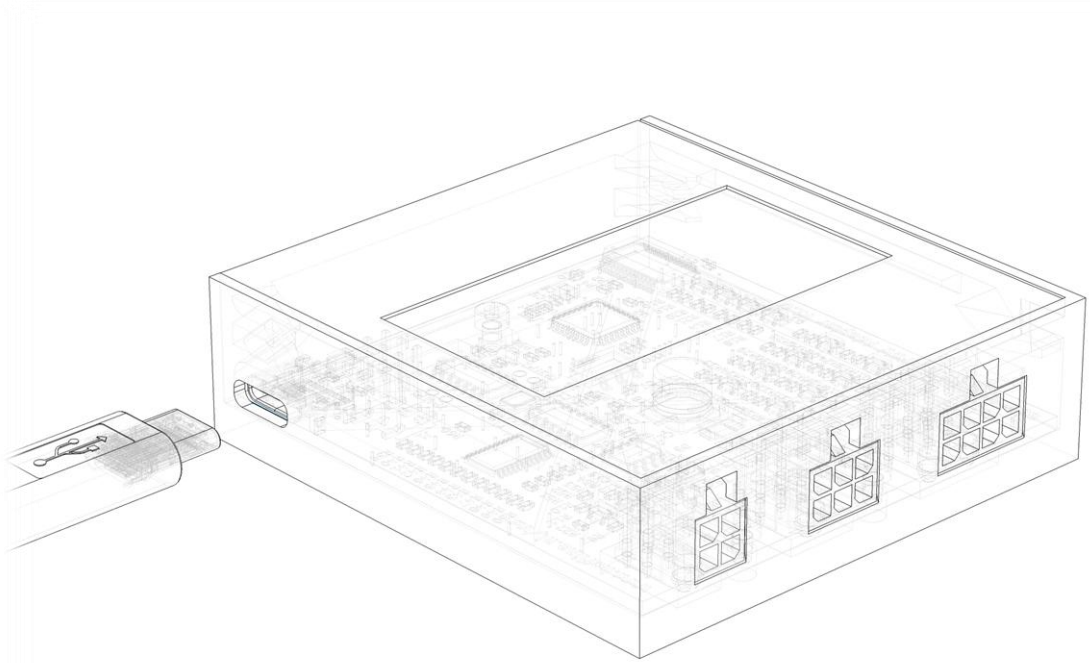
Installation guide

MQB Multifunction Steering Wheel in Golf MK4



September 30th, 2026

Version 1.6

vw.hofline.nl/mfsw/

1 Disclaimers

- Disconnect the battery before installation.
- Verify all wiring before reconnecting the battery.
- Ensure that the airbag circuit remains isolated and is only connected to the airbag control unit through the clockspring.
- The installer assumes responsibility for damage or injury resulting from improper installation or misuse of this product.

2 Required tools

- Ratchet
- TX20 and TX25 Torx bits
- 10 mm socket
- Crosshead screwdriver
- Small flathead screwdriver
- Medium flathead screwdriver
- 55 Nm Torque Wrench
- M12 XZN Bit
- Interior panel removal tool
- Electrical tape

