

Piko VT 11.5 TEE en

Backfitting plan of a TEE from PIKO.

Needed parts:

1 x XLS 8220570

1 x LED lighting board 8124001

1 x LED lighting set from for middle waggons or a selfmade PCB

This plan describes the 1 speaker version.

If you wan't to install 2 speaker, you HAVE TO USE 4 Ohm speakers instead, and connect them serial.

Opening the locomotive is quite easy, remove at the traction unit in front the rear plastic cover. Press lightly on top and pulls the upper part backwards.

Then turn the roof backwards and remove it. (Pict 1).



Pict 1: Removing roof

To remove the front top, pull down the coupler and in the same time push in front of the top (under TEE) and remove it to the top. (Pict 2)



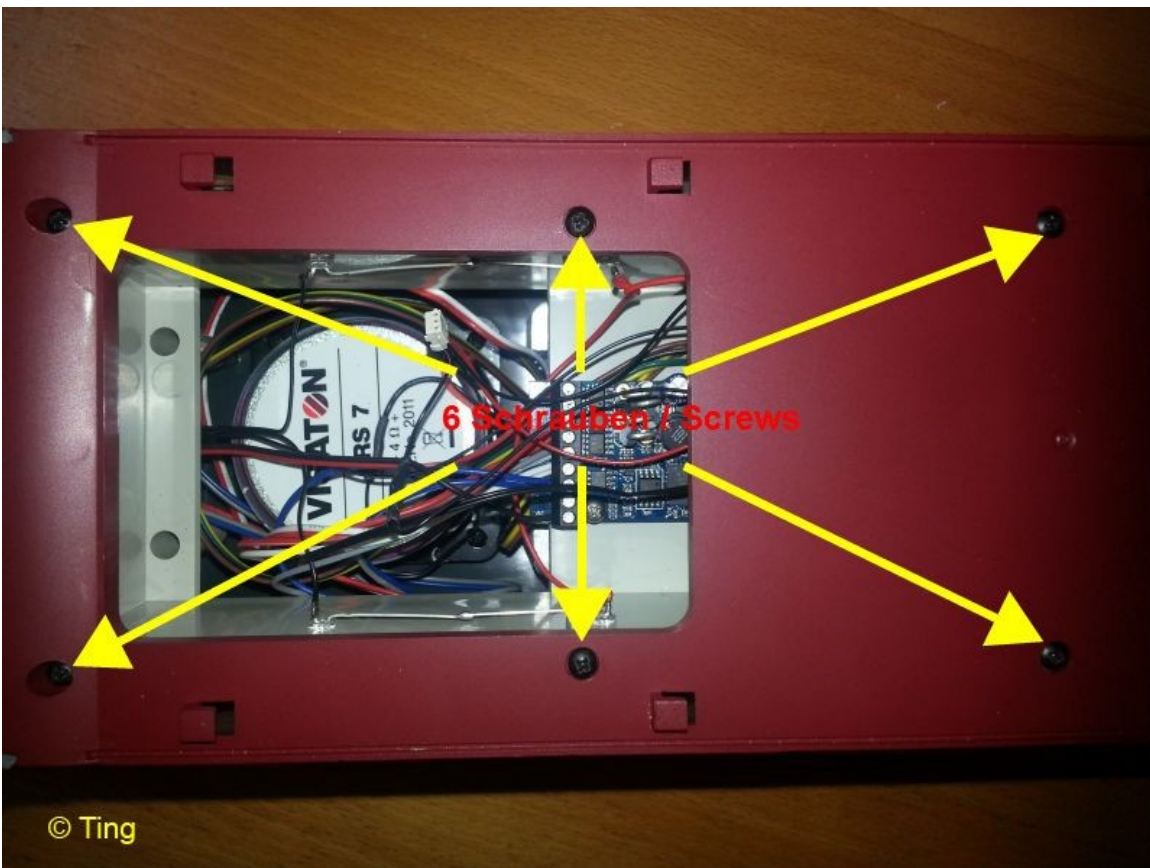
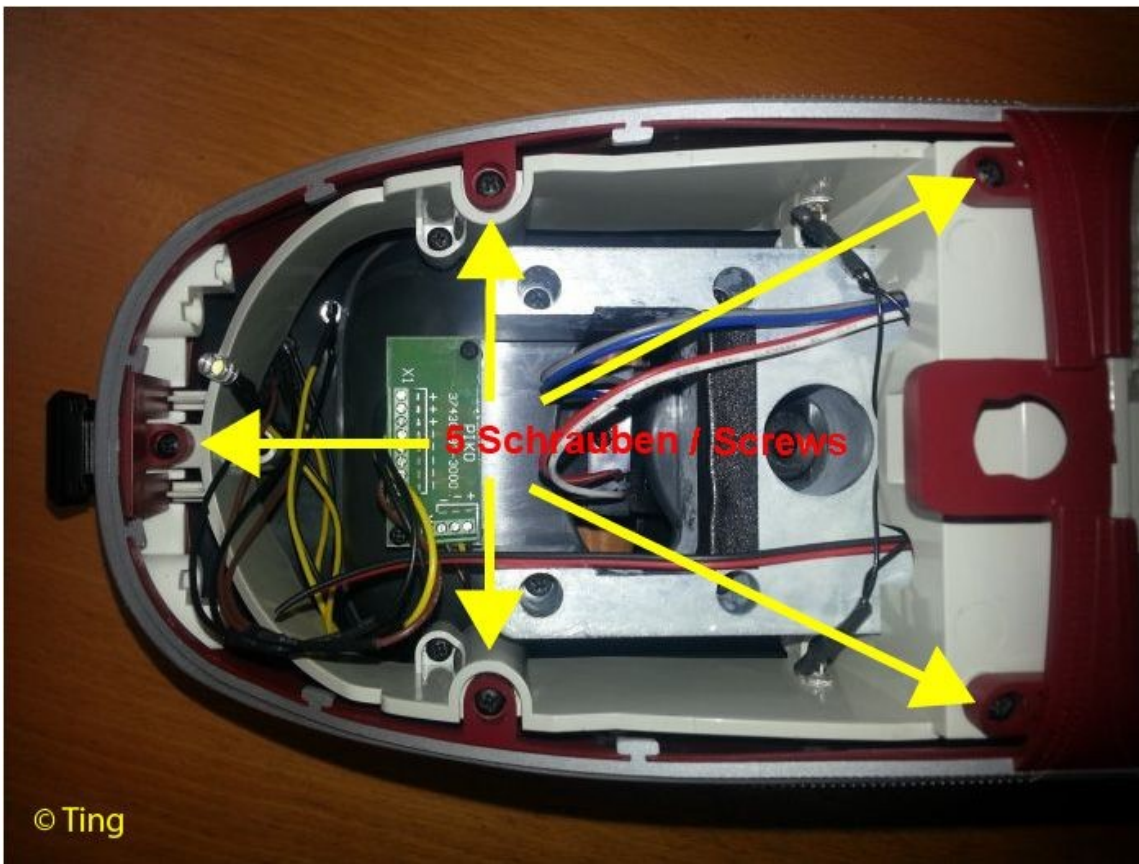
Pict 2: Removing front top

