Piko VT98 en

Backfitting of a Piko “VT98” railbus with an eMotion XLS-soundecoder and Piko-interior light.

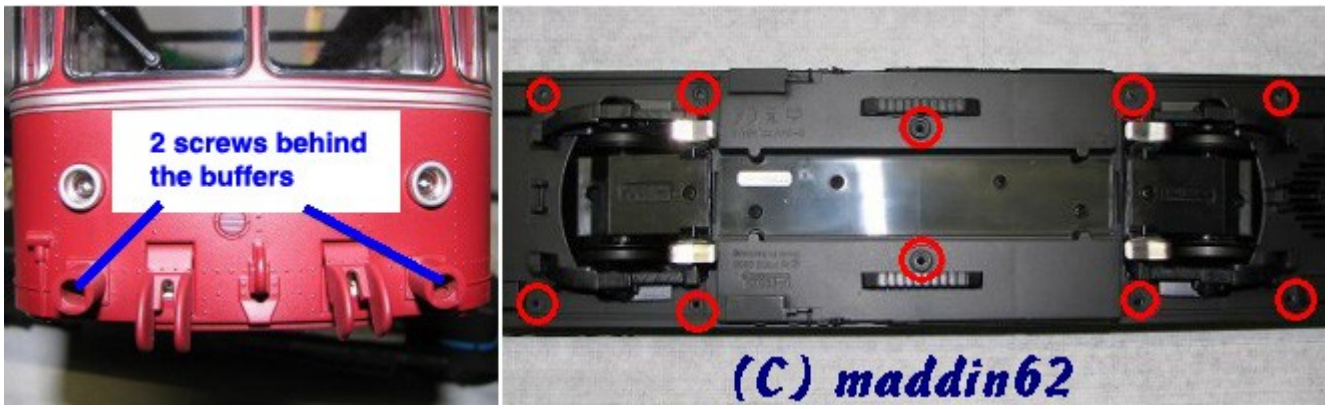
Pict.-1: Piko-VT98

Needed Parts:

- 1x 8220520 XLS-Decoder “VT98”
- Piko interior light for VT98”

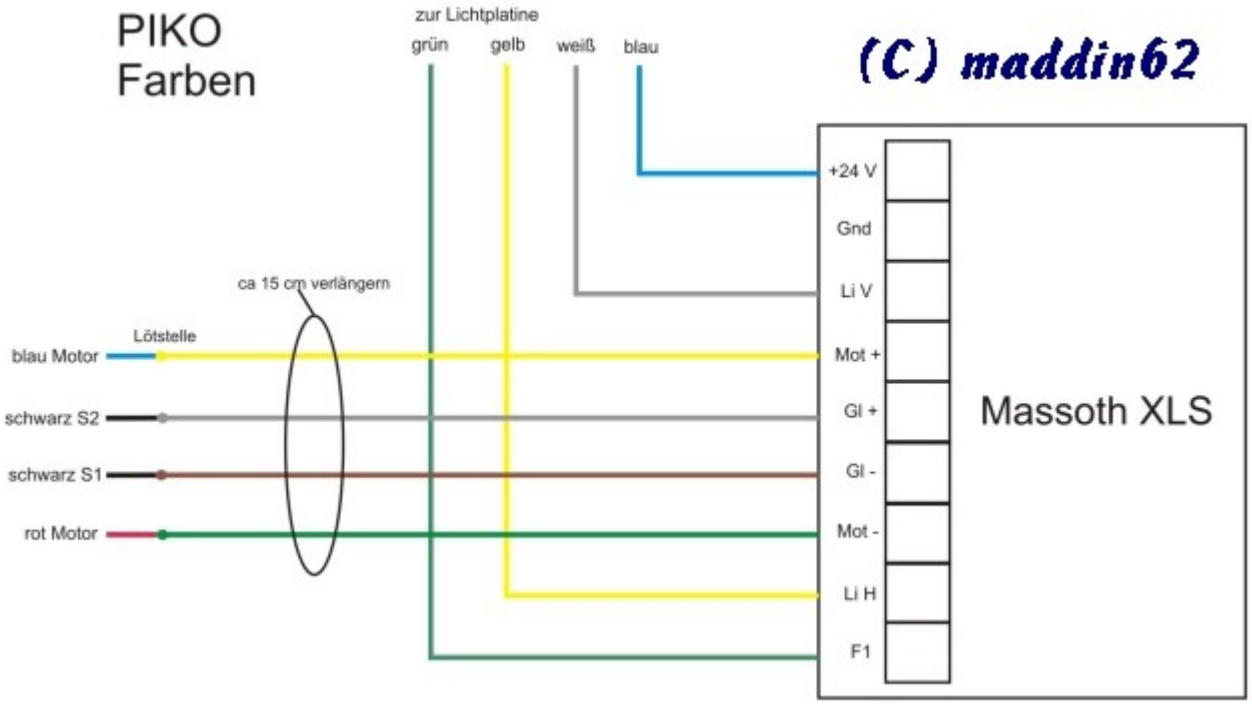
Backfitting:

