Newsletter October 2024
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A pre-release version with potential:

... the ZIMO App

now issue October 2024, new issues coming soon

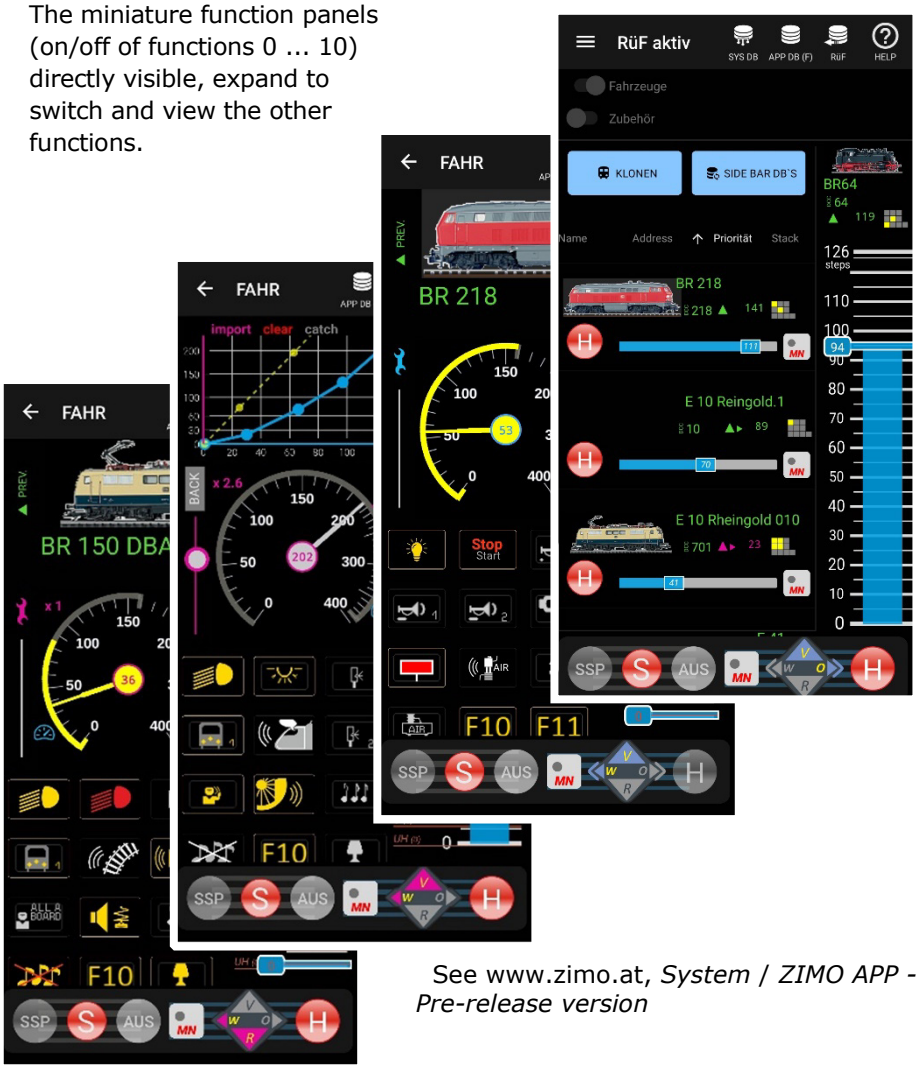
The ZIMO app is - of course, otherwise it wouldn't be a ZIMO product - more than a "normal" model railway app, although it can also be used for normal driving.

The first thing you will notice is that the ZIMO app does not fulfil the usual conventions of apps, but rather resembles a ZIMO controller (such as MX32 or MX33) on a smartphone or tablet: of course with a different focus, as there are no haptic controls, but a large touchscreen.

