

## Data-driven model railway control and its tools

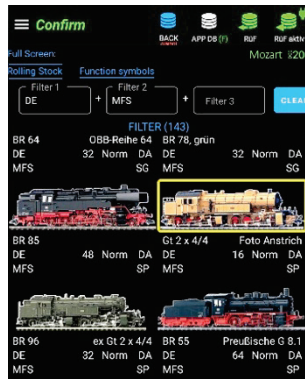
In the ZIMO context, "libraries" are understood to be data collections provided by ZIMO itself (or possibly by business partners) and continuously updated with additional entries (locomotive images, function symbols, etc., including labels and search criteria). The latest versions of the libraries are loaded into the ZIMO control devices, i.e. control panels, ZIMO app, and programmes such as ZSP or ZCS.

To be distinguished from the libraries (according to ZIMO "language rules") are "databases" that contain user-generated lists in the system and control devices, such as the SYS DB (F) – the system-wide database of directly activatable vehicles. These, in turn, have mostly images and symbols from libraries such as 'Rolling stock' and 'Function symbols' assigned to them.

Display of a scrollable and filterable section of the **rolling stock library** in the ZIMO app, i.e. images/photos together with information about the respective vehicle. The appropriate image is selected by filtering and scrolling and assigned to the active address (in this example, "Mozart", address 200). This is done for the app itself and automatically for the ZIMO control panels as well (same images, different file formats).



▶ The function symbols are assigned to the Fu keys from the **Function symbol library**; in addition to marking for direct entry to the active address, there are also simplifications such as copying assignments between vehicles, as well as extensions of the function symbols to time, controller or theme keys.



In addition to the libraries already mentioned above, the following are planned or scheduled for the future; for reasons of clarity, the libraries generally have English names, but are multilingual within.

**ZIMO Accessory parts library:** Points, signals; graphics for positions and aspects

**ZIMO Configuration library:** CV names, value ranges & defaults, descriptions

**ZIMO Decoder type library:** Decoder types with properties (ev. also third-party decoders)

**ZIMO Signal box elements library:** Signal box fields for system-internal displays

The following pages **of this newsletter** do not (yet) deal with the libraries, but with the configuration of decoders, i.e. sound projects, and in some cases also GUIs for control devices, using the tools

**ZIMO Sound Editor** and **ZIMO CV Setting (ZCS)**

BTW: the "ZIMO Sound Database" on the ZIMO website is actually also a library according to this scheme, but will probably not be renamed for traditional reasons.

### ZIMO will also be represented at many trade fairs in 2026:

- **Meursault** (F) 13 & 14 Dec. 2025
- **Vienna Liesing** 13–15 March 2026
- **Gießen** 21 & 22 March 2026
- **Dortmund** 16–19 April 2026
- **Chiemsee** 22–25 May 2026
- **Leipzig** 2–4 October 2026
- **Tulln** 16–18 October 2026

More info at [zimo.at/events](https://zimo.at/events)

## Editorial

ZIMO is very successful as a decoder manufacturer in the 2020s (up to 40% annual growth – not every time, but in one case ...).

Unfortunately, the second important business area – system development – has fallen somewhat behind.

This is now changing: the focus of development is shifting back to **system components**, or rather, has already begun in the background. Much of the software for the components (base unit, control panels, StEin modules) is being rewritten, and the official release of the ZIMO app is coming soon. As is well known, the **control panel radio** is a particularly urgent matter.

The control devices (control panels, MX32/33, ZIMO app) not only require software, but also **images** and **symbols** for the GUIs (graphical user interfaces), along with supplementary information: these are now being compiled in the **newly created "libraries"**.

ZIMO provides users with high-quality photos and graphics in its own libraries, which also include extensive information on the respective object; for example, for vehicles (in the "Rolling stock library"), data such as series, variant, "common name" (Taurus, Vectron, etc.), country, operator, era, etc.

Users have the option of adding their own "creations" to **personal libraries**, e.g. a private "Rolling Stock Library". A platform for exchange between users is planned.

