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(12) **United States Patent**  
**Dua**

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(45) **Date of Patent:** **\*Oct. 1, 2013**

- (54) **WIRELESS AUDIO DEVICE AND WIRELESS MEDIA PLAYER TO COMMUNICATE AND PLAYBACK AUDIO, AND METHOD OF OPERATION**

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(21) Appl. No.: **13/556,429**

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(65) **Prior Publication Data**  
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(63) **Related U.S. Application Data**  
Continuation of application No. 11/127,979, filed on May 12, 2005, now Pat. No. 8,244,179.

(57) **ABSTRACT**

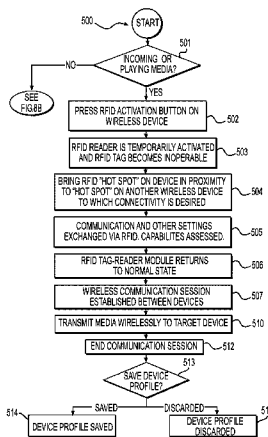
(51) **Int. Cl.**  
**H04B 7/00** (2006.01)  
(52) **U.S. Cl.**  
USPC ..... **455/41.2**; 455/41.3; 455/2.01; 455/3.06; 455/556.1; 455/552.1; 455/557; 340/10.51; 340/572.1; 348/838; 709/248; 709/213; 370/311; 370/338

A wireless media player and a related system and methodology are disclosed. One aspect of the wireless media player system pertains to a virtual connector system, apparatus, and method for the automatic establishment of wireless connectivity with other electronic devices. In one embodiment, the media player device employs the use of integrated Radio Frequency Identification (RFID) technology to exchange communication settings, media capability, and other parameters with an external device that also has integrated RFID technology. The automatic exchange of settings and other information via a proximity-based RFID data exchange allows a media player to quickly establish a secure communication link with another device via a commonly supported wireless protocol such as Ultra Wideband (UWB) or Bluetooth. Another aspect of the media player system pertains to a method of using the captured media capability of the connecting device to customize certain menu options and software parameters in the media player.

(58) **Field of Classification Search**  
USPC ..... 348/838; 340/572.1; 705/14; 455/41.3, 455/2.01, 3.06, 556.1, 552.1, 557, 41.2; 463/25, 463/17; 250/201.5; 206/308.1; 369/53.47, 369/44.28  
See application file for complete search history.

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**17 Claims, 19 Drawing Sheets**



