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vwW12

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DIY: How to repair an RN S2 DVD (a.k.a. MFD2)

My NAR 2006 RN S2 DVD, part #7L6 035 191 Q, had 3 scratches:

- 1. The button you can press to accept the liability disclaimer (damn ambulance chaser lawyers)
- 2. The RADIO button
- 3. A nearly imperceptible scratch on the music symbol button

VW in the U.S. will not repair, only sell replacement. I sought repair of mine at a British place which offers Blaupunkt repairs. They even list #7L6 035 191 Q on their website, for instance. But they informed me Blaupunkt in reality does not sell them any parts. For a "core" fee of only £1250 + the shipping costs two ways, Blaupunkt would offer me a replacement unit, remanufactured, I believe.

So I purchased on eBay a used, made in July 2007, RNS2 DVD, with code provided. The unit was evidently a European version, as it was a 7L6 035 191 S, and instead of a RADIO button it featured a BAND button (function is the exact same, only the label changes).

The idea was to remove the buttons from the eBay unit and replace mine.

To remove the radio, get the VW radio removal tools. I got mine for 5.35, shipping included, from this guy. He calls them «VW RADIO REMOVAL TOOL RRK132»

eBay My World - uneeksupply

Turn on the radio, and eject any disc you may have inside. Turn car off and remove key from starter, or equivalent if you have keyless start.

Put a towel on top of your gear shifter before removing the radio. Insert 4 radio removal tools and be sure and not scratch the seat heating/P/Hazard/Airbag row of buttons above the HVAC controls as you pull out the RNS2 and unplug the wire looms.

There are 5 wire looms that plug into the back of the RNS2. All 5 have some sort of lock or tab. All slide out very, very easily and with little force, once you identify the tab or lock you are supposed to push, pull, or pinch. If you find yourself pulling any of these too hard, you are doing something wrong and you could cause serious damage by ripping cables. Be sure to have plenty of light and a lamp, and preferably a second pair of eyes to identify the tabs.

There are two round FAKRA antenna plugs in back of the RNS2, passenger side. The push tabs face down when the RNS2 is installed. The big standard DIN plug on the driver side also has a tab facing down, but you must pinch its two halves

simultaneously (typically with thumb and forefinger). As it swings open, it will push itself out. The final two connectors are not too different from the above three.

Once the RNS2 is free, carefully wrap it in another towel or similar, and take to a well illuminated desk or workbench. Remove radio removal keys, and store them. You are now holding a \$2,000 to \$4,000 computer whose front scratches very easily. Put something soft between it and the desk as you work on it. Discharge yourself from static electricity before you mess with it. You will require three Torx drivers: a 20 and two others: a 4 and a 6, or was it a 6 and an 8? Just have a range from 4 to 10, and the 20, and you are covered.

Remove the top horizontal cover. It is held by pressure. Just insert a flat screwdriver around the crude slots it is inserted in on the three non-front sides. Once the back and sides are free, it will slide backwards revealing a couple of horizontal tabs inserted towards the front of the unit.

Once you remove it, you will see the DVD drive laying right on top of everything else. For this project, we will not mess with it. It is delicate.

The next step may be unnecessary and I do not like it. Turn the RN S2 upside down. Remove the bottom horizontal cover by removing three torx screws from the bottom cover, screwing down towards the top of the unit when properly installed. The cover will slide backwards revealing a couple of horizontal tabs inserted towards the front of the unit. I don't like this step because it leaves exposed the bottom of the motherboard with all its hundreds of solder points. Treat with enormous care.



Now the fun begins. On the sides of the RN S2, you will see 4 large #20 torx screws (2 on driver's side, 2 on pass). Unscrew them. These screws screw into 4 sort of ledges, leaves or tabs coming from the front of the unit. Insert a flat screwdriver between such tabs and the main body of the RN S2, so as to "open" them or reduce the amount of pressure between them

and the main body. Don't over do it, but loosen such pressure a bit.



Now pull the front of the radio containing the screen, user buttons, and first half-inch of metal or so to separate it from the cube with the innards! At first you may feel the top of the radio wants to yield but not the bottom. You have to pull evenly. The reason the bottom does not want to yield is that there are six computer contact connectors from the middle of the radio towards the bottom; so after you removed the big #20 torx, what holds the front is the pressure of the 4 tabs where the #20 torx go + the pressure of the 6 computer connectors.

