

ELECRAFT[®] K3

Installing the KXV3 RXA Board

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The KXV3 RXA Board mounts on the KXV3 board assembly using double-sticky tape. Electrical connections are made by soldering wires to existing terminals.

Contents

The RXA board is supplied with the mounting tape and wires already attached.

Tools Needed

1. Temperature-controlled ESD-safe soldering station with 700 to 800°F tip (370-430°C).
 2. IC-grade, small-diameter (.031") solder (Kester #44 or equivalent).
- ⚠ DO NOT use acid-core solder, water-soluble flux solder, additional flux or solvents of any kind. Use of any of these will void your warranty.**
3. #0 and #1 size Phillips screwdrivers. Use the screwdriver that best fits the screw in each step.
 4. Soft cloth or other surface to lay cabinet panels on to avoid scratching. A clean static-dissipating mat is ideal (see below). *If using cloth, do not lay circuit boards on it.*
 5. Pliers or wrenches for removing the 3/16" (4.8 mm) rear panel jack screw nuts and 1/4" (6.4 mm) #4 nuts.
 6. Long nose pliers.
 7. Diagonal cutters.

The following tools are strongly recommended:

1. ESD wrist strap.
2. Static dissipating work mat.

Installation Procedure

- Disconnect power and all cables from your K3.
- Remove the top cover as shown in Figure 1. After the cover is open, lift it gently to reach the speaker wire connector. Unplug the speaker then set the top cover aside in a safe place.

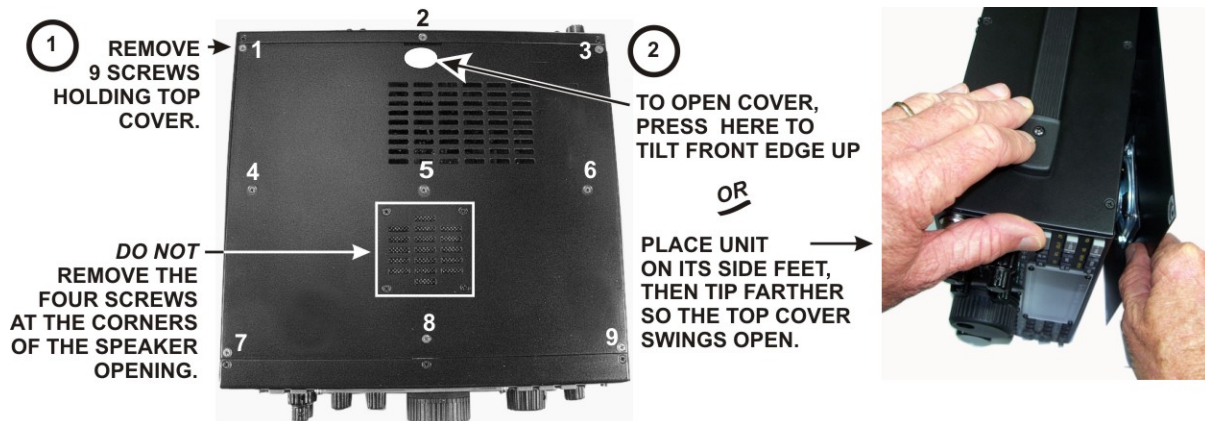


Figure 1. Removing the Top Cover

With the back cover of the KIO3 removed, remove the upper Remote I/O daughter board holding the RS232 and ACC connectors as shown in Figure 2. Only the upper daughter board need to be removed. The lower Audio I/O interface board may be left in place.

⚠ CAUTION: The pc boards are ESD sensitive. Put them in a safe place until you reinstall them.

