**Appendix D - Claim Chart for US Patent No. 8,155,342 Against Infotainment Systems of Accused Kia Automobiles**

In these Infringement Contentions, Blitzsafe contends that at least the following claims of U.S. Patent No. 8,155,342 ("'342 patent") identified below are infringed by the infotainment systems in accused Kia automobiles. Blitzsafe does not concede that any claims of the '342 patent that are not listed below are not infringed by the infotainment systems in accused Kia automobiles. Moreover, the citations to certain documents and other information below are intended to be exemplary only and in no way foreclose Blitzsafe from citing or relying on additional documents, information, and/or testimony at a later time. These contentions are preliminary in nature, and an analysis of Kia's infotainment systems, internal documentation, source code, and/or testimony from relevant witnesses may be necessary to more fully and accurately describe the infringing features of its accused products. Accordingly, Blitzsafe reserves the right to supplement, correct, modify, and/or amend these contentions once such additional information is made available to Blitzsafe. Furthermore, Blitzsafe reserves the right to supplement, correct, modify, and/or amend these contentions as discovery in this case progresses; in view of the Court's claim construction order(s); in view of any positions taken by Kia, including but not limited to positions on claim construction, invalidity, and/or non-infringement; and in connection with the preparation and exchange of expert reports.

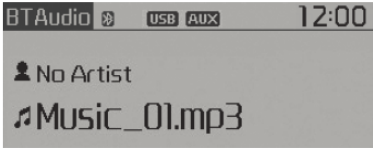| Claim | Support |
|---|---|
| 49[P]. A multimedia device integration system, comprising: | Each accused Kia automobile includes a device integration system that supports integration of audio/video devices, such as freely lying smartphones and other smart devices connected via Bluetooth, as well as MP3 players (e.g., iPods, iPhones and Zune devices playing MP3 files). Accused Kia automobiles also permit audio streaming over Bluetooth from smartphone apps, such as Pandora, iTunes streaming, and Apple Music. |
| [49A] an integration subsystem in communication with a car audio/video system; and | Each device integration system of an accused Kia automobile includes, among other things, an integration subsystem for connecting the car audio/video system to portable devices via a Bluetooth connection. The integration subsystem, which comprises at least the software and hardware shown in the yellow dashed boxes below, including at least a Freescale microcontroller and memory modules, is in communication with the car audio/video system. The integration subsystem channels audio signals to the car stereo from a portable device (such as an iPod, iPhone, Zune device or other smart device) external to the car audio/video system. |

1

| Claim | Support |
|---|---|
| |  |

2

| Claim | Support |
|---|---|
|  |  |

| Claim | Support |
|---|---|
| | **Features of your vehicle** |
| | **Starting *Bluetooth*® Wireless Technology Audio** |
| | • Press the MEDIA key to change the mode in order of USB➡AUX ➡My Music➡BT Audio. |
| | • If BT Audio is selected, *Bluetooth*® Wireless Technology audio will start playing. |
| | ✳ Audio may not automatically start playing in some mobile phones. |
| | **Using the *Bluetooth*® Wireless Technology audio features** |
| | • Play / Stop |
| | Press the ⏺ TUNE knob to play and pause the current song. |
| | BTAudio ⑧    USB AUX      12:00 |
| | 👤 No Artist |
| | ♫ Music_01.mp3 |
| | ✳ The title / artist info may not be supported in some mobile phone. When it is not supported, no title/no artist will be displayed. |
| | • Previous / Next song |
| | Press ∨SEEK TRACK or SEEK TRACK∧ to play previous or next song. |
| | ✳ The previous song / next song / play / pause functions may not be supported in some mobile phones. |
| | 4 178 |
| | *See, e.g.,* Ex. A (2014 Kia Soul User's Manual) at 4:178.[1] |

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[1] Blitzsafe has produced Ex. A, 2014 Kia Soul User's Manual, simultaneously with these Infringement Contentions as a document bearing production numbers BS-HK-0000880 – 1379.  All pin-cites are to manual pages.

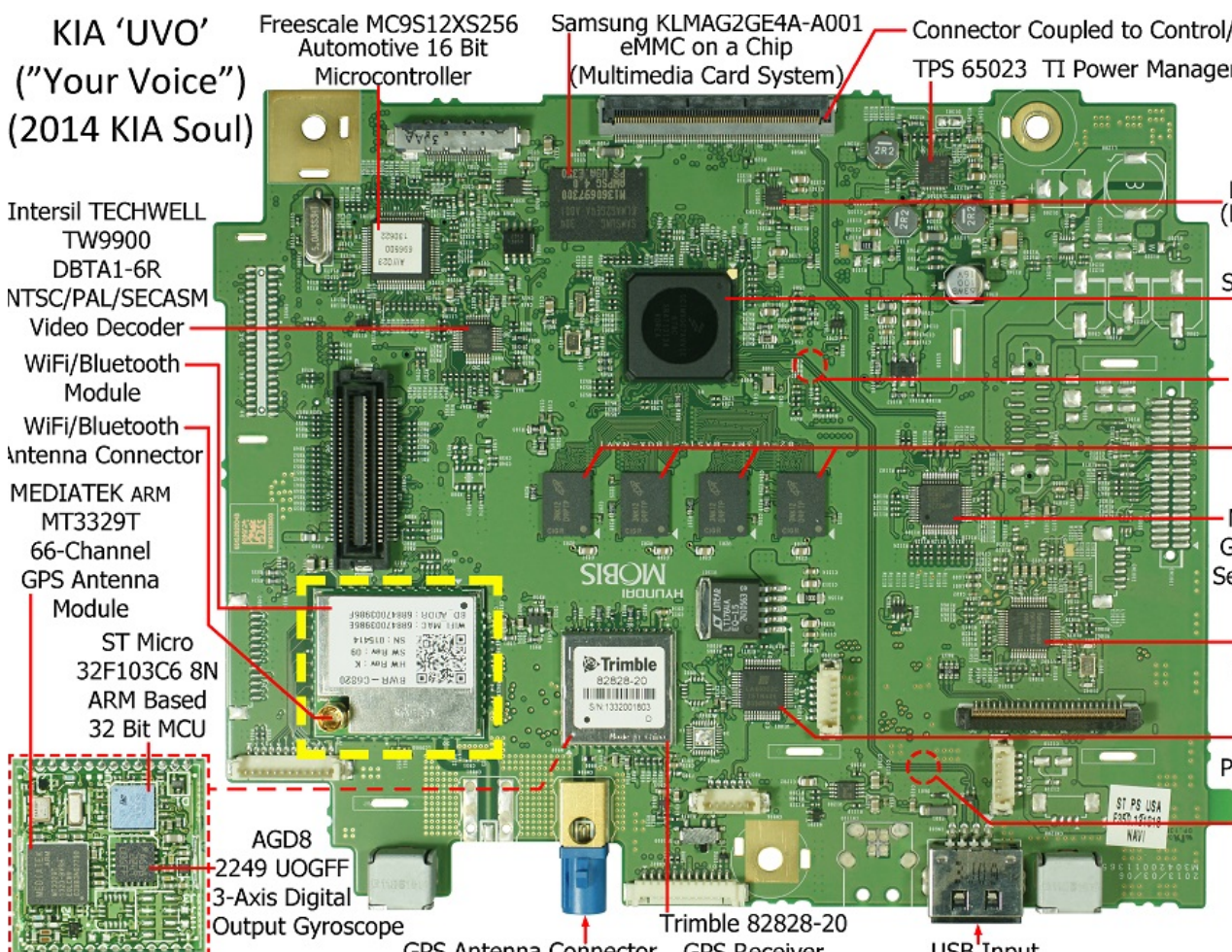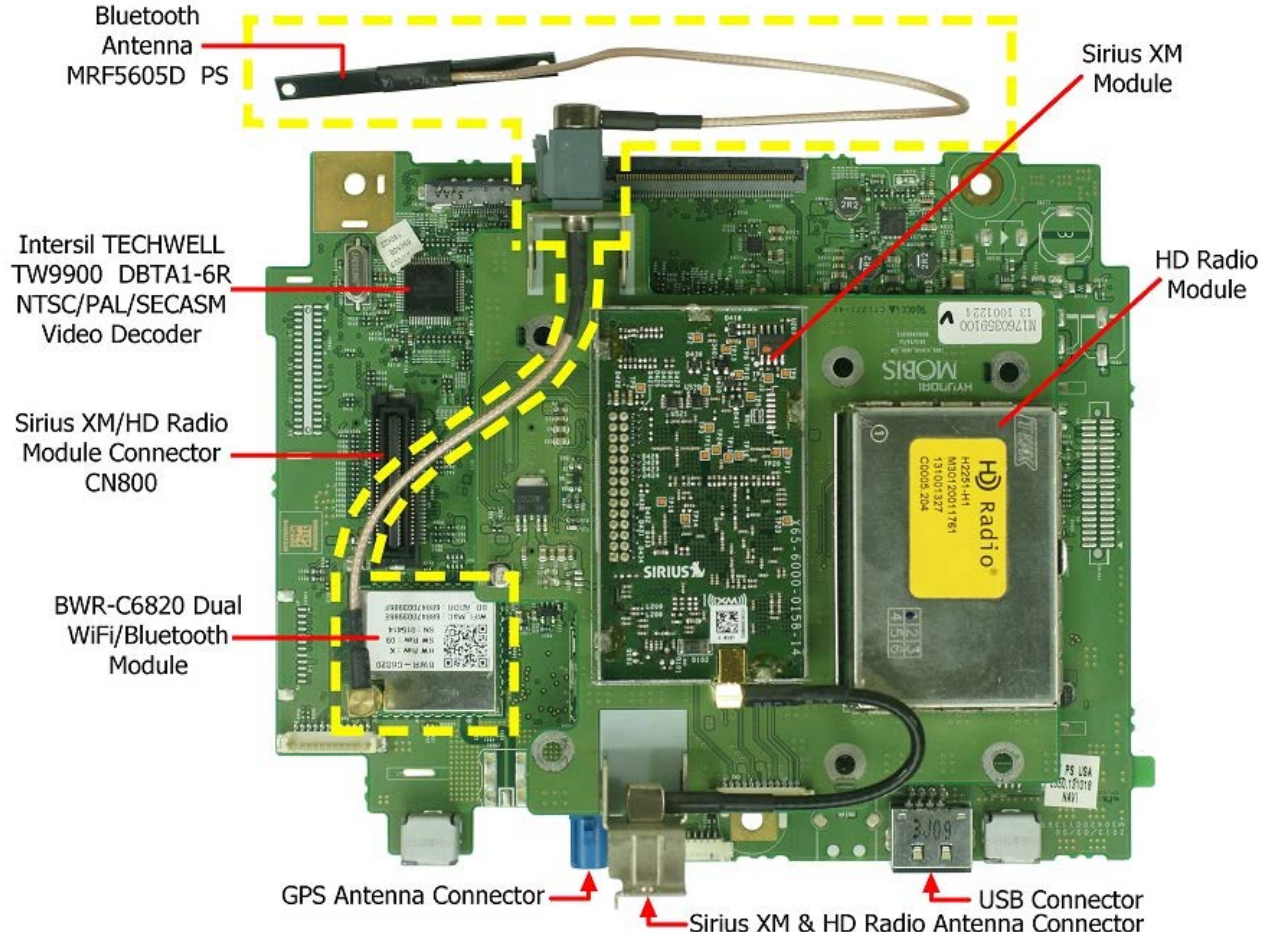| Claim | Support |
|---|---|
|  | **BT AUDIO MODE**<br><br>BT Audio mode is a feature which allows you to stream music stored in your handset device via a *Bluetooth*® wireless technology connection. Music saved in the handset device can be played in the car through *Bluetooth*® wireless technology audio streaming. BT audio can be played only when a handset device has been connected. To play BT audio, pair a handset device with the system. If *Bluetooth*® wireless technology is disconnected while playing BT audio, music play will be discontinued. The audio streaming function may not be supported in some handset devices. Only one function can be used at a time between the *Bluetooth*® wireless technology handsfree or BT audio function. Playing music from the car is not possible when there are no music files stored in the handset device.<br><br>**BT Mode Screen and Features**<br><br>**1 Mode Display**<br>Displays the current mode as BT Audio mode.<br><br>**2 *Bluetooth*® wireless technology enabled device information**<br>Displays information about the *Bluetooth*® wireless technology enabled device<br><br>**3 Song Title**<br>Displays the song title.<br><br>**4 Play/Pause**<br>Plays/pauses the song.<br><br>**5 Sound**<br>Enters Sound Setup.<br><br>**6 Phone Battery charge status**<br>Displays the battery charge status of the connected mobile phone. The battery charge status may not be displayed in some mobile phones.<br><br>**7 Signal Strength**<br>Displays the mobile phone signal strength. The signal strength may not be displayed in some mobile phones.<br><br>**8 *Bluetooth*® wireless technology connection state**<br>Becomes displayed when a *Bluetooth*® wireless technology enabled phone has been connected with the car system.<br><br>PART 2. AUDIO FEATURES   2-27 |

