

## **CS3** Softwareupdate V2.5.1



New capabilities, new possibilities

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### *Inhalt*

The update 2.5.1(0) for CS3 and CS3+ (60216, 60226) provides a number of new features that extend and improve the operation of model railroad vehicles and of a model railroad layout. This concerns

- Status information
  - display of a short-circuit status
  - visualization of the mfx registration
- Settings of vehicles and accessories
  - decoder mapping: trigger condition of an action
  - decoder mapping: modified display of triggers and actions
  - input of SUSI values under mfx
  - setting the DCC turn on/turn off behavior of accessories
  - improving registration of mfx locomotives
- Operation of elements
  - turntable
  - new “World of Operation mode” cabs
  - new filter options for listing accessory items
- Track boards
  - double crossover on a track board
- Layout control
  - introducing model time
- Event control
  - sound playback in events
  - turntable in events
  - model time in events
  - starting an event at a defined point in time
  - stopping an event at a defined point in time

A detailed description follows on the next pages.

Furthermore, the entire WEB app has been revised and reworked; it is now based on a new development toolkit. We provide responsive techniques for mobile devices with small screens. The display of track boards has been integrated.

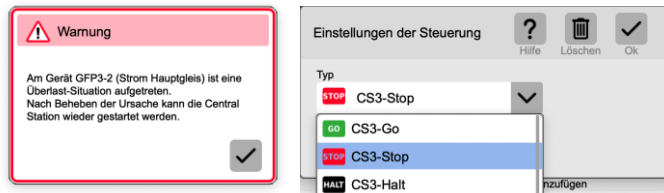
As part of the update, various errors in the CS3/CS3+ operating software have been corrected.

The update contains the locomotive icons of the Märklin/Trix/LGB new items announced until now.

### *Status information*

#### **Display of a short-circuit status**

If an overload situation occurs in the CS3 device environment, a corresponding message with the cause is displayed and the stop button of the CS3 starts to flash. The user can now eliminate the cause of the short. Operation can be resumed by pressing the stop button twice or by an event that sends "GO".



*Error message and possible actions in events*

If you want to react to a short with a special action, you can create a suitable event. This can be placed on the track board, for example, and it triggers the desired action in the event of a short circuit.

#### **Visualization of the mfx registration**

Problems with mfx registration are often due to incorrect mfx discovery. Until now, a user could not recognize this and take appropriate action. Now it is possible to display the discovery status in the stop icon. To do this, logging must be activated in "System/Settings".



If a mfx discovery takes place, a mfx symbol is added to the stop button. This only takes place when the speed controller is completely hidden. The display can be switched off again by deactivating logging.

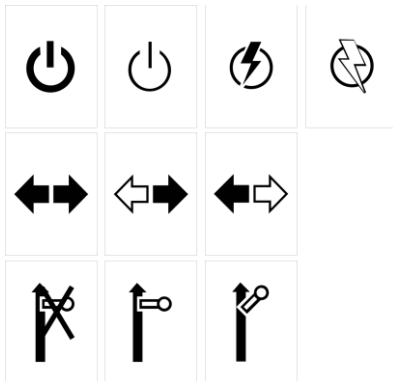
### *Settings of vehicles and accessories*

#### **Decoder mapping: trigger condition of an action**

The trigger condition of an action is displayed graphically in the decoder mapping. It is now obvious for the user which conditions must be fulfilled for an action to be triggered..



*Display of the trigger condition*

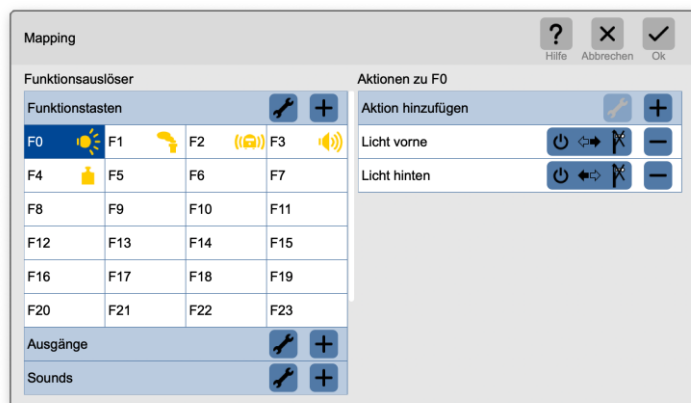


Triggers:

is active/switched on | is inactive/switched off | becomes active | becomes inactive  
both directions | forward only | reverse only  
hold & travel | only hold | only travel

