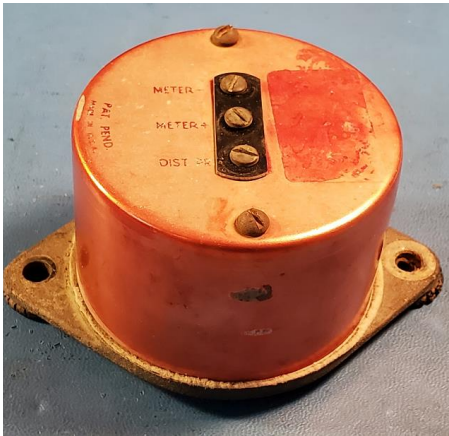


Embedding a TachMatch™ Gauge Converter into a Stewart Warner Red Can Tachometer Transmitter Case

Rev. 1.0

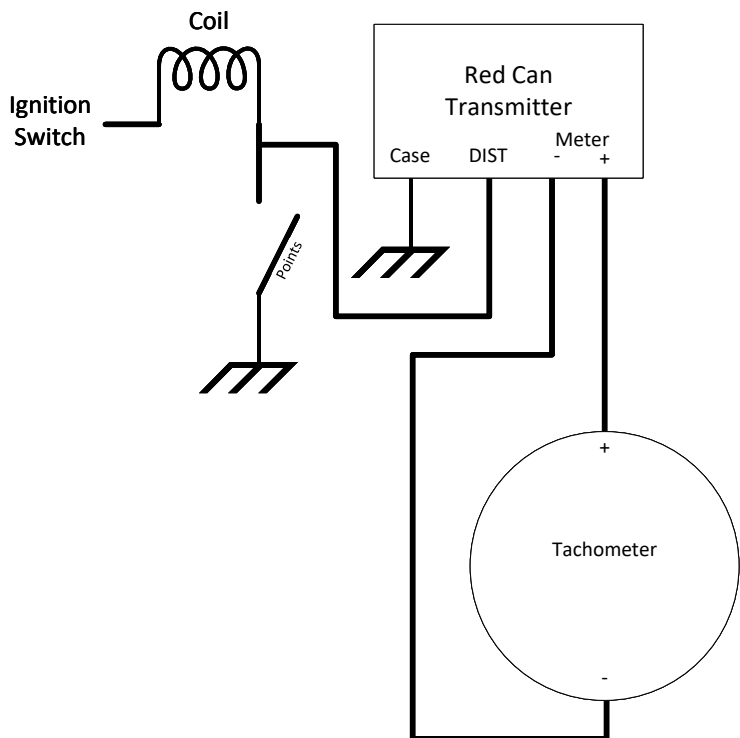
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The Stewart Warner Red Can tachometer transmitter creates a signal that is read by certain vintage Stewart Warner tachometers. It consists of a relay, some capacitors and batteries. After all of these years, the batteries are no longer available and the relays and capacitors have probably failed. For people who want to use their vintage Stewart Warner tachometers in their vintage vehicles, the TachMatch Gauge Converter is a good solution since it will work with both vintage and modern engine ignition systems. For people who want to retain the look and feel of the original installation, it is easy to embed a TachMatch Gauge Converter into a gutted Stewart Warner Red Can transmitter case.