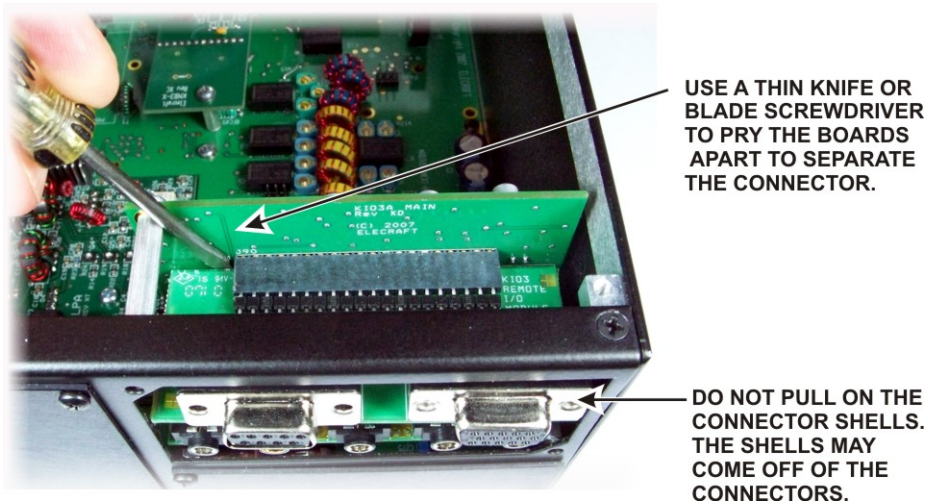


Figure 2. Removing the Remote I/O Board.

Tilt the top of the KIO3 Main board toward the front panel gently so the standoff at the top clears the lip on the rear panel, then use the standoff at the top to lift up on the board while rocking it from side to side to unplug the connector.

Remove the KXV3 board as shown in Figure 3.

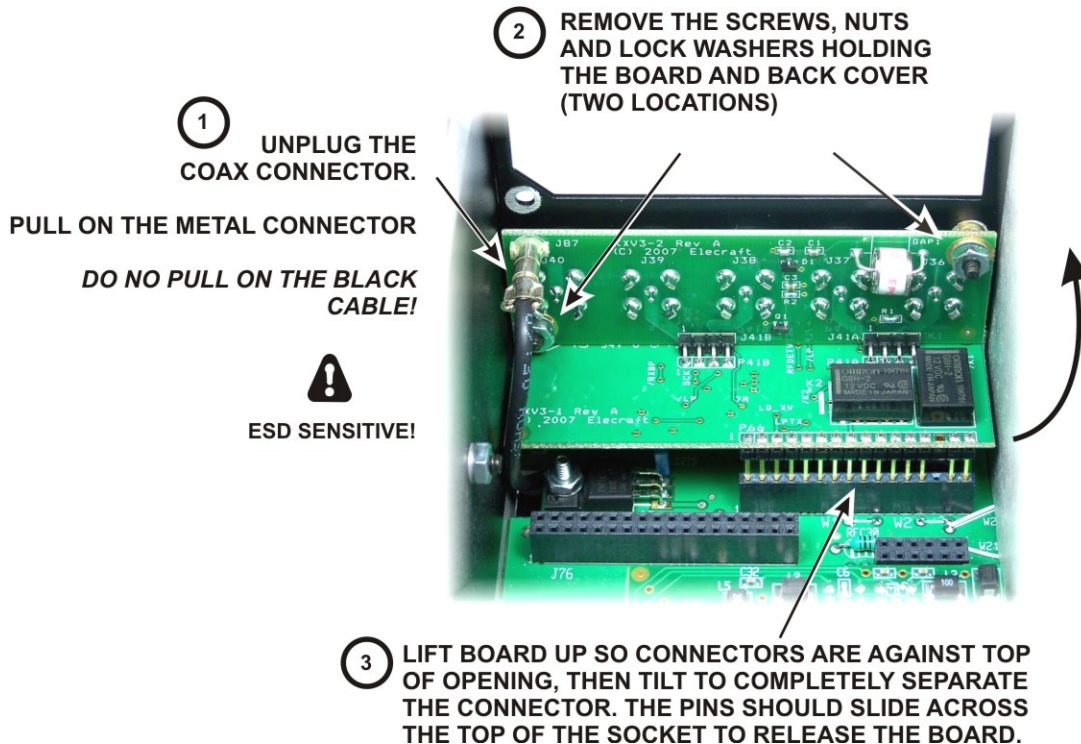


Figure 3. Removing the KXV3 Board.

