Newsletter - Februar 2016

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MiWi

Software Release 1.19.0001 for MX10 & MX32

Activation of the LAN Interface on the MX10

The ZIMO Command Station – MX 10 device. front side

LAN socket on the back of the device

Ethernet-Cable from the LAN-socket to the Router

Router, preferably with IP address 192.168.1.xx; as this is already preset in the MX10 – and no configuration is required (although changes are possible).

With the new software for the digital command station - the MX10 - an essential step towards the completion of the capabilities of the current ZIMO system has been completed.

Connection to a computer or computer network is made possible via the LAN interface. Via the router connected to the same network, apps on smartphones and tablets can be used to control the layout.

One of the most important apps used via the LAN (WLAN) interface will be the "Roco" apps and the Z21 driver apps.

In the photo is the MX32FU → the ZIMO CAB or Controller – next to a smartphone with the "Roco" app on the screen. Both communicate wirelessly with the ZIMO command station MX 10, in the first case on the ZIMO internal MiWi wireless system, in the second case (smartphone app) over WLAN. In the depicted situation, the identical vehicle is on both input devices, in the foreground, the "Roco-app" is responsible, and the MX32 will overwrite the current data (speed, direction, functions) and the LEDs on its display, and reports on the top of the screen that an XPress unit has control, currently (only the "Roco App" = Xpress Protocoll over radio).

Also already available via LAN is ESTWGJ, the railway control program of H.-W. Grandjean, and Rocrail, a non-commercial software system for controlling model trains on Windows, Linux, etc. with apps for iPhone and Adroid, and with operation via web browser, etc. (more on next page).

Planned next is the direct integration of the Rail Manager App of Marschmann Model Trains -. an app for tablets. This is particularly important due to the "AOS's" contained therein (the freely programmable "Automatic Operating Sequences“, or AOS).

"Booster – No thanks "?

The MX10 has two rails outputs, up to 12 A can be loaded on "Schiene-1", "Schiene-2" up to 8 A, giving a total of 20 A, which corresponds to a power of 480 watts (at 24 V on both outputs, the highest adjustable driving voltage).

This quite ample power is incidentally not an attempt to beat the "ampere record" among digital systems. It results rather from the use of the latest technology, and it is as such not at all responsible for the relatively high product price - there are many other features that influence price ..

Anyway MX 10 users rarely need to use a booster to get the necessary driving power. This puts into perspective the high cost.

Nonetheless, the MX10 is fully equipped in terms of supporting a Booster. The CAN bus port on the back contains three additional pins for the usual "Booster Control Bus". This can either be removed from the mating 8-pin cable or (more comfortable) will be made available by means of the "Connection and Distribution Board" MX10AVP on screw terminals. Therefore commercial boosters can be connected, and these can use the "Error-line" (one of the control bus wires) to pass on information on shortcuts.

he prefered procedure, in case of a very high power requirement, is to use a second MX10 unit in the slave mode, using the switch supplied for this situation.
Then the exchange of information between main command station and booster occurs on the ZIMO CAN bus, which of course has a lot more choices than the error management of the normal Booster Control Bus

NOTE: Currently (Feb 2016) the MX10 software version for the booster handling is not yet available.

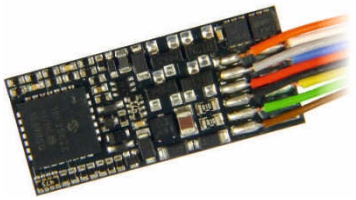
A "normal" ZIMO Booster has therefore not been planned, **but:**

The **StEin** modul is also a kind of booster, with even an 8 circuit booster: thanks to its own DCC output stages for the 8 rail outputs. The driving current (10 A in total) are taken from a separate power supply; for the 8 track sections, and there are separate short-circuit detection circuits, along with HLU, RailCom, occupancy messages, point contact inputs, etc..

