

Delivery starts soon: The new Central Command Station - MX10

The MX10 is not just a digital controller with high power. In every way the best possible solution was sought, even if that means a high development effort. So there are two rail circuits (which are not only electrically independent, but operate completely independently in relation to the data signal), two RailCom precision detectors (to decipher also distorted feedback signals), and also "radio suppression circuits" (to avoid the short circuit damage possible during arcing and other related problems).

The following list of specifications, illustrates quite well what is in the rather small-MX10 housing. The small dimensions (18 x 18 x 5 cm) are not only practical for carrying and placing on a layout, but they also demonstrate the high technological standard of the unit, especially the electronic power supply

Powered by external power supply (with electrically isolated output) 20 - 35 V =
for minimum operating (around 3 A Rail Current) 80 Watt
for operation at full power (up to 25 A Total Rail Current) **600 Watt**

Track 1 Output - Operational Voltage (adjustable in steps of 0.1 V) 10 to 24 V
- Voltage start-up time (Distribution of the in rush current) up to 60 sec
- Current overload threshold (adjustable in steps of 0.1 A) ... 0.5 - **12 A**
- Shut-down time **) when current overloaded (adjustable) 0.01 - 5 sec
- Current overload tolerated by 1 - 4 A
for a time from 1 - 60 sec
- Protective shutdown when current jump of (adjustable) 1 - 10 A
in a time interval of (adjustable) 0.01 - 0.50 sec
- Radio suppression with short circuit from 3 to 6 A

Track 2 Output - Operational Voltage (adjustable in steps of 0.1 V) 10 to 24 V
- Voltage start-up time (Distribution of the in rush current) up to 60 sec
- Current overload threshold (adjustable in steps of 0.1 A) ... 0.5 - **8 A**
- Shut-down time **) when current overloaded (adjustable) 0,01 - 5 sec
- Current overload tolerated by 1 - 2 A
for a time from 1 - 60 sec
- Protective shutdown when current jump of (adjustable) 1 - 5 A
in a time interval of (adjustable) 0,01 - 0.50 sec
- Radio suppression with short circuit from 3 to 6 A

**) During the shutdown: Constant current regulation (Driving voltage is lowered)

DC-Output S1 and S2 (included in the circuits for Track 1 and Track 2)
DC-Output 30 V 4 A
DC-Output 12 V 2 A
30 V supply on the ZIMO CAN Bus for connected devices 4 A
12 V supply on the XNET Bus and Loconet (together with the 12V DC Output) 2 A
LED-Outputs (6 Pins on 2 x 8 pin. sockets) 25 mA
ABA-Inputs (8 Pins on 2 x 8 pin sockets) – Threshold 3 V
Audio Output (Jack socket 2.5 mm) Line-out

RailCom Detector Track 1 - minimum measurable amplitude of the RailCom signal 2 mA
- Sample rate (3-times oversampling) 750 kHz
Detector Track 2 - minimum measurable amplitude of the RailCom signal 2 mA
- Sample rate (3-times oversampling) 750 kHz

ZACK Detector (ZIMO train number impulse) Track 1 - Detection threshold 1 V
Detector (ZIMO train number impulse) Track 2 - Detection threshold 1 V

Cable communication **ZIMO CAN Bus 1** (ZIMO CAN front and rear sockets) **125 kBd**
prepared on 512 kBd
ZIMO CAN Bus 2 (additional pins on the XNET connector) 125 kBd
CAN Bus 2 not yet available prepared on 512 kBd
XNET 62.5 kBd
XN2 (second XNET or OPEN DCC Bus) still under development
Loconet (currently only hardware prepared) 16.6 kBd
USB device (client) interface 1 Mbit/s
USB 2.0 host interface (for USB Stick and future devices) 1 Mbit/s
LAN (Ethernet, also for W-LAN Router connection) 10 Mbit/s

Radio communication **MiWi Network** (Derivative of the ZigBee Standards, 2.4 GHz) about **20 kbit/s**

Internal Memory **DRAM and SRAM** (Memory) 256 KB
NAND Flash (Pictures, Database, Control Settings, Sound, etc.) 4 GB



The Main Topics of this Newsletter

MX618 - Decoder with "Next18"

These miniature decoders correspond to the RCN 118 standard of the "rail community," which refers to the "Electrical Interface Next18". The interface consists of an enclosed 18-pin connector

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MX697 – "American" Large Scale Decoder

A solution for every large scale model railway locomotive: ZIMO has already a great variety of sound decoders for large scale railways in the delivery program ...

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MX820X, -Y, -Z - Accessory- Decoder with Light Outputs

Following after the accessory decoder versions MX820E,-D,-V (for one or two switches or double aspect signals) available already for several months ...

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Motor Control: Software Optimization for Maxon Motors

Maxon Motors, especially in large scale models, becoming more widespread. Their special...

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5.5 V – Supercaps – as Energy Storage for 00/H0 decoders

The energy storage so vehicles travel over dirty track or insulated frogs in turn-outs ...

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The ZIMO Sound Database grows steadily ...

