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(54) Title: SYSTEM FOR DETECTION OF ENVIRONMENTAL SOUND-BASED WARNING SIGNALS FOR PERSONAL MOBILE DEVICES

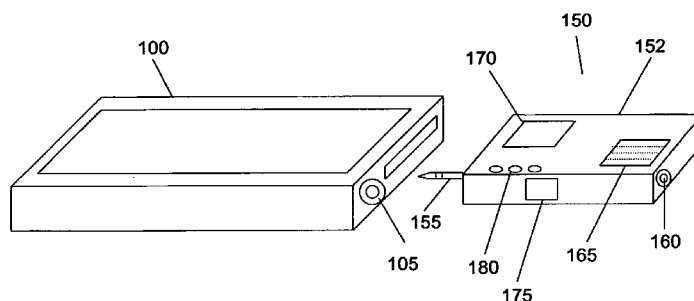


Figure 1

(57) Abstract: An external warning system for connection to an audio output of a personal mobile device. The external warning system includes a connector that couples the system to the audio output of the personal mobile device, an audio output connector that couples to a user headphone for providing audio data to the user, and a microphone that samples external sounds from the environment of the user. The system further includes a digital signal processor that monitors the samples of external sounds for a warning signal. When a warning signal is detected, a multiplexer in the system is switched from providing audio data from the personal mobile device to providing audio data from the microphone to the audio output. This allows a user to hear the warning signal. The system also includes an automatic charging system that uses the audio data received from the personal mobile device to charge the power supply of the system and a switch that connects the power supply to either the monitoring system or the charging system based upon the presence of a headphone connector coupled to the audio output connector.