For more information on ZIMO libraries, see left

## Open Day 2025

Friday, 14 November 2025, 2 - 5 p.m.

- Presentation of **new products & projects** (Peter Ziegler, 3 p.m.)
- Lecture on **sound in general/advanced sound mapping/KLUG** (Alexander Mayer, 4 p.m., 5 p.m. if required)
- **Guided tours of the building.** Please register in advance!  
By telephone +43/ 1 /81 31 007-0, or by email: [office@zimo.at](mailto:office@zimo.at)

1120 Vienna, Schönbrunner Str. 188, reception on the 2nd floor

For many years, ZIMO has been providing users with free software for creating their own sound projects and editing finished sound projects, most of which are obtained from the ZIMO sound database: **"ZIMO Sound Creator"** (known as "ZSP" until the end of 2025) and the **"ZIMO Sound Editor"** (part of "ZSP" until the end of 2025).

Extensive enhancements and simplifications have been made over the past few years, and this will continue in 2026. Video workshops on these topics are also planned (unfortunately suspended for some time...).

The following section presents the programmes mentioned above as well as the alternative (privately initiated) **ZCS - ZIMO CV-Setting** and explains their respective areas of application.

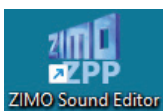
## ZIMO Sound Creator (still known as "ZSP" in 2025) ...

... is used to create **new sound projects**, mostly by professional sound designers (ZIMO employees and ZIMO partners) or advanced users. ZIMO also uses the "Creator" for projects that are made available in the **ZIMO Sound Database** as .zpp files, as well as for commissioned work for model vehicle manufacturers.



The "Creator" is not the subject of this newsletter because it is aimed at ZIMO users who have no ambitions to create completely independent projects. However, "Creator" and "Editor" have similarities in terms of code base, display and operation. The main difference lies in the process windows for driving sounds, which are reserved for the "Creator".

## ZIMO Sound Editor (still "ZPP-Konfig" within ZSP in 2025) ...

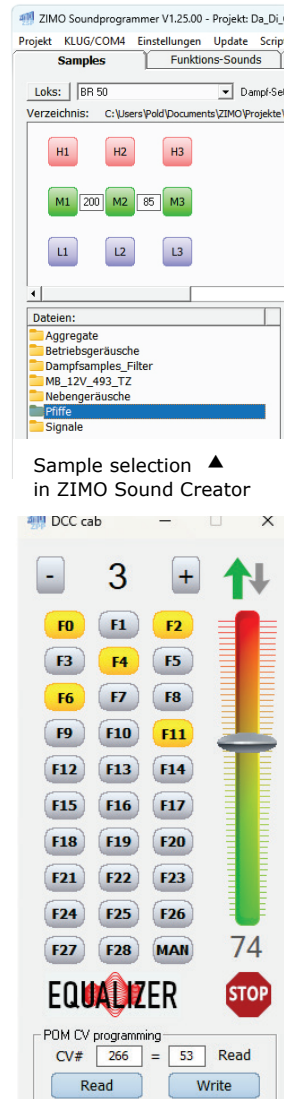


... is used to edit **ZIMO Sound projects** that are downloaded from the **ZIMO Sound Database** as .zpp files. First, the "Editor" is part of the ZSP Container, which is downloaded and installed from the ZIMO website. Afterwards, the icon for ZIMO Sound Editor (or "ZPP-Konfig") is available on the desktop.

