

Transmitter working theory

The MIC transform the sound into electronic signal, the signal then through C_2 coupling to network that consist C_3 and R_1 , and then through the two amplifier stages. The two amplifier stages consist of Q1,Q2 and so on. Enlarged audio signal then to the two pins of D1 through R9, the oscillating circuit consisting of transistor Q3, quartz crystal JT and other components. When the audio voltage changed then the voltage between two pins of D1 changed, and because the capacitance value of D1 is decided by its voltage so the capacitance of D1 will changed by the change of audio signal's amplitude, the final result is the oscillating frequency will be modulated by the amplitude of audio signal.

The circuit of selection frequency consist of C10 and T2 and produce 3 times' frequency. Enlarged by amplifier stage that consist C12,Q4 and produce 2 times' frequency by T3,C13, then the output of C15 through choosing network that consist L3,C16 and C17, then enlarged by amplifier stage that consist C18,Q5,C20,L4 and produce 2 times' frequency, the frequency of signal change to 12 times' original frequency totally through above processes. Then the high-frequency signal through C21, choosing frequency and transmitted out by antenna matching network C23 an L6.