The screenshots below show (images half hidden on the left)

- the typical display for the "LOCO" state with "ETCS"-type speedometer,
- the LOCO screen in "blue needle curve" setting mode,
- another LOCO screen, in this case without km/h feedback,
- the "LoR" screen (*Loco Recall*, RüF in german), a special feature not found in controllers (MX32, MX33): several vehicles can be controlled simultaneously on one screen, one of them with the large slider (which is also used in LOCO), the others with small horizontal controllers.

The miniature function panels (on/off of functions 0 ... 10) directly visible, expand to switch and view the other functions.



See www.zimo.at, *System / ZIMO APP - Pre-release version*

Editorial

The **"ZIMO App"** is one of the current development projects:

This will - as soon as a certain degree of completion has been reached - represent an **alternative for operating** trains and accessories. in addition to the MX33 controller, locomotive mouse, Roco app, ...

BUT

the actual main purpose of the "ZIMO App" is to promote the **innovative future** of **model railways**:

NOT AT ALL,

because ZIMO should also have an APP in keeping with the spirit of the times,

BUT RATHER

because a "division of labour" between the technologies will be necessary:

Haptic controls (buttons, controllers, etc.) on controllers (such as MX33) are unbeatable for driving the trains; but there are increasingly tasks for which the touchscreen of smartphones/tablets is predestined.

This includes the display and processing of large lists and databases, the composition of complex trains, the creation of "movement authorities" for ETCS operation, computer control subtasks such as signal box magnifiers.

If the model railway as a whole is **not** to end as a **die-hard**, terms such as **ETCS** (European Train Control System), **ESTW** (Electronic Signal Box), or **Train Control** (controlling trains with all carriage functions and not just individual vehicles) will play a major role.

But first comes the standard with the designation "**RCN-218"**, also known as "**DCC-A**" (= DCC application): a major joint effort by the "RailCommunity" members, i.e. the leading representatives of the model railway industry and digital specialists.

ZIMO has already done a lot of development work in this area RCN-218 and GUI transmission from the decoder to the system. This will soon be included in the official software versions for the system and decoder.

See page 2 & MX33 operating instructions (English version coming soon)

Peter W. Ziegler

Not really on schedule or good things take time . . .

DCC registration (DCC-A), RCN-218 & Co.

*. . . shortly on the MX33 controller: "**ZIMO stock search" = RCN-218 in ZIMO style***

The **RailCommunity standard RCN-218** (also NMRA standard in progress) for "**Automatic Registration**" **(DCC-A)** specifies a protocol, i.e. additional DCC commands and RailCom messages. This enables interoperability between digital systems and decoders from different manufacturers (also) in this aspect.

"Registration" is a procedure that is intended to fulfil two basic tasks:

1) Registration of the vehicles and accessory items (especially new objects) found on the layout in the digital system, including any re-addressing of the decoders in these vehicles and items (to the desired address if this differs from the currently programmed address, or - if necessary - due to address collision);

2) Transfer of the **GUI information** stored in the decoders to the digital system. This is used for the graphic display of the vehicles and accessories (images, names, function symbols, etc.).

The **"ZIMO stock search**" corresponds to the first part of the complete RCN-218, i.e. **1) Registration . . .** ;

The name indicates that the search is based on the existing "inventory", i.e. the decoders of the vehicles and accessory items that are currently in the **system-wide object database ("system database"** for short). The inventory search is intended to enable a **reorganisation** of this database, normally not fully automatically, but with the involvement of the user (who calls up, monitors and controls it manually). Among other things, newly added decoders should be integrated, address conflicts resolved and (last but not least) addresses that have become superfluous deleted.

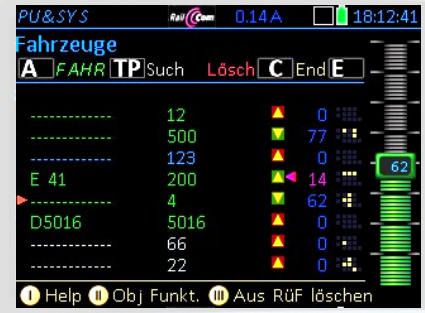
The **"ZIMO stock search**" uses the standardised elements of the RCN-218 log-on protocol, but is usually started by the user from any operating device (possible at any time, not just at the start of operation).

