

AM1062US Operational description

AMS 900MHz wireless hand-free headset system is consist of base unit and headset. The system was designed to provide wireless full duplex audio communication between any cell-phone or audio devices equipped with audio output/input interfaces and users who wearing AMS 900MHz wireless hand-free headset. AM1062US is the headset unit. The headset was designed to sitting on the user's ear, pickup the user's voice and having the user listening the audio signal. The headset has 900MHz transmitter and receiver circuitries with two built-in antennas. Also, the headset is equipped with a microphone, micro speaker and momentary wakeup switch, and powered on single AAA battery.

Before the users start to use the headset, the users have to push the momentary switch to wakeup the headset. After the headset is waked up, the receiver circuitry will check up if the base unit is turned on at the same time by detecting the 903MHz RF carry signal existing from the base unit. If the base unit is detected working, the headset will be turned on automatically to establish the wireless link between the base unit and headset. Otherwise, the headset is going back to sleep mode in about 10 seconds if the base unit is not waked up yet or the distance between the base unit and headset is over the specified operation range. Once the headset is turned on, the receiver antenna is picking up the modulated 903MHz RF carry signal from the base unit and delivering the RF 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 micro speaker. Meanwhile, microphone is picking up and amplifying the user's voice signal and deliver the audio signal to the transmitter. The transmitter is modulating the audio signal directly with 927MHz RF carry, and then delivering the modulated 927MHz RF carry to transmitter antenna. That implements a fully duplex audio wireless communication between base unit and headset. Once the base unit is turned off, the headset is going back to sleep mode immediately.