

Dash Panel Upgrade Kit

Installation instructions

Installing the Dash Panel Upgrade kit is intended to be a DIY task, involving crimping and splicing wires, and other light manual skills such as drilling, cutting and sanding plastic. The document provides an overview of the steps involved in the task, please read it in full before commencing. The installer is at liberty to make their own choices on how to complete the installation based on their own preferences, and available tools and materials.

Other options exist for the lighting switches, and the installer may opt to fit alternative column switches / stalks. Both these are outside the scope of this document, but customers wishing to go this route will be provided with information and support, as required.

Parts required

In addition to the upgrade kit itself and the speed sender, the following components are required:

- Replacement lighting switch (eg. Mk3 Golf or similar), with suitable pigtail of harness ~ 30cm long.
- T3 dash air vent, 281 819 703A. This will be modified to serve as the mounting for the Golf lighting switch.
- T3 heated-seat switch housing, 251 953 515A. This replaces the upper steering column shroud, and serves as the mounting for the hazard switch
- Golf Mk1 hazard switch, 162 953 235.

Tools required

- Drill with ~3mm & ~8mm HSS bit
- Wire cutters / strippers
- Soldering iron & solder, heat-shrink sleeving
- (Optional) Crimp tool and crimp butt splices
- Hacksaw, file, sandpaper (a nice-to-have is an electric multi-tool with saw blade)

Steps

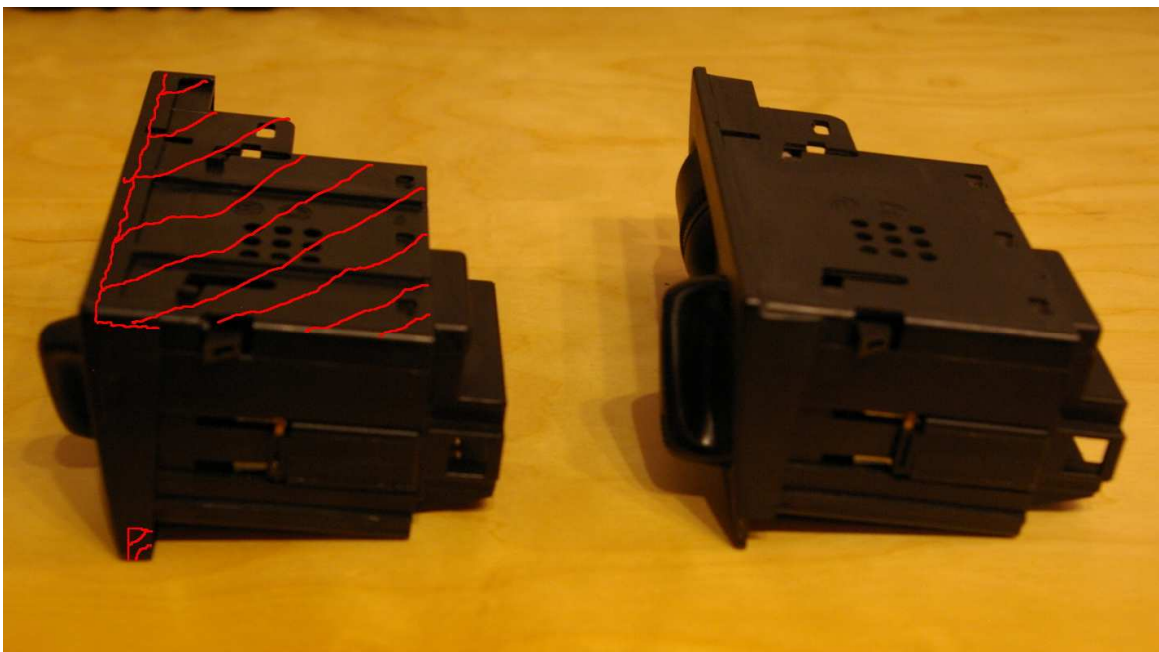
1. Before starting, disconnect the battery.
2. Remove the steering wheel (24mm nut), this greatly improves access. Remove the steering column covers (2 screws).
3. Remove the dash panel cover and set to one side. (This must be modified before re-fitting as described later.)
4. Carefully release and remove from the dash the existing switches, disconnect the speedo drive, and remove the old dash panel (4 screws). Remove the switches.
5. Remove the drivers side air vent from the dashboard

