

8. (Original) The apparatus of claim 1, wherein the data comprises song title and artist information.

9. (Original) The apparatus of claim 1, wherein the data comprises channel number and channel name information.

10. (Original) The apparatus of claim 1, wherein the data comprises video information.

11. (Previously Presented) The apparatus of claim 1, wherein the formatted data is displayed as a menu on a display of the car stereo.

12. (Previously Presented) The apparatus of claim 1, wherein the display of the car stereo comprises a graphic panel.

13. (Original) The apparatus of claim 1, wherein the commands are input by a user using one or more control buttons or presets on the car stereo.

14. (Cancelled)

15. (Previously Presented) The apparatus of claim 1, wherein audio signals from the one or more auxiliary input sources are selectively channeled to the car stereo by the interface.

16. (Previously Presented) The apparatus of claim 1, wherein a user can select between the one or more auxiliary input sources by depressing keys on the car stereo.

17. (Previously Presented) The apparatus of claim 1, wherein a user can select one of the auxiliary input sources by entering a disc number at the car stereo.

18. (Previously Presented) The apparatus of claim 1, wherein a user can select one of the auxiliary input sources by entering a track number at the car stereo.

19. (Previously Presented) The apparatus of claim 1, wherein a user can select one of the auxiliary input sources by entering both disc and track numbers at the car stereo.

20. (Previously Presented) The apparatus of claim 1, wherein a user can select between the audio device and the one or more auxiliary input sources by entering a sequence at the car stereo.

21. (Original) The apparatus of claim 20, wherein the sequence comprises a track up selection followed by a track down selection.

22. (Original) The apparatus of claim 1, further comprising a second interface connected to the first interface for providing a plurality of auxiliary input sources.

23. (Original) The apparatus of claim 22, wherein both the first interface and the second interface are controllable using the car stereo.

24. (Currently Amended) An audio device integration system comprising:

a car stereo;

a plurality of auxiliary input sources;

an interface connected between the car stereo and the plurality of auxiliary input sources for channeling audio from at least one of the plurality of auxiliary input sources, the interface including:

means for remotely controlling at least one of the plurality of auxiliary input sources using the car stereo by receiving a control command from the car stereo in a format incompatible with the at least one of the plurality of auxiliary input sources, processing- the control command into a formatted control command compatible with the at least one of the plurality of auxiliary input sources, and transmitting the formatted control command to the at least one of the plurality of auxiliary input sources for execution thereby;

means for receiving data from the at least one of the plurality of auxiliary input sources in a format incompatible with the car stereo, processing the data into formatted data compatible with the car stereo, and transmitting the formatted data to the car stereo for display thereby; and

means for selecting one of the plurality of auxiliary input sources from the car stereo.

25. (Original) The apparatus of claim 24, wherein the means for selecting one of the plurality of auxiliary input sources comprises a disc or track selection entered by a user using control buttons of the car stereo.

26. (Previously Presented) The apparatus of claim 24, wherein the audio device at least one of the plurality of auxiliary input sources comprises a CD player, CD changer, MP3 player, satellite receiver, or a Digital Audio Broadcast (DAB) receiver.

27. (Previously Presented) The apparatus of claim 24, wherein a device type of the at least one of the plurality of auxiliary input sources is automatically detected by the interface and the at least one of the plurality of auxiliary input sources is automatically integrated with the car stereo based upon the device type.

28. (Original) The apparatus of claim 24, wherein the interface is switchable into an auxiliary input mode by issuing a control sequence at the car stereo.

29. (Original) The apparatus of claim 28, wherein the control sequence comprises a track up command followed by a track down command.

30. (Currently Amended) A method for integrating an after-market device with a car stereo comprising:

connecting an interface to the car stereo, the after-market device to the interface, and an auxiliary input source to the interface;

remotely controlling the after-market device using the car stereo by:

receiving control commands from the car stereo at the interface in a format incompatible with the after-market device; and

processing the control commands into formatted control commands compatible with the after-market device and dispatching the formatted control commands to the after-market device;

receiving data in a format incompatible with the car stereo and audio from the after-market device at the interface;

processing the data into formatted data compatible with the car stereo and dispatching the audio and formatted data to the car stereo;

displaying the formatted data on the car stereo and playing the audio through the car stereo; and

playing audio from the ~~auxiliary input source~~ after-market device through the car stereo.

31. (Original) The method of claim 30, wherein the step of receiving data from the device comprises retrieving CD track and time information from the device.

32. (Original) The method of claim 30, wherein the step of receiving data from the device comprises retrieving MP3 song, title, track, and time information from the device.

33. (Original) The method of claim 30, wherein the step of receiving data from the device comprises retrieving channel number, channel name, artist, and song information from the device.

34. (Original) The method of claim 30, wherein the step of receiving data from the device comprises retrieving video information from the device.

35. (Previously Presented) The method of claim 30, wherein the step of displaying the formatted data comprises displaying the data in an LCD panel.

36. (Previously Presented) The method of claim 30, wherein the step of displaying the formatted data comprises displaying the data in a graphical user interface at the car stereo.

37. (Previously Presented) The method of claim 30, wherein the step of displaying formatted data comprises displaying video at the car stereo.

38. (Previously Presented) The method of claim 30, wherein the step of connecting the after-market device to the interface comprises connecting a CD player, CD changer, MP3 player, satellite receiver, or a Digital Audio Broadcast (DAB) receiver to the interface.

39. (Cancelled)

40. (Previously Presented) The method of claim 30, further comprising receiving a selection command from the car stereo and channeling data and audio from the auxiliary input source to the interface in response to the selection command.

41. (Original) The method of claim 40, further comprising processing the data from the auxiliary input source for display on the car stereo.

42. (Currently Amended) An apparatus for docking a portable device for integration with a car stereo comprising:

a storage area remote from a car stereo for storing the portable device;

a docking portion within the storage area for communicating and physically mating with the portable device;

a data port in communication with the docking portion, the data port connectable with a device for integrating the portable device with the car stereo; and

an interface connected to the data port and to the car stereo, the interface channeling audio from the portable device to the car stereo, the interface including means for remotely controlling the portable device using the car stereo by processing control commands generated by the car stereo in a format incompatible with the portable device into formatted control commands compatible with the portable device, and dispatching the formatted control commands to the portable device for execution thereby.

43. (Previously Presented) The apparatus of claim 42, wherein the storage area further comprises a top member, a bottom member, and a hinge interconnecting the top member and the bottom member at an edge thereof.



44. (Previously Presented) The apparatus of claim 42, wherein the data port comprises an RS-232 or Universal Serial Bus (USB) port.

45. (Previously Presented) The apparatus of claim 42, wherein the storage area further comprises a top portion and a bottom portion defining a sleeve for holding the portable audio device.

46. (Previously Presented) The apparatus of claim 43, further comprising a clasp for retaining the top and bottom members in a closed position.

47. (Currently Amended) A method of integrating an after-market device with an Original Equipment Manufacturer (OEM) or after-market car stereo comprising:

connecting the after-market device to an interface;

connecting the interface to a car stereo;

determining whether the car stereo is an OEM car stereo or an after-market car stereo;

generating and transmitting a device presence signal to the car stereo to maintain the car stereo in an operational state responsive to ~~external signals~~, signals generated by the after-market device, the device presence signal based upon the car stereo;

channeling audio signals from the after-market device to the car stereo using the interface.

48. (Previously Presented) The method of claim 47, further comprising receiving control commands from the car stereo at the interface in a format incompatible with the after-market device.

49. (Original) The method of claim 48, further comprising converting the control commands into a format recognizable by the after-market audio device.

50. (Original) The method of claim 49, further comprising dispatching formatted commands to the after-market audio device for execution thereby.

51. (Previously Presented) The method of claim 47, further comprising converting data received at the interface from the after-market audio device in a format incompatible with the car stereo into a format compatible with the car stereo.

52. (Original) The method of claim 51, further comprising displaying formatted data on the car stereo.

53. (Original) The method of claim 52, wherein the step of displaying formatted data comprises displaying channel numbers, channel names, titles, tracks, song names, or artist names on the car stereo.

54. (Original) The method of claim 52, wherein the step of displaying formatted data comprises displaying video on the car stereo.

55. (Currently Amended) An audio device integration system comprising:

a car stereo;

a portable MP3 player external to the car stereo;

an interface connected between the car stereo and the portable MP3 player, the interface including:

means for generating a device presence signal and transmitting the signal to the car stereo to maintain the car stereo in an operational state;

means for remotely controlling the MP3 player using the car stereo by receiving a control command from the car stereo in a format incompatible with the MP3 player, processing the control command into a formatted control command compatible with the MP3 player, and transmitting the formatted control command to the MP3 player for execution thereby; and

means for transmitting audio from the portable MP3 player to the car stereo.

56. (Previously Presented) The apparatus of claim 55, wherein the car stereo is an Original Equipment Manufacturer (OEM) car stereo.

57. (Previously Presented) The apparatus of claim 55, wherein the car stereo is an after-market car stereo.

58. (Cancelled)

59. (Previously Presented) The system of claim 55, wherein the interface further includes means for receiving data from the MP3 player in a format incompatible with the car stereo, processing the data into formatted data compatible with the car stereo, and transmitting the formatted data to the car stereo for display thereby.

60. (Previously Presented) The apparatus of claim 59, wherein the data comprises track and time information.

61. (Previously Presented) The apparatus of claim 59, wherein the data comprises song title and artist information.

62. (Previously Presented) The apparatus of claim 59, wherein the commands are input by a user using one or more control buttons or presets on the car stereo.

63. (Currently Amended) An audio device integration system comprising:

a car stereo;

a satellite radio receiver external to the car stereo;

an interface connected between the car stereo and the satellite radio receiver, the interface including:

means for generating a device presence signal and transmitting the signal to the car stereo to maintain the car stereo in an operational state;

means for remotely controlling the satellite radio receiver using the car stereo by receiving a control command from the car stereo in a format incompatible with the satellite radio receiver, processing the control command into a formatted control command compatible with the satellite radio receiver, and transmitting the formatted control command to the satellite radio receiver for execution thereby; and

means for transmitting audio from the satellite radio receiver to the car stereo.

64. (Previously Presented) The apparatus of claim 63, wherein the car stereo is an Original Equipment Manufacturer (OEM) car stereo.

65. (Previously Presented) The apparatus of claim 63, wherein the car stereo is an after-market car stereo.

66. (Cancelled)

67. (Previously Presented) The system of claim 63, wherein the interface further includes means for receiving data from the satellite radio receiver in a format incompatible with the car stereo, processing the data into formatted data compatible with the car stereo, and transmitting the formatted data to the car stereo for display thereby.

68. (Previously Presented) The apparatus of claim 67, wherein the data comprises track and time information.

69. (Previously Presented) The apparatus of claim 67, wherein the data comprises song title and artist information.

70. (Previously Presented) The apparatus of claim 67, wherein the data comprises a channel number and a channel name.

71. (Previously Presented) The apparatus of claim 67, wherein the commands are input by a user using one or more control buttons or presets on the car stereo.

72. (Currently Amended) An audio device integration system comprising:

a car stereo;

a digital audio broadcast receiver external to the car stereo;

an interface connected between the car stereo and the digital audio broadcast receiver, the interface including:

means for generating a device presence signal and transmitting the signal to the car stereo to maintain the car stereo in an operational state;

means for remotely controlling the digital audio broadcast receiver using the car stereo by receiving a control command from the car stereo in a format incompatible with the digital audio broadcast receiver, processing the control command into a formatted control command compatible with the digital audio broadcast receiver, and transmitting the formatted control command to the digital audio broadcast receiver for execution thereby; and

means for transmitting audio from the digital audio broadcast receiver to the car stereo.

73. (Previously Presented) The apparatus of claim 72, wherein the car stereo is an Original Equipment Manufacturer (OEM) car stereo.

74. (Previously Presented) The apparatus of claim 72, wherein the car stereo is an after-market car stereo.

75. (Cancelled)

76. (Previously Presented) The system of claim 72, wherein the interface further includes means for receiving data from the digital audio broadcast receiver in a format incompatible with the car stereo, processing the incompatible data into formatted data compatible with the car stereo, and transmitting the formatted data to the car stereo for display thereby.

77. (Previously Presented) The apparatus of claim 76, wherein the data comprises track and time information.

78. (Previously Presented) The apparatus of claim 76, wherein the data comprises song title and artist information.

79. (Previously Presented) The apparatus of claim 76, wherein the data comprises a channel number and a channel name.



80. (Previously Presented) The apparatus of claim 76, wherein the commands are input by a user using one or more control buttons or presets on the car stereo.

81. (Currently Amended) A device for integrating video information for use with a car stereo, comprising:

a car stereo;

a an after-market video device external to the car stereo;

an interface connected between the car stereo and the after-market video device, the interface including:

means for generating a device presence signal and transmitting the signal to the car stereo to maintain the car stereo in an operational state; state responsive to signals generated by the after-market video device; and

means for transmitting video information from the after-market video device to the car stereo.

82. (Previously Presented) The device of claim 81, further comprising means for converting the video information into a format compatible with the car stereo.

83. (Currently Amended) An audio device integration system comprising:

a car stereo;

a portable audio device external to the car stereo;

an interface connected between the car stereo and the portable audio device, the interface including:

means for generating a device presence signal and transmitting the signal to the car stereo to maintain the car stereo in an operational state;

means for remotely controlling the portable audio device using the car stereo by receiving a control command from the car stereo in a format incompatible with the portable audio device, processing the control command into a formatted control command compatible with the portable audio device, and transmitting the formatted control command to the portable audio device for execution thereby; and

means for transmitting audio from the portable audio device to the car stereo.

84. (Previously Presented) The apparatus of claim 83, wherein the portable audio device comprises a portable CD player.

85. (Previously Presented) The apparatus of claim 83, wherein the portable audio device comprises a portable MP3 player.

86. (Previously Presented) The apparatus of claim 83, wherein the portable audio device comprises a portable satellite receiver.

87. (Previously Presented) The apparatus of claim 83, wherein the portable audio device comprises a portable Digital Audio Broadcast (DAB) receiver.

88. (Previously Presented) The apparatus of Claim 1, further comprising a bus connection established between the after-market audio device and the interface.

89. (Previously Presented) The apparatus of Claim 88, wherein the bus connection comprises a Universal Serial Bus (USB) connection.

90. (Previously Presented) The apparatus of Claim 24, further comprising a bus connection established between the at least one of the plurality of auxiliary input sources and the interface.

91. (Previously Presented) The apparatus of Claim 90, wherein the bus connection comprises a Universal Serial Bus (USB) connection.

92. (Previously Presented) The apparatus of Claim 55, further comprising a bus connection established between the MP3 player and the interface.

93. (Previously Presented) The apparatus of Claim 92, wherein the bus connection comprises a Universal Serial Bus (USB) connection.

94. (Previously Presented) The apparatus of Claim 63, further comprising a bus connection established between the satellite radio receiver and the interface.

95. (Previously Presented) The apparatus of Claim 94, wherein the bus connection comprises a Universal Serial Bus (USB) connection.

96. (Previously Presented) The apparatus of Claim 72, further comprising a bus connection established between the digital audio broadcast receiver and the interface.

97. (Previously Presented) The apparatus of Claim 96, wherein the bus connection comprises a Universal Serial Bus (USB) connection.

98. (Previously Presented) The apparatus of Claim 81, further comprising a bus connection established between the video device and the interface.

99. (Previously Presented) The apparatus of Claim 98, wherein the bus connection comprises a Universal Serial Bus (USB) connection.

100. (Previously Presented) The apparatus of Claim 83, further comprising a bus connection established between the portable audio device and the interface.

101. (Previously Presented) The apparatus of Claim 100, wherein the bus connection comprises a Universal Serial Bus (USB) connection.

102. (Previously Presented) The apparatus of Claim 81, wherein the interface further comprises means for receiving a control signal from the car stereo in a format incompatible with the video device, processing the control signal into a formatted control signal compatible with the video device, and transmitting the formatted control signal to the video device for execution thereby.

103. (Previously Presented) The apparatus of Claim 102, wherein the interface further comprises means for receiving data from the video device incompatible with the car stereo, processing the data into formatted data compatible with the car stereo, and transmitting the formatted data to the car stereo for display thereon.

104. (Currently Amended) An audio device integration system, comprising:

a car stereo;

a an after-market, line-level audio source external to the car stereo; and

an interface connected between the car stereo and the after-market, line level audio source, the interface including:

means for generating and transmitting a device presence signal to the car stereo to maintain the car stereo in an operational state; ~~and~~ state responsive to signals generated by the after-market, line-level audio source; and

means for transmitting audio from the after-market, line-level audio source to the car stereo.

## REMARKS

Applicant submits this response to the outstanding Office Action on the above-identified application. Applicant has amended the claims, as set forth herein, and respectfully submits that the application, as amended, is in condition for allowance.

Applicant has amended independent Claims 1, 24, 30, 42, 47, 55, 63, 72, 81, 83, and 104, and dependent Claim 6, to further define the present invention. For the reasons set forth below, Applicant submits that the pending claims are patentable over the cited references, taken alone or in any combination.

### **I. SUMMARY OF THE INVENTION**

Applicant's claimed invention relates generally to an audio device integration system for integrating one or more after-market audio devices external to a car stereo (and, normally, not compatible with the car stereo), such as an MP3 player, a satellite radio receiver, digital audio broadcast (DAB) receiver, or one or more auxiliary input sources, for use with an Original Equipment Manufacturer (OEM) or after-market car stereo system. The invention allows an external device which is ordinarily incompatible with an OEM or after-market car stereo system to be integrated therewith, such that the OEM or after-market car stereo system can be used to control the external device, and audio and/or video from the external device can be channeled to the car stereo. Integration is achieved by the interface of the present invention by receiving an incompatible control command from the car stereo, processing the incompatible control command into a formatted control command compatible with the external device, and transmitting the formatted control command to the external device for execution thereby.

Additionally, incompatible data from the external device, such as track number, time, song name, artist name, video information, and other data, is received by the interface of the present invention, processed into formatted data compatible with the car stereo, and transmitted to the car stereo for display thereby. As a result, external devices which are ordinarily alien to and inoperable with an existing car stereo system can be integrated for use with such systems, while remote command and control capabilities (e.g., using the controls of the car stereo system) are provided.

## II. SUMMARY OF THE REFERENCES CITED IN THE OFFICE ACTION

Applicant submits that the pending claims are patentable over the references cited in the Office Action, taken alone or in combination. Specifically, Applicant submits that the pending claims are patentable over U.S. Patent No. 6,163,079 to Miyazaki, et al., U.S. Patent No. 6,653,948 to Kunimatsu, et al., U.S. Patent No. 6,608,399 to McConnell, et al., U.S. Patent No. 6,993,615 to Falcon, U.S. Patent Application Publication No. 2002/0085730 to Holland, U.S. Patent No. 6,591,085 to Grady, U.S. Patent No. 6,346,917 to Fuchs, et al., and U.S. Patent No. 6,374,177 to Lee, et al., taken alone or in any combination.

Miyazaki, et al. discloses a user-operable system for a vehicle which includes a central control unit and one or more detachable units which can be connected to one or more connectors positioned at various locations in the vehicle. In the first embodiment, the central control unit comprises an audio control unit, and the detachable unit includes a disk changer, a switch unit, and a multiplex control unit. In the second embodiment, the central control unit comprises a car navigation control unit, and the detachable unit includes a disk changer, a switch unit, and a



liquid crystal screen and an associated switch and speaker, wherein the disk changer uploads map data to the car navigation control unit. In the third embodiment, the central control unit includes an air conditioner control unit and the detachable unit includes a switch unit for controlling an air conditioner.

Kunimatsu, et al. discloses a vehicle-mounted display system for allowing operation of a plurality of screens with many functions. The invention allows a user to select a screen from a plurality of screens, and the screen is displayed across the entire surface of the display panel, along with an operation menu which is superimposed over the selected screen.

McConnell, et al. discloses a universal docking station for a vehicle with various electronic feature modules which are custom-designed for docking in the universal docking station. The modules include a custom-designed MP3 player, a tire pressure monitor, a satellite programming receiver, a vehicle security module, an electronic map module, a display feature module, a gas station speed pass module, a remote, keyless entry receiver module, a vehicle lighting controller module, a camera module, a radar detector module, a power line controller module, a garage door opener module, a digital media player module, a global positioning system (GPS) module, a BlueTooth linking module, and a breathalyzer module. A video display could be provided with the docking station for displaying video information.

Falcon discloses a portable computing device which is operable with an appliance, such as a car stereo. The car stereo includes a docking portion which receives the portable computing device. The portable computing device functions as a display for the car stereo, and allows a

user to control the car stereo. The portable computing device includes a configuration module which identifies the type of appliance to which the portable computing device is connected. The appliance includes a type module which sends a data packet to the portable computing device. The data packet is utilized by the configuration module to determine the type of the appliance. The portable computing device generates a screen which is customized to the type of the appliance.

Holland discloses a briefcase with an integrated loudspeaker system. The briefcase can store an electronic device. The loudspeaker system includes an amplifier which can be connected to the electronic device.

Grady discloses an FM transmitter and power supply / charging station for an MP3 player. The FM transmitter transmits audio from the MP3 player to a nearby FM receiver. A docking cavity is provided in the station for receiving the MP3 player.

Fuchs, et al. discloses a method for installing an antenna system external to a vehicle.

Lee, et al. discloses a method and apparatus for providing navigational services in a wireless communication device. The apparatus includes an Internet radio which can be installed in a vehicle. The radio includes an interactive display panel and a communications device, such as a multi-band receiver, a GPS receiver, an infrared (IrDA) receiver, or a gateway receiver, for allowing the radio to obtain data from an external network. Navigational services can be

provided to the user, and navigational updates can be obtained using the communications device. Geographic advertising and other content can be provided to the user.

### III. ARGUMENT

Applicant submits that none of the cited references, taken alone or in any combination, teach or suggest providing an audio device integration system which allows an external, after-market device to communicate with and to be remotely controlled using an existing car stereo system.

#### A. None of the Cited References, Taken Alone or in Any Combination, Teach or Suggest Providing Remote Control of an External Audio or Video Device By A Normally Incompatible Car Stereo

In view of Applicant's amendments to independent Claims 1, 24, and 30, Applicant respectfully submits that Claims 1-4, 6, 10-13, 15-26, 28-30, 34-38, 40-41, 82, 88-89, 90-91, and 102-103, which were rejected as being obvious over Miyazaki, et al. in view of Kunimatsu, et al. and McConnell, et al., are patentable over these references.

The Office Action concedes that neither Miyazaki, et al. nor Kunimatsu, et al. disclose the claimed feature of an audio device integration system which includes **means for remotely controlling an external, after-market device using a car stereo by receiving a control command from the car stereo in a format incompatible with a device external to the car stereo, processing the control command into a formatted command compatible with the external device, and transmitting the formatted command to the external device for execution** thereby, as set forth in independent Claims 1 and 24, and similar limitations set forth in independent method Claim 30 and dependent Claim 82. Although the Office Action points to

column 4, lines 7-19 of McConnell, et al. as disclosing this feature, neither this excerpt, nor the entirety of McConnell, et al., discloses this feature, as specifically set forth in independent Claims 1, 24, and 30 and dependent Claim 82.

McConnell, et al. briefly mentions a controller 14 (see FIG. 1) which “includes suitable circuitry and/or programming to perform power conditioning, filtering, and data protocol translation. Controller circuit 14 operates as a gateway for supply of electrical power (conditioned) and communication of data between the vehicle’s electrical and signal distribution system 15, such [as] a multiplexed data wire or power line, and particular feature modules coupled to rack 12.” However, McConnell, et al. makes no mention of allowing a car stereo system to control an ordinarily incompatible external device, but only discloses custom-designed, native, digital audio player and satellite receiver modules that can be docked with the docking station disclosed therein. These modules are only disclosed in McConnell, et al. as sending audio to a “vehicle speaker system” (see col. 7, line 50), and there is no mention of remotely controlling any of these modules by a car stereo. Put simply, because McConnell, et al. fails whatsoever to disclose allowing a car stereo to remotely control one of the modules, it necessarily fails to disclose receiving an incompatible control command from a car stereo, processing same into a format compatible with an external, after-market device, and transmitting same to the device for execution thereby, as required by the claims.

Indeed, in connection with the digital audio and satellite receiver modules disclosed in McConnell, et al., only audio signals are disclosed as being transmitted to a vehicle speaker system. Thus, McConnell, et al. merely contemplates *sending only audio to the car audio*

*system*. No disclosure is provided relating to control commands flowing in the opposite direction, i.e., from the car stereo to the external audio or video device. As such, McConnell, et al. is absent any disclosure relating to issuing control commands at the car stereo for controlling a device external to the car stereo, much less processing *incompatible* control commands issued at the car stereo so that they can be used to remotely control the external device. Accordingly, Applicant submits that independent Claims 1, 24, and 30 and their respective dependent claims, which include all of the limitations of Claims 1, 24, and 30, as well as dependent Claim 82, are patentable over Miyazaki, et al., Kunimatsu, et al., and McConnell, et al., taken alone or in combination.

For similar reasons, Applicant submits that Claims 5, 7-9, 27, 31-33, and 52-54 are patentable over Miyazaki, et al. in view of Kunimatsu, et al., McConnell, et al., and Falcon. Claims 5, 7-9, 27, and 31-33, by virtue of their dependency on independent Claims 1, 24, and 30, each recite the aforementioned limitations of remotely controlling an external device using a car stereo by receiving a control command from a car stereo in a format incompatible with an external device, processing the control command into a format compatible with the external device, and dispatching the processed command to the external device for execution thereby. As discussed above, neither Miyazaki, et al., Kunimatsu, et al., nor McConnell, et al., taken alone or in combination, teach or suggest such limitations.

Falcon is likewise deficient. Falcon fails whatsoever to disclose allowing a car stereo to remotely control a normally incompatible, after-market, external audio or video device using a car stereo by processing incompatible control commands from the car stereo at the interface into

commands that are compatible with an after-market, external device, and transmitting same to the external, after-market device for execution thereby. Rather, it merely discloses a customized car radio which is specifically designed to receive the portable computer disclosed therein. There is clearly no disclosure of the portable computer being incompatible with the car stereo (since the car stereo is specifically designed for use with the portable computer); nor is there any disclosure of the car stereo being capable of remotely controlling a normally incompatible, after-market device external thereto. As such, Applicants submit that Claims 5, 7-9, 27, and 31-33 are patentable over Miyazaki, et al., Kunimatsu, et al., McConnell, et al. and Falcon, taken alone or in any combination.

Applicant also submits that dependent Claims 52-54, which recite limitations directed to receiving incompatible data from an after-market device at an interface, processing the data into a format compatible with a car stereo, and transmitting same to the car stereo for display thereon, are patentable over Miyazaki, et al. in view of Kunimatsu, et al., McConnell, et al., and Falcon, taken alone or in any combination. None of these references are concerned with receiving information from an after-market device, much less processing same into a format compatible with a car stereo for display thereon. Indeed, each of the external devices disclosed in these references are native (i.e., custom-designed) products which are already compatible with the car stereo. They clearly are not after-market products, and there is no disclosure of retrieving incompatible information from an after-market product and processing same for display on a car stereo. As such, Applicant submits that Claims 52-54 are patentable over the cited references, taken alone or in any combination.

Applicant also submits that Claims 42-46, 48-51, 55-57, 59-65, 67-74, 76-80, 83-87, 92-97, and 100-103, which were rejected as being obvious over various combinations of the remaining references cited in the Office Action in view of McConnell, et al., are patentable over these references. In connection with these claims, the Office Action cites McConnell, et al. as disclosing the claimed feature of remotely controlling an external device using a car stereo by receiving incompatible control commands from a car stereo, processing same into a format compatible with an external audio or video device, and dispatching same to the external device for execution thereby. As discussed above, McConnell, et al. is devoid of such a feature, and Miyazaki, et al., Kunimatsu, et al., and Falcon, taken alone or in any combination, fail to cure this deficiency. The remaining references, i.e., Holland, Grady, Fuchs, and Lee, are similarly deficient. Holland relates only to a briefcase with an integrated loudspeaker, and is absent any disclosure relating to an interface between a car stereo system and an external audio or video device. Grady merely discloses a docking station with an FM transmitter, and fails whatsoever to disclose an interface which allows for remote control of an external audio or video device using a normally incompatible car stereo. Lee, et al. is concerned only with providing navigational services on a wireless communications device, and is unconcerned with processing incompatible commands from a car stereo system for remotely controlling an external audio or video device. Fuchs, et al. only relates to an antenna, and is entirely unconcerned with an interface connected between a car stereo system and an external audio or video device. As such, Applicant submits that Claims 42-46, 48-51, 55-57, 59-65, 67-74, 76-80, 83-87, 92-97, and 100-103 are patentable over Holland, Grady, Fuchs, and Lee, taken alone or in any combination with Miyazaki, et al., Kunimatsu, et al., McConnell, et al. and Falcon.

**B. None of the Cited References, Taken Alone or in Any Combination, Teach or Suggest Generating and Transmitting a Device Presence Signal to Maintain a Car Stereo in a State Responsive to Signals Generated by an After-Market External Device**

In view of Applicant's amendments to independent Claims 47, 81, and 104, Applicant submits that Claims 47, 81, 98-99, and 104, which were rejected as being anticipated by Miyazaki, et al., or obvious over Miyazaki, et al. in view of Falcon or Kunimatsu, et al., are patentable over these references. An important feature of the present invention, as set forth in amended Claims 47, 81, 98-99, and 104, is the ability of the integration system of the present invention to maintain an existing car stereo in a state responsive to signals generated by an after-market external device, including an after-market audio or video device or an after-market, line-level audio source, by generating and transmitting a device presence signal to the car stereo which is based upon the car stereo. Ordinarily, if an after-market device is connected to an existing car stereo system, the car stereo system does not recognize the after-market device and is unresponsive to such a device. The present invention thus allows non-native, after-market devices to be integrated for use with an existing car stereo system because it prevents the car stereo system from being unresponsive when such devices are connected, via the present invention, to the car stereo system.

Neither Miyazaki, et al., Falcon, nor Kunimatsu, et al., taken alone or in any combination, teach or suggest **generating and transmitting a device presence signal to maintain a car stereo in an operational state responsive to signals generated by an after-market device or an after-market, line-level source**, as required by Claims 47, 81, 98-99, and 104. Miyazaki, et al. is entirely unconcerned with maintaining a car stereo in a state responsive to signals generated



by an external, *after-market device*. Miyazaki, et al. merely discloses sending multiplexed instruction data from an audio switch unit to one or more electric equipment units (reference numeral 40A) positioned in a car. However, the equipment units are native (i.e., specifically designed) for use with the system disclosed in Miyazaki, et al. Indeed, each equipment unit includes a specially-designed wiring harness which is configured for use only with custom-designed connectors positioned throughout a vehicle. As such, since these components are native and are custom-designed for each other, Miyazaki, et al. is absent any disclosure relating to an interface for integrating external, after-market devices for use with an existing car stereo.

Still further, although the Office Action points to element number 38 in FIG. 1 of Miyazaki, et al. as disclosing the interface recited in the claims, element number 38 is nothing more than a vehicle-side connector with no internal electronics whatsoever for generating and transmitting a device presence signal to a car stereo. It clearly is not an interface positioned between and in communication with an after-market, external device and a car stereo, much less an interface which generates and transmits a device presence signal to a car stereo to maintain communication between the car stereo and the after-market, external device, as required by Claims 47, 81, 98-99, and 104. Additionally, although the Office Action points to the multiplex element 42 of FIGS. 1 and 2, col. 4, lines 51-67, and col. 5, lines 1-31 of Miyazaki, et al., these excerpts only very broadly disclose exchanging multiplexed data between its audio control unit and the electric equipment units disclosed therein. However, the electric equipment units of Miyazaki, et al. do not send a signal to the audio control unit to maintain a car stereo in a state responsive to signals generated by an external, *after-market device*, as the Office Action improperly concludes. Such a signal is not disclosed in Miyazaki, et al., nor is any required,

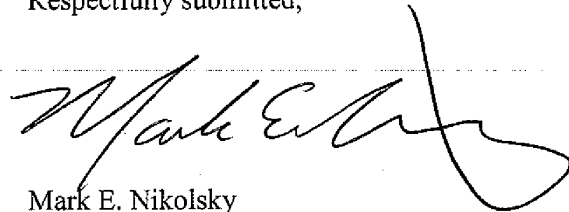
because the components of Miyazaki, et al. are custom-designed to communicate with each other. Put simply, the electric equipment units are native components that are designed to work with a custom-designed audio control unit, and are not after-market components that ordinarily cannot communicate with an existing car stereo.

Falcon and Kunimatsu, et al. fail to remedy the deficiencies of Miyazaki, et al. Falcon does not disclose generating and transmitting a device presence signal to maintain a car stereo in an operational state responsive to signals generated by a non-native device. Rather, it merely discloses a customized car radio which is specifically designed to receive the portable computer disclosed therein. The portable computer includes a software configuration module which determines the type of appliance in which it is docked (e.g., a furnace, an air conditioner, a humidifier, a clock radio, a refrigeration appliance, a freezer, an oven, a range, a car stereo, etc.), and presents an appropriate user interface on its screen based upon the detected type of appliance. However, since the appliances are specifically designed to operate with and be responsive to the portable computer, there is no disclosure of the portable computer of Falcon generating and transmitting a device presence signal to a car stereo to maintain it in a state responsive to signals generated by an external, ordinarily incompatible, after-market device. Kunimatsu, et al. merely discloses a vehicle-mounted display system, and is unconcerned with an integration device that allows for communication between by car stereo and an after-market device by sending a device presence signal to the car stereo. As such, Applicant submits that Claims 47, 81, 98-99, and 104 are patentable over Miyazaki, et al., Falcon, and Kunimatsu, et al., taken alone or in any combination.

**IV. CONCLUSION**

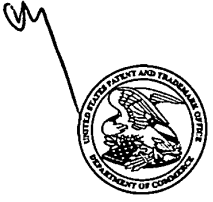
All issues raised in the Office Action are believed to have been addressed. Claims 1, 6, 24, 30, 42, 47, 55, 63, 72, 81, 83, and 104 were amended, and Claims 1-13, 15-38, 40-57, 59-65, 67-74, and 76-104 are pending and are in condition for allowance. No new matter has been added. Reexamination is requested and favorable action solicited.

Respectfully submitted,



Date: 6/28/2007

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Table with 2 columns: ART UNIT, PAPER NUMBER
Value: 2615

Table with 3 columns: SHORTENED STATUTORY PERIOD OF RESPONSE, MAIL DATE, DELIVERY MODE
Values: 3 MONTHS, 04/19/2007, PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

|                              |                                      |                                     |  |
|------------------------------|--------------------------------------|-------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/316,961 | <b>Applicant(s)</b><br>MARLOWE, IRA |  |
|                              | <b>Examiner</b><br>Jason R. Kurr     | <b>Art Unit</b><br>2615             |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1)  Responsive to communication(s) filed on 16 February 2007.
- 2a)  This action is FINAL.                      2b)  This action is non-final.
- 3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4)  Claim(s) 1-13, 15-38, 40-57, 59-65, 67-74 and 76-104 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5)  Claim(s) \_\_\_\_\_ is/are allowed.
- 6)  Claim(s) 1-13, 15-38, 40-57, 59-65, 67-74 and 76-104 is/are rejected.
- 7)  Claim(s) \_\_\_\_\_ is/are objected to.
- 8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9)  The specification is objected to by the Examiner.
- 10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    - a)  All.    b)  Some \*    c)  None of:
      - 1.  Certified copies of the priority documents have been received.
      - 2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
      - 3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1)  Notice of References Cited (PTO-892)
- 2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3)  Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date 2/16/07.
- 4)  Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.
- 5)  Notice of Informal Patent Application
- 6)  Other: \_\_\_\_\_.

### DETAILED ACTION

Claims 14, 39, 58, 66 and 75 have been cancelled and thus will not be further considered by the Examiner.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claim 104 is rejected under 35 U.S.C. 102(b) as being anticipated by Miyazaki et al (US 6,163,079).**

With respect to claim 104, Miyazaki discloses an audio device integration system, comprising: a car stereo (fig.1 #32, col.4 ln.6-7); a line-level audio source (fig.2 #40A) external to the car stereo; and an interface (fig.1,2 #38) connected between the car stereo and the line level audio source, the interface including: means (fig.2 #42) for generating and transmitting a device presence signal to the car stereo to maintain the car stereo in an operational state (col.4 ln.54-57); and means (fig.1 "Ls") for transmitting audio from the line-level audio source to the car stereo.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1-4,6,10-13,15-26,28-30,34-38,40-41,82,88-89,90-91 and 102-103 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki et al (US 6,163,079) in view of Kunimatsu et al (US 6,653,948 B1) and in further view of McConnell et al (US 6,608,399 B2).**

With respect to claim 1, Miyazaki discloses an audio device integration system comprising: a car stereo (fig.1 #32, col.4 ln.6-7); an after-market audio device (fig.2 #40A) external to the car stereo; an interface (fig.1,2 #38,) connected between the car stereo and the after-market audio device for channeling audio signals to the car stereo from the after-market audio device (col.2 ln.5-16), the interface including: means (fig.2 #42) for receiving a control command from the car stereo, processing the control command, and transmitting the command to the after-market audio device for execution thereby (col.4 ln.51-67, col.5 ln.1-31); and means (fig.2, #42) for receiving data from the after-market audio device, processing the data, and transmitting the data to the car

stereo (col.4 ln.51-67, col.5 ln.1-31); and means (fig.2 #43) for switching to one or more auxiliary input sources connected to the interface (col.4 ln.54-57).

Miyazaki does not disclose expressly wherein the means for receiving a control command from the car stereo and the means for receiving data from the after-market device include the capability of processing data from an incompatible form between devices into a compatible format that allows each device to function by executing the compatible formatted command.

McConnell discloses means (fig.1) for receiving incompatible data from vehicle devices, that formats the data into a compatible form, which allows communication between the devices (col.4 ln.7-19 "data protocol translation").

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the means of McConnell to format the data being transmitted between the audio control and peripheral devices along the multiplex signal line of Miyazaki.

The motivation for doing so would have been to allow a user of the invention of Miyazaki to incorporate peripheral devices in the vehicles electrical system that do not contain a multiplex control unit as depicted in figure 2 #42. This would allow a user to use peripheral devices that are not pre-configured to be used with the system of Miyazaki.

Miyazaki does not disclose expressly wherein the means for receiving data from the after-market device includes the capability of displaying data on a display of the car stereo, however does disclose the processing of data including "a radio/CD selection



instruction, a station selection instruction, a volume control instruction, etc. (col.4 ln.51-66). Miyazaki also teaches a navigation system (fig.4 #28) with a visual display (fig.4 #47) as an auxiliary device.

Kunimatsu teaches a navigation system (fig.1 #14) that is combined with an audio system (fig.1 #18) to provide information to a display (fig.1 #12).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine the audio and navigation systems of Miyazaki into one unit that displays information to a visual display as taught by Kunimatsu.

The motivation for doing so would have been to allow a user, who is seated near the car stereo to view the control instructions sent from the auxiliary device, such as volume, selected station, or selected CD. This would also allow the user to make desirable changes to the settings of the auxiliary device by merely controlling the car stereo. Hence, now the system of Miyazaki not only displays navigation information but also information pertaining to the audio system such as the data disclosed in column 4 lines 51-66.

With respect to claim 2, Miyazaki discloses the apparatus of claim 1, wherein the car stereo is an Original Equipment Manufacturer (OEM) car stereo (col.1 ln.12-36).

With respect to claim 3, Miyazaki discloses the apparatus of claim 1, however does not disclose expressly wherein the car stereo is an after-market car stereo. Miyazaki discloses a system for connecting auxiliary devices to a vehicles control

system, however does not make the distinction that the control system is replaceable by an after-market control, such as an after-market car stereo to replace the factory stereo control components. Official Notice is taken that after-market car stereos are well known in the art, and the invention of Miyazaki is not limited to interacting with only factory stereo components. At the time of the invention it would have been obvious that a user of Miyazaki's invention could replace the factory stereo with an after-market unit and continue to achieve the same results. The motivation for using an after-market unit would have been to upgrade the vehicles sound system. These upgrades could include features such as, bass and stereophonic outputs, or mp3 and satellite capabilities.

With respect to claim 4, Miyazaki discloses the apparatus of claim 1, wherein the after-market audio device comprises a CD player, CD changer (fig.2 #44), MP3 player, Digital Audio Broadcast (DAB) receiver, or satellite receiver.

With respect to claim 6, Miyazaki discloses the apparatus of claim 1, wherein the interface generates a CD player presence signal for maintaining the car stereo in a state responsive to processed data and audio signals (col.4 ln.54-66).

With respect to claim 10, Miyazaki discloses the apparatus of claim 1, wherein the data comprises video information (col.5 ln.24-31).

With respect to claim 11, Miyazaki discloses the apparatus of claim 1, however does not disclose expressly wherein the formatted data is displayed as a menu on the display of the car stereo. It is implied that the system of Miyazaki includes a screen to display the navigation information, however it is not disclosed wherein this information is provided as a menu.

Kunimatsu discloses a combined navigation/audio system that displays a menu of data (fig.3B).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the combined navigation and audio system of Kunimatsu as the navigation and audio units of Miyazaki. This would provide a menu of options for a user to select.

The motivation for providing the data in the form of a menu, as does Kunimatsu, would have been to simplify the controls of the system of Miyazaki, by providing an easily viewable set of options.

With respect to claim 12, Miyazaki discloses the apparatus of claim 1, however does not disclose expressly wherein the display of the car stereo comprises a graphic panel. Miyazaki discloses wherein the navigation unit (fig.4 #28,40B) comprises a graphic panel (fig.4 #47).

Kunimatsu discloses a vehicle mounted display system (fig.1 #12) that is integrated with a navigation unit (fig.1 #14) and an audio system (fig.1 #18), wherein the system includes a graphic panel (fig.1 #20).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the combined navigation and audio system of Kunimatsu as the navigation and audio units of Miyazaki. It is well known in the art that touch-screen panels are commonly found in vehicles for the purpose of controlling and displaying both navigation and audio information, as evidenced by Kunimatsu.

The motivation for using a combined unit would have been to supply a system with one set of controls, which would ultimately simplify the operation of the system. Also, a system with one display and one set of controls (being the touch-screen display) would greatly reduce the required area of mounting space, hence allowing the system to be implemented in smaller vehicles.

With respect to claim 13, Miyazaki discloses the apparatus of claim 1, wherein the commands are input by a user using one or more control buttons or presets on the car stereo. It is implied that the audio control unit of Miyazaki contains control buttons or presets to control the functions disclosed on column 4 lines 57-60. Without control buttons or presets, it would not be possible for a user to control these disclosed functions.

With respect to claim 15, Miyazaki discloses the apparatus of claim 1, wherein audio signals from the one or more auxiliary input sources are selectively channeled to the car stereo by the interface (col.4 ln.63-67, col.5 ln.1-4).

With respect to claim 16, Miyazaki discloses the apparatus of claim 1, however does not disclose expressly wherein a user can select between the one or more auxiliary input sources by depressing keys on the car stereo. Miyazaki discloses wherein the control unit is connected to a disk changer (fig.3 #44). Official Notice is taken that it is well known in the art that car stereo units have keys for selecting disks (auxiliary input sources) from a CD changer. It would have been obvious to a person of ordinary skill in the art to use keys for the selection of disks in the changer on the audio control unit (fig.3 #32) of Miyazaki. The motivation for doing so would have been to select a CD to play without having to manually access the disk changer.

With respect to claim 17, Miyazaki discloses the apparatus of claim 1, however does not disclose expressly wherein a user can select one of the auxiliary input sources by entering a disc number at the car stereo. Miyazaki discloses wherein the control unit is connected to a disk changer (fig.3 #44). Official Notice is taken that it is well known in the art that car stereo units have keys for selecting disks (auxiliary input sources) from a CD changer. These keys are known to be associated with a disk number that corresponds to a disk in the changer. It would have been obvious to a person of ordinary skill in the art to use keys with disk numbers for the selection of disks in the changer on the audio control unit (fig.3 #32) of Miyazaki. The motivation for doing so would have been to select a CD to play without having to manually access the disk changer.

With respect to claim 18, Miyazaki discloses the apparatus of claim 1, however does not disclose expressly wherein a user can select one of the auxiliary input sources by entering a track number at the car stereo. Miyazaki discloses wherein the control unit is connected to a disk changer (fig.3 #44). Official Notice is taken that it is well known in the art that car stereo units have means to enter a track number of a CD in a CD changer. It would have been obvious to a person of ordinary skill in the art to enter track numbers on the audio control unit (fig.3 #32) of Miyazaki for the selection of a track of a disk in the changer. The motivation for doing so would have been to select an audio track to play without having to manually access the disk changer.

With respect to claim 19, Miyazaki discloses the apparatus of claim 1, however does not disclose expressly wherein a user can select one of the auxiliary input sources by entering both disc and track numbers at the car stereo. Miyazaki discloses wherein the control unit is connected to a disk changer (fig.3 #44). Official Notice is taken that it is well known in the art that car stereo units have means to enter both disk and track numbers to select an audio track in a CD changer. It would have been obvious to a person of ordinary skill in the art to enter both disk and track numbers on the audio control unit (fig.3 #32) of Miyazaki for the selection of a track of a disk in the changer. The motivation for doing so would have been to select an audio track to play without having to manually access the disk changer.

With respect to claim 20, Miyazaki discloses the apparatus of claim 1, however does not disclose expressly wherein a user can select between the audio device and the one or more auxiliary input sources by entering a sequence at the car stereo. Miyazaki discloses wherein the control unit is connected to a disk changer (fig.3 #44). Official Notice is taken that it is well known in the art that car stereo units have means to enter a sequence, such as disk and track number, to select an audio track in a CD changer. It would have been obvious to a person of ordinary skill in the art to enter a sequence, such as disk and track numbers on the audio control unit (fig.3 #32) of Miyazaki for the selection of a track of a disk in the changer. The motivation for doing so would have been to select an audio track to play without having to manually access

the disk changer.

With respect to claim 21, Miyazaki discloses the apparatus of claim 20, however does not disclose expressly wherein the sequence comprises a track up selection followed by a track down selection. Official Notice is taken that is well known in the art that track up and down commands are common on most CD players and disk changers. It would have been obvious to a person of ordinary skill in the art to use these commands in the control of the CD changer of Miyazaki. The motivation for doing so would have been to allow a user to pan through the tracks until a desired track is found.

With respect to claim 22, Miyazaki discloses the apparatus of claim 1, further comprising a second interface (fig.1 #38) connected to (fig.1 "Ls,Lb") the first interface (fig.1 #38) for providing a plurality of auxiliary input sources.

With respect to claim 23, Miyazaki discloses the apparatus of claim 22, wherein both the first interface and the second interface are controllable using the car stereo (col.6 ln.28-32).

With respect to claim 24, Miyazaki discloses an audio device integration system comprising: a car stereo (fig.1 #32, col.4 ln.6-7); a plurality of auxiliary input sources (fig.2 #40A, fig.4 #40B); an interface (fig.1 #38) connected between the car stereo and the plurality of auxiliary input sources (col.2 ln.5-16) for channeling audio from at least



one of the plurality of auxiliary input sources, the interface including; means (fig.2 #42) for receiving a control command from the car stereo, processing the control command, and transmitting the command to the after-market audio device for execution thereby (col.4 ln.51-67, col.5 ln.1-31); and means (fig.2, #42) for receiving data from the after-market audio device, processing the data, and transmitting the data to the car stereo (col.4 ln.51-67, col.5 ln.1-31); and means (fig.2 #43) for selecting one of the plurality of auxiliary input sources from the car stereo (col.4 ln.54-57).

Miyazaki does not disclose expressly wherein the means for receiving a control command from the car stereo and the means for receiving data from the after-market device include the capability of processing data from an incompatible form between devices into a compatible format that allows each device to function by executing the compatible formatted command.

McConnell discloses means (fig.1) for receiving incompatible data from vehicle devices, that formats the data into a compatible form that allows communication between the devices (col.4 ln.7-19 "data protocol translation").

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the means of McConnell to format the data being transmitted between the audio control and peripheral devices along the multiplex signal line of Miyazaki.

The motivation for doing so would have been to allow a user of the invention of Miyazaki to incorporate peripheral devices in the vehicles electrical system that do not contain a multiplex control unit as depicted in figure 2 #42. This would allow a user to

use peripheral devices that are not pre-configured to be used with the system of Miyazaki.

Miyazaki does not disclose expressly wherein the means for receiving data includes the capability of displaying data on a display of the car stereo, however does disclose the processing of data including "a radio/CD selection instruction, a station selection instruction, a volume control instruction, etc. (col.4 ln.51-66). Miyazaki also teaches a navigation system (fig.4 #28) with a visual display (fig.4 #47) as an auxiliary device.

Kunimatsu teaches a navigation system (fig.1 #14) that is combined with an audio system (fig.1 #18) to provide information to a display (fig.1 #12).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine the audio and navigation systems of Miyazaki into one unit that displays information to a visual display as taught by Kunimatsu.

The motivation for doing so would have been to allow a user, who is seated near the car stereo to view the control instructions sent from the auxiliary device, such as volume, selected station, or selected CD. This would also allow the user to make desirable changes to the settings of the auxiliary device by merely controlling the car stereo. Hence, now the system of Miyazaki not only displays navigation information but also information pertaining to the audio system such as the data disclosed in column 4 lines 51-66.

With respect to claim 25, Miyazaki discloses the apparatus of claim 24, however does not disclose expressly wherein a user can select one of the auxiliary input sources by entering both disc and track numbers at the car stereo. Miyazaki discloses wherein the control unit is connected to a disk changer (fig.3 #44). Official Notice is taken that it is well known in the art that car stereo units have means such as buttons to enter both disk and track numbers to select an audio track in a CD changer. It would have been obvious to a person of ordinary skill in the art to enter both disk and track numbers on the audio control unit (fig.3 #32) of Miyazaki for the selection of a track of a disk in the changer. The motivation for doing so would have been to select an audio track to play without having to manually access the disk changer.

With respect to claim 26, Miyazaki discloses the apparatus of claim 24, wherein at least one of the plurality of auxiliary input sources comprises a CD player, CD changer (fig.2 #44), MP3 player, satellite receiver, or a Digital Audio Broadcast (DAB) receiver.

With respect to claim 28, Miyazaki discloses the apparatus of claim 24, however does not disclose expressly wherein the interface is switchable into an auxiliary input mode by issuing a control sequence at the car stereo. Miyazaki discloses wherein the control unit is connected to a disk changer (fig.3 #44). Official Notice is taken that it is well known in the art that car stereo units have means to enter a sequence, such as disk and track number, to select an audio track in a CD changer. It would have been

obvious to a person of ordinary skill in the art to enter a sequence to switch the interface into an auxiliary input mode, such as disk and track numbers on the audio control unit (fig.3 #32) of Miyazaki for the selection of a track of a disk in the changer. The motivation for doing so would have been to select an audio track to play without having to manually access the disk changer.

With respect to claim 29, Miyazaki discloses the apparatus of claim 28, wherein the control sequence comprises a track up command followed by a track down command. Official Notice is taken that is well known in the art that track up and down commands are common on most CD players and disk changers. It would have been obvious to a person of ordinary skill in the art to use these commands in the control of the CD changer of Miyazaki. The motivation for doing so would have been to allow a user to pan through the tracks until a desired track is found.

With respect to claim 30, Miyazaki discloses a method for integrating an after-market device (fig.2 #40A) with a car stereo (fig.1 #32, col.4 ln.6-7) comprising: connecting an interface (fig.1 #38) to the car stereo, the after-market device to the interface, and an auxiliary input source (fig.1 #38) to the interface (col.2 ln.5-16); receiving control commands from the car stereo at the interface; processing the control commands and dispatching processed control commands to the after-market device; receiving data and audio from the after-market device at the interface; processing the data into a second format compatible with the car stereo and dispatching the audio and

processed data to the car stereo (col.4 ln.51-67, col.5 ln.1-4), and playing audio from the auxiliary input source through the car stereo (fig.3 #30).

Miyazaki does not disclose expressly wherein the control commands are in a format incompatible with the after-market device, where the commands are processed into a format compatible to both the car stereo and the after-market device.

McConnell discloses means (fig.1) for receiving incompatible data from vehicle devices, that formats the data into a compatible form in order to allow communication between the devices (col.4 ln.7-19 "data protocol translation").

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the means of McConnell to format the data being transmitted between the audio control and peripheral devices along the multiplex signal line of Miyazaki.

The motivation for doing so would have been to allow a user of the invention of Miyazaki to incorporate peripheral devices in the vehicles electrical system that do not contain a multiplex control unit as depicted in figure 2 #42. This would allow a user to use peripheral devices that are not pre-configured to be used with the system of Miyazaki.

Miyazaki does not disclose expressly wherein the system displays processed data on a display of the car stereo, however does disclose the processing of data including "a radio/CD selection instruction, a station selection instruction, a volume control instruction, etc. (col.4 ln.51-66). Miyazaki also teaches a navigation system (fig.4 #28) with a visual display (fig.4 #47) as an auxiliary device.

Kunimatsu teaches a navigation system (fig.1 #14) that is combined with an audio system (fig.1 #18) to provide information to a display (fig.1 #12).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine the audio and navigation systems of Miyazaki into one unit that displays information to a visual display as taught by Kunimatsu.

The motivation for doing so would have been to allow a user, who is seated near the car stereo to view the control instructions sent from the auxiliary device, such as volume, selected station, or selected CD. This would also allow the user to make desirable changes to the settings of the auxiliary device by merely controlling the car stereo. Hence, now the system of Miyazaki not only displays navigation information but also information pertaining to the audio system such as the data disclosed in column 4 lines 51-66.

With respect to claim 34, Miyazaki discloses the method of claim 30, wherein the step of receiving data from the device comprises retrieving video information from the device (col.5 ln.24-31).

With respect to claim 35, Miyazaki discloses the method of claim 30, wherein the step of displaying the formatted data comprises displaying the data in an LCD panel (fig.4 #47).

With respect to claim 36, Miyazaki discloses the method of claim 30 in view of Kunimatsu, wherein the step of displaying the formatted data comprises displaying the data in a graphical user interface at the car stereo (Kunimatsu: fig.1).

With respect to claim 37, Miyazaki discloses the method of claim 30 in view of Kunimatsu, wherein the step of displaying formatted data comprises displaying video at the car stereo (Kunimatsu: fig.1, fig.3A).

With respect to claim 38, Miyazaki discloses the method of claim 30, wherein the step of connecting the after-market device to the interface comprises connecting a CD player, CD changer (fig.3 #44), MP3 player, satellite receiver, or Digital Audio Broadcast (DAB) receiver to the interface.

With respect to claim 40, Miyazaki discloses the method of claim 30, however does not disclose expressly further comprising receiving a selection command from the car stereo and channeling data and audio from the auxiliary input source to the interface in response to the selection command. Miyazaki discloses wherein the control unit is connected to a disk changer (fig.3 #44). Official Notice is taken that it is well known in the art that car stereo units have means to select an audio tracks and disks in a CD changer. It would have been obvious to a person of ordinary skill in the art to send a selection command to the interface when an auxiliary unit such as a disk changer is connected. The motivation for doing so would have been to select an audio track to

play without having to manually access the disk changer.

With respect to claim 41, Miyazaki discloses the method of claim 40 in view of Kunimatsu, further comprising processing the data from the auxiliary input source for display on the car stereo (Kunimatsu: col.5 ln.56-62).

With respect to claim 82, Miyazaki discloses the device of claim 81 in view of Kunimatsu, further comprising means for converting the video information into a format compatible with the car stereo (Kunimatsu: fig.1 #44).

Miyazaki does not disclose expressly wherein the control commands are in a format incompatible with the after-market device, where the commands are processed into a format compatible to both the car stereo and the after-market device.

McConnell discloses means (fig.1) for receiving incompatible data from vehicle devices, that formats the data into a compatible form in order to allow communication between the devices (col.4 ln.7-19 "data protocol translation").

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the means of McConnell to format the data being transmitted between the audio control and peripheral devices along the multiplex signal line of Miyazaki.

The motivation for doing so would have been to allow a user of the invention of Miyazaki to incorporate peripheral devices in the vehicles electrical system that do not contain a multiplex control unit as depicted in figure 2 #42. This would allow a user to



use peripheral devices that are not pre-configured to be used with the system of Miyazaki.

With respect to claims 88-91, Miyazaki discloses the apparatus of claims 1 and 24, however does not disclose expressly wherein the connection between the auxiliary/after-market device and the interface comprises a bus or USB connection.

Official Notice is taken that bus and USB connections were well known in the art to connect devices for the purpose of exchanging data. At the time of the invention it would have been obvious to a person of ordinary skill in the art to use a USB connection to attach external devices to the audio system of Miyazaki. The motivation for doing so would have been to allow a user to make use of the plug and play capabilities of a USB connection.

With respect to claim 102, Miyazaki discloses the apparatus of claim 81, wherein the interface further comprises means (fig.2 #42) for receiving a control signal from the car stereo, processing the control signal, and transmitting the control signal to the auxiliary device (col.4 ln.51-67, col.5 ln.1-31).

Miyazaki does not disclose expressly wherein the means for receiving a control signal from the car stereo includes the capability of processing data from an incompatible form between devices into a compatible format that allows each device to function by executing the compatible formatted command.

McConnell discloses means (fig. 1) for receiving incompatible data from vehicle devices, that formats the data into a compatible form that allows communication between the devices (col. 4 ln. 7-19 "data protocol translation").

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the means of McConnell to format the data being transmitted between the audio control and peripheral devices along the multiplex signal line of Miyazaki.

The motivation for doing so would have been to allow a user of the invention of Miyazaki to incorporate peripheral devices in the vehicles electrical system that do not contain a multiplex control unit as depicted in figure 2 #42. This would allow a user to use peripheral devices that are not pre-configured to be used with the system of Miyazaki.

With respect to claim 103, Miyazaki discloses the apparatus of claim 81, wherein the interface further comprises means (fig. 2 #42) for receiving a data from the auxiliary device (Kunimatsu's video device, see claim 81), processing the control signal, and transmitting the control signal to the auxiliary device (col. 4 ln. 51-67, col. 5 ln. 1-31).

Miyazaki does not disclose expressly wherein the means for receiving a control signal from the car stereo includes the capability of processing data from an incompatible form between devices into a compatible format that allows each device to function by executing the compatible formatted command.

McConnell discloses means (fig. 1) for receiving incompatible data from vehicle devices, that formats the data into a compatible form that allows communication between the devices (col.4 ln.7-19 "data protocol translation").

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the means of McConnell to format the data being transmitted between the audio control and peripheral devices along the multiplex signal line of Miyazaki.

The motivation for doing so would have been to allow a user of the invention of Miyazaki to incorporate peripheral devices in the vehicles electrical system that do not contain a multiplex control unit as depicted in figure 2 #42. This would allow a user to use peripheral devices that are not pre-configured to be used with the system of Miyazaki.

**Claims 5,7-9,27,31-33 and 52-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki et al (US 6,163,079) in view of Kunimatsu et al (US 6,653,948 B1) in view of McConnell et al (US 6,608,399 B2) and in further view of Falcon (US 6,993,615 B2).**

With respect to claim 5, Miyazaki discloses the apparatus of claim 1, however does not disclose expressly wherein the interface further comprises a plug-and-play mode for automatically detecting a device type of the after-market audio device and integrating the after-market audio device based upon the device type.

Falcon discloses an external audio device (fig.4 #102) that interfaces with a car stereo (fig.4 #200) wherein the interfacing of the devices comprises a plug-and-play mode for automatically detecting a device type of the audio device and integrating the audio device based upon the device type (col.4 ln.25-42).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to automatically detect and integrate the external audio devices of Miyazaki with the audio control unit as is accomplished in the interfacing of Falcon.

The motivation for doing so would have been to provide a user-friendly system that does not require resetting control configurations each time a new auxiliary device is connected to or in communication with the audio control.

With respect to claims 7-9, Miyazaki discloses the apparatus of claim 1, however does not disclose expressly wherein the data comprises "track and time information", "song title and artist information", "channel number and channel information".

Falcon discloses an external audio device (fig.4 #102) that interfaces with a car stereo (fig.4 #200) wherein the interfacing information of the devices comprises "track

and time information" (col.8 ln.20-26), "song title and artist information" (col.8 ln.26-30), "channel number and channel information" (col.6 ln.41-47).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to include the interfacing information disclosed by Falcon in the data exchanged by Miyazaki.

The motivation for doing so would have been to provide the audio control unit with information pertaining to the operation of the auxiliary devices. This would allow the audio control to present this information to a user located in the front of the vehicle, hence allowing a user to view and control the reproduction of information without leaving his or her seat.

With respect to claim 27, Miyazaki discloses the apparatus of claim 24, however does not disclose expressly wherein a device type of the at least one of the plurality of auxiliary input sources is automatically detected by the interface and the at least one of the plurality of auxiliary input sources is automatically integrated with the car stereo based upon the device type.

Falcon discloses an external audio device (fig.4 #102) that interfaces with a car stereo (fig.4 #200) wherein the interfacing of the devices comprises automatically detecting a device type of the audio device and automatically integrating the device with the car stereo based upon the device type (col.4 ln.25-42).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to automatically detect and integrate the external audio devices of Miyazaki with the audio control unit as is accomplished in the interfacing of Falcon.

The motivation for doing so would have been to provide a user-friendly system that does not require resetting control configurations each time a new auxiliary device is connected to or in communication with the audio control.

With respect to claims 31-33, Miyazaki discloses the apparatus of claim 30, however does not disclose expressly wherein the data comprises "track and time information", "MP3 song, title, track, and time information", "channel number, channel name, artist, and song information".

Falcon discloses an external audio device (fig.4 #102) that interfaces with a car stereo (fig.4 #200) wherein the interfacing information of the devices comprises "track and time information" (col.8 ln.20-26), "MP3 song, title, track, and time information" (col.8 ln.20-30), "channel number, channel name, artist, and song information" (col.6 ln.41-47, col.8 ln.18-40).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to include the interfacing information disclosed by Falcon in the data exchanged by Miyazaki.

The motivation for doing so would have been to provide the audio control unit with information pertaining to the operation of the auxiliary devices. This would allow the audio control to present this information to a user located in the front of the vehicle,

hence allowing a user to view and control the reproduction of information without leaving his or her seat.

With respect to claim 52, Miyazaki discloses the method of claim 51, however does not disclose expressly further comprising displaying formatted data on the car stereo.

Kunimatsu teaches a navigation system (fig.1 #14) that is combined with an audio system (fig.1 #18) to provide information to a display (fig.1 #12).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine the audio and navigation systems of Miyazaki into one unit that displays the formatted data to a visual display as taught by Kunimatsu.

The motivation for doing so would have been to allow a user, who is seated near the car stereo to view the control instructions sent from the auxiliary device, such as volume, selected station, or selected CD. This would also allow the user to make desirable changes to the settings of the auxiliary device by merely controlling the car stereo. Hence, now the system of Miyazaki not only displays navigation information but also information pertaining to the audio system such as the data disclosed in column 4 lines 51-66.

With respect to claim 53, Miyazaki discloses the method of claim 52 in view of Kunimatsu, however does not disclose expressly wherein displayed formatted data

comprises; channel numbers, channel names, titles, tracks, song names, or artist names on the car stereo.

Falcon discloses an external audio device (fig.4 #102) that interfaces with a car stereo (fig.4 #200) wherein the interfacing information of the devices comprises channel numbers, channel names, titles, tracks, song names, or artist names on the car stereo (col.8 ln.20-40).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to include the interfacing information disclosed by Falcon in the data to be displayed the combination of Kunimatsu and Miyazaki.

The motivation for doing so would have been to graphically provide the user with information pertaining the operation of the auxiliary device.

With respect to claim 54, Miyazaki discloses the method of claim 52 in view of Kunimatsu, wherein the step of displaying formatted data comprises displaying video on the car stereo (Kunimatsu: col.5 ln.41-44).

**Claims 42,45,83-84 and 100-103 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki et al (US 6,163,079) in view of McConnell et al (US 6,608,399 B2).**

With respect to claim 42, Miyazaki discloses an apparatus for docking a portable device (fig.2 #40A) for integration with a car stereo comprising: a storage area (fig.7



#50, col.2 ln.29-42) remote from a car stereo for storing the portable device; a docking portion (fig.2 #4C) within the storage area for communicating and physically mating with the portable device; a data port (fig.1 "Ls") in communication with the docking portion (fig.2 #4C), the data port connectable with a device (fig.2 #42) for integrating the portable device with the car stereo; and an interface (fig.2 #38) connected to the data port and to the car stereo, the interface channeling audio from the portable device to the car stereo, processing control commands generated by the car stereo, and dispatching the commands to the portable device for execution thereby (col.4 ln.51-67, col.5 ln.1-31).

Miyazaki does not disclose expressly wherein the control commands are in a format incompatible with the after-market device, where the commands are processed into a format compatible to both the car stereo and the after-market device.

McConnell discloses means (fig.1) for receiving incompatible data from vehicle devices, that formats the data into a compatible form in order to allow communication between the devices (col.4 ln.7-19 "data protocol translation").

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the means of McConnell to format the data being transmitted between the audio control and peripheral devices along the multiplex signal line of Miyazaki.

The motivation for doing so would have been to allow a user of the invention of Miyazaki to incorporate peripheral devices in the vehicles electrical system that do not contain a multiplex control unit as depicted in figure 2 #42. This would allow a user to

use peripheral devices that are not pre-configured to be used with the system of Miyazaki.

With respect to claim 45, Miyazaki discloses the apparatus of claim 42, wherein the storage area further comprises a top portion (fig.14 #17) and a bottom portion (fig.14 #50) defining a sleeve (fig.14 #41) for holding the portable device.

With respect to claim 83, Miyazaki discloses an audio device integration system comprising: a car stereo (fig.1 #32); a portable audio device external to the car stereo (fig.2 #40A); an interface (fig.1 #38) connected between the car stereo and the portable audio device, the interface including; means (fig.2 #42) for generating a device presence signal and transmitting the signal to the car stereo to maintain the car stereo in an operational state (col.4 ln.54-66); means for receiving a control command from the car stereo, processing the control command, and transmitting the control command (col.4 ln.51-67, col.5 ln.1-31); and means (fig.1 "Ls") for transmitting audio from the portable audio device to the car stereo.

Miyazaki does not disclose expressly wherein the control commands are in a format incompatible with the after-market device, where the commands are processed into a format compatible to both the car stereo and the after-market device.

McConnell discloses means (fig. 1) for receiving incompatible data from vehicle devices, that formats the data into a compatible form in order to allow communication between the devices (col. 4 ln. 7-19 "data protocol translation").

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the means of McConnell to format the data being transmitted between the audio control and peripheral devices along the multiplex signal line of Miyazaki.

The motivation for doing so would have been to allow a user of the invention of Miyazaki to incorporate peripheral devices in the vehicles electrical system that do not contain a multiplex control unit as depicted in figure 2 #42. This would allow a user to use peripheral devices that are not pre-configured to be used with the system of Miyazaki.

With respect to claim 84, Miyazaki discloses the apparatus of claim 83, wherein the portable audio device comprises a portable CD player (fig. 2 #44).

With respect to claims 100 and 101, Miyazaki discloses the apparatus of claim 83, however does not disclose expressly wherein the connection between the portable audio device and the interface comprises a bus or USB connection.

Official Notice is taken that bus and USB connections were well known in the art to connect devices for the purpose of exchanging data. At the time of the invention it would have been obvious to a person of ordinary skill in the art to use a USB connection to attach external devices to the audio system of Miyazaki. The motivation for doing so would have been to allow a user to make use of the plug and play capabilities of a USB connection.

**Claim 47 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki et al (US 6,163,079) in view of Falcon (US 6,993,615 B2).**

With respect to claim 47, Miyazaki discloses a method of integrating an after-market device (fig.2 #40A) with an Original Equipment Manufacturer (OEM) or after-market car stereo (fig.1 #32) comprising: connecting the after-market device to an interface (fig.1 #38); connecting the interface to a car stereo; generating and transmitting a device presence signal to the car stereo to maintain the car stereo in an operational state responsive to external signals (col.4 ln.54-57), the device presences signal based upon the car stereo; channeling audio signals from the after-market device to the car stereo using the interface (col.4 ln.51-67, col.5 ln.1-4).

Miyazaki does not disclose expressly wherein the method determines whether the car stereo is an OEM car stereo or an after-market car stereo.

Falcon discloses a method of interfacing an after-market device (fig.4 #102) with a car stereo (fig.4 #200), wherein the method includes determining the type of the car stereo (col.4 ln.25-42).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the method of Falcon to determine the type of car stereo used in the invention of Miyazaki, whether it be an OEM car stereo or an after-market car stereo.

The motivation for doing so would have been to supply the auxiliary devices of Miyazaki with information pertaining to the capabilities of the currently installed control unit. This would ultimately allow the system to take advantage of any options provided in an after-market device not consistent with OEM devices, or vice versa.

**Claims 55-57,85 and 92-93 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki et al (US 6,163,079) in view of Grady (US 6,591,085 B1) and in further view of McConnell et al (US 6,608,399 B2).**

With respect to claim 55, Miyazaki discloses an audio device integration system comprising: a car stereo (fig.1 #32); an auxiliary device (fig.2 #40A) external to the car stereo; an interface (fig.1 #38) connected between the car stereo and the auxiliary device, the interface including; means (fig.2 #42) for generating a device presence signal and transmitting the signal to the car stereo to maintain the car stereo in an operational state (col.4 ln.54-63); means (fig.2 #42) for receiving a control command from the car stereo, processing the control command, and transmitting the control command to the auxiliary device (col.4 ln.51-67, col.5 ln.1-31); and means (fig.1 "Ls") for transmitting audio from the auxiliary device to the car stereo.

Miyazaki does not disclose expressly wherein the means for receiving a control command from the car stereo and the means for receiving data from the after-market device include the capability of processing data from an incompatible form between devices into a compatible format that allows each device to function by executing the compatible formatted command.

McConnell discloses means (fig. 1) for receiving incompatible data from vehicle devices, that formats the data into a compatible form that allows communication between the devices (col. 4 ln. 7-19 "data protocol translation").

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the means of McConnell to format the data being transmitted between the audio control and peripheral devices along the multiplex signal line of Miyazaki.

The motivation for doing so would have been to allow a user of the invention of Miyazaki to incorporate peripheral devices in the vehicles electrical system that do not contain a multiplex control unit as depicted in figure 2 #42. This would allow a user to use peripheral devices that are not pre-configured to be used with the system of Miyazaki.

Miyazaki does not disclose expressly wherein the auxiliary device is a portable MP3 player.

Grady discloses an MP3 player (fig. 8 #56) external to a car stereo (fig. 8 #68) that is in communication with the stereo (col. 5 ln. 55-64).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use an MP3 player such as the one disclosed by Grady as the auxiliary device of Miyazaki.

The motivation for doing so would have been to allow a user of the system of Miyazaki to reproduce sound from an MP3 into the vehicle environment.

With respect to claim 56, Miyazaki discloses the apparatus of claim 55, wherein the car stereo is an Original Equipment Manufacturer (OEM) car stereo (col.1 ln.12-36).

With respect to claim 57, Miyazaki discloses the apparatus of claim 55, however does not disclose expressly wherein the car stereo is an after-market car stereo. Miyazaki discloses a system for connecting auxiliary devices to a vehicles control system, however does not make the distinction that the control system is replaceable by an after-market control, such as an after-market car stereo to replace the factory stereo control components. Official Notice is taken that after-market car stereos are well known in the art, and the invention of Miyazaki is not limited to interacting with only factory stereo components. At the time of the invention it would have been obvious that a user of Miyazaki's invention could replace the factory stereo with an after-market unit and continue to achieve the same results. The motivation for using an after-market unit would have been to upgrade the vehicles sound system. These upgrades could include features such as, bass and stereophonic outputs, or mp3 and satellite capabilities.



With respect to claim 85, Miyazaki discloses the apparatus of claim 83, however does not disclose expressly wherein the portable audio device is a portable MP3 player.

Grady discloses an MP3 player (fig.8 #56) external to a car stereo (fig.8 #68) that is in communication with the stereo (col.5 ln.55-64).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use an MP3 player such as the one disclosed by Grady as the auxiliary device of Miyazaki.

The motivation for doing so would have been to allow a user of the system of Miyazaki to reproduce sound from an MP3 into the vehicle environment.

With respect to claims 92 and 93, Miyazaki discloses the apparatus of claim 55, however does not disclose expressly wherein the connection between the auxiliary/after-market device and the interface comprises a bus or USB connection.

Official Notice is taken that bus and USB connections were well known in the art to connect devices for the purpose of exchanging data. At the time of the invention it would have been obvious to a person of ordinary skill in the art to use a USB connection to attach external devices to the audio system of Miyazaki. The motivation for doing so would have been to allow a user to make use of the plug and play capabilities of a USB connection.

**Claims 63-65,86 and 94-95 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki et al (US 6,163,079) in view of Fuchs et al (US 6,346,917 B1) and in further view of McConnell et al (US 6,608,399 B2).**

With respect to claim 63, Miyazaki discloses an audio device integration system comprising: a car stereo (fig.1 #32); an auxiliary device external (fig.2 #40A) to the car stereo; an interface (fig.1 #38) connected between the car stereo and the auxiliary device, the interface including: means (fig.2 #42) for generating a device presence signal and transmitting the signal to the car stereo to maintain the car stereo in an operational state (col.4 ln.54-63); means (fig.2 #42) for receiving a control command from the car stereo, processing the control command, and transmitting the control

command to the auxiliary device (col.4 ln.51-67, col.5 ln.1-31); and means (fig.1 "Ls") for transmitting audio from the auxiliary device to the car stereo.

Miyazaki does not disclose expressly wherein the means for receiving a control command from the car stereo includes the capability of processing data from an incompatible form between devices into a compatible format that allows each device to function by executing the compatible formatted command.

McConnell discloses means (fig.1) for receiving incompatible data from vehicle devices, that formats the data into a compatible form that allows communication between the devices (col.4 ln.7-19 "data protocol translation").

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the means of McConnell to format the data being transmitted between the audio control and peripheral devices along the multiplex signal line of Miyazaki.

The motivation for doing so would have been to allow a user of the invention of Miyazaki to incorporate peripheral devices in the vehicles electrical system that do not contain a multiplex control unit as depicted in figure 2 #42. This would allow a user to use peripheral devices that are not pre-configured to be used with the system of Miyazaki.

Miyazaki does not disclose expressly wherein the auxiliary device is a satellite radio receiver.

Fuchs discloses a satellite radio receiver (fig.4 #30) external to a car stereo that is in communication with the stereo (col.1 ln.51-62).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use a satellite radio receiver such as the one disclosed by Fuchs as the auxiliary device of Miyazaki.

The motivation for doing so would have been to allow a user of the system of Miyazaki to reproduce sound from a satellite broadcast into the vehicle environment.

With respect to claim 64, Miyazaki discloses the apparatus of claim 63, wherein the car stereo is an Original Equipment Manufacturer (OEM) car stereo (col.1 ln.12-36).

With respect to claim 65, Miyazaki discloses the apparatus of claim 63, however does not disclose expressly wherein the car stereo is an after-market car stereo. Miyazaki discloses a system for connecting auxiliary devices to a vehicles control system, however does not make the distinction that the control system is replaceable by an after-market control, such as an after-market car stereo to replace the factory stereo control components. Official Notice is taken that after-market car stereos are well known in the art, and the invention of Miyazaki is not limited to interacting with only factory stereo components. At the time of the invention it would have been obvious that a user of Miyazaki's invention could replace the factory stereo with an after-market unit and continue to achieve the same results. The motivation for using an after-market unit would have been to upgrade the vehicles sound system. These upgrades could include features such as, bass and stereophonic outputs, or mp3 and satellite capabilities.

With respect to claim 86, Miyazaki discloses the apparatus of claim 83, however does not disclose expressly wherein the portable device is a portable satellite radio receiver.

Fuchs discloses a portable satellite radio receiver (fig.4 #30) external to a car stereo that is in communication with the stereo (col.1 ln.51-62).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use a satellite radio receiver such as the one disclosed by Fuchs as the auxiliary device of Miyazaki.

The motivation for doing so would have been to allow a user of the system of Miyazaki to reproduce sound from a satellite broadcast into the vehicle environment.

With respect to claims 94 and 95, Miyazaki discloses the apparatus of claim 63, however does not disclose expressly wherein the connection between the auxiliary/after-market device and the interface comprises a bus or USB connection.

Official Notice is taken that bus and USB connections were well known in the art to connect devices for the purpose of exchanging data. At the time of the invention it would have been obvious to a person of ordinary skill in the art to use a USB connection to attach external devices to the audio system of Miyazaki. The motivation for doing so would have been to allow a user to make use of the plug and play capabilities of a USB connection.

**Claims 72-74,87 and 96-97 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki et al (US 6,163,079) in view of Lee et al (US 6,374,177B1) and in further view of McConnell et al (US 6,608,399 B2).**

With respect to claim 72, Miyazaki discloses an audio device integration system comprising: a car stereo (fig.1 #32); an auxiliary device external (fig.2 #40A) to the car stereo; an interface (fig.1 #38) connected between the car stereo and the auxiliary device, the interface including: means (fig.2 #42) for generating a device presence signal and transmitting the signal to the car stereo to maintain the car stereo in an operational state (col.4 ln.54-63); means for receiving a control command from the car stereo, processing the control command and transmitting the command to the auxiliary

device (col.4 ln.51-67, col.5 ln.1-31); and means (fig.1 "Ls") for transmitting audio from the auxiliary device to the car stereo.

Miyazaki does not disclose expressly wherein the means for receiving a control command from the car stereo includes the capability of processing data from an incompatible form between devices into a compatible format that allows each device to function by executing the compatible formatted command.

McConnell discloses means (fig.1) for receiving incompatible data from vehicle devices, that formats the data into a compatible form that allows communication between the devices (col.4 ln.7-19 "data protocol translation").

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the means of McConnell to format the data being transmitted between the audio control and peripheral devices along the multiplex signal line of Miyazaki.

The motivation for doing so would have been to allow a user of the invention of Miyazaki to incorporate peripheral devices in the vehicles electrical system that do not contain a multiplex control unit as depicted in figure 2 #42. This would allow a user to use peripheral devices that are not pre-configured to be used with the system of Miyazaki.

Miyazaki does not disclose expressly wherein the auxiliary device is a digital audio broadcast receiver.

Lee discloses a digital audio broadcast receiver (fig.2 #100) external to an audio control (fig.2 #90) that is in communication with the stereo (col.8 ln.25-50).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use a satellite radio receiver such as the one disclosed by Lee as the auxiliary device of Miyazaki.

The motivation for doing so would have been to allow a user of the system of Miyazaki to reproduce sound from a digital audio broadcast into the vehicle environment such as a streaming audio file.

With respect to claim 73, Miyazaki discloses the apparatus of claim 72, wherein the car stereo is an Original Equipment Manufacturer (OEM) car stereo (col.1 ln.12-36).



With respect to claim 74, Miyazaki discloses the apparatus of claim 72, however does not disclose expressly wherein the car stereo is an after-market car stereo. Miyazaki discloses a system for connecting auxiliary devices to a vehicles control system, however does not make the distinction that the control system is replaceable by an after-market control, such as an after-market car stereo to replace the factory stereo control components. Official Notice is taken that after-market car stereos are well known in the art, and the invention of Miyazaki is not limited to interacting with only factory stereo components. At the time of the invention it would have been obvious that a user of Miyazaki's invention could replace the factory stereo with an after-market unit and continue to achieve the same results. The motivation for using an after-market unit would have been to upgrade the vehicles sound system. These upgrades could include features such as, bass and stereophonic outputs, or mp3 and satellite capabilities.

With respect to claim 87, Miyazaki discloses the apparatus of claim 83, however does not disclose expressly wherein the portable audio device comprises a portable digital audio broadcast receiver.

Lee discloses a digital audio broadcast receiver (fig.2 #100) external to an audio control (fig.2 #90) that is in communication with the stereo (col.8 ln.25-50).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use a satellite radio receiver such as the one disclosed by Lee as the auxiliary device of Miyazaki.

The motivation for doing so would have been to allow a user of the system of Miyazaki to reproduce sound from a digital audio broadcast into the vehicle environment such as a streaming audio file.

With respect to claims 96 and 97, Miyazaki discloses the apparatus of claim 72, however does not disclose expressly wherein the connection between the auxiliary/after-market device and the interface comprises a bus or USB connection.

Official Notice is taken that bus and USB connections were well known in the art to connect devices for the purpose of exchanging data. At the time of the invention it would have been obvious to a person of ordinary skill in the art to use a USB connection to attach external devices to the audio system of Miyazaki. The motivation for doing so would have been to allow a user to make use of the plug and play capabilities of a USB connection.

**Claims 81 and 98-99 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki et al (US 6,163,079) in view of Kunimatsu et al (US 6,653,948 B1).**

With respect to claim 81, Miyazaki discloses a device for information for use with a car stereo, comprising: a car stereo (fig.1 #32); an auxiliary device external to the car stereo (fig.2 #40A); an interface (fig.1 #38) connected between the car stereo and the auxiliary device, the interface including; means (fig.2 #42) for generating a device

presence signal and transmitting the signal to the car stereo to maintain the car stereo in an operational state (col.4 ln.54-63); and means (fig.1 "Ls") for transmitting information from the auxiliary device to the car stereo.

Miyazaki does not disclose expressly wherein the auxiliary device is a video device, however does teach a navigation system (fig.4 #28) with a visual display (fig.4 #47) as an auxiliary device.

Kunimatsu teaches a navigation system (fig.1 #14) that is combined with an audio system (fig.1 #18) and a video system (fig.1 #44,50,52) to provide information to a display (fig.1 #12).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine the audio, and navigation systems of Miyazaki into one unit that displays information to a visual display as taught by Kunimatsu. It would also have been obvious to a person of ordinary skill in the art to include the video system disclosed by Kunimatsu in the system of Miyazaki.

The motivation for doing so would have been to allow a user, who is seated near the car stereo to view the control instructions sent from the auxiliary device, such as volume, selected station, or selected CD. This would also allow the user to make desirable changes to the settings of the auxiliary device by merely controlling the car stereo. Hence, now the system of Miyazaki not only displays navigation information but also information pertaining to the audio system such as the data disclosed in column 4 lines 51-66. This would also provide a user with the option to view television broadcasts.

