

Warning Signs and Lights for Buses Carrying Children

Introduction

This fact sheet provides basic guidelines on the requirements for warning signs and lights for buses carrying children.

Application

The following requirements apply to a bus where the GVM (Gross Vehicle Mass) is over 4.5 tonnes and used mainly to carry children.

If the GVM of the bus is 4.5 tonnes or less, and the bus is mainly used to carry children, there are no legislative requirements to install warning signs and lights. However, if any warning lights and signs are fitted, they need to meet the requirements mentioned below.

The following requirements apply to a bus that seats over 9 people including the driver, which is used mainly to carry children. However, these requirements do not apply;

- if the bus operates on charter for a school excursion or being used for community service activities.
- to a bus where no individual fares are being collected by the school.

Definitions

- **Reflective background** – Class 1 or 2 of AS '1906 Retroreflective Materials and Devices for Road Traffic Control Purpose'
- **Image of two children** – Image of 2 children in the same proportions as the children in 'AS 1743 Road Signs – Specifications (Image W6-3)
- **GVM** – Gross Vehicle Mass
- **DPTI** – Department of Planning, Transport and Infrastructure
- **Light buses** – Buses with a GVM of 4.5 tonnes or less.
- **Heavy buses** – Buses with a GVM over 4.5 tonnes.

Front Warning Signs

The front warning signs have the following options.

Option 1 (For both light and heavy buses)

- Display the words “School Bus” in capital letters and the letters must have a minimum height of 100mm (*Figure 1*).



Figure 1 - Front warning sign - Option 1

Option 2 (For both light and heavy buses)

- Display the “Image of two children” where the image of the taller child must have a minimum height of 230 millimetres (*Figure 2*).

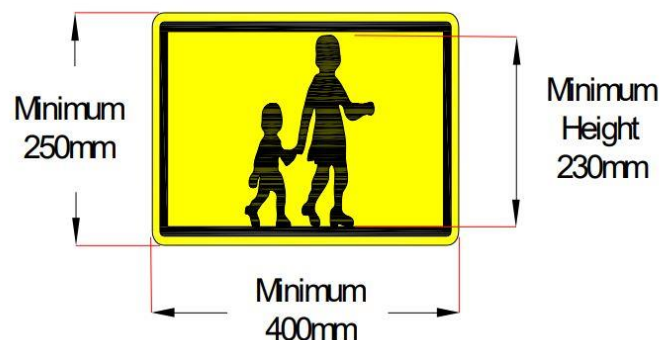


Figure 2 - Front warning sign - Option 2

Option 3 (Light buses only)

- If the words ‘School Bus’ (*Figure 1*) is not used, the word ‘Caution’ must be on the warning sign (*Figure 3*).
- The word ‘Caution’ must be written in capital letters and shall have a minimum height of 100 millimetres.
- If the warning sign ‘Caution’ (*Figure 3*) is used, the words ‘School Bus’ must nevertheless be displayed separately on the front and rear of the bus.



Figure 3 - Front warning sign - Option 3 (Light buses only)

Rear Warning Signs

Option 1 (For both light and heavy buses)

- For the rear of the bus, the warning sign shall be the “**Image of two children**” as per *Figure 2*.

Option 2 (Light Buses only)

- This warning sign shall dimensionally comply as per the requirements indicated in *Figure 4*.
- The “**Image of two children**” must be displayed where the image of the taller child must have a minimum height of 230 millimetres.
- ‘25 km/h’ must be displayed in the top left corner.
- The words ‘When Stopped for Children’ must be displayed in capital letters.
- The warning sign shall be displayed on the rear window of the vehicle as near as practicable to the bottom right hand side of the window.



Figure 4 - Rear warning signs - Option 2 (Light buses only)

Warning sign specifications

Unless otherwise specified, the warning sign shall;

- be a rectangular shape where,
 - if warning lights are on the warning sign, the minimum width and the height must be 550mm and 400mm respectively (*Figure 5*);

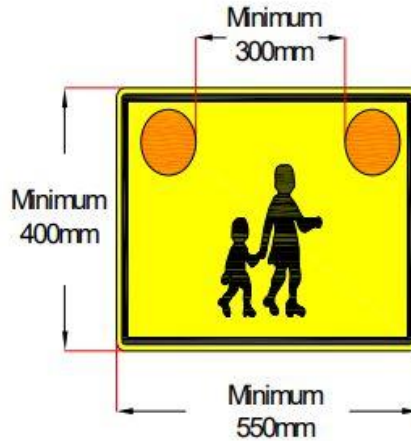


Figure 5 - Warning sign with warning lights

- otherwise, the minimum width and the height must be 400mm and 250mm respectively.
- have a black border and,
- have black graphics and,
- have a yellow “**Reflective background**” and,
- be fitted as high as practically possible and should not obstruct the field of view of the driver; and,
- be installed above the midway height (*Figure 6*) between the highest and the lowest points on the bus; and,
- not obstruct or limit any vehicle operations (i.e. Windscreen wipers, Demisters, Air-intakes etc.); and,
- be fitted either inside or outside of the bus. If the sign is fitted inside, the sign must be,
 - clearly visible;
 - in the same colour;
 - not significantly dimmer;
 as it would be fitted outside of the bus.

