

# UPDATE INSTRUCTIONS FOR MMI 3G

Version 1.6 Mar 2016 (Rev1)

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# BEFORE START



**Caution:** Use this guide at your own risk, we are not responsible



**Important:** Connect your car with a battery charger or leave the engine running



**Important:** Some users report problems when copying files from Mac OS / Linux, It's better if you use Windows for all file copy process. You can use a virtual machine for that.



**We recommend:** Backup your old FSC using "FSC Backup" script.



**We recommend:** Read the complete guide before start, recheck all the steps and do it carefully.

**THIS MEANS A PHYSICAL BUTTON** > A button that you can touch with your hands

**THIS IS A GREEN MENU ITEM** > It indicates the path in the hidden menu

**THIS IS A GREEN MENU BUTTON** -> A button in the Green Menu

## WHAT YOU NEED

- Firmware files
- Map files
- Activation metainfo or script
- A quality SD, Class 10 for faster (and safer) file operations.
- (Optional) VagCom cable or similar

# HOW DO I KNOW WHAT SYSTEM I HAVE?

For identify your firmware:

Turn on your car

Click on **SETUP** or **MENU** button

Select **Settings**

Select **Version Information**



With your Software Version ID you can know which system you have.

## Firmware

<b>BNav</b>	B is for 3G Basic
<b>HNav</b>	H is for 3G High
<b>HN+R</b>	3G+ (3GP or 3G Plus)

## Other Info

<b>EU</b>	Europe
<b>US</b>	USA
<b>AU</b>	Audi

## Number

<b>PXXXX</b>	Factory installed firmware (the firmware that comes with the car)
<b>KXXXX</b>	Firmware updated later

# USEFUL FEATURES

## Reboot Your MMI

<b>MMI 2G</b>	<b>SETUP</b> + Main (Big) Button + Top Right Button
<b>MMI 2G (A8)</b>	<b>TEL</b> + Main (Big) Button + Top Right Button
<b>MMI 3G</b>	<b>SETUP</b> + Main (Big) Button + Top Right Button
<b>MMI 3GP</b>	<b>MENU</b> + Main (Big) Button + Top Right Button
<b>MMI 3GP (A1)</b>	<b>PHONE</b> + Main (Big) Button + Top Right Button
<b>RMC (A1/Q3)</b>	<b>BACK</b> + Main (Big) Button + Top Right Button
<b>RMC (A6/A7)</b>	<b>MENU</b> + Main (Big) Button + Top Right Button
<b>MIB</b>	<b>MENU</b> + Main (Big) Button + Top Right Button

## Engineer Menu (Red Menu)

<b>MMI 2G</b>	<b>SETUP</b> + <b>RETURN</b>
<b>MMI 2G (A8)</b>	<b>TEL</b> + <b>RETURN</b>
<b>MMI 3G</b>	<b>SETUP</b> + <b>RETURN</b>
<b>MMI 3GP</b>	<b>CAR</b> + <b>BACK</b>
<b>MMI 3GP (A1)</b>	<b>BACK</b> + <b>PHONE</b>
<b>RMC (A1/Q3)</b>	<b>BACK</b> + <b>PHONE</b>
<b>RMC (A6/A7)</b>	<b>CAR</b> + <b>BACK</b>
<b>MIB</b>	<b>BACK</b> + Top Left Button

## Developer Menu (Green Menu)

<b>MMI 2G</b>	<b>SETUP</b> + <b>CAR</b>
<b>MMI 3G</b>	<b>SETUP</b> + <b>CAR</b>
<b>MMI 3GP</b>	<b>CAR</b> + <b>MENU</b>
<b>RMC</b>	<b>CAR</b> + <b>MENU</b>
<b>MIB</b>	Not available

## Take a screenshot and save it to SD

<b>MMI 3G</b>	<b>LEFT</b> + <b>RIGHT</b>
<b>MMI 3GP</b>	<b>TEL</b> + <b>MEDIA</b>
<b>RMC</b>	<b>LEFT</b> + <b>RIGHT</b>
<b>MIB</b>	Bottom Left Button + Bottom Right Button

You must wait until four LEDs on the soft buttons flash

# UPDATING FIRMWARE

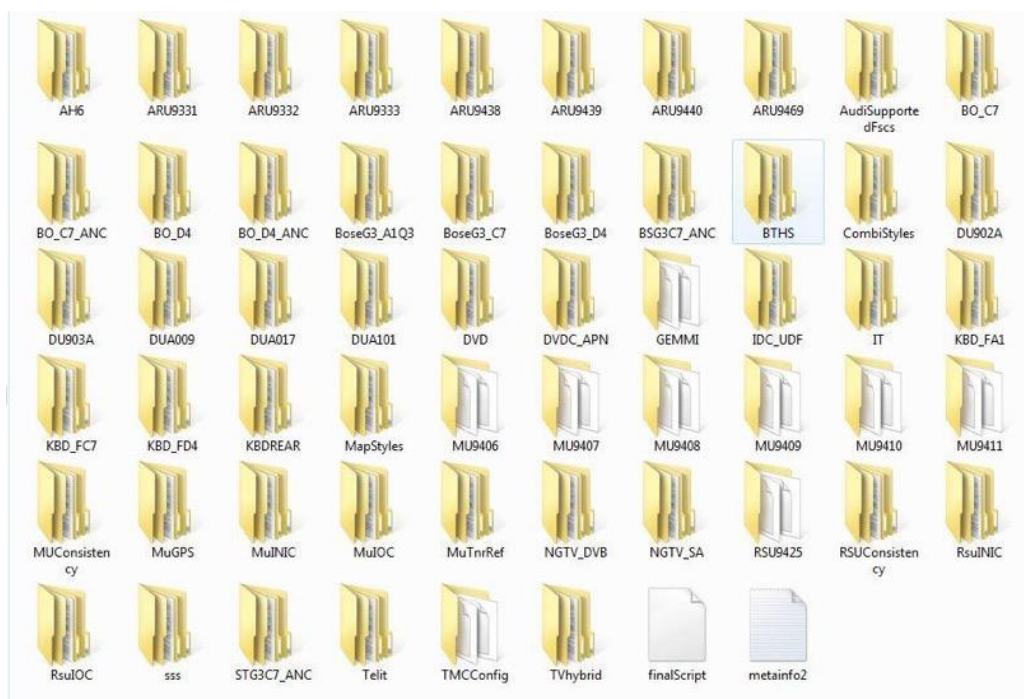


**Caution:** If your system already had another activator (like Carson's one) we recommend making an emergency update **before** doing anything else.

Check how to do it in the page 30

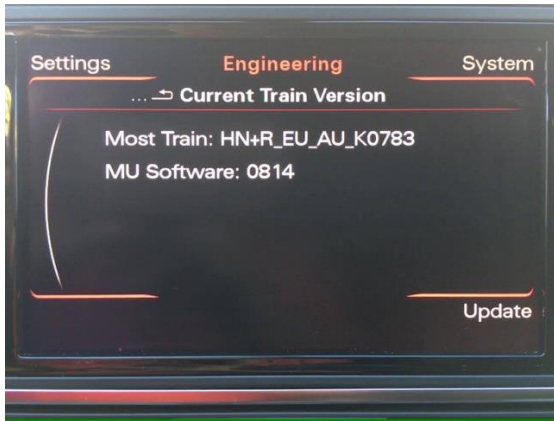
Format your SD in FAT32.

Copy the root of your firmware in the SD (like picture below)



Open "Engineering Menu" (Check page 4)

A screen like this will appear

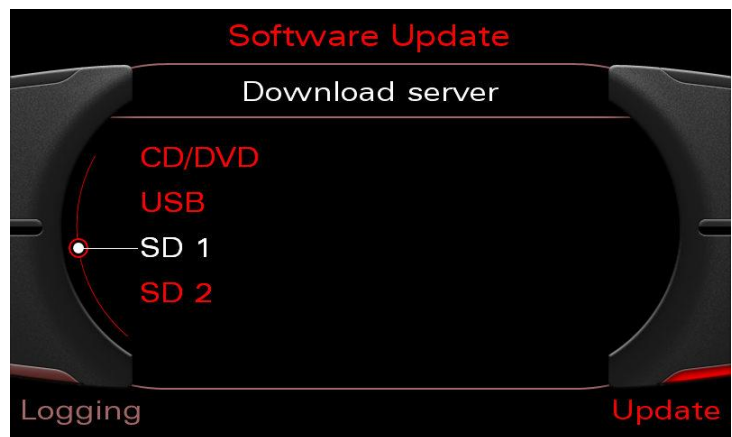
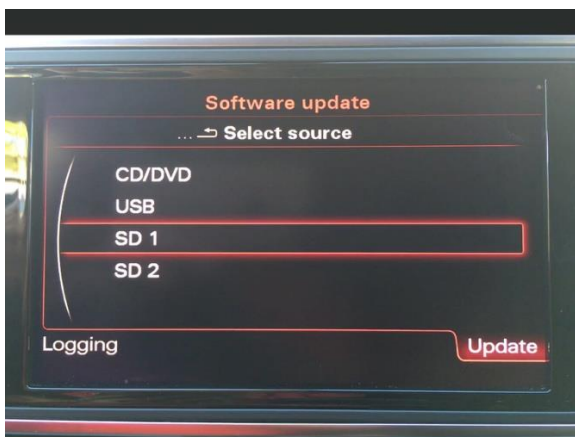


Insert the SD card with the firmware in slot 1

Press the "Update" option using the MMI Control Panel



Scroll down with the big knob and select the source in the menu (SD 1) pressing it.



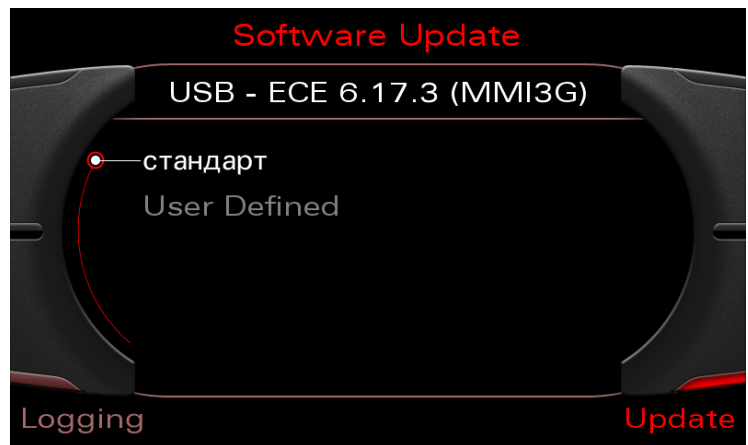
Select the firmware pressing the big knob once



**Caution:** Some users report problems with Bose sound system, if you have Bose and don't know how to recode it... we recommend unselect it from list (using User-Defined Mode as explained in page 4239) before update.

