Updating Audi B8 platform MMI 3G Navigation Database

I thought a guide all in one place would be helpful, since I know I spent a lot of time reading and collating the info needed to carry out navigation database updates.

Pre-requisites:

- That you have installed all applicable firmware updates so your software version is K0257
  - 1st – 8R0906961T – firmware 0031
  - 2nd – 8R0906961AS – firmware 0206
  - 3rd – 8R0906961CC – firmware 0253
  - 4th – 8R0906961DF – firmware 0257
- That you have a high speed 32GB Sandisk SD card (the Extreme range has read speed of 45MB/s) formatted to FAT32, or a 64GB card shrunk down to 32GB
- Download of most recent map database (6.20.4 for Europe at time of writing)
- An activator file or script
- Access to VCDS (not critical but necessary to activate 'green menu' and correct SVM error code)
- Remove all connected media from AMI/SD card slots/bluetooth

Preparation

The map database file is large – it just fits onto a 32GB card and even then requires files to be deleted that are required for the later 3G Plus models with Google maps. When installing new map database it is possible that it will fail because the map database partition on the hard drive is too small to accommodate an additional database. If that's the case, or if you would prefer to start with a fresh install, it is possible to delete the map database partition from the 'green menu'.

Activating the green/hidden menu

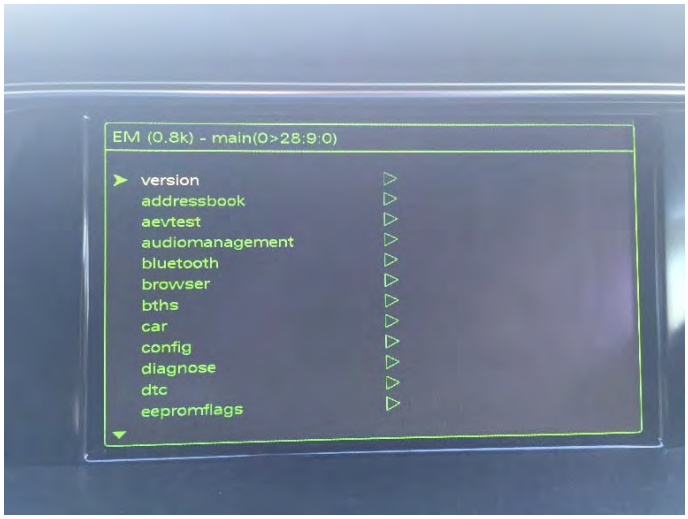
You must have VCDS to do this. Access module 5F (Information Electronics), then select [Adaptation – 10] and enter Channel 6. If the green menu is currently inactive the read value will be 0. Enter 1 in the new value field and click [Done]. If you want to make sure it's been saved go out of the module and back in and read the value from Channel 6 again to confirm it is 1.

Deleting the existing navigation partition (optional unless the install fails due to lack of space)

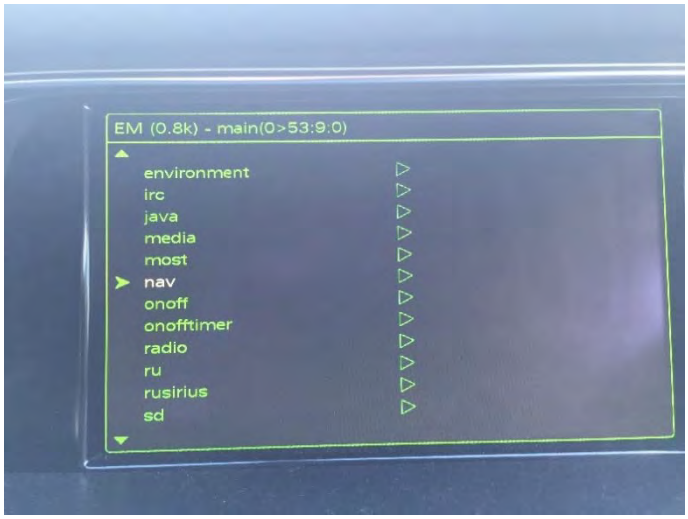
Switch on your MMI – don't switch the ignition on, just press the volume knob to wake it up. Wait a minute or 2 for it to boot fully. Make sure Radio or another non-settings menu are selected.

Press and hold [Car] and [Setup] for several seconds until the green menu pops up. If the screen changes as soon as you press the buttons to the car or setup screen you haven't quite got the button pressing coordinated enough, so press [Radio] and try again.

