

DIY Auto Up Passenger Window Module

I created this guide last year and it has been residing on another MINI forum for a while but I thought I would share it with the MT massive to see if anyone can put it to good use.

This is a guide on how to make and install a DIY module so that your passenger window on your Gen 1 MINI will automatically go up and behave in much the same way as your driver side window

This solution will create a module that can be easily installed and mounted in the car and only needs splicing into 2 wires. There is no need to solder directly to any circuit boards in your car. It can also be easily removed, simply by removing the module

The module you create has the same effect as holding the window switch up for about 6 seconds, but only with a single click. This is enough time to close the window from fully open

Please note that MINI purposely do not put auto up on the passenger window as a safety feature. I will take no responsibility should anyone injure themselves as a result of this module being created and installed

List of parts:

1x Resistor (100 Ohm)

Part Number: M100R, Cost: £0.15

1x Capacitor (22 micro farad at 25V)

Part Number: VH26, Cost: £0.10

1x PCB Strip Board

Part Number: JP46, Cost: £1.41

1x Potting Box

Part Number: LH56, Cost: £0.69

1x Red 16/02 Equipment Wire (10m)

Part Number: FA33L, Cost: £2.09

1x Black 16/02 Equipment Wire (10m)

Part Number: FA26D, Cost: £2.09

Total Cost: £6.53

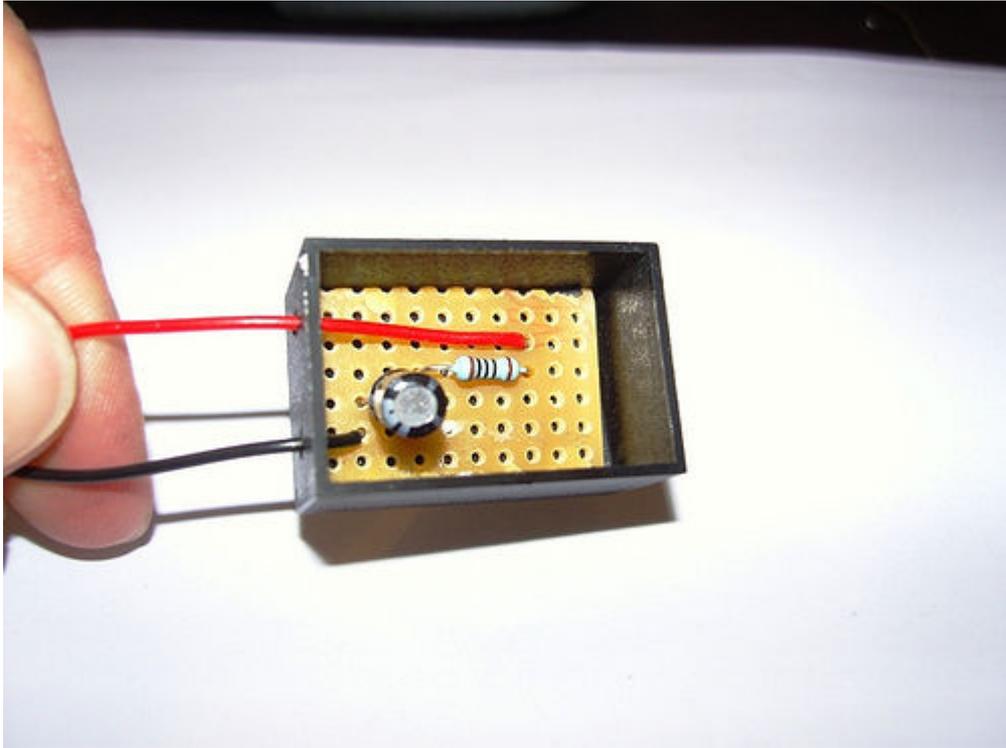
All of these part numbers and costs are from Maplin. You will not use all of the wire, in fact you will only use about 30 cm of it, however I have bought 2 different colours of wire to save confusion and make everything a bit easier when installing

Tools Needed:

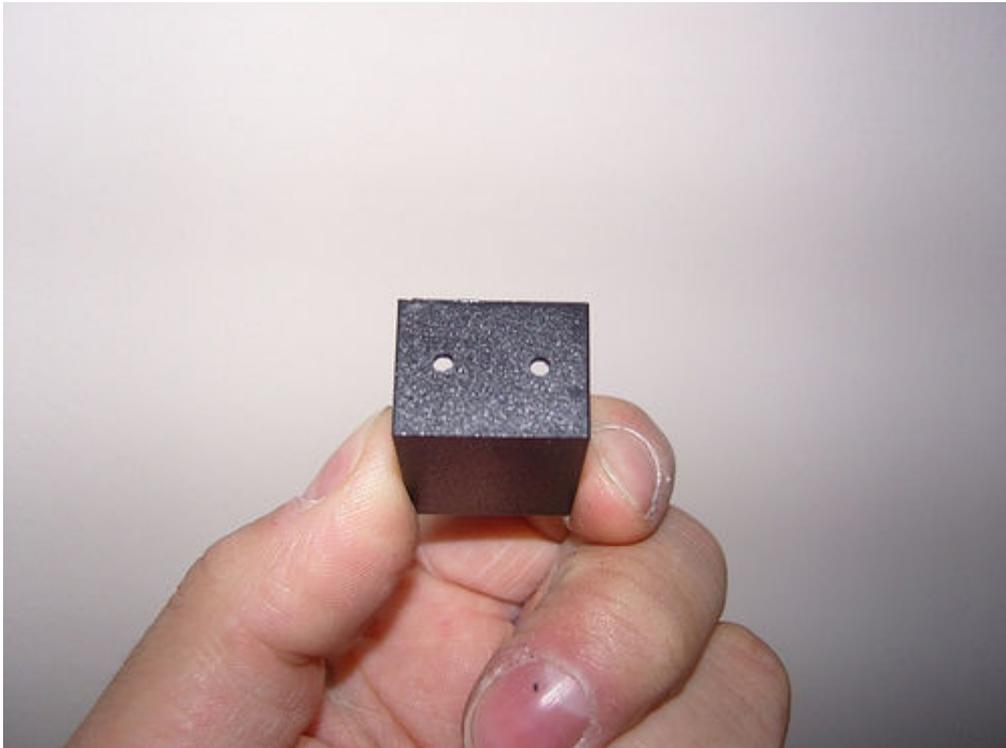
Soldering Iron
Solder
Clippers
Double sided tape or double sided foam tape
Various torx (star head) screw drivers
Sharp knife
Electrical tape
A steady hand

