

## Fitting Instructions – 4x6” JTX LED Lights

The light is a direct replacement of conventional rectangular and round headlights lights.



The clear lens has some ADR approvals which indicate the top of the light. You need the light rotated that way.

### Breather Kit:

If you are likely to take your car through water, then please consider buying our remote breather kit. If the lights were totally sealed, they will fog or condensate with temperature changes. They each have breather buttons on the back which prevent the fogging but are not effective if submerged. Sudden temp changes can cause condensation even in transit before you open the box if they cant breath well. If you get moisture inside the light it is important to dry them out before damage is caused to the chips in the DRL. Remove the breather buttons from the back to speed up the drying process – don't go near water with the buttons off.

### For lights with Halo/DRL:

The Halo gets earth from the 3 pin H4 sockets. No additional wiring for earth but it does mean to test the Halo the headlight needs to be plugged in. Regular Halo rings need the following 2 wires to operate....

- Red is power for the primary halo (often white). 80 series is notorious for poor park light power so best to set up primary (white) as follows: get power from back of cig lighter (so turns off with keys) and run to an on/off switch on dash then out to all the Red plugs on lights. No fuse needed as cig lighter is fused already.
- Yellow is power for the secondary halo. If you have amber, then connect that to your indicator power for that side. When indicating it will turn the regular halo off and become amber and flash with the indicators. Then after 2 seconds of the indicators being off the regular halo will shine again for that light. If you have a coloured halo, e.g. red, you need to connect the wire to a switch on your dashboard ideally that on/off switch above so now make that a white/off/red switch.

### For lights with no Halo:

If you do not have halo you will not need the red and yellow wires at the plug – just ignore them.

### Contact:

If you have any further questions shoot us a message on socials or email us at [support@jtxlighting.com](mailto:support@jtxlighting.com)

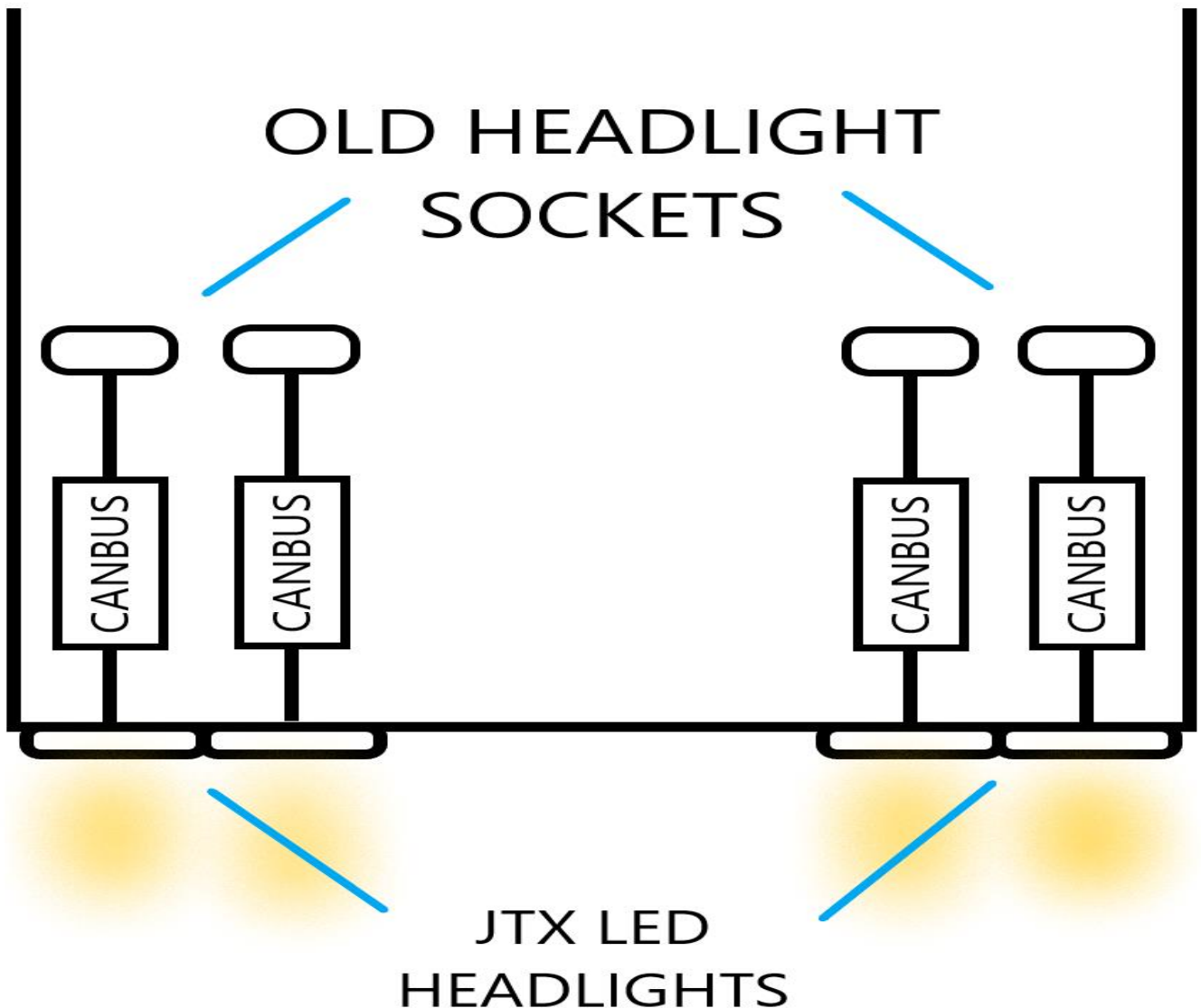


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# 80 SERIES LANDCRUISER



If you wish to use the inner lights as low beam as well, you will require one of our JTX LED Wiring Harnesses on your inner headlights. These are not included and available for individual purchase on our website. Use the code **80SERIES** to save 10% on purchasing a wiring harness.