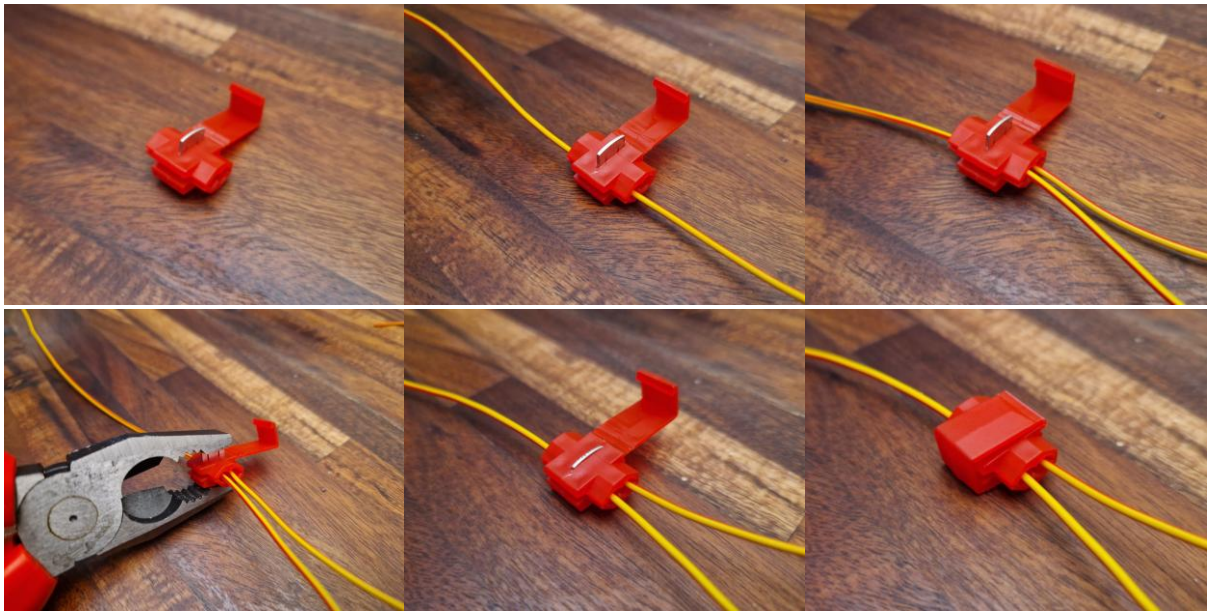
3 Estimated installation time

Experienced installer: 2 - 3 hours

First-time installation: 3 - 4 hours

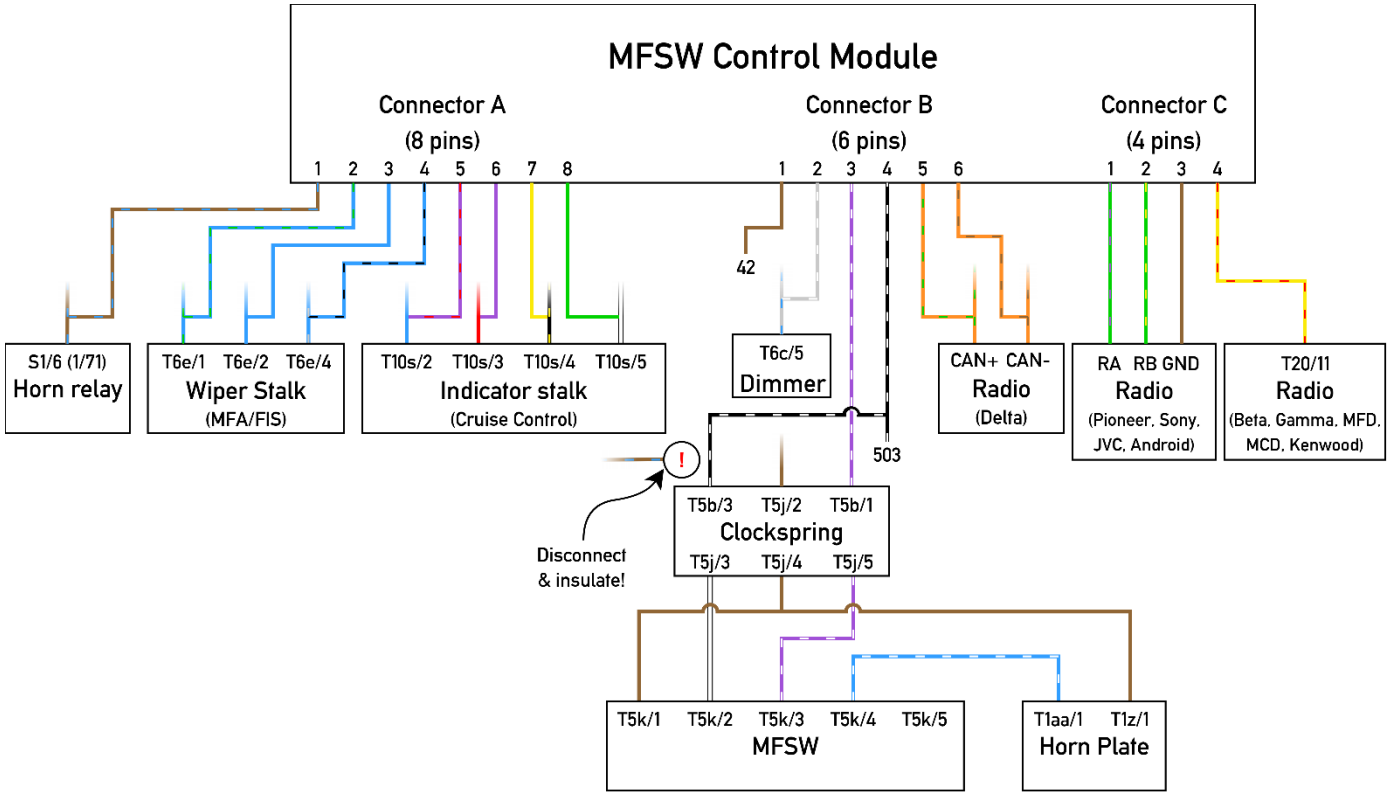
4 Splicing wires

The kit includes quick splice connectors to easily splice wires together. To use them, insert the two wires, use pliers to firmly press the contact sheet into the cable, and then close the safety tab.



