



SAFETY INFORMATION & INSTALLATION INSTRUCTIONS

ULTIMAX LIGHTBARS

Read these instructions before commencing installation and use. Pass this leaflet to the end user.

▲ Safety Information

- To ensure safe installation and use this product should be used only in accordance with the instructions and should not be modified. Modification may invalidate product approvals.
- It is the responsibility of the installer to ensure safe installation of this product in accordance with the applicable national regulations.
- If you have any doubts at all as to the installation or use of this product, consult a competent person.
- To avoid risk of electric shock, disconnect electrical supply before installation.
- Ensure that the supply voltage is compatible with that marked on the product rating label.
- Lamp Replacement : See 'Maintenance Lamp, LED & Xenon Tube Replacement' below. Disconnect the power supply before changing a lamp. Light fittings and lamps are hot whilst running, allow to cool before touching.
- This product may contain high intensity LED devices. To prevent eye damage, DO NOT stare into the light beam from close range.
- **Xenon strobe tubes – Xenon strobe power supplies produce high voltages with the risk of electric shock. To allow the internal capacitor to discharge, wait a minimum of 10 minutes after disconnecting the power supply before touching wiring, changing a lamp or attempting servicing.**
- All lightbar mounting bolts should be periodically checked for tightness.

Installation Instructions

1. Mounting Instructions

Ultimax lightbars can be either permanently mounted to the vehicle or mounted by means of the optional hook-on mount kit. The instructions for mount kit assembly are packed separately in the kit supplied with the lightbar. When using the hook-on kit it is important to ensure that the mounting bolts are sufficiently tight to prevent movement of the bar. It should not be necessary to over tighten to the point of deformation of the roof or guttering. Using the correct mount kit will ensure that the air gap between roof and bar is not reduced, thus avoiding unnecessary wind resistance. The ventilation holes in the lightbar base should not be obstructed. If water accumulation or condensation becomes a problem, this could be due to the drain holes in the aluminium base being blocked by the fixing kit. If this is the case, remove the bung in the base which blocks the spare cable entry hole. On high performance vehicles, depending upon the mounting position of the lightbar, a high pitch whistle may occur at high speed. To eliminate this noise, blue lens models are provided with nylon tube, which may be cut to length and inserted into the mounting bolt grooves along the underside of the lightbar.

2. Wiring Guidelines

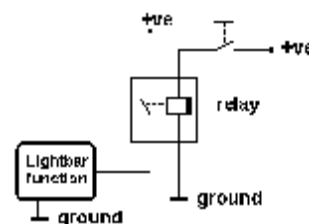
The cable colour codes, functions and current rating applicable to each lightbar function are shown on the lightbar wiring sheet which is attached to the lightbar wiring harness.

Each circuit in the lightbar should be provided with an appropriately rated supply, switched by a suitable relay or switch and fitted with a fuse.

The negative (ground) return is via the lightbar base section and the black cable in the harness. A secure negative connection to the battery or vehicle chassis is essential.

In keeping with normal automotive wiring practice, lightbar functions over 2 A should be switched using a suitable relay. This avoids the need to route heavy current cables to the dashboard. An example of wiring for one function is shown right.

Cable screen - If screening is fitted to cable it is connected to ground inside the lightbar. The screen does not require connection to ground at the loom end and should be cut back approximately 10 cm and insulated with tape to prevent a short circuit to positive connections.



If it is necessary to extend the wiring loom, the recommended cable sizes for given current ratings are shown in the table below.