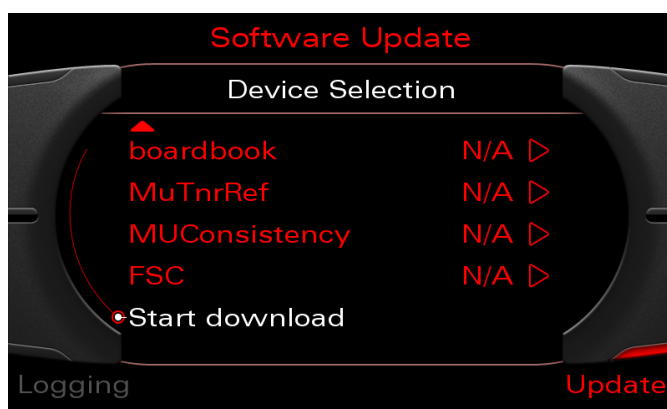
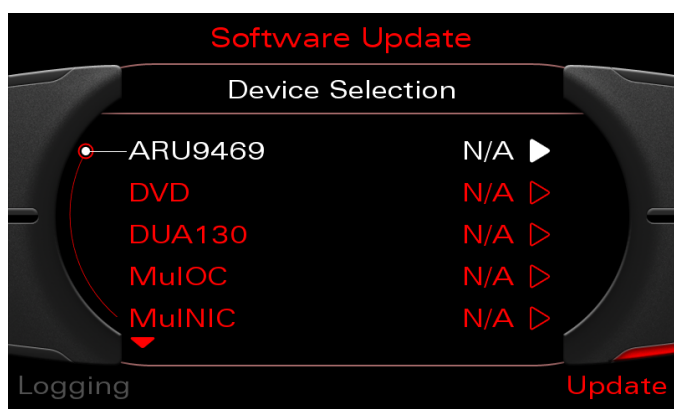
If you update it, you will have to visit an expert or your dealer for recode it.  
**If you can, we recommend update it, just because it sounds better.**

Select "Standard"



You will see a list with all devices that firmware will update

Scroll to bottom and press "Start Update" or "Start Download"

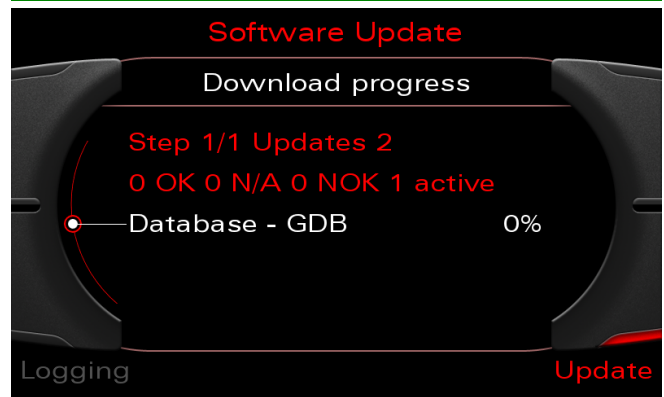
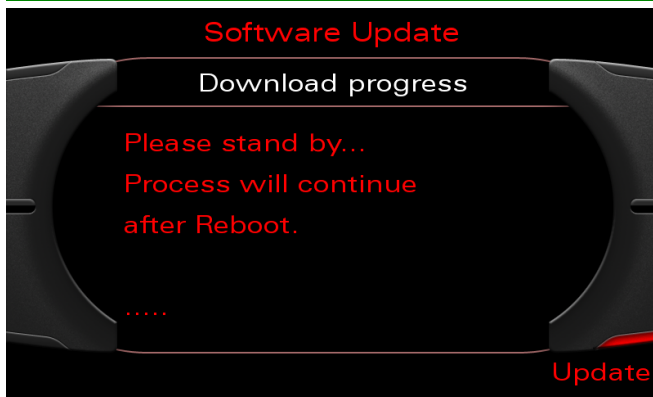
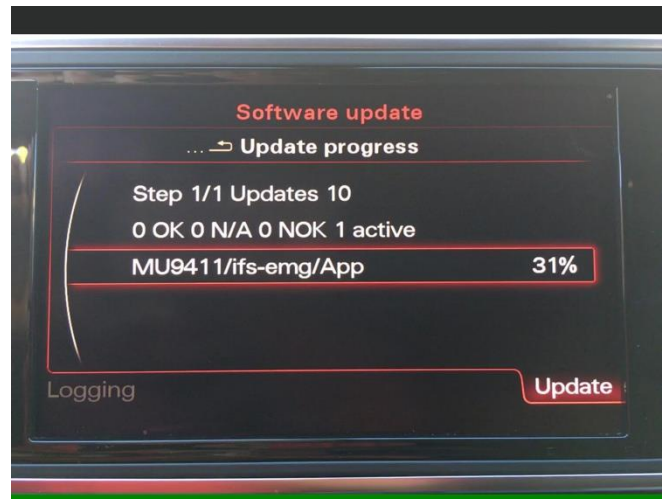
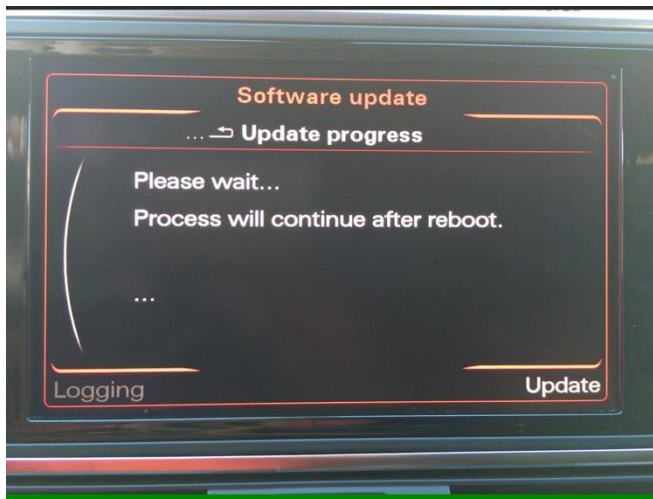


Another screen appears informing you that once you start updating this must not be interrupted. Select "Start" and press the big knob.



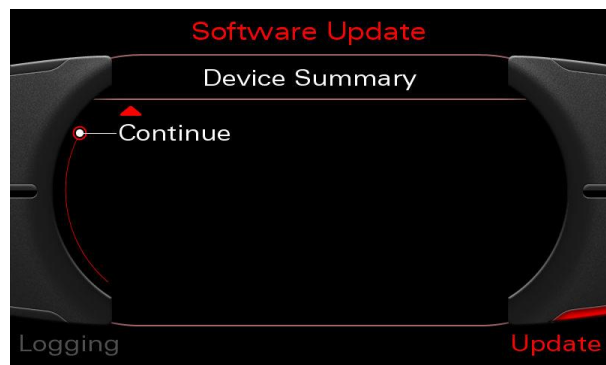
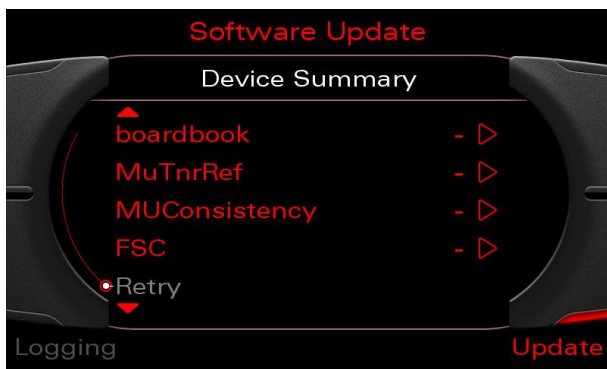


The MMI will reboot and the update process will start.

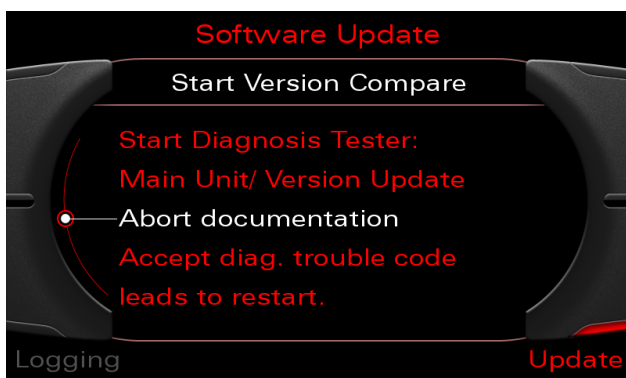
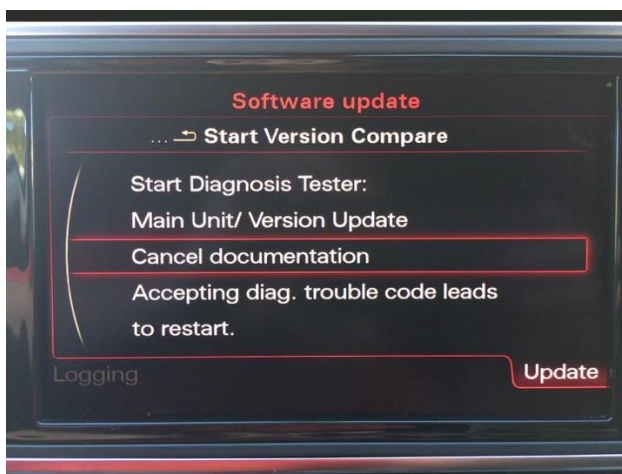


After several minutes/hours (it depends that what it has to update and the speed of your SD) the firmware update will be done

A resume with all updated modules will appear. Scroll down and press "Continue"



Select "Cancel documentation" and the MMI will reboot



# UPDATING THE MAP

**Optional:** Removing the old map is optional. However, is highly recommendable.



Benefits are:

- Avoid the not removable **Fault Code 03175 - Invalid Data Set** error
- Avoid errors while copying the map (out of size, slow write speed)
- No remains of the old map files on the new map

Open **Green Menu** (Check page 4)

Go to `nav/databaseupdate`

Select "`Delete database (will need reboot)`" and click it.

```
<EM 1.0t> /nav/databaseupdate
> ...
  List HDD Database info
  active HDD Nav DB           [EU] 3/18
  internal region code       [EU] 2/7
  Re-check database (will need reboot)
  Delete database (will need reboot)
  Delete Nav HDD partition
```

Wait until system removes the data.

```
EM (0.8k) - main/nav/databaseupdate/Console(9876> 17:9:0)

removeNavDB.sh v2008-01-03
starting navigation database removal...
stopping application...
mounting partition read/write...
checking filesystem (may take some minutes)...
remove navigation database...
> please reboot system
```

When it finished reboot your MMI (Check page 4)

Open **Green Menu** again (Check page 4)

Go to `nav/databaseupdate`

Select "**Delete Nav HDD partition**" and click it.

```
<EM 1.0t> /nav/databaseupdate  
  
▶ ...  
  List HDD Database info  
  active HDD Nav DB           [EU] 3/18  
  internal region code       [EU] 2/7  
  Re-check database (will need reboot)  
  Delete database (will need reboot)  
  Delete Nav HDD partition
```

Wait until system removes the data.

```
<EM 1.0t> /nav/databaseupdate/Console  
  
...  
delNavHDD.sh v2011-11-27  
Starting navigation partition reinit.  
Please wait at least 30 seconds, then  
restart system.  
stopping checkFreeMem  
pid: 28687  
....stopped  
stopping NavCore  
pid: 90152  
▶ .stopped  
  stopping MMI3GApplication  
▼
```

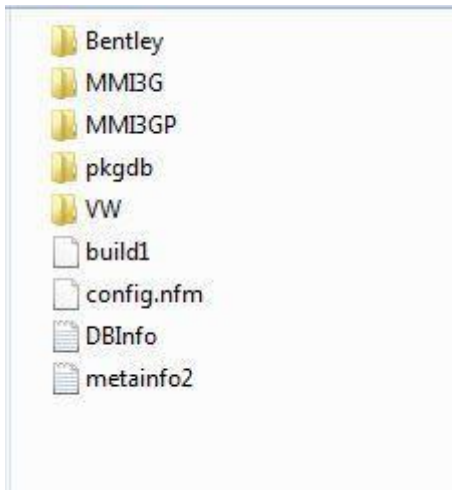
When it finished. Wait at least 30 seconds and then reboot your MMI (Check page 4)



**SD Size:** If the map doesn't fit in a 32 GB SD you can use 64 GB SD (or larger). You must format your SD in FAT32 format (not ExFAT)

Format your SD in **FAT32**.

Copy the root of your map in the SD (like picture below)



Open "Engineering Menu (Check page 4)

This screen will appear

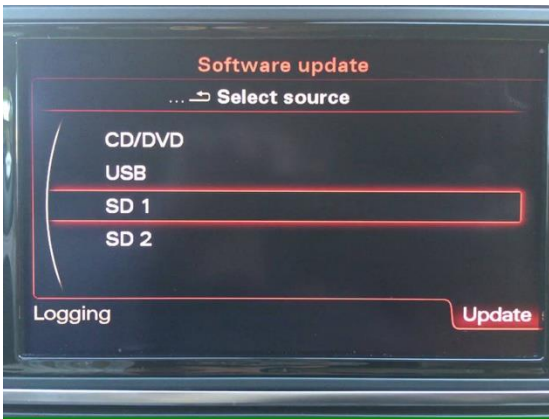


Insert the SD card with the firmware in slot 1

Press the "**Update**" option using the MMI Control Panel



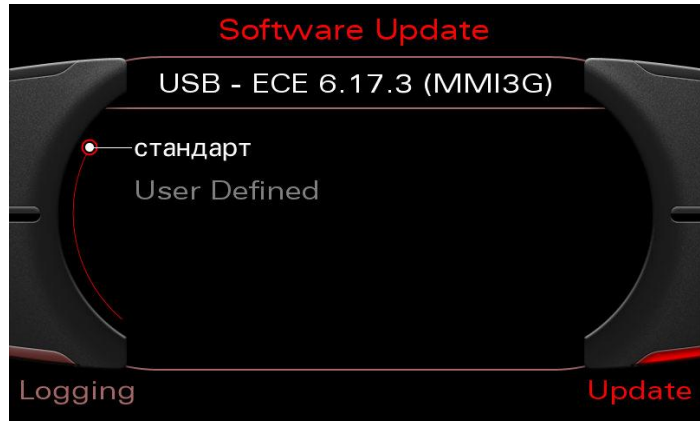
Scroll down with the big knob and select the source in the menu (SD 1) pressing it.



