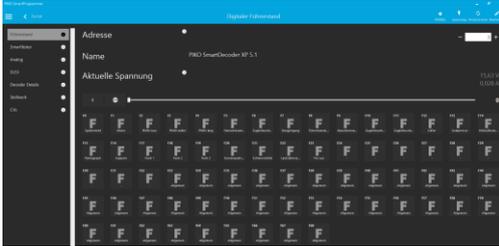


## Special PSP App tools to fix various programming problems of PSD 4.1 and PSD XP 5.1

### Challenge 1:

Reading in the XP 5.1 decoder (sound and NON-sound) connected to the tester or installed in the locomotive takes a very long time and the motor is permanently briefly activated. After reading in, e.g. via the menu "Test decoder", all functions are displayed without the corresponding function symbol. Only the letter "F" is displayed for the functions F0 - F68.



#### Reason:

The PSP app cannot read the CV blocks of the decoder via RailCom and now tries to get as much decoder information as possible by reading individual CVs..

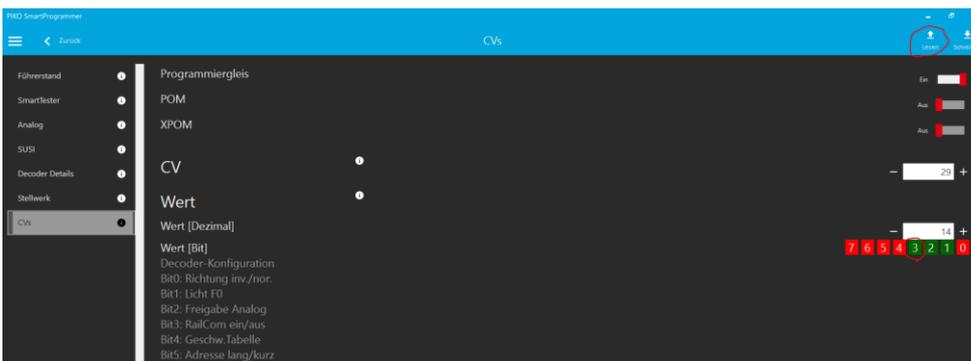
#### Solution:

First, check whether "RailCom" is activated in the decoder..

This is done via bit 3 = 1 in CV29..

#### Option 1:

Menu "Decoder Test" -> "CVs" -> CV29 -> read

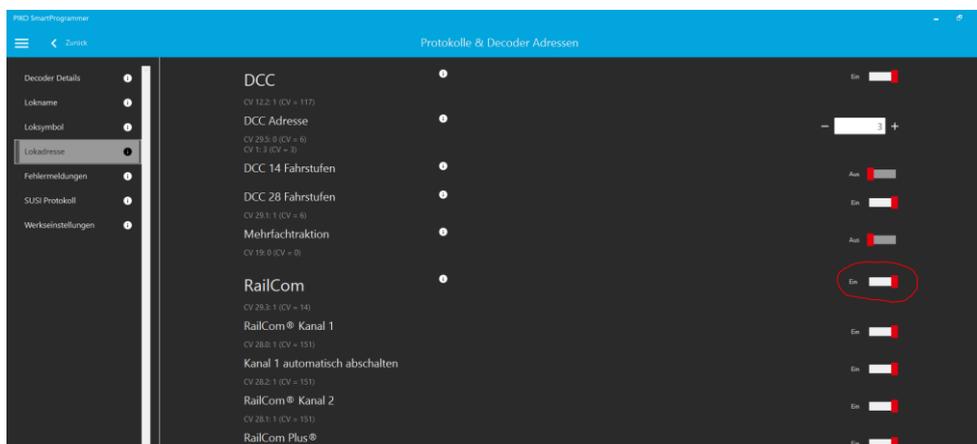


If this bit3 is not set, please click on it and click on "write" in the header. .

Then click on "Back" to return to the main menu and read in the decoder again.

#### Option 2:

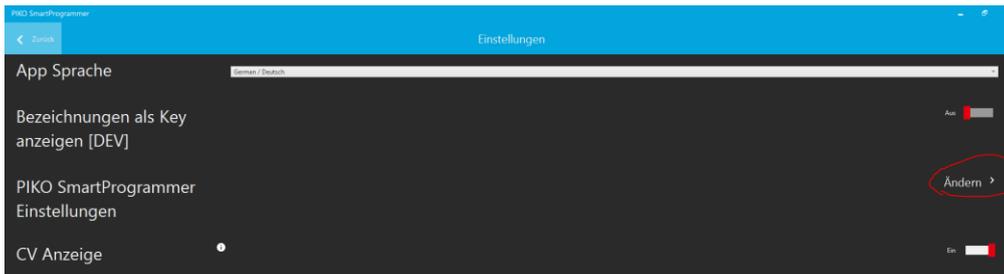
Menu "Program Decoder" -> "Information" -> "Locomotive Address" -> RailCom -> On



Then return to the main menu via "Back" and read in the decoder again..

If RailCom is already activated and the behaviour described as a problem has not changed, then the solution via a "RailCom calibration" can provide a remedy:

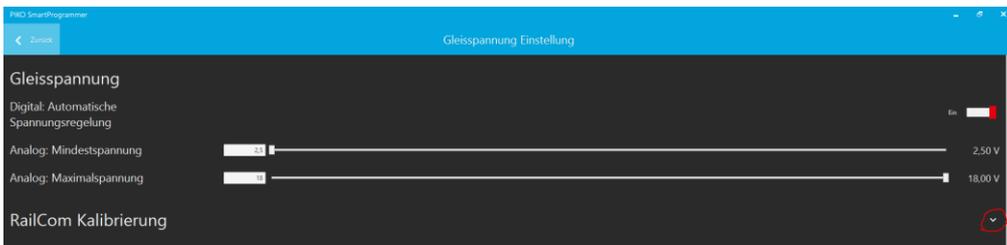
Main menu -> Settings -> PIKO SmartProgrammer settings -> Change



Click on the line of the programmer and select the menu "Voltage" that now appears in the header.

