



The components of the ZIMO system have undergone extensive optimisation, both in terms of hardware and, above all, software. Most importantly:

- Switch to **Wi-Fi technology** for wireless communication between the MX10 and MX10EC digital centres and the MX33 and MX32 controllers, with the option to extend the connection directly to the vehicles, whereby:

The **MX10** and **MX10EC** command stations require no hardware modifications; the existing LAN interfaces are connected to a router or a home network. A suitable router is also available from ZIMO; one is included with new starter sets.

The **MX33FU** controllers have been designed from the outset to allow for a simple conversion from MiWi (the previous radio technology) to Wi-Fi (short for WLAN); once converted, or as new units, they are designated **MX33WL**: all that is required is to desolder the old radio chip and solder in the new one; this is a quick (and inexpensive) job for the ZIMO repairs department.

The process is slightly more involved for the **MX32FU** controllers, as this conversion was not anticipated during their production; in these cases, the 'radio circuit board' must be replaced to convert them to an 'MX32WL'.

- The **ZIMO app** for smartphones and tablets is now an integral part of the ZIMO system – the controllers are primarily suited to tactile operation (sliders, buttons, etc.), whilst the app is designed for tasks where the display of extensive information on a large screen is important.
- The new '**Signal-StEin**' is derived from the 'big StEin' and is currently under development; in other words, it adopts the latter's hardware and software technology for signals, but does not have track section outputs.
- The 'Signal-Stein', just like the signal section in the 'big StEin', works closely with the ZIMO app: the current StEin configurations for each signal type, including definitions of the signal aspects for various signalling systems, form the app's '**Signal Template Library**', where the layout signals are made functional by assigning templates.

Offers for upgrading existing MX32FU and MX33FU controllers coming soon!

Editorial

Over the past 12 months, the 'Decoder' division has seen a steady stream of new models and tools (such as 'KLUG', Sound Creator and Sound Editor) coming onto the market.

In the 'System' division, however – at least from an external perspective – there has been a creative hiatus. The switch from radio technology (see left) to Wi-Fi, the introduction of the libraries and preparations for ETCS have taken up a great deal of resources.

From now on, ZIMO can once again pursue a more 'proactive' public relations strategy: several tutorials are planned, and the video workshops, introduced a few years ago but unfortunately since 'fallen by the wayside', will be resumed.

ZIMO's core strategy for system development remains the same: rather than superficial simplicity and interchangeability with everything, the focus is on:

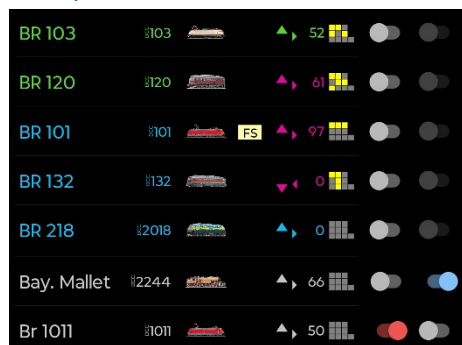
Features that are unique, with an eye to the future of technology that of the railway itself. This newsletter does not yet cover everything we are working on – the next one will be out sooner.

Peter W. Ziegler

Below is a brief summary of the features of the ZIMO controllers (ZIMO MX33 controllers and the ZIMO app); specifically, those that offer a fundamental difference (... and hopefully a major advantage) compared to the mainstream, i.e. the standard products from competitors.

However, this list does not repeat the 'HIGHLIGHTS' and 'SPECIALS' already described in the ZIMO folder, from the September 2026 issue onwards.

The system-wide vehicle database



Screenshot (excerpt) from the ZIMO app: SYS DB (V)

A comprehensive overview, even when dealing with a large number of objects on the layout (here: locomotives).

Each row contains a wealth of information, including name, address, a mini locomotive image, speed, directions, RailCom feedback status and a mini panel of functions – all of which can be toggled on or off even in database view.

In the case of the ZIMO app, system-wide deletions of database entries are also initiated from here (red sliders).