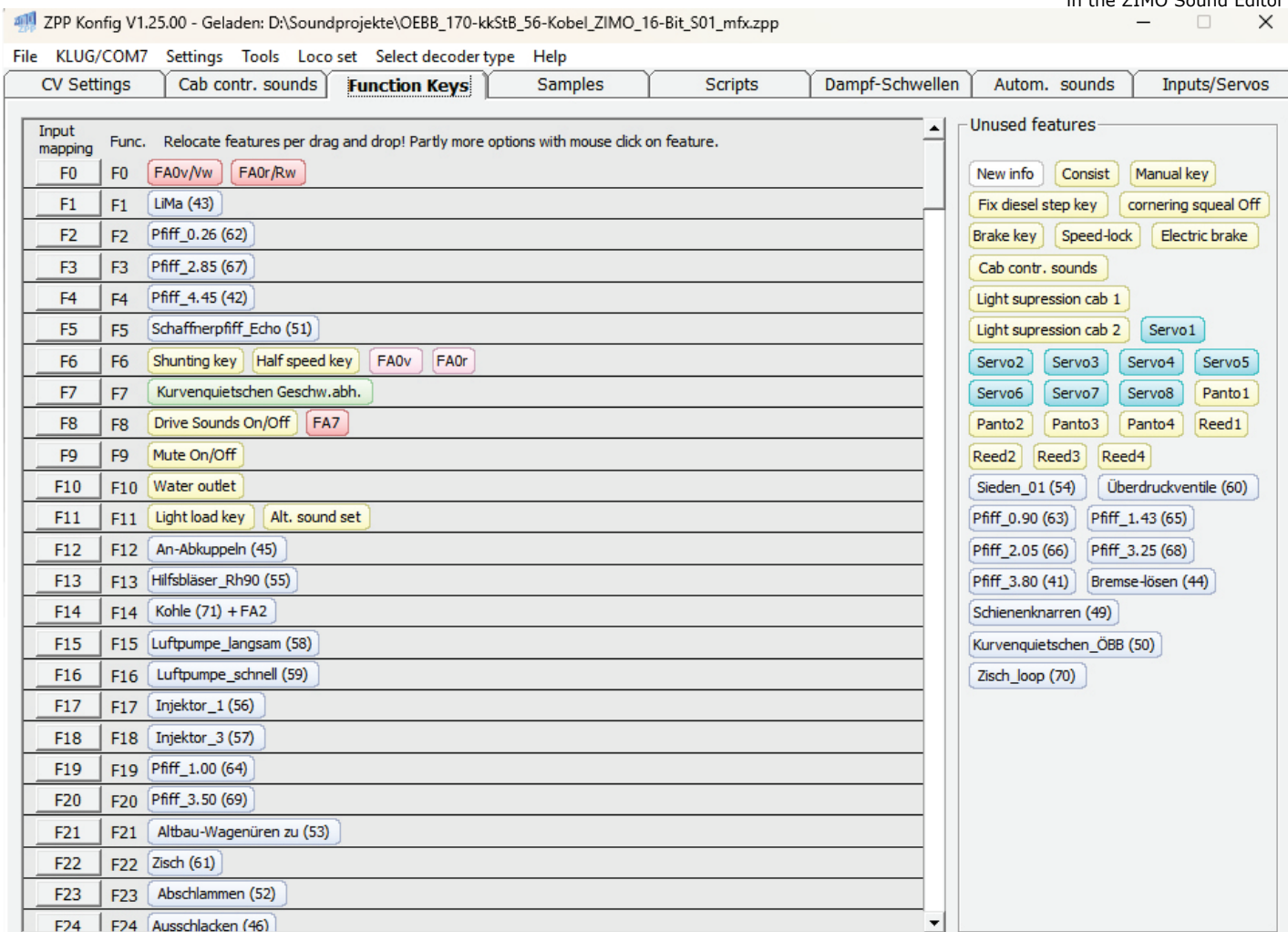
Many model railway enthusiasts want to customise function key assignments, driving settings, etc. to suit their personal ideas; this is exactly what the **ZIMO Sound Editor** allows you to do.

This applies to both free ZIMO sound projects and paid sound projects protected by download codes, all of which can be edited in the same way. The **intelligent moving of function keys** is particularly practical: sounds can be dragged and dropped onto other keys.

Model railway enthusiasts' creativity is supported by the option of adding **their own sounds** (mono, 16-bit, 22 or 44 kHz) to an existing 16-bit sound project.