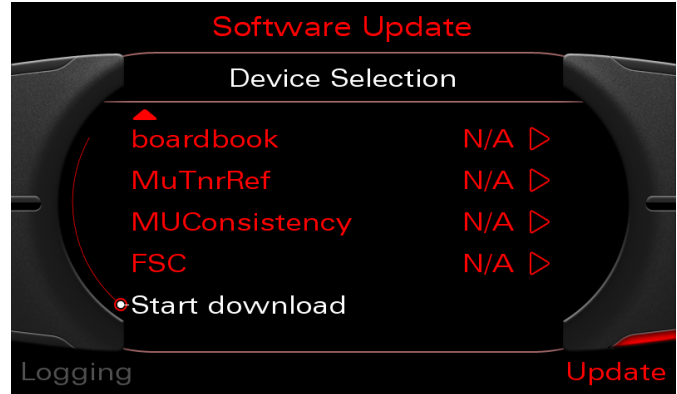
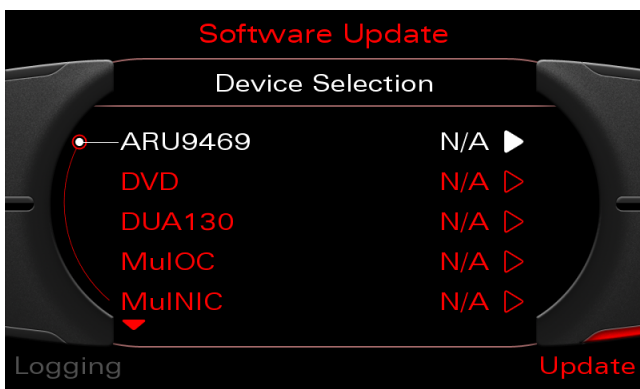
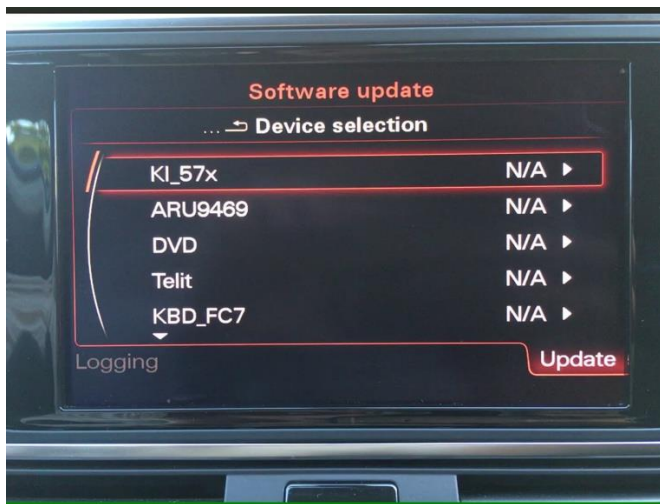
Select the map pressing the big knob once



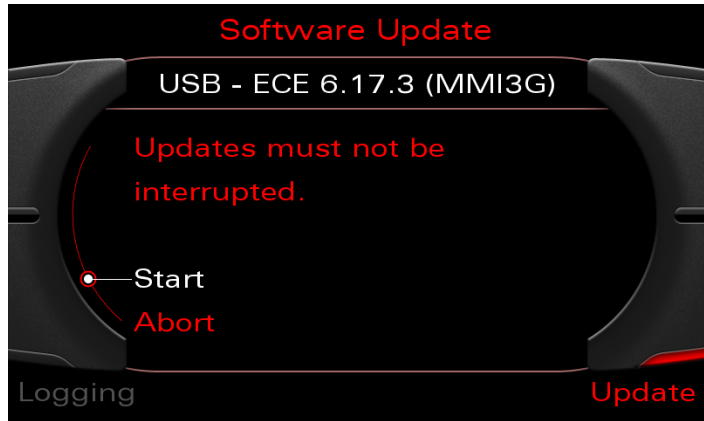
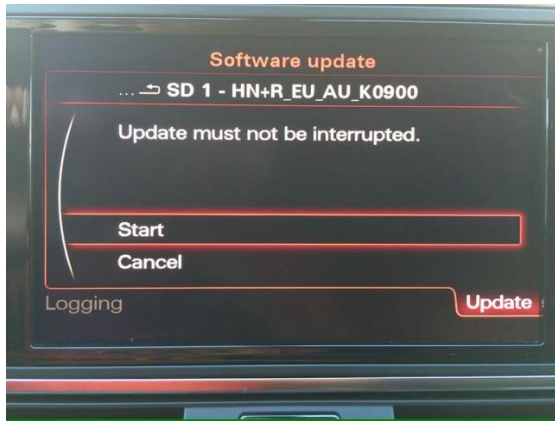
## Select "Standard"



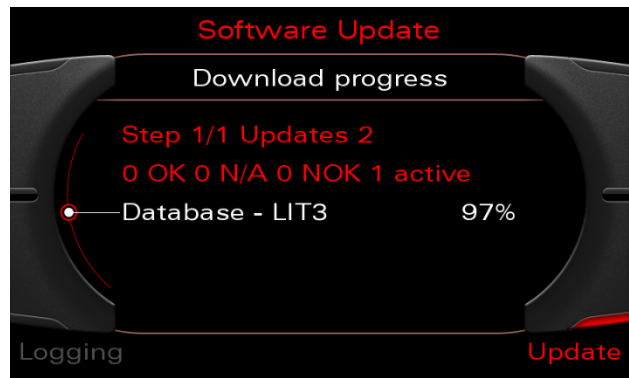
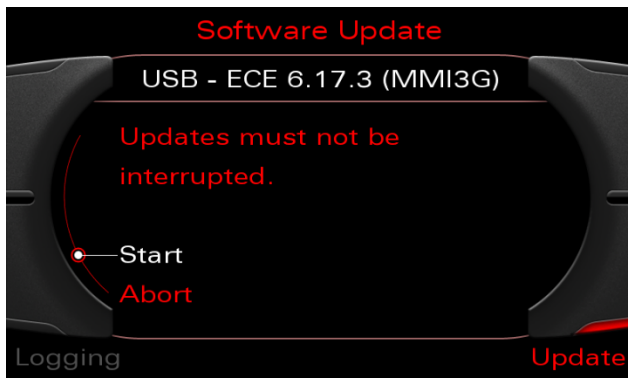
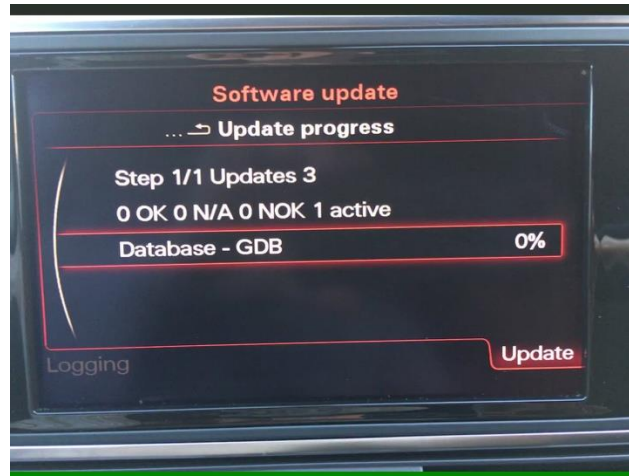
You will see a list with all categories that map will update. Scroll to bottom and press "Start Update" or "Start Download"



Another screen appears informing you that once you start updating this must not be interrupted. Select "Start" and press the big knob.



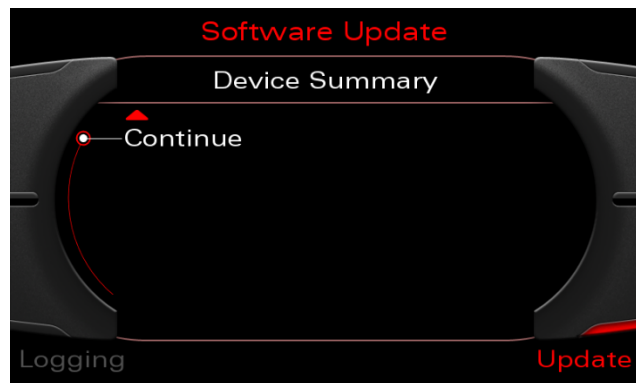
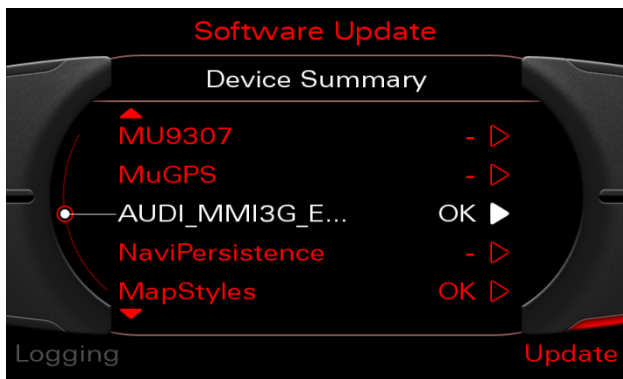
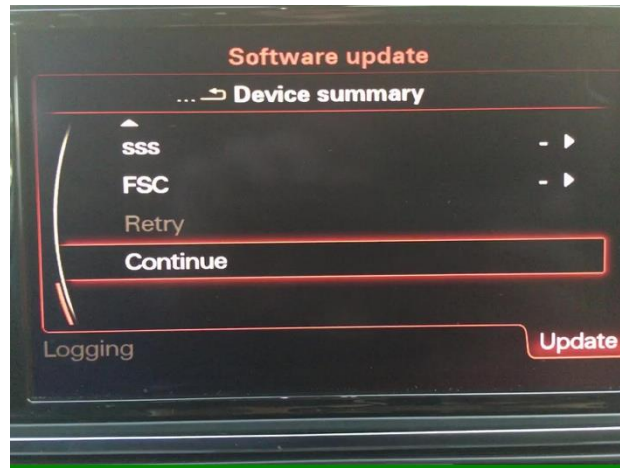
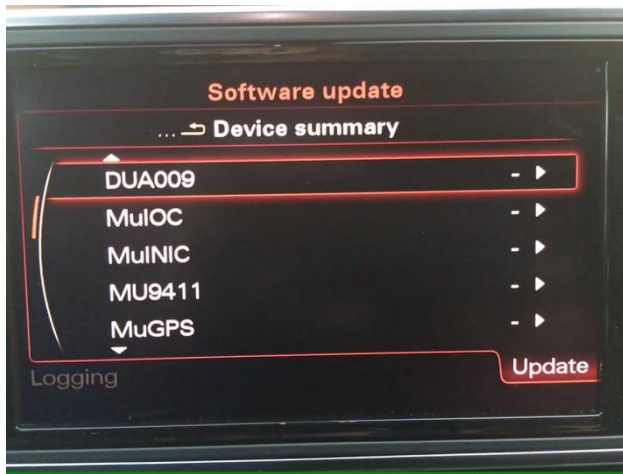
The MMI will reboot and the update process will start.



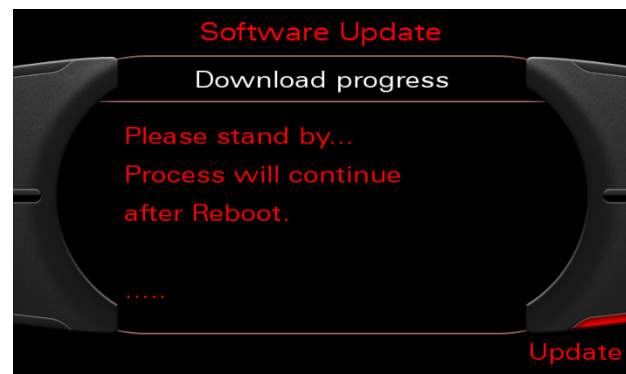
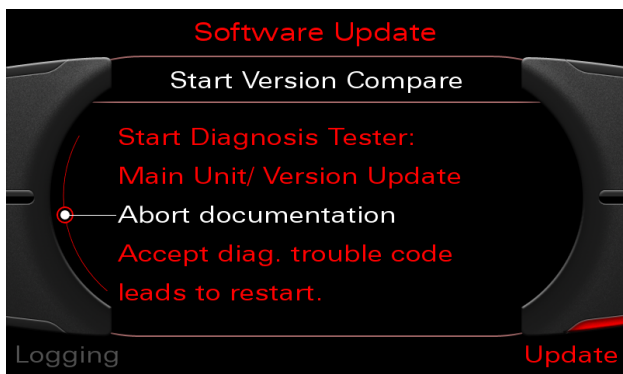
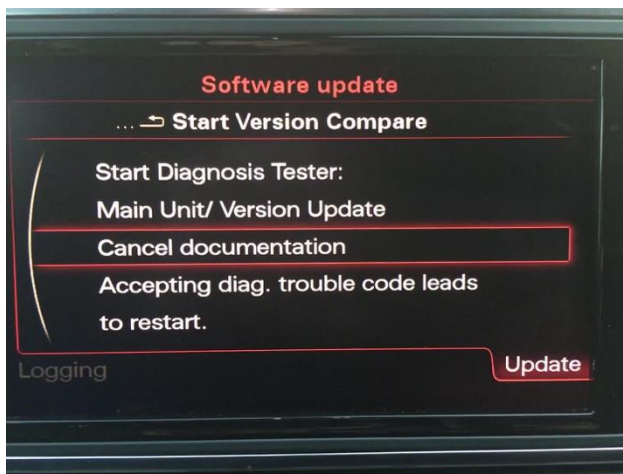
After several minutes/hours (it depends that what it has to update and the speed of your SD) the firmware update will be done



A resume with all updated modules will appear. Scroll down and press "Continue"



Select "Cancel documentation" or "Abort documentation" and the MMI will reboot



# ACTIVATING THE MAP: 3G BASIC AND 3G HIGH



**Caution:** Metafile activators are usually linked to a specific firmware, please **double check** the firmware that you've in your car and the activator's one.