5

| Claim | Support |
|---|---|
| | **Listening to music from your Bluetooth® wireless technology enabled device**<br><br>1. Pair your Bluetooth® wireless technology enabled device to the handsfree system. For more information on pairing your Bluetooth® wireless technology enabled devices, refer to the 'Pairing your handset device to the handsfree system' section.<br>2. Press the MEDIA key on the control panel to turn on BT audio mode.<br>3. When streaming music from your Bluetooth® wireless technology enabled device and you wish to pause, press the ▶❚❚ button next on the screen. Press the ▶❚❚ button to restart music.<br><br>*Note*<br>• While music saved in the Bluetooth® wireless technology enabled device will automatically begin playing after converting to the BT Audio screen, this music player function may not be supported in some Bluetooth® wireless technology enabled devices.<br><br>2-28  PART 2. AUDIO FEATURES<br><br>• If music does not begin playing even after displaying the Phone music screen, try starting the music directly from the Bluetooth® wireless technology enabled device.<br><br>**Selecting a song**<br><br>1. Press the SEEK TRACK ∧ or ∨ SEEK TRACK keys on the control panel or the ∧ or ∨ keys on the steering wheel controller to play the desired song.<br>2. The previous or next song will begin playing.<br><br>*Note*<br>• File selection may not be supported in some Bluetooth® wireless technology enabled devices.<br><br>**REW/FF a song**<br><br>1. Press and hold the SEEK TRACK ∧ or ∨ SEEK TRACK keys (over 0.8 seconds) on the control panel or the ∧, ∨ keys (over 0.8 seconds) on the steering wheel controller.<br>2. The track will rewind or fast-forward at a rate 20 times faster than normal while the key is being held.<br>3. Release the key to play from the current position.<br><br>*Note*<br>• The play/pause, song selection and REW/FF features are supported only in handset devices with AVRCP Ver. 1.3 or higher. If play control features are not working, first check the AVRCP version of your Bluetooth® wireless technology enabled device.<br>• When such operations are not supported, use the handset device to perform these functions.<br><br>*See, e.g.,* Ex. B (2015 Kia Soul UVO Manual) at 2:27-28.[2]<br><br>*See, e.g.,* video (Stream Music from Your Smart Phone - 2014 Kia Uvo eServices Infotainment System with Navigation: https://www.youtube.com/watch?v=4LvVqYtcTho). |
| [49B] a first wireless | Each device integration system of the accused Kia automobiles includes a first wireless interface (a Bluetooth interface in the form of a Bluetooth controller and/or antenna and related circuitry, including at least the circuitry shown in the yellow |

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[2] Blitzsafe has produced Ex. B, 2015 Kia Soul UVO Manual, simultaneously with these Infringement Contentions as a document bearing production numbers BS-HK-0000739 – 875.  All pin-cites are to manual pages.

| Claim | Support |
|---|---|
| interface in communication with said integration subsystem, said first wireless interface establishing a wireless communication link with a second wireless interface in communication with a portable device external to the car audio/video system, | dashed box below) in communication with the integration subsystem. The Bluetooth interface of the car audio/video system is operable to establish a wireless link with Bluetooth interfaces (second wireless interfaces) of and/or in communication with one or more portable devices external to the car audio/video system.<br><br> |

7

| Claim | Support |
|---|---|
| |  |

KIA 'UVO' ("Your Voice") (2014 KIA Soul)

Bluetooth Antenna MRF5605D PS

Sirius XM Module

Intersil TECHWELL TW9900 DBTA1-6R NTSC/PAL/SECASM Video Decoder

HD Radio Module

Sirius XM/HD Radio Module Connector CN800

BWR-C6820 Dual WiFi/Bluetooth Module

GPS Antenna Connector

USB Connector

Sirius XM & HD Radio Antenna Connector

Note: For clarity, the "Sirus XM"/"HD Radio" circuit board has been detached from Connector CN800 & shifted to the right.

8

| Claim | Support |
|---|---|

## iOS: Supported Bluetooth profiles

iPhone, iPad, and iPod touch support multiple Bluetooth profiles with the latest version of iOS. You can learn the differences in Bluetooth-profile support from one device to the next.

The following table lists supported Bluetooth profiles by device for the latest version of iOS.

| Device | Hands-Free Profile (HFP 1.6) | Phone Book Access Profile (PBAP) | Advanced Audio Distribution Profile (A2DP) | Audio/Video Remote Control Profile (AVRCP 1.4) | Personal Area Network Profile (PAN) | Human Interface Device Profile (HID) | Message Access Profile (MAP) |
|---|---|---|---|---|---|---|---|
| iPhone 4 and later | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| iPhone 3GS | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | - |
| iPhone 3G | ✓ | ✓ | ✓ | ✓ | ✓ | - | - |
| Original iPhone | ✓ | ✓ | - | - | - | - | - |
| iPad 2 and later | ✓ | - | ✓ | ✓ | ✓ | ✓ | - |
| iPad (1st generation) | - | - | ✓ | ✓ | ✓ | ✓ | - |
| iPod touch (4th generation and later) | ✓ | - | ✓ | ✓ | ✓ | ✓ | - |
| iPod touch (2nd and 3rd generation) | - | - | ✓ | ✓ | ✓ | ✓ | - |

*See, e.g.,* Ex. C (Apple iPhone webpage).[3]

*See, e.g.,* http://developer.android.com/guide/topics/connectivity/bluetooth.html (discussing Bluetooth support for the
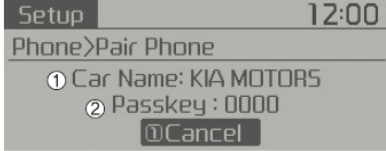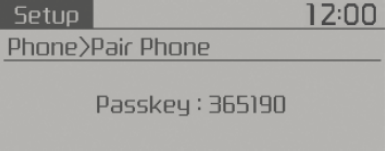
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[3] Blitzsafe has produced Ex. C, iOS: Supported Bluetooth profiles, simultaneously with these Infringement Contentions as a document bearing production numbers BS-HK-0000001 – 3. All pin-cites are to manual pages.
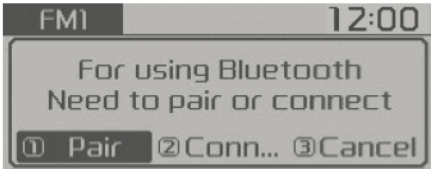
| Claim | Support |
|---|---|
| | Android platform) |

*See also* Ex. D (Kia Bluetooth Compatibility List).[4]

• Check call history and making call
① Briefly press (under 0.8 seconds) the [phone] key on the steering remote controller.
② The call history list will be displayed on the screen.
③ Press the [phone] key again to connect a call to the selected number.

• Redialing the most recently called number
① Press and hold (over 0.8 seconds) the [phone] key on the steering remote controller.
② The most recently called number is redialed.

**Bluetooth® Wireless Technology**

**Pairing a Bluetooth® Wireless Technology Device(if equipped)**

*What is Bluetooth® Wireless Technology Pairing?*
Pairing refers to the process of synchronizing your Bluetooth® Wireless Technology phone or device with the car audio system for connection. Pairing is necessary to connect and use the Bluetooth® Wireless Technology feature.
The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by Kia is under license. Other trademarks and trade names are those of their respective owners. A Bluetooth® enabled cell phone is required to use Bluetooth® Wireless Technology

4 180

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[4] Blitzsafe has produced Ex. D, Kia Bluetooth Compatibility List, simultaneously with these Infringement Contentions as a document bearing production numbers BS-HK-0000876 – 879. All pin-cites are to manual pages.
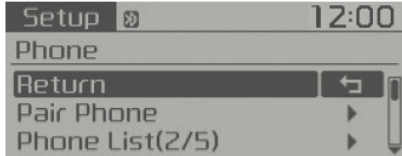
| Claim | Support |
|---|---|
| | **Pairing [PHONE] Key / [📞] Key on the Steering Remote Controller**<br><br>**When No Devices have been Paired**<br>1. Press the [PHONE] key or the [📞] key on the steering remote controller.<br><br>Setup 12:00<br>Turn Bluetooth ON from your device to search<br>① OK<br><br>2. Select [OK] button to enter the Pair Phone screen.<br><br>Setup 12:00<br>Phone>Pair Phone<br>① Car Name: KIA MOTORS<br>② Passkey : 0000<br>① Cancel<br><br>1) Car Name : Name of device as shown when searching from your Bluetooth® Wireless Technology device<br>2) Passkey : Passkey used to pair the device<br><br>3. From your Bluetooth® Wireless Technology device (i.e. Mobile Phone), search and select your car audio system.<br><br>[Non SSP supported device]<br>(SSP: Secure Simple Pairing)<br>4. After a few moments, a screen is displayed where the passkey is entered. Enter the passkey "0000" to pair your Bluetooth® Wireless Technology device with the car audio system.<br><br>[SSP supported device]<br>4. After a few moments, a screen is displayed 6 digits passkey. Check the passkey on your Bluetooth® Wireless Technology device and confirm.<br><br>Setup 12:00<br>Phone>Pair Phone<br>Passkey : 365190<br><br>5. Once pairing is complete, the following screen is displayed.<br><br>4 181 |