Already available:

The "Flat Decoder" MX600 – A "Real ZIMO" in the 20 Euro Class

The term "Flat Decoder" is due to the low height of the one-sided placement of components. The more important effect is probably that a particularly low price is possible, much cheaper than the other two sided circuit boards – normal for ZIMO decoders. Circuitry cost optimizations have been made, but for most applications, the MX600 is still a fully functional ZIMO decoders



25 x 11 x 2 mm

MX600 *(Version with wires)* ***MX600P12*** *(with PluX-12 interface)* **)*

MX600R *(with NEM-652 8-pin plug on wires)*

**)* The MX600P12 version can be plugged into locos with PluX12 and PluX 16 sockets; but it is - strictly speaking - not a standard "PluX Decoder" because the length of the decoder exceeeds the standards (VHDM, MOROP, ..) by 5 mm (25 instead of 20 mm), although the width of 11 mmm is compliant. If an area of 25 x 11 mm is available for installation in a loco with a PluX interface, then the MX600P12 can be used like a regular PluX-12 decoder.

Technical Specificaitons for the "Flat Decoder" MX600 (valid for all types):

DCC + RailCom, DC-analogue
30 V maximum voltage
0,8 A Motor- and Total Current (1,5 A Peak)
4 Funktion Outputs (Lv, Lr, FA1, FA2) with 500 mA current

All Known ZIMO Features
Update capability, motor control and regulation, light effects, train control and feedback, etc.

Dimensions (without plug) ***25 x 11 x 2 mm***

The special restrictions on the MX 600 compared to the other non-ZIMO sound decoders are:

- The MX600 is a pure DCC decoders (possibly the MM capability may be added in a later software version),
- In analogue mode (DC) the MX600 starts a little later (that is, at a higher voltage, because a simpler 5V regulator is installed),
- The MX 600 has NO SUSI interface, and NO Servo Control.

Price: MX600 - €21 - (RRP)

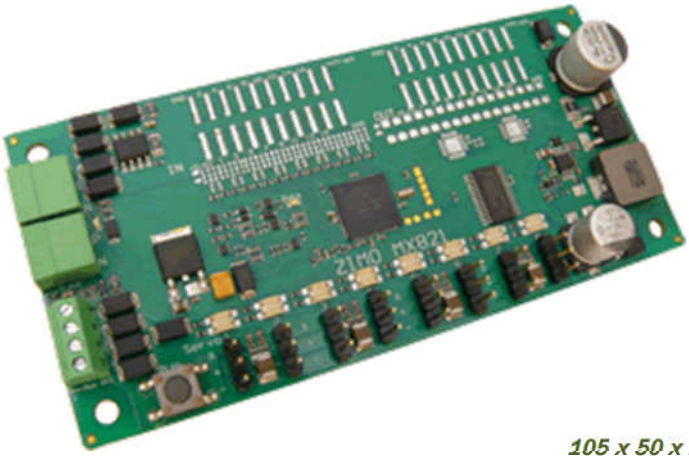
Already available

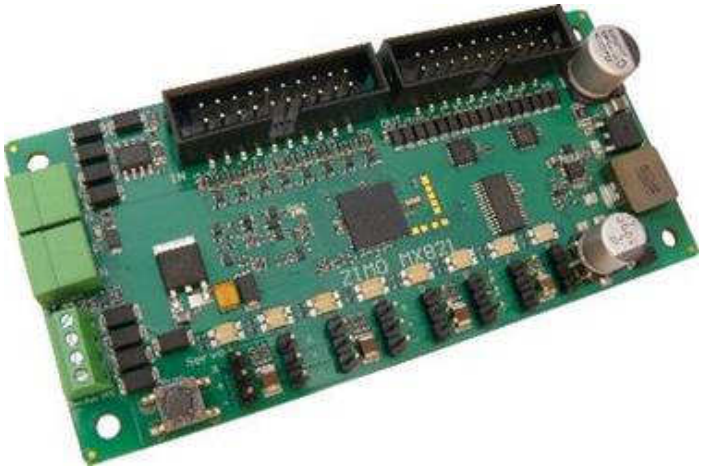
8 times Servo Decoder MX821S and MX821V

The accessory decoders of the MX821 family can be set up for 8 servo drives (mostly for servo powered turnouts, but also be used at railroad crossings, etc.); they contain the three pin connectors for connection of the normal servo power cable; the necessary 5V (if necessary reprogrammed to 6 V) supply is provided from the MX821.