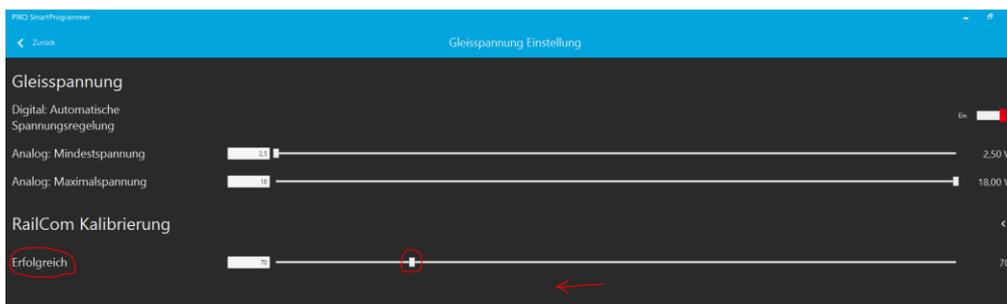


Now open the "RailCom Calibration" and confirm the information about the RailCom-capable decoder with



"Next".

If the term "Failed" appears under "RailCom Calibration" regardless of the position of the slider and the value in the number field, slowly move the slider to the left until "Successful" appears instead of "Failed"..



The value range is between 50 and 150.

Then go back to the main menu via "Back" in the header and read in the decoder again..

## Challenge 2:

A PSD XP 5.1 or 4.1 cannot be read in ("no decoder recognised"), or when attempting to transfer a new project to the decoder, the message "not suitable decoder type recognised" appears, although the decoder suitable for the project is certainly connected.

### Reason:

Something got mixed up in the bootloader area of the decoder processor.

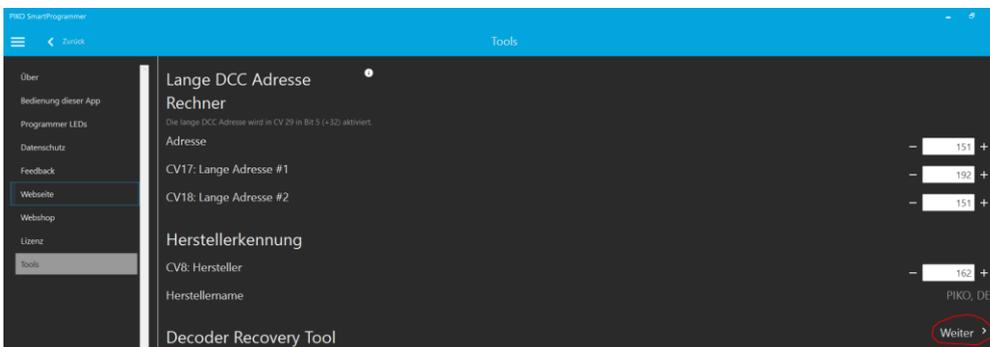
### Solution:

„Decoder Recovery Tool“

In the main menu of the app, select the "Info (i)" icon in the header line



Then "Tools" -> "Decoder Recovery Tool" -> Next



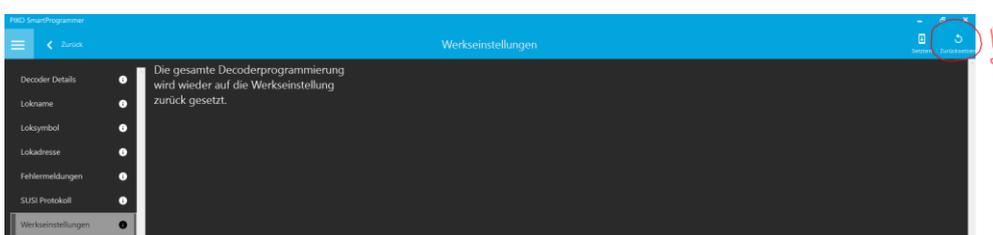
Confirm the note "ATTENTION - Only ....." with OK.

A list of all previously available 4.1 and XP 5.1 decoders and their current firmware version now appears. Now select the corresponding decoder and click on the "Update" symbol..

**ATTENTION:** If the wrong decoder is selected here, it may be irreparably damaged when connected!

PIKO SmartDecoder 4.1 PLUX16 + mfx	35.0.0.0	↓
PIKO SmartDecoder 4.1 PLUX22	35.0.0.0	↓
PIKO SmartDecoder 4.1 PLUX22 + mfx	35.0.0.0	↓
PIKO SmartDecoder 4.1 G	36.0.0.0	↓
PIKO SmartDecoder XP 5.1	1.8.2.0	↓
PIKO SmartDecoder XP 5.1 G	1.7.7.0	↓
#51450 EN 57	2.0.0.0	↓
#97230 Giruno	2.0.0.0	↓

Wait for the following sequence (several small processing windows appear one after the other) until no more extra windows appear (approx. 25s) and the programmer emits a signal tone.



Now via "Back" to the main menu, read in the decoder again and perform a reset.

Program decoder -> Information -> Factory settings -> Reset (NOT "Set").

*Hint:*

The submenu "Set" in the header is used to write possibly changed CV values into the reset area of the decoder for the PIKO SmartDecoder XP 5.1. This overwrites the reset values of the PIKO factory settings with user-defined reset values. If a reset is subsequently carried out on this decoder, these values set by the user are loaded. The values of the PIKO factory settings are then no longer available and can only be restored to the decoder by completely reloading the locomotive project.

2023-05 PIKO, DR