

# Technical Description

*JW160 900MHz Headphone (Receiver)*

## Initial conditions:

1. Install the recommended batteries to the headphone set and turn the Volume Control at minimum level. Turn on the transmitter with Green LED lighting on.
2. Turn on the headphone set and adjust the Tuning Control to obtain a desire receiving frequency based on the transmission channel (A/B) for audio listening from the transmitter' signal source. The Stereo Indicator is lighting on when the unit is operated in Stereo mode. Adjust the Volume Control to a desire listening level.

## Operation:

1. Using the corresponding Mono Pole type of Antenna to catch the transmitted frequency at the antenna port.
2. The receiving frequency will be magnified in the first stage RF AMP by transistor Q4 & Q5 then put into mixer stage Q6. First Inter-media Frequency (1<sup>st</sup> IF) is detected out from the mixer with local oscillator Q3 by SAW resonator (SAW1: 433.92MHz).
3. 1<sup>st</sup> IF via the Matching Coil L2 to Pin-18 (FM\_RF\_IN) of FM Receiver CXA1538. 2<sup>nd</sup> IF is detected out from the mixer with 2<sup>nd</sup> local oscillator. 2<sup>nd</sup> IF via the 10.7MHz Filter FL1 to Pin-13 (2<sup>nd</sup> IF AMP) to implement the de-modulation (DEMOD) and de-multiplexing (DEMPX) processes.
4. The DEMPX signal via de-emphasis network to present an audio output. Put it into the Power Amplifier TDA7050T for amplification and drive the loudspeaker to present an audible level. Adjust the Volume Control VR3 for a desire listening level.

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FCC ID : KYI JW-160R

Page - 2 of 2