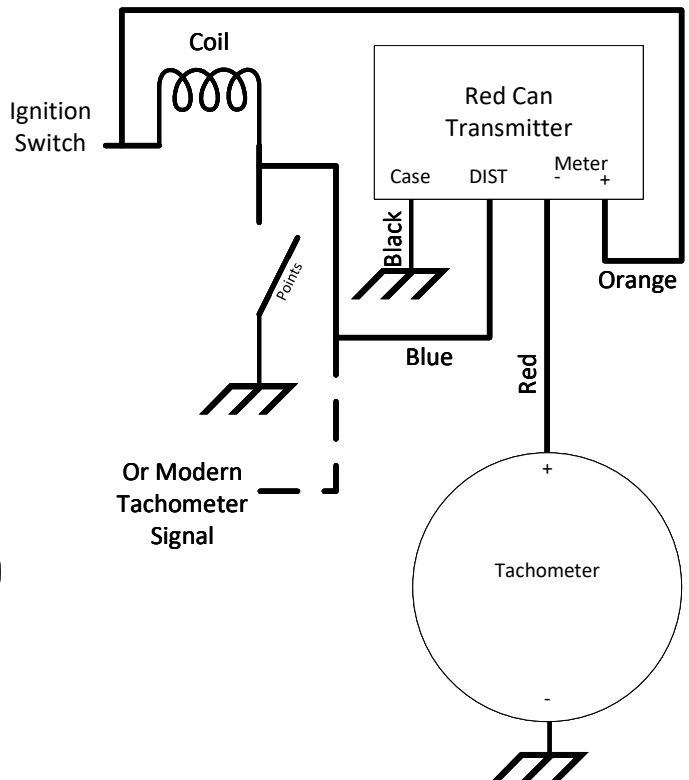


There are 4 electrical terminals in the case (including the case ground) and the TachMatch Gauge Converter also uses 4 terminals to drive your vintage tachometer. However they are wired in a slightly different way than the original is. The stock Red Can transmitter was wired with the case grounded and the DIST terminal connected to the coil primary points connection. This will not change with the embedded TachMatch Converter. The stock Red Can transmitter also has terminals marked “+” and “-”. The transmitter “+” terminal was wired to the tachometer’s “+” terminal. The transmitter’s “-” terminal was connected to the tachometer’s “-” terminal. After embedding the TachMatch Converter, the transmitter’s “+” terminal will be connected to switched battery voltage to supply power to the TachMatch unit. The transmitter’s “-” terminal will be connected to the tachometer’s “+” terminal. The tachometer’s “-” terminal will be grounded. Wire colors used are just for example.

Original wiring diagram:



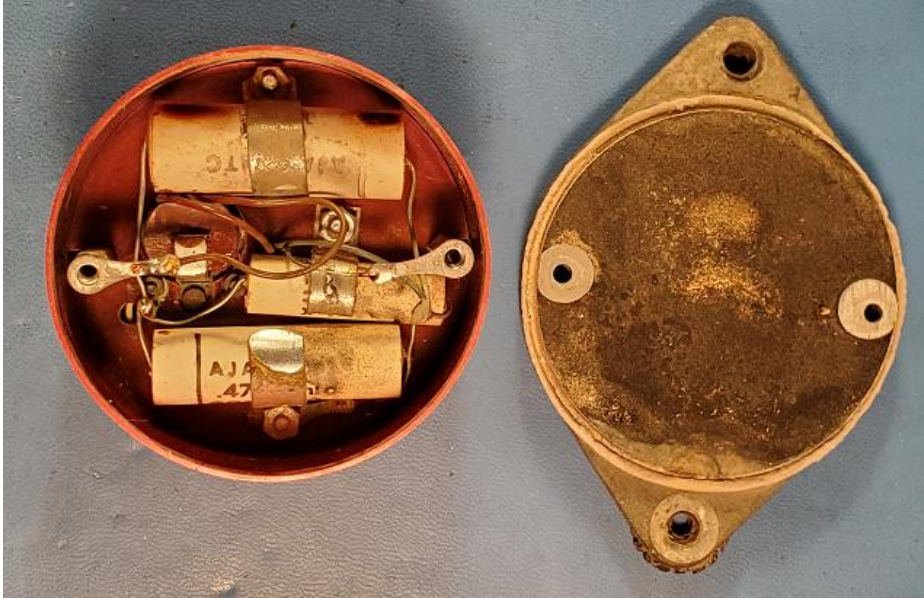
New TachMatch Converter wiring diagram:



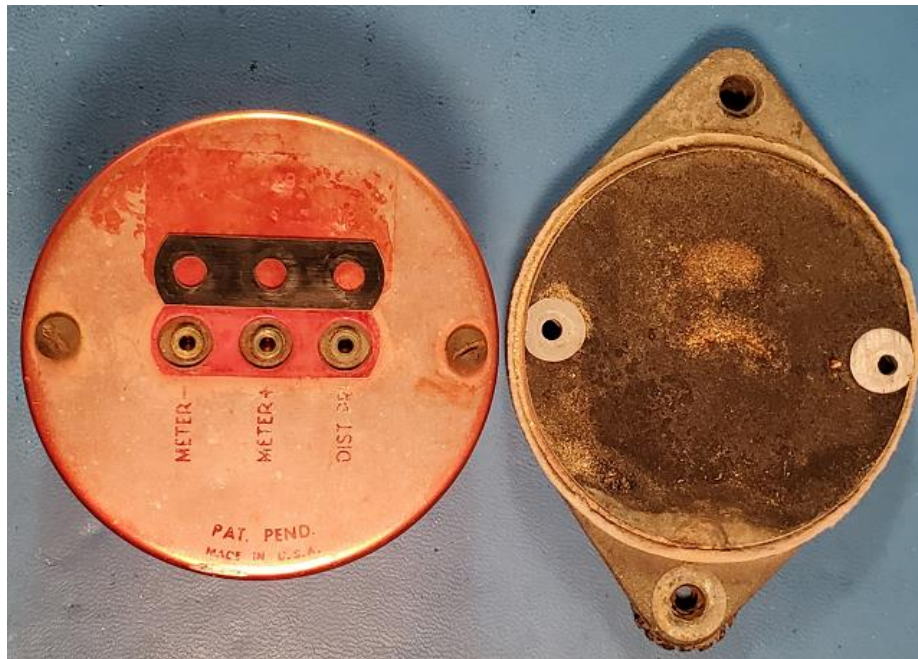
Before you begin modifying your Red Can case, you should follow the TachMatch Converter instructions and temporarily wire it up so you can validate your setup and calibrate the system with your tachometer. Then it will be ready to be installed in your Red Can transmitter case.

Gutting the Stewart Warner Red Can Case

To open the Red can transmitter case, remove the 2 screws from the bottom of the case and remove the bottom of the case. That will expose the innards of the transmitter:

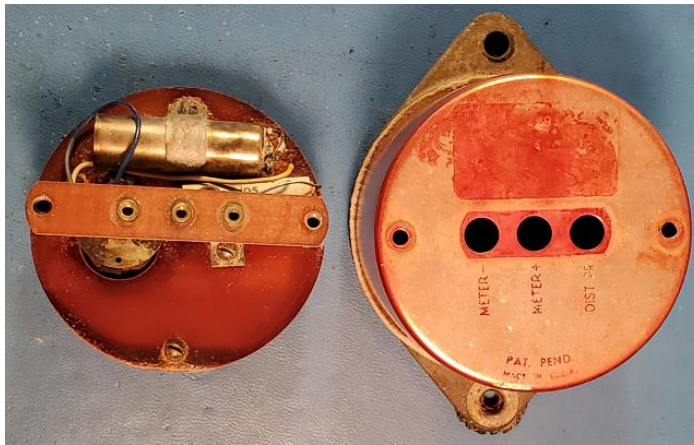


Remove the three screws in the terminal strip in the top and remove the insulation strip from the top of the can:

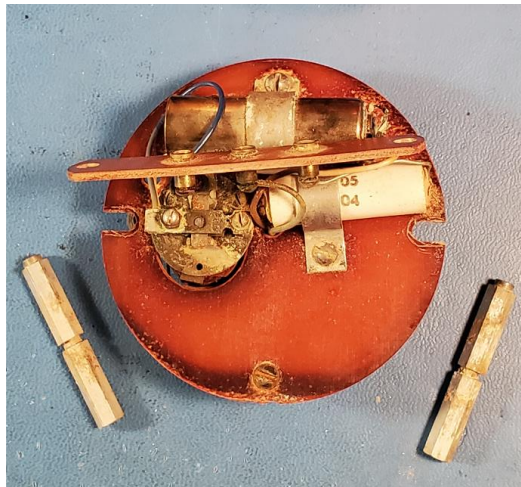


At this point, you are ready to take the guts out of the case.

Remove the two screws from the top of the case and the innards will come out:



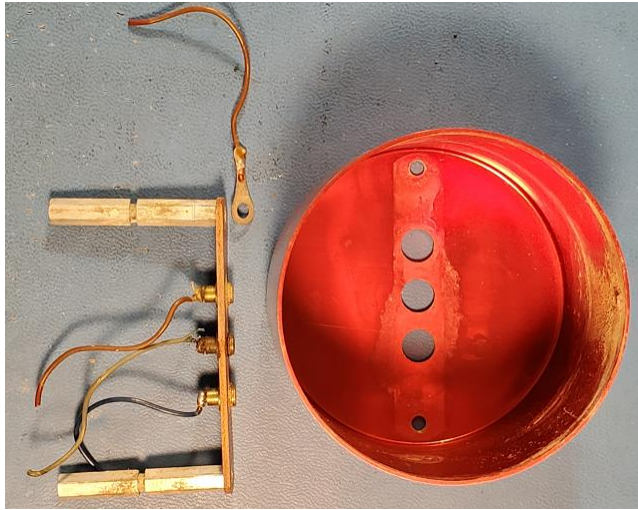
The board that holds the terminals will pop off of the top of the innards. Use a pair of pliers to pull the two stand-offs out of the main PCB:



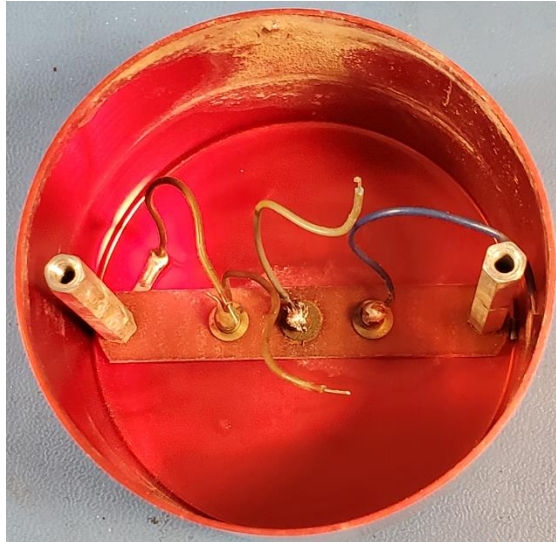
Cut the wires that hold the terminal strip to the PCB and cut one of the ground lug wires. You will use these parts with the TachMatch unit. Solder longer wires to the terminals and the ground lug to make it easier to mount the TachMatch unit into the case. You will need a high-wattage solder gun to be able to melt the solder on the terminals:



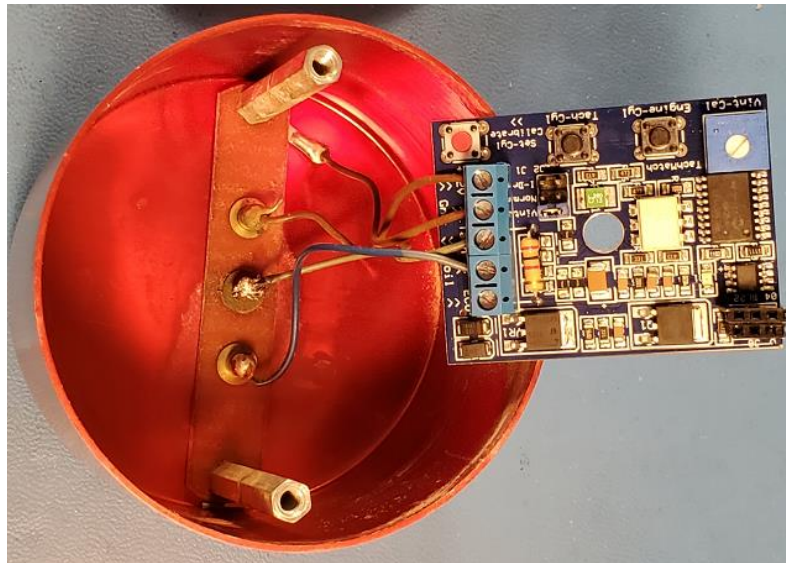
Put the terminal PCB back onto the standoffs and put the ground lug near the top of one of the stand-offs:



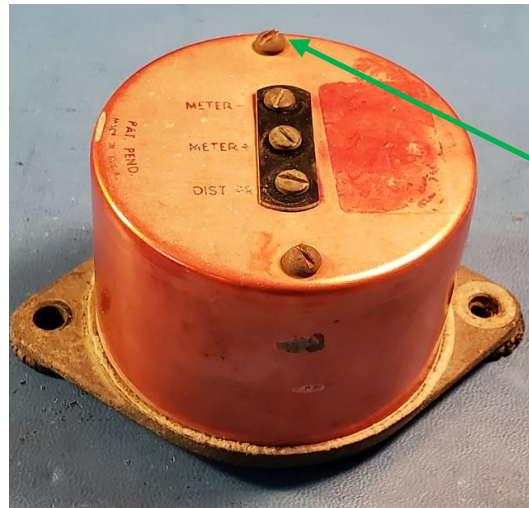
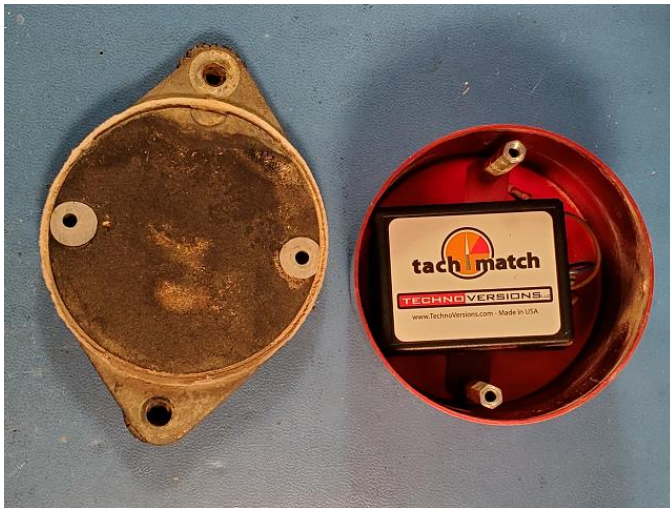
It's a little tricky, but install the PCB with the stand-offs in the can with the ground lug on top of one of the stand-offs. Make a note of which of the terminals the ground lug is nearest to, DIST or Meter-. Replace the insulating plate and terminals screws on the can top:



Connect the wire attached to the DIST terminal to the TachMatch coil or ECU input terminal. Connect the wire attached to the METER+ terminal to the TachMatch +12V terminal. Connect the wire attached to the METER- terminal to the TachMatch Tach terminal. Connect the wire attached to the ground lug to the TachMatch GND terminal:

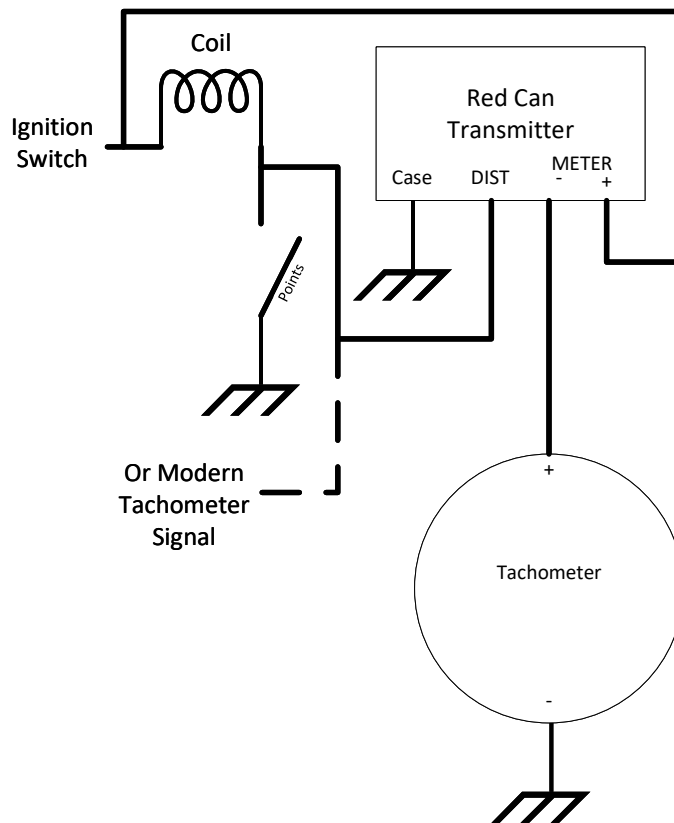


Put the TachMatch box back on the TachMatch PCB. You can use double-sided sticky tape to adhere the TachMatch unit to the bottom of the case if your wires are long enough.



I put the ground lug under this screw, but either one will work. Make sure you use the same screw to attach the outside ground wire.

The modified Red Can transmitter is ready to be wired into the car. Make sure you attach the ground wire to the same screw that you installed the ground lug under. If you use the wrong screw, you will not get a good ground and the TachMatch unit will not function.



Enjoy your vintage tachometer.