

Installation

Simple Installation Instructions: You may want to look at the following pictures before starting the installation:



1. Remove the top cover from radio.
2. Remove the four screws holding down the metal bracket with the speaker, memory bank switch and vox controls. The Digital A board is located in a box under this metal bracket. Lay the speaker bracket over to the right side. There is no need to disconnect the wires going to the controls on this assembly.
3. Remove the 2 screws holding the inverter board to the top of the Digital A board enclosure. Again, lay this board to the side without disconnecting its wiring.
4. Remove the 6 screws from the Digital A board enclosure box cover, and remove the cover.
5. Align the new IF-10B/C board and cable assembly over the 2 metal standoffs mounted on the Digital A board. The board should be oriented with the ribbon cable facing the back of the radio and the 2 pigtail attaching cables towards the front. Screw the board in place with the supplied hardware. Obviously, if you are replacing an existing IF-10B board, it must be removed first!
6. Connect the 2 pig tail cables coming from the Digital A board to their mating receptacles on the new IF-10B/C board. These cables are marked 19 and 20 on the Digital A board. Do not twist the cables when installing them on the IF-10B/C, they should plug in straight on with the wires in the same order as the way they come off of the Digital A board.
7. Make sure the ribbon cable is fitted in the cutout slot at the rear of the Digital A enclosure box. There is a piece of heat shrink on the ribbon cable in the area where it will exit the box to deter scarring.
8. Replace the cover on the Digital A board enclosure and reinstall the cover screws.
9. Remount the Inverter board on the cover plate.
10. Remount the speaker assembly bracket.
11. Orient the serial cable out the rear of the TS-940 transceiver. There is quite a large clearance between the top radio cover and the internal assemblies of the TS-940 in the center of the case, just to the left of the final amplifier assembly (when viewing the transceiver from the front). Orient the cable so it is lying flat and exiting the rear of the transceiver in this location. Again, there is a piece of heat shrink tubing on the ribbon cable in the area where it will exit the transceiver to prevent scarring of the cable.
12. Replace the top cover.
13. Set the communications parameters for your PC application to 4800 baud, 8 data bits, 1 stop bit, no parity, and NO handshaking (in HRD click off the CTS and RTS radio buttons).

14. Play, lots, with your newly computer controlled TS-940

Troubleshooting:

First, all of our interface boards are 100% tested in their intended host transceivers!

Do make sure that you have installed the accessory PROM on the TS-940s digital board and review the connection of the cables as shown in the photos on our web page. Improper installation of the PROM chip, bent legs etc., is by far the most common installation problem.

If you are connecting the TS-940 serial interface to your PC with a USB to RS-232 adapter please be aware that some programs, like HRD, do not work properly with a Prolific based adapter. Try and use a FTDI based USB to serial port adapter.

When you set up your communications software please make sure that you select the appropriate protocol, Kenwood TS-940 or just plain Kenwood should suffice. The com port setting needs to be set for 4800 baud (this is the Kenwood standard) no parity, 8 data bits and 1 stop bit. If you still are having trouble with your software, try to communicate with the board via a dumb terminal program such as Hyperterminal. If you use Hyperterminal, set it up to communicate directly to the appropriate com port and select the settings as mentioned above. In addition the Flow Control must be set to NONE (this is important). If you make changes to the settings, you must hit the disconnect and connect button to get them to take effect. Double check that your port is functioning properly by jumping pin 2 to pin 3 on the DB9 com port you are using and then typing characters in the terminal screen. If the port is working the characters you type will show up on the screen, when pin 2 is jumped to pin 3, and the characters should stop showing on the screen when you remove the jumper. Once you are sure of the ports functionality, reconnect your transceiver to the serial port and type:

if; (that is the letter i then the letter f and finally the semicolon character)

The TS-940 will respond with a string of data embedded in which will be the current VFO frequency. If you get the return string, all is well with the xcvr and you will need to reconsult your software programs setup info. BTW, if you have Hyperterminal functioning, the port it is connected to will not be available to your comm software, so don't forget to shut down Hyperterminal before you retest your communications software.