Install the RXA board on the KXV3 board as shown in Figure 4.

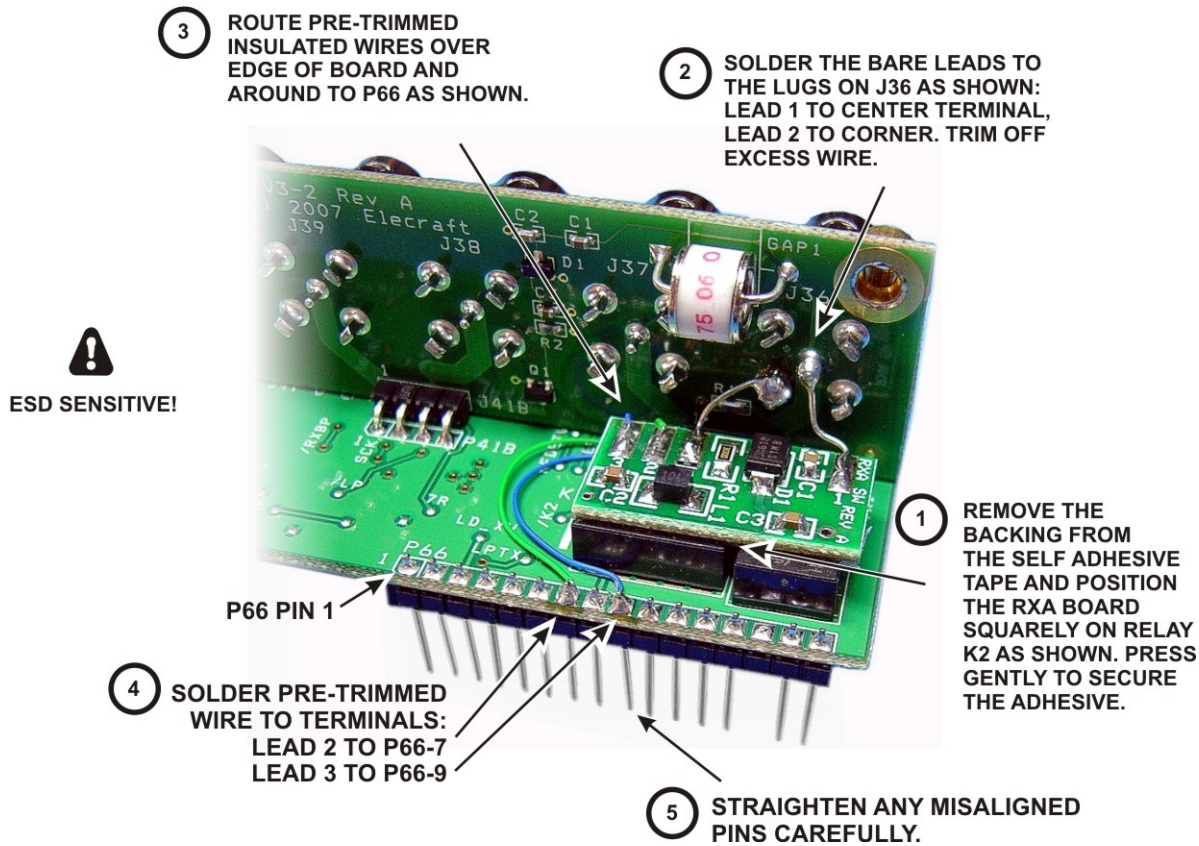


Figure 4. Installing the RXA Board.

Inspect the board carefully to confirm all four leads go to the proper terminals, any excess is trimmed off, there and the RXA board is securely adhered to the top of relay K2. Use a magnifier to ensure there are no solder bridges.

