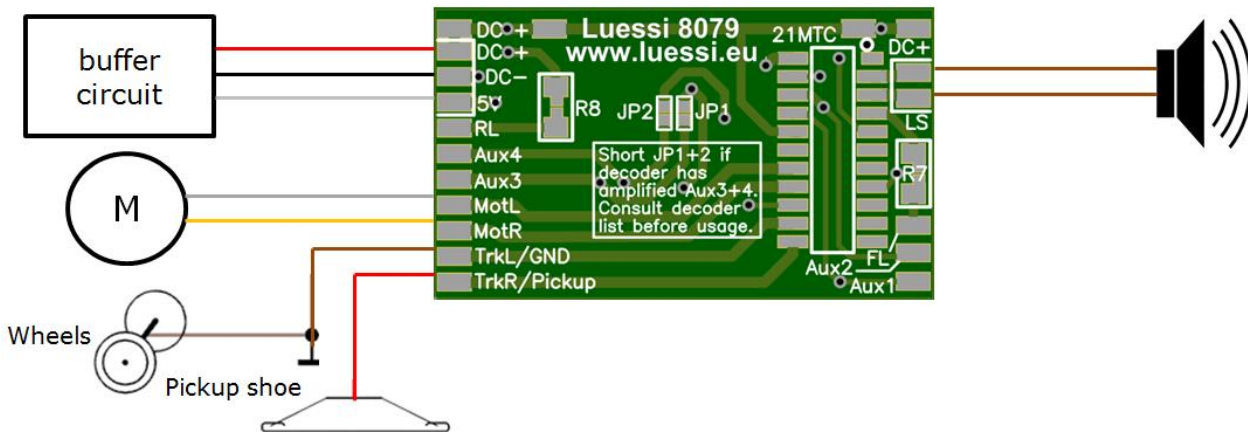


Universal PCB for 21MTC decoders, Part no. 8079

Power, motor and loudspeaker connections

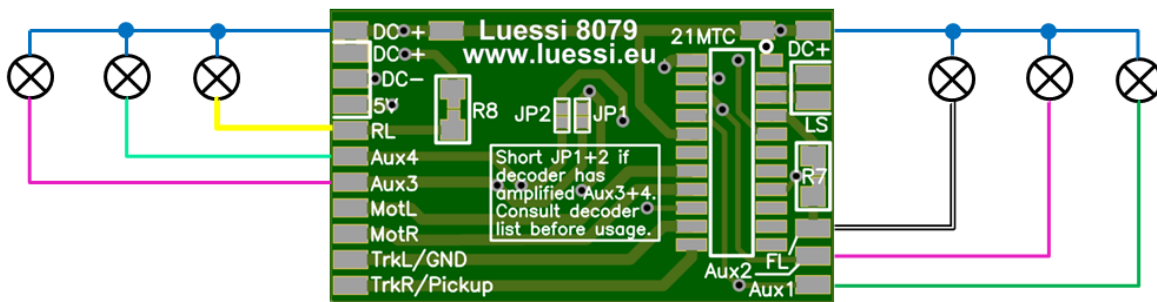


Connections for lights and other functions (direct, without resistors)

Warning: Do not connect any load (lamps) to the blue wire if they have connection to ground!

RL = rear light

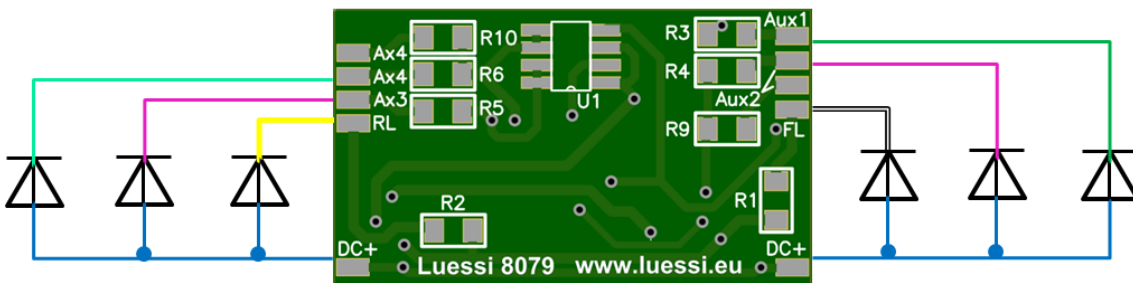
FL = front light



Connections for lights and other functions with inline resistors

On the rear side of the PCB you will find all connections for the function outputs running via resistor. The correct resistors need to be placed (soldered) on the PCB before usage. Check the LEDs or other devices you wish to connect and calculate the resistor accordingly. Use 20 VDC in your calculation as output voltage.

