



## Newsletter - FEBRUARY 2010

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### *Nuremberg 2010: ZIMO in the DB-Museum (Transport Museum)!*

Although we no longer participate in the official Toy Fair at Nuremberg, we will be available in Nuremberg for customers :-

*DB Museum (Verkehrsmuseum) – Lessingstraße 6 (U-Bahn Opernhaus)*

*ZIMO Exhibition and Meeting point from 4. - 7. February 2010, 14:00 to 19:00 every day  
(Thursday to Sunday only, not Monday or Tuesday!)*

There will not be a full exhibition of ZIMO products, but some will be presented. This is mainly an opportunity to discuss future product strategy and meet with you. From our side, there will be : Hubinger, Ziegler (both from ZIMO), Schild (ZIMO Dealer). and Sperrer (STP, PfuSch).

*We look forward to welcoming you to the Transport Museum . . .*

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### *ZIMO Catalogue 2010?*

Due to the not yet completed renewing of the ZIMO product range, we do not have a new catalogue for 2010. The ZIMO Website [www.zimo.at](http://www.zimo.at) and the ZIMO Newsletter will keep you informed about everything worth knowing.



### *Focus 2010: The New ZIMO Digital System*

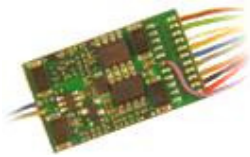
The coming launch of the new digital system, built around the MX10 base station and the MX32 hand-held controller (CAB), represents the latest achievements in microelectronics for use in model railways. ZIMO shows what modern technology can do and at a lower cost than many think.

High-resolution colour displays in the controller, bi-directional communication (RailCom) with the decoder, network radio solutions, stable and secure traction supply, comfortable software updates of all components, etc. identify the highest level of digital technology as provided by ZIMO in 2010. These are not expensive "frills", but modern solutions to meet the high demands of users.

The "old" ZIMO system will also benefit from the new technology: the FURC module (Funk=Radio and RC=RailCom) is derived from the MX10 and will allow the MX1 to connect via wireless (ZigBee) to the new MX32 controllers and use the Global RailCom detector, which transmits information received from the decoder, via the CAN bus to other controllers and computers, if connected.

RailCom is a registered trade mark of Lenz Elektronik GmbH.

More information about the new system: [http://www.zimo.at/web2007/newsletter/ZIMO Newsletter 2009 DEZEMBER E.pdf](http://www.zimo.at/web2007/newsletter/ZIMO_Newsletter_2009_DEZEMBER_E.pdf)  
See also News Announcements on the ZIMO Website and future ZIMO Newsletters.



## ZIMO Decoder 2010: Proven and New Types

Picture above: MX632V

ZIMO Decoders have been known for excellent handling characteristics for a long time, plus many function outputs, for servos and other function such as lights, and various advanced driving modes (constant braking distance, km/h speed control, HLU and other braking methods, analogue control, etc.). All decoder types support multiple protocols (DCC, MM, Analogue DC, Analogue AC from MX630 upwards), include RailCom and the software can be updated with plenty of spare capacity for development of the software.

The more recently developed decoder Families (MX630, MX632) are especially robust (can withstand voltage up to 50 V), naturally all types have the usual protection against temperature or current overload!

Currently (February 2010) and soon (from March or April 2010) to be available Loco Decoders:

- Family **MX620** Miniature for N, TT 13,5 x 8,8 x 2,5 mm, 0,8 A, 4 Function Outputs . . . 4 Types (various plugs incl. 6 pin direct) (soon out of production)
- Family **MX621** Miniature for N, TT 12 x 8,5 x 2 mm, 0,8 A, 4 Function Outputs . . . 4 Types (various plugs incl. 6 pin direct)
- Family **MX630** Standard for 00/H0 20,5 x 11 x 3,5 mm, 1,0 A, 6 Function Outputs . . . 4 Types (various plugs incl. PluX16)
- Family **MX631** High Power 00/H0, (0) 20,5 x 15,5 x 4 mm, 1,2 A, 6 Function Outputs . . . 4 Types (various plugs incl. MTC 21-pin)
- Family **MX632** High Power 00/H0, (0) 26 x 17 x 4,5 mm, 1,8 A, 8 Functions Out. . . 8 Types (various plugs incl. 21-pin, C-Sin, low voltage)
- Family **MX640** SOUND 00/H0, (0) 33 x 16 x 5 mm, 1,2 A, 6 Functions Out, 1,1 W Audio . . . 5 Types (various plugs incl. 21-pin, C-Sin)
- Family **MX642** SOUND 00/H0, (0) 30 x 15 x 4,5 mm, 1,2 A, 6 Functions Out, 3 W Audio . . . 5 Types (various plugs, incl. 21-pin, C-Sin)
- Family **MX69** Large Scales, 55 x 29 x 18 mm, 3 bis 5 A, 8 to 14 Function Outputs, 4 Servo's . . . 3 Types (High load, low voltage)
- Family **MX690** SOUND Large Scales, 55 x 29 x 18 mm, 3 to 5 A, 8 to 14 Functions Out, 4 Servo's, 1,1 W Audio . . . 2 Types
- MX690 "enhanced"** (SOUND Large Scale, 60 x 40 x 25 mm, Data as MX690, but 10 W Audio . . . 8 Types

### The Decoder Highlights in 1st Quarter 2010

#### The new Miniature Decoder **MX621** (12 x 8,5 x 2 mm) . . . the Smallest Decoder in the World?

Many manufacturers have produced the "smallest decoder in the world", but most of them omitted various important features such as function outputs, no advanced motor control, no short-circuit protection or no temperature monitoring/protection.

In terms of features, the ZIMO MX621 decoder is not miniaturized, although it is one of the smallest decoders, it is a full featured decoder, with 4 function outputs, complete hardware and software motor control, with full protection from overloads of current, voltage and temperature, software update capability, and equipped with RailCom. With a 40 Volt rating, this is much higher than most large decoders. Only the software has been reduced to remove certain irrelevant features for this size, such as servo-controlled fans and smoke.

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Decoder Family **MX621** Miniature for N, TT, H0e, (00/H0) 12 x 8,5 x 2 mm 0,8 A 4 Function Outputs . . .  
. . . **4 Types** (wires, NEM651 direct, NEM652, NEM651 on wires)

#### The new 00/H0 Decoder **MX631** (20,5 x 15,5 x 4 mm) . . . the upscale (ZIMO) Standard.

MX631 is the "missing link" between the "ZIMO Standard" Decoder MX630 and the "extremely strong" MX632; thus the MX631 located between these 2 types in terms of capacity, dimensions and price.

The MX631 has (unlike the MX630) – in every version of the MX631 – the advantage of the interface for energy storage, just like the MX632 und MX642. Thus by choosing one of the MX631, MX632 or MX642, you can have the convenience of energy storage (in capacitors) in all 00/H0 and 0 vehicles - with and without Sound.

MX631D is the variant with 21 pin "MTC" plug, and is therefore the ZIMO Standard Decoder for this interface (as the MX630 does not have this interface and the MX632 is often stronger and larger than necessary).

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Decoder Family **MX631** 00/H0, (0) 20,5 x 15,5 x 4 mm 1,2 A 6 Function Outputs (+ 2 Logic level, Servos, or SUSI) . . .  
. . . **4 Types** (wires, NEM652, NEM651 on wires, MTC 21-pin, C-Sinus)

#### The new Sound Decoder **MX642** (30 x 15 x 4,5 mm) . . .

. . . with compelling and superior basic data:

**1,2 A Motor current, 10 Function Outputs<sup>\*)</sup>, 3 Watt Sound<sup>\*\*)</sup>, 32 Mbit<sup>\*\*\*)</sup>, Direct Energy Storage Interface<sup>\*\*\*\*)</sup>**

<sup>\*)</sup> 8 "normal" Function Outputs with a total current of 800 mA, in addition 2 "LED Outputs" each with 10 mA.

