

## LGB 20670 Track cleaning loco

Backfitting of a LGB "Track cleaning loco" with 3-pin-gear and an old DEG-electronic with a XL-decoder.

The base PCB will be removed completely, light roof and front building light will be modified.



Pict.-1: LGB 20670

### **Needed Parts:**

- 1x 8150001 XL-Decoder
- Relais 24V / 5A (e.g. RTE24024 Schrack) with free-wheeling diode
- Miscellaneous cables

### **Backfitting:**

Remove rear (short) bonnet (Release 2 screws in the frontside).

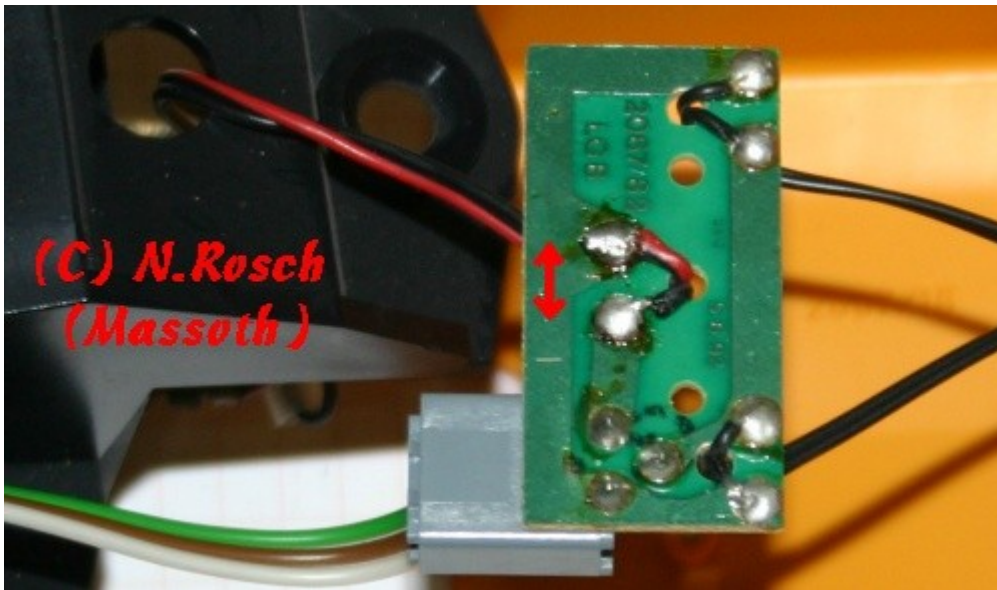
Remove crossing bonnet in front of the driver's cab (Remove 2 screws below the stairs).

Remove driver's cab (2 screws in access ladder and 2 hidden in the fuel tank).

Remove front (long) bonnet (1 screw before the cleaning block and 2 in the bracket of the cleaning block).

On the porch PCB swap the red with the black cable (Motor turns against driving direction).

(Who want's a meeker cleaning don't touch the cable and the cleaning motor turns with driving direction)



Pict.-2: New soldered cleaning motor cable

Assemble completely cleaning porch.

Remove propulsion unit from the chassis (Remove 4 screws from the brackets.)

Rebuild the propulsion unit for the 4. (yellow) cable

Basics: Digital\_compatible\_gears/en

Cut the 4 light roof cables, light rear, jack and the 3 cables to the slider porch from the base PCB.

Remove base PCB complete.

Plug the rest of the 3 gear cables of XL-decoder on the propulsion unit and assemble the gear.

Assemble the XL-decoder and relais on the lead weight.

Connect cable like Pict. 3:

Connection plan

Gear cable on M+(green) , G+(brown) , G-(white) , M-(yellow).

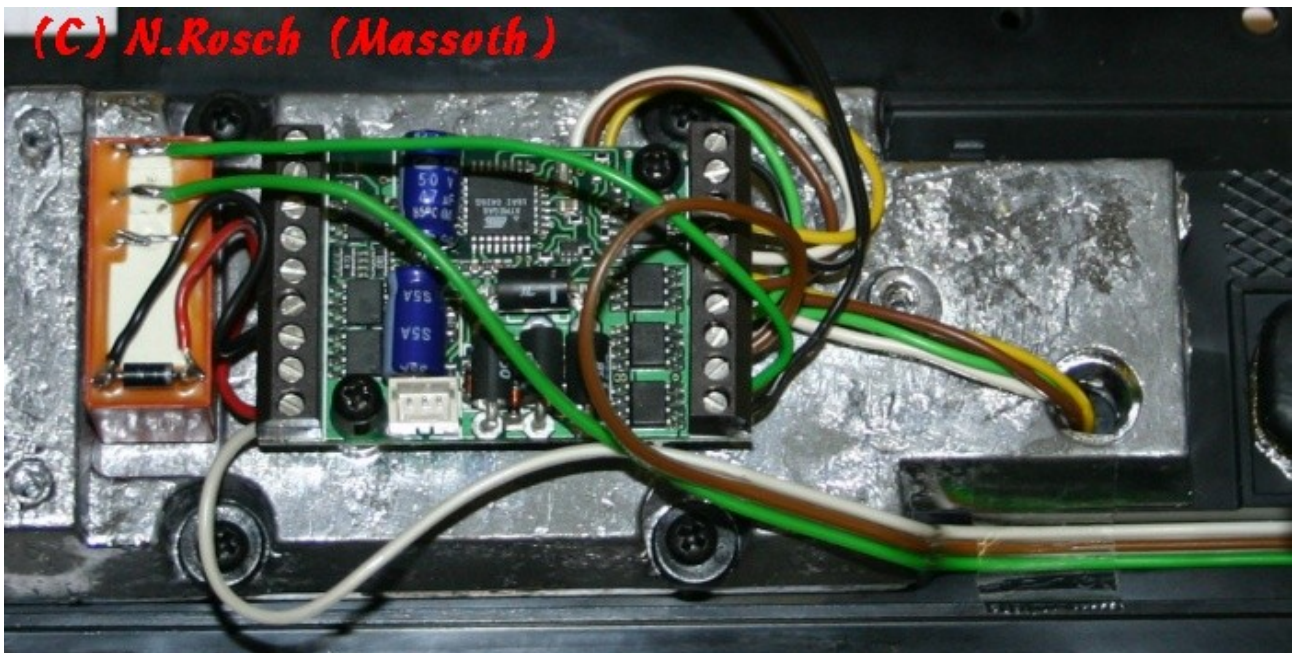
Cable of slider porch "+"(white) , LV(brown) , Relais contact(green).

