# CHANGING THE DASH CONSOLE LIGHTS by Q. Bosch

**This guide will help you change your centre dash console and dials from the standard green lights to bright blue. It does not have to be blue. In fact it can be red, white, yellow or even orange depending on the variety of different bright LED colours there are available. This guide is for the Mazda Astina's (323f's) prior to the face lifted models. The ventilation console in this guide (95 323f BA used) is different to the 96 BA and later models.**

**Please keep in mind that changing these lights can be tedious and some patience is required.**
**I recommend doing this mod over a weekend. I cannot be held responsible for any damages done to your vehicle by using this guide and therefore you do this at your own risk. This is just a guideline.**

**The following will be needed to change the lights:**

1. **12 x 3mm Bright Blue LED's (Add 2 more if changing the front demister and vent button)**
2. **1 x 5mm Bright Blue LED's**
3. **3 x 10mm Push in Bright Blue LED's or 6 x 5mm Bright Blue LED's**
4. **5 x 560ohm resistors (Add 6 more if going with the 6 x 5mm Bright Blue LED's)**
5. **A pair of scissors**
6. **A bottle of blue glass stain and a small paint brush (I used a 10mm flat brush)**
7. **1 x Sheet A4 of clear 0.6 mm film (Thinner or thicker clear films can be used)**
8. **Super Glue**
9. **Soldering Iron and some solder wire**
10. **A flat and a star screwdriver (Plus a small flat and a star screwdriver)**
11. **Side cutter.**

**Firstly remove the side panel between the dash and the door. It clips loose fairly easy.**

**Unclip the panel as where it is indicated on the picture. Some 323f vehicles might have two screws where indicated on the picture and have to be removed before unclipping the panel. After the panel is unclipped on the right gently pull the cover from the bottom end.**

**Unscrew the two screws found at both sides of the steering console that holds the dash cover in place as indicated above.**

**Carefully unclip the centre console where it meets dash cover. A flat screw driver can be used to unclip the console. Be very careful when unclipping the console with the screw driver as the plastic scratches easily. An alternative way is to remove the centre console. There is a guide on the Club323f on removing both the dash cover and the centre console. After the above is completed, the dash cover can be removed. Firstly lower your steering wheel to its lowest position. Gently pull the dash cover starting from the top until it clips loose. Carefully remove the plugs from all of the switches behind the dash cover. The dash cover can now be removed. Keep in mind not to place it on the floor as it scratches easily.**

**Unscrew the dials as indicated above. After this is done slowly remove the dials. Unclip the three connectors at the back. The dials can now be placed on a work bench or any suitable area where the lights can be replaced. Please remember to place the dials on a soft cloth as they do scratch easy and remember about the reset pin on the face.**

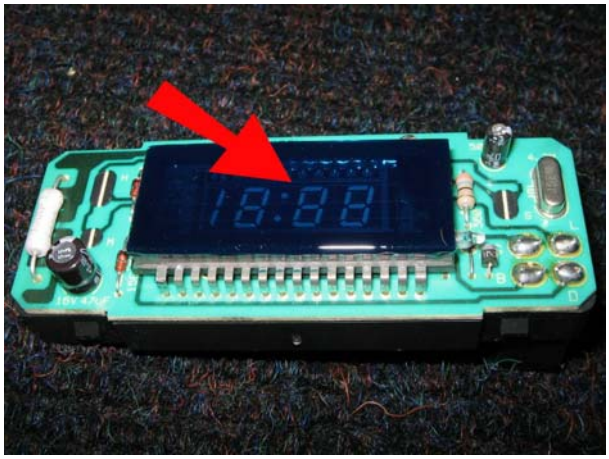
**Remove the three bulb holders as marked on the picture. These three green coloured bulb holders are the bulbs that give light to the speedometer, the rev counter, the heat and fuel gauge. The two black bulb holders at the middle top part of the dials are the lights for the indicators and the other one on the left is for the low fuel warning light. Unclip the three green bulb holders and replace the stock bulbs with the new bulbs acquired. Replace the bulb holders back into the dials.**

**One of the following type of bright blue LED's can be used to replace the stock green capped bulbs. The LED on the left projects its light onto one specific point. The LED on the right spreads its light at a 45° angle. I used the LED type on the left as I found it to be slightly brighter.**

**There are many types of coloured bulbs and bright LED's for sale. These are the only ones I could find during the time.**

