

My Car: Audi A4 B7 2.0TFSi 2006, DIS, Bluetooth, RNS-E

Project to Fit:

Cruise Control, FBMFSW (Flat Bottomed Multi Function Steering Wheel)



BEFORE



AFTER

FIRSTLY DO THIS TOTALLY AT YOUR VERY OWN RISK! I TAKE NO RESPONSIBILITY FOR ANY DAMAGE YOU CAUSE TO YOUR CAR OR YOUR PERSON WITHOUT EXCEPTION! THIS IS ONLY MEANT AS A GENERAL GUIDE!

My Car had No MFSW fitted, No cruise control, had the control module 'S' and a 6 pin slip ring.

Car came fitted with:

Steering Wheel Fitted = NON MFSW (8E0 419 091 DR VDU)

Airbag = (8E0 880 201 DG 6PS)

Steering controller = 8E0 953 549 'S'

Slip Ring = 6 pins

Cruise Control = No

New Parts fitted:

FBMFSW = 8J0 419 091C

Matching Airbag = 8J0 880 201 J 6PS

Steering Controller = 8E0 953 549 'Q'

Slip ring = 12 pins 4E0 953 541 B

Airbag loom = 4F0 971 589 A loom

Cruise Stalk = 8E0 054 690

Cowling (Lower Trim) = 8E0 953 512 P 6PS



Tools Needed: Torx screwdrivers, Allen key, Small flat screwdriver, VCDS (Vag Com Software) & 10mm Spanner

Brief description: My car was fitted with a non MFSW and no cruise control. This meant that contrary to popular belief (even at the dealers (they give you 8E0 953 549 'R' by default and tell you all A4's come pre-fitted with it but this is not true!) I needed to change the Steering controller as mine was fitted with an 8E0 953 549 'S' module which meant it wasn't suitable for MFSW (or possibly Cruise Control). The 'Q' version is perfectly suitable for the job, the 'R' version just differs with the added option of heated steering wheel! who needs that? Also the 'Q' version is cheaper and better chance of getting one from a used source like eBay etc.

I also had to change the Slip Ring, as mine had 6 pins for airbag only and I needed 12 pins (for added steering functions). A new airbag wiring loom as the one on my car didn't have any wires coming out of one side, the mfsw wire side. I needed to get the Cruise Control Stalk and lower cowling (be sure to get the correct colour!) and needed to get a new Airbag wiring loom (harness) as the old one in the car had no wires coming out of the connector for the Steering Multi Functions.

OK this is how I did it:

Firstly before doing anything, run an FULL auto scan using VCDS, save this (good idea to print it out and keep it to hand when coding) as you will need to refer to it, and once you removed the parts then it's too late!

Then you will need to prepare to physically fit the new parts. Put key into ignition, turn to 'ignition' position, this is where the dashboard lights up just before the engine start position, leave it there and go disconnect the car's earth terminal from the battery.

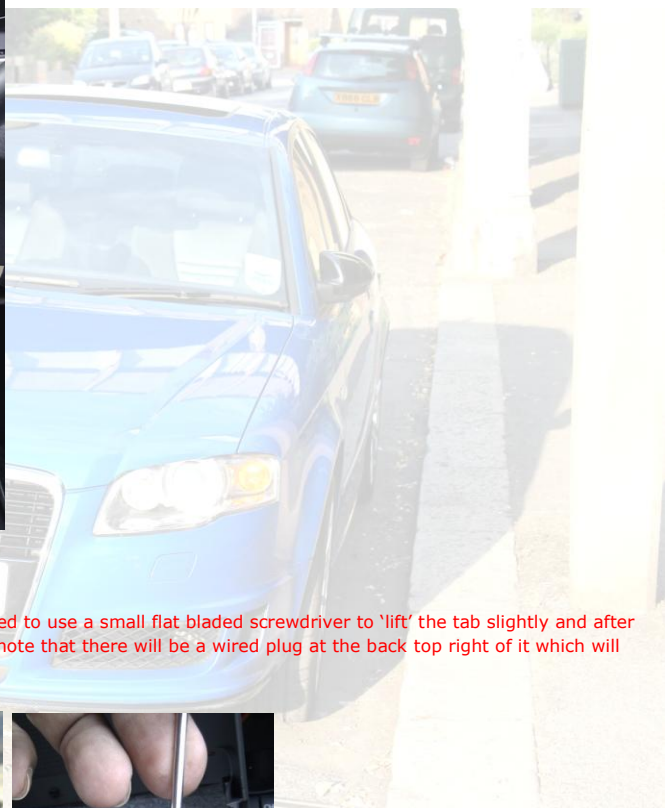
Remove Airbag: You will have Caps that will need to be removed to reveal the 2 Star Screws either side behind the steering.