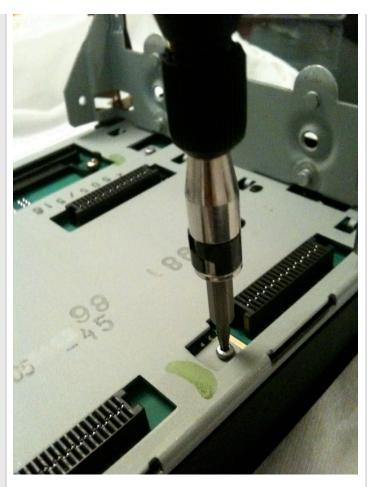


Just pull, there is nothing to break if you pull evenly and all at the same time. You may want to have someone help you.



Once you separate the fascia from the main unit, put aside the main unit.

Put the fascia facing down towards the desk. You still have it on the soft cloth or towel... you don't want to scratch fascia, buttons or screen. On the new "top" (i.e., actual rear of the fascia) you will find 6 small silver or blackened torx. DO NOT TOUCH THE GOLD TORX! 4 are inboard in the area right behind the screen and 2 are outboard.



Afterwards you will have 3 separate components:
No. 1 the black plastic fascia, including most buttons;
No. 2 the electronics containing the screen, the button backlights and springs and the two rotary knobs;
No. 3 the metal chassis which supports the fascia and is the physical connector where the #20 torx fasten to the main body.

Repair Possibilities

If you exchange part No. 1, for instance, you get all new buttons and new fascia. If you exchange part No. 2, you get all new screen and rotary buttons. **Instant repair!** You might also exchange DVD drives if that part is failing.

In this case, I went a step further. Each button consists of two parts:

- a) The user side, black with unpainted surfaces for the letters or $\ensuremath{\mathsf{symbols}}$
- b) The inside, transparent plastic to transmit the button backlight.

If you insert a small flatblade screwdriver from the inside of the fascia, between a) and b), they unclip. a) slides outfront, b) slides out towards the back. You can then replace a)'s and the replacement buttons just click back in place with their transparent b) correspondents.



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(the "accept" button) might be replaceable with its mirrorlooking twin, the top-most soft menu button on the drivers side. No cigar. In an absolute pinch you could, but the latter button is slightly shallower, so it would work, but the button would show almost depressed when compared to the rest of the column of soft buttons. So each of the two columns of soft menu buttons is unique.

Whereas most larger buttons will happily unclip and clip several to many times, the small buttons will break every time: in my case, I tried with the MUSIC icon and the BACK buttons. Once you unclip black button from transparent back, their tiny clip is broken. Solution, a drop of crazy glue gel in between the black and transparent components. Just make sure the crazy glue does not get anywhere else but the sandwich black/transparent.

More Repair Possibilities

By disasembling Part No. 2 (see above), potentially you could exchange the screen component alone. I did not go into that. The more you disassemble, the more risk of damaging something delicate.

To reinstall:

Reassemble (this took me 5 mins or less the second time!) I. Screw again the 6 small torx to fasten the black button fascia together with its green board+screen and its fascia chassis II. Join full fascia assembly with electronics cube, screw back the 4 large #20 torx

III. Affix bottom cover back in place via front tabs + midsize

IV. Affix top cover via front tabs + crude clips on vertical walls of cube

Plug back in the 5 wire harnesses. Push all wires out of way of RN S2, including the A/C wiring. (This is important —the factory on mine had left an a/c loom pinched between radio and a stabilization pole in the back, and some of the wires looked bent and deformed). Push radio back in place on dash (radio removal keys are unnecessary). It will click. Test for functionality.

I tested both reassembled units on my T. Both worked perfectly, I managed to damage neither!

The eBay unit, tested, fully functional and working, with security code, and boxed in VW OEM package, will go up for sale soon in the classifieds. It has a couple additional cosmetic blemishes I will describe, aside from my 3 scratched buttons, and it lived on at least two cars before coming to me, so it's been around, but it was made in mid 2007, (my T's was made in 2005), and it worked perfectly on my 2006 T. They both have the same v.47 software for NAR. Here's how it looks now with my scratched buttons:

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