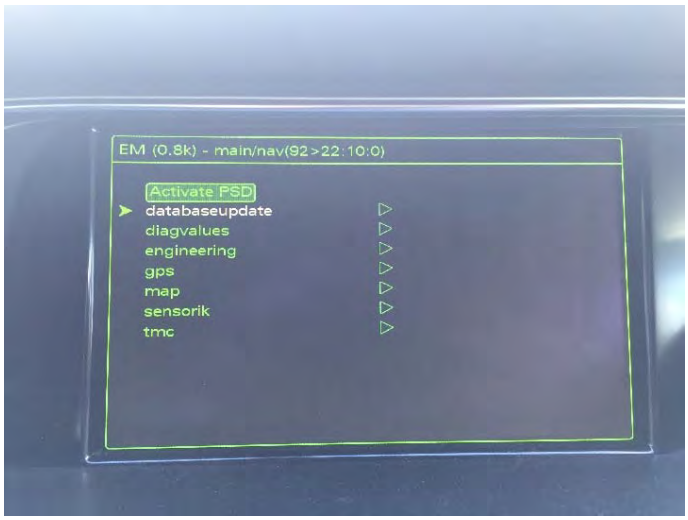
Once in the green menu you will see this screen



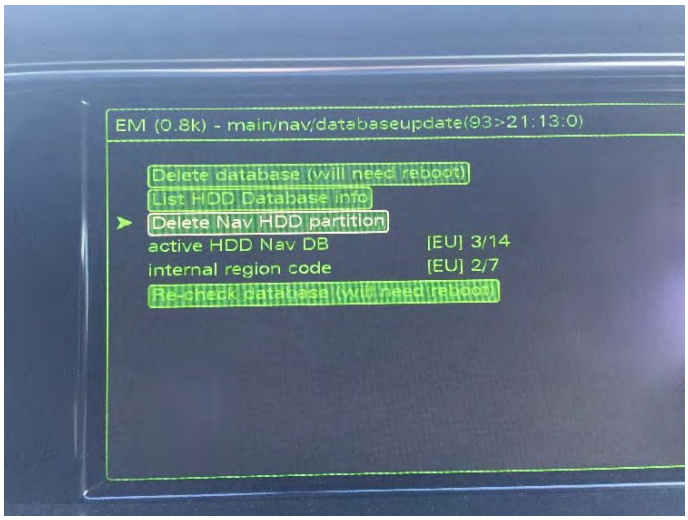
Scroll down to 'nav' and press the click wheel in to select.



Select ‘databaseupdate’ and click

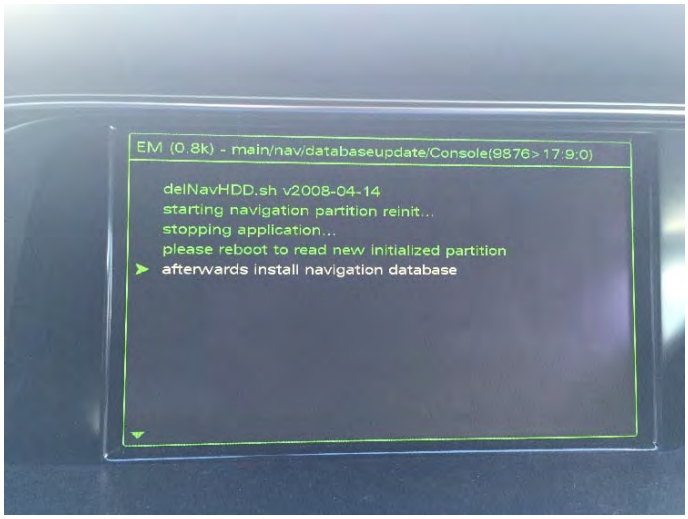


Select ‘Delete Nav HDD partition’ and click



Screen will then change to ‘stopping application’

Then ‘please reboot to read new initialized partition’ and ‘afterwards install navigation database’