- Remove all 4 buffers and remove the screws among.
- Remove 10 screws on car floor.
- Remove chassis to the top.

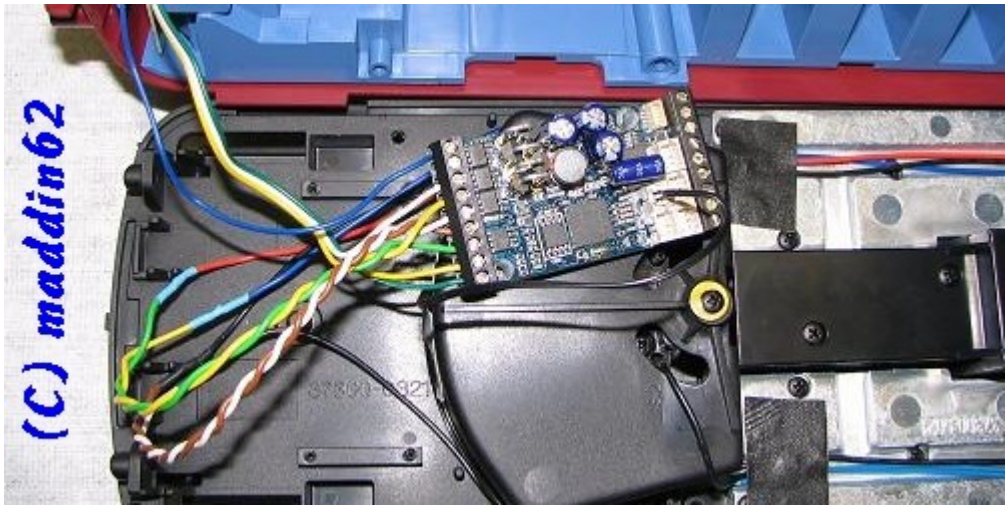


Pict.-2: Screws to remove

- Assemble Visaton speaker on the intended place at the end of vehicle.
- Fix the speaker cable on intended fastener to the front.
- Remove the 8 cables one after another from the adapter PCB.
- Connect them like the manual with the XLS-Decoder.
- The motor- and trackcontacts must be extended at 15cm.



Pict.-3: Wiring diagram XLS



Pict.-4: Completely new wired loco

- Now remove the roof with careful pulling on the horns.
- In the case of the toilet you have to enlarge the hole on the top side, so that your decoder apply through that hole.
- Assemble roof light PCB and tighten it.
- Plug light cable on roof light PCB (Blue = Anode).
- Put XLS-Decoder in the case of the toilet.

Pict.-5: Assembling decoder in the toilet and assembling the roof illumination.

- Put provisorily the loco chassis and test all functions.
- If all tests are successful assemble all other parts.
- No special programming is needed.

Further hints:

- If you think the light is too bright, you can dim it with CV50 (driving light) and CV53 (interior light).
- Normally you should not hear the sound of the control gear. To activate it you must program following CV's:

209=2
229=10
230=25
231=55
232=100
233=160
234=9.

