Nissan R32 Headlight Harness Kit
Installation Manual

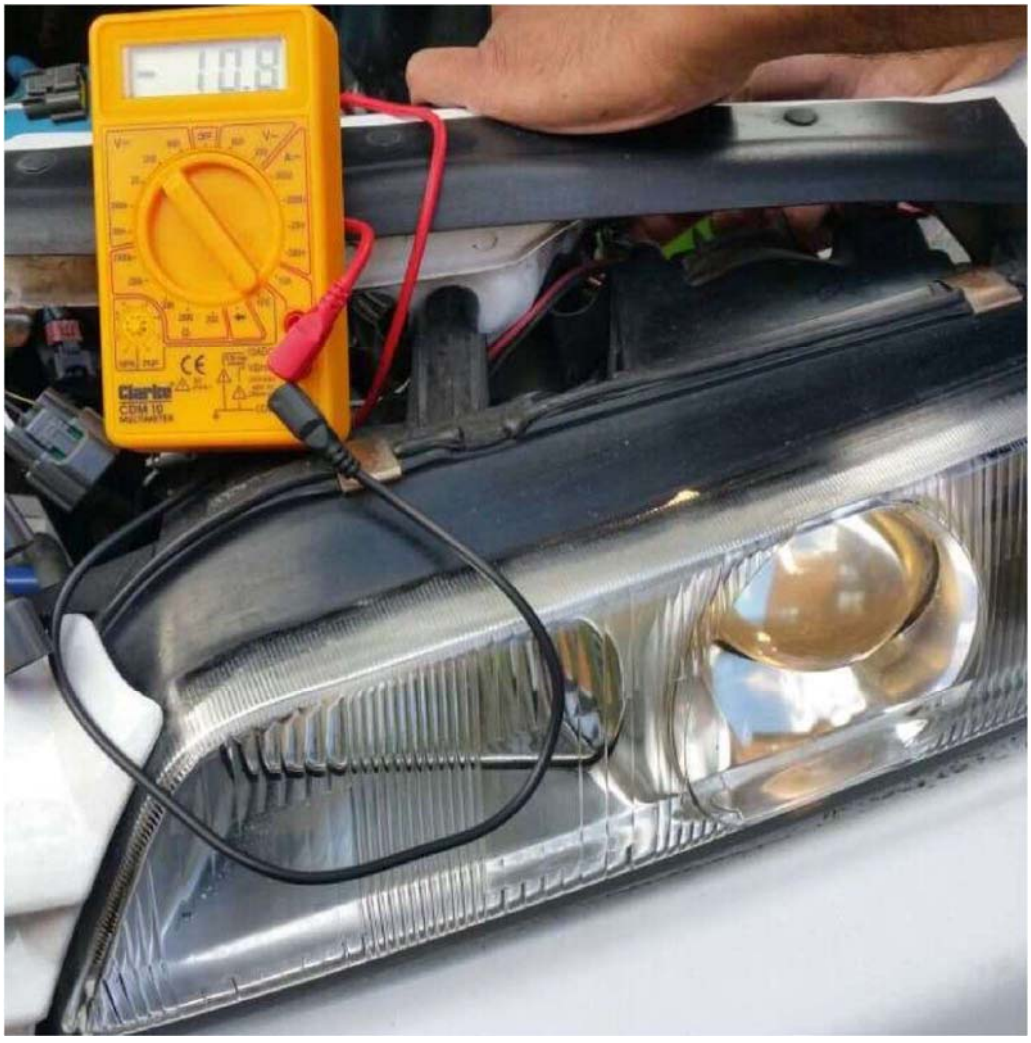
Introduction:

This upgrade was designed to improve the BNR32 headlight brightness by ensuring maximum voltage is delivered to the bulbs with minimal voltage and low resistance drop. Voltage VS Lumens is exponential, so even a 1 volt drop from the battery to the bulb can result in a noticeable difference in brightness of the lights. We have typically seen voltage at the bulb as low as 10.8v which can drastically reduce the amount of light that is produced by the headlights thus impairing visibility.