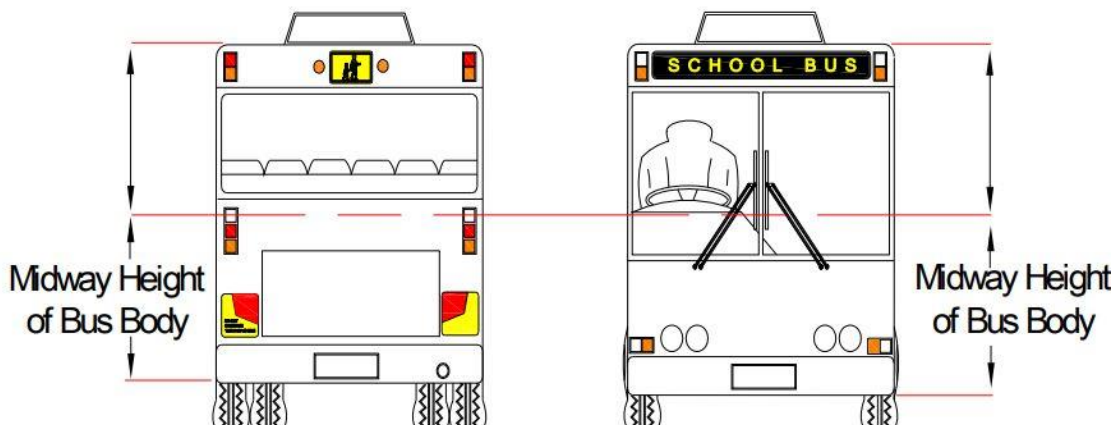


Figure 6 - Midway height of a bus

Warning lights

- Two warning lights must be fitted on the front and two warning lights must be fitted on the rear of the bus.
- The warning lights may be on the warning sign if the words or image on the signs are not obstructed (*Figure 5*).
- The warning lights shall be fitted (*Figure 7, Figure 8*);
 - on each side of the sign and within the same distance from the centre of the warning signs; and,
 - where the distance between the edges of the warning sign and the nearest point on the lens of the warning lights must be 100mm or less; and,
 - where the minimum distance between the nearest points of two warning lights must be 300mm or more.

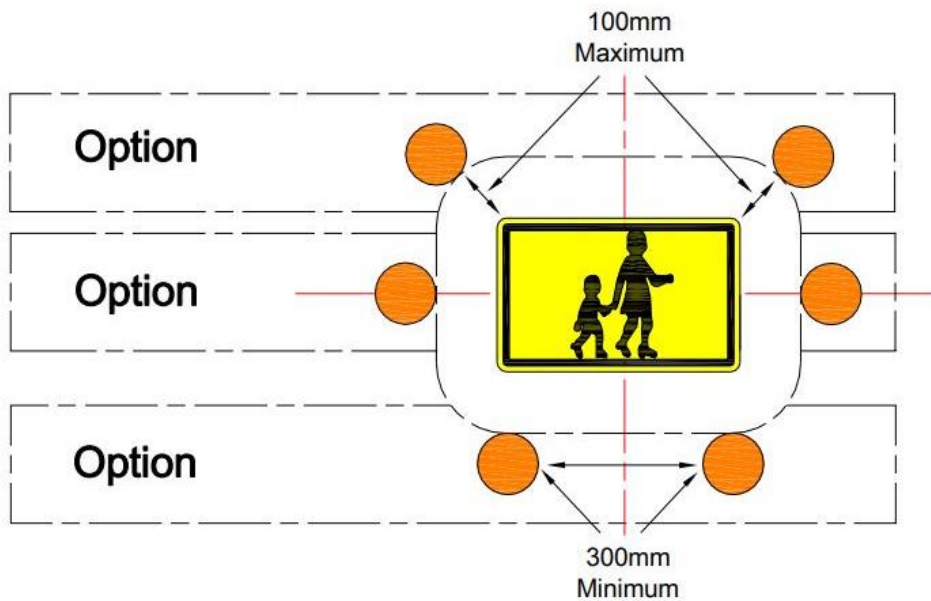


Figure 7 - Warning lights positioning ("Image of two children" sign)