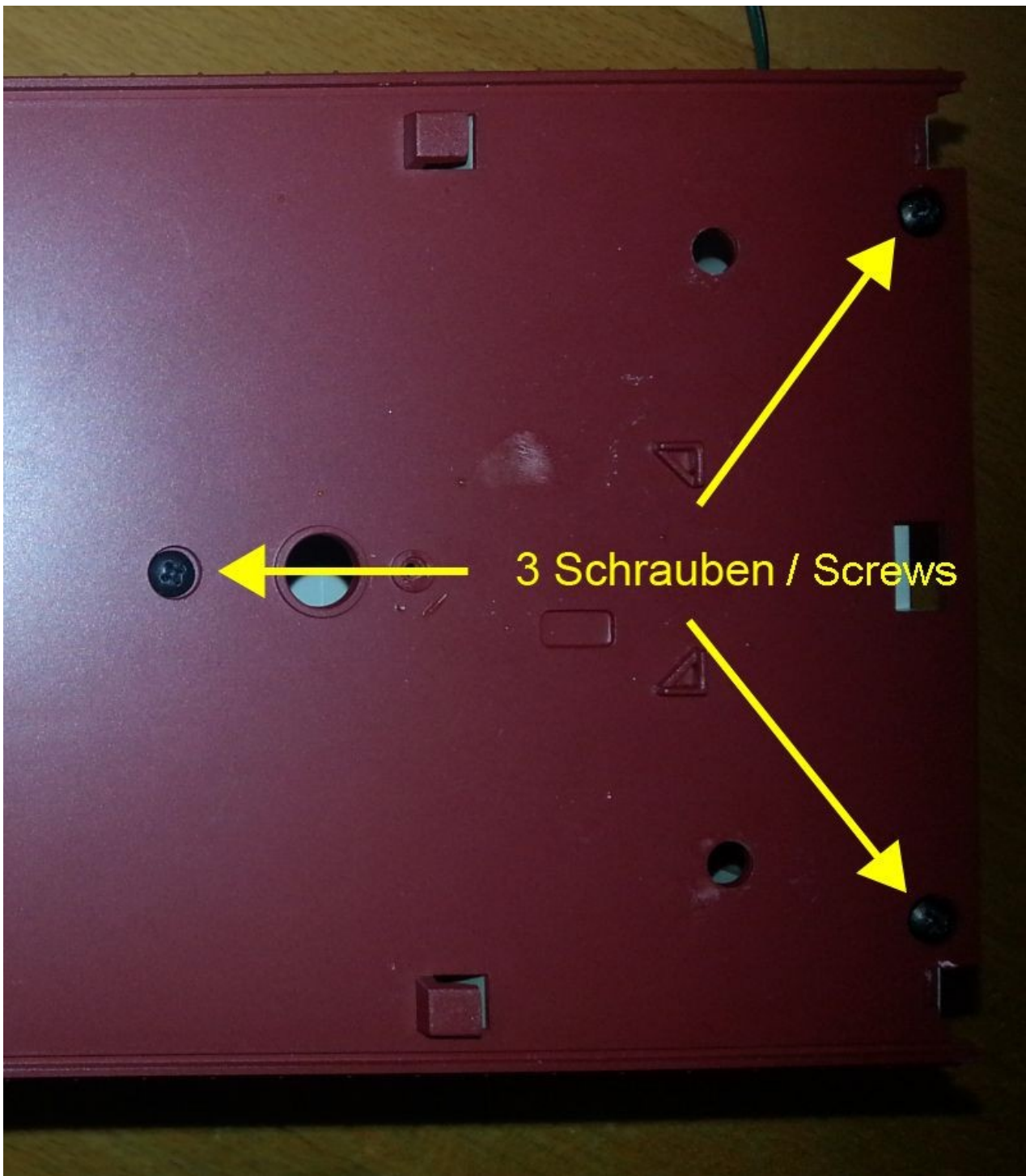
Remove first the analog PCB, BUT PLEASE MARK THE CABLE FOR LIGHT FRONT AND REAR BEFORE.

