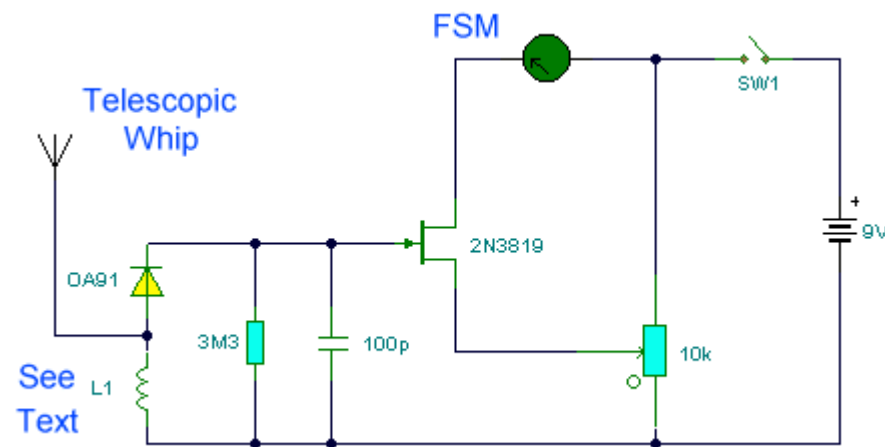


Field Strength Meter

Description

This is a wide band signal strength meter circuit which responds to small changes in RF energy, designed to be used for the VHF spectrum and will respond to AM or FM modulation or just a plain carrier wave.



Notes:

This circuit measures radio field strength by converting the signal to DC and amplifying it. This field strength meter was designed for VHF frequencies in the range 80 -110 MHz. The inductor L1 is 4 to 6 turns of 20swg wire air spaced wound on a quarter inch former or similar. Alternatively an inductor of value 0.15 - 0.35uH will suffice. Sensitivity is not as good as I would have liked, but a small 9 volt battery transmitter will deflect the meters needle from a distance of up to two feet from the FSM. Higher power transmitters give higher signal strength readings and of course from much further away. The meter used was a signal meter with FSD of 250uA. Lower FSD meters will offer greater sensitivity.

The FET used in this circuit is a general purpose 2N3819. A small telescopic whip antenna is used for signal pickup. The 10k preset resistor is used to adjust bias of the FET circuit; with no transmitter present the meter reading is zero, adjust preset if not. The RF signal, whether modulated or just a plain carrier, is rectified and converted to DC by the diode, capacitor and 3.3M resistor. This small DC voltage just enough to upset the bias of the circuit and hence cause a deflection of the meter.

Return to [RF Circuits](#)