In the MX33 controller:

E button + 6 ▫ Switch to the ***"SYS DB"*** window, i.e. the ***system-wide object database***;

TP button (Search) ▫ *Start the stock search*

The digital centre (ZIMO command station MX10) sends LOGON_ENABLE commands periodically (frequency depending on the situation); decoders (vehicles, accessory decoders) respond to these with RailCom (LOGON messages, i.e. logins) according to a statistical procedure. The control centre receives the **DID** (Decoder-Unique-ID) and the **address** (or the "desired address") of the decoder. The decoders registered in this way are synchronised with the system db.



The **system-wide object database** In the **"SYS DB"** window (after E + 6), i.e. the vehicles already known in the system.

▫ ***Registration case 1** . ...a fully matching entry is found in the system database; i.e. **DID** of the reported decoder and **desired address** match*

***Registration case 4.** ... no matching entry is found in the system database, i.e. neither DID nor desired address of the registered decoder.*

This means that both decoders already known to the system and unknown (= new) decoders register; in addition to the examples above, there are special cases. Depending on the situation and settings, **the "new" decoders** are then **integrated automatically or semi-automatically**, with options such as changing an address during registration.

A ZIMO "Extra" (only with ZIMO MS and MN decoders in a future software version) will be a **"system-related address stack"**, which will make it possible for a vehicle to log on to different systems under different addresses in order to avoid address collisions or to fulfil address conventions, e.g. on the home system under addr. 38, on club system A under "138", on club system B under 7038".

As mentioned above: The "ZIMO stock search" corresponds to the first part of the complete RCN-218,

the second part, i.e. 2**) . . GUI information . . .** is carried out for ZIMO decoders by the independent "ZIMO file transmission", or will be added later for third-party decoders according to RCN-218 if required.

In the MX33 context menu in LOCO IN) mode:
Get GUI from decoder (ZIMO)
This prompts the decoder from the system , to send the appropriate GUI via

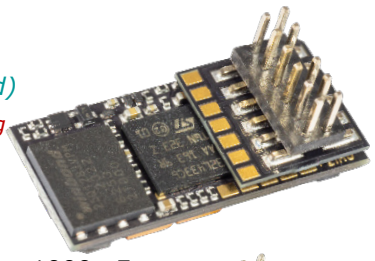
See operating instructions MX33, (Version 2024-10-10) on www.zimo.at

New on the market in 2024

ZIMO Decoder News

MS540P12 *- The ZIMO sound decoder with PluX12 interface*

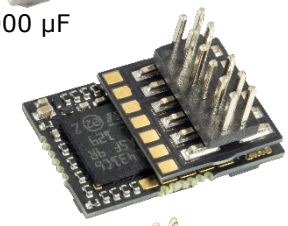
(consisting of the E24 decoder MS540E24 and an adapter board)



- 19 x 8.7 x 3.3 mm *PluX12 sound decoder for gauge N and TT from PIKO and Tillig*
- 0.8 A total and motor current, continuous (1.5 A peak)
- 8 amplified function outputs (4 on PluX12 and 4 on solder pads)
- SUSI on solder pads (SUSI, servos or additional logic level outputs)
- Speaker output 1 Watt / 8 Ohm
- Direct energy storage connection for electrolytic capacitors and tantals up to 1000 µF

MN140P12 *- The ZIMO non-sound decoder with PluX12 interface*

(consisting of the E24 decoder MN140E24 and an adapter board)

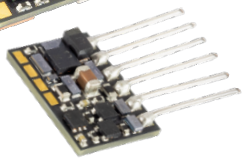


- 13.5 x 8.7 x 2.8 mm *Successor to the MX623P12*
- 0.7 A total and motor current, continuous (1.5 A peak)
- 8 amplified function outputs (4 on PluX12 and 4 on solder pads)
- SUSI on solder pads (SUSI, servos or additional logic level outputs)
- Direct energy storage connection for e-caps and tantals up to 15000 µF on solder pads