Disconnect Airbag and remove steering wheel: Pull the Violet tab upwards and it will disconnect airbag (handle with care and store in safe place!) straighten steering position to straight ahead and remove big centre bolt, after removing centre bolt you cannot see a mark on the steering and on the column, scratch a mark to know where the centre is before lifting of the steering wheel.



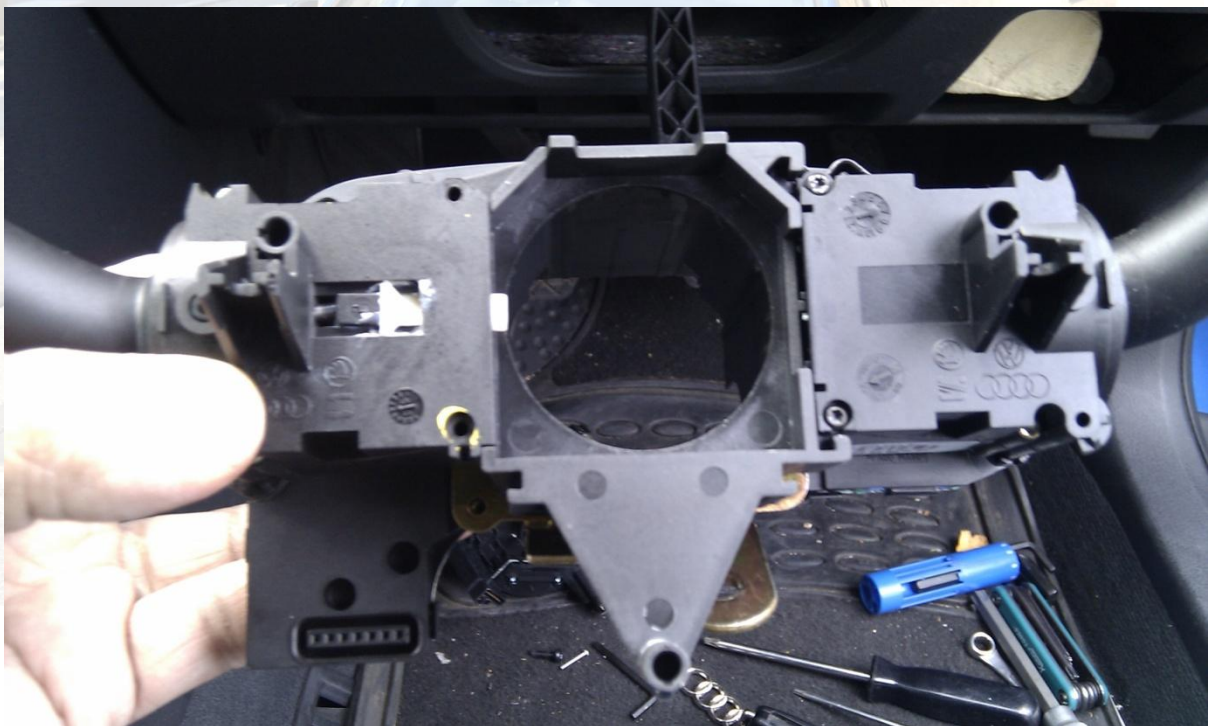
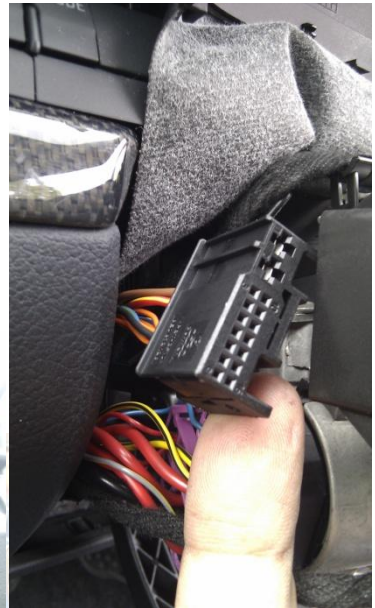
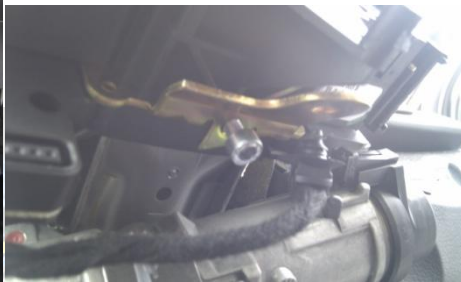
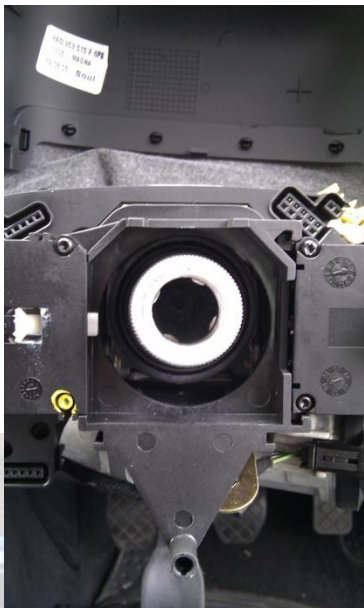
Remove Trim/Cowlings: Unscrew them from the bottom cowl, the top one will flap up and back, I carefully played about with the bottom one and it came off, but others have removed lower trims (knee panel), I didn't need to, so this saved me time. Same is for the refitting of the new one, take your time and with a little fettling it will go back on 😊