11

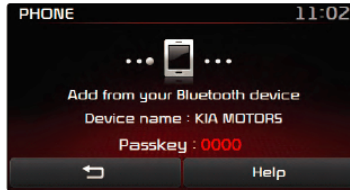| Claim | Support |
|---|---|
|  | During the pairing process, make sure that all connection requests on the phone are accepted for phonebook download and to allow acceptance of all future connection requests. " and "Visit http://www.kia.com/us/#/blue-tooth for additional information on pairing your Bluetooth-enabled mobile phone, and to view a phone compatibility list.<br><br>`FM1                    12:00`<br>`For using Bluetooth`<br>`Need to pair or connect`<br>`① Pair  ②Conn... ③Cancel`<br><br>• If *Bluetooth®* Wireless Technology devices are paired but none are currently connected, pressing the `PHONE` key or the ☎ key on the steering wheel displays the following screen. Select [Pair] button to pair a new device or select [Connect] to connect a previously paired device.<br><br>4 182 |
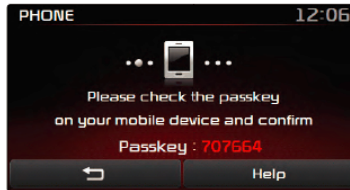
12

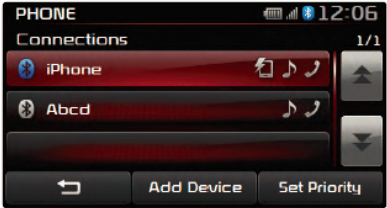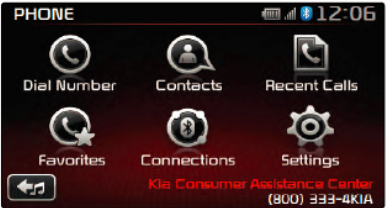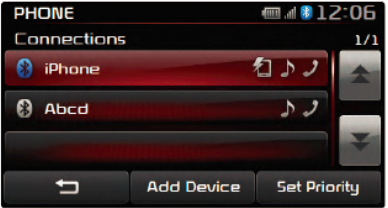| Claim | Support |
|---|---|
| | **Pairing through [PHONE] Setup**<br><br>Press the [SETUP] key ▸Select [Phone]▸Select [Pair Phone] ▸ Select ◉TUNE knob<br><br>Setup 🅱     12:00<br>Phone<br>Return   ↩<br>Pair Phone   ▸<br>Phone List(2/5)   ▸<br><br>1. The following steps are the same as those described in the section "When No Devices have been Paired" on the previous page.<br><br>• *Bluetooth®* Wireless Technology features supported within the vehicle are as follows. Some features may not be supported depending on your *Bluetooth®* Wireless Technology device.<br>  - Outgoing/Incoming Handsfree calls<br>  - Operations during a call (Switch to Private, Switch to call waiting, MIC on/off)<br>  - Downloading Call History<br>  - Downloading Mobile Contacts<br>  - *Bluetooth®* Wireless Technology device auto connection<br>  - Bluetooth Audio Streaming<br>• Up to five *Bluetooth®* Wireless Technology devices can be paired to the Car Handsfree system.<br>• Only one *Bluetooth®* device can be connected at a time.<br>• Only one *Bluetooth®* Wireless Technology device can be connected at a time.<br>• Other devices cannot be paired while a *Bluetooth®* Wireless Technology device is connected.<br><br>• Only *Bluetooth®* Wireless Technology Handsfree and Bluetooth audio related features are supported.<br>• Bluetooth related operations are possible only within devices that support Handsfree or audio features, such as a *Bluetooth®* Wireless Technology mobile phone or a Bluetooth audio device.<br>• If a connected *Bluetooth®* Wireless Technology device becomes disconnected due to being out of communication range, turning the device OFF, or a *Bluetooth®* Wireless Technology communication error, corresponding *Bluetooth®* Wireless Technology devices are automatically searched and reconnected.<br>• If the system becomes unstable due to communication errors between the car Handsfree and the *Bluetooth®* Wireless Technology device, reset the device by turning off and back on again. Upon resetting *Bluetooth®* Wireless Technology device, the system will be restored.<br><br>4 183 |

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| Claim | Support |
|---|---|
|  | • After pairing is complete, a contacts download request is sent once to the mobile phone. Some mobile phones may require confirmation upon receiving a download request, ensure your mobile phone accepts the connection. Refer to your phones user's manual for additional information regarding phone pairing and connections. **Connecting a Device** Press the `SETUP` key ▶ Select [Phone] ▶ Select [Phone List] Setup 12:00 Phone>Phone List Return ↩ ① John Smith's... ▶ ② Bluetooth Phone ▶ 1) Connected Phone : Device that is currently connected 2) Paired Phone : Device that is paired but not connected — From the paired phone list, select the device you want to connect and select [Connect]. Setup 12:00 ....>List>Connect Phone ① Conn... ② Priori... ③ Delete ④ Return Setup 12:00 ....>List>Connect Phone Bluetooth Phone Connection complete ① OK 4 : 184 *See, e.g.,* Ex. A (2014 Kia Soul User's Manual) at 4:180-84. |
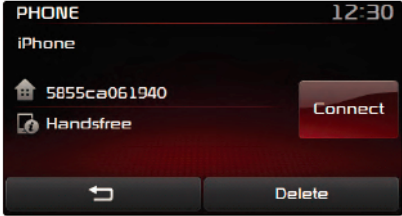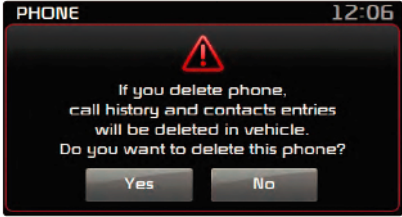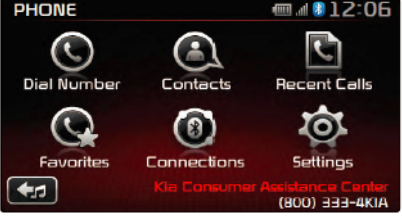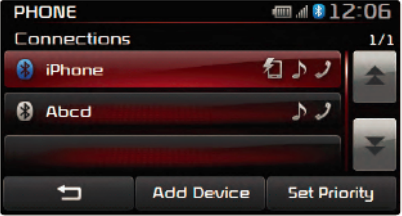
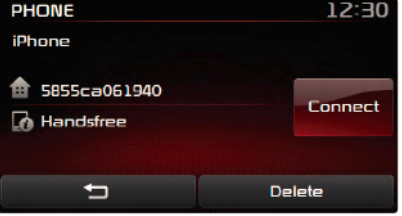**Appendix D - Claim Chart for US Patent No. 8,155,342 Against Infotainment Systems of Accused Kia Automobiles**

| Claim | Support |
|---|---|
| |  |

15

| Claim | Support |
|-------|---------|
|  |  |

5. Once pairing is complete, the handset device will be shown in the Connections list.

*Note*

- Initial pairing may require some time due to initial uploading of your contacts into the system. The contacts upload feature may not be supported in some handset devices.
- Before connecting the *Bluetooth*® wireless technology handsfree system with the handset device, check to see that the handset device supports *Bluetooth*® wireless technology handsfree and *Bluetooth*® wireless technology is turned on.
- The process for initiating *Bluetooth*® wireless technology connections may vary depending on the manufacturer. Use the handset device user's manual as a reference guide.
- The UVO system supports up to 5 pairings.

After 5 handsets have already been paired, you must delete a handset in order to pair a new handset.
- Some phones may offer an option to allow acceptance of all future Bluetooth® connection requests by default.
- Visit http://www.kia.com/us/#/bluetooth for additional information on pairing your Bluetooth® enabled mobile phone, and to view a phone compatibility list.

**Deleting a paired handset device**

1. While in Phone mode, press the Connections button.

2. Select the handset device you want to delete.

PART 3. PHONE FEATURES    3-5

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| Claim | Support |
|---|---|
| | <br><br>*See, e.g.,* Ex. B (2015 Kia Soul UVO Manual) at 3:4-6.<br><br>*See, e.g.,* video (Stream Music from Your Smart Phone - 2014 Kia Uvo eServices Infotainment System with Navigation: https://www.youtube.com/watch?v=4LvVqYtcTho). |
| [49C] wherein | After establishing a wireless link with the portable device, information about an audio file stored on the portable device |

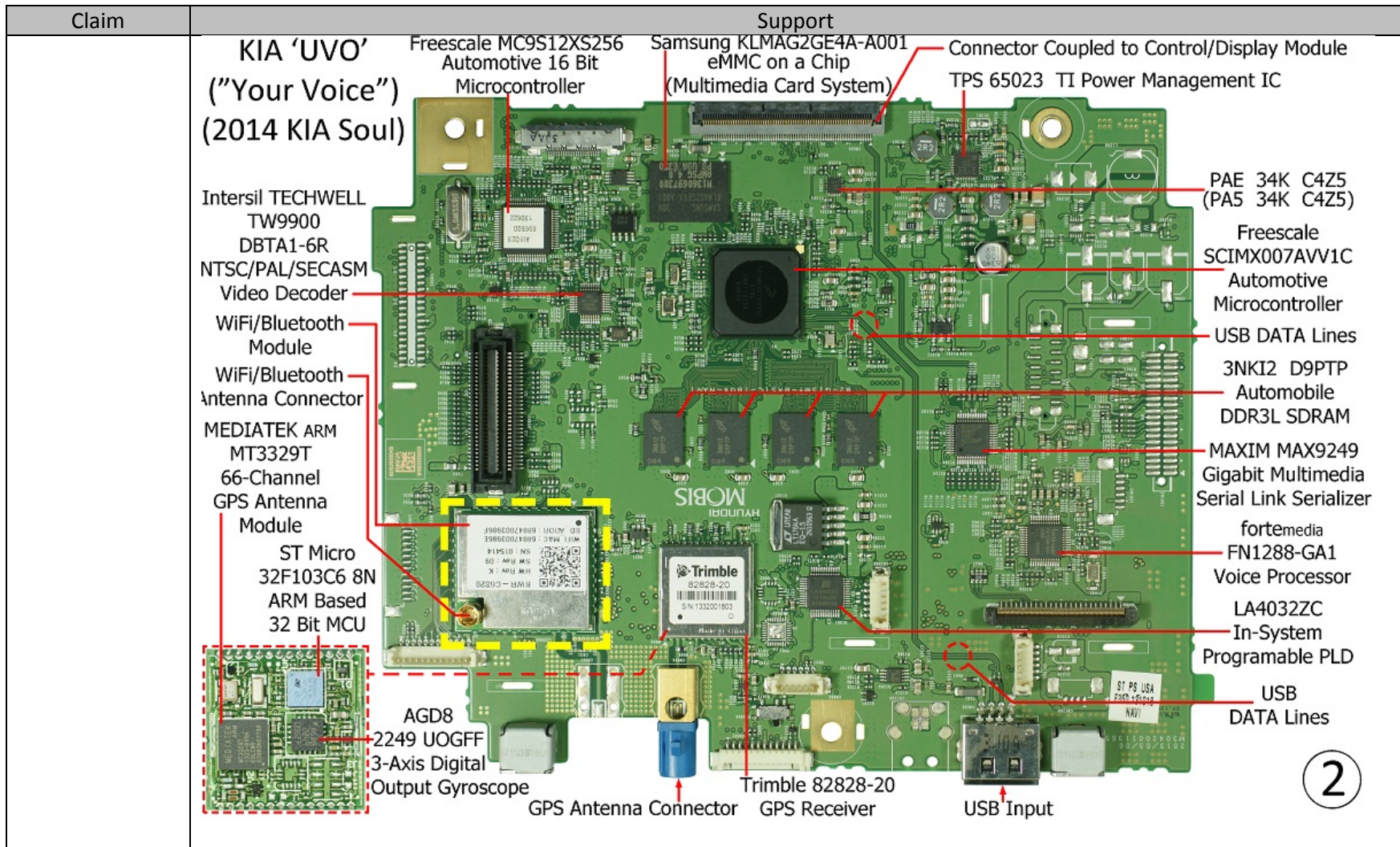| Claim | Support |
|---|---|
| said integration subsystem obtains, using said wireless communication link, information about an audio file stored on the portable device, transmits the information to the car audio/video system for subsequent display of the information on a display of the car audio/video system, | (such as the audio itself, as well as song title information) is communicated wirelessly from the portable device to the integration subsystem of the car audio/video system via the first and second wireless interfaces (i.e., a Bluetooth interface of the car audio/video system and another in communication with and part of the portable device).  The integration subsystem then transmits this information to the car audio/video system for subsequent display of the information on a display of the car audio/video system. |

| Claim | Support |
|---|---|
|  |  |

| Claim | Support |
|---|---|
| |  |

| Claim | Support |
|---|---|



KIA 'UVO' ("Your Voice") (2014 KIA Soul)