The device-specific database



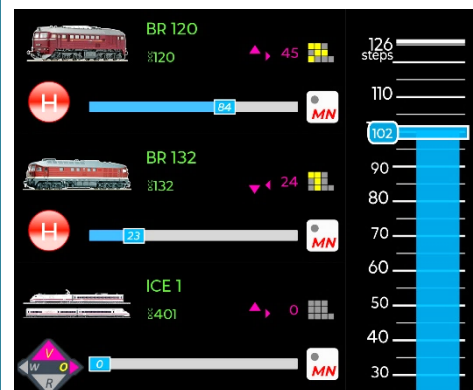
Screenshot (detail) from the MX33 controller: CAB DB (V) with a denser row layout than in the app; selection via scroll wheel, not touch.

List of vehicles for which your own controller or app serves as the primary device; depending on the application, either an extract from SYS DB (without grey rows), see left, or identical to SYS DB; particularly if this is the only device available.

Additional information such as the track section where the vehicle is located or the decoder UID can be displayed here.

It is possible to operate the model railway whilst managing the database; hence the display of the speed control bar on the right-hand side of the screen.

LoR and LoR-active for favourites



Screenshot (detail) from the ZIMO app: LoR active with 3 controls.

"LoR" is the traditional ZIMO term for the favourites list; it stands for "Retrieving an address of the **Loco**" to the foreground and is available on all ZIMO control units.

Within the ZIMO app, "LoR active" also enables the simultaneous control of several vehicles; the functions can also be accessed via the expandable mini-panels.

The LOCO screen on the controller



Screenshot of the MX33 controller: full screen view whilst driving

Together with the keypad (see below), everything is at your fingertips for a complete overview and full control.

For the speedometer dial, you can choose between different designs and colours; the magenta needle indicates the speed measured by the decoder; this is more informative than the drive level.

The two (!) direction buttons correspond to the ZIMO direction control with VR (Forward, Reverse) and OW (East, West).



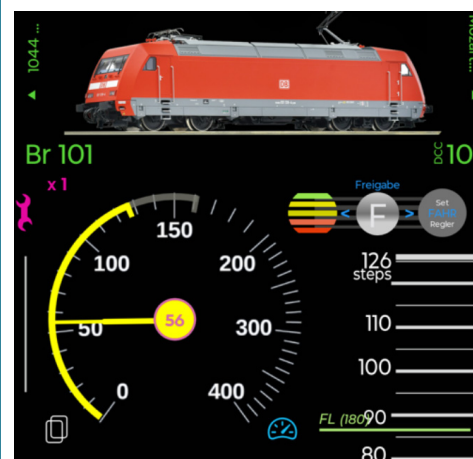
The LOCO screen in the app



Screenshot from the ZIMO app. Full screen view whilst driving

Even without the controller's haptic feedback, the large screen can display a great deal thanks to a similar user interface structure. The function buttons provide additional information and offer plenty of scope for new settings. ZIMO HLU is integrated into the running bar and can be edited whilst in operation; the direction button also shows the transitions during shunting, and much more.

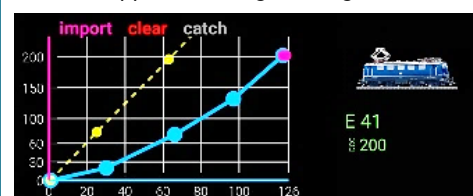
ETCS – The future of rail



Screenshot (detail) from the ZIMO app: image and ETCS SPEEDO

ZIMO is paving the way for the ETCS era; model railways are still lagging behind their real-world counterparts in this respect.

One visible detail is the ETCS-style SPEEDO design, complete with the familiar 'yellow arc' that appears during braking.