Of course our railbus have like the German model included the real breaking squeal (Key 2). While a multi-part set squeal definitely.

Conversion with LS and Massoth interior lighting

Conversion of a Piko "VT98" rail bus with an eMotion LS sound decoder and Massoth interior lighting.
~~#F00:**ATTENTION:** The rail bus consumes more than 2.0A of current in tight curves (R1) with a slight gradient. This conversion therefore only makes sense for use on flat systems with large radii. Otherwise the decoder switches off due to overload.

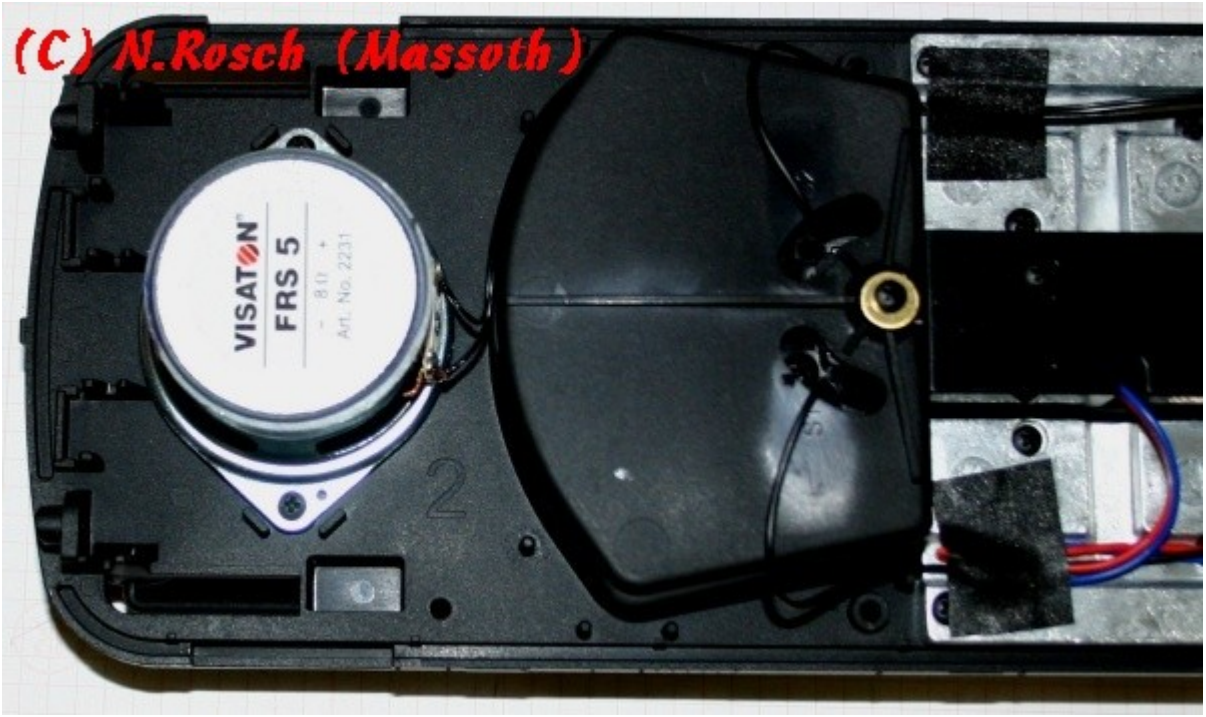
Picture-6: Piko-VT98

Needed parts:

- 1x 8221100 LS-Decoder "Diesel Universal"
- 1x 8241060 Visaton FRS5 Speaker
- 1x 8124001 Massoth LED light strip (2x if VS98 is also converted)

Conversion:

- Reprogram LS decoder with sound for VT98.
- Remove all 4 buffers and remove the screws underneath.
- Remove 10 screws from the bottom of the car.
- Open the case at the top.
- Install Visaton loudspeakers at the intended location at the end of the vehicle.