With respect to claims 98 and 99, Miyazaki discloses the apparatus of claim 81, however does not disclose expressly wherein the connection between the video device and the interface comprises a bus or USB connection.

Official Notice is taken that bus and USB connections were well known in the art to connect devices for the purpose of exchanging data. At the time of the invention it would have been obvious to a person of ordinary skill in the art to use a USB connection to attach external devices to the audio system of Miyazaki. The motivation for doing so would have been to allow a user to make use of the plug and play capabilities of a USB connection.

**Claims 43 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki et al (US 6,163,079) in view of McConnell et al (US 6,608,399 B2) and in further view of Holland (US 2002/0085730 A1).**

With respect to claim 43, Miyazaki discloses the apparatus of claim 42, wherein the storage area further comprises a top member (fig.14 #17), bottom member (fig.14 #50). Miyazaki does not disclose expressly wherein the top member and the bottom member are interconnected at an edge by a hinge.

Holland discloses an apparatus for docking with a portable device further comprising a hinge (pg.1 [0009]) for connecting a top member (fig.2 #5) and a bottom member (fig.2 #3) at an edge.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the hinge of Holland to connect the top and bottom portions of Miyazaki.

The motivation for doing so would have been to provide a closable lid to the protective case (Miyazaki: fig.14 #50). This would provide a case that does not have to slide in and out of a vehicle compartment but rather opens on the hinge, hence allowing for after market installation due to a lack in the need for a manufactured vehicle compartment.

With respect to claim 46, Miyazaki discloses the apparatus of claim 43 in view of Holland, further comprising a clasp (Holland: fig.4 #9) for retaining the top and bottom members in a closed position (Holland: pg.2 [0024][0025]).

**Claims 44 and 48-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki et al (US 6,163,079) in view of Falcon (US 6,993,615 B2) and in further view of McConnell et al (US 6,608,399 B2).**

With respect to claim 44, Miyazaki discloses the apparatus of claim 42, however does not disclose expressly wherein the data port comprises an RS-232 or Universal Serial Bus (USB) port.

Falcon discloses a car stereo (fig.4 #200) with USB ports (fig.4 #216) for the connection of peripheral devices (col.8 ln.6-7).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the USB ports of Falcon as the data ports of Miyazaki.

The motivation for doing so would have been to provide the system of Miyazaki with a plug and play option that is consistent with USB connections.

With respect to claim 48, Miyazaki discloses the method of claim 47, further comprising receiving control commands from the car stereo at the interface (col.4 ln.51-67, col.5 ln.1-4).

Miyazaki does not disclose expressly wherein the control commands are in a format incompatible with the after-market device, where the commands are processed into a format compatible to both the car stereo and the after-market device.

McConnell discloses means (fig.1) for receiving incompatible data from vehicle devices, that formats the data into a compatible form in order to allow communication between the devices (col.4 ln.7-19 "data protocol translation").

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the means of McConnell to format the data being transmitted between the audio control and peripheral devices along the multiplex signal line of Miyazaki.

The motivation for doing so would have been to allow a user of the invention of Miyazaki to incorporate peripheral devices in the vehicles electrical system that do not contain a multiplex control unit as depicted in figure 2 #42. This would allow a user to use peripheral devices that are not pre-configured to be used with the system of Miyazaki.

With respect to claim 49, Miyazaki discloses the method of claim 48, further comprising converting the control commands into a format recognizable by the after-market audio device. It is implied, that in order for the car stereo and after-market



devices of Miyazaki to interact with each other properly, the control commands must be converted into formats recognizable by each device.

With respect to claim 50, Miyazaki discloses the method of claim 49, further comprising dispatching formatted commands to the after-market audio device for execution thereby (col.4 ln.63-67 col.5 ln.1-4).

With respect to claim 51, Miyazaki discloses the method of claim 47, however does not disclose expressly converting data received at the interface from the after-market audio device in a format incompatible with the car stereo into a format compatible with the car stereo.

McConnell discloses means (fig.1) for receiving incompatible data from vehicle devices, that formats the data into a compatible form in order to allow communication between the devices (col.4 ln.7-19 "data protocol translation").

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the means of McConnell to format the data being transmitted between the audio control and peripheral devices along the multiplex signal line of Miyazaki.

The motivation for doing so would have been to allow a user of the invention of Miyazaki to incorporate peripheral devices in the vehicles electrical system that do not contain a multiplex control unit as depicted in figure 2 #42. This would allow a user to

use peripheral devices that are not pre-configured to be used with the system of Miyazaki.

**Claims 59 and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki et al (US 6,163,079) in view of McConnell et al (US 6,608,399 B2) in view of Grady (US 6,591,085 B1) and in further view of Kunimatsu et al (US 6,653,948 B1).**

With respect to claim 59, Miyazaki discloses the system of claim 55 as modified by McConnell and Grady, wherein the interface further includes means for receiving data from the MP3 player in a format incompatible with the car stereo, processing the data into formatted data compatible with the car stereo, and transmitting the formatted data to the car stereo.

Miyazaki does not disclose expressly wherein the means for receiving data includes the capability of displaying data on a display of the car stereo, however does disclose the processing of data including "a radio/CD selection instruction; a station selection instruction, a volume control instruction, etc. (col.4 ln.51-66). Miyazaki also teaches a navigation system (fig.4 #28) with a visual display (fig.4 #47) as an auxiliary device.

Kunimatsu teaches a navigation system (fig.1 #14) that is combined with an audio system (fig.1 #18) to provide information to a display (fig.1 #12).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine the audio and navigation systems of Miyazaki into one unit that displays information to a visual display as taught by Kunimatsu. This would ultimately give the system of Miyazaki the capability of displaying graphically information received from any auxiliary devices, such as an MP3 player.

The motivation for doing so would have been to allow a user, who is seated near the car stereo to view the control instructions sent from the auxiliary device, such as volume, selected station, or selected CD. This would also allow the user to make desirable changes to the settings of the auxiliary device by merely controlling the car stereo. Hence, now the system of Miyazaki not only displays navigation information but also information pertaining to the audio system such as the data disclosed in column 4 lines 51-66.

With respect to claim 62, Miyazaki discloses the apparatus of claim 59, wherein the commands are input by a user using one or more control buttons or presets on the car stereo. It is implied that the audio control unit of Miyazaki contains control buttons or presets to control the functions disclosed on column 4 lines 57-60. Without control buttons or presets, it would not be possible for a user to control these disclosed functions.

**Claims 60-61 rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki et al (US 6,163,079) in view of McConnell et al (US 6,608,399 B2) in view of Grady (US 6,591,085 B1) in view of Kunimatsu et al (US 6,653,948 B1) and in further view of Falcon (US 6,993,615 B2).**

With respect to claims 60-61, Miyazaki discloses the apparatus of claim 59 in view of Kunimatsu, however does not disclose expressly wherein displayed formatted data comprises; track and time information and song title and artist information.

Falcon discloses an external audio device (fig.4 #102) that interfaces with a car stereo (fig.4 #200) wherein the interfacing information of the devices comprises track and time information and song title and artist information (col.8 ln.20-40).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to include the interfacing information disclosed by Falcon in the data to be displayed the combination of Kunimatsu and Miyazaki.

The motivation for doing so would have been to graphically provide the user with information pertaining the operation of the MP3 player.

**Claims 67 and 71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki et al (US 6,163,079) in view of Fuchs et al (US 6,346,917 B1) in view of McConnell et al (US 6,608,399 B2) and in further view of Kunimatsu et al (US 6,653,948 B1).**

With respect to claim 67, Miyazaki discloses the system of claim 63 as modified by McConnell and Fuchs, wherein the interface further includes means for receiving data from the satellite radio receiver in a format incompatible with the car stereo, processing the data into formatted data compatible with the car stereo, and transmitting the formatted data to the car stereo.

Miyazaki does not disclose expressly wherein the means for processing data includes the capability of displaying data on a display of the car stereo, however does disclose the processing of data including "a radio/CD selection instruction, a station

selection instruction, a volume control instruction, etc. (col.4 ln.51-66). Miyazaki also teaches a navigation system (fig.4 #28) with a visual display (fig.4 #47) as an auxiliary device.

Kunimatsu teaches a navigation system (fig.1 #14) that is combined with an audio system (fig.1 #18) to provide information to a display (fig.1 #12).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine the audio and navigation systems of Miyazaki into one unit that displays information to a visual display as taught by Kunimatsu. This would ultimately give the system of Miyazaki the capability of displaying graphically information received from any auxiliary devices, such as a satellite radio receiver.

The motivation for doing so would have been to allow a user, who is seated near the car stereo to view the control instructions sent from the auxiliary device, such as volume, selected station, or selected CD. This would also allow the user to make desirable changes to the settings of the auxiliary device by merely controlling the car stereo. Hence, now the system of Miyazaki not only displays navigation information but also information pertaining to the audio system such as the data disclosed in column 4 lines 51-66.

With respect to claim 71, Miyazaki discloses the apparatus of claim 67, wherein the commands are input by a user using one or more control buttons or presets on the car stereo. It is implied that the audio control unit of Miyazaki contains control buttons or presets to control the functions disclosed on column 4 lines 57-60. Without control

buttons or presets, it would not be possible for a user to control these disclosed functions.

**Claims 68-70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki et al (US 6,163,079) in view of Fuchs et al (US 6,346,917 B1) in view of McConnell et al (US 6,608,399 B2) in view of Kunimatsu et al (US 6,653,948 B1) and in further view of Falcon (US 6,993,615 B2).**

With respect to claims 68-70, Miyazaki discloses the apparatus of claim 67 in view of Kunimatsu, however does not disclose expressly wherein displayed formatted data comprises; track and time information and song title and artist information, channel number and a channel name.

Falcon discloses an external audio device (fig.4 #102) that interfaces with a car stereo (fig.4 #200) wherein the interfacing information of the devices comprises track and time information and song title and artist information, channel number and a channel name (col.8 ln.20-40).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to include the interfacing information disclosed by Falcon in the data to be displayed the combination of Kunimatsu and Miyazaki.

The motivation for doing so would have been to graphically provide the user with information pertaining the operation of the satellite radio receiver.

**Claims 76 and 80 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki et al (US 6,163,079) in view of Lee et al (US 6,374,177 B1) in view of McConnell et al (US 6,608,399 B2) and in further view of Kunimatsu et al (US 6,653,948 B1).**

With respect to claim 76, Miyazaki discloses the system of claim 72 as modified by McConnell and Lee, wherein the interface further includes means for receiving data from the digital audio broadcast receiver in a format incompatible with the car stereo, processing the data into formatted data compatible with the car stereo, and transmitting the formatted data to the car stereo.

Miyazaki does not disclose expressly wherein the means for processing data includes the capability of displaying data on a display of the car stereo, however does disclose the processing of data including "a radio/CD selection instruction, a station selection instruction, a volume control instruction, etc. (col.4 ln.51-66). Miyazaki also teaches a navigation system (fig.4 #28) with a visual display (fig.4 #47) as an auxiliary device.

Kunimatsu teaches a navigation system (fig.1 #14) that is combined with an audio system (fig.1 #18) to provide information to a display (fig.1 #12).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine the audio and navigation systems of Miyazaki into one unit that displays information to a visual display as taught by Kunimatsu. This would



ultimately give the system of Miyazaki the capability of displaying graphically information received from any auxiliary devices, such as a digital audio broadcast receiver.

The motivation for doing so would have been to allow a user, who is seated near the car stereo to view the control instructions sent from the auxiliary device, such as volume, selected station, or selected CD. This would also allow the user to make desirable changes to the settings of the auxiliary device by merely controlling the car stereo. Hence, now the system of Miyazaki not only displays navigation information but also information pertaining to the audio system such as the data disclosed in column 4 lines 51-66.

With respect to claim 80, Miyazaki discloses the apparatus of claim 76, wherein the commands are input by a user using one or more control buttons or presets on the car stereo. It is implied that the audio control unit of Miyazaki contains control buttons or presets to control the functions disclosed on column 4 lines 57-60. Without control buttons or presets, it would not be possible for a user to control these disclosed functions.

**Claims 77-79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki et al (US 6,163,079) in view of Lee et al (US 6,374,177 B1) in view of Kanimatsu et al (US 6,653,948 B1) in view of McConnell et al (US 6,608,399 B2) and in further view of Falcon (US 6,993,615 B2).**

With respect to claims 77-79, Miyazaki discloses the apparatus of claim 76 in view of Kunimatsu, however does not disclose expressly wherein displayed formatted data comprises; track and time information and song title and artist information, channel number and a channel name.

Falcon discloses an external audio device (fig.4 #102) that interfaces with a car stereo (fig.4 #200) wherein the interfacing information of the devices comprises track and time information and song title and artist information, channel number and a channel name (col.8 ln.20-40).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to include the interfacing information disclosed by Falcon in the data to be displayed the combination of Kunimatsu and Miyazaki.

The motivation for doing so would have been to graphically provide the user with information pertaining the operation of the digital audio broadcast receiver.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-13, 15-38, 40-46, 48-57, 59-65, 67-74, 76-80 and 82-104 have been considered but are moot in view of the new ground(s) of rejection.

With respect to claims 47 and 81, the Applicant argues that the Miyazaki reference does not teach wherein the system "generates a device presence signal to the car stereo to maintain the car stereo in an operational state responsive to external signals". The Examiner disagrees with this assertion. Miyazaki teaches in column 4

lines 54-67, that when switch unit #43 is operated, a multiplex signal ("device presence signal") containing instruction data is sent to the audio control unit ("car stereo").

Miyazaki continues to teach that this multiplex signal may contain instructions pertaining to an on/off changeover instruction, hence informing the audio control of the present operational state of the detachable unit #40A. It is implied that the audio control unit stays in a responsive state to the multiplex signal, so when an instruction from the multiplex control unit transmits data containing an "on" instruction the audio control unit may respond, or else the audio control unit would never recognize the presence of the detachable unit.

#### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of


the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason R. Kurr whose telephone number is (571) 272-0552. The examiner can normally be reached on M-F 10:00am to 6:30pm.

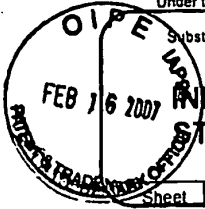
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on (571) 273-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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|------------------------|--------------------|
| Application Number     | 10/316,961         |
| Filing Date            | December 11, 2002  |
| First Named Inventor   | Ira Marlowe        |
| Art Unit               | 2615               |
| Examiner Name          | Jason Richard Kurr |
| Attorney Docket Number | 99879-00005        |

Sheet 1 of 2

| U. S. PATENT DOCUMENTS |                       |                 |  |                             |   |   |
|------------------------|-----------------------|-----------------|--|-----------------------------|---|---|
| Examiner Initials*     | Cite No. <sup>1</sup> | Document Number |  | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear |
|                        |                       | US-             | Number-Kind Code <sup>2</sup> (if known) |                             |   |   |
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| JK                     | 2                     | US-             | 2004/0091123 A1                          | 05/13/2004                  | Stark, et al.                                   |   |
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| Examiner Initials*       | Cite No. <sup>1</sup> | Foreign Patent Document   |  | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear | T <sup>6</sup> |
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|                          |                       |                           |  |                             |   |   |                |

|                    |              |                 |            |
|--------------------|--------------|-----------------|------------|
| Examiner Signature | /Jason Kurr/ | Date Considered | 03/07/2007 |
|--------------------|--------------|-----------------|------------|

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 801.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

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|   |             |                          |                    |
|---|-------------|--------------------------|--------------------|
| Substitute for form 1449/PTO<br><br><b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b><br><br>(Use as many sheets as necessary) |             | <i>Complete if Known</i> |                    |
|   |             | Application Number       | 10/316,961         |
|   |             | Filing Date              | December 11, 2002  |
|   |             | First Named Inventor     | Ira Marlowe        |
|   |             | Art Unit                 | 2615               |
|   |             | Examiner Name            | Jason Richard Kurr |
| Sheet <b>2</b>  | of <b>2</b> | Attorney Docket Number   | 99879-00005        |

| NON PATENT LITERATURE DOCUMENTS |                       |   |                |
|---------------------------------|-----------------------|---|----------------|
| Examiner Initials*              | Cite No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T <sup>2</sup> |
| JK                              | 4                     | "Blitz Safe Offers XM Cables for Radios," printout from website <a href="http://www.twice.com/article/CA190041.html?text=blitz+safe">http://www.twice.com/article/CA190041.html?text=blitz+safe</a> (2 pages)   |                |
| JK                              | 5                     | "Integration Products May Impact Satellite Radio," printout from website <a href="http://www.twice.com/article/CA200541.html?text=blitz+safe">http://www.twice.com/article/CA200541.html?text=blitz+safe</a> (3 pages)  |                |
| JK                              | 6                     | "OEM Integration Poised for Strong Growth," printout from website <a href="http://www.twice.com/article/CA200523.html?text=blitz+safe">http://www.twice.com/article/CA200523.html?text=blitz+safe</a> (3 pages)   |                |
|                                 |                       |   |                |
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|                                 |                       |   |                |
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|                                 |                       |   |                |
|                                 |                       |   |                |
|                                 |                       |   |                |

|                    |              |                 |            |
|--------------------|--------------|-----------------|------------|
| Examiner Signature | /Jason Kurr/ | Date Considered | 03/07/2007 |
|--------------------|--------------|-----------------|------------|

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.  
<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

|                                   |                                       |   |             |
|-----------------------------------|---------------------------------------|---|-------------|
| <b>Notice of References Cited</b> | Application/Control No.<br>10/316,961 | Applicant(s)/Patent Under Reexamination<br>MARLOWE, IRA |             |
|                                   | Examiner<br>Jason R. Kurr             | Art Unit<br>2615  | Page 1 of 1 |

**U.S. PATENT DOCUMENTS**

| * | Document Number<br>Country Code-Number-Kind Code | Date<br>MM-YYYY | Name             | Classification |
|---|--|-----------------|------------------|----------------|
| * | A US-6,608,399 B2                                | 08-2003         | McConnell et al. | 307/10.1       |
| B | US-  |                 |                  |                |
| C | US-  |                 |                  |                |
| D | US-  |                 |                  |                |
| E | US-  |                 |                  |                |
| F | US-  |                 |                  |                |
| G | US-  |                 |                  |                |
| H | US-  |                 |                  |                |
| I | US-  |                 |                  |                |
| J | US-  |                 |                  |                |
| K | US-  |                 |                  |                |
| L | US-  |                 |                  |                |
| M | US-  |                 |                  |                |

**FOREIGN PATENT DOCUMENTS**

| * | Document Number<br>Country Code-Number-Kind Code | Date<br>MM-YYYY | Country | Name | Classification |
|---|--|-----------------|---------|------|----------------|
| N |  |                 |         |      |                |
| O |  |                 |         |      |                |
| P |  |                 |         |      |                |
| Q |  |                 |         |      |                |
| R |  |                 |         |      |                |
| S |  |                 |         |      |                |
| T |  |                 |         |      |                |

**NON-PATENT DOCUMENTS**

| * | Document Number<br>Country Code-Number-Kind Code  | Date<br>MM-YYYY | Country | Name | Classification |
|---|---|-----------------|---------|------|----------------|
|   | Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages) |                 |         |      |                |
| U |   |                 |         |      |                |
| V |   |                 |         |      |                |
| W |   |                 |         |      |                |
| X |   |                 |         |      |                |

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

**Index of Claims**



**Application/Control No.**

10/316,961

**Examiner**

Jason R. Kurr

**Applicant(s)/Patent under Reexamination**

MARLOWE, IRA

**Art Unit**

2615

|   |                 |
|---|-----------------|
| ✓ | <b>Rejected</b> |
| = | <b>Allowed</b>  |

|   |  |
|---|--|
| — | <b>(Through numeral)<br/>Cancelled</b> |
| + | <b>Restricted</b>                      |

|   |                     |
|---|---------------------|
| N | <b>Non-Elected</b>  |
| I | <b>Interference</b> |

|   |                 |
|---|-----------------|
| A | <b>Appeal</b>   |
| O | <b>Objected</b> |

| Claim | Date  |          |         |         |         |
|-------|-------|----------|---------|---------|---------|
|       | Final | Original | 5/29/06 | 11/7/06 | 4/12/07 |
| 1     | ✓     | ✓        | ✓       |         |         |
| 2     | ✓     | ✓        | ✓       |         |         |
| 3     | ✓     | ✓        | ✓       |         |         |
| 4     | ✓     | ✓        | ✓       |         |         |
| 5     | ✓     | ✓        | ✓       |         |         |
| 6     | ✓     | ✓        | ✓       |         |         |
| 7     | ✓     | ✓        | ✓       |         |         |
| 8     | ✓     | ✓        | ✓       |         |         |
| 9     | ✓     | ✓        | ✓       |         |         |
| 10    | ✓     | ✓        | ✓       |         |         |
| 11    | ✓     | ✓        | ✓       |         |         |
| 12    | ✓     | ✓        | ✓       |         |         |
| 13    | ✓     | ✓        | ✓       |         |         |
| 14    | —     | —        | —       |         |         |
| 15    | ✓     | ✓        | ✓       |         |         |
| 16    | ✓     | ✓        | ✓       |         |         |
| 17    | ✓     | ✓        | ✓       |         |         |
| 18    | ✓     | ✓        | ✓       |         |         |
| 19    | ✓     | ✓        | ✓       |         |         |
| 20    | ✓     | ✓        | ✓       |         |         |
| 21    | ✓     | ✓        | ✓       |         |         |
| 22    | ✓     | ✓        | ✓       |         |         |
| 23    | ✓     | ✓        | ✓       |         |         |
| 24    | ✓     | ✓        | ✓       |         |         |
| 25    | ✓     | ✓        | ✓       |         |         |
| 26    | ✓     | ✓        | ✓       |         |         |
| 27    | ✓     | ✓        | ✓       |         |         |
| 28    | ✓     | ✓        | ✓       |         |         |
| 29    | ✓     | ✓        | ✓       |         |         |
| 30    | ✓     | ✓        | ✓       |         |         |
| 31    | ✓     | ✓        | ✓       |         |         |
| 32    | ✓     | ✓        | ✓       |         |         |
| 33    | ✓     | ✓        | ✓       |         |         |
| 34    | ✓     | ✓        | ✓       |         |         |
| 35    | ✓     | ✓        | ✓       |         |         |
| 36    | ✓     | ✓        | ✓       |         |         |
| 37    | ✓     | ✓        | ✓       |         |         |
| 38    | ✓     | ✓        | ✓       |         |         |
| 39    | —     | —        | —       |         |         |
| 40    | ✓     | ✓        | ✓       |         |         |
| 41    | ✓     | ✓        | ✓       |         |         |
| 42    | ✓     | ✓        | ✓       |         |         |
| 43    | ✓     | ✓        | ✓       |         |         |
| 44    | ✓     | ✓        | ✓       |         |         |
| 45    | ✓     | ✓        | ✓       |         |         |
| 46    | ✓     | ✓        | ✓       |         |         |
| 47    | ✓     | ✓        | ✓       |         |         |
| 48    | ✓     | ✓        | ✓       |         |         |
| 49    | ✓     | ✓        | ✓       |         |         |
| 50    | ✓     | ✓        | ✓       |         |         |

| Claim | Date  |          |         |         |         |
|-------|-------|----------|---------|---------|---------|
|       | Final | Original | 5/29/06 | 11/7/06 | 4/12/07 |
| 51    | ✓     | ✓        | ✓       |         |         |
| 52    | ✓     | ✓        | ✓       |         |         |
| 53    | ✓     | ✓        | ✓       |         |         |
| 54    | ✓     | ✓        | ✓       |         |         |
| 55    | ✓     | ✓        | ✓       |         |         |
| 56    | ✓     | ✓        | ✓       |         |         |
| 57    | ✓     | ✓        | ✓       |         |         |
| 58    | ✓     | ✓        | —       |         |         |
| 59    | ✓     | ✓        | ✓       |         |         |
| 60    | ✓     | ✓        | ✓       |         |         |
| 61    | ✓     | ✓        | ✓       |         |         |
| 62    | ✓     | ✓        | ✓       |         |         |
| 63    | ✓     | ✓        | ✓       |         |         |
| 64    | ✓     | ✓        | ✓       |         |         |
| 65    | ✓     | ✓        | ✓       |         |         |
| 66    | ✓     | ✓        | ✓       |         |         |
| 67    | ✓     | ✓        | ✓       |         |         |
| 68    | ✓     | ✓        | ✓       |         |         |
| 69    | ✓     | ✓        | ✓       |         |         |
| 70    | ✓     | ✓        | ✓       |         |         |
| 71    | ✓     | ✓        | ✓       |         |         |
| 72    | ✓     | ✓        | ✓       |         |         |
| 73    | ✓     | ✓        | ✓       |         |         |
| 74    | ✓     | ✓        | ✓       |         |         |
| 75    | ✓     | ✓        | —       |         |         |
| 76    | ✓     | ✓        | ✓       |         |         |
| 77    | ✓     | ✓        | ✓       |         |         |
| 78    | ✓     | ✓        | ✓       |         |         |
| 79    | ✓     | ✓        | ✓       |         |         |
| 80    | ✓     | ✓        | ✓       |         |         |
| 81    | ✓     | ✓        | ✓       |         |         |
| 82    | ✓     | ✓        | ✓       |         |         |
| 83    |       | ✓        | ✓       |         |         |
| 84    |       | ✓        | ✓       |         |         |
| 85    |       | ✓        | ✓       |         |         |
| 86    |       | ✓        | ✓       |         |         |
| 87    |       |          | ✓       |         |         |
| 88    |       |          | ✓       |         |         |
| 89    |       |          | ✓       |         |         |
| 90    |       |          | ✓       |         |         |
| 91    |       |          | ✓       |         |         |
| 92    |       |          | ✓       |         |         |
| 93    |       |          | ✓       |         |         |
| 94    |       |          | ✓       |         |         |
| 95    |       |          | ✓       |         |         |
| 96    |       |          | ✓       |         |         |
| 97    |       |          | ✓       |         |         |
| 98    |       |          | ✓       |         |         |
| 99    |       |          | ✓       |         |         |
| 100   |       |          | ✓       |         |         |

| Claim | Date  |          |         |  |  |
|-------|-------|----------|---------|--|--|
|       | Final | Original | 4/12/07 |  |  |
| 101   | ✓     |          |         |  |  |
| 102   | ✓     |          |         |  |  |
| 103   | ✓     |          |         |  |  |
| 104   | ✓     |          |         |  |  |
| 105   |       |          |         |  |  |
| 106   |       |          |         |  |  |
| 107   |       |          |         |  |  |
| 108   |       |          |         |  |  |
| 109   |       |          |         |  |  |
| 110   |       |          |         |  |  |
| 111   |       |          |         |  |  |
| 112   |       |          |         |  |  |
| 113   |       |          |         |  |  |
| 114   |       |          |         |  |  |
| 115   |       |          |         |  |  |
| 116   |       |          |         |  |  |
| 117   |       |          |         |  |  |
| 118   |       |          |         |  |  |
| 119   |       |          |         |  |  |
| 120   |       |          |         |  |  |
| 121   |       |          |         |  |  |
| 122   |       |          |         |  |  |
| 123   |       |          |         |  |  |
| 124   |       |          |         |  |  |
| 125   |       |          |         |  |  |
| 126   |       |          |         |  |  |
| 127   |       |          |         |  |  |
| 128   |       |          |         |  |  |
| 129   |       |          |         |  |  |
| 130   |       |          |         |  |  |
| 131   |       |          |         |  |  |
| 132   |       |          |         |  |  |
| 133   |       |          |         |  |  |
| 134   |       |          |         |  |  |
| 135   |       |          |         |  |  |
| 136   |       |          |         |  |  |
| 137   |       |          |         |  |  |
| 138   |       |          |         |  |  |
| 139   |       |          |         |  |  |
| 140   |       |          |         |  |  |
| 141   |       |          |         |  |  |
| 142   |       |          |         |  |  |
| 143   |       |          |         |  |  |
| 144   |       |          |         |  |  |
| 145   |       |          |         |  |  |
| 146   |       |          |         |  |  |
| 147   |       |          |         |  |  |
| 148   |       |          |         |  |  |
| 149   |       |          |         |  |  |
| 150   |       |          |         |  |  |



**Search Notes**



**Application/Control No.**

10/316,961

**Examiner**

Jason R. Kurr

**Applicant(s)/Patent under Reexamination**

MARLOWE, IRA

**Art Unit**

2615

| <b>SEARCHED</b> |          |           |          |
|-----------------|----------|-----------|----------|
| Class           | Subclass | Date      | Examiner |
| 381             | 86       | 5/24/2006 | JK       |
| 307             | 9.1,10.1 | 10/4/2006 | JK       |
| 340             | 825.25   | 10/4/2006 | JK       |
| 307             | 10.1     | 3/7/2007  | JK       |
|                 |          |           |          |
|                 |          |           |          |
|                 |          |           |          |
|                 |          |           |          |
|                 |          |           |          |
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|                 |          |           |          |
|                 |          |           |          |

| <b>INTERFERENCE SEARCHED</b> |          |      |          |
|------------------------------|----------|------|----------|
| Class                        | Subclass | Date | Examiner |
|                              |          |      |          |
|                              |          |      |          |
|                              |          |      |          |
|                              |          |      |          |

| <b>SEARCH NOTES<br/>(INCLUDING SEARCH STRATEGY)</b>                               |           |      |
|---|-----------|------|
|   | DATE      | EXMR |
| Searched, car stereo's and interfacing with auxiliary audio devices               | 5/24/2006 | JK   |
| Searched (digital audio broadcasting) DAB   | 5/29/2006 | JK   |
| Searched: mp3 players, interfacing, DAB digital audio broadcasts, satellite radio | 11/7/2006 | JK   |
| Searched new IDS (2/16/07) and continuation applications                          | 3/7/2007  | JK   |
|   |           |      |
|   |           |      |
|   |           |      |
|   |           |      |
|   |           |      |

## EAST Search History

| Ref # | Hits | Search Query   | DBs                | Default Operator | Plurals | Time Stamp        |
|-------|------|--|--------------------|------------------|---------|-------------------|
| S107  | 1    | "6648661".pn.  | US-PGPUB;<br>USPAT | OR               | OFF     | 2007/03/07 18:10  |
| S108  | 0    | 2004/0091123   | US-PGPUB;<br>USPAT | OR               | OFF     | 2007/03/07 18:11  |
| S109  | 1    | "20040091123"  | US-PGPUB;<br>USPAT | OR               | OFF     | 2007/03/07 18:12  |
| S110  | 2    | "20020180767"  | US-PGPUB;<br>USPAT | OR               | OFF     | 2007/03/07 20:17  |
| S111  | 384  | (apple machintosh).in.   | US-PGPUB;<br>USPAT | OR               | OFF     | 2007/03/07 20:18  |
| S112  | 2370 | (apple machintosh).as.   | US-PGPUB;<br>USPAT | OR               | OFF     | 2007/03/07 20:21  |
| S113  | 1    | S111 and mp3   | US-PGPUB;<br>USPAT | OR               | OFF     | 2007/03/07 20:18  |
| S114  | 5    | (car near stereo) same (integrate communicate) same (peripheral auxiliary (after near market)) | US-PGPUB;<br>USPAT | OR               | OFF     | 2007/03/07 20:27. |
| S115  | 703  | (marlowe marlow).in.   | US-PGPUB;<br>USPAT | OR               | OFF     | 2007/03/07 20:28  |
| S116  | 5    | ((marlowe marlow) with ira).in.  | US-PGPUB;<br>USPAT | OR               | OFF     | 2007/03/07 20:35  |
| S117  | 13   | (car near stereo) same (connect\$3 dock\$3 attach\$3) same (mp3 near player)                   | US-PGPUB;<br>USPAT | OR               | OFF     | 2007/03/07 20:50  |
| S118  | 2481 | 307/10.1.ccls.   | US-PGPUB;<br>USPAT | OR               | OFF     | 2007/03/07 20:50  |
| S119  | 235  | S118 and audio   | US-PGPUB;<br>USPAT | OR               | OFF     | 2007/03/07 20:50  |
| S120  | 168  | S119 and ((@ad @rlad)<="20021211")   | US-PGPUB;<br>USPAT | OR               | OFF     | 2007/03/07 20:51  |
| S121  | 10   | S120 and mp3   | US-PGPUB;<br>USPAT | OR               | OFF     | 2007/03/07 20:51  |

**PATENT APPLICATION FEE DETERMINATION RECORD**  
Effective December 8, 2004

Application or Docket Number

10/316901

**CLAIMS AS FILED - PART I**

|   | (Column 1)   | (Column 2)   |
|---|--------------|--------------|
| TOTAL CLAIMS  |              |              |
| FOR   | NUMBER FILED | NUMBER EXTRA |
| TOTAL CHARGEABLE CLAIMS                                   | minus 20 =   | *            |
| INDEPENDENT CLAIMS  | minus 3 =    | *            |
| MULTIPLE DEPENDENT CLAIM PRESENT <input type="checkbox"/> |              |              |

\* If the difference in column 1 is less than zero, enter "0" in column 2

**CLAIMS AS AMENDED - PART II**

|   | (Column 1)                                  | (Column 2)                         | (Column 3)    |
|---|---|------------------------------------|---------------|
| AMENDMENT A   | 2/16/07<br>CLAIMS REMAINING AFTER AMENDMENT | HIGHEST NUMBER PREVIOUSLY PAID FOR | PRESENT EXTRA |
|   | Total • 99                                  | Minus ** 87                        | = 12          |
|   | Independent • 11                            | Minus *** 10                       | = 1           |
| FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/> |   |                                    |               |

|   | (Column 1)                       | (Column 2)                         | (Column 3)    |
|---|----------------------------------|------------------------------------|---------------|
| AMENDMENT B   | CLAIMS REMAINING AFTER AMENDMENT | HIGHEST NUMBER PREVIOUSLY PAID FOR | PRESENT EXTRA |
|   | Total •                          | Minus **                           | =             |
|   | Independent •                    | Minus ***                          | =             |
| FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/> |                                  |                                    |               |

|   | (Column 1)                       | (Column 2)                         | (Column 3)    |
|---|----------------------------------|------------------------------------|---------------|
| AMENDMENT C   | CLAIMS REMAINING AFTER AMENDMENT | HIGHEST NUMBER PREVIOUSLY PAID FOR | PRESENT EXTRA |
|   | Total •                          | Minus **                           | =             |
|   | Independent •                    | Minus ***                          | =             |
| FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/> |                                  |                                    |               |

\* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.  
 \*\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20."  
 \*\*\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3."  
 The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

SMALL ENTITY TYPE  OR OTHER THAN SMALL ENTITY

| RATE      | FEE               | OR | RATE      | FEE               |
|-----------|-------------------|----|-----------|-------------------|
| BASIC FEE | 395 <sup>00</sup> | OR | BASIC FEE | 790 <sup>00</sup> |
| X\$ 25=   |                   | OR | X\$50=    |                   |
| X100=     |                   | OR | X200=     |                   |
| +180=     |                   | OR | +360=     |                   |
| TOTAL     |                   | OR | TOTAL     | 790.00            |

SMALL ENTITY OR OTHER THAN SMALL ENTITY

| RATE             | ADDITIONAL FEE    | OR | RATE             | ADDITIONAL FEE |
|------------------|-------------------|----|------------------|----------------|
| X\$ 25=          | 390               | OR | X\$50=           |                |
| X100=            | 100 <sup>00</sup> | OR | X200=            |                |
| +180=            |                   | OR | +360=            |                |
| TOTAL ADDIT. FEE |                   | OR | TOTAL ADDIT. FEE |                |

| RATE             | ADDITIONAL FEE | OR | RATE             | ADDITIONAL FEE |
|------------------|----------------|----|------------------|----------------|
| X\$ 25=          |                | OR | X\$50=           |                |
| X100=            |                | OR | X200=            |                |
| +180=            |                | OR | +360=            |                |
| TOTAL ADDIT. FEE |                | OR | TOTAL ADDIT. FEE |                |

| RATE             | ADDITIONAL FEE | OR | RATE             | ADDITIONAL FEE |
|------------------|----------------|----|------------------|----------------|
| X\$ 25=          |                | OR | X\$50=           |                |
| X100=            |                | OR | X200=            |                |
| +180=            |                | OR | +360=            |                |
| TOTAL ADDIT. FEE |                | OR | TOTAL ADDIT. FEE |                |



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Ira M. Marlowe  
Serial No.: 10/316,961  
Filed: 12/11/2002  
Title: AUDIO DEVICE INTEGRATION SYSTEM

Examiner: Kurr, Jason R.

Art Unit: 2615

**Mail Stop Amendment**  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**RESPONSE**

Sir:

This is a response to the outstanding Office Action dated November 14, 2006, on the above-identified application. The time period for response extends to and includes February 14, 2007.

**Amendments to the Claims** begin on page 2 of this response.

**Remarks** begin on page 26 of this response.

02/16/2007 MWOLDGE1 00000050 503571 10316961

01 FC:2201 100.00 DA  
02 FC:2202 300.00 DA

## AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An audio device integration system comprising:

a car stereo;

an after-market audio device external to the car stereo;

an interface connected between the car stereo and the after-market audio device for ~~exchanging data and~~ channeling audio signals ~~between to~~ the car stereo and ~~from~~ the ~~after-market audio device;~~ device, the interface including:

means for receiving a control command from the car stereo in a format incompatible with the after-market audio device, processing and dispatching commands for controlling the after-market audio device from the car stereo in a format the control command into a formatted command compatible with the after-market audio device; device, and transmitting the formatted command to the after-market audio device for execution thereby;

means for receiving data from the after-market audio device in a format incompatible with the car stereo, processing and displaying data from the after-market audio device on a display of the car stereo in a format the data into formatted data compatible with the car stereo; and stereo, and transmitting the formatted data to the car stereo for display thereby; and

means for switching to one or more auxiliary input sources connected to the interface.

2. (Previously Presented) The apparatus of claim 1, wherein the car stereo is an Original Equipment Manufacturer (OEM) car stereo.
3. (Original) The apparatus of claim 1, wherein the car stereo is an after-market car stereo.
4. (Currently Amended) The apparatus of claim 1, wherein the after-market audio device comprises a CD player, CD changer, MP3 player, Digital Audio Broadcast (DAB) receiver, or satellite receiver.
5. (Currently Amended) The apparatus of claim 1, wherein the interface further comprises a plug-and-play mode for automatically detecting a device type of the after-market audio device and integrating the after-market audio device based upon the device type.
6. (Original) The apparatus of claim 1, wherein the interface generates a CD player presence signal for maintaining the car stereo in a state responsive to processed data and audio signals.
7. (Original) The apparatus of claim 1, wherein the data comprises track and time information.

8. (Original) The apparatus of claim 1, wherein the data comprises song title and artist information.

9. (Original) The apparatus of claim 1, wherein the data comprises channel number and channel name information.

10. (Original) The apparatus of claim 1, wherein the data comprises video information.

11. (Currently Amended) The apparatus of claim 1, wherein the formatted data is displayed as a menu on ~~the~~ a display of the car stereo.

12. (Previously Presented) The apparatus of claim 1, wherein the display of the car stereo comprises a graphic panel.

13. (Original) The apparatus of claim 1, wherein the commands are input by a user using one or more control buttons or presets on the car stereo.

14. (Cancelled)

15. (Previously Presented) The apparatus of claim 1, wherein audio signals from the one or more auxiliary input sources are selectively channeled to the car stereo by the interface.

16. (Previously Presented) The apparatus of claim 1, wherein a user can select between the one or more auxiliary input sources by depressing keys on the car stereo.

17. (Previously Presented) The apparatus of claim 1, wherein a user can select one of the auxiliary input sources by entering a disc number at the car stereo.

18. (Previously Presented) The apparatus of claim 1, wherein a user can select one of the auxiliary input sources by entering a track number at the car stereo.

19. (Previously Presented) The apparatus of claim 1, wherein a user can select one of the auxiliary input sources by entering both disc and track numbers at the car stereo.

20. (Previously Presented) The apparatus of claim 1, wherein a user can select between the audio device and the one or more auxiliary input sources by entering a sequence at the car stereo.

21. (Original) The apparatus of claim 20, wherein the sequence comprises a track up selection followed by a track down selection.

22. (Original) The apparatus of claim 1, further comprising a second interface connected to the first interface for providing a plurality of auxiliary input sources.

23. (Original) The apparatus of claim 22, wherein both the first interface and the second interface are controllable using the car stereo.



24. (Currently Amended) An audio device integration system comprising:

a car stereo;

a plurality of auxiliary input sources;

an interface connected between the car stereo and the plurality of auxiliary input sources; sources for channeling audio from at least one of the plurality of auxiliary input sources, the interface including:

means for receiving a control command from the car stereo in a format incompatible with the at least one of the plurality of auxiliary input sources, processing and dispatching commands for controlling an audio device connected to one of the plurality of auxiliary input sources from the car stereo in a format the control command into a formatted control command compatible with the audio device; at least one of the plurality of auxiliary input sources, and transmitting the formatted control command to the at least one of the plurality of auxiliary input sources for execution thereby;

means for receiving data from the at least one of the plurality of auxiliary input sources in a format incompatible with the car stereo, processing and displaying data from the audio device on a display of the car stereo in a format the data into formatted data compatible with the car stereo; and stereo, and transmitting the formatted data to the car stereo for display thereby; and

means for selecting one of the plurality of auxiliary input sources from the car stereo.

25. (Original) The apparatus of claim 24, wherein the means for selecting one of the plurality of auxiliary input sources comprises a disc or track selection entered by a user using control buttons of the car stereo.

26. (Currently Amended) The apparatus of claim 24, wherein the audio device at least one of the plurality of auxiliary input sources comprises a CD player, CD changer, MP3 player, satellite receiver, or a Digital Audio Broadcast (DAB) receiver.

27. (Currently Amended) The apparatus of claim 24, wherein a device type of the ~~audio device~~ at least one of the plurality of auxiliary input sources is automatically detected by the interface and the ~~audio device~~ at least one of the plurality of auxiliary input sources is automatically integrated with the car stereo based upon the device type.

28. (Original) The apparatus of claim 24, wherein the interface is switchable into an auxiliary input mode by issuing a control sequence at the car stereo.

29. (Original) The apparatus of claim 28, wherein the control sequence comprises a track up command followed by a track down command.

30. (Currently Amended) A method for integrating an after-market device with a car stereo comprising:

connecting an interface to the car stereo, the after-market device to the interface, and an auxiliary input source to the interface;

receiving control commands from the car stereo at the ~~interface~~; interface in a format incompatible with the after-market device;

processing the control commands into ~~a format~~ formatted control commands compatible with the after-market device and dispatching ~~processed~~ the formatted control commands to the after-market device;

receiving data in a format incompatible with the car stereo and audio from the after-market device at the interface;

processing the data into ~~a second format~~ formatted data compatible with the car stereo and dispatching the audio and ~~processed~~ formatted data to the car stereo;

displaying the ~~processed~~ formatted data on the car stereo and playing the audio through the car stereo; and

playing audio from the auxiliary input source through the car stereo.

31. (Original) The method of claim 30, wherein the step of receiving data from the device comprises retrieving CD track and time information from the device.

32. (Original) The method of claim 30, wherein the step of receiving data from the device comprises retrieving MP3 song, title, track, and time information from the device.

33. (Original) The method of claim 30, wherein the step of receiving data from the device comprises retrieving channel number, channel name, artist, and song information from the device.

34. (Original) The method of claim 30, wherein the step of receiving data from the device comprises retrieving video information from the device.

35. (Currently Amended) The method of claim 30, wherein the step of displaying the ~~processed~~ formatted data comprises displaying the data in an LCD panel.

36. (Currently Amended) The method of claim 30, wherein the step of displaying the ~~processed~~ formatted data comprises displaying the data in a graphical user interface at the car stereo.

37. (Currently Amended) The method of claim 30, wherein the step of displaying ~~processed~~ formatted data comprises displaying video at the car stereo.

38. (Previously Presented) The method of claim 30, wherein the step of connecting the after-market device to the interface comprises connecting a CD player, CD changer, MP3 player, satellite receiver, or a Digital Audio Broadcast (DAB) receiver to the interface.

39. (Cancelled)

40. (Previously Presented) The method of claim 30, further comprising receiving a selection command from the car stereo and channeling data and audio from the auxiliary input source to the interface in response to the selection command.

41. (Original) The method of claim 40, further comprising processing the data from the auxiliary input source for display on the car stereo.

42. (Currently Amended) An apparatus for docking a portable device for integration with a car stereo comprising:

a storage area remote from a car stereo for storing the portable device;

a docking portion within the storage area for ~~electrically~~ communicating and physically mating with the portable device; and

a data port ~~disposed in electrical~~ communication with the docking portion, the data port connectable with a device for integrating the portable device with the car ~~stereo~~; stereo; and

an interface connected to the data port and to the car stereo, the interface channeling audio from the portable device to the car stereo, processing control commands generated by the car stereo in a format incompatible with the portable device into formatted control commands compatible with the portable device, and dispatching the formatted control commands to the portable device for execution thereby.

43. (Previously Presented) The apparatus of claim 42, wherein the storage area further comprises a top member, a bottom member, and a hinge interconnecting the top member and the bottom member at an edge thereof.

44. (Currently Amended) The apparatus of claim 42, wherein the data port comprises an RS-232 or Universal Serial Bus (USB) port.

45. (Currently Amended) The apparatus of claim 42, wherein the storage area further comprises a top portion and a bottom portion defining a sleeve for holding the portable ~~audio~~ device.

46. (Previously Presented) The apparatus of claim 43, further comprising a clasp for retaining the top and bottom members in a closed position.

47. (Currently Amended) A method of integrating an after-market device with an Original Equipment Manufacturer (OEM) or after-market car stereo comprising:

connecting the after-market device to an interface;

connecting the interface to a car stereo;

determining whether the car stereo is an OEM car stereo or an after-market car stereo;

~~if the car stereo is an after market car stereo,~~ generating and transmitting a device presence signal to the car stereo to maintain the car stereo in an operational state responsive to external ~~signals;~~ and signals, the device presence signal based upon the car stereo;

~~selectively channeling data and audio signals from the after-market device to the car stereo using the interface;~~ interface.

48. (Currently Amended) The method of claim 47, further comprising receiving control commands from the car stereo at the ~~interface;~~ interface in a format incompatible with the after-market device.

49. (Original) The method of claim 48, further comprising converting the control commands into a format recognizable by the after-market audio device.

50. (Original) The method of claim 49, further comprising dispatching formatted commands to the after-market audio device for execution thereby.

51. (Currently Amended) The method of claim 47, further comprising converting data received at the interface from the after-market audio device in a format incompatible with the car stereo into a format compatible with the car stereo.

52. (Original) The method of claim 51, further comprising displaying formatted data on the car stereo.

53. (Original) The method of claim 52, wherein the step of displaying formatted data comprises displaying channel numbers, channel names, titles, tracks, song names, or artist names on the car stereo.

54. (Original) The method of claim 52, wherein the step of displaying formatted data comprises displaying video on the car stereo.



55. (Currently Amended) An audio device integration system comprising:

a car stereo;

a portable MP3 player external to the car stereo;

an interface connected between the car stereo and the portable MP3 ~~player;~~ player, the interface including:

means for generating a device presence signal and transmitting the signal to the car stereo to maintain the car stereo in an operational state; ~~and~~

means for receiving a control command from the car stereo in a format incompatible with the MP3 player, processing the control command into a formatted control command compatible with the MP3 player, and transmitting the formatted control command to the MP3 player for execution thereby; and

means for transmitting audio from the portable MP3 player to the car stereo.

56. (Previously Presented) The apparatus of claim 55, wherein the car stereo is an Original Equipment Manufacturer (OEM) car stereo.

57. (Previously Presented) The apparatus of claim 55, wherein the car stereo is an after-market car stereo.

58. (Cancelled)

59. (Currently Amended) The system of claim ~~58~~, 55, wherein the interface further ~~comprising~~ includes means for receiving data from the MP3 player in a format incompatible with the car stereo, ~~processing and displaying data from the portable MP3 player on a display of the car stereo in a format~~ the data into formatted data compatible with the car stereo. ~~stereo~~, and transmitting the formatted data to the car stereo for display thereby.

60. (Previously Presented) The apparatus of claim 59, wherein the data comprises track and time information.

61. (Previously Presented) The apparatus of claim 59, wherein the data comprises song title and artist information.

62. (Previously Presented) The apparatus of claim 59, wherein the commands are input by a user using one or more control buttons or presets on the car stereo.

63. (Currently Amended) An audio device integration system comprising:

a car stereo;

an satellite radio receiver external to the car stereo;

an interface connected between the car stereo and the satellite radio ~~receiver~~; receiver, the interface including:

means for generating a device presence signal and transmitting the signal to the car stereo to maintain the car stereo in an operational state; ~~and~~

means for receiving a control command from the car stereo in a format incompatible with the satellite radio receiver, processing the control command into a formatted control command compatible with the satellite radio receiver, and transmitting the formatted control command to the satellite radio receiver for execution thereby; and

means for transmitting audio from the satellite radio receiver to the car stereo.

64. (Previously Presented) The apparatus of claim 63, wherein the car stereo is an Original Equipment Manufacturer (OEM) car stereo.

65. (Previously Presented) The apparatus of claim 63, wherein the car stereo is an after-market car stereo.

66. (Cancelled)

67. (Currently Amended) The system of claim ~~66~~, 63, wherein the interface further ~~comprising~~ includes means for receiving data from the satellite radio receiver in a format incompatible with the car stereo, processing and displaying data from the satellite radio receiver on a display of the car stereo in a format the data into formatted data compatible with the car stereo, ~~stereo, and transmitting the formatted data to the car stereo for display thereby.~~

68. (Previously Presented) The apparatus of claim 67, wherein the data comprises track and time information.

69. (Previously Presented) The apparatus of claim 67, wherein the data comprises song title and artist information.

70. (Currently Amended) The apparatus of claim 67, wherein the ~~data~~ data comprises a channel number and a channel name.

71. (Previously Presented) The apparatus of claim 67, wherein the commands are input by a user using one or more control buttons or presets on the car stereo.

72. (Currently Amended) An audio device integration system comprising:

a car stereo;

a digital audio broadcast receiver external to the car stereo;

an interface connected between the car stereo and the digital audio broadcast receiver;  
receiver, the interface including:

means for generating a device presence signal and transmitting the signal to the car stereo to maintain the car stereo in an operational state; ~~and~~

means for receiving a control command from the car stereo in a format incompatible with the digital audio broadcast receiver, processing the control command into a formatted control command compatible with the digital audio broadcast receiver, and transmitting the formatted control command to the digital audio broadcast receiver for execution thereby; and

means for transmitting audio from the digital audio broadcast receiver to the car stereo.

73. (Previously Presented) The apparatus of claim 72, wherein the car stereo is an Original Equipment Manufacturer (OEM) car stereo.

74. (Previously Presented) The apparatus of claim 72, wherein the car stereo is an after-market car stereo.

75. (Cancelled)

76. (Currently Amended) The system of claim ~~75~~, 72, wherein the interface further ~~comprising~~ includes means for receiving data from the digital audio broadcast receiver in a format incompatible with the car stereo, processing and ~~displaying data from the digital audio broadcast receiver on a display of the car stereo in a format~~ the incompatible data into formatted data compatible with the car stereo, ~~stereo, and transmitting the formatted data to the car stereo~~ for display thereby.

77. (Previously Presented) The apparatus of claim 76, wherein the data comprises track and time information.

78. (Previously Presented) The apparatus of claim 76, wherein the data comprises song title and artist information.

79. (Previously Presented) The apparatus of claim 76, wherein the data comprises a channel number and a channel name.

80. (Previously Presented) The apparatus of claim 76, wherein the commands are input by a user using one or more control buttons or presets on the car stereo.

81. (Currently Amended) A device for integrating video information for use with a car stereo, comprising:

a car stereo;

a video device external to the car stereo;

an interface connected between the car stereo and the video ~~device~~; device, the interface  
including:

means for generating a device presence signal and transmitting the signal to the car stereo to maintain the car stereo in an operational state; and

means for transmitting video information from the video device to the car stereo.

82. (Previously Presented) The device of claim 81, further comprising means for converting the video information into a format compatible with the car stereo.

83. (Currently Amended) An audio device integration system comprising:

a car stereo;

a portable audio device external to the car stereo;

an interface connected between the car stereo and the portable audio device; device, the interface including:

means for generating a device presence signal and transmitting the signal to the car stereo to maintain the car stereo in an operational state; ~~and~~

means for receiving a control command from the car stereo in a format incompatible with the portable audio device, processing the control command into a formatted control command compatible with the portable audio device, and transmitting the formatted control command to the portable audio device for execution thereby; and

means for transmitting audio from the portable audio device to the car stereo.

84. (Previously Presented) The apparatus of claim 83, wherein the portable audio device comprises a portable CD player.



85. (Previously Presented) The apparatus of claim 83, wherein the portable audio device comprises a portable MP3 player.

86. (Previously Presented) The apparatus of claim 83, wherein the portable audio device comprises a portable satellite receiver.

87. (Previously Presented) The apparatus of claim 83, wherein the portable audio device comprises a portable Digital Audio Broadcast (DAB) receiver.

88. (New) The apparatus of Claim 1, further comprising a bus connection established between the after-market audio device and the interface.

89. (New) The apparatus of Claim 88, wherein the bus connection comprises a Universal Serial Bus (USB) connection.

90. (New) The apparatus of Claim 24, further comprising a bus connection established between the at least one of the plurality of auxiliary input sources and the interface.

91. (New) The apparatus of Claim 90, wherein the bus connection comprises a Universal Serial Bus (USB) connection.

92. (New) The apparatus of Claim 55, further comprising a bus connection established between the MP3 player and the interface.

93. (New) The apparatus of Claim 92, wherein the bus connection comprises a Universal Serial Bus (USB) connection.

94. (New) The apparatus of Claim 63, further comprising a bus connection established between the satellite radio receiver and the interface.

95. (New) The apparatus of Claim 94, wherein the bus connection comprises a Universal Serial Bus (USB) connection.

96. (New) The apparatus of Claim 72, further comprising a bus connection established between the digital audio broadcast receiver and the interface.

97. (New) The apparatus of Claim 96, wherein the bus connection comprises a Universal Serial Bus (USB) connection.

98. (New) The apparatus of Claim 81, further comprising a bus connection established between the video device and the interface.

99. (New) The apparatus of Claim 98, wherein the bus connection comprises a Universal Serial Bus (USB) connection.

100. (New) The apparatus of Claim 83, further comprising a bus connection established between the portable audio device and the interface.

101. (New) The apparatus of Claim 100, wherein the bus connection comprises a Universal Serial Bus (USB) connection.

102. (New) The apparatus of Claim 81, wherein the interface further comprises means for receiving a control signal from the car stereo in a format incompatible with the video device, processing the control signal into a formatted control signal compatible with the video device, and transmitting the formatted control signal to the video device for execution thereby.

103. (New) The apparatus of Claim 102, wherein the interface further comprises means for receiving data from the video device incompatible with the car stereo, processing the data into formatted data compatible with the car stereo, and transmitting the formatted data to the car stereo for display thereon.

104. (New) An audio device integration system, comprising:

a car stereo;

a line-level audio source external to the car stereo; and

an interface connected between the car stereo and the line level audio source, the interface including:

means for generating and transmitting a device presence signal to the car stereo to maintain the car stereo in an operational state; and

means for transmitting audio from the line-level audio source to the car stereo.

### REMARKS

Applicant submits this response to the outstanding Office Action on the above-identified application. Applicant has amended the application, as set forth herein, and respectfully submits that the application, as amended, is in condition for allowance.

Applicant has amended Claims 1, 4-5, 11, 24, 26-27, 30, 35-37, 42, 44-45, 47-48, 51, 55, 59, 63, 67, 70-72, 76, 81, and 83 to further define Applicant's claimed invention, cancelled Claims 58, 66, and 75, and added new Claims 88-104.

Applicant's claimed invention relates generally to an audio device integration system for integrating one or more after-market audio devices external to a car stereo (and, normally, not compatible with the car stereo), such as an MP3 player, a satellite radio receiver, digital audio broadcast (DAB) receiver, or one or more auxiliary input sources, for use with an Original Equipment Manufacturer (OEM) or after-market car stereo system. The invention allows an external device which is ordinarily incompatible with an OEM or after-market car stereo system to be integrated therewith, such that the OEM or after-market car stereo system can be used to control the external device, and audio and/or video from the external device can be channeled to the car stereo. Integration is achieved by the interface of the present invention by receiving an incompatible control command from the car stereo, processing the incompatible control command into a formatted control command compatible with the external device, and transmitting the formatted control command to the external device for execution thereby. Additionally, incompatible data from the external device, such as track number, time, song name, artist name, video information, and other data, is received by the interface of the present

invention, processed into formatted data compatible with the car stereo, and transmitted to the car stereo for display thereby. As a result, external devices which are ordinarily alien to and inoperable with an existing car stereo system can be integrated for use with such systems, while remote command and control capabilities (e.g., using the controls of the car stereo system) are provided.

Applicant submits that the pending claims, as amended herein, are patentable over the references cited in the Office Action, taken alone or in combination. Specifically, Applicant submits that the pending claims are patentable over U.S. Patent No. 6,163,079 to Miyazaki, et al., U.S. Patent No. 6,653,948 to Kunimatsu, et al., U.S. Patent No. 6,993,615 to Falcon, U.S. Patent Application Publication No. 2002/0085730 to Holland, U.S. Patent No. 6,591,085 to Grady, U.S. Patent No. 6,346,917 to Fuchs, et al., and U.S. Patent No. 6,374,177 to Lee, et al., taken alone or in any combination.

Miyazaki, et al. discloses a user-operable system for a vehicle which includes a central control unit and one or more detachable units which can be connected to one or more connectors positioned at various locations in the vehicle. In the first embodiment, the central control unit comprises an audio control unit, and the detachable unit includes a disk changer, a switch unit, and a multiplex control unit. In the second embodiment, the central control unit comprises a car navigation control unit, and the detachable unit includes a disk changer, a switch unit, and a liquid crystal screen and an associated switch and speaker, wherein the disk changer uploads map data to the car navigation control unit. In the third embodiment, the central control unit

includes an air conditioner control unit and the detachable unit includes a switch unit for controlling an air conditioner.

Kunimatsu, et al. discloses a vehicle-mounted display system for allowing operation of a plurality of screens with many functions. The invention allows a user to select a screen from a plurality of screens, and the screen is displayed across the entire surface of the display panel, along with an operation menu which is superimposed over the selected screen.

Falcon discloses a portable computing device which is operable with an appliance, such as a car stereo. The car stereo includes a docking portion which receives the portable computing device. The portable computing device functions as a display for the car stereo, and allows a user to control the car stereo. The portable computing device includes a configuration module which identifies the type of appliance to which the portable computing device is connected. The appliance includes a type module which sends a data packet to the portable computing device. The data packet is utilized by the configuration module to determine the type of the appliance. The portable computing device generates a screen which is customized to the type of the appliance.

Holland discloses a briefcase with an integrated loudspeaker system. The briefcase can store an electronic device. The loudspeaker system includes an amplifier which can be connected to the electronic device.

Grady discloses an FM transmitter and power supply / charging station for an MP3 player. The FM transmitter transmits audio from the MP3 player to a nearby FM receiver. A docking cavity is provided in the station for receiving the MP3 player.

Fuchs, et al. discloses a method for installing an antenna system external to a vehicle.

Lee, et al. discloses a method and apparatus for providing navigational services in a wireless communication device. The apparatus includes an Internet radio which can be installed in a vehicle. The radio includes an interactive display panel and a communications device, such as a multi-band receiver, a GPS receiver, an infrared (IrDA) receiver, or a gateway receiver, for allowing the radio to obtain data from an external network. Navigational services can be provided to the user, and navigational updates can be obtained using the communications device. Geographic advertising and other content can be provided to the user.

As mentioned above, an important feature of the present invention is the ability to integrate an external audio or video device, which is *normally incompatible* with an existing OEM or after-market car stereo, for use with the car stereo. Applicant submits that none of the cited references, taken alone or in any combination, teach or suggest an interface connected between a car stereo and external device (such as an after-market audio device, one or more auxiliary input sources, a portable MP3 player, a satellite receiver, a digital audio broadcast receiver, a video device, or a portable audio device), wherein the interface includes **means for receiving a control command from the car stereo in a format incompatible** with the external device, **processing the control command into a formatted command compatible** with the



external device, and **transmitting the formatted command** to the external device for execution thereby, as set forth in amended independent Claims 1, 24, 55, 63, 72, and 83.

Miyazaki, the primary reference, is entirely unconcerned with an interface connectable between a car stereo and an external audio or video device (such as a portable audio or video device) which receives control commands from the car stereo incompatible with the external audio or video device, processes same into formatted commands compatible with the external audio or video device, and transmits same to the external device for prosecution thereby. Rather, Miyazaki only discloses customized, detachable units which are connectable at one or more locations in a vehicle and which are remotely controllable. The system of Miyazaki is entirely unconcerned with allowing an external audio or video device, which is normally incompatible with a car stereo, to operate with a car stereo.

Moreover, col. 4, lines 51-67 and col. 5, lines 1-4 of Miyazaki, which were cited in the Office Action with regard to processing and dispatching compatible commands to the external audio or video device, fail whatsoever to disclose the features of the amended claims of receiving an incompatible control command from a car stereo, processing same into a formatted control command compatible with the external audio or video device, and transmitting same to the external device for execution thereby. Rather, the quoted excerpt only discloses that the audio switch unit of Miyazaki can send a multiplexed signal to one or more detachable units for remotely controlling such units. However, *these signals are custom-generated by a dedicated audio control unit*. No disclosure is provided relating to the processing of incompatible control commands from a car stereo into compatible, formatted control commands that can be executed

by the external device. Indeed, Miyazaki is wholly unconcerned with integrating normally incompatible audio and video devices for use with a car stereo system.

None of the remaining references cited in the Office Action, taken alone or in combination, cure the foregoing deficiencies of Miyazaki. Kunimatsu, et al. is entirely unrelated to an interface which processes incompatible control commands issued at a car stereo into formatted control commands which are compatible with and are executable by an external audio or video device. Rather, Kunimatsu, et al. merely discloses a vehicle display system having a plurality of display screens and an associated operation menu. Falcon discloses a portable computing device which is operable with an appliance, such as a car stereo. However, the appliance is customized for operation with the portable computing device. No disclosure is provided relating to processing incompatible control commands issued from a car stereo into formatted control commands that are compatible with an external audio or video device. Holland fails whatsoever to disclose an interface connected between a car stereo and an external audio or video device which processes incompatible control commands into formatted control commands compatible with the external device. Grady, Fuchs, et al., and Lee, et al., are similarly deficient, as neither reference discloses an interface connected between a car stereo and an external audio or video device for processing incompatible control commands into formatted control commands compatible with the external device.

Accordingly, Applicant submits that amended independent Claims 1, 24, 55, 63, 72 and 83 are patentable over the cited references, taken alone or in any combination. Claims 2-13, 15-23, 25-29, 56-57, 59-62, 64-65, 67-71, 73-74, 76-80, and 84-101, which depend from amended

independent Claims 1, 24, 55, 63, 72, and 83 and contain all of the limitations thereof, are likewise patentable.

For similar reasons, Applicant submits that amended independent Claim 30 is patentable over the cited references, taken alone or in any combination. Claim 30, as amended, recites a method for integrating an after-market device for use with a car stereo, including the steps of: receiving **control commands** from the car stereo at the interface **in a format incompatible with the after-market device, processing the control commands into formatted control commands compatible with the after-market device**, and dispatching the formatted control commands to the after-market interface. Claim 30 also recites the steps of **receiving data incompatible with the car stereo** and audio from the after-market device at the interface, **processing the data into formatted data compatible with the car stereo**, and dispatching the audio and formatted data to the car stereo. As discussed above, none of the cited references, taken alone or in any combination, teach or suggest processing incompatible control commands from a car stereo into formatted control commands which are compatible with an after-market audio or video device for execution thereby. Moreover, none of the cited references, taken alone or in any combination, teach or suggest processing incompatible data from an after-market device (such as track number, song title, artist name, etc.) into formatted data compatible with the car stereo, and transmitting the formatted data to the car stereo for execution thereby. Accordingly, Applicant submits that independent Claim 30 and Claims 31-38 and 40-41, which depend from Claim 30 and contain all of the limitations thereof, are patentable over the cited references, taken alone or in any combination.

Applicant also submits that independent Claim 42, as amended herein, is patentable over the cited references, taken alone or in any combination. Claim 42, as amended, recites an apparatus for docking a portable device for integration with a car stereo, which includes a storage area remote from a car stereo for storing a portable device, a docking portion within the storage area ..., a data port in electrical communication with the docking portion..., and **an interface connected to the data port and to the car stereo, wherein the interface processes control commands generated by the car stereo in a format incompatible with the portable device into formatted control commands compatible with the portable device, and dispatches the formatted control commands to the portable device for execution thereby.** As discussed above, none of the cited references, taken alone or in any combination, teach or suggest an interface which includes the ability to process incompatible control commands from a car stereo into compatible control commands which can be executed by a portable device. As such, Applicant submits that independent Claim 42 and Claims 43-46, which depend from amended independent Claim 42 and contain all of the limitations thereof, are patentable over the cited references, taken alone or in any combination.

Applicant submits that independent Claim 47, as amended herein, is patentable over the cited references, taken alone or in any combination, Claim 47, as amended, recites a method for integrating an after-market device with an OEM or after-market car stereo, which includes the steps of determining whether a car stereo is an OEM car stereo or an after-market car stereo, and generating a device presence signal to the car stereo to maintain the car stereo in an operational state responsive to external signals, **the device presence signal based on the car stereo....** The Office Action cites col. 4, lines 25-42 of Falcon as disclosing the claimed feature of determining

whether a car stereo is an OEM or an after-market car stereo. However, this excerpt only discloses that the configuration module 144 of the portable computing device of Falcon can identify a type of appliance to which the device is attached. It fails to disclose that the portable computing device can discriminate between an OEM or an after-market car stereo. Moreover, neither Falcon nor any of the other cited references, taken alone or in any combination, teach or suggest generating a device presence signal which is based on the car stereo. As such, Applicant submits that independent Claim 47 and Claims 48-54, which depend from Claim 47 and contain all of the limitations thereof, are patentable over the cited references, taken alone or in any combination.

Applicant respectfully traverses the rejection of independent Claim 81 as being obvious over Miyazaki over Kunimatsu, et al. First, neither Miyazaki nor Kunimatsu, et al., taken alone or in combination, teach or suggest an interface connected between a car stereo and an external video device. Miyazaki, discussed earlier, merely discloses a car navigational unit and an external disk changer. No disclosure is provided of an interface connected between a car stereo and an external video device. Kunimatsu, et al. fails to cure the deficiencies of Miyazaki. Kunimatsu, et al. merely disclose a display system in a car which includes multiple display screens and an operation menu. No disclosure of an interface connected between a car stereo and a video device is provided. Moreover, neither reference discloses means for generating and transmitting a device presence signal for maintaining a car stereo in an operational state. As such, Applicant submits that independent Claim 81 and Claims 82 and 102-103, which depend from Claim 81 and contain all of the limitations thereof, are patentable. Applicant notes that new dependent Claims 102 and 103 further define the interface of Claim 81, and recite features

directed to processing incompatible control commands issued at the car stereo into formatted commands compatible with the video device, as well as processing incompatible data from the video device into formatted data compatible with the car stereo, for display thereon. Accordingly, these claims are also patentable for the reasons stated above.

Applicant notes that new dependent Claims 88-101 recite bus connections established between the interface of the present invention and an external device, including Universal Serial Bus (USB). New independent Claim 104 is directed to an audio device integration system including a car stereo, a line-level audio device external to the car stereo, and an interface connected between the car stereo and the line-level audio device, wherein the interface includes means for transmitting audio from the line-level audio source to the car stereo and means for generating and transmitting a device presence signal to the car stereo to maintain the car stereo in an operational state. Applicant submits that none of the cited references, taken alone or in any combination, teach or suggest such features.

Applicant also notes that none of the references cited in the most recent Office Action in Applicant's co-pending application Serial No. 10/732,909, taken alone or in any combination, teach or suggest Applicant's claimed invention as amended herein. None of the cited references in the co-pending application teach or suggest an interface which receives incompatible control commands from a car stereo system, processes same into a formatted command compatible with an external audio or video device, and transmits same to the external device for execution thereby, as set forth in Claims 1-13, 15-23, 24-29, 55-57, 59-62, 63-65, 67-71, 72-74, 76-80, and 83-101. Additionally, none of the cited references in the co-pending application, taken alone or

in any combination, teach or suggest the features of Claims 30-38 and 40-41; 42-46 and 47-54; 81-82; and 102-104, as summarized above.

All issues raised in the Office Action are believed to have been addressed. Claims 1, 4-5, 11, 24, 26-27, 30, 35-37, 42, 44-45, 47-48, 51, 55, 59, 63, 67, 70-72, 76, 81, and 83 were amended, Claims 58, 66, and 75 were cancelled, and Claims 88-104 were added. No new matter is believed to have been added. Claims 1-13, 15-38, 40-57, 59-65, 67-74, and 76-104 are pending and are in condition for allowance. Reexamination is requested and favorable action solicited.

Respectfully submitted,



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Date: \_\_\_\_\_

2/14/07

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Customer No. 27614

IFU

2615  
A.  
2.3

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450



Re: Our file: 99879-00005 Examiner: Kurr, J.  
Applicant: Ira Marlowe Art Unit: 2615  
Serial No.: 10/316,961  
Filing Date: 12/11/2002  
Title: Audio Device Integration System

Sir:

Enclosed for filing in the United States Patent and Trademark Office is the following:

1. Response to Office Action
2. Amendment Transmittal Letter (Small Entity)
3. Transmittal of Information Disclosure Statement
4. Form PTO/SB/08A (1 Page)
5. Form PTO/SB08B (1 Page)
6. Copies of Three (3) Non-patent References Cited in Form PTO/SB08B
7. Transmittal Sheet
8. Postcard Receipt

**CONDITIONAL PETITION**

If any extension of time is required for the submission of the above-identified items, Applicant requests that this be considered a petition therefor. Please charge any additional charges or any other charges relating to this matter, or credit any overpayment, to the Deposit Account of the writer, **Account No. 503571**. A duplicate copy of this letter is enclosed.

2/14/07  
Date

Respectfully submitted,

Michael R. Friscia  
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**CERTIFICATE OF MAILING BY FIRST CLASS MAIL**

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By:   
Josephine Lobello



**AMENDMENT TRANSMITTAL LETTER (Small Entity)**

Applicant(s): Ira Marlowe

Docket No.  
99879-00005

|                               |                           |                                 |                       |                        |                          |
|-------------------------------|---------------------------|---------------------------------|-----------------------|------------------------|--------------------------|
| Application No.<br>10/316,961 | Filing Date<br>12/11/2002 | Examiner<br>Kurr, Jason Richard | Customer No.<br>27614 | Group Art Unit<br>2615 | Confirmation No.<br>4879 |
|-------------------------------|---------------------------|---------------------------------|-----------------------|------------------------|--------------------------|

Invention: Audio Device Integration System



COMMISSIONER FOR PATENTS:

Transmitted herewith is an amendment in the above-identified application.

Applicant claims small entity status. See 37 CFR 1.27

The fee has been calculated and is transmitted as shown below.

CLAIMS AS AMENDED

|  | CLAIMS REMAINING<br>AFTER AMENDMENT | HIGHEST #<br>PREV. PAID FOR | NUMBER EXTRA<br>CLAIMS PRESENT | RATE       | ADDITIONAL<br>FEE |
|--|-------------------------------------|-----------------------------|--------------------------------|------------|-------------------|
| TOTAL CLAIMS   | 99 -                                | 87 =                        | 12                             | x \$25.00  | \$300.00          |
| INDEP. CLAIMS  | 11 -                                | 10 =                        | 1                              | x \$100.00 | \$100.00          |
| Multiple Dependent Claims (check if applicable) <input type="checkbox"/> |                                     |                             |                                |            | \$0.00            |
| <b>TOTAL ADDITIONAL FEE FOR THIS AMENDMENT</b>                           |                                     |                             |                                |            | <b>\$400.00</b>   |

- No additional fee is required for amendment.
- Please charge Deposit Account No. 503571 in the amount of \$400.00
- A check in the amount of \_\_\_\_\_ to cover the filing fee is enclosed.
- The Director is hereby authorized to charge payment of the following fees associated with this communication or credit any overpayment to Deposit Account No. 503571
  - Any additional filing fees required under 37 C.F.R. 1.16.
  - Any patent application processing fees under 37 CFR 1.17.
- Payment by credit card. Form PTO-2038 is attached.

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Signature

Dated: 2/14/07

Michael R. Friscia  
Reg. No. 33,884  
McCarter & English, LLP  
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100 Mulberry Street  
Newark, NJ 07102-4056  
Tel.: 973-639-8493

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| Josephine Lobello<br>Typed or Printed Name of Person Mailing Correspondence  |

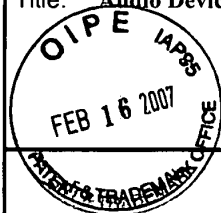
**TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT  
(Under 37 CFR 1.97(b) or 1.97(c))**

Docket No.  
99879-00005

In Re Application Of: Ira Marlowe

| Application No. | Filing Date | Examiner            | Customer No. | Group Art Unit | Confirmation No. |
|-----------------|-------------|---------------------|--------------|----------------|------------------|
| 10/316,961      | 12/11/2002  | Kurr, Jason Richard | 27614        | 2615           | 4879             |

Title: Audio Device Integration System



Address to:  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**37 CFR 1.97(b)**

1.  The Information Disclosure Statement submitted herewith is being filed within three months of the filing of a national application other than a continued prosecution application under 37 CFR 1.53(d); within three months of the date of entry of the national stage as set forth in 37 CFR 1.491 in an international application; before the mailing of a first Office Action on the merits, or before the mailing of a first Office Action after the filing of a request for continued examination under 37 CFR 1.114.

**37 CFR 1.97(c)**

2.  The Information Disclosure Statement submitted herewith is being filed after the period specified in 37 CFR 1.97(b), provided that the Information Disclosure Statement is filed before the mailing date of a Final Action under 37 CFR 1.113, a Notice of Allowance under 37 CFR 1.311, or an Action that otherwise closes prosecution in the application, and is accompanied by one of:

the statement specified in 37 CFR 1.97(e);

**OR**

the fee set forth in 37 CFR 1.17(p).

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P10A/REV06

**TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT**  
(Under 37 CFR 1.97(b) or 1.97(c))

Docket No.  
99879-00005

In Re Application of: **Ira Marlowe**

| Application No. | Filing Date | Examiner            | Customer No. | Group Art Unit | Confirmation No. |
|-----------------|-------------|---------------------|--------------|----------------|------------------|
| 10/316,961      | 12/11/2002  | Kurr, Jason Richard | 27614        | 2615           | 4879             |

Title: **Audio Device Integration System**



**Payment of Fee**

(Only complete if Applicant elects to pay the fee set forth in 37 CFR 1.17(p))

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Josephine LoBello

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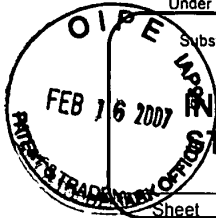
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Dated: 2/14/07

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Fax: (973) 297-6627

cc:

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Substitute for form 1449/PTO

### INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 2

| Complete if Known      |                    |
|------------------------|--------------------|
| Application Number     | 10/316,961         |
| Filing Date            | December 11, 2002  |
| First Named Inventor   | Ira Marlowe        |
| Art Unit               | 2615               |
| Examiner Name          | Jason Richard Kurr |
| Attorney Docket Number | 99879-00005        |

| U. S. PATENT DOCUMENTS |                       |  |                                |   |   |
|------------------------|-----------------------|--|--------------------------------|---|---|
| Examiner Initials*     | Cite No. <sup>1</sup> | Document Number                          | Publication Date<br>MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear |
|                        |                       | Number-Kind Code <sup>2</sup> (if known) |                                |   |   |
|                        | 1                     | US- 6,648,661                            | 11/18/2003                     | Byrne, et al.                                   |   |
|                        | 2                     | US- 2004/0091123 A1                      | 05/13/2004                     | Stark, et al.                                   |   |
|                        | 3                     | US- 2002/0180767 A1                      | 12/05/2002                     | Northway, et al.                                |   |
|                        |                       | US-                                      |                                |   |   |
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| FOREIGN PATENT DOCUMENTS |                       |   |                                |   |   |                |
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| Examiner Initials*       | Cite No. <sup>1</sup> | Foreign Patent Document   | Publication Date<br>MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear | T <sup>6</sup> |
|                          |                       | Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known) |                                |   |   |                |
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| Examiner Signature | Date Considered |
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|   |   | <b>Application Number</b>     | 10/316,961         |
| <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b><br><br>(Use as many sheets as necessary) |   | <b>Filing Date</b>            | December 11, 2002  |
|   |   | <b>First Named Inventor</b>   | Ira Marlowe        |
|   |   | <b>Art Unit</b>               | 2615               |
|   |   | <b>Examiner Name</b>          | Jason Richard Kurr |
|   |   | <b>Attorney Docket Number</b> | 99879-00005        |
| Sheet   | 2 | of                            | 2                  |

| NON PATENT LITERATURE DOCUMENTS |                       |   |                |
|---------------------------------|-----------------------|---|----------------|
| Examiner Initials*              | Cite No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T <sup>2</sup> |
|                                 | 4                     | "Blitz Safe Offers XM Cables for Radios," printout from website<br><a href="http://www.twice.com/article/CA190041.html?text=blitz+safe">http://www.twice.com/article/CA190041.html?text=blitz+safe</a> (2 pages)  |                |
|                                 | 5                     | "Integration Products May Impact Satellite Radio," printout from website<br><a href="http://www.twice.com/article/CA 200541.html?text=blitz+safe">http://www.twice.com/article/CA 200541.html?text=blitz+safe</a> (3 pages)                                     |                |
|                                 | 6                     | "OEM Integration Poised for Strong Growth," printout from website<br><a href="http://www.twice.com/article/CA 200523.html?text=blitz+safe">http://www.twice.com/article/CA 200523.html?text=blitz+safe</a> (3 pages)  |                |
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| <b>Examiner Signature</b> | <b>Date Considered</b> |
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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/316,961      | 12/11/2002  | Ira Marlowe          | 9809/1              | 4879             |

7590 11/14/2006  
 MICHAEL R FRISCIA  
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 NEWARK, NJ 07102

|                                 |
|---------------------------------|
| EXAMINER<br>KURR, JASON RICHARD |
|---------------------------------|

|                  |              |
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| ART UNIT<br>2615 | PAPER NUMBER |
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DATE MAILED: 11/14/2006

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|                              |                                      |                                     |  |
|------------------------------|--------------------------------------|-------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/316,961 | <b>Applicant(s)</b><br>MARLOWE, IRA |  |
|                              | <b>Examiner</b><br>Jason R. Kurr     | <b>Art Unit</b><br>2615             |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1)  Responsive to communication(s) filed on 11 September 2006.
- 2a)  This action is **FINAL**.
- 2b)  This action is non-final.
- 3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4)  Claim(s) 1-13, 15-38 and 40-86 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5)  Claim(s) \_\_\_\_\_ is/are allowed.
- 6)  Claim(s) 1-13, 15-38 and 40-86 is/are rejected.
- 7)  Claim(s) \_\_\_\_\_ is/are objected to.
- 8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9)  The specification is objected to by the Examiner.
- 10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1)  Notice of References Cited (PTO-892)
- 2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3)  Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 9/12/05.
- 4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_
- 5)  Notice of Informal Patent Application
- 6)  Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 42, 45, 83 and 84 are rejected under 35 U.S.C. 102(b) as being anticipated by Miyazaki et al (US 6,163,079).**

With respect to claim 42, Miyazaki discloses an apparatus for docking a portable device (fig.2 #40A) for integration with a car stereo comprising: a storage area (fig.7 #50, col.2 ln.29-42) remote from a car stereo for storing the portable device; a docking portion (fig.2 #4C) within the storage area for electrically communicating and physically mating with the portable device; and a data port in electrical communication with the docking portion (fig.1 #38, "Ls"), the data port connectable with a device (fig.2 #42) for integrating the portable device with the car stereo.

With respect to claim 45, Miyazaki discloses the apparatus of claim 42, wherein the storage area further comprises a top portion (fig.14 #17) and a bottom portion (fig.14 #50) defining a sleeve (fig.14 #41) for holding the portable audio device.



With respect to claim 83, Miyazaki discloses an audio device integration system comprising: a car stereo (fig.1 #32); a portable audio device external to the car stereo (fig.2 #40A); an interface (fig.1 #38) connected between the car stereo and the portable audio device; means (fig.2 #42) for generating a device presence signal and transmitting the signal to the car stereo to maintain the car stereo in an operational state (col.4 ln.54-66); and means (fig.1 "Ls") for transmitting audio from the portable audio device to the car stereo.

With respect to claim 84, Miyazaki discloses the apparatus of claim 83, wherein the portable audio device comprises a portable CD player (fig.2 #44).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1-4,6,10-13,15-26,28-30,34-38,40-41,81 and 82 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki et al (US 6,163,079) in view of Kunitatsu et al (US 6,653,948 B1).**

With respect to claim 1, Miyazaki discloses an audio device integration system comprising: a car stereo (fig.1 #32, col.4 ln.6-7); an after-market audio device (fig.2 #40A) external to the car stereo; an interface (fig.1,2 #38,) connected between the car stereo and the after-market audio device for exchanging data and audio signals between the car stereo and the audio device (col.2 ln.5-16); means (fig.1 "Ls",#32, col.4 ln.15-18) for processing and dispatching commands for controlling the after-market audio device from the car stereo in a format compatible with the after-market audio device (col.4 ln.51-67, col.5 ln.1-4); and means (fig.2 #42) for processing data from the audio after-market device on the car stereo in a format compatible with the car stereo (col.4 ln.54-66); and means (fig.2 #43) for switching to one or more auxiliary input sources connected to the interface (col.4 ln.54-57).

Miyazaki does not disclose expressly wherein the means for processing data includes the capability of displaying data on a display of the car stereo, however does disclose the processing of data including "a radio/CD selection instruction, a station selection instruction, a volume control instruction, etc. (col.4 ln.51-66). Miyazaki also teaches a navigation system (fig.4 #28) with a visual display (fig.4 #47) as an auxiliary device.

