

## Heated door mirror conversion – Toyota MR2 Roadster

By David Howson  
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Depending on which kit you requested, you should have the following parts:

### Kit 1

2 X Heated pads

### Kit 2 – in addition to kit 1

4 X Female connectors

4 X Heat shrink insulation sleeves

2 X Earth crimp ring connectors

2 X Blue Scotch Lock connectors

2 X Red 12 volt positive connection wires

2 X Black earth connection wires

### Kit 3 – in addition to kit 2

1 X LH mirror assembly

1 X RH mirror assembly

### Operation of heated mirrors

As the mirror heaters are connected to the heated rear window demister, the mirror heaters will go on and off with the heated rear window switch.

### Description of basic installation operation

The thin heated pads are inserted between the back of the mirror glass and the black plastic holder, which clips into the electric angle adjustment mechanism in the door mirror casing.

The mirror glass is stuck with an adhesive gum and clipped into a black plastic moulding which in turn clips into the electrical adjustment mechanism in the door mirror casing. Remove the door mirrors from the mirror casing by very gently pulling outwards from the bottom of the mirror and the two clips should come apart and the top of the mirror is held by two plastic hooks and removal is by simply pulling gently downwards once the bottom clips are undone.

This is the back of the passenger side mirror glass assembly:



The mirror glass is then removed from the black plastic moulding by gently heating the back of the assembly with a hair-dryer; this softens the white adhesive gum and also softens the black plastic. When this is all reasonably warm, very, very carefully pull back the edge of the black plastic moulding starting from the right hand side of the example shown above – ie the side away from the right angled corner. Do not rush this as you can break the glass very easily. Once separated, use a stiff piece of card or something similar (not a metal knife or screwdriver or you will scratch the mirror !!) to remove as much of the white gum as you can; what ever residue is left on the mirror can be washed off using white spirit. The back of the mirror needs to be as clean as you can get it.

Once you have done this it should look like this:



The heater pads are self adhesive and should be stuck on the back of the mirror glass so that the electrical terminals are at the edge furthest away from the right angled corner, thus:



It is imperative that you stick these on this way round or you will not be able to connect to the red and black wires!

Next step is to drill to large (13mm) holes in the black plastic moulding to allow for access to the electrical terminals, thus:



Warm the black plastic moulding with the hair-dryer again, to aid refitting. Insert the mirror glass into the black plastic moulding, starting at the right angle edge this time. Again, take your time so you do not break the glass! There should be no need to use any additional adhesive gum as the plastic moulding seems to clip hold of the glass quite well without it.

On the car, wind down the door windows and remove the entire door panel trim. SC has an excellent thread on this so I will not try to re-write it.



Door panel in place to start.



Remove center cap plastic piece to get at screw underneath.



Screw exposed



Open the front plastic piece with screwdriver blade.



Remove door handle screw



Carefully wedge blade in between to pop arm rest off.



This exposes door handle screw.



Don't forget to remove this plastic cover.



Which exposes another screw to remove



If you wedge a screwdriver above the lock mechanism you can pop this snap clips off. This is probably the most difficult part.



Trim removed, you can see the plastic above the lock toggle and below the handle that catches on the trim ring.



Here is the back of the door panel. Note the foam piece installed to reduce outside noise.



Door panel removed.

All courtesy of SC – Thanks guys!

Two wires, with the connectors at the mirror end, one black and one red (OK I know my picture shows two red wires!!) are fed through the base of the mirror casing along side the existing wires which feed the electric adjustment mechanism servo motors use a thin piece of stiff wire with the red and black wires attached to help pull them through to the inside.



The new heater wires are then fed through the door casing and into the "A" post (this is the part of the car body that the doors are attached to), via the rubber tubing which contains the speaker wires etc; again, use a piece of thin stiff wire to do this with the black and red wires taped to the end so you can pull the wires through. Remove the plastic moulding from the foot-wells and the plastic sill protectors. The wires will come out behind the black plastic moulding in the side of the front foot-wells, where you will see a convenient earth point to attach the black wire. Attach the earth ring using a crimp tool to the end of the black wire, undo the 10mm earth point and attach the mirror heater black wire to this point on each side of the car.

Driver's side only - The red wire should be fed to the driver's side storage bin in the rear of the car. Attach the red wire to the existing wiring loom by means of cable ties or insulating tape. Behind the removable section of the side of the storage bin you will locate the plug and socket for the heated rear window. The red wire of the heated mirror is then attached to the white wire of the rear window socket at a convenient point using the scotch lock connector. \* **However – see addendum by Glenonoka at the end of these instructions for alternative wiring point which is easier!**

Passenger side only – The red wire should be fed across the front of the passenger compartment (behind the dashboard) to meet up with the red wire as it emerges in the driver's side foot-well, so that the passenger side red wire connect to the driver's side red wire by means of the second scotch lock. Therefore the passenger side red wire connects midway along the red wire coming from the driver's side mirror and then the driver's side red wire continues on to the rear of the car where it connects to the heated rear window socket.