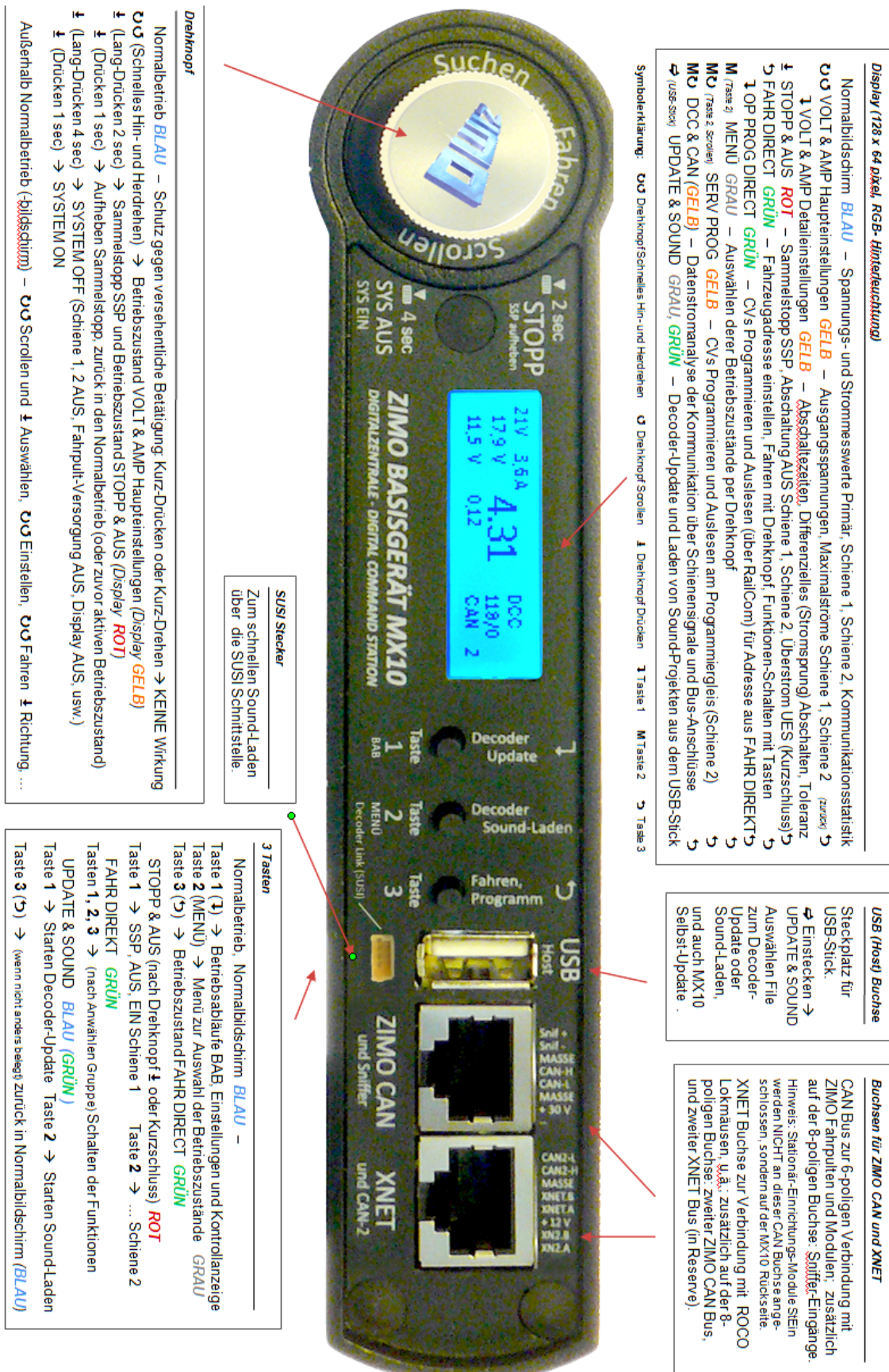
Currently, the ZIMO Sound Database contains more than 350 sound projects, in many cases further split into "sub-projects" (for specific models and more general versions) ...

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Rail Manager, ESTWGJ, STP

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As the text on these diagrams is embedded in the image, the following 2 diagrams have not been translated. Many of the technical terms are the same in English and German, so it should be fairly easy to understand these diagrams, plus a properly translated version will appear in the English version of the Operating Manual in due course. If you have any specific questions, please join the ZIMO-DCC Yahoo Group (<http://groups.yahoo.com/groups/Zimo-DCC/>) and ask them there



Primärversorgung

durch Netzgerät
10 - 35 V =
80 - 600 Watt
Es sollen nur galvanisch getrennte Netzgeräte verwendet werden!
MX10 startet automatisch nach Anschließen/Einschalten des Netzgerätes.