Format your SD in FAT32

Copy the root of your activator in the SD (like picture below)

Usually is a folder called FSC and a file called metainfo2.txt



FSC



metainfo2.txt

Open "Engineering Menu" (Check page 4)

A screen like this will appear

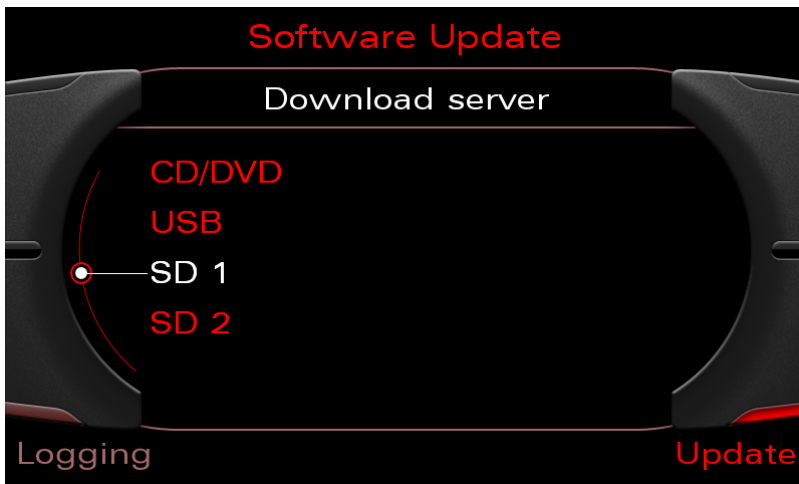


Insert the SD card with the activator in slot 1

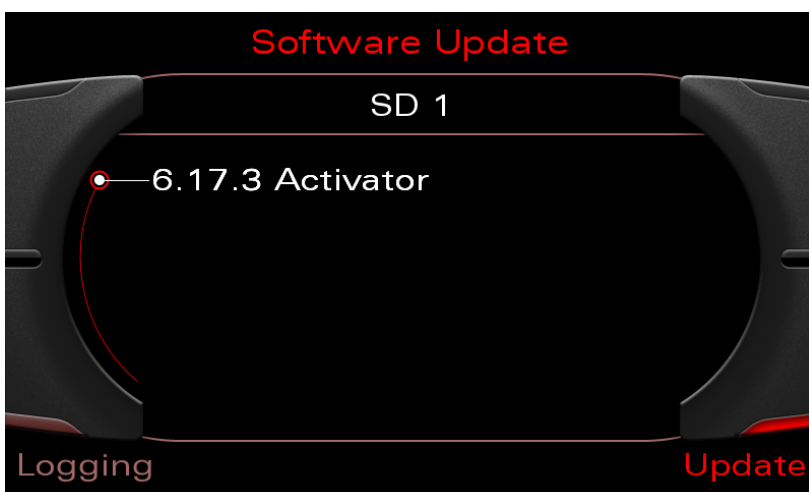
Press the "Update" option using the MMI Control Panel



Scroll down with the big knob and select the source in the menu (SD 1) pressing it.



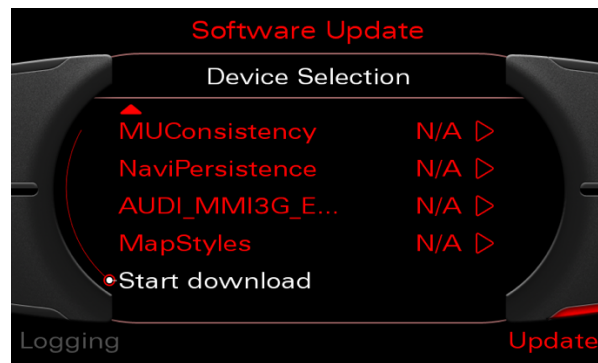
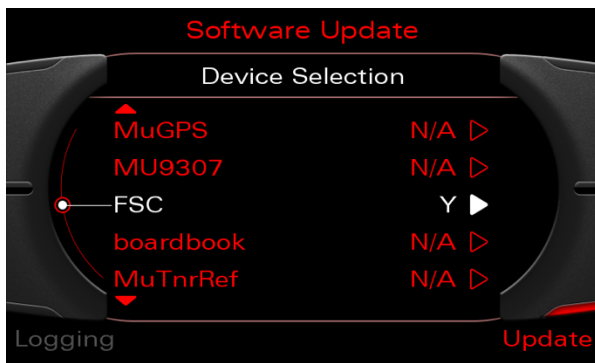
Select the activator pressing the big knob once



Select "Standard"



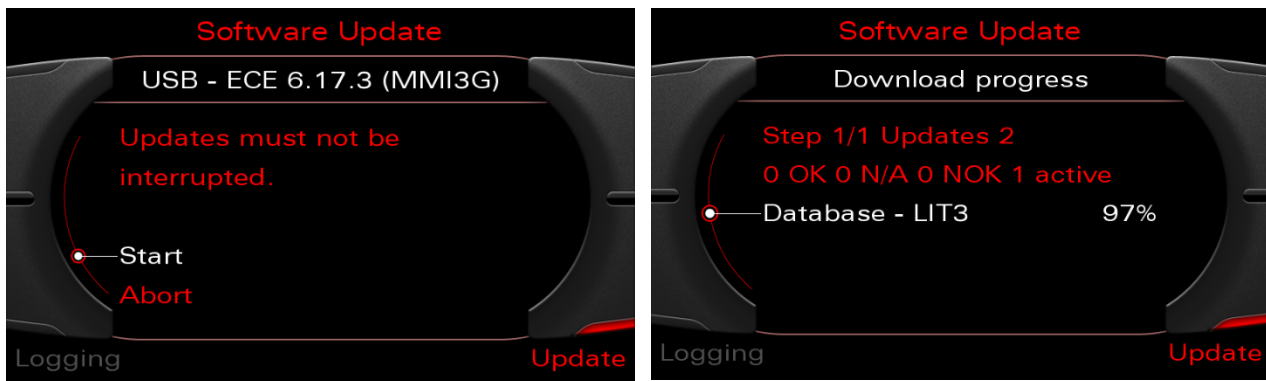
You will see a list. Scroll to bottom and press "Start Update"



Another screen appears informing you that once you start updating this must not be interrupted. Select "Start" and press the big knob.



The MMI will reboot and the update process will start.



After some minutes the activator will finish copying files.

A resume with all updated modules will appear. Scroll down and press "Continue"



Select "Cancel documentation" and the MMI will reboot



Your map must be activated now.

# ACTIVATING THE MAP: 3GP (KELDO'S ACTIVATOR)

**Caution:** There are some activators on the Internet with a modified code that will erase the flash memory maybe bricking your unit so be careful



When you download it, **double check** that your **copie\_scr.sh** file size is **3634 bytes** that's the correct one

## GETTING THE XCODE FOR YOUR CAR

Open **Green Menu** (Check page 4)

Go to **WLAN** and click it.

Copy your MAC address

```
<EM 1.0t> /wlan
...
Adaption 0x13 WLAN ON: 
wlan running 
> SSID: _____
password: _____
mac: _____
set simple default password
```

Exit from Green Menu using any button, e.g.: **CAR** or **RADIO**

Using the XCodeCalculator just write your MAC address and you'll get the code.



If you don't have access to calculator or want to calculate it manually you have to:

1	Split the MAC address in 2 parts	0a1b2c   3d4e5f
2	Extract only the numbers	12   345
3	Sum both numbers	$12 + 345 = 357$
4	Sum 1984 to your result	$357 + 1984 = 2341$
5	Your XCode is ready	<b>2341</b>

## PREPARING THE FILES FOR THE ACTIVATOR

Once you have your XCode rename your file `Xcode_00040009.fsc` replacing XCode with your code, e.g.:

`Xcode_00040009.fsc` -> `2341_00040009.fsc`

Format your SD in FAT32.

Transfer both files to the SD card root:

`2341_00040009.fsc`  
`copie_scr.sh`



2341\_00040009.fsc



copie\_scr.sh

# ACTIVATING THE MAP



**Caution:** Do **NOT** insert the SD until MMI has fully booted

Start the car and wait until MMI is fully loaded (usually 5-10 minutes)

Make sure that MMI is fully booted (press all buttons once **RADIO CAR NAV MEDIA TEL**).

Wait until all options are ok (no options in gray) even when all options are ok wait a minute more.

Insert the SD card into the first MMI slot.

## Don't touch anything

Wait 15-60 seconds, if everything is done according to the instructions, the MMI itself will turn off and reboot.

Enjoy your fully activated map!

# TROUBLESHOOTING

If something goes wrong, you can check your SD for a file called "install.log".

Error	<b>The activation token is not found, please refer to the instructions</b>
Reason	The script can't find your FSC file
Solution	Make sure that your SD has both files "2341_00040009.fsc" and "copie_scr.sh"

Error	<b>Activation failed, was the ignition switch on?</b>
Reason	The script can't find your WLAN MAC address
Solution	Access to Green Menu -> <b>WLAN</b> and check that mac are not empty Exit from Green Menu using any button like <b>CAR</b> or <b>RADIO</b> Insert the SD with activator and wait a minute to reboot



# MISC

## ENABLE GREEN MENU (HIDDEN MENU)

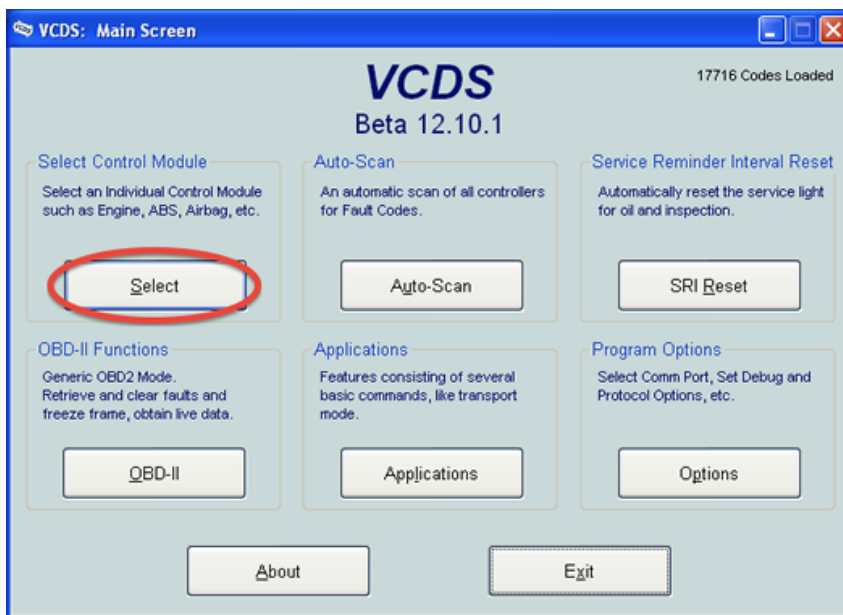
Green Menu is used for several operations. For activate it you can do it with a VagCom cable (VCDS) or using a script.

