RNS-510 Retrofit in a ’10 Passat CC
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This procedure illustrates how to swap an RCD-510 in dash 6-CD changer touch screen AM/FM/SAT in car entertainment system with an RNS-510 in-dash DVD/CD touch screen GPS navigation in car entertainment system. This swap was done on a 2010 Volkswagen CC Sport. Other applications may use similar steps.

Tools needed:

t-20 torx driver
two sided tape
pair of scissors
Towel to cover your console
Small flashlight--a little light is always nice

Step 1:

Cover your console/shifter with a thick towel to prevent anything from being scratched. Remove the key and make sure everything is off. Start by removing the trim around the head-unit. On the CC/Passat pull on one of the bottom corners to get it started then work your way around the trim. There are two clips on the bottom, two at the top, and one on each side. Be careful, the trim can crack if you use too much force. Take your time.

Step 2:

Unplug the passenger airbag indicator from the trim. Squeeze the sides of the plug and it comes off easily. Set the trim out of the way. **Very important, do not turn the car on while the airbag light is unplugged or you will get a warning on the dash**.

Step 3:

Using the torx driver, remove the four torx screws from the RCD. Do not lose them, you will need them to install the RNS.

Step 4:

Pull the RCD straight out. There is plenty of slack in the cables to get the unit out. Once out, unplug the connectors. The antenna plugs are small Fakras and have a white release on the side. Squeeze the release and they will slide off with a click. The large plug is called a quadralock and you will need to swing the locking lever up to unlock the plug. It takes more effort than you think, but be patient. It will unlock. In the picture below, the RCD is the top unit. Note the plugs are the same on both unit and are color coded. The blue plug on the RNS is for the GPS antenna.

Step 5:

Pull out your GPS antenna. There is a cavity above the area where the head unit lives that is the perfect size for the antenna. Reach above the plastic chassis the head unit slides into and you will find the area I am talking about. Cut a small piece of two-sided tape and stick the antenna in place. Plug the other end into the blue plug on the back of the RNS.

Step 6:

Plug in the antenna cables and the quadralock plug. Tuck the wires behind the unit and slide it into place. Make sure the mounting holes line up too. Tighten the t-20s back into place. Press the power knob and see if the unit powers up. Assuming it does, turn it back off for now.

Step 7:

The RNS does not need the onboard positioning sensor. You will deactivate it using VCDS later, but it also must be unplugged. Go to the trunk and open it up. Move all your stuff, tools, towels, dead hookers, etc. out of the cubby box on the right-hand side (passenger side for North America). There is an access panel behind the tail-light. Remove the cover, it is hinged on the outboard side but the other

sides can be popped out. There is a small module above the tail-light, you can see it in the picture below, The plug is up and to the right of the module, you cannot see it, but it comes unplugged pretty easily. You will need to squeeze the connector to unlock it. Tuck the plug someplace it will not rattle and close up everything in the trunk.

Step 8:

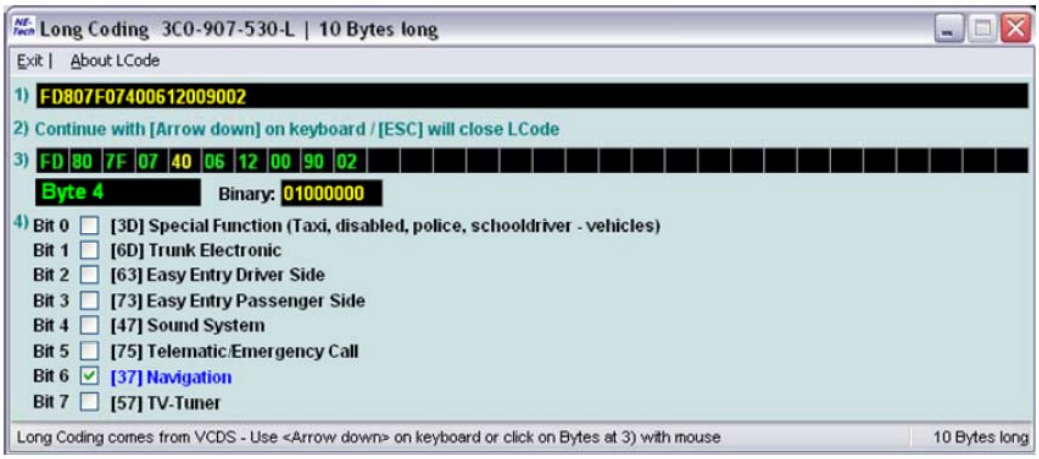
Go back to the dash and plug in the air-bag indicator and reinstall the trim piece by snapping the clips into place. The install is all done now. You can turn on the unit, enter your code and start setting presets. You may not get an accurate GPS fix until you move the car outside.