ABA-Eingänge und LED-Ausgänge

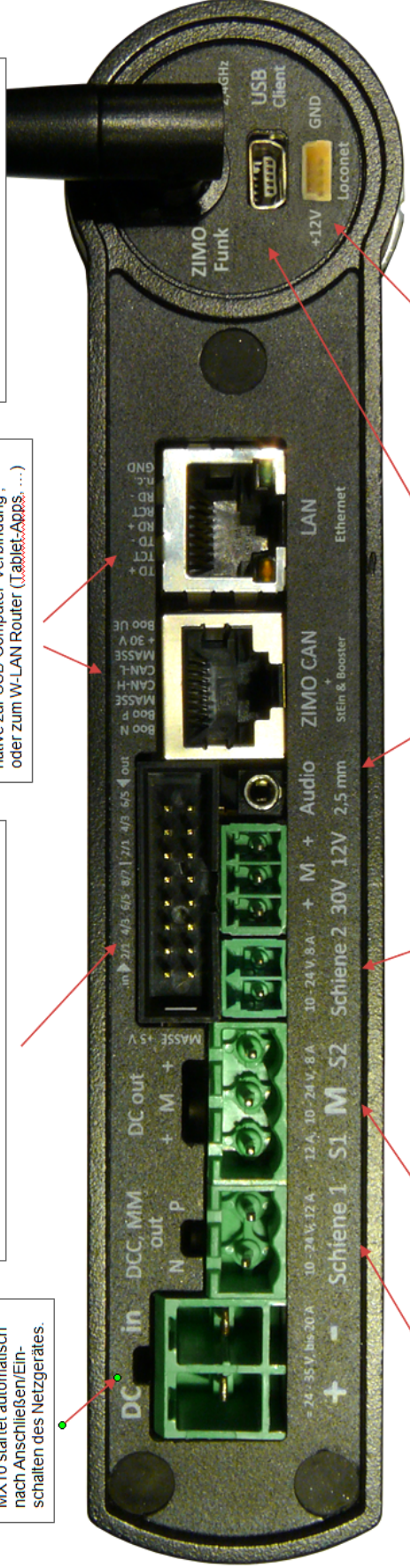
8 Logik-Eingänge (entsprechend auf Masse und Plus, z.B. Schienensignal) für
- Externe Tasten für Not-STOPP und Not-AUS,
- Gleiskontakte für interne ABAs (aut. - Betriebsabläufe)
- Gleiskontakte für externe ABAs (aut. - Betriebsabläufe)
6 LED-Ausgänge (belastbar bis 25 mA) für
- Signale, sonstige Lichter, gesteuert durch ABAS,
Versorgungs-Pins 5 V und MASSE.

Buchsen für ZIMO CAN und LAN

CAN Bus - zur 6-poligen Verbindung mit ZIMO Fahrpulten und Modulen, und/oder ZIMO Stationär-Einrichtungs-Modulen
- zur 8-poligen Verbindung mit "SEin"- und kompatiblen Boostern (CAN und Synchronisations für externe DCC-Endstufen).
LAN Schnittstelle als netzwerkfähige Alternative zur USB Computer-Verbindung, oder zum W-LAN Router (Tablet-Apps, ...)

2,4 GHz Antenne für Mi-Mi Funknetz

ZIMO verwendet für die Kommunikation zu Funkfahrpulten, Mi-Wi, ein „Mesh network“ basierend auf Bauteilen und Software der Fa. Microchip, abgeleitet aus dem ZigBee-Standard. Die Nachrichten werden dabei von Knoten zu Knoten weitergereicht, bis sie das Ziel erreichen, auch wenn gerade keine direkte Funkverbindung besteht. Ausbaufähig auch zum Zugfunk.



Ausgänge: Schiene 1 | Schienengleichspannungen (DC out) S1, S2 | Schiene 2

Doppelschraubklemme „Schiene 1“ - meistens Hauptstrecke
Doppelschraubklemme „Schiene 2“ - Programmiergleis, zweiter Stromkreis
„Digitalstrom“ (DCC, MM, ev. in Zukunft weitere Gleisformate wie mtX, sX)
Polarität N.P., ohne Bedeutung in einfachen Anwendungen, zu beachten bei Anlagen mit Sektionen oder Gleisabschnitten (MX9-, SEin-, Booster-Anwendungen)
Ausgänge Schiene 1, Schiene 2 bezüglich Spannung, Stromgrenzen, usw. unabhängig voneinander einzustellen, je nach Konfiguration und Situation gleiches oder unterschiedliches Datensignal.
3-fach Schraubklemme „DC out „- S1 (zur Schiene 1), MASSE, S2 (zur Schiene 2) zur Versorgung von Stationär-Einrichtungs-Modulen SEin, Gleisabschnitts-Modulen, Kehrschleifen-Modulen, u.a. (innerhalb MX10 der DCC-Endstufen).

Audio-Buchse (Line-out)

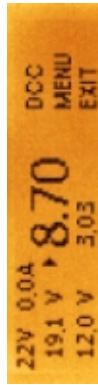
Zur verstärkten Wiedergabe von Sounds, die primär am internen Lautsprecher zu hören sind (Warntöne bis hin zu Sound-Projekten; Nutzung steht noch nicht fest).