Freescale MC9S12XS256 Automotive 16 Bit Microcontroller

Samsung KLMAG2GE4A-A001 eMMC on a Chip (Multimedia Card System)

Connector Coupled to Control/Display Module

TPS 65023 TI Power Management IC

Intersil TECHWELL TW9900 DBTA1-6R NTSC/PAL/SECASM Video Decoder

WiFi/Bluetooth Module

WiFi/Bluetooth Antenna Connector

MEDIATEK ARM MT3329T 66-Channel GPS Antenna Module

ST Micro 32F103C6 8N ARM Based 32 Bit MCU

AGD8 2249 UOGFF 3-Axis Digital Output Gyroscope

GPS Antenna Connector

Trimble 82828-20 GPS Receiver

USB Input

PAE 34K C4Z5 (PA5 34K C4Z5)

Freescale SCIMX007AVV1C Automotive Microcontroller

USB DATA Lines

3NKI2 D9PTP Automobile DDR3L SDRAM

MAXIM MAX9249 Gigabit Multimedia Serial Link Serializer

fortemedia FN1288-GA1 Voice Processor

LA4032ZC In-System Programable PLD

USB DATA Lines
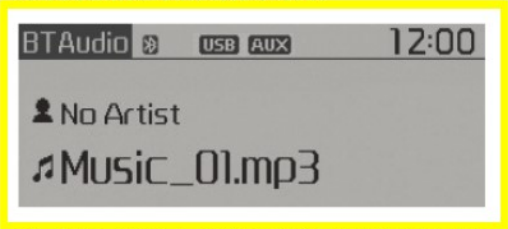
②

21

| Claim | Support |
|---|---|
|  |  KIA 'UVO' ("Your Voice") (2014 KIA Soul)<br><br>Bluetooth Antenna MRF5605D PS<br>Sirius XM Module<br>Intersil TECHWELL TW9900 DBTA1-6R NTSC/PAL/SECASM Video Decoder<br>HD Radio Module<br>Sirius XM/HD Radio Module Connector CN800<br>BWR-C6820 Dual WiFi/Bluetooth Module<br>GPS Antenna Connector<br>Sirius XM & HD Radio Antenna Connector<br>USB Connector<br>Note: For clarity, the "Sirus XM"/"HD Radio" circuit board has been detached from Connector CN800 & shifted to the right. |

| Claim | Support |
|---|---|
| | **Starting *Bluetooth*® Wireless Technology Audio**<br><br>• Press the MEDIA key to change the mode in order of USB➡AUX ➡My Music➡BT Audio.<br><br>• If BT Audio is selected, *Bluetooth*® Wireless Technology audio will start playing.<br><br>✳ Audio may not automatically start playing in some mobile phones.<br><br>**Using the *Bluetooth*® Wireless Technology audio features**<br><br>• Play / Stop<br>Press the ◎ TUNE knob to play and pause the current song.<br><br>BTAudio ⊗   USB  AUX        12:00<br>👤 No Artist<br>♫ Music_01.mp3<br><br>✳ The title / artist info may not be supported in some mobile phone. When it is not supported, no title/no artist will be displayed.<br><br>• Previous / Next song<br>Press ⌄SEEK TRACK or SEEK TRACK⌃ to play previous or next song.<br><br>✳ The previous song / next song / play / pause functions may not be supported in some mobile phones.<br><br>4 178<br><br>*See, e.g.,* Ex. A (2014 Kia Soul Owner's Manual) at 4:178. |

23

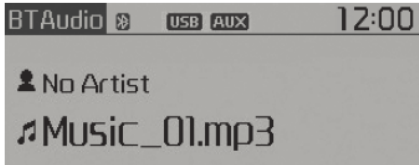| Claim | Support |
|---|---|
| | BT AUDIO MODE<br><br>BT Audio mode is a feature which allows you to stream music stored in your handset device via a *Bluetooth*® wireless technology connection. Music saved in the handset device can be played in the car through *Bluetooth*® wireless technology audio streaming. BT audio can be played only when a handset device has been connected. To play BT audio, pair a handset device with the system. If *Bluetooth*® wireless technology is disconnected while playing BT audio, music play will be discontinued. The audio streaming function may not be supported in some handset devices. Only one function can be used at a time between the *Bluetooth*® wireless technology handsfree or BT audio function. Playing music from the car is not possible when there are no music files stored in the handset device.<br><br>**BT Mode Screen and Features**<br><br>**1 Mode Display**<br>Displays the current mode as BT Audio mode.<br><br>**2 *Bluetooth*® wireless technology enabled device information**<br>Displays information about the *Bluetooth*® wireless technology enabled device<br><br>**3 Song Title**<br>Displays the song title.<br><br>**4 Play/Pause**<br>Plays/pauses the song.<br><br>**5 Sound**<br>Enters Sound Setup.<br><br>**6 Phone Battery charge status**<br>Displays the battery charge status of the connected mobile phone. The battery charge status may not be displayed in some mobile phones.<br><br>**7 Signal Strength**<br>Displays the mobile phone signal strength. The signal strength may not be displayed in some mobile phones.<br><br>**8 *Bluetooth*® wireless technology connection state**<br>Becomes displayed when a *Bluetooth*® wireless technology enabled phone has been connected with the car system.<br><br>PART 2. AUDIO FEATURES  2-27 |

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| Claim | Support |
|---|---|
| | **Listening to music from your Bluetooth® wireless technology enabled device**<br><br>1. Pair your Bluetooth® wireless technology enabled device to the handsfree system. For more information on pairing your Bluetooth® wireless technology enabled devices, refer to the 'Pairing your handset device to the handsfree system' section.<br>2. Press the MEDIA key on the control panel to turn on BT audio mode.<br>3. When streaming music from your Bluetooth® wireless technology enabled device and you wish to pause, press the ▶II button next on the screen. Press the ▶II button to restart music.<br><br>*Note*<br>• While music saved in the Bluetooth® wireless technology enabled device will automatically begin playing after converting to the BT Audio screen, this music player function may not be supported in some Bluetooth® wireless technology enabled devices.<br><br>2-28   PART 2. AUDIO FEATURES<br><br>• If music does not begin playing even after displaying the Phone music screen, try starting the music directly from the Bluetooth® wireless technology enabled device.<br><br>**Selecting a song**<br><br>1. Press the SEEK TRACK ∧ or ∨ SEEK TRACK keys on the control panel or the ∧ or ∨ keys on the steering wheel controller to play the desired song.<br>2. The previous or next song will begin playing.<br><br>*Note*<br>• File selection may not be supported in some Bluetooth® wireless technology enabled devices.<br><br>**REW/FF a song**<br><br>1. Press and hold the SEEK TRACK ∧ or ∨ SEEK TRACK keys (over 0.8 seconds) on the control panel or the ∧, ∨ keys (over 0.8 seconds) on the steering wheel controller.<br>2. The track will rewind or fast-forward at a rate 20 times faster than normal while the key is being held.<br>3. Release the key to play from the current position.<br><br>*Note*<br>• The play/pause, song selection and REW/FF features are supported only in handset devices with AVRCP Ver. 1.3 or higher. If play control features are not working, first check the AVRCP version of your Bluetooth® wireless technology enabled device.<br>• When such operations are not supported, use the handset device to perform these functions.<br><br>*See, e.g.,* Ex. B (2015 Kia Soul UVO Manual) at 2:27-28.<br><br>*See, e.g.,* video (Stream Music from Your Smart Phone - 2014 Kia Uvo eServices Infotainment System with Navigation: https://www.youtube.com/watch?v=4LvVqYtcTho). |
| [49D] said integration subsystem … instructs the portable device | With respect to each device integration system of the accused Kia automobiles, a user can input commands via buttons and controls of the car audio/video system to (i) select a track; (ii) fast forward and reverse a track; and (iii) play and pause a track.  When a user selects an audio file to play using buttons and/or controls of the car audio/video system, the integration subsystem instructs the portable device to play the audio file, which is received by the integration subsystem via the first and second wireless interfaces (i.e., a Bluetooth interface of the car audio/video system and another in communication with |

| Claim | Support |
|---|---|
| to play the audio file in response to a user selecting the audio file using controls of the car audio/video system, and receives audio generated by the portable device over said wireless communication link for playing on the car audio/video system. | and part of the portable device). The audio file is then played via the car's speakers.<br><br>**SYSTEM CONTROLLERS AND FUNCTIONS**<br><br>✳ Display and settings may differ depending on the selected audio.<br><br>**Audio Head Unit**<br><br>PS34001N<br><br>**(1) RADIO**<br>Changes to FM/AM/SiriusXM™ mode.<br>Each time the key is pressed, the mode is changed in order of FM1 → FM2 → AM → SAT1 → SAT2 → SAT3.<br><br>✳ In Setup>Display, the radio pop up screen will be displayed when [Mode Pop up] is turned (On).<br>When the pop up screen is displayed, use the ◯ TUNE knob or keys 1 ~ 6 to select the desired mode.<br><br>**(2) MEDIA**<br>Changes to USB(iPod®), AUX, My Music, BT Audio mode.<br>Each time the key is pressed, the mode is changed in order of USB(iPod®), AUX, My Music, BT Audio.<br>✳ In Setup>Display, the media pop up screen will be displayed when [Mode Pop up] is turned (On).<br>When the pop up screen is displayed, use the ◯ TUNE knob or keys 1 ~ 5 to select the desired mode.<br><br>**(3) PHONE**<br>Operates Phone Screen<br>✳ When a phone is not connected, the connection screen is displayed.<br><br>**(4) SETUP CLOCK**<br>Briefly press the key (under 0.8 seconds) : Moves to the Display, Sound, Clock, Phone, System setting modes<br>Press and hold the key (over 0.8 seconds) : Move to the Time setting screen<br><br>**(5) SEEK TRACK**<br>Radio Mode : Automatically searches for broadcast frequencies.<br>USB, iPod®, My Music modes<br>- Briefly press the key (under 0.8 seconds): Moves to next or previous song (file)<br>- Press and hold the key (over 0.8 seconds): Rewinds or fast-forwards the current song.<br>BT Audio mode : Moves to next or previous song(file)<br>✳ The Play/Pause feature may operate differently depending on the mobile phone.<br><br>4 159 |