**Now the dials can be replaced back into the dash. Before screwing it back in place, plug in the connectors and check if all three lights are working. Remove the ones that are not working and turn the bulb holder 180° around. LED's have a diode fitted so that power can only flow a one way through it. After all the bulbs are working the dials can be replaced and screwed in place. Just remember to plug in the three connectors at the back of the dials.**

**Unscrew the digital clock unit as indicated on the left picture. Next unclip the digital clock as shown in the right picture. There are two similar clips found on the other side of the digital clock that also needs to be unclipped. Remove the clock and place it on a workbench where it can be disassembled.**

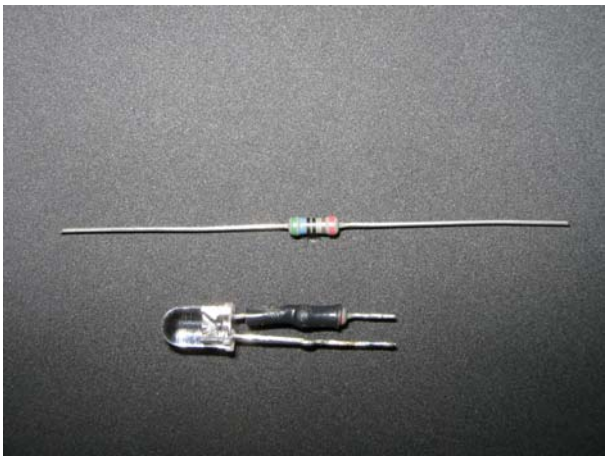


**Unclip the clock as shown in the left picture. Remove the circuit with the LCD display and place it aside. Watch out for the three setting buttons and their cushions. Place the three buttons and cushions in a safe place where they cannot be lost. Before painting the LCD lens clean it with some pure alcohol. The reason for using pure alcohol is that it will not damage the clock board's circuitry and it leaves no residue on the lens. Take a 10mm flat paint brush and paint the first layer of glass stain on the lens. After the first coat is applied clean the paint brush immediately. Wait about 15-20 minutes before applying the next coat. I applied 8 coats to my LCD display. You can check the colour of the lens by plugging it back into the harness to check if more coats are needed.**

**Next carefully remove the tinted plastic lens from clock cover. Cut out a piece of the 0.6mm clear film that will cover the clock's front cover. Test the new lens to ensure that it will cover the whole face. Now apply some superglue to the clock cover where the new clear lens will bond. I did not get this right on my first attempt as it was more difficult than I thought.**

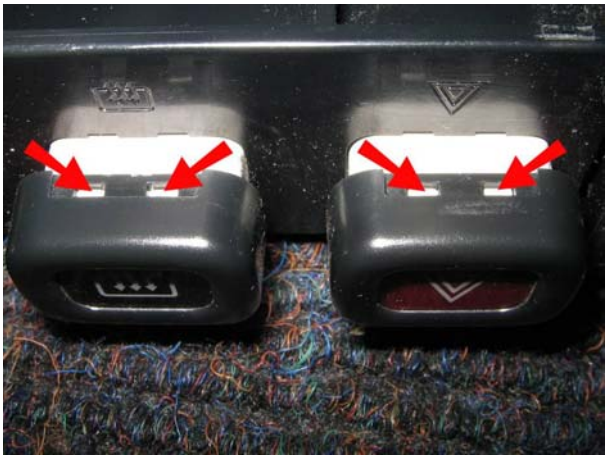
**When the clear lens is firmly in place and the clock's LCD display is finished, the clock can be put back together. Now check the clock by plugging it back into the dash harness. Check the to ensure that the buttons for setting the clock is working. If everything is working the clock unit can be clipped back into the console.**

**Next locate the demister's light. Unclip and remover the bulb holder. Remove the bulb from the bulb holder by loosening its legs with a small flat screwdriver.**