Creating the Module:

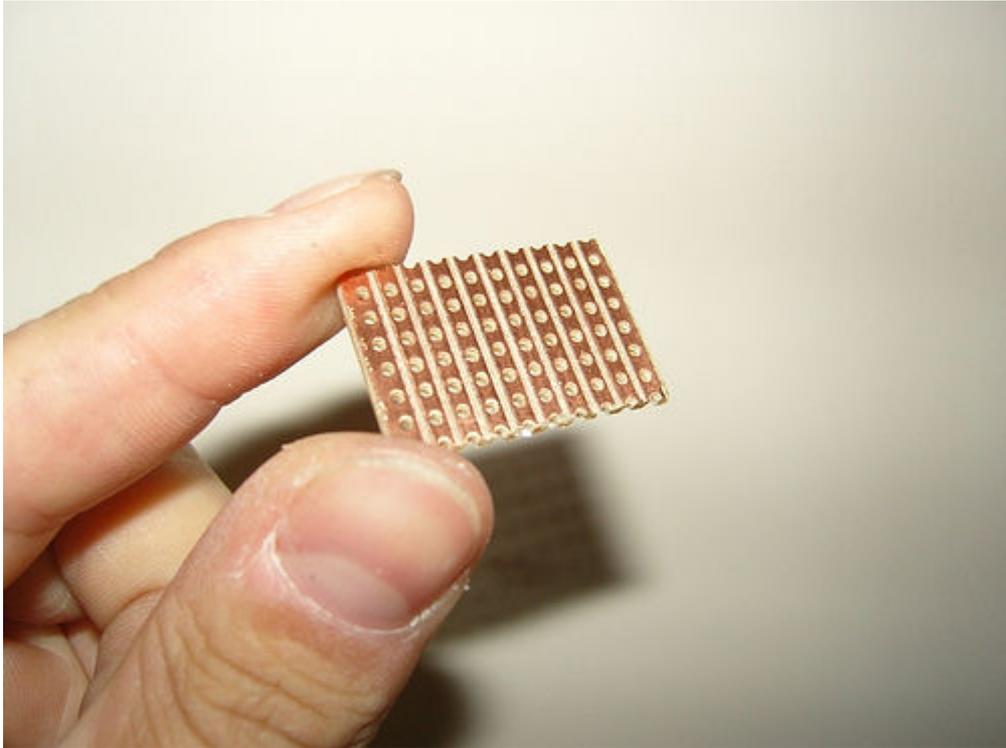
The first thing that you need to do is create the auto up module. It will end up looking something like this



First start off by making 2 small holes in the side of the Potting Box, this will be so that the cables can poke out of the side of the box. I used a number 2 drill bit to make these holes

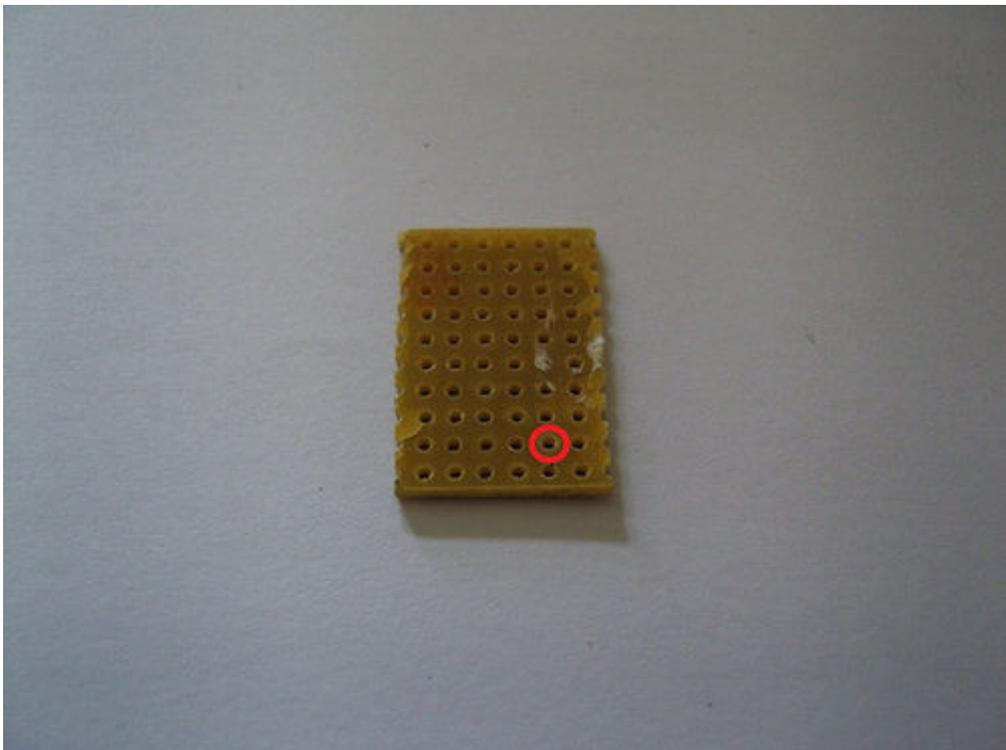


Next cut a piece of the PCB strip so that it will fit inside the Potting Box. You can use a heavy duty pair of scissors though I recommend using a hack saw to cut it. It will be about 1.5 cm by 2.5 cm and look something like this:

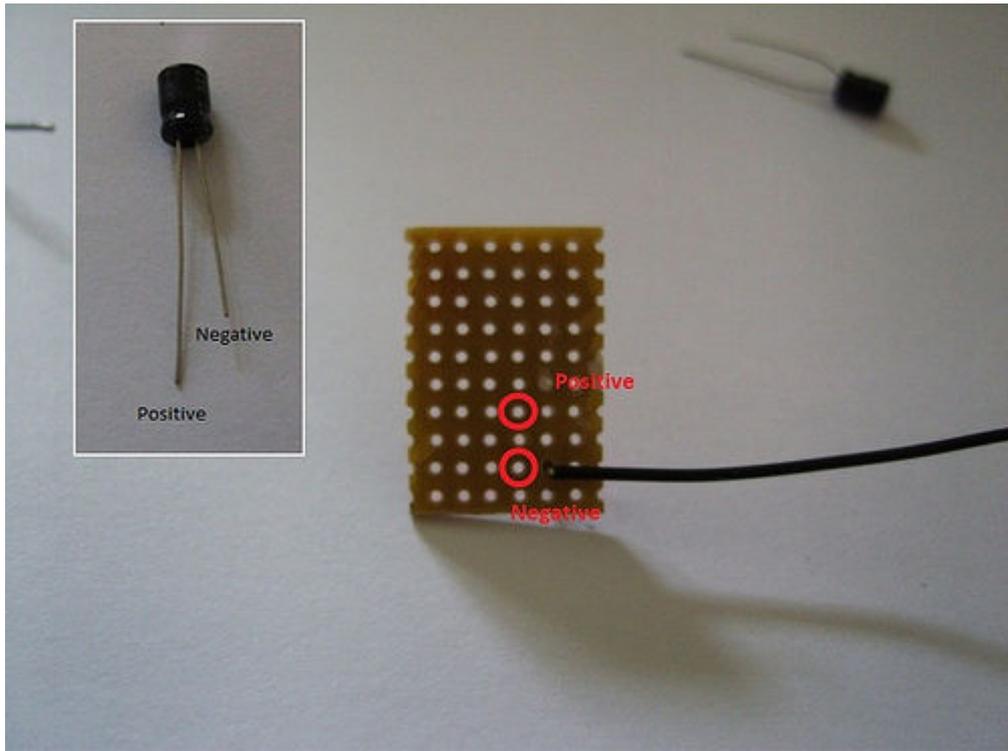


Now you will need to solder all of the parts onto the PCB board. All of the parts will be pushed through from the top of the board with the copper underneath; this will allow you to solder them in place without the components getting in the way. When soldering be sure not to let the solder travel from one rail to another on the PCB as it cause the module not to work

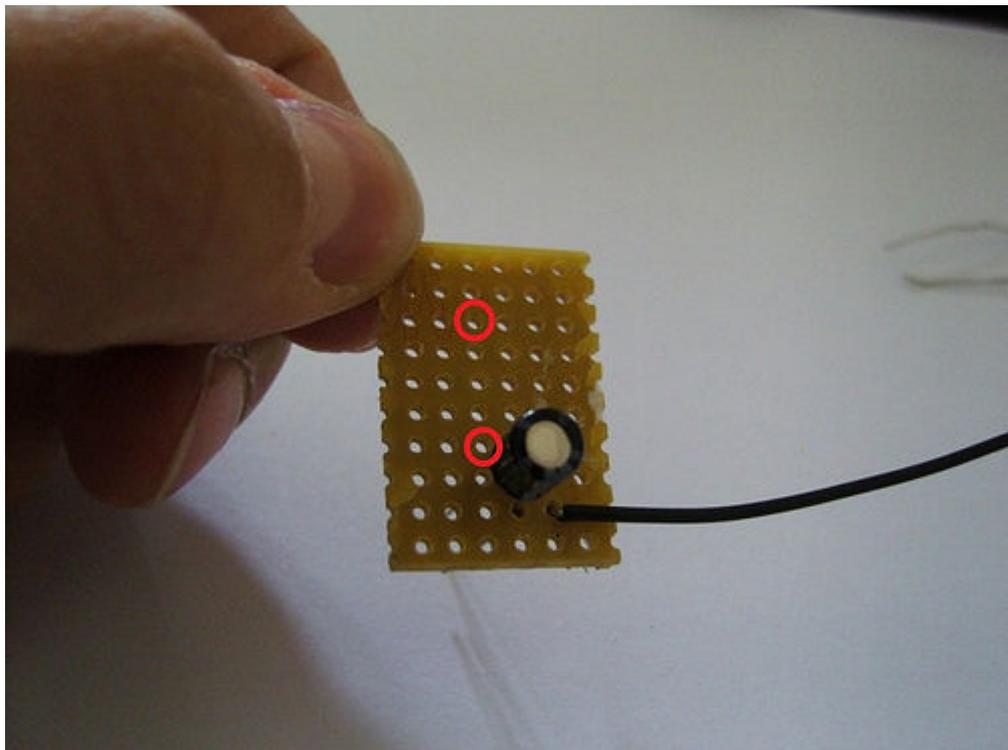
Start with the black cable. You will only need about 15cm of cable. Strip off about 1 cm of the plastic covering from the cable and run it through the hole marked on the PCB and then solder it into place



