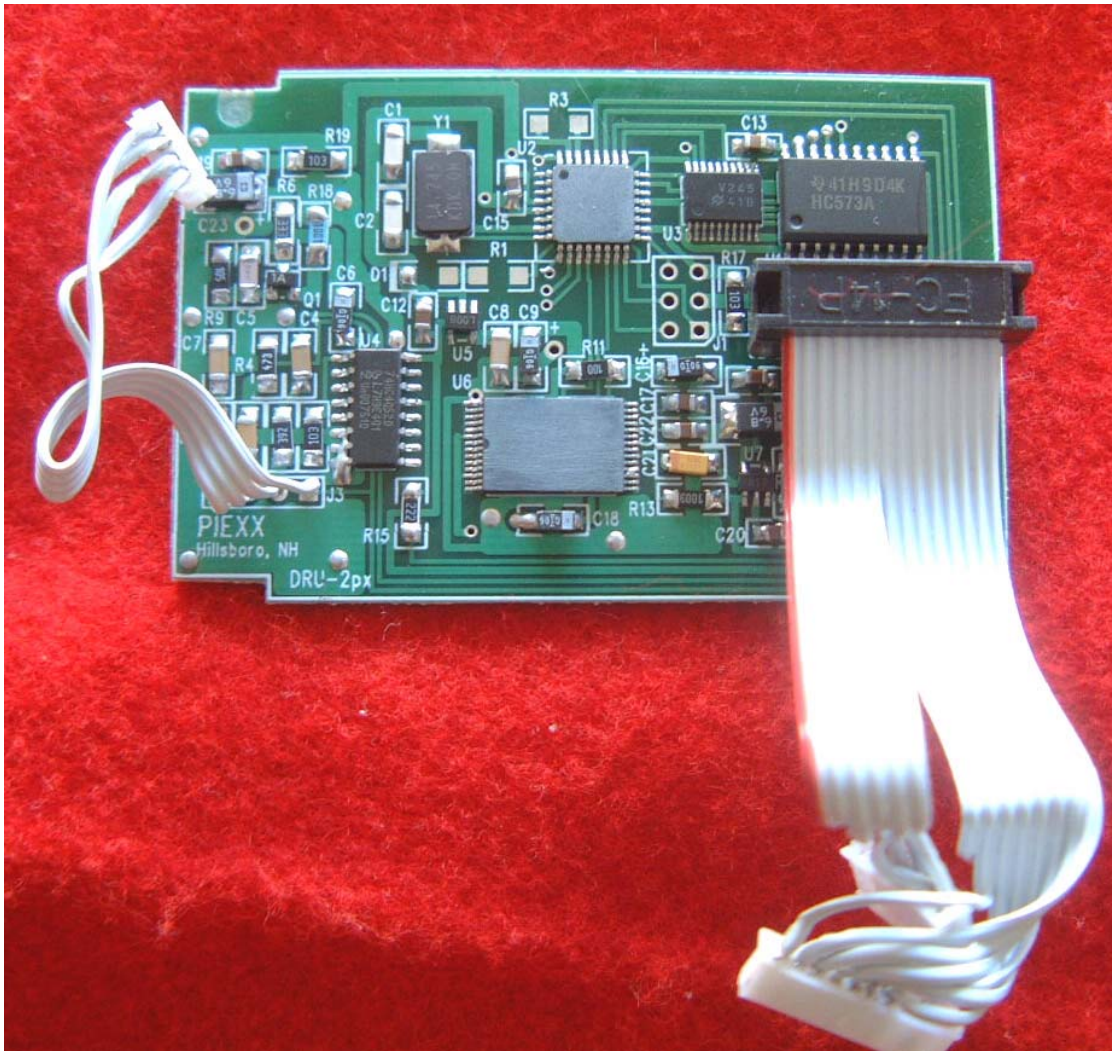PIEXX Co.
13 Main Street
PO Box 123
Hillsboro, NH 03244
(603) 464-5411
www.piexx.com