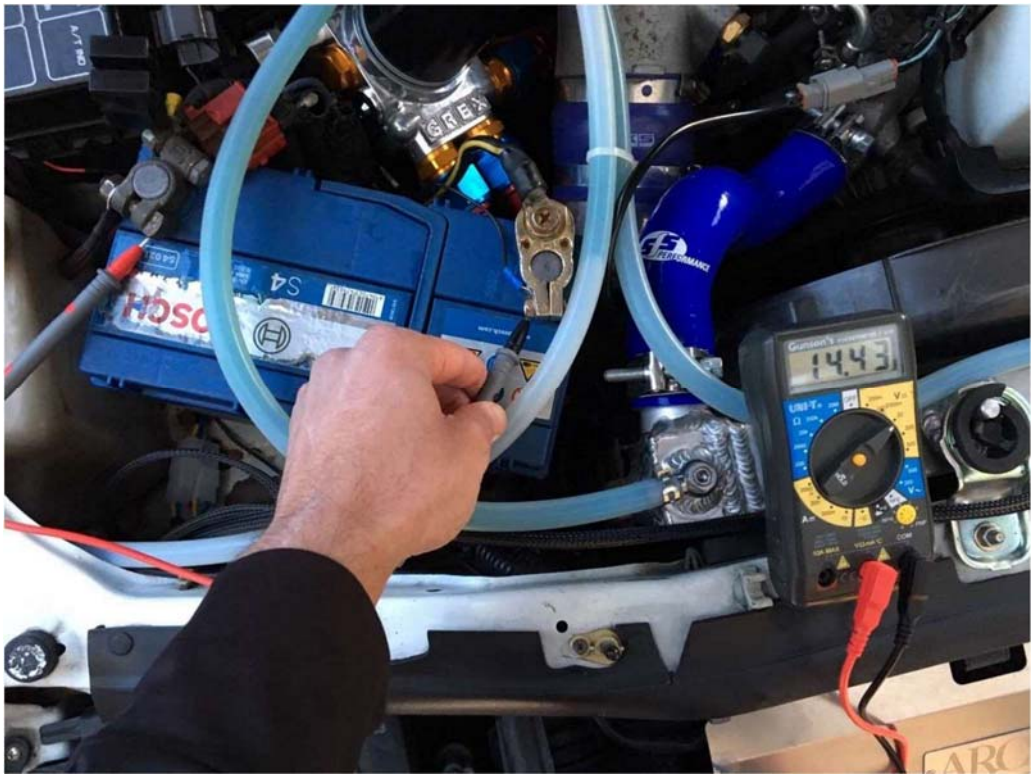
The factory setup uses very long wires as they route from the fuse box next to the battery to the headlight switch and back out again to the bulbs. This over time has been known to burn up the switch connector and sometimes the switch itself resulting in loss of operation and poor lighting. Worse case scenarios could also involve an electrical fire. Adding relays prevents the high flow of current through the switch and increase life of both the switch and connector.

With the upgrade installed you will also have the benefit of having your low beams remaining on while the high beams are enabled, this is also good if you have or are considering having a HID setup fitted as these bulbs do not like to have power taken away so frequently (reduction in HID bulb life expectancy) as would be the case if you need to activate your high beams frequently on lark country lanes.