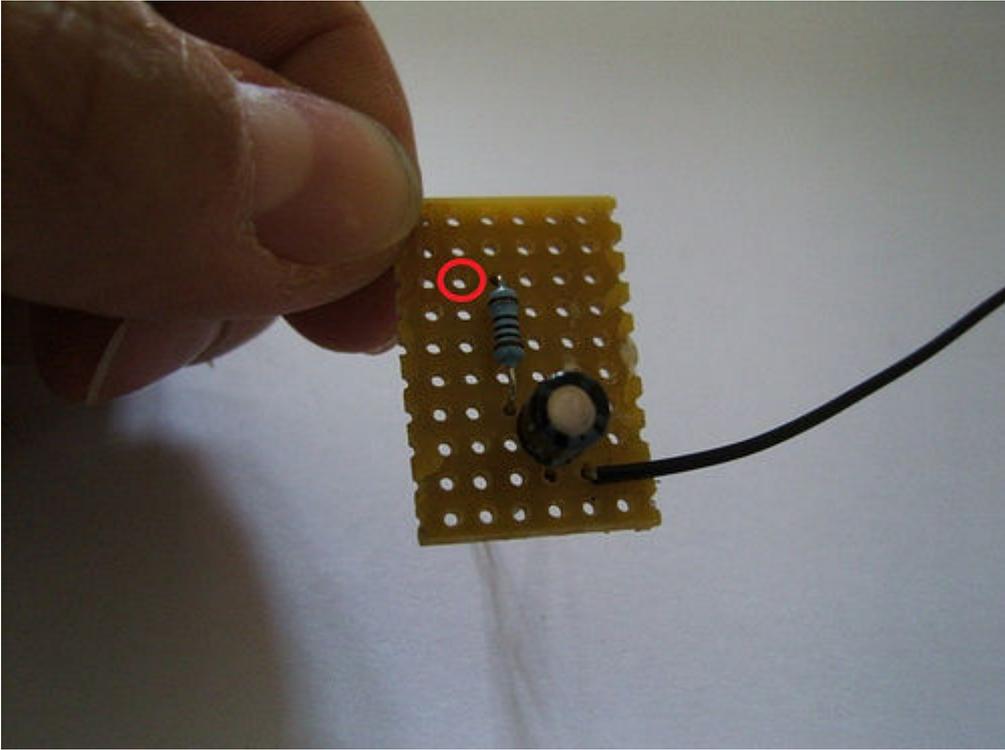
You next you will need to solder the capacitor into place. You need to make sure that it is the right way round otherwise it won't work. Place the pins as shown below. The positive pin is the longer of the 2 as shown in the diagram



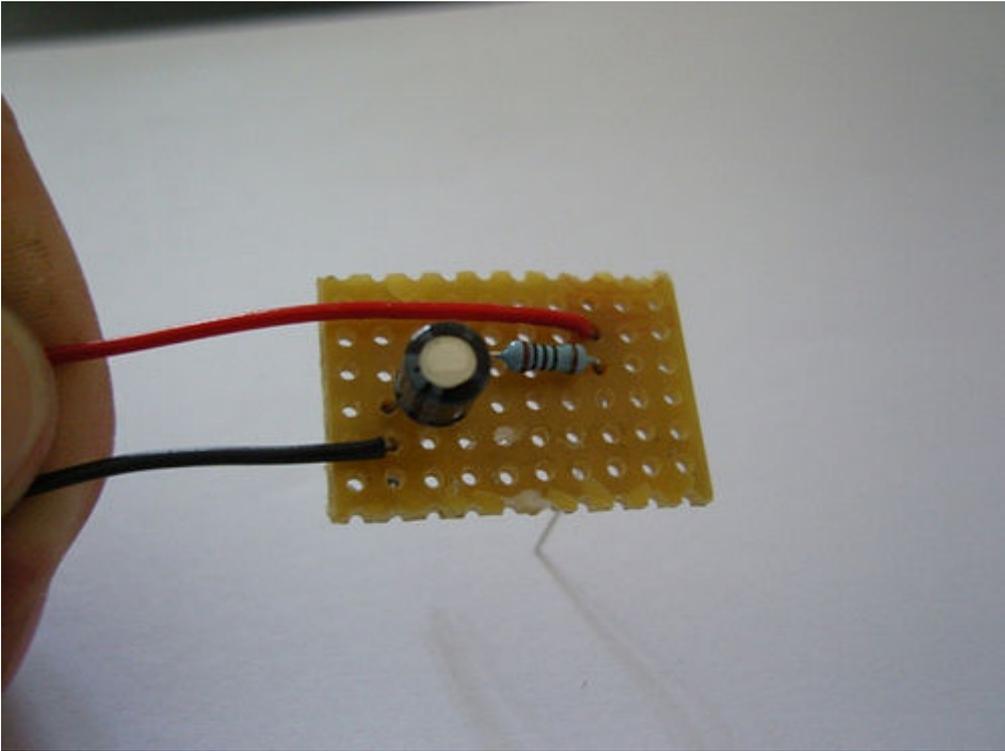
Once the capacitor has been soldered into place you will need to install the resistor. Push the pins through the PCB as shown on the diagram. The resistor does not need to be a specific way round



