

## **AM1100US Operational description**

AM1100US is a wireless battery pack and was designed for Nokia cell-phone only to provide fully duplex wireless voice communication between Nokia cell-phone and users who wearing AM1062US wireless hand-free headset. AM1100US has 900MHz transmitter and receiver circuitries with two built-in antennas as well as a 3.7 V rechargeable lithium-ion battery with battery protect circuitry. AM1100US is equipped with a mode switch, so the user can switch the battery to wireless headset mode by using AM1062US together or to normal battery mode by using Nokia cell-phone only.

In the wireless headset mode, the keypad dial tone or the call ring tone will turns on the transmitter and receiver circuitries inside the battery pack. Once the transceiver is turned on, the transmitter is picking up the audio signal from the audio input of Nokia cell-phone and modulating the audio signal directly with 903 MHz RF carry signal, then delivering the modulated 903MHz RF carry signal to transmitter antenna. Meanwhile, the receiver antenna is picking up the modulated 927MHz RF carry signal from the AM1062US headset and delivering the RF carry signal to RF front amplifier. After that, the RF signal is down converted to 10.7 MHz IF band and demodulated back to original audio signal. The recovered audio signal goes through the audio amplifier to the audio input interface of Nokia cell-phone. That implements a fully duplex voice wireless communication between the Nokia cell-phone and headset. The transceiver goes back to sleep mode automatically after the conversation.