USB (Device) Buchse

USB-Verbindung zum Computer, für Anwendungen wie Stellwerks- und Konfigurations-Software.

Loconet Stecker

Vorbereitet.



Normalbetrieb **BLAU**: Spannungs- und Stromanzeige, Daten über DCC- und CAN-Bus Nutzung

VOLT & AMP Detail **GELB**: Einstellen der wichtigsten Kennwerte (Fahrspannungen, Ströme)

STOPP & AUS **ROT**: Sammelstopp oder Fahrspannung ausschalten für einen Ausgang oder für beide



Zustand „Sammelstopp“

ROT auf Schiene 1:

Mit Tasten 1 und 2 Schalten

der beiden Schienen-

Ausgänge Betriebszustand

FAHR **GRÜN**: Fahren (in

diesem Fall Adresse 3) über

Drehknopf und Tasten

MX618 – Decoder for N- and TT Scale with “Next18” Interface

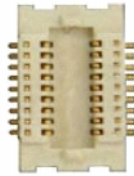
Delivery starts toward the end of October 2013

These miniature decoders use the RCN 118 standard as defined by the "RailCommunity", which is an association of European manufacturers of digital model railway products, usually known as Next18 interface.

As stated in the text of the RCN 118 standard, this interface is suitable for "vehicles with limited mounting space", i.e. vehicles of N and TT scales and small vehicles of 00/H0 scale. The interface is generally 18-pins.

The interface consists of an enclosed 18-pin socket on the system board of the vehicle and a sealed 18-pin plug on the decoder. By a symmetrical arrangement of the electrical connections and the appropriate space limitations in the vehicles, protection against faulty installation is guaranteed

Socket on loco circuit board:



Gleis rechts	1	18	Gleis rechts
Motor +	2	17	F0 r
AUX1	3	16	AUX5/LS A ²⁾
AUX3/Zugbus-Takt ¹⁾	4	15	U+
GND	5	14	GND
U+	6	13	AUX4/Zugbus-Daten ¹⁾
AUX6/LS B ²⁾	7	12	AUX2
F0 f	8	11	Motor -
Gleis links	9	10	Gleis links

The interface will be provided on a non-sound decoder (at ZIMO: MX618N18), as well as on a sound decoder (at ZIMO: MX658N18) from October or November 2013, the first non-sound version MX618N18 should be delivered.

Currently (while writing this newsletter) there is no photo of the new decoder available (first series will be built in the first week of October), here the main technical data:

DCC + RailCom, DC analogue, MM, AC analogue
 Dimensions: 15 x 9.5 x 2.8 mm
 0.7 A motor current and total current (1.5 A peak)
 4 function outputs (Lv, Lr, FA1, FA2)
 4 logic level outputs for more functions
 2 servo control lines or SUSI connections

Of course, the decoders comes with all the well-known ZIMO properties such as update capability, motor control and regulation functions, train control and feedback.

Price MX618N18: RRP €27

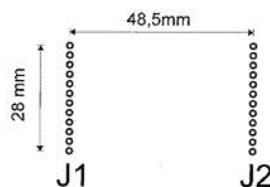
MX697S, MX697V – "American" Large Scale Sound Decoder

Planned start of delivery in November 2013

A solution for every major railway locomotive: Already ZIMO has a wide range of sound decoders for major railways in the product range: the families MX695 and MX696 (6 types) and matching loco circuit boards (8 types), which together provide 22 combinations for the individual forms of locomotive equipment.

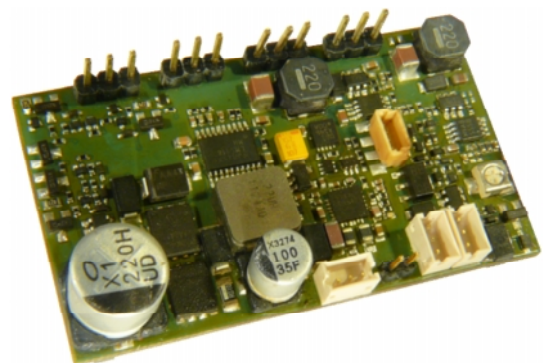
Now a new family arrives: **MX697**, in the two variants MX697S and MX696V. These 2 types cover the increasing demand for decoders which can be incorporated into American locomotives in "1" and "G" scales. Also, in Europe, such models are quite popular. These are targeted to the models from the Aristocraft and Bachmann manufacturers. The vehicles are equipped with not quite identical, but very similar decoder sockets.

