

## How to fit the remote parking heater module

The function of this project is to convert a standard fuel burning heater on the diesel models of the Rover 75 and MG ZT to a remote controlled parking heater.

I did not invent the "Parking Heater" mod and acknowledgement of the work of those who have gone before is hereby given - Thanks Keith :D

I have, however, added to it.

A single three second press of the appropriate remote button will initiate the startup sequence of the Webasto FBH. After a period of approximately five minutes, to allow the coolant time to warm up, the climate control will be switched on and the interior of the car will be warmed and windows defrosted dependent upon the position of the climate control switches.

After approximately 30 minutes, the FBH and climate control will automatically shut down. Alternatively, another three second press of the remote button will have the same effect at any time during the process.

I've arranged for the module to only respond when the button is pressed for at least three seconds. This has two benefits. Firstly, it ensures that you don't accidentally switch the FBH on when the transmitter is on your hand or your pocket. Secondly, it ensures that spurious pulses within the car don't start the FBH.

### Preliminary:-

This project assumes that you have:-

1. A fully functional FBH
2. A remote control transmitter / receiver ( I recommend a Quasar).
3. The module appropriate to your FBH type.
4. Eight different colours of 20 AWG wire.

On the subject of point 3 above, you will need to examine the label on the side of your Webasto heater closest to the nearside of the car.

If you have the **66232C** you need a **TYPE A** module

For the **98570B** you need a **TYPE B** module

The modules are NOT interchangeable and damage may be caused to the FBH PCB if the wrong module is used.

### First things first

I strongly recommend that you disconnect the battery before you start.

Next, to gain access you need to remove and store in a safe place:-

1. The glovebox.
2. The climate control panel ( as shown below).



As you can see, you will need to disconnect one white and one black connector from the CC control panel.

Now you need to route a 20AWG wire from the area of the connectors on the FBH, along the bulkhead of the car and into the interior. I route the wire all the way over to the off-side end of the bulkhead and feed it through a convenient grommet which will become visible if you lift the plenum chamber grille on that side of the car.

Once inside the passenger compartment, route the wire behind the centre console until it appears in the glovebox void.

If you want to route the wire differently, please do, providing you end up with one end of the wire adjacent to the FBH and the other end in the glovebox void.

Disconnect the 6 pin connector on the front of the Webasto FBH.

If you have the **66232C** type Webasto, locate contact position **1**.

If you have the **98570B** type, then locate contact position **3**.

In both cases, the appropriate contact position should be unwired and be fitted with a blue coloured silicon rubber seal which you need to prise out.

The photo below shows position 3 prepared.



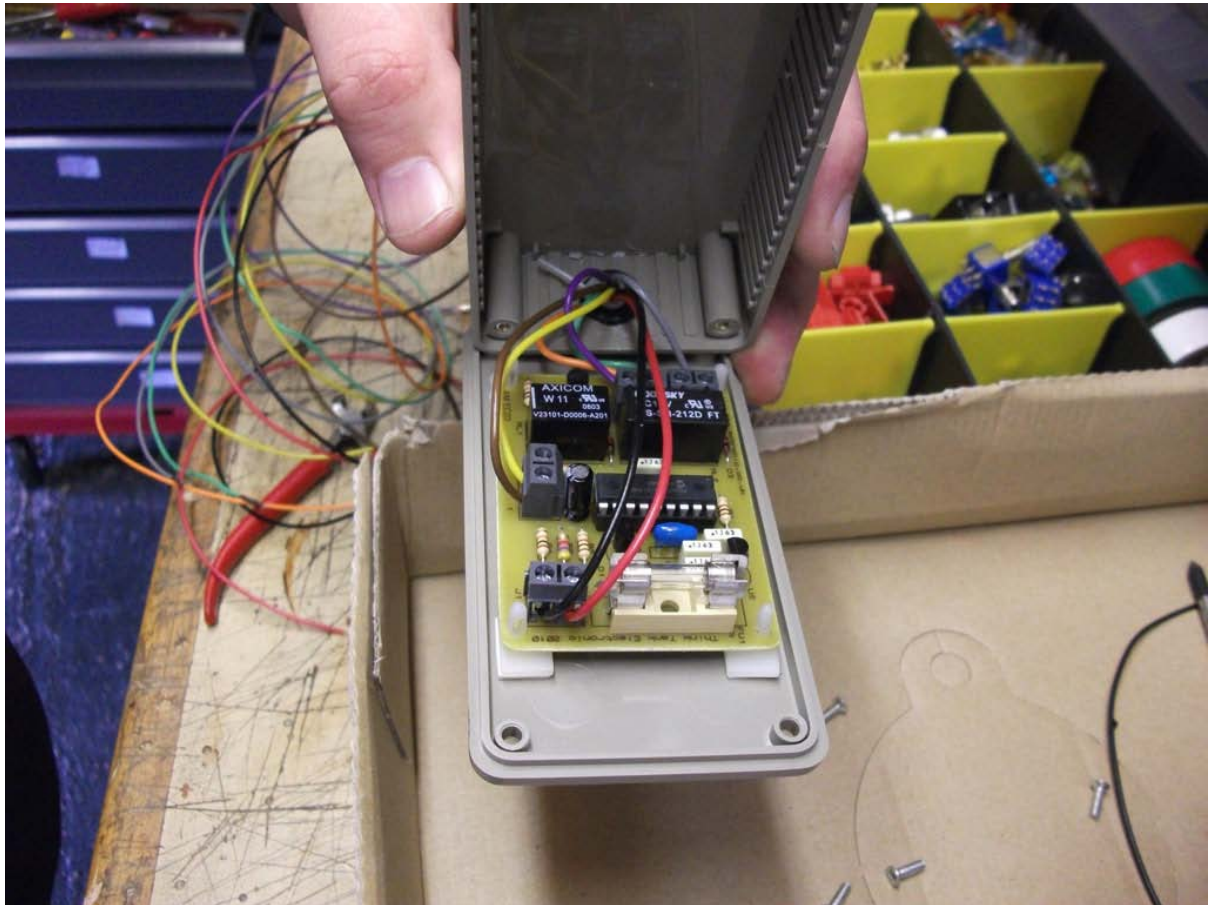
Next, you need to terminate the FBH end of the wire you fed through with an appropriate contact. The genuine Rover contacts are difficult to find but Radiospares do a perfectly acceptable alternative under the part number:- 495-9653 (pack of 100).