Kunimatsu teaches a navigation system (fig.1 #14) that is combined with an audio system (fig.1 #18) to provide information to a display (fig.1 #12).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine the audio and navigation systems of Miyazaki into one unit that displays information to a visual display as taught by Kunimatsu.

The motivation for doing so would have been to allow a user, who is seated near the car stereo to view the control instructions sent from the auxiliary device, such as volume, selected station, or selected CD. This would also allow the user to make desirable changes to the settings of the auxiliary device by merely controlling the car stereo. Hence, now the system of Miyazaki not only displays navigation information but also information pertaining to the audio system such as the data disclosed in column 4 lines 51-66.

With respect to claim 2, Miyazaki discloses the apparatus of claim 1, wherein the car stereo is an Original Equipment Manufacturer (OEM) car stereo (col.1 ln.12-36).

With respect to claim 3, Miyazaki discloses the apparatus of claim 1, however does not disclose expressly wherein the car stereo is an after-market car stereo. Miyazaki discloses a system for connecting auxiliary devices to a vehicles control system, however does not make the distinction that the control system is replaceable by an after-market control, such as an after-market car stereo to replace the factory stereo control components. Official Notice is taken that after-market car stereos are well known in the art, and the invention of Miyazaki is not limited to interacting with only factory stereo components. At the time of the invention it would have been obvious that

a user of Miyazaki's invention could replace the factory stereo with an after-market unit and continue to achieve the same results. The motivation for using an after-market unit would have been to upgrade the vehicles sound system. These upgrades could include features such as, bass and stereophonic outputs, or mp3 and satellite capabilities.

With respect to claim 4, Miyazaki discloses the apparatus of claim 1, wherein the audio device comprises a CD player, CD changer (fig.2 #44), MP3 player, Digital Audio Broadcast (DAB) receiver, or satellite receiver.

With respect to claim 6, Miyazaki discloses the apparatus of claim 1, wherein the interface generates a CD player presence signal for maintaining the car stereo in a state responsive to processed data and audio signals (col.4 ln.54-66).

With respect to claim 10, Miyazaki discloses the apparatus of claim 1, wherein the data comprises video information (col.5 ln.24-31).

With respect to claim 11, Miyazaki discloses the apparatus of claim 1, however does not disclose expressly wherein the data is displayed as a menu on the display of the car stereo. It is implied that the system of Miyazaki includes a screen to display the navigation information, however it is not discloses wherein this information is provided in as a menu.

Kunimatsu discloses a combined navigation/audio system that displays a menu of data (fig.3B).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the combined navigation and audio system of Kunimatsu as the navigation and audio units of Miyazaki. This would provide a menu of options for a user to select.

The motivation for providing the data in the form of a menu, as does Kunimatsu, would have been to simplify the controls of the system of Miyazaki, by providing an easily viewable set of options.

With respect to claim 12, Miyazaki discloses the apparatus of claim 1, however does not disclose expressly wherein the display of the car stereo comprises a graphic panel. Miyazaki discloses wherein the navigation unit (fig.4 #28,40B) comprises a graphic panel (fig.4 #47).

Kunimatsu discloses a vehicle mounted display system (fig.1 #12) that is integrated with a navigation unit (fig.1 #14) and an audio system (fig.1 #18), wherein the system includes a graphic panel (fig.1 #20).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the combined navigation and audio system of Kunimatsu as the navigation and audio units of Miyazaki. It is well known in the art that touch-screen panels are commonly found in vehicles for the purpose of controlling and displaying both navigation and audio information, as evidenced by Kunimatsu.

The motivation for using a combined unit would have been to supply a system with one set of controls, which would ultimately simplify the operation of the system. Also, a system with one display and one set of controls (being the touch-screen display) would greatly reduce the required area of mounting space, hence allowing the system to be implemented in smaller vehicles.

With respect to claim 13, Miyazaki discloses the apparatus of claim 1, wherein the commands are input by a user using one or more control buttons or presets on the car stereo. It is implied that the audio control unit of Miyazaki contains control buttons or presets to control the functions disclosed on column 4 lines 57-60. Without control buttons or presets, it would not be possible for a user to control these disclosed functions.

With respect to claim 15, Miyazaki discloses the apparatus of claim 1, wherein audio signals from the one or more auxiliary input sources are selectively channeled to the car stereo by the interface (col.4 ln.63-67, col.5 ln.1-4).

With respect to claim 16, Miyazaki discloses the apparatus of claim 1, however does not disclose expressly wherein a user can select between the one or more auxiliary input sources by depressing keys on the car stereo. Miyazaki discloses wherein the control unit is connected to a disk changer (fig.3 #44). Official Notice is taken that it is well known in the art that car stereo units have keys for selecting disks

(auxiliary input sources) from a CD changer. It would have been obvious to a person of ordinary skill in the art to use keys for the selection of disks in the changer on the audio control unit (fig.3 #32) of Miyazaki. The motivation for doing so would have been to select a CD to play without having to manually access the disk changer.

With respect to claim 17, Miyazaki discloses the apparatus of claim 1, however does not disclose expressly wherein a user can select one of the auxiliary input sources by entering a disc number at the car stereo. Miyazaki discloses wherein the control unit is connected to a disk changer (fig.3 #44). Official Notice is taken that it is well known in the art that car stereo units have keys for selecting disks (auxiliary input sources) from a CD changer. These keys are known to be associated with a disk number that corresponds to a disk in the changer. It would have been obvious to a person of ordinary skill in the art to use keys with disk numbers for the selection of disks in the changer on the audio control unit (fig.3 #32) of Miyazaki. The motivation for doing so would have been to select a CD to play without having to manually access the disk changer.

With respect to claim 18, Miyazaki discloses the apparatus of claim 1, however does not disclose expressly wherein a user can select one of the auxiliary input sources by entering a track number at the car stereo. Miyazaki discloses wherein the control unit is connected to a disk changer (fig.3 #44). Official Notice is taken that it is well known in the art that car stereo units have means to enter a track number of a CD in a

CD changer. It would have been obvious to a person of ordinary skill in the art to enter track numbers on the audio control unit (fig.3 #32) of Miyazaki for the selection of a track of a disk in the changer. The motivation for doing so would have been to select an audio track to play without having to manually access the disk changer.

With respect to claim 19, Miyazaki discloses the apparatus of claim 1, however does not disclose expressly wherein a user can select one of the auxiliary input sources by entering both disc and track numbers at the car stereo. Miyazaki discloses wherein the control unit is connected to a disk changer (fig.3 #44). Official Notice is taken that it is well known in the art that car stereo units have means to enter both disk and track numbers to select an audio track in a CD changer. It would have been obvious to a person of ordinary skill in the art to enter both disk and track numbers on the audio control unit (fig.3 #32) of Miyazaki for the selection of a track of a disk in the changer. The motivation for doing so would have been to select an audio track to play without having to manually access the disk changer.

With respect to claim 20, Miyazaki discloses the apparatus of claim 1, however does not disclose expressly wherein a user can select between the audio device and the one or more auxiliary input sources by entering a sequence at the car stereo. Miyazaki discloses wherein the control unit is connected to a disk changer (fig.3 #44). Official Notice is taken that it is well known in the art that car stereo units have means to enter a sequence, such as disk and track number, to select an audio track in a CD



changer. It would have been obvious to a person of ordinary skill in the art to enter a sequence, such as disk and track numbers on the audio control unit (fig.3 #32) of Miyazaki for the selection of a track of a disk in the changer. The motivation for doing so would have been to select an audio track to play without having to manually access the disk changer.

With respect to claim 21, Miyazaki discloses the apparatus of claim 20, however does not disclose expressly wherein the sequence comprises a track up selection followed by a track down selection. Official Notice is taken that is well known in the art that track up and down commands are common on most CD players and disk changers. It would have been obvious to a person of ordinary skill in the art to use these commands in the control of the CD changer of Miyazaki. The motivation for doing so would have been to allow a user to pan through the tracks until a desired track is found.

With respect to claim 22, Miyazaki discloses the apparatus of claim 1, further comprising a second interface (fig.1 #38) connected to (fig.1 "Ls,Lb") the first interface (fig.1 #38) for providing a plurality of auxiliary input sources.

With respect to claim 23, Miyazaki discloses the apparatus of claim 22, wherein both the first interface and the second interface are controllable using the car stereo (col.6 ln.28-32).

With respect to claim 24, Miyazaki discloses an audio device integration system comprising: a car stereo (fig.1 #32, col.4 ln.6-7); a plurality of auxiliary input sources (fig.2 #40A, fig.4 #40B); an interface (fig.1 #38) connected between the car stereo and the plurality of auxiliary input sources (col.2 ln.5-16); means (fig.1 "Ls", #32, col.4 ln.15-18) for processing and dispatching commands for controlling an audio device connected to one of the plurality of auxiliary input sources from the car stereo in a format compatible with the audio device (col.4 ln.51-67, col.5 ln.1-4); means for processing (fig.2 #42) data from the audio device on the car stereo in a format compatible with the car stereo (col.4 ln.54-66); and means (fig.2 #43) for selecting one of the plurality of auxiliary input sources from the car stereo (col.4 ln.54-57).

Miyazaki does not disclose expressly wherein the means for processing data includes the capability of displaying data on a display of the car stereo, however does disclose the processing of data including "a radio/CD selection instruction, a station selection instruction, a volume control instruction, etc. (col.4 ln.51-66). Miyazaki also teaches a navigation system (fig.4 #28) with a visual display (fig.4 #47) as an auxiliary device.

Kunimatsu teaches a navigation system (fig.1 #14) that is combined with an audio system (fig.1 #18) to provide information to a display (fig.1 #12).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine the audio and navigation systems of Miyazaki into one unit that displays information to a visual display as taught by Kunimatsu.

The motivation for doing so would have been to allow a user, who is seated near the car stereo to view the control instructions sent from the auxiliary device, such as volume, selected station, or selected CD. This would also allow the user to make desirable changes to the settings of the auxiliary device by merely controlling the car stereo. Hence, now the system of Miyazaki not only displays navigation information but also information pertaining to the audio system such as the data disclosed in column 4 lines 51-66.

With respect to claim 25, Miyazaki discloses the apparatus of claim 24, however does not disclose expressly wherein a user can select one of the auxiliary input sources by entering both disc and track numbers at the car stereo. Miyazaki discloses wherein the control unit is connected to a disk changer (fig.3 #44). Official Notice is taken that it is well known in the art that car stereo units have means such as buttons to enter both disk and track numbers to select an audio track in a CD changer. It would have been obvious to a person of ordinary skill in the art to enter both disk and track numbers on the audio control unit (fig.3 #32) of Miyazaki for the selection of a track of a disk in the changer. The motivation for doing so would have been to select an audio track to play without having to manually access the disk changer.

With respect to claim 26, Miyazaki discloses the apparatus of claim 24, wherein the audio device comprises a CD player, CD changer (fig.2 #44), MP3 player, satellite receiver, or a Digital Audio Broadcast (DAB) receiver.

With respect to claim 28, Miyazaki discloses the apparatus of claim 24, however does not disclose expressly wherein the interface is switchable into an auxiliary input mode by issuing a control sequence at the car stereo. Miyazaki discloses wherein the control unit is connected to a disk changer (fig.3 #44). Official Notice is taken that it is well known in the art that car stereo units have means to enter a sequence, such as disk and track number, to select an audio track in a CD changer. It would have been obvious to a person of ordinary skill in the art to enter a sequence to switch the interface into an auxiliary input mode, such as disk and track numbers on the audio control unit (fig.3 #32) of Miyazaki for the selection of a track of a disk in the changer. The motivation for doing so would have been to select an audio track to play without having to manually access the disk changer.

With respect to claim 29, Miyazaki discloses the apparatus of claim 28, wherein the control sequence comprises a track up command followed by a track down command. Official Notice is taken that is well known in the art that track up and down commands are common on most CD players and disk changers. It would have been obvious to a person of ordinary skill in the art to use these commands in the control of the CD changer of Miyazaki. The motivation for doing so would have been to allow a user to pan through the tracks until a desired track is found.

With respect to claim 30, Miyazaki discloses a method for integrating an after-market device (fig.2 #40A) with a car stereo (fig.1 #32, col.4 ln.6-7) comprising: connecting an interface (fig.1 #38) to the car stereo, the after-market device to the interface, and an auxiliary input source (fig.1 #38) to the interface (col.2 ln.5-16); receiving control commands from the car stereo at the interface; processing the control commands into a format compatible with the after-market device and dispatching processed control commands to the after-market device; receiving data and audio from the after-market device at the interface; processing the data into a second format compatible with the car stereo and dispatching the audio and processed data to the car stereo (col.4 ln.51-67, col.5 ln.1-4), and playing audio from the auxiliary input source through the car stereo (fig.3 #30).

Miyazaki does not disclose expressly wherein the system displays processed data on a display of the car stereo, however does disclose the processing of data including "a radio/CD selection instruction, a station selection instruction, a volume control instruction, etc. (col.4 ln.51-66). Miyazaki also teaches a navigation system (fig.4 #28) with a visual display (fig.4 #47) as an auxiliary device.

Kunimatsu teaches a navigation system (fig.1 #14) that is combined with an audio system (fig.1 #18) to provide information to a display (fig.1 #12).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine the audio and navigation systems of Miyazaki into one unit that displays information to a visual display as taught by Kunimatsu.

The motivation for doing so would have been to allow a user, who is seated near the car stereo to view the control instructions sent from the auxiliary device, such as volume, selected station, or selected CD. This would also allow the user to make desirable changes to the settings of the auxiliary device by merely controlling the car stereo. Hence, now the system of Miyazaki not only displays navigation information but also information pertaining to the audio system such as the data disclosed in column 4 lines 51-66.

With respect to claim 34, Miyazaki discloses the method of claim 30, wherein the step of receiving data from the device comprises retrieving video information from the device (col.5 ln.24-31).

With respect to claim 35, Miyazaki discloses the method of claim 30, wherein the step of displaying the processed data comprises displaying the data in an LCD panel (fig.4 #47).

With respect to claim 36, Miyazaki discloses the method of claim 30 in view of Kunimatsu, wherein the step of displaying the processed data comprises displaying the data in a graphical user interface at the car stereo (Kunimatsu: fig.1).

With respect to claim 37, Miyazaki discloses the method of claim 30 in view of Kunimatsu, wherein the step of displaying processed data comprises displaying video at

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the car stereo (Kunimatsu: fig.1, fig.3A).

With respect to claim 38, Miyazaki discloses the method of claim 30, wherein the step of connecting the after-market device to the interface comprises connecting a CD player, CD changer (fig.3 #44), MP3 player, satellite receiver, or Digital Audio Broadcast (DAB) receiver to the interface.

With respect to claim 40, Miyazaki discloses the method of claim 39, however does not disclose expressly further comprising receiving a selection command from the car stereo and channeling data and audio from the auxiliary input source to the interface in response to the selection command. Miyazaki discloses wherein the control unit is connected to a disk changer (fig.3 #44). Official Notice is taken that it is well known in the art that car stereo units have means to select an audio tracks and disks in a CD changer. It would have been obvious to a person of ordinary skill in the art to send a selection command to the interface when an auxiliary unit such as a disk changer is connected. The motivation for doing so would have been to select an audio track to play without having to manually access the disk changer.

With respect to claim 41, Miyazaki discloses the method of claim 40 in view of Kunimatsu, further comprising processing the data from the auxiliary input source for display on the car stereo (Kunimatsu: col.5 ln.56-62).

With respect to claim 81, Miyazaki discloses a device for information for use with a car stereo, comprising: a car stereo (fig.1 #32); an auxiliary device external to the car stereo (fig.2 #40A); an interface (fig.1 #38) connected between the car stereo and the auxiliary device; means (fig.2 #42) for generating a device presence signal and transmitting the signal to the car stereo to maintain the car stereo in an operational state (col.4 ln.54-63); and means (fig.1 "Ls") for transmitting information from the auxiliary device to the car stereo.

Miyazaki does not disclose expressly wherein the auxiliary device is a video device, however does teach a navigation system (fig.4 #28) with a visual display (fig.4 #47) as an auxiliary device.

Kunimatsu teaches a navigation system (fig.1 #14) that is combined with an audio system (fig.1 #18) and a video system (fig.1 #44,50,52) to provide information to a display (fig.1 #12).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine the audio, and navigation systems of Miyazaki into one unit that displays information to a visual display as taught by Kunimatsu. It would also have been obvious to a person of ordinary skill in the art to include the video system disclosed by Kunimatsu in the system of Miyazaki.

The motivation for doing so would have been to allow a user, who is seated near the car stereo to view the control instructions sent from the auxiliary device, such as volume, selected station, or selected CD. This would also allow the user to make desirable changes to the settings of the auxiliary device by merely controlling the car



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stereo. Hence, now the system of Miyazaki not only displays navigation information but also information pertaining to the audio system such as the data disclosed in column 4 lines 51-66. This would also provide a user with the option to view television broadcasts.

With respect to claim 82, Miyazaki discloses the device of claim 81 in view of Kunimatsu, further comprising means for converting the video information into a format compatible with the car stereo (Kunimatsu: fig.1 #44).

**Claims 5,7-9,27,31-33,44 and 52-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki et al (US 6,163,079) in view of Kunimatsu et al (US 6,653,948 B1) and in further view of Falcon (US 6,993,615 B2).**

With respect to claim 5, Miyazaki discloses the apparatus of claim 1, however does not disclose expressly wherein the interface further comprises a plug-and-play mode for automatically detecting a device type of the audio device and integrating the audio device based upon the device type.

Falcon discloses an external audio device (fig.4 #102) that interfaces with a car stereo (fig.4 #200) wherein the interfacing of the devices comprises a plug-and-play mode for automatically detecting a device type of the audio device and integrating the audio device based upon the device type (col.4 ln.25-42).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to automatically detect and integrate the external audio devices of Miyazaki with the audio control unit as is accomplished in the interfacing of Falcon.

The motivation for doing so would have been to provide a user-friendly system that does not require resetting control configurations each time a new auxiliary device is connected to or in communication with the audio control.

With respect to claims 7-9, Miyazaki discloses the apparatus of claim 1, however does not disclose expressly wherein the data comprises "track and time information", "song title and artist information", "channel number and channel information".

Falcon discloses an external audio device (fig.4 #102) that interfaces with a car stereo (fig.4 #200) wherein the interfacing information of the devices comprises "track

and time information" (col.8 ln.20-26), "song title and artist information" (col.8 ln.26-30), "channel number and channel information" (col.6 ln.41-47).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to include the interfacing information disclosed by Falcon in the data exchanged by Miyazaki.

The motivation for doing so would have been to provide the audio control unit with information pertaining to the operation of the auxiliary devices. This would allow the audio control to present this information to a user located in the front of the vehicle, hence allowing a user to view and control the reproduction of information without leaving his or her seat.

With respect to claim 27, Miyazaki discloses the apparatus of claim 24, however does not disclose expressly wherein a device type of the audio device is automatically detected by the interface and the audio device is automatically integrated with the car stereo based upon the device type.

Falcon discloses an external audio device (fig.4 #102) that interfaces with a car stereo (fig.4 #200) wherein the interfacing of the devices comprises automatically detecting a device type of the audio device and automatically integrating the device with the car stereo based upon the device type (col.4 ln.25-42).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to automatically detect and integrate the external audio devices of Miyazaki with the audio control unit as is accomplished in the interfacing of Falcon.

The motivation for doing so would have been to provide a user-friendly system that does not require resetting control configurations each time a new auxiliary device is connected to or in communication with the audio control.

With respect to claims 31-33, Miyazaki discloses the apparatus of claim 30, however does not disclose expressly wherein the data comprises "track and time information", "MP3 song, title, track, and time information", "channel number, channel name, artist, and song information".

Falcon discloses an external audio device (fig.4 #102) that interfaces with a car stereo (fig.4 #200) wherein the interfacing information of the devices comprises "track and time information" (col.8 ln.20-26), "MP3 song, title, track, and time information" (col.8 ln.20-30), "channel number, channel name, artist, and song information" (col.6 ln.41-47, col.8 ln.18-40).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to include the interfacing information disclosed by Falcon in the data exchanged by Miyazaki.

The motivation for doing so would have been to provide the audio control unit with information pertaining to the operation of the auxiliary devices. This would allow the audio control to present this information to a user located in the front of the vehicle, hence allowing a user to view and control the reproduction of information without leaving his or her seat.

With respect to claim 44, Miyazaki discloses the apparatus of claim 42, however does not disclose expressly wherein the data port comprises an RS-232 or USB port.

Falcon discloses a car stereo (fig.4 #200) with USB ports (fig.4 #216) for the connection of peripheral devices (col.8 ln.6-7).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the USB ports of Falcon as the data ports of Miyazaki.

The motivation for doing so would have been to provide the system of Miyazaki with a plug and play option that is consistent with USB connections.

With respect to claim 52, Miyazaki discloses the method of claim 51, however does not disclose expressly further comprising displaying formatted data on the car stereo.

Kunimatsu teaches a navigation system (fig.1 #14) that is combined with an audio system (fig.1 #18) to provide information to a display (fig.1 #12).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine the audio and navigation systems of Miyazaki into one unit that displays the formatted data to a visual display as taught by Kunimatsu.

The motivation for doing so would have been to allow a user, who is seated near the car stereo to view the control instructions sent from the auxiliary device, such as volume, selected station, or selected CD. This would also allow the user to make desirable changes to the settings of the auxiliary device by merely controlling the car stereo. Hence, now the system of Miyazaki not only displays navigation information but

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also information pertaining to the audio system such as the data disclosed in column 4 lines 51-66.

With respect to claim 53, Miyazaki discloses the method of claim 52 in view of Kunimatsu, however does not disclose expressly wherein displayed formatted data comprises; channel numbers, channel names, titles, tracks, song names, or artist names on the car stereo.

Falcon discloses an external audio device (fig.4 #102) that interfaces with a car stereo (fig.4 #200) wherein the interfacing information of the devices comprises channel numbers, channel names, titles, tracks, song names, or artist names on the car stereo (col.8 ln.20-40).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to include the interfacing information disclosed by Falcon in the data to be displayed the combination of Kunimatsu and Miyazaki.

The motivation for doing so would have been to graphically provide the user with information pertaining the operation of the auxiliary device.

With respect to claim 54, Miyazaki discloses the method of claim 52 in view of Kunimatsu, wherein the step of displaying formatted data comprises displaying video on the car stereo (Kunimatsu: col.5 ln.41-44).

**Claims 47-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki et al (US 6,163,079) in view of Falcon (US 6,993,615 B2).**

With respect to claim 47, Miyazaki discloses a method of integrating an after-market device (fig.2 #40A) with an Original Equipment Manufacturer (OEM) or after-market car stereo (fig.1 #32) comprising: connecting the after-market device to an interface (fig.1 #38); connecting the interface to a car stereo; generating and transmitting a presence signal to the car stereo to maintain the car stereo in an operational state responsive to external signals (col.4 ln.54-57); and selectively channeling data and audio signals from the after-market device to the car stereo using the interface (col.4 ln.51-67, col.5 ln.1-4).

Miyazaki does not disclose expressly wherein the method determines whether the car stereo is an OEM car stereo or an after-market car stereo.

Falcon discloses a method of interfacing an after-market device (fig.4 #102) with a car stereo (fig.4 #200), wherein the method includes determining the type of the car stereo (col.4 ln.25-42).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the method of Falcon to determine the type of car stereo used in the invention of Miyazaki, whether it be an OEM car stereo or an after-market car stereo.

The motivation for doing so would have been to supply the auxiliary devices of Miyazaki with information pertaining to the capabilities of the currently installed control

unit. This would ultimately allow the system to take advantage of any options provided in an after-market device not consistent with OEM devices, or vice versa.

With respect to claim 48, Miyazaki discloses the method of claim 47, further comprising receiving control commands from the car stereo at the interface (col.4 ln.51-67, col.5 ln.1-4).

With respect to claim 49, Miyazaki discloses the method of claim 48, further comprising converting the control commands into a format recognizable by the after-market audio device. It is implied, that in order for the car stereo and after-market devices of Miyazaki to interact with each other properly, the control commands must be converted into formats recognizable by each device.

With respect to claim 50, Miyazaki discloses the method of claim 49, further comprising dispatching formatted commands to the after-market audio device for execution thereby (col.4 ln.63-67 col.5 ln.1-4).

With respect to claim 51, Miyazaki discloses the method of claim 47, further comprising converting data received at the interface from the after-market audio device into a format compatible with the car stereo. It is implied, that in order for the car stereo and after-market devices of Miyazaki to interact with each other properly, the control commands must be converted into formats recognizable by each device.



**Claims 43 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki et al (US 6,163,079) in view of Holland (US 2002/0085730 A1).**

With respect to claim 43, Miyazaki discloses the apparatus of claim 42, wherein the storage area further comprises a top member (fig.14 #17), bottom member (fig.14 #50). Miyazaki does not disclose expressly wherein the top member and the bottom member are interconnected at an edge by a hinge.

Holland discloses an apparatus for docking with a portable device further comprising a hinge (pg.1 [0009]) for connecting a top member (fig.2 #5) and a bottom member (fig.2 #3) at an edge.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the hinge of Holland to connect the top and bottom portions of Miyazaki.

The motivation for doing so would have been to provide a closable lid to the protective case (Miyazaki: fig.14 #50). This would provide a case that does not have to slide in and out of a vehicle compartment but rather opens on the hinge, hence allowing for after market installation due to a lack in the need for a manufactured vehicle compartment.

With respect to claim 46, Miyazaki discloses the apparatus of claim 43 in view of Holland, further comprising a clasp (Holland: fig.4 #9) for retaining the top and bottom

members in a closed position (Holland: pg.2 [0024][0025]).

**Claims 55-58 and 85 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki et al (US 6,163,079) in view of Grady (US 6,591,085 B1).**

With respect to claim 55, Miyazaki discloses an audio device integration system comprising: a car stereo (fig.1 #32); an auxiliary device (fig.2 #40A) external to the car stereo; an interface (fig.1 #38) connected between the car stereo and the auxiliary device; means (fig.2 #42) for generating a device presence signal and transmitting the signal to the car stereo to maintain the car stereo in an operational state (col.4 ln.54-63); and means (fig.1 "Ls") for transmitting audio from the auxiliary device to the car stereo.

Miyazaki does not disclose expressly wherein the auxiliary device is a portable MP3 player.

Grady discloses an MP3 player (fig.8 #56) external to a car stereo (fig.8 #68) that is in communication with the stereo (col.5 ln.55-64).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use an MP3 player such as the one disclosed by Grady as the auxiliary device of Miyazaki.

The motivation for doing so would have been to allow a user of the system of Miyazaki to reproduce sound from an MP3 into the vehicle environment.

With respect to claim 56, Miyazaki discloses the apparatus of claim 55, wherein the car stereo is an Original Equipment Manufacturer (OEM) car stereo (col.1 ln.12-36).

With respect to claim 57, Miyazaki discloses the apparatus of claim 55, however does not disclose expressly wherein the car stereo is an after-market car stereo. Miyazaki discloses a system for connecting auxiliary devices to a vehicles control system, however does not make the distinction that the control system is replaceable by an after-market control, such as an after-market car stereo to replace the factory stereo control components. Official Notice is taken that after-market car stereos are well known in the art, and the invention of Miyazaki is not limited to interacting with only factory stereo components. At the time of the invention it would have been obvious that a user of Miyazaki's invention could replace the factory stereo with an after-market unit and continue to achieve the same results. The motivation for using an after-market unit would have been to upgrade the vehicles sound system. These upgrades could include features such as, bass and stereophonic outputs, or mp3 and satellite capabilities.

With respect to claim 58, Miyazaki discloses the system of claim 55, further comprising means for processing and dispatching commands (fig.2 #42) for controlling the portable MP3 player from the car stereo in a format compatible with the portable MP3 player.

With respect to claim 85, Miyazaki discloses the apparatus of claim 83, however does not disclose expressly wherein the portable audio device is a portable MP3 player.

Grady discloses an MP3 player (fig.8 #56) external to a car stereo (fig.8 #68) that is in communication with the stereo (col.5 ln.55-64).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use an MP3 player such as the one disclosed by Grady as the auxiliary device of Miyazaki.

The motivation for doing so would have been to allow a user of the system of Miyazaki to reproduce sound from an MP3 into the vehicle environment.

**Claims 59 and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki et al (US 6,163,079) in view of Grady (US 6,591,085 B1) and in further view of Kunimatsu et al (US 6,653,948 B1).**

With respect to claim 59, Miyazaki discloses the system of claim 58, however does not disclose expressly, further comprising means for displaying data from the portable MP3 player on a display of the car stereo in a format compatible with the car stereo.

Miyazaki does not disclose expressly wherein the means for processing data includes the capability of displaying data on a display of the car stereo, however does disclose the processing of data including "a radio/CD selection instruction, a station selection instruction, a volume control instruction, etc. (col.4 ln.51-66). Miyazaki also

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teaches a navigation system (fig.4 #28) with a visual display (fig.4 #47) as an auxiliary device.

Kunimatsu teaches a navigation system (fig.1 #14) that is combined with an audio system (fig.1 #18) to provide information to a display (fig.1 #12).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine the audio and navigation systems of Miyazaki into one unit that displays information to a visual display as taught by Kunimatsu. This would ultimately give the system of Miyazaki the capability of displaying graphically information received from any auxiliary devices, such as an MP3 player.

The motivation for doing so would have been to allow a user, who is seated near the car stereo to view the control instructions sent from the auxiliary device, such as volume, selected station, or selected CD. This would also allow the user to make desirable changes to the settings of the auxiliary device by merely controlling the car stereo. Hence, now the system of Miyazaki not only displays navigation information but also information pertaining to the audio system such as the data disclosed in column 4 lines 51-66.

With respect to claim 62, Miyazaki discloses the apparatus of claim 59, wherein the commands are input by a user using one or more control buttons or presets on the car stereo. It is implied that the audio control unit of Miyazaki contains control buttons or presets to control the functions disclosed on column 4 lines 57-60. Without control

buttons or presets, it would not be possible for a user to control these disclosed functions.

**Claims 60-61 rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki et al in view of Grady (US 6,591,085 B1) in view of Kunimatsu et al (US 6,653,948 B1) and in further view of Falcon (US 6,993,615 B2).**

With respect to claims 60-61, Miyazaki discloses the apparatus of claim 59 in view of Kunimatsu, however does not disclose expressly wherein displayed formatted data comprises; track and time information and song title and artist information.

Falcon discloses an external audio device (fig.4 #102) that interfaces with a car stereo (fig.4 #200) wherein the interfacing information of the devices comprises track and time information and song title and artist information (col.8 ln.20-40).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to include the interfacing information disclosed by Falcon in the data to be displayed the combination of Kunimatsu and Miyazaki.

The motivation for doing so would have been to graphically provide the user with information pertaining the operation of the MP3 player.

**Claims 63-66 and 86 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki et al (US 6,163,079) in view of Fuchs et al (US 6,346,917 B1).**

With respect to claim 63, Miyazaki discloses an audio device integration system comprising: a car stereo (fig.1 #32); an auxiliary device external (fig.2 #40A) to the car stereo; an interface (fig.1 #38) connected between the car stereo and the auxiliary device; means (fig.2 #42) for generating a device presence signal and transmitting the signal to the car stereo to maintain the car stereo in an operational state (col.4 ln.54-63); and means (fig.1 "Ls") for transmitting audio from the auxiliary device to the car stereo.

Miyazaki does not disclose expressly wherein the auxiliary device is a satellite radio receiver.

Fuchs discloses a satellite radio receiver (fig.4 #30) external to a car stereo that is in communication with the stereo (col.1 ln.51-62).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use a satellite radio receiver such as the one disclosed by Fuchs as the auxiliary device of Miyazaki.

The motivation for doing so would have been to allow a user of the system of Miyazaki to reproduce sound from a satellite broadcast into the vehicle environment.

With respect to claim 64, Miyazaki discloses the apparatus of claim 63, wherein the car stereo is an Original Equipment Manufacturer (OEM) car stereo (col.1 ln.12-36).

With respect to claim 65, Miyazaki discloses the apparatus of claim 63, however does not disclose expressly wherein the car stereo is an after-market car stereo. Miyazaki discloses a system for connecting auxiliary devices to a vehicles control system, however does not make the distinction that the control system is replaceable by an after-market control, such as an after-market car stereo to replace the factory stereo control components. Official Notice is taken that after-market car stereos are well known in the art, and the invention of Miyazaki is not limited to interacting with only factory stereo components. At the time of the invention it would have been obvious that a user of Miyazaki's invention could replace the factory stereo with an after-market unit and continue to achieve the same results. The motivation for using an after-market unit would have been to upgrade the vehicles sound system. These upgrades could include features such as, bass and stereophonic outputs, or mp3 and satellite capabilities.

With respect to claim 66, Miyazaki discloses the system of claim 63, further comprising means for processing and dispatching commands (fig.2 #42) for controlling the satellite radio receiver from the car stereo in a format compatible with the satellite radio receiver.

With respect to claim 86, Miyazaki discloses the apparatus of claim 83, however does not disclose expressly wherein the portable device is a portable satellite radio receiver.



Fuchs discloses a portable satellite radio receiver (fig.4 #30) external to a car stereo that is in communication with the stereo (col.1 ln.51-62).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use a satellite radio receiver such as the one disclosed by Fuchs as the auxiliary device of Miyazaki.

The motivation for doing so would have been to allow a user of the system of Miyazaki to reproduce sound from a satellite broadcast into the vehicle environment.

**Claims 67 and 71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki et al (US 6,163,079) in view of Fuchs et al (US 6,346,917 B1) and in further view of Kunimatsu et al (US 6,653,948 B1).**

With respect to claim 67, Miyazaki discloses the system of claim 66, however does not disclose expressly, further comprising means for displaying data from the satellite radio receiver on a display of the car stereo in a format compatible with the car stereo.

Miyazaki does not disclose expressly wherein the means for processing data includes the capability of displaying data on a display of the car stereo, however does disclose the processing of data including "a radio/CD selection instruction, a station selection instruction, a volume control instruction, etc. (col.4 ln.51-66). Miyazaki also teaches a navigation system (fig.4 #28) with a visual display (fig.4 #47) as an auxiliary device.

Kunimatsu teaches a navigation system (fig.1 #14) that is combined with an audio system (fig.1 #18) to provide information to a display (fig.1 #12).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine the audio and navigation systems of Miyazaki into one unit that displays information to a visual display as taught by Kunimatsu. This would ultimately give the system of Miyazaki the capability of displaying graphically information received from any auxiliary devices, such as a satellite radio receiver.

The motivation for doing so would have been to allow a user, who is seated near the car stereo to view the control instructions sent from the auxiliary device, such as volume, selected station, or selected CD. This would also allow the user to make desirable changes to the settings of the auxiliary device by merely controlling the car stereo. Hence, now the system of Miyazaki not only displays navigation information but also information pertaining to the audio system such as the data disclosed in column 4 lines 51-66.

With respect to claim 71, Miyazaki discloses the apparatus of claim 67, wherein the commands are input by a user using one or more control buttons or presets on the car stereo. It is implied that the audio control unit of Miyazaki contains control buttons or presets to control the functions disclosed on column 4 lines 57-60. Without control buttons or presets, it would not be possible for a user to control these disclosed functions.

**Claims 68-70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki et al (US 6,163,079) in view of Fuchs et al (US 6,346,917 B1) in view of Kunimatsu et al (US 6,653,948 B1) and in further view of Falcon (US 6,993,615 B2).**

With respect to claims 68-70, Miyazaki discloses the apparatus of claim 67 in view of Kunimatsu, however does not disclose expressly wherein displayed formatted data comprises; track and time information and song title and artist information, channel number and a channel name.

Falcon discloses an external audio device (fig.4 #102) that interfaces with a car stereo (fig.4 #200) wherein the interfacing information of the devices comprises track and time information and song title and artist information, channel number and a channel name (col.8 ln.20-40).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to include the interfacing information disclosed by Falcon in the data to be displayed the combination of Kunimatsu and Miyazaki.

The motivation for doing so would have been to graphically provide the user with information pertaining the operation of the satellite radio receiver.

**Claims 72-75 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki et al (US 6,163,079) in view of Lee et al (US 6,374,177B1).**

With respect to claim 72, Miyazaki discloses an audio device integration system comprising: a car stereo (fig.1 #32); an auxiliary device external (fig.2 #40A) to the car stereo; an interface (fig.1 #38) connected between the car stereo and the auxiliary device; means (fig.2 #42) for generating a device presence signal and transmitting the signal to the car stereo to maintain the car stereo in an operational state (col.4 ln.54-63); and means (fig.1 "Ls") for transmitting audio from the auxiliary device to the car stereo.

Miyazaki does not disclose expressly wherein the auxiliary device is a digital audio broadcast receiver.

Lee discloses a digital audio broadcast receiver (fig.2 #100) external to an audio control (fig.2 #90) that is in communication with the stereo (col.8 ln.25-50).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use a satellite radio receiver such as the one disclosed by Lee as the auxiliary device of Miyazaki.

The motivation for doing so would have been to allow a user of the system of Miyazaki to reproduce sound from a digital audio broadcast into the vehicle environment such as a streaming audio file.

With respect to claim 73, Miyazaki discloses the apparatus of claim 72, wherein the car stereo is an Original Equipment Manufacturer (OEM) car stereo (col.1 ln.12-36).

With respect to claim 74, Miyazaki discloses the apparatus of claim 72, however does not disclose expressly wherein the car stereo is an after-market car stereo. Miyazaki discloses a system for connecting auxiliary devices to a vehicles control system, however does not make the distinction that the control system is replaceable by an after-market control, such as an after-market car stereo to replace the factory stereo control components. Official Notice is taken that after-market car stereos are well known in the art, and the invention of Miyazaki is not limited to interacting with only factory stereo components. At the time of the invention it would have been obvious that a user of Miyazaki's invention could replace the factory stereo with an after-market unit and continue to achieve the same results. The motivation for using an after-market unit

would have been to upgrade the vehicles sound system. These upgrades could include features such as, bass and stereophonic outputs, or mp3 and satellite capabilities.

With respect to claim 75, Miyazaki discloses the system of claim 72, further comprising means for processing and dispatching commands (fig.2 #42) for controlling the digital audio broadcast receiver from the car stereo in a format compatible with the digital audio broadcast receiver.

**Claims 76 and 80 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki et al (US 6,163,079) in view of Lee et al (US 6,374,177 B1) and in further view of Kunimatsu et al (US 6,653,948 B1).**

With respect to claim 76, Miyazaki discloses the system of claim 75, however does not disclose expressly, further comprising means for displaying data from the digital audio broadcast receiver on a display of the car stereo in a format compatible with the car stereo.

Miyazaki does not disclose expressly wherein the means for processing data includes the capability of displaying data on a display of the car stereo, however does disclose the processing of data including "a radio/CD selection instruction, a station selection instruction, a volume control instruction, etc. (col.4 ln.51-66). Miyazaki also teaches a navigation system (fig.4 #28) with a visual display (fig.4 #47) as an auxiliary device.

Kunimatsu teaches a navigation system (fig.1 #14) that is combined with an audio system (fig.1 #18) to provide information to a display (fig.1 #12).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine the audio and navigation systems of Miyazaki into one unit that displays information to a visual display as taught by Kunimatsu. This would ultimately give the system of Miyazaki the capability of displaying graphically information received from any auxiliary devices, such as a digital audio broadcast receiver.

The motivation for doing so would have been to allow a user, who is seated near the car stereo to view the control instructions sent from the auxiliary device, such as volume, selected station, or selected CD. This would also allow the user to make desirable changes to the settings of the auxiliary device by merely controlling the car stereo. Hence, now the system of Miyazaki not only displays navigation information but also information pertaining to the audio system such as the data disclosed in column 4 lines 51-66.

With respect to claim 80, Miyazaki discloses the apparatus of claim 76, wherein the commands are input by a user using one or more control buttons or presets on the car stereo. It is implied that the audio control unit of Miyazaki contains control buttons or presets to control the functions disclosed on column 4 lines 57-60. Without control buttons or presets, it would not be possible for a user to control these disclosed functions.

**Claims 77-79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki et al (US 6,163,079) in view of Lee et al (US 6,374,177 B1) in view of Kunimatsu et al (US 6,653,948 B1) and in further view of Falcon (US 6,993,615 B2).**

With respect to claims 77-79, Miyazaki discloses the apparatus of claim 76 in view of Kunimatsu, however does not disclose expressly wherein displayed formatted data comprises; track and time information and song title and artist information, channel number and a channel name.



Falcon discloses an external audio device (fig.4 #102) that interfaces with a car stereo (fig.4 #200) wherein the interfacing information of the devices comprises track and time information and song title and artist information, channel number and a channel name (col.8 ln.20-40).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to include the interfacing information disclosed by Falcon in the data to be displayed the combination of Kunimatsu and Miyazaki.

The motivation for doing so would have been to graphically provide the user with information pertaining the operation of the digital audio broadcast receiver.

#### ***Response to Arguments***

Applicant's arguments with respect to claims 1-82 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason R. Kurr whose telephone number is (571) 272-0552. The examiner can normally be reached on M-F 10:00am to 6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on (571) 273-8300. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JK

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VIVIAN CHIN  
SUPERVISORY PATENT EXAMINER  
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|-----------------------------------|---------------------------------------|---|-------------|
| <b>Notice of References Cited</b> | Application/Control No.<br>10/316,961 | Applicant(s)/Patent Under Reexamination<br>MARLOWE, IRA |             |
|                                   | Examiner<br>Jason R. Kurr             | Art Unit<br>2615  | Page 1 of 1 |

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| * | O  |                 |         |      |                |
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\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

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|--|---|--|---|
| <b>INFORMATION DISCLOSURE CITATION</b><br><i>(Use several sheets if necessary)</i> |  | Docket Number (Optional)<br><b>99879-00005</b> | Application Number<br><b>10/316,961</b> |
|  | Applicant(s)<br><b>Ira Marlowe</b>  |  | Group Art Unit<br><b>2644</b>           |
|  | Filing Date<br><b>12/11/2002</b>  |  |   |

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**FOREIGN PATENT DOCUMENTS**

|  | REF | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUBCLASS | Translation |    |
|--|-----|-----------------|------|---------|-------|----------|-------------|----|
|  |     |                 |      |         |       |          | YES         | NO |
|  |     |                 |      |         |       |          |             |    |
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|  |     |                 |      |         |       |          |             |    |

**OTHER DOCUMENTS** *(Including Author, Title, Date, Pertinent Pages, Etc.)*

|    |    |   |  |  |  |  |  |
|----|----|---|--|--|--|--|--|
| JK | 9  | "SoundGate, Ventura Announce Sophisticated OEM-Integration Interfaces," article from The 12 Volt News, December 2002 (1 page) |  |  |  |  |  |
| JK | 10 | "XMDirect Smart Digital Adapter," product description (3 pages).  |  |  |  |  |  |

|                                 |                                      |
|---------------------------------|--------------------------------------|
| EXAMINER<br><b>/Jason Kurr/</b> | DATE CONSIDERED<br><b>11/02/2006</b> |
|---------------------------------|--------------------------------------|

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

|  |  |  |   |  |
|--|--|--|---|--|
| <b>INFORMATION DISCLOSURE CITATION</b><br><i>(Use several sheets if necessary)</i> | Docket Number (Optional)<br><b>99879-00005</b> |  | Application Number<br><b>10/316,961</b> |  |
|  | Applicant(s)<br><b>Ira Marlowe</b>             |  |   |  |
|  | Filing Date<br><b>12/11/2002</b>               |  | Group Art Unit<br><b>2644</b>           |  |
|  |  |  |   |  |

**U.S. PATENT DOCUMENTS**

| *EXAMINER INITIAL | REF | DOCUMENT NUMBER | DATE       | NAME            | CLASS | SUBCLASS | FILING DATE IF APPROPRIATE |
|-------------------|-----|-----------------|------------|-----------------|-------|----------|----------------------------|
| JK                | 11  | 4,772,079       | 09/20/1988 | Douglas, et al. | 312   | 257      | 09/26/1986                 |
|                   |     |                 |            |                 |       |          |                            |
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**U.S. PATENT APPLICATION PUBLICATIONS**

| *EXAMINER INITIAL | REF | DOCUMENT NUMBER | DATE | NAME | CLASS | SUBCLASS | FILING DATE IF APPROPRIATE |
|-------------------|-----|-----------------|------|------|-------|----------|----------------------------|
|                   |     |                 |      |      |       |          |                            |
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**FOREIGN PATENT DOCUMENTS**

| REF | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUBCLASS | Translation |    |
|-----|-----------------|------|---------|-------|----------|-------------|----|
|     |                 |      |         |       |          | YES         | NO |
|     |                 |      |         |       |          |             |    |
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|     |                 |      |         |       |          |             |    |
|     |                 |      |         |       |          |             |    |
|     |                 |      |         |       |          |             |    |

**OTHER DOCUMENTS** *(Including Author, Title, Date, Pertinent Pages, Etc.)*

|    |    |  |
|----|----|--|
| JK | 12 | "Breaking Protocol A Look at BlitzSafe's New DMX Protocol Converter Technology," November 1998 printout from <a href="http://www.blitzsafe.com/blitz_news/news101998/body_news101998.html">http://www.blitzsafe.com/blitz_news/news101998/body_news101998.html</a> (2 pages) |
| JK | 13 | "PIE Virtual Catalog," printout from <a href="http://web.archive.org/web/19981205005802/http://www.pie.net/sec12sb1.htm">http://web.archive.org/web/19981205005802/http://www.pie.net/sec12sb1.htm</a> (2 pages)   |

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| EXAMINER<br><b>/Jason Kurr/</b> | DATE CONSIDERED<br><b>11/02/2006</b> |
|---------------------------------|--------------------------------------|

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| <b>INFORMATION DISCLOSURE CITATION</b><br><i>(Use several sheets if necessary)</i>   |  | Docket Number (Optional)<br><b>99879-00005</b>   | Application Number<br><b>10/316,961</b> |
|  |  | Applicant(s)<br><b>Ira Marlowe</b>   |   |
|  |  | Filing Date<br><b>12/11/2002</b>   | Group Art Unit<br><b>2644</b>           |
| <b>*EXAMINER INITIAL</b>   | <b>OTHER DOCUMENTS</b> <i>(Including Author, Title, Date, Pertinent Pages, Etc.)</i> |  |   |
| JK   | 14   | "The UniLink Project," printout from website (2 pages)   |   |
| JK   | 15   | "CD Changer Interfaces," printout from <a href="http://web.archive.org/web/19991012021952/soundgate.com/cd-inter.html">http://web.archive.org/web/19991012021952/soundgate.com/cd-inter.html</a> (1 page)  |   |
| JK   | 16   | "Digital Obsessions A Spotlight on Audio Gadgetry," ZDNet Music: The PhatNoise Car Audio System, printout from <a href="http://web.archive.org/web/20000817164605/music.gamespot.com/features/phantnoise/">http://web.archive.org/web/20000817164605/music.gamespot.com/features/phantnoise/</a> (3 pages) |   |
| JK   | 17   | "Bypassing and Switching With the CD4053 CMOS Analog MUX," printout from website (4 pages)   |   |
| JK   | 18   | "Device Profile: Phatnoise PhatBox Car MP3 Player," November 1, 2000, printout from <a href="http://techupdate.zdnet.com/techupdate/stories/main/0,14179,2649276,00.html">http://techupdate.zdnet.com/techupdate/stories/main/0,14179,2649276,00.html</a> (4 pages)  |   |
| JK   | 19   | "The EZ Protoboard," printout from <a href="http://web.archive.org/web/20010613095105/http://www.ajusd.org/~edward/ezproto/">http://web.archive.org/web/20010613095105/http://www.ajusd.org/~edward/ezproto/</a> (2 pages).  |   |
| JK   | 20   | "TDIClub Forums: Reverse Engineering CD Changer Progress," April 3, 2001, printout from website (3 pages)  |   |
| JK   | 21   | "TDIClub Forums: Reverse Engineering CD Changer Progress Reports," April 5, 2001, printout from website (8 pages)  |   |
| JK   | 22   | "Multi Technology Equipment - Home of the Neo MP3 Player," printout from <a href="http://web.archive.org/web/20010413222617/ssiameica.com/products/neo35/">http://web.archive.org/web/20010413222617/ssiameica.com/products/neo35/</a> (1 page)  |   |
| JK   | 23   | "TDIClub Forums: Reverse Engineering CD Changer Protocol Update," April 18, 2001, printout from website (3 pages)  |   |
| JK   | 24   | "The Car CD Changer Interface Page," printout from website (10 pages)  |   |
| JK   | 25   | "SourceForge.net: Project Info - GNUlink," printout from <a href="http://sourceforge.net/projects/gnunilink/">http://sourceforge.net/projects/gnunilink/</a> (3 pages)   |   |
| EXAMINER<br><b>/Jason Kurr/</b>  |  | DATE CONSIDERED<br><b>11/02/2006</b>   |   |
| *EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. |  |  |   |

POS9/REV04

SHEET 3 OF 4

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| <b>INFORMATION DISCLOSURE CITATION</b><br><i>(Use several sheets if necessary)</i>   |  | Docket Number (Optional)<br><b>99879-00005</b>   | Application Number<br><b>10/316,961</b> |
|  |  | Applicant(s)<br><b>Ira Marlowe</b>   |   |
|  |  | Filing Date<br><b>12/11/2002</b>   | Group Art Unit<br><b>2644</b>           |
|  |  |  |   |
| <b>*EXAMINER INITIAL</b>   | <b>OTHER DOCUMENTS</b> <i>(Including Author, Title, Date, Pertinent Pages, Etc.)</i> |  |   |
| JK   | 26   | "EZ Protoboard News," printout from website (3 pages)  |   |
| JK   | 27   | "GNUlink - For All Your AUX-IN Needs...", printout from <a href="http://gnunilink.sourceforge.net/">http://gnunilink.sourceforge.net/</a> (4 pages)  |   |
| JK   | 28   | "VWCDPIC News," printout from <a href="http://web.archive.org/web/20020701101541/http://www.ajusd.org/~edward/vwcdpic/">http://web.archive.org/web/20020701101541/http://www.ajusd.org/~edward/vwcdpic/</a> (8 pages)  |   |
| JK   | 29   | "VWCDPIC News," printout from <a href="http://web.archive.org/web/20021009014959/http://www.ajusd.org/~edward/vwcdpic/">http://web.archive.org/web/20021009014959/http://www.ajusd.org/~edward/vwcdpic/</a> (10 pages) |   |
| JK   | 30   | "Neo Car Jukebox MP3 Player," printout from website (3 pages)  |   |
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| EXAMINER<br><b>/Jason Kurr/</b>  |  | DATE CONSIDERED<br><b>11/02/2006</b>   |   |
| *EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. |  |  |   |

**Index of Claims**



Application/Control No.

10/316,961

Examiner

Jason R. Kurr

Applicant(s)/Patent under Reexamination

MARLOWE, IRA

Art Unit

2615

|   |          |
|---|----------|
| ✓ | Rejected |
| = | Allowed  |

|   |                                |
|---|--------------------------------|
| - | (Through numeral)<br>Cancelled |
| + | Restricted                     |

|   |              |
|---|--------------|
| N | Non-Elected  |
| I | Interference |

|   |          |
|---|----------|
| A | Appeal   |
| O | Objected |

| Claim |          | Date    |         |  |  |
|-------|----------|---------|---------|--|--|
| Final | Original | 5/29/06 | 11/7/06 |  |  |
| 1     | ✓        | ✓       |         |  |  |
| 2     | ✓        | ✓       |         |  |  |
| 3     | ✓        | ✓       |         |  |  |
| 4     | ✓        | ✓       |         |  |  |
| 5     | ✓        | ✓       |         |  |  |
| 6     | ✓        | ✓       |         |  |  |
| 7     | ✓        | ✓       |         |  |  |
| 8     | ✓        | ✓       |         |  |  |
| 9     | ✓        | ✓       |         |  |  |
| 10    | ✓        | ✓       |         |  |  |
| 11    | ✓        | ✓       |         |  |  |
| 12    | ✓        | ✓       |         |  |  |
| 13    | ✓        | ✓       |         |  |  |
| 14    | -        | -       |         |  |  |
| 15    | ✓        | ✓       |         |  |  |
| 16    | ✓        | ✓       |         |  |  |
| 17    | ✓        | ✓       |         |  |  |
| 18    | ✓        | ✓       |         |  |  |
| 19    | ✓        | ✓       |         |  |  |
| 20    | ✓        | ✓       |         |  |  |
| 21    | ✓        | ✓       |         |  |  |
| 22    | ✓        | ✓       |         |  |  |
| 23    | ✓        | ✓       |         |  |  |
| 24    | ✓        | ✓       |         |  |  |
| 25    | ✓        | ✓       |         |  |  |
| 26    | ✓        | ✓       |         |  |  |
| 27    | ✓        | ✓       |         |  |  |
| 28    | ✓        | ✓       |         |  |  |
| 29    | ✓        | ✓       |         |  |  |
| 30    | ✓        | ✓       |         |  |  |
| 31    | ✓        | ✓       |         |  |  |
| 32    | ✓        | ✓       |         |  |  |
| 33    | ✓        | ✓       |         |  |  |
| 34    | ✓        | ✓       |         |  |  |
| 35    | ✓        | ✓       |         |  |  |
| 36    | ✓        | ✓       |         |  |  |
| 37    | ✓        | ✓       |         |  |  |
| 38    | ✓        | ✓       |         |  |  |
| 39    | -        | -       |         |  |  |
| 40    | ✓        | ✓       |         |  |  |
| 41    | ✓        | ✓       |         |  |  |
| 42    | ✓        | ✓       |         |  |  |
| 43    | ✓        | ✓       |         |  |  |
| 44    | ✓        | ✓       |         |  |  |
| 45    | ✓        | ✓       |         |  |  |
| 46    | ✓        | ✓       |         |  |  |
| 47    | ✓        | ✓       |         |  |  |
| 48    | ✓        | ✓       |         |  |  |
| 49    | ✓        | ✓       |         |  |  |
| 50    | ✓        | ✓       |         |  |  |

| Claim |          | Date    |  |  |  |
|-------|----------|---------|--|--|--|
| Final | Original | 5/29/06 |  |  |  |
| 51    | ✓        | ✓       |  |  |  |
| 52    | ✓        | ✓       |  |  |  |
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| 58    | ✓        | ✓       |  |  |  |
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| 71    | ✓        | ✓       |  |  |  |
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| Claim |          | Date |  |  |  |
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| 149   |          |      |  |  |  |
| 150   |          |      |  |  |  |



**Search Notes**

Application/Control No.

10/316,961

Examiner

Jason R. Kurr

Applicant(s)/Patent under Reexamination

MARLOWE, IRA

Art Unit

2615

**SEARCHED**

| Class | Subclass | Date      | Examiner |
|-------|----------|-----------|----------|
| 381   | 86       | 5/24/2006 | JK       |
| 307   | 9.1,10.1 | 10/4/2006 | JK       |
| 340   | 825.25   | 10/4/2006 | JK       |
|       |          |           |          |
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**SEARCH NOTES  
(INCLUDING SEARCH STRATEGY)**

|   | DATE      | EXMR |
|---|-----------|------|
| Searched, car stereo's and interfacing with auxiliary audio devices               | 5/24/2006 | JK   |
| Searched (digital audio broadcasting) DAB   | 5/29/2006 | JK   |
| Searched: mp3 players, interfacing, DAB digital audio broadcasts, satellite radio | 11/7/2006 | JK   |
|   |           |      |
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**INTERFERENCE SEARCHED**

| Class | Subclass | Date | Examiner |
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## EAST Search History

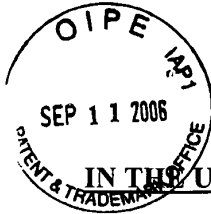
| Ref # | Hits  | Search Query  | DBs                          | Default Operator | Plurals | Time Stamp       |
|-------|-------|---|------------------------------|------------------|---------|------------------|
| L1    | 1     | "20060050944"   | US-PGPUB;<br>USPAT           | OR               | OFF     | 2006/11/07 17:04 |
| L2    | 3849  | mp3 near player   | US-PGPUB;<br>USPAT           | OR               | OFF     | 2006/11/07 17:04 |
| L3    | 17    | l2 with connect\$3 with (car vehicle automobile) with (radio stereo)            | US-PGPUB;<br>USPAT           | OR               | OFF     | 2006/11/07 17:05 |
| L4    | 1     | ("20040058649").PN.   | US-PGPUB;<br>USPAT;<br>USOCR | OR               | OFF     | 2006/11/07 17:08 |
| L5    | 1     | "6591085".pn.   | US-PGPUB;<br>USPAT;<br>USOCR | OR               | OFF     | 2006/11/07 17:08 |
| L6    | 6     | ("20020098813"   "6240297"   "6292440"   "6396769"   "6420849"   "6423892").PN. | US-PGPUB;<br>USPAT;<br>USOCR | OR               | OFF     | 2006/11/07 17:44 |
| L11   | 3666  | satellite near radio  | US-PGPUB;<br>USPAT;<br>USOCR | OR               | OFF     | 2006/11/07 17:46 |
| L12   | 4741  | l11 connect\$3 with car with radio  | US-PGPUB;<br>USPAT;<br>USOCR | OR               | OFF     | 2006/11/07 17:45 |
| L13   | 3     | l11 with connect\$3 with car with radio   | US-PGPUB;<br>USPAT;<br>USOCR | OR               | OFF     | 2006/11/07 17:45 |
| L14   | 112   | l11 and (aftermarket (after adj2 market))                                       | US-PGPUB;<br>USPAT;<br>USOCR | OR               | OFF     | 2006/11/07 18:13 |
| L15   | 14900 | (digital with audio with broadcast) (dab)                                       | US-PGPUB;<br>USPAT;<br>USOCR | OR               | OFF     | 2006/11/07 18:12 |
| L16   | 3     | l15 with (connect\$3) with car with stereo                                      | US-PGPUB;<br>USPAT;<br>USOCR | OR               | OFF     | 2006/11/07 18:13 |
| L17   | 53    | l15 and (aftermarket (after adj2 market))                                       | US-PGPUB;<br>USPAT;<br>USOCR | OR               | OFF     | 2006/11/07 18:13 |
| S1    | 632   | 381/86.ccls.  | US-PGPUB;<br>USPAT           | OR               | OFF     | 2006/11/06 14:25 |
| S58   | 47    | ((car vehicle automobile) with adaptor).ti.                                     | US-PGPUB;<br>USPAT           | OR               | OFF     | 2006/10/04 16:33 |
| S59   | 0     | S58 and ("381".clas.)   | US-PGPUB;<br>USPAT           | OR               | OFF     | 2006/10/04 16:23 |
| S60   | 7     | (car vehicle automobile) with stereo with adaptor                               | US-PGPUB;<br>USPAT           | OR               | OFF     | 2006/10/04 16:28 |

## EAST Search History

|     |      |   |                              |    |     |                  |
|-----|------|---|------------------------------|----|-----|------------------|
| S61 | 7    | (car vehicle automobile) with stereo with adaptor   | US-PGPUB;<br>USPAT           | OR | OFF | 2006/10/04 16:29 |
| S62 | 7    | (car vehicle automobile) with stereo with adaptor   | US-PGPUB;<br>USPAT           | OR | OFF | 2006/10/04 16:33 |
| S63 | 168  | ((car vehicle automobile) with interface).ti.   | US-PGPUB;<br>USPAT           | OR | ON  | 2006/10/04 16:34 |
| S64 | 5    | S63 and ("381".clas.)   | US-PGPUB;<br>USPAT           | OR | ON  | 2006/10/04 16:34 |
| S65 | 36   | ("2133151"   "2926240"   "2941173"   "2973431"   "3099797"   "3544901"   "4194155"   "4291411"   "4362907"   "4455454"   "4501013"   "4503513"   "4551714"   "4602358"   "5319803"   "5339362"   "5515345"   "5555502"   "5559499"   "5691710"   "5781123"   "5790065"   "5790481"   "5903259"   "5999996"   "6097520"   "6114970"   "6119088"   "6396164"   "6397186").PN. | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2006/10/04 16:39 |
| S66 | 715  | 381/86.ccls.  | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2006/10/04 16:42 |
| S67 | 3162 | 307/9.1,10.1.ccls.  | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2006/10/04 16:42 |
| S68 | 269  | S67 and audio   | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2006/10/04 16:45 |
| S70 | 354  | 340/825.25.ccls.  | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2006/10/04 16:45 |
| S71 | 6    | ("6032089"   "6114970"   "6163079"   "6189057"   "6236918"   "6240347").PN.   | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2006/10/30 15:19 |
| S72 | 1617 | (car automobile vehicle) and stereo and integrate   | US-PGPUB;<br>USPAT;<br>USOCR | OR | ON  | 2006/10/30 15:20 |
| S73 | 321  | S72 and (cd with player)  | US-PGPUB;<br>USPAT;<br>USOCR | OR | ON  | 2006/10/30 15:20 |
| S74 | 143  | S73 and mp3   | US-PGPUB;<br>USPAT;<br>USOCR | OR | ON  | 2006/10/30 15:30 |
| S75 | 0    | "20000328".pn.  | US-PGPUB;<br>USPAT;<br>USOCR | OR | ON  | 2006/10/30 15:30 |

## EAST Search History

|     |      |  |                              |    |     |                  |
|-----|------|--|------------------------------|----|-----|------------------|
| S76 | 2    | "09537812"   | US-PGPUB;<br>USPAT;<br>USOCR | OR | ON  | 2006/10/30 15:30 |
| S77 | 7161 | plug adj2 play   | US-PGPUB;<br>USPAT           | OR | OFF | 2006/11/06 14:25 |
| S78 | 507  | S77 and stereo   | US-PGPUB;<br>USPAT           | OR | OFF | 2006/11/06 14:47 |
| S79 | 10   | CD with player with presence with signal                 | US-PGPUB;<br>USPAT           | OR | OFF | 2006/11/06 14:48 |
| S80 | 5318 | navigation with audio                                    | US-PGPUB;<br>USPAT           | OR | OFF | 2006/11/06 15:40 |
| S81 | 3350 | S80 and ((@ad @rlad)<="20021211")                        | US-PGPUB;<br>USPAT           | OR | OFF | 2006/11/06 15:41 |
| S82 | 1388 | S81 and (lcd liquid)                                     | US-PGPUB;<br>USPAT           | OR | OFF | 2006/11/06 15:49 |
| S83 | 1052 | S82 and (car vehicle automobile)                         | US-PGPUB;<br>USPAT           | OR | OFF | 2006/11/06 16:28 |
| S84 | 5834 | (car vehicle automobile) near (stereo radio)             | US-PGPUB;<br>USPAT           | OR | OFF | 2006/11/06 16:32 |
| S85 | 748  | S84 and menu   | US-PGPUB;<br>USPAT           | OR | OFF | 2006/11/06 16:42 |
| S86 | 436  | S85 and portable   | US-PGPUB;<br>USPAT           | OR | OFF | 2006/11/07 10:45 |
| S87 | 7583 | (after near market) aftermarket                          | US-PGPUB;<br>USPAT           | OR | OFF | 2006/11/07 10:49 |
| S88 | 3168 | S87 and (stereo radio head)                              | US-PGPUB;<br>USPAT           | OR | OFF | 2006/11/07 10:50 |
| S89 | 2320 | S88 and (interfac\$3 integrat\$3 communicat\$3)          | US-PGPUB;<br>USPAT           | OR | OFF | 2006/11/07 10:51 |
| S90 | 50   | S89 and (presence near signal)                           | US-PGPUB;<br>USPAT           | OR | OFF | 2006/11/07 10:58 |
| S91 | 1201 | S87 and (OEM (original with equipment with manufact\$4)) | US-PGPUB;<br>USPAT           | OR | OFF | 2006/11/07 10:59 |
| S92 | 306  | S91 and (stereo radio)                                   | US-PGPUB;<br>USPAT           | OR | OFF | 2006/11/07 11:00 |
| S93 | 204  | S92 and ((@ad @rlad)<="20021211")                        | US-PGPUB;<br>USPAT           | OR | OFF | 2006/11/07 14:44 |



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Ira M. Marlowe  
Serial No.: 10/316,961  
Filed: 12/11/2002  
Title: AUDIO DEVICE INTEGRATION SYSTEM

Examiner: Kurr, Jason R.

Art Unit: 2615

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**RESPONSE**

Sir:

This is a response to the outstanding Office Action dated June 5, 2006 on the above-identified application. The time period for response extends to and includes September 5, 2006.

**Amendments to the Claims** begin on page 2 of this response.

**Remarks** begin on page 20 of this response.

09/13/2006 WAGFAW1 00000043 503571 10316961

01 FC:2202 125.00 DA  
02 FC:2201 100.00 DA

## AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An audio device integration system comprising:

a car stereo;

an after-market audio device external to the car stereo;

an interface connected between the car stereo and the after-market audio device for exchanging data and audio signals between the car stereo and the audio device;

means for processing and dispatching commands for controlling the after-market audio device from the car stereo in a format compatible with the after-market audio device;

means for processing and displaying data from the after-market audio device on a display of the car stereo in a format compatible with the car stereo; and

means for switching to one or more auxiliary input sources connected to the ~~interface if the audio device is disconnected from the~~ interface.

2. (Currently Amended) The apparatus of claim 1, wherein the car stereo is an Original Equipment Manufacturer (OEM) car stereo.

3. (Original) The apparatus of claim 1, wherein the car stereo is an after-market car stereo.

4. (Original) The apparatus of claim 1, wherein the audio device comprises a CD player, CD changer, MP3 player, Digital Audio Broadcast (DAB) receiver, or satellite receiver.
5. (Original) The apparatus of claim 1, wherein the interface further comprises a plug-and-play mode for automatically detecting a device type of the audio device and integrating the audio device based upon the device type.
6. (Original) The apparatus of claim 1, wherein the interface generates a CD player presence signal for maintaining the car stereo in a state responsive to processed data and audio signals.
7. (Original) The apparatus of claim 1, wherein the data comprises track and time information.
8. (Original) The apparatus of claim 1, wherein the data comprises song title and artist information.
9. (Original) The apparatus of claim 1, wherein the data comprises channel number and channel name information.
10. (Original) The apparatus of claim 1, wherein the data comprises video information.
11. (Original) The apparatus of claim 1, wherein the data is displayed as a menu on the display of the car stereo.

12. (Original) The apparatus of claim 1, wherein the ~~data is displayed in a graphical interface on a graphic panel.~~ display of the car stereo comprises a graphic panel.

13. (Original) The apparatus of claim 1, wherein the commands are input by a user using one or more control buttons or presets on the car stereo.

14. (Cancelled)

15. (Previously Presented) The apparatus of claim 1, wherein audio signals from the one or more auxiliary input sources are selectively channeled to the car stereo by the interface.

16. (Previously Presented) The apparatus of claim 1, wherein a user can select between the one or more auxiliary input sources by depressing keys on the car stereo.

17. (Previously Presented) The apparatus of claim 1, wherein a user can select one of the auxiliary input sources by entering a disc number at the car stereo.

18. (Previously Presented) The apparatus of claim 1, wherein a user can select one of the auxiliary input sources by entering a track number at the car stereo.

19. (Previously Presented) The apparatus of claim 1, wherein a user can select one of the auxiliary input sources by entering both disc and track numbers at the car stereo.



20. (Previously Presented) The apparatus of claim 1, wherein a user can select between the audio device and the one or more auxiliary input sources by entering a sequence at the car stereo.

21. (Original) The apparatus of claim 20, wherein the sequence comprises a track up selection followed by a track down selection.

22. (Original) The apparatus of claim 1, further comprising a second interface connected to the first interface for providing a plurality of auxiliary input sources.

23. (Original) The apparatus of claim 22, wherein both the first interface and the second interface are controllable using the car stereo.

24. (Original) An audio device integration system comprising:

a car stereo;

a plurality of auxiliary input sources;

an interface connected between the car stereo and the plurality of auxiliary input sources;

means for processing and dispatching commands for controlling an audio device connected to one of the plurality of auxiliary input sources from the car stereo in a format compatible with the audio device;

means for processing and displaying data from the audio device on a display of the car stereo in a format compatible with the car stereo; and

means for selecting one of the plurality of auxiliary input sources from the car stereo.

25. (Original) The apparatus of claim 24, wherein the means for selecting one of the plurality of auxiliary input sources comprises a disc or track selection entered by a user using control buttons of the car stereo.

26. (Currently Amended) The apparatus of claim 24, wherein the audio device comprises a CD player, CD changer, MP3 player, satellite receiver, or a Digital Audio Broadcast (DAB) receiver.

27. (Original) The apparatus of claim 24, wherein a device type of the audio device is automatically detected by the interface and the audio device is automatically integrated with the car stereo based upon the device type.

28. (Original) The apparatus of claim 24, wherein the interface is switchable into an auxiliary input mode by issuing a control sequence at the car stereo.

29. (Original) The apparatus of claim 28, wherein the control sequence comprises a track up command followed by a track down command.

30. (Currently Amended) A method for integrating a an after-market device with a car stereo comprising:

connecting an interface to the car stereo, the after-market device to the interface, and an auxiliary input source to the interface;

receiving control commands from the car stereo at the interface;

processing the control commands into a format compatible with the after-market device and dispatching processed control commands to the after-market device;

receiving data and audio from the after-market device at the interface;

processing the data into a second format compatible with the car stereo and dispatching the audio and processed data to the car stereo;

displaying the processed data on the car stereo and playing the audio through the car stereo; and

playing audio from the auxiliary input source through the car stereo ~~if the device is disconnected from the interface.~~ stereo.

31. (Original) The method of claim 30, wherein the step of receiving data from the device comprises retrieving CD track and time information from the device.

32. (Original) The method of claim 30, wherein the step of receiving data from the device comprises retrieving MP3 song, title, track, and time information from the device.

33. (Original) The method of claim 30, wherein the step of receiving data from the device comprises retrieving channel number, channel name, artist, and song information from the device.

34. (Original) The method of claim 30, wherein the step of receiving data from the device comprises retrieving video information from the device.

35. (Original) The method of claim 30, wherein the step of displaying the processed data comprises displaying the data in an LCD panel.

36. (Original) The method of claim 30, wherein the step of displaying the processed data comprises displaying the data in a graphical user interface at the car stereo.

37. (Original) The method of claim 30, wherein the step of displaying processed data comprises displaying video at the car stereo.

38. (Currently Amended) The method of claim 30, wherein the step of connecting the ~~audio~~ after-market device to the interface comprises connecting a CD player, CD changer, MP3 player, satellite receiver, or a Digital Audio Broadcast (DAB) receiver to the interface.

39. (Cancelled)

40. (Previously Presented) The method of claim 30, further comprising receiving a selection command from the car stereo and channeling data and audio from the auxiliary input source to the interface in response to the selection command.

41. (Original) The method of claim 40, further comprising processing the data from the auxiliary input source for display on the car stereo.

42. (Currently Amended) An apparatus for docking a portable device for integration with a car stereo comprising:

a storage area remote from a car stereo for storing the portable device;

a docking portion within the storage area for electrically communicating and physically mating with the portable device; and

a data port ~~disposed~~ in electrical communication with the docking portion, the data port connectable with a device for integrating the portable device with the car stereo.

43. (Previously Presented) The apparatus of claim 42, wherein the storage area further comprises a top member, a bottom member, and a hinge interconnecting the top member and the bottom member at an edge thereof.

44. (Original) The apparatus of claim 42, wherein the data port comprises an RS-232 or USB port.

45. (Previously Presented) The apparatus of claim 42, wherein the storage area further comprises a top portion and a bottom portion defining a sleeve for holding the portable audio device.

46. (Previously Presented) The apparatus of claim 43, further comprising a clasp for retaining the top and bottom members in a closed position.

47. (Currently Amended) A method of integrating an after-market device with an Original Equipment Manufacturer (OEM) or after-market car stereo comprising:

connecting the after-market device to an interface;

connecting the interface to a car stereo;

determining whether the car stereo is an OEM car stereo or an after-market car stereo;

if the car stereo is an after-market car stereo, generating and transmitting a presence signal to the car stereo to maintain the car stereo in an operational state responsive to external signals; and

selectively channeling data and audio signals from the after-market device to the car stereo using the interface.

48. (Original) The method of claim 47, further comprising receiving control commands from the car stereo at the interface.

49. (Original) The method of claim 48, further comprising converting the control commands into a format recognizable by the after-market audio device.

50. (Original) The method of claim 49, further comprising dispatching formatted commands to the after-market audio device for execution thereby.

51. (Original) The method of claim 47, further comprising converting data received at the interface from the after-market audio device into a format compatible with the car stereo.

52. (Original) The method of claim 51, further comprising displaying formatted data on the car stereo.

53. (Original) The method of claim 52, wherein the step of displaying formatted data comprises displaying channel numbers, channel names, titles, tracks, song names, or artist names on the car stereo.

54. (Original) The method of claim 52, wherein the step of displaying formatted data comprises displaying video on the car stereo.

55. (Previously Presented) An audio device integration system comprising:

a car stereo;

a portable MP3 player external to the car stereo;

an interface connected between the car stereo and the portable MP3 player;

means for generating a device presence signal and transmitting the signal to the car stereo to maintain the car stereo in an operational state; and

means for transmitting audio from the portable MP3 player to the car stereo.

56. (Currently Amended) The apparatus of claim 55, wherein the car stereo is an Original Equipment Manufacturer (OEM) car stereo.



57. (Previously Presented) The apparatus of claim 55, wherein the car stereo is an after-market car stereo.

58. (Previously Presented) The system of claim 55, further comprising means for processing and dispatching commands for controlling the portable MP3 player from the car stereo in a format compatible with the portable MP3 player.

59. (Previously Presented) The system of claim 58, further comprising means for processing and displaying data from the portable MP3 player on a display of the car stereo in a format compatible with the car stereo.

60. (Previously Presented) The apparatus of claim 59, wherein the data comprises track and time information.

61. (Previously Presented) The apparatus of claim 59, wherein the data comprises song title and artist information.

62. (Previously Presented) The apparatus of claim 59, wherein the commands are input by a user using one or more control buttons or presets on the car stereo.

63. (Previously Presented) An audio device integration system comprising:

a car stereo;

an satellite radio receiver external to the car stereo;

an interface connected between the car stereo and the satellite radio receiver;

means for generating a device presence signal and transmitting the signal to the car stereo to maintain the car stereo in an operational state; and

means for transmitting audio from the satellite radio receiver to the car stereo.

64. (Currently Amended) The apparatus of claim 63, wherein the car stereo is an Original Equipment Manufacturer (OEM) car stereo.

65. (Previously Presented) The apparatus of claim 63, wherein the car stereo is an after-market car stereo.

66. (Previously Presented) The system of claim 63, further comprising means for processing and dispatching commands for controlling the satellite radio receiver from the car stereo in a format compatible with the satellite radio receiver.

67. (Previously Presented) The system of claim 66, further comprising means for processing and displaying data from the satellite radio receiver on a display of the car stereo in a format compatible with the car stereo.

68. (Previously Presented) The apparatus of claim 67, wherein the data comprises track and time information.

69. (Previously Presented) The apparatus of claim 67, wherein the data comprises song title and artist information.

70. (Previously Presented) The apparatus of claim 67, wherein the data comprises a channel number and a channel name.

71. (Previously Presented) The apparatus of claim 67, wherein the commands are input by a user using one or more control buttons or presets on the car stereo.

72. (Previously Presented) An audio device integration system comprising:

a car stereo;

a digital audio broadcast receiver external to the car stereo;

an interface connected between the car stereo and the digital audio broadcast receiver;

means for generating a device presence signal and transmitting the signal to the car stereo to maintain the car stereo in an operational state; and

means for transmitting audio from the digital audio broadcast receiver to the car stereo.

73. (Currently Amended) The apparatus of claim 72, wherein the car stereo is an Original Equipment Manufacturer (OEM) car stereo.

74. (Previously Presented) The apparatus of claim 72, wherein the car stereo is an after-market car stereo.

75. (Previously Presented) The system of claim 72, further comprising means for processing and dispatching commands for controlling the digital audio broadcast receiver from the car stereo in a format compatible with the digital audio broadcast receiver.

76. (Previously Presented) The system of claim 75, further comprising means for processing and displaying data from the digital audio broadcast receiver on a display of the car stereo in a format compatible with the car stereo.

77. (Previously Presented) The apparatus of claim 76, wherein the data comprises track and time information.

78. (Previously Presented) The apparatus of claim 76, wherein the data comprises song title and artist information.

79. (Previously Presented) The apparatus of claim 76, wherein the data comprises a channel number and a channel name.

80. (Previously Presented) The apparatus of claim 76, wherein the commands are input by a user using one or more control buttons or presets on the car stereo.

81. (Previously Presented) A device for integrating video information for use with a car stereo, comprising:

a car stereo;

a video device external to the car stereo;

an interface connected between the car stereo and the video device;

means for generating a device presence signal and transmitting the signal to the car stereo to maintain the car stereo in an operational state; and

means for transmitting video information from the video device to the car stereo.

82. (Previously Presented) The device of claim 81, further comprising means for converting the video information into a format compatible with the car stereo.

83. (New) An audio device integration system comprising:

a car stereo;

a portable audio device external to the car stereo;

an interface connected between the car stereo and the portable audio device;

means for generating a device presence signal and transmitting the signal to the car stereo to maintain the car stereo in an operational state; and

means for transmitting audio from the portable audio device to the car stereo.

84. (New) The apparatus of claim 83, wherein the portable audio device comprises a portable CD player.

85. (New) The apparatus of claim 83, wherein the portable audio device comprises a portable MP3 player.

86. (New) The apparatus of claim 83, wherein the portable audio device comprises a portable satellite receiver.

87. (New) The apparatus of claim 83, wherein the portable audio device comprises a portable Digital Audio Broadcast (DAB) receiver.

### REMARKS

Applicant submits this response to the outstanding Office Action on the above-identified application. Applicant has amended the application, as set forth herein, and respectfully submits that the application, as amended, is in condition for allowance.

Claims 2, 47, 56, 64, and 73 were objected to in the Office Action with respect to the abbreviation "OEM" appearing in said claims. Applicant has amended each of these claims to recite "Original Equipment Manufacturer." Support for this amendment can be found throughout the specification. Accordingly, Applicant respectfully requests that the objection raised with respect to Claims 2, 47, 56, 64, and 73 be withdrawn.

Claims 26 and 38 were objected to in the Office Action with respect to the abbreviation "DAB" appearing in said claims. Applicant has amended each of these claims to recite "Digital Audio Broadcast." Support for this amendment can be found throughout the specification. Accordingly, Applicant respectfully requests that the objection raised with respect to Claims 26 and 38 be withdrawn.

Applicant has amended independent Claim 1 to recite "an **after-market** audio device external to the car stereo" and to more broadly define the claimed invention. Similarly, Claim 30 was amended to recite an **after-market** device and to more broadly define the claimed invention. Claim 38, which depends from amended Claim 30, was also amended to provide antecedent basis. Applicant has also amended dependent Claim 12 to further define the present invention.



Applicant has amended Claim 42 to further define the present invention and to overcome the rejections raised in the Office Action. Specifically, Claim 42 was amended to recite "a storage area **remote from a car stereo**" for storing a portable device. Applicant has also added new Claims 83-87 to further define the present invention.

Applicant's claimed invention relates generally to an audio device integration system for integrating one or more after-market audio devices external to a car stereo (and, normally, not compatible with the car stereo), such as an MP3 player, a satellite radio receiver, digital audio broadcast (DAB) receiver, or one or more auxiliary input sources, for use with an Original Equipment Manufacturer (OEM) or after-market car stereo system. The audio device integration system of the present invention includes an interface that generates a device presence signal and transmits the signal to the car stereo to maintain the car stereo in an operational state responsive to an external device. Audio from the external device is transmitted to the car stereo for playing thereon. Data from the external device, such as disc number, track number, elapsed time, channel number, channel name, artist name, song title, and other information, as well as video information, is processed by the interface of the present invention into a format compatible with the car stereo system, and transmitted to the car stereo for display on one or more displays of the car stereo system. Commands for controlling the external device, which are issued using the controls of the car stereo system, are received by the interface of the present invention, processed into a format compatible with the external device, and dispatched to the external device for execution thereby. In some cases, the audio device integration system includes an interface connected between a car stereo system and an after-market audio device external to the car stereo, as well as means for switching to one or more auxiliary input sources connected to the

interface. The present invention is operable with a multitude of external devices, such as portable audio devices, portable MP3 players, satellite receivers, DAB receivers, video devices, and the like. A remote docking station for storing a portable receiver, such as a portable DAB or satellite receiver, is also provided.

U.S. Patent No. 6,993,615 to Falcon discloses a portable computing device which can be docked with an appliance. The portable computing device includes a display screen, and could include a personal digital assistant (PDA), organizer, or handheld computer. The portable computing device includes a graphical user interface that can be customized based upon the appliance to which the portable computing device is docked. In one embodiment, the portable computing device can be docked with a car stereo which includes a receptacle for receiving the portable computing device.

U.S. Patent Application Publication No. US 2003/0053638 to Yasuhara discloses an entertainment system for a vehicle. The system includes a head unit in a car, a rear controller connected to the head unit, a display connected to the rear controller, a DVD player connected to the head unit, and an external terminal input unit connected to the DVD player and the head unit. The rear controller is operable with a handheld remote control, in addition to headphones. The external input terminal unit is connectable to one or more headphones, and includes an external input for connecting an external device thereto, such as a video game machine or a video camera.

U.S. Patent Application Publication No. US 2002/0085730 to Holland discloses a briefcase or carrying case with an integrated loudspeaker system.

U.S. Patent No. 6,295,033 to Chatzipetros, et al. discloses a vehicle antenna assembly for receiving satellite broadcast signals. The assembly includes a window clip having an integral transmission line.

Claims 24-27, 42, 44-45, 55, 58-63, 66-71, and 81-82 were rejected as being anticipated by Falcon, and Claims 28-29, 47-54, 56-57, and 64-65 were rejected as being obvious over Falcon. For the reasons set forth below, Applicant submits these claims are patentable over Falcon.

Falcon fails to disclose each element of independent Claim 24 and Claims 25-27 depending therefrom, which recite **an interface connected between a car stereo system and a plurality of auxiliary input sources**. The Office Action attempts to equate the portable computing device disclosed in Falcon with the interface of the present invention. However, such a comparison is entirely unfounded. As a threshold matter, the system disclosed by Falcon is merely a portable computer system that can be docked with a custom-manufactured car stereo system having a receptacle for receiving the portable computer system. Falcon is entirely unconcerned with integrating an external audio device, which is ordinarily alien to and incompatible with a car stereo system, for use with the car stereo system. Further, any discussion of an “interface” in Falcon is limited to a graphical user interface. This is an entirely different concept than the interface of the present invention, which includes a physical interface device connected between a car stereo system and an external audio source (e.g., a plurality of auxiliary input sources).

