Phaeton Upgrade

How to fit a rear AC Controller to 5 Seat Phaetons

Summary

This document provides resources, guidance, hints and tips to achieve the change shown in the above two photographs. I cannot guarantee that the contacts, prices or availability still exist. It merely exists to help you shortcut all the hours of research I went through to achieve the result.

It should be used in conjunction with the full Vortex thread entitled

"How to retrofit a rear climate control panel" located at

http://forums.vwvortex.com/zerothread?id=2501825&page=1

I could not have done this without the terrific support of the VW VOrtex, Phaeton forum and especially Michael, Mr Paneuropean. So thanks to all who contributed.

Tools Required

13 mm Socket wrench

To remove the rear seat squab, there is a single nut, under the carpet at each end of the rear seat.

T20 Torx Screwdriver

To remove the side panels at the rear of the centre console

Pliers, crimp tool, wire cutters

To make up the wiring as required.

Parts Required

Rear AC Controller

3D0-919-158- F-5W8, I was quoted about £425 sterling from my friendly VW Reseller, however, via Rich at OEM Plus, I was put in touch with Holger Auernhammer at "need4street.DE" in Germany. I paid €390 including P&P

Rear AC Controller, connector

8E0-973-754, I purchased this at my friendly VW Reseller for the princely sum of £0.65 ! At the same time I asked for the correct "repair" wires to fit this connector, again pennies only. I bought 4 but you only need two, as each wire has the correct pin on both ends.

Wires

You are going to need a good couple of metres of fine twisted pair cable, I got mine from breaking down a Cat 5 ethernet cable.

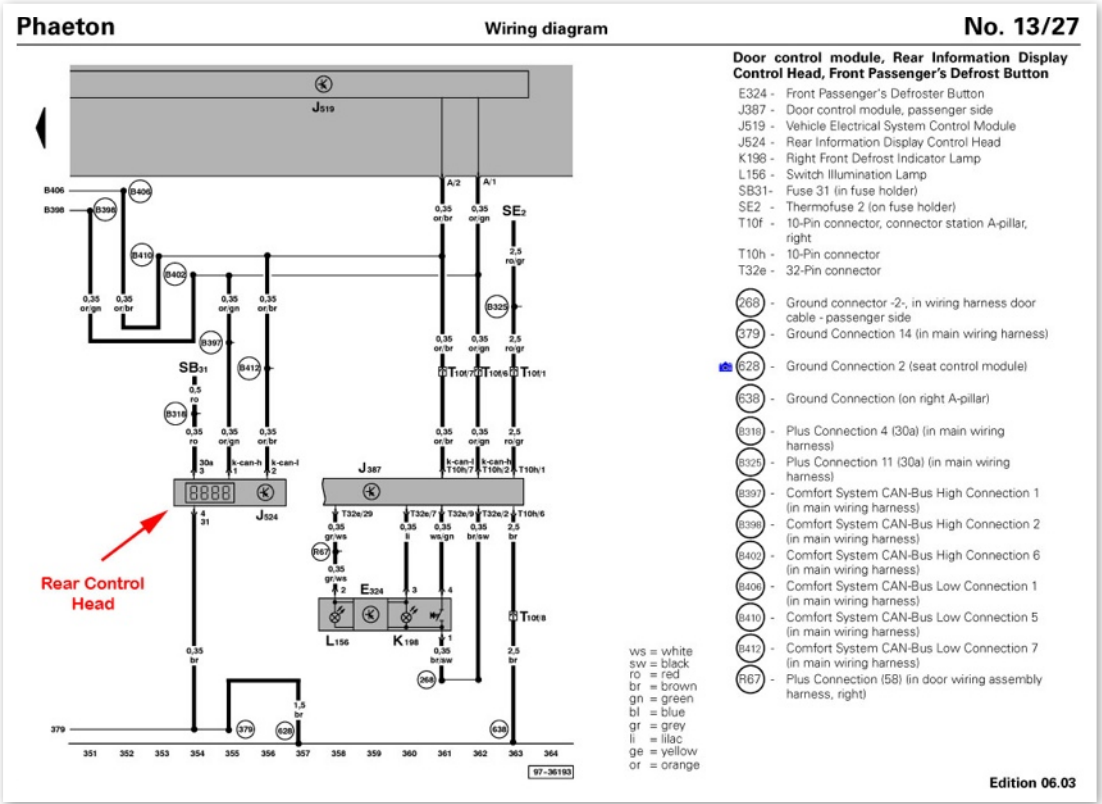
Connectors

I purchased, from Halfords, a pack of 4 "Through cable" connectors which allow you to splice a take off wire into an existing cable without breaking the original cable