5 Wiring overview

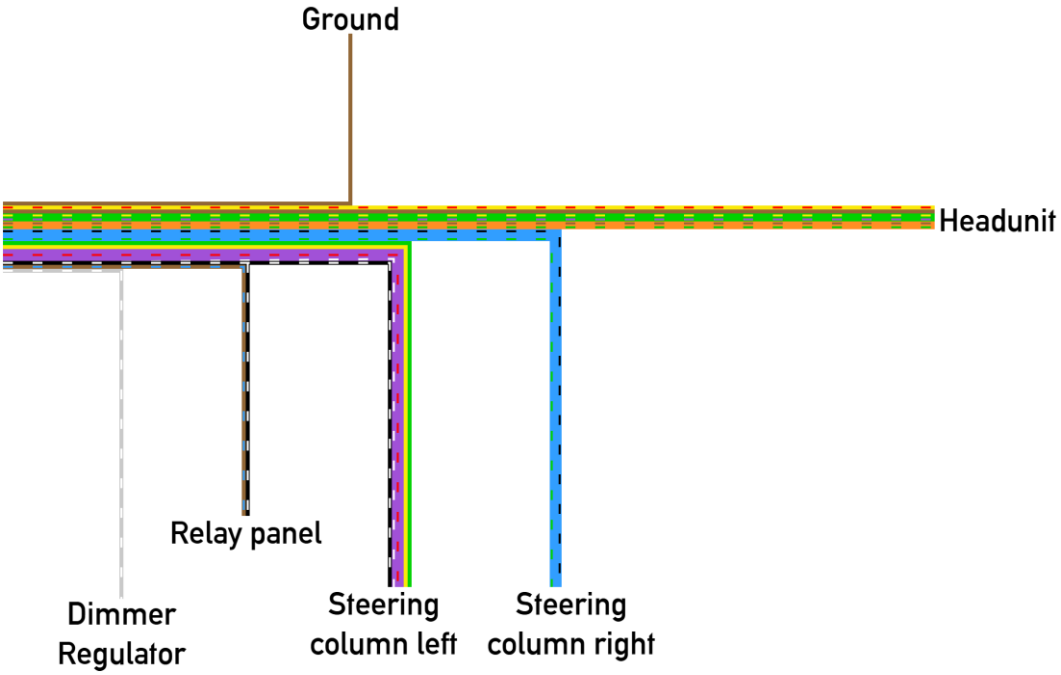
The wiring diagram below provides an overview of all connections that are described in the step-by-step guide.