6. Prepare the Golf lighting switch for fitting, as follows.

First take the air vent, carefully pry out the moving parts leaving just the shell, then cut it down to around 37mm, as shown, to create a mounting sleeve for the Golf switch:



Then take the switch, and carefully cut / sand away the parts shown, so it can be pushed into the sleeve created from the air vent. Remove material a bit at a time, and checking for fit as you go.



If you have a belt sender available, this can be used to reduce the thickness by the small amount required to allow the switch to slide into the mounting sleeve. Make a notch in the sleeve as shown, to allow the switch to seat fully into the sleeve.

Finally cut a small hole for the retaining catch on the right of the switch, and add a screw on the upper left side. These will effectively retain the switch in the sleeve. After fitting into the dashboard, the screw can be accessed from above, to allow the switch to be inserted and removed.

The result should be like this:



7. Splice the Golf lighting switch harness onto the T3 lighting switch wires. First, fit the new switch in place, and assess the new route the wiring must follow to the switch, and where it will be most convenient to join the wires. Once you are happy with this, neatly cut both sides, and splice together, following the schema below. If you have suitable crimps, using these may be quicker and easier than twisting/soldering. Whatever approach taken, it is very important to ensure the joins are good.

T3			Golf		
Switch	Description	Colour	Switch	Pin	Colour
T3 Lighting - E1	Instrument panel light output, terminal 58b	Grey	Lighting	1	Grey/Blue
T3 Lighting - E1	Headlight output to dipper switch, terminal 56	White/Black	Lighting	2	White/Black
T3 Lighting - E1	Headlight dim-dip output, terminal 58d	Yellow/Black	Lighting	3	Yellow
T3 Foglight - E23	Foglight current supply input, terminal 83	Grey/Yellow	Lighting	4	Grey/Blue
T3 Lighting - E1	Ignition switch X terminal	Black/Yellow	Lighting	5	Black/Yellow
T3 Lighting - E1	Side light & tail light R output, terminal 58R	Grey/Red	Lighting	6	Grey/Red
T3 Lighting - E1	Number plate light output, terminal 58	Grey/Red	Lighting	7	Grey/Green
T3 Foglight - E23	Warning lamp current return, earth, terminal 31	Brown	Lighting	9	Brown
	Output for term. 58d relief relay (Golf only, delete on T3)		Lighting	10	White/Black
T3 Lighting - E1	Battery positive input, terminal 30	Red/Yellow	Lighting	11	Red/Yellow
T3 Foglight - E23	Rear foglight output via relay plate, terminal 83b	Grey/White	Lighting	12	Grey/White
T3 Foglight - E23	Front foglight output via relay plate, terminal 83a	White/Yellow	Lighting	13	Grey/Yellow
T3 Lighting - E1	Side light & tail light L output, terminal 58L	Grey/Black	Lighting	14	Grey/Black

Before making these splices, it is suggested the installer also review the 'Connection List' document. Depending on requirements, additional connections can be made at the splices to enable functions on the new dash panel. eg.

Foglight warning lamp (recommended, but optional, as the Golf switch already has the required telltale lamp)

L&R side light (optional, only required if planning to implement 'Lights left-on warning alarm in the new dash panel, which also requires the later ignition switch with the key-inserted terminal.

8. If a demister switch is fitted to the T3, a Mk1 Golf switch (162 959 621) can be used instead without any wiring modification. The Golf switch lends itself to panel-mounting, and a suitable-sized rectangular hole could be cut in the dashboard to fit it.