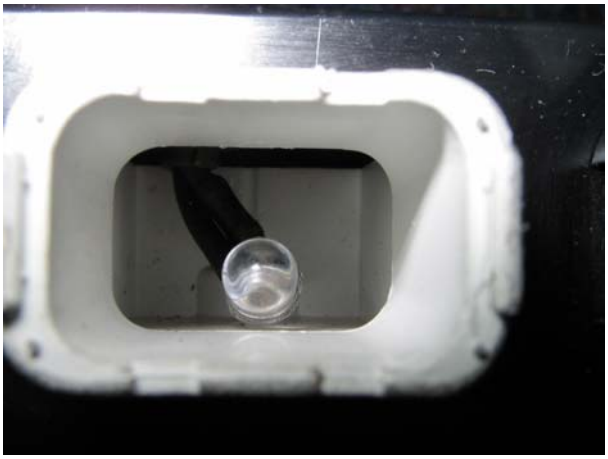


**Take a 5mm LED and cut the positive leg about 15-20mm shorter. (The positive leg is usually longer than the negative leg.) Now twist the resistor's one leg around the shorter positive leg of the LED. Take the soldering iron and solder the resistor and LED's legs together. Cut a piece of heat shrink to cover the soldered legs from the start of the LED's head to just past the resistor. Take a heat gun or lighter and heat the heat shrink so that it shrinks around the soldered leg and the resistor.**

**Both legs of the LED can be covered with the heat shrink if there is any doubt in covering only one leg. Next cut the resistor's leg to the same size and push the two legs through the bulb holder and bend the legs into the grooves where the original bulb's legs were. Trim the legs with a side cutter. Please note that the LED can also be soldered onto the track of the board, but I would not recommend it.**



**There are two clips on each side of the face caps. Carefully unclip the demister face cap. Please note that I did not unclip my hazard button due to the fact that I did not change it's bulb. The stock light in the hazard button can be changed to a bright white LED.**

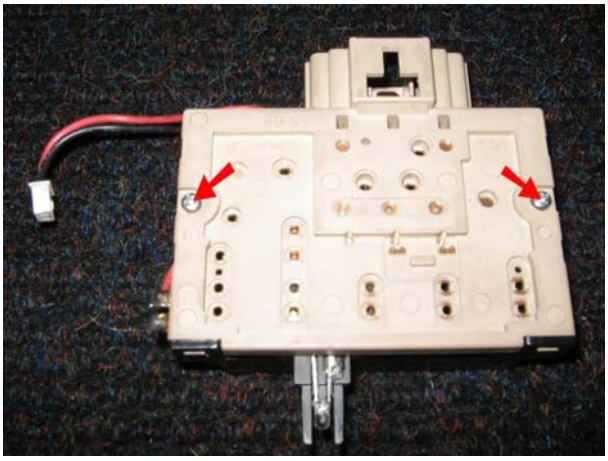


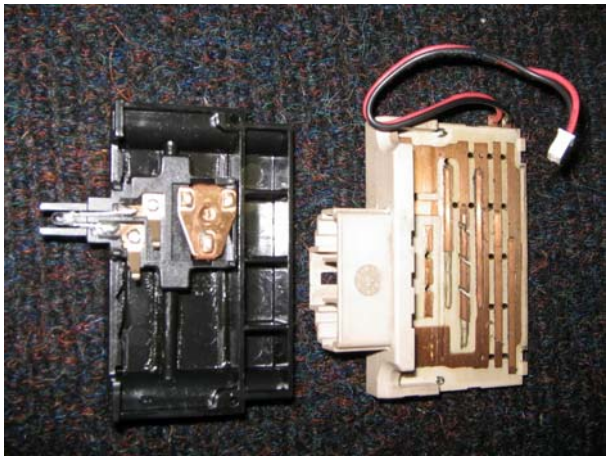
**Firstly bend the LED so that it will curve into hazard button. Place the LED into the hazard button and clip the bulb holder back into the slot. A flat screwdriver might be needed if the LED struggles to bend into the demister button. Before continuing plug the demister button into the harness and check if the LED works. If not, just unclip the bulb holder and turn it 180° around.**

**Next the LED needs to positioned correctly to ensure that you get the most light onto the demister badge. Plug the demister button back into the console and turn it on. Place the demister badge onto the button's face and check the spread of the light. Just adjust the LED with a flat screw driver until the light shines roughly on the centre of the demister badge. When this is done place the demister badge back onto the button and clip the face back onto the button. Just ensure the demister badge is facing with the three arrows upwards.**

