

Decoder PCB for Märklin locomotives, item no. 8096/8096A

This decoder adapter has been developed from practical experience and makes the digitization of analog Märklin locomotives much easier.

The adapter is designed in the size and placement of the components so that with the attached decoder the size of the electro-mechanical direction switch is not exceeded. Thus, this adapter can be installed in the vast majority of analog Märklin locomotives without reworking the locomotive. The adapter is simply screwed on instead of the direction switch. In addition, this adapter offers many other interesting features:

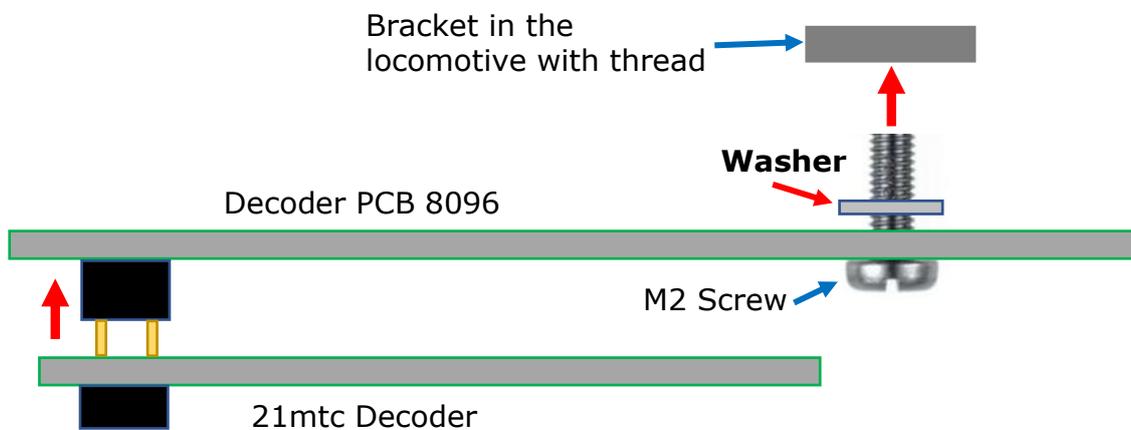
- Direct connection of bulbs and/or LED lighting (series resistors already present on the PCB).
- Several connections for *Decoder Plus* (return line for functions) available.
- Also suitable for sound decoders, speaker connections available on both sides of the PCB.
- Aux1 to Aux4 are led out directly as well as via series resistors, e.g. for cab lighting with LEDs.
- Can be screwed to the existing threaded hole in the loco instead of the direction switch, a suitable screw and washer is included with the PCB. There is no need for mounting tape.
- The PCB is available in two versions

8096: without amplified outputs Aux3 and Aux4 (for decoders with amplified outputs).

8096A: with amplified circuit for Aux3 and Aux4 (for decoders with logic outputs).

The PCB has a size of 34 x 20mm and therefore fits with the attached decoder in most cases at the place of the direction switch.