„G“ DCC-Schnittstelle für
 ARISTO/BACHMANN
 von Oben



J1	ARISTO/BACHMANN	J2	BACHMANN
Pin #	Purpose	Pin #	Purpose
12	Rail left +		
11	Rail left +	11	NC (AUX Power)
10	motor left side	10	Fireboxflicker (FA3)
9	Rearlight FA0r	9	NC (FA4)
8	Smoke on/off FA6	8	Cabligh (FA5)
7	GND	7	NC (FA2)
6	Decoder Plus	6	NC (FA1)
5	S3 / FA6/ NC (wahlweise)	5	Trainbus - (wahlweise NC/FA8/SUSI D)
4	Frontlight FA0f	4	Trainbus + (wahlweise NC/FA7/SUSI C)
3	motor right side	3	speaker +
2	Rail right -	2	NC (wahlweise S1/S2/S3)
1	Rail right -	1	speaker -

FETT = Werkseinstellung



DCC + RailCom, DC Analogue, MM, AC Analogue
 56 x 32 x 21 mm

4 A Motor, Total (Peak 10 A)

10 Function Outputs

1 Smoke Fan Connection

3 switchable inputs

4 complete servo connections (Control, Minus, 5 V)

3 Low Voltage outputs

(5 V, 10 V, variable 1.5 V to track voltage)

SUSI (with 4 pin socket)

Direct connectors for energy storage ("stay alive")

(Elkos, Goldcaps or Batteries)

10 Watt Audio, 4 - 8 Ohm, 32 Mbit, 6 Channels

Sound decoders are of course really only useful with appropriate sound projects. As for American locomotives, this is one of the specialties of our sound provider Heinz Däppen, mainly known by model railroaders for his outstanding work in the field of sound for the Rhaetian Railway.

As usual with ZIMO sound decoders, the "American interface" provides more than the minimum features of a sound decoder: for example, (at least in the V-type) there are complete servo outputs and an adjustable low-voltage on-board. Circuit technology and software, and thus the technical data of the MX697 are quite similar to the known type MX696.

Price MX697S / MX697V: RRP €168 / €188

MX820X, -Y, -Z – Accessory Decoder with additional light outputs

Delivery is planned to start in November 2013

After the accessory decoders MX820E, -D, and -V (for one or two switches or double-aspect signals) have been delivered for several months, now also start the types MX820X, Y, Z with the "additional light outputs".

These represent a particularly cost-effective type of control of light signals, especially those with many lamps,

Type **MX820X**: as MX820E (therefore one turnout), but with 8 additional light outputs (open collector, 100 mA) for signal lamps

Type **MX820Y**: as MX820V (therefore 2 turnouts), but with 16 additional light outputs (open collector, 100 mA) for signal lamps

Type **MX820Z**: without the normal outputs for turnouts, "only" 16 light outputs (open collector) for signal lamps



MX820Y Under side



MX820Z Under side

(with solder pads for 16 Signal lamps or LEDs)

For the operation of the light outputs (= the connected signals), there are several "Control Modes" (selected with CV # 70, each separated by ones and tens place for the light outputs 0 .. 7 and 8 .. 15)

Control Mode = 0:

The 8 light outputs of a group form a light signal group for which the 8 possible signal aspects are stored in the associated CVs (# 157 and # 150 ... 158 ... 165). The decoder MX820X thus has up to 8 light signals with up to 8 aspects connected; MX820Y or -Z can have 2 signals, each with 8 aspects.

The control (= switching on the signal stored images) via the corresponding accessory commands ("Turnout commands" accessory commands) on the relevant "add address":

Command with sub-address 0, left: signal aspect 1 (according to CV # 150),

Command with sub-address 0, right: signal aspect 2 (according to CV # 151),

Command with sub-address 1, left: signal aspect 3 (according to CV # 152), etc.

Control Mode = 1:

The light outputs are organized in pairs, i.e. 4 (MX820X) or 8 (MX820Y or Z) red-green signals... Each of these signals is addressed by its "extra" address and the Sub-Address (such as a turnout).

Control Mode = 2:

In this case, there are no predefined signals or signal aspects, but each light output is set individually through the corresponding accessory command ("turnout" command), on the "additional address" (according to CV # 578, etc.) and the respective sub-address and the left/right bits – on and off.

Control Mode = 3 (not yet available, for delivery later in October 2013 via software update!):

(for the "extended" format of the accessory commands according to NMRA)

The 8 light outputs are in a group (0-7 or 8-15), 32 signal aspects available (in the CVs # 150... (213). The control is via the "extended" accessory commands.

Control Mode = 4 (not yet available, for delivery later in October 2013 via software update!):

Only in this mode (a mode which has no equivalent in the NMRA or VHDM but is a ZIMO speciality) the existing light outputs can be used particularly well, according to the requirements, how many light outputs are used for each signal can be individually defined. 2, 3, 4, up to 8 signal lamps for each signal with 1 ("1", if it is a single light) and up to 8 signal aspects.

The configuration is not address organized (as usual), but object-oriented: for each signal object there is a quota of 12 CVs available; see the following table. For each signal defined there: the accessory address for this signal (the entire decoder can have up to 8 "object addresses" in this way), the number of light outputs, one possible dependency as a distant signal, and up to 8 signal aspects.

Such a defined signal is controlled by the address of the object, and the switching commands ("left", "right" to the four lower addresses (therefore up to 8 signal aspects).

Because of the relatively complex configuration, this control method is intended rather for computer operation.