<sup>\*\*)</sup> 3 Watt for a loudspeaker impedance of 3 Ohm; for example 3 normal 8 Ohm loudspeakers connected in parallel, or a 4 Ohm loudspeakers and, if necessary an 8 Ohm type in parallel.

\*\*\*) 32 Megabit means 180 sec playing time at 22 kHz sampling rate (used for higher quality), or 360 sec at 11 kHz, as an alternative. In this respect the MX642 is the same as the MX640.

\*\*\*\*) see next section in this newsletter.

Other advantages of the MX642 over the MX640:

- **Withstand 50 V** (like the MX630, MX632, as against the 24 V MX640), in addition to DCC, MM, DC analogue, also AC analogue,
- **Highly effective ESD-Protection** for loudspeaker outputs (a known weakness of the MX640!),
- **Shorter and thinner:** 30 x 15 x 4,5 mm (instead of 33 x 16 x 5 mm of the MX640), suitable for more locos.

The MX642 is offered in addition to the MX640 (the MX640 is now even cheaper than before, the MX642 is about 20% more, but still a good bargain ...); both types are the same in all other features (beside those mentioned above): maximum current 1,2 A, multiprotocol DCC/MM, RailCom, all the usual ZIMO features, ...

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Decoder Family **MX642** 00/H0, (0) 30 x 15 x 4,5 mm 1,2 A 8 + 2 Function Outputs 3 Watt Sound ...  
... **5 Types** (wires, NEM652, NEM651 on wires, MTC 21-pin, C-Sinus)

More decoder Info at [www.zimo.at](http://www.zimo.at)!

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## Energy Storage Interface: An important Feature in all newly designed Decoders

*Already implemented in all types of the MX632 family, soon in the MX631 and MX642 Sound Decoder.*

Energy storage: a capacitor is connected to the decoder to bridge any small disruptions of operating voltage, this greatly benefits the smooth running of the decoder, even with small capacitors of 100 µF, which have shown positive effects, such that larger (space consuming) and expensive (such as Gold Caps) capacitors are not really necessary.

The use of energy storage capacitors for decoders has been long recommended by ZIMO, with the MX631, MX632 and MX642 families, it is now possible to connect capacitors directly (without the additional circuitry of resistors, diodes and inductors previously required), which is so much more convenient and with no additional cost.

The positive effects of energy storage:

- **Prevention of loco stalling and light flickering** on dirty rails or insulated frogs, especially with the ZIMO decoder feature which "prevents stopping on interruption of current", whereby the loco does not stop when there is no contact with the rails, but continues on to the next track contact, so long as the capacitor can supply power.

Already condenser values from 1000 to 3300 µF are effective (depending on current consumption),

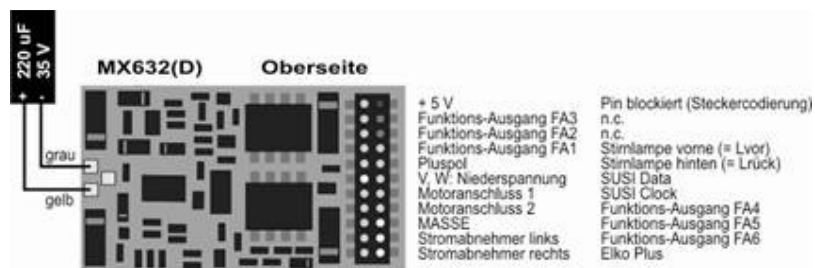
- **Heat Reduction** and the blind consumption of the decoder, especially with low-impedance motors,

- when using **RailCom Technology**: the energy loss through the "RailCom Gap" is averted, the motor noise is reduced and the quality (readability) of the RailCom data is improved.

The ZIMO technology of the direct energy storage interface provides for the **limitation of the "In-rush current"**, i.e. the capacitor charging current when the controller is switched on. An unlimited "in-rush current" when switching on the layout can cause long-term damage to wheels and pick-ups, and can cause power-on overload cut-outs for DCC base stations and boosters (at least with devices with simple current overload cut-outs).

