

**99-7510 / 95-7510**

We receive frequent customer calls about early model (2004-2008) RX8's with problems relating to the A/C temperature control. The complaint ranges from no heat, no cooling, to erratic temperature control. Users often relate the issue to the installation of the 99-7510 installation kit and its variants.

In actuality, the problem stems from a very common issue with the OEM A/C control module. The solder joints connecting the rotary encoder (knob) to the circuit board were soldered poorly from the factory. Time, vibration, heat cycles and use can cause the connections between the knob and board to develop hairline cracks that prevent the control from properly communicating to the A/C blend motor. This is known as cold solder joints. Due to the frequently intermittent nature of the problem, it may seem that the process of swapping between factory and aftermarket radios affects the problem, but it is very common for vehicles with the factory radio still installed to develop the same symptom. The install kit is not related to the problem at all.

One solution to the issue would be to replace the control module with a new part, but even if one could be sourced, the replacement part (FE01-61-190) is expensive at \$350 retail. Used parts are not a good option as the problem is so widespread that the replacement part will likely have the same issue. We sourced a used part for this tech tip, and it had the problem even though it was sold as a good replacement part.

There are many reasons why heat or A/C might not work in a 20 year old vehicle, so this is not necessarily a fix for every vehicle. To diagnose whether this repair is likely to work, there is a simple test. On the OE radio, Press and hold the Power On/Off button and then press and hold the Scan-Up button for one second while continuing to hold the power button. The word "A/C Temp" should appear on the left side of the display, and a number from 0-16 on the right. "0" represents full cold, "16" represents full hot. The number should move evenly in increments of 1 as you turn the temperature knob left and right. If it jumps or is erratic, or does not move at all, the following repair should solve the issue. If the numbers scroll smoothly, the problem is likely elsewhere in the vehicle or the control.

## The Repair

**Step 1)** Remove the control module from the Dash bezel by unplugging the two 14 pin white connectors connecting it to the bezel, and the 12pin white and the 6 pin fan speed connectors connecting it to the vehicle harness. Use a pick or small screwdriver to depress the locking tabs on the connectors if necessary. Next, remove the 4, #2 Philips screws that attach the bezel to the module.



**Step 2)** Remove both control knobs by pulling outwards firmly



**Step 3)** Remove right and left knob bezel/trims by depressing the 3 locking tabs on each with a small pick Or screwdriver and lifting the trim



## The Repair

**Step 4)** Remove the lighting lens from each side. They are attached by a sticky tape and might require a gentle twisting to release.



**Step 5)** Remove the center button assembly by removing 4 #1 Philips screws.



**Step 6)** Remove the printed circuit board from the module housing by gently prying on the locking tabs on each side with a small flat blade screwdriver. It may require gently flexing the circuit board for clearance.



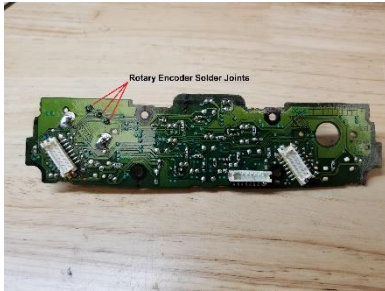
Once released, the board can be extracted by unplugging the harnesses from the circuit board or fishing them through the housing.





## The Repair

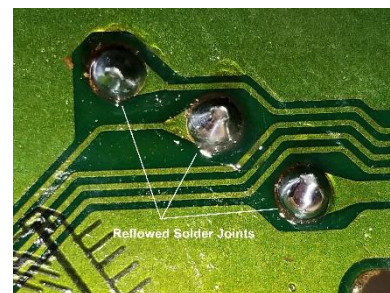
**Step 7)** Locate the 3 solder joints connecting the rotary encoder to the circuit board and examine them for integrity. They will probably look dull and may show evidence of cracks or breaks. This is the cause of the control issue and what needs to be resoldered.



**Step 8)** The best practice is to remove the old solder using a vacuum extraction device (Solder Sucker) or solder wick before resoldering, but it is possible to add new solder and flux to reflow the joint. It is important to use a high-quality electronic solder with a rosin core and a flux designed for electronic soldering. Solders designed for other purposes like plumbing may have corrosive flux or an alloy that requires more heat than the circuit board and components can withstand. A soldering iron around 30W with a fine tip and temperature control should be used to control the heat applied.



To make the repair, the joint should be heated with the iron, and fresh solder flowed in. When properly executed, the joint should look smooth and shiny, with the solder blended into the board. It should not look like a ball on top of the connection.



### The Repair

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While these three connection points are the most common failure point, it would be a good idea to look at the entire board under magnification and inspect for any other bad joints.

If you do not possess the tools or skill to make delicate electronic repairs, your local stereo retailer or TV/Phone repair center can probably affect the repair inexpensively at this point.

**Step 9)** Once the repair is made reassembly is the reverse of disassembly. Be sure to lock the circuit board into its tabs and route the harnesses back under their retention clips. The lenses fit only on their designated sides. Be careful to rotate them so they line up to the LEDs underneath.

A YouTube video of the complete repair process can be found at:

<https://www.youtube.com/watch?v=N71aUPOXZX4>

[2004-2008 RX8 A/C Control Repair \(youtube.com\)](#)