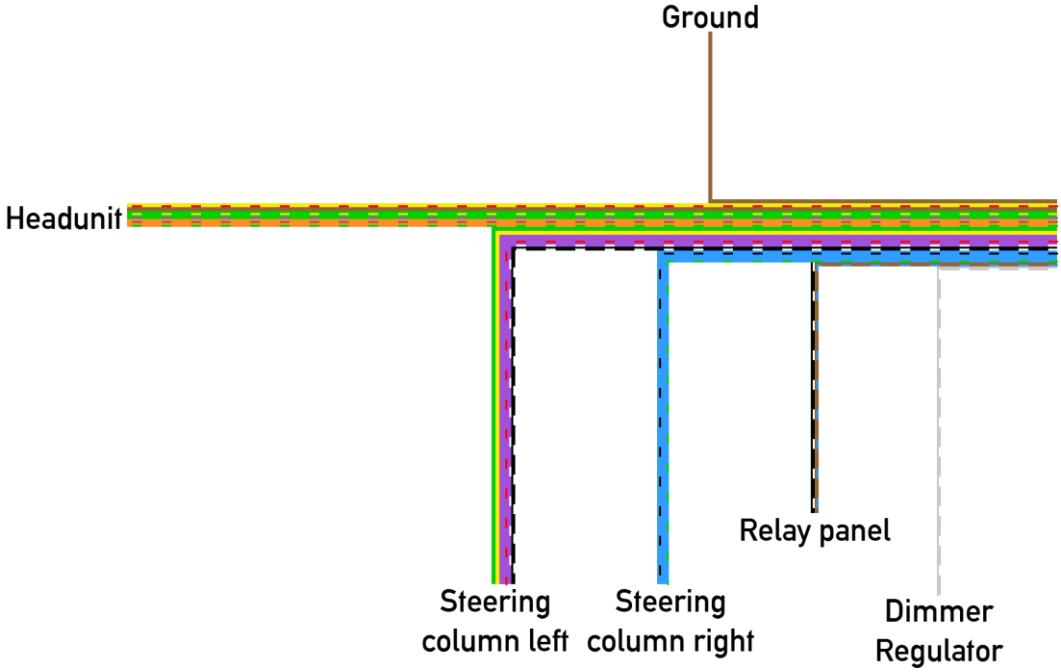
6 Wiring harness

The diagrams below provide an overview of the wiring harness included for either the left- or right-hand drive variant. Some wires depend on the selected options and therefore they may not be present in your wiring harness.

6.1 Left-hand drive



6.2 Right-hand drive



7 Preparation

7.1 Remove dashboard panels

1. Remove the driver side dashboard cap.

2. Remove two TX20 screws from the bottom of the lower left dashboard trim piece.

3. Pull the trim piece off towards the back of the vehicle.
4. Remove two TX20 screws from the right trim piece.

5. Pull the trim piece off towards the back of the vehicle.
6. Remove seven TX20 screws from the dashboard reinforcement.

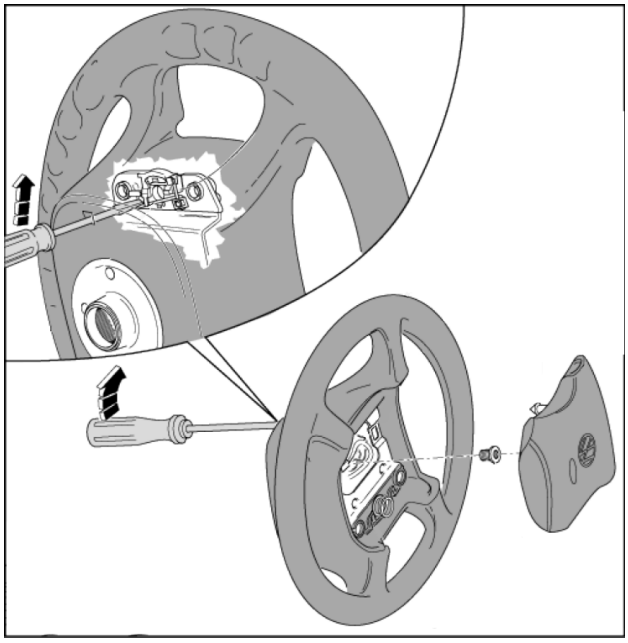
7. Pull the reinforcement off towards the back of the vehicle.
8. Pull the panel above the pedals off towards the back of the vehicle. It is held in place by the clip in the center.

7.2 Remove the steering wheel

> ⚠ Do not rotate the clockspring once the steering wheel is off. If it ends up one or more full rotation from the original position it may break!

1. Disconnect the battery.
2. Fully extend and rise the steering column and turn the wheel 90 degrees to the right.
3. Insert a flathead screwdriver into the hole in the back of the steering wheel and use it to release the left side of the airbag.

4. Turn the steering wheel 180 degrees and release the other side of the airbag using the same method.
5. Disconnect the airbag
6. Center the steering wheel
7. Unscrew the center bolt using an M12 XZN bit. (Hold the steering wheel, avoid exerting force on the steering wheel lock.)
8. Pull the steering wheel off.

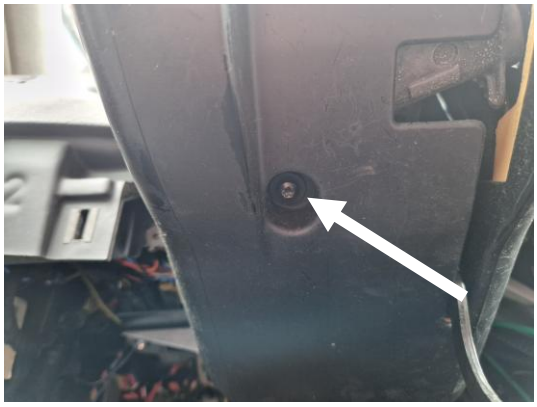


7.3 Remove the steering column trim

1. Remove two TX25 screws from the steering wheel adjustment lever.

2. Extend the steering wheel adjustment lever and pull off the handle towards the left.
3. Remove four crosshead screws from the front and bottom of the steering column trim.