The terminal crimps onto the end of the wire. IF you can find them, a little green silicone rubber blank like those round the pre-installed wires in the photo above can be fitted to the wire PRIOR to crimping the terminal. Otherwise, a blob of silicone sealant on the wire as you insert it into the connector does the same job, albeit more permanent.

Push the prepared terminal into the connector until it clicks into place. Make sure you get it right first time as they are a little &^%\$£%\$^ to get out of the connector.

The next picture shows the FBH module in its plastic enclosure with the appropriate wires pre attached to the module's screw terminals.





Personally, I prefer to wire up the module before I go anywhere near the car so that I'm left with a fully enclosed module with colour coded wires and an appropriate table of wire colours. If you prefer to connect the wires to the peripherals and then wire up the module, that's just as good.

The fully prepared module looks like this:-



The slam panel of Rob's car was just a convenient location to take the photo. The module is designed to live in the glovebox void where it's warm and (hopefully) dry :)

Returning to the interior of the car:-

The remote control receiver needs one of its channels setup to produce a momentary 12 volt pulse when the appropriate remote button is pressed.

Next, choose a permanent 12 volt supply and earth point within the glovebox void. I suggest a "piggy-back" fuseholder to one of the fuse positions on the fuse panel visible within the glovebox void. There are plenty of good earth point in the vicinity and you can decide which you want to use.

Now, we turn to the climate control wiring:-

In the photo below you will see the white connector from the climate control panel and it is this connector we need to look at.



Identify the **Light green / White** and **White / Orange** wires at the back of the connector.

Choose either of the wires and cut it several inches away from the connector. Use masking tape labels to identify the two cut ends as

