OBC Hack

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0. Background

The On-Board Computer is an option that gives you these values: Temperature, Distance To Empty, Avg. MPH, and Avg. MPG. To control it, an extra stalk is added to the steering column. Up through 2000, this was a separate option. For 2001, it was bundled into the Sport Touring Package. Also, the OBC had it's own display up through 2000, but for 2001 shares the trip mileage display.

The OBC can be added afterwards by installing the stalk (or just a bipolar rocker switch) and having the dealer enable OBC in the cars computer. On pre-2001 cars, many people just enabled the OBC without installing a stalk or switch. This brought up the temp display, though they couldn't cycle to any of the other functions. For 2001, this is no longer an option.

These instructions will show you how to enable the OBC with a footwell lighting switch. You could use any switch you want, or even install the whole stalk. Installation of the stalk requires removing the steering wheel.

If you already have the OBC or PCM options, then this hack won't do anything for you.

This is not a simple hack, so make sure you know what you're doing.

This worked for me on a 2001. This information comes with no guarantees. Use at your own risk.

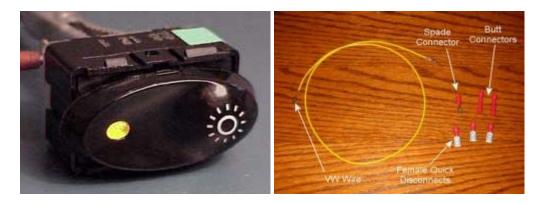
1. Tools & Supplies

Tools:

- T20 Torx Driver
- 10mm Socket and Driver
- Butter Knife
- Wire Cutter
- Wire Crimper
- Small Screwdriver
- Radio Code Card
- Optional: Ohm Meter

Supplies

- 1 VW Wire (#000.979.010, \$3.28) This is a wire with two Molex connecters.
- 6ft. 20-22 Gauge wire
- 3 Female Quick Disconnects (Radio Shack #64-4040 or PAG #999.650.103.12)
- 1 Spade Terminal (Radio Shack #64-3125)
- 2 Butt Connectors (Radio Shack #64-3108)
- 1 Footwell Rocker Switch (PAG #996.613.980.00, ~ \$33) or any other switch. I chose this switch because it's the most non-descript.



2. Prep Work

1. Have your dealer enable OBC. They do this using the Porsche System Tool 2 (PST2). Your salesman may have no idea about this, but the service techs should. They may say, "This doesn't work anymore for 2001". Be insistent. They may charge you a small fee.

If your dealer doesn't know how to use the PST2 to enable the OBC, this is the reported screen path: Control Module Search, Instrument Cluster, Country Coding, Boxster USA (several screens), On Board Computer, With On Board Computer, Activate.

There have been reports that independant Porsche mechanics have not been able to do this using the laptop-based PST2. Apparently only the dealer's special PST2 can do it.



- 2. Cut three pieces of wire about two feet long.
- 3. Cut the VW Wire in half
- 4. Using the Butt Connectors, connect one wire to each half of the VW Wire.
- 5. Crimp Female Quick Disconnects to the ends.
- 6. Crimp a Spade Terminal to one end of the last wire.



7. Crimp a Female Quick Disconnect to the other end.



- 8. Optional: Use the Ohm Meter to test the wires.
- 9. Disconnect the battery.
 - a. Lower the windows, lower the top, open the front trunk.
 - b. Remove the key from the ignition.
 - c. Remove the battery cover by twisting the screws 90 degrees.



d. Use the 10mm socket to disconnect the negative terminal.

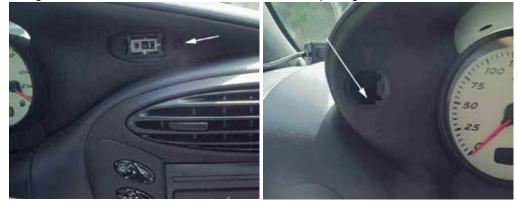


- 3. Remove Instrument Cluster
 - 1. Pry out the microphone cover with a small screwdriver.



2. Pry out the hazard button (this is easier if you turn the hazards on first).

3. Using the Torx driver remove one screw from each opening.



- 4. Lay a rag on your steering column to protect it.
- 5. Lift up the instrument cluster. There are clips holding it in place. Just lift firmly and they will pop out.
- 6. Underneith you will find three colored connecters (Grey-Blue-Green for 2001-, Black-White-Blue for 1997-2000). Disconnect these by pushing back the black cam.



7. The Instrument Cluster will still be connected by one harness on the right. Twist the cluster and lay it on it's face on the dashboard.