4. Remove the TX25 screw from the bottom of the steering column trim.



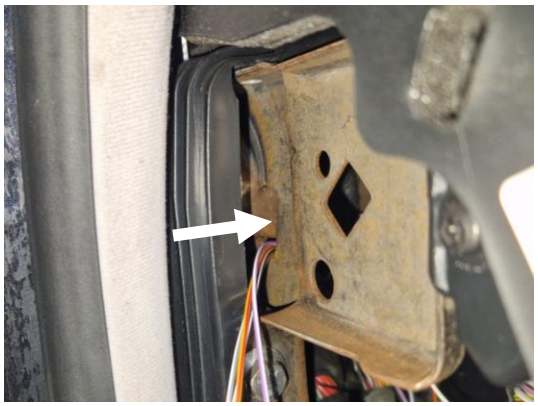
5. Remove the lower steering column trim.
6. Unclip the front part of the upper steering column trim from the dashboard by pulling it horizontally towards the back of the vehicle.

7. Remove the upper steering column trim.

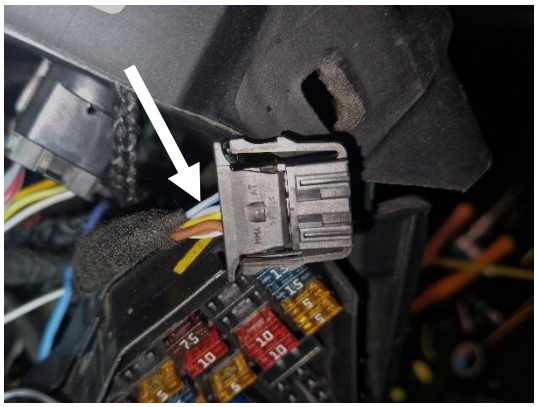
8 Wiring

8.1 Base wiring

1. Feed the MFSW wiring loom through the hole at the left side of the dashboard.



2. Disconnect the connector from the back of the dimmer switch.
3. Splice the gray/blue wire from the MFSW module into the gray/blue dimmer wire.

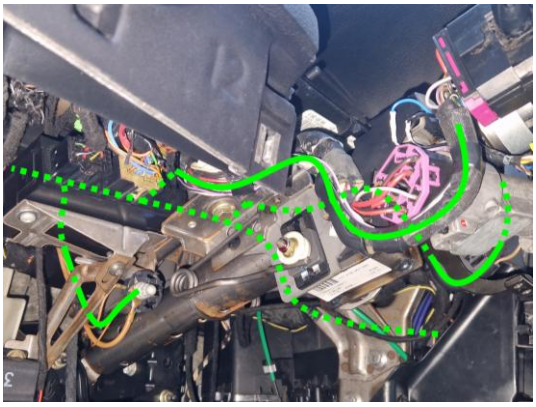


4. Continue routing the wiring along the path shown below, route the black/white and brown/blue wires towards the relay panel.

5. Connect the black/white power wire to the X-contact relief terminal marked “75 X”.

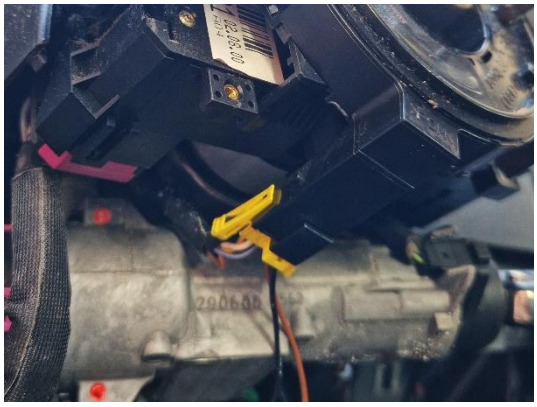
6. Connect the brown/blue horn wire from the horn relay (53) to the brown/blue wire from the MFSW wiring loom.

7. Continue routing the wiring along the original wiring loom as shown below:
   a. Brown down towards the ground point.
   b. Head unit control wires towards the head unit.
   c. Clockspring and cruise (optional) wires along the left.
   d. MFA (optional) wires along the right of the steering column.