**CC1 (plug)** and **CC1 (loom)** respectively.

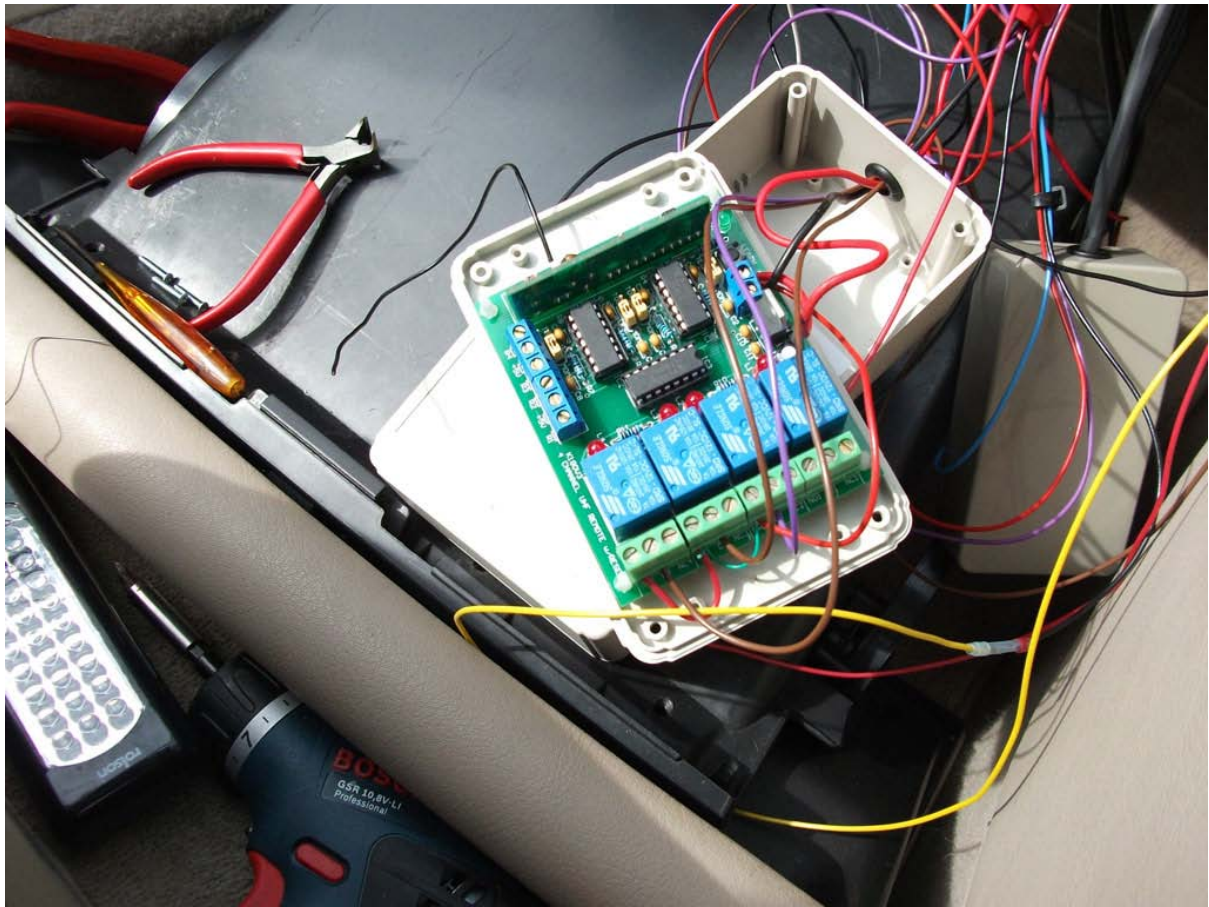
Then cut the other identified wire and label its cut ends as **CC2 (plug)** and **CC2 (loom)**.

### **Wiring it all up.**

The following picture shows the wiring to the remote receiver I used for this How-to on Rob's car. Bear in mind that he has other remote



functions so there is more wiring here than you will have if this is your first (or only) remote control project.