Replace the KXV3 board in your K3 (see Figure 3) as follows:

- Holding the KXV3 board so the BNC connectors against the top of the rear cover opening, carefully slide the pins into the corresponding holes on the connector. Be sure each pin goes into the corresponding socket and no pins are caught out of position alongside the connector. *Hint: Hold the BNC connectors with one hand while using the fingers of your other hand to lift up on the edge of the board and press on the pins to guide them into position in the socket.*
- Carefully inspect the pins to be sure each one has dropped into its respective socket. Note that pin 14 (third from the end) is missing. That is normal.
- Press down on the KXV3 board to mate the connector only far enough to align the screw holes with the holes in the back panel. Remember that a portion of the pins will still be visible when it is in position (See Figure 3).
- Replace the 4-40, 1/2" (13 mm) pan head screws through the KXV3 rear cover, the K3 back panel and the KXV3 pc board and secure them with the inside tooth lock washers and 4-40 nuts you removed earlier. Be sure the rear panel is oriented so the connector labels are right side up.
- Replace the coaxial connector into J87 in the KXV3 board. Note that P66 does not fully engage the connector in the K3 RF board. A portion of the pins are visible above the connector when the board is in the correct position.

☐ Check the KIO3 board and ensure the screws holding the two standoffs are tight. Also check to ensure the connector on the Audio I/O daughter board is fully mated with J91 on the KIO3 Main board (see Figure 5).

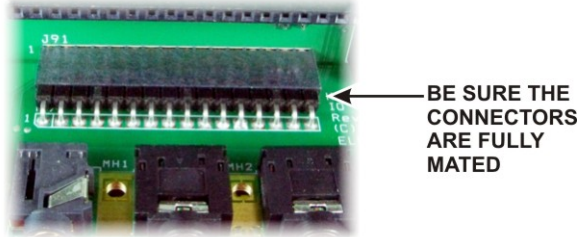


Figure 5. Checking KIO3 Audio I/O Board Mating.

☐ Replace the KIO3 Main Board with the Audio I/O daughter board attached in the K3 as shown in . The Audio I/O board fits just over the KXV3 board assembly and the TMP cable passes through the space between the edge of the KXV3 board and the KIO3 board. Ensure the KIO3 connectors are fully mated so the standoffs line up with the holes in the rear panel.

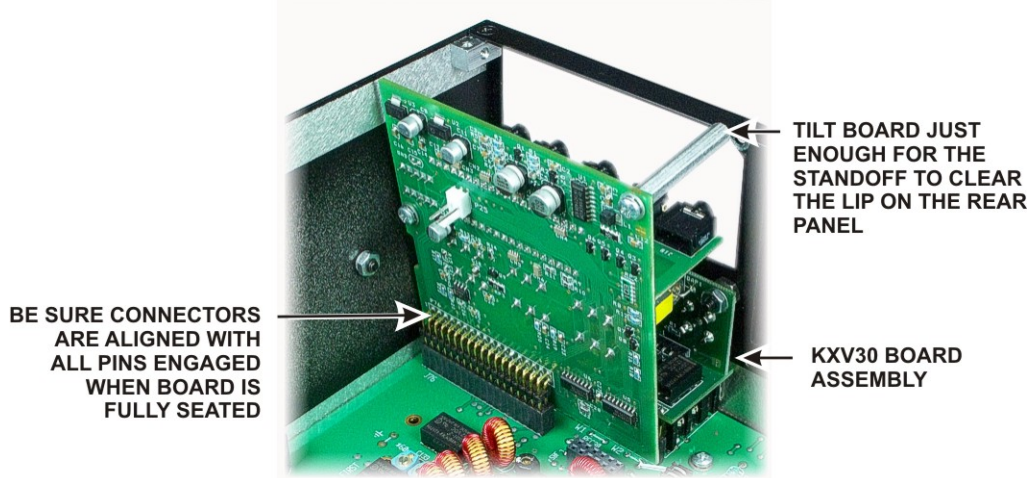


Figure 6. Installing the KIO3 Main Board.

☐ Install the KIO3 Digital I/O daughter board as shown in . Be careful to support the KIO3 main board as shown while pressing the daughter board in place.


ESD SENSITIVE!