| Claim | Support |
|---|---|
| | **Starting *Bluetooth®* Wireless Technology Audio**<br><br>• Press the MEDIA key to change the mode in order of USB➡AUX ➡My Music➡BT Audio.<br>• If BT Audio is selected, *Bluetooth®* Wireless Technology audio will start playing.<br>❋ Audio may not automatically start playing in some mobile phones.<br><br>**Using the *Bluetooth®* Wireless Technology audio features**<br><br>• Play / Stop<br>Press the ◎ TUNE knob to play and pause the current song.<br><br>BTAudio ☻ USB AUX 12:00<br><br>♟No Artist<br><br>♫Music_01.mp3<br><br>❋ The title / artist info may not be supported in some mobile phone. When it is not supported, no title/no artist will be displayed.<br>• Previous / Next song<br>Press ⌄SEEK TRACK or SEEK TRACK⌃ to play previous or next song.<br>❋ The previous song / next song / play / pause functions may not be supported in some mobile phones.<br><br>4 178<br><br>*See, e.g.,* Ex. A (2014 Kia Soul Owner's Manual) at 4:159, 178. |

| Claim | Support |
|---|---|
| | **Controls and Features**<br><br>**Control Panel**<br><br><br><br>※ No ∿Infinity logo will be shown if the exterior Amplifier feature is not supported.<br><br>1-2 PART 1. GETTING STARTED<br><br>**1 FM/AM**<br>Turns on FM/AM mode. Each press of the FM/AM key will change the band in the order of FM → AM → FM.<br><br>**2 SAT**<br>Turns on SIRIUS™ mode.<br><br>**3 MEDIA**<br>Turns on MEDIA mode. Each press of the MEDIA key will change the mode in the order of USB/iPod°/zune° →JUKEBOX → AUX → BT Audio → PANDORA → USB/iPod°/zune°.<br><br>**4 POWER/VOLUME**<br>Push : Turns Power On/Off.<br>Dial : Turns Volume Up/Down.<br><br>**5 ∨ SEEK/TRACK ∧**<br>*Short (under 0.8 seconds)*<br>In FM/AM mode, automatically searches and plays the previous or next frequency.<br>In SIRIUS™ mode, automatically searches and plays the previous or next channel. |

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| Claim | Support |
|---|---|
|  | In MEDIA mode (USB, iPod*, zune*, BT AUDIO), plays the previous or next track, song, or file. In PANDORA Radio, PANDORA Radio skip (Seek up). In JUKEBOX mode, plays the previous or next track. <br><br> **Long (over 0.8 seconds)** <br> In FM/AM mode, quickly moves through the frequencies when the button is pressed and held. Once released, automatically searches and plays the previous or next frequency. <br> In SIRIUS™ mode, quickly moves to the previous or next channel. <br> In MEDIA mode (USB, iPod*, zune*, BT AUDIO), REW/FF the current track, song, or file. <br> In JUKEBOX mode, REW/FF the current track. <br><br> **6 CLOCK** <br> Displays the clock setting screen. <br><br> **7 ∨ CATEGORY ∧** <br> In SIRIUS™ mode, moves to the previous or next SIRIUS™ category. <br><br> **8 TUNE** <br> In FM/AM mode, turn the knob to manually search for frequencies. <br> In SIRIUS™ mode, turn the knob to manually search for channels. Press the knob to receive the selected channel. <br> In MEDIA mode (USB, iPod*, zune*), turn the knob to manually search for the previous or next track, song, or file. Press the knob to receive the selected track, song, or file. <br> In PANDORA Radio, searches PANDORA Radio stations. <br> In JUKEBOX mode, turn the knob to manually search for the previous or next track. Press the knob to receive the selected track. <br><br> **9 eServices** <br> Displays UVO eServices mode. <br><br> **10 PHONE** <br> Displays *Bluetooth®* wireless technology Phone mode. <br><br> **11 SETUP** <br> Displays SETUP mode. <br><br> **12 RESET** <br> Reset the system to be used if system is acting abnormally. <br><br> PART 1. GETTING STARTED 1-3 |

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| Claim | Support |
|---|---|
| |  |

| Claim | Support |
|---|---|
| |  |

See, e.g., Ex. B (2015 Kia Soul UVO Manual) at 1:2-3, 2:27-28.

See, e.g., video (Stream Music from Your Smart Phone - 2014 Kia Uvo eServices Infotainment System with Navigation: https://www.youtube.com/watch?v=4LvVqYtcTho).

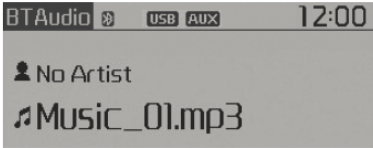| | |
| | |
| 50. The system | Each car audio/video system of the accused Kia automobiles includes the integration subsystem for connecting to external |

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| Claim | Support |
|---|---|
| of claim 49, wherein said integration subsystem is positioned within the car audio/video system. | portable devices (such as iPhones, Zune devices and other smart devices) via a wireless Bluetooth interface. Once connected, the portable device may be controlled directly from the car audio/video system. Commands, which are received from buttons and other controls of the car audio/video system, may be communicated wirelessly via the Bluetooth interface to the portable device. The portable device then responds to the received commands by channeling audio and other information (such as track name and artist information) to the car audio/video system by way of the first and second wireless interfaces and the integration subsystem.  |

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| Claim | Support |
|---|---|
| |  |

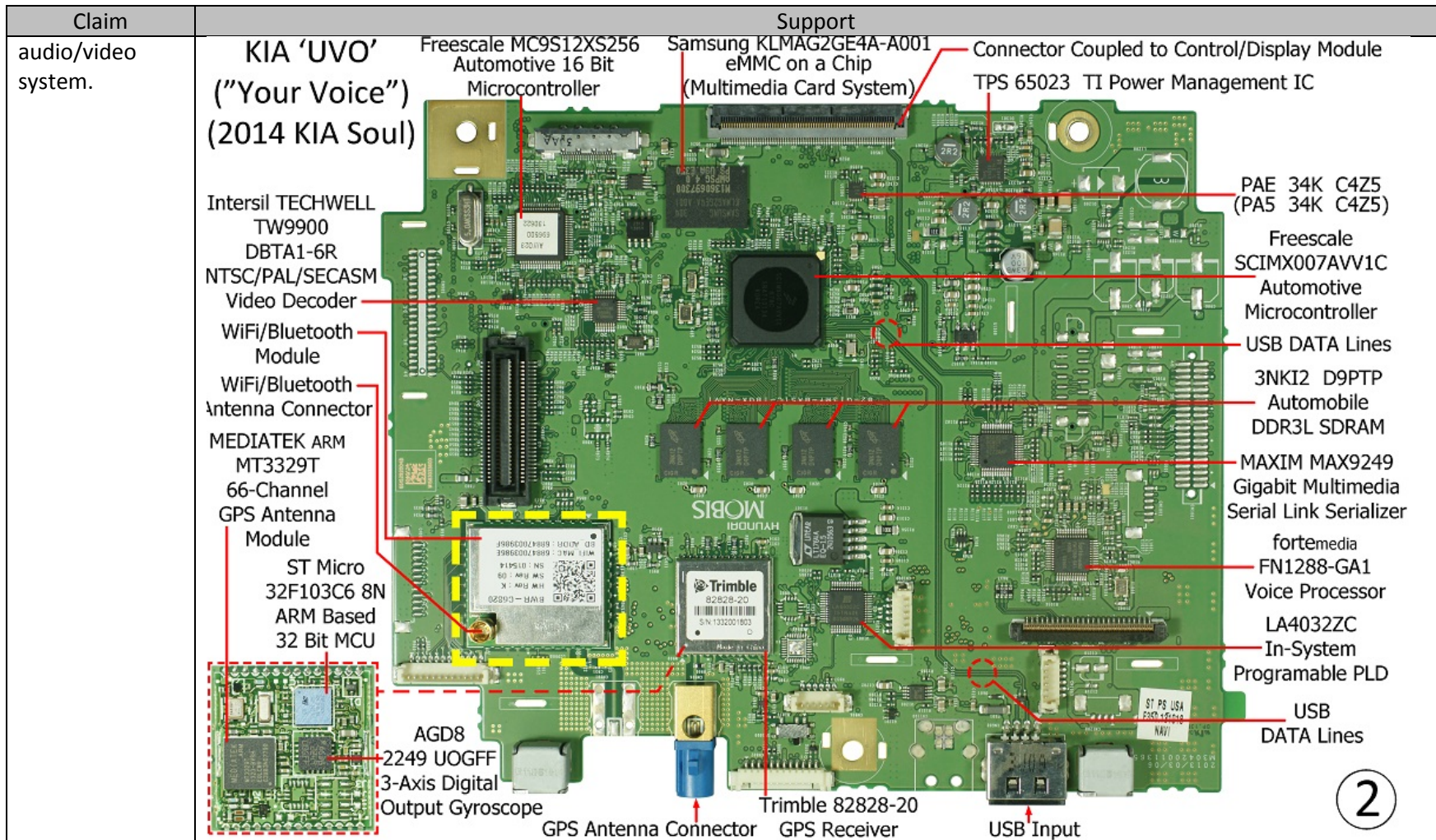| Claim | Support |
|---|---|
| | **Features of your vehicle**<br><br>**Starting *Bluetooth®* Wireless Technology Audio**<br>• Press the [MEDIA] key to change the mode in order of USB➡AUX ➡My Music➡BT Audio.<br>• If BT Audio is selected, *Bluetooth®* Wireless Technology audio will start playing.<br>❋ Audio may not automatically start playing in some mobile phones.<br><br>**Using the *Bluetooth®* Wireless Technology audio features**<br>• Play / Stop<br>Press the ◎ TUNE knob to play and pause the current song.<br><br>BTAudio ⑧  USB AUX    12:00<br>👤 No Artist<br>♪ Music_01.mp3<br><br>❋ The title / artist info may not be supported in some mobile phone. When it is not supported, no title/no artist will be displayed.<br>• Previous / Next song<br>Press [∨SEEK TRACK] or [SEEK∧ TRACK] to play previous or next song.<br>❋ The previous song / next song / play / pause functions may not be supported in some mobile phones.<br><br>4 178<br><br>*See, e.g.,* Ex. A (2014 Kia Soul User's Manual) at 4:178. |

| Claim | Support |
|-------|---------|

**BT AUDIO MODE**

BT Audio mode is a feature which allows you to stream music stored in your handset device via a *Bluetooth®* wireless technology connection. Music saved in the handset device can be played in the car through *Bluetooth®* wireless technology audio streaming. BT audio can be played only when a handset device has been connected. To play BT audio, pair a handset device with the system. If *Bluetooth®* wireless technology is disconnected while playing BT audio, music play will be discontinued. The audio streaming function may not be supported in some handset devices. Only one function can be used at a time between the *Bluetooth®* wireless technology handsfree or BT audio function. Playing music from the car is not possible when there are no music files stored in the handset device.

**BT Mode Screen and Features**

**1 Mode Display**
Displays the current mode as BT Audio mode.

**2 *Bluetooth®* wireless technology enabled device information**
Displays information about the *Bluetooth®* wireless technology enabled device

**3 Song Title**
Displays the song title.

**4 Play/Pause**
Plays/pauses the song.

**5 Sound**
Enters Sound Setup.

**6 Phone Battery charge status**
Displays the battery charge status of the connected mobile phone. The battery charge status may not be displayed in some mobile phones.

**7 Signal Strength**
Displays the mobile phone signal strength. The signal strength may not be displayed in some mobile phones.

