Newsletter - November 2014

The November 2014 Newsletter includes 4 pages from the October 2014 Newsletter.

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The large selection in the new ZIMO Digital Control System

The following figure shows which Command Centres, Devices and Apps of ZIMO and ROCO can work together (some already operational, some just in the works).



Production of MX10 The first production version of the MX10 Digital Centre (Base Station)



Note: Delivery of StEin starts after MX32 und MX10!

The ZIMO MX32 Controller & the ROCO Z21 Control Centre

Recently, the ROCO Control Centre Z21 and the ZIMO MX32 are able to communicate with each other; the usual ZIMO CAN bus cable (remote cable) is used at the socket "CAN" on the back of the Z21. This will be made available via a future release of a new software version.



The operation of the MX32 controller is almost the same as using the controller with ZIMO command stations; driving (including RailCom[®] speed feedback), programming via SERV PROG (programming track) mode and OP PROG (POM) mode work well, but some differences do exist due to differences in equipment between ZIMO and ROCO command stations:

- With the Z21, only two ZIMO MX32 Cabs can be directly connected; other devices may be connected via the CAN-cable by adding an additional power supply, if necessary.
- With the Z21 the ZIMO cabs are intended for use in cable mode. The radio cab MX32FU's can also be run from a cable (exactly the same as the non-wireless device MX32), however, the power consumption for battery-charging could cause problems. It is intended to automatically reduce the battery charging in the future.
- The "GUI-overs" which is the transfer of graphic symbols used for functions, tachometer data, and loco images are limited because of the space available in the ZIMO MX10 memory is not available with Z21.

Additional operational possibilities, such as the exchange of data with concurrent ROCO apps on the tablet or smartphone will work in future software versions.

New Features in the new Digital System (MX10 and MX32)

The MX10 includes a central object oriented database into which the GUI data *) for all vehicles that have been activated are stored, and any changes to this data. Other controller or cabs (or even computer apps) can automatically copy most of this GUI data to use for its own presentation of the same vehicles, and still have the possibility that the same locomotive can be displayed on several different remotes with different speedometer or other function symbols.

*) With "GUI data" GUI (Graphical User Interface), the information display for a vehicle on the MX32 (or other devices) Screen, such as function symbols and the loco icon, name, speedometer disc including speed range, and others, can be-customized, information may incidentally include the handling such as system-controlled acceleration / deceleration times, etc.

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The (new) "control panel" (Basis Panel) to switch points or signal comes on the lower half of the screen when you press the W button (mode *WEI* for WEICHEN, will show *SWI* for Switch in the English version). It now contains default default "V-icons" that show a general left-right point or can be interpreted as a red-green signals.

The (new) fastest possible way ("short-cut") to change the default addresses uses the key sequence $E + 3 + \mathbb{Z}$ (Shift). This results in the entry into **WEI DEF** (*SWI DEF* in English), the definition screen, with simultaneous jump in the line to enter the directory (and sub-address, ...) and with the "Scroll in line" - option, so without further scrolling operational addresses can be consecutively typed (address - A – sub-address - A – sub-address - A – ...)

The "V-symbols" are used as default but are not fixed, and therefore can be replaced, if necessary, by more relevant point or signal symbols (also in the definition screen *WEI DEF/SWI DEF*)





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A correct speedometer is now easily added through a separate menu item which shows the driving-speed on the cab, both in the case of real feedback from RailCom[®], as well as a using a speed curve determined in other ways.

These can be derived from driving the locomotive at a medium speed, then determine on the basis of a measurement (speedometer car, measuring distance, ...) or by estimating what speed should appear, then using (E + 2 ->ADR TACHO) set the speedometer curve corresponding to at least the middle measurement point, then invoke the menu, and the new feature from the menu.

The New ZIMO Digital System



Rocrail is software for controlling model trains

for Linux, Mac OS X, Raspberry Pi (en) and Windows Operating Systems.

Rocrail is an Open Source Project, progammed in C/C++ based on the class library <u>wxWidgets</u>. With Rocrail, trains can be controlled directly from a computer or in automatic mode by the software

R

Mixed operation is possible, with some trains controlled manually,

and others in automatic control.

www.rocrail.net/

The connection of Rocrail to the ZIMO system via the USB interface of the MX10 is well advanced.