This guide is for enable green menu in 3G and 3GP but you can follow the same steps with other systems with this instructions:

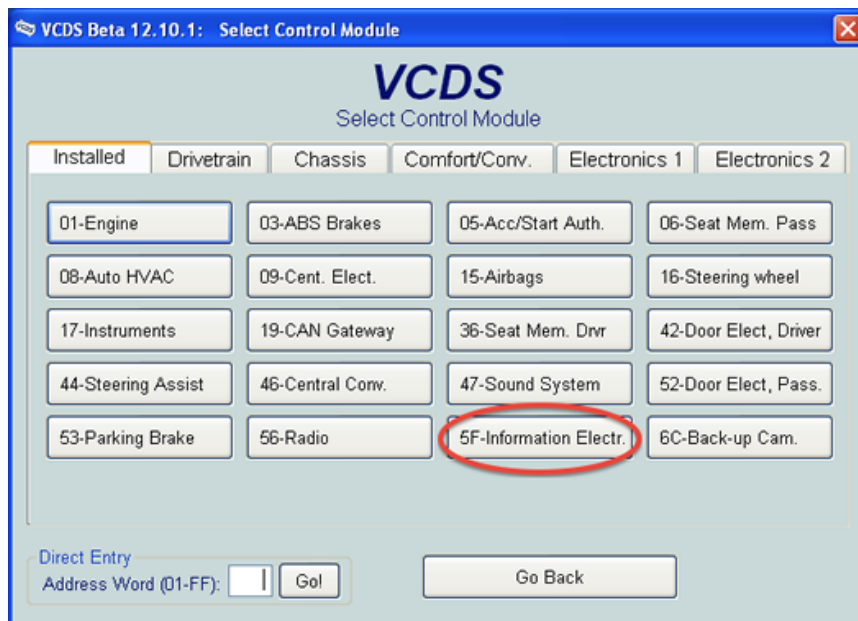
<b>MMI 2G</b>	[07 - Control Head] => [Adaptation - 10] => Channel 8 => set to 1
<b>MMI 3G</b>	[5F - Information Electr.] => [Adaptation - 10] => Channel 6 => set to 1
<b>MMI 3GP</b>	[5F - Information Electr.] => [Adaptation - 10] => Channel 6 => set to 1
<b>RMC</b>	[5F - Information Electr.] => [Adaptation - 10] => Channel 5 => set to 1
<b>MIB</b>	Not available

## ENABLING GREEN MENU WITH VCDS

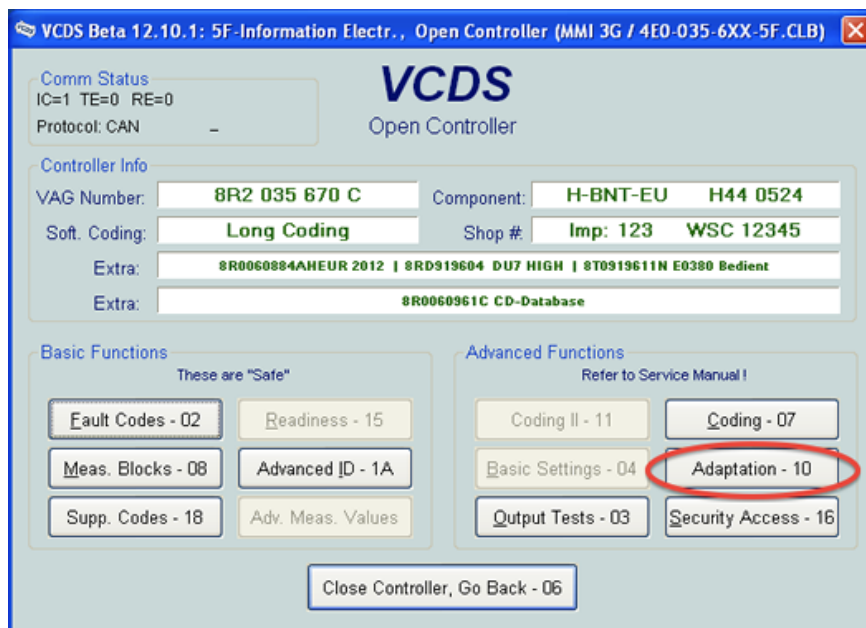
Open VCDS and inside "Select Control Module" click on "**Select**" button



Select module "5F"

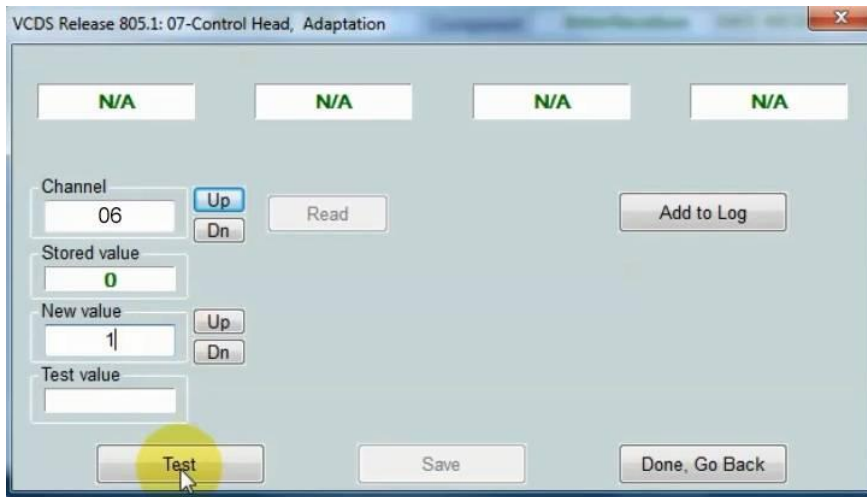


Click on "Adaption - 10"



Enter "6" for the channel and press the "Read" button

Now inside the **“New Value”** field set the value to **“1”** and click **“Test”** and **“Save”**



Note that only **“Save”** may be available in which case you would ignore the **“Test”** button

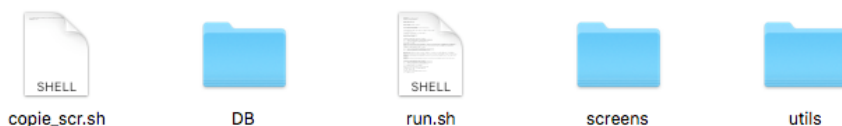
Press **“Done, Go Back”**, close the controller and quit the software

There's no need to restart the MMI, just enter the hidden menu (Check page 4)

## ENABLING GREEN MENU USING A SCRIPT

Download the “Green Menu” script

Format your SD in FAT32 and copy the script’s files in the SD root (like picture below).



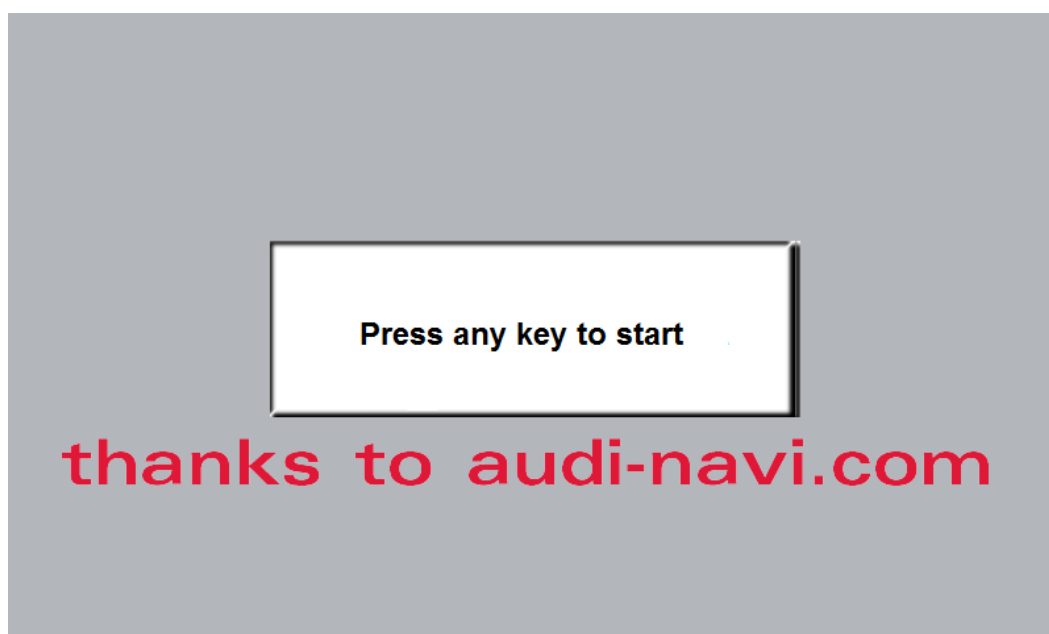
Make sure that MMI is fully booted (press all buttons once **RADIO CAR NAV MEDIA TEL**).

Wait until all options are ok (no options in gray) even when all options are ok wait a minute more.

Is the moment for insert the SD in slot 1.

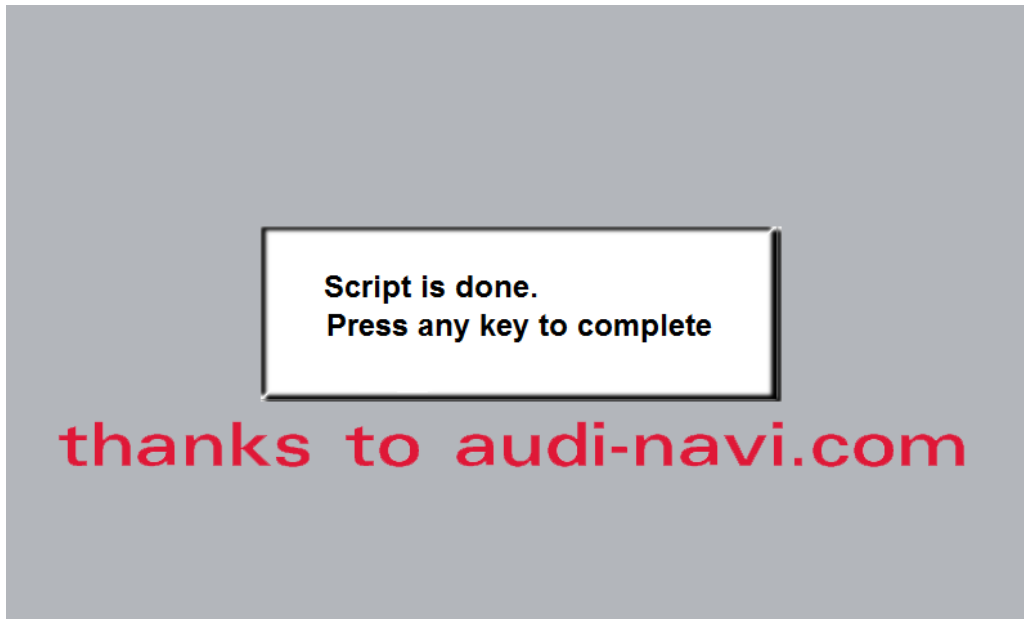
### Don't touch anything

After a few seconds a screen will pop up, press any key (we suggest the big knob) **once**



**Don't touch anything again** (the script are copying files and doing stuff)

After some seconds/minutes the script will finish and another screen will appear.



**Remove the SD before doing anything**

Reboot your MMI using the 3 button



Now you can access to "**Green Menu**"

## EMERGENCY UPDATE (AND OPTIONAL REGION CHANGE)

Emergency update is useful if you have an activator installed (like Carson's patch) and you want to update your firmware or install another patch without problems.