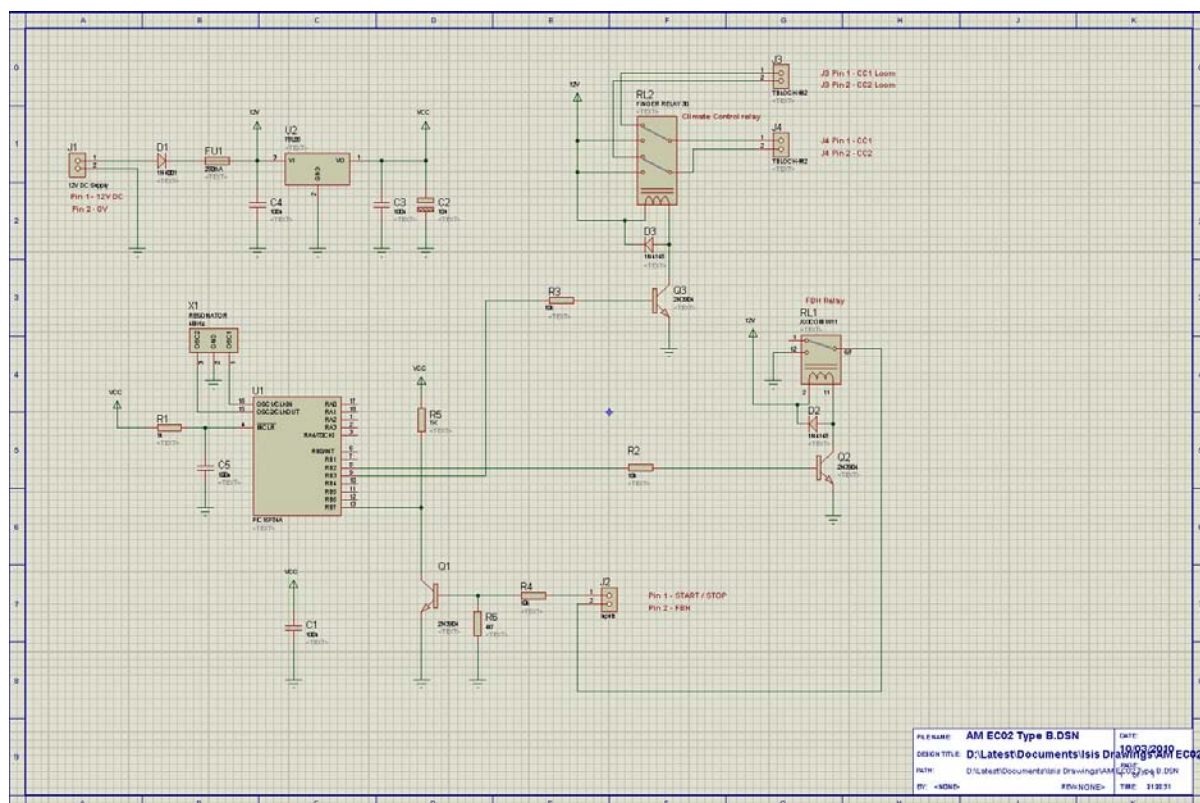


Providing you have chosen an appropriate output channel and set it up to produce a momentary 12 volts pulse, you needn't worry about the other wires shown above.

The remote transmitter / receiver will have its own instructions as to how to setup the output channel and how to wire the permanent 12 volts and earth. I suggest paralleling the 12 volts and earth with the power supply to the FBH module, soldering or crimping as you prefer.

The following is a reproduction of the circuit diagram you will have received when you purchased the module. Bear in mind that this one is for the **98570B** type FBH:-





Follow this wiring chart for convenience:-

Module terminal	Destination
J1 Pin 1	Permanent 12 volts supply (fused 2 amp)
J1 Pin 2	Earth
J2 Pin 1	12 volt PULSE from remote control receiver
J2 Pin 2	Wire to FBH
J3 Pin 1	CC1( Loom)
J3 Pin 2	CC2 (Loom)
J4 Pin 1	CC1 (Plug)
J4 Pin 2	CC2 (Plug)

Connect up the wiring from the FBH module terminals to the peripherals as per the wiring chart above.

The four wires to the climate control panel white connector are conveniently passed up through the glovebox void into the area of the appropriate connector in the centre console. Solder or crimp as you prefer.

Depending upon whether you pre-wired the module or not, you will either be using the screw terminals on the module or in-line splices on the appropriate wires.

The colours of wire you use are entirely up to you but for convention, I'd suggest red for the 12 volt supply and black for the earth.

**DOUBLE AND TRIPLE CHECK** the wiring to the climate control panel. It is easy to become confused, especially if are not used to installing new wiring.

That's the wiring completed. Painless wasn't it? :D

### Testing.

Re-connect the FBH six pin connector, observing the new wire to ensure that it doesn't push out as the connector is mated.

Make the final connection to the fuse panel in the glovebox void and / or reconnect the battery.

Reconnect and loosely re-fit the climate control panel.

Switch on the ignition and ensure that the climate control panel lights up and the functions you want are selected (eg, temperature, fan speed etc.)

Switch the ignition off and ensure the climate control panel displays extinguish.

**MAKE A NOTE OF THE TIME OR START A STOPWATCH.**

Press for three seconds and release the appropriate remote control fob button and confirm (by sound, smell and temperature) that the FBH startup sequence has initiated.

Confirm that the climate control panel displays are NOT illuminated.