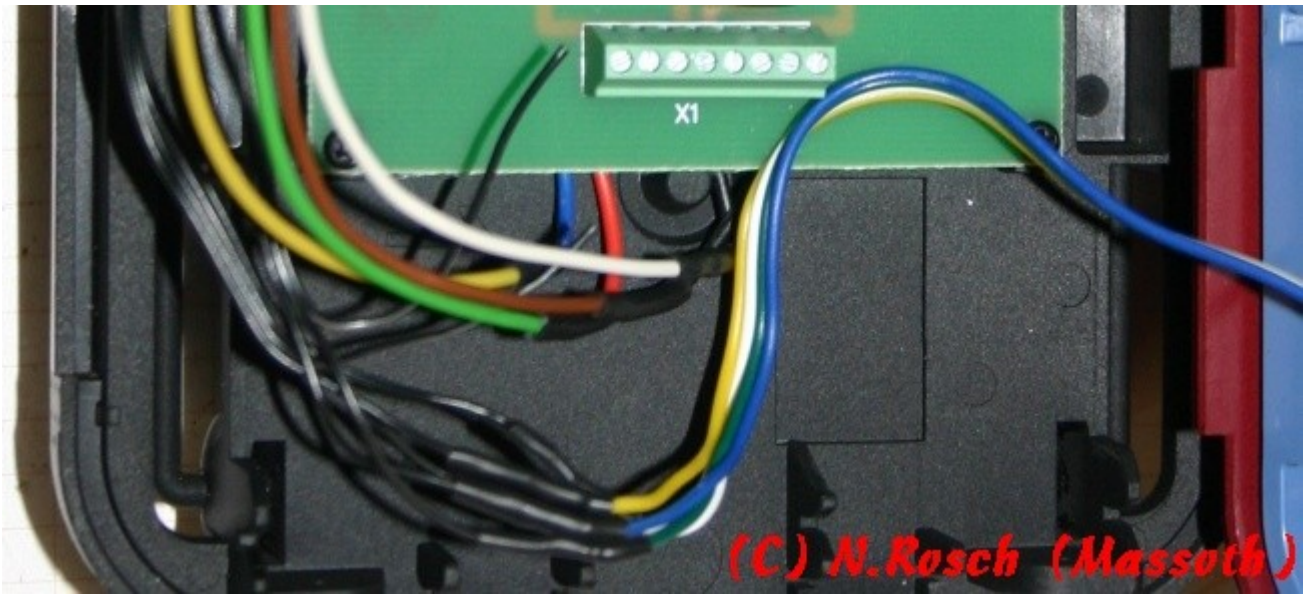
Picture-7: Loudspeaker installation

- Now release the roof by gently pulling the horns upwards.
- Connect Massoth LED light strip to the Piko light cable (blue = “+”).
- Fix the light strip in the roof.

Picture-8: Light strip installation

- Remove the cable from the screw terminal one after the other and connect it to the LS decoder.

Connect motor cable “+” (yellow) to Piko (blue)
Connect motor cable “-” (green) with Piko (red)
Connect track “+” (white) with Piko-S2 (black)
Connect track “-” (brown) with Piko-S1 (black)
Connect light cable “+” with Piko (blue)
Connect light front with pico (white)
Connect light-back with pico (yellow)
Connect functional cable “+” to Piko (blue)
Connect F1 output to pico (green).



Picture-9: Wiring of the LS decoder

- Plug loudspeaker, light and function cables into the decoder.
- Put the LS decoder in the toilet housing.
- Temporarily fit the locomotive housing and test all functions.
- After successful testing, reassemble the remaining parts.
- No special programming is required.

Further information :

- If the light is too bright, CV50 (headlights) and CV53 (interior light) can be dimmed.

The sound of the manual gearbox is usually not audible. If you want to activate it, you have to program the following CV’s:
CV 209=2
CV 229=10
CV 230=25
CV 231=55
CV 232=100
CV 233=160
CV 234=9
And our railbus has the real brake noise (key-2) included.