**8 *Bluetooth®* wireless technology connection state**
Becomes displayed when a *Bluetooth®* wireless technology enabled phone has been connected with the car system.

PART 2. AUDIO FEATURES    2-27

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**Appendix D - Claim Chart for US Patent No. 8,155,342 Against Infotainment Systems of Accused Kia Automobiles**

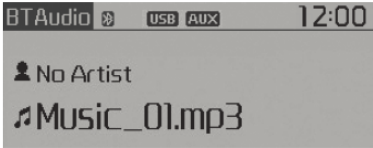| Claim | Support |
|---|---|
| | **Listening to music from your Bluetooth® wireless technology enabled device**<br><br>1. Pair your Bluetooth® wireless technology enabled device to the handsfree system. For more information on pairing your Bluetooth® wireless technology enabled devices, refer to the 'Pairing your handset device to the handsfree system' section.<br>2. Press the MEDIA key on the control panel to turn on BT audio mode.<br>3. When streaming music from your Bluetooth® wireless technology enabled device and you wish to pause, press the ▶II button next on the screen. Press the ▶II button to restart music.<br><br>*Note*<br>• While music saved in the Bluetooth® wireless technology enabled device will automatically begin playing after converting to the BT Audio screen, this music player function may not be supported in some Bluetooth® wireless technology enabled devices.<br><br>• If music does not begin playing even after displaying the Phone music screen, try starting the music directly from the Bluetooth® wireless technology enabled device.<br><br>**Selecting a song**<br><br>1. Press the SEEK TRACK ∧ or ∨ SEEK TRACK keys on the control panel or the ∧ or ∨ keys on the steering wheel controller to play the desired song.<br>2. The previous or next song will begin playing.<br><br>*Note*<br>• File selection may not be supported in some Bluetooth® wireless technology enabled devices.<br><br>**REW/FF a song**<br><br>1. Press and hold the SEEK TRACK ∧ or ∨ SEEK TRACK keys (over 0.8 seconds) on the control panel or the ∧, ∨ keys (over 0.8 seconds) on the steering wheel controller.<br>2. The track will rewind or fast-forward at a rate 20 times faster than normal while the key is being held.<br>3. Release the key to play from the current position.<br><br>*Note*<br>• The play/pause, song selection and REW/FF features are supported only in handset devices with AVRCP Ver. 1.3 or higher. If play control features are not working, first check the AVRCP version of your Bluetooth® wireless technology enabled device.<br>• When such operations are not supported, use the handset device to perform these functions.<br><br>2-28 PART 2. AUDIO FEATURES<br><br>*See, e.g.,* Ex. B (2015 Kia Soul UVO Manual) at 2:27-28. |
| | |
| 51. The system of claim 50, wherein said first wireless interface is positioned within the car | The first wireless interface (i.e., the Bluetooth interface) is part of the car audio/video system. |

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**Appendix D - Claim Chart for US Patent No. 8,155,342 Against Infotainment Systems of Accused Kia Automobiles**

| Claim | Support |
|---|---|
| audio/video system. |  |

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| Claim | Support |
|---|---|
| |  |

KIA 'UVO' ("Your Voice") (2014 KIA Soul)

Bluetooth Antenna MRF5605D PS

Sirius XM Module

Intersil TECHWELL TW9900 DBTA1-6R NTSC/PAL/SECASM Video Decoder

HD Radio Module

Sirius XM/HD Radio Module Connector CN800

BWR-C6820 Dual WiFi/Bluetooth Module

GPS Antenna Connector

Sirius XM & HD Radio Antenna Connector

USB Connector

Note: For clarity, the "Sirus XM"/"HD Radio" circuit board has been detached from Connector CN800 & shifted to the right.

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| Claim | Support |
|---|---|
| |  |

*See, e.g.,* Ex. A (2014 Kia Soul User's Manual) at 4:178.

| Claim | Support |
|---|---|

**BT AUDIO MODE**

BT Audio mode is a feature which allows you to stream music stored in your handset device via a *Bluetooth*® wireless technology connection. Music saved in the handset device can be played in the car through *Bluetooth*® wireless technology audio streaming. BT audio can be played only when a handset device has been connected. To play BT audio, pair a handset device with the system. If *Bluetooth*® wireless technology is disconnected while playing BT audio, music play will be discontinued. The audio streaming function may not be supported in some handset devices. Only one function can be used at a time between the *Bluetooth*® wireless technology handsfree or BT audio function. Playing music from the car is not possible when there are no music files stored in the handset device.

**BT Mode Screen and Features**

**1 Mode Display**

Displays the current mode as BT Audio mode.

**2 *Bluetooth*® wireless technology enabled device information**

Displays information about the *Bluetooth*® wireless technology enabled device

**3 Song Title**

Displays the song title.

**4 Play/Pause**

Plays/pauses the song.

**5 Sound**

Enters Sound Setup.

**6 Phone Battery charge status**

Displays the battery charge status of the connected mobile phone. The battery charge status may not be displayed in some mobile phones.

**7 Signal Strength**

Displays the mobile phone signal strength. The signal strength may not be displayed in some mobile phones.

**8 *Bluetooth*® wireless technology connection state**

Becomes displayed when a *Bluetooth*® wireless technology enabled phone has been connected with the car system.

PART 2. AUDIO FEATURES    2-27

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| Claim | Support |
|---|---|
| | **Listening to music from your Bluetooth® wireless technology enabled device**<br><br>1. Pair your *Bluetooth®* wireless technology enabled device to the handsfree system. For more information on pairing your *Bluetooth®* wireless technology enabled devices, refer to the 'Pairing your handset device to the handsfree system' section.<br>2. Press the MEDIA key on the control panel to turn on BT audio mode.<br>3. When streaming music from your *Bluetooth®* wireless technology enabled device and you wish to pause, press the button next on the screen. Press the button to restart music.<br><br>*Note*<br>• While music saved in the *Bluetooth®* wireless technology enabled device will automatically begin playing after converting to the BT Audio screen, this music player function may not be supported in some *Bluetooth®* wireless technology enabled devices.<br><br>2-28   PART 2. AUDIO FEATURES<br><br>• If music does not begin playing even after displaying the Phone music screen, try starting the music directly from the *Bluetooth®* wireless technology enabled device.<br><br>**Selecting a song**<br><br>1. Press the SEEK TRACK ∧ or ∨ SEEK TRACK keys on the control panel or the ∧ or ∨ keys on the steering wheel controller to play the desired song.<br>2. The previous or next song will begin playing.<br><br>*Note*<br>• File selection may not be supported in some *Bluetooth®* wireless technology enabled devices.<br><br>**REW/FF a song**<br><br>1. Press and hold the SEEK TRACK ∧ or ∨ SEEK TRACK keys (over 0.8 seconds) on the control panel or the ∧, ∨ keys (over 0.8 seconds) on the steering wheel controller.<br>2. The track will rewind or fast-forward at a rate 20 times faster than normal while the key is being held.<br>3. Release the key to play from the current position.<br><br>*Note*<br>• The play/pause, song selection and REW/FF features are supported only in handset devices with AVRCP Ver. 1.3 or higher. If play control features are not working, first check the AVRCP version of your *Bluetooth®* wireless technology enabled device.<br>• When such operations are not supported, use the handset device to perform these functions.<br><br>*See, e.g.,* Ex. B (2015 Kia Soul UVO Manual) at 2:27-28. |
| | |
| 52. The system of claim 51, wherein said second wireless interface is positioned within the | Portable devices, such as iPhones, Zune devices, Android devices and other smart, portable devices, include Bluetooth interfaces. |

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| Claim | Support |
|---|---|
| portable device. | iOS: Supported Bluetooth profiles<br><br>iPhone, iPad, and iPod touch support multiple Bluetooth profiles with the latest version of iOS. You can learn the differences in Bluetooth-profile support from one device to the next.<br><br>The following table lists supported Bluetooth profiles by device for the latest version of iOS.<br><br>*(see table below)* |

| Device | Hands-Free Profile (HFP 1.6) | Phone Book Access Profile (PBAP) | Advanced Audio Distribution Profile (A2DP) | Audio/Video Remote Control Profile (AVRCP 1.4) | Personal Area Network Profile (PAN) | Human Interface Device Profile (HID) | Message Access Profile (MAP) |
|---|---|---|---|---|---|---|---|
| iPhone 4 and later | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| iPhone 3GS | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | - |
| iPhone 3G | ✓ | ✓ | ✓ | ✓ | ✓ | - | - |
| Original iPhone | ✓ | ✓ | - | - | - | - | - |
| iPad 2 and later | ✓ | - | ✓ | ✓ | ✓ | ✓ | - |
| iPad (1st generation) | - | - | ✓ | ✓ | ✓ | ✓ | - |
| iPod touch (4th generation and later) | ✓ | - | ✓ | ✓ | ✓ | ✓ | - |
| iPod touch (2nd and 3rd generation) | - | - | ✓ | ✓ | ✓ | ✓ | - |

*See, e.g.,* Ex. C (Apple iPhone webpage).

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| Claim | Support |
|---|---|
|  | *See, e.g.,* http://developer.android.com/guide/topics/connectivity/bluetooth.html (discussing Bluetooth support for the Android platform). <br><br> *See, e.g.,* Ex. D (Kia Bluetooth Compatibility List). |
|  |  |
| 53. The system of claim 49, wherein said integration subsystem receives a control command issued at the car audio/video system in a format incompatible with the portable device, processes the control command into a formatted command compatible with the portable device, and dispatches the processed control command to the | The integration subsystem of each accused Kia automobile "receives a control command issued at the car audio/video system in a format incompatible with the portable device, processes the control command into a formatted command compatible with the portable device, and dispatches the processed control command to the portable device for execution thereby."  More specifically, once a portable device is connected, commands are received by the integration subsystem from the car audio/video system, where they are processed and converted from a format understandable and compatible with the car audio/video system and associated Kia protocols (i.e., a format incompatible with the portable device) into formatted commands that are compatible with the portable device (i.e., converted into Bluetooth, application and/or device-specific protocols understandable to the portable device).  These formatted commands are then dispatched to the portable device via the first and second wireless interfaces (i.e., the Bluetooth interface of the car audio/video system car audio/video system and one or more Bluetooth interfaces in communication with and part of the portable device), where they are executed by the portable device.  At least the Freescale microcontroller of the integration subsystem (and potentially other microcontrollers on one or more circuit boards of the device integration system) executes pre-programmed code to perform at least a portion of these functions.  It is believed that this code is stored in onboard flash and/or other memory modules, and/or is contained within firmware elsewhere in the integration subsystem (such as within the Freescale microcontroller itself). |

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| Claim | Support |
|---|---|
| portable device for execution thereby. |  |

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| Claim | Support |
|---|---|
| |  |

45

| Claim | Support |
|---|---|
| |  |

| Claim | Support |
|---|---|
| | **Starting _Bluetooth_® Wireless Technology Audio** <br><br> • Press the [MEDIA] key to change the mode in order of USB➡AUX ➡My Music➡BT Audio. <br> • If BT Audio is selected, _Bluetooth_® Wireless Technology audio will start playing. <br> ❋ Audio may not automatically start playing in some mobile phones. <br><br> **Using the _Bluetooth_® Wireless Technology audio features** <br><br> • Play / Stop <br> Press the ◉ TUNE knob to play and pause the current song. <br><br> BTAudio ⑧　USB AUX　12:00 <br> ♚ No Artist <br> ♫ Music_01.mp3 <br><br> ❋ The title / artist info may not be supported in some mobile phone. When it is not supported, no title/no artist will be displayed. <br> • Previous / Next song <br> Press [✓ SEEK TRACK] or [SEEK TRACK ^] to play previous or next song. <br> ❋ The previous song / next song / play / pause functions may not be supported in some mobile phones. <br><br> 4 178 <br><br> _See, e.g.,_ Ex. A (2014 Kia Soul Owner's Manual) at 4:159, 178. |

