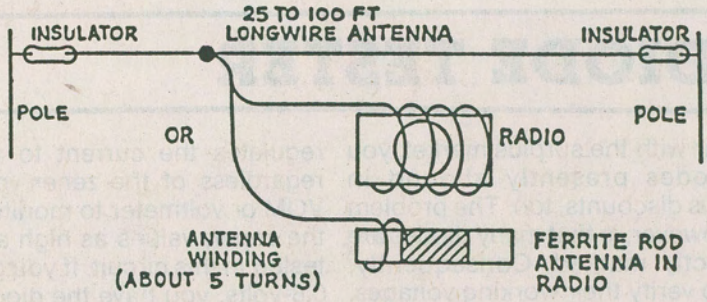
PASSIVE AM BOOSTER

Your transistor radio antenna system is designed to pull in local broadcast-band stations that are either local or very high power—you need a signal with oomph! Now you can make that "one lunger" more sensitive and try some DX with the Passive BC Booster. Also, for those people who work in or live in buildings that effectively kill BC signals, this Passive BC Booster can bring life to that transistor radio that could only detect the noise from fluorescent lamps.

All you have to do is simply bring in the end of an outdoor "longwire" antenna and wrap the end around the radio about 5 times.

Even better reception is possible if you open the radio and wrap about 5 turns around the rod antenna immediately adjacent to the antenna coil mounted on the rod. Make certain the ends of the outdoor antenna are insulated with glass or ceramic insulators. In fact, often an insulated wire about 10-to 20-feet long that is left dangling out a high-story window is all that is needed for an antenna.



SQUARE WAVE CONVERTER

Got a yen to go digital but few bucks to spend? Well, if you happen to have an old audio signal generator at hand, you can convert its sinewave output to a squarewave and save yourself the expense of a squarewave generator. The converter consists of an ordinary saturating transistor switch which, when driven by a large amplitude (about 10-VDC peak-to-peak or greater) sinewave, yields squarewaves with reasonably fast rise and fall times. Be certain to use as large an input amplitude as possible. Certain edge-triggered ICs, TTL flip-flops in particular, may fail to clock on a waveform whose rise and fall times are too long; however, the majority of ICs will clock readily when driven by this converter.

PARTS LIST FOR SQUARE WAVE CONVERTER

C1—1.0-uF, 25 VDC non-polarized mylar capacitor
Q1—2N3904 NPN transistor
R1—4,700-ohm resistor, 5%
R2—1,000-ohm resistor, 5%