The virtual DCC cab ▲ in the ZIMO Sound Editor



However, the modified function key assignment is only one of the many possibilities offered by the ZIMO Sound Editor. The increasingly popular **scripts** can also be modified, and it is possible to add your own scripts.

Add sample from file (.wav) Used Memory: 10015 / 16384 kB  
Anzahl Samples: 63 / 255

CV Settings	Cab contr. sounds	Function Keys	Samples	<b>Scripts</b>	Diesel-Schwellen	Autom. sounds	Inputs/Servos																																				
<div style="display: flex; justify-content: space-around;"> <span>Add</span> <span>Import from file</span> <span>Export to file</span> </div> <table border="1"> <thead> <tr> <th>Active</th> <th>Name</th> <th>Keys</th> <th>Outputs</th> <th>CVs</th> <th>Sounds</th> </tr> </thead> <tbody> <tr> <td><input checked="" type="checkbox"/></td> <td>wheel flange</td> <td>F23</td> <td></td> <td></td> <td>Spurkranz (28)</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>fan</td> <td>F16</td> <td></td> <td>980,981</td> <td></td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>emergency break</td> <td></td> <td></td> <td>983</td> <td>OeBB_1043_SiFa-Piep_01 (39)</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>tachometer</td> <td>F22</td> <td></td> <td>984</td> <td>Tic_Tic_bearbeitet (41)</td> </tr> <tr style="background-color: #e0e0e0;"> <td><input checked="" type="checkbox"/></td> <td>air</td> <td>F19</td> <td></td> <td>982,991</td> <td>OeBB_1043_Zisch_01 (40)</td> </tr> </tbody> </table>								Active	Name	Keys	Outputs	CVs	Sounds	<input checked="" type="checkbox"/>	wheel flange	F23			Spurkranz (28)	<input checked="" type="checkbox"/>	fan	F16		980,981		<input checked="" type="checkbox"/>	emergency break			983	OeBB_1043_SiFa-Piep_01 (39)	<input checked="" type="checkbox"/>	tachometer	F22		984	Tic_Tic_bearbeitet (41)	<input checked="" type="checkbox"/>	air	F19		982,991	OeBB_1043_Zisch_01 (40)
Active	Name	Keys	Outputs	CVs	Sounds																																						
<input checked="" type="checkbox"/>	wheel flange	F23			Spurkranz (28)																																						
<input checked="" type="checkbox"/>	fan	F16		980,981																																							
<input checked="" type="checkbox"/>	emergency break			983	OeBB_1043_SiFa-Piep_01 (39)																																						
<input checked="" type="checkbox"/>	tachometer	F22		984	Tic_Tic_bearbeitet (41)																																						
<input checked="" type="checkbox"/>	air	F19		982,991	OeBB_1043_Zisch_01 (40)																																						

Audio filters for individual sound ▲ Changes are immediately audible.

◀ ZIMO sound decoders contain **audio filters** that can be used to customise the sound. The filters can be activated live and listened to in preview mode.

The "Editor" supports **load codes** for encrypted sound projects: The serial number (ID) of a decoder can be read out by pressing two buttons, and then the **load code** is entered. See also the new **ZIMO Load Code Shop** at [www.zimo.at/shop](http://www.zimo.at/shop).

Reading out the decoder serial number ▲ and easy programming of a loading code

Of course, the programme offers ▶ the option of **reading** and **writing** all **CVs** from the decoder (i.e. CV programming).

A **sound project adapted** with the "ZIMO Sound Editor" is saved under a new name and loaded into a ZIMO sound decoder. As with readymade sound projects (which come directly from the sound database), this is done using one of the **ZIMO update and sound loading devices**, i.e. **MXULF** or **ZIMO KLUG**.

A sound project can be loaded either via the track (the decoder remains in the vehicle) or by plugging the decoder into the interfaces (PluX, MTC, Next, etc.) of the ZIMO KLUG or into an MSTAP board that can be connected to MXULF with these (and even more) interfaces.