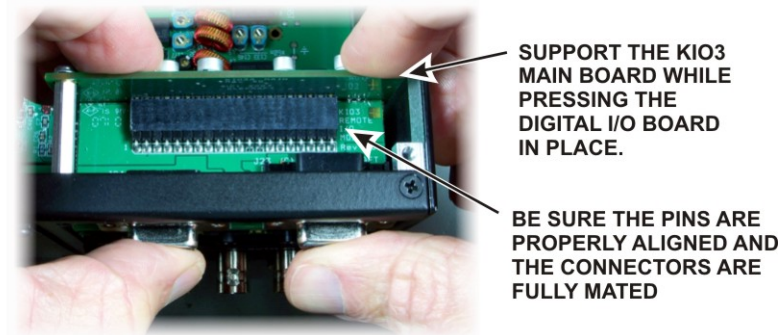


Figure 7. Installing the KIO3 Digital Daughter Board.

Install the KIO3 rear panel as shown in Figure 8. Be sure the audio jacks are aligned in the holes and not trapped behind the panel.

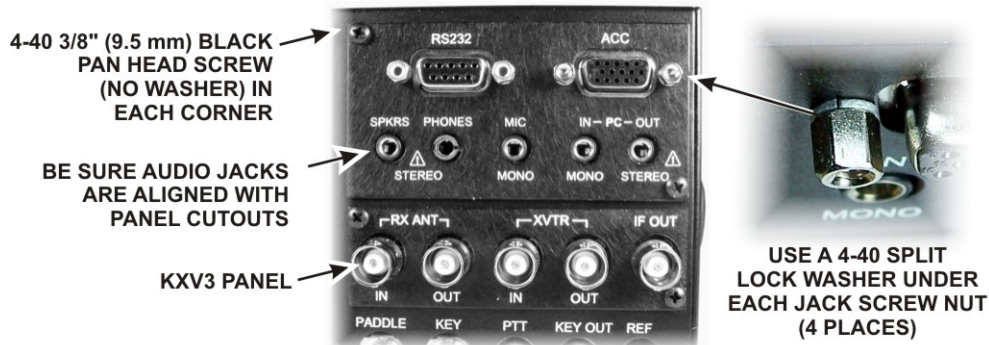


Figure 8. Installing the KIO3 Rear Panel.

Hold the top cover above the K3, route the speaker wire under the stiffener bar and plug it into P25 on the KIO3 board at the left rear of the K3 as shown in Figure 9.

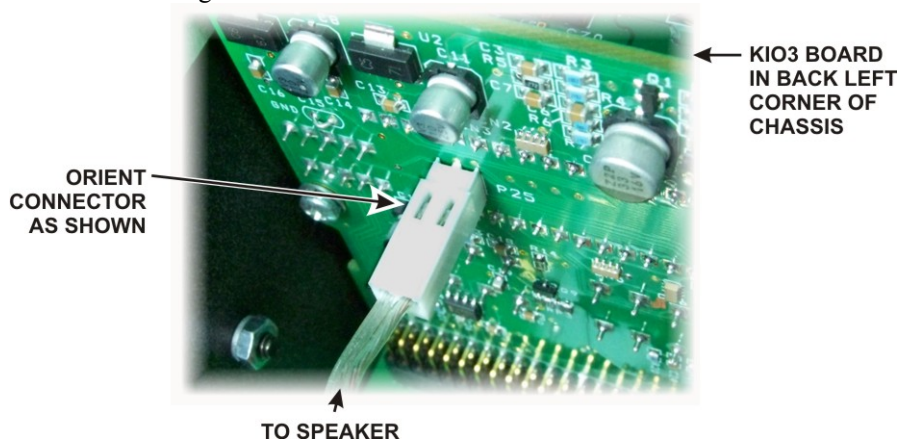


Figure 9. Connecting the Speaker Cable.

Position the top cover on the K3. Note that the tab on the back center goes under the rear lip of the K3 rear panel. Secure the top cover with the nine 4-40 3/16" (4.8 mm) black flat head screws you removed earlier (see Figure 1).

⚠ REPLACE ALL THE SCREWS!

The K3's chassis has excellent rigidity despite its light weight. The screws that hold the top cover in place are an important part of the structural design. Please be sure to replace all the screws and verify they are tight whenever you replace the cover or other panels

That completes the installation of your KXV3 RXA board.