Prices MX820X / MX820Y / MX820Z: RRP €38 / €43 / €28

Motor Control: Software Optimization for Maxon Motors

Included in software version 34 (scheduled for October 2013)

Maxon Motors, especially in large scales, are becoming more widespread. Their special properties (similar to the Faulhaber motors, but not the same) sometimes lead to unpleasant stuttering at moderate speed. With new software (version 34) Maxon Motors will now be given special consideration and drivability that is optimally designed for this engine class.

The new software version 34 also includes other new features at the same time, especially (in the case of sound decoders) make options for the operation of the prototypical

Mallet-Locomotives: the two engines generate steam and blow smoke independently (when using a smoke generator with fan), and are controlled by two independent axle detectors or simulated axle detectors that mimic the effect of the not quite synchronised engines.

5.5 V - Supercaps^{*)} as Energy Storage for 00/H0 Sound Decoder

Space-saving and affordable with planned Sound Decoder **MX645G (... -R, -F, -P16, -P22)** ^{**)} ,
and planned Non-Sound Decoder **MX633G (... -R, -F, -P16, -P22)** ^{**)}

^{*)} Supercapacitors are known better under the brand name "Gold Cap" (although they are not made of gold)

^{**)} New variants of the already known decoder family MX645 and MX633

The energy storage (or stay alive) is used in vehicles to pass over dirty track or turnout frogs without breaking or restarting the sound is a major theme of the digital model railways, for which there are already numerous solutions. ZIMO decoders, in particular sound decoder, support the connection of external energy storage capacitors by special circuits in the decoder itself, which can be used to reduce the side effects of the addition of energy storage systems (such as the high "in-rush current" when powering up, faults during the CV programming, etc.). In the case of miniature types of decoders, where there is no room for such circuits, there are also methods for external wiring.

However, energy storage capacitors need quite a lot of space if they are to have a real impact. This begins at about 1000 uF, much better already from 2000 to 5000 uF capacitors which are usually larger than the decoder itself. When Gold Caps with much better capacity to size volume ratio, is important to note that Gold Caps only can be charged to a voltage of 2.7 V, and so, in practice, several are connected in series (e.g. ZIMO modules GOLM ... with 7 gold caps), which is an excellent solution for large scales, but not for 00/H0 (because for example, the dimensions of 16 x 8 x 14 mm). Gold Cap modules with voltage transformers (driving voltage to load Gold Cap return to driving the vehicle) also need much space, and are also relatively expensive (approximately from 25 euros).

The new solution with 5.5 V - supercapacitors is based on that fact for the purpose of energy storage no voltage on the order of the driving voltage (usually 14 to 18 V) is used, but also about 5 V range, to correct contact interruptions at low speeds: modern model train engines are also moving with 5 V (the load-balancing scheme compensates for the low voltage as much as possible), and the sound amplifier is anyway supplied in normal operation with only 5 V (and runs further down to 3 V).

Such supercapacitors are more and more commonly available in the electronics distributors (they are needed outside the model train industry...), they are still - because new - relatively expensive but will surely become cheaper. Especially interesting are the flat designs that happen to have quite similar dimensions as decoders and can be accommodated easily in model locomotives. For PluX connected decoders, even between decoder and locomotive circuit board. Popular types (including a very large selection) are likely to be:



BZ055B153ZSB with 15mF = 15.000 μ F (20x15x2.7mm) or BZ055A333ZSB with 33 mF = 33.000 μ F (20x15x3.5mm)

These supercapacitors thus offer at least a 10 times larger capacitance as electrolytic capacitors, which would accommodate vehicles in 00/H0, and a bridging period of a few tenths of a second (of course highly dependent on the current requirement).

Of course these can be combined with a number of such Gold Caps connected in parallel, or even about two round gold caps (1 F, 2.7 V, size 8 x 12 mm), connected in series (as they have to be at ZIMO) with a 5.5V supercapacitors to get the desired capacity. The latter is even a very high capacity (500.000 uF) at very low cost.

To connect these 5.5V supercapacitors to the decoder (without external components), however, the modified decoder types available today are needed, these will be

as Sound Decoder **MX645G (... -R, -F, -P16, -P22)**

with its own wires for connection of supercapacitors,

charging circuit with 5.5V (instead of 16 V), otherwise the same as MX645

as Not Sound-Decoder: **MX633G (... -R, -F)**

charging circuit with 5.5V (instead of 16 V), otherwise the same as MX633,

no PluX types because these extra leads are not possible.



Price MX645G, ... / MX633G, ...: RRP €92 / €43 (pin types are the same as the corresponding "normal types")

The same rates of loading for "5.5 V types" as "normal types" are possible because the "normal types" already have a regulated charging circuit for the energy storage feature (set to 16 V), which is for "G" modified only slightly (to 5.5 V).

The ZIMO Sound Database grows steadily

Currently, the ZIMO Sound Database contains already more than 350 sound projects, in many cases further split into "sub-projects" (for specific model as well as more general versions). These are divided into

Free Downloadable Projects: freely available for downloading and installation in any ZIMO sound decoder (if required can be modified according to the customer's own ideas).

Coded Projects: unlocked by purchasing a "load code" (with the purchase of the decoder or later).

