

BUS FLASHER INSTALLATION & OPERATION GUIDE

VICTORIA

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1. PLACING LAMPS AND SIGNS ON YOUR BUS

Please refer to your State Transport Operation Regulations for the correct placement of the lamps and signs before mounting.

2. INSTALLING THE LAMPS AND SIGN

2.1 SCHOOL BUS WARNING SIGN

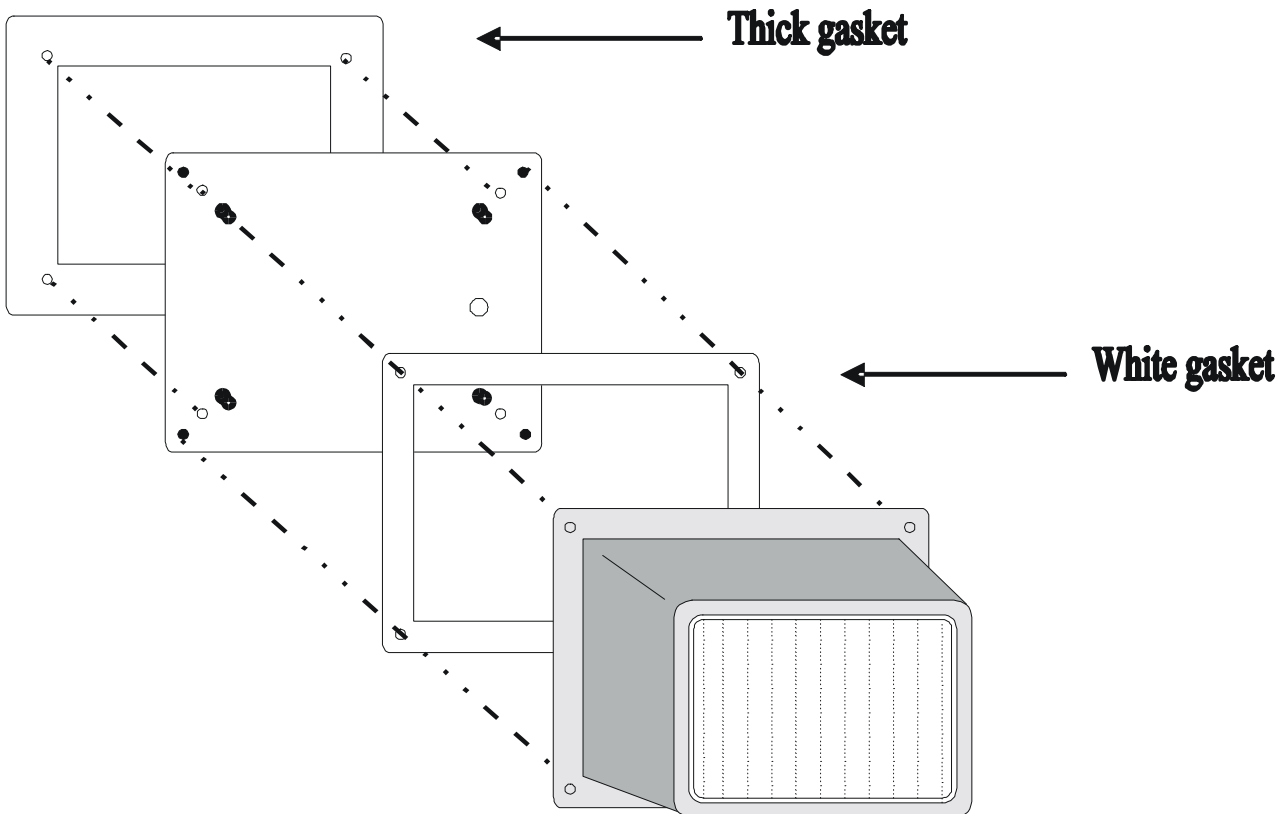
The sign supplied is a decal with an adhesive backing, which can be adhered directly to the exterior of the bus or window. Peel the backing paper off the sign and moisten the back of the sign with a damp sponge or cloth. Place the sign on the desired location and squeeze out excess water by rubbing the decal from the centre to the edge.