Then force a reboot by holding these buttons in for a few seconds and releasing

Installing the map database files

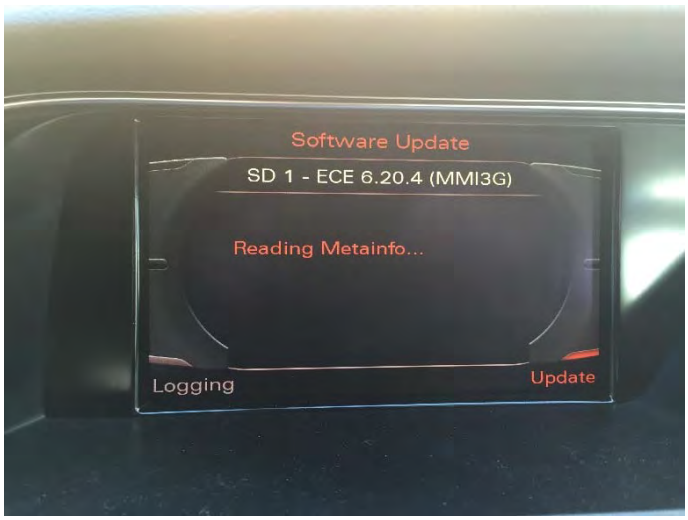
Put the SD card pre-loaded with the map files (the metainfo.txt file should be at the top level of the file structure) into one of the SD card slots and press [Setup] and [Return] together to enter Engineering Mode.

Press the bottom right soft key to enter ‘update’ and select your source, then click

The screen will then change to this for a while

Before coming up with the map database version

Just click on the highlighted update to begin the installation process



You'll then get the screen below – select 'standard'

Scroll down the list (you'll see the relevant update highlighted with Y) and click 'Start download'

You then get a warning that downloads mustn't be interrupted – just click 'Start'

MMI will then reboot

Once the reboot has finished the screen will show a progress % for each of the installed folders.

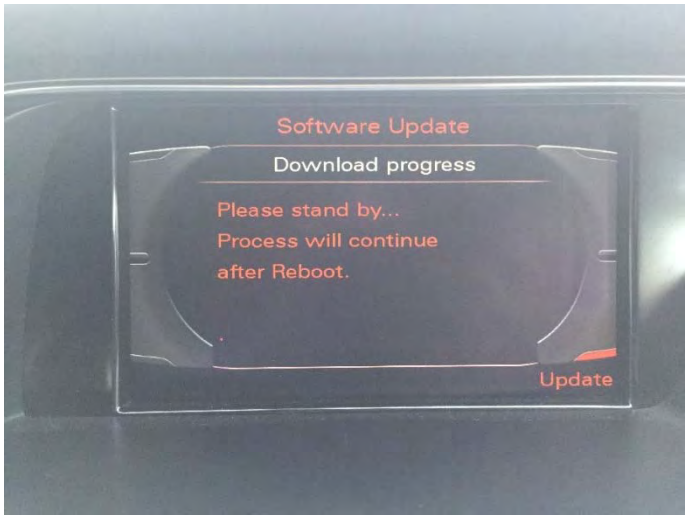
Some go faster than others – some span across 2 or more folders as they go. Even on the largest folders the % should increase in less than a minute. LIT is a large folder, followed by LIT2!

SDS update is speedy

Another lengthy one

And another

Until finally after 2-2.5 hours:



Reads the metainfo file again

D

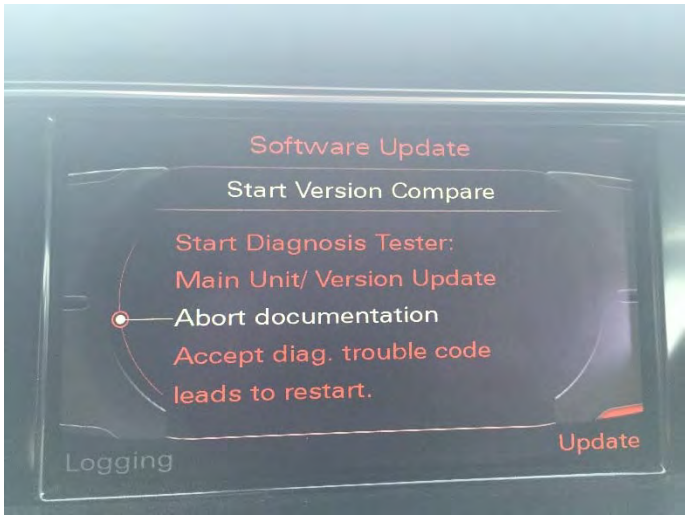
Devices will then fire up and disappear from the list as they boot up

You will then be given a summary screen to scroll down showing the completed installations. Any updates should state OK next to them – any with NOK haven't completed properly.

