

Assembly Instructions For The CG Single Channel Tone Receiver Model R-1

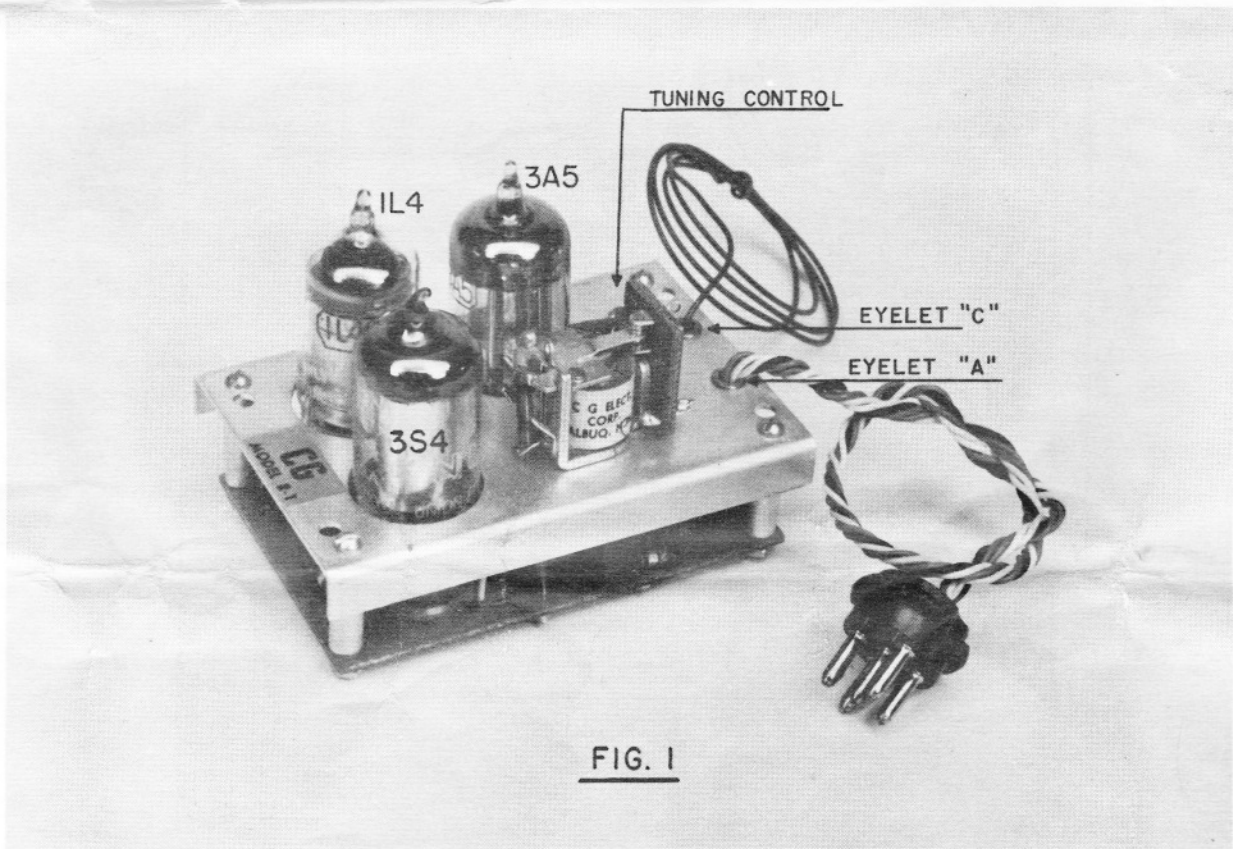
Designed and Produced by

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This set of instructions is a condensed version of the production drawings as used by CG Electronics in the manufacture of the R-1 single channel tone receiver. The circuit is identical to the production model and with reasonable care the performance of the R-1 can be duplicated. This set of components and instructions is made available to modelers who take pride in doing their own construction work and is not to be considered a KIT. The components are not to be confused with so called bargains now being offered for sale at surplus prices. All the components are guaranteed against defects and will be replaced free of charge if returned to CG Electronics Corporation providing they have not been abused in use. The tubes are not guaranteed against burn outs or breakage.