Have a look in the PIKO manual, you can find a plan for it! (Page 14- Main-PCB)

If you reverse lights nothing will damage, but the Leds are lighting in the wrong way.

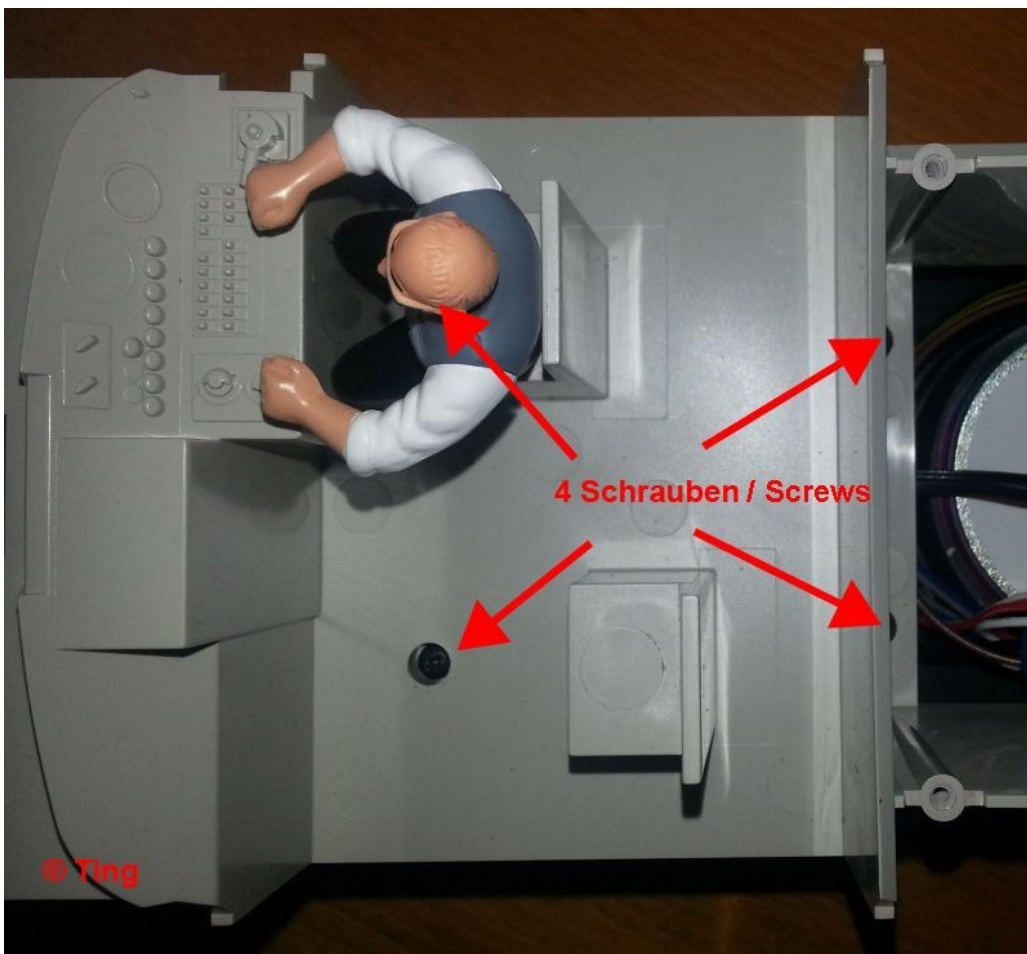
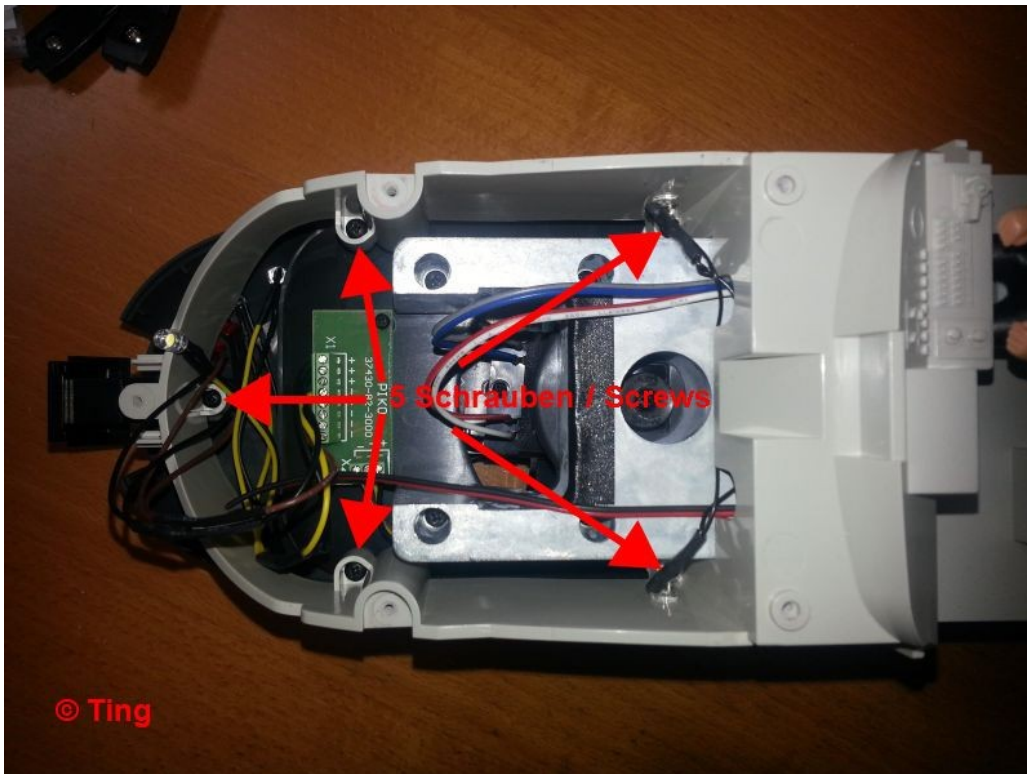
Now you are able to open the 14 screws from top, to remove the loco outer wall.(Pict 3-5)

