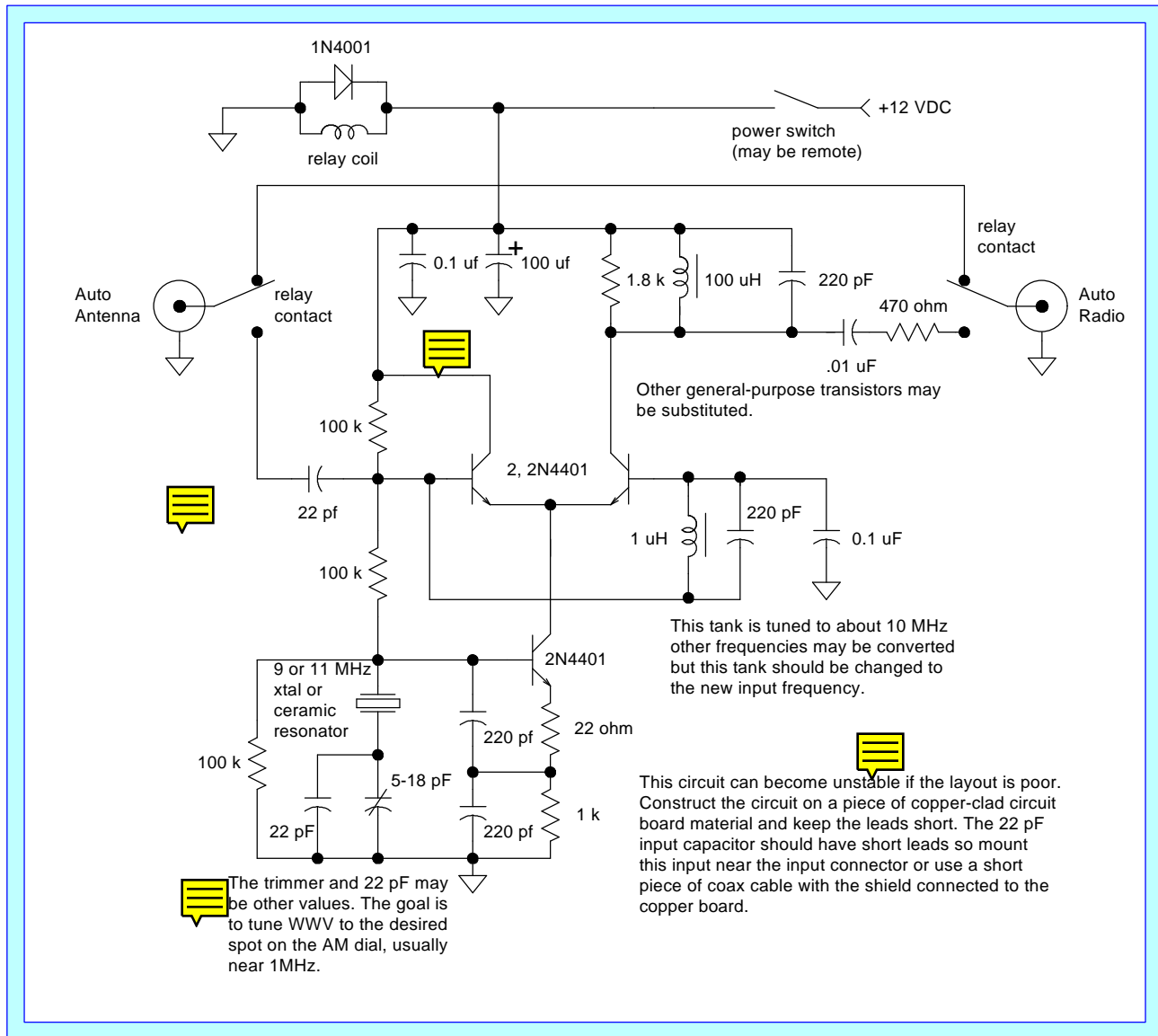
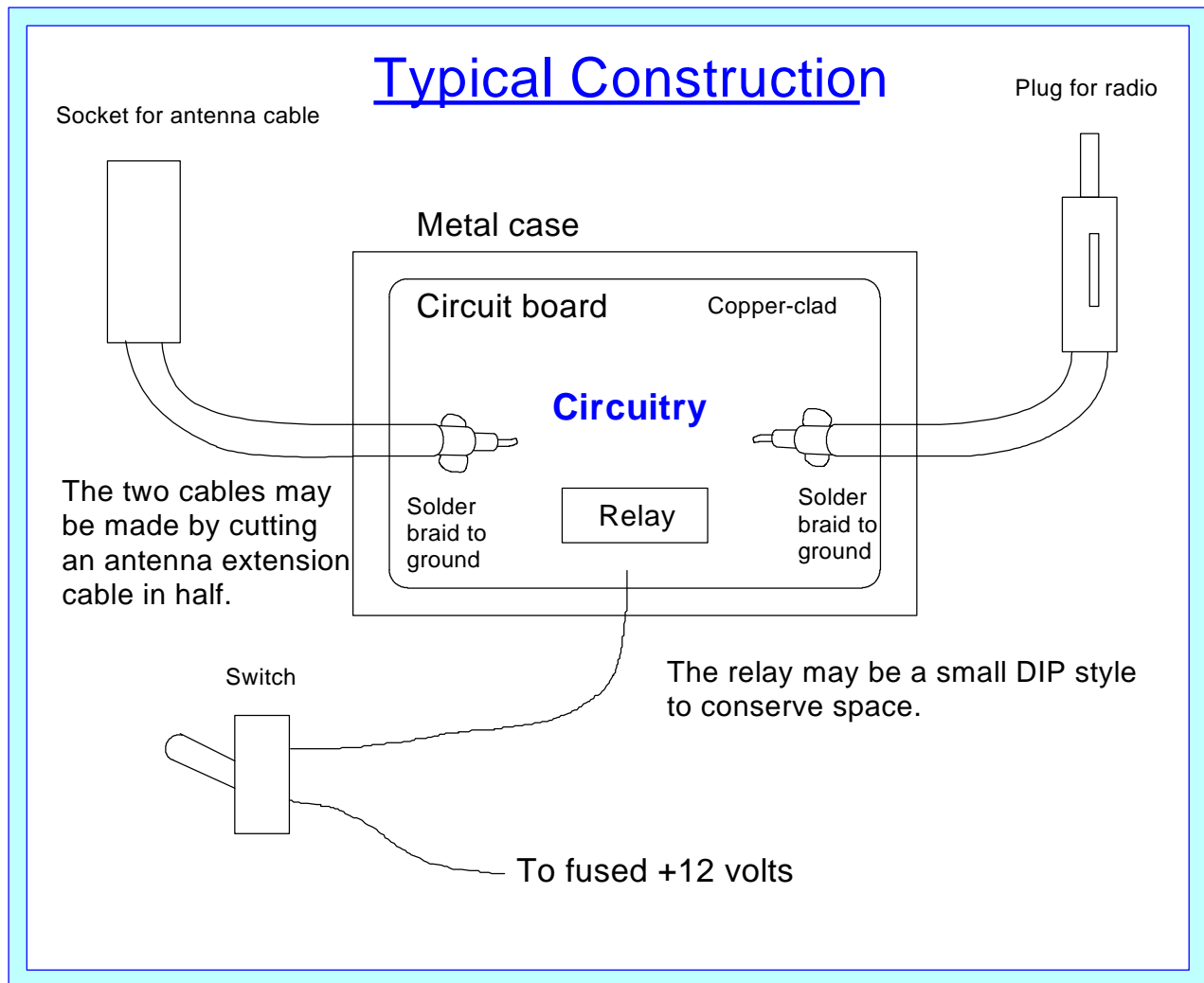