Replace all the plastic trim and the door panel.

Slide the heat shrink insulation sleeves over the end of the connectors before you connect the red and black wires in the door mirror casings to the terminals of the heated pads – it doesn't matter which way round as the pads are not sensitive to polarity. Once connected, cover over the exposed terminals & connectors with the heat shrink sleeves and gently heat with a hair-dryer until the heat shrink sleeves tighten around the connectors and terminals.

To refit the door mirror glass, line up the top hooks on the back of the mirror assembly and gently push the bottom clips firmly home so to secure the mirror glass assembly onto the electrical angle adjustment mechanism.

Start engine, adjust door mirror angle, switch on rear heated window, wait 1 minute and carefully touch the surface of the mirror glass – it should be **HOT!**

The finished result:



Start



30 seconds

1 minute

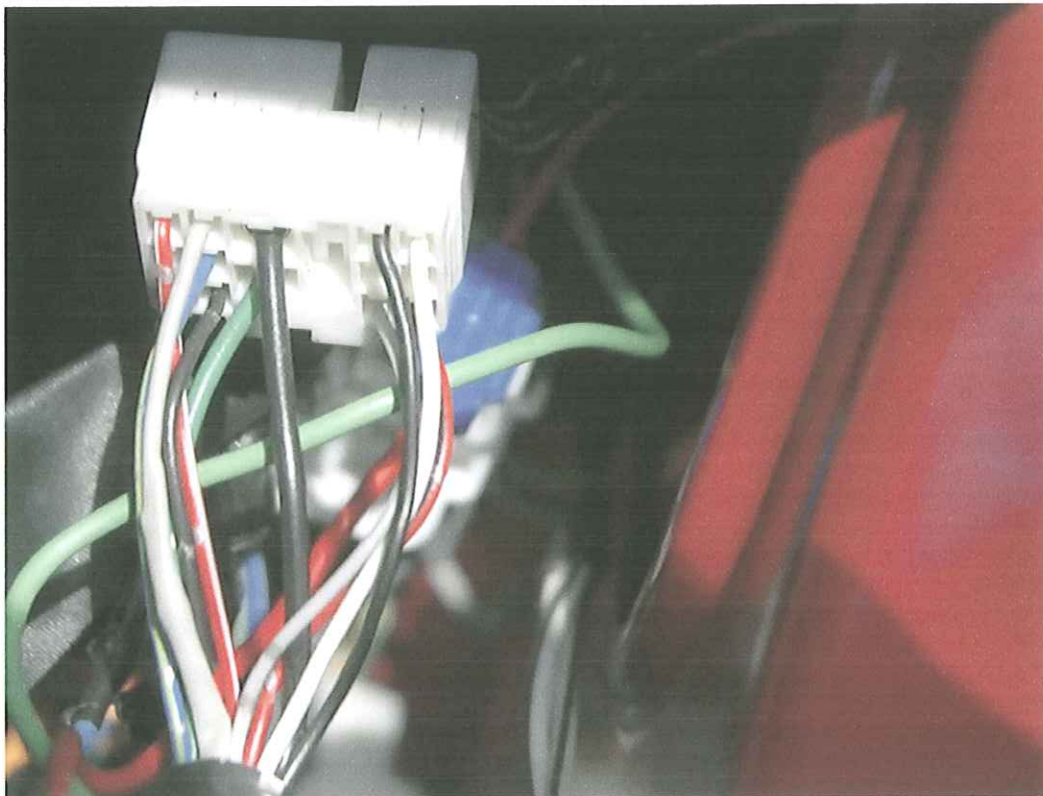
2 minutes

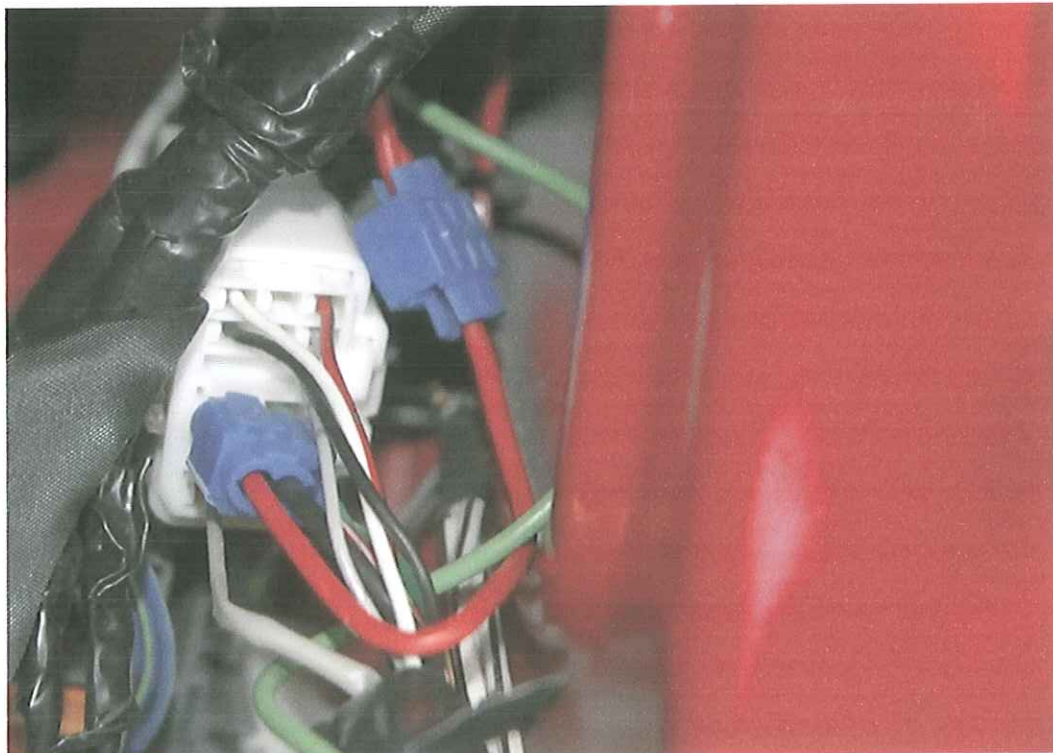
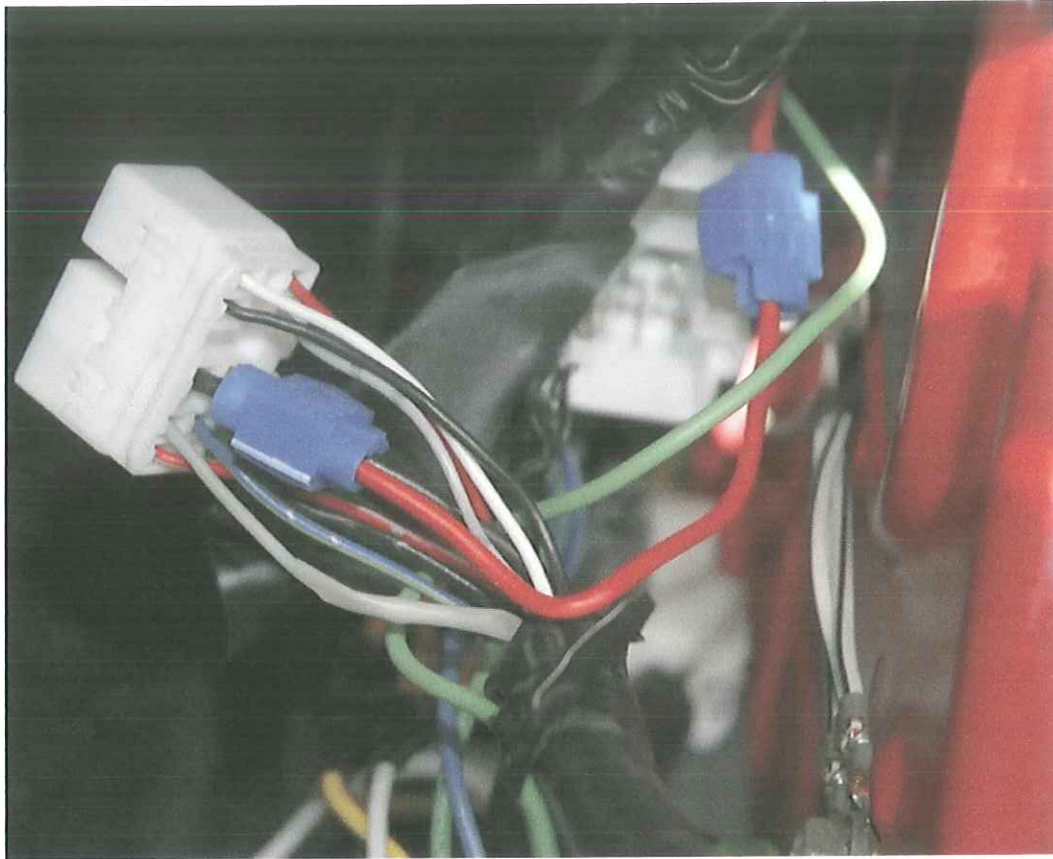
3 minutes

### Addendum by Glenonoka to help with the fitting:

by [glenonoka](#) on Mon Mar 26, 2007 8:25 pm

For the hook-up into the defogger circuit, there is a closer point to hook into. It is on the right side behind the kick panel. You can tap into the middle, thicker black wire, see pictures below.





[glenonoka](#)