8FL Decoder and Massoth Interior Lighting in Control Carts

Conversion of a Piko “VS98” rail bus control unit with an eMotion 8FL decoder and Massoth interior lighting.
Due to the easily breaking connection cables between VT+VS, the conversion with a function decoder and its own power supply is shown here.

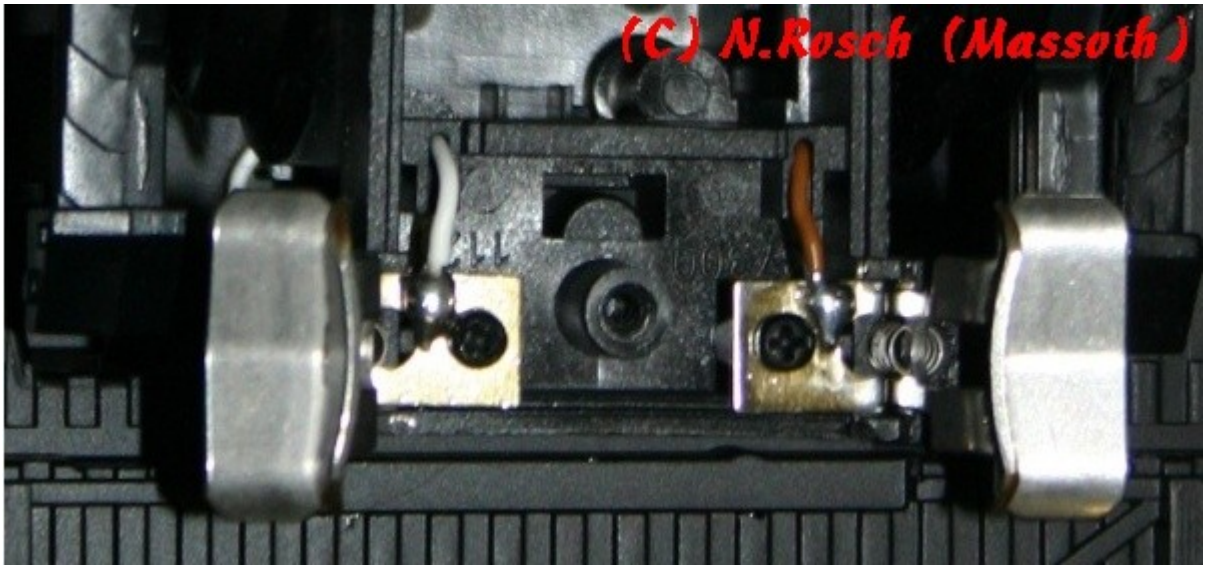
Picture-10 Piko-VT98

Needed parts:

- 1x 8152001 eMotion 8FL
- 2x 8124001 Massoth LED light strip
- Miscellaneous Cables
- capacitor 1000uF + 150R + diode 1N4007 for buffer circuit

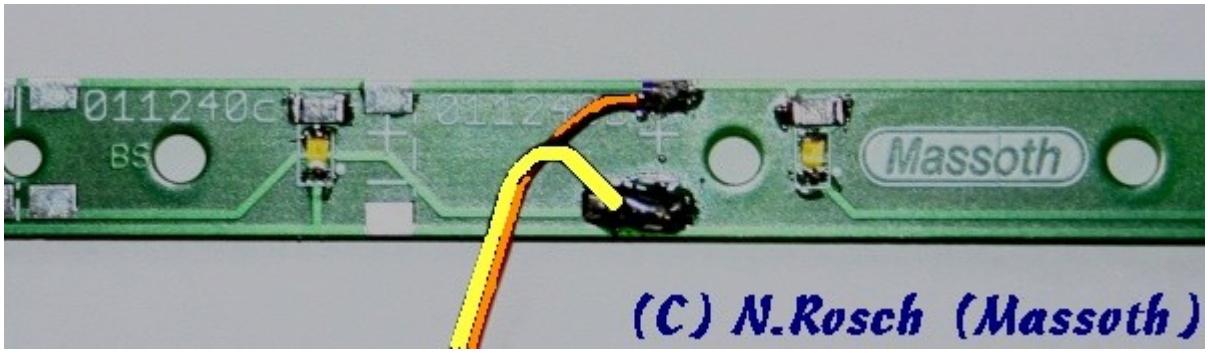
Conversion:

- Remove all 4 buffers and remove the screws underneath.
- Remove 10 screws from the bottom of the car.
- Open the case at the top.
- Open the wheelsets from below + above and solder the cables to the slider.