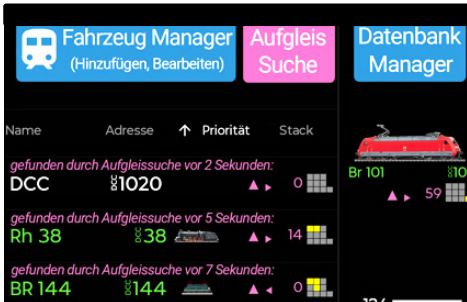


Screenshot (detail) from the ZIMO app: Blue needle curve

One of the preparatory measures for implementing ETCS (European Train Control System) is the 'blue needle curve' (a ZIMO term, not an ETCS one), which is important for the precise measurement of speed and distance required for smooth ETCS operation.

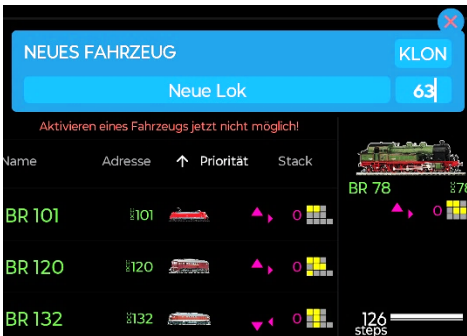
Of course, decoders play a key role in ETCS: they must be capable of receiving and executing the standard ETCS 'Movement Authorities'. They also require good odometry.

On-track search and Vehicle Manager



Screenshot (detail) from the ZIMO app: on-track search messages

On-track search – a 'ZIMO Special' – is a useful alternative to the 'official' registration process for quickly locating the addresses of vehicles that are not yet known.



Screenshot (detail) from the ZIMO app: Adding an address

The input fields in the Vehicle Manager are used to define new addresses for inclusion in the databases; this feature also allows you to create clones of existing vehicles and make modifications (new names for old addresses).

Inventory search/ 'DCC-A' registration

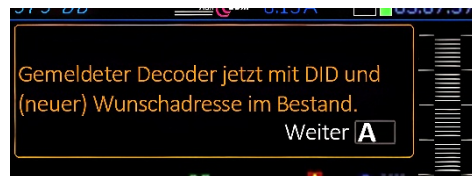


Screenshot from the MX33 controller: a new decoder has been found.

The 'ZIMO Inventory Search' is based on the existing 'stock', i.e. the addresses (vehicles) registered in the system-wide SYS DB (V) database.

The aim is to reorganise the database, usually semi-automatically, i.e. the user can monitor and control the process. In the process, the addresses of the new decoders are added, address conflicts are resolved, and redundant addresses are deleted.

The inventory search uses the 'standard' elements of the RCN-218 (Railcommunity); however, it is initiated by the user themselves.



Screenshot from the MX33 controller: the new address is being added.

GUI from decoder via 'file transfer'



Screenshot from the MX33 controller: select 'Retrieve GUI' from the menu

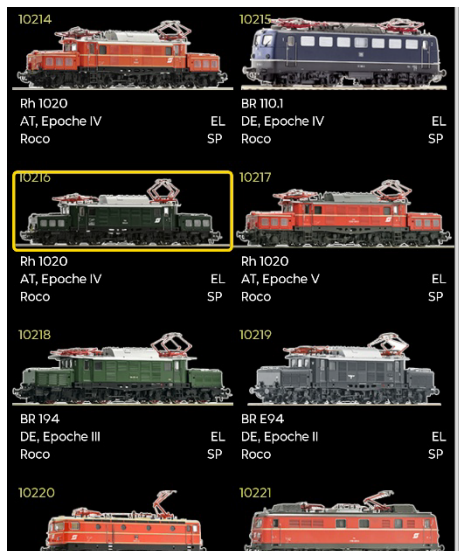
The GUI (Graphical User Interface) is the representation of a vehicle on control units, i.e. name, image, function icons, etc. This data often comes from the sound project that has been loaded into the decoder.

The 'ZIMO File Transfer' works by sending the file – in the form of a chain of 4-byte datagrams as a sequence of RailCom messages, each as a response following the 'normal' DCC packets – from the decoder to the digital centre.

On the MX33's screen, the sequence of the file transfer is indicated by a progress bar.

Note: ZIMO file transfer is used not only for GUIs, but also for transmitting data blocks with other content: text (messages, alarms), technical data on train components, and sensor data such as gradients.

