Circuit Description

In the headset, the 2.4GMHz wireless module is build into receiver, the transceiver and audio process IC is control by IA2S6, which utilize a 16MHz OSC.

Audio codec process IC is control by ES8388.

Power management IC which supply the PCB Power for receiver is control by SGM2007.

3.7V li-ion battery is build into receiver, charging management IC is control by PJ4054, and the charging status will show by LED function.

Other switch and LED is for how to use the receiver and display the status for user reference.

The working procedures are:

1. When power on, the headset will scan the whole frenquency band again and again until a connection command sent by the USB Dongle is received.

2. The headset transmit a response signal.

3. The USB Dongle receive the response signal and recognize it, then send a connection command to build up the connect.

4. While the connection build up successfully, the data transmission is beginning. At the same time, the USB dongle and device (headset) will shift frequencies in synchronization per a same pseudo randomly ordered list of hopping frequencies, the hopping rate is 250 times per second.

5. The bandwidth of the headset, which is set to a fix width by the software, match the hopping channel bandwidth of their corresponding transmitter.