Moreover, the portable computing device of Falcon is not connected between a car stereo system and a plurality of auxiliary input sources. Indeed, the portable computer of Falcon is incapable of being connected to a plurality of auxiliary input sources. The Office Action points to an optical disc slot in the car stereo of Falcon, in addition to disclosure in the specification relating to coupling peripheral devices to an appliance, in an effort to show an interface connected between a plurality of auxiliary input sources. However, it is clear that Falcon does not teach or suggest connecting auxiliary input sources to its portable computing device. Accordingly, Falcon not only fails to disclose an interface, but it also fails to disclose connecting the interface between a car stereo and a plurality of auxiliary input sources as claimed by Applicant.

Falcon also fails to disclose “means for processing and dispatching commands for controlling an audio device connected to one of the plurality of auxiliary input sources from the car stereo in a format compatible with the audio device; means for processing and displaying data from the audio device on a display of the car stereo in a format compatible with the car stereo; and means for selecting one of the plurality of auxiliary input sources from the car stereo” as recited in Claims 24-27. Falcon fails whatsoever to disclose controlling an audio device connected to one of a plurality of auxiliary input sources by processing and dispatching commands for controlling the audio device. Rather, Falcon merely discloses sending data (e.g., an MP3 file) from the portable computing device to an appliance (see col. 6, lines 20-31). Further, Falcon fails to disclose processing and displaying data from an audio device on the display of a car stereo, in a format compatible with the car stereo. Rather, the car stereo of Falcon only includes a small display 202 (see FIGS. 4-6) for displaying information relating to a

radio station or a disc. Absolutely no capability is provided for displaying information from an external audio device on the display 202 of Falcon. The Office Action points to the display of the portable computing device of Falcon as the display of the car stereo, but this argument is hard to accept because the portable computing device of Falcon is also identified in the Office Action as the interface of the present invention. Moreover, Falcon fails to disclose means for selecting one of a plurality of auxiliary input sources connected to an interface, using the car stereo. As such, Falcon fails to disclose each element of Claims 24-27.

Falcon fails to disclose each element of independent Claim 42, as amended herein, and Claims 43-46 depending therefrom. Claim 42, as amended herein, recites a storage area **remote from a car stereo** for storing a portable device. Falcon is devoid of any such feature. Rather, Falcon merely discloses a receptacle for receiving a portable computing device, which is integral with a car stereo and not remote therefrom. As such, Claims 42-46 are patentable over Falcon.

Falcon fails to disclose each element of independent Claim 47, as amended herein, and Claims 48-54 depending therefrom. Claim 47, as amended, recites the step of **generating and transmitting a presence signal to the car stereo to maintain the car stereo in an operation state response to external signals**. The Office Action implies, without any supporting disclosure, that such a feature is inherent in the portable computing device of Falcon. However, Falcon is wholly devoid of any such feature. While the portable computing device disclosed in Falcon can display different graphical user interface screens depending on the type of appliance with which the computer is docked, Falcon is entirely absent any disclosure relating to generating and transmitting a device presence signal to the car stereo to maintain the car stereo in

an operation state responsive to external signals. As such, Claims 47-54 are patentable over Falcon.

Applicant submits that independent Claim 55 and dependent Claims 56-62 are also patentable over Falcon. Each of these claims recites "**means for generating a device presence signal and transmitting the signal to the car stereo to maintain the car stereo in an operational state**" responsive to a portable MP3 player. Falcon is wholly devoid of any such features. Falcon provides no such functionality. The Office Action points to col. 4, lines 16-24 of Falcon as disclosing this feature. However, the quoted excerpt only discloses that the portable computing device of Falcon identifies the type of appliance to which it is connected, so that an appropriate graphical user interface can be displayed on the portable computing device. Absolutely no disclosure is provided related to generating a device presence signal and transmitting such a signal to a car stereo. As such, Applicant submits that Claims 55-62 are patentable over Falcon.

Applicant submits that independent Claim 63 and dependent Claims 64-71 are also patentable over Falcon. Each of these claims recites "a car stereo; **a satellite receiver external to the car stereo;**" and "**an interface connected between the car stereo and the satellite receiver....**" Falcon is wholly devoid of any such features. As established above, Falcon fails to disclose an interface connected between a car stereo and an external audio device, such as an satellite receiver. Rather, Falcon merely discloses a portable computing device that can be docked with a car stereo. The portable computing device does not include any capability for being connected between a car stereo and an external satellite receiver. Moreover, Falcon fails

whatsoever to disclose a satellite receiver external to a car stereo. As such, Applicant submits that Claims 63-71 are patentable over Falcon.

Applicant further submits that independent Claim 81, and Claim 82 depending therefrom, is patentable over Falcon. Each of these claims recites "a car stereo; **a video device external to the car stereo;**" and "**an interface connected between the car stereo and the video device....**" Falcon is entirely absent any such features. Falcon merely discloses that an appliance to which the portable computing device is docked may include a CD or a DVD drive. However, Falcon fails to disclose an interface connected between a car stereo and an external video device. Indeed, the portable computing device cannot be connected between a car stereo and an external satellite receiver -- it is nothing more than a portable computer, not a device for integrating two products together. As such, Applicant submits that Claims 81-82 are patentable over Falcon.

Applicant respectfully traverses the rejection of Claims 1-13, 15-23, 30-38, and 40-41 as being obvious over Falcon in view of Yasuhara. First, independent Claim 1 and Claims 2-13 and 14-25 each recite a car stereo, an **after-market** audio device external to the car stereo, and **an interface connected between the car stereo and the audio device for exchanging data and audio signals between the car stereo and the audio device.** Falcon fails whatsoever to disclose an interface connected between a car stereo and an after-market audio device for exchanging data and audio signals between the car stereo and the audio device. Yasuhara fails to cure this deficiency. While Yasuhara discloses an external input terminal unit that can be connected to an external device such as a video game or a video camera, absolutely no disclosure

is provided of an interface that can exchange data between the car stereo and an after-market audio device, such as disc information, track information, artist information, song titles, etc. Rather, the external input terminal unit of Yasuhara merely ports audio and video from a video game or a video camera to a display of an existing car stereo system.

Second, neither Falcon nor Yasuhara, taken alone or in combination, teach or suggest **means for processing and displaying data from an audio device on the display of a car stereo in a format compatible with the car stereo**, as recited in Claims 1-13 and 15-23. Falcon provides absolutely no ability to display data from an after-market external device on a display of a car stereo. Yasuhara is similarly deficient. Although Yasuhara discloses displaying video information from a DVD player or an external source (connected to the external input terminal unit) on a display connected to an extension unit, Yasuhara is entirely absent of any disclosure relating to displaying data from an after-market device on a display of a car stereo, much less processing such data into a format compatible with the car stereo. Simply put, Yasuhara only allows raw audio or video signals to be sent to a car display; it does not allow any textual data, such as a track number, a disc number, a song title, and artist name, a channel name, etc., generated by an after-market device to be displayed on a display of a car stereo.

For similar reasons, Applicant submits that Claims 30-38 and 40-41 are patentable over Falcon in view of Yasuhara. First, each of these claims recites the limitations of **receiving control commands from a car stereo at an interface and processing the control commands into a format compatible with an after-market device connected to the interface and dispatching processed control commands to the after-market device**. Falcon is entirely



absent any such feature. The portable computing device of Falcon cannot be controlled by the car stereo disclosed therein. Yasuhara is similarly deficient. An external device, such as a video game or video camera, connected to the external input terminal unit of Yasuhara, cannot be controlled by a car stereo (in this case, the head unit of Yasuhara). Rather, the external video device merely sends raw audio and video signals to the external input terminal unit. Second, neither reference, taken alone or in combination, teaches or suggests **processing data from an after-market device into a second format compatible with a car stereo and displaying the processed data on the car stereo**, as set forth in Claims 30-38 and 40-41. The car stereo of Falcon cannot display data from an after-market device on the display of the car stereo. Similarly, the head unit (car stereo) of Yasuhara cannot display data from an external device connected to the external input terminal unit. Rather, only raw audio and video signals are ported from the external device through the external input terminal unit. As such, Applicants submit that Claims 30-38 and 40-41 are patentable over Falcon in view of Yasuhara, taken alone or in combination.

Applicant submits that Claims 43 and 46 are patentable over Falcon in view of Holland. For reasons set forth previously, Falcon does not teach or suggest all of the elements of underlying independent Claim 42. Holland does not remedy these deficiencies. Holland makes no mention of a car stereo or attachment of a device to a car stereo. As such, Applicant submits that Claims 43 and 46 are patentable over Falcon in view of Holland.

Applicant submits that Claims 72-80 are patentable over Falcon in view of Chatzipetros, et al. Claims 72-80 each recite **an interface connected between a car stereo and a digital**

**audio broadcast receiver.** Falcon is wholly devoid of any such disclosure. As discussed at length above, the portable computing device of Falcon is not connectable between a car stereo and a device external to the car stereo. Chatzipetros, et al. is likewise entirely deficient. Chatzipetros, et al. merely discloses an antenna assembly -- it has nothing to do with an interface connectable between a car stereo and a digital audio broadcast receiver. Similarly, neither reference, taken alone or in combination, teaches or suggests **means for generating a device presence signal and transmitting the signal to a car stereo to maintain the car stereo in an operation state**, as set forth in Claims 72-80. As such, Applicant submits that Claims 72-80 are patentable over Falcon in view of Chatzipetros, et al., taken alone or in combination.

Applicants have added new Claims 83-87 to further define the present invention. Each of these claims recites a car stereo; a portable audio device external to the car stereo; an interface connected between the car stereo and the portable audio device, means for generating a device presence signal and transmitting the signal to the car stereo to maintain the car stereo in an operational state; and means for transmitting audio from the portable audio device to the car stereo. None of the references cited in the Office Action, taken alone or in any combination, teach or suggest such features.

All issues raised in the Office Action are believed to have been addressed. Claims 1-2, 12, 26, 30, 38, 42, 47, 56, 64, and 73 were amended, and Claims 83-87 were added. Claims 1-13, 15-38, and 40-87 are pending and are in condition for allowance. No new matter is believed to have been added. Re-examination is respectfully requested and favorable action solicited.

Dated: 9/5/2006

Respectfully submitted,



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IPW 2615 ✓

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Customer No. 27614

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Re: Our file: 99879-00005 Examiner: Kurr, J.  
Applicant: Ira Marlowe Art Unit: 2615  
Serial No.: 10/316,961  
Filing Date: 12/11/2002  
Title: Audio Device Integration System

Sir:

Enclosed for filing in the United States Patent and Trademark Office is the following:

1. Response to Office Action
2. Amendment Transmittal Letter (Small Entity)
3. Transmittal Sheet
4. Postcard Receipt

**CONDITIONAL PETITION**

If any extension of time is required for the submission of the above-identified items, Applicant requests that this be considered a petition therefor. Please charge any additional charges or any other charges relating to this matter, or credit any overpayment, to the Deposit Account of the writer, **Account No. 503571**. A duplicate copy of this letter is enclosed.

Respectfully submitted,

Mark E. Nikolsky  
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9/5/2006  
Date

Check One and Complete:

**CERTIFICATE OF MAILING BY EXPRESS MAIL**

I hereby certify that this correspondence is being deposited with the United States Postal Service, postage prepaid, as "Express Mail Post Office to Addressee," Mailing Label No. \_\_\_\_\_ US to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on \_\_\_\_\_.

By: \_\_\_\_\_

**CERTIFICATE OF MAILING BY FIRST CLASS MAIL**

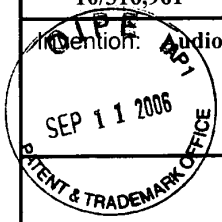
I hereby certify that this correspondence is being deposited with the United States Postal Service, First Class Mail, postage prepaid, to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on 9/5/2006.

By:   
Mark E. Nikolsky

|  |  |                           |
|--|--|---------------------------|
| <b>AMENDMENT TRANSMITTAL LETTER (Small Entity)</b> |  | Docket No.<br>99879-00005 |
| Applicant(s): Ira Marlowe                          |  |                           |

|                               |                           |                      |                       |                        |                          |
|-------------------------------|---------------------------|----------------------|-----------------------|------------------------|--------------------------|
| Application No.<br>10/316,961 | Filing Date<br>12/11/2002 | Examiner<br>Kurr, J. | Customer No.<br>27614 | Group Art Unit<br>2615 | Confirmation No.<br>4879 |
|-------------------------------|---------------------------|----------------------|-----------------------|------------------------|--------------------------|

Invention: Audio Device Integration System



**COMMISSIONER FOR PATENTS:**

Transmitted herewith is an amendment in the above-identified application.

Applicant claims small entity status. See 37 CFR 1.27

The fee has been calculated and is transmitted as shown below.

**CLAIMS AS AMENDED**

|  | CLAIMS REMAINING<br>AFTER AMENDMENT | HIGHEST #<br>PREV. PAID FOR | NUMBER EXTRA<br>CLAIMS PRESENT | RATE       | ADDITIONAL<br>FEE |
|--|-------------------------------------|-----------------------------|--------------------------------|------------|-------------------|
| TOTAL CLAIMS   | 87 -                                | 82 =                        | 5                              | x \$25.00  | \$125.00          |
| INDEP. CLAIMS  | 10 -                                | 9 =                         | 1                              | x \$100.00 | \$100.00          |
| Multiple Dependent Claims (check if applicable) <input type="checkbox"/> |                                     |                             |                                |            | \$0.00            |
| <b>TOTAL ADDITIONAL FEE FOR THIS AMENDMENT</b>                           |                                     |                             |                                |            | <b>\$225.00</b>   |

- No additional fee is required for amendment.
- Please charge Deposit Account No. 503571 in the amount of \$225.00
- A check in the amount of to cover the filing fee is enclosed.
- The Director is hereby authorized to charge payment of the following fees associated with this communication or credit any overpayment to Deposit Account No.
  - Any additional filing fees required under 37 C.F.R. 1.16.
  - Any patent application processing fees under 37 CFR 1.17.
- Payment by credit card. Form PTO-2038 is attached.

**WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.**

*Mark E Nikolsky*  
Signature

Dated: 09/05/2006

Mark E. Nikolsky  
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|   |
|---|
| I certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)] on<br>09/05/2006<br>(Date) |
| <i>Mark E Nikolsky</i><br>Signature of Person Mailing Correspondence  |
| <b>Mark E. Nikolsky</b><br>Typed or Printed Name of Person Mailing Correspondence   |

cc:

**PATENT APPLICATION FEE DETERMINATION REC RD**  
Effective October 1, 2001

Application or Docket Number

10/316961

**CLAIMS AS FILED - PART I**

|                                  | (Column 1)               | (Column 2)   |
|----------------------------------|--------------------------|--------------|
| TOTAL CLAIMS                     | 54                       |              |
| FOR                              | NUMBER FILED             | NUMBER EXTRA |
| TOTAL CHARGEABLE CLAIMS          | 54 minus 20 =            | 34           |
| INDEPENDENT CLAIMS               | 3 minus 3 =              | 0            |
| MULTIPLE DEPENDENT CLAIM PRESENT | <input type="checkbox"/> |              |

\* If the difference in column 1 is less than zero, enter "0" in column 2

**CLAIMS AS AMENDED - PART II**

4/18/05

|   | (Column 1)                       | (Column 2)                         | (Column 3)    |
|---|----------------------------------|------------------------------------|---------------|
| AMENDMENT A   | CLAIMS REMAINING AFTER AMENDMENT | HIGHEST NUMBER PREVIOUSLY PAID FOR | PRESENT EXTRA |
|   | Total                            | 80 Minus                           | 54 = 26       |
|   | Independent                      | 9 Minus                            | 5 = 4         |
| FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/> |                                  |                                    |               |

9/11/04

|   | (Column 1)                       | (Column 2)                         | (Column 3)    |
|---|----------------------------------|------------------------------------|---------------|
| AMENDMENT B   | CLAIMS REMAINING AFTER AMENDMENT | HIGHEST NUMBER PREVIOUSLY PAID FOR | PRESENT EXTRA |
|   | Total                            | 87 Minus                           | 80 = 7        |
|   | Independent                      | 10 Minus                           | 9 = 1         |
| FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/> |                                  |                                    |               |

|   | (Column 1)                       | (Column 2)                         | (Column 3)    |
|---|----------------------------------|------------------------------------|---------------|
| AMENDMENT C   | CLAIMS REMAINING AFTER AMENDMENT | HIGHEST NUMBER PREVIOUSLY PAID FOR | PRESENT EXTRA |
|   | Total                            |                                    |               |
|   | Independent                      |                                    |               |
| FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/> |                                  |                                    |               |

\* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.  
 \*\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20."  
 \*\*\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3."  
 The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

SMALL ENTITY TYPE

OR OTHER THAN SMALL ENTITY

| RATE      | FEE    | OR | RATE      | FEE    |
|-----------|--------|----|-----------|--------|
| BASIC FEE | 370.00 |    | BASIC FEE | 740.00 |
| X\$9=     |        |    | X\$18=    |        |
| X42=      |        |    | X84=      |        |
| +140=     |        |    | +280=     |        |
| TOTAL     |        |    | TOTAL     |        |

SMALL ENTITY OR

OTHER THAN SMALL ENTITY

| RATE             | ADDITIONAL FEE | OR | RATE             | ADDITIONAL FEE |
|------------------|----------------|----|------------------|----------------|
| X\$9=            | 650            |    | X\$18=           |                |
| X42=             | 400            |    | X84=             |                |
| +140=            |                |    | +280=            |                |
| TOTAL ADDIT. FEE | 1050           |    | TOTAL ADDIT. FEE |                |

RATE

ADDITIONAL FEE

| RATE             | ADDITIONAL FEE | OR | RATE             | ADDITIONAL FEE |
|------------------|----------------|----|------------------|----------------|
| X\$9=            | 125            |    | X\$18=           |                |
| X42=             | 100            |    | X84=             |                |
| +140=            |                |    | +280=            |                |
| TOTAL ADDIT. FEE | 225            |    | TOTAL ADDIT. FEE |                |

RATE

ADDITIONAL FEE

| RATE             | ADDITIONAL FEE | OR | RATE             | ADDITIONAL FEE |
|------------------|----------------|----|------------------|----------------|
| X\$9=            |                |    | X\$18=           |                |
| X42=             |                |    | X84=             |                |
| +140=            |                |    | +280=            |                |
| TOTAL ADDIT. FEE |                |    | TOTAL ADDIT. FEE |                |



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| APPLICATION NO.   | FILING DATE     | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.             | CONFIRMATION NO. |
|---|-----------------|----------------------|---------------------------------|------------------|
| 10/316,961  | 12/11/2002      | Ira Marlowe          | 9809/1                          | 4879             |
|   | 7590 06/05/2006 |                      | EXAMINER<br>KURR, JASON RICHARD |                  |
| MICHAEL R FRISCIA<br>MCCARTER & ENGLISH<br>FOUR GATEWAY CENTER<br>100 MULBERRY STREET<br>NEWARK, NJ 07102 |                 |                      | ART UNIT                        | PAPER NUMBER     |
|   |                 |                      | 2615                            |                  |

DATE MAILED: 06/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |                                     |  |
|------------------------------|--------------------------------------|-------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/316,961 | <b>Applicant(s)</b><br>MARLOWE, IRA |  |
|                              | <b>Examiner</b><br>Jason R. Kurr     | <b>Art Unit</b><br>2615             |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1)  Responsive to communication(s) filed on 11 December 2002.
- 2a)  This action is FINAL.
- 2b)  This action is non-final.
- 3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4)  Claim(s) 1-82 is/are pending in the application.
- 4a) Of the above claim(s) 14 and 39 is/are withdrawn from consideration.
- 5)  Claim(s) \_\_\_\_\_ is/are allowed.
- 6)  Claim(s) 1-13, 15-38 and 40-82 is/are rejected.
- 7)  Claim(s) \_\_\_\_\_ is/are objected to.
- 8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9)  The specification is objected to by the Examiner.
- 10)  The drawing(s) filed on 11 December 2002 is/are: a)  accepted or b)  objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1)  Notice of References Cited (PTO-892)
- 2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3/8/04 3/22/04, 9/12/05
- 4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5)  Notice of Informal Patent Application (PTO-152)
- 6)  Other: \_\_\_\_\_



## **DETAILED ACTION**

### ***Claim Objections***

Claims 2, 26, 38, 47, 56, 64 and 73 are objected to because of the following informalities:

Claims 2, 47, 56, 64 and 73 contain the acronym OEM, which is not described in the claim as being limited to "Original Equipment Manufacturers" as disclosed in the specification.

Claims 26 and 38 contain the acronym DAB, which is not described in the claim as being limited to "Digital Audio Broadcasting" as disclosed in the specification.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 24-27, 42, 44-45, 55, 58-63, 66-71 and 81-82 are rejected under 35 U.S.C. 102(e) as being anticipated by Falcon (US 6,993,615 B2).

With respect to claim 24, Falcon discloses an audio device integration system comprising: a car stereo (fig.4 #200); a plurality of auxiliary input sources (fig.3 #210, col.6 ln.66-67, col.7 ln.1-4, "peripheral device"); an interface (fig.4 #102) connected between the car stereo and the plurality of auxiliary input sources; means for processing and dispatching commands (fig.3 #182,184,186,188,190) for controlling an audio device connected to one of the plurality of auxiliary input sources from the car stereo in a format compatible with the audio device (col.6 ln.20-31); means for processing and displaying data from the audio device on a display of the car stereo in a format compatible with the car stereo (fig.4 #218, col.8 ln.18-23); and means for selecting one of the plurality of auxiliary input sources from the car stereo (fig.3 #182,184,186,188,190 , col.9 ln.13-24).

With respect to claim 25, Falcon discloses the apparatus of claim 24, wherein the means for selecting one of the plurality of auxiliary input sources comprises a disc or track selection (col.8 ln.20-26) entered by a user using control buttons (fig.3 #182,184,186,188,190) of the car stereo.

With respect to claim 26, Falcon discloses the apparatus of claim 24, wherein the audio device comprises a CD player, CD changer, MP3 player, satellite receiver, or DAB receiver (col.9 ln.16-19).

With respect to claim 27, Falcon discloses the apparatus of claim 24, wherein a device type of the audio device is automatically detected by the interface and the audio device is automatically integrated with the car stereo based upon the device type (col.4 ln.25-42).

With respect to claim 44, Falcon discloses the apparatus of claim 42, wherein the data port comprises an RS-232 or USB port (col.6 ln.66-67, col.7 ln.1-4).

With respect to claim 45, Falcon discloses the apparatus of claim 42, wherein the storage area further comprises a top portion and a bottom portion defining a sleeve for holding the portable audio device (fig.6 #330, col.10 ln.19-25).

With respect to claim 55, Falcon discloses an audio device integration system comprising: a car stereo (fig.4 #200); a portable MP3 player (col.5 ln.20-31, col.6 ln.66-67) external to the car stereo; an interface (fig.4 #102) connected between the car stereo and the portable MP3 player; means for generating a device presence signal and transmitting the signal to the car stereo to maintain the car stereo in an operational state (col.4 ln.16-24); and means for transmitting audio from the portable MP3 player to the car stereo (col.7 ln.1-4).

With respect to claim 58, Falcon discloses the system of claim 55, further comprising means for processing and dispatching commands for controlling the portable

MP3 player from the car stereo in a format compatible with the portable MP3 player (col.7 In.37-42, fig.3 #182,184,186,188,190).

With respect to claim 59, Falcon discloses the system of claim 58, further comprising means for processing and displaying data from the portable MP3 player on a display of the car stereo in a format compatible with the car stereo (fig.4 #218, col.8 In.18-40).

With respect to claim 60, Falcon discloses the apparatus of claim 59, wherein the data comprises track and time information (col.8 In.20-26).

With respect to claim 61, Falcon discloses the apparatus of claim 59, wherein the data comprises song title and artist information (col.8 In.26-30).

With respect to claim 62, Falcon discloses the apparatus of claim 59, wherein the commands are input by a user using one or more control buttons or presets on the car stereo (fig.3 #182,184,186,188,190).

With respect to claim 63, Falcon discloses an audio device integration system comprising: a car stereo (fig.4 #200); a satellite radio receiver (col.6 In.41-48, col.6 In.66-67) external to the car stereo; an interface (fig.4 #102) connected between the car stereo and the satellite radio receiver; means for generating a device presence signal

and transmitting the signal to the car stereo to maintain the car stereo in an operational state (col.4 ln.16-24); and means for transmitting audio from the satellite radio receiver to the car stereo (col.7 ln.1-4).

With respect to claim 66, Falcon discloses the system of claim 63, further comprising means for processing and dispatching commands for controlling the satellite radio receiver from the car stereo in a format compatible with the satellite radio receiver (col.7 ln.37-42, fig.3 #182,184,186,188,190).

With respect to claim 67, Falcon discloses the system of claim 66, further comprising means for processing and displaying data from the satellite radio receiver on a display of the car stereo in a format compatible with the car stereo (fig.4 #218, col.8 ln.18-40).

With respect to claim 68, Falcon discloses the apparatus of claim 67, wherein the data comprises track and time information (col.8 ln.20-26).

With respect to claim 69, Falcon discloses the apparatus of claim 67, wherein the data comprises song title and artist information (col.8 ln.26-30).

With respect to claim 70, Falcon discloses the apparatus of claim 67, wherein the data comprises a channel number and a channel name (col.6 ln.41-47)

With respect to claim 71, Falcon discloses the apparatus of claim 67, wherein the commands are input by a user using one or more control buttons or presets on the car stereo (fig.3 #182,184,186,188,190).

With respect to claim 81, Falcon discloses a device for integrating video information for use with a car stereo, comprising: a car stereo (fig.4 #200); a video device external to the car stereo (col.6 ln.60-63, col.7 ln.1-4); an interface (fig.4 #102) connected between the car stereo and the video device; means for generating a device presence signal and transmitting the signal to the car stereo to maintain the car stereo in an operational state (col.4 ln.16-24); and means for transmitting video information from the video device to the car stereo (col.7 ln.1-4).

With respect to claim 82, Falcon discloses the device of claim 81, further comprising means for converting the video information into a format compatible with the car stereo. It is inherent that the interface (#102) converts video from an external DVD drive into a format compatible with the car stereo in order to display the content of the disk (col.6 ln.60-66).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-13, 15-23, 30-38 and 40-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Falcon (US 6,993,615 B2) in view of Yasuhara (US 2003/0053638 A1).

With respect to claim 1, Falcon discloses an audio device integration system comprising: a car stereo (fig.4 #200); an audio device external to the car stereo (col.6 ln.66-67, col.7 ln.1-4, "peripheral device"); an interface (fig.4 #102) connected between the car stereo and the audio device for exchanging data and audio signals between the car stereo and the audio device (col.6 ln.10-31); means for processing and dispatching commands (fig.3 #182,184,186,188,190) for controlling the audio device from the car stereo in a format compatible with the audio device (col.6 ln.20-31); means for processing and displaying data (fig.4 #218) from the audio device on a display of the car stereo in a format compatible with the car stereo (col.8 ln.18-23).

Falcon does not disclose expressly means for switching to one or more auxiliary input sources connected to the interface if the audio device is disconnected from the interface.

Yasuhara discloses the switching of audio sources in response to the disconnection of an audio device (pg.9 [0131] "ejection of the medium").

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the switching of audio sources as disclosed by Yasuhara in the invention of Falcon.

The motivation for doing so would have been to provide a user with continuous reproduced audio by switching to an alternate source upon the termination of another source such as the ejection of a CD. This would allow a user to continuously listen to audio without having to manually change an input source mode.

With respect to claim 2, Falcon discloses the apparatus of claim 1, however does not disclose expressly wherein the car stereo is an OEM car stereo. Falcon does disclose wherein the interface (fig.4 #102) identifies the type of appliance in which it is docked to, for the purpose of communicating with the appliance (col.4 ln.25-42). At the time of the invention it would have been obvious that the appliance of Falcon could be an OEM car stereo. The motivation for making the appliance an OEM stereo would have been to allow a user to have the functions of the interface, such as integration with satellite radio, without having to spend extra money on an after market car stereo.

With respect to claim 3, Falcon discloses the apparatus of claim 1, however does not disclose expressly wherein the car stereo is an after-market car stereo. Falcon does disclose wherein the interface (fig.4 #102) identifies the type of appliance in which it is docked to, for the purpose of communicating with the appliance (col.4 ln.25-42). At the time of the invention it would have been obvious that the appliance of Falcon could be



an after market car stereo. The motivation for doing so would have been to allow a user to upgrade their car stereo and still be able to use the interface's functions such integration with a satellite receiver.

With respect to claim 4, Falcon discloses the apparatus of claim 1, wherein the audio device comprises a CD player, CD changer, MP3 player, Digital Audio Broadcast (DAB) receiver, or satellite receiver (col.9 ln.16-19).

With respect to claim 5, Falcon discloses the apparatus of claim 1, wherein the interface further comprises a plug-and-play mode for automatically detecting a device type of the audio device and integrating the audio device based upon the device type (col.4 ln.25-42).

With respect to claim 6, Falcon discloses The apparatus of claim 1, wherein the interface generates a CD player presence signal for maintaining the car stereo in a state responsive to processed data and audio signals (fig.2, col.4 ln.20-24).

With respect to claim 7, Falcon discloses the apparatus of claim 1, wherein the data comprises track and time information (col.8 ln.20-26).

With respect to claim 8, Falcon discloses the apparatus of claim 1, wherein the data comprises song title and artist information (col.8 ln.26-30).

With respect to claim 9, Falcon discloses the apparatus of claim 1, wherein the data comprises channel number and channel name information (col.6 ln.41-47).

With respect to claim 10, Falcon discloses the apparatus of claim 1, wherein the data comprises video information (col.6 ln.60-63). It is implicit that a DVD is capable of reproducing a video signal and the system of Falcon is capable of reading video information from a DVD with the optical disk drive (col.6 ln.63-66).

With respect to claim 11, Falcon discloses the apparatus of claim 1, wherein the data is displayed as a menu on the display of the car stereo (fig.4 #218).

With respect to claim 12, Falcon discloses the apparatus of claim 1, wherein the data is displayed in a graphical interface on a graphic panel (fig.4 #218).

With respect to claim 13, Falcon discloses the apparatus of claim 1, wherein the commands are input by a user using one or more control buttons (fig.3 #182,184,186,188,190) or presets on the car stereo (col.7 ln.37-42).

With respect to claim 15, Falcon discloses the apparatus of claim 1, wherein audio signals from the one or more auxiliary input sources are selectively channeled to the car stereo by the interface (col.6 ln.66-67, col.7 ln.1-4).

With respect to claim 16, Falcon discloses the apparatus of claim 1, wherein a user can select between the one or more auxiliary input sources by depressing keys (fig.3 #182,184,186,188,190) on the car stereo (col.9 ln.13-24).

With respect to claim 17, Falcon discloses the apparatus of claim 1, however fails to disclose wherein a user can select one of the auxiliary input sources by entering a disc number at the car stereo. Official Notice is taken that it is well known in the art to enter disc numbers on a car stereo to control auxiliary input sources such as a CD disk changer. It would have been obvious to include this feature in the car stereo of Falcon in order to control the selection of a CD without having a user manually change disks. This would allow a user to focus on driving the vehicle while the system changes the disk selection.

With respect to claim 18, Falcon discloses the apparatus of claim 1, wherein a user can select one of the auxiliary input sources by entering a track number at the car stereo (col.8 ln.20-26).

With respect to claim 19, Falcon discloses the apparatus of claim 1, however fails to disclose wherein a user can select one of the auxiliary input sources by entering both disc and track numbers at the car stereo. Official Notice is taken that it is well known in the art to enter disc and track numbers on a car stereo to control auxiliary input sources such as a CD disk changer. It would have been obvious to include this feature in the car stereo of Falcon in order to control the selection of a CD and track without having a user manually change disks. This would allow a user to focus on driving the vehicle while the system changes the disk selection.

With respect to claim 20, Falcon discloses the apparatus of claim 1, wherein a user can select between the audio device and the one or more auxiliary input sources by entering a sequence at the car stereo (col.8 ln.45-50).

With respect to claim 21, Falcon discloses the apparatus of claim 20, wherein the sequence comprises a track up selection followed by a track down selection (fig.4 #206,208, col.8 ln.1-7).

With respect to claim 22, Falcon discloses the apparatus of claim 1, further comprising a second interface (fig.4 #216) connected to the first interface for providing a plurality of auxiliary input sources.

With respect to claim 23, Falcon discloses the apparatus of claim 22, wherein both the first interface and the second interface are controllable using the car stereo (col.6 ln.20-31).

With respect to claim 30, Falcon discloses a method for integrating a device with a car stereo comprising: connecting an interface (fig.4 #102) to the car stereo (fig.4 #100) and the device (fig.4 #210) to the interface, and an auxiliary input source to the interface (col.6 ln.66-67, col.7 ln.1-4, "peripheral device"); receiving control commands from the car stereo at the interface (col.3 ln.34-40); processing the control commands into a format compatible with the device and dispatching processed control commands to the device (col.6 ln.20-25); receiving data and audio from the device at the interface (col.6 ln.60-63); processing the data into a second format compatible with the car stereo and dispatching the audio and processed data to the car stereo (col.6 ln.20-25); and displaying the processed data on the car stereo and playing the audio through the car stereo (col.8 ln.20-25).

Falcon does not disclose expressly wherein audio is played from the auxiliary input source through the car stereo if the device is disconnected from the interface.

Yasuhara discloses the switching of audio sources in response to the disconnection of an audio device (pg.9 [0131] "ejection of the medium").

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the switching of audio sources as disclosed by Yasuhara in the invention of Falcon.

The motivation for doing so would have been to provide a user with continuous reproduced audio by switching to an alternate source upon the termination of another source such as the ejection of a CD. This would allow a user to continuously listen to audio without having to manually change an input source mode.

With respect to claim 31, Falcon discloses the method of claim 30, wherein the step of receiving data from the device comprises retrieving CD track and time information from the device (col.8 ln.20-26).

With respect to claim 32, Falcon discloses the method of claim 30, wherein the step of receiving data from the device comprises retrieving MP3 song, title, track, and time information from the device (col.8 ln.20-26).

With respect to claim 33, Falcon discloses the method of claim 30, wherein the step of receiving data from the device comprises retrieving channel number, channel name, artist, and song information from the device (col.6 ln.41-47, col.8 ln.18-40).

With respect to claim 34, Falcon discloses the method of claim 30, wherein the step of receiving data from the device comprises retrieving video information from the device (col.6 ln.60-63). It is implicit that a DVD is capable of reproducing a video signal and the system of Falcon is capable of reading video information from a DVD with the

optical disk drive (col.6 ln.63-66).

With respect to claim 35, Falcon discloses the method of claim 30, wherein the step of displaying the processed data comprises displaying the data in an LCD panel (col.7 ln.37-42). It is implicit that the touchscreen display of Falcon can be made from a LCD panel.

With respect to claim 36, Falcon discloses the method of claim 30, wherein the step of displaying the processed data comprises displaying the data in a graphical user interface at the car stereo (col.7 ln.37-42).

With respect to claim 37, Falcon discloses the method of claim 30, wherein the step of displaying processed data comprises displaying video at the car stereo (col.6 ln.60-63). It is implicit that a DVD is capable of reproducing a video signal and the system of Falcon is capable of reading video information from a DVD with the optical disk drive (col.6 ln.63-66).

With respect to claim 38, Falcon discloses the method of claim 30, wherein the step of connecting the audio device to the interface comprises connecting a CD player, CD changer, MP3 player, satellite receiver, or DAB receiver to the interface (col.9 ln.16-19).

With respect to claim 40, Falcon discloses the method of claim 30, further comprising receiving a selection command from the car stereo and channeling data and audio from the auxiliary input source to the interface in response to the selection command (col.9 ln.13-24). It is implied that when the interface (#102) selects a media source the data from the source would be channeled to the car stereo.

With respect to claim 41, Falcon discloses the method of claim 40, further comprising processing the data from the auxiliary input source for display on the car stereo (col.9 ln.21-24).

Claims 28-29, 47-54, 56-57 and 64-65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Falcon (US 6,993,615 B2).

With respect to claim 28, Falcon discloses the apparatus of claim 24, however does not disclose expressly wherein the interface is switchable into an auxiliary input mode by issuing a control sequence at the car stereo. Falcon discloses that the interface is switchable between two modes, first a docked mode and second an undocked mode (col.7 ln.1-4, col.8 ln.18-26) wherein the docked mode controls auxiliary input devices (col.9 ln.13-24). At the time of the invention it would have been obvious to control this docked mode by issuing a control sequence at the car stereo. The motivation for doing so would have been to give a user the option of selecting different input sources for reproduction in the vehicle. This would allow a user to choose between different types of media such as DVD's, satellite radio, or navigational



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systems.

With respect to claim 29, Falcon discloses the apparatus of claim 28, wherein the control sequence comprises a track up command followed by a track down command (fig.4 #206,208, col.8 ln.2-3).

With respect to claim 47, Falcon discloses a method of integrating an after-market device (col.6 ln.66-67, col.7 ln.1-4, "peripheral device") with a car stereo (fig.4 #200) comprising: connecting the after-market device to an interface (fig.4 #102); connecting the interface to a car stereo; determining whether the car stereo is an OEM car stereo or an after-market car stereo (col.4 ln.25-42); if the car stereo is an after-market car stereo, generating and transmitting a presence signal to the car stereo to maintain the car stereo in an operational state responsive to external signals; and selectively channeling data and audio signals from the after-market device to the car stereo using the interface. It is implied that the car stereo would remain responsive to external signals when docked with interface (#102). Falcon discloses that the interface is capable of controlling external signals from peripheral devices (col.9 ln.13-24); hence the interface selectively channels data from the after-market devices to the car stereo.

Falcon does not disclose expressly wherein the car stereo is an OEM or after-market car stereo. Falcon does disclose wherein the interface (fig.4 #102) identifies the type of appliance in which it is docked to, for the purpose of communicating with the appliance (col.4 ln.25-42). At the time of the invention it would have been obvious that

the appliance of Falcon could be either an OEM or after market car stereo. The motivation for allowing the car stereo to be either OEM or after market would have been to allow a user to use the interface no matter what type of stereo is in his or her vehicle.

With respect to claim 48, Falcon discloses the method of claim 47, further comprising receiving control commands from the car stereo at the interface (col.7 ln.37-42).

With respect to claim 49, Falcon discloses the method of claim 48, further comprising converting the control commands into a format recognizable by the after-market audio device (col.10 ln.42-49).

With respect to claim 50, Falcon discloses the method of claim 49; further comprising dispatching formatted commands to the after-market audio device for execution thereby (col.7 ln.1-4).

With respect to claim 51, Falcon discloses the method of claim 47, further comprising converting data received at the interface from the after-market audio device into a format compatible with the car stereo (col.10 ln.42-49).

With respect to claim 52, Falcon discloses the method of claim 51; further comprising displaying formatted data on the car stereo (col.8 ln.20-40).

With respect to claim 53, Falcon discloses the method of claim 52, wherein the step of displaying formatted data comprises displaying channel numbers, channel names, titles, tracks, song names, or artist names on the car stereo (col.8 ln.20-40).

With respect to claim 54, Falcon discloses the method of claim 52, wherein the step of displaying formatted data comprises displaying video on the car stereo (col.6 ln.60-63). It is implicit that a DVD is capable of reproducing a video signal and the system of Falcon is capable of reading video information from a DVD with the optical disk drive (col.6 ln.63-66).

With respect to claim 56, Falcon discloses the apparatus of claim 55, however fails to disclose wherein the car stereo is an OEM car stereo. Falcon does disclose wherein the interface (fig.4 #102) identifies the type of appliance in which it is docked to, for the purpose of communicating with the appliance (col.4 ln.25-42). At the time of the invention it would have been obvious that the appliance of Falcon could be an OEM car stereo. The motivation for making the appliance an OEM stereo would have been to allow a user to have the functions of the interface, such as integration with satellite radio, without having to spend extra money on an after market car stereo.

With respect to claim 57, Falcon discloses the apparatus of claim 55, however fails to disclose wherein the car stereo is an after-market car stereo. Falcon does disclose wherein the interface (fig.4 #102) identifies the type of appliance in which it is docked to, for the purpose of communicating with the appliance (col.4 ln.25-42). At the time of the invention it would have been obvious that the appliance of Falcon could be an after market car stereo. The motivation for doing so would have been to allow a user to upgrade their car stereo and still be able to use the interface's functions such integration with a satellite receiver.

With respect to claim 64, Falcon discloses the apparatus of claim 63, however fails to disclose wherein the car stereo is an OEM car stereo. Falcon does disclose wherein the interface (fig.4 #102) identifies the type of appliance in which it is docked to, for the purpose of communicating with the appliance (col.4 ln.25-42). At the time of the invention it would have been obvious that the appliance of Falcon could be an OEM car stereo. The motivation for making the appliance an OEM stereo would have been to allow a user to have the functions of the interface, such as integration with satellite radio, without having to spend extra money on an after market car stereo.

With respect to claim 65, Falcon discloses the apparatus of claim 63, however fails to disclose wherein the car stereo is an after-market car stereo. Falcon does disclose wherein the interface (fig.4 #102) identifies the type of appliance in which it is docked to, for the purpose of communicating with the appliance (col.4 ln.25-42). At the

time of the invention it would have been obvious that the appliance of Falcon could be an after market car stereo. The motivation for doing so would have been to allow a user to upgrade their car stereo and still be able to use the interface's functions such integration with a satellite receiver.

Claims 43 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Falcon (US 6,993,615 B2) in view of Holland (US 2002/0085730 A1).

With respect to claim 43, Falcon discloses the apparatus of claim 42, however fails to disclose further comprising a hinge for connecting the top member and bottom member at an edge thereof.

Holland discloses an apparatus for docking with a portable device further comprising a hinge (pg.1 [0009]) for connecting a top member (fig.2 #5) and a bottom member (fig.2 #3) at an edge thereof.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the hinge of Holland in the invention of Falcon.

The motivation for doing so would have been to provide a closable case for the portable interface of Falcon. This would give the interface a protective case that can reduce risks of damage to the interface while in the docked position.

With respect to claim 46, Falcon discloses the apparatus of claim 42 in view of Holland, further comprising a clasp (Holland: fig.4 #9) for retaining the top and bottom

members in a closed position (Holland: pg.2 [0024][0025]).

Claims 72-80 are rejected under 35 U.S.C. 103(a) as being unpatentable over Falcon (US 6,993,615 B2) in view of Chatzipetros et al (US 6,295,033 B1).

With respect to claim 72, Falcon discloses an audio device integration system comprising: a car stereo (fig.4 #200); an external device (col.6 ln.66-67, col.7 ln.1-4, "peripheral device"); an interface (fig.4 #102) connected between the car stereo and the external device; means for generating a device presence signal and transmitting the signal to the car stereo to maintain the car stereo in an operational state (col.4 ln.16-24); and means for transmitting audio from the external device to the car stereo (col.7 ln.1-4).

Falcon does not disclose expressly wherein the external device is a digital audio broadcast receiver.

Chatzipetros discloses digital audio broadcast receiver (fig.8 #30) capable of being installed in a vehicle (col.4 ln.63-65).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the digital audio broadcast receiver of Chatzipetros as the external device in the invention of Falcon. The motivation for doing so would have been to provide a user with capability of listening to digital audio broadcasts.

With respect to claim 73, Falcon discloses the apparatus of claim 63, however fails to disclose wherein the car stereo is an OEM car stereo. Falcon does disclose

wherein the interface (fig.4 #102) identifies the type of appliance in which it is docked to, for the purpose of communicating with the appliance (col.4 ln.25-42). At the time of the invention it would have been obvious that the appliance of Falcon could be an OEM car stereo. The motivation for making the appliance an OEM stereo would have been to allow a user to have the functions of the interface, such as integration with satellite radio, without having to spend extra money on an after market car stereo.

With respect to claim 74, Falcon discloses the apparatus of claim 63, however fails to disclose wherein the car stereo is an after-market car stereo. Falcon does disclose wherein the interface (fig.4 #102) identifies the type of appliance in which it is docked to, for the purpose of communicating with the appliance (col.4 ln.25-42). At the time of the invention it would have been obvious that the appliance of Falcon could be an after market car stereo. The motivation for doing so would have been to allow a user to upgrade their car stereo and still be able to use the interface's functions such integration with a satellite receiver.

With respect to claim 75, Falcon discloses the system of claim 72, further comprising means for processing and dispatching commands for controlling the digital audio broadcast receiver from the car stereo in a format compatible with the digital audio broadcast receiver (col.7 ln.37-42, fig.3 #182,184,186,188,190).

With respect to claim 76, Falcon discloses the system of claim 75, further comprising means for processing and displaying data from the digital audio broadcast receiver on a display of the car stereo in a format compatible with the car stereo (fig.4 #218, col.8 ln.18-40).

With respect to claim 77, Falcon discloses the apparatus of claim 76, wherein the data comprises track and time information (col.8 ln.20-26).

With respect to claim 78, Falcon discloses the apparatus of claim 76, wherein the data comprises song title and artist information (col.8 ln.26-30).

With respect to claim 79, Falcon discloses the apparatus of claim 76, wherein the data comprises a channel number and a channel name (col.6 ln.41-47)

With respect to claim 80, Falcon discloses the apparatus of claim 76, wherein the commands are input by a user using one or more control buttons or presets on the car stereo (fig.3 #182,184,186,188,190).

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Beckert et al (US 5,794,164) discloses a vehicle computer system.



Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason R. Kurr whose telephone number is (571) 272-0552. The examiner can normally be reached on M-F 10:00am to 6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on (571) 273-8300. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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| <b>Notice of References Cited</b> | Application/Control No.<br>10/316,961 | Applicant(s)/Patent Under<br>Reexamination<br>MARLOWE, IRA |             |
|                                   | Examiner<br>Jason R. Kurr             | Art Unit<br>2615   | Page 1 of 1 |

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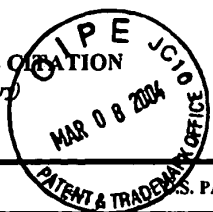
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| Docket Number (Optional)<br>9809/1 | Application Number<br>10/316,961 |
| Applicant(s)<br>Ira Marlowe        |                                  |
| Filing Date<br>12/11/02            | Group Art Unit<br>2644           |

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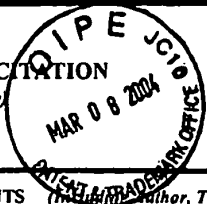
**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)**

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| JK | 4 | "Blitzsafe Overview," from Blitzsafe.com website- "The Worldwide Leader in Aftermarket Interfaces and OEM Engineering" (1 page). |
| JK | 5 | "Delphi XM SKYFI(TM) RADIO," product description from XM Satellite Radio web site (2 pages).                                     |

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| EXAMINER<br> | DATE CONSIDERED<br>5/26/06 |
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**INFORMATION DISCLOSURE CITATION**  
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Docket Number (Optional)  
9809/1

Application Number  
10/316,961

Applicant(s)  
Ira Marlowe

Filing Date  
12/11/02

Group Art Unit  
2644

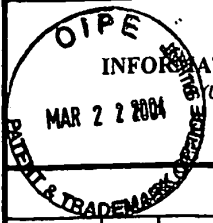
| *EXAMINER INITIAL | OTHER DOCUMENTS<br><small>(Include Author, Title, Date, Pertinent Pages, Etc.)</small>                                    |
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| JK 6              | "The New Delphi XM SKYFi Radio Add it to Any Car or Home Audio System," product description from www.xradio.com (1 page). |
| JK 7              | Mobile Electronics: News, "Soundgate to Release New GM and BMW Interfaces," December 2, 2002, ME-Mag.com (1 page)         |
| JK 8              | "Welcome to Ventura Technology," from www.venturatechnology.net (2 pages).  |
| JK 9              | "Ventura Technology" product descriptions from www.venturatechnology.net (1 page)   |
| JK 10             | "Phatnoise Digital Media Players," product description from www.phatnoise.com (2 pages).                                  |
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| Docket Number (Optional)<br>9809/1 | Application Number<br>10/316,961 |
| Applicant(s)<br>Ira Marlowe        |                                  |
| Filing Date<br>12/11/02            | Group Art Unit<br>2644           |

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| *EXAMINER INITIAL | REF | DOCUMENT NUMBER | DATE       | NAME           | CLASS | SUBCLASS | FILING DATE IF APPROPRIATE |
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| JK                | 1   | 5,410,675       | 04/25/1995 | Shreve, et al. | 395   | 500      | 09/17/1993                 |
|                   | 2   | 4,943,978       | 07/24/1990 | Rice           | 375   | 1        | 01/17/1989                 |
|                   | 3   | 4,817,130       | 03/28/1989 | Frimmel, Jr.   | 379   | 88       | 12/05/1986                 |
|                   | 4   | Re. 34,536      | 02/08/1994 | Frimmel, Jr.   | 379   | 88       | 06/28/1990                 |
|                   | 5   | 4,562,533       | 12/31/1985 | Hodel, et al.  | 364   | 200      | 08/20/1984                 |
|                   | 6   | 4,234,919       | 11/18/1980 | Bruce, et al.  | 364   | 200      | 10/31/1978                 |
|                   | 7   | 4,091,455       | 05/23/1978 | Woods, et al.  | 364   | 200      | 12/20/1976                 |
|                   | 8   | 4,068,104       | 01/10/1978 | Werth, et al.  | 179   | 175.3    | 05/14/1976                 |
|                   | 9   | 4,047,162       | 09/06/1977 | Dorey, et al.  | 364   | 200      | 04/28/1975                 |
|                   | 10  | 3,940,743       | 02/24/1976 | Fitzgerald     | 340   | 172.5    | 11/05/1973                 |

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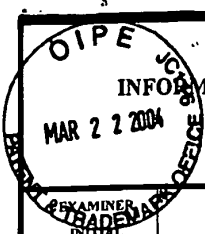
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| JK | 12 | Hadland, "Protocol Converter Apparatus and Method," United States Patent Application Publication No. US 2002/0133610 A1, published September 19, 2002.   |

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| Applicant(s)<br>Ira Marlowe        |                                  |
| Filing Date<br>12/11/02            | Group Art Unit<br>2644           |

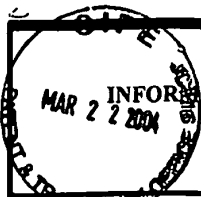
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| JIC | 13 | "Automedia," magazine pages from June/July 1996 issue (2 pages).                |
|     | 14 | "Automedia," magazine pages from January 1998 issue (2 pages).                  |
|     | 15 | "Automedia," magazine pages from February 1998 issue (2 pages).                 |
|     | 16 | "Automedia," magazine pages from July 1998 issue (2 pages).                     |
|     | 17 | "Automedia," magazine pages from September 1998 issue (2 pages).                |
|     | 18 | "Automedia," magazine pages from November 1998 issue (12 pages).                |
|     | 19 | "Automedia," magazine pages from February 1999 issue (2 pages).                 |
|     | 20 | "Automedia," magazine pages from February 1999 issue (2 pages).                 |
|     | 21 | "Car Stereo Review," magazine pages from June 1998 issue (5 pages).             |
|     | 22 | "Car Stereo Review," magazine pages from January 1999 issue (2 pages).          |
|     | 23 | "Car Stereo Review," magazine pages from April 1999 issue (3 pages).            |
|     | 24 | "Car Audio and Electronics," magazine pages from December 1998 issue (2 pages). |

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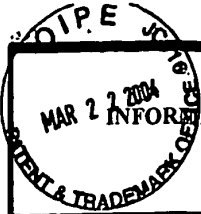
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| Docket Number (Optional)<br>9809/1 | Application Number<br>10/316,961 |
| Applicant(s)<br>Ira Marlowe        |                                  |
| Filing Date<br>12/11/02            | Group Art Unit<br>2644           |

| OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) |  |
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|  | "Carsound," magazine pages from May/June 1999 issue (2 pages).   |
|  | "Mobile Electronics Retailer," magazine pages from August 1997 issue (4 pages).  |
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|  | "Mobile Electronics Retailer," magazine pages from August 2000 issue (2 pages).  |
|  | "Cesmobile," magazine pages from January 1999 issue (3 pages).   |
|  | "The 12 Volt News," magazine pages from March 2002 issue (2 pages).  |
|  | "P.I.E. Millennium Price Guide Make the Precision Decision," Precision Interface Electronics, Inc. (6 pages).  |
|  | "PIE 1999 Price Guide," Precision Interface Electronics, Inc. (4 pages).   |
|  | "Design & Engineering Showcase Award," award presented to Precision Interface Electronics, Inc. for DPX Technology Digital Protocol Converter FRDN/PC-KNW, 2000 International CES. |
|  | "Design & Engineering Showcase Award," award presented to Precision Interface Electronics, Inc. for DPX Technology Digital Protocol Converter GM9/PC-KNW, 2000 International CES.  |

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| <b>INFORMATION DISCLOSURE CITATION</b><br><i>(Use several sheets if necessary)</i> | Docket Number (Optional) | Application Number |
|  | 9809/1                   | 10/316,961         |
|  | Applicant(s)             |                    |
|  | Ira Marlow               |                    |
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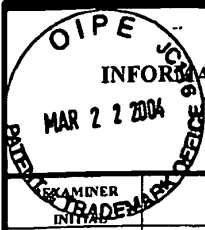
| *EXAMINER<br>INITIAL | OTHER DOCUMENTS <i>(Including Author, Title, Date, Pertinent Pages, Etc.)</i>  |
|----------------------|--|
| JC                   | 37 Invoice dated January 28, 1998 from Precision Interface Electronics, Inc. for "Ford FCU-Sanyo Protocol," and "Ford RCU Sanyo Protocol."     |
|                      | 38 Invoice dated January 29, 1999 from Precision Interface Electronics, Inc. for "Ford NCU-Sanyo Protocol."                                    |
|                      | 39 Invoice dated April 26, 1999 from Precision Interface Electronics, Inc. for "9 Pin GM-Kenwood Protocol," and "10 Pin GM-Kenwood Protocol."  |
|                      | 40 Invoice dated April 27, 1999 from Precision Interface Electronics, Inc. for "9 Pin GM-Kenwood Protocol."                                    |
|                      | 41 Invoice dated May 27, 1999 from Precision Interface Electronics, Inc. for "10 Pin GM-Kenwood Protocol," and "9 Pin GM-Kenwood Protocol."    |
|                      | 42 Invoice dated March 20, 2000 from Precision Interface Electronics, Inc. for "98-2000 Pre-Wired VW 6 DIS."                                   |
|                      | 43 Invoice dated March 20, 2000 from Precision Interface Electronics, Inc. for "98-2000 Pre-Wired VW 8 DIS," and "1998-2000 Audi to Pan 8 PC." |
|                      | 44 Invoice dated December 17, 2001 from Precision Interface Electronics, Inc. for "98-02 Ford/Lincoln/Mercury."                                |
|                      | 45 Invoice dated December 17, 2001 from Precision Interface Electronics, Inc. for "98-02 Ford/Lincoln/Mercury."                                |
|                      | 46 Invoice dated May 29, 2002 from Precision Interface Electronics, Inc. for "95-01 GMC/Chev/Pontiac AUX," and "98-02 Ford/Lincoln/Merc AU."   |
|                      | 47 Toyota/Avox Interface Rev. Eng., Peripheral Model TIAS, created February 15, 1998 (1 page)  |
|                      | 48 GM/Kenwood Translator diagram, created February 4, 1999 (2 pages).  |

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9809/1

Application Number  
10/316,961

Applicant(s)  
Ira Marlowe

Filing Date  
12/11/02

Group Art Unit  
2644

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JK 49

Ford/Audiovox Translator diagram, created December 29, 1997 (2 pages).

JK 50

Component Side Silkscreen, created December 31, 1997 (2 pages).

JK 51

Component Xray, created February 4, 1999 (2 pages).

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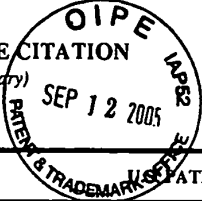
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| Docket Number (Optional)<br>99879-00005 | Application Number<br>10/316,961 |
| Applicant(s)<br>Ira Marlowe             |                                  |
| Filing Date<br>12/11/2002               | Group Art Unit<br>2644           |

**U.S. PATENT DOCUMENTS**

| *EXAMINER INITIAL | REF | DOCUMENT NUMBER | DATE       | NAME              | CLASS | SUBCLASS | FILING DATE IF APPROPRIATE |
|-------------------|-----|-----------------|------------|-------------------|-------|----------|----------------------------|
| JK                | 1   | 6,629,197       | 09/30/2003 | Bhogal, et al.    | 711   | 111      | 11/03/2000                 |
|                   | 2   | 6,396,164       | 05/28/2002 | Barnea, et al.    | 307   | 10.1     | 10/20/1999                 |
|                   | 3   | 6,330,337       | 12/11/2001 | Nicholson, et al. | 381   | 86       | 01/19/2000                 |
|                   | 4   | 6,157,725       | 12/05/2000 | Becker            | 381   | 86       | 12/10/1997                 |
| ✓                 | 5   | 5,339,362       | 08/16/1994 | Harris            | 381   | 86       | 01/07/1992                 |

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| *EXAMINER INITIAL | REF | DOCUMENT NUMBER    | DATE       | NAME             | CLASS | SUBCLASS | FILING DATE IF APPROPRIATE |
|-------------------|-----|--------------------|------------|------------------|-------|----------|----------------------------|
| JK                | 6   | US 2003/0086699 A1 | 05/08/2003 | Benyamin, et al. | 386   | 96       | 02/15/2002                 |
|                   | 7   | US 2003/0007649 A1 | 01/09/2003 | Riggs            | 381   | 86       | 06/14/2002                 |
| ✓                 | 8   | US 2001/0044664 A1 | 11/22/2001 | Mueller, et al.  | 700   | 94       | 03/23/2001                 |

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| REF | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUBCLASS | Translation |    |
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**OTHER DOCUMENTS** (Including Author, Title, Date, Pertinent Pages, Etc.)

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|----|----|---|
| JK | 9  | "SoundGate, Ventura Announce Sophisticated OEM-Integration Interfaces," article from The 12 Volt News, December 2002 (1 page) |
| JK | 10 | "XMDirect Smart Digital Adapter," product description (3 pages).  |

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| <b>INFORMATION DISCLOSURE CITATION</b><br><i>(Use several sheets if necessary)</i> | Docket Number (Optional)<br><b>99879-00005</b> | Application Number<br><b>10/316,961</b> |
|  | Applicant(s)<br><b>Ira Marlowe</b>             |   |
|  | Filing Date<br><b>12/11/2002</b>               | Group Art Unit<br><b>2644</b>           |

**U.S. PATENT DOCUMENTS**

| *EXAMINER INITIAL | REF       | DOCUMENT NUMBER  | DATE              | NAME                   | CLASS      | SUBCLASS   | FILING DATE IF APPROPRIATE |
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| <b>JK</b>         | <b>11</b> | <b>4,772,079</b> | <b>09/20/1988</b> | <b>Douglas, et al.</b> | <b>312</b> | <b>257</b> | <b>09/26/1986</b>          |
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| <b>JK</b> | <b>13</b> | "PIE Virtual Catalog," printout from <a href="http://web.archive.org/web/19981205005802/http://www.pie.net/sec12sb1.htm">http://web.archive.org/web/19981205005802/http://www.pie.net/sec12sb1.htm</a> (2 pages)   |

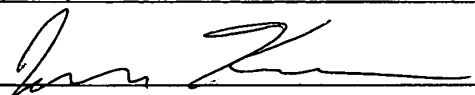
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| <b>INFORMATION DISCLOSURE CITATION</b><br><i>(Use several sheets if necessary)</i>   |   | Docket Number (Optional)<br><b>99879-00005</b>   | Application Number<br><b>10/316,961</b> |
|  |   | Applicant(s)<br><b>Ira Marlowe</b>   |   |
|  |   | Filing Date<br><b>12/11/2002</b>   | Group Art Unit<br><b>2644</b>           |
| *EXAMINER<br>INITIAL   | OTHER DOCUMENTS <i>(Including Author, Title, Date, Pertinent Pages, Etc.)</i>       |  |   |
| JR   | 14  | "The UniLink Project," printout from website (2 pages)   |   |
| JIC  | 15  | "CD Changer Interfaces," printout from <a href="http://web.archive.org/web/19991012021952/soundgate.com/cd-inter.html">http://web.archive.org/web/19991012021952/soundgate.com/cd-inter.html</a> (1 page)  |   |
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|  | 17  | "Bypassing and Switching With the CD4053 CMOS Analog MUX," printout from website (4 pages)   |   |
|  | 18  | "Device Profile: Phatnoise PhatBox Car MP3 Player," November 1, 2000, printout from <a href="http://techupdate.zdnet.com/techupdate/stories/main/0,14179,2649276,00.html">http://techupdate.zdnet.com/techupdate/stories/main/0,14179,2649276,00.html</a> (4 pages)                                      |   |
|  | 19  | "The EZ Protoboard," printout from <a href="http://web.archive.org/web/20010613095105/http://www.ajusd.org/~edward/ezproto/">http://web.archive.org/web/20010613095105/http://www.ajusd.org/~edward/ezproto/</a> (2 pages).  |   |
|  | 20  | "TDIClub Forums: Reverse Engineering CD Changer Progress," April 3, 2001, printout from website (3 pages)  |   |
|  | 21  | "TDIClub Forums: Reverse Engineering CD Changer Progress Reports," April 5, 2001, printout from website (8 pages)  |   |
|  | 22  | "Multi Technology Equipment - Home of the Neo MP3 Player," printout from <a href="http://web.archive.org/web/20010413222617/ssiamerica.com/products/neo35/">http://web.archive.org/web/20010413222617/ssiamerica.com/products/neo35/</a> (1 page)  |   |
|  | 23  | "TDIClub Forums: Reverse Engineering CD Changer Protocol Update," April 18, 2001, printout from website (3 pages)  |   |
|  | 24  | "The Car CD Changer Interface Page," printout from website (10 pages)  |   |
|  | 25  | "SourceForge.net: Project Info - GNUlink," printout from <a href="http://sourceforge.net/projects/gnunilink/">http://sourceforge.net/projects/gnunilink/</a> (3 pages)   |   |
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| <b>INFORMATION DISCLOSURE CITATION</b><br><i>(Use several sheets if necessary)</i>  |   | Docket Number (Optional)<br>99879-00005  | Application Number<br>10/316,961 |
|   |   | Applicant(s)<br>Ira Marlowe  |                                  |
|   |   | Filing Date<br>12/11/2002  | Group Art Unit<br>2644           |
| *EXAMINER<br>INITIAL  | OTHER DOCUMENTS <i>(Including Author, Title, Date, Pertinent Pages, Etc.)</i>       |  |                                  |
| JK  | 26  | "EZ Protoboard News," printout from website (3 pages)  |                                  |
| ↓   | 27  | "GNUlink - For All Your AUX-IN Needs...," printout from <a href="http://gnunilink.sourceforge.net/">http://gnunilink.sourceforge.net/</a> (4 pages)  |                                  |
|   | 28  | "VWCDPIC News," printout from <a href="http://web.archive.org/web/20020701101541/http://www.ajusd.org/~edward/vwcdpic/">http://web.archive.org/web/20020701101541/http://www.ajusd.org/~edward/vwcdpic/</a> (8 pages)  |                                  |
|   | 29  | "VWCDPIC News," printout from <a href="http://web.archive.org/web/20021009014959/http://www.ajusd.org/~edward/vwcdpic/">http://web.archive.org/web/20021009014959/http://www.ajusd.org/~edward/vwcdpic/</a> (10 pages) |                                  |
| ↓   | 30  | "Neo Car Jukebox MP3 Player," printout from website (3 pages)  |                                  |
|   |   |  |                                  |
|   |   |  |                                  |
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|   |   |  |                                  |
|   |   |  |                                  |
| EXAMINER  |  |  | DATE CONSIDERED<br>5/26/06       |
| <small>*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</small> |   |  |                                  |

P09B/REV04

**Index of Claims**



Application/Control No.

10/316,961

Examiner

Jason R. Kurr

Applicant(s)/Patent under Reexamination

MARLOWE, IRA

Art Unit

2615

|   |          |
|---|----------|
| ✓ | Rejected |
| = | Allowed  |

|   |                                |
|---|--------------------------------|
| — | (Through numeral)<br>Cancelled |
| ÷ | Restricted                     |

|   |              |
|---|--------------|
| N | Non-Elected  |
| I | Interference |

|   |          |
|---|----------|
| A | Appeal   |
| O | Objected |

| Claim |          | Date    |  |  |  |
|-------|----------|---------|--|--|--|
| Final | Original | 5/29/06 |  |  |  |
|       | 1        | ✓       |  |  |  |
|       | 2        | ✓       |  |  |  |
|       | 3        | ✓       |  |  |  |
|       | 4        | ✓       |  |  |  |
|       | 5        | ✓       |  |  |  |
|       | 6        | ✓       |  |  |  |
|       | 7        | ✓       |  |  |  |
|       | 8        | ✓       |  |  |  |
|       | 9        | ✓       |  |  |  |
|       | 10       | ✓       |  |  |  |
|       | 11       | ✓       |  |  |  |
|       | 12       | ✓       |  |  |  |
|       | 13       | ✓       |  |  |  |
|       | 14       | —       |  |  |  |
|       | 15       | ✓       |  |  |  |
|       | 16       | ✓       |  |  |  |
|       | 17       | ✓       |  |  |  |
|       | 18       | ✓       |  |  |  |
|       | 19       | ✓       |  |  |  |
|       | 20       | ✓       |  |  |  |
|       | 21       | ✓       |  |  |  |
|       | 22       | ✓       |  |  |  |
|       | 23       | ✓       |  |  |  |
|       | 24       | ✓       |  |  |  |
|       | 25       | ✓       |  |  |  |
|       | 26       | ✓       |  |  |  |
|       | 27       | ✓       |  |  |  |
|       | 28       | ✓       |  |  |  |
|       | 29       | ✓       |  |  |  |
|       | 30       | ✓       |  |  |  |
|       | 31       | ✓       |  |  |  |
|       | 32       | ✓       |  |  |  |
|       | 33       | ✓       |  |  |  |
|       | 34       | ✓       |  |  |  |
|       | 35       | ✓       |  |  |  |
|       | 36       | ✓       |  |  |  |
|       | 37       | ✓       |  |  |  |
|       | 38       | ✓       |  |  |  |
|       | 39       | —       |  |  |  |
|       | 40       | ✓       |  |  |  |
|       | 41       | ✓       |  |  |  |
|       | 42       | ✓       |  |  |  |
|       | 43       | ✓       |  |  |  |
|       | 44       | ✓       |  |  |  |
|       | 45       | ✓       |  |  |  |
|       | 46       | ✓       |  |  |  |
|       | 47       | ✓       |  |  |  |
|       | 48       | ✓       |  |  |  |
|       | 49       | ✓       |  |  |  |
|       | 50       | ✓       |  |  |  |

| Claim |          | Date    |  |  |  |
|-------|----------|---------|--|--|--|
| Final | Original | 5/29/06 |  |  |  |
|       | 51       | ✓       |  |  |  |
|       | 52       | ✓       |  |  |  |
|       | 53       | ✓       |  |  |  |
|       | 54       | ✓       |  |  |  |
|       | 55       | ✓       |  |  |  |
|       | 56       | ✓       |  |  |  |
|       | 57       | ✓       |  |  |  |
|       | 58       | ✓       |  |  |  |
|       | 59       | ✓       |  |  |  |
|       | 60       | ✓       |  |  |  |
|       | 61       | ✓       |  |  |  |
|       | 62       | ✓       |  |  |  |
|       | 63       | ✓       |  |  |  |
|       | 64       | ✓       |  |  |  |
|       | 65       | ✓       |  |  |  |
|       | 66       | ✓       |  |  |  |
|       | 67       | ✓       |  |  |  |
|       | 68       | ✓       |  |  |  |
|       | 69       | ✓       |  |  |  |
|       | 70       | ✓       |  |  |  |
|       | 71       | ✓       |  |  |  |
|       | 72       | ✓       |  |  |  |
|       | 73       | ✓       |  |  |  |
|       | 74       | ✓       |  |  |  |
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|       | 76       | ✓       |  |  |  |
|       | 77       | ✓       |  |  |  |
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|       | 79       | ✓       |  |  |  |
|       | 80       | ✓       |  |  |  |
|       | 81       | ✓       |  |  |  |
|       | 82       | ✓       |  |  |  |
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| Claim |          | Date |  |  |  |
|-------|----------|------|--|--|--|
| Final | Original |      |  |  |  |
|       | 101      |      |  |  |  |
|       | 102      |      |  |  |  |
|       | 103      |      |  |  |  |
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|       | 149      |      |  |  |  |
|       | 150      |      |  |  |  |

**Search Notes**



**Application/Control No.**

10/316,961

**Applicant(s)/Patent under Reexamination**

MARLOWE, IRA

**Examiner**

Jason R. Kurr

**Art Unit**

2615

**SEARCHED**

| Class | Subclass | Date      | Examiner |
|-------|----------|-----------|----------|
| 381   | 86       | 5/24/2006 | JK       |
|       |          |           |          |
|       |          |           |          |
|       |          |           |          |
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**SEARCH NOTES  
(INCLUDING SEARCH STRATEGY)**

|   | DATE      | EXMR |
|---|-----------|------|
| Searched, car stereo's and interfacing with auxiliary audio devices | 5/24/2006 | JK   |
| Searched (digital audio broadcasting) DAB                           | 5/29/2006 | JK   |
|   |           |      |
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**INTERFERENCE SEARCHED**

| Class | Subclass | Date | Examiner |
|-------|----------|------|----------|
|       |          |      |          |
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## EAST Search History

| Ref # | Hits  | Search Query  | DBs                | Default Operator | Plurals | Time Stamp       |
|-------|-------|---|--------------------|------------------|---------|------------------|
| S1    | 632   | 381/86.ccls.  | US-PGPUB;<br>USPAT | OR               | OFF     | 2006/05/24 12:57 |
| S2    | 134   | S1 and (interface dock\$3)  | US-PGPUB;<br>USPAT | OR               | OFF     | 2006/05/24 12:57 |
| S3    | 28    | S2 and mp3  | US-PGPUB;<br>USPAT | OR               | OFF     | 2006/05/24 13:18 |
| S4    | 1     | "6791907".pn.   | US-PGPUB;<br>USPAT | OR               | OFF     | 2006/05/24 13:28 |
| S5    | 14    | ("3940743" "0034536" "4047162" "4068104" "4091455" "4234919" "4562533" "4817130" "4943978" "5410675" "6005488" "6278697" "6389332" "RE34536").PN. | US-PGPUB;<br>USPAT | OR               | OFF     | 2006/05/24 13:46 |
| S6    | 3     | S1 and (stereo with (interfac\$3 dock\$3) with source)  | US-PGPUB;<br>USPAT | OR               | OFF     | 2006/05/24 15:41 |
| S7    | 31    | (docking near station) with hinge   | US-PGPUB;<br>USPAT | OR               | OFF     | 2006/05/24 15:46 |
| S8    | 170   | (cassette near player).ti.  | US-PGPUB;<br>USPAT | OR               | OFF     | 2006/05/24 15:50 |
| S9    | 4     | S8 and hinge  | US-PGPUB;<br>USPAT | OR               | OFF     | 2006/05/24 15:51 |
| S10   | 124   | 381/334.ccls.   | US-PGPUB;<br>USPAT | OR               | OFF     | 2006/05/24 15:52 |
| S11   | 386   | docking with usb  | US-PGPUB;<br>USPAT | OR               | OFF     | 2006/05/24 16:03 |
| S12   | 86    | S11 and mp3   | US-PGPUB;<br>USPAT | OR               | OFF     | 2006/05/24 16:07 |
| S13   | 4834  | docking near station  | US-PGPUB;<br>USPAT | OR               | OFF     | 2006/05/24 16:08 |
| S14   | 501   | S13 and radio and usb   | US-PGPUB;<br>USPAT | OR               | OFF     | 2006/05/24 16:13 |
| S15   | 56    | S14 and (mp3 near player)   | US-PGPUB;<br>USPAT | OR               | OFF     | 2006/05/24 16:08 |
| S16   | 12735 | radio and usb   | US-PGPUB;<br>USPAT | OR               | OFF     | 2006/05/24 16:13 |
| S17   | 565   | S16 and (mp3 near player)   | US-PGPUB;<br>USPAT | OR               | OFF     | 2006/05/24 16:16 |
| S18   | 5     | S10 and usb   | US-PGPUB;<br>USPAT | OR               | OFF     | 2006/05/24 16:17 |
| S19   | 985   | portable near player  | US-PGPUB;<br>USPAT | OR               | OFF     | 2006/05/24 16:17 |
| S20   | 35    | S19 and (usb with dock\$3)  | US-PGPUB;<br>USPAT | OR               | OFF     | 2006/05/24 16:21 |



## EAST Search History

|     |       |  |                 |    |     |                  |
|-----|-------|--|-----------------|----|-----|------------------|
| S21 | 35    | S19 and ((usb universal) with dock\$3)                             | US-PGPUB; USPAT | OR | OFF | 2006/05/24 16:22 |
| S22 | 2765  | portable and dock\$3 and (usb or (universal near serial near bus)) | US-PGPUB; USPAT | OR | OFF | 2006/05/24 16:23 |
| S23 | 1460  | S22 and radio  | US-PGPUB; USPAT | OR | OFF | 2006/05/24 16:23 |
| S24 | 287   | S23 and mp3  | US-PGPUB; USPAT | OR | OFF | 2006/05/24 21:18 |
| S25 | 336   | automatic\$4 with switch\$3 with source with disconnect\$3         | US-PGPUB; USPAT | OR | ON  | 2006/05/24 21:26 |
| S26 | 6     | S25 and "381".clas.  | US-PGPUB; USPAT | OR | ON  | 2006/05/24 21:23 |
| S27 | 1076  | automatic\$4 with source with disconnect\$3                        | US-PGPUB; USPAT | OR | ON  | 2006/05/24 21:23 |
| S28 | 13    | S27.and "381".clas.  | US-PGPUB; USPAT | OR | ON  | 2006/05/24 21:23 |
| S29 | 7     | S28 not S26  | US-PGPUB; USPAT | OR | ON  | 2006/05/24 21:23 |
| S30 | 7     | S25 and stereo   | US-PGPUB; USPAT | OR | ON  | 2006/05/24 21:26 |
| S31 | 5     | S30 not S26  | US-PGPUB; USPAT | OR | ON  | 2006/05/24 21:28 |
| S32 | 226   | switch\$3 with audio with source with (stereo player)              | US-PGPUB; USPAT | OR | ON  | 2006/05/24 21:29 |
| S33 | 23142 | "381".clas.  | US-PGPUB; USPAT | OR | ON  | 2006/05/24 21:29 |
| S34 | 57    | S32 and S33  | US-PGPUB; USPAT | OR | ON  | 2006/05/24 21:38 |
| S35 | 147   | scan\$4 with source with disconnect\$3                             | US-PGPUB; USPAT | OR | ON  | 2006/05/24 21:40 |
| S36 | 0     | S35 and S33  | US-PGPUB; USPAT | OR | ON  | 2006/05/24 21:39 |
| S37 | 0     | S35 and S33  | US-PGPUB; USPAT | OR | ON  | 2006/05/24 21:39 |
| S38 | 0     | S35 and stereo   | US-PGPUB; USPAT | OR | ON  | 2006/05/24 21:40 |
| S39 | 12    | S35 and audio  | US-PGPUB; USPAT | OR | ON  | 2006/05/24 21:40 |
| S40 | 799   | (rout\$3 with source) and (source with disconnect\$3)              | US-PGPUB; USPAT | OR | ON  | 2006/05/24 21:41 |
| S41 | 6     | S40 and S33  | US-PGPUB; USPAT | OR | ON  | 2006/05/24 21:53 |
| S42 | 2984  | (detect\$3 adj3 source) with (connect\$5 disconnect\$5)            | US-PGPUB; USPAT | OR | ON  | 2006/05/24 21:55 |

## EAST Search History

|     |       |  |                    |    |     |                  |
|-----|-------|--|--------------------|----|-----|------------------|
| S43 | 25    | S42 and S33  | US-PGPUB;<br>USPAT | OR | ON  | 2006/05/24 22:20 |
| S44 | 18    | (cd with eject\$3) and S33                           | US-PGPUB;<br>USPAT | OR | ON  | 2006/05/24 22:21 |
| S45 | 1437  | display with (channel near number)                   | US-PGPUB;<br>USPAT | OR | OFF | 2006/05/25 11:22 |
| S46 | 23161 | "381".clas.  | US-PGPUB;<br>USPAT | OR | ON  | 2006/05/25 11:22 |
| S47 | 31    | S45 and S46  | US-PGPUB;<br>USPAT | OR | OFF | 2006/05/25 11:28 |
| S48 | 296   | display with satellite with station                  | US-PGPUB;<br>USPAT | OR | OFF | 2006/05/25 11:34 |
| S49 | 2     | S48 and S46  | US-PGPUB;<br>USPAT | OR | OFF | 2006/05/25 11:29 |
| S50 | 87    | display with (satellite near radio)                  | US-PGPUB;<br>USPAT | OR | OFF | 2006/05/25 15:41 |
| S51 | 965   | (cd disc) near changer                               | US-PGPUB;<br>USPAT | OR | OFF | 2006/05/25 15:42 |
| S52 | 634   | 381/86.ccls.   | US-PGPUB;<br>USPAT | OR | OFF | 2006/05/25 15:43 |
| S53 | 22    | S51 and S52  | US-PGPUB;<br>USPAT | OR | OFF | 2006/05/25 19:51 |
| S54 | 1     | "7006642".pn.  | US-PGPUB;<br>USPAT | OR | OFF | 2006/05/25 19:52 |
| S55 | 761   | digital with audio with broadcast<br>with receiver   | US-PGPUB;<br>USPAT | OR | OFF | 2006/05/29 19:24 |
| S56 | 134   | S55 and vehicle                                      | US-PGPUB;<br>USPAT | OR | OFF | 2006/05/29 20:36 |
| S57 | 301   | vehicle with stereo and (interfac\$3<br>with system) | US-PGPUB;<br>USPAT | OR | OFF | 2006/05/29 20:37 |



**MICHAEL R FRISCIA  
MCCARTER & ENGLISH  
FOUR GATEWAY CENTER  
100 MULBERRY STREET  
NEWARK, NJ 07102**

**COPY MAILED**

**APR 27 2006**

**OFFICE OF PETITIONS**

|                            |   |                       |
|----------------------------|---|-----------------------|
| In re Application of       | : |                       |
| Ira Marlowe                | : |                       |
| Application No. 10/316,961 | : | DECISION ON PETITION  |
| Filed: December 11, 2002   | : | TO MAKE SPECIAL UNDER |
| Attorney Docket No. 9809/1 | : | 37 CFR 1.102(d)       |
|                            | : |                       |

This is a decision on the renewed petition under 37 CFR § 1.102(d), filed March 17, 2006, to make the above-identified application special based on actual infringement as set forth in M.P.E.P. § 708.02, Section II.

The petition is **GRANTED**.

A grantable petition to make an application special under 37 CFR § 1.102(d) and MPEP § 708.02, Section II: Infringement, must be accompanied by the required fee pursuant to 37 CFR 1.17(h) and a statement by the applicant, assignee, or attorney/agent registered to practice before the Office alleging:

- (A) That there is an infringing device or product actually on the market or method in use;
- (B) That a rigid comparison of the alleged infringing device, product, or method with the claims of the application has been made, and that, in his or her opinion, some of the claims are unquestionably infringed; and
- (c) That he or she has made or caused to be made a careful and thorough search of the prior art or has a good knowledge of the pertinent prior art.

Applicant must provide one copy of each of the references deemed most closely related to the subject matter encompassed by the claims if said references are not already of record.

The petition complies with all the above stated requirements. Accordingly, the above-identified application has been accorded "special" status.

Telephone inquiries concerning this decision should be directed to Wan Laymon at 571-272-3220.

All other inquiries concerning either the examination or status of the application should be directed to the Technology Center.

This matter is being referred to Technology Center AU 2615 for action on the merits commensurate with decision.

A handwritten signature in black ink, appearing to read "Amelia Au for". The signature is fluid and cursive.

Amelia Au  
Petitions Examiner  
Office of Petitions



IFW 2644

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Customer No. 27614

Mail Stop Petition  
Attn: Petitions Examiner Wan Laymon  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Re: File No.:99879-00005  
Applicant: Ira Marlowe  
Serial No.: 10/316,961  
Filing Date: 12/11/2002  
Title: Audio Device Integration System

Sir:

Enclosed for filing in the United States Patent and Trademark Office is the following:

- 1. Renewed Petition to Make Special
- 2. Supplemental Declaration of Ira Marlowe
- 4. Transmittal Sheet
- 5. Postcard Receipt

CONDITIONAL PETITION

If any extension of time is required for the submission of the above-identified items, Applicant requests that this be considered a petition therefor. Please charge any additional charges or any other charges relating to this matter, or credit any overpayment, to the Deposit Account of the writer, **Account No. 503571**. A duplicate copy of this letter is enclosed.

3/19/2006  
Date

Respectfully submitted,

Mark E. Nikolsky  
Registration No. 48,319  
McCarter & English, LLP  
Four Gateway Center  
100 Mulberry Street  
Newark, NJ 07102  
Tel: (973) 639-6987  
Fax: (973) 297-6624

**CERTIFICATE OF MAILING BY FIRST CLASS MAIL**

I hereby certify that this correspondence is being deposited with the United States Postal Service, First Class Mail, postage prepaid, to Mail Stop Petition, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on

3/14/2006

By:   
Mark E. Nikolsky

ME1\5410094.1



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Ira Marlowe  
Serial No.: 10/316,961  
Filing Date: 12/11/2002  
Title: Audio Device Integration System

Group Art Unit: 2644

Examiner: Graham, A.

Mail Stop Petition  
Attn: Petitions Examiner Wan Laymon  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**RENEWED PETITION TO MAKE SPECIAL**

Pursuant to a telephone call between the undersigned and Petitions Examiner Wan Laymon, Applicant respectfully submits the within Renewed Petition to Make Special under MPEP § 708.02 and 37 C.F.R. § 1.102.