In the package of a ZIMO decoder, a small capacitor is now included. Other capacitors are readily available at store that stock small electronic components, or you can purchase the ZIMO ELKSORT package which includes several different size capacitors, enough for 10 or 20 locos (they can be connected in parallel).

*Here is an example of the MX632D (this is also valid for the MX631, MX632 and MX642):*



# The current Feature List for ZIMO Decoders in 2010


ZIMO only offers full featured decoders

*No "Basic Decoder", Eco-Types or anything similar.*

## GENERAL:

- DCC Addresses 1 ... 10239, Addresses 1 ... 127, MM Addresses 1 ... 80, Functions F0 ... F12 ( .. F20 for Sound),
- 14, 28 or 128 (external) speed steps, 256 or 1024 internal steps,
- Programming of CVs in "service mode" (on programming track) and in "operations mode",
- uninterrupted operation (without decoder reset or new start) for an interruption of 1 or 2 sec (independent of any energy storage device),
- avoidance of automatic stopping on dead pieces of rail, insulated frogs, dirty rails (only works if external energy storage is available),
- DC Analogue operation with automatic detection, also during driving, alternatively regulated or unregulated,
- AC Analogue operation (including Märklin voltage pulsing to reverse) with the decoders of the family MX630, MX631, MX632, and MX642.
- Updatable Software: new software versions can be loaded without opening the loco, with the help of the ZIMO Decoder and the MXDECUP Update Device, the MX31ZL controller or the MX10 base station; using a computer with the ZIRC ("ZIMO Rail Centre") software or direct on the USB-Stick (via the MX31ZL or MX10).

## SAFETY:

- Overload protection for all Outputs, Overheating protection, For details see  under "Steady state current" and "Peak current",
- Protection against overload spikes of the motor inductance via specific suppressor diodes,
- Voltage protection up to 40 V (MX621), 50 V (MX630, MX631, MX632, MX642), 24 V (MX640, MX69, MX690),
- wired versions protected by insulating clear shrink tubing ( MX620, ..., MX630, ... , MX631, ..., MX632, ..., MX642, ..., but not MX620N, MX630P, MX631D, etc.)

## MOTOR CONTROL and OPERATION:

- high frequency motor control, with either 20 or 40 kHz (MX621: 32 kHz),
- suitable for all DC motors and coreless motors (Faulhaber, Maxxon), with additional diodes also for AC motors,
- also for "hard cases" like the Fleischmann round motor, or older motors only suitable for low frequencies,
- and for C-Sinus and Softdrive Motors in Märklin and Trix Locomotives (C-Types with 21-pin interface),
- ZIMO motor control with automatic optimization, plus numerous settings for manual optimization,
- Speed curve in 3 steps or freely programmable in 28 steps, according to NMRA standard,
- km/h-speed control (each speed step is 1/2 km/h, 1 km/h or 2 km/h) as an alternative to conventional speed step control,
- adjustable measure for the reconciliation of the transmission neutral gear to avoid the initial jerk,
- ZIMO acceleration settings ("standard" according to NRMA, in addition "exponential" for soft starting and stopping, "adaptive" as a method that avoids the starting jerk, special method against jerk from neutral gear after direction change,
- Shunting function (half speed, reduction or shutdown of braking effects) activate via F3, F4, or MAN key),

## FUNCTIONS and FUNCTION OUTPUTS:

- full NMRA function mapping for F0 - F12, also ZIMO extensions (directional assignments, Swiss Light System, etc.), Specific Function Mapping F0 - F20 for Sound Functions,
- Dimming, blinking, American style (mars, ditch, strobe, ...) and other light effects (soft start, brake light, flickering, automatic time-out, fan control for smoke generator, ...),
- High beam/low beam headlight control via function key,
- time-limited coupling activation and hold for Krois and Roco digital coupling and the disconnection dance (walz) – automatic movement of loco to disconnect coupling and free the hook,
- SUSI-interface on solder pads, on the PluX-plug (MX630P) or on the 21-pin plug (MX631D, MX632D, MX640D, MX642D), with the possibility to implement the Train-Bus protocols.