Step 9:

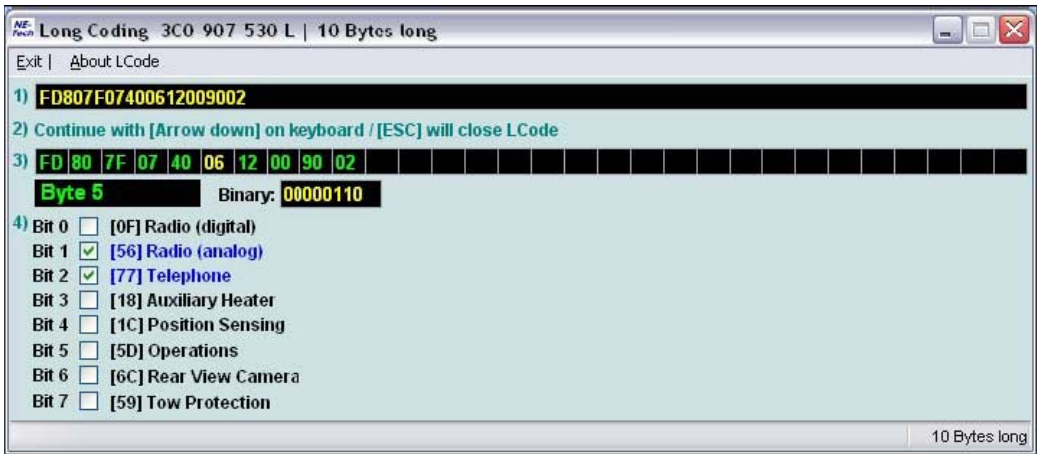
VCDS Coding. You do not have to do this, but your system will not be 100% until you do so. I suggest only Ross-Tech VCDS products. Don't waste your time with cheap eBay junk. If you are not familiar with how VCDS works, find someone who is, otherwise you may really mess things up.

First (and always) run an autoscan and save it. You will get several errors. This process took me a few times to get it all right and I think I have all the steps.

Start in module 19 Can Gateway. Using the long coding helper, activate 57-Navigation.

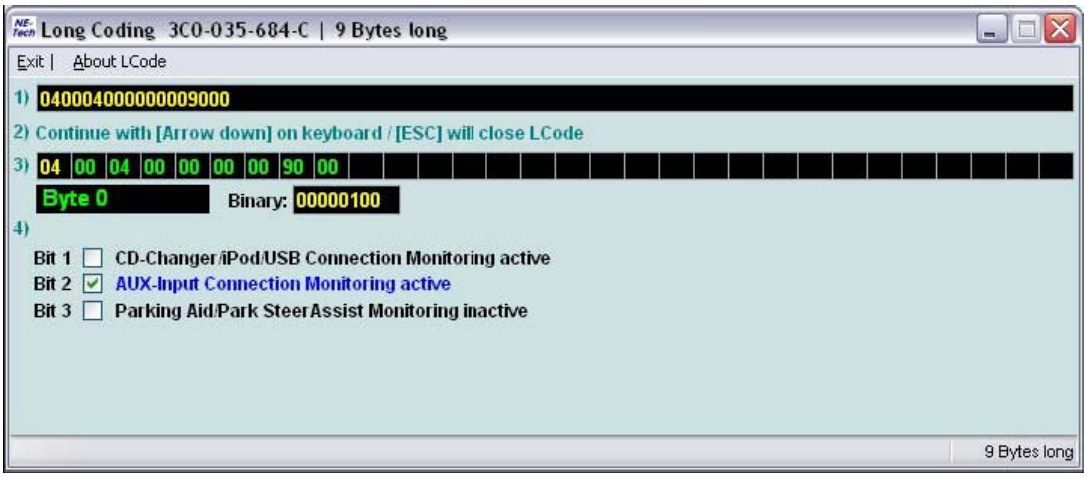


Next deactivate 1C position sensing.