Preloaded Projects: installed as a complete package with the decoder, or, in some cases, with the entire vehicle.

This organization is (unfortunately) not always conveniently for the user in terms of the availability of sound projects or decoders, but it delivers this great diversity, through the cooperation of ZIMO with a larger and more increasing number of "Sound providers" becoming available.

"Sound Providers" are working as an independent service provider and create mainly sound projects from their own countries or from their own special area where they have special knowledge and access (to train drivers, railway companies, ...).

On this page we provide some info about sound providers:

Other Sound Providers - not described (scheduled for the next newsletter for space reasons):

Stramitzer (Austria), Henning (Germany), Meszaros (Slovakia), Schmidt (Czech Republic), Portigliatti (Italy), Wala (Poland), ZIMO intern



Oliver Zoffi (left) makes privately-created Sound Projects (focus Austria) for free download (**Free D'load**)

Arnold Hübsch (right) produced together with a loco driver projects (Austria) and sells them loaded onto ZIMO decoders (**Preloaded**).

Heinz Däppen (right image on the left) was the first commercial provider (co-inventor of the **Coded** method) and constantly brings new sound projects, mainly RhB and American steam locomotives, meanwhile for vehicle manufacturers, the ZIMO decoders work, with Load Codes and the sound project downloaded from his own website and available at ZIMO.

Paul Chetter (left image on right) makes Sound Projects for several British retailers and manufacturers (Digitrains and RAIL EXCLUSIVE), most of them are available in **Preloaded** form; numerous ZIMO decoder features result from his suggestions, Paul Chetter is also active in journalism - his specialist articles on sound are also found in German magazines.

Matthias Lenz (right in picture on left) is the latest ZIMO Sound Partner, and he has just delivered its first projects for Roco locomotives. Along with Karl Edlmaier (left), he runs the "Westbahnstudios" (Music production, voice recordings, restoring old tape recordings, space → acoustics for theater, etc.), what a boost this means in audio professionalism for ZIMO sound.

John Russell (left in picture on the right, with Phil Sutton & Jamie Walsh of RAIL EXCLUSIVE, UK) has a particularly important role: the programming of the database and website as well as the introduction of sound projects.



ZIMO Sound Database									
Spur	Antrieb	Art, Bauart, Bezeichnung	Proben	Info	Typ	Autor (Inhaber)	Datum		
Standard	Dampf	EASY-LINE für LCD-Dampf-Loks	Free D'load	ZIMO	Oliver Zoffi	Jul 08			
Standard	Dampf/Diesel	Europäische Dampf/Diesel Collection	Free D'load	ZIMO	Oliver Zoffi	Mar 12			
Standard	Dampf/Diesel	US Steam/Diesel Collection	Free D'load	ZIMO	Oliver Zoffi	Mar 12			
Multinational									
Schmal	Diesel	Schöma (D1-150)	Free D'load	Provider	Heinz Däppen	Apr 13			
Standard	Dampf	EDO 214 (D70 DR12, CDD DR12, CTR 142)	Free D'load	Provider	Matthias Henning	Jan 12			
Standard	Diesel	DE VT 39, CDD 5361 usw.	Free D'load	ZIMO	Oliver Zoffi	Mar 12			
Standard	Diesel	Bombardier (Lent 1088, UB, MAY, usw.)	Free D'load	ZIMO	Oliver Zoffi	Mar 12			
Standard	Diesel	Trumpf DR 182, CDD 1616 usw.)	Free D'load	ZIMO	Oliver Zoffi	Mar 12			
Standard	Verschiedene	Preloaded (Sound (Turbine Sound))	Free D'load	ZIMO	Oliver Zoffi	Apr 13			
Standard	Verschiedene	Waggon	Free D'load	ZIMO	Oliver Zoffi	Jan 08			
Austria									
Schmal	Dampf	R60	Free D'load	ZIMO	Oliver Zoffi	Jan 08			
Schmal	Dampf	NÖ R 100/100 300	Free D'load	ZIMO	Oliver Zoffi	Jan 08			
Schmal	Dampf	Stainz	Free D'load	ZIMO	Oliver Zoffi	Jan 08			
Schmal	Dampf	U	Free D'load	ZIMO	Oliver Zoffi	Jan 08			
Schmal	Diesel	2001	Free D'load	ZIMO	Oliver Zoffi	Jan 08			
Schmal	Diesel	2001.03	Free D'load	ZIMO	Oliver Zoffi	Jan 08			
Schmal	Diesel	2005	Free D'load	ZIMO	Oliver Zoffi	Jan 08			
Schmal	Diesel	2005 (1.08 Version)	Free D'load	ZIMO	Oliver Zoffi	Jan 08			
Schmal	Diesel	2100	Free D'load	ZIMO	Oliver Zoffi	Jan 08			
Schmal	Diesel	6000	Free D'load	ZIMO	Oliver Zoffi	Jan 08			
Schmal	Diesel	Protektor	Free D'load	ZIMO	Oliver Zoffi	Jan 08			
Schmal	Diesel	Gemündel U 75 58-St	Free D'load	ZIMO	Oliver Zoffi	Jan 08			
Schmal	Diesel	2002 N 1139	Free D'load	ZIMO	Oliver Zoffi	Jan 08			
Schmal	Diesel	2100	Free D'load	ZIMO	Oliver Zoffi	Jan 08			
Schmal	Diesel	1000	Free D'load	ZIMO	Oliver Zoffi	Jan 08			
Standard	Dampf	R60 214/100 10	Free D'load	ZIMO	Oliver Zoffi	Jan 08			
Standard	Dampf	EM 32	Free D'load	ZIMO	Oliver Zoffi	Jan 08			
Standard	Dampf	1000 10	Free D'load	ZIMO	Oliver Zoffi	Jan 08			
Standard	Dampf	Rh 478	Free D'load	ZIMO	Oliver Zoffi	Jan 08			
Standard	Diesel	2005	Free D'load	ZIMO	Oliver Zoffi	Jan 08			
Standard	Diesel	2005	Free D'load	ZIMO	Oliver Zoffi	Jan 08			
Standard	Diesel	2005	Free D'load	ZIMO	Oliver Zoffi	Jan 08			