MS481P16 *- The PluX16 sound decoder with 3 watts of sound*

- 19 x 11 x 3.1 mm *Successor to the MS480P16*
- Speaker output 3 Watt / 4-8 Ohm
- All specifications like MS480

MN150, -N *- The ZIMO subminiature non-sound decoder*



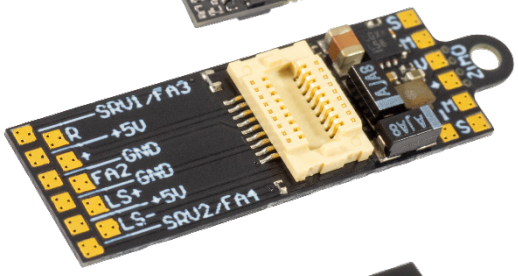
- 8.2 x 5.9 x 2.1 mm *Successor to the MX615*
- 0.5 A total and motor current, continuous (1 A peak)
- 4 amplified function outputs (2 on wires/pins and 2 on solder pads)

MS591N18 *- The small Next18 sound decoder with 6 amplified function outputs*

- 15 x 9.3 x 3.1 mm *Successor to the MS590N18*
- 0.7 A total and motor current, continuous (1.5 A peak)
- 6 amplified function outputs
  (4 on Next18 and 2 on solder pads)
- SUSI pins (SUSI, servos or additional logic level outputs)

ADANEX *- Adapter board with Next18 and 5 V supply*

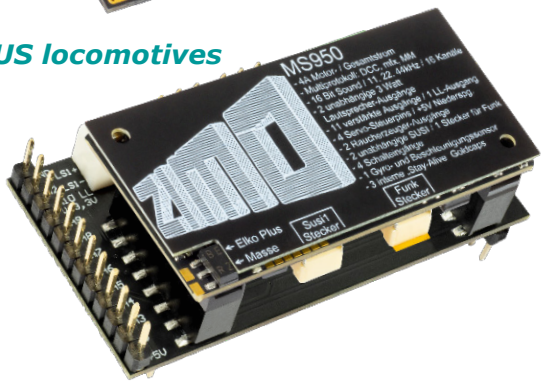
Suitable for gauge N, TT and small H0 models



- 29 (without break-off tab 25.5) x 9 x 2.2mm
- 5 V / max. 300 mA
- All connections from the Next18 socket are made on solder pads
- Solder pads for up to 2 servos available
- Suitable for Next18 decoders up to max. 15mm length

MS970 *- MS950 with adapter board ADAUS950 for US locomotives*

with "American interface" (e.g. Bachmann, Aristo-Craft)



- 59.5 x 30.5 x 19mm
- Pin headers for up to 4 servos
- 3-pin plug for cam sensor
- 2-pin plug for 1st speaker
- Connection option for a 2nd loudspeaker and Fans for smoke generators on 5-pole screw terminal

Values for adapter board

US mainline railway ***Next18 interface*** ***NEM 651 PluX16 / PluX12 interface***

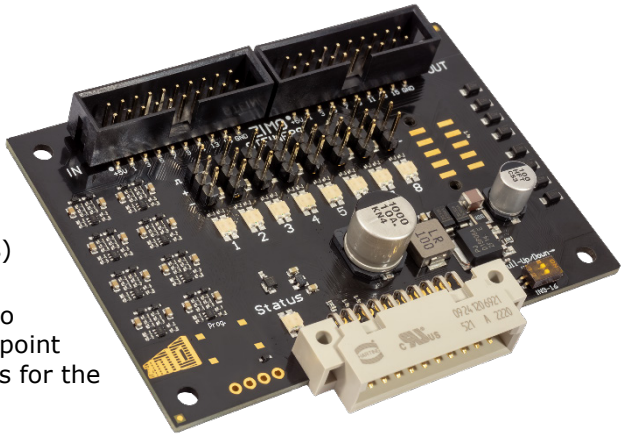
MS and MN decoders from SW version 5.003:

ZIMO train number recognition for systems with MX9 track section modules

The original ZIMO train number recognition has long since been replaced by RailCom, together with the introduction of the "StEin" modules. However, systems that were digitised up to around 2015 still use MX9, which unfortunately cannot be upgraded to RailCom.