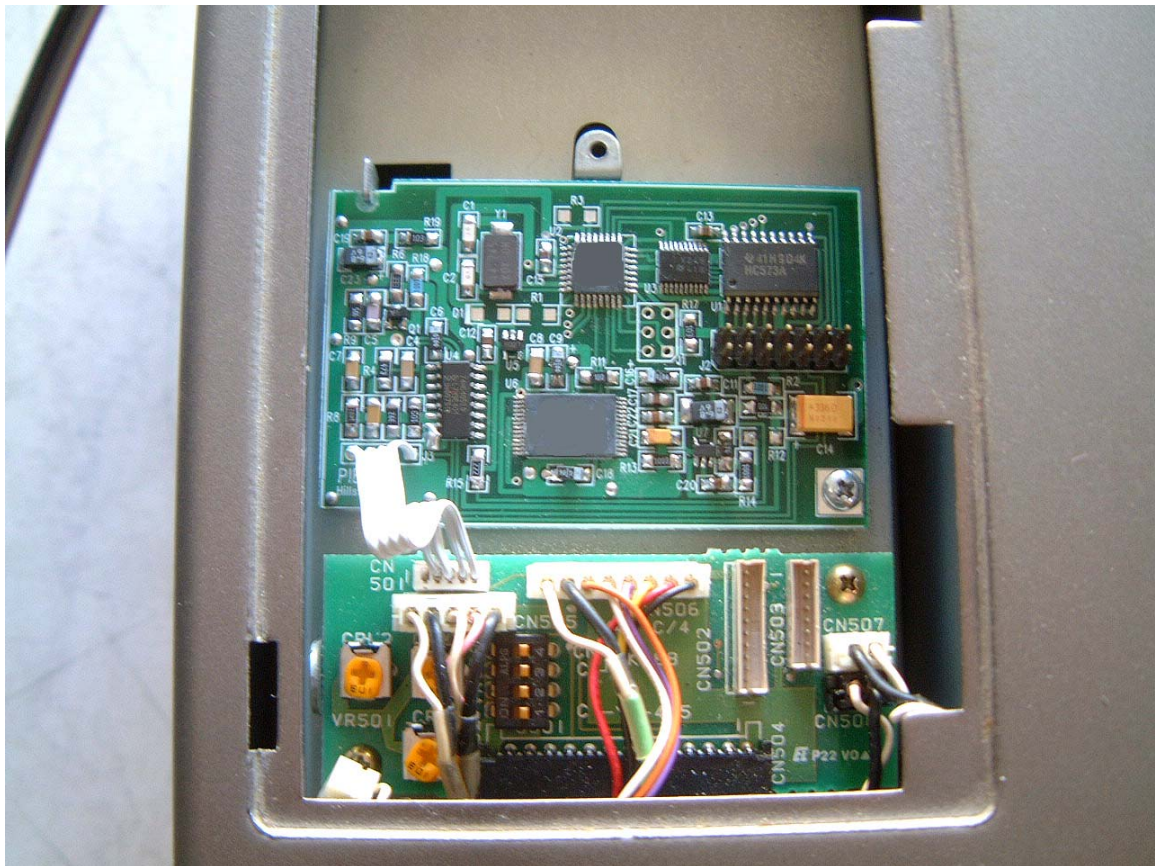# PIEXX DRU-2 px
Installation Instructions