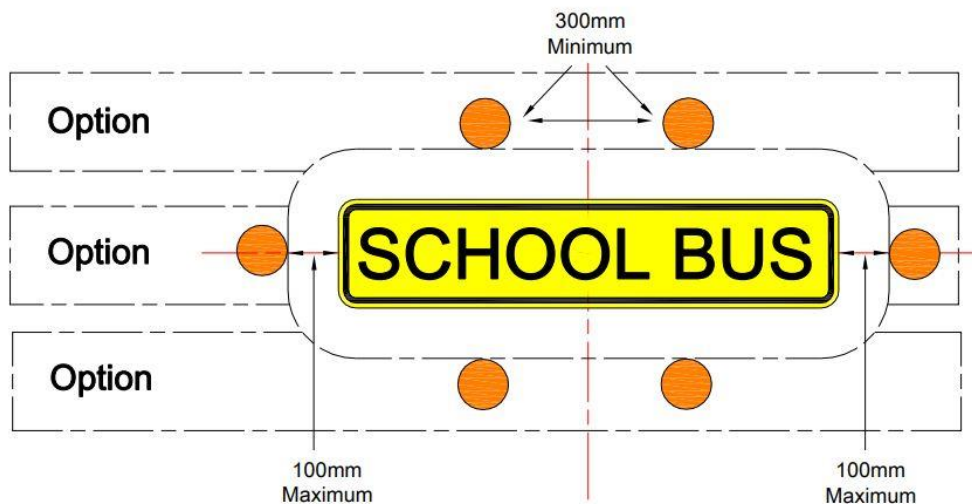


Figure 8 - Warning lights positioning ("School bus" sign)

- The warning lights must be fitted, so that no part of the bus would obstruct the lights displayed (*Figure 9*);
 - 30° to the left and right of the centre of each light and (60° in total),
 - 10° above and below the centre of each light (20° in total).

