Circuit Description

Ⅰ.Transmission section.

1. Audio frequency amplifying section.

MIC signal input @pin9 of U8, through amplification and compressor of U8 , The output signal @pin16 goes to FM modulation.

2. VCO section.

Q301, Q302 work as VCO, the varactor D302 value i3 controlled by PLL Part of U8 .

3. Power amplifying section.

Q11 is a buffer, Q4 is a driver transister,Q1,Q2,Q3 work together as power amplifier. When the signal has been amplified , it will be passed to a switch diode D2 and send out from antenna.

Ⅱ.Receiving section.

1. RF section.

   The signal received by antenna passed to filter network, then amplified by Q6, via band-pass filter network, then goes into mixer Q8.

2. Local oscillator and Mixer.

   Q7 is frequency mixing transistor, the VCO act as local oscillator , the frequency is controlled by PLL, after mixing, the IF(21.4MHZ) signal selected by CF1, then output via L12 and C54 to U8.

3. IF section.

CF1 is 21.4MHz crystal filter, second IF is 450KHz, U8 works as second mixing, second local-oscillator, second IF amplifier, demodulation etc.

4. Audio section:

   The demodulated audio signal goes to U4 and is amplified, and then U8 drives Speaker.

Ⅲ.Others.

The PLL circuit is embedded in U8, X202 is a local oscillation crystal, CT201 is a trimmer, the U8 pin 46 output constant current to control D302 oscillation frequency.