## Decoder mapping: modified display of triggers and actions

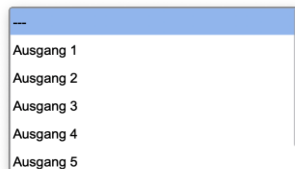
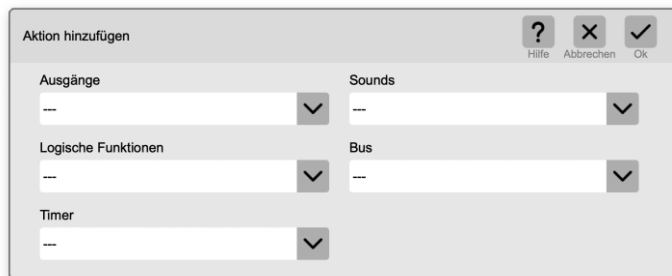
The layout of decoder mapping has been changed to display more informations.



The following has been changed:

1. All settings have been moved to the function triggers page and can now be set there. The old display was particularly confusing when the same setting options could be edited for both the trigger and an action. The menus for setting the properties are unchanged.
2. Adding an action is now grouped under one item and does not require several lines to display.
3. The trigger condition in the trigger chain is now displayed graphically and can be determined immediately. In the previous version, you had to look in the settings menu to see which trigger option was valid here.
4. In a trigger chain, the external actions – activated by other triggers – are displayed.

When an action is added, a new dialog is offered with all just now available actions.



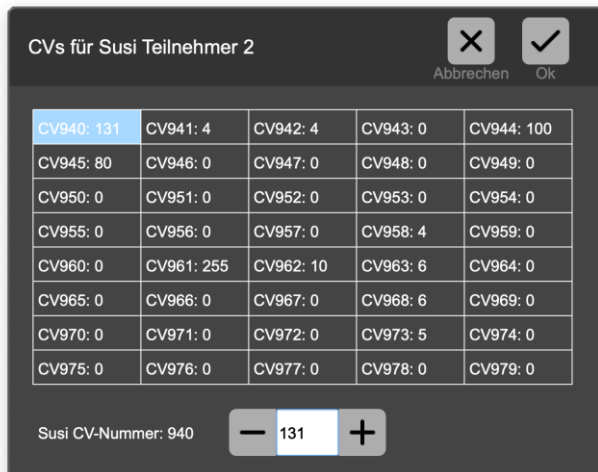
The "Front light" and "Rear light" outputs are already inserted in the mapping. These can no longer be added.



Representation of a complex mapping. The information is spread over two pages. The function activates "And 11". "And 11" activates "Output 2" and "Front light". "Front light" in turn has the other triggers F26 and "And 13". F26 and "And 13" are new in this display and extend the understanding of when an action is triggered. It is now possible to see when and how these triggers work. The trigger conditions are only shown in the direct trigger chain.

### Input of SUSI values under mfx

A separate input dialog has been created for SUSI values under mfx. It allows to input a single value.



A variable can be selected in the matrix; its value is changed by using the input field in the bottom of the dialogue.

### Setting the DCC turn on/turn off behavior of accessories

If using extended events, the turn off command is omitted for DCC accessories. This allows DCC items to be switched more quickly. According to standard, a turn off command is not necessary for DCC accessory decoders and does not have to be sent. (However, there is a version of the Märklin DCC single turnout decoder (74461 with SW version 0.3.0.0) that requires the turn off command. This can be determined either from the switching errors of these decoders or by reading CV #7. If there is a 3, then the turn off command must be sent.)

### Improving registration of mfx locomotives

The CS3 process that handles the mfx registration of mfx-capable decoders has been improved.

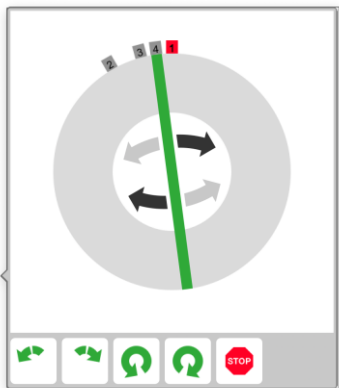
- A known memory position in the decoder is assumed and used when reading the values required for registration, If the position of the values is not correct, the system falls back to the previous procedure.
- Once a decoder has been registered, the search for further decoders is triggered immediately. This eliminates the waiting time until the next decoder is started.
- After a restore, as in the previous versions, a bind to the new mfx environment is sent for all existing locomotives. Depending on the number of locomotives, this may take some time. If an attempt is made to edit an mfx locomotive during the process, a progress bar appears instead.
- It was very difficult to access the mfx editing dialog during a running discovery process. The blocking times have been adjusted.