Remove the Slip ring: The slip ring is 'clipped' on, you will need to use a small flat bladed screwdriver to 'lift' the tab slightly and after you have done all three tabs it will come away, be careful to note that there will be a wired plug at the back top right of it which will need to be disconnected to finally allow it to come away.



Removing Steering controller assembly: Steering controller is exposed with the indicator and wiper stalks as an assembly. There is an allen key underneath, loosen this and the assembly will come away, there is a wiring plug on the left side disconnect this and there will be a small wire running across the top just clipped on the assembly, life it away, then slide assemble forward and remove it.

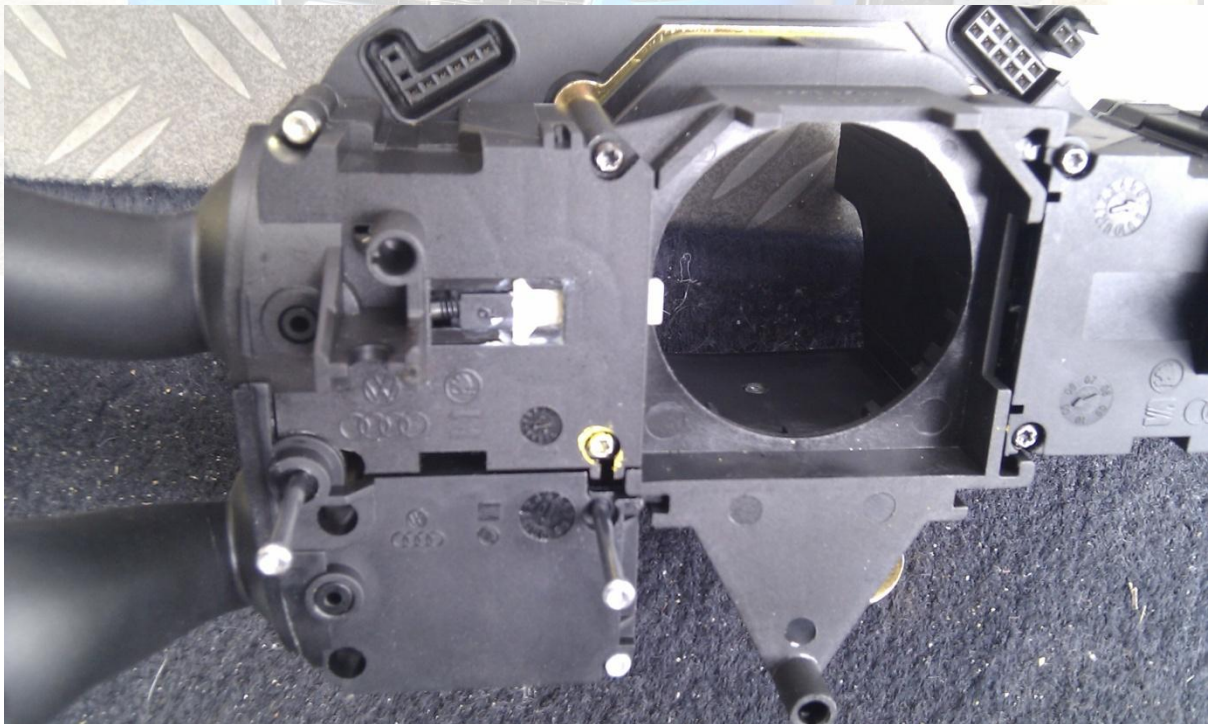


Separate the Steering Controller from the stalks: Unscrew the four small star screws and the controller will then separate. Notice the bottom left there is a space this is where the Cruise control Stalk will be connected to the new Steering Controller.