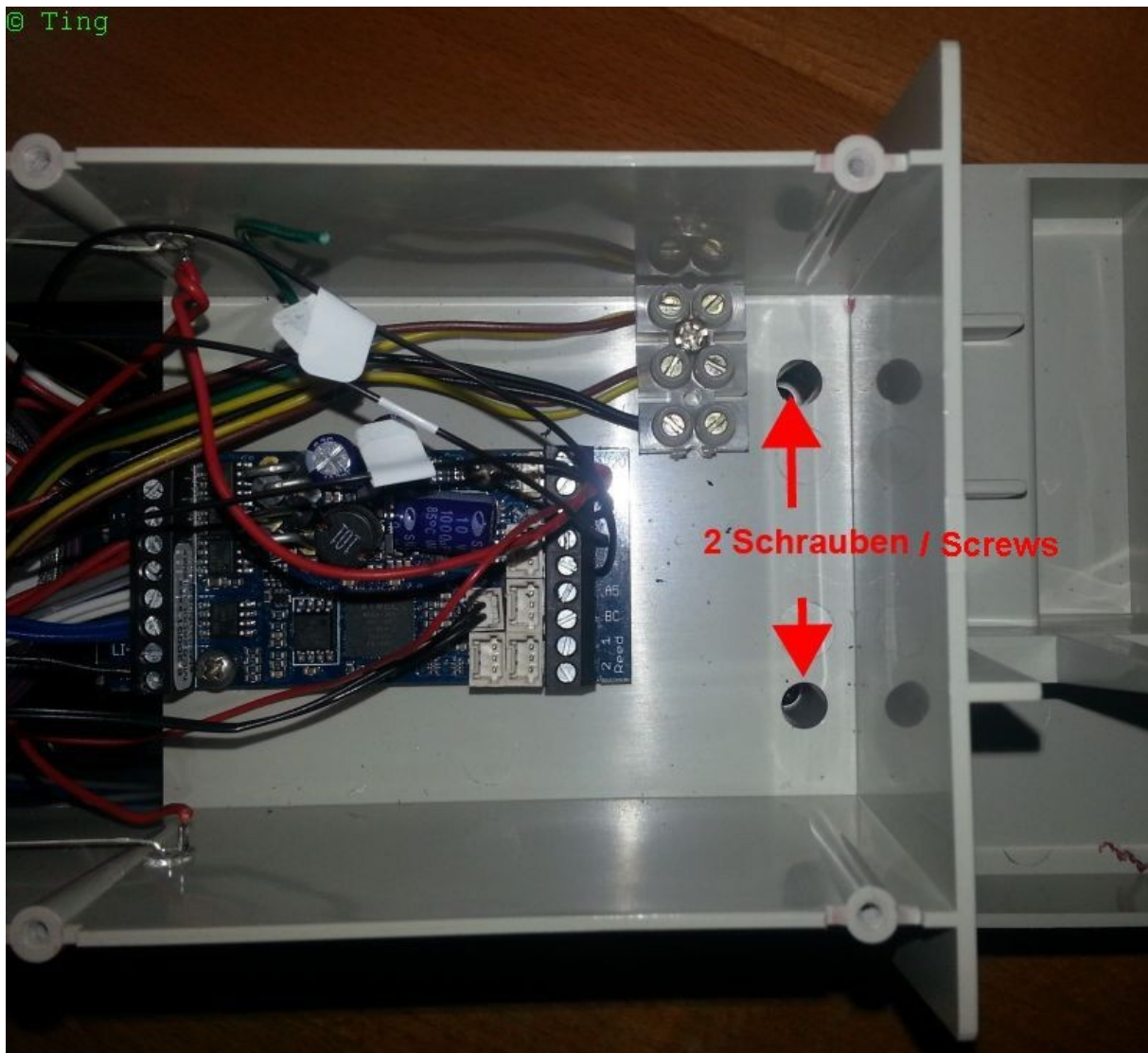




Pict 3-5: Open the screws for loco outer wall.

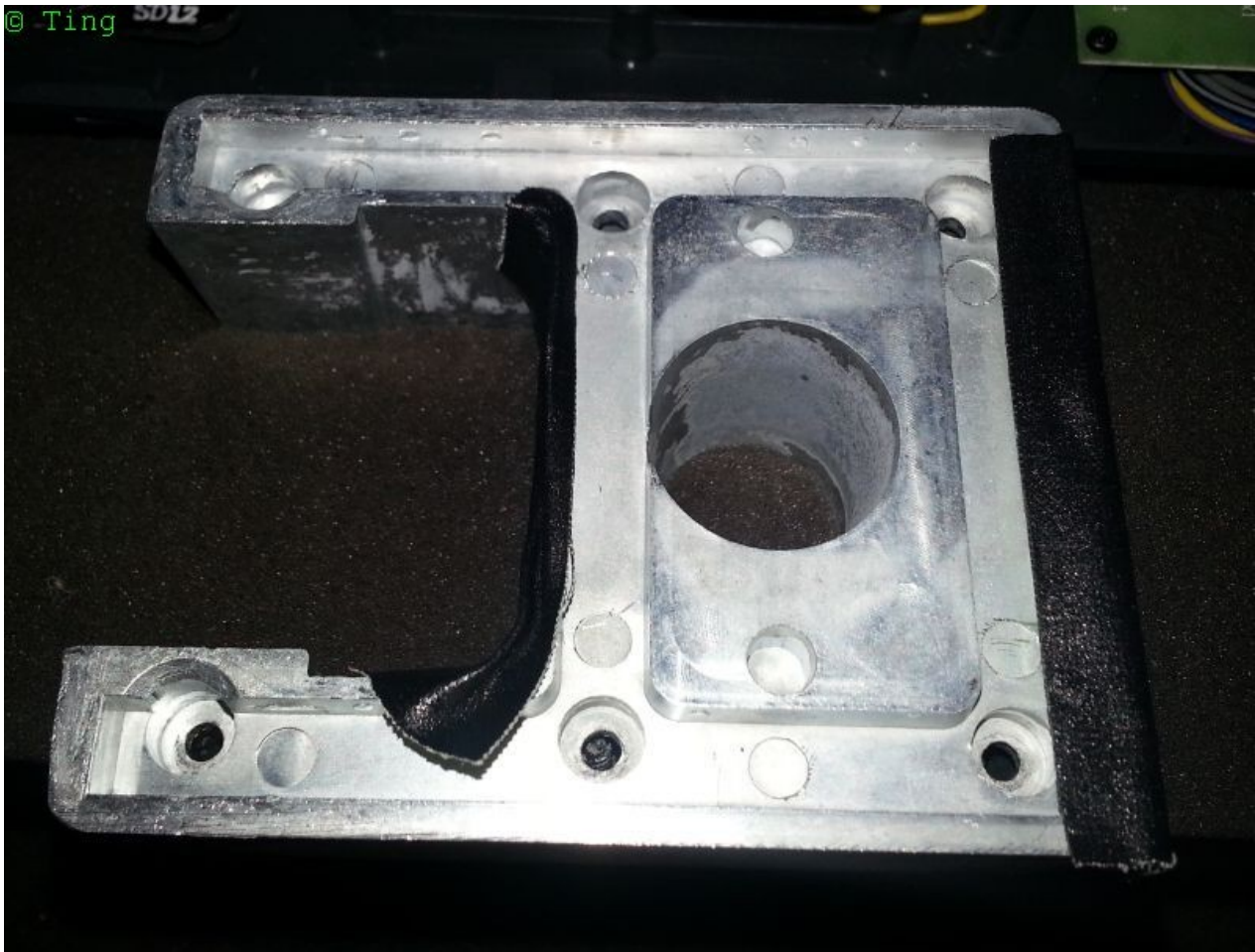
Then you are able to open the 13 screws for the inner part. (Pict 6-9)





Pict 6-9: Open the screws for inner part.