The Rocrail software already uses part of the GUI data of the MX32 (the loco icons in the screenshot on the right); and the loco can be driven with either Rocrail or the ZIMO cabs.

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www.modellbahnberatung.com/rail-manager

The Rail Manager is now available for the new ZIMO MX10 command station and also for the MXULF:



Extension of the "automatic operations" (ABA)

In addition to the control of locomotives, points etc. now event-related control is possible. RailManager evaluates the signals generated through tracks sections, signals, reed contacts, etc. Sent the command station, and controls the locomotives accordingly, or triggers functions. Improvement of points control

Turnouts to be switched are now selectable in the loco control screen. The management of the different track diagrams have been optimized.

In Preparation:

Evaluation of track occupation messages, improvements to the vehicle database

Shuttle trains, controlled autonomously by the MX10



The new menu point "BAB (operating process") in the main menu of the MX10 leads to a submenu, the first item is "Shuttle Mode". From there, up to 16 shuttles are activated. A shuttle definition consists of two ABA inputs in the MX10 and the vehicle address, speed and direction information, which should be applied when passing the contact tracks for the defined ABA.

MXULFA & ZCS (ZIMO CV Setting Tool)

Unlike solutions that support a large number of types of decoders from different manufacturers, ZCS (ZIMO CV Setting Tool), which is developed and is maintained currently by Matthias Manhart, is focused on ZIMO decoders with graphical user interface. In the field of sound configuration (where there is no Cross-manufacturer standards) a special program like ZCS has better options than a universal software, although the latter of course, has advantages - it just depends on the application.

With firmware 0.61.26 for MXULFA, ZCS Version 4.05 is supported in the new so-called live mode for reading and writing CVs and to drive the decoder.

The live mode is switched on and off using the button at the bottom left.

Once the live mode is enabled, an additional window will appear with a software remote driver.

The cab (Fahrpult) screen allows the direct driving of the decoder connected to the MXULFA with 28 functions.

The button "Ërkennen" (Recognize) from the cab screen, reads and displays the version and type of the decoder, plus the firmware.

In live mode, any changes to the CVs are directly transmitted to the decoder. In this mode the remote vehicle can be changed using the programming track or programming on the main (POM). To customize CVs, the mode POM "main line" is used because changes in the decoder can be observed directly.

In the "CV" window, individual CVs can be read or written. To do this, click in the desired CV and press "r" for read or "w" for writing.

In the main window, at the bottom, the last 4 commands to the decoder can be seen. Any error messages are displayed are also displayed here.

. & other Configuration Programs

In the penultimate ZIMO Newsletter (June 2014) the combination offer" MXULFA-PF "was presented, in addition to the MXULFA, this contains a license for the full version of the program P.F.u. Sch. or ADAPT (Advanced Driving and Programming Tool) of E. Sperrer.

Meanwhile, the MXULFA also supports the TrainProgrammer of Railroad & Co., Freiwald software since version 8.0D2. Currently being prepared is RocRail, the free "Innovative Model Railroad Control System" for cooperation with MXULFA. There is also in the works plans to connect to DecoderPro (JMRI Project).

Loco Adapter Boards for 00/H0-Decoders

With the latest versions (ADAMTC and ADAMKL) ZIMO offers a comprehensive range

Locomotive adapter boards are often the link between the vehicle's equipment and the decoder. They contain an interface (usually PluX, 21MTC, Next18, or the older standards NEM 651 and NEM 652), into which a suitable decoder (either a sound or nonsound decoder) can be plugged.

ZIMO loco adapter boards often offer an added value in low voltage sources for 1.5 V or 5 V (useful for LED lighting, servos and other features) and/or additional rectifier diodes to increase the maximum current of the decoder. Combinations of these adapter boards and decoders often form a de facto new family of decoders with special characteristics.

The latest ZIMO types of locomotive adapter boards are the families **ADAMTC** and **ADAMKL**, into which the different decoders with the 21MTC interface can be plugged, in addition to all the ZIMO sound and non-sound decoders (the respective "C" types) you can also use third-party products.