Unpack the components and at the same time study all the parts to get familiar with the layout of the receiver.

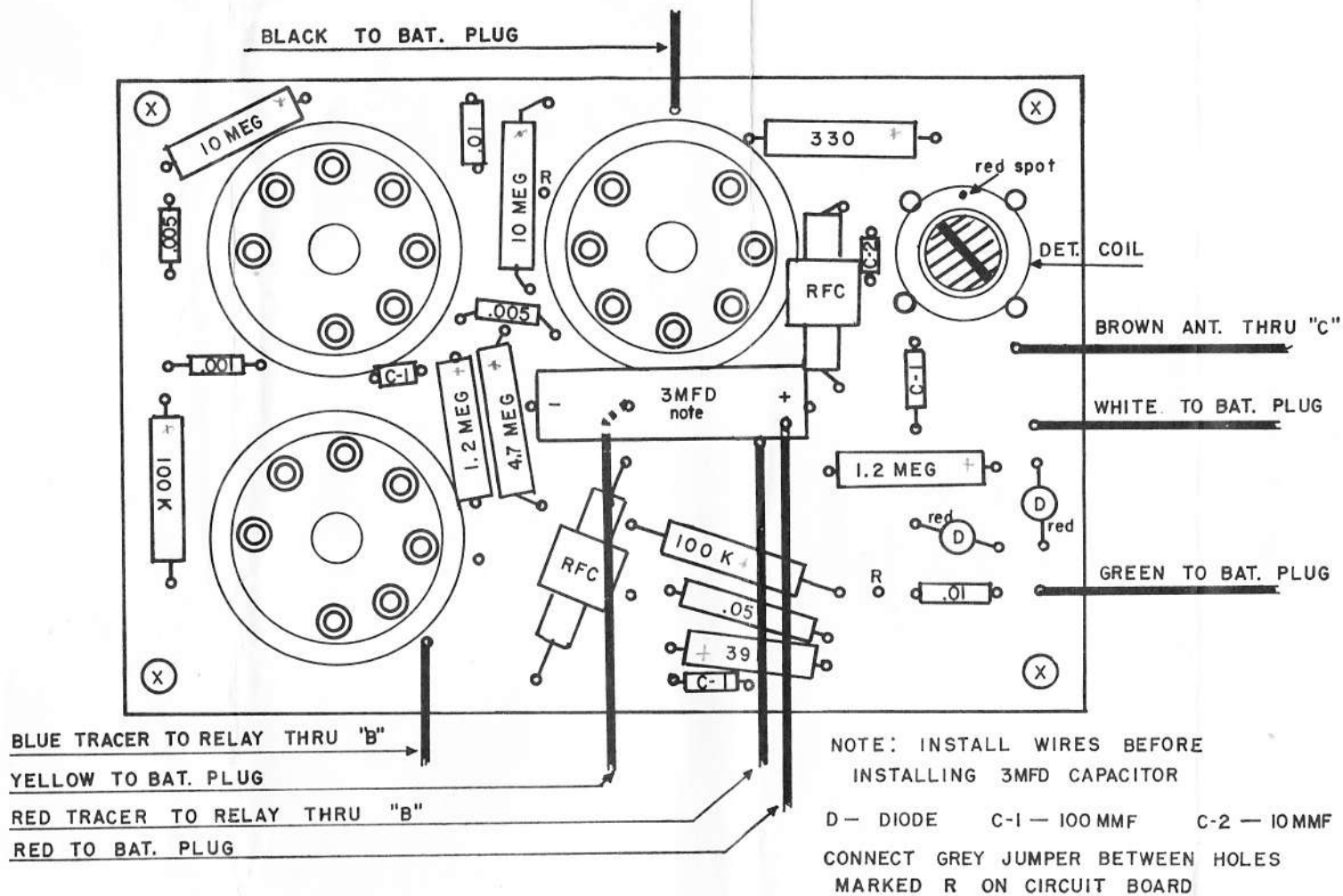
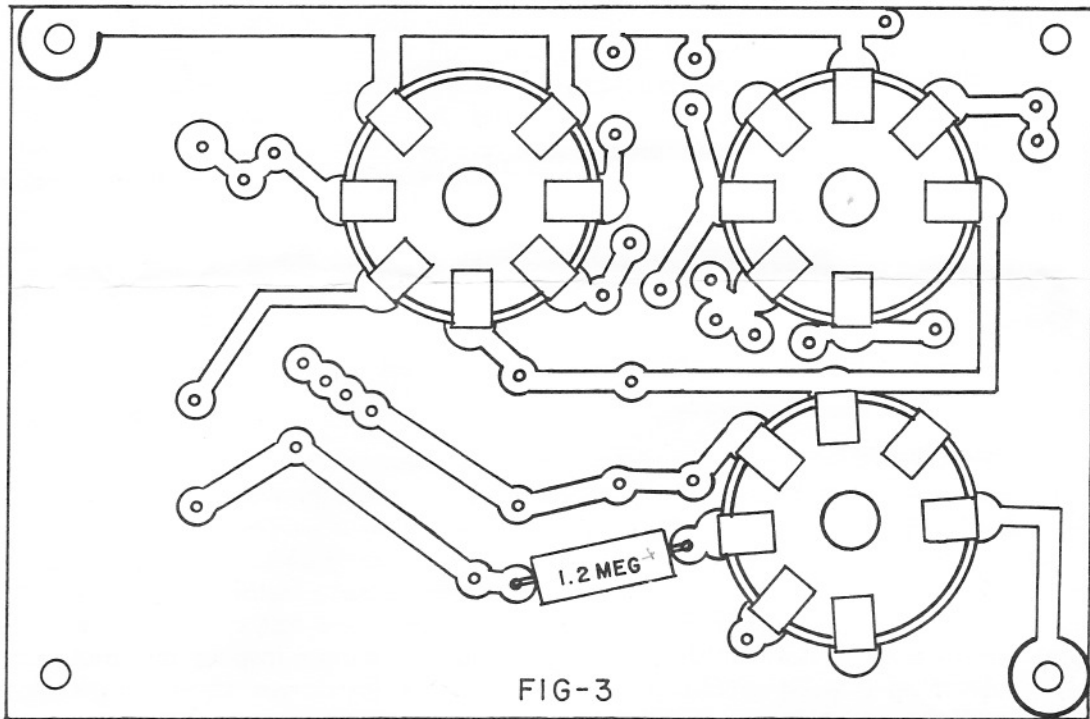


