

WHP140 Theory of Operation

General

This Product is Stereo Wireless Transmitter & Headphones

Transmitter

Auto Power On /Off

The Audio Signal from the Stereo plug to the Q6, Q4, Q9, Q8, Q7. When the Audio Signal is at High Signal, Transmitter Auto Power On. When the Audio Signal is at Lower Signal, Transmitter Auto Power Off.

Stereo Modulator

The Audio Signal from the Stereo plug to the U3 NJM2035 PIN 1, 2. Audio Signal & 19KHz Pilot from the U3 pin 8, 9 to Q5.

Frequency Modulation

Q5 output the Audio Signal to adjust the VD1.

Frequency Adjust

VR4 adjust the Voltage to control VD1 to change Frequency

900MHz Oscillator & RF Amplified

Q1, DR1, VD1 oscillate the 900MHz Frequency from Q2, Q3 RF amplified to ANT.

Receiver

Power On

SW1 push to ON Position, Q2 send the Signal to Led1B. Red Color lights up.

RF VCO

RF Signal from the ANT to FL1 912MHz, filter to Q2, Q1 & mix the Q3, DR1 RF Local Oscillator, send the IF Signal to U1 Cxa1538.

IF Amplified & 2nd Oscillator

U1 Cxa1538 PIN 18 receive the IF Signal, mix PIN 22 Local Oscillator & send the 10.7MHz Signal to U1 PIN 13. When the Signal is correct, U1 PIN 4 send the Signal to Q1 Led1A, Green Color lights Up, & U1 PIN 5, 6 send the Stereo Audio Signal from Audio Amplified.

Frequency Adjust

VR2 adjust the Voltage to control VD1 to change U1 PIN 22 Local Oscillator to select the Correct Channel.

Audio Amplified

U2 PT2308 PIN 1, 2 receive the Audio Signal from PIN 5, 7 to SP1, SP2.