A removable sign can be made by sticking the decal to a sheet of metal, which may be detachable or foldable, or even by sticking it to magnetised plastic material.

2.2 SURFACE MOUNT LAMP

- Place the back plate of the lamp housing against the bus in the position it is to be mounted and use it as a template to mark the positions of the mounting holes and the hole for the wiring.
- Drill 3mm holes for mounting screws and an 11mm one for the wiring.
- Place the grommet supplied in the wiring hole.
- Pull the wiring for the lamp through the hole (lamp wiring is described in section 4), through the centre of the thick gasket and through the wiring hole in the back plate.
- Screw the back plate onto the bus so that the thick gasket forms a watertight seal.
- Crimp the contacts supplied onto the wires and insert into the receptacle connector (polarity is not important).
- Plug the lamp connector into the receptacle connector.
- If the back plate is placed on a slightly curved section of the bus, the screws on the lamp may be adjusted to redirect the beam.
 - Place the white gasket on the back plate and replace the lamp cover, ensuring the groove is at the bottom and the dome nuts are secure.

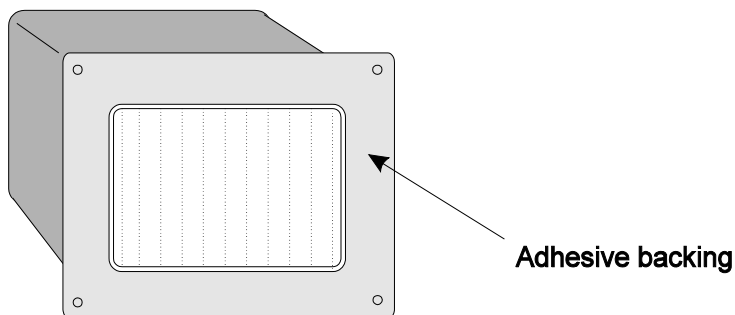
Lamps are to be positioned horizontally, not vertically.



2.3 WINDOW MOUNT LAMP

- The window mount lamp is designed to be mounted on the inside of the vehicle.
- Ensure the window surface is cleaned and free of grease and dirt.
- Peel the adhesive backing off the mounting plate and press the plate firmly onto the window in the desired position.
- Crimp the contacts supplied onto the wires from the control unit (lamp wiring is described in section 4) and insert into the receptacle connector (polarity is not important).
- Place the thin gasket on the back plate and plug the lamp connector into the receptacle connector.
- If the plate is placed on a slightly curved section of the window, the nuts on the lamp may be adjusted to redirect the beam.
- Replace the lamp cover, ensuring the wiring groove is at the bottom and the connector is inside the cover.

Lamps are to be positioned horizontally, not vertically.



"Window-mount lights are available to allow the fitment of lights to the inside of front or rear windscreens. Before fitting check your local regulations and with your local vehicle inspectors to confirm that these lights can be safely installed in your particular vehicle"