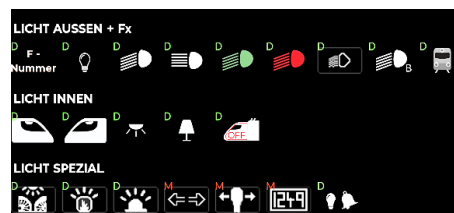
The libraries for vehicle GUIs



Screenshot (detail) from the ZIMO app: Rolling Stock Library

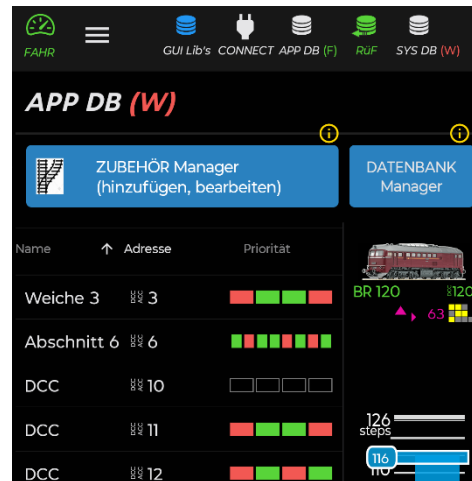
The 'Libraries' are collections of data and images for various aspects of display and control, provided by ZIMO (or by partners), supplemented where necessary by user-generated 'Private Libraries'.

Initially, the 'Rolling Stock Library' and 'Function Symbols' are the main ones active.

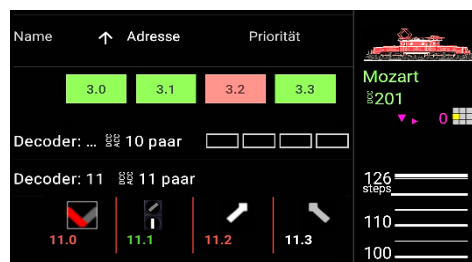


Screenshot (detail) from the ZIMO app: Function symbols

'Classic' accessory control



Screenshot (detail) from the ZIMO app: List of addresses



Screenshot (detail) from the ZIMO app: with sub-addresses or symbols

This is the method for addressing accessories using addresses, each with 4 sub-addresses – i.e. for 4 'two-term' items such as points (left/right), signals (red/green) and the like, or for 8 'single-term' items such as individual lights.

The addresses with 4 on/off fields are listed first and can be assigned addresses, sub-addresses and symbols as required.

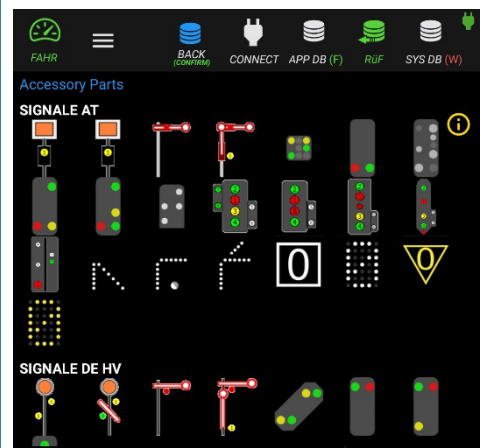
Signal Switching Project



A comprehensive guide to light and semaphore signals – covering the configuration and switching of numerous signal types across different signalling systems (organised by country, year of manufacture and provider) – is currently in progress.

With the StEin concept, ZIMO has a signalling system that could, in theory, be expanded to cover all systems worldwide by creating additional type and image tables.

The ZIMO app will utilise the existing signal types, including the defined signal aspects ('templates'), add graphics and, once the user has entered the connection points (for the first red light in each case), configure the StEin modules.



