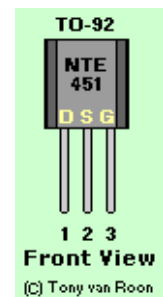


Active Antenna for AM/FM/SW:

This simple little circuit can be used for AM, FM, and Shortwave(SW). On the shortwave band this active antenna is comparable to a 20 to 30 foot wire antenna. It is further more designed to be used on receivers that use untuned wire antennas, such as inexpensive units and car radios.

Parts List:

R1 = 1M
 C1 = 470pF
 C2 = 470pF
 L1 = see text
 Q1 = MPF102, or NTE451

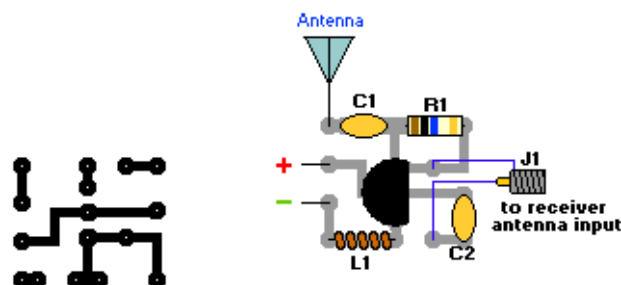


L1 can be selected for the application. A 470uH coil works on lower frequencies and lie in AM, for shortwave try a 20uH coil. This unit can be powered by a 9 volt alkaline battery. If a power supply is used, bypass the power supply with a 0.04uF capacitor to prevent noise pickup. The antenna used on this circuit is a standard 18-inch telescoping type, but a thick piece of copper, bus-bar, or piano wire will also work fine.

The heart of this circuit is Q1, a JFET-N-Channel, UHF/VHF amplifier in a TO-92 case. It can be replaced with an NTE451.

Output is taken from jack J1 and run to the antenna-input of your receiver.

Although this little circuit can easily be mounted on a piece of vero-board, I have supplied the printed circuit board and layout diagram if you wish to make a printed circuit board.



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