

Installation and build notes

BOM:

HDR-1x2 jst-eh series 2-pin header

C1 470uf ECA-1VM471 Panasonic CAPPR-5/10.5h14

D1 1A 400V DB107-G Comchip DB-DIP

L1 22uh 78F220J-RC Bourns IND_400

R1 22 to 100 Ohm 1/4W metal film resistor (pick value for brightness level)

U1 LM317TG ON Semiconductor TO-220

Assembly

Solder parts in this order:

D1

R1 and L1

HDR

C1

U1

Usually, you will solder the AC input wires from the wheels and rollers directly to the board. The Header is installed on the DC side. You need a JST-EH series 2 pin plug. The plug leads are soldered to the LED light strip observing polarity. Any 12v LED light strip may be used. If after installation, you are not happy with the light level, simply replace R1. Typical values will be 27-47 ohms, minimum 22 ohms. I found that 47 Ohms gives prototypical brightness with a 20" (30- LED strip). However, others may like brighter lighting in their cars.