# WWV Converter for the Car



This converter allows an ordinary AM car radio to receive WWV at 10 MHz. WWV transmits the precise time of day and the car is the most common place to need accurate time! Other interesting stations near 10 MHz may also be received including those famous BBC news and science shows. The unit should be constructed in a metal box with antenna connectors compatible with the car radio. The converter includes a relay which automatically bypasses the converter when power is removed. A single power wire comes out of the converter box and goes to a power switch located in a convenient spot. (The unit is connected to ground through the coax.) Make sure to keep the leads short and use ground-plane construction. The circuit is not so fussy that a beginner should fear to proceed but it is more challenging than many projects. The performance is quite good and well worth a little effort.



The oscillator may use either a crystal or a ceramic resonator at either 9 MHz or 11 MHz. WWV will appear at 1MHz on the AM radio dial. A slightly different frequency may be desired if there is a strong station near 1 MHz (1000 on the dial). A ceramic resonator will tune far enough to "dodge" a strong station. The coaxial connections may be made by cutting an antenna extension cable in half to obtain two "pig tails" as shown above. Solder the outer braid directly to the copper board. The relay may be a small 12 volt DIP style relay or a 5 volt relay with a suitable current limiting resistor. When power is applied to the circuit, the relay closes, connecting the circuit to the radio and antenna.

Other frequencies may be received with this basic circuit by making a few changes. The crystal frequency should be about 1 MHz above or below the desired receive frequency and the tuned circuit across the diff. amp inputs should be adjusted to resonate near the new frequency. These changes should be attempted by the more experienced hobbyist.