

# AM RADIO RF BOOSTER

You can greatly increase the pickup distance of your transistor radio (or even an AM table radio) by adding an RF (radio frequency) stage and then coupling that boosted signal to the receiver's built-in antenna loopstick (ferrite rod). This is a low-cost project that can pack a lot of extra sensitivity into an ordinary radio and it'll let you do broadcast-band DX'ing with that little radio you thought was just for listening to local stations.

Assemble the circuit in a small plastic cabinet with coil L cemented to the side or back of the cabinet. You

can use almost any epoxy, adhesive, or cement.

Connect at least 15 feet (up to 80 feet is even better) of antenna wire (even covered telephone wire or flat TV wire will do temporarily) to input capacitor C1. Position the booster case flat against your radio with L1 as close to the set's loopstick antenna which is built into the radio. Now tune capacitor C2 to the frequency of the station you want to pick up.

Then turn on the radio and listen to the signals booming in. Remember that the radio set's AVC action will cut down normally-loud local signals.

## PARTS LIST FOR AM BOOSTER

- B1**—15-volt penlight AA battery
- C1**—0.005- $\mu$ F disc capacitor, 25 VDC or better
- C2**—365-pF miniature tuning capacitor
- C3**—0.05- $\mu$ F capacitor, 25 VDC or better
- L1**—Loopstick for C1
- Q1**—2N1304 NPN transistor
- R1**—39,000-ohm,  $\frac{1}{2}$ -watt resistor
- S1**—Spst switch (on-off)