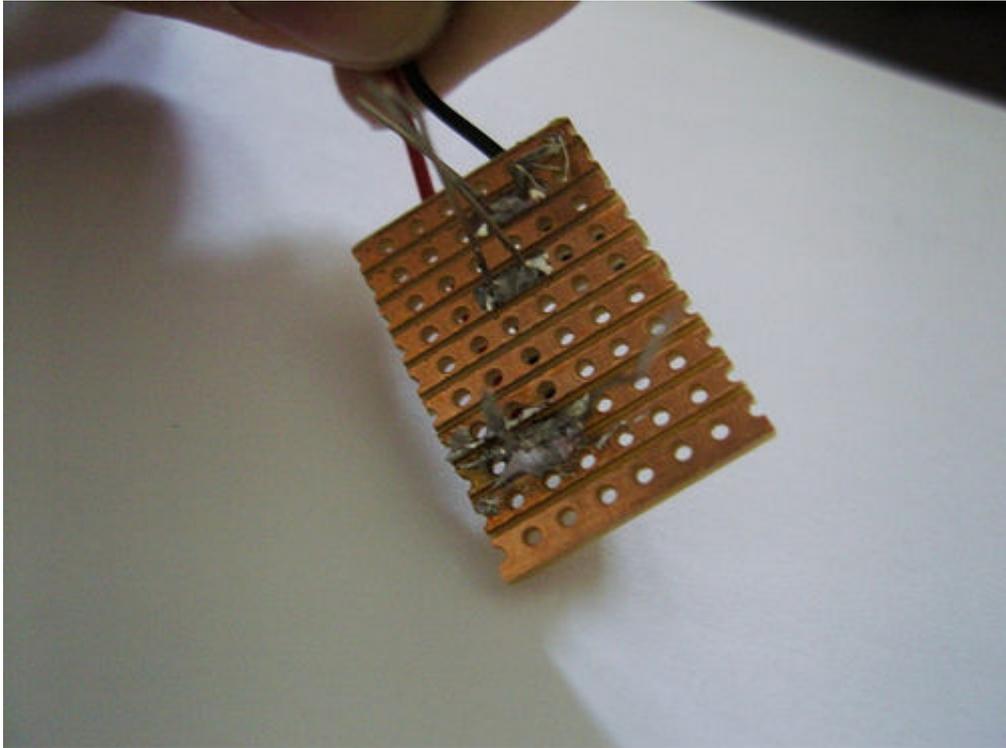
Now that the resistor has been soldered into place you will need to solder in the red cable. As with the black cable you will need about 15cm of cable. Strip about 1cm of the plastic covering off the cable and push the cable through the hole marked on the diagram and solder it into place



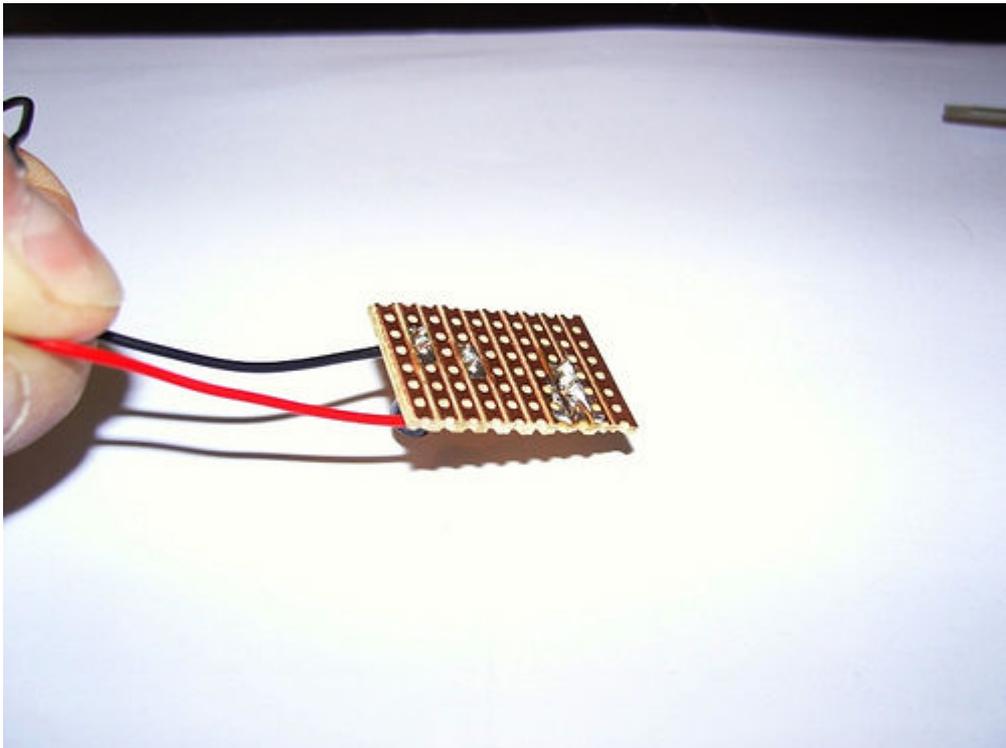
You will now end up with something that looks like this from the front:



And like this from the back:

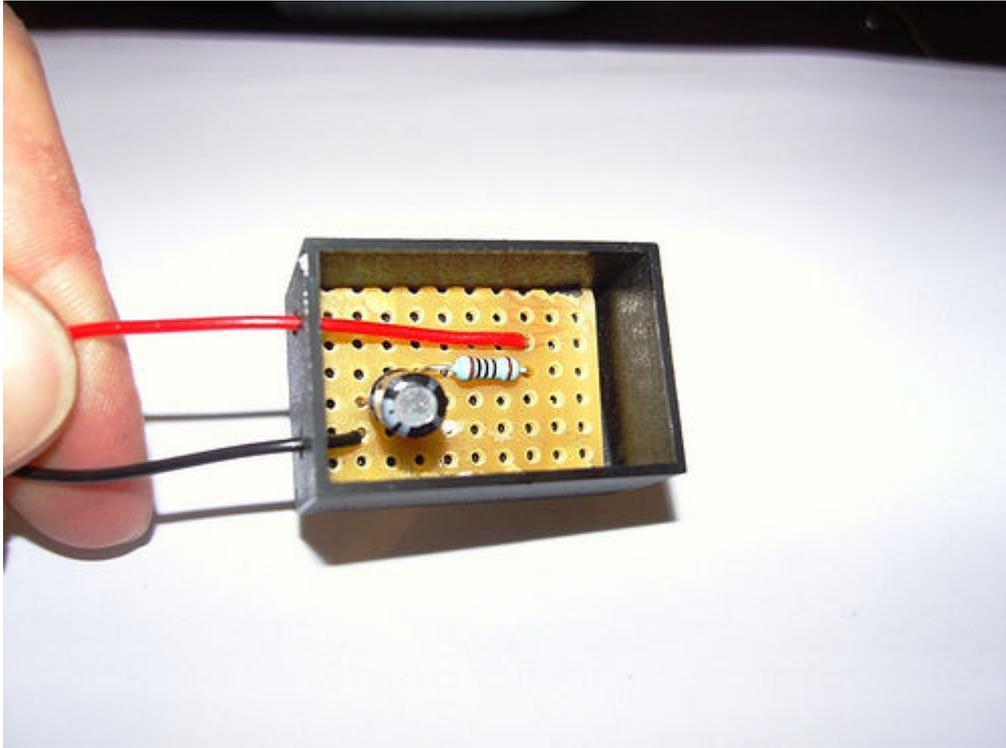


You will need to use your clippers to cut away the excess of the pins that is poking through the back of the PCB. Be careful not to cut away too much of the solder as it may damage the connection. Once complete it will look like this:



Now install the PCB you have made into the potting box. The copper side will need to face down in the box. Make sure that you push the cables through the holes you made in the box. You can use some double sided tape or doubled side foam tape to hold it in place

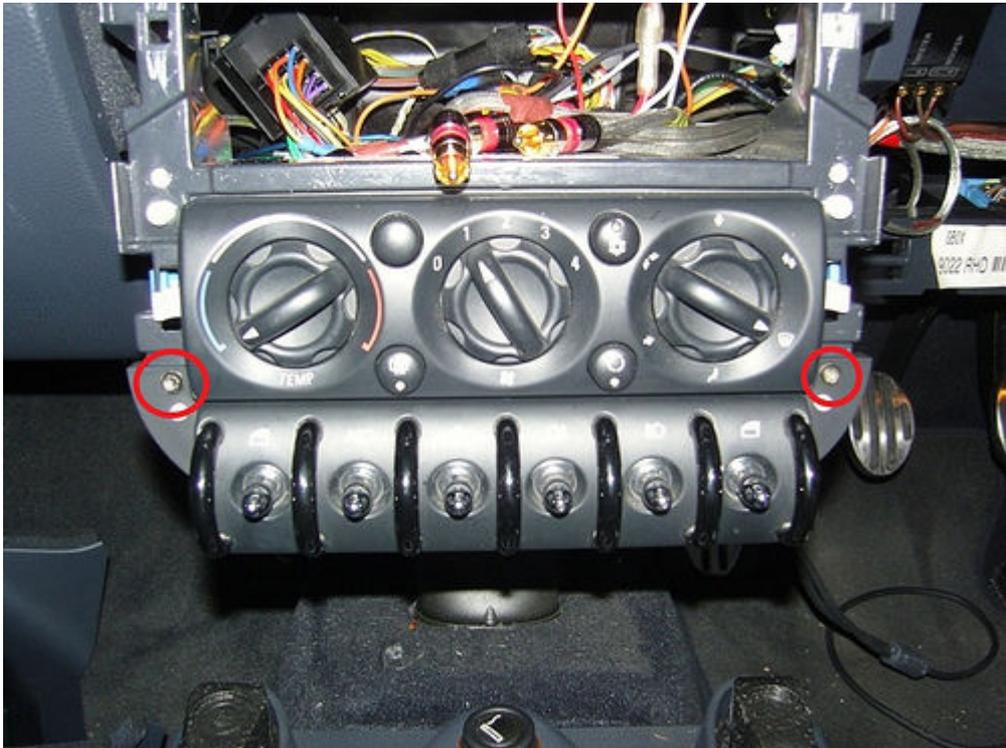
You will now end up with your finished module:



Installing the module in the car:

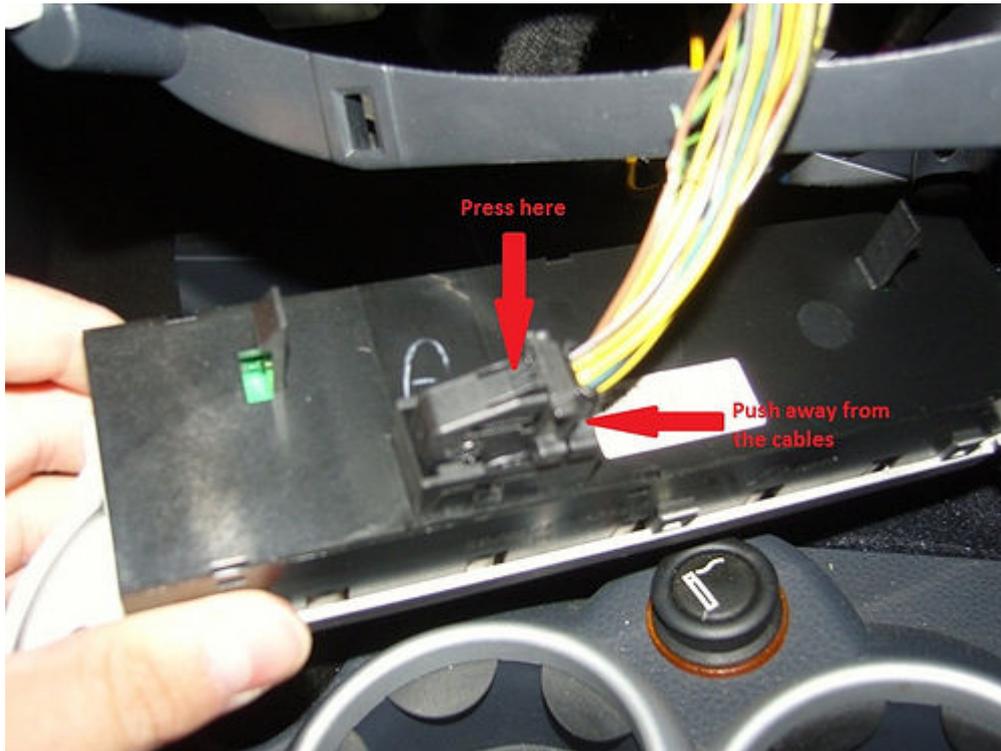
To install the module you will need to get access to the switch panel that has the window switches on it. To do this you will need to first remove the down tubes. Guides to this can be found on the internet