On January 12, 2006, Applicant filed a Petition to Make Special on the basis of infringement. The Petition was dismissed in a Decision dated February 23, 2006. Specifically, the Decision stated that the Petition lacked a statement by the applicant, assignee, or attorney/agent registered to practice before the Office that "he or she has made or caused to be made a careful and thorough search of the prior art or has a good knowledge of the pertinent prior art." The Decision further states that:

ME1\5535811.1

A review of the official file indicates that IDS submissions were filed on March 8, 2004, March 22, 2004 and September 12, 2005. However, the petition does not indicate whether the IDS submissions already filed are deemed most closely related to the subject matter. [sic]

Applicant respectfully submits that the dismissal was in error. First, neither 37 C.F.R. § 1.102(d) nor MPEP § 708.02 require that the statement quoted above regarding Applicant's previous IDS submissions be made. Second, Applicant complied with all of the requirements of MPEP § 708.02. As acknowledged in the Decision, Applicant provided the statements required by MPEP § 708.02(II)(A)-(B), i.e., that an infringing product is actually on the market, that a rigid comparison of the alleged product with the claims of the application has been made, and that in the opinion of the Applicant, some of the claims are unquestionably infringed. However, the Decision incorrectly states that Applicant failed to provide a statement in compliance with MPEP § 708.02(II)(C). MPEP § 708.02(II)(C) requires a statement that a careful or thorough search of the prior has been made or caused to be made, **or that the Applicant has a good knowledge of the prior art.** The Declaration of Applicant Ira Marlow, which accompanied the Petition, specifically stated the following in paragraph 10: "Due to my experience in the automotive electronics field, **I have a good knowledge of the pertinent prior art.**" (emphasis supplied). Therefore, the requirements of MPEP § 708.02(II)(A)-(C) were met.

Further, MPEP § 708.02(II) only requires that copies of each of the references deemed most closely related to the subject matter encompassed by the claims be submitted **if said references are not already of record.** Applicant complied with this requirement, as copies of the references deemed most closely related to the subject matter encompassed by the claims were previously submitted with the IDS's dated March 8, 2004, March 22, 2004, and September 12,

2005, and such references are currently of record. Accordingly, it is respectfully submitted that the Petition was improperly dismissed.

Notwithstanding the above, Applicant herewith submits a Renewed Petition. The accompanying Supplemental Declaration of Ira Marlowe includes a statement (see paragraph 12) that the IDS submissions filed on March 8, 2004, March 22, 2004, and September 12, 2005 are what Applicant believes to be most closely related to the subject matter encompassed by the claims of the above-referenced application. It is respectfully submitted that the Renewed Petition be granted, and that the above-referenced matter be accorded special status.

No fees are believed to be due in connection with this submission, as Applicant previously submitted the petition fee required by 37 C.F.R. §§ 1.102(d) and 1.17(h). However, should any fees be required in connection with this petition, please charge Deposit Account No. 503571.

Date:

3/14/2006

Respectfully submitted,



Mark E. Nikolsky  
Registration No. 48,319  
McCarter & English, LLP  
Four Gateway Center  
100 Mulberry Street  
Newark, NJ 07102  
Tel.: (973) 639-6987  
Fax: (973) 297-6624

ME\5535811.1



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Ira Marlowe  
Serial No.: 10/316,961  
Filing Date: 12/11/2002  
Title: Audio Device Integration System

Group Art Unit: 2644

Examiner: Graham, A.



**SUPPLEMENTAL DECLARATION OF IRA MARLOWE**

I, Ira Marlowe, hereby declare as follows:

1. I am the President of Blitzsafe of America, Inc. ("Blitzsafe") and the inventor of the subject matter of U.S. Patent Application Serial No. 10/316,961, filed December 11, 2002 and entitled "Audio Device Integration System."
2. The above-identified application was initially assigned to Blitzsafe, and has subsequently been assigned back to me. As such, I am the sole owner of the above-identified application.
3. I submit this declaration in support of a Renewed Petition to Make Special on the basis of actual infringement.
4. Since the filing date of the above-identified patent application, a number of entities have manufactured and/or sold audio device integration products having features recited in some of the claims of the above-identified patent application.

MEI\5350839.1

5. Attached hereto at Exhibit A is a printout of the website for an entity named VAIS Technology ([www.vaistech.com](http://www.vaistech.com)), showing a SoundLinQ Model SLX Auxiliary Input Adapter with Satellite Radio Interface currently sold by VAIS Technology.

6. A rigid comparison of the SoundLinQ Model SLX integration device shown in Exhibit A to the claims of the above-identified application have been made. In my opinion, some of the claims are unquestionably infringed.

7. Attached hereto at Exhibit B is a copy of an Owner's Manual for an Ipod to Volkswagen integration device (Model No. PA11-VW), which is currently sold by an entity named USA-SPEC ([www.usa-spec.com](http://www.usa-spec.com)) and which I recently purchased.

8. A rigid comparison of the USA-SPEC PA11-VW integration device to the claims of the above-identified application has been made. In my opinion, some of the claims are unquestionably infringed.

9. Numerous other manufactures are currently selling audio device integration products with features identical to the features recited in some of the claims of the above-identified application.

10. Due to my experience in the automotive electronics field, I have a good knowledge of the pertinent prior art.

MAR. 13. 2006 7:29PM (973) 624 7070

NO. 6886 P. 2

11. The Information Disclosure Statement (IDS) submissions filed on March 8, 2004, March 22, 2004, and September 12, 2005 are what I believe to be most closely related to the subject matter of the above-identified application.

12. In view of the foregoing, I respectfully request that a Petition to Make Special be granted so as to advance prosecution of the above-identified application.

I hereby certify that all statements made herein of my own knowledge are true, all statements made on information and belief are believed to be true, and further certify that these statements were made with the knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under 18 U.S.C. § 1001, and may jeopardize the validity of the application or any patent issuing thereon.

Date: March 13, 2006



Ira Marlowe



MICHAEL R FRISCIA  
MCCARTER & ENGLISH  
FOUR GATEWAY CENTER  
100 MULBERRY STREET  
NEWARK, NJ 07102

**COPY MAILED**

**FEB 23 2006**

**OFFICE OF PETITIONS**

|                            |   |                       |
|----------------------------|---|-----------------------|
| In re Application of       | : |                       |
| Ira Marlowe                | : |                       |
| Application No. 10/316,961 | : | DECISION ON PETITION  |
| Filed: December 11, 2002   | : | TO MAKE SPECIAL UNDER |
| Attorney Docket No. 9809/1 | : | 37 CFR 1.102(d)       |

This is a decision on the petition under 37 CFR §1.102(d), filed January 17, 2006, to make the above-identified application special based on actual infringement as set forth in M.P.E.P. § 708.02, Section II.

The petition is **DISMISSED**.

A grantable petition to make an application special under 37 CFR §1.102(d) and MPEP §708.02, Section II: Infringement, must be accompanied by the required fee pursuant to 37 CFR 1.17(h) and a statement by the applicant, assignee, or attorney/agent registered to practice before the office alleging:

- (A) That there is an infringing device or product actually on the market or method in use;
- (B) That a rigid comparison of the alleged infringing device, product, or method with the claims of the application has been made, and that, in his or her opinion, some of the claims are unquestionably infringed; and
- (C) That he or she has made or caused to be made a careful and thorough search of the prior art or has a good knowledge of the pertinent prior art.

Applicant must provide one copy of each of the references deemed most closely related to the subject matter encompassed by the claims if said references are not already of record.

The instant petition lacks item (C) above. Petitioner states he “has a good knowledge of the pertinent prior art.” A review of the official file indicates that IDS submissions were filed on March 8, 2004, March 22, 2004 and September 12, 2005. However, the petition does not indicate whether the IDS

submissions already ~~been~~ filed <sup>are</sup> deemed most closely related to the subject matter.

*ep*

Further correspondence with respect to this matter should be addressed as follows:

By Mail:                    Mail Stop PETITION  
                                  Commissioner for Patents  
                                  P. O. Box 1450  
                                  Alexandria, VA 22313-1450

By hand:                    U. S. Patent and Trademark Office  
                                  Customer Service Window, Mail Stop Petitions  
                                  Randolph Building  
                                  401 Dulany Street  
                                  Alexandria, VA 22314

By FAX:                    (571) 273-8300

Telephone inquiries concerning this decision should be directed to Wan Laymon at 571-272-3220.

All other inquiries concerning either the examination or status of the application should be directed to the Technology Center.

This matter is being referred to the Technology Center Art Unit 2644 for action in its regular turn.



Denise Pothier  
Petitions Examiner  
Office of Petitions



*J.P. Pat*

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Customer No. 27614

Mail Stop Petition  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Re: File No.: 99879-00005  
Applicant: Ira Marlowe  
Serial No.: 10/316,961  
Filing Date: 12/11/2002  
Title: Audio Device Integration System

**Best Available Copy**

Sir:

Enclosed for filing in the United States Patent and Trademark Office is the following:

1. Petition to Make Special
2. Declaration of Ira Marlowe
3. Check No. 319354 for \$130.00
4. Transmittal Sheet
5. Postcard Receipt

**CONDITIONAL PETITION**

If any extension of time is required for the submission of the above-identified items, Applicant requests that this be considered a petition therefor. Please charge any additional charges or any other charges relating to this matter, or credit any overpayment, to the Deposit Account of the writer, **Account No. 503571**. A duplicate copy of this letter is enclosed.

Respectfully submitted,

Mark E. Nikolsky  
Registration No. 48,319  
McCarter & English, LLP  
Four Gateway Center  
100 Mulberry Street  
Newark, NJ 07102  
Tel: (973) 639-6987  
Fax: (973) 297-6624

1/12/2006  
Date

**CERTIFICATE OF MAILING BY FIRST CLASS MAIL**

I hereby certify that this correspondence is being deposited with the United States Postal Service, First Class Mail, postage prepaid, to Mail Stop Petition, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on

1-12-06

By:   
Josephine Lobello

ME1\1.5430744



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Ira Marlowe  
Serial No.: 10/316,961  
Filing Date: 12/11/2002  
Title: Audio Device Integration System

Group Art Unit: 2644

Examiner: Graham, A.

Mail Stop Petition  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**PETITION TO MAKE SPECIAL**

Pursuant to MPEP § 708.02 and 37 C.F.R. § 1.102, Applicant respectfully petitions the U.S. Patent and Trademark Office to grant special status to the above-identified patent application.

Applicant respectfully requests that the above-identified application be granted special status on the basis of infringement. As set forth in detail in the Declaration of Ira Marlowe submitted herewith, Applicant respectfully submits that the requirements for a Petition to Make Special on the basis of infringement have been met. Specifically, Applicant submits that: (a) there is an infringing device or product actually on the market or method in use; (b) a rigid comparison of the alleged infringing device, product, or method with the claims of the application has been made, and that, in Applicant's opinion, some of the claims are

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130.00 DP

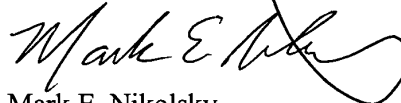
ME1\5351100.1

unquestionably infringed; and (c) Applicant has a good knowledge of the pertinent prior art. See MPEP § 708.02.

Submitted herewith is the petition fee required by 37 C.F.R. §§ 1.102(d) and 1.17(h). Should any additional fees be required in connection with this petition, please charge Deposit Account No. **503571**.

Date: 1/12/2006

Respectfully submitted,



Mark E. Nikolsky  
Registration No. 48,319  
McCarter & English, LLP  
Four Gateway Center  
100 Mulberry Street  
Newark, NJ 07102  
Tel.: (973) 639-6987  
Fax: (973) 297-6624

ME1\5351100.1





**DECLARATION OF IRA MARLOWE**

I, Ira Marlowe, hereby declare as follows:

1. I am the President of Blitzsafe of America, Inc. ("Blitzsafe") and the inventor of the subject matter of U.S. Patent Application Serial No. 10/316,961, filed December 11, 2002 and entitled "Audio Device Integration System."
2. The above-identified application was initially assigned to Blitzsafe, and has subsequently been assigned back to me. As such, I am the sole owner of the above-identified application.
3. I submit this declaration in support of a Petition to Make Special on the basis of actual infringement.
4. Since the filing date of the above-identified patent application, a number of entities have manufactured and/or sold audio device integration products having features recited in some of the claims of the above-identified patent application.
5. Attached hereto at Exhibit A is a printout of the website for an entity named VAIS Technology ([www.vaistech.com](http://www.vaistech.com)), showing a SoundLinQ Model SLX Auxiliary Input Adapter with Satellite Radio Interface currently sold by VAIS Technology.
6. A rigid comparison of the SoundLinQ Model SLX integration device shown in Exhibit A to the claims of the above-identified application have been made. In my opinion, some of the claims are unquestionably infringed.

MEI\5350839.1

7. Attached hereto at Exhibit B is a copy of an Owner's Manual for an Ipod to Volkswagen integration device (Model No. PA11-VW), which is currently sold by an entity named USA-SPEC ([www.usa-spec.com](http://www.usa-spec.com)) and which I recently purchased.

8. A rigid comparison of the USA-SPEC PA11-VW integration device to the claims of the above-identified application has been made. In my opinion, some of the claims are unquestionably infringed.

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10. Due to my experience in the automotive electronics field, I have a good knowledge of the pertinent prior art.

11. In view of the foregoing, I respectfully request that a Petition to Make Special be granted so as to advance prosecution of the above-identified application.

I hereby certify that all statements made herein of my own knowledge are true, all statements made on information and belief are believed to be true, and further certify that these statements were made with the knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under 18 U.S.C. § 1001, and may jeopardize the validity of the application or any patent issuing thereon.

Date:

1/11/2006



Ira Marlowe



**VAIS TECHNOLOGY**  
Video Audio Information Solutions  
for OEM integration

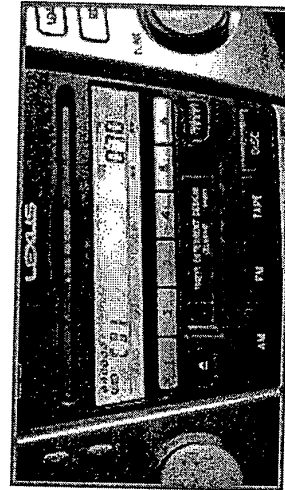
ABOUT US   PRODUCTS   CONTACTS   NEWS

Let us make integration simple...

The banner features a stylized car and a satellite dish with signal waves, set against a dark background with technical patterns.

## SoundLinQ (Model SLX) - Auxiliary Input Adapter with a Satellite Radio Interface

(fits most Toyota/Lexus vehicles 2001-2006)



Lexus RX330 XM radio (CH070)  
(CD changer emulation)

The SLX allows you to receive digital XM Satellite Radio directly through the Toyota/Lexus OEM head unit. It seamlessly integrates the Terk® XMDirect™ Universal Tuner box (XMD1000) into OEM audio system. You can now control your Satellite Radio Receiver through the vehicle's head unit and audio steering wheel controls and enjoy your Satellite Radio outstanding sound quality in your car without Cassette Adapters, FM Transmitters or FM Modulators.

This adapter also has an uncontrolled Auxiliary input. SLX provides direct Plug-and-Play connection to Toyota/Lexus OEM audio system and supports vehicles whether they are equipped with Navigation System or not.

Our unique technology allows you to keep all factory installed components (such as 6-disc CD changer, CD/DVD changer). When you connect SLX to the audio system, Toyota/Lexus recognizes it as an additional CD/MD changer.

SLX can be set up in CD changer emulation mode or MD changer emulation mode. We suggest to use MD changer mode ONLY if your Radio supports MiniDisc changer with MD-TEXT; otherwise MD CHANGER mode is useless. Channel and Song information can be displayed on the Radio LCD or Navigation screen ONLY if Radio Receiver supports MD changer with MD-Text or CD changer with CD-Text.

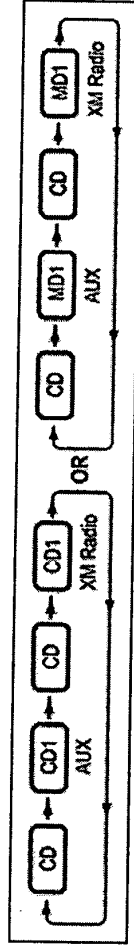


Audio AUX Input enables you to connect uncontrolled Audio aftermarket equipment such as MP3 player, MiniDisc player/changer and etc.

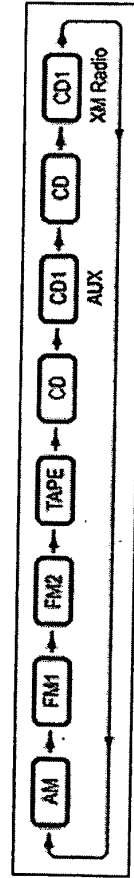
Audio AUX Input is universal auxiliary input and it provides NO control over added aftermarket equipment. Added equipment operates through the factory Audio system and can only be controlled by its own controls.

Audio input dedicated for XM radio receiver can only be used for XM Radio integration. Control of XM Radio Receiver is done through your head unit or the steering wheel controls. SLX supports both Terk® XMDirect™ and XMCommander™ universal satellite tuners.

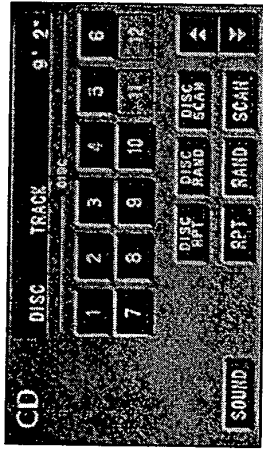
To switch between the SLX sources you need to use "DISC" or "CD" button on the head unit (Diagram below assumes factory CD changer is present).



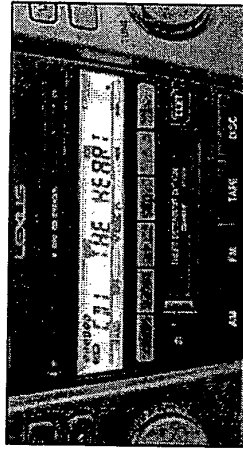
If your vehicle is equipped with a factory steering wheel control you will be able to switch between the SLX sources using "MODE" button on the steering wheel. (Diagram below assumes factory CD changer is present).



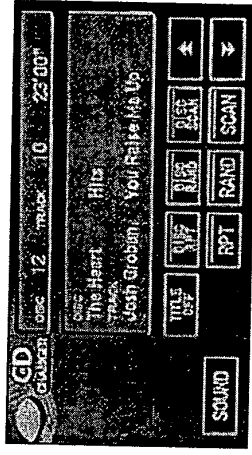
For your convenience SLX supports "Direct entry mode" to select satellite Radio channels. Channels selected simply by touching the numeric buttons on the Navigation screen. Option is available ONLY for vehicles with Radio integrated into Navigation System.



**XM Radio - CD emulation mode  
(for Radio integrated into Navigation System)**



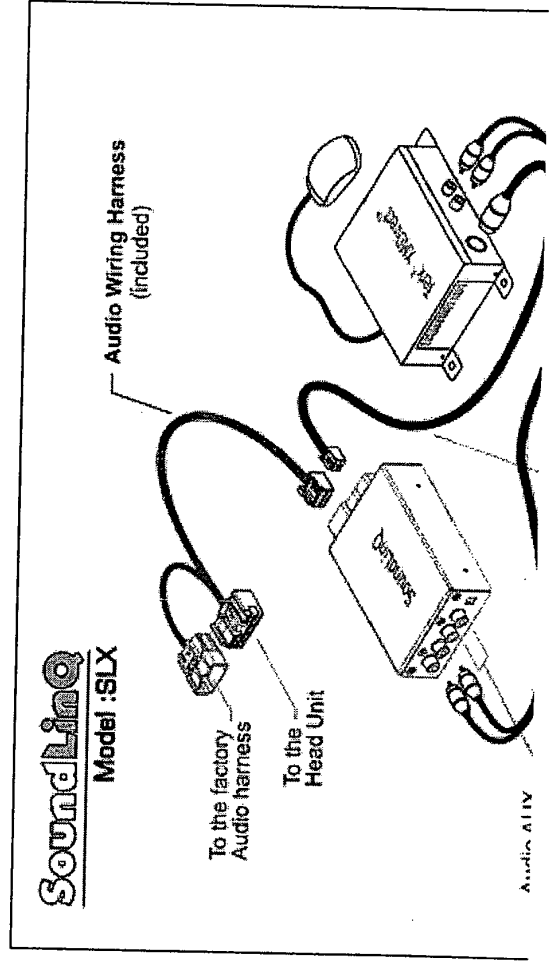
**XM Radio, Lexus RX330 - CD-Text support  
(for Radio not integrated into Navigation System)**



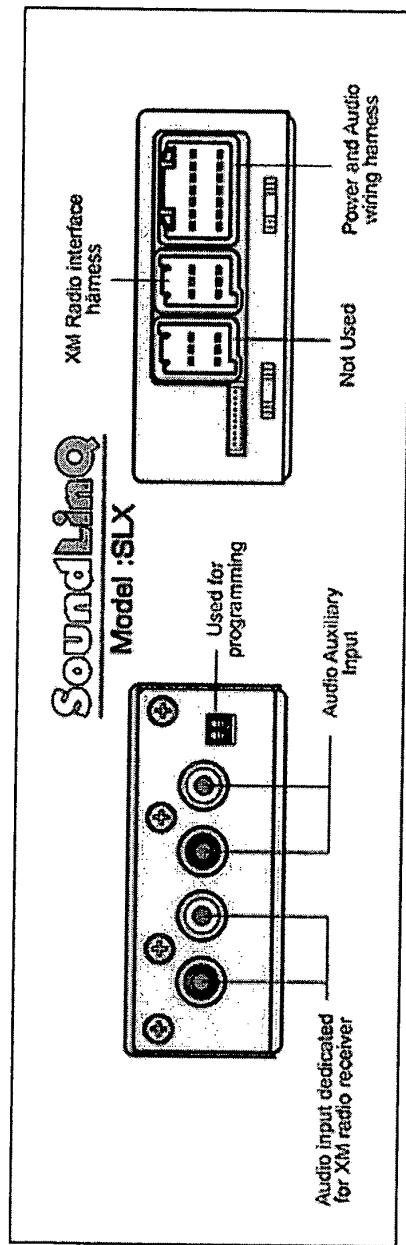
### XM Radio, Toyota Camry - CD-Text support (for Radio not integrated into Navigation System)

## SLX Connection diagram

(Actual connection depends on the Lexus car model and Audio System configuration)



## Connectors Description



### Key Features:

- Auxiliary Audio input (RCA)
- Audio input dedicated for Terk® XMDirect™ integration
- Audio Source selection and XMDirect™ controls via OEM Radio or Steering Wheel Controls \*
- 10+ and 10- mode for convenient satellite channel selection
- 10 PRESETs are available for your favorite channels
- Artist/Song info displayed on the Navigation screen or Radio display \*\*
- Channel number displayed on the Navigation screen or Radio display
- True Plug & Play solution
- Dimensions: 3-1/8"W x 1-5/16"H x 5-1/4"D (mounting bracket not included)
- Made in USA
- Warranty: 1 year



\* Some functional limitations could apply depending on the Lexus model  
\*\* Available ONLY for the Lexus models with Radio supports MD Changer with MD-Text or CD Changer with CD-Text

---

SoundLinQ SLX KIT

MSRP \$329.99 \*\*\*\*  
Sale Price \$299.99 \*\*\*\*

**Item includes:**

- SoundLinQ SLX unit
- Audio Harness
- XM Radio interface harness
- Operation Manual
- Installation Manual
- 1 year Limited Warranty

---

Prices are subject to change without notice

\*\*\*\* Price does not include Terk® XMDirect™ Universal Satellite Receiver.

For more information about our products please visit our [Frequently Asked Questions](#) page or contact Customer Service department

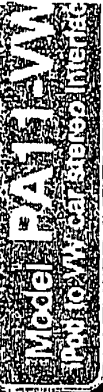
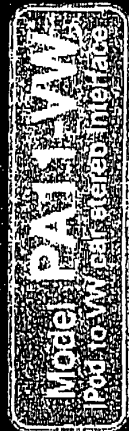
Product availability is based on whether the product was tested on the particular vehicle model and Audio/Navigation system configuration.

[Buy Now](#)

Due to limited supply and high demand average order takes approximately 3 weeks. We truly appreciate your patience.

[About us](#) | [Products](#) | [Contact information](#) | [Return Policy](#)

Copyright © 2003-2005 VAIS Technology



## PLAY, CONTROL & CHARGE

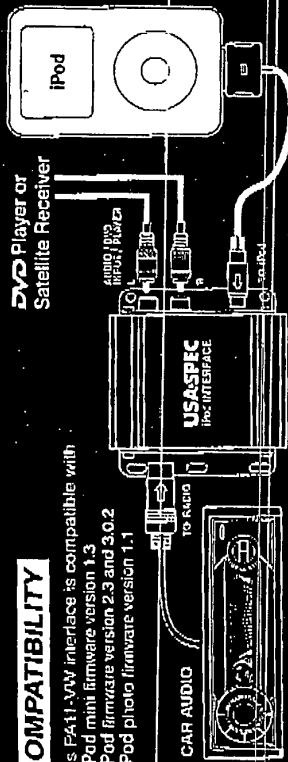
### Your iPod through VW Car Stereo System!

#### KEY FEATURES

- This interface connects an iPod or iPod mini directly to your VW audio system with following benefits:
  - Connect directly iPod's audio output to VW vehicle audio system for optimal sound quality playback.
  - In **Playlist Mode**: Select songs and Playlists on iPod with CD changer button on radio.
  - In **Direct Mode**: Search and select songs directly on iPod.
  - Maintain current Playlist when switching from portable to in-car use.
  - Charge the iPod battery while playing, charging automatically ends at one hour after iPod is paused to prevent car battery drain.
  - Plus-DVD player, Satellite radio or other audio device can be used in conjunction with the iPod through Aux Audio Input jack.
  - Plug-n-Play: This complete package includes installation cables, mounting screws and user's manual.

#### COMPATIBILITY

- This PA11-VW interface is compatible with
- iPod mini firmware version 1.3
  - iPod firmware version 2.3 and 3.0.2
  - iPod photo firmware version 1.1



Display of artist and song title information, track search by artist, song title, album or genre are NOT supported. Only the Playlist and track numbers are displayed.

#### APPLICATIONS

PA11-VW is applicable to the following VW vehicles:

|        |       |          |       |
|--------|-------|----------|-------|
| Cabrio | 98-04 | Jetta    | 98-05 |
| Beetle | 98-05 | Passat   | 98-05 |
| Golf   | 98-05 | Euro Van | 01-04 |
| GTI    | 98-05 | Touareg  | 04-05 |

Note: Radios must have round **SCAN** button.

PA11-VW is not applicable to some 98-99 year models equipped with BOSE or Premier radio that have 13-pin din plug.

XM is a trade mark of XM Satellite Radio Inc.  
VW is a registered trade mark of Volkswagen Group.



ITL Enterprises, Inc. 167 Mason Way, Unit A2, City of Industry, CA91746

www.usaspec.com Tel: (626) 336-3535

Made in Korea



**USASPEC**  
iPod INTERFACE

# OWNER'S MANUAL

**TECH. SUPPORT**  
(626) 890-6410  
9 AM ~ 4 PM PST  
Monday ~ Friday

Thank you for purchasing **USASPEC** product. This manual describes the functions and operation of PA11-VW iPod interface for VW cars. Please read this manual before installing the product to your vehicle.

### Section 11 ABOUT YOUR INTERFACE PA11-VW

This interface connects an iPod directly to your VW audio system. Its on-board software translates commands from your VW CD changer controls into commands that the iPod understands. This interface enables the iPod to take the place of a VW CD changer and provides the following benefits:

- Directs the iPod's audio output to VW vehicle audio system for optimal sound quality playback.
- Controls the iPod via vehicle's radio and steering wheel controls.
- Charges the iPod's internal battery, and charging stops automatically at one hour after iPod is paused. iPod will go to SLEEP mode after charging.

### Compatibility

This PA11-VW interface is compatible with iPod and iPod mini models featuring a dock connector. The functionality and features of the iPod interface described in this owner's manual are confirmed with firmware version 1.3 for iPod mini, firmware version 2.3 and 3.0.2 for iPod and firmware version 1.1 for iPod photo.

Future firmware updates for your iPod or iPod mini may affect the features and functions described in this owner's manual.

Display of artist and song title information, track search by artist, song title, album or genre are NOT supported. Only the Playlist number and track number are displayed on radio.

This interface is designed as an alternative replacement to the VW 6 disc CD changer unit in your VW vehicle. Therefore it is not possible to have the slave VW 6 disc CD changer and PA11-VW iPod interface simultaneously connected to your VW radio. The CD changer which is built-in the VW radio is not affected.

### Package Contents

PA11-VW contains one each of PA11-VW interface adaptor, CB-PVW and CB-PA14 cables.

### Applications

PA11-VW is applicable to the following VW vehicles:

|        |       |          |       |
|--------|-------|----------|-------|
| Cabrio | 98-04 | Jetta    | 98-05 |
| Beetle | 98-05 | Passat   | 98-05 |
| Golf   | 98-05 | Euro Van | 01-04 |
| GTI    | 98-05 | Touareg  | 04-05 |

Note: Radios must have round SCAN button.

PA11-VW is not applicable to some 98-99 year models equipped with BOSE or Premier radio that have 13-pin din plug.

### Section 2 PLAYLIST MODE, DIRECT MODE and AUX OPTION

PA11-VW provides two ways to control your iPod through car radio, namely **Playlist Mode** and **Direct Mode**.

**2-1 Direct Mode:** Search and select music on iPod directly just as you would in portable use. The sound of music will play back through your car stereo. Use the track up/down, fast forward and reverse buttons on your radio to control music playback. All control functions on iPod are available to use too. Please see section 4 of this manual for additional information

**2-2 Playlist Mode:** Operate and control the iPod like it is a CD changer. This mode allows you to access up to five Playlists on the iPod. This is also referenced as External Control Mode of the iPod. The detail instruction of Playlist creation and playback controls are in section 5 of this manual.

DIP switch #2 is for mode selection use. "ON" position is for **Playlist Mode** and "OFF" position is for **Direct Mode**. It is preset to **Playlist Mode** at factory.

Note: Disconnect iPod from PA11-VW before switching DIP switch #2 for mode alteration.

### 2-3 Additional AUX INPUT Option Selection

PA11-VW interface adaptor is capable of connecting two audio sources to your VW radio including the iPod. The additional audio source connects to the RCA input jack labeled as **AUX INPUT**. If you choose to use **AUX INPUT**, the DIP switch #1 at the side of adaptor box must be set to "OFF" position (factory presets it at "ON" position).

The audio source at **AUX INPUT** can be accessed at CD 6 Track 1 after selecting CD changer source on the radio. CD 1 to CD 4 are for accessing Playlists and CD 5 is for accessing all songs on iPod.

### Operation of AUX

If the "AUX INPUT" option is selected, radio will display "CD 6 Track 1" when AUX button is pressed. "CD 6 Track 1" gives access to the audio source connected to AUX INPUT port.

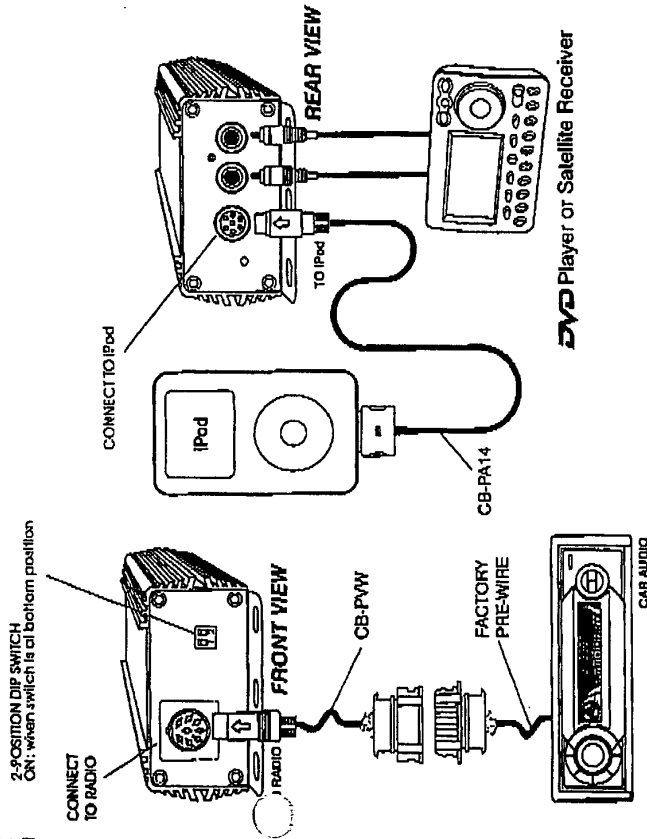
Adjust **VOLUME**, **BASS**, **TREBLE** and etc. as you would normally do for the other program sources on the radio.

### Section 3. INSTALLATION

- Step 1- Remove radio from the dash.
- Step 2- Plug the round din plug on CB-PVW to PA11-VW interface adaptor where it is labeled "RADIO".
- Step 3- Plug the black rectangular connector on CB-PVW cable to the factory prewired connector for CD changer. (If a CD changer exists, disconnect it first.)
- Step 4-a- Connect the audio output of your auxiliary devices to AUX input jack on PA11-VW adaptor box if the additional AUX option is selected by setting the DIP switch#1 to "OFF" position.
- Step 4-b- Set the DIP switch #2 to "OFF" position only if the **Direct Mode** is preferred.
- Step 5- Plug CB-PA14 cable to PA11-VW adaptor box where it is labeled "iPod".
- Step 6- Reinstall radio to the dash.

### WARNING!!

Use only the iPod connection cable which comes with PA11-VW interface adaptor. iPod connection cables from other sources may look similar, but they may damage your iPod.



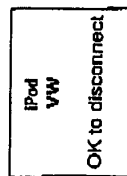
Blitzsarte

**Section 4. CONNECTING & PLAYING of iPod in DIRECT MODE**

When the iPod is connected to the adaptor, iPod's screen will go blank for few seconds before the normal screen returns. Set source to CD changer on your radio, the audio of iPod music will be played back at DISC 5 and Track 1. Adjust VOLUME, BASS, TREBLE and etc. as you would normally do for the other program sources on the radio.

**Section 5. CONNECTING & PLAYING of iPod in PLAYLIST MODE**

**5-1 Connecting iPod to the interface**  
Turn your VW radio ON before connecting your iPod. After connection, the iPod will take a few moments to change to external control mode. On the screen of iPod will then show



and you are now able to select iPod mode.

**5-2 Select iPod mode on VW radio**

Press the CD button on radio repeatedly until "CD 6-x" appears on the radio display (x is the track number of "Now Playing" song on iPod). This display confirms that iPod mode has been completely synchronized and activated. Synchronization timing varies according to the number of Playlists on your iPod.

If iPod was playing previously before radio or ACC power was OFF, and the iPod was not disconnected, playback resumes from where it was stopped.

**5-3 Disconnecting iPod from the interface**

If your iPod is disconnected during playback in iPod mode, the radio will automatically switch to AM/FM mode.

After disconnecting, iPod screen changes from the external control mode screen back to the normal menu. Press and hold the Play/Pause button on iPod may get the normal menu back faster.

**5-4 Playback of songs on iPod**

All audio tracks on your iPod will be played at disc 6. Track order is determined by the default order on your iPod. Selecting disc 1 to disc 5 on radio will allow playback of 5 Playlists on iPod if adapter's AUX option is not selected.

Every time when iPod is connected to the interface adapter, the playback starts from "Now Playing" song at disc 6 by default. If iPod was playing any of its Playlist right before the connection, the same Playlist will continue to play and repeated at disc 6 and iPod will switch to "All" as soon as the fast forward button (▶▶) is pressed.

**5-5 Selecting a Playlist**

Press DISC UP (▲) or DISC DOWN (▼) button to select a Playlist. The selected Playlist will begin playing and the Playlist number and track number will be displayed. In rare cases, this may take up to few seconds for the completion of synchronization.

After playing the last song in the current Playlist, playback will start again from the first track of this Playlist.

**Playlist naming**

- When iPod is connected to your radio via PA11-VW interface adapter, the adapter scans all available Playlists on iPod and look for designated "VW" Playlists which are created for direct access with the DISC controls on VW radio. The designated "VW" Playlists are related to DISC number in the following manner:

- DISC 1: "VW1..."
- DISC 2: "VW2..."
- DISC 3: "VW3..."
- DISC 4: "VW4..."
- DISC 5: "VW5..."
- DISC 6: ALL SONGS on iPod

The naming of designated "VW" Playlists in iTunes for PA11-VW interface must be exactly as shown. "VW" must be in capital letters and there can be no spaces between "VW" text and number.

However, you may add any text after the correct naming of a Playlist. (i.e. "VW1-Jazz", "VW3\_Favorites") are acceptable Playlist names for PA11-VW iPod interface.)

- If no designated "VW" Playlists are created, PA11-VW adapter automatically relates to the first five Playlists on iPod to DISC number 1 to 5 regardless Playlist naming.
- If less than five designated "VW" Playlists are created, PA11-VW adapter automatically fills up the rest of DISC numbers beginning with the first available Playlist on iPod. Example: if only three designated "VW1", "VW3" and "VW5" Playlists are created, the disc number on radio will be:

- DISC 1: "VW1..."
- DISC 2: (" available Playlist on iPod )
- DISC 3: "VW3..."
- DISC 4: (2" available Playlist on iPod )
- DISC 5: "VW5..."

The iPod interface does not recognize a Playlists that contains no audio tracks regardless of Playlist naming. The iPod interface also does not recognize the "On-The-Go" Playlist on your iPod.

### 5-6 Playback function controls

You can control playback with several functions. These functions are generally cancelled when you press select radio buttons; disconnect the iPod , or POWER OFF the radio or ACC.

### SCAN

Press the scan button, each track in the current Playlist play for 10 seconds. If SCAN is pressed at DISC 6, it will play all songs in iPod for 10 seconds each.

### Random (Shuffle)

Press the "RDM" random button, songs and Playlist will playback in random order. Some radio models use the "P scan" button to activate random mode.

### Repeat

Repeat of a song being played is not supported.

### Track Up/Down

Press the "NEXT" button to advance to the next track in the Playlist. Press the "PREV" button to go to the beginning of the track that is being played. Press the track down button twice to go to the previous track.

If the track up or track down buttons is pressed quickly in repetition, the track numbers displayed may change unevenly. You may also hear short bits of audio during repeated presses of track up and track down buttons.

If your VW radio currently displays a maximum of two digits for track number. Track number 100 will be displayed as 01, track 101 as 02, track 102 as 03...

### Fast Track Search (x10)

Press the "FWD" (fast forward) or "REV" (fast reverse buttons) will advance or retreat through the tracks in the Playlist in increments of 10 (i.e. 04, 14, 24...). When the end of the Playlists reached, the search will stop at track 1, and then continue by increments of 10 (i.e. 19, 29, 1, 11...).

Press and hold the fast forward or fast reverse buttons for more than 4 seconds; the search will jump to the last track or the first track of the Playlist.

If you are in scan mode, the mode will be cancelled.

### Fast Forward/Fast Reverse Play

This function applies **only** in random mode. Since engaging or disengaging the random mode does not stop playback of the current song, you can change into or out of random mode to do the fast track search (x10) function, or the fast forward/fast backward play function.

Press and hold the forward or backward button will cause only the current track to skip through at speed.

During fast forward, when the end of the current track is reached, the iPod will start playing the next random track at normal speed. During fast backward, when the start of the current track is reached, the track will start playing again at normal speed. To continue fast forward or fast reverse play, release the button and press it again.

### Changing source to AM/FM, CD, Cassette

When a source other than the iPod is selected on radio, the iPod will pause.

## Section 6 CAUTION

In general, iPod has not been designed to withstand temperature extremes in automobiles. Please consult your iPod Owner's Manual regarding acceptable operation and storage temperatures.

- Do not disassemble or alter the cable and interface box.
- Make the connections correctly.
- Do not cut away the wire sheath or use the power for other equipments.
- Do not install in locations which might hinder vehicle operation or create hazards for vehicle occupants.
- Having the wiring and installation done by professionals.
- Arrange wiring so it is not crimped or pinched.
- Do not use this product for purposes other than stated for the vehicle

Note: iPod, iPod mini, iPod photo and iTunes are registered trade marks of Apple Computer, Inc.

XM is a trade mark of XM Satellite Radio Inc.

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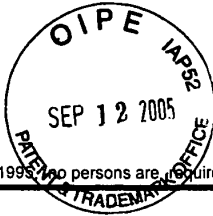
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| <b>REVOCATION OF POWER OF ATTORNEY WITH<br/>NEW POWER OF ATTORNEY<br/>AND<br/>CHANGE OF CORRESPONDENCE ADDRESS</b> | Application Number     | 10/316,961        |
|  | Filing Date            | 12/11/2002        |
|  | First Named Inventor   | Ira Marlowe       |
|  | Art Unit               | 2644              |
|  | Examiner Name          | Graham, Andrew R. |
|  | Attorney Docket Number | 99879-00005       |

**I hereby revoke all previous powers of attorney given in the above-identified application:**

A Power of Attorney is submitted herewith.

**OR**

I hereby appoint the practitioners associated with the Customer Number:

Please change the correspondence address for the above-identified application to:

The address associated with Customer Number:

**OR**

|   |   |       |                       |     |       |
|---|---|-------|-----------------------|-----|-------|
| <input checked="" type="checkbox"/> Firm or Individual Name | Michael R. Friscia  |       |                       |     |       |
| Address   | McCarter & English, LLP<br>100 Mulberry Street<br>Four Gateway Center |       |                       |     |       |
| City  | Newark  | State | NJ                    | ZIP | 07102 |
| Country   | USA   |       |                       |     |       |
| Telephone   | (973) 639-8493  | Email | mfriscia@mccarter.com |     |       |

I am the:

Applicant/Inventor.

Assignee of record of the entire interest. See 37 CFR 3.71  
*Statement under 37CFR 3.73(b) is enclosed. (Form PTO/SB/96)*

**SIGNATURE of Applicant or Assignee of Record**

|           |             |           |  |
|-----------|-------------|-----------|--|
| Signature |             |           |  |
| Name      | Ira Marlowe |           |  |
| Date      | 12/29/05    | Telephone |  |

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below\*.

\*Total of 1 forms are submitted.

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Customer No. 27614

Re: Our file: 99879-00005  
Applicant: Ira Marlowe  
Serial No.: 10/316,961  
Filing Date: 12/11/2002  
Title: Audio Device Integration System

Examiner: Graham, Andrew R.  
Art Unit: 2644

Sir:

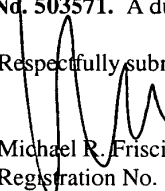
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4. Revocation of Power of Attorney With New Power of Attorney and Change of Correspondence Address
5. Transmittal Sheet
6. Postcard Receipt

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If any extension of time is required for the submission of the above-identified items, Applicant requests that this be considered a petition therefor. Please charge any additional charges or any other charges relating to this matter, or credit any overpayment, to the Deposit Account of the writer, **Account No. 503571**. A duplicate copy of this letter is enclosed.

Respectfully submitted,

  
Michael R. Friscia  
Registration No. 33,884  
McCarter & English, LLP  
Four Gateway Center  
100 Mulberry Street  
Newark, NJ 07102  
Tel: (973) 639-8493  
Fax: (973) 297-6627

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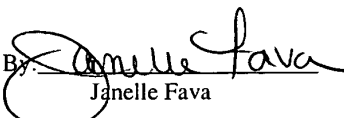
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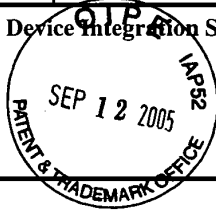
**TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT**  
(Under 37 CFR 1.97(b) or 1.97(c))

Docket No.  
99879-00005

In Re Application: **Ira Marlowe**

| Application No. | Filing Date | Examiner          | Customer No. | Group Art Unit | Confirmation No. |
|-----------------|-------------|-------------------|--------------|----------------|------------------|
| 10/316,961      | 12/11/2002  | Graham, Andrew R. | 27614        | 2644           | 4879             |

Title: **Audio Device Integration System**



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(Only complete if Applicant elects to pay the fee set forth in 37 CFR 1.17(p))

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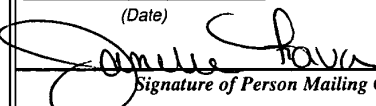
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Docket No.  
99879-00005

In Re Application Of: **Ira Marlowe**

| Application No. | Filing Date | Examiner          | Customer No. | Group Art Unit | Confirmation No. |
|-----------------|-------------|-------------------|--------------|----------------|------------------|
| 10/316,961      | 12/11/2002  | Graham, Andrew R. | 27614        | 2644           | 4879             |

Title: **Audio Device Integration System**



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**37 CFR 1.97(b)**

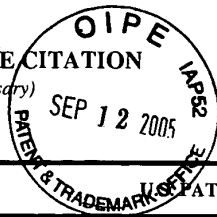
1.  The Information Disclosure Statement submitted herewith is being filed within three months of the filing of a national application other than a continued prosecution application under 37 CFR 1.53(d); within three months of the date of entry of the national stage as set forth in 37 CFR 1.491 in an international application; before the mailing of a first Office Action on the merits, or before the mailing of a first Office Action after the filing of a request for continued examination under 37 CFR 1.114.

**37 CFR 1.97(c)**

2.  The Information Disclosure Statement submitted herewith is being filed after the period specified in 37 CFR 1.97(b), provided that the Information Disclosure Statement is filed before the mailing date of a Final Action under 37 CFR 1.113, a Notice of Allowance under 37 CFR 1.311, or an Action that otherwise closes prosecution in the application, and is accompanied by one of:
- the statement specified in 37 CFR 1.97(e);
- OR**
- the fee set forth in 37 CFR 1.17(p).

P10A/REV05

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|  |   |
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| Docket Number (Optional)<br><b>99879-00005</b> | Application Number<br><b>10/316,961</b> |
| Applicant(s)<br><b>Ira Marlowe</b>             |   |
| Filing Date<br><b>12/11/2002</b>               | Group Art Unit<br><b>2644</b>           |

**U.S. PATENT DOCUMENTS**

| *EXAMINER INITIAL | REF | DOCUMENT NUMBER | DATE       | NAME              | CLASS | SUBCLASS | FILING DATE IF APPROPRIATE |
|-------------------|-----|-----------------|------------|-------------------|-------|----------|----------------------------|
|                   | 1   | 6,629,197       | 09/30/2003 | Bhogal, et al.    | 711   | 111      | 11/03/2000                 |
|                   | 2   | 6,396,164       | 05/28/2002 | Barnea, et al.    | 307   | 10.1     | 10/20/1999                 |
|                   | 3   | 6,330,337       | 12/11/2001 | Nicholson, et al. | 381   | 86       | 01/19/2000                 |
|                   | 4   | 6,157,725       | 12/05/2000 | Becker            | 381   | 86       | 12/10/1997                 |
|                   | 5   | 5,339,362       | 08/16/1994 | Harris            | 381   | 86       | 01/07/1992                 |

**U.S. PATENT APPLICATION PUBLICATIONS**

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|-------------------|-----|--------------------|------------|------------------|-------|----------|----------------------------|
|                   | 6   | US 2003/0086699 A1 | 05/08/2003 | Benyamin, et al. | 386   | 96       | 02/15/2002                 |
|                   | 7   | US 2003/0007649 A1 | 01/09/2003 | Riggs            | 381   | 86       | 06/14/2002                 |
|                   | 8   | US 2001/0044664 A1 | 11/22/2001 | Mueller, et al.  | 700   | 94       | 03/23/2001                 |
|                   |     |                    |            |                  |       |          |                            |

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**OTHER DOCUMENTS** (Including Author, Title, Date, Pertinent Pages, Etc.)

|  |    |   |
|--|----|---|
|  | 9  | "SoundGate, Ventura Announce Sophisticated OEM-Integration Interfaces," article from The 12 Volt News, December 2002 (1 page) |
|  | 10 | "XMDirect Smart Digital Adapter," product description (3 pages).  |

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|  | Applicant(s)<br><b>Ira Marlowe</b>             |   |
|  | Filing Date<br><b>12/11/2002</b>               | Group Art Unit<br><b>2644</b>           |

**U.S. PATENT DOCUMENTS**

| *EXAMINER INITIAL | REF | DOCUMENT NUMBER | DATE       | NAME            | CLASS | SUBCLASS | FILING DATE IF APPROPRIATE |
|-------------------|-----|-----------------|------------|-----------------|-------|----------|----------------------------|
|                   | 11  | 4,772,079       | 09/20/1988 | Douglas, et al. | 312   | 257      | 09/26/1986                 |
|                   |     |                 |            |                 |       |          |                            |
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|  |    |  |
|--|----|--|
|  | 12 | "Breaking Protocol A Look at BlitzSafe's New DMX Protocol Converter Technology," November 1998 printout from <a href="http://www.blitzsafe.com/blitz_news/news101998/body_news101998.html">http://www.blitzsafe.com/blitz_news/news101998/body_news101998.html</a> (2 pages) |
|  | 13 | "PIE Virtual Catalog," printout from <a href="http://web.archive.org/web/19981205005802/http://www.pie.net/sec12sb1.htm">http://web.archive.org/web/19981205005802/http://www.pie.net/sec12sb1.htm</a> (2 pages)   |

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|   |   | Applicant(s)<br><b>Ira Marlowe</b>             |   |
|   |   | Filing Date<br><b>12/11/2002</b>               | Group Art Unit<br><b>2644</b>           |
|   |   |  |   |
| *EXAMINER<br>INITIAL  | OTHER DOCUMENTS <i>(Including Author, Title, Date, Pertinent Pages, Etc.)</i>   |  |   |
| 14  | "The UniLink Project," printout from website (2 pages)  |  |   |
| 15  | "CD Changer Interfaces," printout from <a href="http://web.archive.org/web/19991012021952/soundgate.com/cd-inter.html">http://web.archive.org/web/19991012021952/soundgate.com/cd-inter.html</a> (1 page)   |  |   |
| 16  | "Digital Obsessions A Spotlight on Audio Gadgets," ZDNet Music: The PhatNoise Car Audio System, printout from <a href="http://web.archive.org/web/20000817164605/music.gamespot.com/features/phatnoise/">http://web.archive.org/web/20000817164605/music.gamespot.com/features/phatnoise/</a> (3 pages) |  |   |
| 17  | "Bypassing and Switching With the CD4053 CMOS Analog MUX," printout from website (4 pages)  |  |   |
| 18  | "Device Profile: Phatnoise PhatBox Car MP3 Player," November 1, 2000, printout from <a href="http://techupdate.zdnet.com/techupdate/stories/main/0,14179,2649276,00.html">http://techupdate.zdnet.com/techupdate/stories/main/0,14179,2649276,00.html</a> (4 pages)                                     |  |   |
| 19  | "The EZ Protoboard," printout from <a href="http://web.archive.org/web/20010613095105/http://www.ajusd.org/~edward/ezproto/">http://web.archive.org/web/20010613095105/http://www.ajusd.org/~edward/ezproto/</a> (2 pages).   |  |   |
| 20  | "TDIclub Forums: Reverse Engineering CD Changer Progress," April 3, 2001, printout from website (3 pages)   |  |   |
| 21  | "TDIclub Forums: Reverse Engineering CD Changer Progress Reports," April 5, 2001, printout from website (8 pages)   |  |   |
| 22  | "Multi Technology Equipment - Home of the Neo MP3 Player," printout from <a href="http://web.archive.org/web/20010413222617/ssiamerica.com/products/neo35/">http://web.archive.org/web/20010413222617/ssiamerica.com/products/neo35/</a> (1 page)   |  |   |
| 23  | "TDIclub Forums: Reverse Engineering CD Changer Protocol Update," April 18, 2001, printout from website (3 pages)   |  |   |
| 24  | "The Car CD Changer Interface Page," printout from website (10 pages)   |  |   |
| 25  | "SourceForge.net: Project Info - GNUlink," printout from <a href="http://sourceforge.net/projects/gnunilink/">http://sourceforge.net/projects/gnunilink/</a> (3 pages)  |  |   |
| EXAMINER  |   | DATE CONSIDERED                                |   |
| <p>*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p> |   |  |   |

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| <p align="center"><b>INFORMATION DISCLOSURE CITATION</b><br/><i>(Use several sheets if necessary)</i></p> |   | Docket Number (Optional)<br><b>99879-00005</b>   | Application Number<br><b>10/316,961</b> |
|   |   | Applicant(s)<br><b>Ira Marlowe</b>   |   |
|   |   | Filing Date<br><b>12/11/2002</b>   | Group Art Unit<br><b>2644</b>           |
|   |   |  |   |
| <b>*EXAMINER INITIAL</b>  | <b>OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)</b> |  |   |
|   | 26  | "EZ ProtoBoard News," printout from website (3 pages)  |   |
|   | 27  | "GNUlink - For All Your AUX-IN Needs...", printout from <a href="http://gnulink.sourceforge.net/">http://gnulink.sourceforge.net/</a> (4 pages)  |   |
|   | 28  | "VWCDPIC News," printout from <a href="http://web.archive.org/web/20020701101541/http://www.ajusd.org/~edward/vwcdpic/">http://web.archive.org/web/20020701101541/http://www.ajusd.org/~edward/vwcdpic/</a> (8 pages)  |   |
|   | 29  | "VWCDPIC News," printout from <a href="http://web.archive.org/web/20021009014959/http://www.ajusd.org/~edward/vwcdpic/">http://web.archive.org/web/20021009014959/http://www.ajusd.org/~edward/vwcdpic/</a> (10 pages) |   |
|   | 30  | "Neo Car Jukebox MP3 Player," printout from website (3 pages)  |   |
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| <b>EXAMINER</b>   |   | <b>DATE CONSIDERED</b>   |   |

**\*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.**



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| APPLICATION NUMBER | FILING OR 371 (c) DATE | FIRST NAMED APPLICANT | ATTY. DOCKET NO./TITLE |
|--------------------|------------------------|-----------------------|------------------------|
| 10/316,961         | 12/11/2002             | Ira Marlowe           | 9809/1                 |

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CONFIRMATION NO. 4879



\*OC000000016628439\*


Date Mailed: 07/27/2005

**NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY**

This is in response to the Power of Attorney filed 07/18/2005.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

---

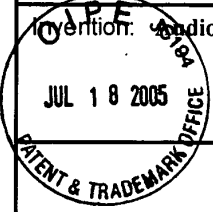
  
SHIRELL M CARMICHAEL  
2600 (571) 272-7238

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| <b>AMENDMENT TRANSMITTAL LETTER (Small Entity)</b> |  | Docket No.<br>9809/1 |
| Applicant(s): Ira M. Marlowe                       |  |                      |

|                               |                           |                              |                       |                        |                          |
|-------------------------------|---------------------------|------------------------------|-----------------------|------------------------|--------------------------|
| Application No.<br>10/316,961 | Filing Date<br>12/11/2002 | Examiner<br>Andrew R. Graham | Customer No.<br>27614 | Group Art Unit<br>2644 | Confirmation No.<br>4879 |
|-------------------------------|---------------------------|------------------------------|-----------------------|------------------------|--------------------------|



Invention: Audio Device Integration System

COMMISSIONER FOR PATENTS:

Transmitted herewith is an amendment in the above-identified application.

Applicant claims small entity status. See 37 CFR 1.27

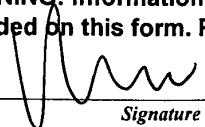
The fee has been calculated and is transmitted as shown below.

**CLAIMS AS AMENDED**

|  | CLAIMS REMAINING<br>AFTER AMENDMENT | HIGHEST #<br>PREV. PAID FOR | NUMBER EXTRA<br>CLAIMS PRESENT | RATE       | ADDITIONAL<br>FEE |
|--|-------------------------------------|-----------------------------|--------------------------------|------------|-------------------|
| TOTAL CLAIMS   | 80 -                                | 54 =                        | 26                             | x \$25.00  | \$650.00          |
| INDEP. CLAIMS  | 9 -                                 | 5 =                         | 4                              | x \$100.00 | \$400.00          |
| Multiple Dependent Claims (check if applicable) <input type="checkbox"/> |                                     |                             |                                |            | \$0.00            |
| <b>TOTAL ADDITIONAL FEE FOR THIS AMENDMENT</b>                           |                                     |                             |                                |            | <b>\$1,050.00</b> |

- No additional fee is required for amendment.
- Please charge Deposit Account No. \_\_\_\_\_ in the amount of \_\_\_\_\_
- Checks totaling **\$1,050.00** to cover the filing fee are enclosed.
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  - Any additional filing fees required under 37 C.F.R. 1.16.
  - Any patent application processing fees under 37 CFR 1.17.
- Payment by credit card. Form PTO-2038 is attached.

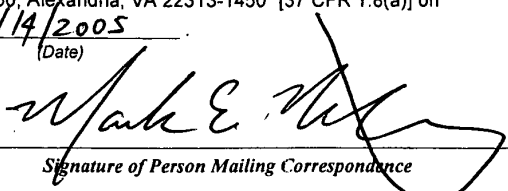
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Signature

Dated: 7/14/05

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| Signature of Person Mailing Correspondence  |  |
| Mark E. Nikolsky  |  |
| Typed or Printed Name of Person Mailing Correspondence  |  |



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Ira M. Marlowe  
Serial No.: 10/316,961  
Filed: 12/11/2002  
Title: AUDIO DEVICE INTEGRATION SYSTEM

Examiner: Andrew R. Graham

Art Unit: 2644

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**PRELIMINARY AMENDMENT**

Sir:

This is a Preliminary Amendment submitted in connection with the above-identified application.

**Amendments to the Claims** appear on page 2 of this response.

**Remarks** appear on page 18 of this response.

07/19/2005 SFELEKE1 00000018 10316961  
01 FC:2201 400.00 OP  
02 FC:2202 650.00 OP

### AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An audio device integration system comprising:

a car stereo;

an audio device external to the car stereo;

an interface connected between the car stereo and the audio device for exchanging data and audio signals between the car stereo and the audio device;

means for processing and dispatching commands for controlling the audio device from the car stereo in a format compatible with the audio device; ~~and~~

means for processing and displaying data from the audio device on a display of the car stereo in a format compatible with the car ~~stereo- stereo; and~~

means for switching to one or more auxiliary input sources connected to the interface if the audio device is disconnected from the interface.

2. (Original) The apparatus of claim 1, wherein the car stereo is an OEM car stereo.

3. (Original) The apparatus of claim 1, wherein the car stereo is an after-market car stereo.

4. (Original) The apparatus of claim 1, wherein the audio device comprises a CD player, CD changer, MP3 player, Digital Audio Broadcast (DAB) receiver, or satellite receiver.
5. (Original) The apparatus of claim 1, wherein the interface further comprises a plug-and-play mode for automatically detecting a device type of the audio device and integrating the audio device based upon the device type.
6. (Original) The apparatus of claim 1, wherein the interface generates a CD player presence signal for maintaining the car stereo in a state responsive to processed data and audio signals.
7. (Original) The apparatus of claim 1, wherein the data comprises track and time information.
8. (Original) The apparatus of claim 1, wherein the data comprises song title and artist information.
9. (Original) The apparatus of claim 1, wherein the data comprises channel number and channel name information.
10. (Original) The apparatus of claim 1, wherein the data comprises video information.
11. (Original) The apparatus of claim 1, wherein the data is displayed as a menu on the display of the car stereo.

12. (Original) The apparatus of claim 1, wherein the data is displayed in a graphical interface on a graphic panel.

13. (Original) The apparatus of claim 1, wherein the commands are input by a user using one or more control buttons or presets on the car stereo.

14. (Cancelled)

15. (Currently Amended) The apparatus of claim ~~14~~, 1, wherein audio signals from the one or more auxiliary input sources are selectively channeled to the car stereo by the interface.

16. (Currently Amended) The apparatus of claim ~~14~~, 1, wherein a user can select between the one or more auxiliary input sources by depressing keys on the car stereo.

17. (Currently Amended) The apparatus of claim ~~14~~, 1, wherein a user can select one of the auxiliary input sources by entering a disc number at the car stereo.

18. (Currently Amended) The apparatus of claim ~~14~~, 1, wherein a user can select one of the auxiliary input sources by entering a track number at the car stereo.

19. (Currently Amended) The apparatus of claim ~~14~~, 1, wherein a user can select one of the auxiliary input sources by entering both disc and track numbers at the car stereo.

20. (Currently Amended) The apparatus of claim 14, 1, wherein a user can select between the audio device and the one or more auxiliary input sources by entering a sequence at the car stereo.

21. (Original) The apparatus of claim 20, wherein the sequence comprises a track up selection followed by a track down selection.

22. (Original) The apparatus of claim 1, further comprising a second interface connected to the first interface for providing a plurality of auxiliary input sources.

23. (Original) The apparatus of claim 22, wherein both the first interface and the second interface are controllable using the car stereo.

24. (Original) An audio device integration system comprising:

a car stereo;

a plurality of auxiliary input sources;

an interface connected between the car stereo and the plurality of auxiliary input sources;

means for processing and dispatching commands for controlling an audio device connected to one of the plurality of auxiliary input sources from the car stereo in a format compatible with the audio device;

means for processing and displaying data from the audio device on a display of the car stereo in a format compatible with the car stereo; and

means for selecting one of the plurality of auxiliary input sources from the car stereo.

25. (Original) The apparatus of claim 24, wherein the means for selecting one of the plurality of auxiliary input sources comprises a disc or track selection entered by a user using control buttons of the car stereo.

26. (Original) The apparatus of claim 24, wherein the audio device comprises a CD player, CD changer, MP3 player, satellite receiver, or DAB receiver.

27. (Original) The apparatus of claim 24, wherein a device type of the audio device is automatically detected by the interface and the audio device is automatically integrated with the car stereo based upon the device type.

28. (Original) The apparatus of claim 24, wherein the interface is switchable into an auxiliary input mode by issuing a control sequence at the car stereo.

29. (Original) The apparatus of claim 28, wherein the control sequence comprises a track up command followed by a track down command.

30. (Currently Amended) A method for integrating a device with a car stereo comprising:

connecting an interface to the car ~~stereo~~ stereo, and the device to the ~~interface~~; interface,  
and an auxiliary input source to the interface;

receiving control commands from the car stereo at the interface;

processing the control commands into a format compatible with the device and  
dispatching processed control commands to the device;

receiving data and audio from the device at the interface;

processing the data into a second format compatible with the car stereo and dispatching  
the audio and processed data to the car stereo; ~~and~~

displaying the processed data on the car stereo and playing the audio through the car  
~~stereo~~; stereo; and

playing audio from the auxiliary input source through the car stereo if the device is  
disconnected from the interface.

31. (Original) The method of claim 30, wherein the step of receiving data from the device  
comprises retrieving CD track and time information from the device.



32. (Original) The method of claim 30, wherein the step of receiving data from the device comprises retrieving MP3 song, title, track, and time information from the device.

33. (Original) The method of claim 30, wherein the step of receiving data from the device comprises retrieving channel number, channel name, artist, and song information from the device.

34. (Original) The method of claim 30, wherein the step of receiving data from the device comprises retrieving video information from the device.

35. (Original) The method of claim 30, wherein the step of displaying the processed data comprises displaying the data in an LCD panel.

36. (Original) The method of claim 30, wherein the step of displaying the processed data comprises displaying the data in a graphical user interface at the car stereo.

37. (Original) The method of claim 30, wherein the step of displaying processed data comprises displaying video at the car stereo.

38. (Original) The method of claim 30, wherein the step of connecting the audio device to the interface comprises connecting a CD player, CD changer, MP3 player, satellite receiver, or DAB receiver to the interface.

39. (Cancelled)

40. (Currently Amended) The method of claim ~~39~~, 30, further comprising receiving a selection command from the car stereo and channeling data and audio from the auxiliary input source to the interface in response to the selection command.

41. (Original) The method of claim 40, further comprising processing the data from the auxiliary input source for display on the car stereo.

42. (Currently Amended) An apparatus for docking a portable device for integration with a car stereo comprising:

~~a top member interconnected with a bottom member and defining~~ a storage area for storing the portable device;

a docking portion within the storage area for electrically communicating and physically mating with the portable device; and

a data port disposed ~~on the top member or the bottom member and~~ in electrical communication with the docking portion, the data port connectable with a device for integrating the portable device with the car stereo.

43. (Currently Amended) The apparatus of claim 42, wherein the storage area further comprising comprises a top member, a bottom member, and a hinge for connecting interconnecting the top member and the bottom member at an edge thereof.

44. (Original) The apparatus of claim 42, wherein the data port comprises an RS-232 or USB port.

45. (Currently Amended) The apparatus of claim 42, wherein the storage area further comprises a top portion and the a bottom portion define defining a sleeve for holding the portable audio device.

46. (Currently Amended) The apparatus of claim 42, 43, further comprising a clasp for retaining the top and bottom members in a closed position.

47. (Original) A method of integrating an after-market device with an OEM or after-market car stereo comprising:

connecting the after-market device to an interface;

connecting the interface to a car stereo;

determining whether the car stereo is an OEM car stereo or an after-market car stereo;

if the car stereo is an after-market car stereo, generating and transmitting a presence signal to the car stereo to maintain the car stereo in an operational state responsive to external signals; and

selectively channeling data and audio signals from the after-market device to the car stereo using the interface.

48. (Original) The method of claim 47, further comprising receiving control commands from the car stereo at the interface.

49. (Original) The method of claim 48, further comprising converting the control commands into a format recognizable by the after-market audio device.

50. (Original) The method of claim 49, further comprising dispatching formatted commands to the after-market audio device for execution thereby.

51. (Original) The method of claim 47, further comprising converting data received at the interface from the after-market audio device into a format compatible with the car stereo.

52. (Original) The method of claim 51, further comprising displaying formatted data on the car stereo.

53. (Original) The method of claim 52, wherein the step of displaying formatted data comprises displaying channel numbers, channel names, titles, tracks, song names, or artist names on the car stereo.

54. (Original) The method of claim 52, wherein the step of displaying formatted data comprises displaying video on the car stereo.

55. (New) An audio device integration system comprising:

a car stereo;

a portable MP3 player external to the car stereo;

an interface connected between the car stereo and the portable MP3 player;

means for generating a device presence signal and transmitting the signal to the car stereo to maintain the car stereo in an operational state; and

means for transmitting audio from the portable MP3 player to the car stereo.

56. (New) The apparatus of claim 55, wherein the car stereo is an OEM car stereo.

57. (New) The apparatus of claim 55, wherein the car stereo is an after-market car stereo.

58. (New) The system of claim 55, further comprising means for processing and dispatching commands for controlling the portable MP3 player from the car stereo in a format compatible with the portable MP3 player.

59. (New) The system of claim 58, further comprising means for processing and displaying data from the portable MP3 player on a display of the car stereo in a format compatible with the car stereo.

60. (New) The apparatus of claim 59, wherein the data comprises track and time information.

61. (New) The apparatus of claim 59, wherein the data comprises song title and artist information.

62. (New) The apparatus of claim 59, wherein the commands are input by a user using one or more control buttons or presets on the car stereo.

63. (New) An audio device integration system comprising:

a car stereo;

an satellite radio receiver external to the car stereo;

an interface connected between the car stereo and the satellite radio receiver;

means for generating a device presence signal and transmitting the signal to the car stereo to maintain the car stereo in an operational state; and

means for transmitting audio from the satellite radio receiver to the car stereo.

64. (New) The apparatus of claim 63, wherein the car stereo is an OEM car stereo.

65. (New) The apparatus of claim 63, wherein the car stereo is an after-market car stereo.

66. (New) The system of claim 63, further comprising means for processing and dispatching commands for controlling the satellite radio receiver from the car stereo in a format compatible with the satellite radio receiver.

67. (New) The system of claim 66, further comprising means for processing and displaying data from the satellite radio receiver on a display of the car stereo in a format compatible with the car stereo.

68. (New) The apparatus of claim 67, wherein the data comprises track and time information.

69. (New) The apparatus of claim 67, wherein the data comprises song title and artist information.

70. (New) The apparatus of claim 67, wherein the data comprises a channel number and a channel name.

71. (New) The apparatus of claim 67, wherein the commands are input by a user using one or more control buttons or presets on the car stereo.

72. (New) An audio device integration system comprising:

a car stereo;

a digital audio broadcast receiver external to the car stereo;

an interface connected between the car stereo and the digital audio broadcast receiver;

means for generating a device presence signal and transmitting the signal to the car stereo to maintain the car stereo in an operational state; and

means for transmitting audio from the digital audio broadcast receiver to the car stereo.

73. (New) The apparatus of claim 72, wherein the car stereo is an OEM car stereo.

74. (New) The apparatus of claim 72, wherein the car stereo is an after-market car stereo.



75. (New) The system of claim 72, further comprising means for processing and dispatching commands for controlling the digital audio broadcast receiver from the car stereo in a format compatible with the digital audio broadcast receiver.

76. (New) The system of claim 75, further comprising means for processing and displaying data from the digital audio broadcast receiver on a display of the car stereo in a format compatible with the car stereo.

77. (New) The apparatus of claim 76, wherein the data comprises track and time information.

78. (New) The apparatus of claim 76, wherein the data comprises song title and artist information.

79. (New) The apparatus of claim 76, wherein the data comprises a channel number and a channel name.

80. (New) The apparatus of claim 76, wherein the commands are input by a user using one or more control buttons or presets on the car stereo.

81. (New) A device for integrating video information for use with a car stereo, comprising:

a car stereo;

a video device external to the car stereo;

an interface connected between the car stereo and the video device;

means for generating a device presence signal and transmitting the signal to the car stereo to maintain the car stereo in an operational state; and

means for transmitting video information from the video device to the car stereo.

82. (New) The device of claim 81, further comprising means for converting the video information into a format compatible with the car stereo.

## REMARKS

Applicant submits this Preliminary Amendment in connection with the above-identified application.

Applicant has amended independent Claim 1 to more specifically define Applicant's claimed invention. Claim 1, as amended, now includes the limitation of "**means for switching to one or more auxiliary input sources connected to the interface if the audio device is disconnected from the interface.**" Support for this amendment can be found in FIGS. 4d-4f and their associated text in the Specification. In view of this amendment, Applicant has cancelled Claim 14 and amended Claims 15-20 to depend from amended Claim 1.

Applicant has also amended independent Claim 30 to more specifically define Applicant's claimed invention. Claim 30, as amended, now includes the limitations of "connecting an interface to the car stereo, the device to the interface, **and an auxiliary input source to the interface...** and **playing audio from the auxiliary input source through the car stereo if the device is disconnected from the interface.**" Support for this amendment can be found in FIGS. 4d-4f and their associated text in the Specification. In view of this amendment, Applicant has cancelled Claim 39 and amended Claim 40 to depend from Claim 30.

Applicant has amended independent Claim 42 and Claims 43, 45, and 46 depending therefrom to more specifically define the structure of the docking apparatus of the present invention.

Applicant has added new independent Claim 55 and Claims 56-62 depending therefrom to further define Applicant's claimed invention. These claims recite an audio device integration system comprising **“a car stereo; a portable MP3 player external to the car stereo; an interface connected between the car stereo and the portable MP3 player; means for generating a device presence signal and transmitting the signal to the car stereo to maintain the car stereo in an operational state; and means for transmitting audio from the portable MP3 player to the car stereo.”**

Applicant has also added new independent Claim 63 and Claims 64-71 depending therefrom to further define Applicant's claimed invention. These claims recite an audio device integration system comprising **“a car stereo; a satellite radio receiver external to the car stereo; an interface connected between the car stereo and the satellite radio receiver; means for generating a device presence signal and transmitting the signal to the car stereo to maintain the car stereo in an operational state; and means for transmitting audio from the satellite radio receiver to the car stereo.”**

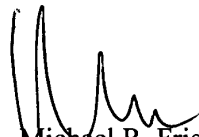
Applicant has added new independent Claim 72 and Claims 73-80 depending therefrom to further define Applicant's claimed invention. These claims recite an audio device integration system comprising **“a car stereo; a digital audio broadcast receiver external to the car stereo; an interface connected between the car stereo and the digital audio broadcast receiver; means for generating a device presence signal and transmitting the signal to the car stereo to maintain the car stereo in an operational state; and means for transmitting audio from the digital broadcast receiver to the car stereo.”**

Applicant has added new independent Claim 81 and Claim 82 depending therefrom to further define Applicant's claimed invention. These claims recite a device for integrating video information for use with a car stereo, comprising **"a car stereo; a video device external to the car stereo; an interface connected between the car stereo and the video device; means for generating a device presence signal and transmitting the signal to the car stereo to maintain the car stereo in an operational state; and means for transmitting video information from the video device to the car stereo."**

Claims 1, 15-20, 30, 40, 42, and 43 have been amended, Claims 14 and 39 have been cancelled, and Claims 55-82 were added. Claims 1-13, 15-38, and 40-82 are pending in this application and are in condition for allowance. No new matter is believed to have been added. Examination is requested and favorable action solicited.

Dated: 7/14/05

Respectfully submitted,



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2644

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**



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P.O. Box 1450  
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Customer No. 27614

Re: Our file: 9809/1 Examiner: Andrew R. Graham  
Applicant: Ira M. Marlowe Art Unit: 2644  
Serial No.: 10/316,961  
Filing Date: 12/11/2002  
Title: Audio Device Integration System

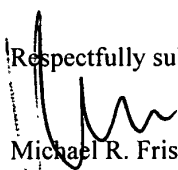
Sir:

Enclosed for filing in the United States Patent and Trademark Office is the following:

1. Preliminary Amendment
2. Amendment Transmittal Letter
3. Revocation of Power of Attorney with New Power of Attorney
4. Check No. 172 for \$1,025.00
5. Check No. 305095 for \$25.00
6. Transmittal Sheet
7. Postcard Receipt

7/14/05  
Date

Respectfully submitted,

  
Michael R. Friscia  
Registration No. 33,884  
McCarter & English, LLP  
Four Gateway Center  
100 Mulberry Street  
Newark, NJ 07102  
Tel: (973) 639-8493  
Fax: (973) 297-6627

Check One and Complete:

**CERTIFICATE OF MAILING BY EXPRESS MAIL**

I hereby certify that this correspondence is being deposited with the United States Postal Service, postage prepaid, as "Express Mail Post Office to Addressee," Mailing Label No. \_\_\_\_\_ US to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on \_\_\_\_\_.

By: \_\_\_\_\_

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7/14/2005

By: 

Mark E. Nikolsky

MEI\5121600.1



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Ira M. Marlowe  
Serial No.: 11/316,961  
Filed: 12/11/2002  
Title: Audio Device Integration System

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**REVOCATION OF POWER OF ATTORNEY  
WITH NEW POWER OF ATTORNEY BY ASSIGNEE**

Sir:

As President of BlitzSafe of America, Inc., owner of the entire right, title and interest in and to the above-identified application, I hereby revoke all powers of attorney previously given, and hereby appoint RALPH W. SELITTO, JR., Reg. No. 26,996; MICHAEL R. FRISCLA, Reg. No. 33,884; JOHN K. KIM, Reg. No. 37,002, and all other practitioners associated with Customer Number 27614, to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

Please direct all correspondence to:

Michael R. Friscia  
McCarter & English, LLP  
Four Gateway Center  
100 Mulberry Street  
Newark, NJ 07102

Date: 7/14/05

  
By: Ira M. Marlowe  
Title: President

MB15121425.1

**PATENT APPLICATION FEE DETERMINATION RECORD**  
Effective October 1, 2001

Application or Docket Number

10/316961

**CLAIMS AS FILED - PART I**

|   | (Column 1)    | (Column 2)   |
|---|---------------|--------------|
| TOTAL CLAIMS  | 54            |              |
| FOR   | NUMBER FILED  | NUMBER EXTRA |
| TOTAL CHARGEABLE CLAIMS                                   | 54 minus 20 = | * 34         |
| INDEPENDENT CLAIMS  | 3 minus 3 =   | * 0          |
| MULTIPLE DEPENDENT CLAIM PRESENT <input type="checkbox"/> |               |              |

\* If the difference in column 1 is less than zero, enter "0" in column 2

SMALL ENTITY TYPE  OR OTHER THAN SMALL ENTITY

| RATE      | FEE    |    | RATE      | FEE    |
|-----------|--------|----|-----------|--------|
| BASIC FEE | 370.00 | OR | BASIC FEE | 740.00 |
| X\$ 9=    |        | OR | X\$18=    |        |
| X42=      |        | OR | X84=      |        |
| +140=     |        | OR | +280=     |        |
| TOTAL     |        | OR | TOTAL     |        |

**CLAIMS AS AMENDED - PART II**

4/18/05

|   | (Column 1)                       | (Column 2)                         | (Column 3)    |
|---|----------------------------------|------------------------------------|---------------|
| AMENDMENT A   | CLAIMS REMAINING AFTER AMENDMENT | HIGHEST NUMBER PREVIOUSLY PAID FOR | PRESENT EXTRA |
|   | Total                            | * 80 Minus ** 54                   | = 26          |
|   | Independent                      | * 9 Minus *** 5                    | = 4           |
| FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/> |                                  |                                    |               |

SMALL ENTITY OR OTHER THAN SMALL ENTITY

| RATE             | ADDITIONAL FEE |    | RATE             | ADDITIONAL FEE |
|------------------|----------------|----|------------------|----------------|
| X\$ 9=           | 650            | OR | X\$18=           |                |
| X42=             | 400            | OR | X84=             |                |
| +140=            |                | OR | +280=            |                |
| TOTAL ADDIT. FEE | 1050           | OR | TOTAL ADDIT. FEE |                |

|   | (Column 1)                       | (Column 2)                         | (Column 3)    |
|---|----------------------------------|------------------------------------|---------------|
| AMENDMENT B   | CLAIMS REMAINING AFTER AMENDMENT | HIGHEST NUMBER PREVIOUSLY PAID FOR | PRESENT EXTRA |
|   | Total                            | * Minus **                         | =             |
|   | Independent                      | * Minus ***                        | =             |
| FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/> |                                  |                                    |               |

| RATE             | ADDITIONAL FEE |    | RATE             | ADDITIONAL FEE |
|------------------|----------------|----|------------------|----------------|
| X\$ 9=           |                | OR | X\$18=           |                |
| X42=             |                | OR | X84=             |                |
| +140=            |                | OR | +280=            |                |
| TOTAL ADDIT. FEE |                | OR | TOTAL ADDIT. FEE |                |

|   | (Column 1)                       | (Column 2)                         | (Column 3)    |
|---|----------------------------------|------------------------------------|---------------|
| AMENDMENT C   | CLAIMS REMAINING AFTER AMENDMENT | HIGHEST NUMBER PREVIOUSLY PAID FOR | PRESENT EXTRA |
|   | Total                            | * Minus **                         | =             |
|   | Independent                      | * Minus ***                        | =             |
| FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/> |                                  |                                    |               |

| RATE             | ADDITIONAL FEE |    | RATE             | ADDITIONAL FEE |
|------------------|----------------|----|------------------|----------------|
| X\$ 9=           |                | OR | X\$18=           |                |
| X42=             |                | OR | X84=             |                |
| +140=            |                | OR | +280=            |                |
| TOTAL ADDIT. FEE |                | OR | TOTAL ADDIT. FEE |                |

\* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.  
 \*\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than "20."  
 \*\*\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3."  
 The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.



**WOLFF & SAMSON PC**  
 COUNSELLORS AT LAW  
 THE OFFICES AT CRYSTAL LAKE  
 ONE BOLAND DRIVE  
 WEST ORANGE, NEW JERSEY 07052  
 973-325-1500  
 TELECOPIER: 973-325-1501

NEW YORK OFFICE:  
 140 BROADWAY  
 FORTY-SIXTH FLOOR  
 NEW YORK, NEW YORK 10006  
 212-973-0572

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From: Michael R. Friscia, Esq.

Writer's Direct #: (973) 530-2024

Total Pages (including this page): 13

Fax Direct #: (973) 530-2224

Reference: Serial No. 10/732,909  
 10/316,961  
 Patent No. 5,622,000

Comments:

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner of Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Re: Our file: 9809/1 Group Art Unit: 2644  
Applicant: Ira M. Marlowe Examiner:  
Serial No.: 10/316,961  
Filing Date: 12/11/02  
Title: Audio Device Integration System

Sir:

Enclosed for filing in the United States Patent and Trademark Office is the following:

1. Application to Withdraw as Attorneys of Record
2. Transmittal Sheet

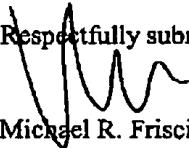
CONDITIONAL PETITION

If any extension of time is required for the submission of the above-identified items, Applicant requests that this be considered a petition therefore. Please charge any additional charges or any other charges relating to this matter to the deposit account of the writer, Account No. 06-2143. A duplicate copy of this letter is enclosed.

11/10/04  
Date

enc.

Respectfully submitted,

  
Michael R. Friscia  
Registration No. 33,884  
Wolff & Samson PC  
One Boland Drive  
West Orange, NJ 07052  
Tel: (973) 530-2024  
Fax: (973) 530-2224

I hereby certify that the following papers are being facsimile transmitted to the U.S. Patent and Trademark Office to the Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450 to telefax no. (703) 872-9306 on 11/10/04.

By:   
Janelle Fava

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APPLICATION TO WITHDRAW AS ATTORNEYS  
OF RECORD

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

|                       |                                 |   |                            |
|-----------------------|---------------------------------|---|----------------------------|
| <hr/>                 |                                 | : |                            |
| In re Application of: | Ira M. Marlowe                  | : |                            |
| Serial No.:           | 10/316,961                      | : | Group Art Unit: 2644       |
| Filed:                | 12/11/02                        | : | Examiner: Not Yet Assigned |
| For:                  | Audio Device Integration System | : |                            |
| <hr/>                 |                                 | : |                            |

APPLICATION TO WITHDRAW AS ATTORNEYS OF RECORD

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

I, the undersigned attorney of record in the above-captioned patent application, hereby apply to the Commissioner to withdraw as the attorney of record in this application for non-payment of legal fees, as set forth in detail below.

1. The above-captioned application is assigned to BlitzSafe of America, Inc. (hereinafter "BlitzSafe").
2. Since the filing date of his application to the present, we have rendered legal services to BlitzSafe, as our client, in connection with filing and prosecuting the application.
3. In exchange for the legal work, BlitzSafe agreed to pay us our hourly fee plus all disbursements incurred on their behalf.