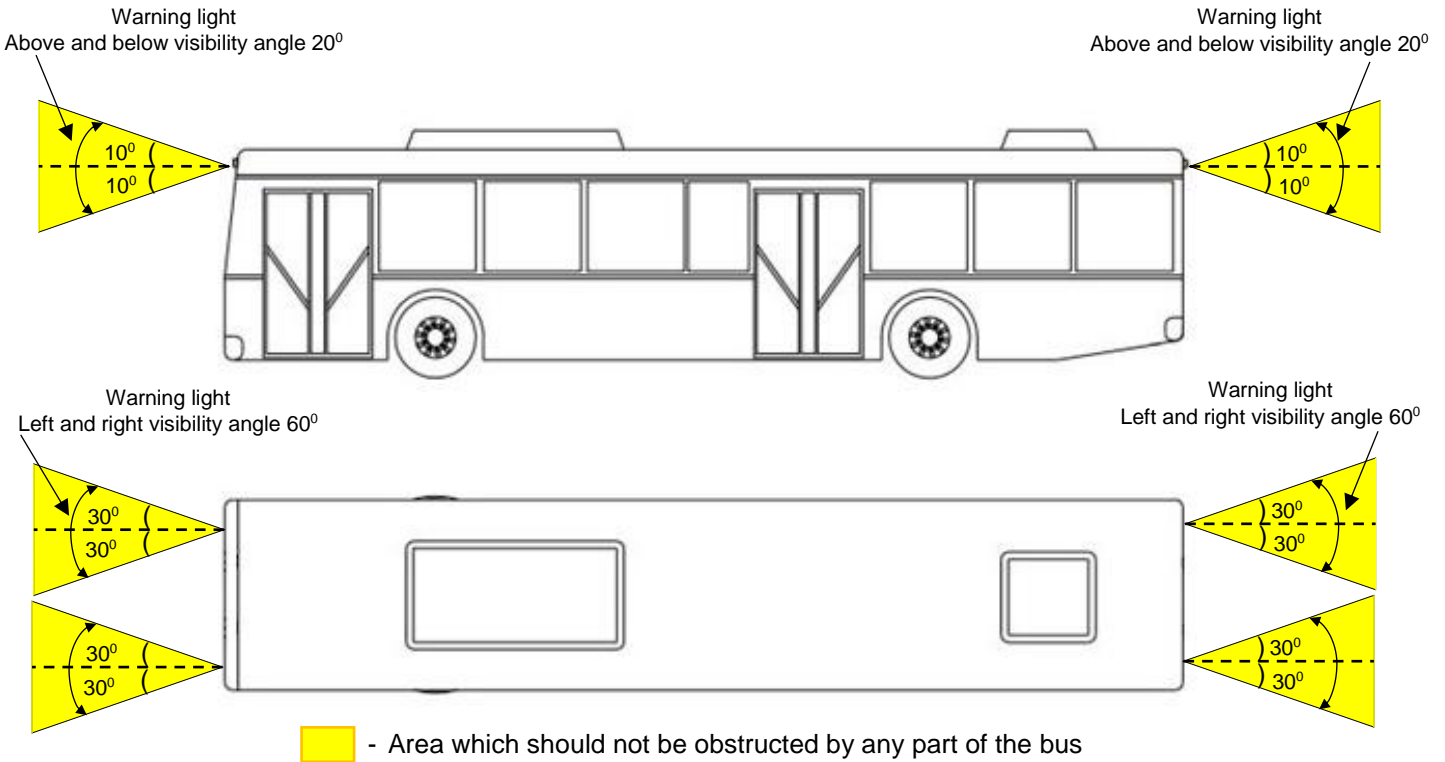


Figure 9 - Warning lights positioning

- The warning lights must be fitted;
 - at the same height and,
 - as high as practically possible and,
 - above the midway height (*Figure 6*) between the highest and lowest point of the bus body.
- If the centres of the warning lights are less than 1.8m above ground level, no part of the warning lights or warning signs must be on the left side of the bus (*Figure 10*).

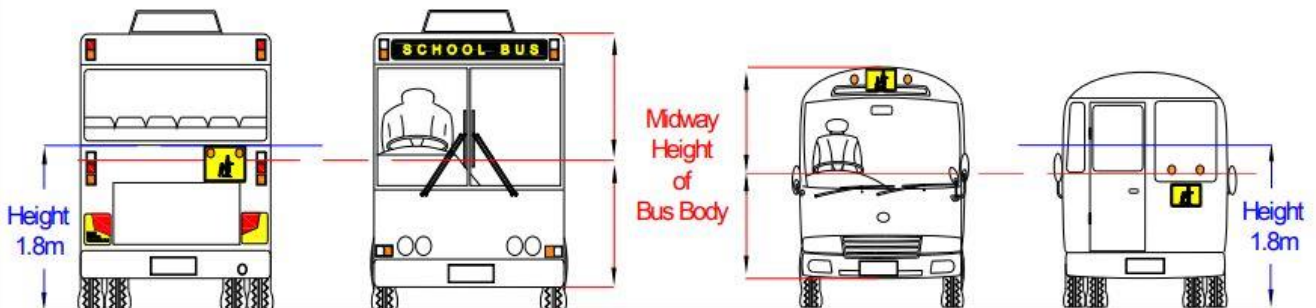


Figure 10 - When the midway height is under 1.8m

Operation of warning lights

- When switched on, the warning lights attached to the bus must emit a flashing yellow coloured light and flash between 90 and 180 times per minute.
- The warning lights at the same end of the bus must flash alternately.
- The bus must have an audible or visible signal that indicates the driver when the lights are flashing.
- The bus must be fitted with a switch that allows the driver to turn off the warning lights from the normal driving position.
- Unless the driver of the bus has turned the warning lights off, they must operate automatically when;
 - a door on the bus opens and,
 - at least 10 seconds, and not over 20 seconds after all the doors on the bus have closed.
- A warning light fitted to the bus must have;
 - a lens area of at least 60cm² (e.g. 90mm diameter for a round lens or 80x80mm for a square lens) and,
 - the luminous intensity of the warning light should be at least six times higher (1500 candela or more) than the intensity of a standard direction indicator.

References

- Heavy Vehicle (Vehicle Standards) National Regulation – Schedule 2 - Division 16 “*Warning lights and signs on buses carrying children*”
- Road Traffic (Light Vehicle Standards) Rules 2018—1.7.2019 – Part 7 - Division 19 “*Warning lights and signs on buses carrying children*”
- Australian Design Rules (ADR) 6/00 – “*Direction Indicators*”
- Australian Standard 1743 – “*Road Signs – Specifications*”
- Australian Standard 1906 – “*Retroreflective Materials and Devices for Road Traffic Control Purpose*”
- Australian Road Rules – Section 222 —“*Using warning lights on buses carrying children*”
- South Australian Government Gazette No 42. - 22nd August 2019 – “*Road Traffic (Exemption for Alternative Warning Signs on Buses Carrying Children) Light Vehicle Notice 2019*”

Further information

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