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**Appendix D - Claim Chart for US Patent No. 8,155,342 Against Infotainment Systems of Accused Kia Automobiles**

| Claim | Support |
|---|---|
| |  |

| Claim | Support |
|---|---|
|  | In MEDIA mode (USB, iPod*, zune*, BT AUDIO), plays the previous or next track, song, or file. In PANDORA Radio, PANDORA Radio skip (Seek up). In JUKEBOX mode, plays the previous or next track. *Long (over 0.8 seconds)* In FM/AM mode, quickly moves through the frequencies when the button is pressed and held. Once released, automatically searches and plays the previous or next frequency. In SIRIUS™ mode, quickly moves to the previous or next channel. In MEDIA mode (USB, iPod*, zune*, BT AUDIO), REW/FF the current track, song, or file. In JUKEBOX mode, REW/FF the current track. **6 CLOCK** Displays the clock setting screen. **7 ∨ CATEGORY ∧** In SIRIUS™ mode, moves to the previous or next SIRIUS™ category. **8 TUNE** In FM/AM mode, turn the knob to manually search for frequencies. In SIRIUS™ mode, turn the knob to manually search for channels. Press the knob to receive the selected channel. In MEDIA mode (USB, iPod*, zune*), turn the knob to manually search for the previous or next track, song, or file. Press the knob to receive the selected track, song, or file. In PANDORA Radio, searches PANDORA Radio stations. In JUKEBOX mode, turn the knob to manually search for the previous or next track. Press the knob to receive the selected track. **9 eServices** Displays UVO eServices mode. **10 PHONE** Displays *Bluetooth*® wireless technology Phone mode. **11 SETUP** Displays SETUP mode. **12 RESET** Reset the system to be used if system is acting abnormally. PART 1. GETTING STARTED  1-3 |

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| Claim | Support |
|---|---|
|  |  |

| Claim | Support |
|---|---|
| | **Listening to music from your *Bluetooth®* wireless technology enabled device** 1. Pair your *Bluetooth®* wireless technology enabled device to the handsfree system. For more information on pairing your *Bluetooth®* wireless technology enabled devices, refer to the 'Pairing your handset device to the handsfree system' section. 2. Press the MEDIA key on the control panel to turn on BT audio mode. 3. When streaming music from your *Bluetooth®* wireless technology enabled device and you wish to pause, press the ▶❚❚ button next on the screen. Press the ▶❚❚ button to restart music. *Note* • While music saved in the *Bluetooth®* wireless technology enabled device will automatically begin playing after converting to the BT Audio screen, this music player function may not be supported in some *Bluetooth®* wireless technology enabled devices. 2-28  PART 2. AUDIO FEATURES  • If music does not begin playing even after displaying the Phone music screen, try starting the music directly from the *Bluetooth®* wireless technology enabled device. **Selecting a song** 1. Press the SEEK TRACK ∧ or ∨ SEEK TRACK keys on the control panel or the ∧ or ∨ keys on the steering wheel controller to play the desired song. 2. The previous or next song will begin playing. *Note* • File selection may not be supported in some *Bluetooth®* wireless technology enabled devices.  **REW/FF a song** 1. Press and hold the SEEK TRACK ∧ or ∨ SEEK TRACK keys (over 0.8 seconds) on the control panel or the ∧, ∨ keys (over 0.8 seconds) on the steering wheel controller. 2. The track will rewind or fast-forward at a rate 20 times faster than normal while the key is being held. 3. Release the key to play from the current position. *Note* • The play/pause, song selection and REW/FF features are supported only in handset devices with AVRCP Ver. 1.3 or higher. If play control features are not working, first check the AVRCP version of your *Bluetooth®* wireless technology enabled device. • When such operations are not supported, use the handset device to perform these functions. *See, e.g.,* Ex. B (2015 Kia Soul UVO Manual) at 1:2-3, 2:27-28. *See, e.g.,* video (Stream Music from Your Smart Phone - 2014 Kia Uvo eServices Infotainment System with Navigation: https://www.youtube.com/watch?v=4LvVqYtcTho). |

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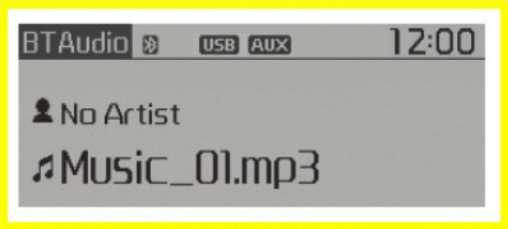| Claim | Support |
|---|---|
| 54. The system of claim 49, wherein said integration subsystem receives data generated by the portable device in a format incompatible with the car audio/video system, processes the data into formatted data compatible with the car audio/video system, and transmits the processed data to the car audio/video system for subsequent display of the processed data on a display of the car audio/video system. | The integration subsystem of each accused Kia automobile "receives data generated by the portable device in a format incompatible with the car audio/video system, processes the data into formatted data compatible with the car audio/video system, and transmits the processed data to the car audio/video system for subsequent display of the processed data on a display of the car audio/video system." More specifically, the portable device transmits data (such as audio, song and artist information) to the integration subsystem via the first and second wireless interfaces (i.e., the Bluetooth interface of the car audio/video system and one or more Bluetooth interfaces in communication with and part of the portable device). The integration subsystem then processes and converts the data from a format incompatible with the car audio/video system and understandable and compatible with the portable device (i.e., Bluetooth, application and/or device-specific protocols understandable to the portable device) into formatted data compatible with the car audio/video system (i.e., formatted data understandable and compatible with the car audio/video system and associated Kia protocols). The formatted data is then transmitted by the integration subsystem to the car audio/video system for subsequent display of the processed data on a display of the car audio/video system. At least the Freescale microcontroller of the integration subsystem (and potentially other microcontrollers on one or more circuit boards of the device integration system) executes pre-programmed code to perform at least a portion of these functions. It is believed that this code is stored in onboard flash and/or other memory modules, and/or is contained within firmware elsewhere in the integration subsystem (such as within the Freescale microcontroller itself). |

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| Claim | Support |
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| Claim | Support |
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| Claim | Support |
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| | <br><br>*See, e.g.,* Ex. A (2014 Kia Soul Owner's Manual) at 4:178. |

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| Claim | Support |
|---|---|
| |  |

| Claim | Support |
|---|---|
| | **Listening to music from your Bluetooth® wireless technology enabled device**<br><br>1. Pair your Bluetooth® wireless technology enabled device to the handsfree system. For more information on pairing your Bluetooth® wireless technology enabled devices, refer to the 'Pairing your handset device to the handsfree system' section.<br>2. Press the MEDIA key on the control panel to turn on BT audio mode.<br>3. When streaming music from your Bluetooth® wireless technology enabled device and you wish to pause, press the ▶II button next on the screen. Press the ▶II button to restart music.<br><br>*Note*<br>• While music saved in the Bluetooth® wireless technology enabled device will automatically begin playing after converting to the BT Audio screen, this music player function may not be supported in some Bluetooth® wireless technology enabled devices.<br><br>2-28 PART 2. AUDIO FEATURES<br><br>• If music does not begin playing even after displaying the Phone music screen, try starting the music directly from the Bluetooth® wireless technology enabled device.<br><br>**Selecting a song**<br><br>1. Press the SEEK TRACK ∧ or ∨ SEEK TRACK keys on the control panel or the ∧ or ∨ keys on the steering wheel controller to play the desired song.<br>2. The previous or next song will begin playing.<br><br>*Note*<br>• File selection may not be supported in some Bluetooth® wireless technology enabled devices.<br><br>**REW/FF a song**<br><br>1. Press and hold the SEEK TRACK ∧ or ∨ SEEK TRACK keys (over 0.8 seconds) on the control panel or the ∧, ∨ keys (over 0.8 seconds) on the steering wheel controller.<br>2. The track will rewind or fast-forward at a rate 20 times faster than normal while the key is being held.<br>3. Release the key to play from the current position.<br><br>*Note*<br>• The play/pause, song selection and REW/FF features are supported only in handset devices with AVRCP Ver. 1.3 or higher. If play control features are not working, first check the AVRCP version of your Bluetooth® wireless technology enabled device.<br>• When such operations are not supported, use the handset device to perform these functions.<br><br>*See, e.g.,* Ex. B (2015 Kia Soul UVO Manual) at 2:27-28.<br><br>*See, e.g.,* video (Stream Music from Your Smart Phone - 2014 Kia Uvo eServices Infotainment System with Navigation: https://www.youtube.com/watch?v=4LvVqYtcTho). |
| | |
| 55. The system of claim 49, wherein said integration | The accused Kia automobiles permit various control and audio commands to be submitted via voice recognition, which is processed by a voice recognition subsystem of the car audio/video system. Voice recognition of spoken control commands issued by a user may be used by the car audio/video system to instruct the portable device to play audio files. |

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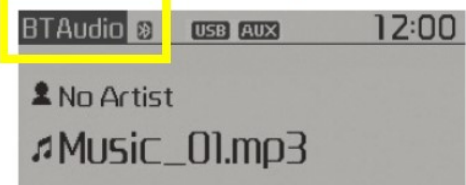| Claim | Support |
|---|---|
| subsystem further comprises a voice recognition subsystem for receiving and processing spoken control commands issued by a user. | <br><br><br>| Command | Function |<br>|---|---|<br>| My Music | Plays the music saved in My Music. |<br>| AUX (Auxiliary) | Plays the connected external device. |<br>| Bluetooth® Audio | Plays the music saved in connected Bluetooth® device. |<br>| Please repeat | Repeats the most recent comment. |<br>| Mute | Mutes the sound. |<br>| Cancel (Exit) | Ends voice command. |<br><br>4 \| 197<br><br>*See, e.g.,* Ex. A (2014 Kia Soul Owner's Manual) at 4:197. |