861846.01

4. Between February 2004 and September 2004, we submitted numerous invoices to BlitzSafe for the legal work and the disbursements incurred in connection with their patent matters.

5. To date, BlitzSafe has not fully paid and owes substantial balances for legal services and disbursements. Invoices dating from February 2004 remain unpaid. Numerous calls have been made and letters sent in an attempt to collect on the outstanding balance, all to no avail.

6. BlitzSafe has made numerous promises to us that further payments will be forthcoming but has not kept such promises.

7. We believe that we will be harmed if we were to continue to assume responsibility in any way over this application. Specifically, if this application for withdrawal is not approved, then our professional and ethical obligations as attorneys would force us to expend additional time and resources on behalf of BlitzSafe in responding to a future Office Action. However, we would most likely receive no compensation for this effort.

8. The application is currently pending and there is no outstanding matter which requires a response.

9. We have sent copies of the complete file relating to this matter to the client.

10. Mark E. Nikolsky, Esq., an attorney at the law firm of Wolff & Samson PC, is also appointed to prosecute the application. It is respectfully requested that this attorney also be withdrawn.

11. Once the application for our withdrawal is approved, kindly direct all future correspondence regarding this application to Ira M. Marlowe at his business address of BlitzSafe of America, Inc., 33 Honeck Street, Englewood, New Jersey 07631.

In conclusion, we do not want to expend any further time on this application or continue to be responsible in any way therefor. For this reason, we earnestly solicit the Commissioner's prompt consideration and approval of this application to withdraw.

Respectfully submitted,



Michael R. Friscia  
Registration No. 33,884  
Attorney for Applicant  
Wolff & Samson PC  
One Boland Drive  
West Orange, NJ 07052  
Tel.: (973) 530-2024  
Fax: (973) 530-2224

Dated: 11/10/04

NOV-10-2004 16:08

WOLFF & SAMSON

19737401407 P.01/13

**WOLFF & SAMSON PC**  
COUNSELLORS AT LAW  
THE OFFICES AT CRYSTAL LAKE  
ONE BOLAND DRIVE  
WEST ORANGE, NEW JERSEY 07052  
973-325-1500

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Reference: Serial No. 10/732,909  
10/316,961  
Patent No. 5,622,000

Comments:

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PAGE 1/13 \* RCVD AT 11/10/2004 3:55:20 PM [Eastern Standard Time] \* SVR:USPTO-EFXRF-1/2 \* DNIS:8729306 \* CSID:19737401407 \* DURATION (mm-ss):02-46

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner of Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

|     |              |                                 |                 |      |
|-----|--------------|---------------------------------|-----------------|------|
| Re: | Our file:    | 9809/1                          | Group Art Unit: | 2644 |
|     | Applicant:   | Ira M. Marlowe                  | Examiner:       |      |
|     | Serial No.:  | 10/316,961                      |                 |      |
|     | Filing Date: | 12/11/02                        |                 |      |
|     | Title:       | Audio Device Integration System |                 |      |

Sir:

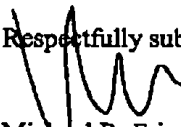
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2. Transmittal Sheet

CONDITIONAL PETITION

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Respectfully submitted,



Michael R. Friscia  
Registration No. 33,884  
Wolff & Samson PC  
One Boland Drive  
West Orange, NJ 07052  
Tel: (973) 530-2024  
Fax: (973) 530-2224

11/10/04  
Date

enc.

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By:   
Janelle Fava

**APPLICATION TO WITHDRAW AS ATTORNEYS  
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**NOV 10 2004**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of: Ira M. Marlowe

Serial No.: 10/316,961

Group Art Unit: 2644

Filed: 12/11/02

Examiner: Not Yet Assigned

For: Audio Device Integration System

**APPLICATION TO WITHDRAW AS ATTORNEYS OF RECORD**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

I, the undersigned attorney of record in the above-captioned patent application, hereby apply to the Commissioner to withdraw as the attorney of record in this application for non-payment of legal fees, as set forth in detail below.

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Michael R. Friscia  
Registration No. 33,884  
Attorney for Applicant  
Wolff & Samson PC  
One Boland Drive  
West Orange, NJ 07052  
Tel.: (973) 530-2024  
Fax: (973) 530-2224

Dated: 11/10/04

2644



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE **RECEIVED**

Commissioner of Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

MAR 24 2004  
Technology Center 2600

Re: Our file: 9809/1 Group Art Unit: 2644  
Applicant: Ira Marlowe Examiner:  
Serial No.: 10/316,961  
Filing Date: 12/11/02  
Title: Audio Device Integration System

Sir:

Enclosed for filing in the United States Patent and Trademark Office is the following:


1. Transmittal of Information Disclosure Statement
2. Form PTO-1449
3. Copies of References from Form PTO-1449
4. Transmittal Sheet
5. Postcard Receipt

CONDITIONAL PETITION

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3/15/04  
Date

Respectfully submitted,

  
Michael R. Friscia  
Registration No. 33,884  
Wolff & Samson PC  
One Boland Drive  
West Orange, NJ 07052  
Tel: (973) 530-2024  
Fax: (973) 530-2224

enc.

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By:   
Janelle Fava



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner of Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Re: Our file: 9809/1  
Applicant: Ira Marlowe  
Serial No.: 10/316,961  
Filing Date: 12/11/02  
Title: Audio Device Integration System

Group Art Unit: 2644  
Examiner:

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MAR 24 2004

Technology Center 2600

Sir:

Enclosed for filing in the United States Patent and Trademark Office is the following:

1. Transmittal of Information Disclosure Statement
2. Form PTO-1449
3. Copies of References from Form PTO-1449
4. Transmittal Sheet
5. Postcard Receipt

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Respectfully submitted,

Michael R. Friscia  
Registration No. 33,884  
Wolff & Samson PC  
One Boland Drive  
West Orange, NJ 07052  
Tel: (973) 530-2024  
Fax: (973) 530-2224

3/15/04  
Date

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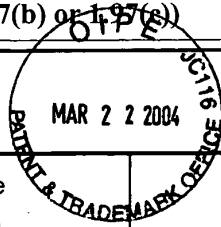
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By:   
Janelle Fava

**TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT**  
(Under 37 CFR 1.97(b) or 1.97(e))

Docket No.  
9809/1

In Re Application Of: **Ira Marlowe**



Serial No.  
10/316,961

Filing Date  
12/11/02

Examiner

Group Art Unit  
2644

Title: **AUDIO DEVICE INTEGRATION SYSTEM**

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**MAR 2 4 2004**

**Technology Center 2600**

Address to:

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**37 CFR 1.97(b)**

1.  The Information Disclosure Statement submitted herewith is being filed within three months of the filing of a national application other than a continued prosecution application under 37 CFR 1.53(d); within three months of the date of entry of the national stage as set forth in 37 CFR 1.491 in an international application; before the mailing of a first Office Action on the merits, or before the mailing of a first Office Action after the filing of a request for continued examination under 37 CFR 1.114.

**37 CFR 1.97(c)**

2.  The Information Disclosure Statement submitted herewith is being filed after the period specified in 37 CFR 1.97(b), provided that the Information Disclosure Statement is filed before the mailing date of a Final Action under 37 CFR 1.113, a Notice of Allowance under 37 CFR 1.311, or an Action that otherwise closes prosecution in the application, and is accompanied by one of:

the statement specified in 37 CFR 1.97(e);

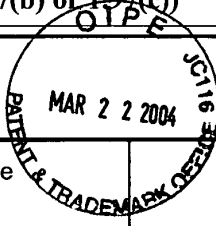
**OR**

the fee set forth in 37 CFR 1.17(p).

**TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT**  
(Under 37 CFR 1.97(b) or 1.97(c))

Docket No.  
9809/1

In Re Application: Ira Marlowe



Serial No.  
10/316,961

Filing Date  
12/11/02

Examiner

Group Art Unit  
2644

AUDIO DEVICE INTEGRATION SYSTEM

**RECEIVED**

MAR 24 2004

Technology Center 2600

**Payment of Fee**

(Only complete if Applicant elects to pay the fee set forth in 37 CFR 1.17(p))

- A check in the amount of \_\_\_\_\_ is attached.
- The Director is hereby authorized to charge and credit Deposit Account No. \_\_\_\_\_ as described below.
  - Charge the amount of \_\_\_\_\_
  - Credit any overpayment.
  - Charge any additional fee required.

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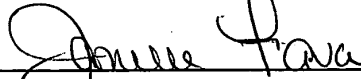
\_\_\_\_\_  
(Date)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Typed or Printed Name of Person Signing Certificate

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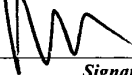


\_\_\_\_\_  
Signature of Person Mailing Correspondence

Janelle Fava

\_\_\_\_\_  
Typed or Printed Name of Person Mailing Certificate

\*This certificate may only be used if paying by deposit account.

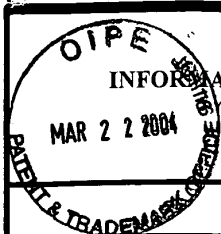


\_\_\_\_\_  
Signature

Dated: 3/15/04

Michael R. Friscia  
Registration No. 33, 884  
Wolff & Samson PC  
One Boland Drive  
West Orange, NJ 07052  
Tel.: (973) 530-2024  
Fax: (973) 530 2224

cc:



**INFORMATION DISCLOSURE CITATION**

(Use several sheets if necessary)

|   |   |
|---|---|
| Docket Number (Optional)<br><b>9809/1</b> | Application Number<br><b>10/316,961</b> |
| Applicant(s)<br><b>Ira Marlowe</b>        |   |
| Filing Date<br><b>12/11/02</b>            | Group Art Unit<br><b>2644</b>           |

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|                   | 1   | 5,410,675       | 04/25/1995 | Shreve, et al. | 395   | 500      | 09/17/1993                 |
|                   | 2   | 4,943,978       | 07/24/1990 | Rice           | 375   | 1        | 01/17/1989                 |
|                   | 3   | 4,817,130       | 03/28/1989 | Frimmel, Jr.   | 379   | 88       | 12/05/1986                 |
|                   | 4   | Re. 34,536      | 02/08/1994 | Frimmel, Jr.   | 379   | 88       | 06/28/1990                 |
|                   | 5   | 4,562,533       | 12/31/1985 | Hodel, et al.  | 364   | 200      | 08/20/1984                 |
|                   | 6   | 4,234,919       | 11/18/1980 | Bruce, et al.  | 364   | 200      | 10/31/1978                 |
|                   | 7   | 4,091,455       | 05/23/1978 | Woods, et al.  | 364   | 200      | 12/20/1976                 |
|                   | 8   | 4,068,104       | 01/10/1978 | Werth, et al.  | 179   | 175.3    | 05/14/1976                 |
|                   | 9   | 4,047,162       | 09/06/1977 | Dorey, et al.  | 364   | 200      | 04/28/1975                 |
|                   | 10  | 3,940,743       | 02/24/1976 | Fitzgerald     | 340   | 172.5    | 11/05/1973                 |
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|     |                 |      |         |       |          | YES         | NO |
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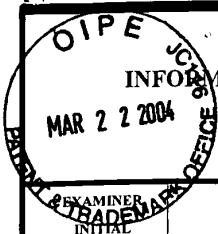
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| 12 | Hadland, "Protocol Converter Apparatus and Method," United States Patent Application Publication No. US 2002/0133610 A1, published September 19, 2002.   |

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| Applicant(s)<br><b>Ira Marlowe</b>        |   |
| Filing Date<br><b>12/11/02</b>            | Group Art Unit<br><b>2644</b>           |

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| 14 | "Automedia," magazine pages from January 1998 issue (2 pages).                  |
| 15 | "Automedia," magazine pages from February 1998 issue (2 pages).                 |
| 16 | "Automedia," magazine pages from July 1998 issue (2 pages).                     |
| 17 | "Automedia," magazine pages from September 1998 issue (2 pages).                |
| 18 | "Automedia," magazine pages from November 1998 issue (12 pages).                |
| 19 | "Automedia," magazine pages from February 1999 issue (2 pages).                 |
| 20 | "Automedia," magazine pages from February 1999 issue (2 pages).                 |
| 21 | "Car Stereo Review," magazine pages from June 1998 issue (5 pages).             |
| 22 | "Car Stereo Review," magazine pages from January 1999 issue (2 pages).          |
| 23 | "Car Stereo Review," magazine pages from April 1999 issue (3 pages).            |
| 24 | "Car Audio and Electronics," magazine pages from December 1998 issue (2 pages). |

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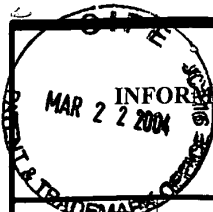
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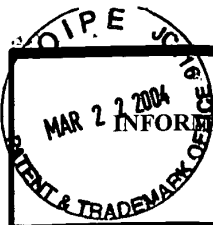
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| Applicant(s)<br><b>Ira Marlowe</b>        |   |
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| 26  | "Car Audio and Electronics," magazine pages from June 1999 issue (2 pages).  |
| 27  | "Carsound," magazine pages from May/June 1999 issue (2 pages).   |
| 28  | "Mobile Electronics Retailer," magazine pages from August 1997 issue (4 pages).  |
| 29  | "Mobile Electronics Retailer," magazine pages from July 1999 issue (7 pages).  |
| 30  | "Mobile Electronics Retailer," magazine pages from August 2000 issue (2 pages).  |
| 31  | "Cesmobile," magazine pages from January 1999 issue (3 pages).   |
| 32  | "The 12 Volt News," magazine pages from March 2002 issue (2 pages).  |
| 33  | "P.I.E. Millennium Price Guide Make the Precision Decision," Precision Interface Electronics, Inc. (6 pages).  |
| 34  | "PIE 1999 Price Guide," Precision Interface Electronics, Inc. (4 pages).   |
| 35  | "Design & Engineering Showcase Award," award presented to Precision Interface Electronics, Inc. for DPX Technology Digital Protocol Converter FRDN/PC-KNW, 2000 International CES. |
| 36  | "Design & Engineering Showcase Award," award presented to Precision Interface Electronics, Inc. for DPX Technology Digital Protocol Converter GM9/PC-KNW, 2000 International CES.  |

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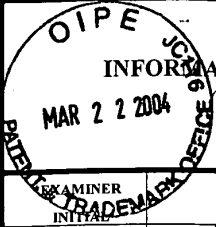
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| *EXAMINER INITIAL | OTHER DOCUMENTS <i>(Including Author, Title, Date, Pertinent Pages, Etc.)</i>   |
|-------------------|---|
| 37                | Invoice dated January 28, 1998 from Precision Interface Electronics, Inc. for "Ford FCU-Sanyo Protocol," and "Ford RCU Sanyo Protocol."     |
| 38                | Invoice dated January 29, 1999 from Precision Interface Electronics, Inc. for "Ford NCU-Sanyo Protocol."                                    |
| 39                | Invoice dated April 26, 1999 from Precision Interface Electronics, Inc. for "9 Pin GM-Kenwood Protocol," and "10 Pin GM-Kenwood Protocol."  |
| 40                | Invoice dated April 27, 1999 from Precision Interface Electronics, Inc. for "9 Pin GM-Kenwood Protocol."                                    |
| 41                | Invoice dated May 27, 1999 from Precision Interface Electronics, Inc. for "10 Pin GM-Kenwood Protocol," and "9 Pin GM-Kenwood Protocol."    |
| 42                | Invoice dated March 20, 2000 from Precision Interface Electronics, Inc. for "98-2000 Pre-Wired VW 6 DIS."                                   |
| 43                | Invoice dated March 20, 2000 from Precision Interface Electronics, Inc. for "98-2000 Pre-Wired VW 8 DIS," and "1998-2000 Audi to Pan 8 PC." |
| 44                | Invoice dated December 17, 2001 from Precision Interface Electronics, Inc. for "98-02 Ford/Lincoln/Mercury."                                |
| 45                | Invoice dated December 17, 2001 from Precision Interface Electronics, Inc. for "98-02 Ford/Lincoln/Mercury."                                |
| 46                | Invoice dated May 29, 2002 from Precision Interface Electronics, Inc. for "95-01 GMC/Chev/Pontiac AUX," and "98-02 Ford/Lincoln/Merc AU."   |
| 47                | Toyota/Avox Interface Rev. Eng., Peripheral Model TIAS, created February 15, 1998 (1 page)  |
| 48                | GM/Kenwood Translator diagram, created February 4, 1999 (2 pages).  |

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| Applicant(s)<br>Ira Marlowe        |                                  |
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|                        | 50 | Component Side Silkscreen, created December 31, 1997 (2 pages).        |
|                        | 51 | Component Xray, created February 4, 1999 (2 pages).                    |
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner of Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Re: Our file: 9809/1  
Applicant: Ira Marlowe  
Serial No.: 10/316,961  
Filing Date: 12/11/02  
Title: Audio Device Integration System

Group Art Unit: 2644  
Examiner:

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Sir:

Enclosed for filing in the United States Patent and Trademark Office is the following:


1. Transmittal of Information Disclosure Statement
2. Form PTO-1449
3. Copies of References from Form PTO-1449
4. Transmittal Sheet
5. Postcard Receipt

CONDITIONAL PETITION

If any extension of time is required for the submission of the above-identified items, Applicant requests that this be considered a petition therefore. Please charge any additional charges or any other charges relating to this matter to the deposit account of the writer, **Account No. 06-2143**. A duplicate copy of this letter is enclosed.

3/5/04  
Date

Respectfully submitted,

  
Michael R. Friscia  
Registration No. 33,884  
Wolff & Samson PC  
One Boland Drive  
West Orange, NJ 07052  
Tel: (973) 530-2024  
Fax: (973) 530-2224

enc.

I hereby certify that this correspondence is being deposited with the United States Postal Service, First Class Mail, postage prepaid, to the Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on 3/5/04.

By:   
Janelle Fava

**TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT  
(Under 37 CFR 1.97(b) or 1.97(c))**

Docket No.  
9809/1

In Re Application Of: **Ira Marlowe**

Serial No.  
10/316,961

Filing Date  
12/11/02

Examiner

Group Art Unit  
2644

Title: **AUDIO DEVICE INTEGRATION SYSTEM**



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**37 CFR 1.97(b)**

1.  The Information Disclosure Statement submitted herewith is being filed within three months of the filing of a national application other than a continued prosecution application under 37 CFR 1.53(d); within three months of the date of entry of the national stage as set forth in 37 CFR 1.491 in an international application; before the mailing of a first Office Action on the merits, or before the mailing of a first Office Action after the filing of a request for continued examination under 37 CFR 1.114.

**37 CFR 1.97(c)**

2.  The Information Disclosure Statement submitted herewith is being filed after the period specified in 37 CFR 1.97(b), provided that the Information Disclosure Statement is filed before the mailing date of a Final Action under 37 CFR 1.113, a Notice of Allowance under 37 CFR 1.311, or an Action that otherwise closes prosecution in the application, and is accompanied by one of:
- the statement specified in 37 CFR 1.97(e);
- OR**
- the fee set forth in 37 CFR 1.17(p).

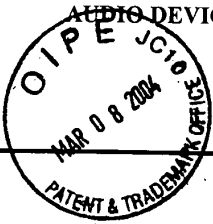
**TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT**  
 (Under 37 CFR 1.97(b) or 1.97(c))

Docket No.  
 9809/1

In Re Application: Ira Marlowe

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| Serial No.<br>10/316,961 | Filing Date<br>12/11/02 | Examiner | Group Art Unit<br>2644 |
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AUDIO DEVICE INTEGRATION SYSTEM



**Payment of Fee**

(Only complete if Applicant elects to pay the fee set forth in 37 CFR 1.17(p))

- A check in the amount of \_\_\_\_\_ is attached.
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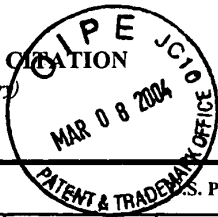
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Dated: 3/5/04

Michael R. Friscia  
 Registration No. 33, 884  
 Wolff & Samson PC  
 One Boland Drive  
 West Orange, NJ 07052  
 Tel.: (973) 530-2024  
 Fax: (973) 530 2224

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| Applicant(s)<br>Ira Marlowe        |                                  |
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|  | 5 | "Delphi XM SKYFI(TM) RADIO," product description from XM Satellite Radio web site (2 pages) .                                    |

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| Applicant(s)<br><b>Ira Marlowe</b>        |   |
| Filing Date<br><b>12/11/02</b>            | Group Art Unit<br><b>2644</b>           |

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| 7                 | Mobile Electronics: News, "Soundgate to Release New GM and BMW Interfaces," December 2, 2002, ME-Mag.com (1 page)          |
| 8                 | "Welcome to Ventura Technology," from www.venturatechnology.net (2 pages).   |
| 9                 | "Ventura Technology" product descriptions from www.venturatechnoogy.net (1 page)   |
| 10                | "Phatnoise Digital Media Players," product description from www.phatnoise.com (2 pages).                                   |
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FIG. 1

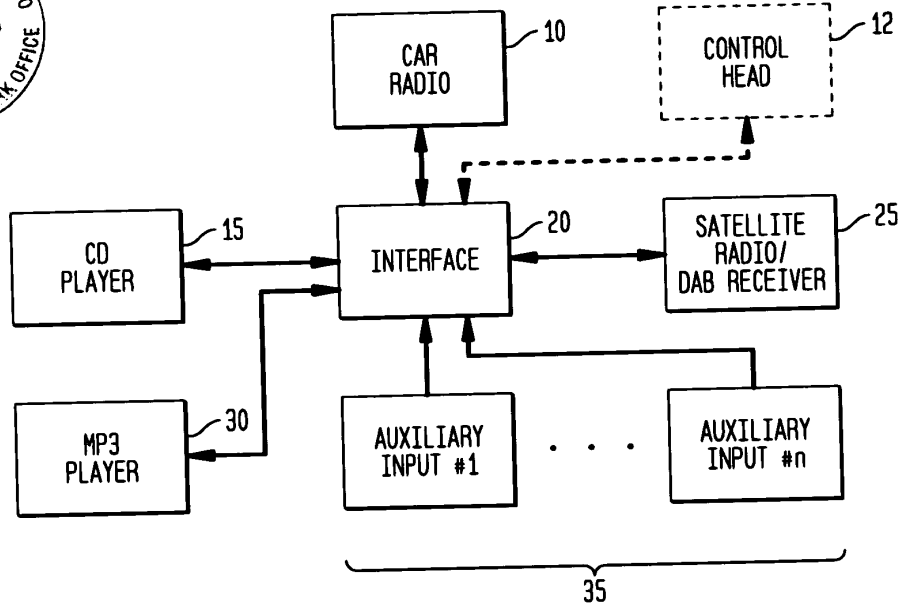
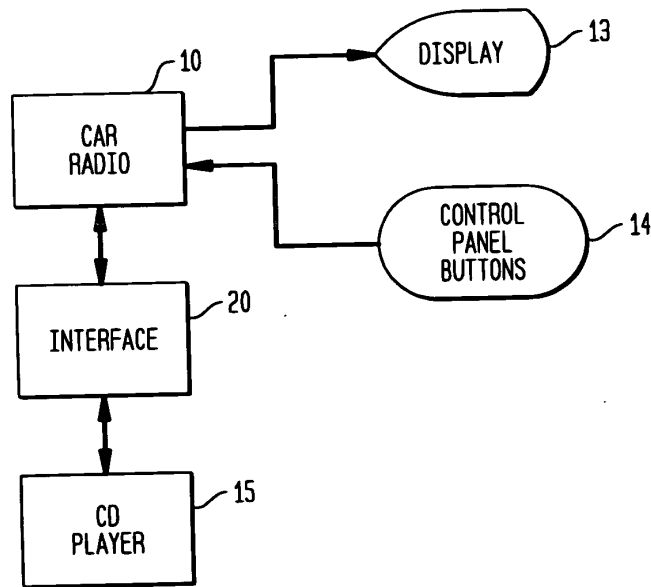


FIG. 2A



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FIG. 2B

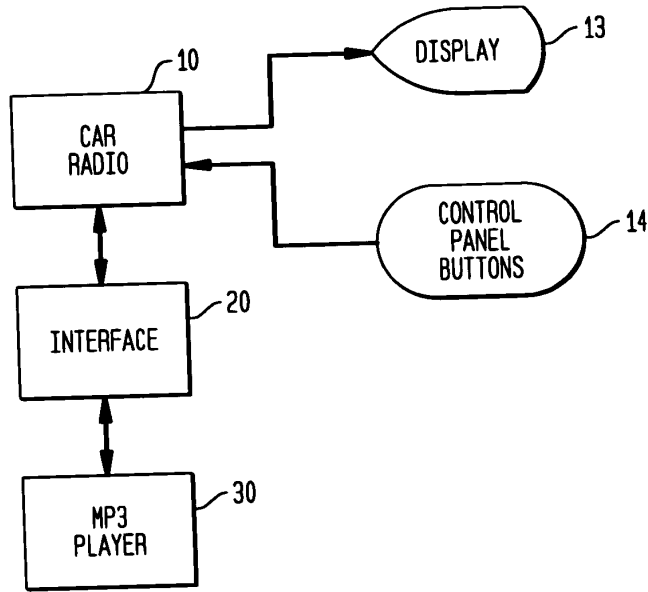
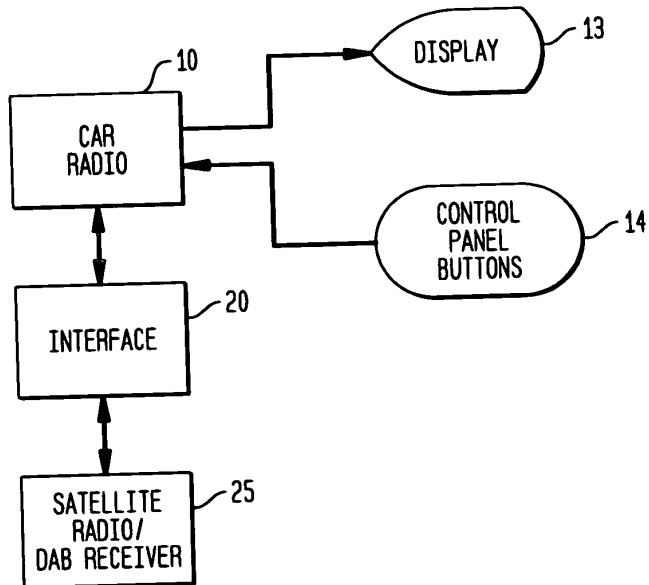


FIG. 2C





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FIG. 2D

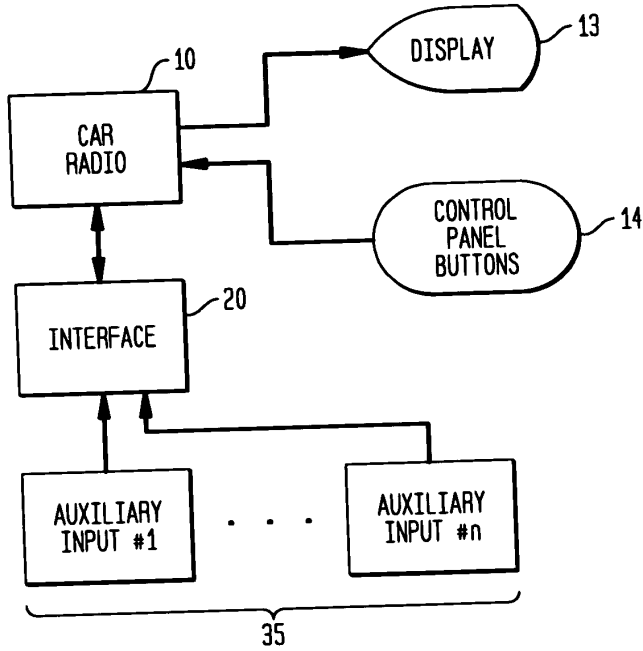
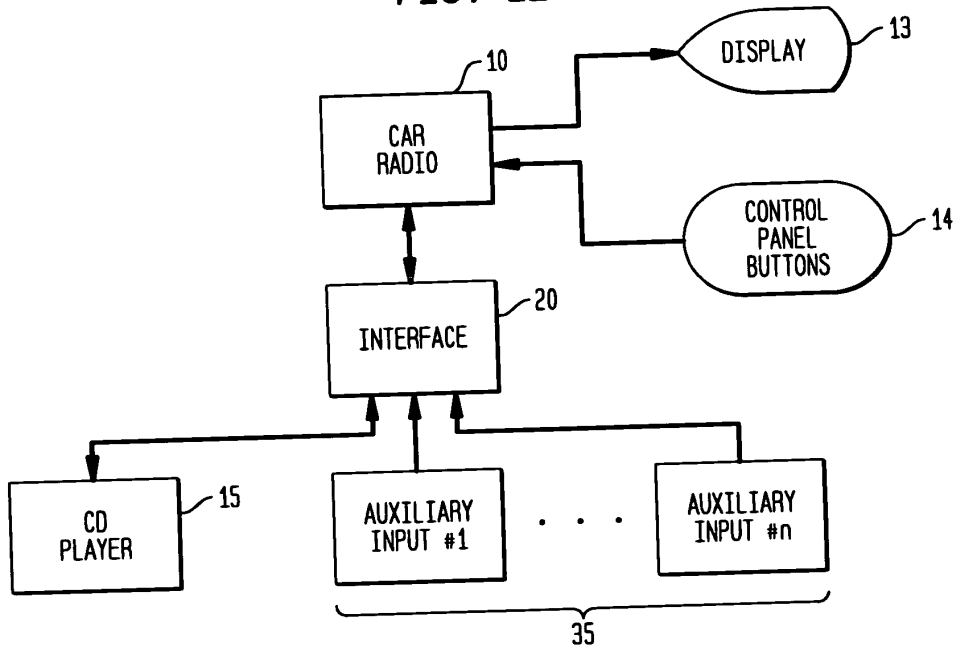


FIG. 2E



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FIG. 2F

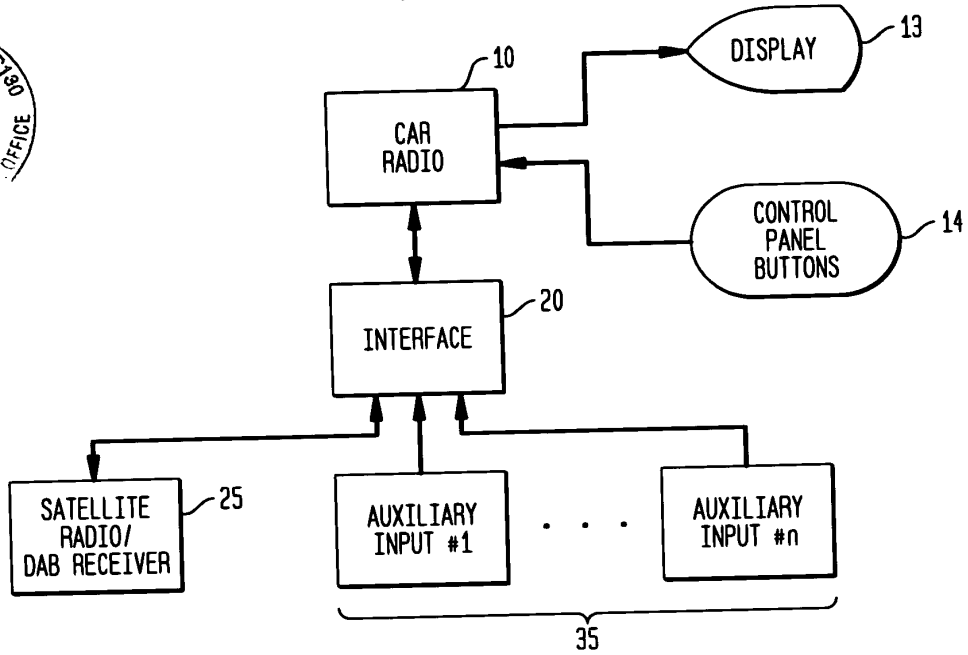


FIG. 2G

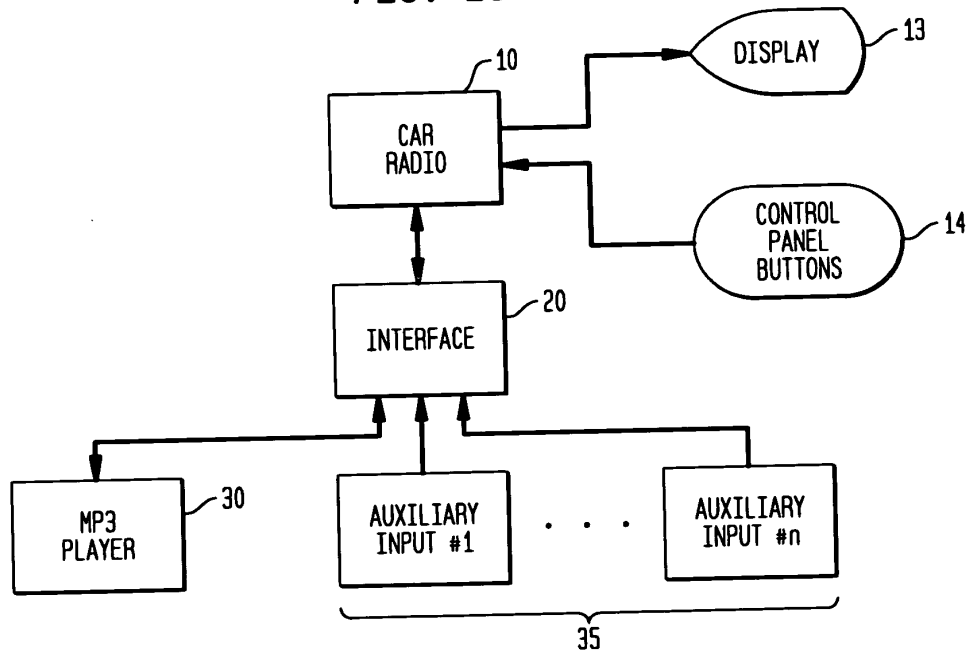
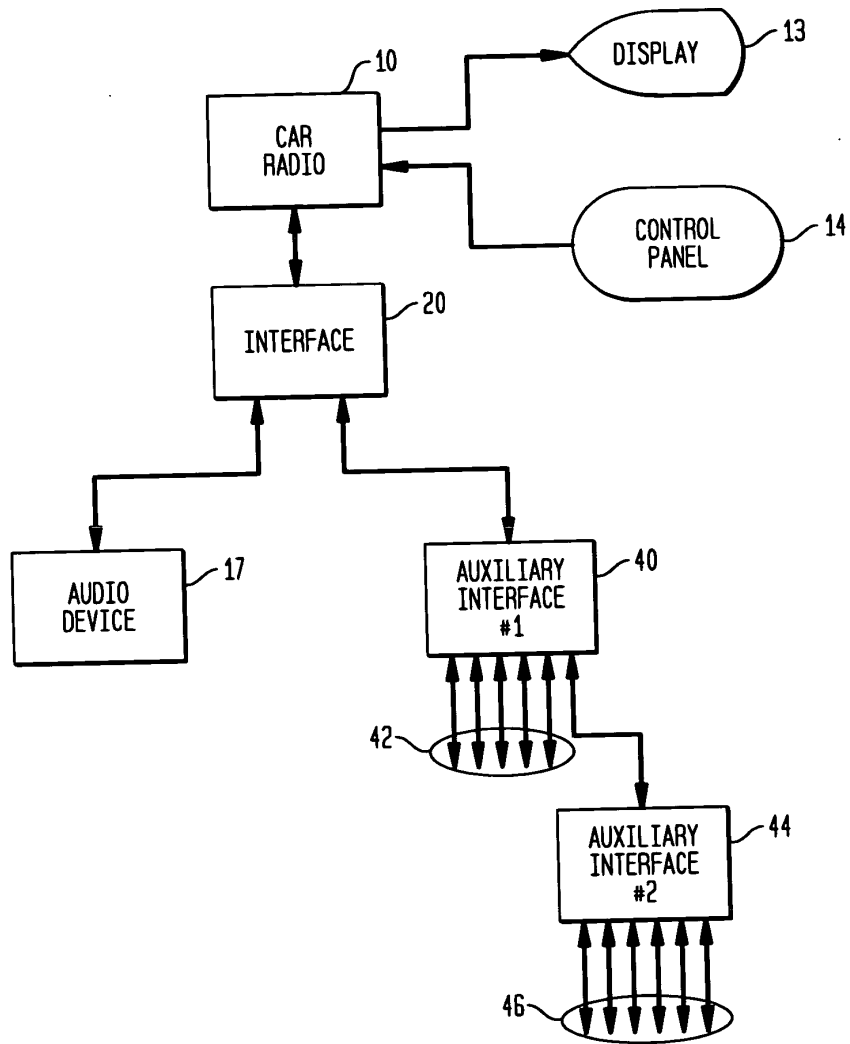




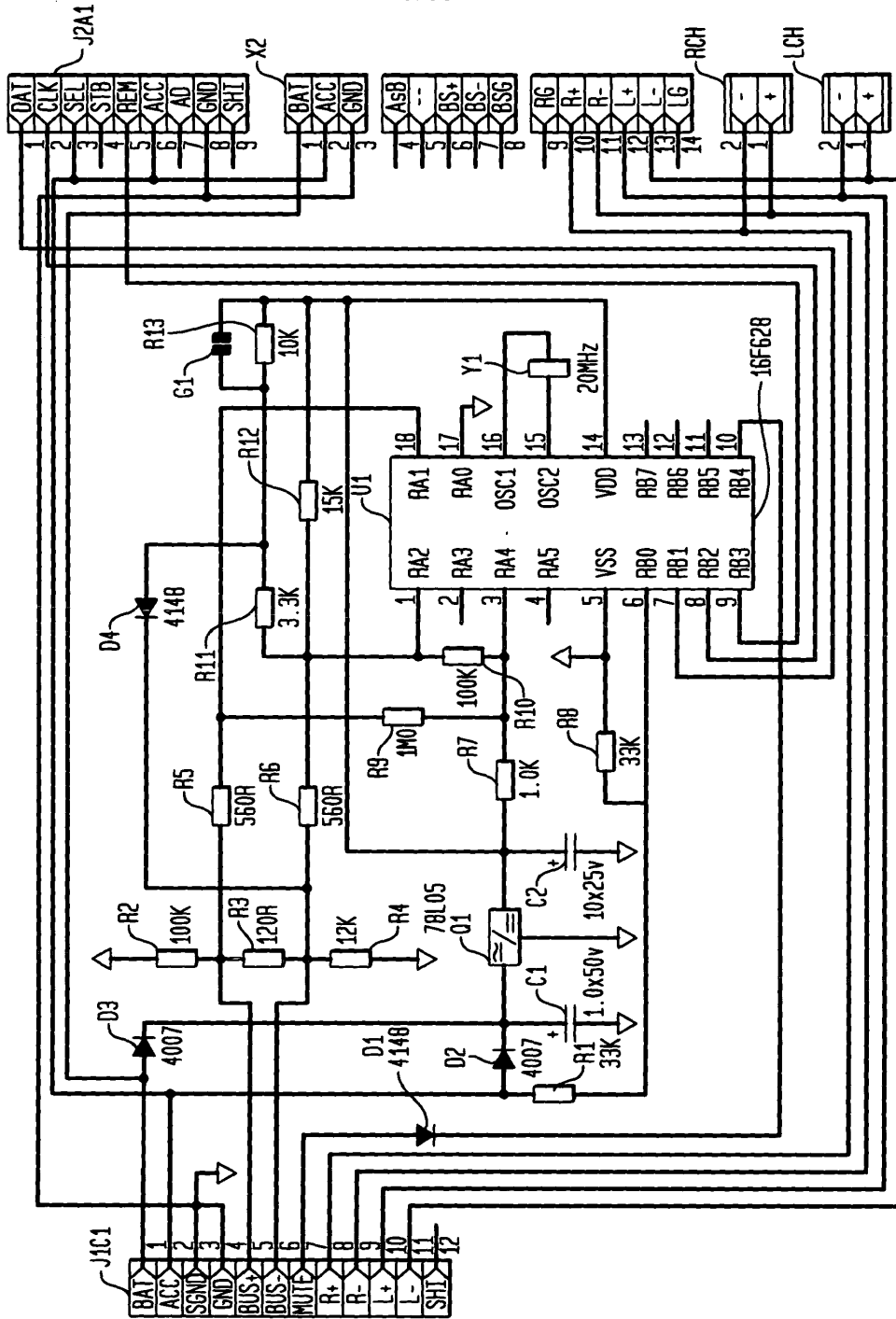
FIG. 2H



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FIG. 3A

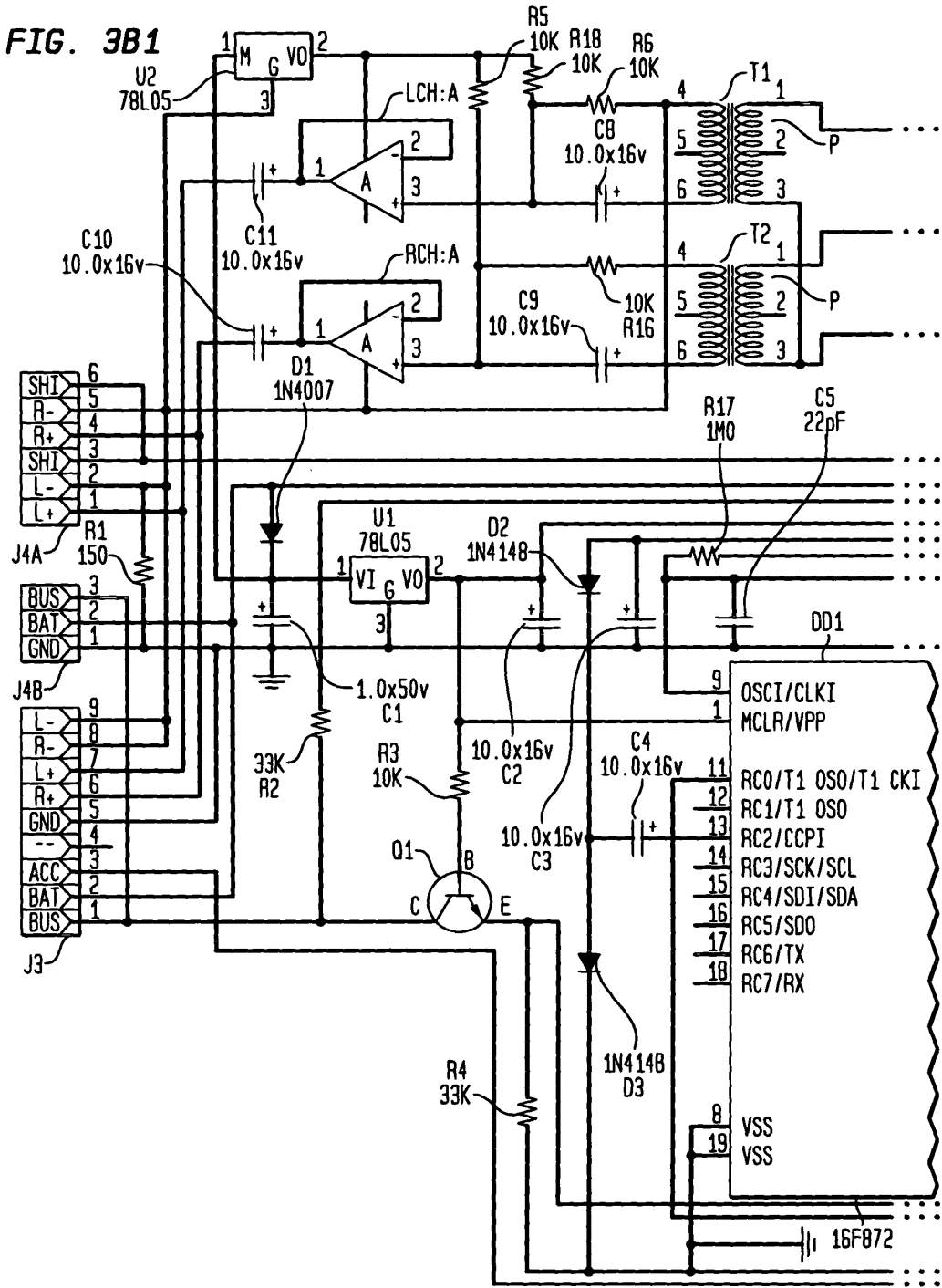




Serial No.: 10/316,961  
 Inventor(s): Ira Marlowe  
 Title: Audio Device Integration System

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FIG. 3B1

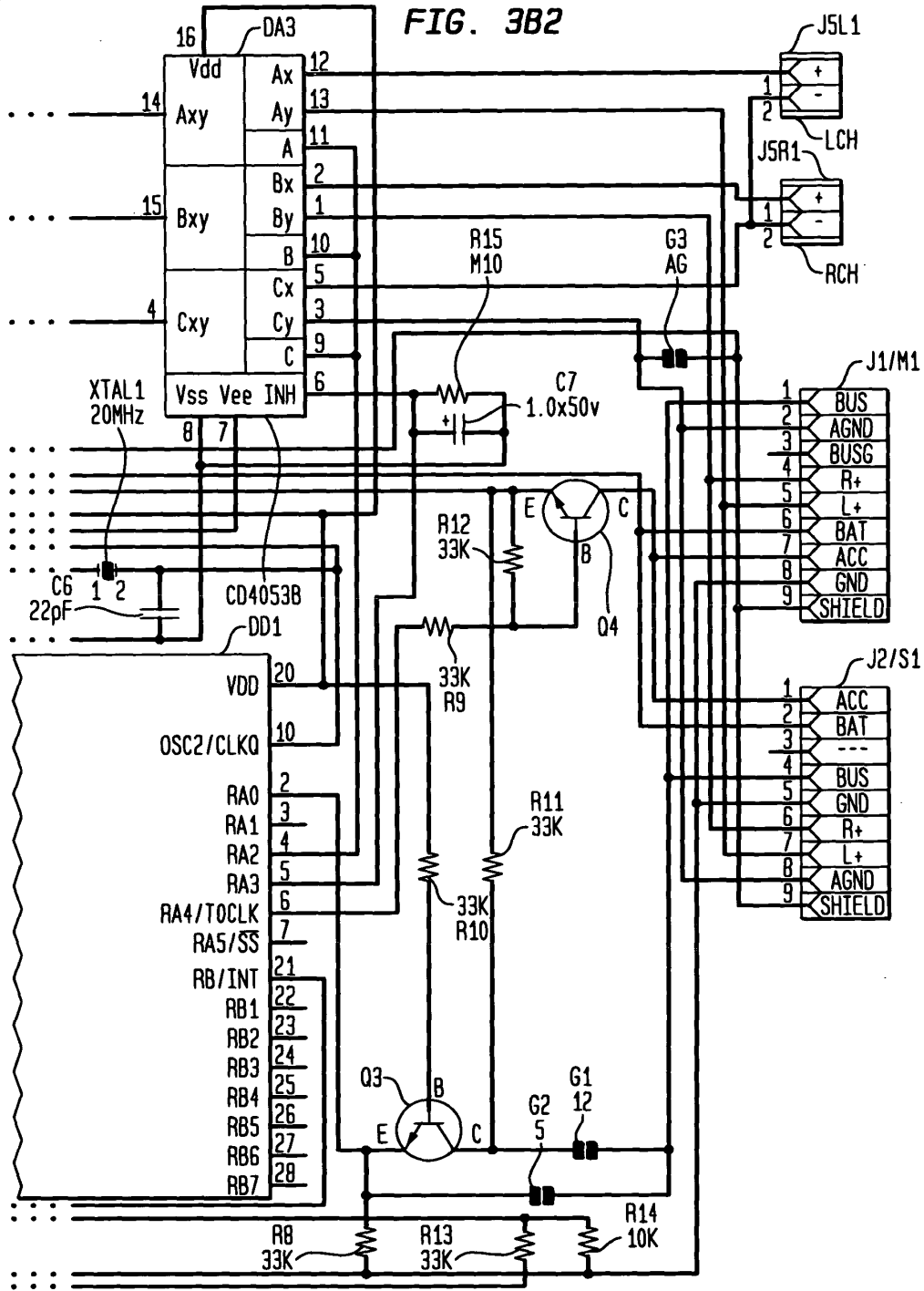




Serial No.: 10/316,961  
 Inventor(s): Ira Marlowe  
 Title: Audio Device Integration System

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FIG. 3B2

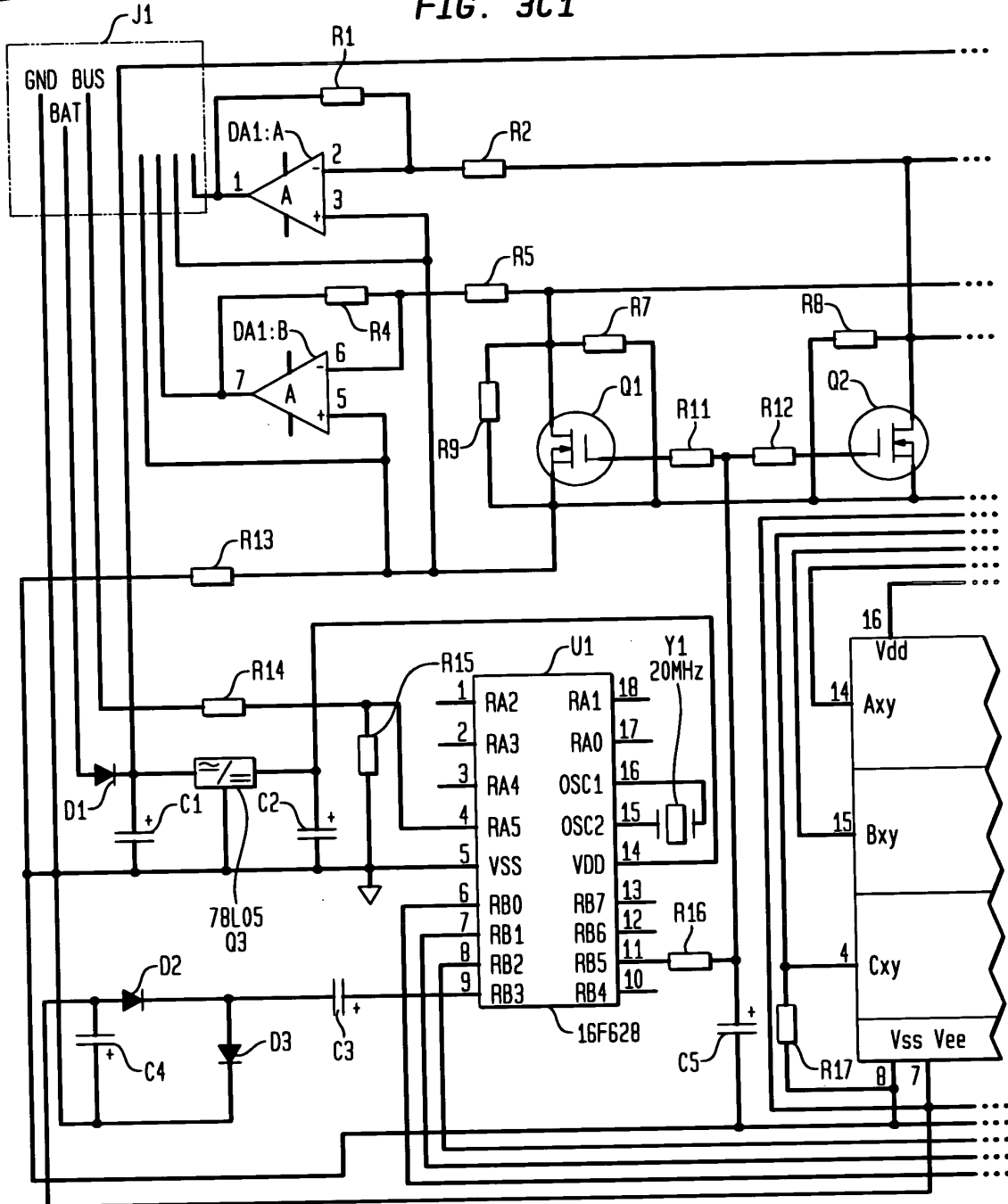






Serial No.: 10/316,961  
 Inventor(s): Ira Marlowe  
 Title: Audio Device Integration System

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**FIG. 3C1**

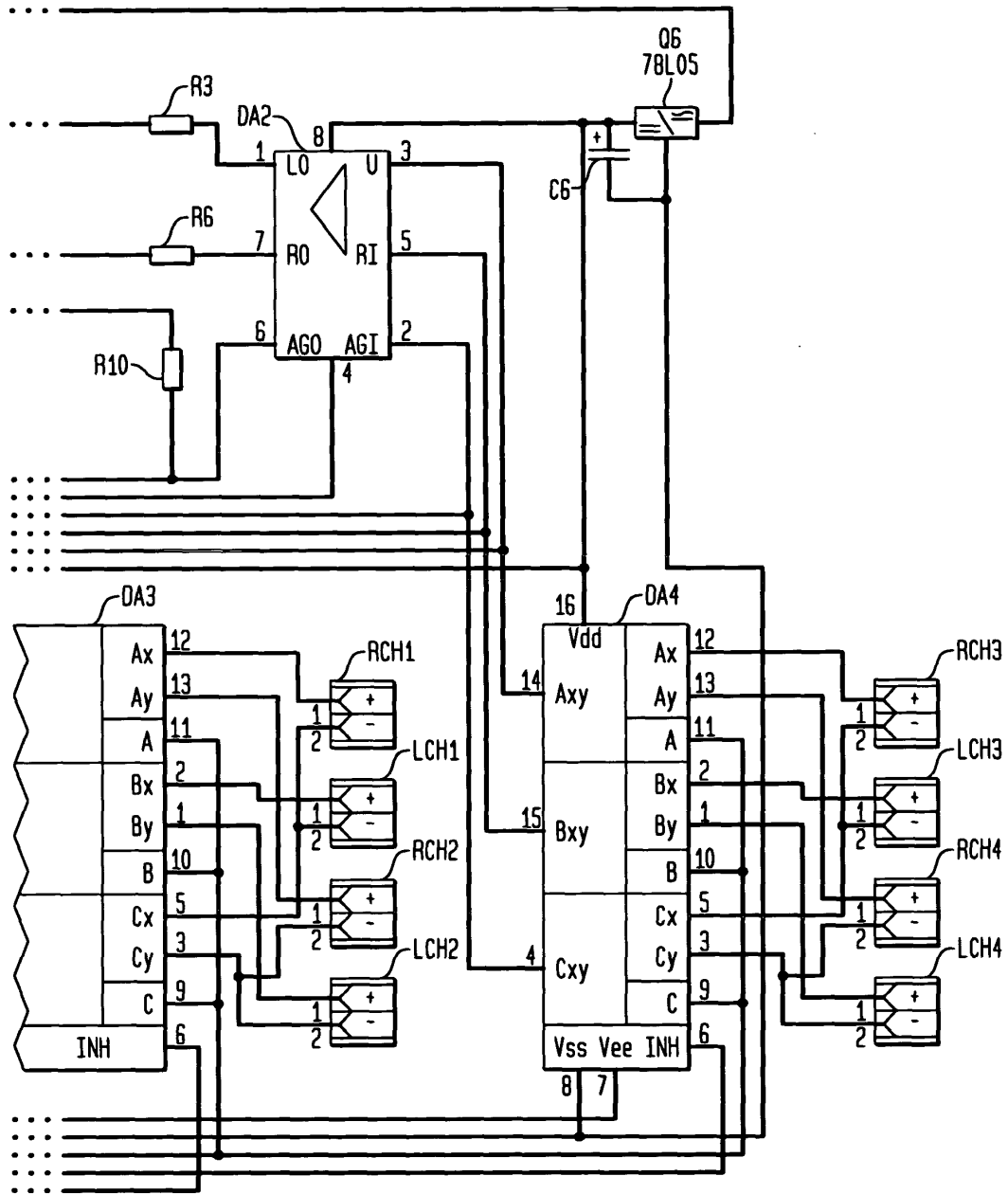




Serial No.: 10/316,961  
Inventor(s): Ira Marlowe  
Title: Audio Device Integration System

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FIG. 3C2

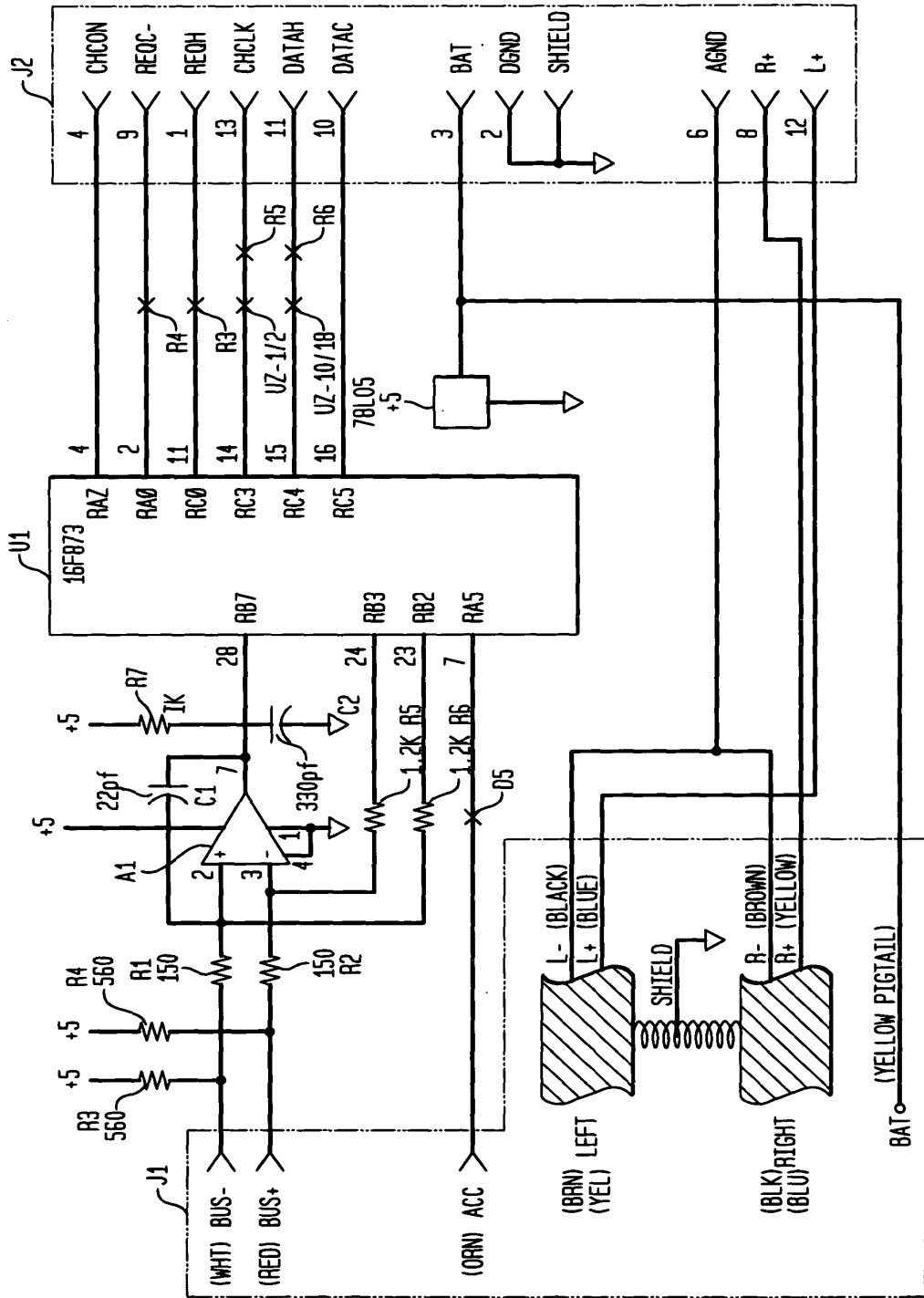




Serial No.: 10/316,961  
 Inventor(s): Ira Marlowe  
 Title: Audio Device Integration System

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FIG. 3D

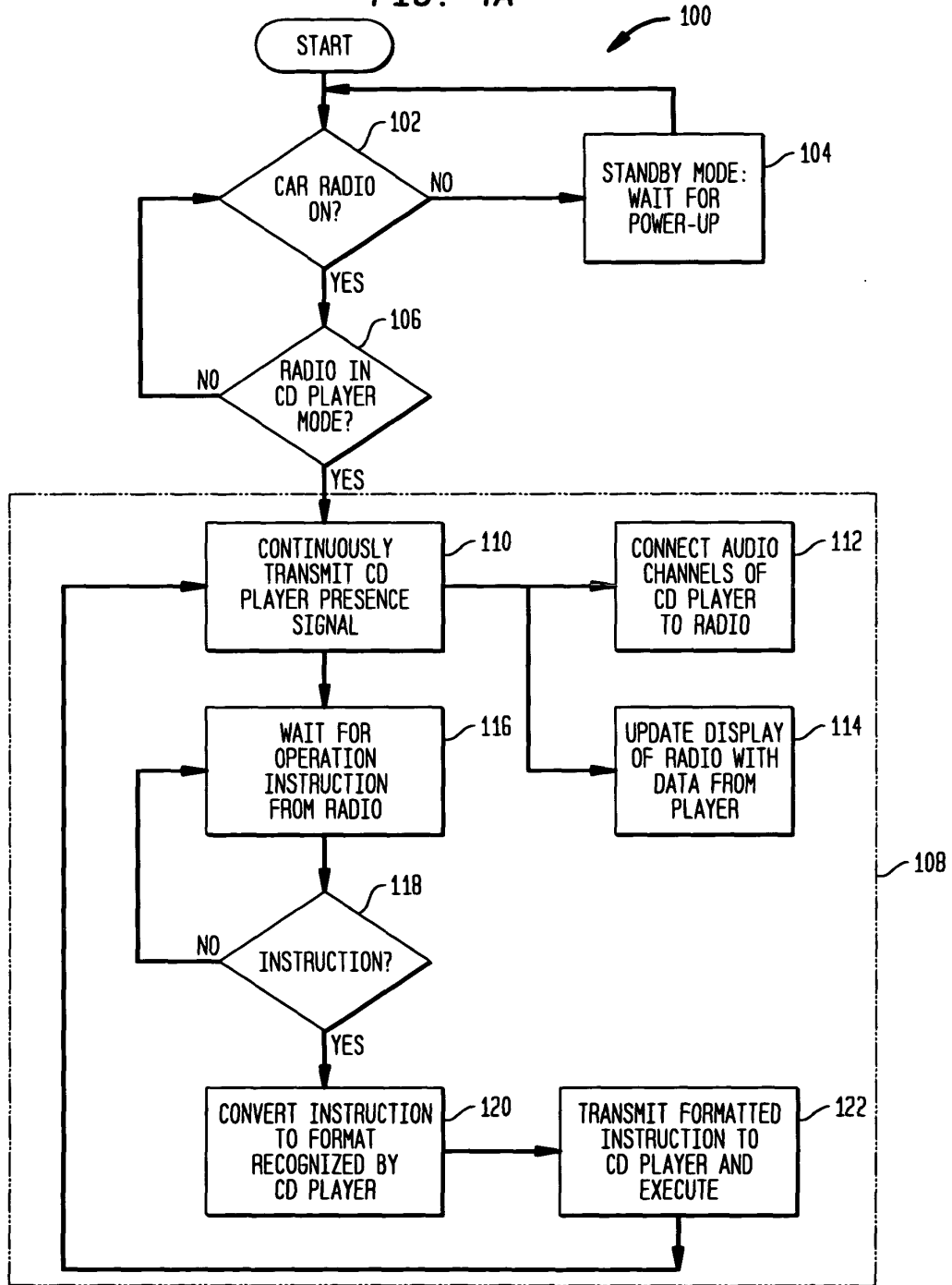




Serial No.: 10/316,961  
Inventor(s): Ira Marlowe  
Title: Audio Device Integration System

12/21

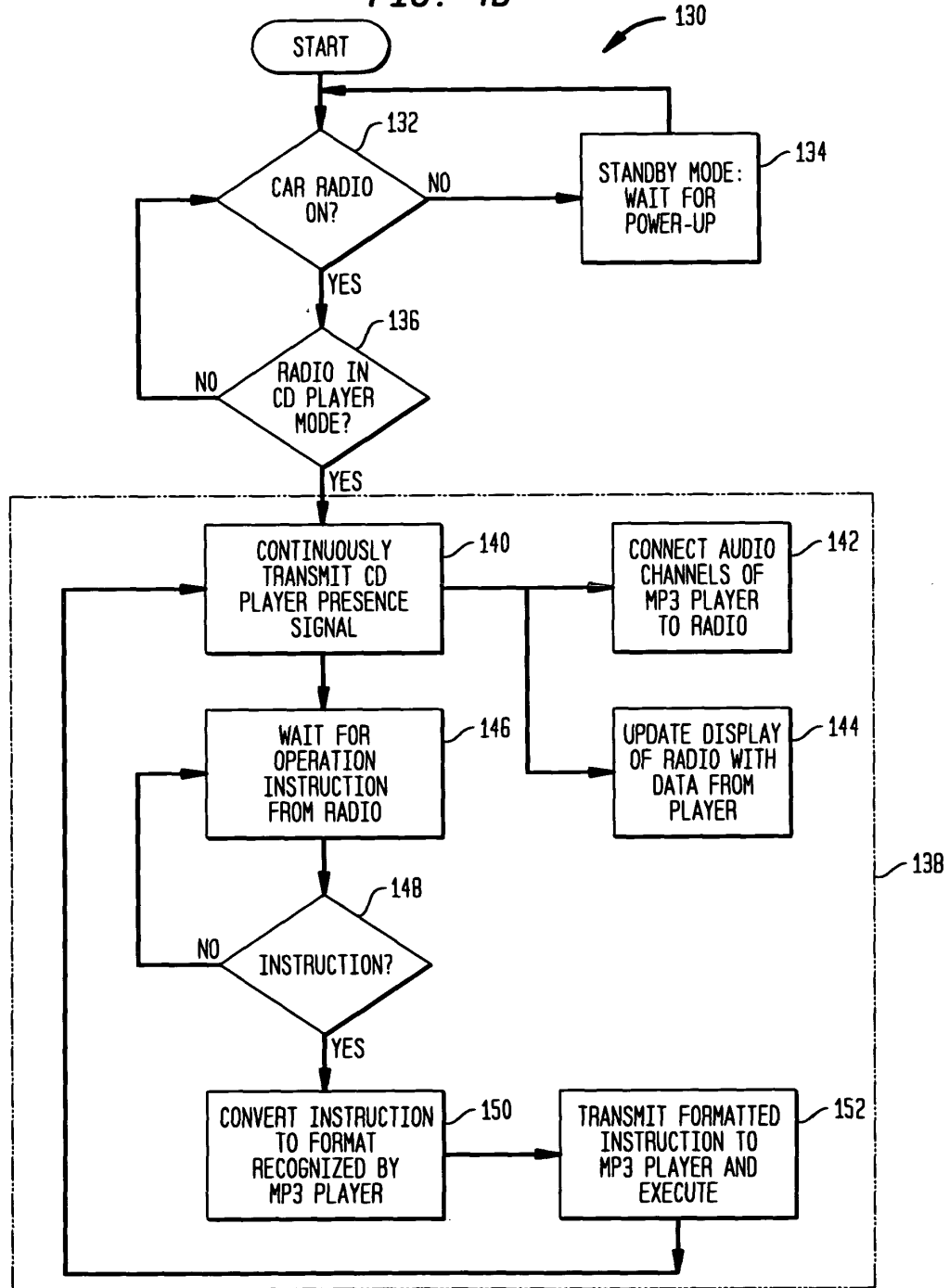
FIG. 4A





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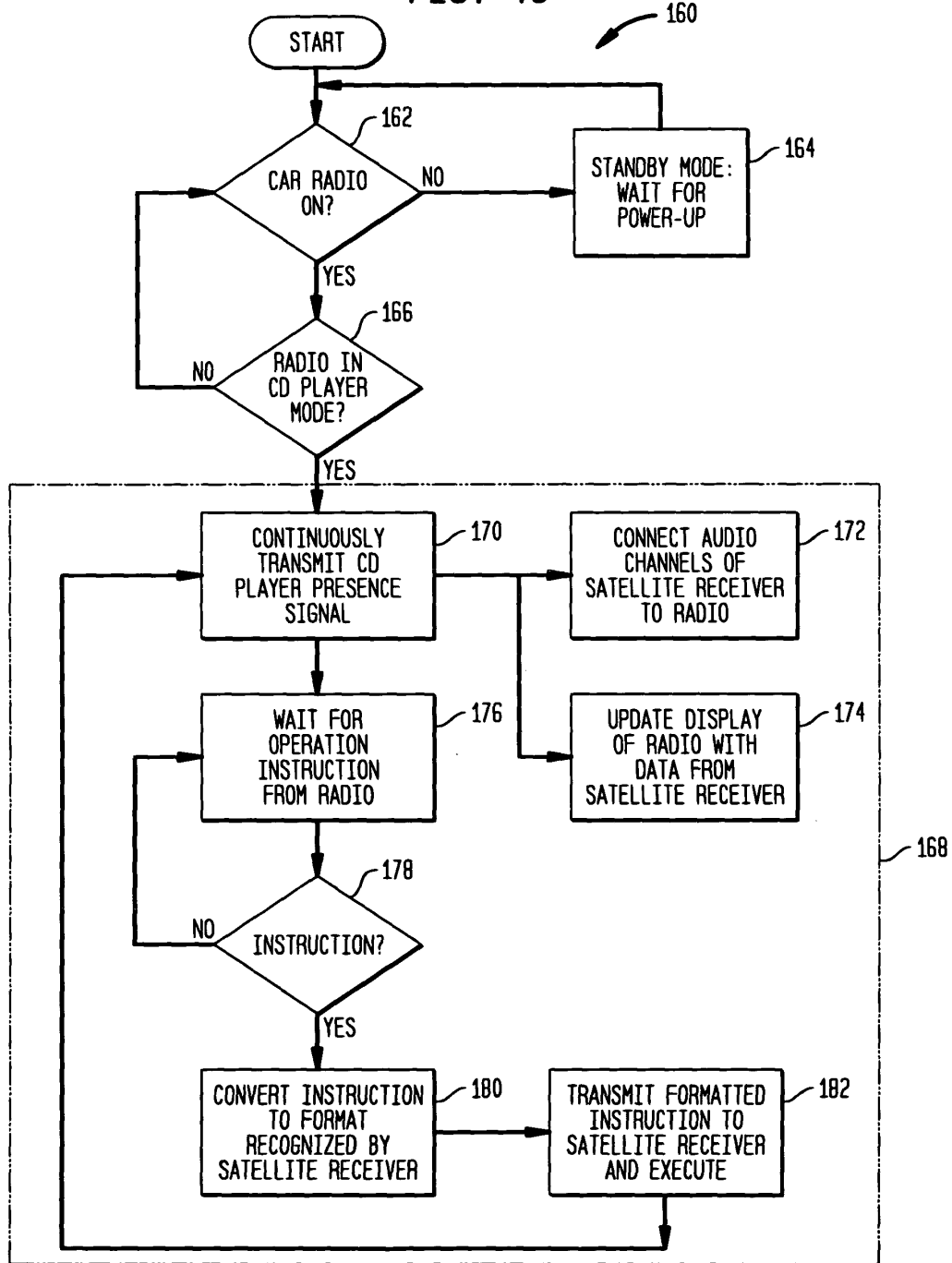
FIG. 4B





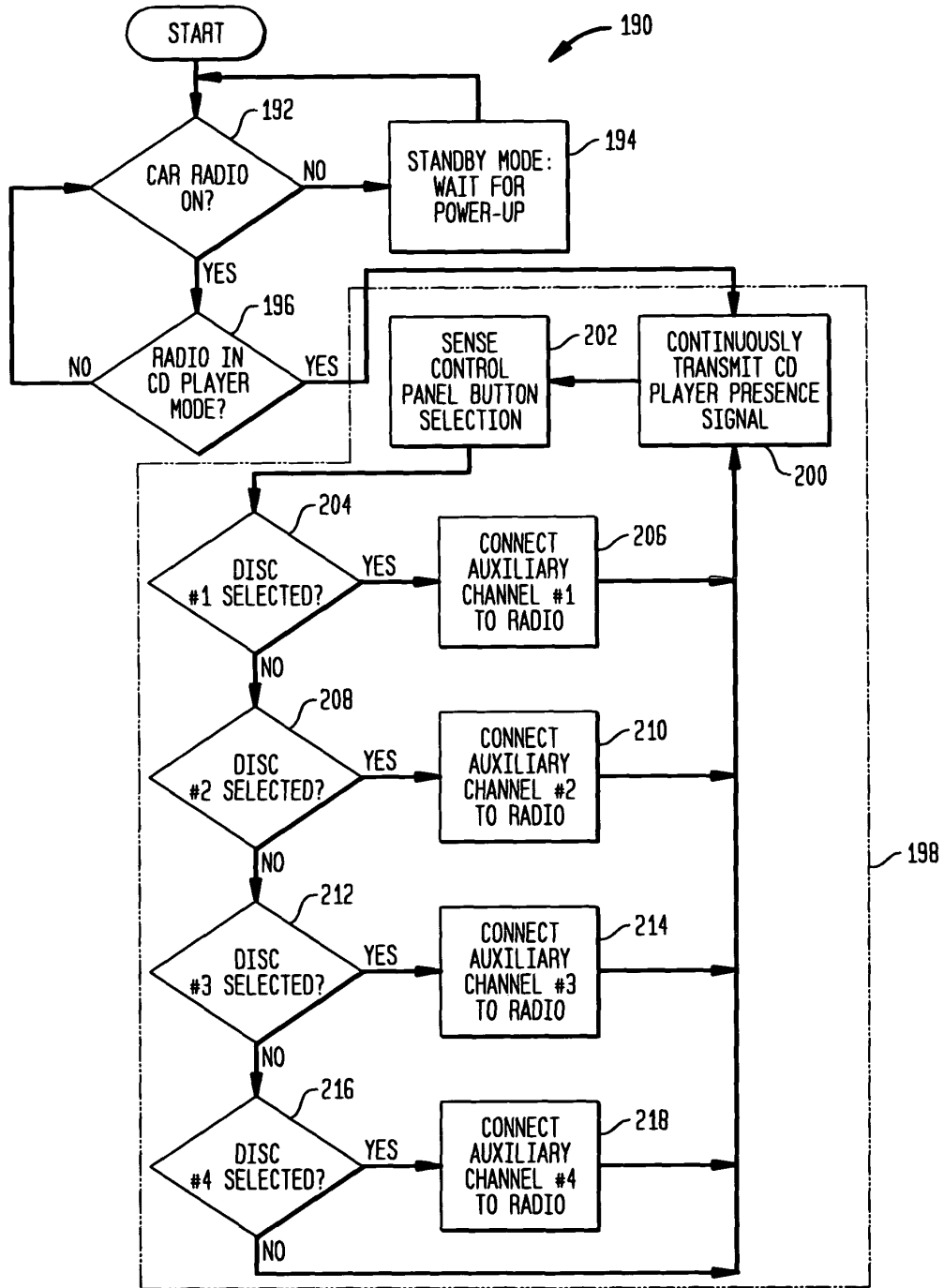
14/21

FIG. 4C



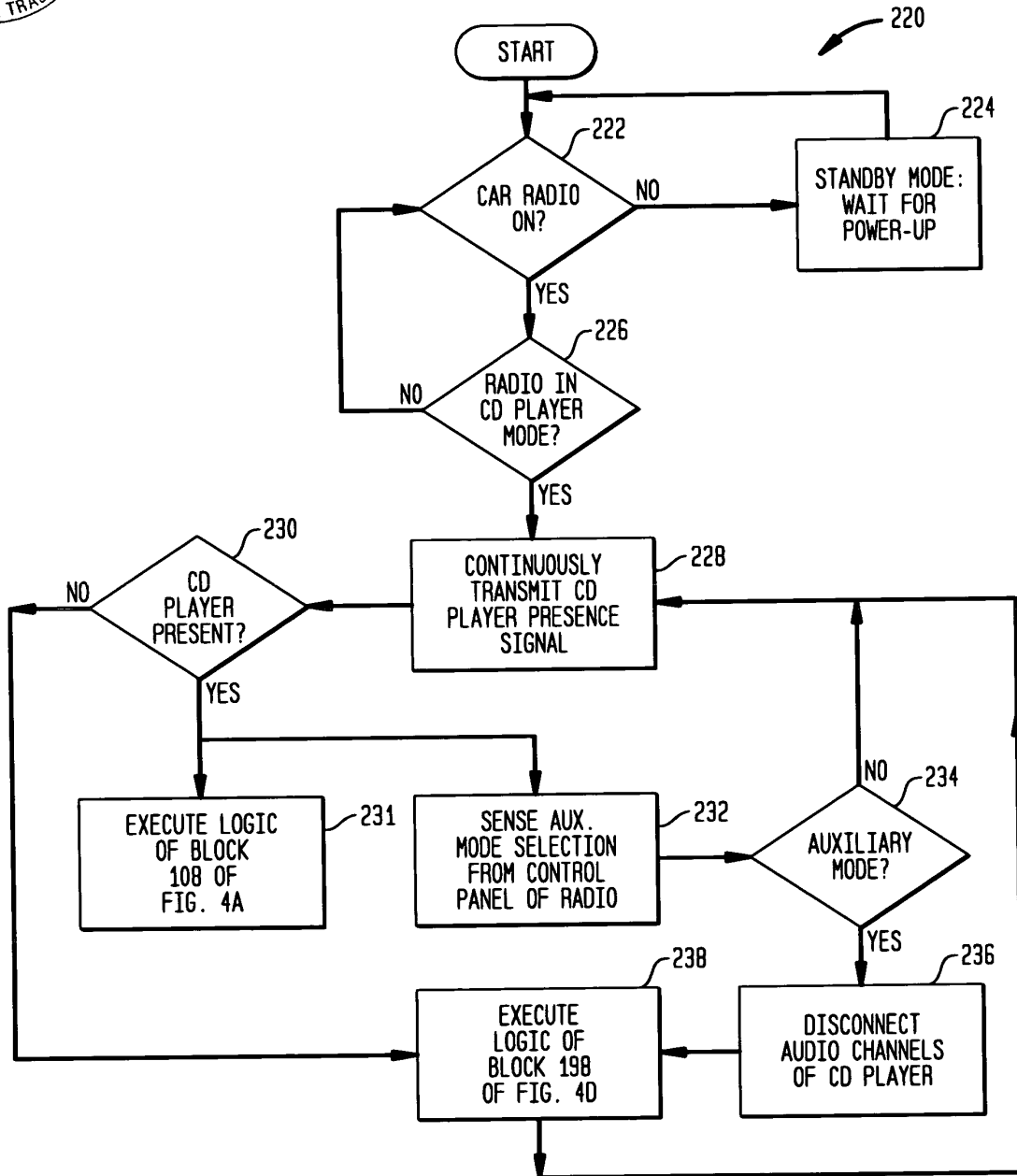


15/21  
FIG. 4D





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FIG. 4E

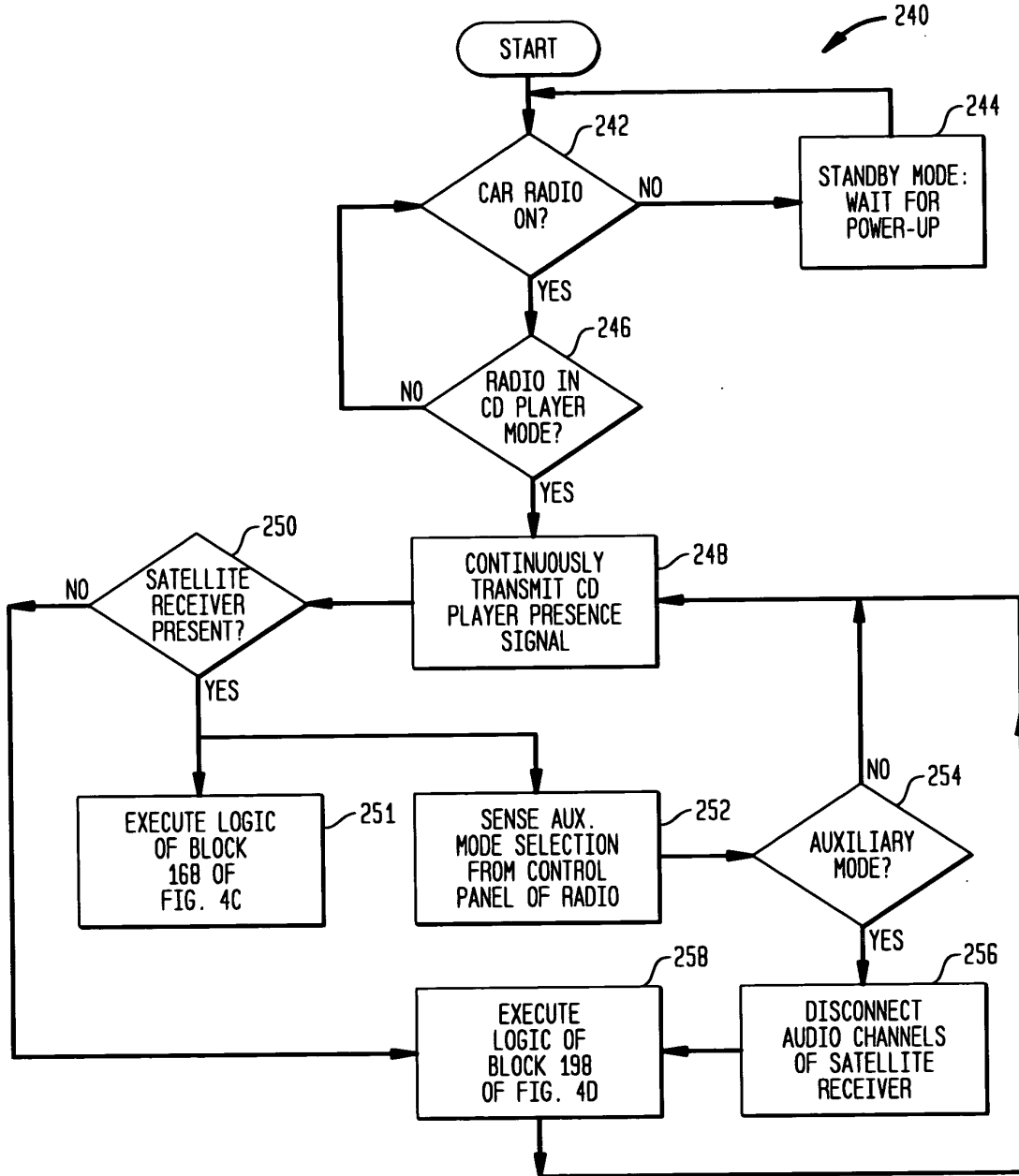






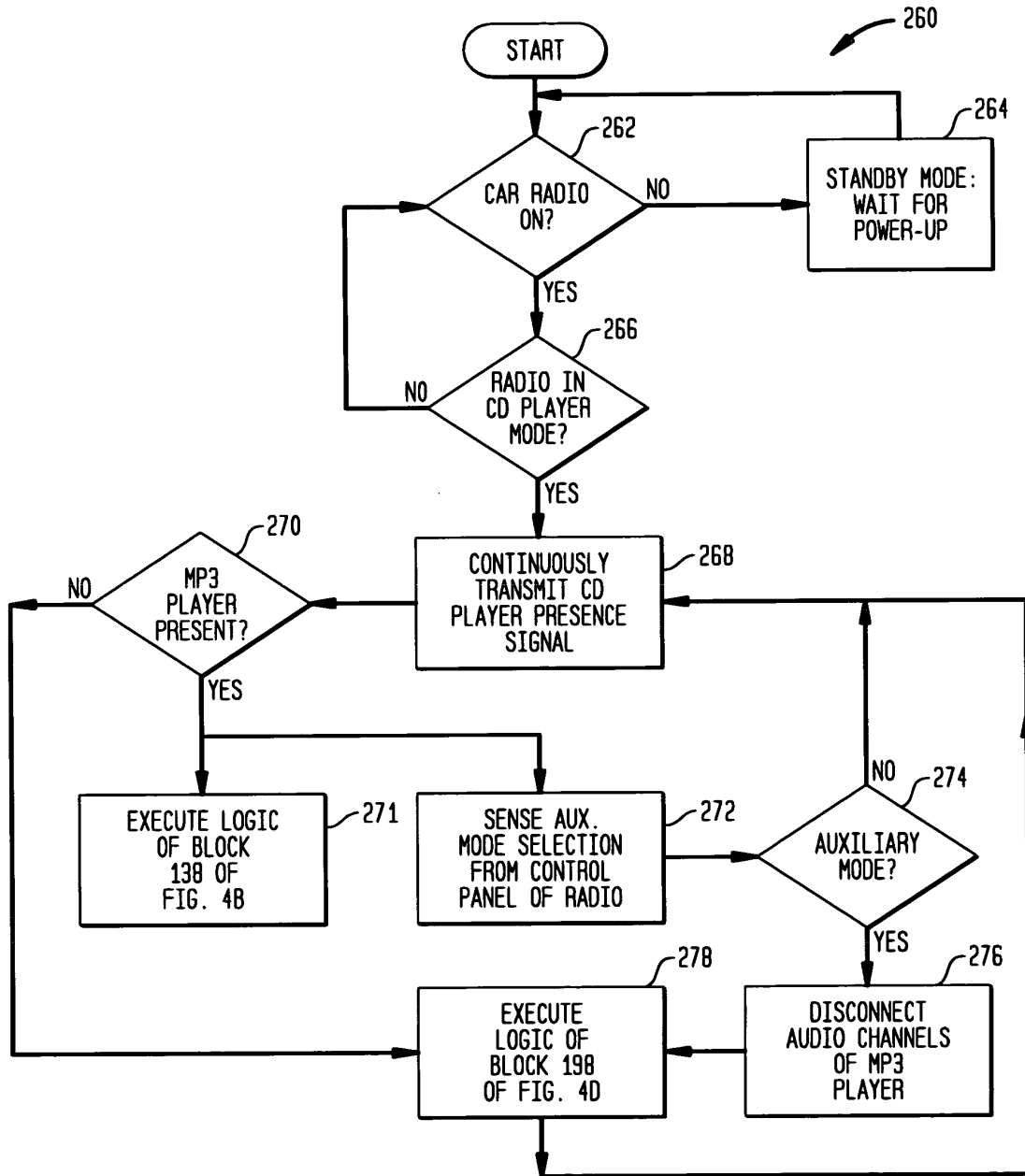
Serial No.: 10/316,961  
Inventor(s): Ira Marlowe  
Title: Audio Device Integration System

