

Circuit Description (Communication Module)

- Transmitter -

- In case Communication Module receives the Data of Remote control which is same as that of EEPROM (24C02), EPROM(PIC16C63A) inputs Data bit into D3 Frequency Modulator through R15,C2,C3.
- At same time EPROM (PIC16C63A) activates power through Q2,Q3 and oscillates Crystal X1 Oscillating Frequency is 48.213333Mhz.
- Crystal X1 is oscillated by Q5 and L3/C16 is synthesized (aligned) with f/3 which is 1st over tone among oscillating frequencies. f/3 Frequency is 144.64 Mhz.
- After f/3 Frequency passes through f/3 Frequency Filter which consists of L4/C8, it is transformed to 1st-over-tone by Q6,Q7, gaining f/0 Transmission Frequency. It accumulates total 3rd-over-tone. f/0 Frequency is 433.920Mhz.
- f/0 Frequency is amplified by Amplifier Q8 after it passes through f/0 Frequency Filter which consists of C66/ L10.
- Final output RF Signal is transmitted to Antenna through L24.

- Receiver -

- The Receiver of Communication Module receives data of 433.920Mhz through Antenna and Q15,R48,L22 amplifies 433.920Mhz Frequency without Harmonic.
- This Frequency filters again Harmonic by C56,L21,C55,C54,TC3,L20.
- This is amplified again by R41,R46,L19,Q6, and filters again Harmonic by L18,C51,L17.
- The Data of this Frequency is input into Intermediate Frequency (21.4Mhz) R44,L16,C49,Q13, with the Frequency(421.520Mhz) oscillated locally.
- The Data made by Intermediate Frequency is input into Receiving Interface Control IC.

This IC is demodulated, detected and amplified, inputting FSK Data into Micro Controller(16C63A)

Communication Module (Protocol Timing)

