

Yaesu Quadra VL-1000 Amplifier

How to replace resistors R2A, R2B and R2C -- 5.6 Ohm 5 W ceramic Yaesu part number J31379004 -- located on power supply board 1. These resistors act as a fuse to protect from surges when turning on the power supply.

General. The Technical Supplement, Yaesu part number E08979100, is not necessary, but it will help you locate the resistors. You will need two Phillips screwdrivers, one small and one medium, and a small flat blade screwdriver. You will need soldering equipment suitable for printed circuit board work. I found a flashlight was useful. Have a small book or a 6 x 6 x 1/2 inch piece of wood to support the power supply unit up off the bench surface. I recommend putting the screws from each step in a separate pile or container and identified with the step. Keep the piles in order to facilitate reassembly.

This is the sequence of disassembly: remove top cover, remove front panel and side rails as a unit, invert the power supply and remove the bottom cover, open up the power supply unit like a clam shell, remove the circuit board. Reverse the process to reassemble.

I used these steps to make the repair. There may be an easier way, but this one worked for me. I am not responsible for any errors or damage that may result from you following my instructions, so proceed at your own risk.

1. Remove the top cover, 7 black screws. Slide it to the rear until clear of the front panel and then lift off. You may need to pull the side edges outward slightly.
2. Put a sticker on the power supply unit on the top right front corner to assist with orientation later.
3. Unplug Remote 2 cable, left side, 2 wires. The release tab is on the bottom side.
4. Unplug Control Cable, right side, 7 wires. The release tab is on the bottom side. The blank pin is at the top front.
5. Unscrew Red and Black output wires from the terminal strip on the right side. Put aside 4 silver screws, washers and lock washers. Leave the wires connected to the power supply unit for now. The Red wires go to the front 2 terminals, the Black wires go to the 2 rear terminals.
6. Remove 2 black screws from the left and right sides at the rear of the bottom cover. These screws hold the side rails.
7. Remove 4 silver screws from the back panel that are holding the rear panel to the side rails.
8. Push the Control and Output connectors inside the case by pushing or squeezing the release tabs on the side of the connectors. There are orientation tabs at the top of each connector. Control connector has 4 white wires on top. Output connector has yellow wire on top front.
9. Remove 2 silver screws from the bottom edge of the front panel that are holding the front panel to the bottom cover.

10. Remove 2 black screws at the left and right front sides of the bottom cover. The front panel and side rails are now a unit that can be removed.
11. Pull the front panel and side rails slightly forward then remove them by lifting up. Use caution to not damage the components on the filter boards attached to the side rail. Set this assembly aside.
12. Turn the power supply upside down and support the power supply unit on a book or piece of wood so that the bottom cover is free from the work surface.
13. Remove 9 black screws and washers holding the bottom cover to the power supply unit.
14. Remove 2 silver screws holding the two AC line power wires from the terminal strip on the power supply. Lift up the bottom cover slightly for access to the screws.
15. Remove 1 silver screw holding the power cord ground wire to the power supply. Lift off the bottom cover and set aside.
16. Remove 8 silver screws holding the fan grills and fans. Unplug the two fan cables. Set the fans aside. The Red wires are toward the right side where the Control connector is located. The fan cables are at the bottom right corner of the opening when you replace the fans. When reassembling, plug-in both fan cables before mounting the fans and make sure there are no wires that can come in contact with the fan blades.
17. Remove 1 silver screw holding the Black wire on the COM terminal on the strip on the right side. Remove 1 silver screw holding the Red wire on the +48 terminal.
18. Remove 5 silver screws and washers holding the small air duct/cover on the right side.
19. Unplug cable at CN28 in the rear opening. Brown wire goes to the left.
20. Remove 12 silver screws and 1 silver ground screw with star washer holding the rear fan mounting bracket and remove the bracket. The fan bracket is not symmetrical. Note the position of the grounding screw hole when reassembling.
21. Remove 3 silver screws on the bottom edge of the heat sink cover on the left side.
22. Remove 3 screws on the top edge of the heat sink cover. Remove the heat sink cover.
23. Remove 8 silver screws holding the front vent cover. Remove 2 silver screws located inside the heat sink fins holding the front vent cover. Remove the front vent cover. Note that the front vent cover is not symmetrical so make an ink mark for reference for reassembly.
24. Remove 4 silver screws in the 3rd fin from the bottom in the heat sink.
25. Remove 2 silver screws above the AC terminal strip that are in line with the screws removed from the heat sink in the previous step.
26. Put the power supply unit on the front end to stand it up sideways.

27. Remove 4 silver screws on the right side top edge to release the top assembly.
28. Carefully separate the two halves a few inches, making sure to not break the 2 cables holding them together.
29. Remove 1 silver screw holding the thermal sensor to the chassis. The cable has 2 Blue wires. Replace the screw in the hold for safe keeping.
30. Remove 2 silver screws on the terminals of the 385 volt cable. Blue wires are (+), Black wires are (-). Replace the screws for safe keeping.
31. You now have the power supply unit in two halves. When reassembling, put them on edge to allow the interconnecting cables to be connected.
32. Remove 6 screws holding Q7A, Q8A, Q9A, Q10A and D9, D10 with brackets and a rubber cover. Keep the screws and brackets together. This is the half that contains resistors R2A, R2B and R2C.
33. Remove 11 silver flat head screws holding the power supply circuit board to the chassis. Remove the screws on the outside of the chassis, not the screws on the circuit board side.
34. Loosen the 2 silver screws holding the brackets on D4A and D5A by putting the screwdriver in the round access holes in the edge of the heat sink/cover.
35. Remove 2 silver screws from the bottom of the circuit board holding the heat sink/cover. Put the 2 screws back in the heat sink/cover for safe keeping.
36. Remove cable from CN2A. Brown wire is closest to the relay in black plastic case.
37. Test R2A, R2B and R2C with an ohmmeter to identify open resistors. Replace the failed resistor(s) and test again for continuity through the series of all three resistors.
38. Reassemble by reversing these steps.