### *Operation of elements*

#### **Turntable**

When operating the turntable, it is not possible to follow the control house. This is due to the fact that the platform is controlled with half of the possible outputs. Accordingly, the position of the operators house is not known; it can be either on one side or the other. It is therefore not possible to reliably track or instruct the operators house where to move.

To ensure that the arrows for selecting the direction of rotation are not confused with the position of the control box, the arrows have been drawn on all four sides and made clickable.



To make it easier to operate the direction of rotation, turning commands for the platform are only permitted in the gray circle. To make it easier to touch the tracks directly, the touch sensible area of the tracks has been slightly enlarged.

#### **New “World of Operation mode” cabs**

The cab for the SBB Ae 3/6 has been added.

The cab for the ET 85 has been added.

The cab for the SJ RC6 has been added.

The cab for the NS Reihe 1600/1700, SNCF BB7200 BB22000 has been added.

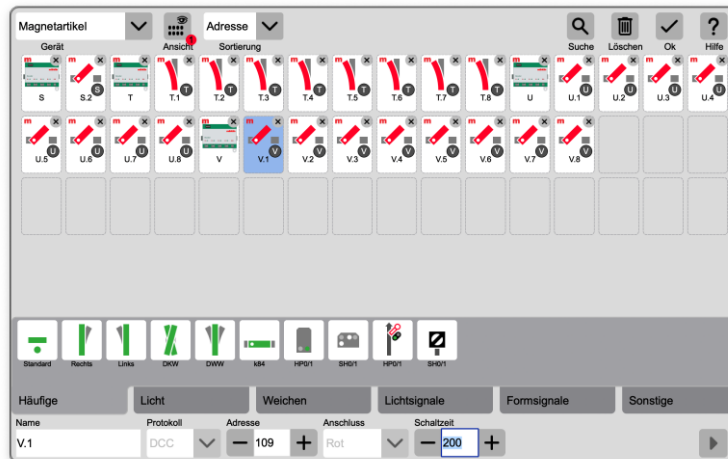
The cab for the SBB RABe 501 Giruno has been added.

#### **New filter options for listing accessory items**

A new filter "New mfx" has been added to the configuration dialog for accessory items. If this filter is active, only newly found mfx items are displayed. These new items can now be configured as the using case requires.



### Setting the new filter



### Filtered list view.

If an article is new, the associated basic multichannel decoder is also displayed. By definition, new mfx items are items that have been found and have not yet been switched.

## Track boards

### Double crossover on a track board

The double crossover is now drawn scaled in the selected grid. The connections are now aligned in the horizontal grid.

## Layout control

### Introducing model time

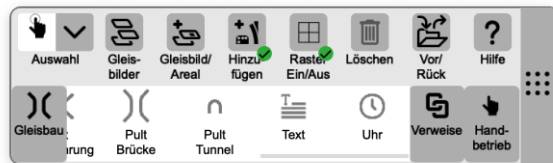
The Central Station can now display a model time. The clock can be inserted as a display element in the track diagram. The model time factor can be set in the settings.

If the model time is deactivated, the clock displays the real time. The CS3 must be connected to the Internet to receive the correct time settings. The CS3 has a real-time clock built in, their buffer lasts for approx. 2 months without power supply. Once a clock has been set, it does not require a permanent internet connection.



If a model time is activated, it is continued by “Go” and stopped by any other status (Stop, Halt, ...). The real time is not stopped.

The model time of external devices like CS3, MS2 are synchronized by the main device. The CAN command for synchronizing connected CS2 is also sent.

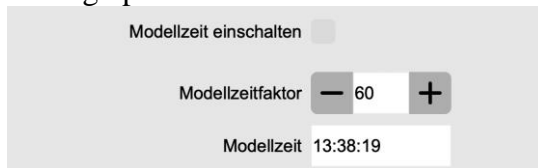


*Inserting a model time clock..*



*Displaying a clock in the control panel and on the track board*

Setting up the model time



*Setting parameters for the model time. The settings can be found under System->Settings->CS3->Track: Protocols and operation*

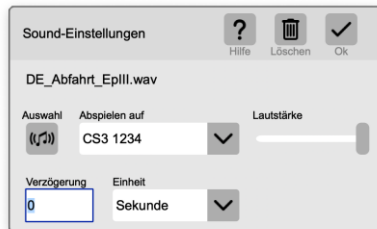
The setting of the factor is analogous to CS2: The set real time seconds correspond to 60 model seconds. If 30 is set, the model time runs twice as fast.