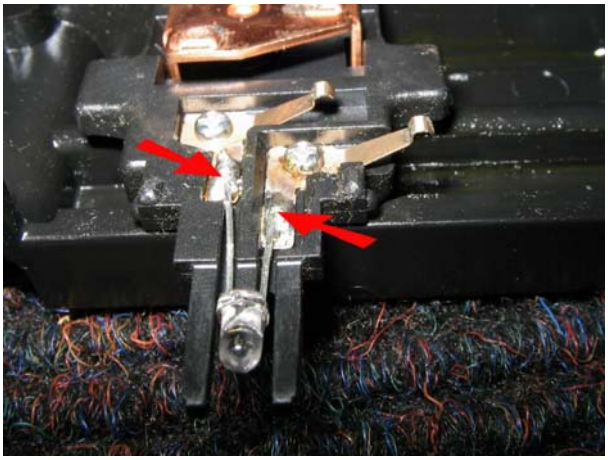
**When this is done the clock console can be screwed back into the dash console.**

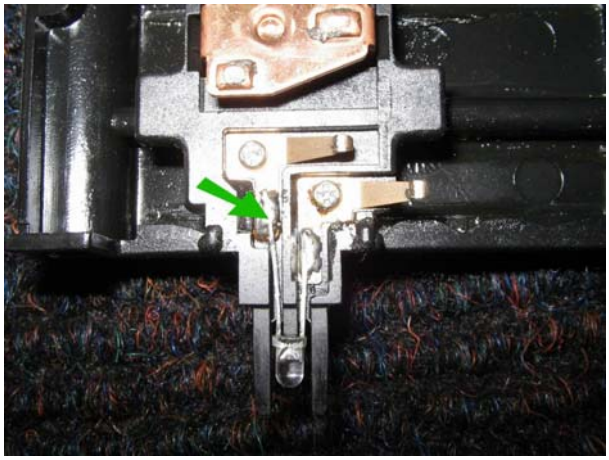

**Next unscrew the two screws holding the ventilation console in place. At the back of the console there are two connectors that needs to be unplugged. Now the ventilation console can be removed. Removed the heater and fan control button from the console and place them in a safe place where they cannot be lost.**





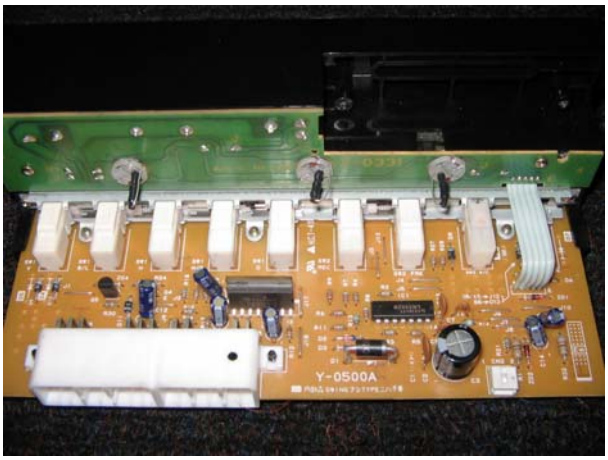
**Unscrew the fan control switch and unclip the small power plug. Next unscrew the cover on the fan control switch.**