Unfortunately with a longer delay, but nevertheless, the current decoders (MS and MN) now support the ZIMO train number recognition (CV #112, set bit 2 = 1); MX decoders have always done this.

StEin expansion board for servo drives



Turnouts and **signals** with servo drive can now be controlled by the "ZIMO StEin" using the "***STEIN E8S***" expansion board.

Up to 2 expansion boards can be plugged into one of the two connectors at the top of the module at the same time.

There are **8 three-pole pin headers** on the expansion board for **8 servos**, and 20-pin pin headers ("post connectors" for ribbon cables) for 16 inputs ("IN") and for 16 outputs ("OUT").

The inputs can either be used for forced switching contacts of the servo points or to supplement the inputs on the StEin module itself, e.g. for point detectors. The outputs are primarily used to operate polarisation relays for the turnout frogs.

*Note: an important ZIMO project - the **train bus** - will not be covered until the next newsletter.*

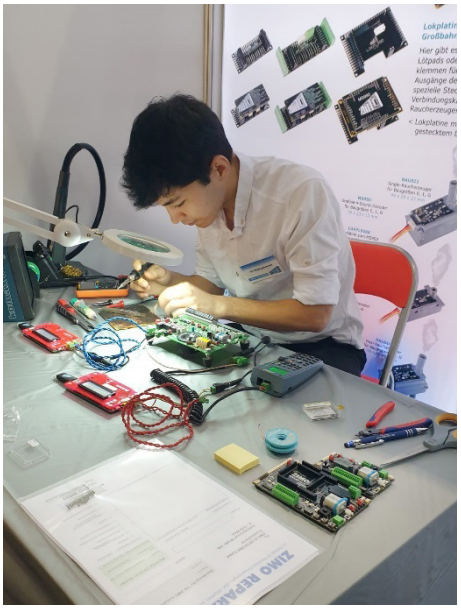
*The **latest updates** for system products, decoders and MXULF: see www.zimo.at !*

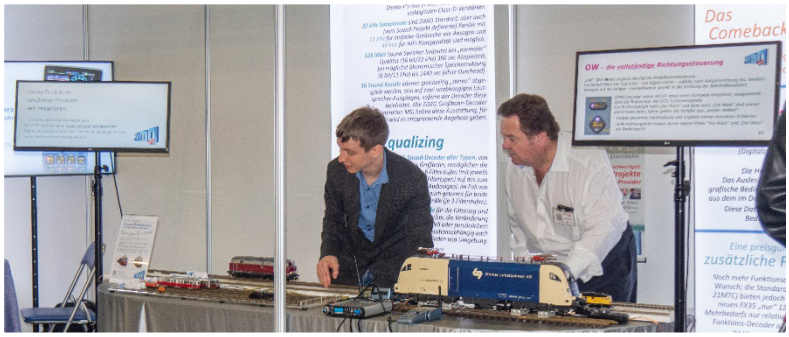
The ZIMO trade fair on home ground: "Modellbau WIEN" (25-27 October)

For the first time at an exhibition:
the show repair

ZIMO users brought defective decoders to the exhibition, and these were made to work again by a knowledgeable member of the ZIMO repair department.

Of course, this was also an opportunity to update the software and record sound projects.





New in the ZIMO team

Oscar Navales Farreras
Repairs, testing

Farid Moradikoochi
SMD assembly

Mohammad Ali Mohammadi
Repairs, testing

John Vitek
SMD assembly

Daniel Pold
Documentation, photography, image processing