- Event control
  - sound playback in events
  - turntable in events
  - starting an event at a defined point in time
  - stopping an event at a defined point in time

### *Event control*

#### **Sound playback in events**

In the properties of a sound element in events, the playback volume can now be set in addition to the playback source. This means that each sound can be played at a dedicated volume..

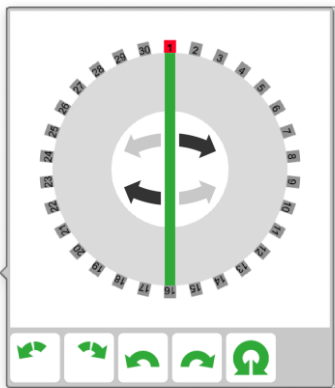


#### *Properties of a sound event element*

You can select the sound file and the playback destination (all CS3, not possible with CS2); the volume can also be defined.

#### **Turntable in events**

New icons have been introduced in the events area to better illustrate the functionality of the turntable. In events, the direction of rotation, the step left, the step right and the turn with a preselected direction of rotation can be chosen. The icon for a 180° turn left and a 180° turn right has been added.



The meaning of the icons from left to right:  
rotation left, rotation right, step left, step right, 180° rotation. An individual track can be targeted by selecting the exit track.

#### **Model time in events**

The model time can be used in events in two ways. Firstly, events can be triggered at a start time and secondly, an event can be delayed until a defined time.

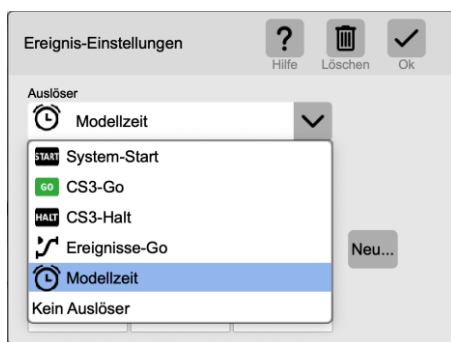
Times set in events are always model times. These times are checked against the central model time and triggered accordingly. If the model time factor is changed, the times in the event system are adjusted accordingly; now triggering is faster or slower.

If "absolute time" is selected in the central unit, the internal clock continues to run even when "Stop" is selected. This means that events are not triggered when "Stop" is selected, even if they are to run at the current time.

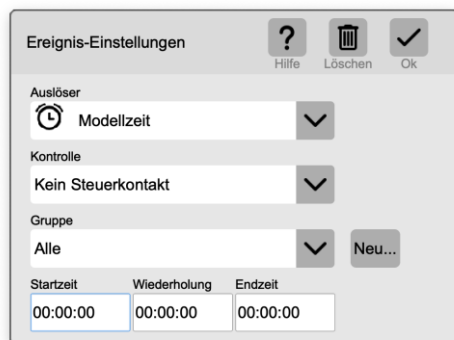
### Starting an event at a defined point in time

An event can be started at a specific time and then repeated regularly. The repetition can be stopped at a further point in time.

To execute an event at a specific time, the "model time" option must be set as a trigger in the start element of the event.



If the model time trigger is set, the input fields for start time, repetition and end time become active and can be set as required.



The **start time** determines the model time at which the event is triggered. If repetition and end time are set to 00:00:00 – i.e. not set – the event is executed once at this time.

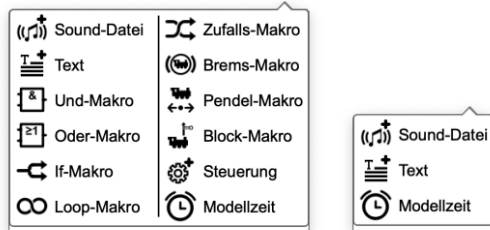
If a **repetition** is set, the event is started periodically beginning at the start time with the noted period.

If an **end time** is set, the repetition is ended at the end time. It does not make sense to set an end time without defining a repetition. The event always runs from the start time to the end time. If an event is not to end, an end time must be entered that is one second less than the start time (e.g. start at 00:00:00 and end at 23:59:59).

The trigger times are based on the global model time parameters of CS3. If the model time is accelerated, the events are triggered correspondingly more often. Please note that an event can only run once. The running time of the event must be shorter than the repetition time.

### Stopping an event at a defined point in time

The execution of an event can be paused up to a defined model time. A "Model time" macro element must be inserted under "Add" for this purpose.

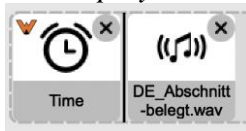


The model time macro is available in both normal and extended event mode.

The processing of the event stops until the specified time.



*The display is like this:*



The event is delayed until the time noted in the time element and then processed further.