In the MX821V version (not however, in the MX821S) there are 16 inputs for switches (a switch from one track contact or a reed switch into the desired position) or via a switch button, and also 16 outputs for polarization relay or light signals (LEDs or bulbs to 100 mA). The light signals are operated by the same logic as the accessory decoders MX820 in versions -X, -Y, -Z. The difference: MX820 has solder pads for connections; whereas the MX821 has a 20-pin ribbon cable connector ("IDC Connector").

The ZIMO accessory decoders operate according to the standardized NMRA DCC data format with RailCom feedback, the decoders are addressed under the usual accessory addresses to 1 ... 511 (referred to as solenoid addresses).





105 x 50 x 15 mm

MX821S *(8 Servo Connections)*

MX821V *(16 Inputs and 16 Outputs, in addition)*

Special features of the MX821 are:

"Automatic Decoder Searching and Addressing" - works together with the accessory decoders MX820 - from decoders installed in the layout containing initially all the same address (usually "3"), and

"Synchronous Update", which allows you to load a new software version without removing the decoder from the system (which naturally are all connected in parallel).

(Translators Note: To save time, the diagram on right is not translated)

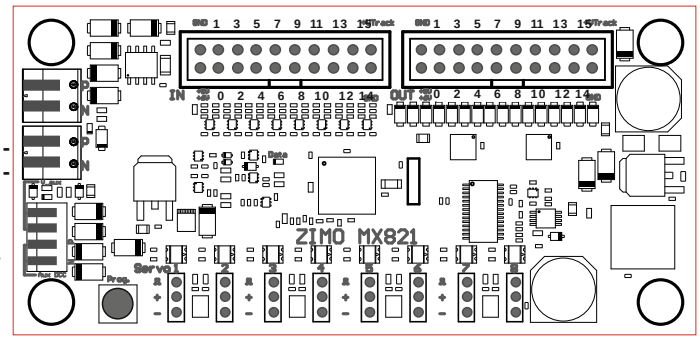
nur MX821V:
16 Eingänge zum Zwangsschalten, für Handbedienung, Meldekontakte, MASSE, 5V, 20 V (= Schiene) Spannungen.

nur MX821V:
16 Ausgänge für Herzstück-Polarisierungs-Relais oder Signallichter (Ansteuerungsmodus 0 ... 4, MASSE, 5V, 20 V (= Schiene) Spannungen.

Buchse SCHIENE, von Digitalzentrale, Ausgang „Schiene“

Zweite Buchse (parallel) zur Weiterleitung **P - N -**

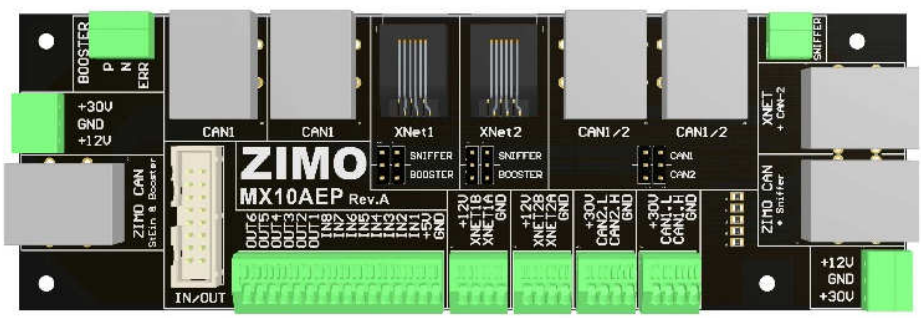
Ersatzversorgung (anstelle SCHIENE), = oder ~, 12 - 20 V und Ersatz-DCC ohne Leistungsentnahme (z.B. Booster Steuersignal) zusammen mit Ersatzversorgung.



Programmiertaste; lang drücken MX821 wartet auf nächsten Befehl zur Übernahme der Adresse.

LEDs zur Anzeige der Stellungen der Servo-Weichen, Servo-Ausgänge 1 ... 8 (Steuerleitung, 5V, MASSE)

The MX10 Connection and Distribution Board - MX10AVP



← CAD drawing of MX10AVP (no photo)

This addition to the MX10 (available from April 2016) makes a number of terminals of the MX10 more accessible. It is preferably placed on the machine or next to it. On the narrow sides, the connectors for MX10 can be found, on the long sides, are the connections to be used for outside devices. Several CAN connections are available (repositioned CAN1 or CAN2) and XNET jacks,screw connectors for I/Os (AOS) etc.