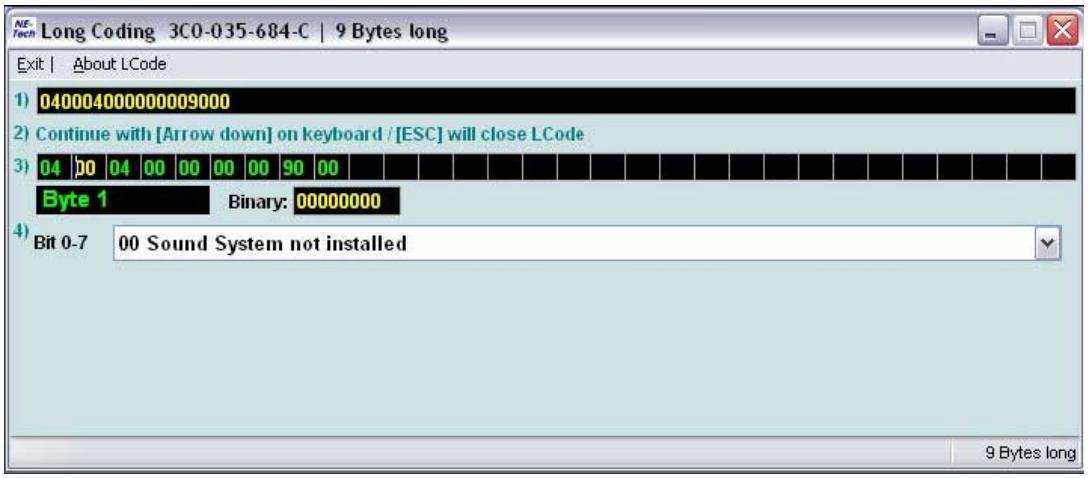


After your coding changes, clear all fault codes.

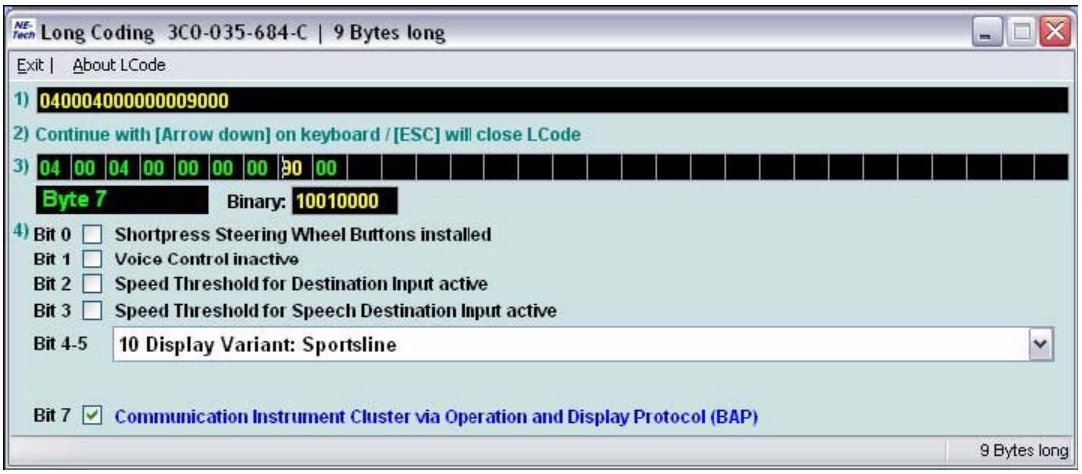
Next, go to 57-Navigation. Check the Aux/In box if you have MDI.



You will need to setup Dynaudio if you have it.



You will need to setup BAP. This displays RNS info on the MFD.



Before you click "Do It!" make sure the workshop code and import code are something other than zeros. You will see these settings on the screen with the before and after long coding. Clear all/any fault codes.

Finally, go to 56-Radio and clear any fault codes. No further changes should be required on this module.

Power on the RNS and push the < and > buttons together with the small button on the top right of the unit. Release the buttons and the unit should reboot. You always need to reboot the RNS after coding changes.

Run another autoscan. You should not have any error codes left.