MXULF can be used either **offline** (sound project via USB stick) or **online** on a computer, while ZIMO KLUG can only be used online.

The "ZIMO Sound Editor" is also responsible for performing decoder software updates, also via MXULF or ZIMO KLUG. ZIMO usually offers new software versions for all decoders several times a year.

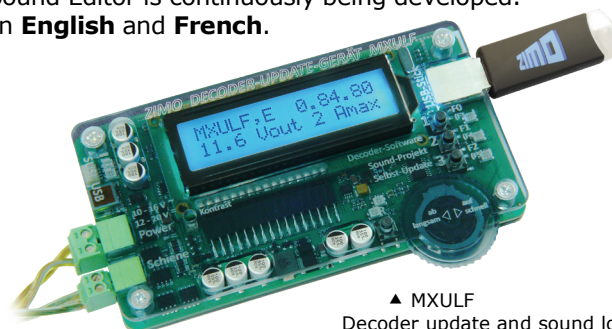
The decoder with new software and the sound project can be tested directly in the "Editor" with the **virtual control panel** (i.e. still supplied by the sound loading device), or of course on the digital system, possibly with the help of the **ZCS - ZIMO CV Setting**, which allows convenient real-time modifications.

The "ZIMO Sound Editor" is the central tool for editing and customising **ZIMO sound projects** and loading them into the decoders. In addition, it offers numerous practical functions that make working with ZIMO decoders even more convenient.

Like all ZIMO products, the Sound Editor is continuously being developed. It is currently also available in **English** and **French**.



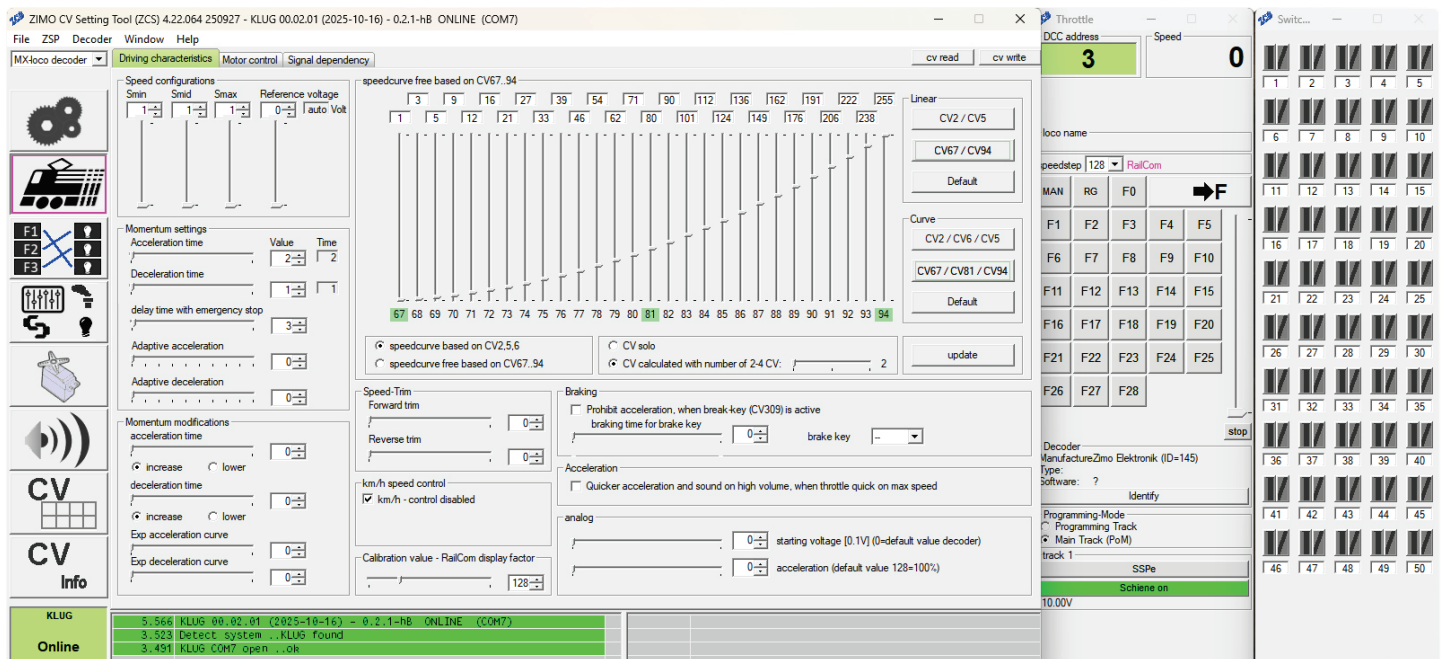
▲ ZIMO KLUG Compact sound loading and decoder update device with integrated interfaces