Scroll down to confirm the navigation update has completed successfully

Click Continue

At this point the dealer would plug the vehicle in to servers back at head office to confirm software version – since those tools aren't available select 'Abort documentation'



That's the navigation database install finished. The MMI will reboot/shut down at this point. You can now remove the SD card with the map files and replace with your chosen activation file.

Map database activation

These can come in script format (similar for 3GP) where you let the unit fully boot, install on SD card and it will write the necessary FSC file direct to the relevant folder. For the 3G setup, since it's not connecting online to anything in normal use, we can use a standalone activator, which is simply the FSC data and a metainfo file with a checksum that authenticates the file size and allows the install.

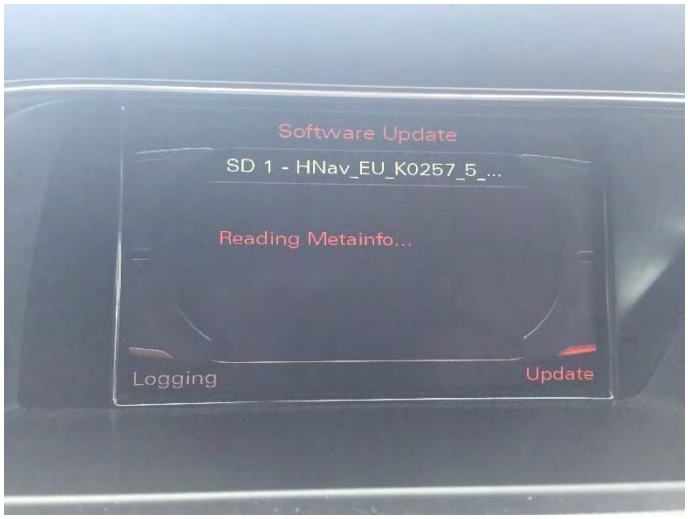
As before you need to enter Engineering mode by pressing [Setup] and [Return] together for a few seconds

Select your SD card location for the activation file

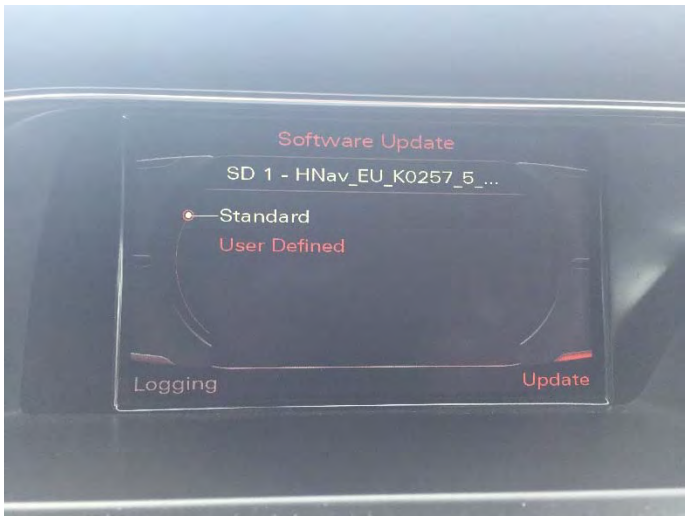
Reads the file:

And comes up with the release info from the metainfo2.txt file

Click to accept and the metainfo file is read



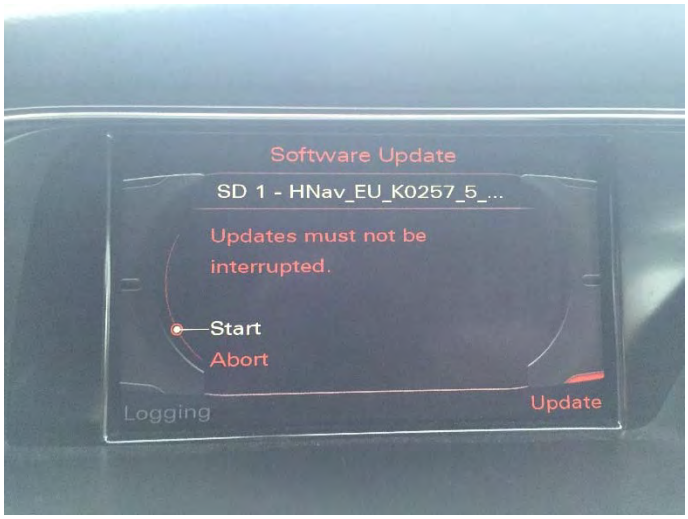
Click standard



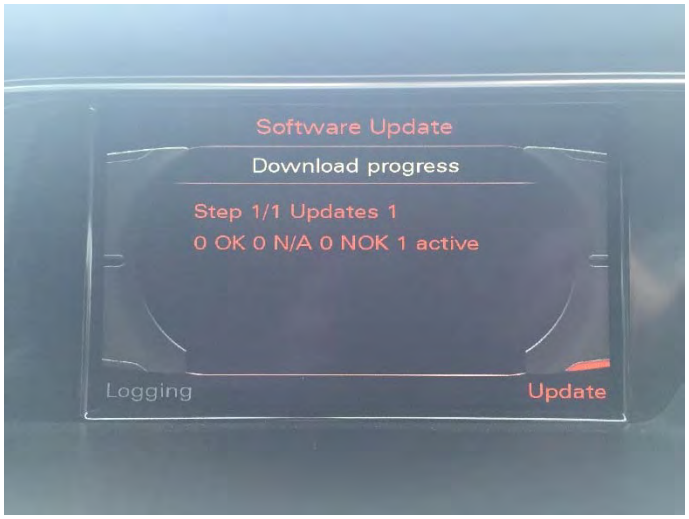
Scroll down the list of folders and you will find a Y next to FSC

Continue down and click Start download

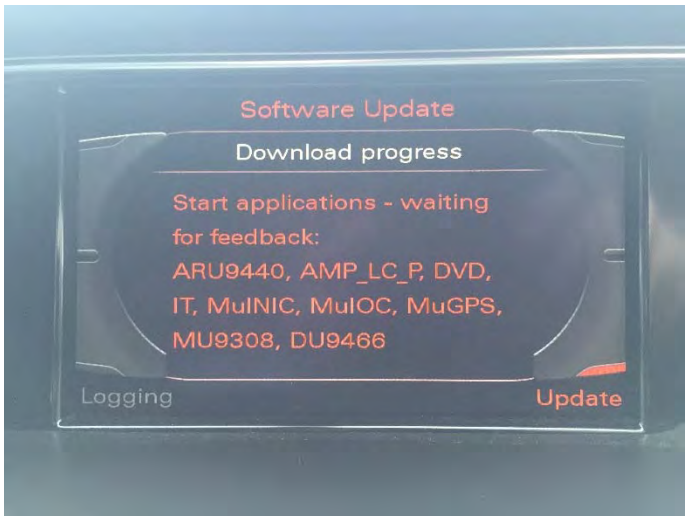
Warning repeats about not interrupting the update – click Start



MMI will then reboot



This will take seconds and the MMI will then reboot again



Scroll down to confirm the FSC update has completed successfully

Scroll to the bottom and click Continue

Accept Abort documentation default again

The MMI will then do a final reboot/shut down. On switching it on again and selecting Nav you should be greeted with the familiar:

Going through the Car menu to select Version Information and you will eventually see:

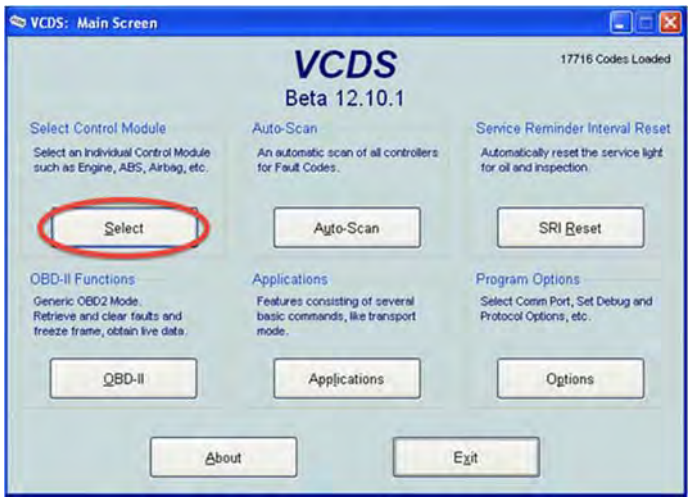
Do not panic if Software version comes up as 'null' – it takes a little while to finish refreshing and will then show as above (or whatever text was written in the release line of the metainfo2 file!)