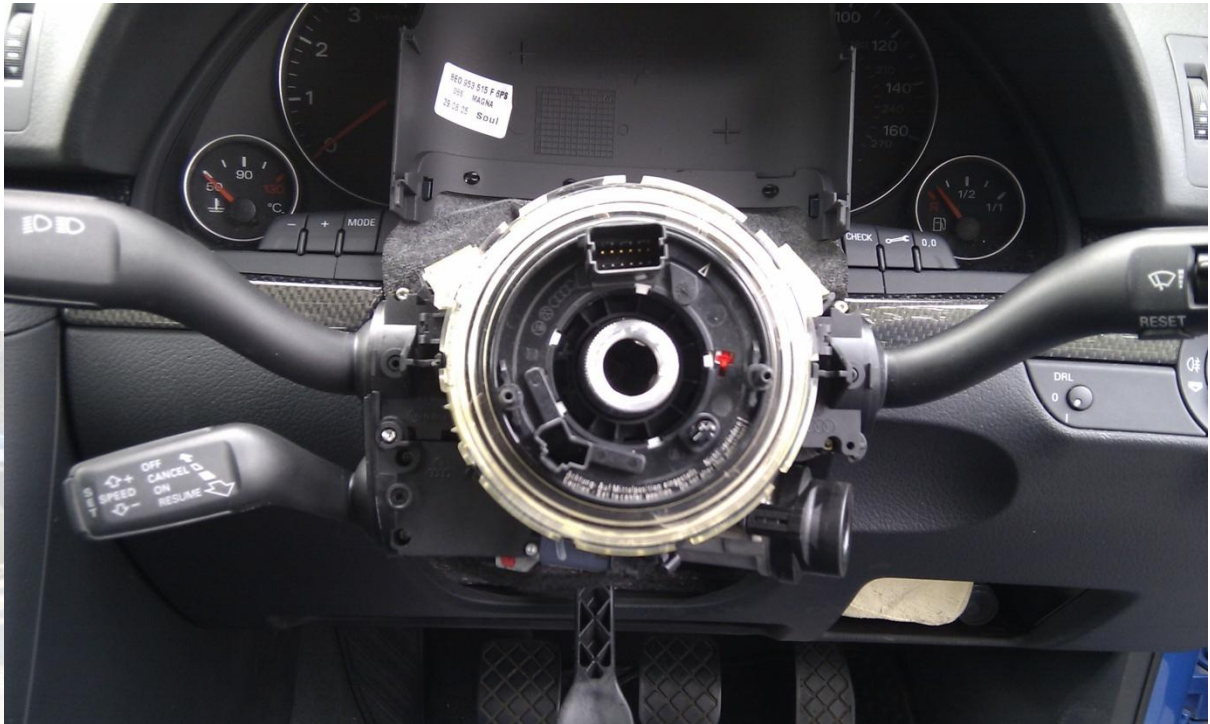


OLD AND NEW

Fitting the cruise to the assembly and the new Steering Controller: Fit the new Cruise stalk to the assembly, then, fit new controller and screw together, this is because the cruise stalk has a bit that slides underneath and if you fit the controller first you will have to remove it again! Screw in new additional two screws to secure the Cruise Stalk.



Refit assembly and Slip ring: Push assembly back onto steering column, reconnect big wire plug on left side and wire connector top right of slip ring, also clip back little wire running along top of steering controller which you moved away previously. Tighten the loosened bolt underneath to secure.



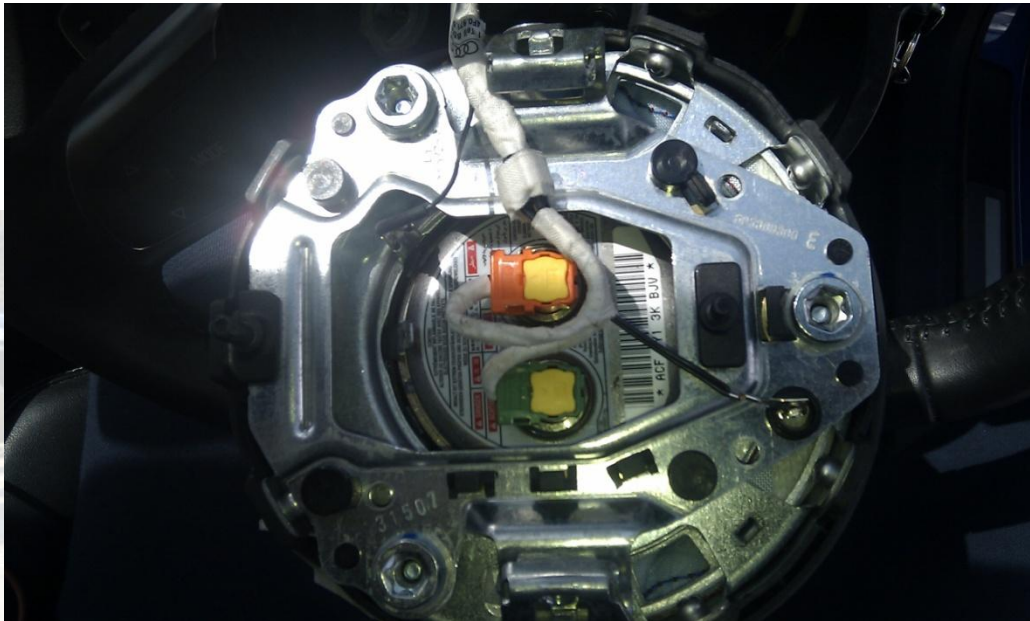
Refit all other parts in reverse including the trims (cowlings) then the all important FBMFSW lining up the mark you made at the beginning to keep steering aligned straight then properly tightening up the main column bolt! ☺



Fitting Airbag: Take the airbag (as always handle with care!) remove old loom (by lifting the yellow tabs on top of the Orange and Green connectors , they only pop up a little so don't force them all the way out! As they don't come all the way out!) and fit the new Airbag loom carefully making sure the correct connectors are fitted to the correct airbag connections (these are colour coded) fit the loom around the cable guides and then connect the two black wires to the grounding tabs, if there are three tabs then you will need to connect one of the wires to the insulated tab on the metal frame (probably has a round black plastic surround around the tab), and the other black wire to the outer tab of the remaining two. This is for the horn, and if connected incorrectly the horn will not work!

You may find that the size of the tabs on the Airbag differs from the size of the connectors on the black wires on the loom, if so then you need to solder new ones of the appropriate sizes.

Connect the small flat Connectors from the Airbag loom and the loom fitted inside the steering wheel. (note the steering wheel loom has only three wires while the Airbag loom has 6 black wires, but it is ok.