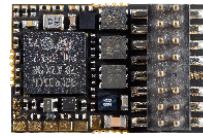
Screenshot (detail) from the ZIMO App: Signal Types Library

New decoders this autumn

FS880 - Miniature function sound decoders for control carriages and non-motorised power cars

FS880, -R wired versions (open, with NEM652)
FS880P16 with PluX16 interface

- 16.6 x 10.8 x 3.1 mm
- 0.8 A total current, continuous
- 6 amplified function outputs
- SUSI pins (SUSI, servos or logic-level inputs/outputs)
- **Speaker output 3 watts / 4–8 ohms**

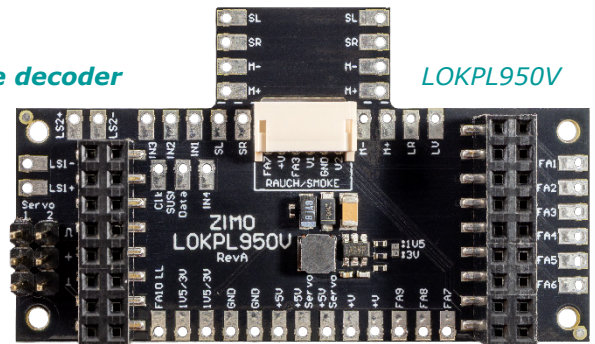


Scale 2:1

FS880P16

LOKPL950V - Loco board for the MS950 large scale decoder with adjustable low voltage

- 61 x 35 x 20 mm (height including decoder)
- **1.5 V / 3 V low voltage**, adjustable via solder jumper
- Pin headers for 2 servos
- Connection for ZIMO smoke generator
- All connections also available on solder pads

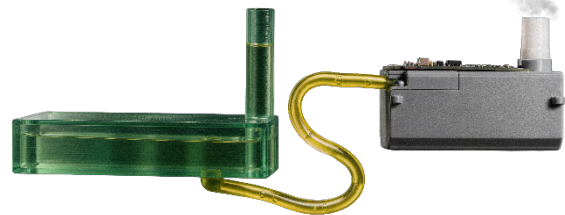


LOKPL950V

ADDITIONAL TANK for SMOKE GENERATOR

Smoke generator with pump and optional auxiliary tank
Prototype for the future design of the ZIMO RAUSI

- Additional tank for more smoke fluid (manufacturer-specific sizes and shapes available)
- Special hose
- Pump and new circuit board for control

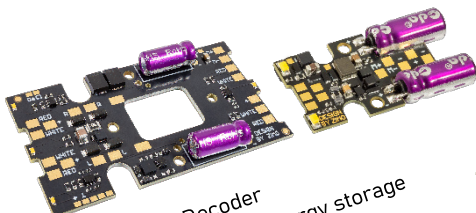


ZIMO INDIVIDUAL

Energy storage with StayAlive, pantograph drives, advanced lighting systems, Wi-Fi units for cameras or specialised power supplies – modern loco boards are now taking on an ever-increasing number of key functions.

Where standard decoders and loco boards are insufficient, or where narrow gauges offer too little space, ZIMO develops and manufactures **locomotive-specific decoders, accessories and bespoke electronics – including software** – for both large-scale production runs and small product series.

Vehicle manufacturers draw on ZIMO's expertise in bespoke electronics and software development to perfectly realise even the most complex vehicle configurations – tailor-made solutions that go beyond standard technology

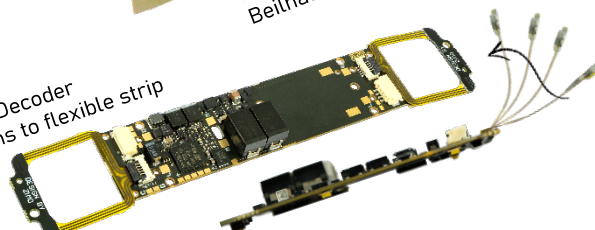


- ZIMO Individual Decoder for H0 gauge with energy storage and recess for loudspeaker
- for N gauge, with energy storage



ZIMO custom decoders in Beilhack snow blower, gauge N

ZIMO Individual Decoder with connections to flexible strip



Manufacturer-specific smoke generator with a special design and extra-long cut-to-size flues.

