

RFX85HD Installation guide

The RFX85HD is a replacement final RF amplification stage and low pass filter module for use with 10 meter amateur transceivers. The RFX85HD is standard equipment on certain models of amateur transceivers, and it may also be used for repairs on most 10 meter amateur transceivers.

The RFX85HD has a maximum RF input power level of 18 watts carrier and 30 watts PEP. RF input levels less than these 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 RFX85HD.
2. Remove the transceiver covers.
3. 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.
4. Using a 1/8 inch drill bit, drill two holes for mounting the RFX85HD, using the RFX85HD heatsink as a template.
NOTE: Most 10 meter amateur transceivers with a stock heatsink have holes that will line up with the RFX85HD mounting holes.
5. In the rear panel of the transceiver, drill a 3/8 inch to 1/2 inch diameter hole between the two 1/8 inch holes that were drilled in step 4. Make sure that this hole does not interfere with the transceiver finals and driver transistors.

WARNING: After drilling, make sure that no drill shavings and debris is in the transceiver.

6. On the RFX85HD, disassemble the fuse holder on the positive (red) power lead so it will fit through the hole drilled in step 5. Open the fuse holder and carefully remove the glass fuse and wire from the plastic fuse holder.
7. Route the RFX85HD wires and coax cables through the large hole drilled in step 5.
8. Reassemble the fuse holder assembly on the inside of the transceiver.
9. Using the supplied 40mm long machine screws and nylon-insert nuts, bolt the RFX85HD to the transceiver.
 - a. Insert the 40mm machine screws through the holes in the back of the RFX85HD (between the heatsink fins).
 - b. Line up the screws with the 1/8 inch holes drilled in step 4, and hold the RFX85HD to the transceiver.
 - c. On the inside of the transceiver, use the nylon-insert nuts to secure the RFX85HD.
10. Inside the transceiver, locate the wire that is soldered to the transceiver's antenna connector. Unsolder this wire from the transceiver's circuit board and in its place solder the center conductor of the Yellow coax (INPUT) from the RFX85HD. Solder the shield of the coax to the transceiver's CHASSIS Ground.
11. Unsolder the wire from the transceiver's antenna connector and in its place solder the center conductor of the Red coax (OUTPUT) from the RFX85HD. 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 RFX85HD 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 18 watts. Exceeding 18 watts of carrier for a prolonged period of time can damage the transceiver and installed RFX85HD.

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