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| Claim | Support |
|---|---|
| | ### 3. MEDIA<br><br>| | Command | Operation |<br>|---|---|---|<br>| ● | Play {zune*, iPod*, USB} | Plays the selected media mode. |<br>| ● | Play {Bluetooth® audio, AUX} | Plays the selected media mode. |<br>| ● | Play artist {artist name} | Plays songs of the selected artist. |<br>| ● | Play album {album name} | Plays songs of the selected album. |<br>| ● | Play track {track name} | Plays the selected track. |<br>| ● | Play playlist {playlist name} | Plays songs of the selected playlist. |<br>| ● | Play genre {genre} | Plays songs of the selected genre |<br>| ● | Play audiobook {title} | (iPod only) Plays the selected audiobook. |<br>| ● | Play podcast {podcast} | (iPod only) Plays the selected iPod podcast. |<br>| ● | Play composer {composer} | Plays songs for the selected composer. |<br>| ○ | What's playing? | Reads back the current song information. |<br>| ○ | Repeat {on, off} | Turns the repeat feature on or off. |<br>| ○ | Shuffle {on, off} | Turns the shuffle feature on or off. |<br>| ● | Play {zune*, iPod*, USB} artist {name} | Plays songs for the selected artist in the selected media mode. |<br>| ● | Play {zune*, iPod*, USB} album {name} | Plays songs for the selected album in the selected media mode. |<br>| ● | Play {zune*, iPod*, USB} track {name} | Plays the selected track in the selected media mode. |<br>| ● | Play {zune*, iPod*, USB} playlist {name} | Plays the selected playlist in the selected media mode. |<br>| ● | Play {zune*, iPod*, USB} genre {genre} | Plays songs for the selected genre in the selected media mode. |<br>| ● | Play {Czune*, iPod*, USB} composer {name} | Plays songs for the selected composer in the selected media mode. |<br>| ● | Play iPod audiobook {title} | (iPod only) Plays the selected iPod audiobook. |<br>| ● | Play iPod podcast {podcast} | (iPod only) Plays the selected iPod podcast. |<br><br>PART 4. VOICE COMMANDS  4-11<br><br>*See, e.g.,* Ex. B (2015 Kia Soul UVO Manual) at 4:11. |
| | |
| 56. The system of claim 49, wherein said integration | Each of the accused Kia automobiles includes a device presence signal that "maintain[s] the car audio/video system in a state responsive to the portable device."  Specifically, when a portable device is paired via Bluetooth, a Bluetooth graphic appears indicating that a compatible device is connected and recognized.  Once a compatible portable device is connected and recognized, the integration subsystem maintains the car audio/video system in a state responsive to processed data |

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| Claim | Support |
|---|---|
| subsystem generates a device presence signal and transmits the device presence signal to the car audio/video system to maintain the car audio/video system in a state responsive to the portable device. | and audio signals from the portable device.<br><br>The device presence signal is generated when at least the Freescale microcontroller of the integration subsystem (and potentially other microcontrollers on one or more circuit boards of the device integration system) executes pre-programmed code stored in onboard flash and/or other memory modules, and/or within firmware elsewhere in the interface (such as within the Freescale microcontroller itself) in response to its receipt from the first wireless interface of a signal indicating that a portable device has established a connection via Bluetooth.<br><br>The device presence signal can be identified by examining the source code in the integration subsystem of the accused Kia automobiles. |

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| Claim | Support |
|---|---|
| | **Starting *Bluetooth*® Wireless Technology Audio**<br><br>• Press the [MEDIA] key to change the mode in order of USB➡AUX ➡My Music➡BT Audio.<br>• If BT Audio is selected, *Bluetooth*® Wireless Technology audio will start playing.<br>✳ Audio may not automatically start playing in some mobile phones.<br><br>**Using the *Bluetooth*® Wireless Technology audio features**<br><br>• Play / Stop<br>Press the ◎ TUNE knob to play and pause the current song.<br><br>BTAudio ⑧   USB AUX    12:00<br>▲ No Artist<br>♪ Music_01.mp3<br><br>✳ The title / artist info may not be supported in some mobile phone. When it is not supported, no title/no artist will be displayed.<br>• Previous / Next song<br>Press [∨ SEEK TRACK] or [SEEK TRACK ∧] to play previous or next song.<br>✳ The previous song / next song / play / pause functions may not be supported in some mobile phones.<br><br>4 ¦ 178<br><br>*See, e.g.,* Ex. A (2014 Kia Soul Owner's Manual) at 4:178. |

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| Claim | Support |
|---|---|
| | <br><br>*See, e.g.,* Ex. B (2015 Kia Soul UVO Manual) at 2:27.<br><br>*See, e.g.,* video (Stream Music from Your Smart Phone - 2014 Kia Uvo eServices Infotainment System with Navigation: https://www.youtube.com/watch?v=4LvVqYtcTho). |
| | |
| 57. The system of claim 49, wherein said | *See* claim 55 support. |

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| Claim | Support |
|---|---|
| integration subsystem instructs said portable device to play a desired file in response to a spoken command processed by the voice recognition subsystem. | |
| | |
| 62. The system of claim 49, wherein the portable device comprises a portable digital media player. | Portable devices capable of being connected to car audio/video systems of the accused Kia automobiles include Bluetooth compatible smart phones and other smart devices, such as iPhones, iPads, iPods, and Android devices. When storing, streaming and playing media (such as audio and/or video), these smart devices constitute digital media players. These players are capable of at least playing MP3 song files and streaming audio, such as via applications and online websites (e.g., Pandora, iTunes streaming, and Apple Music). <br><br> *See, e.g.,* Ex. C (Kia Bluetooth Phone Compatibility List). |
| | |
| 63. The system of claim 62, wherein the portable digital media player comprises a video device, a portable media center, a portable media player, an MP3 player, an MP4 | *See* claim 62 support. |

63

| Claim | Support |
|---|---|
| player, a WMV player, an Apple iPod, or an Apple video iPod. | |
| | |
| 64. The system of claim 49, wherein the portable device comprises a cellular telephone. | *See* claim 62 support. |
| | |
| 71. The system of claim 49, wherein the audio file comprises a song stored on the portable device. | *See* claim 49 support. |
| | |
| [73P]. A multimedia device integration system, comprising: | *See* preamble [49P] support. |
| [73A]. an integration subsystem in communication | *See* element [49A] support. |

| Claim | Support |
|---|---|
| with a car audio/video system; and | |
| [73B] a first wireless interface in communication with said integration subsystem, said first wireless interface establishing a wireless communication link with a second wireless interface in communication with a portable device external to the car audio/video system, | *See* element [49B] support. |
| [73C] wherein said integration subsystem obtains, using said wireless communication link, information about an audio file received by | *See* element [49C] support.<br><br>The audio file may be "received" by the portable device from online streaming services, such as Pandora, Spotify, iTunes, or Apple Music. Audio files (such as MP3 files) stored on the portable device may also be "received" from other sources, such as download websites or the user himself/herself via download. |

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| Claim | Support |
|---|---|
| the portable device, transmits the information to the car audio/video system for subsequent display of the information on a display of the car audio/video system, | |
| [73D] instructs the portable device to play the audio file in response to a user selecting the audio file using controls of the car audio/video system, and receives audio generated by the portable device over said wireless communication link for playing on the car audio/video | *See* element [49D] support |

| Claim | Support |
|---|---|
| system. | |
| | |
| 74. The system of claim 73, wherein said integration subsystem is positioned within the car audio/video system. | *See* claim 50 support. |
| | |
| 75. The system of claim 74, wherein said first wireless interface is positioned within the car audio/video system. | *See* claim 51 support. |
| | |
| 76. The system of claim 75, wherein said second wireless interface is positioned within the portable device. | *See* claim 52 support. |
| | |
| 77. The system of claim 73, | *See* claim 53 support. |

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| Claim | Support |
|---|---|
| wherein said integration subsystem receives a control command issued at the car audio/video system in a format incompatible with the portable device, processes the control command into a formatted command compatible with the portable device, and dispatches the processed control command to the portable device for execution thereby. | |
| | |
| 78. The system of claim 73, wherein said integration | *See* claim 54 support. |

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| Claim | Support |
|---|---|
| subsystem receives data generated by the portable device in a format incompatible with the car audio/video system, processes the data into formatted data compatible with the car audio/video system, and transmits the processed data to the car audio/video system for subsequent display of the processed data on a display of the car audio/video system. | |
| | |
| 79. The system of claim 73, wherein said | *See* claim 55 support. |

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| Claim | Support |
|---|---|
| integration subsystem further comprises a voice recognition subsystem for receiving and processing spoken control commands issued by a user. | |
| | |
| 80. The system of claim 79, wherein said integration subsystem instructs said portable device to play a desired file in response to a spoken command processed by the voice recognition subsystem. | *See* claim 55 support. |
| | |
| 95. The system of claim 73, wherein the audio file | *See* claim 71 support. |

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| Claim | Support |
|---|---|
| comprises a song stored on the portable device. | |
| | |
| [97P] A multimedia device integration system, comprising: | *See* preamble [49A] support. |
| [97A] first and second wireless interfaces establishing a wireless communication link between a car audio/video system and a portable device external to the car audio/video system; and | *See* element [49B] support. |
| [97B] an integration subsystem in communication with said wireless communication link, | *See* element [49A] support. |
| [97C] wherein | *See* element [49C] and [49D] support. |

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| Claim | Support |
|---|---|
| said integration subsystem channels audio generated by the portable device to the car audio/video system using the wireless communication link for subsequent playing of the audio on the car audio/video system, the audio corresponding to an audio file played by the portable device, and | |
| [97D] wherein said integration subsystem receives a control command issued by a user through one or more controls of the car audio/video | *See* claim 53 support. |

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| Claim | Support |
|---|---|
| system in a format incompatible with the portable device, processes the control command into a formatted command compatible with the portable device, and dispatches the formatted command to the portable device for execution thereby. | |
| | |
| 99. The system of claim 97, wherein said integration subsystem is positioned within the car audio/video system. | *See* claim 50 support. |
| | |
| 100. The system of claim 97, where the audio | *See* element [49C] support. |

73

| Claim | Support |
|---|---|
| file is stored on the portable device. | |
| | |
| 101. The system of claim 97, wherein the audio file is received by the portable device. | *See* element [73C] support. |
| | |
| 102. The system of claim 97, wherein said integration subsystem further comprises a voice recognition subsystem for receiving and processing spoken control commands issued by the user. | *See* claims 55 and 57 support. |
| | |
| 103. The system of claim 102, wherein said integration subsystem | *See* claims 55 and 57 support. |

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| Claim | Support |
|---|---|
| instructs said portable device to play a desired file in response to a spoken command processed by the voice recognition subsystem. | |
| | |
| 106. The system of claim 97, wherein said integration subsystem generates a device presence signal and transmits the device presence signal to the car audio/video system to maintain the car audio/video system in a state responsive to the portable device. | *See* claim 56 support. |
| | |
| 109. The system of claim 97, | *See* claim 62 support. |

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| Claim | Support |
|---|---|
| wherein the portable device comprises a portable digital media player. | |
| | |
| 110. The system of claim 109, wherein the portable digital media player comprises a video device, a portable media center, a portable media player, an MP3 player, an MP4 player, a WMV player, an Apple iPod, or an Apple video iPod. | *See* claim 63 support. |
| | |
| 111. The system of claim 97, wherein the portable device comprises a cellular telephone. | *See* claim 64 support. |
| | |
| 120. A | *See* preamble [97P] support. |

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| Claim | Support |
|---|---|
| multimedia device integration system, comprising: | |
| first and second wireless interfaces establishing a wireless communication link between a car audio/video system and a portable device external to the car audio/video system; and | *See* element [97A] support. |
| an integration subsystem in communication with said wireless communication link, | *See* element [97B] support |
| wherein said integration subsystem instructs the portable device to play an audio file in response to a user | *See* element [97C] support. |

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| Claim | Support |
|---|---|
| selecting the audio file using controls of the car audio/video system, wherein said integration subsystem channels audio generated by the portable device to the car audio/video system using the wireless communication link for subsequent playing of the audio on the car audio/video system, the audio corresponding to the audio file played by the portable device, and | |
| wherein said integration subsystem receives data generated by the portable | *See* element [97D] support. |

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| Claim | Support |
|---|---|
| device in a format incompatible with the car audio/video system, processes the data into formatted data compatible with the car audio/video system, and transmits the processed data to the car audio/video system for subsequent display of the processed data on a display of the car audio/video system. | |
| | |

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