The PIEXX DRU-2 px is a physical and electrical replacement for the original Kenwood DRU-2 Digital Voice Recorder.
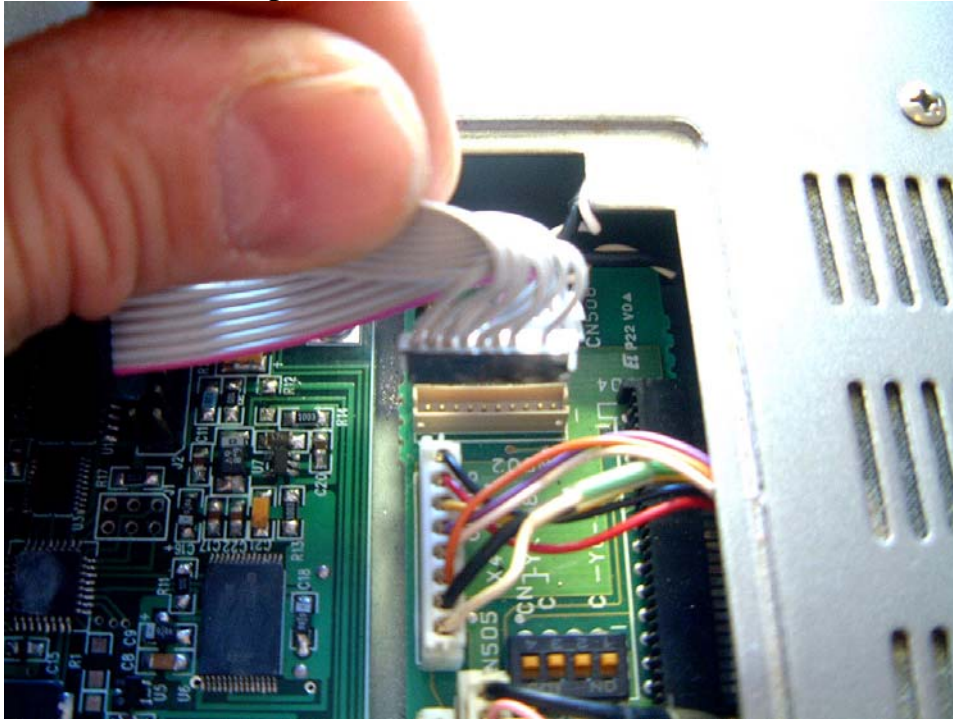
Don't you wish those PLAY and RECORD buttons worked on your Kenwood TS-850 transceiver? They would if you had bought the DRU-2 option board. The original Kenwood part is nearly impossible to get, but now PIEXX is manufacturing a replacement DRU-2px board. Best of all, with the PIEXX board the three messages are each 32 seconds long!

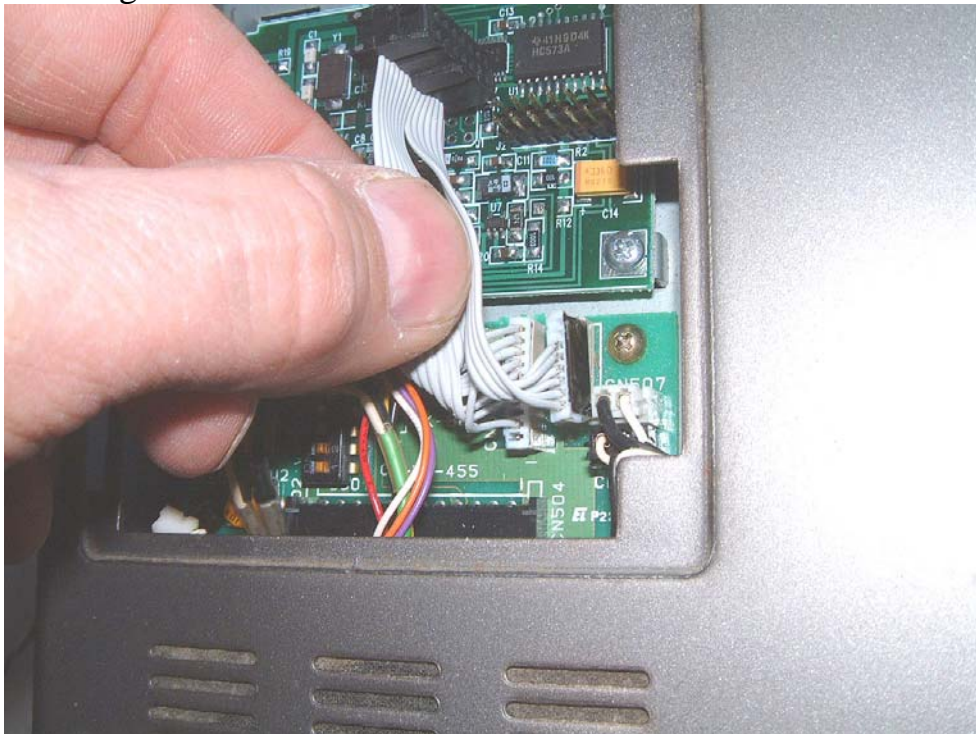# DRU-2 px Installation in the Kenwood TS-850 transceiver.