FIG. 2



Refer to figure 2 for this operation. First remove the circuit board from the package and place it with the copper wiring down on the table top. Now orient it until it corresponds to the drawing. All components are installed on the side that does not contain copper wiring. Begin by installing the components one at a time and soldering each in place. Observe polarity of all electrolytic capacitors and coding on the detector coil. Be very careful to orient the tube sockets as indicated in figure 2 and figure 3. Make certain the copper wiring lines up with the lug on the bottom of the socket. The socket may require a little effort to push into the chassis board but should snap into place. The sockets are secured by building up solder between the wiring and socket lug. Do not install the 3 MFD capacitor until all the other components and wires are installed. The wires are furnished at random lengths and do not cut any of them except the grey wire used for a jumper. Use rosin core solder only and do not use any additional flux. Use as little solder as possible on all circuit connections. Probably the best way to solder printed circuits is to apply the heat and solder to the wire lead that extends thru the printed board. Then move the soldering iron down to touch the printed wiring which will complete the job. All leads can be trimmed off flush after they are soldered. Use a small soldering iron and use only enough heat to perform the soldering operation. Excessive heat will cause the copper wiring to release from the circuit board.

R-1 RESISTOR COLOR CODE

Resistance	Color Nearest One End		
330	Orange	Orange	Brown
39K	Orange	White	Orange
100K	Brown	Black	Yellow
1.2M	Brown	Red	Green
4.7M	Yellow	Violet	Green
10M	Brown	Black	Blue

After the circuit board is finished, take the chassis and install the relay as shown in figure 1 using screw and lockwasher provided for this use. Pull the groups of wires thru the indicated eyelets. Install the long screws thru the chassis and the circuit board in the holes marked with an X. Put a spacer, which is provided, between the chassis and the circuit board and secure with a lockwasher and nut. Cut the Blue tracer and red tracer wires to length and connect them to the two lugs on the bottom of the relay terminal board. Cut the battery cable wires all the same length and solder the 5 pin plug in place.