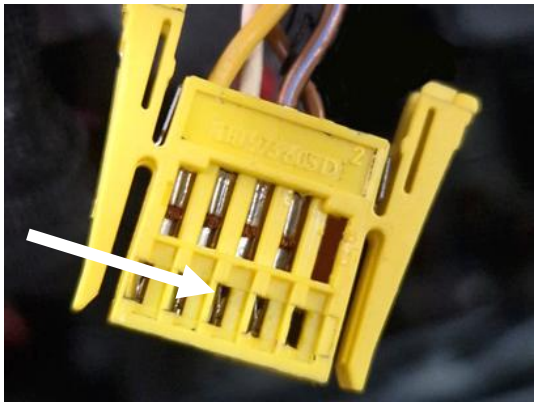


8. Connect the brown ground wire to the ground point next to the steering column.

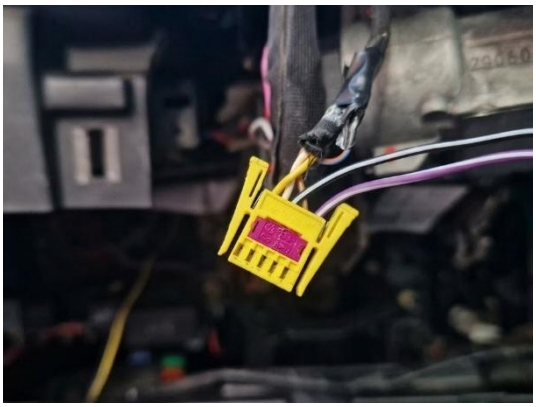
9. Disconnect the yellow plug from the back of the clockspring.



10. Remove the purple retainer clip from the plug using a small flathead screwdriver.
11. Remove the brown/blue horn wire from pin 3 by pressing the small tab on the contact using a small flathead screwdriver.



12. Insulate the removed brown/blue wire using electrical tape.
13. Insert the purple/white signal wire into pin 1, and the black/white power wire into pin 3.
14. Reinsert the purple retaining clip.



15. Plug the connector back into the clockspring.

8.2 MFA/FIS

> ⓘ Only for vehicles with MFA (Half) or FIS (Full) cluster display.

Splice the following wires into the corresponding wires from the wiper stalk:

MFSW Harness	Wiper Stalk
Blue/Green	Pin 1 (Blue/Green)
Blue	Pin 2 (Blue)
Blue/Black	Pin 4 (Blue/Gray)

8.3 Cruise control

> ⓘ Only for vehicles with cruise control.

Remove the following wires from the indicator stalk, and splice them into the corresponding wires:

MFSW Harness	Indicator Stalk
Purple/Red	Pin 2 (Blue)
Purple	Pin 3 (Red)
Yellow	Pin 4 (Black/Yellow)
Green	Pin 5 (White)

8.4 Headunit connections

8.4.1 OEM Radio Beta/Gamma V, or Navigation Systems MFD/MCD

1. Insert the red/yellow wire into pin 11 (rem.) of the 20-pin connector at the back of the head unit. Use the included 20-pin connector if it is not present in your vehicle.

8.4.2 OEM Radio Delta 6

1. Splice the orange/brown wire into the orange/brown wire (CAN Low) from the head unit.
2. Splice the orange/green wire into the orange/green wire (CAN High) from the head unit.

8.4.3 Resistance based with 3.5mm input

> ⓘ Applies to some Pioneer, Sony and JVC head units.
> May also apply to other head units.

1. Connect the 3.5mm jack connector to the wired remote/steering wheel control input.

8.4.4 Android & various resistance based

> ⓘ Applies to Android head units.
> May also apply to other head units.

1. Connect the Green/Purple wire to KEY, SWC, KEY1, SWC1, or similar on your head unit.
2. Connect the Green/Yellow wire to KEY2, SWC2, or similar on your head unit if present.
3. Connect the brown wire to the signal ground connection of your head unit.

8.4.5 NEC IR Protocol based

> ⓘ Applies to some Kenwood head units
> May also apply to other head units.

1. Connect the red/yellow wire to the remote-control wire of your head unit.

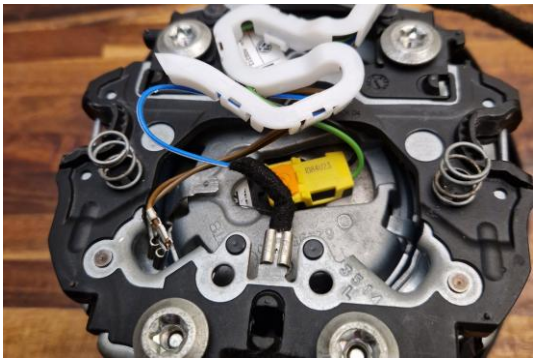
8.4.6 CAN Based

1. Connect the orange/brown wire to the CAN low connection of your head unit.
2. Connect the orange/green wire to the CAN high connection of your head unit.