1. Open the cover panel on the top left of your TS-850 transceiver.
2. Position the DRU-2px board as shown in the picture below. Notice that the DRU-2px board is held in place on the top left side by a hook in the sheet metal on the TS-850 chassis. Secure the DRU-2 px in place with the #4 sheet metal screw and lock washer provided. The lock washer should be positioned between the head of the screw and the top side of the DRU-2 px board.
3. Align and install the 5-position connector (only 4 leads) coming from the bottom left of the DRU-2 px board, with connector CN501. The black side of the connector, installed in CN501 will be facing the DRU-2 px board.
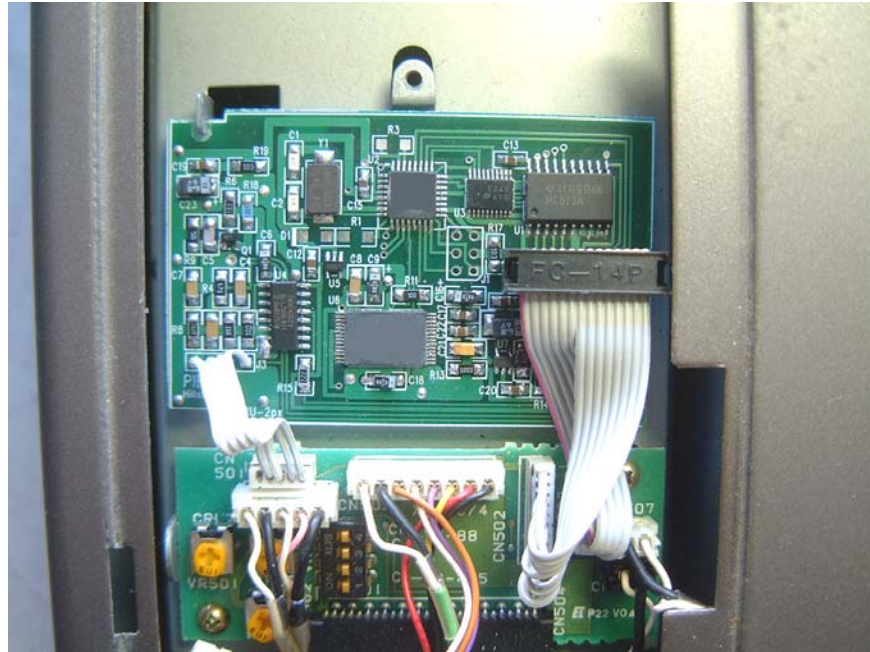
4. Find the IDC 14-pin cable that was shipped with the DRU-2 px board. Notice that it has a 10 position and a 8 position 1.5 mm plug on one side of the cable. Each of these 1.5mm plugs has a side that is painted black. The 10 position plug should be installed in CN502 with the black side facing the "CN502" screened on the board. Verify this installation in the picture below.

