# PLEASE READ ME FIRST

01/16/22

The TR-35 Upper and Lower PC boards are shipped inside the plastic enclosure. Remove the 4 black screws holding the enclosure together and remove the board set. Discard any anti-rattle bubble material. Place the case screws in a safe place, you will need them later. Remove the four 3mm screws holding the lower board to the metal spacers. You will need these screws later as well. Set the lower board aside for now. The metal spacers should remain on the upper board. The upper board will be assembled first, followed by the lower board. There are separate assembly instructions for the two boards. You should read through both sets of assembly procedures before you start. Try to resolve questions or anything that seems unclear ahead of time. There are separate parts carrier strips for the upper board, the lower board, and the case final assembly parts. The parts are arranged in the carriers in the order of the assembly instruction steps. You will work from the top of the carrier strip down as you complete steps. It is recommended that you remove only the parts needed for the particular building step as outlined in the assembly instructions. Some of the hardware is small and could easily be lost or misplaced. A clean working environment will help prevent lost or misplaced items. This might be a good time to clean up your workbench before you start assembly.

**Upper Board Notes**: All the parts (except the crystal) need to be tight against the board, especially the capacitors. If they extend above the 12mm metal spacers, the case will not fit together. After the display is mounted, be sure to use nail polish on the screws and nuts under the board. The nuts could come loose and cause damage. This has happened on prototype units. Don't forget to remove the display protective covering before final case assembly (pull the green tab). The microprocessor (U1) socket pins must be trimmed after soldering so that they do not poke into the toroid inductors on the bottom board.

**Lower Board Notes:** Don't neglect to trim leads and pins under this board when instructed lest the case might not fit together. It's tight in there! Be sure you get

the orange relay positioned correctly. It's not easy to remove if you get it wrong. The BNC antenna connector has been installed at the factory due to the high amount of heat required for soldering due to its mass. Don't forget that capacitors C77 and C78 must be installed lying down on the board. Bend the leads before installing. The poly-fuse will also need to be installed lying over. Do not molest the four brown or yellow trimmer capacitors on the lower board. They affect receiver sensitivity and have been carefully adjusted as part of the total alignment procedure performed at the factory on a bed-of-nails fixture prior to shipment. Thermal heat sink compound was not used on the prototype units, but you may use a small amount if you wish. Also, the toroids were not glued to the board in the prototypes and there were no issues. If you routinely subject your radio to extreme shock and vibration, you could glue the toroids to the board with hot melt glue, or maybe epoxy. Do NOT use any silicon sealer that liberates acetic acid as it cures (smells like vinegar) as this would be very corrosive and would most likely cause damage.

**Final Assembly Notes:** Remember to remove the OLED display protective covering. Follow the instructions for adjusting the PA bias control. Adjust the blue "SIG" quality LED sensitivity on the mounted to the underside of the upper board. Some users have commented that the unit looks better without the plastic display window installed. You may or may not install it, as you wish. Before installing the plastic protective window, you most likely will need to remove the thin clear protective film from one or both sides of the window and poke out any remaining plastic in the screw holes. The plastic display window should appear water-clear after the plastic protective coatings are removed from both sides. The four small knobs may have burrs inside the brass inserts that make for difficult attachment. Loosen the setscrews and twist a ¼ inch drill bit by hand inside the shaft holes to remove any burrs.