ZIMO Decoder: Tips and News …

Decoder **Software** Version 35.15

The latest software version for ZIMO sound decoders includes a number of fixes and minor enhancements; the most important ones:

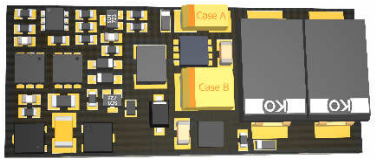
- Option to automatically activate the ditch lights with the honr or bell.
- "Stop light" effect corrected.
- Sound loading made more reliable.

NOTE: In one of the future software versions the often requested "Swiss Mapping" for non-sound decoder will be implemented.

Hardware Revision MX658N18

The sound decoder MX658N18 (with standardized NEXT interface) will in future be manufactured with a new board. The main difference for the user is with reference to the internal energy storage, consisting of two Tantalum Capacitors: its capacity was doubled from 44 to 100 uF uF: This ensures better uninterrupted sound at small contact interruptions. In addition, the new devices have a higher dielectric strength, and above all is the situation at the end of the board, the possibility of an extension of the decoder and increasing the capacity by some additional capacitors.

NOTE: How much capacity should be added, is not yet determined.



The new MX658N18 (CAD), underneath

WARNING for Tantalum Capacitors

The capacitors contained in the **TANTSOPL** pack should **NOT** be used as energy storage systems for large scale-decoders! There is a risk of overheating and the explosion of a capacitor.

The reason for this problem is the voltage rating of tantalum of 16V. However, there are strong variations between examples, as regards the real voltage strength. Someunits do not really support 16V, especially at higher temperatures. During the charging voltage across the power connection of the "small" ZIMO PluX decoder MX633, MX645 is only 14 to 15V (ie safe because less than 16 V) but in large scale decoders rit is more like17 V (i.e. critical because greater than 16).

For all ZIMO large scale decoders, it is recommended to use the Goldcap capacitors GOLMRUND and GOLMLANG.

Load Code with more comfort

The ZIMO "Sound Providers" (Heinz Däppen, Matthias Henning, Georg Breuer, et al) create, as independent authors numerous sound proejts which can be downloaded from the ZIMO Sound Database. These sound proejcts are of high quality and use authentic sounds. These projects are charged extra, and are therefore encrypted, so are only usable with a purchased load code.

The purchase of the load code on request via e-mail is not really optimal because sometimes this involves a long waiting time; therefore ZIMO are working on a simpler way: a system using automatically redeemable vouchers.

Sound Projects - **Georg Breuer**

By the summer of 2016, the following major projects are planned:

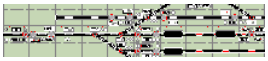
BR **245** / DB BR **423** (squeaker) / DB BR **151** (Recording already done) / DB BR **150** (Recordings also already exist).

ZIMO Workshops & Seminars

Sinsheim - ***DiMo Workshops*** *Register: www.digitalworkshops.vgbahn.de*


4. März 2016, 9:30 - 13:30:
Sound for Models with Winfried Reinecke, Heinrich Schild

5. März 2016, 9:30 - 13:30:
Layout Control with Heinz-Will Grandjean



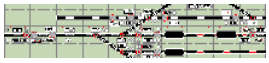
Dortmund - ***DiMo Workshops*** *Register: www.digitalworkshops.vgbahn.de*



22. April 2016, 13:30 - 17:30:
Sound for Models mit Heinz Däppen, Winfried Reinecke

23. März 2016, 10:00 - 12:00:
The ZIMO Digital System with Winfried Reinecke, Peter Ziegler

23. März 2016, 13:30 - 17:30:
Layout Control with Heinz-Will Grandjean



Zuzenhausen - ***ZIMO Seminar „beim Dachsenfranz“*** *Register: ZIMO*

23. Juni 2016, 9:00 - ca. 17:00
ZIMO Sound & ZIMO System
with Reinecke, Schild, Ziegler

NOTE: Scale 1 Meeting in Sinsheim on 24. Juni