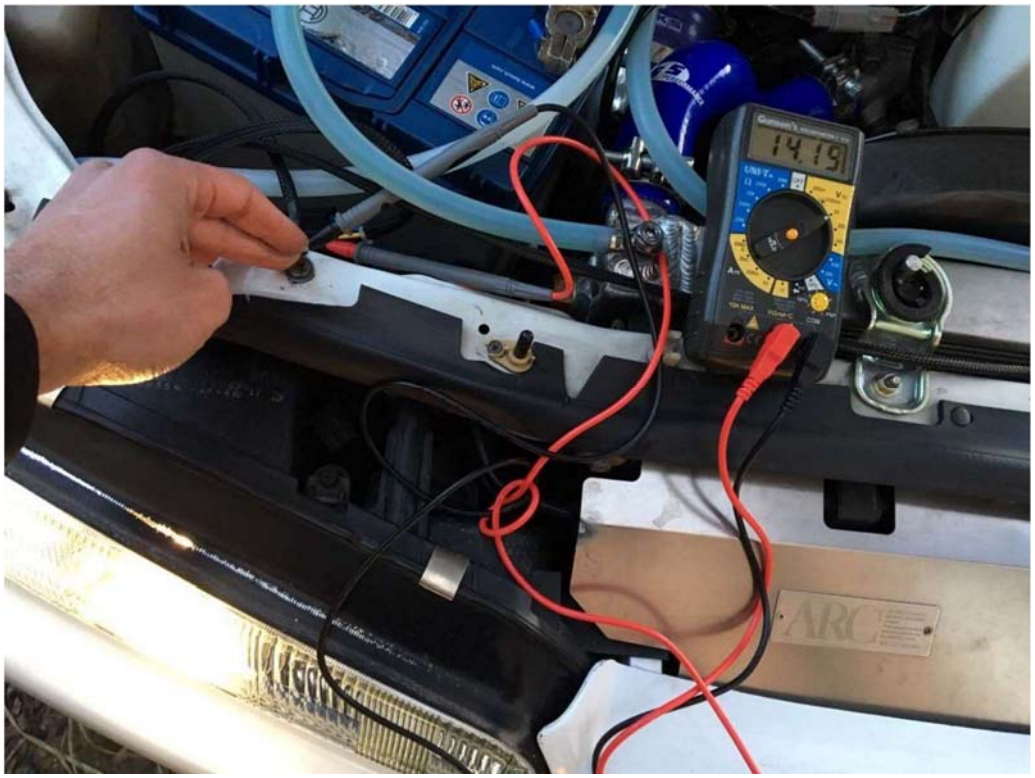
It might be a good idea to measure voltage at the battery and bulb before and after the upgrade so you are able to realise the improvement.



This R32 GTR, in addition to a burnt out headlight switch connector, we found that voltage at the bulbs to be very low. 10.8v.



Measurement taken at the battery post installation showing 14.43V.



Measurement taken at the bulb post installation showing 14.19V.

Disclaimer:

All harness kits are fully tested and checked prior to shipping to ensure they operate fully. Please note we cannot accept any responsibility or liability for damage to your vehicle through incorrect wiring carried out. This manual was created based on extensive testing carried out on our own test vehicle to ensure everything works as intended. If you are not familiar with basic automotive electronics, please seek help of a fully qualified auto electrician. We reserve the right to change specifications and design without notice.

Prior to installation please disconnect the battery.

1.

Connect the earth lead (identified by having a smaller ring terminal) to a suitable chassis point.

2.

Remove the factory female connectors that are connected to both the right and left headlights and connect the connectors from the harness kit. You will need to route the left side harness across the slam panel and fasten with tie wraps.

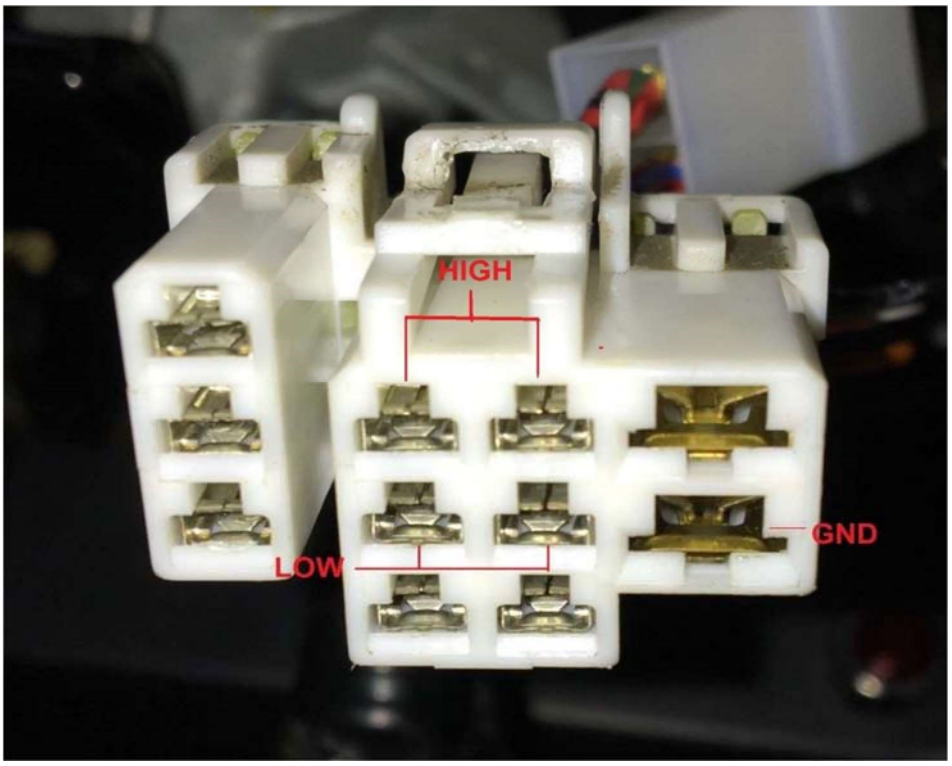
** This section will depend on whether you have purchased either the long harness kit or the short harness kit.
Fitting of Long Harness kit 3:

You will need to remove the driver side fender liner to get access to the rubber grommet where the factory harness feeds into the driver compartment, as well as the driver side kick panel and also the steering column covers to get access to the flasher switch connector.

Route the long harness from the kit consisting of 3 wires, 2 white and 1 black through the right side of the engine bay and you will see a triangular opening with a sponge block. Once you have routed the cable through you will then need open the factory grommet and feed the wire through to the driver compartment.

4.

Once you have removed the steering column covers, you will have access to remove the multi pin plug that connects to the flasher/high beam switch. As marked below looking head on you will see pins that are for high beams and low beams followed by an earth.



Headlight wire identification:

Projector Headlights:

Red/Blue - right side low

Red/Yellow - left side low

Red/Green - right side high

Red/Black - left side high

N1 Headlights:

Red/Green - right side low
Red/Yellow - left side low

Red/Blue - right side high

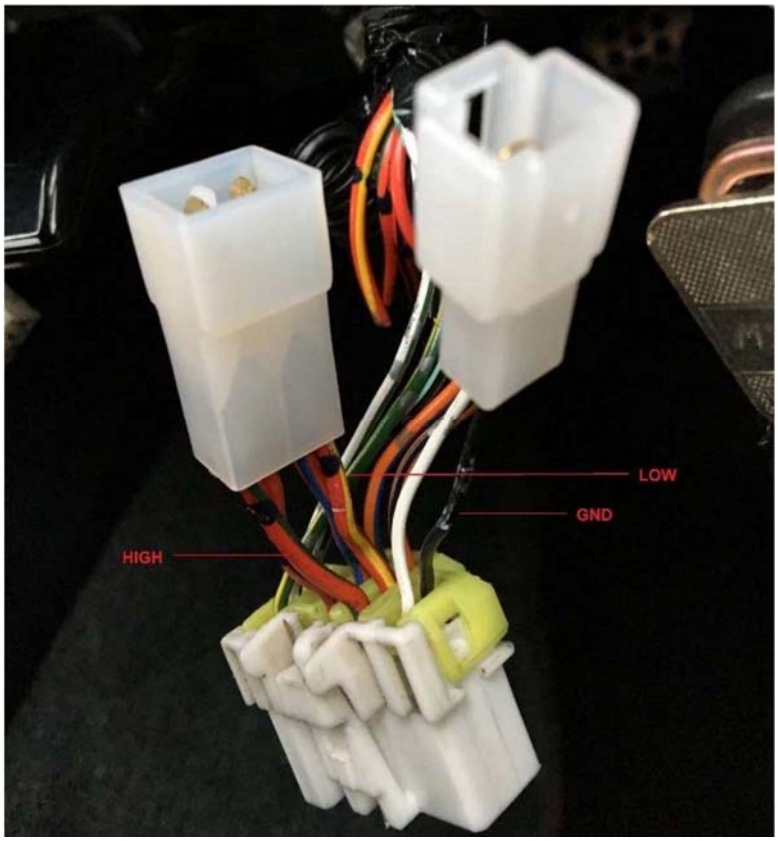
Red/Black - left side high

**For your own sanity you may wish to ensure prior to cutting relevant “HI” and “LO” wires from the harness. Using a tester or a DVM, place the probe/test lead to the high beam wires with the high beams enabled and you should see 11.5-12v reading and the same again with the low beams when enabled.