## TRAIN CONTROL and FEEDBACK:

- Braking on DC, ABC (braking on asymmetric DCC-Signal), "Märklin style braking",
- ZIMO "signal dependant train control" (HLU), with 5 levels of speed limits and "stop before red signal",
- ZIMO train number recognition in conjunction with ZIMO digital system and ZIMO track section modules,
- constant braking distance in two variants, one with braking starting as soon as the braking section is entered, the other with braking as a function of speed on entering, so it starts later at slow speeds,
- RailCom: km/h feedback, CV "on-the-main" read-out and certified programming, RailCom address feedback, many more RailCom applications are planned in future software versions.

## SOUND:

- Loading of Sound Projects similar (with the same devices) as loading new software (see Software Updated above),
- Playback rate at 22 kHz (most often used) and 11 kHz, up to 4 Sound Channels played simultaneously (for example. steam chuffs, boiler hiss, air pumps, whistle, ...),
- Synchronization of the steam chuff, either by connecting an external axle detector (mechanical, Led, Hall) or simulated for sound and smoke generator control,
- Acceleration and load dependence automatically adjusted via a calibration run,
- and many other features, see the ZIMO Sound Database, User Manuals, etc.

"RailCom" is a Trade Mark of Lenz Elektronik GmbH

## Selection tips: Which decoder is the right one?

Of course a ZIMO decoder is always the right one . . . Often there are many ZIMO decoder types to take into consideration . . . so here is a small guide on the topic "which is the right one"?

First a general rule: Despite all the protection (against temperature, current and voltage overloads), there is no protection possible against a direct short circuit between the +ve terminal and the rail or between motor and rail; and there is an "inviolable rule": the LARGER decoder is the more ROBUST decoder.

This rule is only true, or course, for decoders built using the same design principles. However, it is quite possible that a smaller decoder of manufacturer A (and especially Z....) is more robust than a larger one from manufacturer B.

THEREFORE: A miniature decoder should only be used, when the larger decoder will not fit in the loco (or the installation will be too difficult), and not because people always use a particular decoder because it is well understood, or because they were cheap. The understanding of different ZIMO decoders should play no large role in selection as most of the features are identical.

- For small scales (N, TT, H0e, ..):

The natural choice is the **MX621** family ( or the MX620 until the MX61 is available); which of the 4 types is used depends on the connections available in the loco.

- If the 6-pin socket (NEM651) is available in the loco: MX621N  
in exceptional cases the MX621F (if the space requirements prevent the use of the MX621N, which plugs in directly).
- If the 8-pin socket (NEM652) is available in the loco: MX621R.
- If there is no socket in the loco: MX621.

Special cases:

- If you need more functions or a higher motor output, then the **MX630** may fit in many N and TT locos!

- For 00/H0 scales – without Sound:

This raises the question, should the new ZIMO technology for energy storage be used (see above for further details).

If no (no interest in energy storage): **MX630** (the type depends on the connection, required, see below) can fit seamlessly in almost any loco. The performance is almost always sufficient, the slightly lower capacity, compared with the MX631 rarely plays a role. If the loco has a 21-pin MTC interface, then the family MX630 is not suitable, but only the MX631 in the **MX631D** form.

If yes (the possibility of energy storage is desired): a representative of the **MX631** family fits in most cases: the specific type within the family (**MX630** or **MX631**) depends on the connection in the loco:

- If no socket in the loco, everything must be soldered to wires: MX630 or MX631.
- If the 8-pin socket (NEM652) is in the loco: MX630**R** or MX631**R**.
- If the 6-pin socket (NEM651) is in the loco: MX630**F** or MX631**F**.
- If the 21-pin "MTC" socket is in the loco: MX631**D**.
- If it is a Märklin or Trix loco with 21-pin "MTC" socket (mostly with C-Sinus, Softdrive): MX631**C**.
- If the PluX socket (16-pin or 12-pin) is in the loco: MX630**P**.