5. Now, install the 8 position 1.5mm connector into the socket marked CN503. The black side of the connector will face the silkscreen marking "CN507".
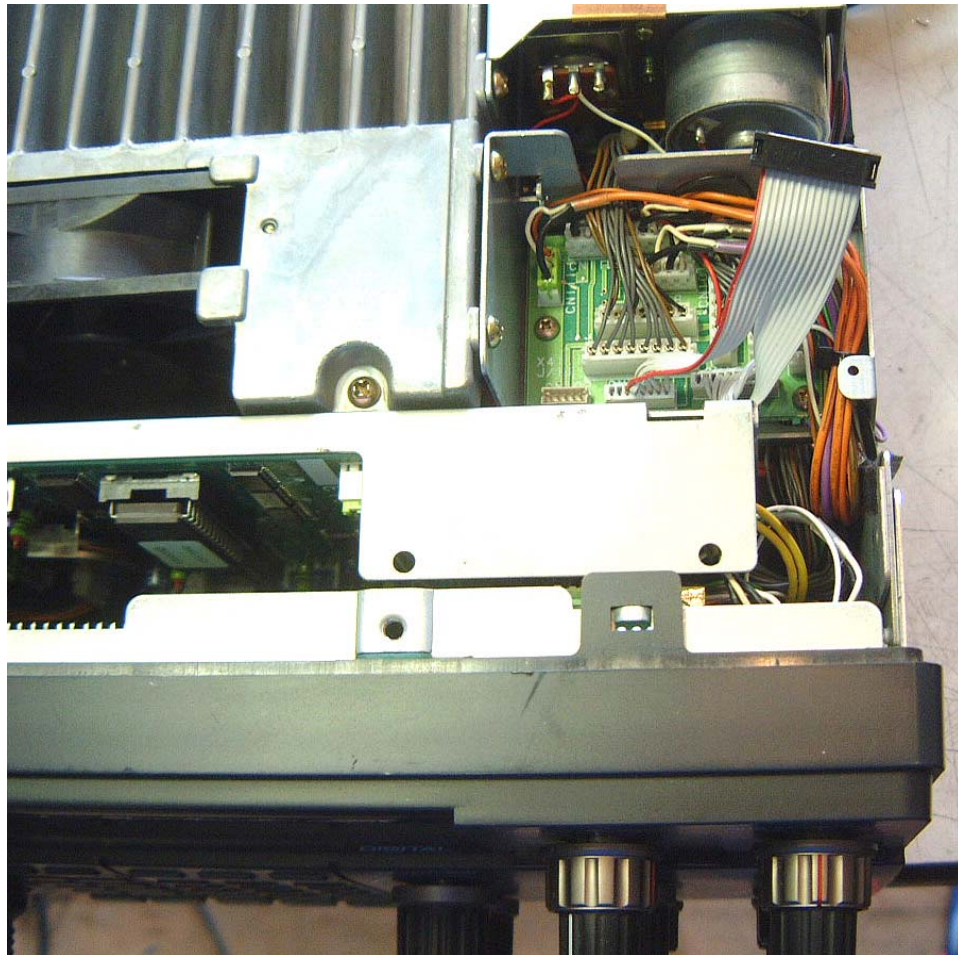
6. Next, install the 14 position IDC connector on the 14 pin header marked J2 on the DRU-2 px board. Be sure that the connector is aligned with the header pins. It is going to be very close to the right side of the sheet metal cutout on the TS-850 access door.
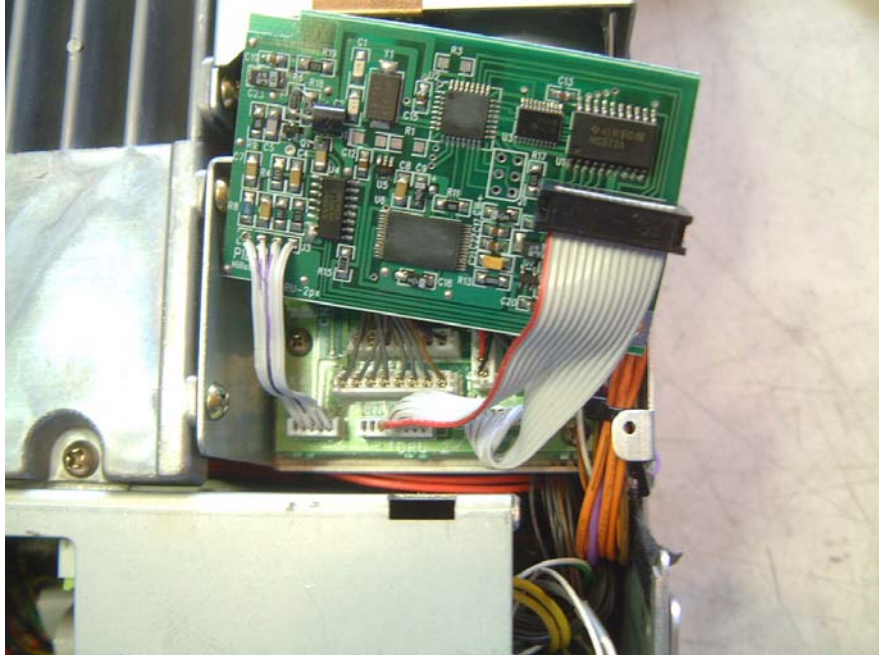
DRU-2px Installation in the Kenwood TS-950SDX transceiver.