- The Black wire to Pin #1,
- The Green wire to Pin #2,
- The Yellow wire to Pin #3,
- The White wire to Pin #4,
- The Red wire to Pin #5.

The Brown wire is the antenna connection. It is advisable to wash the rosin from the circuit board using carbon-tet and a tooth brush.

Refer to figure 1 and install the tubes in the proper socket. Install the .005 capacitor from the normally open relay lug to the relay frame. The relay frame has a lug on the rear next to the spring. The receiver is now finished and ready for checking. Inspect the receiver and be certain that everything is as it should be then refer to the instruction sheet for testing. When connecting a milliammeter in series with the +45 volts, it should idle at approximately 1.5 MA and rise to approximately 5 MA when receiving a signal.

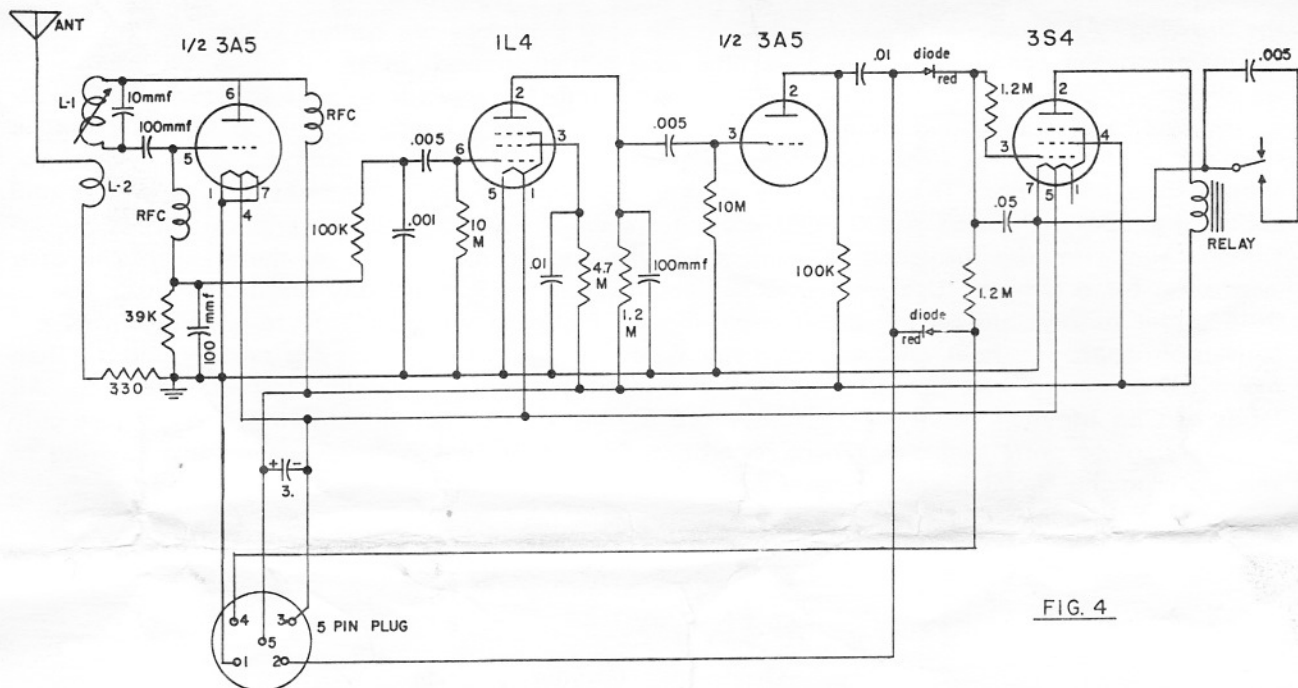


FIG. 4