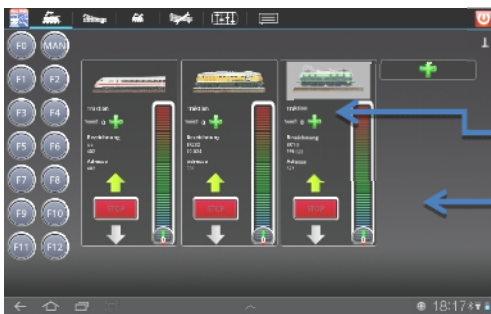


Version from September 2013 Version 2.6

Model Railway Consultant - Wolfgang Marschmann, Wilhelmstr. 160, 47198 Duisburg, Deutschland

New Version 2.6 with modifications and improvements

- 1) **Vehicle Management:** Improvements in creating and managing multi-traction vehicles
Extension of the control path for the train control
- 2) **Track images:** Create and manage multiple track images
Adjustment of the turnout display connections
Full integration with the MX10
- 3) **General:** Better indication of the connection status Base Station PC Tablet/Smartphone, on the PC and Tablet / Smartphone
English Version
- 4) **Preview for Version 3.0:** Live transmission from the car and locomotives
Optimization of the CV structure, Data storage as a backup



← Actual Main Screen

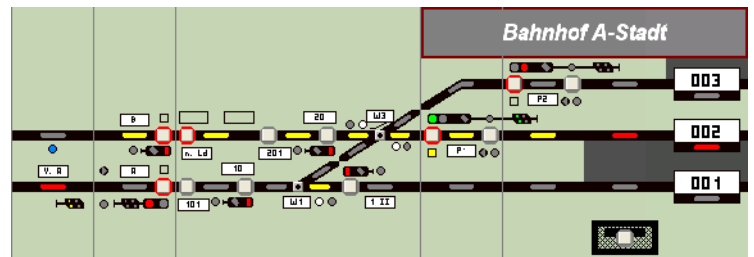
Displays whether the connection is established

Creating and Managing vehicles directly in the main screen

Extended regulator for the locomotives

ESTWGJ - Version 6

Updated on 14.06.2013 (Effective as of **ESTWGJ V_6.0. 115**)
Copyright: Heinz Willi Grandjean, 56154 Boppard/Rhein, Deutschland



AUSZUG:

New Pull Down Menus: The group key-dependent functions WGT, WHT, WSPT / WESpT can now be turned on via pull-down menus directly on the switch element. The function takes into account the different mode of action in ESTWGJ-DRS2. The group key-dependent functions FHT and FRT can also be accessed by right-clicking the closed element, where the program takes care of the respectively applicable command (Single or Group).

Flexible adaptation of single track resolution: The dissolution of a single track no longer has to be entered at the first pre-sealed and superior element, but can be moved to an element further or earlier in direction. Will this new element retracted, all return items are located track total dissolved as a group. d) Monitor the maintenance, if the target signal in an automatic block sections:

Resolution of Input Track System for ESTWG_DrS2: Through a virtual key can now drive a train into a station, when the exit from the station by means of a track is not immediately resolved. Currently, it is checked whether the track is locked and shows the entry signal HP 0-term. (More tests are planned for later versions of the ESTWGJ.)

Simplification of the automatic block: The automatic block signal goes back to drive when all sections of the block have been freed. This works without the previous direction of testing, in particular to facilitate the operation for beginners.

STP - Das Stellpult für Modellbahn-Profis

(STP = The Control Panel for Professional Railway Modellers)

New STP V5.21: Automatic processes can be un-prioritised now, so that the order depends on when trains come into the fiddle yard and not on the "main track" preferential treatment, i.e. by testing, the order placed on when the train exits, is not fixed, but is constantly being updated (the last track occupied by an incoming train has then the lowest priority). If this functionality is switched off, then the order is as before.