Here is the link to the JTX LED wiring harness if you need inner lights to work in low beam or need to solve bad earth issues (read below) :

<https://www.jtxlighting.com/product/led-wiring-kit/>



## ADR Statement – JTX Headlights

JTX Lighting warrant that the JTX series of LED lights conform to the relevant requirements within ADR 13/00.

A detailed version of Australian Design Rule ADR 13/00 may be found at this link ...

<https://www.legislation.gov.au/Details/F2017C01072> - **Vehicle Standard (Australian Design Rule 13/00 – Installation of Lighting and Light Signalling Devices on other than L-Group Vehicles) 2005**. L Group are vehicles with less than 4 wheels.

These lighting standards were established in 2005 with the 6<sup>th</sup> amendment being the latest in 2017.

The ADR principally adopts the United Nations regulations No 48 - UNIFORM PROVISIONS CONCERNING THE APPROVAL OF VEHICLES WITH REGARD TO THE INSTALLATION OF LIGHTING AND LIGHT-SIGNALLING DEVICES

LED (Light Emitting Diode) technology should not be confused with HID (Gas Discharge).

The specifics which pertain to the JTX Lights are as follows:

- Forward facing lamps must be either White or Amber and that includes headlamps, turning signals and Day Running Lights.
- It is assumed the JTX lights will only replace factory headlights and be mounted where such factory lights were fitted
- The functional dipping between high and low beams remains unchanged
- Low beam remains on when high beam is activated. For safety low beam consists of more than one LED combination such that if 1 LED Combination were to fail others remain illuminated.
- Low beam does not exceed 2,000 Lm
- The light pattern is asymmetrical in accordance with left side of road driving.
- The E marking and ADR references are stamped on the lenses

Paragraph 6.2.9 of ADR 13/00 states that LED lights do not need to be self dipping or cleaning if the LM capacity of the LED components does not exceed 2000 Lm.

Further supporting material and facts worth reviewing –

- Australian Light Vehicles Standards published by National Transport Commission in 2016
- ADR 13/00 Explanatory Statement specific to LED states Australia will adopt European standards and permit LED – refer to following link  
<https://www.legislation.gov.au/Details/F2007L02589/Explanatory%20Statement/Text>

## JTX - White Halo not working?

The DRL Halo get their earth through the 3-pin headlight socket. Power up the Red wire on the light and the White DRL Halo comes on. Power up the Yellow wire (even if the Red also has power) and the white halo is over ridden by the Amber. If you have a different colour combination this concept still applies but instead of Amber it is your chosen colour and activated by a switch instead of indicators.



There are 2 things that cause issues with halo.

1. Low voltage – a common problem if you use park lights as the power source. Don't use the park light power.
2. Poor Earth – Toyota turn lights on by turning on the earth and sometimes is not good enough at the inner lights.

Such observations of low voltage or poor earth are dull DRL, takes a while for DRL to turn back on and reach full brightness, opposite side does weird things like flash off while other side is indicating.

The way things work in our JTX lights the Amber Halo overrides the White and turns white off for about 2 seconds while the Amber does its thing. Once finished flashing Amber the White comes back on about 2 seconds later. This process means the white halo is more voltage and earth sensitive than the amber. Amber can be OK but white has issues = not enough volts or earth.

**Low Voltage :** You can test low voltage by running a thick test wire from + on battery to red wire at light and when engine running at 2000 rpm or on a battery charger DRL should be bright and come on quickly.

Don't power the white halo off the park lights – there are not enough volts available when on, you forget to turn them off when you park and you drive around during the day with your tail lights on. Instead source the power from behind the cig lighter – it has a fuse, has enough volts and auto turns off when you remove keys. Run a manual on/off switch on dash and then run the power out to the red wires at the lights. If you have non amber (like white & blue instead of white & amber) make that a 3 way on/off/on switch so up is white (connect to red wires at lights) middle is off and down is Blue (alternate colour) and run to yellow wires at lights.

Another option is run a heavy fused wire from + on battery to the red DRL wires at lights via a relay that's triggered by your on/off switch or ignition circuit.

**Bad Earth :** Toyota turns the earth on and off – in some 80 series models the earth at the inner lights is worse for some than it is for other owners. It is hard to measure earth but the observation is that the DRL works fine for outers but inner DRLs are dull.

You can not just earth to the body or the battery because of the way Toyota turn the lights on. If you are handy you can either piggy back into the earth of the neighbouring outer light (the vertical pin that the JTX lights has the black wire going to) or you can buy one of our JTX LED Harnesses. The harness was designed to convert from negative (earth) switching and not only presents the lights with a new power source but also a new earth source.

Here is the link to the JTX LED wiring harness if you need inner lights to work in low beam or need to solve bad earth issues (read below) :

<https://www.jtxlighting.com/product/led-wiring-kit/>