

B2100028 // N & M ADR Category Considerations

## **Australian Design Rules – Installation Compliance – Sound Extreme models**

Outdoor Bluetooth Soundbar (SOUNDEXTREME) system to vehicle cabin interior N&M category vehicle ADR Considerations Document Reference: B2100028

Certain ADR (Australian Design Rules) considerations relating to Outdoor Bluetooth Soundbar system installation to vehicle cabin interior of N & M category vehicles are outlined in this report. Vehicles modified and fitted with accessories need to continue to comply with the ADRs that they were constructed to meet, as well as the rules set out in applicable Road Transport Regulations.

Installation and operation of the product in compliance with all applicable laws and regulations is the customer's responsibility and not the responsibility of the manufacturer. The ADRs noted in this report are indicative only. There may be additional ADRs, laws and regulations that are relevant to installation and operation of the product and those requirements may change over time. It is the customer's responsibility to ensure installation and operation of the product is in compliance with all applicable ADRs, laws and regulations at all times. The manufacturer of the product accepts no responsibility and disclaims all liability for installation or operation of the product in breach of those requirements and makes no representation or warranty as to the accuracy of matters set out in this report.

### **N & M ADR Category Considerations**

The following ADRs have been identified as being potentially affected by the mounting of the Outdoor Bluetooth Soundbar (SOUNDEXTREME) system to vehicle cabin interior:

ADR 13—Installation of Lighting and Light-signaling Devices on other than L-Group Vehicles

ADR21 Instrument Panel

ADR42 General Safety Requirements

ADR69 Full Frontal Impact Occupant Protection ADR73 Offset Frontal Impact Occupant Protection

ADR 93 Forward Field of View

### **ADR 13—Installation of Lighting and Light-signaling Devices on other than L-Group Vehicles**

ADR13 part 5.10 requires that no red light which could give rise to confusion shall be emitted from a lamp as defined in paragraph 2.7. in a forward direction and no white light which could give rise to confusion, shall be emitted from a lamp as defined in paragraph 2.7. in a rearward direction. No account shall be taken of lighting devices fitted for the interior lighting of the vehicle.

**ADR21 Instrument Panel** Any devices fitted in the location of the instrument panel must continue to meet the performance requirements set out in ADR21, with particular attention to location of additional devices.

**ADR42 General Safety Requirements** ADR42 part 13.1 has the following requirements for visual display units, which must be securely mounted:

- (a) Does not obscure the driver's vision and;
- (b) Does not impede driver or passenger movement in the vehicle and;
- (c) Is unlikely to increase the risk of occupant injury Based on the last point, consideration would need to be given to the deployment path of the airbags fitted to the vehicle, and the unit to be located so it doesn't impede the functionality of the airbags.

### **ADR69 Full Frontal Impact Occupant Protection**

### **ADR73 Offset Frontal Impact Occupant Protection**

### **ADR 93 Forward Field of View**

As per ADR 69, 73 & 93, panels containing airbags require airbag markings. Any such panels must not be covered with the mounting of this product.

**ADR 93 Forward Field of View** ADR93 paragraph 5.1.3 Except as provided in paragraph 5.1.3.3. or 5.1.3.4., other than the obstructions created by the "A" pillars, the fixed or movable vent or side window division bars, outside radio aerials, devices for indirect vision, covering the mandatory field of indirect vision, and windscreen wipers, there shall be no obstruction in the driver's 180° forward direct field of vision below a horizontal plane passing through V1, and above three planes through V2, one being perpendicular to the plane X-Z and declining forward 4° below the horizontal, and the other two being perpendicular to the plane Y-Z and declining 4° below the horizontal

**Possible Measures to Maintain ADR Compliance** The following measures may assist a customer in maintaining ADR compliance for the vehicles fitted with Outdoor Bluetooth Soundbar (SOUNDEXTREME) system to vehicle cabin interior.

- The soundbar should be affixed to the vehicle security and in a location that will not impede the driver's field of view, or impede driver or passenger movement in the vehicle
- The soundbar should be affixed to reduce impedance with the occupant leg room outlined in the H point template (as defined in ADRs). The leg space must extend not less than 35 per cent of the seat width on either side of the centre line of each seating position.
- Consideration needs to be given to the height and location of the soundbar in relation to the airbag deployment. Manufacture information needs to be consulted to ensure that the location of the product will not impeded the functionality of the airbags. Information can typically be found in the user manuals supplied with the vehicle and panels containing airbags are marked accordingly
- If the soundbar is deemed to be within the occupant leg room (vehicle/model dependant) then the device will have to comply with ADR 21 5.3.2. As such it is suggested that devices in this location would need to be tested in this manner to meet the radius and strength requirements per ADR 21.

The aforementioned points need to be considered to ensure that ADR compliance for the vehicles fitted with Outdoor Bluetooth Soundbar (SOUNDEXTREME) system to vehicle cabin interior is maintained.

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