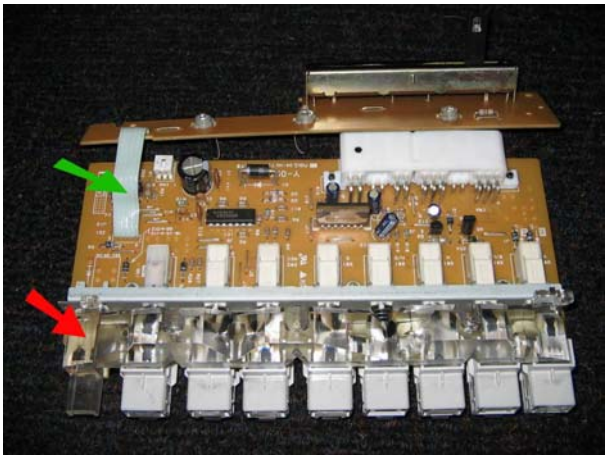


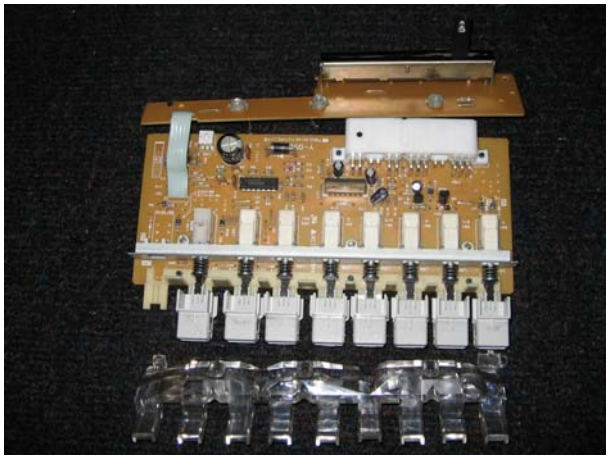
**Unsolder the original green LED as shown in the above left picture. I did not unscrew the two connectors. They can be unscrewed and then soldered if there is a fear of melting the plastic tracks.**
**After the original LED has been removed the new 3mm bright blue LED can be soldered onto the connectors. Cut the new LED's legs to size if necessary. No resistor is needed on this LED. The above right picture indicates the positive leg marked with the green arrow. When this is done the fan control unit can screwed back together. Do not screw it back into the ventilation console yet.**


**Unclip the all of the ventilation button faces with a small flat screw driver. Please take great care in unclipping the button faces as the console can be damaged very easily.**

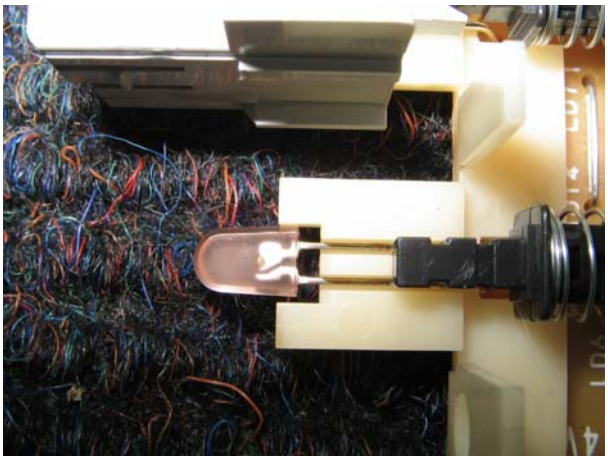


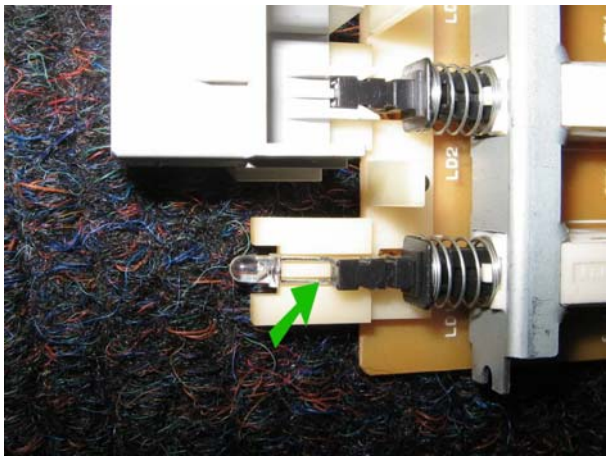

**Next unscrew the two screws at the back of the ventilation console. Carefully unclip the plastic cover. Unclip the three bulb holders found on the circuit board. Please take great care by removing the bulb holders as the circuit board can crack or damage very easily. These three bulb holders can be removed prior to removing the plastic cover. Next unscrew the two small screws on the circuit board and the two screws on the metal frame holding the face in place. Place the screws in a safe place.**



