# Technical Description

Transmitter Section:

1. Voltage Controlled Oscillator (VCO) and PLL circuit.

Q11, L9 and peripheral circuit would constitute oscillator. Q12 is buffer amplifier. PLL voltage control D6, D7 is added to audio modulation, Q9 alternates between transmitting and receiving oscillation frequency. IC U1 TB31202 is PLL IC.

2. RF Power Amplification

Q13 front-driver, Q14 rear-driver. Q15 is power amplifier. D1D2 is switch of antenna. L17L18L1L2 constitute low-pass filtering, restrains harmonic radiation.

3. Modulation

IC U5B finishes audio frequency amplification and limitation, through U5A low-pass filter, via VR2 regulating frequency deviation. D7 is added.

Receiving Section:

1. RF amplification and frequency variation.

Q1 is RF amplification, SAW1 is bandpass filter, Q2 is first mixer.

2. IF circuit

XF1 is the first IF filter, Q3 is the first amplifier, IC U2 KA3361 is the second frequency variation and second IF amplification and FM demodulation.

3. Audio Frequency Amplification

IC U3 is audio power amplification

Other:

1. CPU

IC U4 PIC16C620 control transmission and reception

2. Display

IC U7 74HC164 is a drive frequency and low power display.

3. Stablization of Voltage

IC U6 is of 3V and for stabilizing voltage.