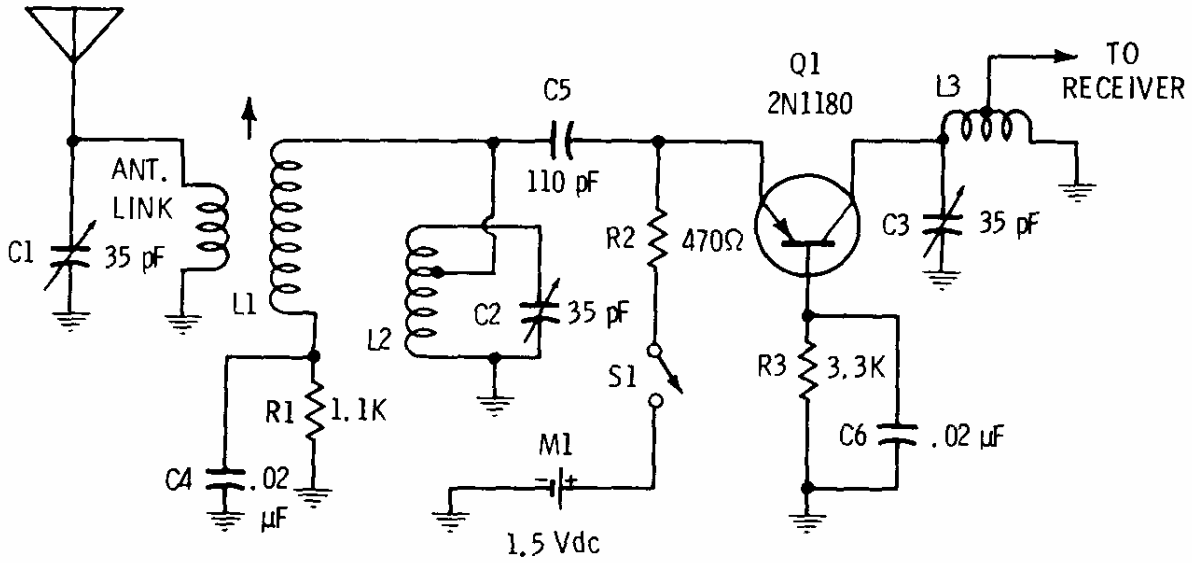
BROADBAND TRANSISTORIZED RF PREAMP

This project is actually a broadband one-stage RF amplifier that provides approximately 12 dB signal-over-noise increase over the frequency range of approximately 3.5 through 22 MHz. It is ideal for 80, 40, 20, and 15 meter band reception. Designed to accept a wide variety of antenna input impedances, several stages of L/C tuning adjustments allow peaking at the precise frequency of interest at the moment.



Rf preamp circuit.

All leads should be kept short and to the point. Follow instructions closely in the parts list for the construction of L2 and L3.

Generally, L1 should only be touched up as the band of operation is switched. C1 and C2 provide initial tuning and can be balanced somewhat with C3 for a maximum-signal, minimum-noise level effect.

Parts List for Economical RF Preamplifier

Item No.	Description
C1, C2, C3	35 pF trimmer capacitors.
C4, C6	.02 μF capacitors.
C5	110 pF capacitor.
L1	Antenna transformer, 12 turns of No. 20 wire closewound on ½ inch diameter slug tuned coil form. Antenna link is 3 turns of No. 20 insulated hookup wire wound over cold end of L1.
L2, L3	L2 is 23 turns of No. 20 enameled wire on a 1 megohm, 1-watt resistor. Scrape enamel from one end of wire and solder to resistor lead close to the body. Wind 5 turns and twist ½" tall loop. Then add 18 turns and solder the wire end to the resistor lead. L3 has the same number of turns as L2—but has no loop. After winding coil, locate 5th and 6th turns from ground end and scrape off enough wire for a good solder tap connection.
M1	1.5-volt dry cell.
Q1	2N1180 transistor.
R1	1.1K resistor.
R2	470-ohm resistor.
R3	3.3K resistor.
S1	Spst switch (Oak type 200 or equiv.).

The 2N1180 is a discontinued, Germanium PNP Lo-Power BJT.