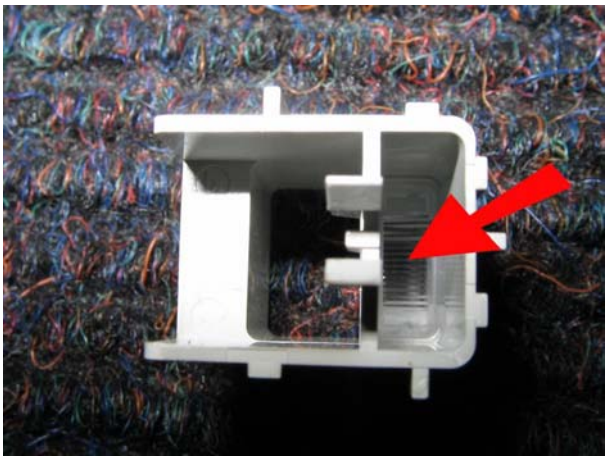


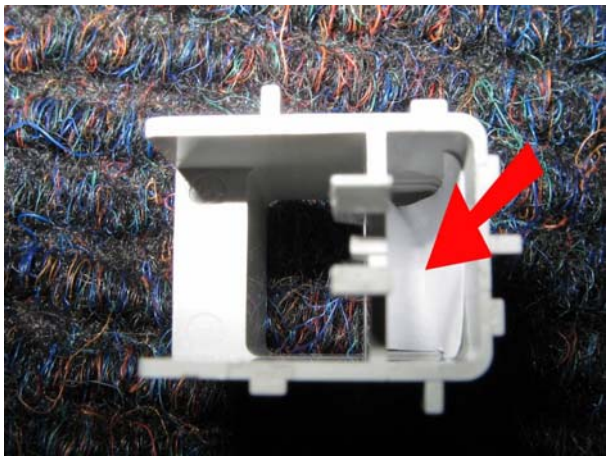
**The front face of the ventilation console should come off fairly easily now. Remove the face and the clear plastic runner (indicated with the red arrow) that distributes the light to the button faces. Please take great care in handling this unit especially the wire strip (indicated with the green arrow) that connects the two boards together.**



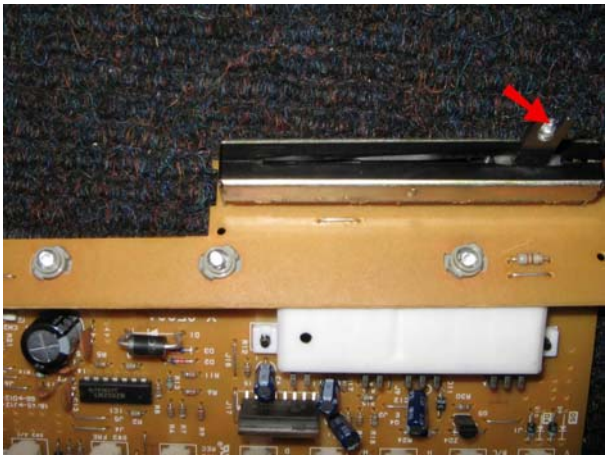


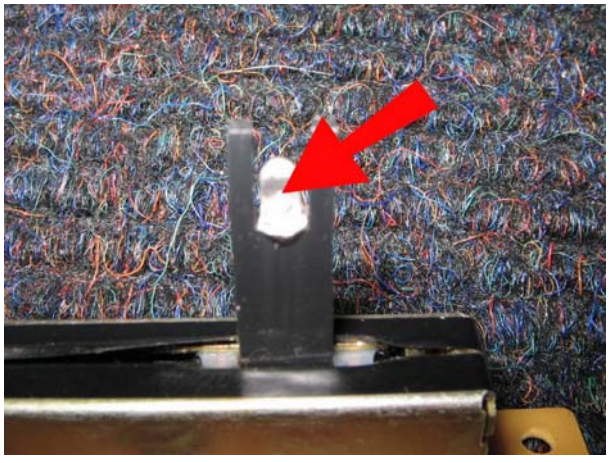
**Next unclip a white cap that clips onto the black button covering the LED. The LED in the above left picture is the stock LED that has to be unsoldered. Please note that I only changed the green stock LED's and not the two orange LED used for the front window demister and the air circulation. The above left picture shows one of the stock orange LED's. Unsolder the stock LED and replace it with a 3mm bright blue LED. The above right picture indicates the positive arm of the LED. When this is done unclip the next white cap and repeat the above process until all of the desired LED's has been replaced.**