Once you have removed the down tubes you will need to remove the 2 torx screws holding the panel in place, marked on the picture



Now remove the switch panel, it should come out pretty easily without much force. Remove the cable connector by pressing

down the button on the top of the switch and pushing the small bar away from the cables, as shown in the picture:



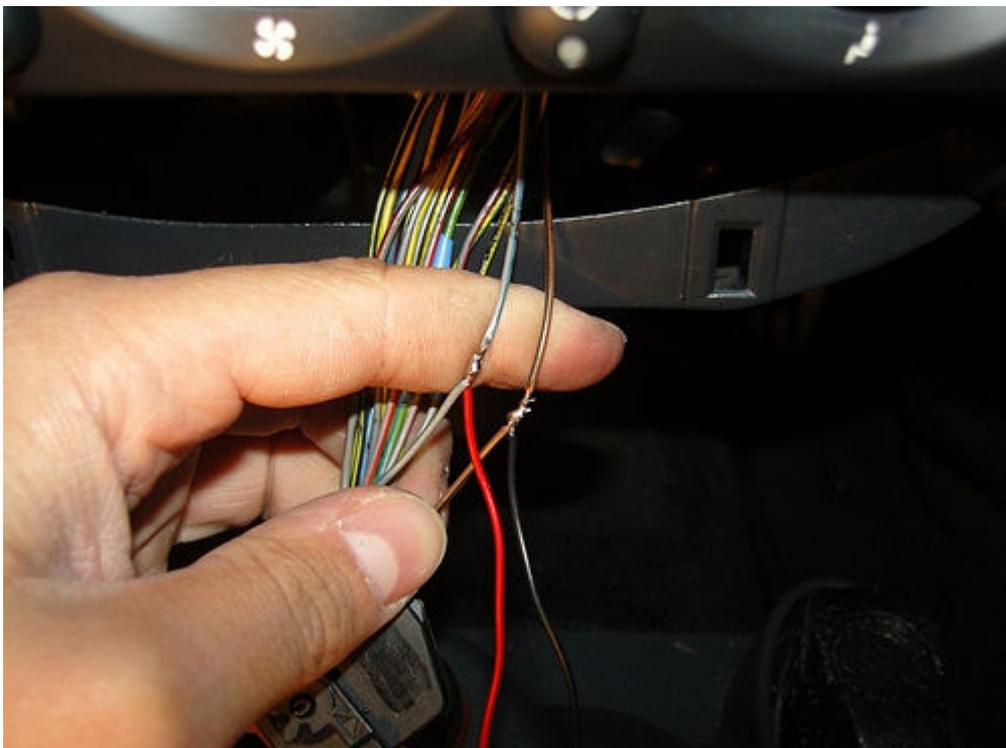
Put the switch panel to one side. Now working with the cable bundle unwrap it so that you can access the individual cables. There is only a limited amount of slack on the cables, so work space is tight



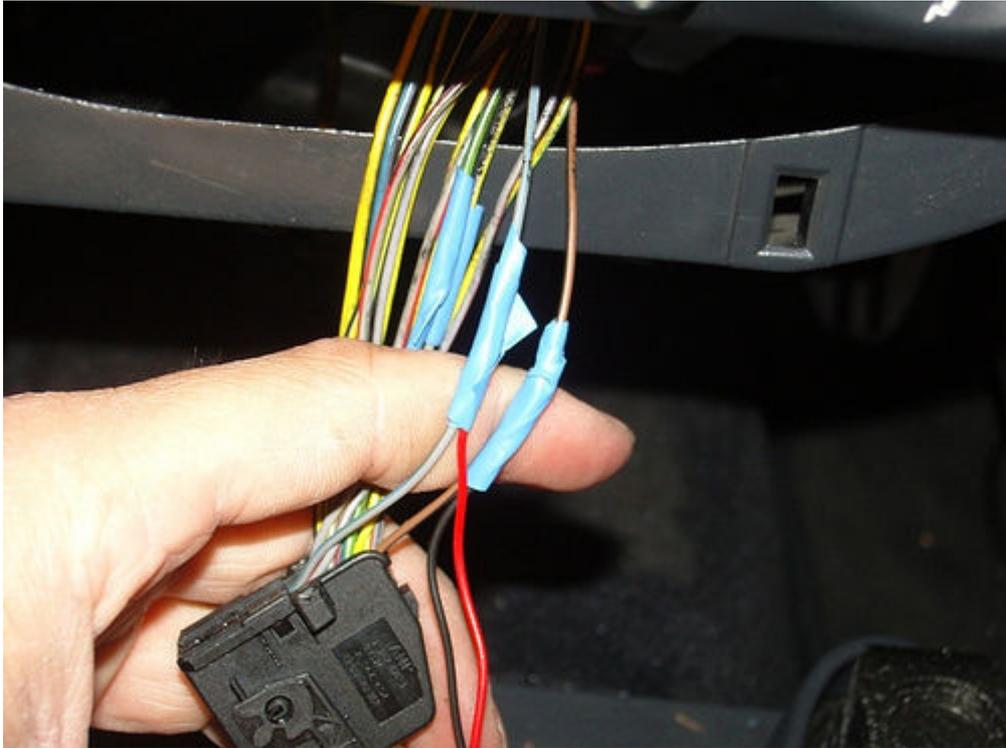
You will need to find 2 cables, the first a **brown cable with a black line** on it, and the second a **grey cable with a blue line**. Once you have found these cables you will need to cut away some of the plastic covering to expose the copper cable. Do this by carefully shaving away the plastic