As a precaution i removed the lead weight to take some gauze tape on it (like shown in Pict. 2), to prevent the cables from the sharp edges.
Then screw the lead weight again. (Pict. 10)



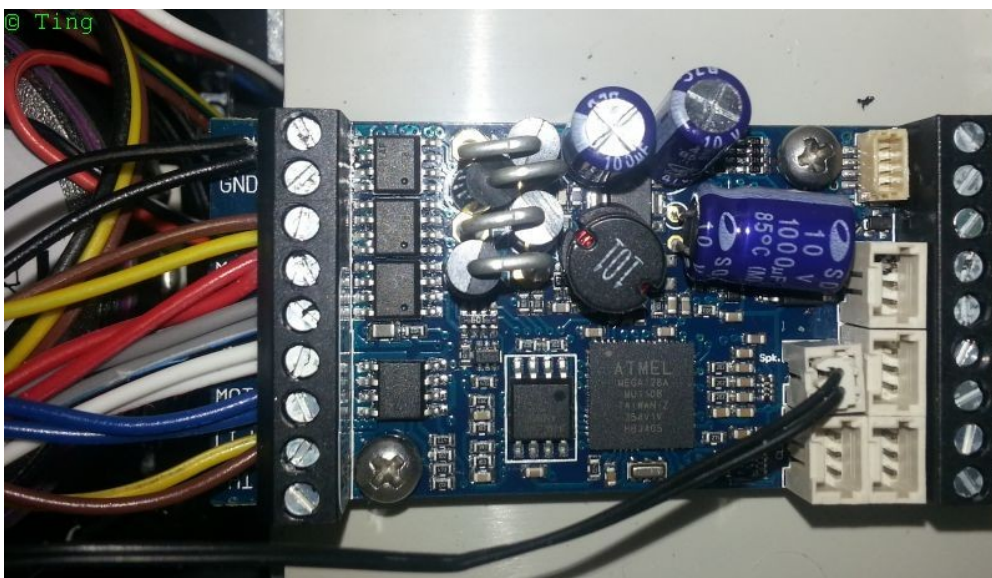
Pict. 10: Preventing cables under lead weight.

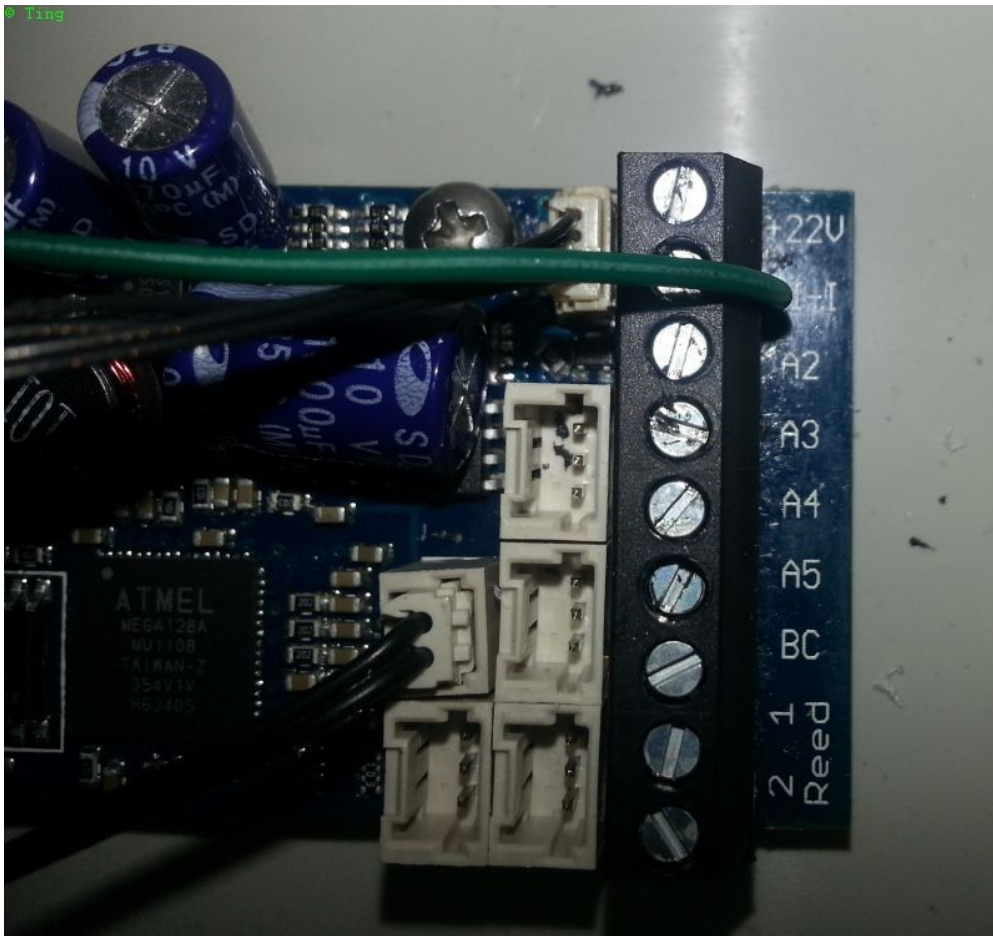
Mounting the speaker like pict. 11. You can see here another cable, but you should use the original cable.