17/21  
FIG. 4F



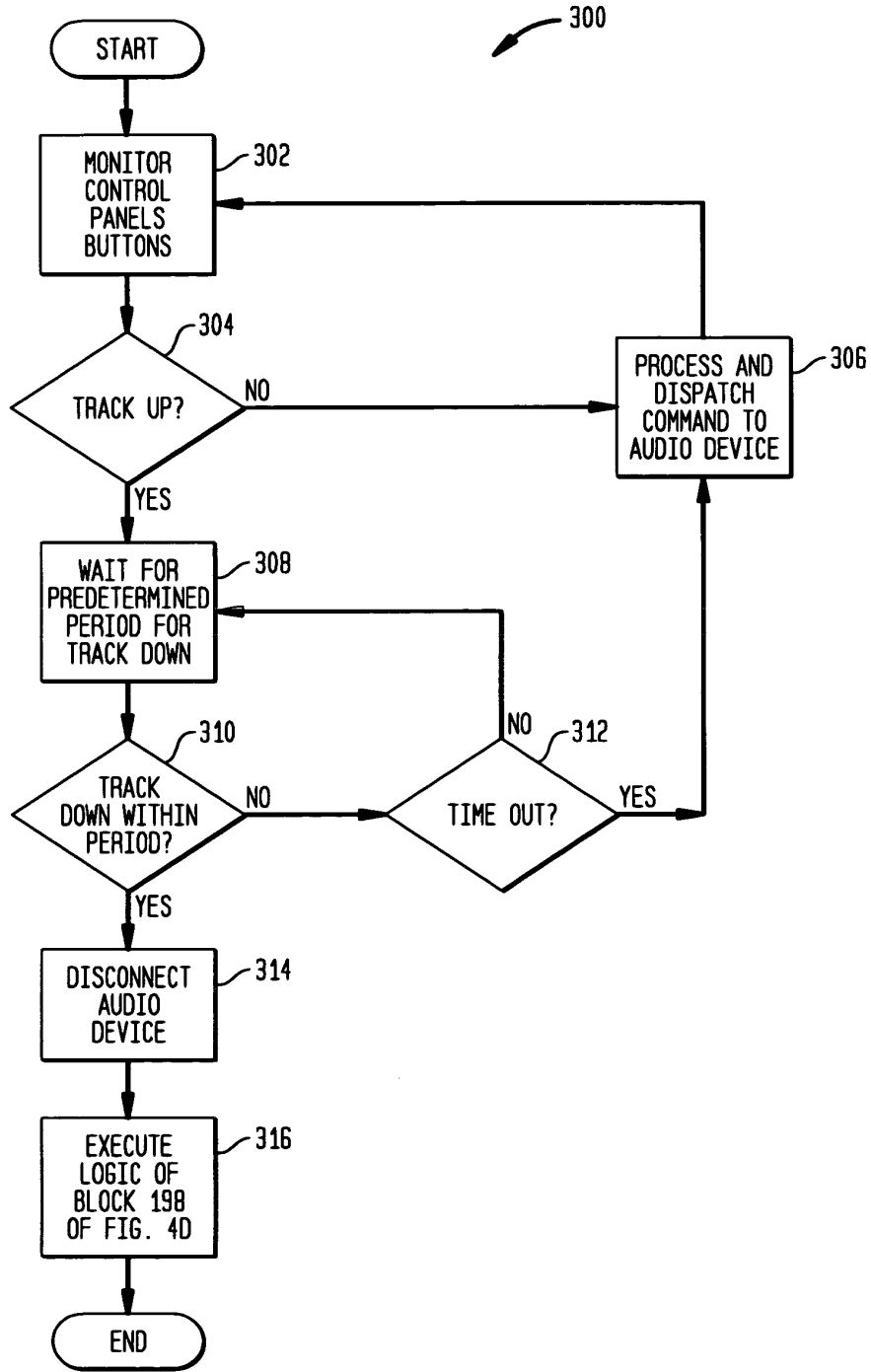


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FIG. 4G





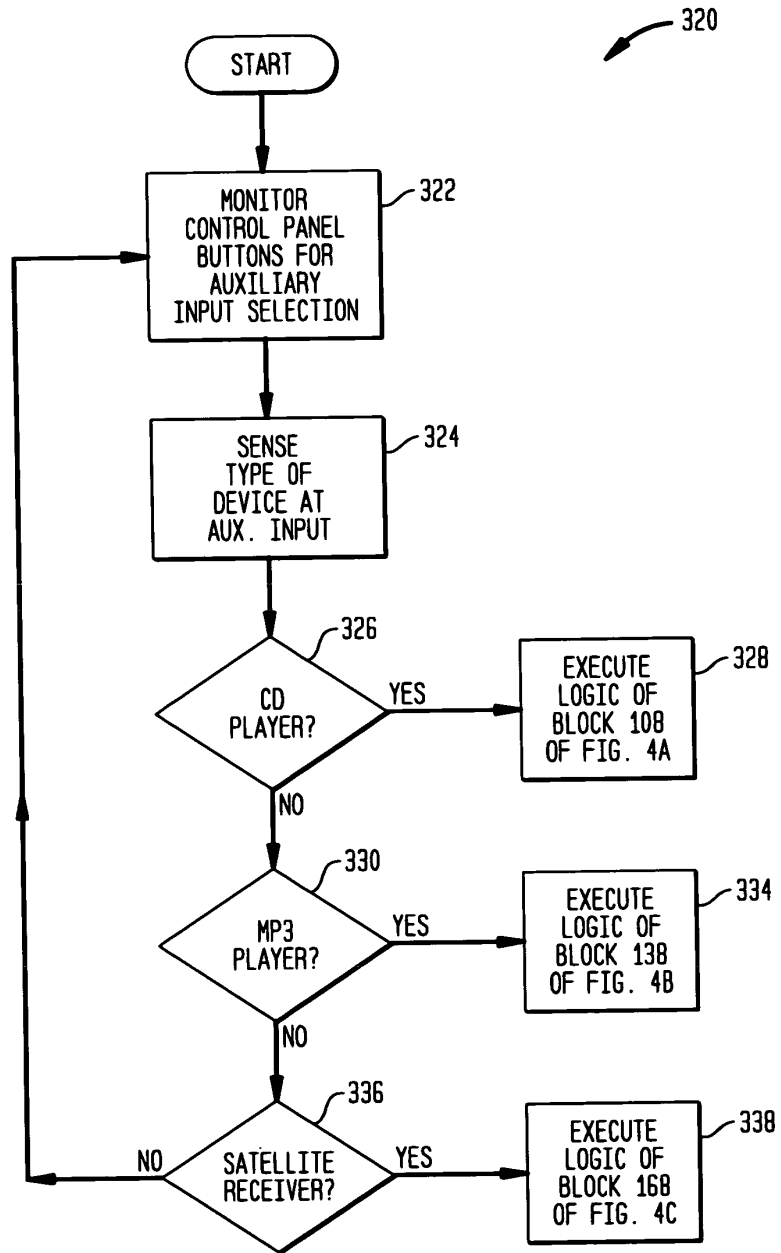
19/21  
FIG. 5





Serial No.: 10/316,961  
Inventor(s): Ira Marlowe  
Title: Audio Device Integration System

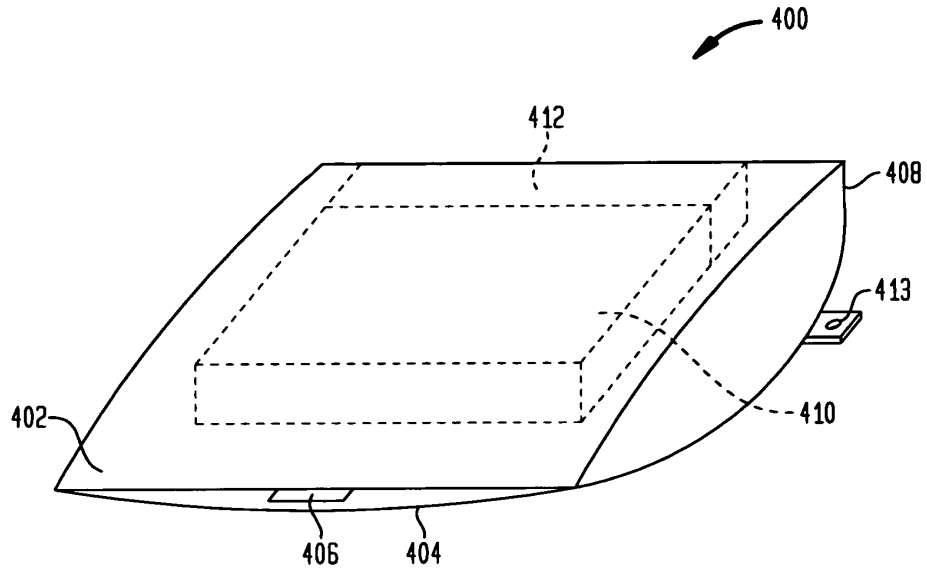
20/21  
FIG. 6



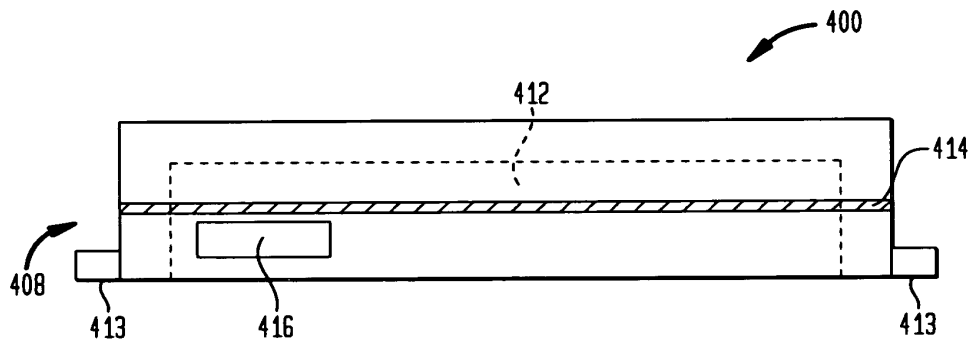


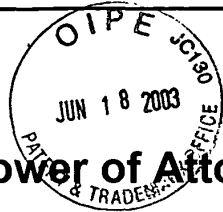
Serial No.: 10/316,961  
Inventor(s): Ira Marlowe  
Title: Audio Device Integration System

21/21  
**FIG. 7A**



**FIG. 7B**





Docket No. 9809/1

# Declaration and Power of Attorney For Patent Application

## English Language Declaration

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name,

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled **Audio Device Integration System**

the specification of which

(check one)

- is attached hereto.
- was filed on 12/11/02 as United States Application No. or PCT International Application Number 10/316,961 and was amended on \_\_\_\_\_ (if applicable)

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, Section 119(a)-(d) or Section 365(b) of any foreign application(s) for patent or inventor's certificate, or Section 365(a) of any PCT International application which designated at least one country other than the United States, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate or PCT International application having a filing date before that of the application on which priority is claimed.

| Prior Foreign Application(s) |           |                        | Priority Not Claimed     |
|------------------------------|-----------|------------------------|--------------------------|
| _____                        | _____     | _____                  | <input type="checkbox"/> |
| (Number)                     | (Country) | (Day/Month/Year Filed) |                          |
| _____                        | _____     | _____                  | <input type="checkbox"/> |
| (Number)                     | (Country) | (Day/Month/Year Filed) |                          |
| _____                        | _____     | _____                  | <input type="checkbox"/> |
| (Number)                     | (Country) | (Day/Month/Year Filed) |                          |

I hereby claim the benefit under 35 U.S.C. Section 119(e) of any United States provisional

|                          |               |
|--------------------------|---------------|
| _____                    | _____         |
| (Application Serial No.) | (Filing Date) |
| _____                    | _____         |
| (Application Serial No.) | (Filing Date) |
| _____                    | _____         |
| (Application Serial No.) | (Filing Date) |

I hereby claim the benefit under 35 U. S. C. Section 120 of any United States application(s), or Section 365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. Section 112, I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, C. F. R., Section 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application:

|                          |               |                                |
|--------------------------|---------------|--------------------------------|
| _____                    | _____         | _____                          |
| (Application Serial No.) | (Filing Date) | (Status)                       |
|                          |               | (patented, pending, abandoned) |
| _____                    | _____         | _____                          |
| (Application Serial No.) | (Filing Date) | (Status)                       |
|                          |               | (patented, pending, abandoned) |
| _____                    | _____         | _____                          |
| (Application Serial No.) | (Filing Date) | (Status)                       |
|                          |               | (patented, pending, abandoned) |

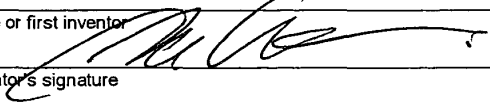
I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith. *(list name and registration number)*

**Michael R. Friscia**  
**Registration No. 33,884**  
**Mark E. Nikolsky**  
**Registration No. 48,319**  
**Raina Semionow**  
**Registration No. 39,022**

Send Correspondence to: **Michael R. Friscia**  
**Wolff & Samson**  
**5 Becker Farm Road**  
**Roseland, NJ 07068-1776**

Direct Telephone Calls to: *(name and telephone number)*  
**Michael R. Friscia (973) 533-6599**

|   |   |                 |
|---|---|-----------------|
| Full name of sole or first inventor<br><b>Ira Marlowe</b>           |  | <b>12/13/02</b> |
| Sole or first inventor's signature                                  |   | Date            |
| Residence<br><b>6403 Hilltop Court, Fort Lee, NJ 07024</b>          |   |                 |
| Citizenship<br><b>USA</b>   |   |                 |
| Post Office Address<br><b>6403 Hilltop Court Fort Lee, NJ 07024</b> |   |                 |

|                                      |      |
|--------------------------------------|------|
| Full name of second inventor, if any |      |
| Second inventor's signature          | Date |
| Residence                            |      |
| Citizenship                          |      |
| Post Office Address                  |      |



5

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Ira Marlowe

Serial No.: 10/316,961

Filed: 12/11/02



AUDIO DEVICE INTEGRATION SYSTEM

**REQUEST FOR EARLY PUBLICATION UNDER 37 C.F.R. § 1.219**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Pursuant to 37 C.F.R. § 1.219, Applicant herewith requests **early publication** of the above-referenced patent application. The required publication fee of \$300.00, set forth in 37 C.F.R. § 1.18(d), accompanies the within request.

08/04/2003 UEDUVIJE 00000004 062143 10316961

01 FC:1504 300.00 DA

Dated: 6/16/03

Respectfully submitted,

Michael R. Friscia  
Reg. No. 33,884  
Attorney for Applicant  
Wolff & Samson PC  
One Boland Drive  
West Orange, NJ 07052  
Tel.: (973) 530-2024  
Fax: (973) 530-2224

812795.01



Commissioner for Patents  
Washington, DC 20231  
www.uspto.gov

| APPLICATION NUMBER | FILING/RECEIPT DATE | FIRST NAMED APPLICANT | ATTORNEY DOCKET NUMBER |
|--------------------|---------------------|-----------------------|------------------------|
| 10/316,961         | 12/11/2002          | Ira Marlowe           | 9809/1                 |

Wolff & Samson  
5 Becker Farm Road  
Roseland, NJ 07068-1776

CONFIRMATION NO. 4879

FORMALITIES LETTER



\*OC00000009398036\*

Date Mailed: 01/17/2003

**NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION**

FILED UNDER 37 CFR 1.53(b)

*Filing Date Granted*

**Items Required To Avoid Abandonment:**

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items and pay any fees required below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The statutory basic filing fee is missing.  
*Applicant must submit \$ 370 to complete the basic filing fee for a small entity.*
- The oath or declaration is missing.  
*A properly signed oath or declaration in compliance with 37 CFR 1.63, identifying the application by the above Application Number and Filing Date, is required.*
- To avoid abandonment, a late filing fee or oath or declaration surcharge as set forth in 37 CFR 1.16(e) of \$65 for a small entity in compliance with 37 CFR 1.27, must be submitted with the missing items identified in this letter.

The application is informal since it does not comply with the regulations for the reason(s) indicated below.

The required item(s) identified below must be timely submitted to avoid abandonment:

- Replacement drawings in compliance with 37 CFR 1.84 and 37 CFR 1.121 are required. The drawings submitted are not acceptable because:
  - The drawings must be reasonably free from erasures and must be free from alterations, overwriting, interlineations, folds, and copy marks. See Figure(s) 3d.
  - Numbers, letters, and reference characters on the drawings must measure at least 0.32 cm (1/8 inch) in height. See Figure(s) 3b.

**Items Required To Avoid Processing Delays:**

The item(s) indicated below are also required and should be submitted with any reply to this notice to avoid further processing delays.

- Additional claim fees of **\$390** as a small entity, including any required multiple dependent claim fee, are required. Applicant must submit the additional claim fees or cancel the additional claims for which fees are due.

**SUMMARY OF FEES DUE:**

Total additional fee(s) required for this application is **\$825** for a Small Entity

- **\$370** Statutory basic filing fee.
- **\$65** Late oath or declaration Surcharge.
- Total additional claim fee(s) for this application is **\$390**
  - **\$306** for **34** total claims over 20 .
  - **\$84** for **2** independent claims over 3 .

---

*A copy of this notice **MUST** be returned with the reply.*

*Eg*

---

Customer Service Center  
Initial Patent Examination Division (703) 308-1202

PART 3 - OFFICE COPY

12-12-02

AS

12/11/02

J1054 U.S. PTO

# UTILITY PATENT APPLICATION TRANSMITTAL (Small Entity)

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Docket No.  
9809/1

Total Pages in this Submission  
86

**TO THE ASSISTANT COMMISSIONER FOR PATENTS**  
Box Patent Application  
Washington, D.C. 20231

Transmitted herewith for filing under 35 U.S.C. 111(a) and 37 C.F.R. 1.53(b) is a new utility patent application for an invention entitled:

Audio Device Integration System

and invented by:

Ira Marlowe

If a CONTINUATION APPLICATION, check appropriate box and supply the requisite information:

Continuation  Divisional  Continuation-in-part (CIP) of prior application No.: \_\_\_\_\_

Which is a:

Continuation  Divisional  Continuation-in-part (CIP) of prior application No.: \_\_\_\_\_

Which is a:

Continuation  Divisional  Continuation-in-part (CIP) of prior application No.: \_\_\_\_\_

Enclosed are:

### Application Elements

1.  Filing fee as calculated and transmitted as described below
2.  Specification having 56 pages and including the following:
  - a.  Descriptive Title of the Invention
  - b.  Cross References to Related Applications (if applicable)
  - c.  Statement Regarding Federally-sponsored Research/Development (if applicable)
  - d.  Reference to Sequence Listing, a Table, or a Computer Program Listing Appendix
  - e.  Background of the Invention
  - f.  Brief Summary of the Invention
  - g.  Brief Description of the Drawings (if filed)
  - h.  Detailed Description
  - i.  Claim(s) as Classified Below
  - j.  Abstract of the Disclosure

J1054 U.S. PTO  
12/11/02

**UTILITY PATENT APPLICATION TRANSMITTAL  
(Small Entity)**

*(Only for new nonprovisional applications under 37 CFR 1.53(b))*

Docket No.  
9809/1

Total Pages in this Submission  
86

**Application Elements (Continued)**

3.  Drawing(s) *(when necessary as prescribed by 35 USC 113)*
  - a.  Formal      Number of Sheets \_\_\_\_\_
  - b.  Informal      Number of Sheets      24
4.  Oath or Declaration
  - a.  Newly executed *(original or copy)*       Unexecuted
  - b.  Copy from a prior application (37 CFR 1.63(d)) *(for continuation/divisional application only)*
  - c.  With Power of Attorney       Without Power of Attorney
  - d.  **DELETION OF INVENTOR(S)**  
Signed statement attached deleting inventor(s) named in the prior application, see 37 C.F.R. 1.63(d)(2) and 1.33(b).
5.  Incorporation By Reference *(usable if Box 4b is checked)*  
The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied under Box 4b, is considered as being part of the disclosure of the accompanying application and is hereby incorporated by reference therein.
6.  CD ROM or CD-R in duplicate, large table or Computer Program (Appendix)
7.  Application Data Sheet (See 37 CFR 1.76)
8.  Nucleotide and/or Amino Acid Sequence Submission *(if applicable, all must be included)*
  - a.  Computer Readable Form (CFR)
  - b.  Specification Sequence Listing on:
    - i.  CD-ROM or CD-R (2 copies); or
    - ii.  Paper
  - c.  Statement(s) Verifying Identical Paper and Computer Readable Copy

**Accompanying Application Parts**

9.  Assignment Papers (cover sheet & document(s))
10.  37 CFR 3.73(B) Statement (when there is an assignee)
11.  English Translation Document (if applicable)
12.  Information Disclosure Statement/PTO-1449       Copies of IDS Citations
13.  Preliminary Amendment
14.  Return Receipt Postcard (MPEP 503) (Should be specifically itemized)
15.  Certified Copy of Priority Document(s) (if foreign priority is claimed)
16.  Certificate of Mailing
 

First Class       Express Mail *(Specify Label No.):* EL548971255US

**UTILITY PATENT APPLICATION TRANSMITTAL  
(Small Entity)**

*(Only for new nonprovisional applications under 37 CFR 1.53(b))*

Docket No.  
9809/1

Total Pages in this Submission  
86

**Accompanying Application Parts (Continued)**

- 17.  Applicant claims small entity status. See 37 CFR 1.27.  
 (Optional) Small Entity Statement(s) - Specify Number of Statements Submitted: \_\_\_\_\_

- 18.  Additional Enclosures *(please identify below)*:

**Request That Application Not Be Published Pursuant To 35 U.S.C. 122(b)(2)**

- 19.  Pursuant to 35 U.S.C. 122(b)(2), Applicant hereby requests that this patent application not be published pursuant to 35 U.S.C. 122(b)(1). Applicant hereby certifies that the invention disclosed in this application has not and will not be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication of applications 18 months after filing of the application.

**Warning**

***An applicant who makes a request not to publish, but who subsequently files in a foreign country or under a multilateral international agreement specified in 35 U.S.C. 122(b)(2)(B)(i), must notify the Director of such filing not later than 45 days after the date of the filing of such foreign or international application. A failure of the applicant to provide such notice within the prescribed period shall result in the application being regarded as abandoned, unless it is shown to the satisfaction of the Director that the delay in submitting the notice was unintentional.***

12/11/02  
 31054 U.S. PTO

**UTILITY PATENT APPLICATION TRANSMITTAL  
 (Small Entity)**

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Docket No.  
 9809/1

Total Pages in this Submission  
 86

**Fee Calculation and Transmittal**

**CLAIMS AS FILED**

| For  | #Filed | #Allowed | #Extra | Rate      | Fee             |
|--|--------|----------|--------|-----------|-----------------|
| Total Claims   | 54     | - 20 =   | 34     | x \$9.00  | \$306.00        |
| Indep. Claims  | 5      | - 3 =    | 2      | x \$42.00 | \$84.00         |
| Multiple Dependent Claims (check if applicable) <input type="checkbox"/> |        |          |        |           | \$0.00          |
| <b>BASIC FEE</b>   |        |          |        |           | \$370.00        |
| OTHER FEE (specify purpose) _____  |        |          |        |           | \$0.00          |
| <b>TOTAL FILING FEE</b>  |        |          |        |           | <b>\$760.00</b> |

- A check in the amount of \_\_\_\_\_ to cover the filing fee is enclosed.
- The Commissioner is hereby authorized to charge and credit Deposit Account No. \_\_\_\_\_ as described below. A duplicate copy of this sheet is enclosed.
  - Charge the amount of \_\_\_\_\_ as filing fee.
  - Credit any overpayment.
  - Charge any additional filing fees required under 37 C.F.R. 1.16 and 1.17.
  - Charge the issue fee set in 37 C.F.R. 1.18 at the mailing of the Notice of Allowance, pursuant to 37 C.F.R. 1.311(b).

Dated:

12/11/02



Signature

**Michael R. Friscia**  
 Registration No. 33,884  
 Wolff & Samson  
 5 Becker Farm Road  
 Roseland, NJ 07068-1776  
 Tel: (973) 533-6599  
 Fax: (973) 436-4499

cc:

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Box: Patent Application  
Assistant Commissioner for Patents  
Washington, D.C. 20231

Re: Our file: 9809/1  
Applicant: Ira Marlowe  
Serial No.:  
Filing Date:  
Title: Audio Device Integration System

Sir:  
Enclosed for filing in the United States Patent and Trademark Office is the following:

- 1. Patent Application (56 pages)
- 2. Utility Patent Application Transmittal
- 3. Informal Drawings (FIG. 1-7), 24 pages
- 4. Transmittal Sheet
- 5. Postcard Receipt

CONDITIONAL PETITION

If any extension of time is required for the submission of the above-identified items, Applicant requests that this be considered a petition therefor. Please charge any additional charges or any other charges relating to this matter to deposit account of the writer, **Account No. 06-2143**. A duplicate copy of this letter is enclosed.

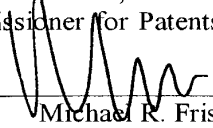
12/11/02  
Date

enc.

Respectfully submitted,

  
Michael R. Friscia  
Registration No. 33,884  
Wolff & Samson  
5 Becker Farm Road  
Roseland, NJ 07068-1776  
Tel: (973) 533-6599  
Fax: (973) 436-4499

I hereby certify that this correspondence is being deposited with the United States Postal Service, postage prepaid, as "Express Mail Post Office to Addressee," Mailing Label No. EL548971255US to Box: Patent Application, Assistant Commissioner for Patents, Washington, D.C. 20231 on 12/11/02.

By:   
Michael R. Friscia



Express Mail Label No.: EL548971255US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

INVENTOR: IRA MARLOWE  
 5 TITLE: AUDIO DEVICE INTEGRATION SYSTEM

SPECIFICATION

10 BACKGROUND OF THE INVENTION

FIELD OF THE INVENTION

The present invention relates to an audio device integration system. More specifically,  
 15 the present invention relates to an audio device integration system for integrating after-market  
 components such as satellite receivers, CD players, CD changers, MP3 players, Digital Audio  
 Broadcast (DAB) receivers, auxiliary audio sources, and the like with factory-installed (OEM) or  
 after-market car stereo systems.

20 RELATED ART

Automobile audio systems have continued to advance in complexity and the number of  
 options available to automobile purchasers. Early audio systems offered a simple AM and/or  
 FM tuner, and perhaps an analog tape deck for allowing cassettes, 8-tracks, and other types of  
 tapes to be played while driving. Such early systems were closed, in that external devices could  
 25 not be easily integrated therewith.

With advances in digital technology, CD players have been included with automobile  
 audio systems. Original Equipment Manufacturers (OEMs) often produce car stereos having CD  
 players and/or changers for allowing CDs to be played while driving. However, such systems

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often include proprietary buses and protocols that do not allow after-market audio systems, such as satellite receivers (e.g., XM satellite tuners), digital audio broadcast (DAB) receivers, MP3 players, CD changers, auxiliary input sources, and the like, to be easily integrated therewith. Thus, automobile purchasers are frequently forced to either entirely replace the OEM audio system, or use same throughout the life of the vehicle or the duration of ownership. Even if the OEM radio is replaced with an after-market radio, the after-market radio also frequently is not operable with an external device.

A particular problem with integrating after-market audio systems with existing car stereos is that signals generated by the car stereo is in a proprietary format, and is not capable of being processed by the after-market system. Additionally, signals generated by the after-market system are also in a proprietary format that is not recognizable by the car stereo. Thus, in order to integrate after-market systems with car stereos, it is necessary to convert signals between such systems.

It known in the art to provide one or more expansion modules for OEM and after-market car stereos for allowing external audio products to be integrated with the car stereo. However, such expansion modules only operate with and allow integration of external audio products manufactured by the same manufacturer as the OEM / after-market car stereo. For example, a satellite receiver manufactured by PIONEER, Inc., cannot be integrated with an OEM car radio manufactured by TOYOTA or an after-market car radio manufactured by CLARION, Inc. Thus, existing expansion modules only serve the limited purpose of integrating equipment by the same manufacturer as the car stereo. Thus, it would be desirable to provide an integration system that

**Express Mail Label No.: EL548971255US**

allows any audio device of any manufacture to be integrated with any OEM or after-market radio system.

Moreover, it would be desirable to provide an integration system that not only achieves  
 5 integration of various audio devices that are alien to a given OEM or after-market stereo system,  
 but also allows for information to be exchanged between the after-market device and the car  
 stereo. For example, it would be desirable to provide a system wherein station, track, time, and  
 song information can be retrieved from the after-market device, formatted, and transmitted to the  
 car stereo for display thereby, such as at an LCD panel of the car stereo. Such information could  
 10 be transmitted and displayed on both hardwired radio systems (*e.g.*, radios installed in  
 dashboards or at other locations within the car), or integrated for display on one or more software  
 or graphically-driven radio systems operable with graphical display panels. Additionally, it  
 would be desirable to provide an audio integration system that allows a user to control more than  
 one device, such as a CD or satellite receiver and one or more auxiliary sources, and to quickly  
 15 and conveniently switch between same using the existing controls of the car stereo.

Accordingly, the present invention addresses these needs by providing an audio  
 integration system that allows a plurality of audio devices, such as CD players, CD changers,  
 MP3 players, satellite receivers, DAB receivers, auxiliary input sources, or a combination  
 20 thereof, to be integrated into existing car stereos while allowing information to be displayed on,  
 and control to be provided from, the car stereo.

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#### SUMMARY OF THE INVENTION

The present invention relates to an audio device integration system. One or more after-market audio devices, such as a CD player, CD changer, MP3 player, satellite receiver (e.g., XM tuner), digital audio broadcast (DAB) receiver, or auxiliary input source, can be connected to and  
5 operate with an existing stereo system in an automobile, such as an OEM car stereo system or an after-market car stereo system installed in the automobile. The integration system connects to and interacts with the car stereo at any available port of the car stereo, such as a CD input port, a satellite input, or other known type of connection. If the car stereo system is an after-market car stereo system, the present invention generates a signal that is sent to the car stereo to keep same  
10 in an operational state and responsive to external data and signals. Commands generated at the control panel are received by the present invention and converted into a format recognizable by the after-market audio device. The formatted commands are executed by the audio device, and audio therefrom is channeled to the car stereo. Information from the audio device is received by the present invention, converted into a format recognizable by the car stereo, and forwarded to  
15 the car stereo for display thereby. The formatted information could include information relating to a CD or MP3 track being played, channel, song, and artist information from a satellite receiver or DAB receiver, or video information from one or more external devices connected to the present invention. The information can be presented as one or more menus, textual, or graphical prompts for display on an LCD display of the radio, allowing interaction with the user at the  
20 radio. A docking port is provided for allowing portable external audio devices to be connected to the interface of the present invention.

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In an embodiment of the present invention, a dual-input device is provided for integrating both an external audio device and an auxiliary input with an OEM or after-market car stereo. The user can select between the external audio device and the auxiliary input using the controls of the car stereo. The invention can automatically detect the type of device connected to the  
5 auxiliary input, and integrate same with the car stereo.

In another embodiment of the present invention, an interface is provided for integrating a plurality of auxiliary input sources with an existing car stereo system. A user can select between the auxiliary sources using the control panel of the car stereo. One or more after-market audio  
10 devices can be integrated with the auxiliary input sources, and a user can switch between the audio device and the auxiliary input sources using the car stereo. Devices connected to the auxiliary input sources are inter-operable with the car stereo, and are capable of exchanging commands and data via the interface.

BRIEF DESCRIPTION OF THE DRAWINGS

These and other important objects and features of the invention will be apparent from the following Detailed Description of the Invention, taken in connection with the accompanying drawings, in which:

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**FIG. 1** is a block diagram showing the audio device integration system of the present invention.

**FIG. 2a** is a block diagram showing an alternate embodiment of the audio device integration system of the present invention, wherein a CD player is integrated with a car radio.

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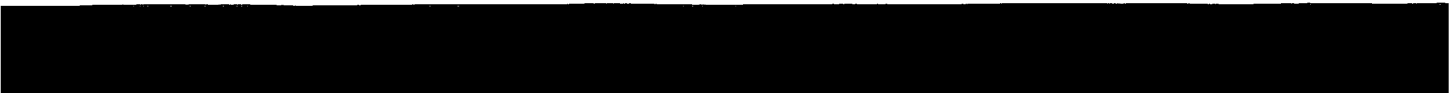
**FIG. 2b** is a block diagram showing an alternate embodiment of the audio device integration system of the present invention, wherein a MP3 player is integrated with a car radio.

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**FIG. 2c** is a block diagram showing an alternate embodiment of the audio device integration system of the present invention, wherein a satellite or DAB receiver is integrated with a car radio.

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**FIG. 2d** is a block diagram showing an alternate embodiment of the audio device integration system of the present invention, wherein a plurality of auxiliary input sources are integrated with a car radio.



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**FIG. 2e** is a block diagram showing an alternate embodiment of the audio device integration system of the present invention, wherein a CD player and a plurality of auxiliary input sources are integrated with a car radio.

5 **FIG. 2f** is a block diagram showing an alternate embodiment of the present invention, wherein a satellite or DAB receiver and a plurality of auxiliary input source are integrated with a car radio.

**FIG. 2g** is a block diagram showing an alternate embodiment of the present invention,  
10 wherein a MP3 player and a plurality of auxiliary input sources are integrated with a car radio.

**FIG. 2h** is a block diagram showing an alternate embodiment of the present invention, wherein a plurality of auxiliary interfaces and an audio device are integrated with a car stereo.

15 **FIG. 3a** is a circuit diagram showing a device according to the present invention for integrating a CD player or an auxiliary input source with a car radio.

**FIG. 3b** is a circuit diagram showing a device according to the present invention for integrating both a CD player and an auxiliary input source with a car radio, wherein the CD  
20 player and the auxiliary input are switchable by a user.

**FIG. 3c** is a circuit diagram showing a device according to the present invention for integrating a plurality of auxiliary input sources with a car radio.

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FIG. 3d is a circuit diagram showing a device according to the present invention for integrating a satellite or DAB receiver with a car radio.

5      **FIG. 4a** is a flowchart showing processing logic according to the present invention for integrating a CD player with a car radio.

**FIG. 4b** is a flowchart showing processing logic according to the present invention for integrating a MP3 player with a car radio.

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**FIG. 4c** is a flowchart showing processing logic according to the present invention for integrating a satellite receiver with a car radio.

15      **FIG. 4d** is a flowchart showing processing logic according to the present invention for integrating a plurality of auxiliary input sources with a car radio.

**FIG. 4e** is a flowchart showing processing logic according to the present invention for integrating a CD player and one or more auxiliary input sources with a car radio.

20      **FIG. 4f** is a flowchart showing processing logic according to the present invention for integrating a satellite or DAB receiver and one or more auxiliary input sources with a car radio.



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**FIG. 4g** is a flowchart showing processing logic according to the present invention for integrating a MP3 player and one or more auxiliary input sources with a car stereo.

**FIG. 5** is a flowchart showing processing logic according to the present invention for  
5 allowing a user to switch between an after-market audio device and one or more auxiliary input sources.

**FIG. 6** is a flowchart showing processing logic according to the present invention for determining and handling various device types connected to the auxiliary input ports of the  
10 invention.

**FIG. 7a** is a perspective view of a docking station according to the present invention for retaining an audio device within a car.

**FIG. 7b** is an end view of the docking station of **FIG. 7a**.  
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the term “inter-operable” is intended to mean allowing the external audio device to receive and process commands that have been formatted by the interface of the present invention, as well as allowing a car stereo to display information that is generated by the external audio device and processed by the present invention. Additionally, by the term “inter-operable,” it is meant  
 5 allowing a device that is alien to the environment of an existing OEM or after-market car stereo to be utilized thereby.

Also, as used herein, the terms “car stereo” and “car radio” are used interchangeably and are intended to include all presently existing car stereos and radios, such as physical devices that  
 10 are present at any location within a vehicle, in addition to software and/or graphically- or display-driven receivers. An example of such a receiver is a software-driven receiver that operates on a universal LCD panel within a vehicle and is operable by a user via a graphical user interface displayed on the universal LCD panel. Further, any future receiver, whether a  
 15 hardwired or a software/graphical receiver operable on one or more displays, is considered within the definition of the terms “car stereo” and “car radio,” as used herein, and is within the spirit and scope of the present invention.

**FIG. 1** is a block diagram showing the audio device integration (or interface) system of the present invention, generally indicated at **20**. A plurality of devices and auxiliary inputs can  
 20 be connected to the interface **20**, and integrated with an OEM or after-market car radio **10**. A CD player or changer **15** can be integrated with the radio **10** via interface **20**. A satellite radio or DAB receiver **25**, such as an XM radio satellite receiver or DAB receiver known in the art, could be integrated with the radio **10**, via the interface **20**. Further, an MP3 player could also be

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integrated with the radio **10** via interface **20**. Moreover, a plurality of auxiliary input sources, illustratively indicated as auxiliary input sources **35** (comprising input sources 1 through  $n$ ,  $n$  being any number), could also be integrated with the car radio **10** via interface **20**. Optionally, a control head **12**, such as that commonly used with after-market CD changers and other similar devices, could be integrated with the car radio **10** via interface **20**, for controlling any of the car radio **10**, CD player/changer **15**, satellite/DAB receiver **25**, MP3 player **30**, and auxiliary input sources **35**. Thus, as can be readily appreciated, the interface **20** of the present invention allows for the integration of a multitude of devices and inputs with an OEM or after-market car radio or stereo.

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**FIG. 2a** is a block diagram of an alternate embodiment of the audio device interface system of the present invention, wherein a CD player/changer **15** is integrated with an OEM or after-market car radio **10**. The CD player **15** is electrically connected with the interface **20**, and exchanges data and audio signals therewith. The interface **20** is electrically connected with the car radio **10**, and exchanges data and audio signals therewith. In a preferred embodiment of the present invention, the car radio **10** includes a display **13** (such as an alphanumeric, electroluminescent display) for displaying information, and a plurality of control panel buttons **14** that normally operate to control the radio **10**. The interface **20** allows the CD player **15** to be controlled by the control buttons **14** of the radio **10**. Further, the interface **20** allows information from the CD player **15**, such as track, disc, time, and song information, to be retrieved therefrom, processed and formatted by the interface **20**, sent to the display **13** of the radio **10**.

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Importantly, the interface **20** allows for the remote control of the CD player **15** from the radio **10** (e.g., the CD player **15** could be located in the trunk of a car, while the radio **10** is mounted on the dashboard of the car). Thus, for example, one or more discs stored within the CD player **15** can be remotely selected by a user from the radio **10**, and tracks on one or more of the discs can be selected therefrom. Moreover, standard CD operational commands, such as pause, play, stop, fast forward, rewind, track forward, and track reverse (among other commands) can be remotely entered at the control panel buttons **14** of the radio **10** for remotely controlling the CD player **15**.

**FIG. 2b** is a block diagram showing an alternate embodiment of the present invention, wherein an MP3 player **30** is integrated with an OEM or after-market car radio **10** via interface **20**. As mentioned earlier, the interface **20** of the present invention allows for a plurality of disparate audio devices to be integrated with an existing car radio for use therewith. Thus, as shown in **FIG. 2b**, remote control of the MP3 player **30** via radio **10** is provided for via interface **20**. The MP3 player **30** is electronically interconnected with the interface **20**, which itself is electrically interconnected with the car radio **10**. The interface **20** allows data and audio signals to be exchanged between the MP3 player **30** and the car radio **10**, and processes and formats signals accordingly so that instructions and data from the radio **10** are processable by the MP3 player **30**, and vice versa. Operational commands, such as track selection, pause, play, stop, fast forward, rewind, and other commands, are entered via the control panel buttons **14** of car radio **10**, processed by the interface **20**, and formatted for execution by the MP3 player **30**. Data from the MP3 player, such as track, time, and song information, is received by the interface **20**,

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processed thereby, and sent to the radio 10 for display on display 13. Audio from the MP3 player 30 is selectively forwarded by the interface 20 to the radio 10 for playing.

5           **FIG. 2c** is a block diagram showing an alternate embodiment of the present invention, wherein a satellite receiver or DAB receiver 25 is integrated with an OEM or after-market car radio 10 via the interface 20. Satellite/DAB receiver 25 can be any satellite radio receiver known in the art, such as XM or Sirius, or any DAB receiver known in the art. The satellite/DAB receiver 25 is electrically interconnected with the interface 20, which itself is electrically interconnected with the car radio 10. The satellite/DAB receiver 25 is remotely  
10 operable by the control panel buttons 14 of the radio 10. Commands from the radio 10 are received by the interface 20, processed and formatted thereby, and dispatched to the satellite/DAB receiver 25 for execution thereby. Information from the satellite/DAB receiver 25, including time, station, and song information, is received by the interface 20, processed, and transmitted to the radio 10 for display on display 13. Further, audio from the satellite/DAB  
15 receiver 25 is selectively forwarded by the interface 20 for playing by the radio 10.

**FIG. 2d** is a block diagram showing an alternate embodiment of the present invention, wherein one or more auxiliary input sources 35 are integrated with an OEM or after-market car radio 10. The auxiliary inputs 35 can be connected to analog sources, or can be digitally coupled  
20 with one or more audio devices, such as after-market CD players, CD changers, MP3 players, satellite receivers, DAB receivers, and the like, and integrated with an existing car stereo. Preferably, four auxiliary input sources are connectable with the interface 20, but any number of auxiliary input sources could be included. Audio from the auxiliary input sources 35 is

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selectively forwarded to the radio **10** under command of the user. As will be discussed herein in greater detail, a user can select a desired input source from the auxiliary input sources **35** by depressing one or more of the control panel buttons **14** of the radio **10**. The interface **20** receives the command initiated from the control panel, processes same, and connects the corresponding  
 5 input source from the auxiliary input sources **35** to allow audio therefrom to be forwarded to the radio **10** for playing. Further, the interface **20** determines the type of audio devices connected to the auxiliary input ports **35**, and integrates same with the car stereo **10**.

As mentioned previously, the present invention allows one or more external audio  
 10 devices to be integrated with an existing OEM or after-market car stereo, along with one or more auxiliary input sources, and the user can select between these sources using the controls of the car stereo. Such “dual input” capability allows operation with devices connected to either of the inputs of the device, or both. Importantly, the device can operate in “plug and play” mode, wherein any device connected to one of the inputs is automatically detected by the present  
 15 invention, its device type determined, and the device automatically integrated with an existing OEM or after-market car stereo. Thus, the present invention is not dependent any specific device type to be connected therewith to operate. For example, a user can first purchase a CD changer, plug same into a dual interface, and use same with the car stereo. At a point later in time, the user could purchase an XM tuner, plug same into the device, and the tuner will automatically be  
 20 detected and integrated with the car stereo, allowing the user to select from and operate both devices from the car stereo. It should be noted that such plug and play capability is not limited to a dual input device, but is provided for in every embodiment of the present invention. The dual-input configuration of the present invention is illustrated in **FIGS. 2e-2h** and described below.

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**FIG. 2e** is a block diagram showing an alternate embodiment of the present invention, wherein an external CD player/changer **15** and one or more auxiliary input sources **35** are integrated with an OEM or after-market car stereo **10**. Both the CD player **15** and one or more of the auxiliary input sources **35** are electrically interconnected with the interface **20**, which, in turn, is electrically interconnected to the radio **10**. Using the controls **14** of the radio **10**, a user can select between the CD player **15** and one or more of the inputs **35** to selectively channel audio from these sources to the radio. The command to select from one of these sources is received by the interface **20**, processed thereby, and the corresponding source is channeled to the radio **10** by the interface **20**. As will be discussed later in greater detail, the interface **20** contains internal processing logic for selecting between these sources.

**FIG. 2f** is a block diagram of an alternate embodiment of the present invention, wherein a satellite receiver or DAB receiver and one or more auxiliary input sources are integrated by the interface **20** with an OEM or after-market car radio **10**. Similar to the embodiment of the present invention illustrated in **FIG. 2e** and described earlier, the interface **20** allows a user to select between the satellite/DAB receiver **25** and one or more of the auxiliary input sources **35** using the controls **14** of the radio **10**. The interface **20** contains processing logic, described in greater detail below, for allowing switching between the satellite/DAB receiver **25** and one or more of the auxiliary input sources **35**.

20

**FIG. 2g** is a block diagram of an alternate embodiment of the present invention, wherein a MP3 player **30** and one or more auxiliary input sources **35** are integrated by the interface **20** with an OEM or after-market car radio **10**. Similar to the embodiments of the present invention



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illustrated in **FIGS. 2e** and **2f** and described earlier, the interface **20** allows a user to select between the MP3 player **30** and one or more of the auxiliary input sources **35** using the controls **14** of the radio **10**. The interface **20** contains processing logic, as will be discussed later in greater detail, for allowing switching between the MP3 player **30** and one or more of the  
 5 auxiliary input sources **35**.

**FIG. 2h** is a block diagram showing an alternate embodiment of the present invention, wherein a plurality of auxiliary interfaces **40** and **44** and an audio device **17** are integrated with an OEM or after-market car stereo **10**. Importantly, the present invention can be expanded to  
 10 allow a plurality of auxiliary inputs to be connected to the car stereo **10** in a tree-like fashion. Thus, as can be seen in **FIG. 2h**, a first auxiliary interface **40** is connected to the interface **20**, and allows data and audio from the ports **42** to be exchanged with the car radio **10**. Connected to one of the ports **42** is another auxiliary interface **44**, which, in turn, provides a plurality of input  
 15 ports **46**. Any device connected to any of the ports **42** or **46** can be integrated with the car radio **10**. Further, any device connected to the ports **42** or **46** can be inter-operable with the car radio **10**, allowing commands to be entered from the car radio **10** (e.g., such as via the control panel **14**) for commanding the device, and information from the device to be displayed by the car radio **10**. Conceivably, by configuring the interfaces **40**, **44**, and successive interfaces in a tree configuration, any number of devices can be integrated using the present invention.

20

The various embodiments of the present invention described above and shown in **FIGS. 1** through **2h** are illustrative in nature and are not intended to limit the spirit or scope of the present invention. Indeed, any conceivable audio device or input source, in any desired combination,

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can be integrated by the present invention into existing car stereo systems. Further, it is conceivable that not only can data and audio signals be exchanged between the car stereo and any external device, but also video information that can be captured by the present invention, processed thereby, and transmitted to the car stereo for display thereby and interaction with a user thereat.

Various circuit configurations can be employed to carry out the present invention. Examples of such configurations are described below and shown in **FIGS. 3a-3d**.

**FIG. 3a** is an illustrative circuit diagram according to the present invention for integrating a CD player or an auxiliary input source with an existing car stereo system. A plurality of ports **J1C1**, **J2A1**, **X2**, **RCH**, and **LCH** are provided for allowing connection of the interface system of the present invention between an existing car radio, an after-market CD player or changer, or an auxiliary input source. Each of these ports could be embodied by any suitable electrical connector known in the art. Port **J1C1** connects to the input port of an OEM car radio, such as that manufactured by TOYOTA, Inc. Conceivably, port **J1C1** could be modified to allow connection to the input port of an after-market car radio. Ports **J2A1**, **X2**, **RCH**, and **LCH** connect to an after-market CD changer, such as that manufactured by PANASONIC, Inc., or to an auxiliary input source.

Microcontroller **U1** is in electrical communication with each of the ports **J1C1**, **J2A1**, and **X2**, and provides functionality for integrating the CD player or auxiliary input source connected to the ports **J2A1**, **X2**, **RCH**, and **LCH**. For example, microcontroller **U1** receives

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control commands, such as button or key sequences, initiated by a user at control panel of the car radio and received at the connector **J1C1**, processes and formats same, and dispatches the formatted commands to the CD player or auxiliary input source via connector **J2A1**. Additionally, the microcontroller **U1** receives information provided by the CD player or auxiliary input source via connector **J2A1**, processes and formats same, and transmits the formatted data to the car stereo via connector **J1C1** for display on the display of the car stereo. Audio signals provided at the ports **J2A1**, **X2**, **RCH** and **LCH** is selectively channeled to the car radio at port **J1C1** under control of one or more user commands and processing logic, as will be discussed in greater detail, embedded within microcontroller **U1**.

10

In a preferred embodiment of the present invention, the microcontroller **U1** comprises the 16F628 microcontroller manufactured by MICROCHIP, Inc. The 16F628 chip is a CMOS, flash-based, 8-bit microcontroller having an internal, 4 MHz internal oscillator, 128 bytes of EEPROM data memory, a capture/compare/PWM, a USART, 2 comparators, and a programmable voltage reference. Of course, any suitable microcontroller known in the art can be substituted for microcontroller **U1** without departing from the spirit or scope of the present invention.

A plurality of discrete components, such as resistors **R1** through **R13**, diodes **D1** through **D4**, capacitors **C1** and **C2**, and oscillator **Y1**, among other components, are provided for interfacing the microcontroller **U1** with the hardware connected to the connectors **J1C1**, **J2A1**, **X2**, **RCH**, and **LCH**. These components, as will be readily appreciated to one of ordinary skill in the art, can be arranged as desired to accommodate a variety of microcontrollers, and the

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numbers and types of discrete components can be varied to accommodate other similar controllers. Thus, the circuit shown in **FIG. 3a** and described herein is illustrative in nature, and modifications thereof are considered to be within the spirit and scope of the present invention.

5           **FIG. 3b** is a diagram showing an illustrative circuit configuration according to the present invention, wherein one or more after-market CD changers / players and an auxiliary input source are integrated with an existing car stereo, and wherein the user can select between the CD changer/player and the auxiliary input using the controls of the car stereo. A plurality of connectors are provided, illustratively indicated as ports **J4A**, **J4B**, **J3**, **J5L1**, **J5R1**, **J1**, and **J2**.  
10   Ports **J4A**, **J4B**, and **J3** allow the audio device interface system of the present invention to be connected to one or more existing car stereos, such as an OEM car stereo or an after-market car stereo. Each of these ports could be embodied by any suitable electrical connector known in the art. For example, ports **J4A** and **J4B** can be connected to an OEM car stereo manufactured by BMW, Inc. Port **J3** can be connected to a car stereo manufactured by LANDROVER, Inc. Of  
15   course, any number of car stereos, by any manufacturer, could be provided. Ports **J1** and **J2** allow connection to an after-market CD changer or player, such as that manufactured by ALPINE, Inc., and an auxiliary input source. Optionally, ports **J5L1** and **J5R1** allow integration of a standard analog (line-level) source. Of course, a single standalone CD player or auxiliary input source could be connected to either of ports **J1** or **J2**.

20

Microcontroller **DD1** is in electrical communication with each of the ports **J4A**, **J4B**, **J3**, **J5L1**, **J5R1**, **J1**, and **J2**, and provides functionality for integrating the CD player and auxiliary input source connected to the ports **J1** and **J2** with the car stereo connected to the ports **J4A** and

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**J4B** or **J3**. For example, microcontroller **DD1** receives control commands, such as button or key sequences, initiated by a user at control panel of the car radio and received at the connectors **J4A** and **J4B** or **J3**, processes and formats same, and dispatches the formatted commands to the CD player and auxiliary input source via connectors **J1** or **J2**. Additionally, the microcontroller **DD1** receives information provided by the CD player and auxiliary input source via connectors **J1** or **J2**, processes and formats same, and transmits the formatted data to the car stereo via connectors **J4A** and **J4B** or **J3** for display on the display of the car stereo. Further, the microcontroller **DD1** controls multiplexer **DA3** to allow selection between the CD player/changer and the auxiliary input. Audio signals provided at the ports **J1**, **J2**, **J5L1** and **J5R1** is selectively channeled to the car radio at ports **J4A** and **J4B** or **J3** under control of one or more user commands and processing logic, as will be discussed in greater detail, embedded within microcontroller **DD1**.

In a preferred embodiment of the present invention, the microcontroller **DD1** comprises the 16F872 microcontroller manufactured by MICROCHIP, Inc. The 16F872 chip is a CMOS, flash-based, 8-bit microcontroller having 64 bytes of EEPROM data memory, self-programming capability, an ICD, 5 channels of 10 bit Analog-to-Digital (A/D) converters, 2 timers, capture/compare/PWM functions, a USART, and a synchronous serial port configurable as either a 3-wire serial peripheral interface or a 2-wire inter-integrated circuit bus. Of course, any suitable microcontroller known in the art can be substituted for microcontroller **DD1** without departing from the spirit or scope of the present invention. Additionally, in a preferred embodiment of the present invention, the multiplexer **DA3** comprises the CD4053 triple, two-channel analog multiplexer/demultiplexer manufactured by FAIRCHILD SEMICONDUCTOR,

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Inc. Any other suitable multiplexer can be substituted for **DA3** without departing from the spirit or scope of the present invention.

A plurality of discrete components, such as resistors **R1** through **R18**, diodes **D1** through **D3**, capacitors **C1-C11**, and **G1-G3**, transistors **Q1-Q3**, transformers **T1** and **T2**, amplifiers **LCH:A** and **LCH:B**, oscillator **XTAL1**, among other components, are provided for interfacing the microcontroller **DD1** and the multiplexer **DA3** with the hardware connected to the connectors **J4A**, **J4B**, **J3**, **J5L1**, **J5R1**, **J1**, and **J2**. These components, as will be readily appreciated to one of ordinary skill in the art, can be arranged as desired to accommodate a variety of microcontrollers and multiplexers, and the numbers and types of discrete components can be varied to accommodate other similar controllers and multiplexers. Thus, the circuit shown in **FIG. 3b** and described herein is illustrative in nature, and modifications thereof are considered to be within the spirit and scope of the present invention.

**FIG. 3c** is a diagram showing an illustrative circuit configuration for integrating a plurality of auxiliary inputs using the controls of the car stereo. A plurality of connectors are provided, illustratively indicated as ports **J1**, **RCH1**, **LCH1**, **RCH2**, **LCH2**, **RCH3**, **LCH3**, **RCH4**, and **LCH4**. Port **J1** allows the audio device integration system of the present invention to be connected to one or more existing car stereos. Each of these ports could be embodied by any suitable electrical connector known in the art. For example, port **J1** could be connected to an OEM car stereo manufactured by HONDA, Inc., or any other manufacturer. Ports **RCH1**, **LCH1**, **RCH2**, **LCH2**, **RCH3**, **LCH3**, **RCH4**, and **LCH4** allow connection with the left and

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right channels of four auxiliary input sources. Of course, any number of auxiliary input sources and ports/connectors could be provided.

Microcontroller **U1** is in electrical communication with each of the ports **J1**, **RCH1**,  
5 **LCH1**, **RCH2**, **LCH2**, **RCH3**, **LCH3**, **RCH4**, and **LCH4**, and provides functionality for  
integrating one or more auxiliary input sources connected to the ports **RCH1**, **LCH1**, **RCH2**,  
**LCH2**, **RCH3**, **LCH3**, **RCH4**, and **LCH4** with the car stereo connected to the port **J1**. Further,  
the microcontroller **U1** controls multiplexers **DA3** and **DA4** to allow selection amongst any of  
the auxiliary inputs using the controls of the car stereo. Audio signals provided at the ports  
10 **RCH1**, **LCH1**, **RCH2**, **LCH2**, **RCH3**, **LCH3**, **RCH4**, and **LCH4** are selectively channeled to  
the car radio at port **J1** under control of one or more user commands and processing logic, as will  
be discussed in greater detail, embedded within microcontroller **U1**. In a preferred embodiment  
of the present invention, the microcontroller **U1** comprises the 16F872 microcontroller discussed  
earlier. Additionally, in a preferred embodiment of the present invention, the multiplexers **DA3**  
15 and **DA4** comprises the CD4053 triple, two-channel analog multiplexer/demultiplexer, discussed  
earlier. Any other suitable microcontroller and multiplexers can be substituted for **U1**, **DA3**, and  
**DA4** without departing from the spirit or scope of the present invention.

A plurality of discrete components, such as resistors **R1** through **R15**, diodes **D1** through  
20 **D3**, capacitors **C1-C5**, transistors **Q1-Q2**, amplifiers **DA1:A** and **DA1:B**, and oscillator **Y1**,  
among other components, are provided for interfacing the microcontroller **U1** and the  
multiplexers **DA3** and **DA4** with the hardware connected to the ports **J1**, **RCH1**, **LCH1**, **RCH2**,  
**LCH2**, **RCH3**, **LCH3**, **RCH4**, and **LCH4**. These components, as will be readily appreciated to

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one of ordinary skill in the art, can be arranged as desired to accommodate a variety of microcontrollers and multiplexers, and the numbers and types of discrete components can be varied to accommodate other similar controllers and multiplexers. Thus, the circuit shown in **FIG. 3c** and described herein is illustrative in nature, and modifications thereof are considered to  
 5 be within the spirit and scope of the present invention.

**FIG. 3d** is an illustrative circuit diagram according to the present invention for integrating a satellite receiver with an existing OEM or after-market car stereo system. Ports **J1** and **J2** are provided for allowing connection of the integration system of the present invention  
 10 and **J2** are provided for allowing connection of the integration system of the present invention between an existing car radio and a satellite receiver. These ports could be embodied by any suitable electrical connector known in the art. Port **J2** connects to the input port of an existing car radio, such as that manufactured by KENWOOD, Inc. Port **1** connects to an after-market satellite receiver, such as that manufactured by PIONEER, Inc.

15

Microcontroller **U1** is in electrical communication with each of the ports **J1** and **J2**, and provides functionality for integrating the satellite receiver connected to the port **J1** with the car stereo connected to the port **J2**. For example, microcontroller **U1** receives control commands, such as button or key sequences, initiated by a user at control panel of the car radio and received  
 20 at the connector **J2**, processes and formats same, and dispatches the formatted commands to the satellite receiver via connector **J2**. Additionally, the microcontroller **U1** receives information provided by the satellite receiver via connector **J1**, processes and formats same, and transmits the formatted data to the car stereo via connector **J2** for display on the display of the car stereo. Audio signals provided at the port **J1** is selectively channeled to the car radio at port **J2** under



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control of one or more user commands and processing logic, as will be discussed in greater detail, embedded within microcontroller **U1**.

In a preferred embodiment of the present invention, the microcontroller **U1** comprises the  
5 16F873 microcontroller manufactured by MICROCHIP, Inc. The 16F873 chip is a CMOS,  
flash-based, 8-bit microcontroller having 128 bytes of EEPROM data memory, self-  
programming capability, an ICD, 5 channels of 10 bit Analog-to-Digital (A/D) converters, 2  
timers, 2 capture/compare/PWM functions, a synchronous serial port that can be configured as a  
either a 3-wire serial peripheral interface or a 2-wire inter-integrated circuit bus, and a USART.  
10 Of course, any suitable microcontroller known in the art can be substituted for microcontroller  
**U1** without departing from the spirit or scope of the present invention.

A plurality of discrete components, such as resistors **R1** through **R7**, capacitors **C1** and  
**C2**, and amplifier **A1**, among other components, are provided for interfacing the microcontroller  
15 **U1** with the hardware connected to the connectors **J1** and **J2**. These components, as will be  
readily appreciated to one of ordinary skill in the art, can be arranged as desired to accommodate  
a variety of microcontrollers, and the numbers and types of discrete components can be varied to  
accommodate other similar controllers. Thus, the circuit shown in **FIG. 3d** and described herein  
is illustrative in nature, and modifications thereof are considered to be within the spirit and scope  
20 of the present invention.

**FIGS. 4a** through **6** are flowcharts showing processing logic according to the present  
invention. Such logic can be embodied as software and/or instructions stored in a read-only

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memory circuit (*e.g.*, and EEPROM circuit), or other similar device. In a preferred embodiment of the present invention, the processing logic described herein is stored in one or more microcontrollers, such as the microcontrollers discussed earlier with reference to **FIGS. 3a-3d**. Of course, any other suitable means for storing the processing logic of the present invention can  
5 be employed.

**FIG. 4a** is a flowchart showing processing logic, indicated generally at **100**, for integrating a CD player or changer with an existing OEM or after-market car stereo system. Beginning in step **100**, a determination is made as to whether the existing car stereo is powered  
10 on. If a negative determination is made, step **104** is invoked, wherein the present invention enters a standby mode and waits for the car stereo to be powered on. If a positive determination is made, step **106** is invoked, wherein a second determination is made as to whether the car stereo is in CD player mode. If a negative determination is made, step **106** is re-invoked.

15 If a positive determination is made in step **106**, a CD handling process, indicated as block **108**, is invoked, allowing the CD player/changer to exchange data and audio signals with any existing car stereo system. Beginning in step **110**, a signal is generated by the present invention indicating that a CD player/changer is present, and the signal is continuously transmitted to the car stereo. Importantly, this signal prevents the car stereo from shutting off, entering a sleep  
20 mode, or otherwise being unresponsive to signals and/or data from an external source. If the car radio is an OEM car radio, the CD player presence signal need not be generated. Concurrently with step **110**, or within a short period of time before or after the execution of step **110**, steps **112** and **114** are invoked. In step **112**, the audio channels of the CD player/changer are connected

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(channeled) to the car stereo system, allowing audio from the CD player/changer to be played through the car stereo. In step 114, data is retrieved by the present invention from the CD player/changer, including track and time information, formatted, and transmitted to the car stereo for display by the car stereo. Thus, information produced by the external CD player/changer can be quickly and conveniently viewed by a driver by merely viewing the display of the car stereo. After steps 110, 112, and 114 have been executed, control passes to step 116.

In steps 116, the present invention monitors the control panel buttons of the car stereo for CD operational commands. Examples of such commands include track forward, track reverse, play, stop, fast forward, rewind, track program, random track play, and other similar commands. In step 118, if a command is not detected, step 116 is re-invoked. Otherwise, if a command is received, step 118 invokes step 120, wherein the received command is converted into a format recognizable by the CD player/changer connected to the present invention. For example, in this step, a command issued from a GM car radio is converted into a format recognizable by a CD player/changer manufactured by ALPINE, Inc. Any conceivable command from any type of car radio can be formatted for use by a CD player/changer of any type or manufacture. Once the command has been formatted, step 122 is invoked, wherein the formatted command is transmitted to the CD player/changer and executed. Step 110 is then re-invoked, so that additional processing can occur.

FIG. 4b is a flowchart showing processing logic, indicated generally at 130, for integrating an MP3 player with an existing car stereo system. Beginning in step 132, a determination is made as to whether the existing car stereo is powered on. If a negative

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determination is made, step **134** is invoked, wherein the present invention enters a standby mode and waits for the car stereo to be powered on. If a positive determination is made, step **136** is invoked, wherein a second determination is made as to whether the car stereo is in CD player mode. If a negative determination is made, step **136** is re-invoked.

5

If a positive determination is made in step **136**, an MP3 handling process, indicated as block **138**, is invoked, allowing the MP3 player to exchange data and audio signals with any existing car stereo system. Beginning in step **140**, the CD player presence signal, described earlier, is generated by the present invention and continuously transmitted to the car stereo. If the car radio is an OEM car radio, the CD player presence signal need not be generated. In step **142**, the audio channels of the MP3 player are connected (channeled) to the car stereo system, allowing audio from the MP3 player to be played through the car stereo. In step **144**, data is retrieved by the present invention from the MP3 player, including track, time, title, and song information, formatted, and transmitted to the car stereo for display by the car stereo. Thus, information produced by the MP3 player can be quickly and conveniently viewed by a driver by merely viewing the display of the car stereo. After steps **140**, **142**, and **144** have been executed, control passes to step **146**.

In steps **146**, the present invention monitors the control panel buttons of the car stereo for MP3 operational commands. Examples of such commands include track forward, track reverse, play, stop, fast forward, rewind, track program, random track play, and other similar commands. In step **148**, if a command is not detected, step **146** is re-invoked. Otherwise, if a command is received, step **148** invokes step **150**, wherein the received command is converted into a format

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recognizable by the MP3 player connected to the present invention. For example, in this step, a command issued from a HONDA car radio is converted into a format recognizable by an MP3 player manufactured by PANASONIC, Inc. Any conceivable command from any type of car radio can be formatted for use by an MP3 player of any type or manufacture. Once the  
 5 command has been formatted, step **152** is invoked, wherein the formatted command is transmitted to the MP3 player and executed. Step **140** is then re-invoked, so that additional processing can occur.

**FIG. 4c** is a flowchart showing processing logic, indicated generally at **160**, for  
 10 integrating a satellite receiver or a DAB receiver with an existing car stereo system. Beginning in step **162**, a determination is made as to whether the existing car stereo is powered on. If a negative determination is made, step **164** is invoked, wherein the present invention enters a standby mode and waits for the car stereo to be powered on. If a positive determination is made, step **166** is invoked, wherein a second determination is made as to whether the car stereo is in  
 15 CD player mode. If a negative determination is made, step **166** is re-invoked.

If a positive determination is made in step **166**, a satellite/DAB receiver handling process, indicated as block **168**, is invoked, allowing the satellite/DAB receiver to exchange data and audio signals with any existing car stereo system. Beginning in step **170**, the CD player presence  
 20 signal, described earlier, is generated by the present invention and continuously transmitted to the car stereo. If the car radio is an OEM car radio, the CD player presence signal need not be generated. In step **172**, the audio channels of the satellite/DAB receiver are connected (channeled) to the car stereo system, allowing audio from the satellite receiver or DAB receiver

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to be played through the car stereo. In step 174, data is retrieved by the present invention from the satellite/DAB receiver, including channel number, channel name, artist name, song time, and song title, formatted, and transmitted to the car stereo for display by the car stereo. The information could be presented in one or more menus, or via a graphical interface viewable and  
 5 manipulable by the user at the car stereo. Thus, information produced by the receiver can be quickly and conveniently viewed by a driver by merely viewing the display of the car stereo. After steps 170, 172, and 174 have been executed, control passes to step 176.

In steps 176, the present invention monitors the control panel buttons of the car stereo for  
 10 satellite/DAB receiver operational commands. Examples of such commands include station up, station down, station memory program, and other similar commands. In step 178, if a command is not detected, step 176 is re-invoked. Otherwise, if a command is received, step 178 invokes step 180, wherein the received command is converted into a format recognizable by the satellite/DAB receiver connected to the present invention. For example, in this step, a command  
 15 issued from a FORD car radio is converted into a format recognizable by a satellite receiver manufactured by PIONEER, Inc. Any conceivable command from any type of car radio can be formatted for use by a satellite/DAB receiver of any type or manufacture. Once the command has been formatted, step 182 is invoked, wherein the formatted command is transmitted to the satellite/DAB receiver and executed. Step 170 is then re-invoked, so that additional processing  
 20 can occur.

FIG. 4d is a flowchart showing processing logic, indicated generally at 190, for integrating a plurality of auxiliary input sources with a car radio. Beginning in step 192, a

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determination is made as to whether the existing car stereo is powered on. If a negative determination is made, step 194 is invoked, wherein the present invention enters a standby mode and waits for the car stereo to be powered on. If a positive determination is made, step 196 is invoked, wherein a second determination is made as to whether the car stereo is in CD player mode. If a negative determination is made, step 196 is re-invoked.

If a positive determination is made in step 196, an auxiliary input handling process, indicated as block 198, is invoked, allowing one or more auxiliary inputs to be connected (channeled) to the car stereo. Further, if a plurality of auxiliary inputs exist, the logic of block 198 allows a user to select a desired input from the plurality of inputs. Beginning in step 200, the CD player presence signal, described earlier, is generated by the present invention and continuously transmitted to the car stereo. If the car radio is an OEM car radio, the CD player presence signal need not be generated. Then, in step 202, the control panel buttons of the car stereo are monitored.

15

In a preferred embodiment of the present invention, each of the one or more auxiliary input sources are selectable by selecting a CD disc number on the control panel of the car radio. Thus, in step 204, a determination is made as to whether the first disc number has been selected. If a positive determination is made, step 206 is invoked, wherein the first auxiliary input source is connected (channeled) to the car stereo. If a negative determination is made, step 208 is invoked, wherein a second determination is made as to whether the second disc number has been selected. If a positive determination is made, step 210 is invoked, wherein the second auxiliary input source is connected (channeled) to the car stereo. If a negative determination is made, step

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212 is invoked, wherein a third determination is made as to whether the third disc number has been selected. If a positive determination is made, step 214 is invoked, wherein the third auxiliary input source is connected (channeled) to the car stereo. If a negative determination is made, step 216 is invoked, wherein a fourth determination is made as to whether the fourth disc number has been selected. If a positive determination is made, step 218 is invoked, wherein the fourth auxiliary input source is connected (channeled) to the car stereo. If a negative determination is made, step 200 is re-invoked, and the process disclosed for block 198 repeated. Further, if any of steps 206, 210, 214, or 218 are executed, then step 200 is re-invoked and block 198 repeated.

10

The process disclosed in block 198 allows a user to select from one of four auxiliary input sources using the control buttons of the car stereo. Of course, the number of auxiliary input sources connectable with and selectable by the present invention can be expanded to any desired number. Thus, for example, 6 auxiliary input sources could be provided and switched using corresponding selection key(s) or keystroke(s) on the control panel of the radio. Moreover, any desired keystroke, selection sequence, or button(s) on the control panel of the radio, or elsewhere, can be utilized to select from the auxiliary input sources without departing from the spirit or scope of the present invention.

20

FIG. 4e is a flowchart showing processing logic, indicated generally at 220, for integrating a CD player and one or more auxiliary input sources with a car radio. Beginning in step 222, a determination is made as to whether the existing car stereo is powered on. If a negative determination is made, step 224 is invoked, wherein the present invention enters a



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standby mode and waits for the car stereo to be powered on. If a positive determination is made, step 226 is invoked, wherein a second determination is made as to whether the car stereo is in CD player mode. If a negative determination is made, step 226 is re-invoked.

5           If a positive determination is made in step 226, then step 228 is invoked, wherein the CD player presence signal, described earlier, is generated by the present invention and continuously transmitted to the car stereo. Then, in step 230, a determination is made as to whether a CD player is present (*i.e.*, whether an external CD player or changer is connected to the audio device integration system of the present invention). If a positive determination is made, steps 231 and

10   232 are invoked. In step 231, the logic of block 108 of FIG. 4a (the CD handling process), described earlier, is invoked, so that the CD player/changer can be integrated with the car stereo and utilized by a user. In step 232, a sensing mode is initiated, wherein the present invention monitors for a selection sequence (as will be discussed in greater detail) initiated by the user at the control panel of the car stereo for switching from the external CD player/changer to one or

15   more auxiliary input sources. Step 234 is then invoked, wherein a determination is made as to whether such a sequence has been initiated. If a negative determination is made, step 234 re-invokes step 228, so that further processing can occur. Otherwise, if a positive determination is made (*i.e.*, the user desires to switch from the external CD player/changer to one of the auxiliary input sources), step 236 is invoked, wherein the audio channels of the CD player/changer are

20   disconnected from the car stereo. Then, step 238 is invoked, wherein the logic of block 198 of FIG. 4d (the auxiliary input handling process), discussed earlier, is executed, allowing the user to select from one of the auxiliary input sources. In the event that a negative determination is made in step 230 (no external CD player/changer is connected to the present invention), then step

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238 is invoked, and the system goes into auxiliary mode. The user can then select from one or more auxiliary input sources using the controls of the radio.

FIG. 4f is a flowchart showing processing logic, indicated generally at 240, for integrating a satellite receiver or DAB receiver and one or more auxiliary input sources with a car radio. Beginning in step 242, a determination is made as to whether the existing car stereo is powered on. If a negative determination is made, step 244 is invoked, wherein the present invention enters a standby mode and waits for the car stereo to be powered on. If a positive determination is made, step 246 is invoked, wherein a second determination is made as to whether the car stereo is in CD player mode. If a negative determination is made, step 246 is re-invoked.

If a positive determination is made in step 246, then step 248 is invoked, wherein the CD player presence signal, described earlier, is generated by the present invention and continuously transmitted to the car stereo. Then, in step 250, a determination is made as to whether a satellite receiver or DAB receiver is present (*i.e.*, whether an external satellite receiver or DAB receiver is connected to the audio device integration system of the present invention). If a positive determination is made, steps 231 and 232 are invoked. In step 251, the logic of block 168 of FIG. 4c (the satellite/DAB receiver handling process), described earlier, is invoked, so that the satellite receiver can be integrated with the car stereo and utilized by a user. In step 252, a sensing mode is initiated, wherein the present invention monitors for a selection sequence (as will be discussed in greater detail) initiated by the user at the control panel of the car stereo for switching from the external satellite receiver to one or more auxiliary input sources. Step 254 is

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then invoked, wherein a determination is made as to whether such a sequence has been initiated. If a negative determination is made, step 254 re-invokes step 258, so that further processing can occur. Otherwise, if a positive determination is made (*i.e.*, the user desires to switch from the external satellite/DAB receiver to one of the auxiliary input sources), step 256 is invoked, wherein the audio channels of the satellite receiver are disconnected from the car stereo. Then, step 258 is invoked, wherein the logic of block 198 of FIG. 4d (the auxiliary input handling process), discussed earlier, is executed, allowing the user to select from one of the auxiliary input sources. In the event that a negative determination is made in step 250 (no external satellite/DAB receiver is connected to the present invention), then step 258 is invoked, and the system goes into auxiliary mode. The user can then select from one or more auxiliary input sources using the controls of the radio.

FIG. 4g is a flowchart showing processing logic according to the present invention for integrating an MP3 player and one or more auxiliary input sources with a car stereo. Beginning in step 262, a determination is made as to whether the existing car stereo is powered on. If a negative determination is made, step 264 is invoked, wherein the present invention enters a standby mode and waits for the car stereo to be powered on. If a positive determination is made, step 266 is invoked, wherein a second determination is made as to whether the car stereo is in CD player mode. If a negative determination is made, step 266 is re-invoked.

20

If a positive determination is made in step 266, then step 268 is invoked, wherein the CD player presence signal, described earlier, is generated by the present invention and continuously transmitted to the car stereo. Then, in step 270, a determination is made as to whether an MP3

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player is present (*i.e.*, whether an external MP3 player is connected to the audio device integration system of the present invention). If a positive determination is made, steps 271 and 272 are invoked. In step 271, the logic of block 138 of FIG. 4b (the MP3 handling process), described earlier, is invoked, so that the CD player/changer can be integrated with the car stereo and utilized by a user. In step 272, a sensing mode is initiated, wherein the present invention monitors for a selection sequence (as will be discussed in greater detail) initiated by the user at the control panel of the car stereo for switching from the external CD player/changer to one or more auxiliary input sources. Step 274 is then invoked, wherein a determination is made as to whether such a sequence has been initiated. If a negative determination is made, step 274 re-  
invokes step 278, so that further processing can occur. Otherwise, if a positive determination is made (*i.e.*, the user desires to switch from the external MP3 player to one of the auxiliary input sources), step 276 is invoked, wherein the audio channels of the MP3 player are disconnected from the car stereo. Then, step 278 is invoked, wherein the logic of block 198 of FIG. 4d (the auxiliary input handling process), discussed earlier, is executed, allowing the user to select from one of the auxiliary input sources. In the event that a negative determination is made in step 270 (no external MP3 player is connected to the present invention), then step 278 is invoked, and the system goes into auxiliary mode. The user can then select from one or more auxiliary input sources using the controls of the radio.

As mentioned previously, to enable integration, the present invention contains logic for converting command signals issued from an after-market or OEM car stereo into a format compatible with one or more external audio devices connected to the present invention. Such logic can be applied to convert any car stereo signal for use with any external device. For

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purposes of illustration, a sample code portion is shown in **Table 1**, below, for converting control signals from a BMW car stereo into a format understandable by a CD changer:

*Table 1*

---

```

5      ;      =====
      ;      Radio requests changer to STOP (exit PLAY mode)
      ;      Decoding 6805183801004C message
      ;      =====
10     Encode_RD_stop_msg:
      movlw 0x68
      xorwf BMW_Recv_buff,W
      skpz
15     return

      movlw 0x05
      xorwf BMW_Recv_buff+1,W
      skpz
20     return

      movlw 0x18
      xorwf BMW_Recv_buff+2,W
      skpz
25     return

      movlw 0x38
      xorwf BMW_Recv_buff+3,W
      skpz
30     return

      movlw 0x01
      xorwf BMW_Recv_buff+4,W
      skpz
35     return

      tstf BMW_Recv_buff+5
      skpz
      return
40

      movlw 0x4C
      xorwf BMW_Recv_buff+6,W
      skpz
      return
45

      bsf BMW_Recv_STOP_msg
      return

```

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The code portion shown in **Table 1** receives a STOP command issued by a BMW stereo, in a format proprietary to BMW stereos. Preferably, the received command is stored in a first buffer, such as BMW\_Recv\_buff. The procedure "Encode\_RD\_stop\_msg" repetitively applies an XOR function to the STOP command, resulting in a new command that is in a format compatible with the after-market CD player. The command is then stored in an output buffer for dispatching to the CD player.