**We recommend:** Do the emergency update with the same firmware that are currently installed.



**Info:** "Emergency Update" is not available in firmware K900

Open Green Menu (Check page 4)



**Important:** This step is only required if you need to change the region of your car (e.g. USA->Europe)

Go to `system/internal`

Change "**internal region code**" to "**Rest of the world**" and press return

```
<EM 1.0t> /system/internal
...
> internal region code           [Rest of the world] 3/7
```



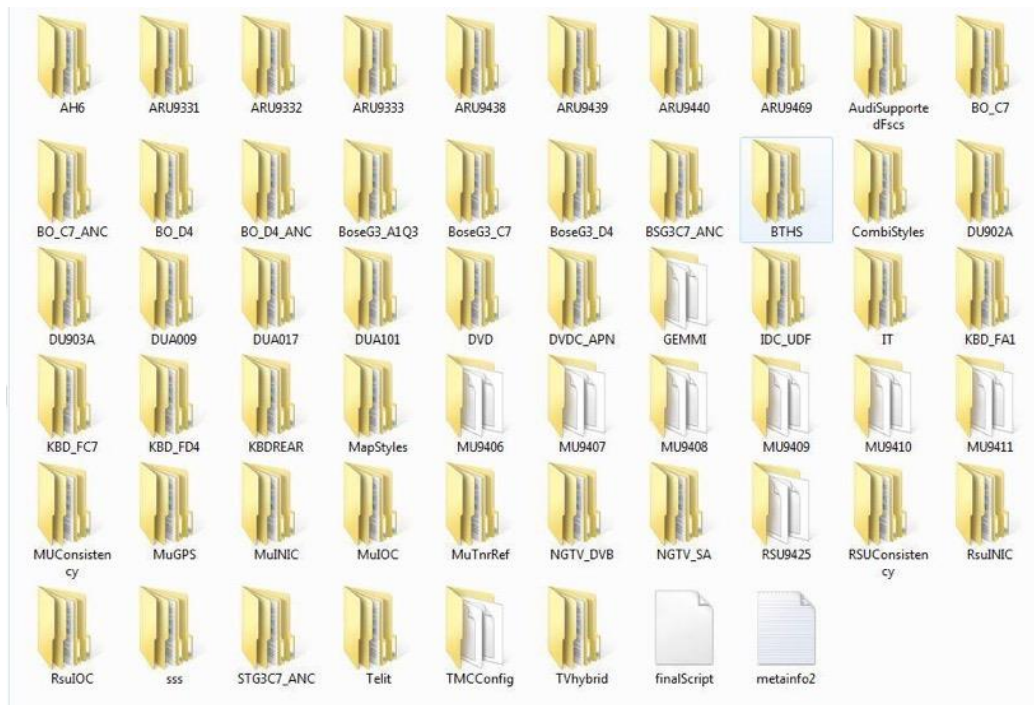
**Important:** This step is only required if you need to change the region of your car (USA->Europe e.g.)

Go to **swdl** and tick **“ignore region and variant”**

```
<EM 1.0t> /swdl  
  
...  
count down                41169  
HW index IT                0  
unexpected resets          0  
current version            ####  
user defined mode            
▶ ignore region and variant 
```

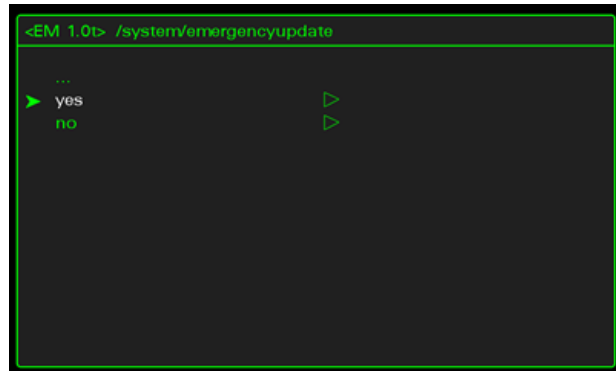
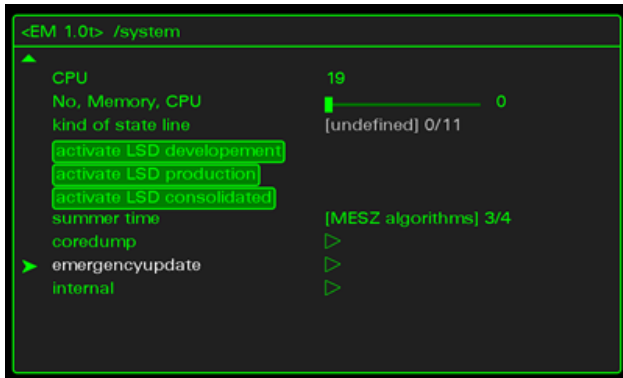
Format your SD in FAT32.

Copy the root of your firmware in the SD (like picture below)

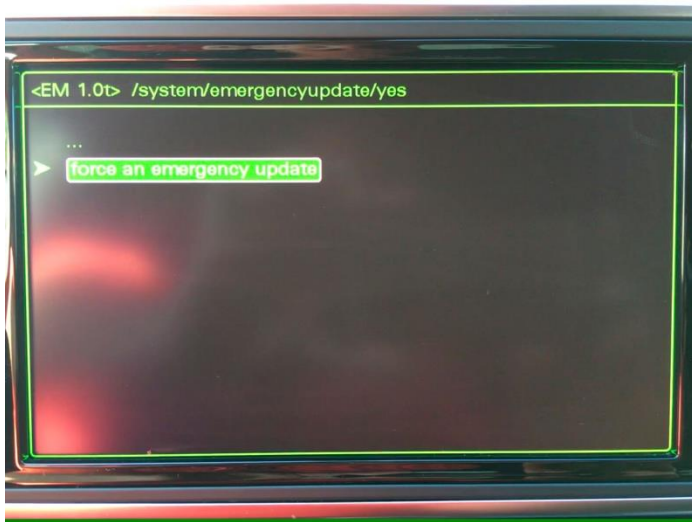


Insert your new firmware update into the MMI unit slot SD1

Go to **system** and press “**emergency update**”, then click “**Yes**”



Click on **force an emergency update** and then exit from menu to start the update.



MMI will now reboot and enter into “Emergency Update” mode.



**Important:** The deletion and programming processes are performed several times, until all components of the MMI have been updated. Wait until the programming process is finished and the system automatically restarts. **Your input is not necessary.** The flash tool will begin deleting all the existing flash information in this step.





Once the above step is completed the programming screen will appear



**Important:** Your input is not necessary; the update tool will perform everything automatically.



**Info:** Some users reported that “Emergency Update” only install a few (basic) functions on your MMI, while other functions (like Google Maps) are not installed.



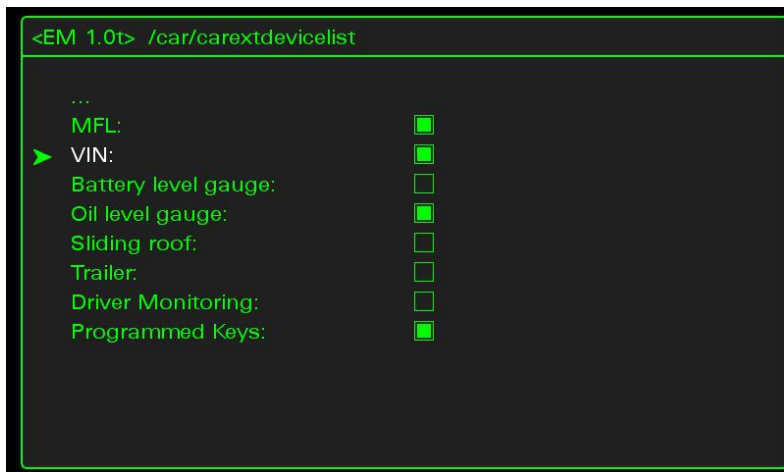
Once the MMI emergency update is completed, you will need to re-install your firmware as normal using the procedure showed in this manual for install all “secondary” functions.

# SHOW VIN NUMBER IN MMI MENU

If, previously, you have disabled "show VIN in menu" (because Carson's activator) you can enable again following the next steps:

Open Green Menu (Check page 4)

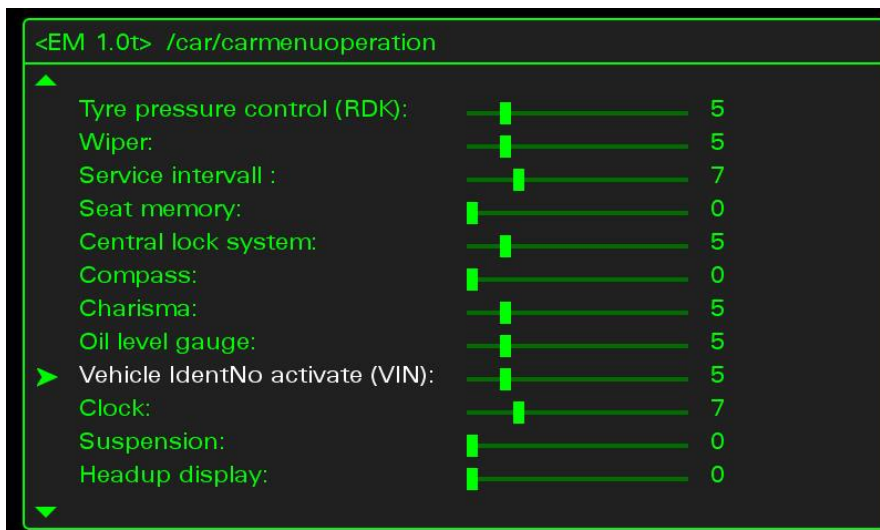
Go to `car/carextdevicelist` and check "VIN"



Go back (click in `...`)

Go to `car/carmenuoperation`

Scroll down to VIN and set VIN value to "5"

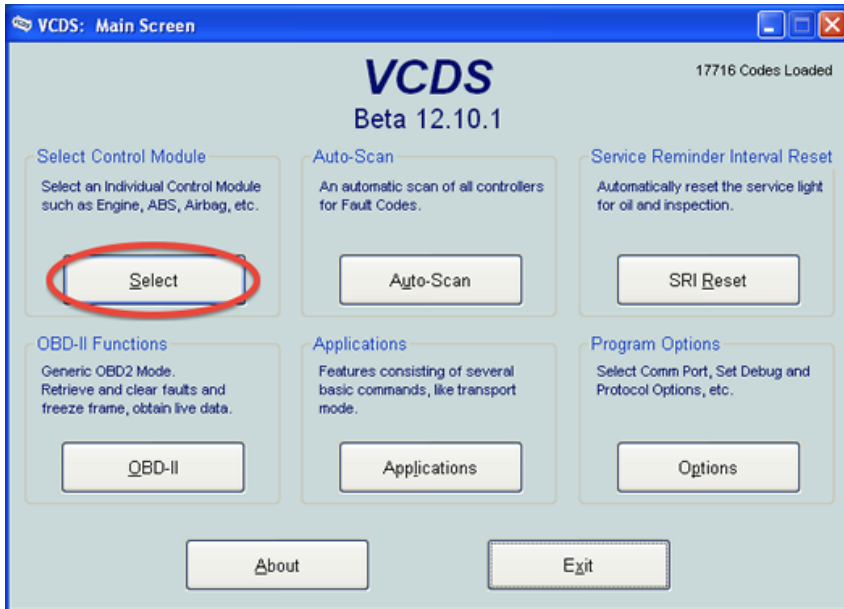


Exit from Green Menu with the `CAR` button.

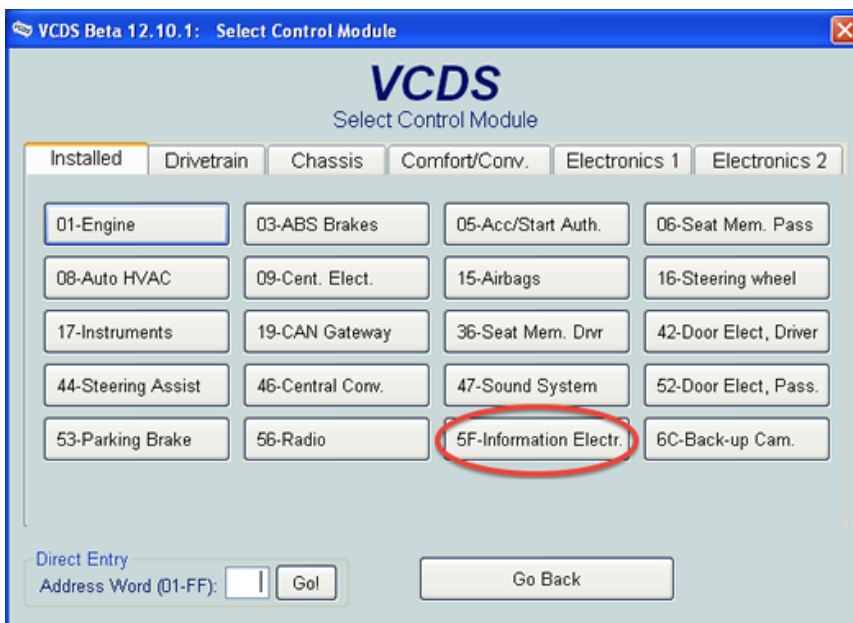
Reboot your MMI (Check page 4)