Mounting the printed circuit board in the locomotive

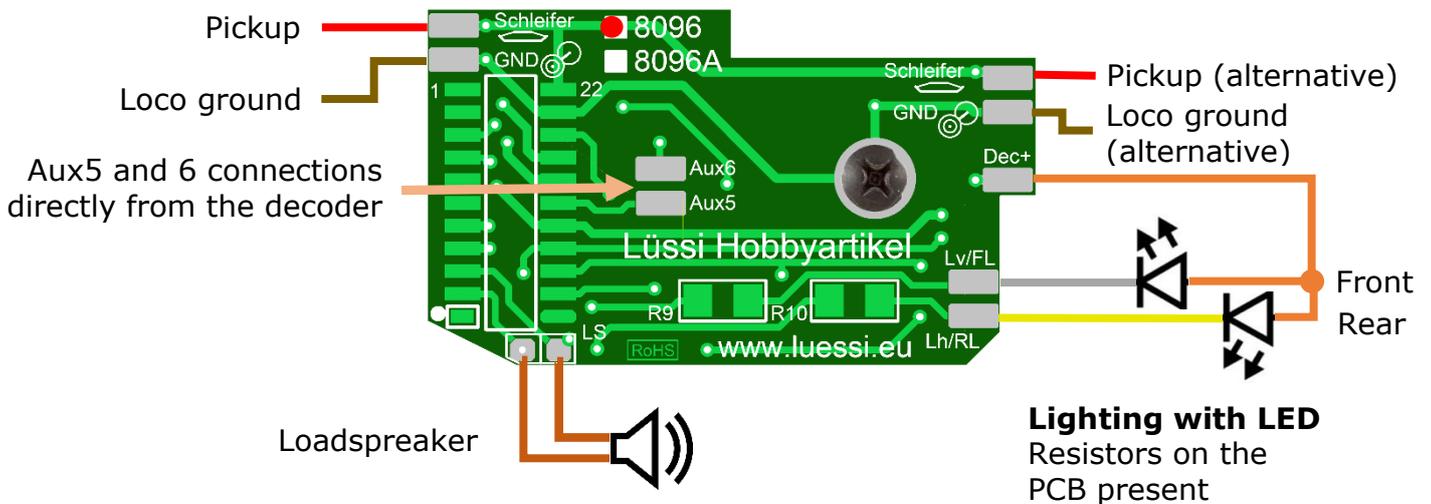


Note: It is mandatory to use the supplied washer.

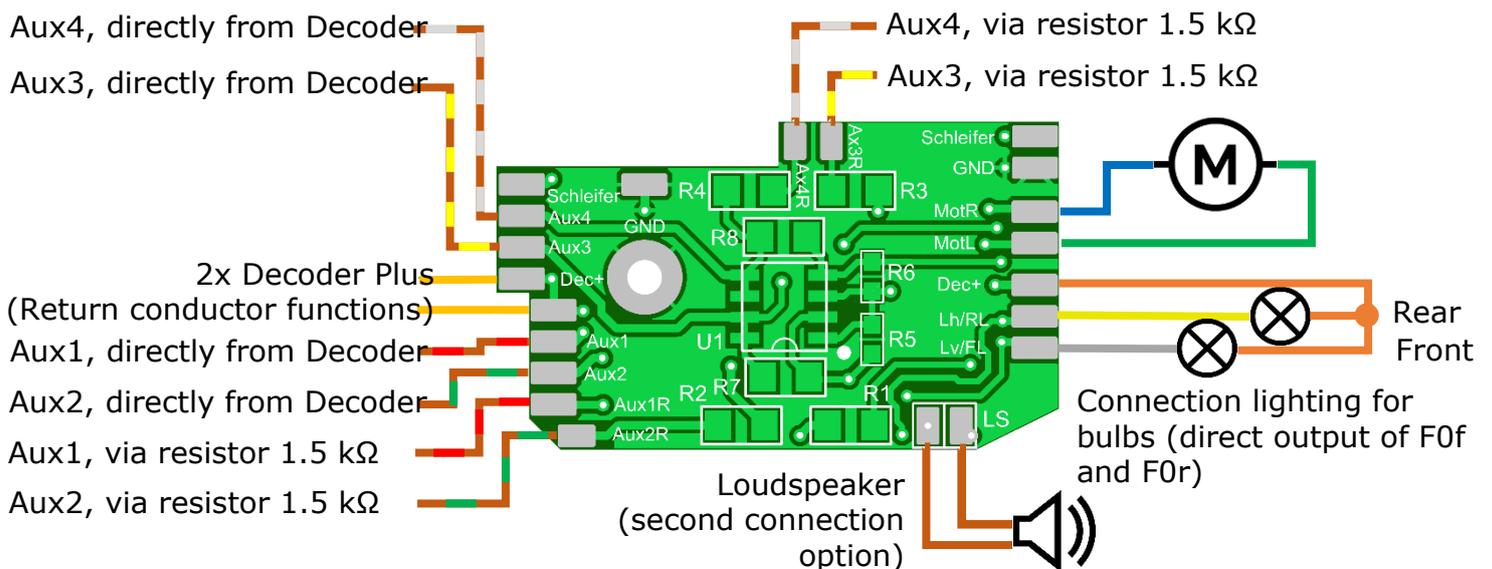
Connection

(Colours according to Märklin standard)

Printed circuit board front



Back of circuit board



Note on the loudspeakers

For decoders with 4 Ohm impedance, two speakers with 8 Ohm can be connected (1x each at the front and rear of the PCB, parallel connection).

Colours according NEM

At https://luessi.ch/pdf/Decoder_Farben.png you will find a colour table with the comparison of the strand colours at Märklin to the NEM.

Outputs Aux3 and Aux4

With version 8096, these come directly from the decoder (unamplified).

With version 8096A, these outputs are amplified on the circuit board from logic level to full function outputs. At https://luessi.ch/pdf/Decoderliste_21MTC.pdf you will find a list of common decoders with corresponding indications of the outputs (amplified vs logic level).