9 Final assembly

1. Connect the wires to the MFSW Module and insert it in the space in the dashboard bracket.

2. Re-install the steering wheel column trim by reversing the steps of section 4.3.
3. Fit the new steering wheel on the steering column, ensure the center markings align.
4. Torque the center bolt to 55 Nm.
5. Connect the included steering wheel wiring harness to the airbag and horn contacts.



6. Connect the clockspring and MFSW connector.
7. Insert the airbag into the steering wheel.
8. Re-install the dashboard panels by reversing the steps of section 4.1.

10 Usage instructions

The default functionality of the steering wheel buttons are described in this chapter.

10.1 Media controls

The assigned media controls depend on the type of head unit. Find the ones corresponding to your head unit below.

10.1.1 OEM

Button	Function
⏮	Previous track
⏭	Next track
−	Volume down
+	Volume up

10.1.2 Pioneer, Sony, JVC

Button	Function
⏮	Previous track
⏭	Next track
−	Volume down
+	Volume up
OK	Source / Hold = Off
📞	Mute
	Display
△	Folder up
▽	Folder down

10.1.3 Android & various resistance based

Media controls are to be assigned manually in your head unit. Look for an app or settings menu called steering wheel learning, or similar to do this.

If a button you desired to use for your head unit is not registered, assign a unique value for RA and RB in the configuration tool. (See 11. Configuration)

10.2 Cruise control

To use the steering wheel cruise control buttons, the cruise control switch on the stalk must be set to OFF.

Press ⏻ to turn cruise control on/off. When cruise control is on, RES, SET, - and + can be used to resume, set, or adjust the cruise control. To cancel cruise control press CNL.

10.3 MFA/FIS

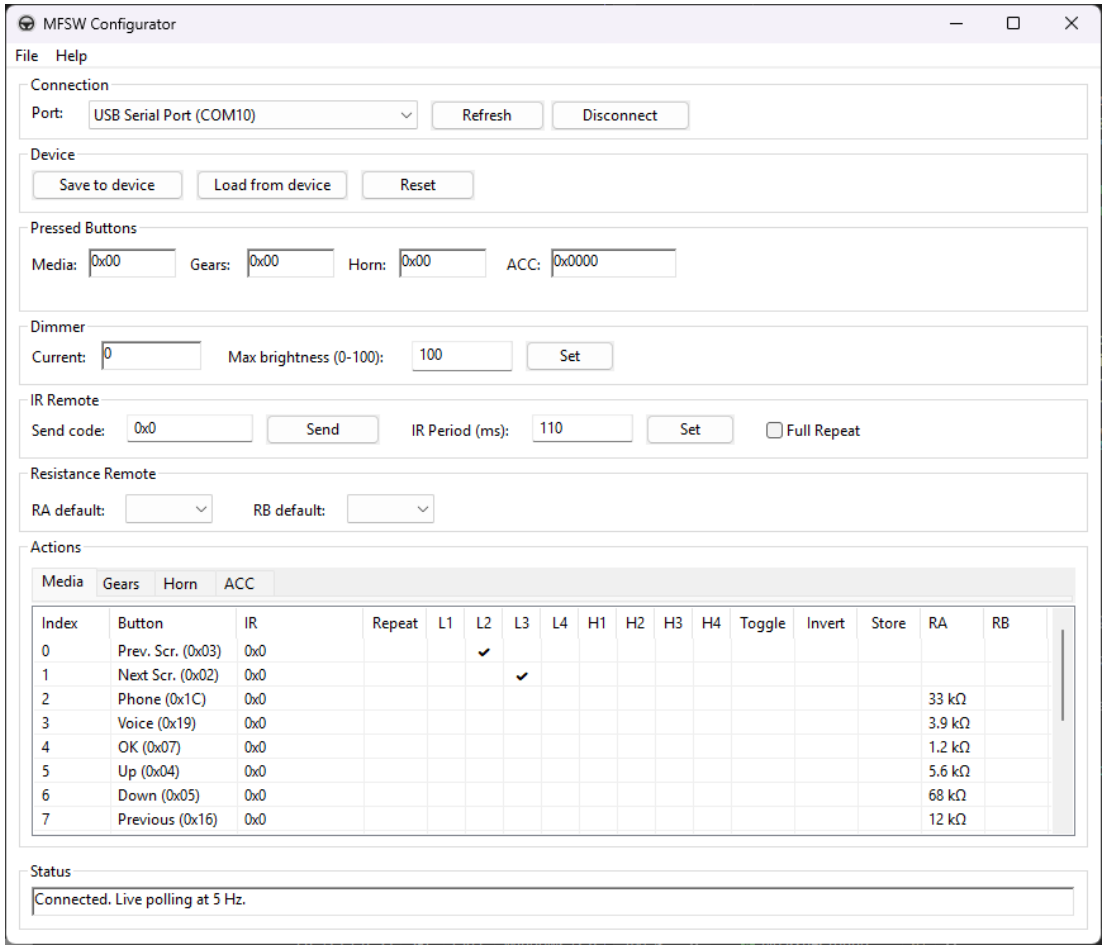
Press ◁ and ▷ to navigate the MFA or FIS.