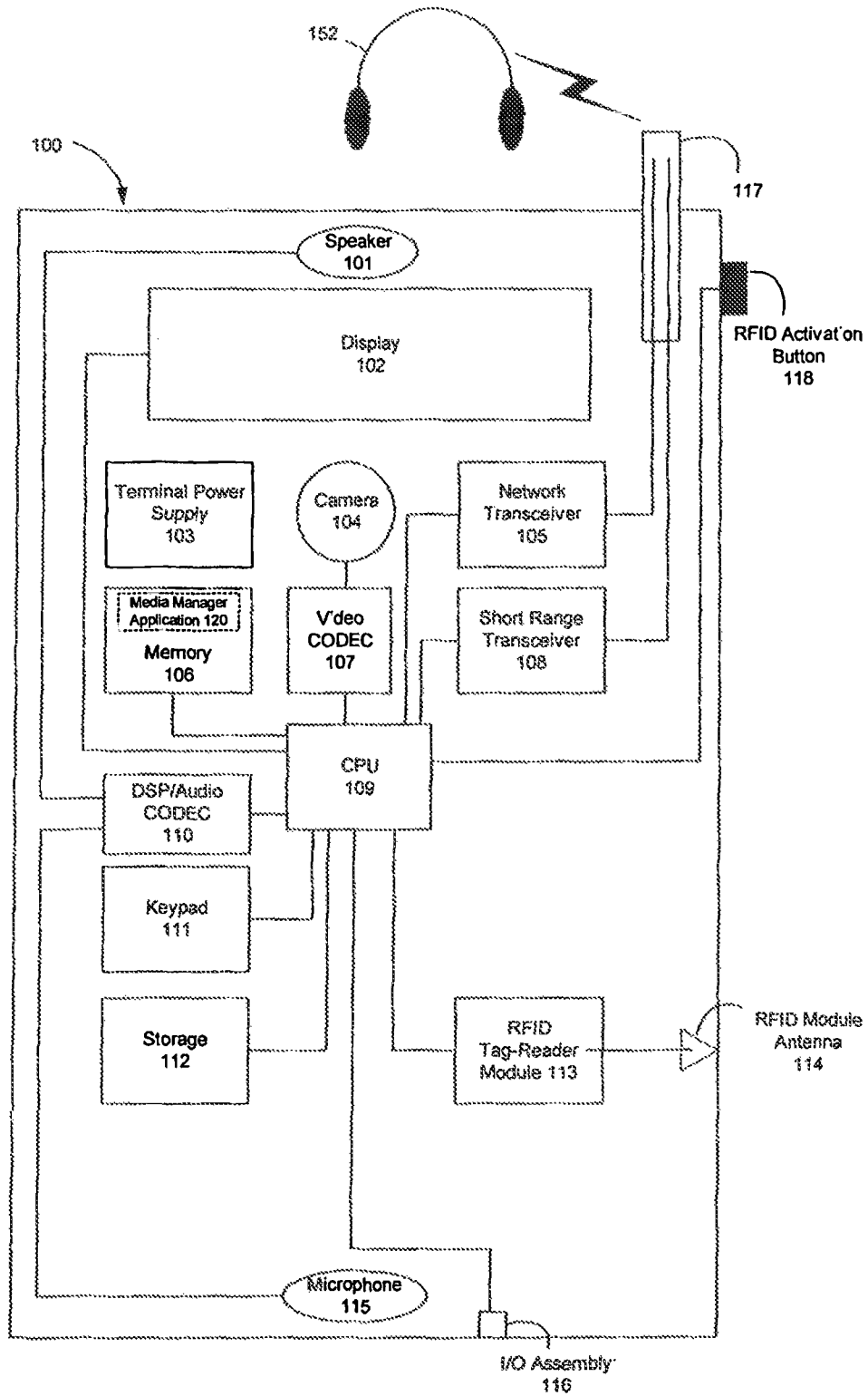


FIG. 1

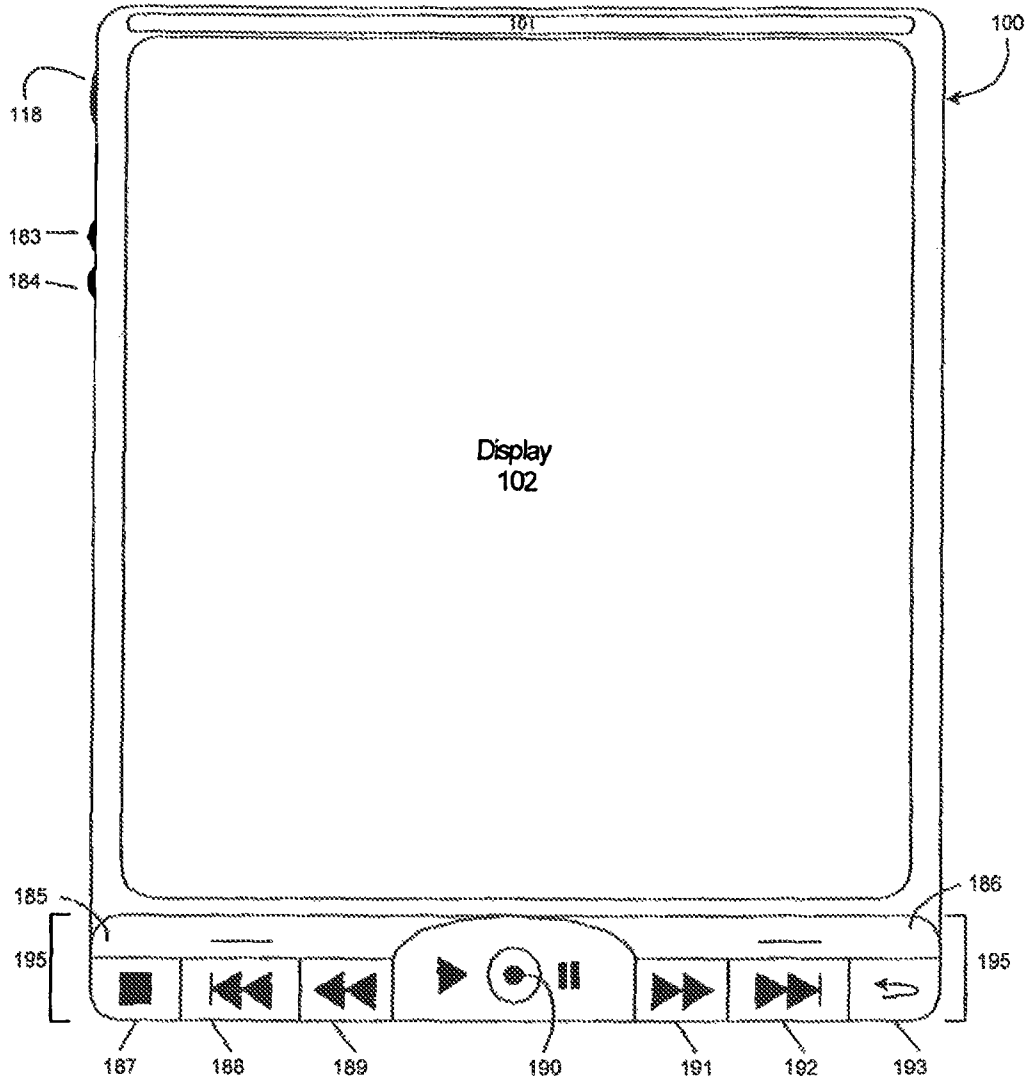


FIG. 2A

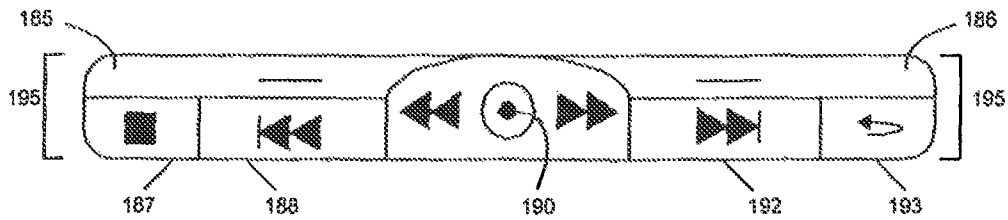


FIG. 2B