ADAMTC (with solder pads) with Sound Decoder MX644C ADAMKL (with screw terminals) with Sound Decoder MX644C 44 x 26.5 x 6 mm each in 3 versions (without low voltage, with 1,5V or 5V low voltage) 44 x 26.5 x 12 mm

The combinations of these adapter boards and 00/H0 decoders, especially the version with screw terminals, can be a large scale sound decoder for "small scales", especially when considered for 0 scale. They have smaller dimensions than the "real" large scale decoder and are also less expensive; although the maximum current load is indeed smaller (1.8 A instead of 4 or 6 A) and the sound amplifier weaker (3 watts instead of 10 watts), but, in 0 scale, those are minor restrictions.

The main technical data of such a "O Scale Sound Decoder", consisting of ADAMKL and MX644C are:

1,8 A motor- and total current (2,5 A peak)

8 function outputs

2 logic level outputs (Servo, SUSI)

0 or 1 low voltage outputs (selectable as 1,5V or 5V) depending on the type of ADAMTC/ADAMKL

Direct connection for stay alive external energy storage (including GoldCap-modules)

3 Watt Audio, 4 - 8 Ohm, 32 Mbit, 6 channels

In addition to the MTC boards, there are adapter boards for a PluX22 decoder ADAPLU and ADAPUS, both of these are also available in three versions: without low-voltage, with 1.5V or with 5V low voltage. The PluX boards are narrower than the 21MTC types (15 mm, exactly-as wide as the decoder itself, instead of 26.5 mm); functionally similar, because of the narrowness but less comfortable to connect, and no connection possible for large GoldCap modules, and there are no screw terminal versions.



ADAPLU with Sound-Decoder MX645P22, 45 x 15 x 8 mm



ADAPUS with Sound-Decoder MX645P22, 71 x 18 x 8 mm (as a replacement decoder for US models)



ZIMO Sound Project for the new PIKO V 36 (G Scale)

Erstmals auf der Internationalen Modellbahn Ausstellung In Köln (ab 20. November 2014) zu hören und am ZIMO Messestand erhältlich.

Large Scale Sound Decoder MX696S with Sound-Project "V36" loaded:

Exhibition price EUR 130

New Features for ZIMO (Sound) Decoders

With the software version 34.0, which will be made available soon during the next update.

The suggestions of these useful features have been come from various vehicle manufacturers and sound providers and implemented by ZIMO. Therefore, parts of these features are already implemented in software versions prior to 34.0, and used in some production vehicles.

- **Dynamic acceleration behaviour during fast movements of the speed control**: During rapidly moving up (spin up) of the speed regulator of the controller, which from the perspective of the decoder means a rapid movement up the speed levels of DCC in received packets, the vehicle will be accelerated faster than dictated by the CV #3 parameter; also the sound will be adjusted accordingly. This feature is activated by bit 4 of CV #394.
- "Coasting" and Brake key: By setting a very high value for the deceleration time (e.g. CV #4 = 255) coasting to a stop of a train is simulated (several minutes to a standstill) this option has always been available for ZIMO decoders by the wide range of values of CV #4; However, this can produce a "reasonable" stopping distance, but stopping at a pre-defined point is not possible, and the "Emergency Stop" button stops too quickly (and is not available on all DCC controllers). Therefore, now the "brake" button (any function 0 ... 28) is introduced, together with its own braking time which is used only when this button is pressed. Brake button is stored in CV #309, deceleration time in CV #349
- Extension of the "one-sided light suppression": Another function output (in addition to the previous two) can now be included to make one of the two Loco sides "dark". CV #109 and #110.
- Manual increase in the diesel step: By function keys, a higher load on the engine can now be simulated (in the form of minimum steps that are effective, in addition to any automatic assignment). CV # 339, #340.

The new software release also includes improvements in engine control, especially for Maxon Motors in large scales.

MX697: Delay due to repeated revision of the circuit board This delay was necessary because of the different interpretations of the interface in different models.