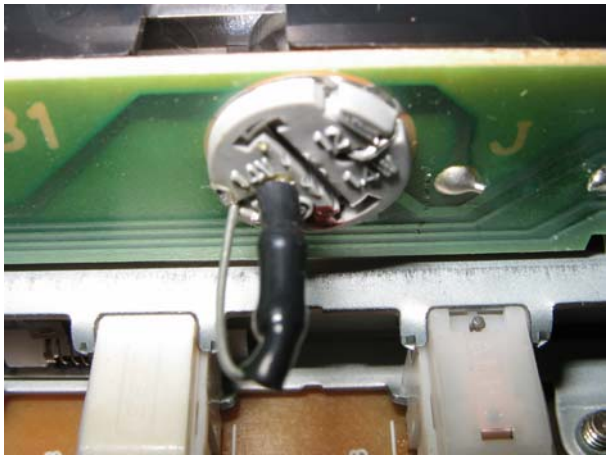
**If the two stock orange LED has <u>not</u> been replaced, clip back their white caps. I found that the bright blue LED's were too bright and irritated my eyes while driving at night. Cut a small piece of white paper and insert it into the inside of the white cap where the clear lens is. Ensure that the piece of paper goes all the way against the face of the clear lens. I cut the piece of paper roughly 30mmx16mm. It doesn't have to be perfectly cut. After all of the required white caps have been done, clip them back onto the buttons.**



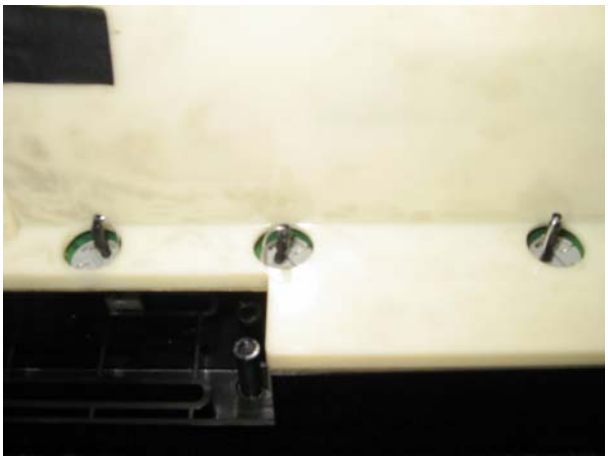


**Next simply pull out the stock heater switch LED and take a 3mm bright blue LED and cut its leg to the same size as the stock green LED and push it back into the heater switch.**

**Insert the clear runner back into the white caps and screw the small circuit board back onto the main board.**

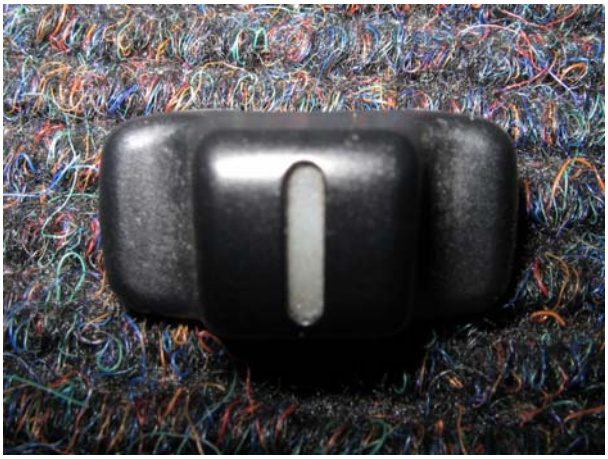


**Take the three bulb holders that were unclipped from the smaller circuit board and carefully remove the stock lights. Take a 3mm bright blue LED and push it through a bulb holder. Bend the negative leg into the grooves where the original leg has been and trim the excess of the leg with a side cutter. Cut the positive leg shorter and solder a resistor onto the leg. Next cut a piece of heat shrink and shrink it over the resistor and soldered area. Bend the resistor's leg 180° and bend it into the grooves where the original leg has been and trim the excess of the leg with a side cutter. Repeat the above section for the remaining two bulb holders.**



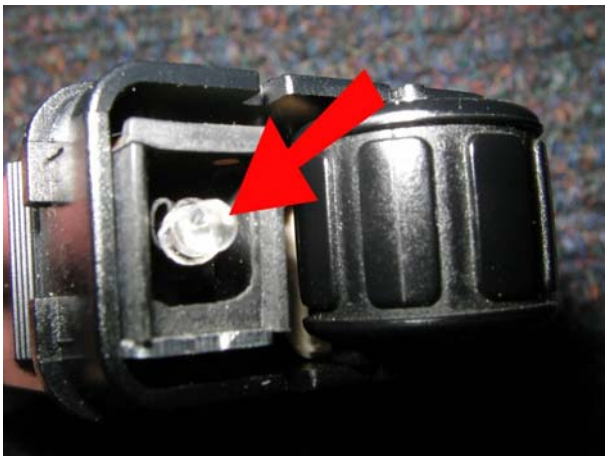
**Replace the ventilation console's face and clip back the face buttons in the correct order. Clip the plastic cover back onto the ventilation console and screw back the two screws. Carefully clip back the three bulb holders. Connect the ventilation console into the dash harness and check all of the lights replaced. The three bulb holders can be rotated 180° if they do not work. Do this until all three LED's work. Next unplug the ventilation console and insert the fan control switch into the console and screw it into place. Remember to connect the small power plug of the fan control switch.**