1. Open the cover panel on the top left of your TS-950SDX transceiver.

2. Find the IDC 14-pin cable that was shipped with the DRU-2 px board. Notice that it has a 10 position and a 8 position 1.5 mm plug on one side of the cable. Each of these 1.5mm plugs has a side that is painted black. The 10 position plug should be installed in CN104 with the black side facing the "CN104" screened on the board. Verify this installation in the picture below.

3. Install the 8 position 1.5mm connector into the socket marked CN103. The black side of the connector will face the silkscreen marking "CN103".

4. Align and install the 5-position connector (only 4 leads) coming from the bottom left of the DRU-2 px board, with connector CN102. The black side of the connector will face the silkscreen marking "CN102".

5. Position the DRU-2px board as shown in the picture below. Notice that the DRU-2px board is held in place on the top left side by a hook in the sheet metal on the TS-950SDX chassis. Secure the DRU-2 px in place with the #4 sheet metal screw and lock washer provided. The lock washer should be positioned between the head of the screw and the top side of the DRU-2 px board.

7. Reinstall the access cover on your TS-950SDX transceiver. Installation is now complete.

Operation

The operation of the PIEXX DRU-2 px is the same as the original DRU-2 so the instructions in your TS-850 manual apply. The DRU-2 px has three 32 second message buffers so you might as well change the REC 1, REC 2 and REC 3 recording times to the longest value. These parameters are set as indicated in the "Power on function selection" section of the owners manual on page 35, but here is a quick review:

1. Turn off your TS-850 transceiver.
2. Press and hold the LSB / USB key, and while holding this key turn the transceiver back on.
3. Rotate the M.CH / VFO CH knob to select parameter # 29 as indicated on the main display. Press the UP button to change this parameter to 16, the maximum value it can be changed to.
4. Next rotate the M.CH / VFO CH knob to select parameter # 30 as indicated on the main display. Press the UP button to change this parameter to 16, the maximum value it can be changed to.
5. Next rotate the M.CH / VFO CH knob to select parameter # 31 as indicated on the main display. Press the UP button to change this parameter to 32, the maximum value it can be changed to.
6. Exit the "Power on function selection" mode by pressing the CLR button on your transceiver. You can also exit by turning the radio off.

Even though you can only set REC 1 and REC 2 to 16 seconds, these memory locations can, and will hold 32 seconds of speech. The display will count down from 16 to 0, while recording and then continue to stay on 0 until the 32 second record buffer is full as indicated by the CW character AR being announced from the speaker.

In order for the Voice recorder functions to operate, the TS-850 must be in a voice mode either SSB, AM or FM.

To record a message:
1. Pres REC-1, or REC-2 or REC-3 depending on which buffer you would like to record to. The TS-850 will announce the CW character BT, and the display will show AP1 - , AP 2 - ,or AP 3 -.
2. When you are ready to start recording your message, press and hold the same REC button you initiated the recording sequence with in step 1 above.
3. Speak into the mic in a normal voice. There is no need to press, nor should you, the PTT button on the hand mic. The TS-850 should not be in the transmit mode while you are recording!

4. The record session will be completed when you release the REC button you are holding. The display will return to the normal frequency readout.

To listen to the message you recorded:
1. Turn the MONI control up to a convenient listening level. Make sure that the VOX feature is not engaged.
2. Press the PLAY-1, PLAY-2 or PLAY-3 button. Adjust the playback volume with the MONI control.
3. The playback will stop when the message completes, or you can stop playback with the CLR button.

To transmit a saved message, either go to the SEND mode, by pressing the SEND button, or enable the VOX system. Press one of the PLAY buttons. Set the transmit level with the MIC control.

You can 'stack' the messages to be transmitted, up to 3 levels, by pressing another PLAY button while a message is playing. The next message, or the same one for that matter, will start as soon as the previous message completes. You can terminate the message playback by pressing the CLR button.

The mic is still enabled while a message is playing, so be quiet!