▲ MXULF Decoder update and sound loading device

# ZCS – ZIMO CV Setting

The "ZCS (ZIMO CV Setting)" software was created in 2010 as a private initiative by Oliver Zoffi. In 2014, Matthias Manhart took over the further development of ZCS, which is still available free of charge today, on a private basis.



ZCS facilitates the programming of ZIMO decoders, in particular the reading and writing of CVs and sound projects (.zpp / .zpr). With the growing range of functions offered by the decoders, ZCS has also been continuously expanded.

The programme can be used **offline** or **online**. In online mode, ZCS supports various programming devices and control centres. Changes to the CVs are written directly to the decoder – either via the **programming track** or via **PoM** (Programming-on-the-Main, i.e. on the main track) **via RailCom**.

ZCS enables the complete **documentation** of a sound project: images of the locomotive can be stored and function outputs or inputs can be described with text. If a sound project file is missing, all CVs can be read from the decoder, saved and reloaded if necessary. If a file is available, it can be edited in ZCS (CVs and texts) and then loaded into the decoder using **"ZIMO Sound Editor"** or directly via **MXULF** or **ZIMO KLUG**.

ZCS displays the meaning of each CV in German and English and automatically calculates the correct values. Switching between pages on newer decoder generations is fully automatic.

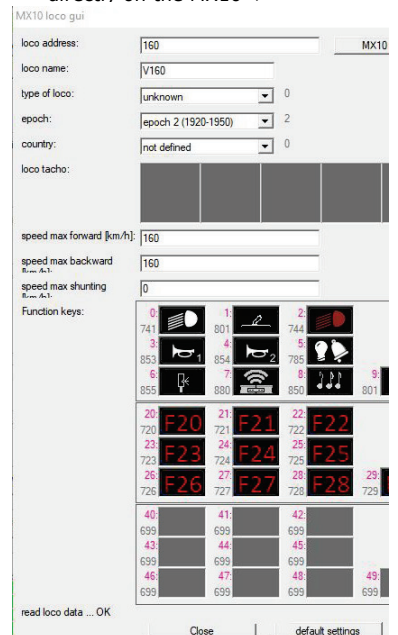
With **the control panel** and **switch panel**, settings can be tested immediately and adjusted live in PoM mode – including direct observation of the effect.

### Support for the ZIMO MX10 control centre:

ZCS offers a range of special functions for the **ZIMO MX10 control centre**: locomotive lists with images and data can be easily edited, and all MX10 parameters can be displayed and adjusted directly on the screen. A practical **backup/restore function** provides additional security. In addition, **import and export functions** enable **CV values** to be easily exchanged with other programmes.

ZCS driving characteristics Window ▲  
Also shown: Controller and turnouts

GUI customisation  
directly on the MX10 ▼



## ZIMO Load Code Shop

At [www.zimo.at/shop](http://www.zimo.at/shop), you can

*buy and generate  
load codes online*



*around the clock and from anywhere  
– as a retailer or private individual*

New to the ZIMO team



Tomoya Hagen  
Software Development



Stanzin Lhadol  
AOI inspection