9. Prepare the necessary electrical connections for the dash upgrade kit. Please also refer to the 'Connection List' document. Many different optional connections are possible, depending on requirements, however this document only covers those required for standard functions.

Most of the connections required are already present in the existing T3 dash panel plugs, T14 and K7, which simply plug onto the upgrade kit interface board.

In addition, the following 3 connections are required.

Left turn signal (Black/White) -> Dash Panel plug P7, pin 4

Right turn signal (Black/Green) -> Dash Panel plug P7, pin 5

The best way to make these is at the hazard warning switch plug. Release the ¼" spade terminals from the plug housing (using a flat jewellers screwdriver or similar), cut them off, and re-crimp two fresh terminals with an extra wire added.

Coolant shortage sender (Blue/Green)

To make this connection, remove relay number 3 (which is no longer required) from the T3 relay plate, and make a connection from pin 3 using a ¼" male spade terminal (supplied in the kit) to dash panel plug P7, pin 6

Using the small crimp terminals and 8-pin plug housing supplied with the kit, terminate the above connections, leaving a suitable length of wire to reach the P7 plug on the dash panel.

10. Relocate drivers air vent. Remove the drivers side-window demister air vent. After measuring and marking carefully, enlarge the hole to accept the larger sized air vent. Fit the air vent, and reaching from underneath the dashboard, re-fit the corrugated plastic duct to the vent.

11. Fit the Golf hazard switch into the T3 heated-seat switch housing. Plug the T3 hazard warning plug onto the switch, and fit the assembly in place onto the top of the steering column. Re-fit the lower steering-column cover.

12. Prepare the T3 dash panel cover. As originally designed, the cover clips onto the original T3 dash panel along its front edge, where it is located by protruding 'teeth'. The teeth must be removed (eg. using a hacksaw blade or multitool) and the resulting channel smoothed and opened-out slightly using some sandpaper wrapped around a thin piece of wood or similar.

13. Fit the speed sender.

2wd. This is fitted on the left-hand gearbox CV joint. The assembly comprises a toothed ring in two halves, which secures to the joint via the existing 6 socket-head screws. The ring replaces the three spreader plates, allowing the standard-length CV joint bolts to be reused. Please ensure the serrated washers are present and in good order, and that the correct torque is used.

The inductive sender is fitted using a simple angle-bracket, secured using a single 8mm screw to the clutch slave bracket mounting point. The sender position should be adjusted so it is ~2mm from the sender ring.

The sender should be connected using a suitable length of three-core cable (3A mains flex is suitable) using the terminals and housings provided in the kit.

4wd. This is fitted to the Syncro front diff. The sender should be connected using a suitable length of three-core cable (3A mains flex is suitable) using the terminals and housings provided in the kit.

14. Fit the dash panel. With the dash panel assembly in place, mark the position of the two screw holes. (It may be useful to put the cover in place, and adjust the position of the assembly back and forth slightly to determine the optimum position.) Drill the holes, then re-drill to 8mm, and move two of the captive speed-nuts from their original locations to the new holes.

15. Final assembly.

Connect the required connectors, T14, K7, P7 (dash connections), and P3 (speed sender, aka distance sender). Secure the dash panel in place using two screws. Place the dash panel cover onto the dash panel, and mark the position of the two upper mounting points which secure the cover to the dash, then drill two holes. Fit the supplied speed nuts. Fit the supplied clear polycarbonate cover. Fit the dash panel cover, and secure in place with two screws. Re-fit the steering wheel. Re-connect the battery.

16. Testing and speedometer calibration.

With the battery connected, the dash panel LCD displays should now be showing the time, and the recorded mileage. Unless requested otherwise, the mileage will be zero, and can be re-set to requirements using VAGCOM or VCDS.

Turn on the ignition and check that the dash functions as expected. Check the lighting, turn signals etc. operate as expected. Start the engine and check that alternator and oil pressure warnings stop, and that the tachometer is reading as expected.

To set up the speedometer, follow the instructions in the document 'Speedometer Adjustment'.