Tidying up after install

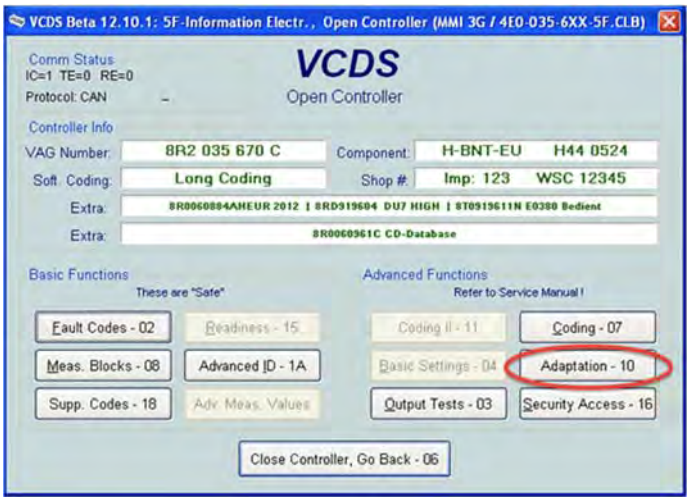
Now at this point, if you want to tidy up the install, there's a bit of fault code clearing to do with VCDS. If you don't have it, leaving the code in place will not stop the unit working but it will pop up if or when your car is connected to the dealer systems.

A bit like the checksum within the metainfo file, Software Version Management (SVM) logs a value within the MMI module, which if files are updated will be invalid. An auto scan with VCDS will show an error in module 5F (Information Electronics) '03276 – Please check Software Version Management'

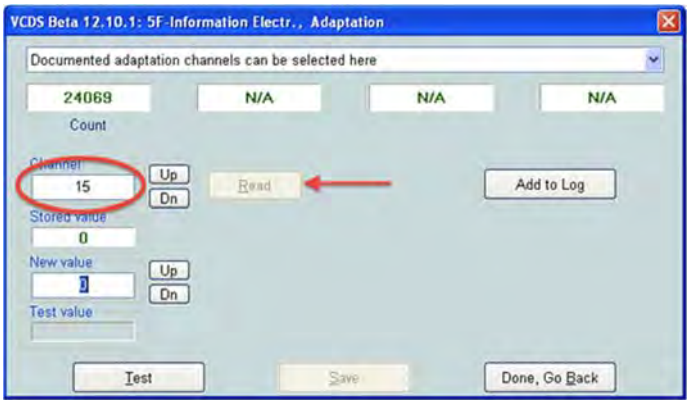
To clear the fault go into 'select control module' in VCDS and select module 5F (it appears under a number of tabs but I went in via Electronics 2 tab)



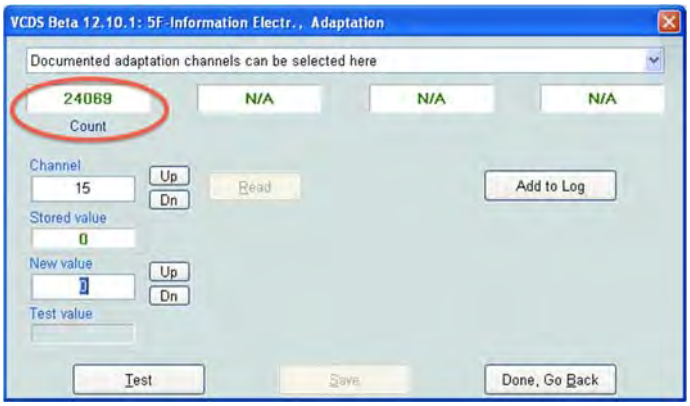
Click [Adaptation – 10]



Enter 15 into the Channel box and click [Read]



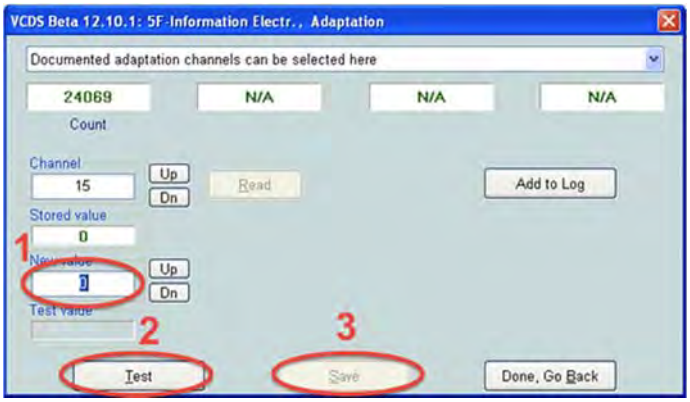
Ignore the stored value and new value fields for now – look up in the top left corner above 'Count' and this is the value you need to update



