

Circuit Description

1. Receiver Part

RF signal from antenna is amplified by Q7. Then the RF signal(F1) mixes with LO(462.2124M HZ \pm 1K HZ). LO(F2) is produced by X3 crystal(77.0354 M HZ). Q8 act as mixer. IF(F1-F2) is sent to U1(SL5018). Demodulated by U1. Then Audio signal is amplified by audio amplifier(U2 SIT8602).

2. Transmitter Part

Oscillating circuit consists of X4 crystal(77.1104M HZ), transistor Q2, Resistors, Capacitors etc. It produces LO($f_o=462.6624$ M Hz \pm 1K HZ). Audio signal is amplified by amplifier. The signal is sent to modulation circuit. Implement FM. FM signal is amplified by Q5, Q4. And filtered by two BPF filters. The higher FM signal is to Q6. The FM signal is amplified by Q6 again. Then the FM signal enough is transmitted by antenna.