Pict 11: Mounting the speaker.

Mount the XLS as shown in the inner part of loco and connect it as shown in the manual. Have a look at these 2 pict. (Pict 12 + 13)





Pict 12+13: Mount and connect the XLS.

Now connect the cables in following way:

Track + = grey/grey

Track - = white/white

Motor + = red/red

Motor - = blau/blau

Light interior = green (you can also connect it to A2, if you want to switch it separately)

Light front = yellow/brown (the marked cable for front light)

Light rear = yellow/brown (the marked cable for rear light)

Decoder + (22V) = black/black

Plug in the 2-pole connector for speaker.

Illumination

Cut the LED lighting board as shown in pict. 14 (each 13,5 cm from outside PCB)

As shown in picture you have to drill a hole with a 7mm drill.

Solder the 2 cables as shown.

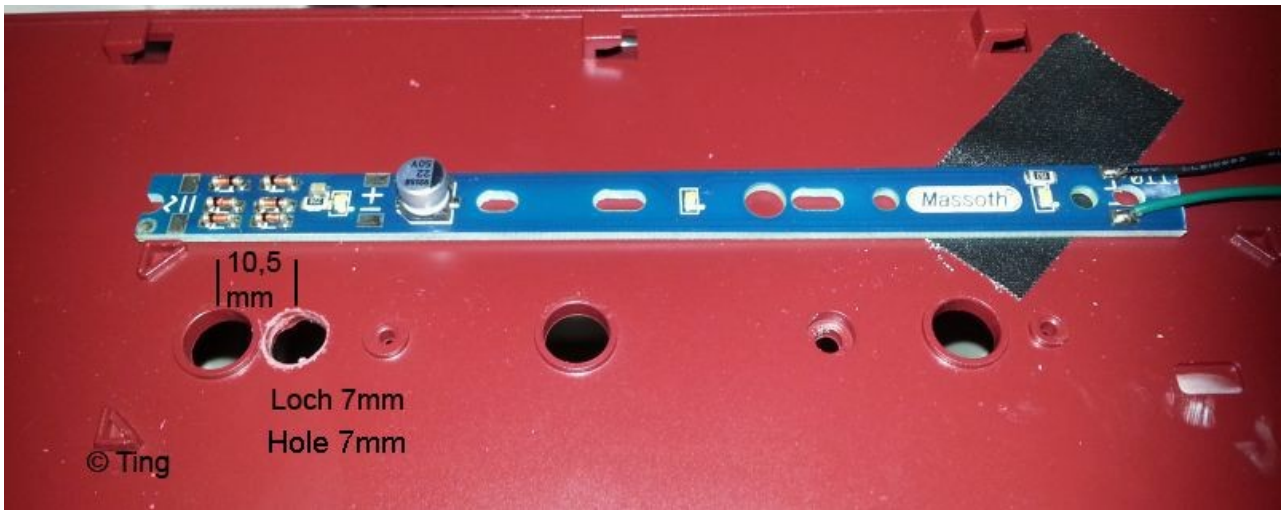
Black = +

Green = -

The PCB will be fixed with 2 screws 1,5 x 4 .

In traction unit 2 you will mount the other PCB.

Reassemble the traction units in reverse order.



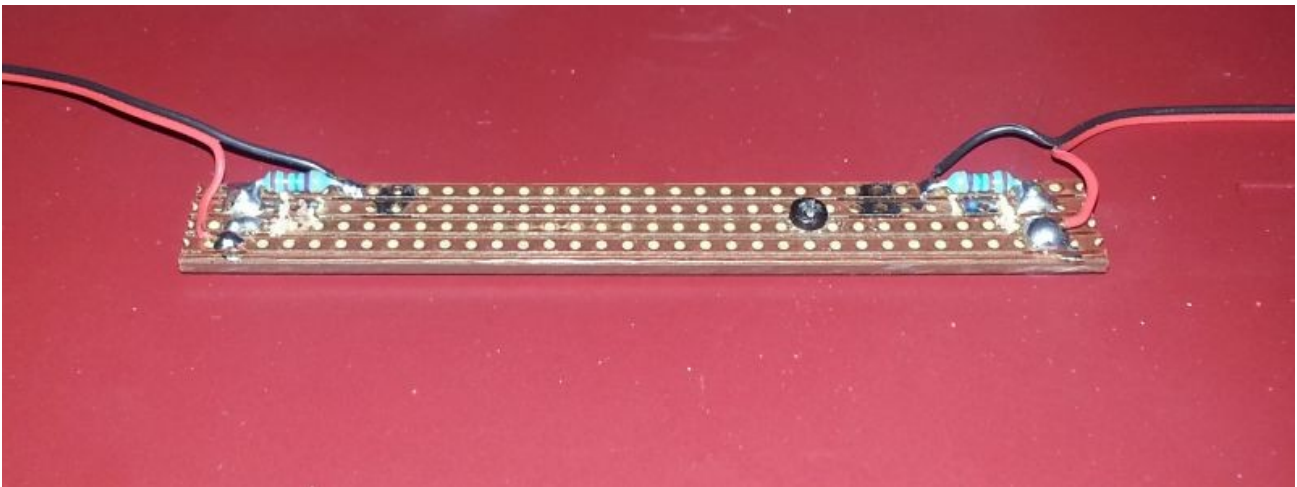
Pict 14: Assembling and connection of LED lighting board.