For the high beams cut the correct wire based on your headlamp about 2” from the connector join together and crimp to a suitable connector as below:

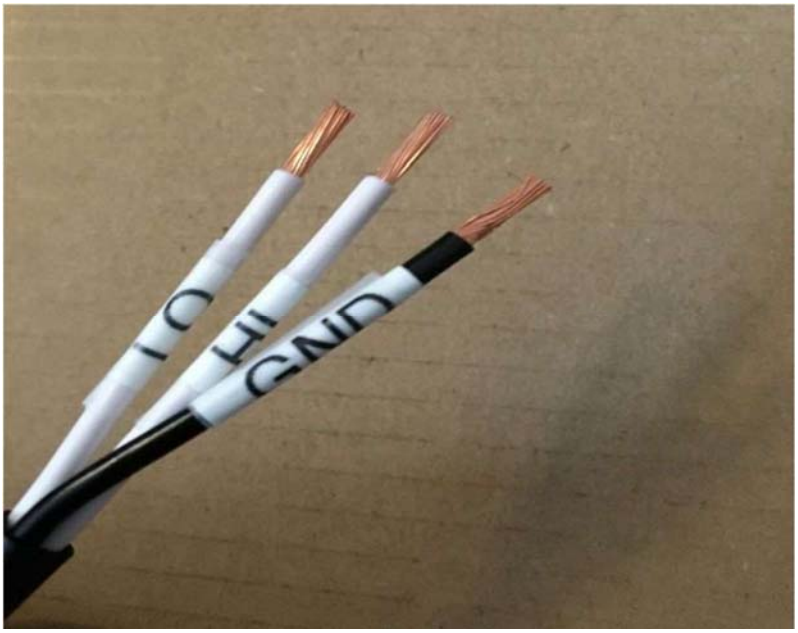
Do the same again for the low beams.

Also do the same for the black ground lead/leads, some kits come with two ground wires from the relay harness which can be joined together and spliced to the ground for the light circuit.



5.

Connect the cables by means of a 2 pin plug as pictured or using crimps or soldering. Wires marked “HI” connect to the high beam wires of the connector and connect the “LO” cable to the low beam wires from the connector. Join the black wire marked “GND” from the harness to the ground wire, but making sure you T this to complete the ground circuit.



6.

Connect the large ring terminal (identified as it is on the same part of the harness as the fuse enclosures)

Fitting of Short Harness:

As with the steps of connecting wires for the long harness, the short harness would intercept the same wires but near the battery/fuse box. Simply locate the following wires from the female headlight connectors on the factory loom and trace back to the loom that is near the fuse box. Process of cutting wires and joining them to the new harness feed or “LOW” and “HIGH” inc “GND” would remain the same.

1.

Locating the high and low feed wires returning from the steering column light circuit/flasher. NOTE: Ensure you have the correct wires that are returning from the dash area and not the wires that are going from the fuse box to the dash. If you splice into these wires your headlights will not operate correctly.

2.

Strip back the factory insulation to expose the loom and ultimately the required wires which you will need to cut.

Headlight wire identification:

Projector Headlights:

Red/Blue - right side low

Red/Yellow - left side low

Red/Green - right side high

Red/Black - left side high

N1 Headlights:

Red/Green - right side low
Red/Yellow - left side low

Red/Blue - right side high

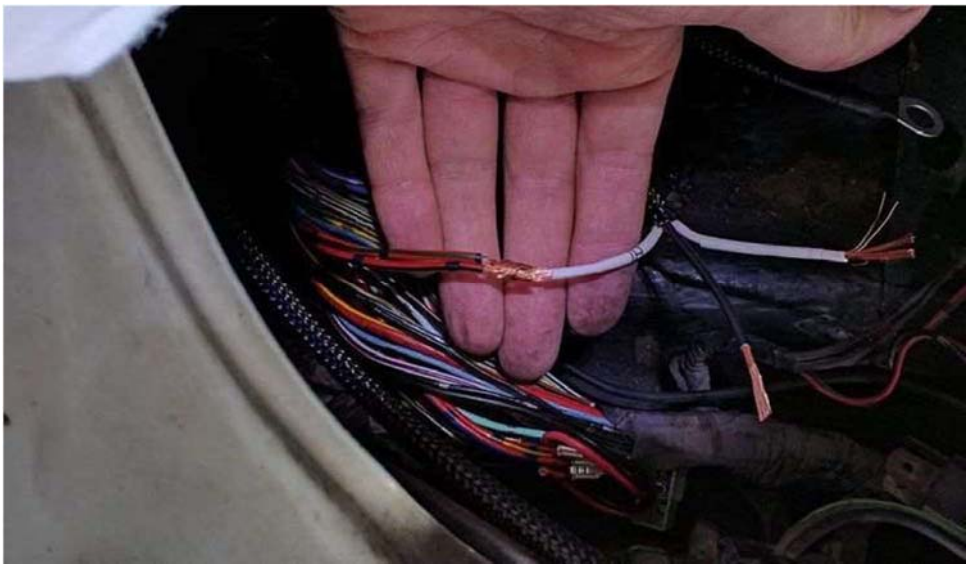
Red/Black - left side high

**For your own sanity you may wish to ensure prior to cutting relevant “HI” and “LO” wires from the harness. Using a tester or a DVM, place the probe/test lead to the high beam wires with the high beams enabled and you should see 11.5-12v reading and the same again with the low beams when enabled.

For the high beams cut the correct wire based on your headlamp about 2” from the connector join together and crimp to a suitable connector as below:

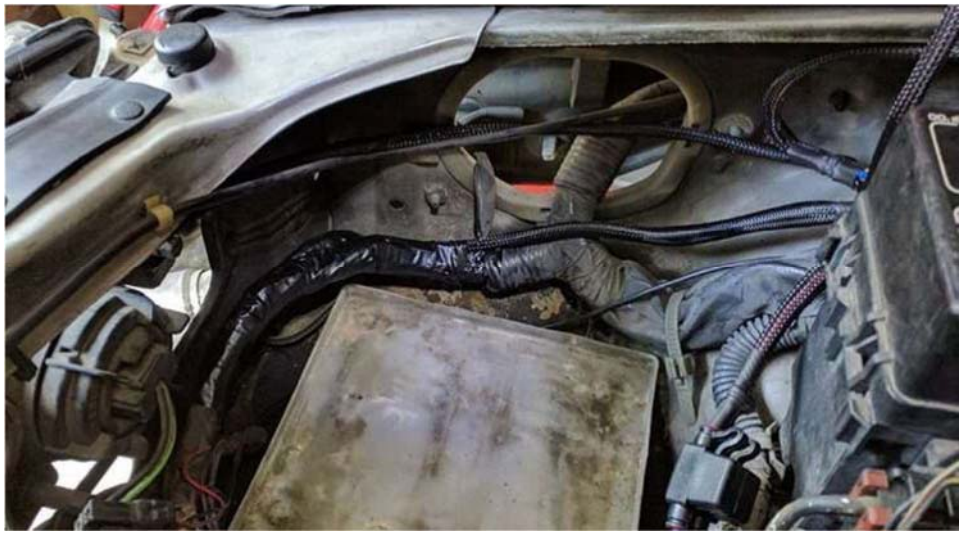
Do the same again for the low beams.

Find and Identify the thin ground wire, carry out a continuity test to ensure you have the correct ground for the headlights between the 3 pin plug for the bulb (Ground Terminal) and the thin wire identified at the loom. Some kits come with two ground wires from the relay harness which can be joined together and T to the identified ground for the circuit.



3.

Insulate the wires with heat shrink and black electrical tape.



Plug & Play Option: Kits Sold after May 2019

It is also possible to by pass the procedures above where by eliminating the need to splice into the loom, this allows almost plug and play once you have confirmed with a DVM/Tester which wires on the driver side factory 3-pin female plug corresponds with low, high and ground. All other references to factory loom wire colours remain the same. (Kits sold prior to May 2019 will need a 3- pin male plug)

All kits sold after May 2019 will come included with a 3-pin male plug & pins which can be crimp connected on to the relay harness low, high and ground wires (see picture below) which then in turn connects to the factory 3-pin female plug that is removed from the driver side headlight.

Relay Harness Wire Reference:

(May 2019 Onwards)
Purple- Low Trigger
White- High Trigger
Black- Ground

(Jan 2024 Onwards)
White- Low Trigger
Purple- High Trigger
Black- Ground

Position of Low and High will vary from N1 headlights to early and late projector lights. Please verify on the headlight using a DVM/ Tester.

Assuming you have correctly followed the instructions, your headlights should now function properly as normal but also when you pull the high beams your low beams will also remain on. Please go through a visual check to ensure all lights function as they should including the indicators, tail lights and brake lights. It is also worthwhile checking and ensuring the beam is aligned correctly.