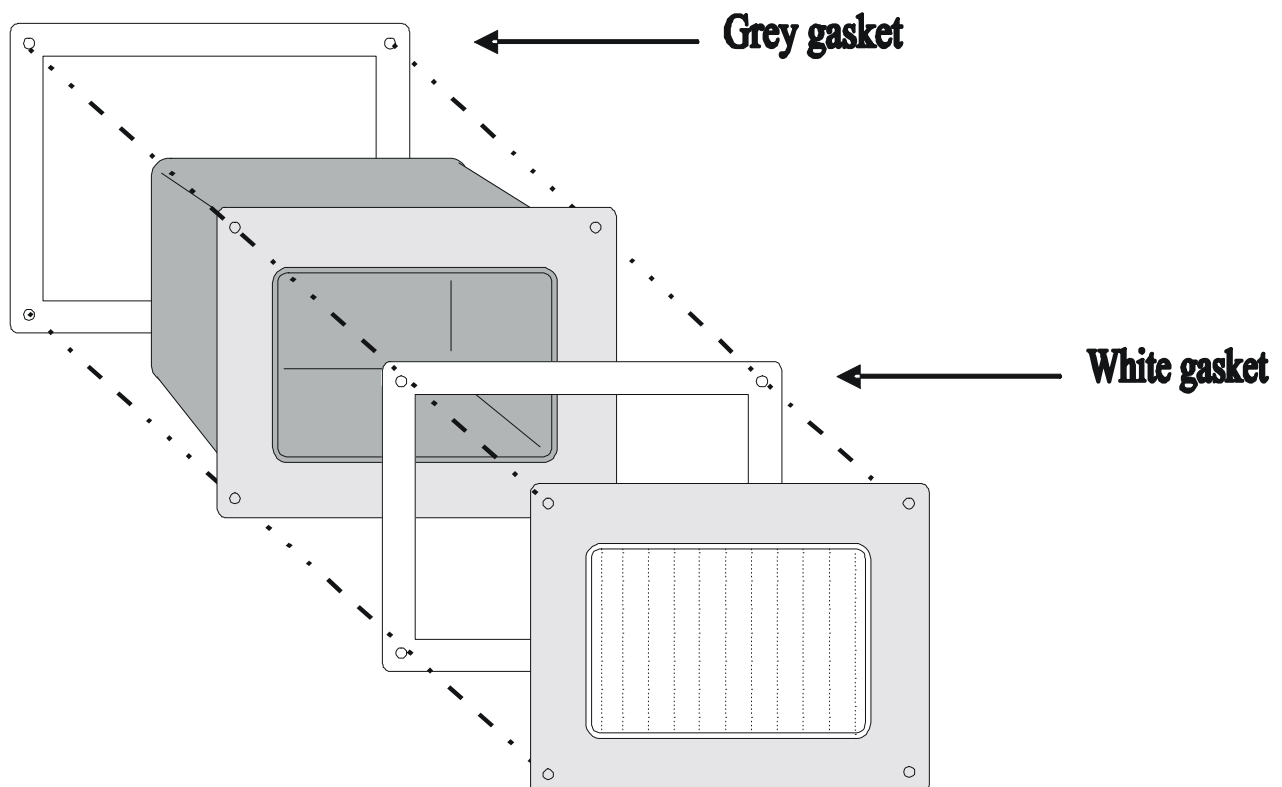
Some installation points to consider include:

1. Lamp mountings are of the "window-mount" type
2. Lamps and wiring cannot be tampered with by passengers (i.e. suitably covered or out of reach if behind back seat.)
3. Window glass is not tinted or if tinting material has been applied a hole is cut in it for the lamps
4. Driver vision is not obscured. Lamps mounted on rear windows are unlikely to obscure driver vision. Only buses with very low front windscreens may be able to have lamps mounted at the bottom of the windscreen though high mounted lamps may be acceptable if the sign is positioned so it does not obscure vision.

2.4 FLUSH MOUNT LAMP

- Use the gasket as a template to mark the positions of the mounting holes and the area which must be cut from the bodywork to recess the lamp.
- Drill 4mm holes for mounting screws and cut out section from bodywork for recess.
- Drill hole in rear cover in desired position.
- Feed the lamp wiring (as described in section 4) through the wiring hole in the rear cover.
- Crimp the contacts supplied onto the wires from the control unit (lamp wiring is described in section 4) and insert into the receptacle connector (polarity is not important).
- Plug the lamp connector into the receptacle connector.
- Place the white gasket between the front plate assembly and the rear cover and insert screws.
- Place a grey gasket (or two if required) between the bus and the lamp unit by gently stretching over the front of the lamp.
- Ensure wiring hole is at the bottom and screw into bus.
- Lamps and signs **must not** interfere with the operation of emergency exits in any way.

Lamps are to be positioned horizontally, not vertically.



3. WIRING THE BUS & INSTALLING THE CONTROLLER UNIT

Find a suitable place to mount the control unit, do not mount the flasher unit in areas where it is likely to be subjected to heat and moisture.

3.1 Door Switch Wiring

There are two parts to the door switch, the magnet and the switch with the wiring terminals. When the bus door is closed, the two parts must be mounted side by side with the two locating arrows pointing to each other (or just side by side where magnet and switch do not have arrows).