# REMOVE ERROR "03276 PLEASE CHECK SOFTWARE VERSION MANAGEMENT"

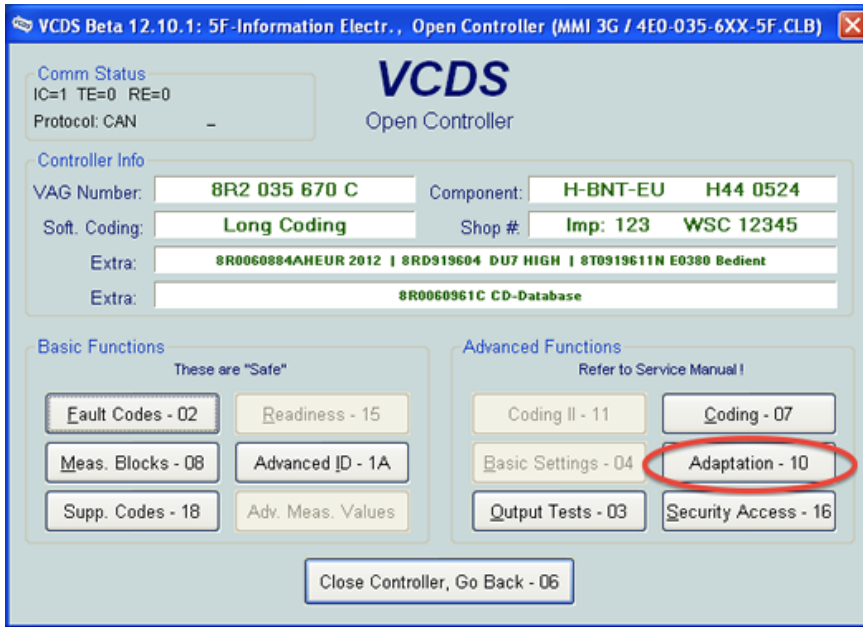
Open VCDS and inside "Select Control Module" click on "Select" button



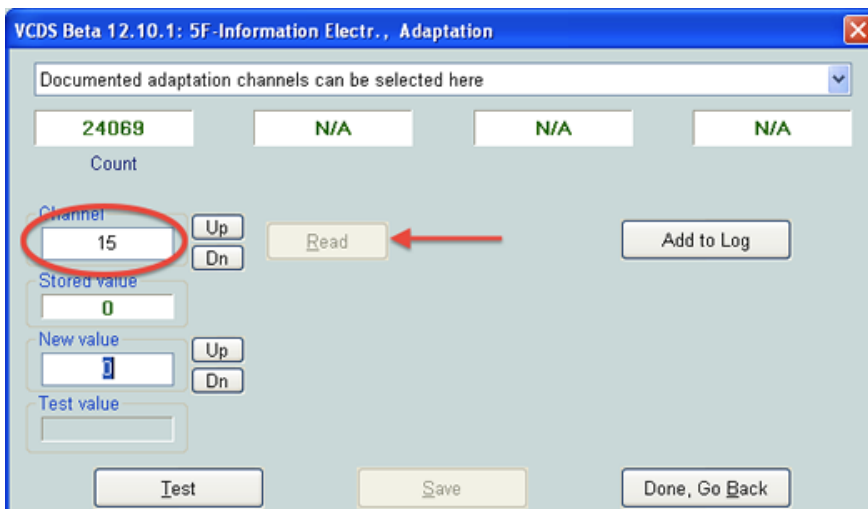
Select module "5F"



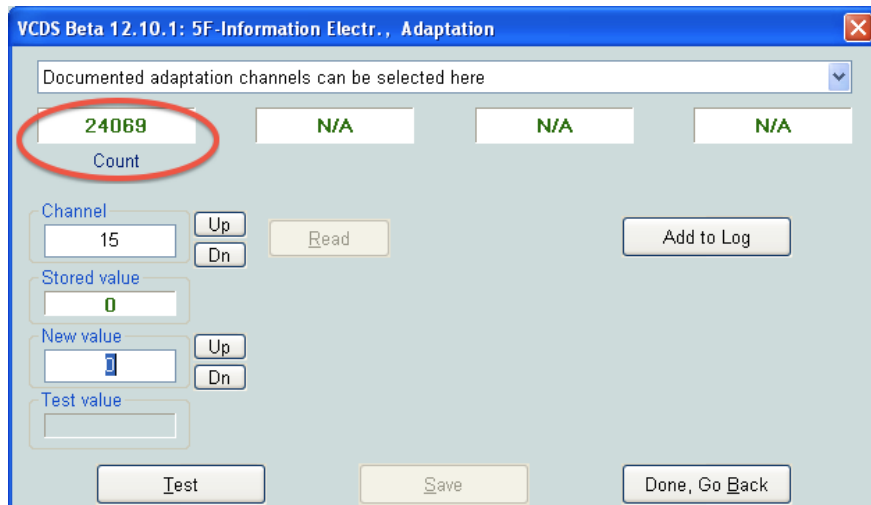
Click on **"Adaption - 10"**



Enter **"15"** for the channel and press the **"Read"** button



Copy the number in “**Count**” field



Using a scientific calculator make the next formula:

YourCountNumber ^ 51666

Or

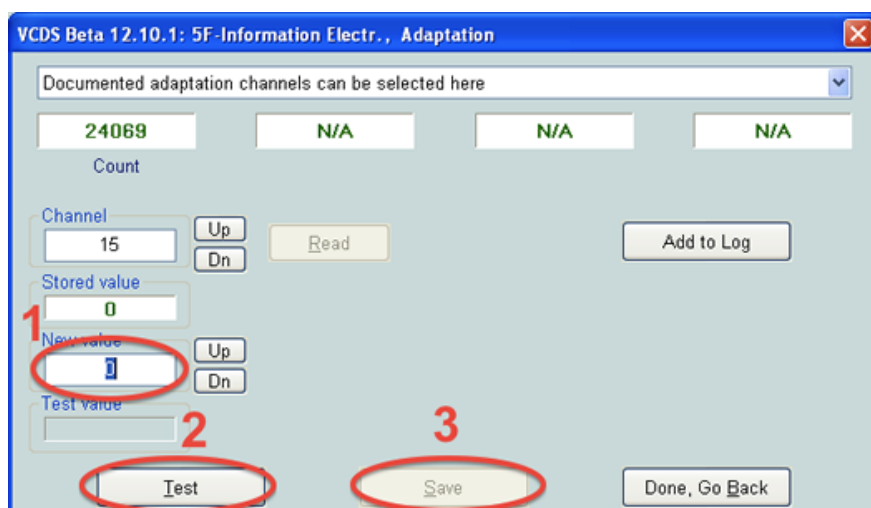
YourCountNumber XOR 51666

You can also use the calculator in

[http://www.audienthusiasts.com/Application\\_SVMError.html](http://www.audienthusiasts.com/Application_SVMError.html)

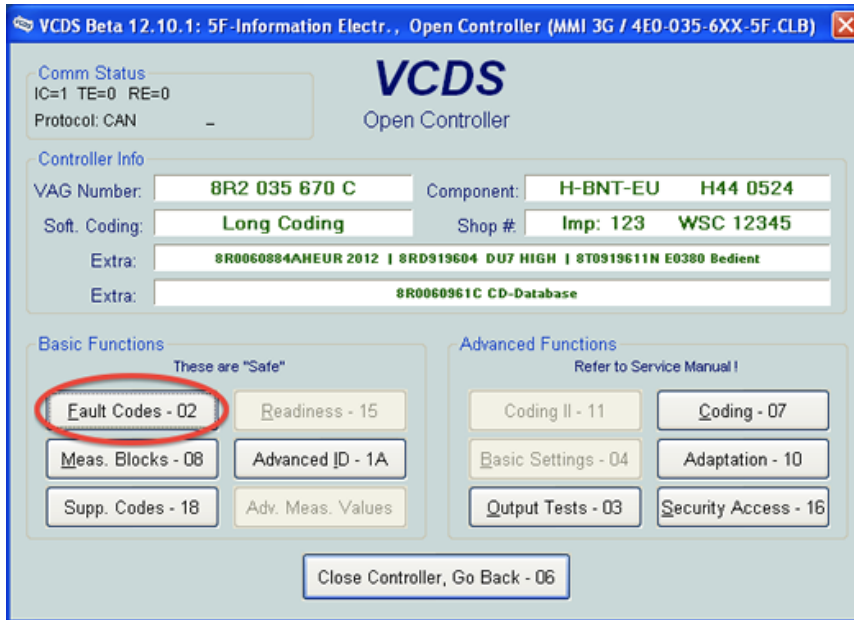
Now enter the result into the “**New Value**” field and click “**Test**” and “**Save**”

Note that only “**Save**” may be available in which case you would ignore the “**Test**” button

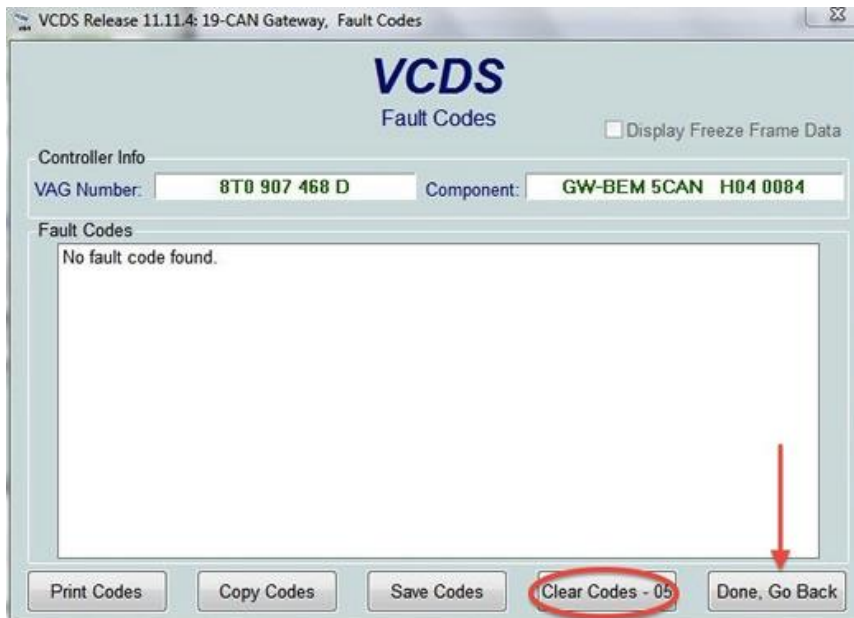


Exit Adaptations and return to the main screen (Click “**Done, Go Back**”)

Click **“Fault Codes – 02”**



If you see any Faults click **“Clear Codes – 05”** then **“Done, Go Back”**



Now check Fault Codes one more time and the SVM error should be gone. If not, repeat the steps again.

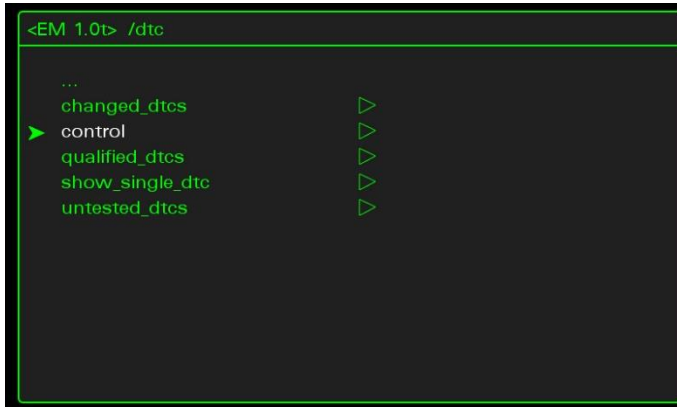


**Info:** In the event you go to Channel 15 and there is no Count value, clear your errors and then go back recheck. Sometimes the count will not be present until the error is cleared. Of course the error will return until you complete all the above steps again

# REMOVE ERROR "03623 - Invalid Security / Release Code"

Open Green Menu (Check page 4)

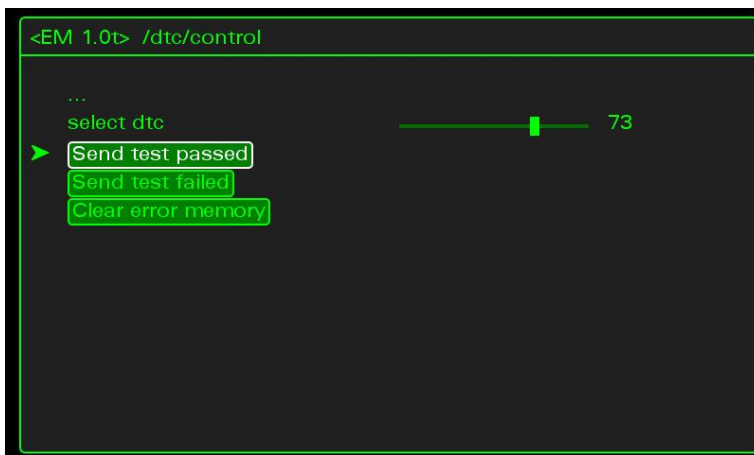
Go to **dtc**



Search and select **control**

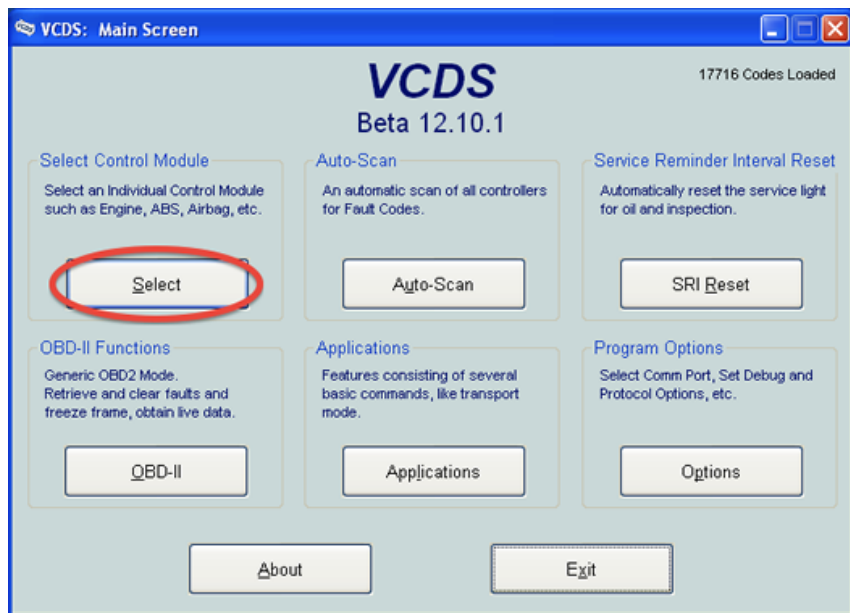
Scroll **search dtc** to value 73 and click for select it.

