

RFX150 Installation guide

The RFX150 is a replacement final RF amplification stage and low pass filter module for use with 10 meter amateur transceivers. The RFX150 is standard equipment on certain models of amateur transceivers, and it may also be used for repairs and upgrades on most 10 meter amateur transceivers.

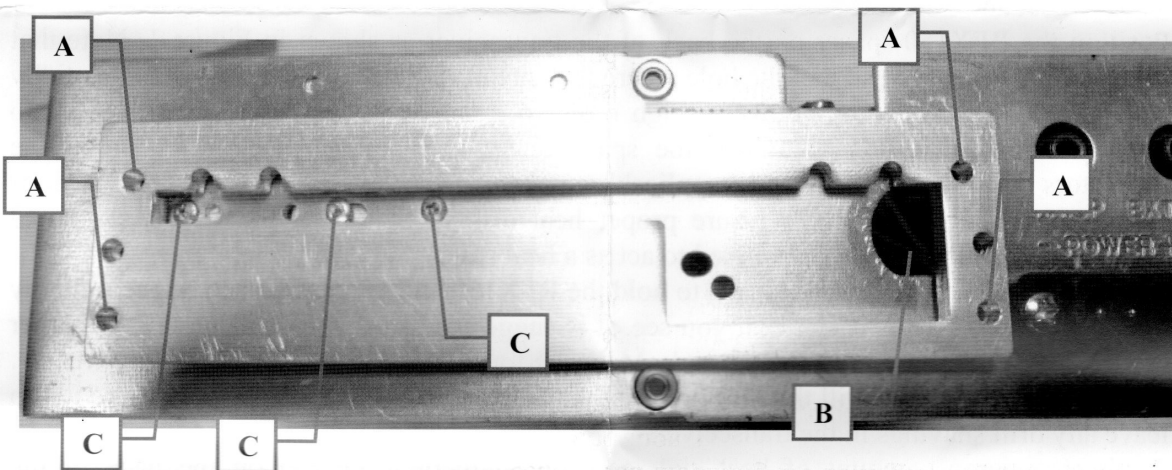
The RFX150 requires a RF input power level between 40 and 45 watts PEP for maximum performance. RF input level less than 40 watts PEP will work, but overall power out levels will be less.

1. Determine that the transceiver receives and transmits properly on all modes and all frequencies before proceeding. Repair any problems prior to installing the RFX150.
2. Remove the transceiver covers.
3. Unsolder and remove the antenna connector from the back of the transceiver.
4. On transceivers with an aluminum heat sink, remove the original heat sink.
 - a. This is usually accomplished by removing the two screws that are located between the fins of the heat sink.
 - b. Some transceiver heat sinks are mounted with the same screws that hold the driver and final transistors in place, inside the transceiver. On this style transceiver you will need to remove the screws from the inside of the transceiver that are holding the transistors. After removing the heat sink, use the three supplied nuts to secure the transistors back into place. **THIS IS REQUIRED.** If the screws are not properly reinstalled the transistors will overheat and fail.
5. Position the RFX150 spacer on the back of the transceiver as shown in Figure 1. Note that the spacer is positioned so that the hole where the antenna connector was removed is partially covered by the spacer, but allows enough room to route the wires from the RFX150 into transceiver. In Figure 1, note how the spacer clears the screws that are mounting the transistors inside the transceiver (if applicable) and that the spacer is flat against the back of the chassis. This is critical to insure proper heat dissipation of the transceiver's internal transistors since the spacer is designed to act as a heat sink.
6. Decide which four holes will be used to hold the RFX150 and spacer in place on the radio by verifying any clearance issues that you see. It is suggested to use the outer most four corner holes that are in the spacer and heat sink. Mark the four holes using the spacer as a template. Remove the spacer and drill the four holes on the rear chassis. **WARNING:** Make sure not to leave any drill shavings in the transceiver.
7. Apply a generous amount of heat sink compound (thermal grease) on the back of the transceiver chassis where the spacer will touch to insure good heat transfer. Position the spacer in place.
8. Route the blue wire and the coax cable through the antenna connector hole.
9. Locate the four threaded mounting rods and cap nuts. Screw the four cap nuts onto one end of each of the four threaded mounting rods. It is highly recommended to use thread lock so that the cap nuts do not come loose.
10. Mount the RFX150 and spacer to the back of the transceiver by passing the assembled threaded mounting rods through the chosen mounting holes in the RFX150, spacer and into

- the transceiver. Use the provided nylock nuts to tighten down the RFX150 assembly to the transceiver. Make sure to not overtighten the nylock nuts.
11. Inside the transceiver, locate the wire that was soldered to the antenna connector that was removed in step 3. Unsolder this wire from the transceiver's circuit board and in its place solder the center conductor of the coax from the RFX150. Solder the shield of the coax to the transceiver's CHASSIS Ground.
 12. Locate the transceivers +8 volt transmit voltage. Solder the Blue wire to this +8 volt transmit voltage source. Optional: If you add a SPST switch in series with the Blue wire you can turn the RFX150 on and off.
 13. Once you have verified that all connections and mounting are done properly apply power to the transceiver and test the unit for proper operation.
 14. Referencing your transceiver's service manual or technical documentation reset the carrier level on AM/FM. With the transceiver's output power set to maximum, adjust the carrier level so that it does not exceed 40 watts. Exceeding 40 watts of carrier for a prolonged period of time can damage the transceiver and installed RFX150.

Figure 1

- A. Preferred holes for mounting RFX150
- B. Antenna connector hole positioned for best wire routing
- C. Screws holding the transceiver's finals and driver



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