- Mount the magnet part onto the door and the switch part onto the doorframe. Ensure each part is in a position which will not be damaged by the door opening and closing. If you are just attaching the switch with the adhesive backing and not using mounting screws, put the switch where passengers getting off or on will not disturb it.
- Use a short section of wire to ground the switch common terminal (COM.). Strip and attach one wire from the grey cable to the normally open terminal (N.O.), and run back to control unit base (refer to wiring diagram).
- For one door operation, insulate other wire. For two-door operation, repeat above two steps for 2nd door. A second door switch will be required.

3.2 Lamp Wiring

- Run a length of the blue 3-core cable from the control unit base to the farthest lamp at the rear of the bus and cut off the excess. Run another length of the same cable from the control unit base to the farthest lamp at the front of the bus and cut off the excess.
- At the rear of the bus, the lamp wiring is as follows:-

Left hand lamp		Right hand Lamp	
Yellow	White	Green	White

- Cut the white wire at the rear of the bus and using the blue crimp joiner provided and any excess wire available, make a "Y" connection so that both lamps can be connected to the white wire.

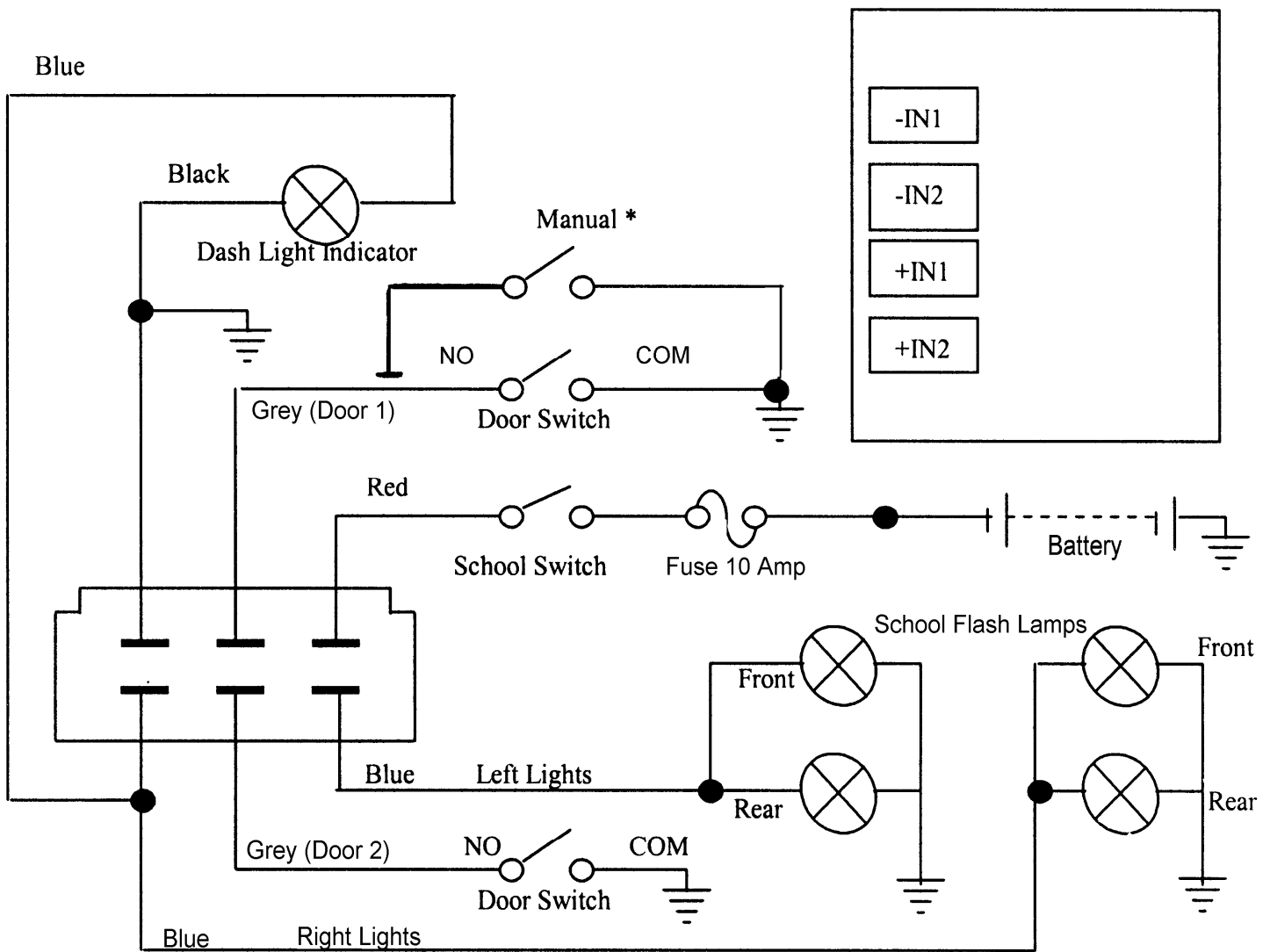
The wiring for the front lamps is the same as the wiring for the rear.