Select **Send test passed** and click it

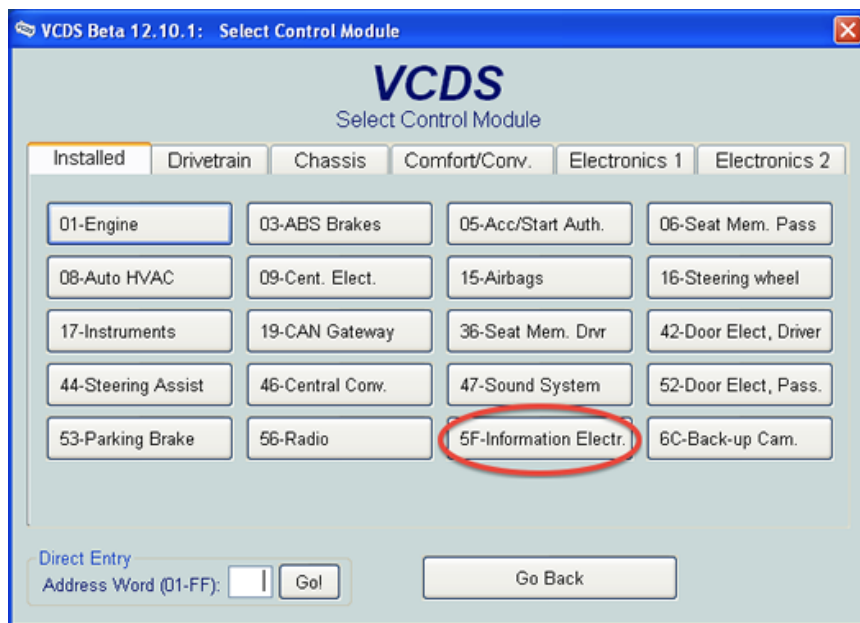


Check that error are cleaned

Open VCDS and inside "Select Control Module" click on "Select" button

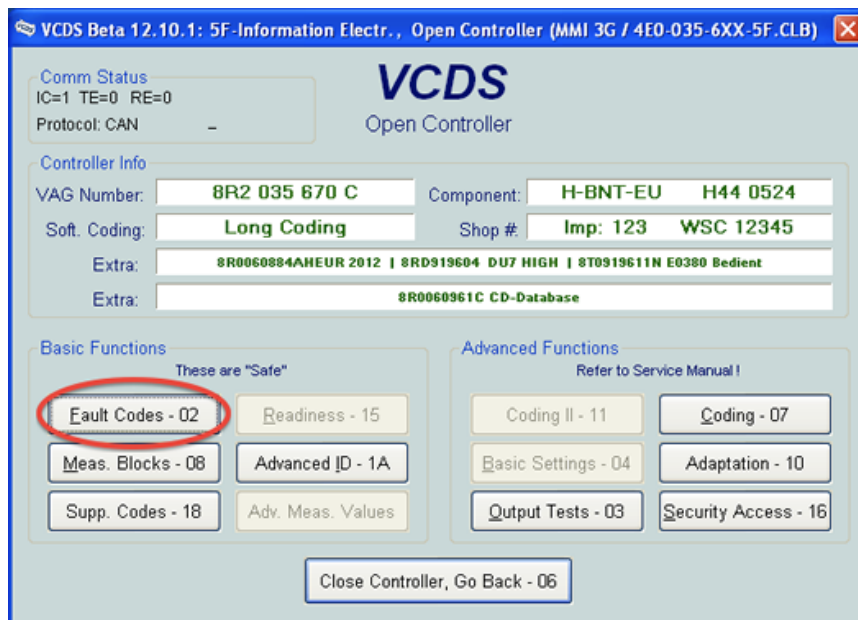


Select module "5F"

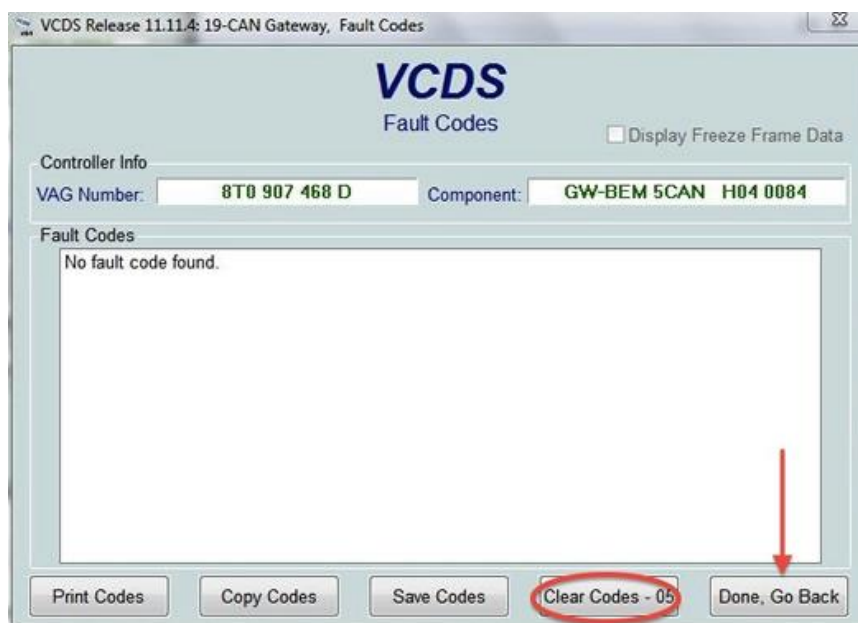




Click **"Fault Codes – 02"**



If you see any Faults click **"Clear Codes – 05"** then **"Done, Go Back"**



Now check Fault Codes one more time and the 03623 error should be gone. If not, repeat the steps again.

# USER DEFINED UPDATE

Sometimes things go wrong and maybe the update is not completed. When this happen you can use the "User Defined" mode for make a manual selection of what upgrade or install.

This is also useful for some Bose audio users that want to update all functions in MMI except Bose modules (Bose updating sometimes will trigger "component protection" and you will need to recode the unit).

For enable this mode:

Open Green Menu (Check page 4)

Go to **swdl** and tick "**user defined mode**"

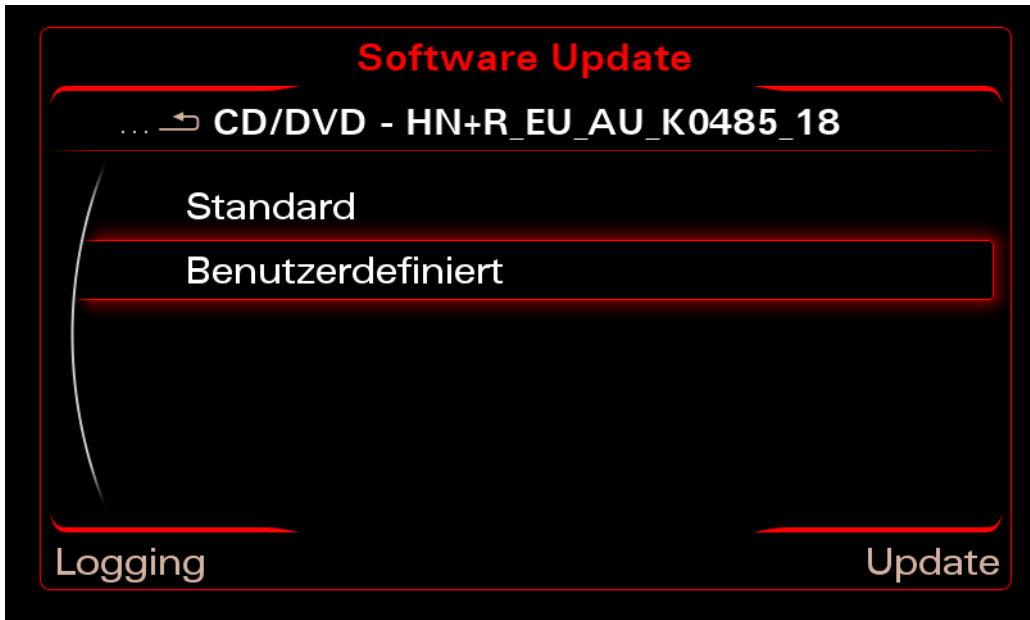


```
<EM 1.0t> /swdl
...
count down           41169
HW index IT         0
unexpected resets    0
current version      ####
> user defined mode   
ignore region and variant 
```

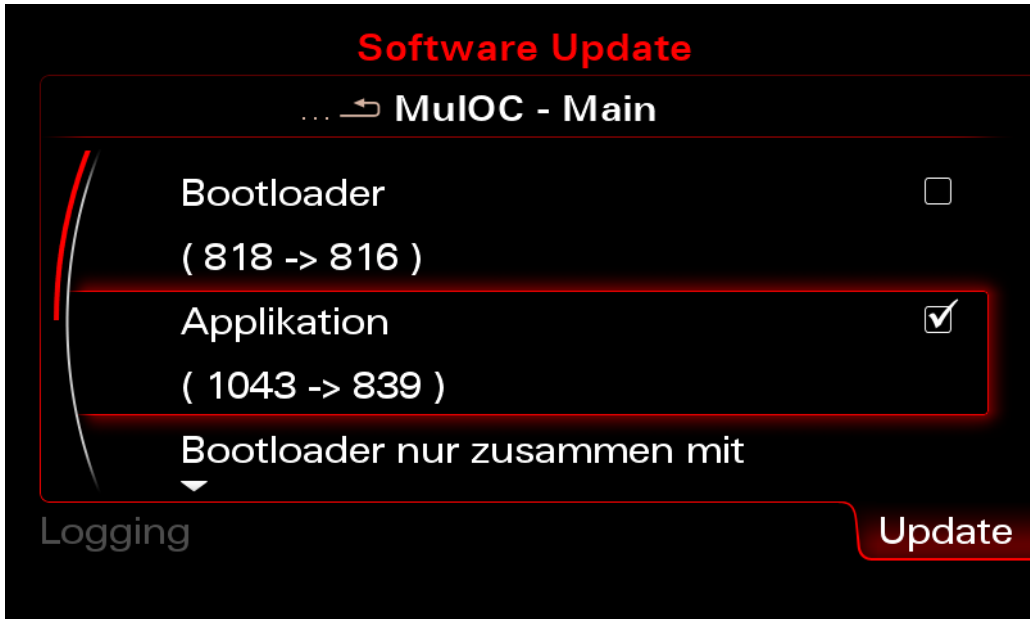
Don't reboot, just exit with any button (I usually use **RADIO**)

Proceed with firmware-upgrade as normal.

When the update starts, you can select "User Defined" instead of "Standard"



And now you can select every module manually.



# THANKS

This manual was originally created by Carpediem and updated/extended by darkdll

Thanks to all the people involved in the Audi scene

Thanks to Carson and Keldo for their super patch.

Thanks to people that share their maps, firmwares and FSCs and helps in forums

Especial thanks to Iridium, Walawa75, DJDeniska, 571 & Sjaxo, AudiEnthusiasts, Cartechnology forum

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And of course thank you for read this :)