

From the track-on search to the vehicle registration

The **“track-on search”** is a procedure developed for the ZIMO system and decoders to be able to determine a loco address on the layout, which is unknown or new: the vehicle is lifted from the tracks for about 2 seconds ^{*)} (i.e. disconnected from the current); then the procedure is started on the cab (press A, TP), whereafter the address, and (if already known) also the name of the loco are shown on the display. This usually works within a few seconds and is also possible for more than one vehicle (address).

^{*)} this lifting up is the reason for the preliminary, now obsolete – tilt-search, which then was changed because of the standardization by VHDM “RailCommunity” (European equivalent to NMRA WG tech) to track-on search.



The display-picture of the MX32 shows the results of the track-on search: in this case, the address 2044 was found, which obviously was registered in the MX10 as Bay Mallet; the track-on search nevertheless also works for new addresses. In the field beneath further addresses are listed (mixed: new ones and also known ones), which were „tilted” in the same period of time (1 minute after starting the search).

For real applications more than one addresses are untypical, in this case only for demonstration purposes.

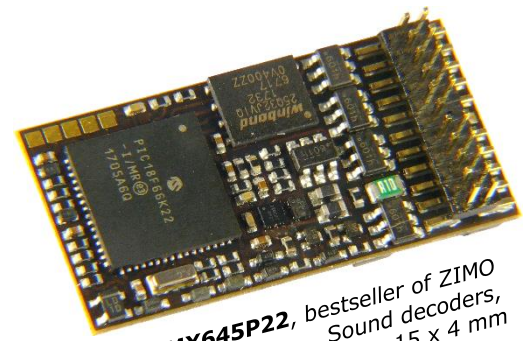
The **track-on search** in the current version is a very useful feature of ZIMO’s control technique, which – if wanted – can be taken over by other manufacturers (therefore the registration at VHDM). At the same time it is the **first step to a comprehensive registration solution**.

If the vehicles to search are not – as until now – tilted and rerailed during operation, but the search is started immediately after starting the layout, all addresses are shown in the track-on list, and can be registered individually or altogether. Although, for a **real vehicle registration, two important steps** have to be taken first:

- Solving address conflicts; typically all new vehicles have address „3”; those (and all other addresses that appear more than once) have to be separated (with the help of the decoder ID which is unique worldwide) and given new addresses, either automatically or by manually typing it into the controller.
- Loading the „GUI” (= Graphical User Interface, i.e. name, picture, function symbol, etc.) from the decoder into the system.

Future Software updates for decoders and the system will contain corresponding add-ons.

ZIMO decoders contain a number of features... and they are constantly amplified and made available by updates for decoders of the corresponding classes. The new software versions usually are described on the software-update page on the website. Sometimes, features are developed "secretly" (i.e. available in the software but not made public), for example projects with our sound providers. Such secrets are not because of company policies, but usually, because those features are not usable for everyone and not yet described. Such a case are the...