The first deliveries of the "Large scale sound decoder for American locos" have confirmed its good function; However, there are problems with some vehicles from Aristo-Craft (and probably their successors), because there the second (right) connector is not connected and only the mechanical stability of this connection is used. There is also disagreement about the sound speaker-and input connections.

Therefore yet another modification of the circuit board must be made before the decoder MX697S and MX697V can be fully produced and delivered. The (hopefully final) board is extended to the right by about 3 mm; This new area is utilized on the top for a number of solder pads, which repeat the connections of the underlying pin strip and offer the opportunity for additional connections, which are not supported by the pins if they are plugged into a non-active socket.



The "Dumbo" (officially: LS13X18) Loudspeaker

Another miniature rectangular speaker with integrated resonator in the ZIMO catalogue

The LS13X18 continues to increase this very popular series of miniature speakers. So there are now three basic forms, some are available with different resonance bodies, for a total of 4 types of these "miniature speaker boxes" which are available..

"Dumbo"



all for 8 ohm speakers. Of course, the larger speakers (and also the larger sound box, if there is more than one for the same speaker) are always preferred over smaller types. The dependence of the volume level and the frequency response on the volume of the speaker is unavoidable.

10 x 15 x 8 (or 11) mm

8 x 12 x 8 mm

By the way: the use of two parallel-connected speakers very often improves sound quality. The decoder MX644 and MX645 families can cope with two 8 ohm speakers easily; and this is often practiced with two LS10X15, but of course with the "Dumbo" this is also possible. However, for miniature sound decoder of the families MX648, MX646, MX658, this type of connection of 2 speakers is not recommended.

13 x 18 x 13 mm



ZIMO expanding ...

The ZIMO product range grows (more types of decoders, new system components, ...) and the numbers produced increase (especially in the decoder business with factory installation by vehicle manufacturers) - hence the premises have been extended. Finally, a ceiling was added in one portion of the production area, which creates accommodation for three additional work tables and warehouse facilities and on the mezzanine a new seminar and social area.







20.11. – 23.11.2014 Internationale Ausstellung für Modellbahn und -zubehör in KÖLN Koelnmesse, ZIMO: Halle 4.1, Stand 1148

Am ZIMO Stand: Wolfgang Marschmann (RailManager), Heinz Däppen (SoundDesign), Heinz-Willi Grandjean (ESTWGJ, Heinrich Schild, Winfried Reinecke, Peter Ziegler Spur G - Strecke mit zahlreichen Sound-Loks, Spur 0, H0, Computer-gesteuerte (ESTWGJ) N-Anlage

Besonderer Service: Heinz Däppen lädt Ihren Wunsch-Sound in den neu gekauften (oder mitgebrachten) ZIMO Sound-Decoder!

It starts with ZIMO and stops with ZIMO ...

.. and in between there is something else: the programme of the Digital Workshop in Cologne 2014:

| Internationale Modellbahnausstellung Köln Digital-Workshops | 9:00 – 18:00 | |
|--|---|-------------------------------|
| 21.11 Freitag | 22.11 Samstag | 23.11 Sonntag - nur bis 17:00 |
| 9:20 - 13:20 | 9:20 –11:20 | |
| Sound | RFID als Melder für Lok- und Wagenerkennung | |
| Zimo / Heinz Däppen | Viktor Krön/Robert Friedrich | 10:00 - 12:00 |
| | | s88 |
| 13:40 - 15:40 | 11:40 – 13:40 | Tams / Kersten Tams |
| Digital für Ahnungslose | Decodereinbau | |
| Lenz / Peter Rapp | AMS / Arnold Hübsch | 12:30 – 16:30 |
| | | ESTWGJ |
| 16:00 - 18:00 | 14:00 - 18:00 | Zimo / Heinz Willi Grandjean |
| LocoNet | Decodereinstellung mit dem LokProgrammer | |
| Uhlenbrock / Detlef Richter | ESU / Jürgen Lindner | |
| | | |

Register for the Events in the Digital Workshops (registering later at the ZIMO Stand is not possible): <u>http://digitalworkshops.vgbahn.de/locations/modellbahn-ima-koeln-20-23-11-2014/</u>