Additionally, the present invention contains logic for retrieving information from an after-market audio device, and converting same into a format compatible with the car stereo for display thereby. Such logic can be applied to convert any data from the external device for display on the car stereo. For purposes of illustration, a sample code portion is shown in **Table 2**, below, for converting data from a CD changer into a format understandable by a BMW car stereo:

**Table 2**

```

15      ;      =====
      ;      Changer replies with STOP confirmation
      ;      Encoding 180A68390002003F0001027D message
      ;      =====
20      Load_CD_stop_msg:
          movlw 0x18
          movwf BMW_Send_buff

          movlw 0x0A
25      movwf BMW_Send_buff+1

          movlw 0x68
          movwf BMW_Send_buff+2

          movlw 0x39
30      movwf BMW_Send_buff+3

          movlw 0x00      ;current status_XX=00, power off
          movwf BMW_Send_buff+4

35      movlw 0x02      ;current status_YY=02, power off
          movwf BMW_Send_buff+5
    
```

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```

5      clrfs BMW_Send_buff+6          ;separate field, always =0
      movfw BMW_MM_stat             ;current status_MM , magazine config
      movwf BMW_Send_buff+7

10     clrfs BMW_Send_buff+8          ;separate field, always =0
      movfw BMW_DD_stat             ;current status_DD , current disc
      movwf BMW_Send_buff+9

15     movfw BMW_TT_stat             ;current status_TT , current track
      movwf BMW_Send_buff+10

20     xorwf BMW_Send_buff+9,W      ;calculate check sum
      xorwf BMW_Send_buff+8,W
      xorwf BMW_Send_buff+7,W
      xorwf BMW_Send_buff+6,W
      xorwf BMW_Send_buff+5,W
      xorwf BMW_Send_buff+4,W
      xorwf BMW_Send_buff+3,W
      xorwf BMW_Send_buff+2,W
      xorwf BMW_Send_buff+1,W
      xorwf BMW_Send_buff,W

25     movwf BMW_Send_buff+11       ;store check sum
      movlw D'12'                  ;12 bytes total
      movwf BMW_Send_cnt
      bsf  BMW_Send_on              ;ready to send

30     return

```

The code portion shown in **Table 2** receives a STOP confirmation message from the CD player, in a format proprietary to the CD player. Preferably, the received command is stored in a first buffer, such as BMW\_Send\_buff. The procedure "Load\_CD\_stop\_msg" retrieves status information, magazine information, current disc, and current track information from the CD changer, and constructs a response containing this information. Then, a checksum is calculated and stored in another buffer. The response and checksum are in a format compatible with the BMW stereo, and are ready for dispatching to the car stereo.

While the above code portions are shown using assembler language, it is to be expressly understood that any low or high level language known in the art, such as C or C++, could be

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utilized without departing from the spirit or scope of the invention. It will be appreciated that various other code portions can be developed for converting signals from any after-market or OEM car stereo for use by an after-market external audio device, and vice versa.

5           **FIG. 5** is a flowchart showing processing logic, indicated generally at **300** for allowing a user to switch between an after-market audio device, and one or more auxiliary input sources. As was discussed earlier, the present invention allows a user to switch from one or more connected audio devices, such as an external CD player/changer, MP3 player, satellite receiver, DAB receiver, or the like, and activate one or more auxiliary input sources. A selection  
10 sequence, initiated by the user at the control panel of the car stereo, allows such switching. Beginning in step **302**, the buttons of the control panel are monitored. In step **304**, a determination is made as to whether a "Track Up" button or sequence has been initiated by the user. The "Track Up" button or sequence can be for a CD player, MP3 player, or any other device. If a negative determination is made, step **306** is invoked, wherein the sensed button or sequence  
15 is processed in accordance with the present invention and dispatched to the external audio device for execution. Then, step **302** is re-invoked, so that additional buttons or sequences can be monitored.

In the event that a positive determination is made in step **304**, step **308** is invoked,  
20 wherein the present invention waits for a predetermined period of time while monitoring the control panel buttons for additional buttons or sequences. In a preferred embodiment of the present invention, the predetermined period of time is 750 milliseconds, but of course, other time durations are considered within the spirit and scope of the present invention. In step **310**, a





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determination is made as to whether the user has initiated a "Track Down" button or sequence at the control panel of the car stereo within the predetermined time period. The track down button or sequence can be for a CD player, MP3 player, or any other device. If a negative determination is made, step 312 is invoked. In step 312, a determination is made as to whether a  
 5 timeout has occurred (e.g., whether the predetermined period of time has expired). If a negative determination is made, step 308 is re-invoked. Otherwise, if a positive determination is made, step 312 invokes step 306, so that any buttons or key sequences initiated by the user that are not a "Track Down" command are processed in accordance with the present invention and dispatched to the audio device for execution.

10

In the event that a positive determination is made in step 310 (a "Track Down" button or sequence has been initiated within the predetermined time period), then step 314 is invoked. In step 314, the audio channels of the audio device are disconnected, and then step 316 is invoked. In step 316, the logic of block 198 of FIG. 4d (the auxiliary input handling process), discussed  
 15 earlier, is invoked, so that the user can select from one of the auxiliary input sources in accordance with the present invention. Thus, at this point in time, the system has switched, under user control, from the audio device to a desired auxiliary input. Although the foregoing description of the process 300 has been described with reference to "Track Up" and "Track Down" buttons or commands initiated by the user, it is to be expressly understood that any  
 20 desired key sequence, keystroke, button depress, or any other action, can be sensed in accordance with the present invention and utilized for switching modes.

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When operating in auxiliary mode, the present invention provides an indication on the display of the car stereo corresponding to such mode. For example, the CD number could be displayed as "1", and the track number displayed as "99," thus indicating to the user that the system is operating in auxiliary mode and that audio and data is being supplied from an auxiliary  
 5 input source. Of course, any other indication could be generated and displayed on the display of the car stereo, such as a graphical display (*e.g.*, an icon) or textual prompt (*e.g.*, "Auxiliary 1" or a title corresponding to the device connected to the auxiliary port).

**FIG. 6** is a flowchart showing processing logic, indicated generally at **320**, for  
 10 determining and handling various device types connected to the auxiliary input ports of the invention. The present invention can sense device types connected to the auxiliary input ports, and can integrate same with the car stereo using the procedures discussed earlier. Beginning in step **322**, the control panel buttons of the car stereo are monitored for a button or sequence initiated by the user corresponding to an auxiliary input selection (such as the disc number  
 15 method discussed earlier with reference to **FIG. 4d**). In response to an auxiliary input selection, step **324** is invoked, wherein the type of device connected to the selected auxiliary input is sensed by the present invention. Then, step **326** is invoked.

In step **326**, a determination is made as to whether the device connected to the auxiliary  
 20 input is a CD player/changer. If a positive determination is made, step **328** is invoked, wherein the logic of block **108** of **FIG. 4a** (the CD handling process), discussed earlier, is executed, and the CD player is integrated with the car stereo. If a negative determination is made in step **326**, then step **330** is invoked. In step **330**, a determination is made as to whether the device

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connected to the auxiliary input is an MP3 player. If a positive determination is made, step 334 is invoked, wherein the logic of block 138 of FIG. 4b (the MP3 handling process), discussed earlier, is executed, and the MP3 player is integrated with the car stereo. If a negative determination is made in step 330, then step 336 is invoked. In step 336, a determination is made as to whether the device connected to the auxiliary input is a satellite receiver or a DAB receiver. If a positive determination is made, step 338 is invoked, wherein the logic of block 168 of FIG. 4c (the satellite/DAB receiver handling process), discussed earlier, is executed, and the satellite receiver is integrated with the car stereo. If a negative determination is made in step 336, step 322 is re-invoked, so that additional auxiliary input selections can be monitored and processed accordingly. Of course, process 320 can be expanded to allow other types of devices connected to the auxiliary inputs of the present invention to be integrated with the car stereo.

The present invention can be expanded for allowing video information generated by an external device to be integrated with the display of an existing OEM or after-market car stereo. In such a mode, the invention accepts RGB input signals from the external device, and converts same to composite signals. The composite signals are then forwarded to the car stereo for display thereby, such as on an LCD panel of the stereo. Further, information from the external device can be formatted and presented to the user in one or more graphical user interfaces or menus capable of being viewed and manipulated on the car stereo.

20

FIG. 7a is a perspective view of a docking station 400 according to the present invention for retaining an audio device within a car. Importantly, the present invention can be adapted to allow portable audio devices to be integrated with an existing car stereo. The docking station

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400 allows such portable devices to be conveniently docked and integrated with the car stereo. The docking station 400 includes a top portion 402 hingedly connected at a rear portion 408 to a bottom portion 404, preferably in a clam-like configuration. A portable audio device 410, such as the SKYFI radio distributed by DELPHI, Inc., is physically and electrically connected with the docking portion 412, and contained within the station 100. A clasp 406 can be provided for holding the top and bottom portions in a closed position to retain the device 410. Optionally, a video device could also be docked using the docking station 400, and tabs 413 can be provided for holding the docking station 400 in place against a portion of a car. Conceivably, the docking station 400 could take any form, such as a sleeve-like device for receiving and retaining a portable audio device and having a docking portion for electrically and mechanically mating with the audio device.

FIG. 7b is an end view showing the rear portion 408 of the docking station 400 of FIG. 7a. A hinge 414 connects the top portion and the bottom portions of the docking station 400. A data port 416 is provided for interfacing with the audio device docked within the station 400, and is in electrical communication therewith. In a preferred embodiment of the present invention, the data port 416 is an RS-232 serial or USB data port that allows for the transmission of data with the audio device, and which connects with the audio device integration system of the present invention for integrating the audio device with an OEM or after-market car stereo. Any known bus technology can be utilized to interface with any portable audio or video device contained within the docking station 400, such as FIREWIRE, D2B, MOST, CAN, USB/USB2, IE Bus, T Bus, I Bus, or any other bus technology known in the art.

4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

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Having thus described the invention in detail, it is to be understood that the foregoing description is not intended to limit the spirit and scope thereof. What is desired to be protected by Letters Patent is set forth in the appended claims.

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CLAIMS

What is claimed is:

1. An audio device integration system comprising:  
  
5 a car stereo;  
  
an audio device external to the car stereo;  
  
an interface connected between the car stereo and the audio device for exchanging data  
10 and audio signals between the car stereo and the audio device;  
  
means for processing and dispatching commands for controlling the audio device from  
the car stereo in a format compatible with the audio device; and  
  
15 means for processing and displaying data from the audio device on a display of the car  
stereo in a format compatible with the car stereo.
2. The apparatus of claim 1, wherein the car stereo is an OEM car stereo.
- 20 3. The apparatus of claim 1, wherein the car stereo is an after-market car stereo.
4. The apparatus of claim 1, wherein the audio device comprises a CD player, CD changer,  
MP3 player, Digital Audio Broadcast (DAB) receiver, or satellite receiver.

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5. The apparatus of claim 1, wherein the interface further comprises a plug-and-play mode for automatically detecting a device type of the audio device and integrating the audio device based upon the device type.
- 5 6. The apparatus of claim 1, wherein the interface generates a CD player presence signal for maintaining the car stereo in a state responsive to processed data and audio signals.
7. The apparatus of claim 1, wherein the data comprises track and time information.
- 10 8. The apparatus of claim 1, wherein the data comprises song title and artist information.
9. The apparatus of claim 1, wherein the data comprises channel number and channel name information.
- 15 10. The apparatus of claim 1, wherein the data comprises video information.
11. The apparatus of claim 1, wherein the data is displayed as a menu on the display of the car stereo.
- 20 12. The apparatus of claim 1, wherein the data is displayed in a graphical interface on a graphic panel.

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13. The apparatus of claim 1, wherein the commands are input by a user using one or more control buttons or presets on the car stereo.
14. The apparatus of claim 1, further comprising one or more auxiliary input sources  
5 connected to the interface.
15. The apparatus of claim 14, wherein audio signals from the one or more auxiliary input sources are selectively channeled to the car stereo by the interface.
- 10 16. The apparatus of claim 14, wherein a user can select between the one or more auxiliary input sources by depressing keys on the car stereo.
17. The apparatus of claim 14, wherein a user can select one of the auxiliary input sources by entering a disc number at the car stereo.  
15
18. The apparatus of claim 14, wherein a user can select one of the auxiliary input sources by entering a track number at the car stereo.
19. The apparatus of claim 14, wherein a user can select one of the auxiliary input sources by  
20 entering both disc and track numbers at the car stereo.
20. The apparatus of claim 14, wherein a user can select between the audio device and the one or more auxiliary input sources by entering a sequence at the car stereo.



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21. The apparatus of claim 20, wherein the sequence comprises a track up selection followed by a track down selection.

22. The apparatus of claim 1, further comprising a second interface connected to the first interface for providing a plurality of auxiliary input sources.

23. The apparatus of claim 22, wherein both the first interface and the second interface are controllable using the car stereo.

24. An audio device integration system comprising:

a car stereo;

a plurality of auxiliary input sources;

an interface connected between the car stereo and the plurality of auxiliary input sources;

means for processing and dispatching commands for controlling an audio device connected to one of the plurality of auxiliary input sources from the car stereo in a format compatible with the audio device;

means for processing and displaying data from the audio device on a display of the car stereo in a format compatible with the car stereo; and

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means for selecting one of the plurality of auxiliary input sources from the car stereo.

25. The apparatus of claim 24, wherein the means for selecting one of the plurality of auxiliary input sources comprises a disc or track selection entered by a user using control buttons  
5 of the car stereo.

26. The apparatus of claim 24, wherein the audio device comprises a CD player, CD changer, MP3 player, satellite receiver, or DAB receiver.

10 27. The apparatus of claim 24, wherein a device type of the audio device is automatically detected by the interface and the audio device is automatically integrated with the car stereo based upon the device type.

28. The apparatus of claim 24, wherein the interface is switchable into an auxiliary input  
15 mode by issuing a control sequence at the car stereo.

29. The apparatus of claim 28, wherein the control sequence comprises a track up command followed by a track down command.

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30. A method for integrating a device with a car stereo comprising:

connecting an interface to the car stereo and the device to the interface;

5 receiving control commands from the car stereo at the interface;

processing the control commands into a format compatible with the device and dispatching  
processed control commands to the device;

10 receiving data and audio from the device at the interface;

processing the data into a second format compatible with the car stereo and dispatching  
the audio and processed data to the car stereo; and

15 displaying the processed data on the car stereo and playing the audio through the car  
stereo.

31. The method of claim 30, wherein the step of receiving data from the device comprises  
retrieving CD track and time information from the device.

20

32. The method of claim 30, wherein the step of receiving data from the device comprises  
retrieving MP3 song, title, track, and time information from the device.

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33. The method of claim 30, wherein the step of receiving data from the device comprises retrieving channel number, channel name, artist, and song information from the device.

5 34. The method of claim 30, wherein the step of receiving data from the device comprises retrieving video information from the device.

35. The method of claim 30, wherein the step of displaying the processed data comprises displaying the data in an LCD panel.

10 36. The method of claim 30, wherein the step of displaying the processed data comprises displaying the data in a graphical user interface at the car stereo.

37. The method of claim 30, wherein the step of displaying processed data comprises displaying video at the car stereo.

15

38. The method of claim 30, wherein the step of connecting the audio device to the interface comprises connecting a CD player, CD changer, MP3 player, satellite receiver, or DAB receiver to the interface.

20 39. The method of claim 30, further comprising connecting an auxiliary input source to the interface.

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40. The method of claim 39, further comprising receiving a selection command from the car stereo and channeling data and audio from the auxiliary input source to the interface in response to the selection command.

5 41. The method of claim 40, further comprising processing the data from the auxiliary input source for display on the car stereo.

42. An apparatus for docking a portable device for integration with a car stereo comprising:

10 a top member interconnected with a bottom member and defining a storage area for storing the portable device;

a docking portion within the storage area for electrically communicating and physically mating with the portable device; and

15

a data port disposed on the top member or the bottom member and in electrical communication with the docking portion, the data port connectable with a device for integrating the portable device with the car stereo.

20 43. The apparatus of claim 42, further comprising a hinge for connecting the top member and bottom member at an edge thereof.

44. The apparatus of claim 42, wherein the data port comprises an RS-232 or USB port.

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45. The apparatus of claim 42, wherein the top portion and the bottom portion define a sleeve for holding the portable audio device.

46. The apparatus of claim 42, further comprising a clasp for retaining the top and bottom members in a closed position.

47. A method of integrating an after-market device with an OEM or after-market car stereo comprising:

10 connecting the after-market device to an interface;

connecting the interface to a car stereo;

15 determining whether the car stereo is an OEM car stereo or an after-market car stereo;

if the car stereo is an after-market car stereo, generating and transmitting a presence signal to the car stereo to maintain the car stereo in an operational state responsive to external signals; and

20 selectively channeling data and audio signals from the after-market device to the car stereo using the interface.

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48. The method of claim 47, further comprising receiving control commands from the car stereo at the interface.
49. The method of claim 48, further comprising converting the control commands into a format recognizable by the after-market audio device.
50. The method of claim 49, further comprising dispatching formatted commands to the after-market audio device for execution thereby.
51. The method of claim 47, further comprising converting data received at the interface from the after-market audio device into a format compatible with the car stereo.
52. The method of claim 51, further comprising displaying formatted data on the car stereo.
53. The method of claim 52, wherein the step of displaying formatted data comprises displaying channel numbers, channel names, titles, tracks, song names, or artist names on the car stereo.
54. The method of claim 52, wherein the step of displaying formatted data comprises displaying video on the car stereo.

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ABSTRACT

An audio device integration system is provided. One or more after-market audio devices, such as a CD player, CD changer, MP3 player, satellite receiver, DAB receiver, or the like, is integrated for use with an existing OEM or after-market car stereo system, wherein control  
5 commands can be issued at the car stereo and responsive data from the audio device can be displayed on the stereo. Control commands generated at the car stereo are received, processed, converted into a format recognizable by the audio device, and dispatched to the audio device for execution. Information from the audio device, including track, disc, song, station, time, and other information, is received, processed, converted into a format recognizable by the car stereo,  
10 and dispatched to the car stereo for display thereon. One or more auxiliary input sources can be integrated with the car stereo, and selected between using the controls of the car stereo. Both an audio device and one or more auxiliary input sources can be integrated together, and a user can select between the device or the one or more auxiliary input sources by issuing selection commands through the car stereo. A docking station is provided for docking a portable audio or  
15 video device for integration with the car stereo.

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FIG. 1

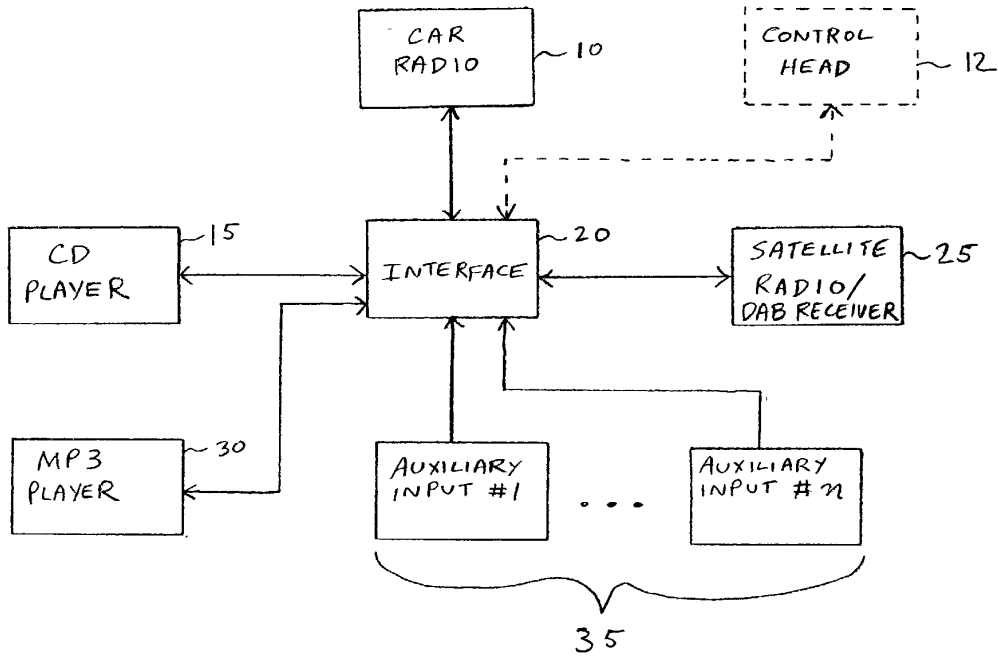


FIG. 2a

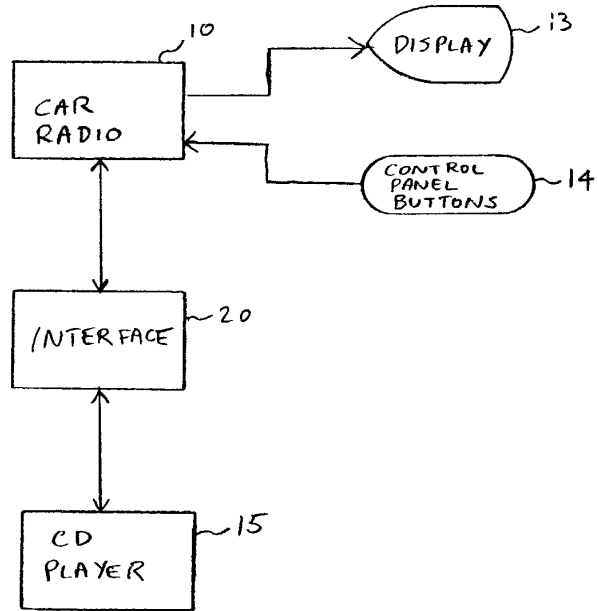


FIG. 2b

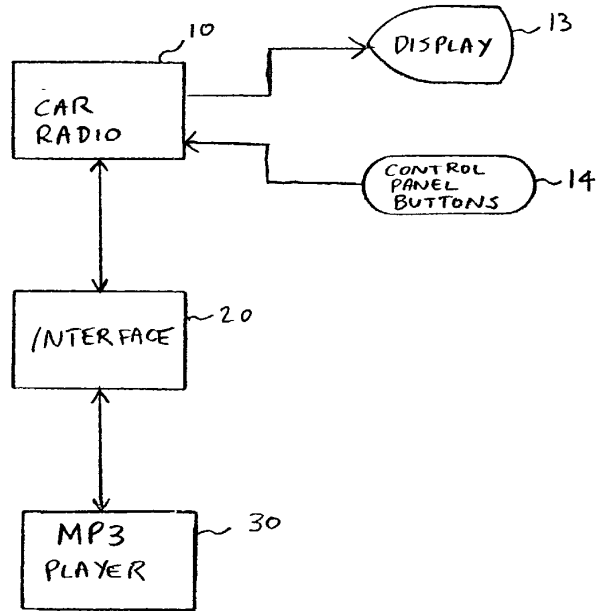


FIG. 2c

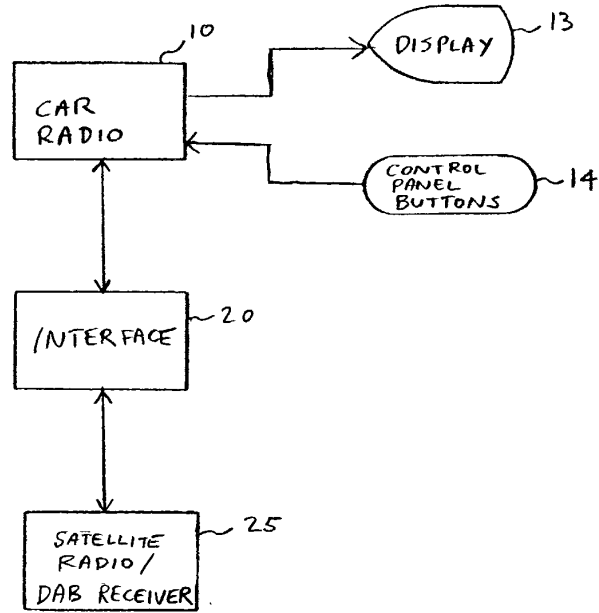


FIG. 2d

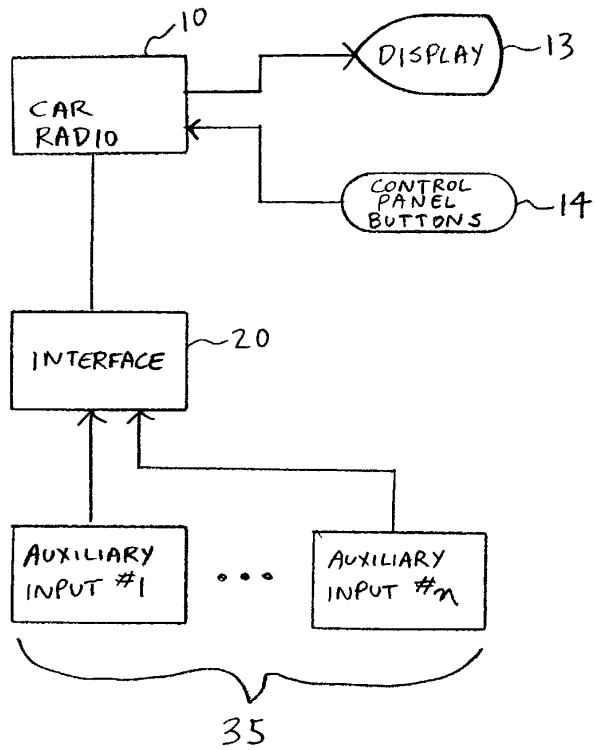


FIG. 2e

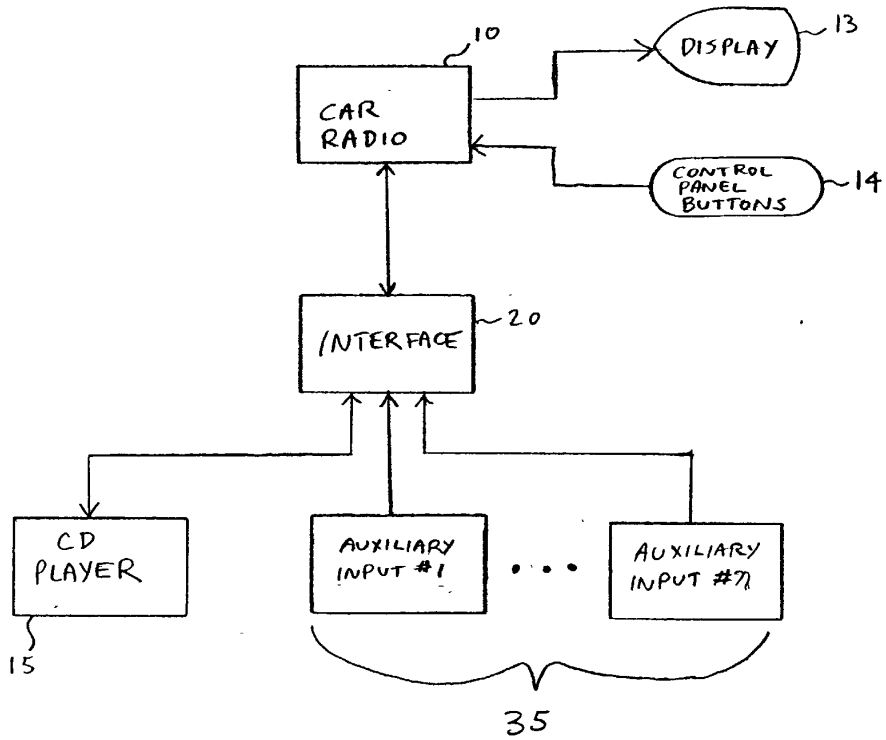


FIG. 2f

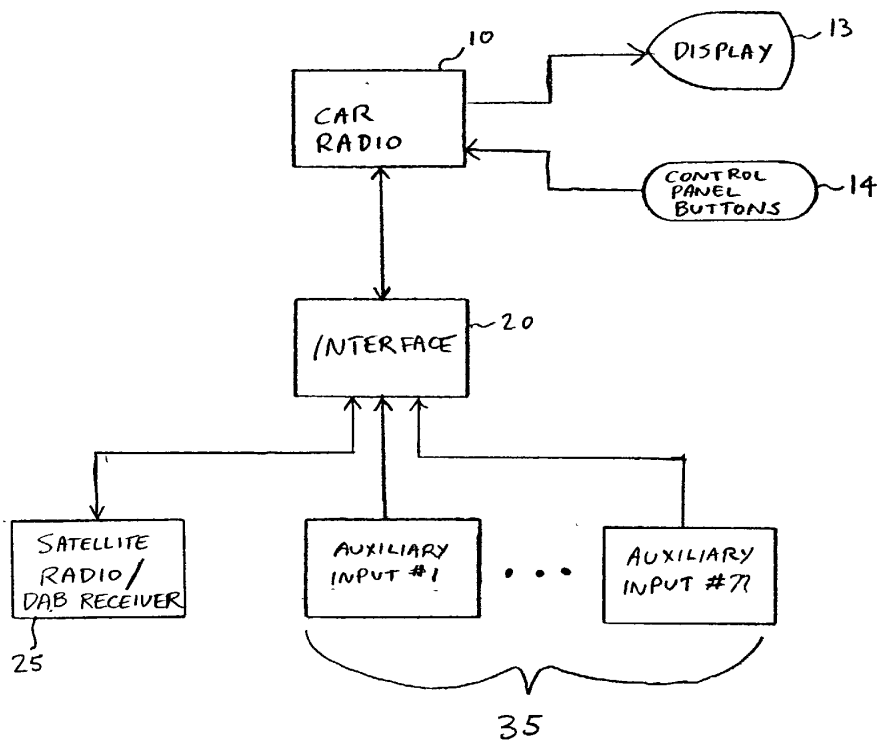


FIG. 2g

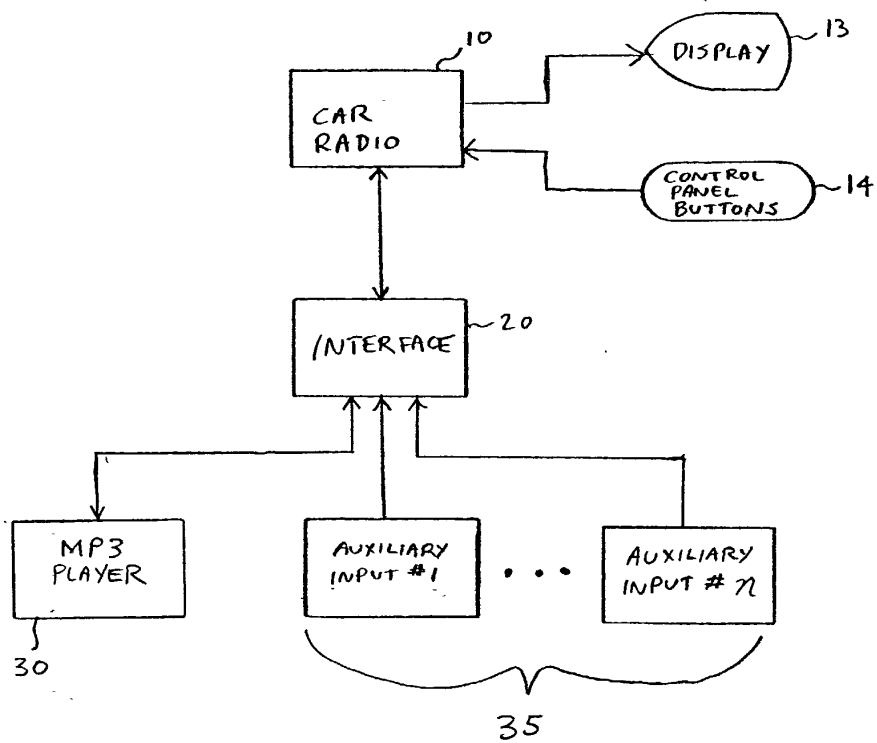
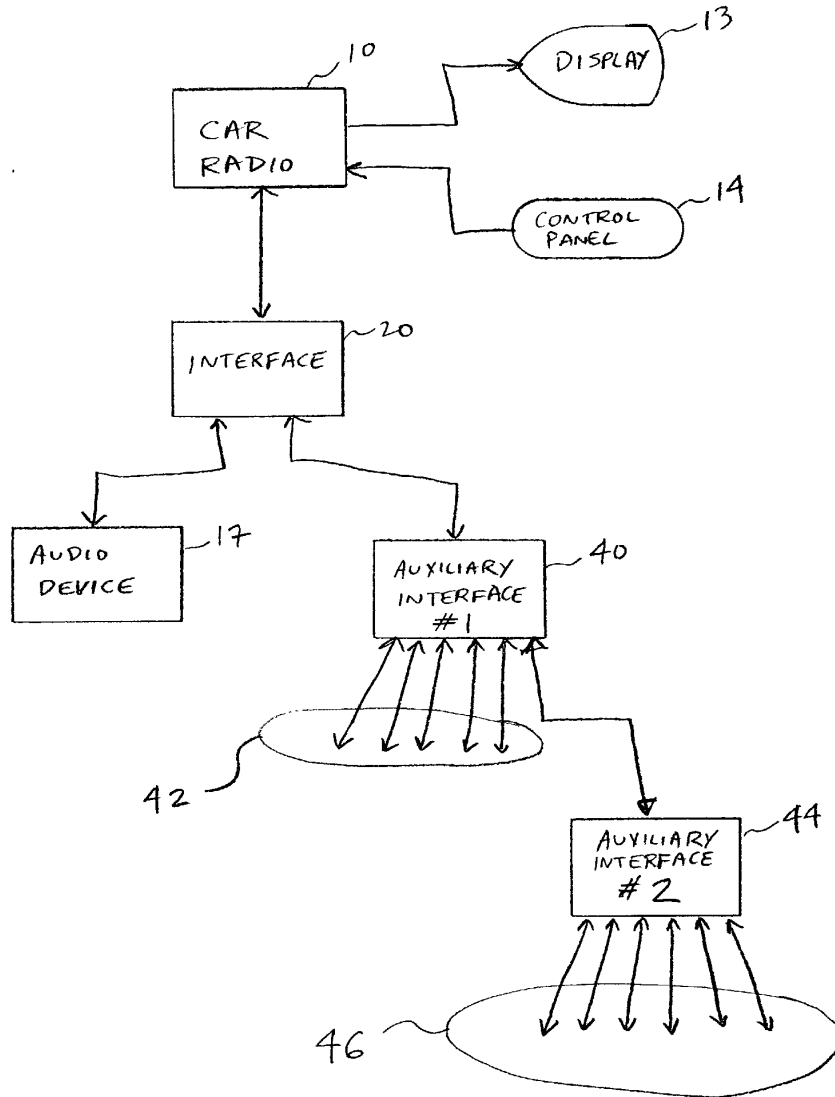




FIG. 2k



103-5553-22302

FIG. 3a

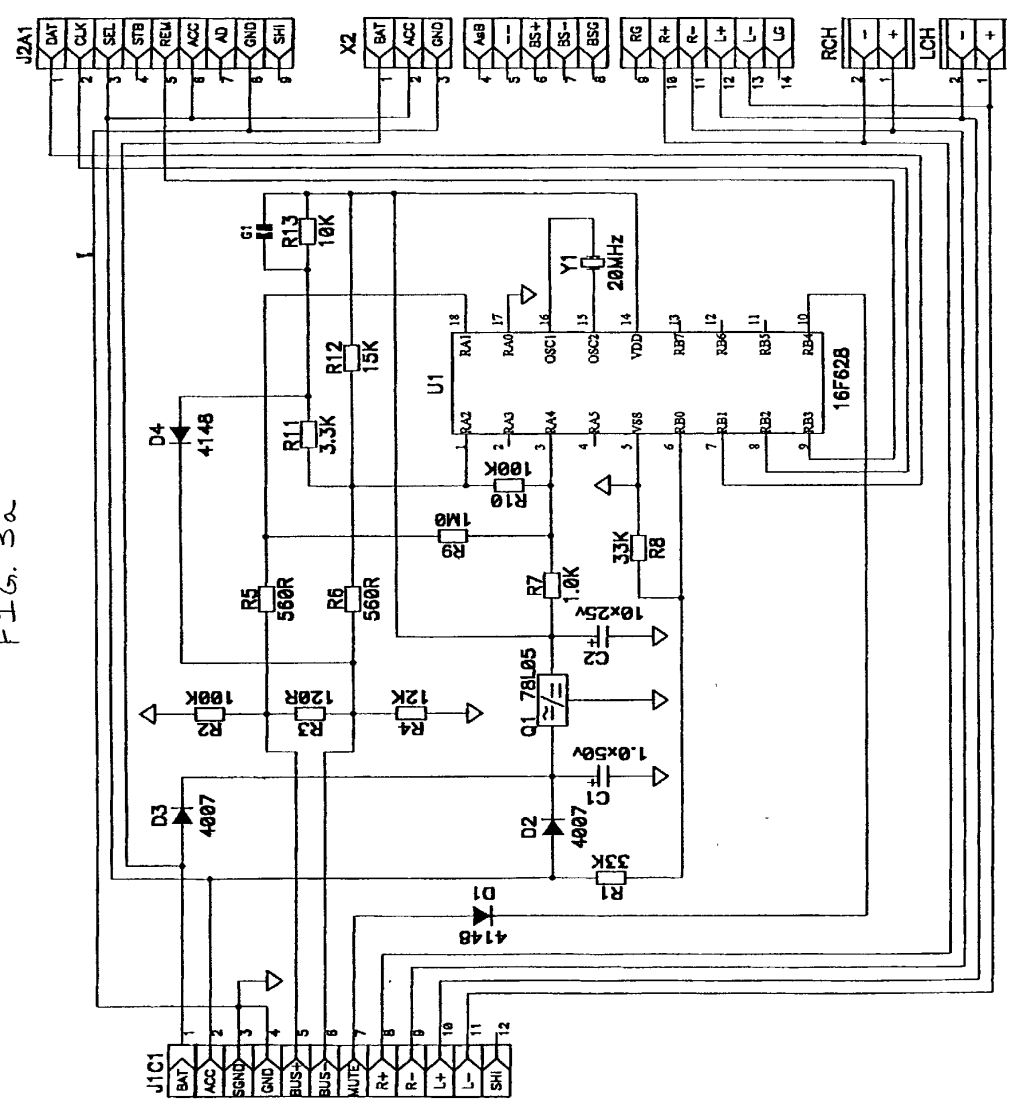


FIG. 3b

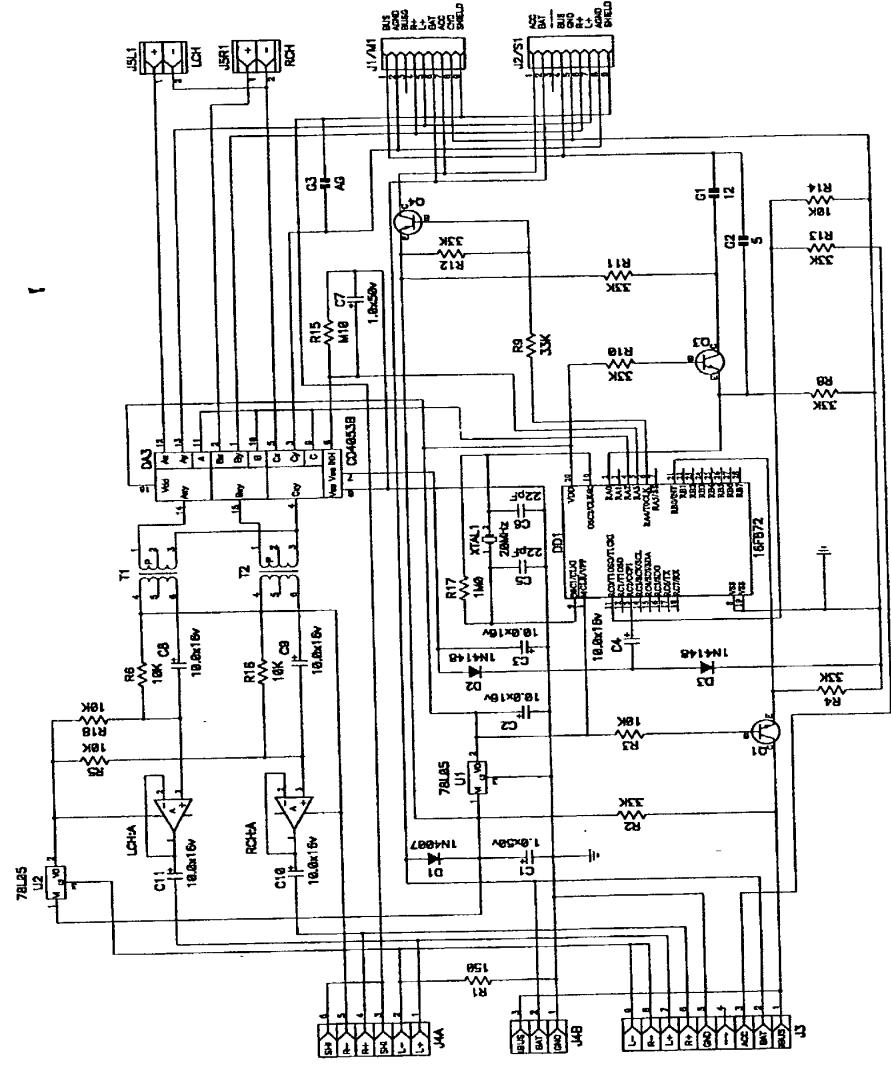


FIG. 3c

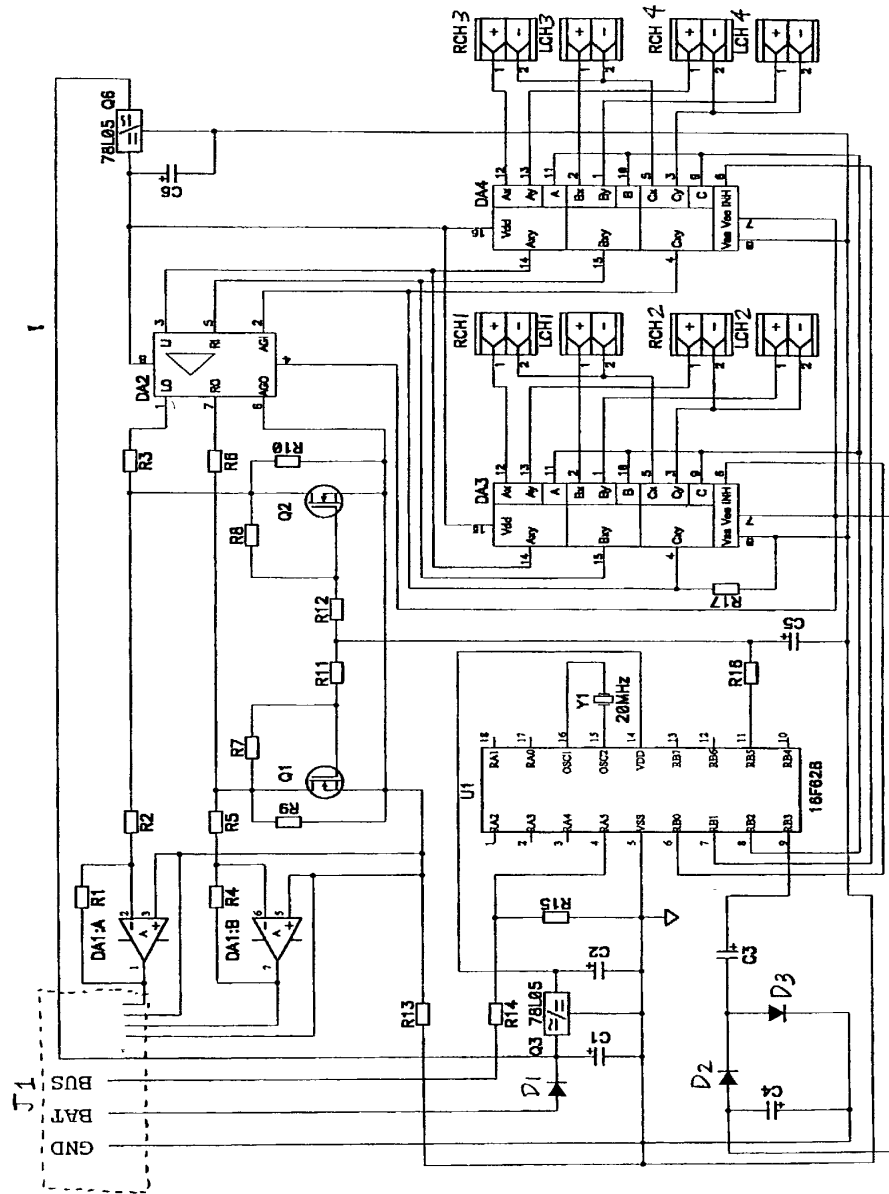


FIG. 3d

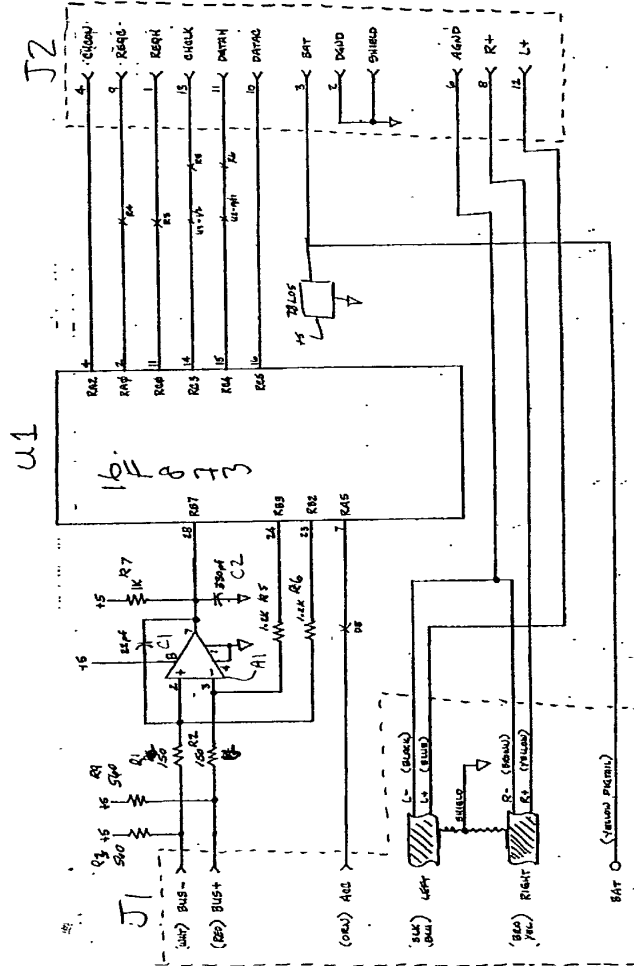


FIG. 4a

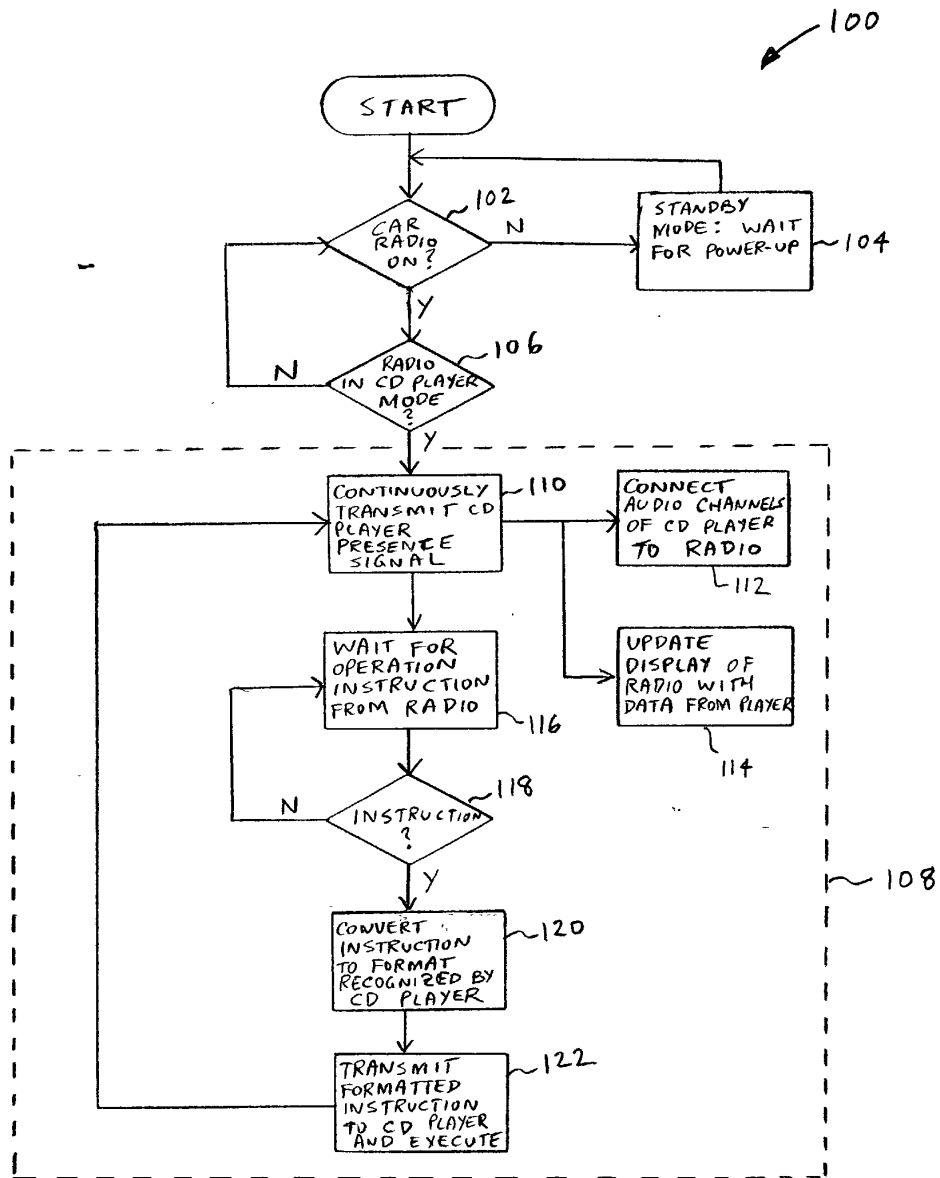


FIG. 4b

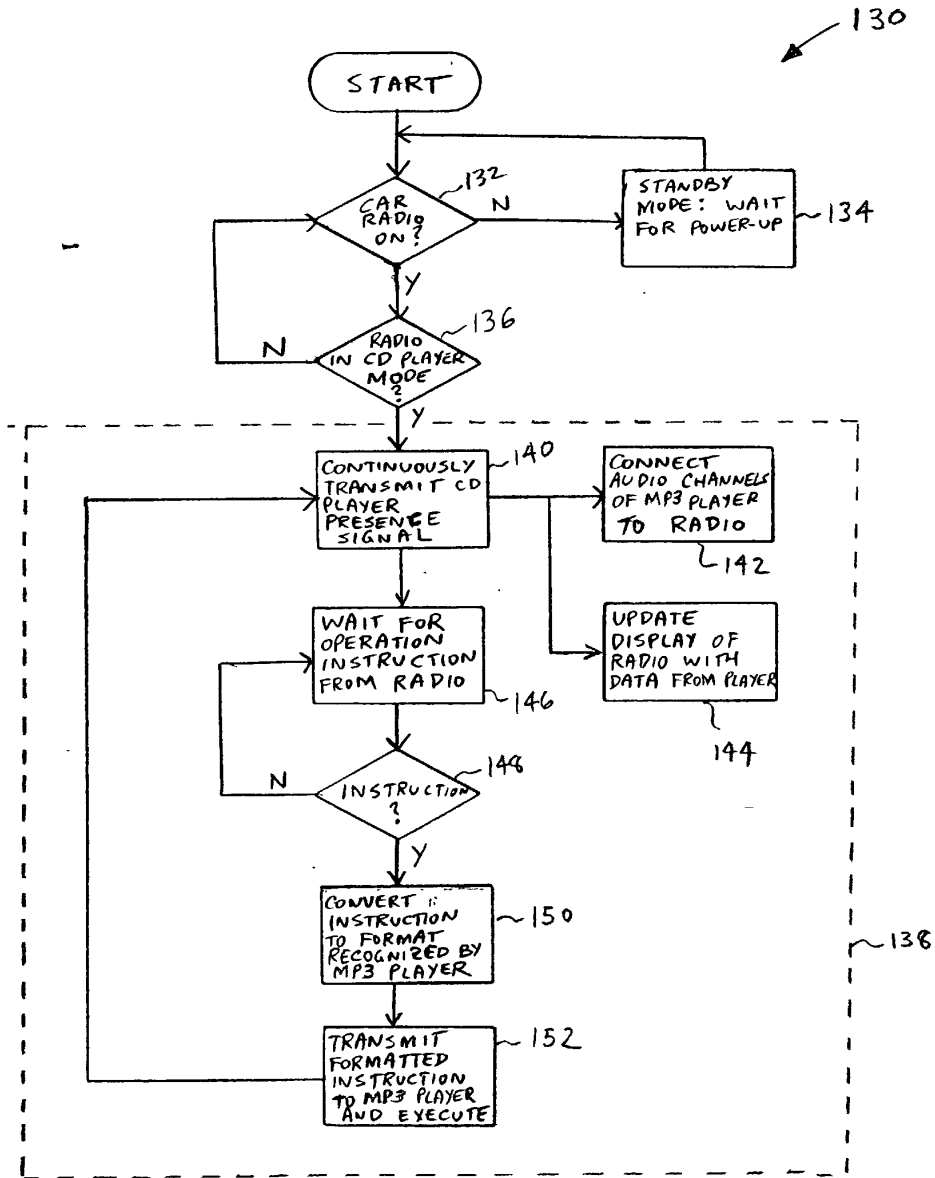


FIG. 4c

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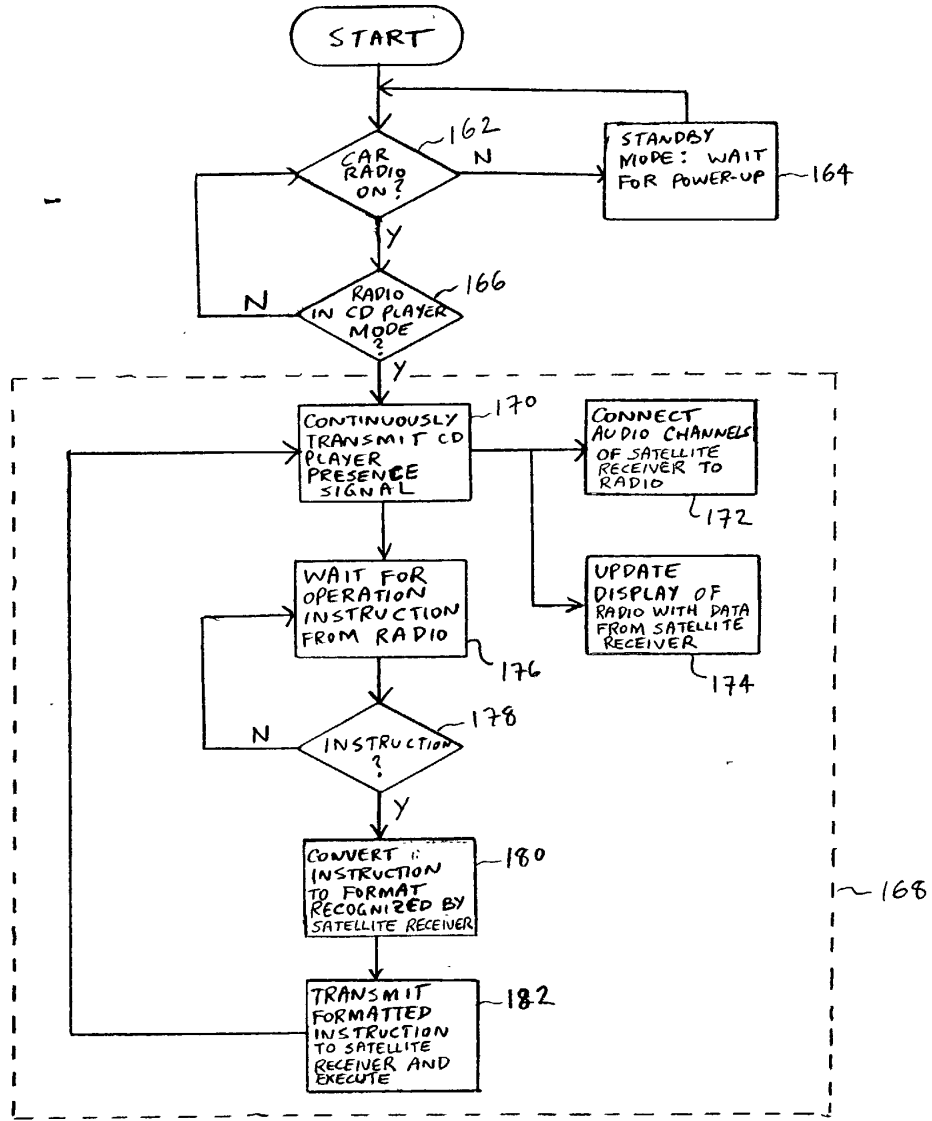




FIG. 4d

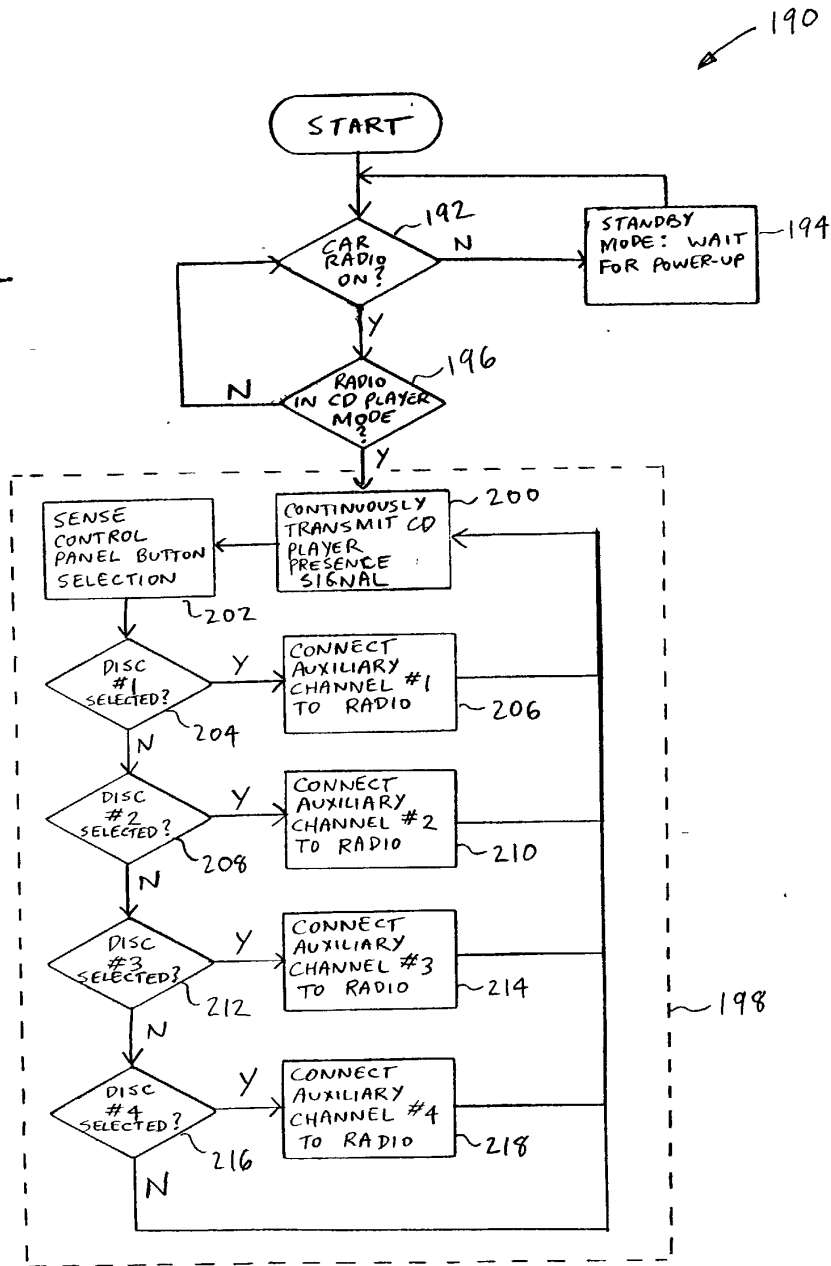


FIG. 4e

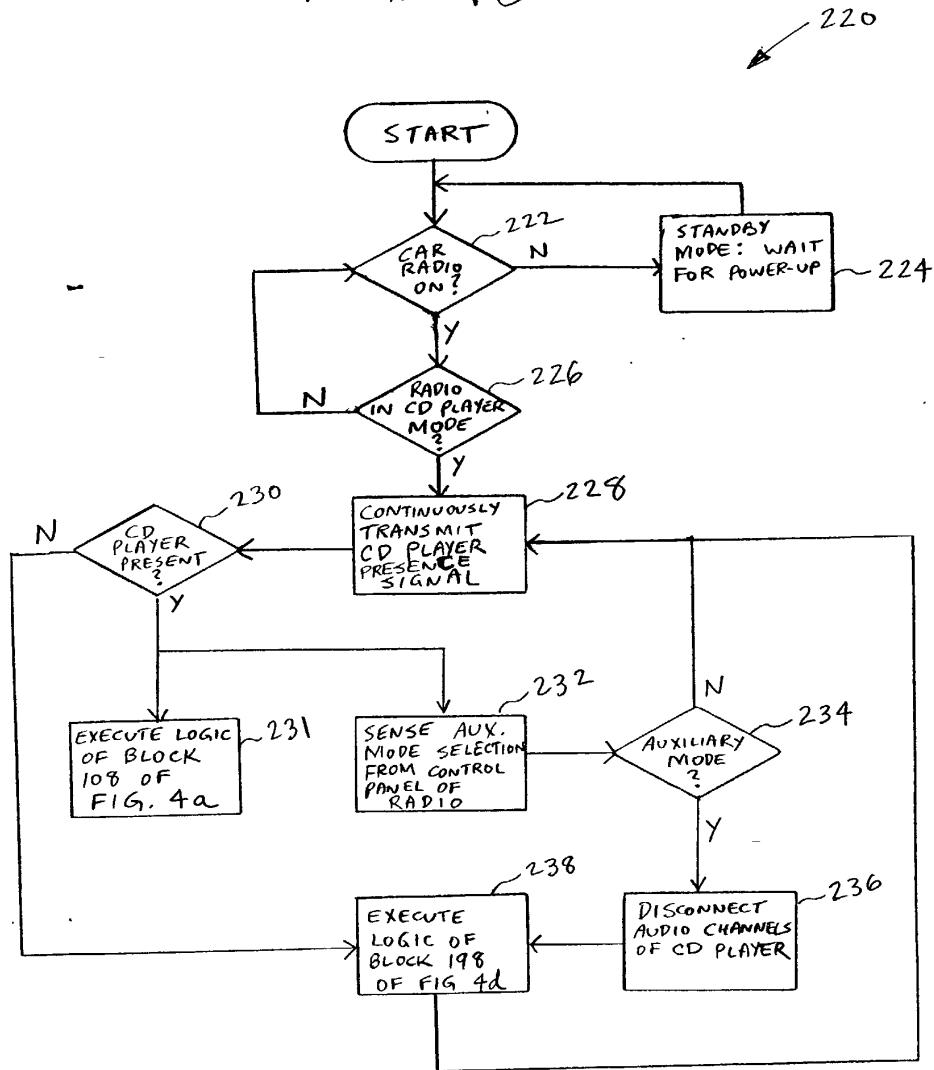


FIG. 4f

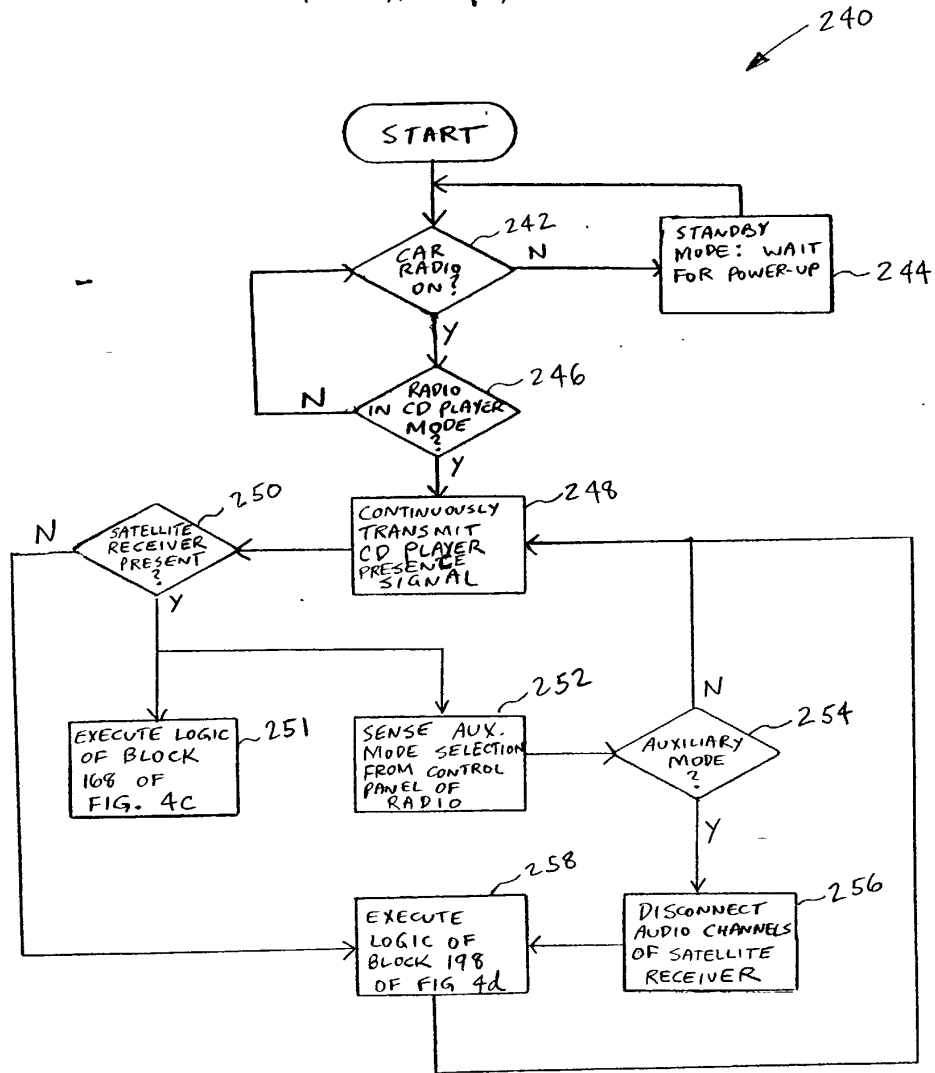


FIG. 4g

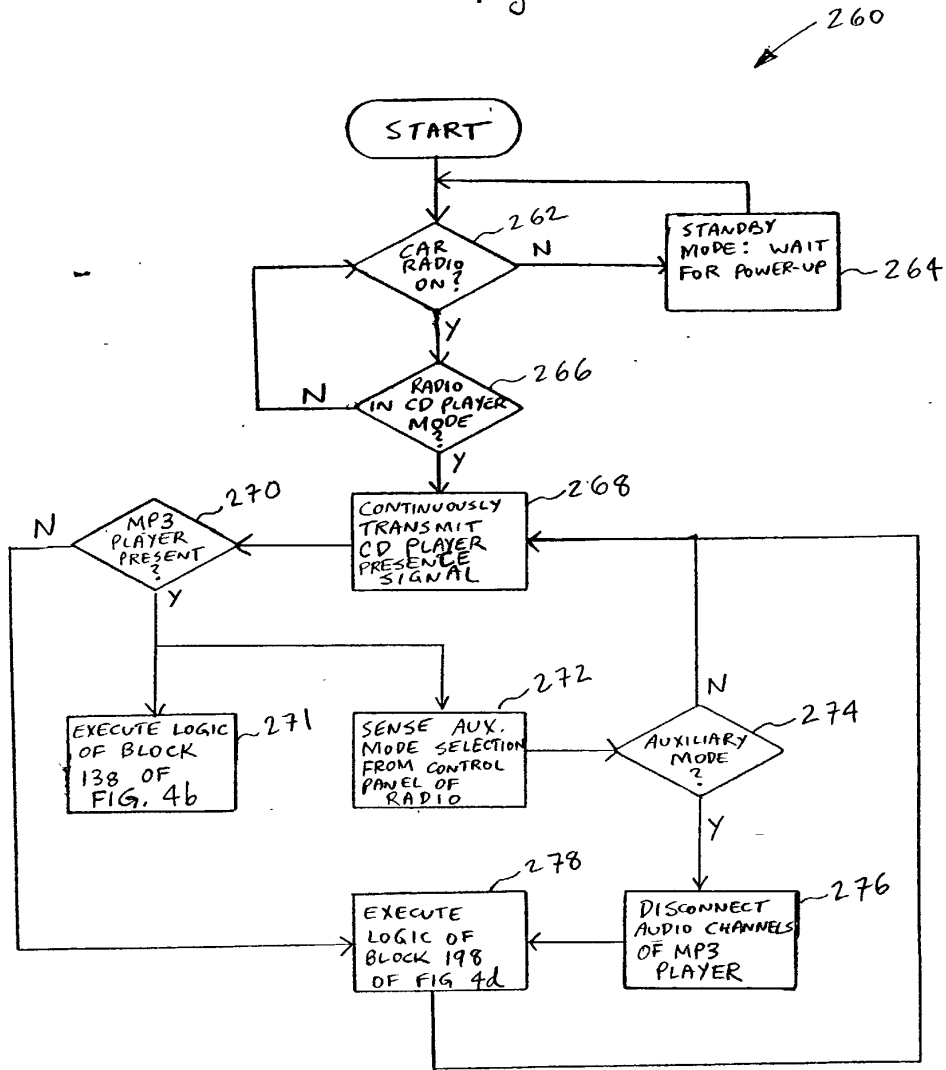


FIG. 5

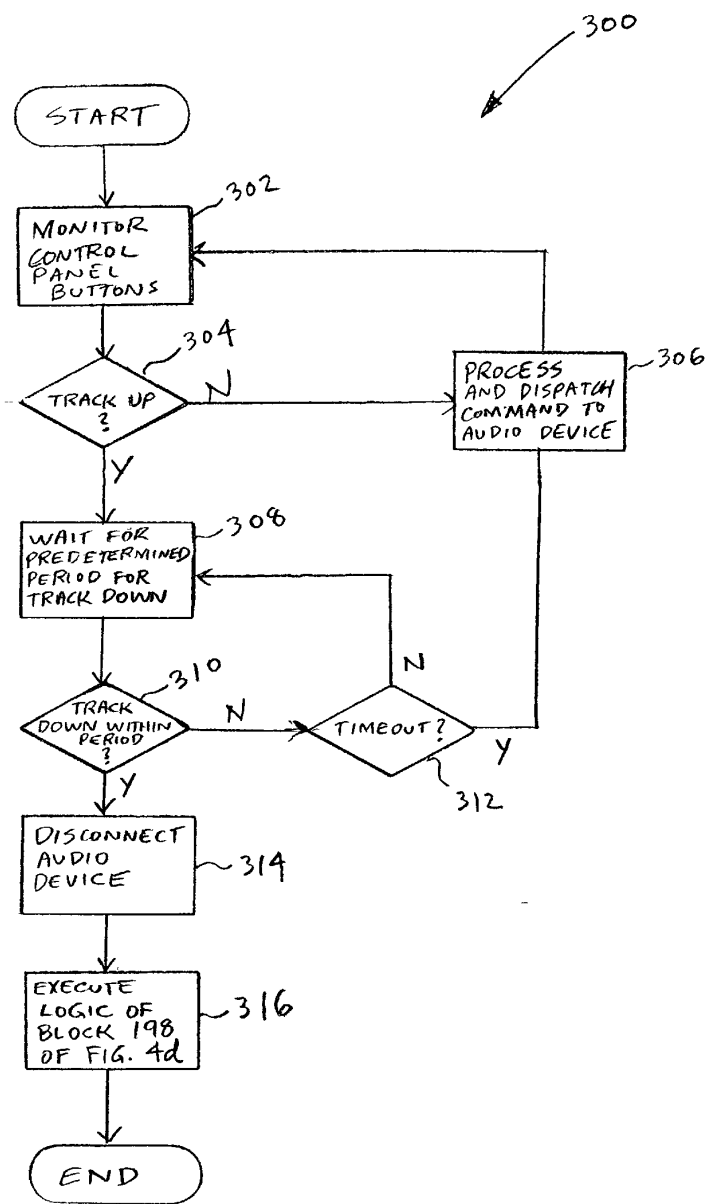


FIG. 6

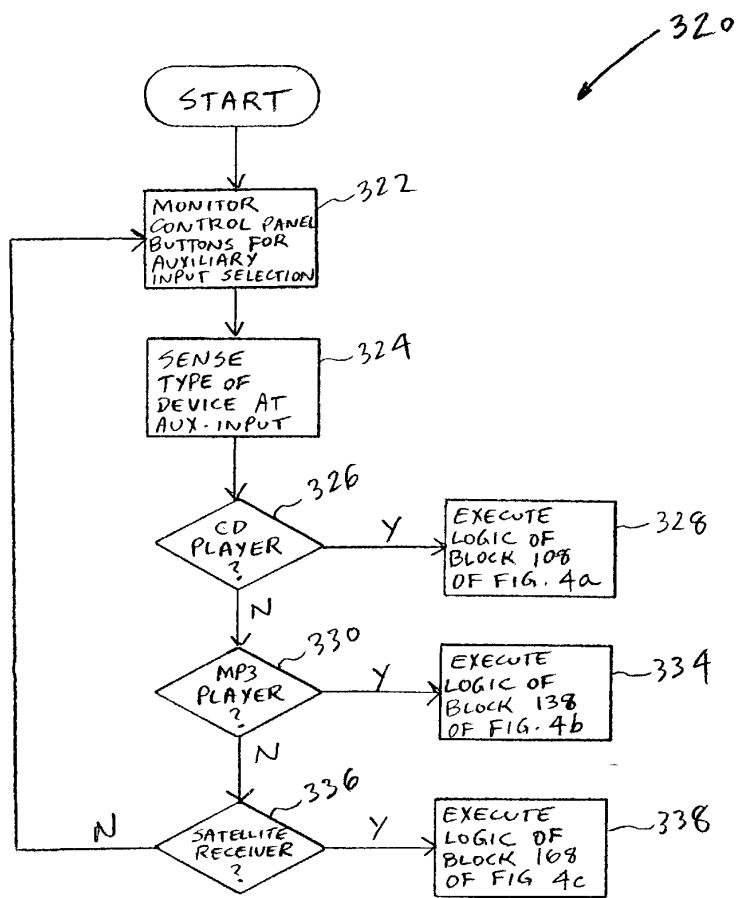


FIG. 7a

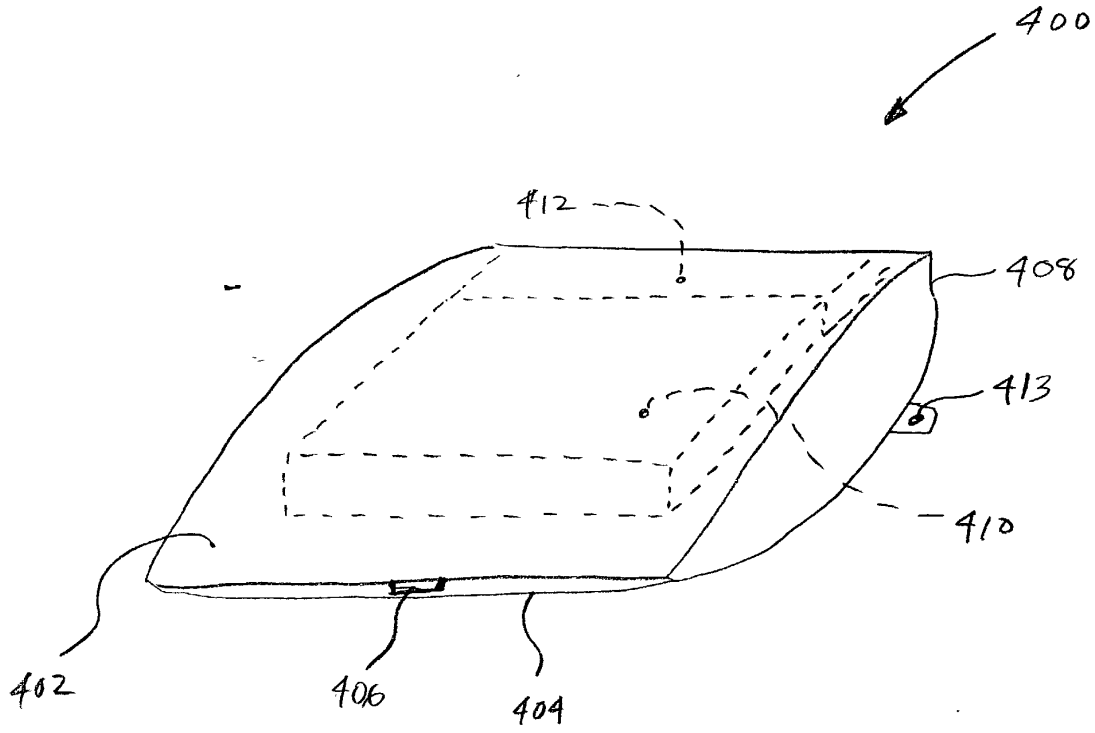
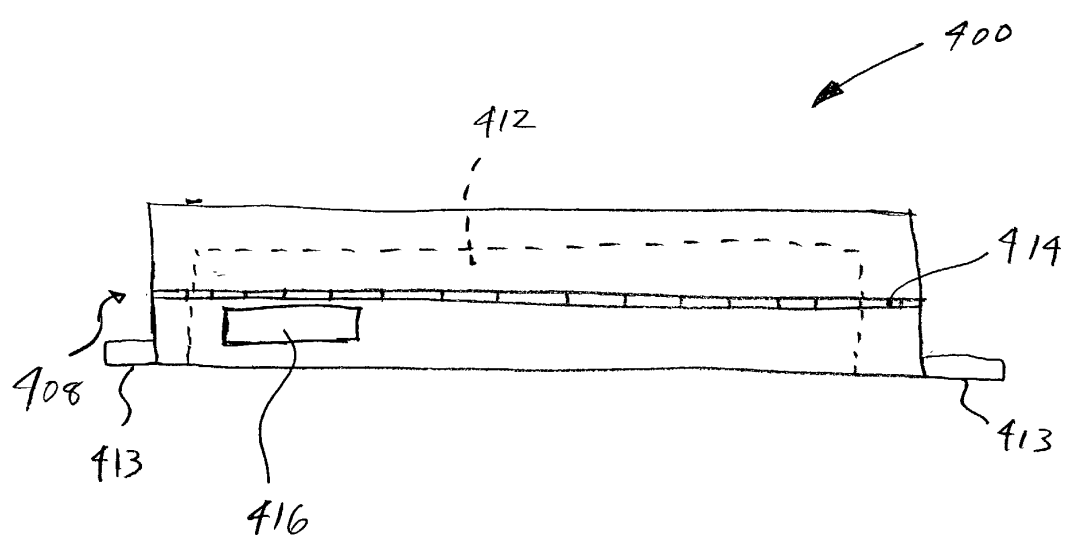
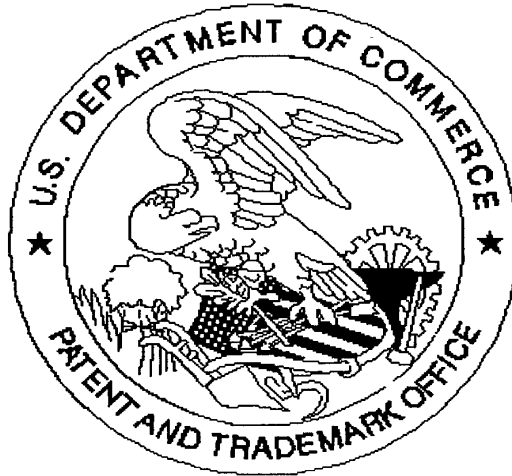


FIG. 76





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for scanning. (Document title)

*Scanned copy is best available.*

**PATENT APPLICATION FEE DETERMINATION RECORD**  
Effective October 1, 2001

Application or Docket Number

**CLAIMS AS FILED - PART I**

|   | (Column 1)   | (Column 2)   |
|---|--------------|--------------|
| TOTAL CLAIMS  | 54           |              |
| FOR   | NUMBER FILED | NUMBER EXTRA |
| TOTAL CHARGEABLE CLAIMS                                   | 54 minus 20= | * 34         |
| INDEPENDENT CLAIMS  | 3 minus 3=   | * 0          |
| MULTIPLE DEPENDENT CLAIM PRESENT <input type="checkbox"/> |              |              |

**SMALL ENTITY TYPE**  **OR** **OTHER THAN SMALL ENTITY**

| RATE      | FEE    |    | RATE      | FEE    |
|-----------|--------|----|-----------|--------|
| BASIC FEE | 370.00 | OR | BASIC FEE | 740.00 |
| X\$ 9=    |        | OR | X\$18=    |        |
| X42=      |        | OR | X84=      |        |
| +140=     |        | OR | +280=     |        |
| TOTAL     |        | OR | TOTAL     |        |

\* If the difference in column 1 is less than zero, enter "0" in column 2

**CLAIMS AS AMENDED - PART II**

|                    | (Column 1)  | (Column 2)                         | (Column 3)    |
|--------------------|---|------------------------------------|---------------|
| <b>AMENDMENT A</b> | CLAIMS REMAINING AFTER AMENDMENT  | HIGHEST NUMBER PREVIOUSLY PAID FOR | PRESENT EXTRA |
|                    | Total   | * Minus **                         | =             |
|                    | Independent   | * Minus ***                        | =             |
|                    | FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/> |                                    |               |

**SMALL ENTITY**  **OR** **OTHER THAN SMALL ENTITY**

| RATE             | ADDITIONAL FEE |    | RATE             | ADDITIONAL FEE |
|------------------|----------------|----|------------------|----------------|
| X\$ 9=           |                | OR | X\$18=           |                |
| X42=             |                | OR | X84=             |                |
| +140=            |                | OR | +280=            |                |
| TOTAL ADDIT. FEE |                | OR | TOTAL ADDIT. FEE |                |

|                    | (Column 1)  | (Column 2)                         | (Column 3)    |
|--------------------|---|------------------------------------|---------------|
| <b>AMENDMENT B</b> | CLAIMS REMAINING AFTER AMENDMENT  | HIGHEST NUMBER PREVIOUSLY PAID FOR | PRESENT EXTRA |
|                    | Total   | * Minus **                         | =             |
|                    | Independent   | * Minus ***                        | =             |
|                    | FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/> |                                    |               |

| RATE             | ADDITIONAL FEE |    | RATE             | ADDITIONAL FEE |
|------------------|----------------|----|------------------|----------------|
| X\$ 9=           |                | OR | X\$18=           |                |
| X42=             |                | OR | X84=             |                |
| +140=            |                | OR | +280=            |                |
| TOTAL ADDIT. FEE |                | OR | TOTAL ADDIT. FEE |                |

|                    | (Column 1)  | (Column 2)                         | (Column 3)    |
|--------------------|---|------------------------------------|---------------|
| <b>AMENDMENT C</b> | CLAIMS REMAINING AFTER AMENDMENT  | HIGHEST NUMBER PREVIOUSLY PAID FOR | PRESENT EXTRA |
|                    | Total   | * Minus **                         | =             |
|                    | Independent   | * Minus ***                        | =             |
|                    | FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/> |                                    |               |

| RATE             | ADDITIONAL FEE |    | RATE             | ADDITIONAL FEE |
|------------------|----------------|----|------------------|----------------|
| X\$ 9=           |                | OR | X\$18=           |                |
| X42=             |                | OR | X84=             |                |
| +140=            |                | OR | +280=            |                |
| TOTAL ADDIT. FEE |                | OR | TOTAL ADDIT. FEE |                |

\* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.  
 \*\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20."  
 \*\*\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3."  
 The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.