

RX-7 Clock/Warning Light Cluster Repair/Replacement

Symptoms:

- Clock resets itself to 1:00
- Clock flickers between bright and dim settings
- Clock does not work at all
- Warning lights flicker occasionally

Note: If **all** of your warning lights come on (while the car is running), this is often a sign of a weak or dead alternator. This is a separate problem, and not something that this procedure can address.

Note 2: If your parking brake light stays on, or your seatbelt light flickers, this is again a separate problem. The parking brake light is normally caused by a misaligned or broken parking brake switch, near the parking brake lever. The Seatbelt light is generally a cold solder joint in the CPU (in the driver's side kickpanel area, not to be confused with the ECU, which is in the passenger's side kickpanel area).

Solution: Resolder 'cold' solder joints within modules/replace parts

Tools Necessary:

- Phillips Screwdriver
- Tiny (jeweler's) flathead screwdriver
- Soldering iron w/ good electrical-grade solder (and flux)
- Flathead screwdriver or thin prying device

The following items are optional, depending on whether or not you want to actually replace the solder on the board

- Solder-sucking device
- Desoldering braid

Background:

Many cars develop this problem with age. For some reason, the electronic components in the early second generation cars leave much to be desired.

My car developed these symptoms slowly. When I first bought the car, the clock had an annoying habit of flickering between the normal (bright) and night-time (dim) settings whenever it pleased. This had the unfortunate side effect of drawing my eye towards it all the time.

I fixed this problem with the procedure below, but did not actually replace the solder, I just melted the existing solder until it was smooth and shiny, and then

put the module back. This worked fine for about 3 years, but a new problem arose. In this case, the clock would reset itself to 1:00 randomly. The weather during this period was very hot, so this may have hastened the failure of the new solder points.

This is a pretty easy job, if you are handy with a soldering iron.

Step 1: Expose module

Insert something thin and flat underneath the rear of the 'tray' in front of the warning light cluster, prying up **gently** (rear, in this case, means towards the rear of the car). Be very careful, as this piece of plastic tends to take on the consistency of a potato chip, given the heat and cold extremes it is exposed to. The interior of my car is maroon, but this thing has faded to this bizarre olive-green/maroon splotchy thing, no doubt due to the heat cyclings over the last decade or so.

When the edge of the surround pops upwards, gently pull it back towards the rear of the car. This should expose the module itself.

Step 2: Remove module

One screw on each side holds the module in the car. Removing these two screws will loosen the module.

Carefully pull the little stem which adjusts the time back towards the rear of the car. This should loosen the device enough so that it slides forward slightly. Grasping the sides of the module should allow you to slide it forward enough to expose the connector in the back.

Disconnect the connector. You must press down on the little tab at the top of the connector in order to slide it free of the module. At this point, the module should be free, and you can move it to your workshop.

Step 3: Dissassemble module

Three gold screws in the back of the module hold it together. There's one on each end, and one in the middle. (The one in the middle's longer than the ones on the ends of the module.) You must also remove the tiny screw in the middle of the clock-adjustment stalk, and remove the knob at the end. (Be careful with these, as they're pretty small).

When you unscrew all four of these screws, the module should come apart into two pieces, the faceplate, and the actual guts. The guts of the module will stick with the 'back part' of the module, the part with the wiring harness connector.

Now, gently pivot the first PCB away from the back PCB. The two boards are wired together with several ribbon connectors. These are soldered in, so be careful not to stress the connections too much.

Step 4: Resolder joints

The joints which most often fail are the ones which hold the large wiring harness connector into the PCB. A brief inspection of the disassembled module should be very helpful in spotting which these are. Using good soldering techniques, you can either just melt the existing solder, or you can remove the old solder and put new solder on. I'd recommend the latter, although the former technique worked on my car for about 3-4 years. It failed, though, prompting me to have to do the procedure again.

Step 5: Assembly is the reverse of removal

Don't you hate when they say that? Just be careful with the crunchy plastic parts as you put it back together, and don't forget to put the little tiny knob at the end of the clock adjustment stalk.

Contents from: <http://www.lemmings.com/mark/rx7clock.htm>