Press MODE to reset the MFA or FIS.

11 Configuration

If you desire to change the actions of the buttons, or adjust the brightness of the lights, you can use the configuration tool. This chapter describes how to install and use the tool.

1. Download the configuration tool on a windows computer from the product page at vw.hofline.nl/mfsw/.
2. Run the configuration tool and connect the MFSW module to your PC using a USB-C cable.
3. In the connection section, select "USB Serial Port (COM...)" from the drop down menu, then click connect.
4. The device is now connected, and the window will now show information from the control module as shown in the image below.



The sections below describe each section of the tool.

11.1 Device

The "**Device**" section is used to write the new configuration to the device, or to load the previous configuration. Changes made can be tested immediately but are only stored in the device after pressing "**Save to device**". To revert any current changes, press "**Load to device**". To load the default configuration from when you received the module, press "**Reset**".

11.2 Pressed buttons

The "**Pressed Buttons**" section displays the value associated with the button that is currently being pressed. The buttons are split up into four groups:

- **Media**: All buttons belonging to the Radio and MFA/FIS controls.
- **Gears**: The shift paddles at the back of the steering wheel (If present)
- **Horn**: The horn.
- **ACC**: The (adaptive) cruise control buttons.

11.3 Dimmer

The "**Dimmer**" section provides information about the dashboard illumination and allows you to change the maximum brightness of the lights. The "**Current**" field shows the current brightness based on the dimmer signal. The "**Max brightness**" input can be used to by setting a value from 0 to 100 and then pressing "**Set**".

11.4 IR Remote

The "**IR Remote**" section applies to radios using the NEC IR protocol. To try out a command for your radio, enter it in the **Send code** input, and press **Send**. Such commands can often be found online for your specific head unit by searching for "Radio remote codes", "SWC codes", "NEC codes" or similar.

The "**IR Period**" input allows you to configure how quickly a command is repeated when holding down the respective button, set the desired value in milliseconds, and press "**Set**". If the commands are not repeating, even though "Repeat" is enabled in the "Actions" section, try enabling or disabling "**Full Repeat**".

11.5 Resistance Remote

The "**Resistance Remote**" section applies to radios using the resistance based remote. "**RA Default**" is the resistance set to RA (SWC1/KEY1) when no button is pressed. "**RB Default**" is the same for RB (SWC2/KEY2).

11.6 Actions

The "**Actions**" section is used to configure the actions performed when pressing each button. It is split up into the four separate Media, Gears, Horn and ACC groups, which can be selected from the tabs above the table. The columns are as follows:

- **Button**: The value displayed in the "Pressed Buttons" section when pressing the desired button.
- **IR**: The NEC IR code to send to the radio when pressing the button. (NEC IR remote radios only.)
- **Repeat**: Check to repeat the NEC IR command when holding the button (NEC IR remote radios only.)
- **L1 - L4**: Check to enable the corresponding ground switched output. The selected output is connected to ground when the button is pressed. **L1** is used for the horn, **L2 – L4** are used for the MFA/FIS controls.
- **H1 - H4**: Check to enable the corresponding 12V (Battery) switched output. The selected output is connected to 12V when the button is pressed. (Used for the cruise control signals).
- **Toggle**: Check to toggle the selected **L1 – L4** and **H1 – H4** outputs when pressing the button, instead of them only being on while the button is being held.
- **Invert**: Check to invert the selected **L1 – L4** and **H1 – H4** outputs.
- **Store**: Check to return to last state when the ignition is turned on.
- **RA**: The resistor assigned to this button on pin RA (SWC1/KEY1, Green/purple wire).
- **RB**: The resistor assigned to this button on pin RB (SWC2KEY2, Green/yellow wire).