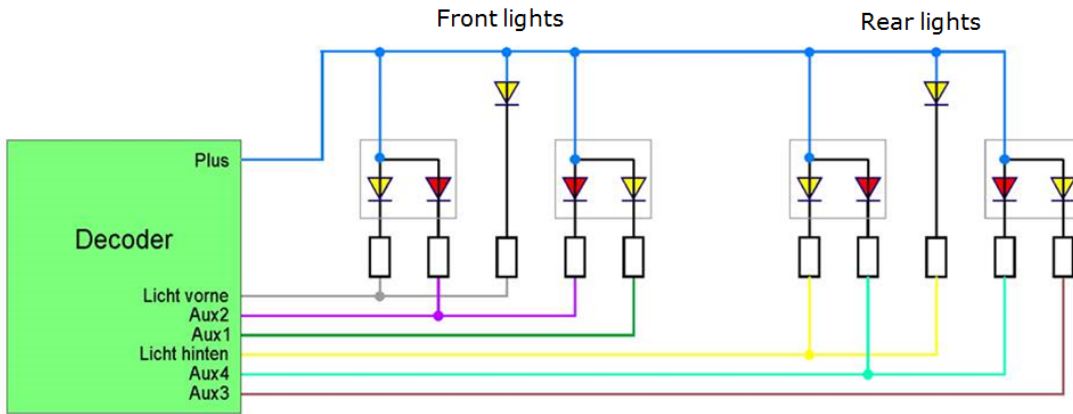
This way you can connect LEDs directly to the PCB without using resistors outside of the PCB. Best use with SMD resistors size 1206.



Resistor vs functions:

- R1 FL Front Lights
- R2 RL Rear Lights
- R3 Aux1
- R4 Aux2
- R5 Aux3
- R6 Aux4
- R9 Aux2 second connection, e.g. for Duo LEDs
- R10 Aux4 second connection, e.g. for Duo LEDs

Example: Connection of white and red duo LEDs:



In this example all resistors can be placed on the PCB.

The resistors for the top white LEDs are R7 and R8. Remove the solder shorts on the top side of the PCB and replace by resistors with the correct value for your application (LEDs)

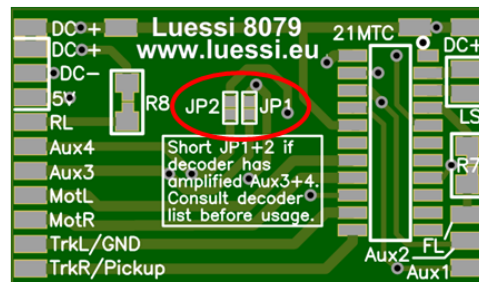
For the connection of the red LEDs the outputs for Aux2 Aux4 come in double, each with its own resistor.

Usage with decoders with amplified Aux3 and Aux4 outputs

You can use this adapter also with a decoder that comes with amplified Aux3 and Aux4 outputs.

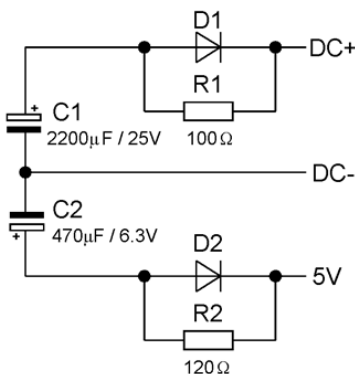
However, you will need to short the pads JP1 and JP2 on the top side of the PCB with solder.

WARNING: Do NOT connect a decoder without amplified outputs Aux3 and Aux4 to this PCB, when JP1 and JP2 are shorted. This might damage the decoder!



Buffer circuit

A buffer circuit ensures the loco to run for a small time even when connection to the power is lost, e.g. due to dirt on the rails. This PCB allows direct connection for such a buffer. However: contact the documentation of your decoder to ensure it is capable for this.



This circuit can be used with most of the decoders available.

You can connect it directly to the corresponding pads of this PCB.

D1 and D2 = Diode 1N400x