MX645P22, bestseller of ZIMO Sound decoders, 30 x 15 x 4 mm

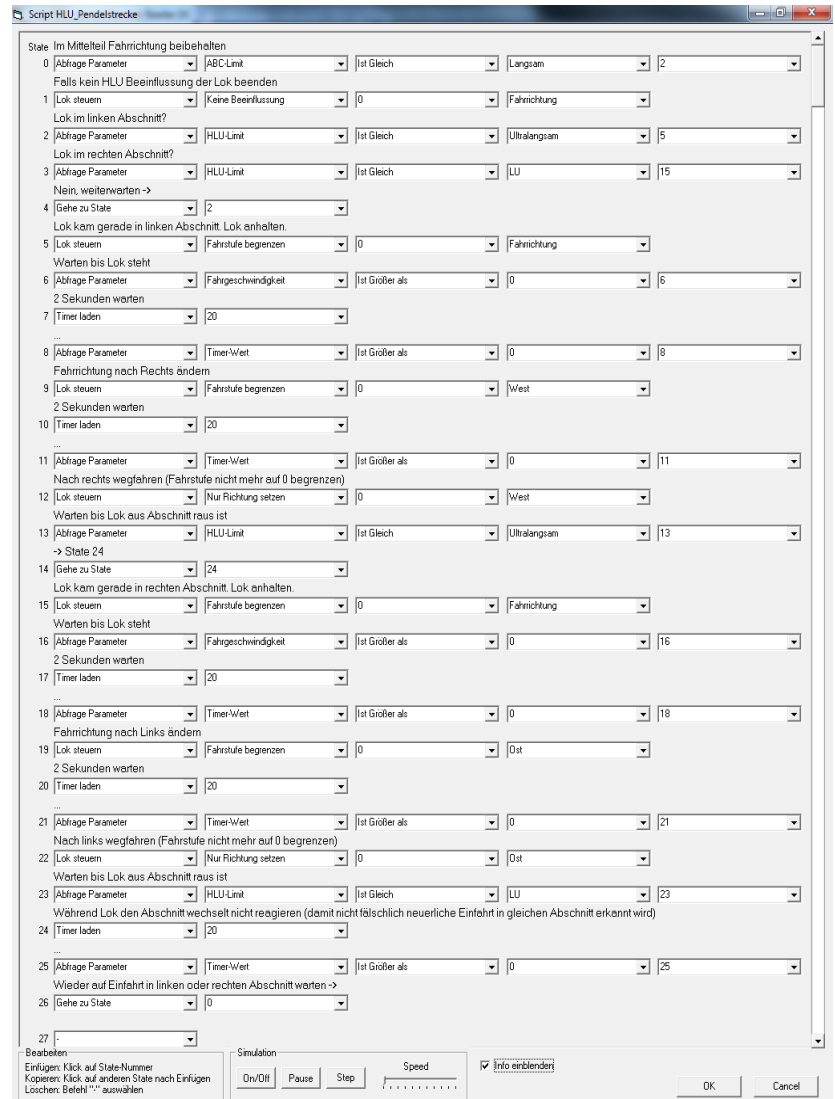
Scripts in sound decoders

This tool for decoder configuration is even more powerful than CVs. Currently, it is not programmed directly on the main track (PoM), but **exclusively part of sound projects**. The "ZIMO Sound Programmer" ZSP contains an editor for scripts.

ZIMO decoder scripts can also be used "un-typically" for automatic operation sequence (shutteling, ...), like the application described in the following, the G-gauge demonstration track on the ZIMO booth on the **NMRA Train Show 2018, Kansas City**.

Generally it is a shuttle-track, on which a loco (American small gauge or G9 diesel loco) drives forward or backwards. The automatic operation sequence defined velocity and changes of direction, as sound (whistles, horn, bells, blow-off, etc.) and light effects (Mars, Ditch, etc).

As trigger points (especially for the change of direction) the ZIMO HLU system is used. This means: the demonstration track is divided into three insulated track sections, of which everyone was set with an HLU limit. This is done via track outputs of a StEin module with the help of the object parameter HLUFIX, which allows setting fixed HLU limits, different to the normal StEin control from the computer (interlocking).



A bigger script application is prepared for the **autumn exhibitions 2018 in Leipzig and Köln**. In this case it is about a 7m long gauge G wall track, with a three-rail terminal station and a two-rail track. In this case, a combination of scripts in the MX10 and in the decoders of the corresponding locos is used.



Endabschnitte von MX10 Script geschaltet zwischen "H" und "U"

Weichenabschnitte fix "LU"

Langabschnitte fix "FL"

Endabschnitt hinten fix "UH"

The automatic operation sequence moves the three locos from the terminal track sections to the tracks – the script in the MX10 controls the switches and starts the movement of one loco with the speed limit "U" (=slow driving) instead of "H" (= Halt) on the corresponding track. The scripts in the decoders control the movement itself: sound and light effects and change of direction.