Correct Wiring

configuration for the two black wires which allowed the horn to work ;)



OK, now after fitting the Airbag back on and securing it, make a visual inspection, making sure Airbag is properly and evenly seated on both sides (I would recommend evenly tightening up of the Airbag bolts, push the horn and see that it freely moves, and steering turns without anything scrubbing.

PUT KEY BACK INTO IGNITION BARREL AND TURN TO SAME POSITION AS IN BEGINING, WHICH IS TO IGNITION ON, THEN, go and connect the car's battery back on.

Please note all Coding references here are for my vehicle, other cars may/will vary and you will need to make sure you look up the correct info for your own car, again do this at your own risk! ☺

CODING:

Now that you have fitted your new MFSW you will need to 'code' all the relevant controllers for the car to know it is there and of which type. Grab your VCDS (Vag Com)

You will have errors logged and will need to code the following controllers:

- 1) Address 16: Steering wheel
- 2) Address 01: Engine Controller
- 3) Address 03: ABS Brakes
- 4) Address 37: Navigation
- 5) Address 56: Radio (when you correct code above Address: 37 this one should clear itself)
- 6) Address 77: Telephone

- 1) Address 16: Steering wheel

As my new steering controller was actually a 'used' one and a change of the controller means I had to (VIN) learn it to the car and Code it as a Multi Function Steering as opposed to previous non MFSW.

Using VCDS go to Channel 081: Vehicle Data Learning

To start the process for the vehicle data learning, enter 00111 and save.

Next coding:

You will need to refer to a table and select the correct coding for your new MFSW, in my case my Coding is 04041.

This is explained here:

[http://wiki.ross-tech.com/wiki/index.php/Audi_A4_\(8E\)_Steering_Wheel#Coding](http://wiki.ross-tech.com/wiki/index.php/Audi_A4_(8E)_Steering_Wheel#Coding)

- 2) Address 01: Engine Controller

As my car didn't have Cruise Control I needed to tell the ECM that it was there to enable it, this is done as:

Using VCDS go to Channel 01: Engine Controller, select coding, now in my car I had to do long coding as it is the newer type, the coding I did is: 01040003180F0120, the red digit being the one I changed from 0 to 1.

This is explained here:

http://wiki.ross-tech.com/wiki/index.php/2.0I_TFSI_%28AXX/BGB/BPJ/BPY/BWA%29#Coding

- 3) Address 03: ABS Brakes

As the Slip ring had been replaced, and battery disconnected I had to go to login, in my case enter 0004526, select Do it!

This is explained here:

[http://wiki.ross-tech.com/wiki/index.php/Audi_A4_\(8E\)_Brake_Electronics_\(Bosch_8.0\)#Sensor_for_Steering_Angle_.28G85.29](http://wiki.ross-tech.com/wiki/index.php/Audi_A4_(8E)_Brake_Electronics_(Bosch_8.0)#Sensor_for_Steering_Angle_.28G85.29)

or here

[http://wiki.ross-tech.com/wiki/index.php/Audi_A4_\(8E\)_Brake_Electronics_\(Bosch_5.7\)](http://wiki.ross-tech.com/wiki/index.php/Audi_A4_(8E)_Brake_Electronics_(Bosch_5.7))

Depends on your car.

- 4) Address 37: Navigation
My RNS-E was showing wrong coding after adding the MFSW, so I went to coding and coded mine to 0309717.

This is explained here:

- 5) Address 56: Radio (when you correct code above Address: 37 this one should clear itself)
When coding the Address 37 above this error cleared itself ☺

- 6) Address 77: Telephone
Everything was now working but the 'mode' button on the MFSW wasn't doing anything so I went to coding and coded mine to 0011822 this allowed my mode button to work ☺

This is explained here:

[http://wiki.ross-tech.com/wiki/index.php/Audi_A4_\(8K\)_Telephone_Preparation_\(CAN\)#Adaptation](http://wiki.ross-tech.com/wiki/index.php/Audi_A4_(8K)_Telephone_Preparation_(CAN)#Adaptation)

That's pretty much it ☺





THANKS
SARGE