**The ventilation console can now be plugged in and screwed back into the dash.**



**Please take great care in doing the following modification. I could not get flat 4x2mm bright blue LED's and had to use the 3mm round LED's. Take the heater switch button and either cut or solder a gap in the**

**back piece that fits over the LED and the switch arm. Ensure not to make the gap too big as this will ruin your button. Do the same for the fan control switch button.**



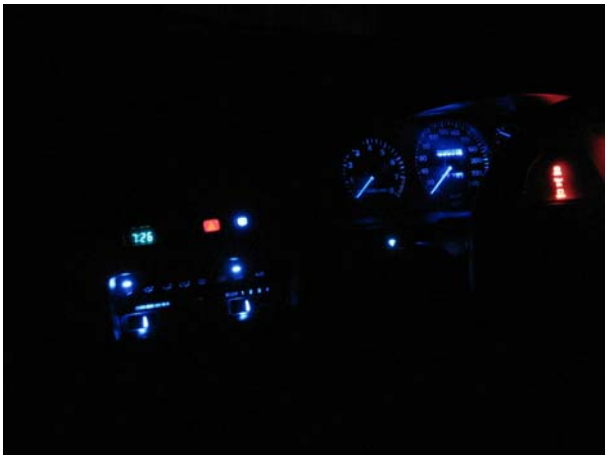
**Remove the bulb holder from the dimming unit and carefully unclip the face plate.**
**Take a 3mm LED and cut the positive leg about 15-20mm shorter. (The positive leg is usually longer than the negative leg.) Now twist the resistor's one leg around the shorter positive leg of the LED. Take the soldering iron and solder the resistor and LED's twisted legs together. Cut a piece of heat shrink to cover the soldered legs from the start of the LED's head to just past the resistor. Take a heat gun or lighter and heat the heat shrink so that it shrinks around the soldered leg and the resistor.**

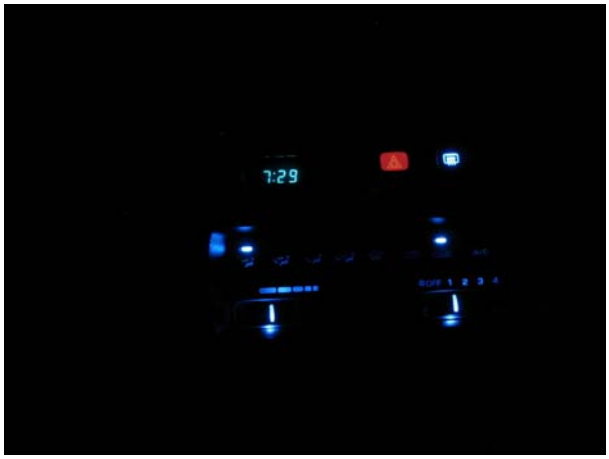
**Both legs of the LED can be covered with the heat shrink if there is any doubt in covering only one leg. Next cut the resistor's leg to the same size and push the two legs through the bulb holder and bend the legs into the grooves where the original bulb's legs were. Trim the legs with a side cutter. Please note that the LED can also be soldered onto the track of the board, but I would not recommend it.**

**Carefully bend the LED into the dimming unit. A screwdriver can be used to guide the LED around the curve. Try to get the LED positioned about 1mm away from the dimmer face button. You will have to clip on the face button to check that the LED shine in the middle of the light icon on the face plate. Be careful not to let the dimmer wheel fall out of the unit.**

**When the dimmer unit is completed connect everything to the dash harness and check that all of the lights are working. If all is well the dash can be re-assembled. After the dash has been completed, double check all the lights and your dial console to ensure that everything works.**

**That's that. I hope this guide aided you in changing your dash lights.**






**If you have any questions regarding this guide I will try my best to help you.**

**I can be contacted at: q.bosch@ravemail.co.za**

**Enjoy**

**Quentin Bosch**