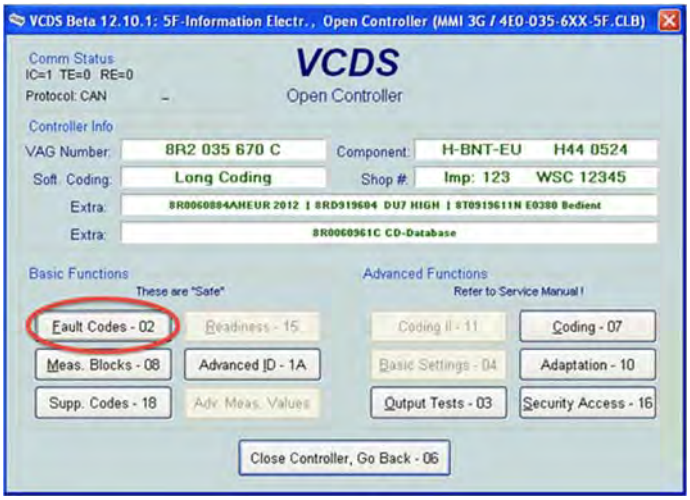
You then need to find a friendly web site with an SVM error tool – this guide to the VCDS process is pretty much copied from one available on the USA based audienthusiasts.com - the pics are nice and clear. To access the SVM tool directly use the link below:

http://www.audienthusiasts.com/Application_SVMError.html

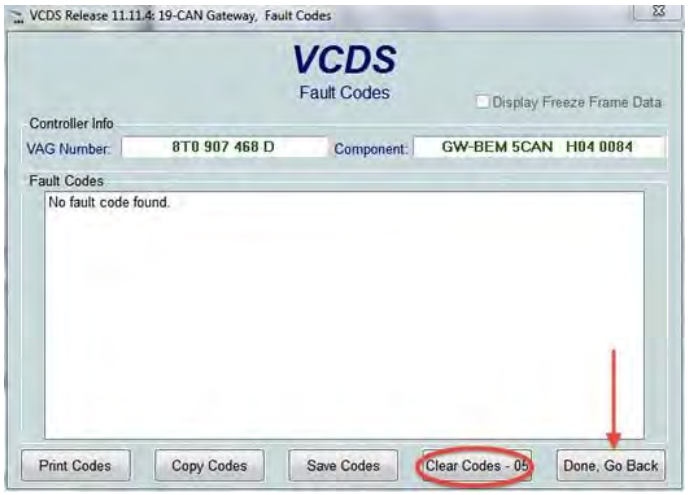
At the bottom of that page you enter your Count value and make a note of the new generated SVM code. Go back to VCDS and enter this value in the 'New value' field and click [Test] then [Save] then [OK] to confirm the new value. Once done click [Done, Go Back]



and select [Fault Codes – 02] and you may still find the SVM error message if you haven't cleared it already



If present, click [Clear Codes – 05]. It can take a couple of goes but if the fault code persists, check the SVM values again.



Run another auto scan to confirm all is well, log out of VCDS and your work is done ☺

If you have another stored fault code '03175 - invalid data set' you most likely have an early model and gone straight from very old maps to the current. In doing that you get to a point where the firmware updates required before map installation make the old map unreadable by the MMI, hence the code generated in Module 47 – Sound system. DO NOT PANIC!

You cannot clear this fault code with VCDS. Instead you must enter the green menu as per the navigation partition deletion instructions. Once in, navigate to 'car' then 'carmenuoperation'. TAKE PICTURES OF ALL THE VALUES FOR THE 2 OR 3 SCREENS OF FIELDS AVAILABLE BEFORE TOUCHING ANYTHING!!

Add 1 to every value – this changes the features the MMI thinks your car is equipped with.

Reboot the MMI using the 3 finger button press used before.

Go back into the green menu and navigate back to 'carmenuoperation'.

Put all the values back as they were before and reboot the MMI yet again.

The invalid data set error code will have now disappeared ☺

Sorry this guide is on so many pages – I wanted to try and capture every step in the process for my own piece of mind for future updates and save others scrolling through mega-page threads looking for the important info amongst the fluff and miss-information.

Hope it's useful

A