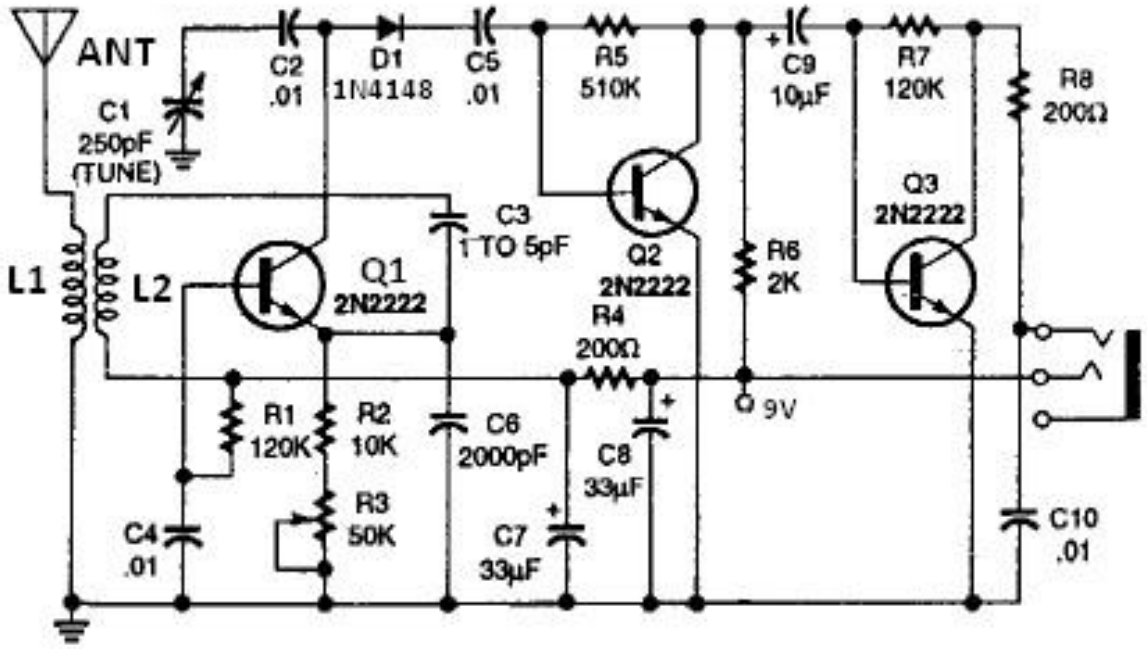
2N2222 based Shortwave radio reciver circuit



This electronic project presented in this circuit diagram is an very simple “economy” shortwave radio receiver circuit . Why this shortwave receiver electronic circuit is an economy type? Because is use few common components as you can see in the schematic diagram . This shortwave radio receiver is based on 2N2222 transistors and has and has an operating frequency range between 6 and 17 Mhz .
All coils are designed using an inch diameter pvc pipe using 20 gauge insulated hookup wire , L1 require 6 turns and L2 require 14 turns . You can add turns to or subtract turns from L(or change C2) to receive other frequencies.
R1 and R2 provide a large amount of negative bias at the emitter of Q1 to achieve smooth control.

Q2 and Q3 form an amplifier, which has sufficient output level to directly drive headphones or a small speaker, amplify the detected audio signal output from D1. R3can replaced with a 2kohms potentiometer , if you want to use it as an volume control .
R4 and C4 form a lowpass filter that maintains circuit stability and improves the receiver’s sound quality.
D2, D3, and D4 implement a low-cost voltage regulator to keep the voltage supplying Q1fairly constant, which minimizes drift.