3.3 Control Box Wiring

Install the isolation switch and pilot light in the dashboard.

An additional momentary 'manual' switch may be needed in addition to the door switch. Check before completing the installation.

Ensure all components are wired according to the diagram below:



4. OPERATION

4.1 Start-up

When the main power switch is turned on the lights will flash for approximately 20 seconds.

The normal sequence is as follows:

Once the door is opened the four amber lights (two front and two rear) will flash in an alternating pattern, they will continue to flash after the door has closed. The lights will continue to flash for a period of 20 seconds.

The momentary switch will activate the amber lights before the door has been opened. Once the door is closed the lights will flash for a further 20 seconds.

4.2 Running Requirements

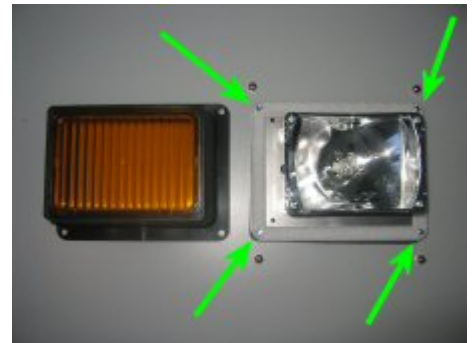
Please refer to your State Transport Operation Regulations for the required times of operation.

5. SPARE PARTS & REPLACING GLOBES

***GLOBES NOT TO BE TOUCHED WITH NAKED FINGERS**

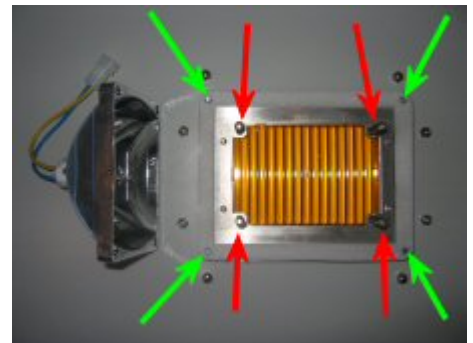
Replacing Globes in Surface Mount Lights

- Simply unscrew the four **dome** nuts holding the black housing to the base of the light.
- Remove the box, then take out the old globe and replace it with the new globe.
- Screw the black housing back onto the base using the **dome** nuts.



Replacing Globes in Window Mount Lights

- Simply unscrew the four **dome** nuts holding the black housing to the base of the light. You will then see the reflector.
- Unscrew the four **nyloc** nuts to remove the reflector.
- Take the globe out of the reflector and replace with new one.
- Push reflector onto the screw threads attached to the base.
- Screw down with the **nyloc** nuts.
- Replace the black housing and screw down with the **dome** nuts.



Replacing Globes in Flush Mount Lights

- Take the lens out of the front of the light.
- Remove the globe and replace with new one.
- Replace the front lens by clicking the lens back into the front plate.



Spare parts and replacement globes can be ordered from your local distributor or

Australian Warning Systems Pty Ltd
14-16 Wedgewood Road
Hallam Vic. 3805

Phone: (03) 9796 5880
Fax: (03) 9796 5885
Email: sales@warningsystems.com.au
Web: www.warningsystems.com.au