4. Install Switch

1. Pry off the switch panel using the butter knife



- 2. Remove the fake button (pry it out from behind)
- 3. Pop in the new button



5. Wiring

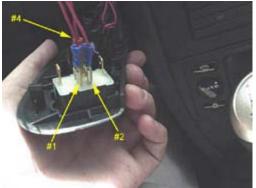
- 1. Open the Grey (2001-) or White (1997-2000) connecter and slide out the black terminal.
 - a. Open wire wrap
 - b. Pull back retaining lever and...
 - c. Simultaneously push terminal through hole in back of grey connecter



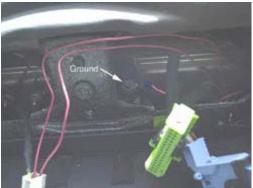
2. Connect the Mode Up wire by putting a Molex connecter in Slot 22 (2001-) or Slot 21 (1997-2000).



- 3. Run the wire through the dashboard to pin 1 of the new switch.
- 4. Connect the Reset wire by putting a Molex connecter in Slot 24 (2001-) or Slot 25 (1997-2000).
- 5. Run the wire through the dashboard to pin 2 of the new switch.
- 6. Connect the third wire to pin 4 on the switch.



7. Connect the wire to ground. Use the 10mm socket to loosen the ground nut and slide the spade connecter behind it.



8. *Optional:* If you want, you can also wire up the Mode Down, Slot 23 (2001-) or Slot 20 (1997-2000) and Speed Gong, Slot 21 (2001-) or Slot 22 (1997-2000). This would require an extra switch.

6. Put It Back Together

- 1. Put the Grey (2001-) or White (1997-2000) connecter back together.
- 2. Plug the three colored connecters back into the instrument cluster. It helps if you push the cam back and then insert the connecter. Then pull the cam forward to lock the connecter in place.
- 3. Replace the cluster.
- 4. Replace the Torx screws behind the microphone cover and the hazard light switch.
- 5. Replace the microphone cover and the hazard light switch.
- 6. Replace the switch panel.
- 7. Reconnect the battery.
- 8. Turn on the ignition.
- 9. Enter your radio code.

7. Troubleshooting

- 1. If it doesn't work, first check all of your connections, including your ground.
- 2. Make sure you got the right slots in the Molex terminal.
- 3. If Reset resets your trip mileage then your switch is working correctly. Chances are your OBC is not enabled. (Note that you have to hold down Reset for a few seconds for it to work.)
- 4. If Reset doesn't reset your trip mileage, then the Grey connecter may not be plugged in properly. Try operating your top. If the red indicator light doesn't light up, then that is the problem. (I'm not sure if this applies to pre-2001)
- 5. If some of your instruments no longer work, then one of the other two plugs is not plugged in properly.

8. Miscellaneous

1. Sandy's comments about switch choices and lighting:

For your OBC, you might want to try a 996TT spoiler switch body (996.613.155.00) which has the toggle (rocker) replaced with the one from your footwell lights switch. This would allow you to have night illumination without having to internally modify your FWL switch.

The 996TT spoiler switch has its internal night illumination circuitry completely isolated from the switch contacts. This provides a lot of flexibility in connecting up to the illumination wiring in the car.

Before you snap the FWL switch toggle onto the spoiler switch's body, you would only have to place a dab of black paint, or a small piece of black tape, over the BACK side of the toggle's "lens" (normally located over the amber LED). You have to do this because there are TWO night illumination LEDs in the spoiler switch's body.

Here's the info I believe is required to hook up the night illumination pins on a 996TT spoiler switch body. There are two options:

Parallel pin 3 of the 996TT spoiler switch with the RED/BLACK wire on the PSM/TC OFF switch. Also, parallel pin 5 of the 996TT spoiler switch with the GREY/BLUE/BROWN wire on the PSM/TC OFF switch.

The second option would be:

Parallel pin 3 of the 996TT spoiler switch with the GREY/BLUE/RED wire on the intermittent wiper rotary control. Also, parallel pin 5 of the 996TT spoiler switch with the BROWN wire on the same control.

If neither component is available to connect to, the first choice color combination should be available at the switches over on the other side of the panel.

- 2. Links:
 - Peter's document on how to install the entire stalk. It covers all years.
 - Oggie's <u>wiring diagram</u> interpretation of Peter's instructions.
 - Magic Mtn Dan's <u>Instructions</u> showing how to install the stalk. (Instructions and Pictures copyright D2 Performance)
 - Wiring diagrams for Footwell Light switch and 996TT Spoiler switch from Sandy.
 - A post on Porsche Pete's Boxster Museum Board about installing the entire stalk.
- 3. If you have any comments or corrections, please email me.

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