Picture-11: Cable connection slider front and rear

- Now release the roof by gently pulling the horns upwards.
- Fix the light strip in the roof.

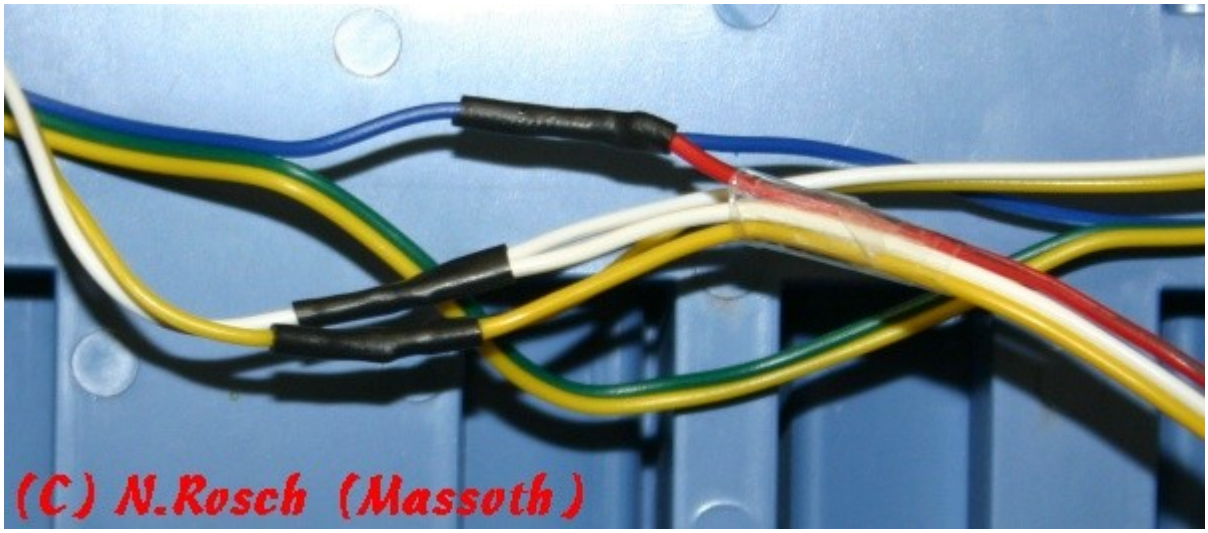


Picture-12: Massoth batten luminaire with cable connection

A solder bridge must still be placed on the Massoth light strip as described in the instructions! Otherwise only half of the lamps light up!

Fasten the decoder in the car floor and connect the cables:
Connect the decoder “brown” with the left sliders
Connect decoder “white” with the right sliders
Connect decoder “orange” with “+” of the Massoth LED light strip
Connect decoder “yellow” with “-” of the Massoth LED light strip
Connect decoder “+” (solder pin) with the “blue” cable
Connect the decoder “F7” (solder pin) to the “yellow” cable (from yellow/white).
Connect the decoder “F8” (solder pin) to the “white” cable (from yellow/white).
In addition, we recommend connecting a small buffer:

Picture-13: Decoder installation + connection



Picture-14: Cable connection between light boards and decoder

Programming:

- CV51=128 (Red taillight on F7 switchable with light button)
- CV52=64 (White lamps on back of F8 switchable with light button)
- CV54=7 (interior lighting on F1 switchable with key-7)

After successful testing, reassemble the vehicle in reverse order.

- The socket cables to the VT98 must no longer be plugged in !