Light rear on "+" and "LH".

Relais coil on "+" and "F3" (Follow the polarity of diode).

Second relais contact on "-" .

While the old jack is not protected against reversal polarity, the cable will be removed completely.



Pict.-3: Assembling and wiring of XL-decoder.

Before the first test you must program the decoder:

CV50 = 5 (light to 5V)

CV53 = 5 oder 197 (F1+F2 5V for blinking light on roof)

CV55 = 2 (F1 blinking with 0,5sec. clock)

CV57 = 16 (F2 coupled on F1)

CV56 = 1 (F2 switchable with key 1)

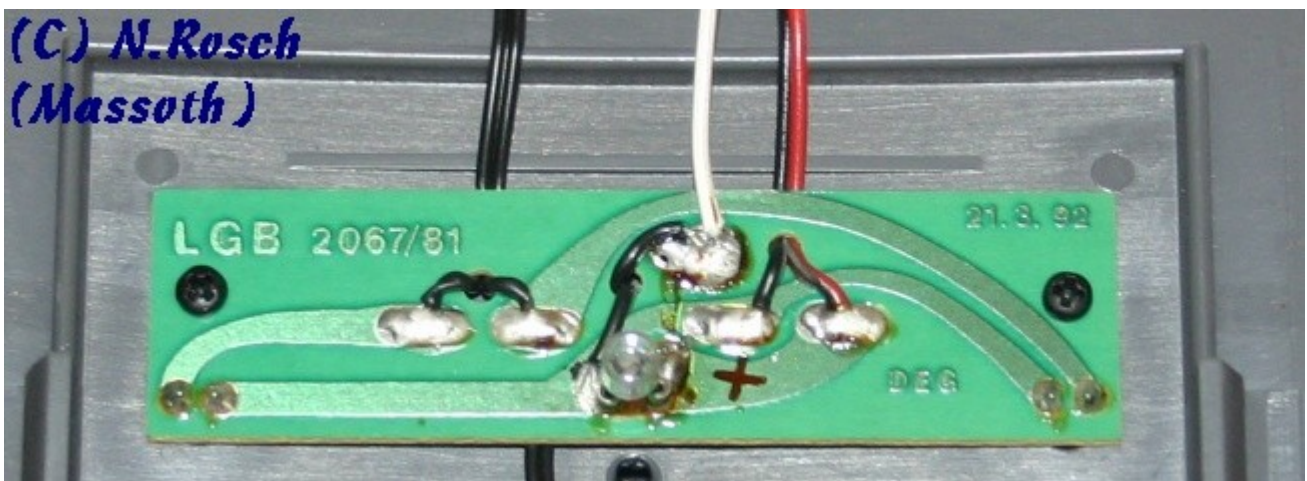
CV113 = 129 (F3 with key 1 for cleaning function on driving forward)

Check basic function:

Loco will drive forward and backward.

Light front + rear glows depending on direction, when turned on.

With Key 1 you can turn on the cleaning motor (only forward).



Pict.-4 : Changes on the light PCB on the roof.



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Remove roof from driver's cab  
Desolder the diode from roof light PCB  
Solder additional cable (in Pict.-4 white) on diode soldering point.  
Extend the remaining 4 cables, for a better assembling.  
Assemble driver's cab on the chassis.  
Assemble the remaining cables like the drawing:  
Connection plan  
Black cable from "red/black" on "+"  
Red cable from "red/black" on "LI"  
New white cable on "LV"  
On any black cable of the last cable on "F1" + "F2".  
Now you can check the remaining functions:  
Interior light glow in both directions, when turned on.  
Yellow lamps on roof blinking alternately, when key 1 on.  
After successful check assemble the remaining parts.

**Additional possibilities:**

To clean the track on highly polluted tracks we recommend assembling of a voltage buffer (8151001) or a goldcap buffer (8151501).  
If you wish you can trigger the functions individual:  
(CV54 + CV56 = 2) to switch the roof blinking light with key 2  
Red cable from roof light on "F4" in place of "LI" (change bulb to 19V)