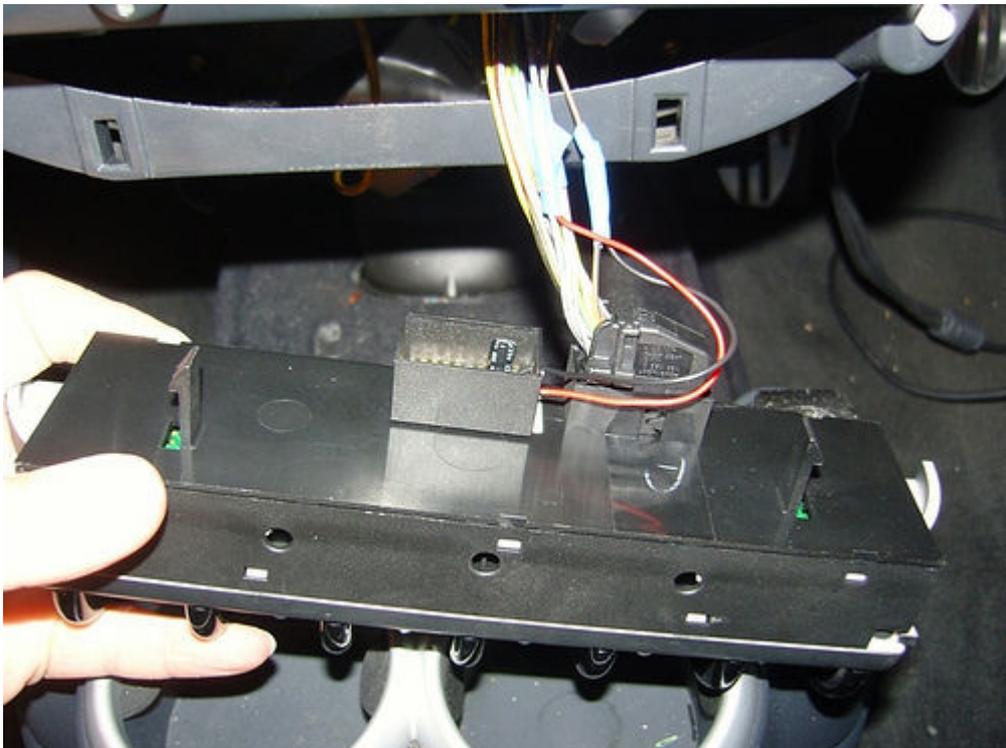
You will now need to connect the module you have made to these cables. The **black cable** from your module will need to connect to the **brown and black cable** on the car, and the **red cable** from your module will need to connect to the **grey and blue cable** on the car



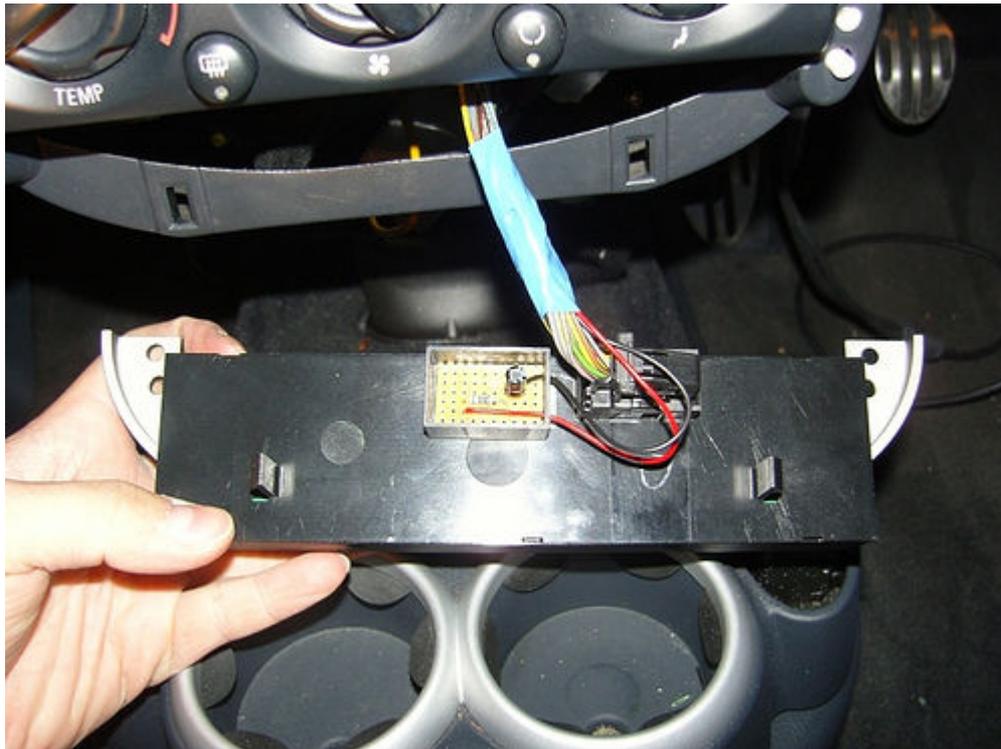
Solder the cables into place and cover the exposed connections with electrical tape or heat wrap



Now reattach the switch panel to the cables and use some double sided tape, or double sided foam tape, to mount the module next to the cable connector. Make sure that it is next to the cable connector as shown in the picture otherwise the module will not have enough clearance, meaning the switch panel cannot be reinstalled properly



Finally tape up all of the cables to ensure that they are kept together and they do not get snagged or damaged



All that is left to do now is reinstall the switch panel and enjoy using it!

Using the Auto Up Module:

Lowering the window is just the same as before, press the switch down to lower the window automatically

To raise the window simply push the switch up and it will close on its own. Should you wish to stop the window going up at any point push the switch down and it will top in its current location. Then simply push the switch up or down again to open or close the window

Here is a video of the module in action :biggrin:

[Uitklappen](#)

Given the nature of this solution it is not designed for the window to be opened and closed many times in quick succession, as it takes time of the capacitor to discharge. Should this be done the window may stop responding. Should this happen do not press the switch for about 10 seconds. It should then be back to normal again

Enjoy!