

FM Transmitter

The figure below is a simple version of an FM transmitter.

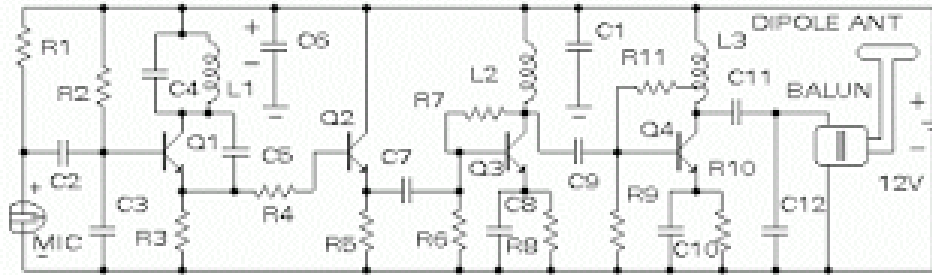


Fig: Circuit diagram of the Transmitter

Q1 is an oscillator that runs at a given frequency. The microphone changes the frequency up or down depending on the voice signal. Q2 is an emitter follower and Q3/Q4 are inverting power amplifiers with added filtering. It is important to note the Q3/Q4 conduct current in only one direction.

A high voltage on the base of Q3 will cause the output of Q4 to have a high voltage. This is when there are many particles moving toward the antenna. The opposite is true when there is a low voltage on the base of Q3, which is when there are fewer particles going to the antenna. When these particles reach the antenna they generate a distribution of particles that look like an FM carrier with voice modulation.

More importantly, the distribution exactly matches the particle theory of light (EM radiation).

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