Light center coach

Removing the roof is in the same way like the traction unit.

You can buy the PIKO set with 2 PCBs and connect it easily with the cables.

With a breadboard, 8 x LEDs white 5mm and 8 resistors 4,7KOhm you can make a slefmade PCB.
Here you can see how the PCB can look like (Pict 15)



Pict 15: Making of the selfmade PCB for LED lighting board.

Here you can see the schematic plan of the PCB (Pict 16):

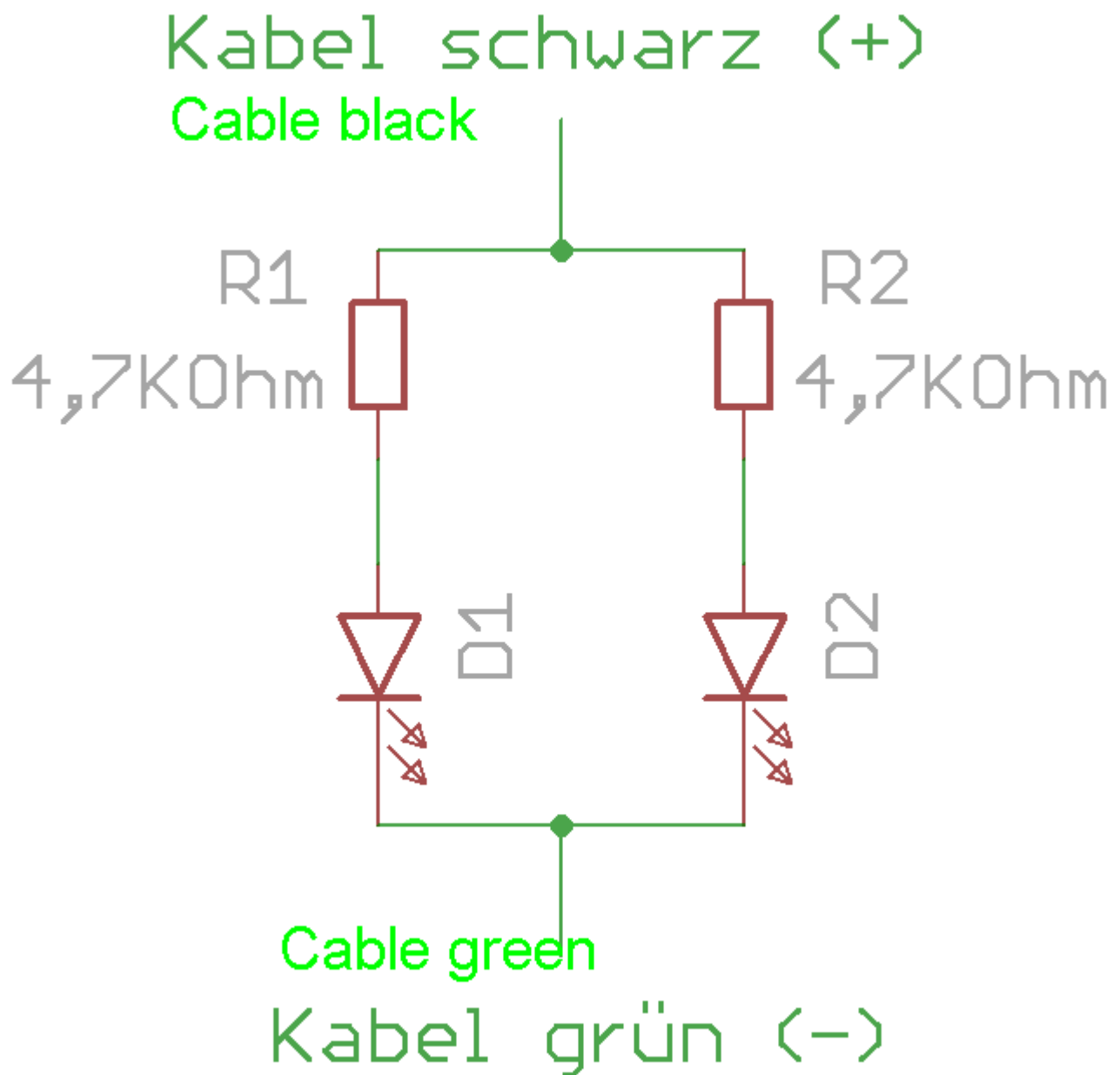


Bild 16: Schematic of selfmade lighting board.

You need this PCB 4 x per center coach
2 x in different lenght.