AUTOMOTIVE CABLE			RISTEX CABLE (HIGH TEMPERATURE INSULATION)			
NUMBER & DIAMETER OF CONDUCTORS	NOMINAL CROSS – SECTION AREA mm ²	MAXIMUM CURRENT RATING (AMPS)	NUMBER & DIAMETER OF CONDUCTORS	NOMINAL CROSS – SECTION AREA mm ²	APPROX DIAMETER mm	MAXIMUM CURRENT RATING (AMPS)
9/0.30	0.65	5	7/0.23	0.30	0.69	5
21/0.30	1.5	10	19/0.23	0.75	1.15	10
44/0.30	3.0	20	19/0.41	2.50	2.05	20

Illuminated Signs

The optional illuminated sign fitted to certain models has a current consumption of between 1.25 and 5 A at 12 V dc depending on the size of the sign, and will require a power supply of at least 5 A. If required the sign can be supplied via the vehicle sidelight circuit so that the sign will illuminate when the vehicle lights are switched on.

Ancillary Lights

Depending upon specification, various other lamps may be fitted e.g. Brake/Tail/Turn repeaters. These lamps may require integration with existing vehicle wiring, care should be taken to ensure that the vehicle systems are not adversely affected.

Xenon Lamps

Xenon lighting systems consist of a power supply unit with various lamp options. The power supply wiring will vary with the type and will be shown on the lightbar wiring sheet. If xenon strobe leads are extended, the joints should be sealed with RTV Silicone to prevent ingress of moisture.

3. Maintenance

Cleaning

Ultimax lightbars may be cleaned with a detergent/water mixture. DO NOT USE ABRASIVE OR SOLVENT BASED CLEANERS AS THESE WILL DAMAGE THE SURFACE OF THE LENSES. In order to avoid condensation build-up, lightbars are ventilated through the base of the unit. Over-enthusiastic use of high power jet washers may result in some water penetration through the vent holes. However, drain holes in the base will allow any water accumulation to drain away, and operation of the unit should not be affected.

Lamp, LED & Xenon Tube replacement

Access to the interior of the lightbar is obtained by removal of one or more lenses.

Lens Removal

1. Remove the six screws that secure the end lens to the lightbar and remove the end lens.
2. The middle lenses are also secured with screws.
3. To gain access to lamps on the lower deck, remove the appropriate aluminium covers. Note that the lower lenses and internal deck do not need to be removed.
4. After lamp replacement, refit the covers, lenses, seals and screws. **It is important that the lenses and seals are correctly located before replacing the screws, failure to ensure this may result in lenses detaching at high speed.** Dilute washing up liquid may be used to lubricate the seals and make the lens replacement easier.

Lamp Replacement - Rotating lights / Directional lights with H1 type lamps

1. Remove the lamp clip from the rotator assembly and pull the lamp upwards out of the lamp connector and insulator.
NOTE: To improve access, the reflector can be removed by prising the clips at the back upwards and sliding the reflector upwards to clear the mounting bracket.
2. Push the new lamp into the connector, taking care not to handle the glass envelope. If it is touched remove any finger marks with methylated spirit.
3. Refit the lamp clip ensuring that the lamp flange is retained by the clip. Test the rotator operation to ensure that the lamp unit is working.
4. Replace the lenses and seals by reversing the removal sequence.

Halogen / Tungsten Lamps – Lower Deck

Lamps fitted to ancillary lighting will generally be bayonet lamp cap, requiring push & twist fitting. Access for lamp replacement can be improved by unscrewing the light fitting and lifting it out through the aperture in the internal deck.


LED Module Replacement

The LED module is attached to the lightbar by two screws. It is designed for long life and contains no user serviceable parts, if it is diagnosed as faulty it must be replaced as a complete unit.

Xenon Tube Replacement

Xenon tubes are either plug-in lamps with 8-pin bases or linear tubes which can be removed by unclipping from the reflector.

NOTE: Xenon power supplies have input voltages between 10-30 Volts, but are designed to produce high voltage output to the lamps at approximately 400V with the consequent risk of electric shock.

 **To allow the internal capacitor to discharge, wait a minimum of 10 minutes after disconnecting the power supply before touching wiring, changing a lamp or attempting servicing.**

Approvals

Ultimax lightbars comply with EMC directive 95/54EC.

In the configurations and lens colours permitted, Ultimax lightbars are approved to Regulation ECE65.

Approval numbers and documentation are available on request from Premier Hazard Sales.



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