

RX7 Convertible Headrest Speaker Replacement: I Did It My Way

By jackhild59

This is my method of Headrest Speaker replacement. You have to remove the cover. Retrieve the zipper pull from one side of the headrest and unzip it.



When you get the cover partly pulled back, you must cut the hog rings that hold the front cover in place. You will need some quality side-cutting pliers to cut the hog rings. Now, using lots of hand strength, you must pull the cover up and over the sides. If the leather is tough and brittle, it may tear. If it feels hard, soften it with repeated applications of leather treatment. I find the very best treatment is Leatherique. www.leatherique.com
Now remove the entire cover.

Split the headrest foam along the seam. One of mine came loose easily, the other I had to cut with a long sharp knife.



Remove the speaker boxes, take them apart and remove the speaker wires from the boxes.



Discard the boxes, the speakers and the screws. You don't need them anymore.

Replace the headrest foam on the headrest metal and glue it back together with Contact Cement. The wrong glue will melt the foam; other glues will not stick. Be careful to thread the wires up and out the front of the speaker cavities before gluing. Cut one side of the black foam that covers over the speaker faceplate so you can fold it back for access



After the glue has dried, wire each replacement speaker, keeping a record of the polarity. The polarity must be maintained not only within each headrest, but from headrest to headrest or your sound will suffer. I used 3-1/2" Blaupunkt coaxials.



Press the speaker into the cavity until the magnet adheres to the steel frame of the headrest. The magnet will hold it nicely in place along with the cradle of the foam. It won't move or rattle.

From this:



To this:



Don't be worried that the speaker is not in a box or an enclosure. Most automobile speakers (subwoofers excluded) are designed as 'Infinite Baffle' type speakers. That means that they do not need a box to control the speaker excursion. The only thing that is critical is for the sound from the front to be divided from the sound produced by the back of the cone. This mounting method substantially accomplishes this necessity, because the front of the cone will be sealed and pressed against the black foam and then the leather front of the cover.

If you want to be totally sure, you could use some scrap foam or weatherstripping foam to close off any gaps around the speaker basket. It shouldn't make a difference in these frequency ranges.

Carefully position the foam around the speaker and place the black speaker face foam over the front of your new speaker.



Replace the leather cover; reattach the hog rings as they originally were located. Finish by pulling the bottom of the cover together and zip up the zipper, tucking the zipper pull in at the end of the zipper run.

Plug in the connector, replace the headrest and enjoy!

The above methodology is exactly that used by the Miata crowd. There are several speaker suppliers that produce speakers specifically for the Miata headrest. None of them will endorse using their speaker in the RX7 Headrest, but they will all work. There is a lot of discussion and disagreement within the Miata community about which speaker is best or if it better to use a standard coaxial 3-1/2" speaker. I used 3-1/2" Blaupunkt coaxial because of the high-efficiency and excellent sound of the speaker. That and all of the other speakers in my car are Blaupunkt.

One issue with non-stock head units: If you use a pair of 4 ohm speakers as described above and you wire the headrest speakers to use the rear channel of the aftermarket head unit, you will present the head unit with a 2 ohm load. Most head units cannot withstand this and may distort, overheat and fail. One solution is to wire the headrest speakers in parallel. This will present the head unit with an 8 ohm load. Nothing will fail, but the sound volume will be quite low and you won't be able to hear them over the wind. The best solution is to use an external amp that has 4 channels or use one can handle the 2 ohm load. You don't need a lot of power. This is seems like overkill, but it is the best solution. The stock system in the RX7 is designed for a 4 ohm speaker and thus you avoid the problem altogether.

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