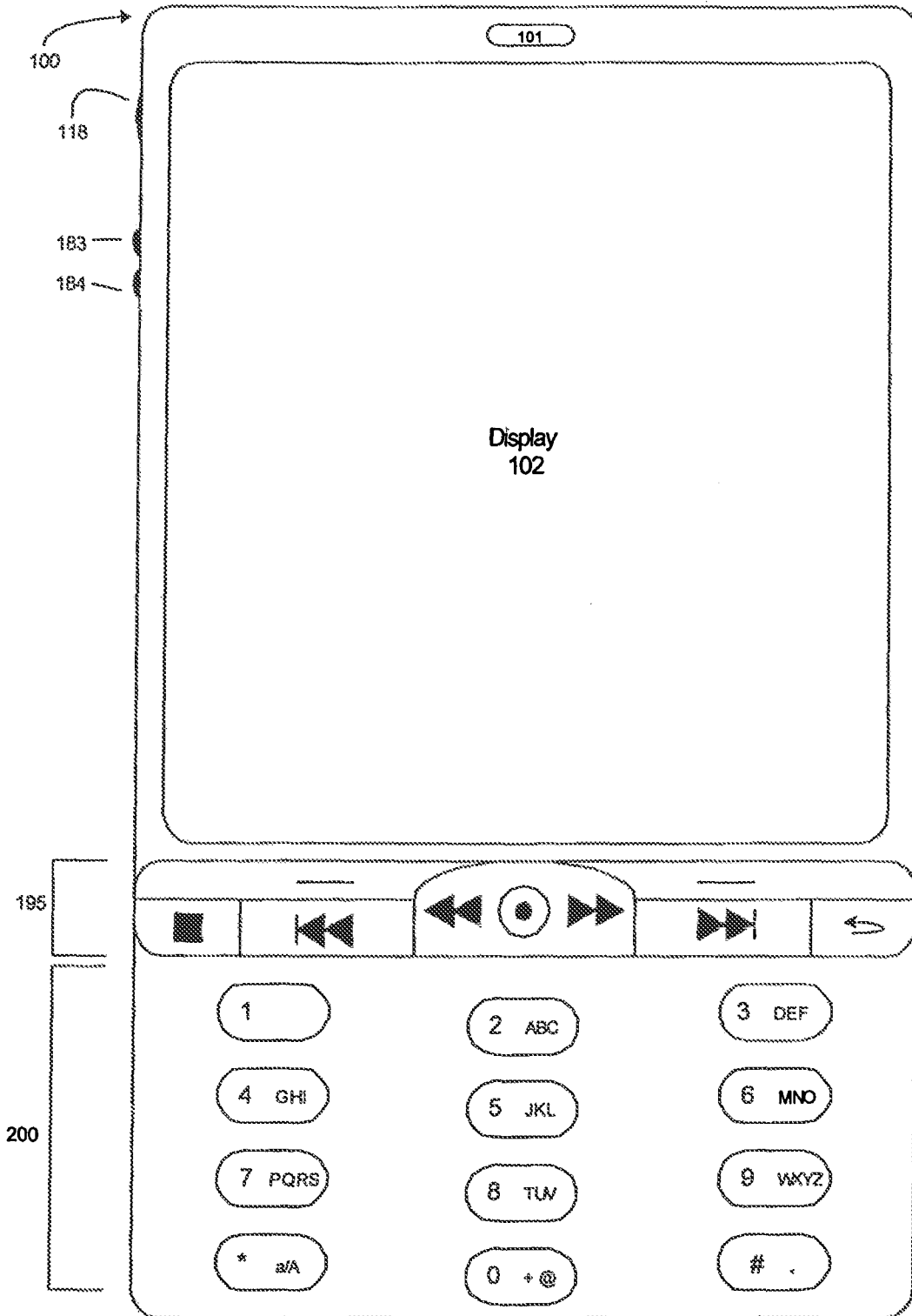


FIG. 2C

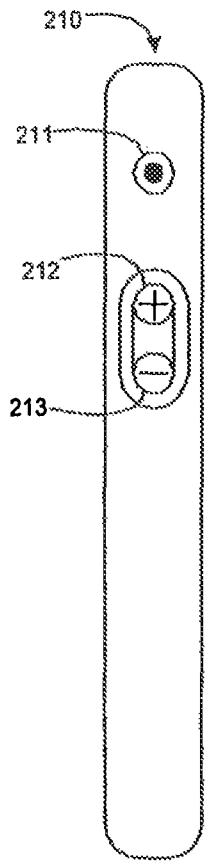


FIG. 3A

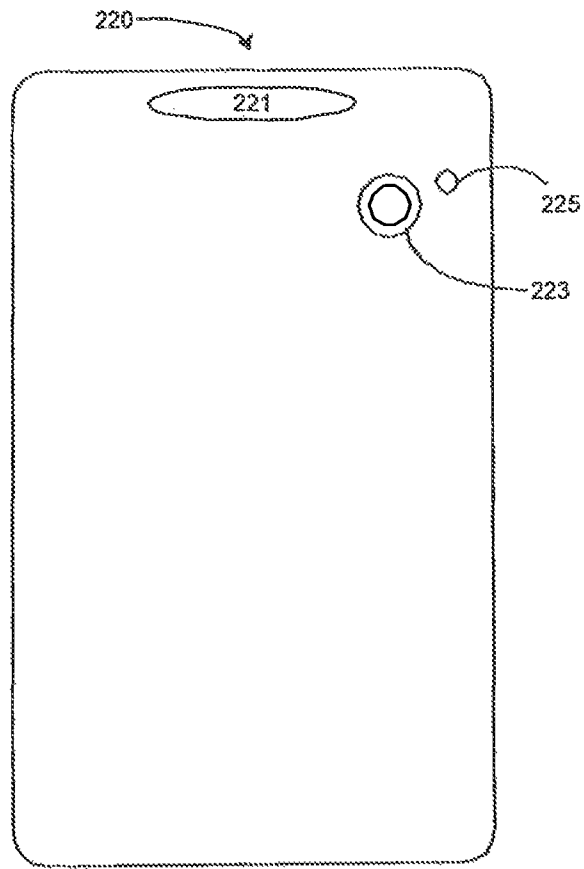


FIG. 3B

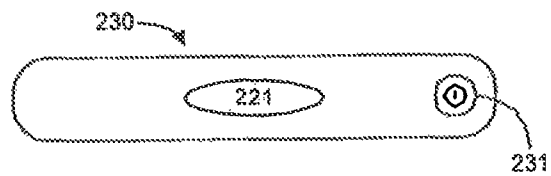


FIG. 3C

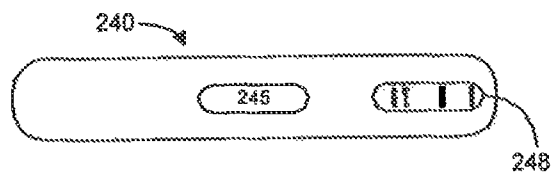


FIG. 3D

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