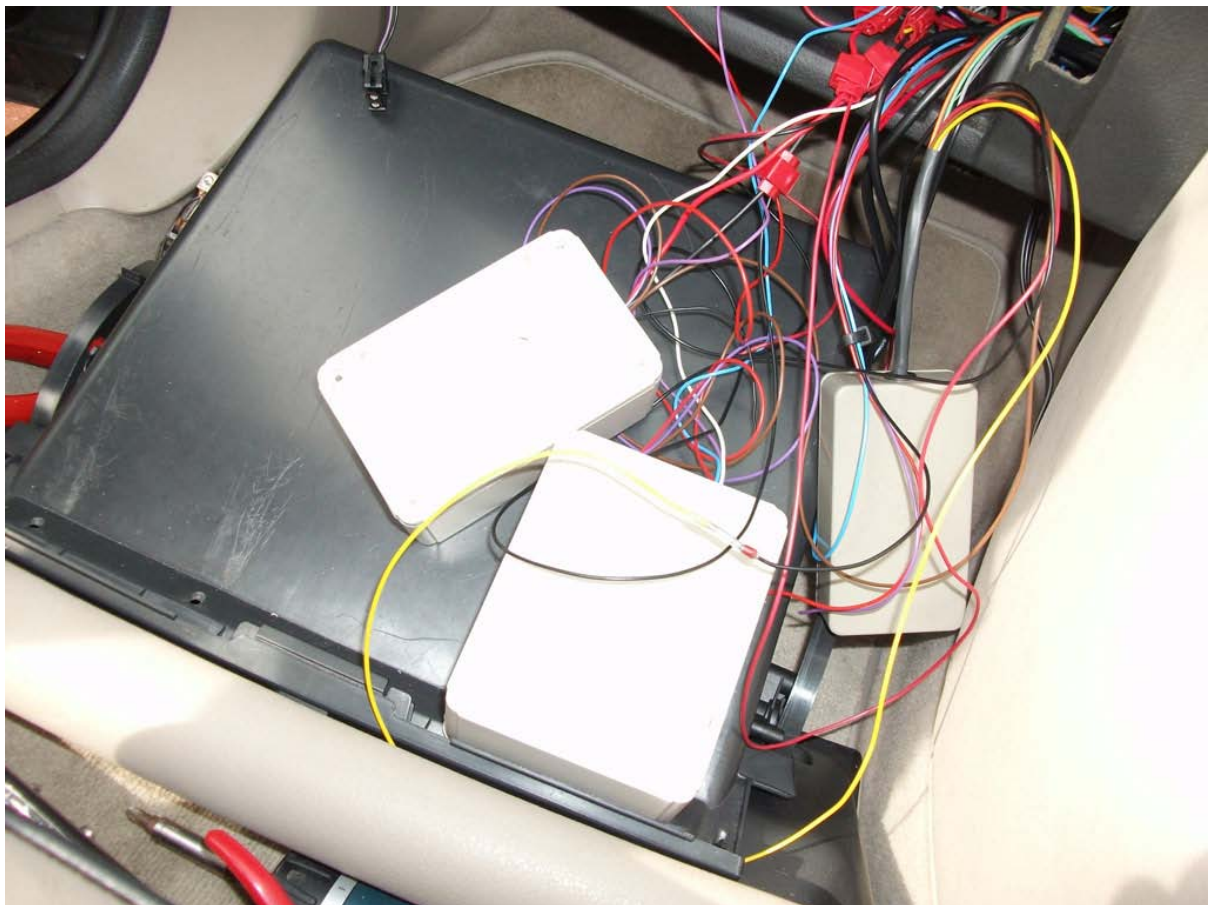
Confirm that the climate control panel displays illuminate after approximately 5 minutes ( assume a plus or minus two minute tolerance).

Stop the stopwatch if used.

Press the remote button again for three seconds and confirm that the climate control displays extinguish and the FBH runs down.

At this point, I'd recommend tidying up the wiring, locating the module in the glovebox void and refitting the parts removed for access to allow the FBH time to fully shut down.

If you think you've had it bad in terms of wiring, here's a picture of Rob's wiring before it was loomed up ;)



The other two enclosures house the Ultimate Remote module and the remote control receiver.

After the FBH has fully shut down, in any event **NO LESS THAN 10 MINUTES** after you switched off previously, make a note of the time or



re-start the stopwatch and press the remote control button again for three seconds, confirming that the FBH starts up and that in approximately five minutes the climate control panel displays illuminate.

Monitor the setup and confirm that after a total of approximately 30 minutes (plus or minus five minutes tolerance) the climate control panel displays extinguish and the FBH runs down.

Something you might want to consider:-

How about fitting an LED, in series with a 470 ohm resistor, between the FBH initiator terminal ( J2/2) and either earth (early models) or 12 volts (later models).

This would give you a positive visual signal that the FBH was running and would be most useful if the LED was mounted such that it could be seen from outside the car, for example, attached to the back of the rear view mirror maybe?

That's it, you're all set for next Winter :D

If you like the project, please let me know.

Thanks to Rob for all the pictures used in this How-To.

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