Knowledge Required

CAN BUS

The control system on the Phaeton consists of 3 separate twisted pair networks, Drivetrain, Infotainment and Convenience. Climate Control is under the control of the Convenience bus, so we need to add this rear controller to that network



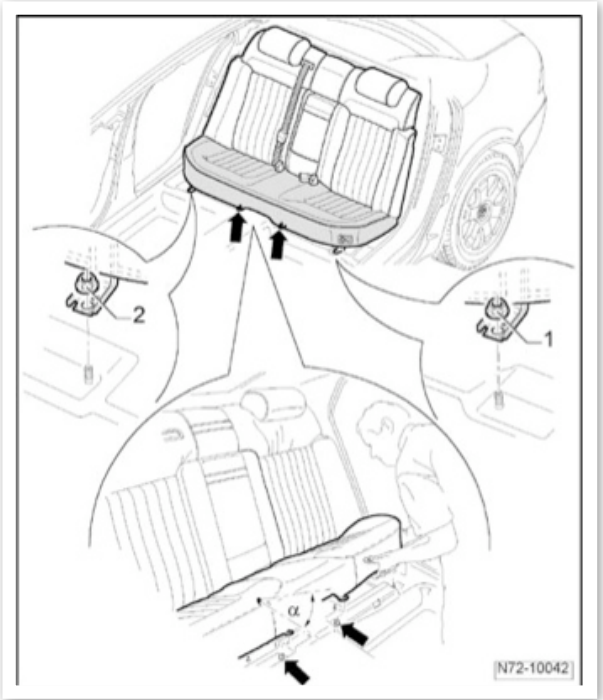
Practical Location

This Wiring Diagram is fine, but it doesn't actually tell you where those wires are physically located, I found the correct coloured pair (Orange/Green & Orange Brown) running down the left hand side of the car at the base of the C pillar.

Process

Remove Rear seat squab

After removing the two nuts, lift the front of the squab to about 30 degrees then tug forward, my seat had no further connectors, but if you have heated seats etc, expect some more disconnecting to be required.



Locate Comfort Bus Wiring Pair

At the base of the C pillar is a thick loom of wires, held together by a wrapping of black tape. Slice through the tape and peel back so you can gain access to this loom. You are looking for a twisted pair, predominantly orange but with a green stripe and a brown stripe.

Remove existing Cubby Hole

This is only held in with spring clips and easily pulls out, exposing a fairly large open space behind.

Remove Centre Console rear side panel

Move both front seats to their most forward positions, allowing access to these covers, (I only removed the left hand cover). Prise off the plastic screw cover and undo the T20 screw, the panel has a spring clip at the back, but just pulls off.

Route Twisted pair cable

Leave tails of the pair (enough to work with) hanging out of the hole where the cubby was. Run it out at the base of the side panel, down, under the back of the inboard seat runner, forward and around the under seat vent, under the outboard runner and square up to the plastic trim panel, just aft of the B pillar. Then, rearwards to the exposed loom of cable that you located earlier.

Make cables at centre console

However you wish to do this, use the yellow VW repair wires inserted into the 4 pin connector that will plug into the controller, and join to the twisted pair (pins 1 & 2), pins 3 & 4 are a Positive and a ground (I just tee'd into the red and brown wires connected to the 12V Cigar lighter socket at the same location).

Splice into CAN BUS

Take a deep breath ! From the twisted pair that you have run from the centre console, connect the wire that is terminated at pin 1 to the Orange and Green wire, Connect the wire that is terminated at pin 2 to the Orange and Brown wire

Put everything back together

Snap the side panel back in place, and secure with the Torx screw. Replace the rear seat (Easier said than done) You need to line up the flattened tube at the back of the seat with two brackets, either side of the centre tunnel. Then you have to exert a lot of pressure rearwards while manipulating the seat at a precise angle, hopefully you will find that angle sooner than I did ! Once it has 'clipped' into position, just lower the front down and secure with the two nuts.

Plug in the Controller

Connect the 4 pin plug to the socket on the back of the rear AC controller and locate the unit in the hole, it is held firmly with spring clips and just snaps into place.

Jobs done, have a cup of tea !

Now, you need someone with a VAGCOM cable and a laptop to tell the car that this controller has been fitted, so it behaves correctly.

You need to make a very minor change to the coding of the J523 Front Information Display and Control Head (the big screen in the front of the car, which is controller 07), in order to achieve full functionality.

The coding for that controller consists of 7 digits. You want to look at the digit that is in the 6th position from the right, and add 1 to whatever value is there now. The value at present will likely be either 0 or 4. Whatever it is, add a 1 and then save it. The addition of the 1 will advise the front display unit that a rear HVAC control head has been added.