Special cases:

- Too little space for the MX630: for such locos the **MX621** should be used, in these cases the power requirement is usually low.
- More motor power required, e.g. for 2 motor locos: **MX632** instead of MX630 or MX631; the same connection types exist as in the MX631.
- More function outputs required: **MX632** or **MX642** (the Sound Decoder has more Outputs, in addition to Sound).
- For low voltage lights, servos, etc.: **MX632V** (1,5 V), **MX632W** (5 V) or MX632VD, MX632WD.

- For 00/H0 scales – with Sound:

There is a choice between the MX640 and the MX642. The MX642 has been derived from the MX640 and has some areas optimized, plus it has the energy storage interface.

The MX640 is a low-priced Sound Decoder, and is quite well-equipped, with 1,2 A motor current, 6 "normal" function outputs and 5 LED outputs, 1,1 Watt audio power.

The MX642 is somewhat more expensive (but still low-priced compared with the competition), and is in many ways more better: 8 "normal" function outputs, 3 Watt audio power, especially robust up to 50 V and highly effective ESD-protection for loudspeakers, energy storage interface, and has smaller dimensions (to fit an "industry standard").

- If no socket in the loco, everything must be soldered to wires: MX640 bzw. MX642.
- If the 8-pin socket (NEM652) is in the loco: MX640**R** or MX642**R**.
- If the 6-pin socket (NEM651) is in the loco: MX640**F** or MX642**F**.
- If the 21-pin "MTC" socket is in the loco: MX640**D** or MX642**D**.
- If it is a Märklin or Trix loco with 21-pin "MTC" socket (mostly with C-Sinus, Softdrive): MX640**C**.

- For 0 scale – without Sound:

0 scale is a size between the small scales (from N to 00) and the larger scales (1 and larger). Therefore the choice is between the largest of the decoders designed for the smaller scales and the decoders designed for large scale locos. The **MX632** is already very powerful and suitable for the smaller 0 scale locos.; a large scale **MX69** decoder has more reserves and should be used for heavier locos that will pull heavy trains and need the higher performance.

Often, 0 scale locos are fitted with the 21-pin connector, so the **MX632D** should be used. For locos which need to be hand-wired, then the MX69S or MX69V should be used, possibly with a screw-fitted connector.

In both cases, there are variants with low voltage outputs, 1,5 V or 5 V for functions: MX632V, W, VD, WD or MX69V.

- For 0 scale – with Sound:

For sound the choice is between the decoder for small scales - **MX642** and the decoder for large scales - **MX690**. Since the MX640 is not so strong as the more resilient MX632 (see above), there is a tendency to use the large-scale solution. i.e. the MX690. Of course, except for small locos, where space allows no choice, or a 21-pin interface is desired, when the **MX642D** is needed.

If low voltage outputs are required then you have to use the Sound Decoders offered for large scales: MX690V1 (1,5 V) or MX690V5 (5 V); if 5 V is required and a max. of 200 mA then the MX642 is suitable

- For Larger Scales (G, 1, ..):

Here the choice is simple: most will use the **MX690**. In a few case the non-sound **MX69** can be fitted, and with the SUSI-interface another SUSI compatible sound module can be connected.

Depending on the low voltage requirements (1,5 V or 5V) the corresponding MX690V1 or MX690V5 can be used; if the Sound should be "very loud", the versions with enhancement boards should be used, usually the **MX690SEX** or **MX690VEX**.



## *Sound Projects - Heinz Däppen, Oliver Zoffi, and Co.*

The number of sound projects for the ZIMO Sound Decoders (MX640, MX642 and MX690) in the ZIMO Sound Database continues to grow.

**Heinz Däppen (Sound Design)** expanded his palette of sound projects in 2010; all developed from original recordings of the prototype. Heinz Däppen can draw on an archive of film up to the 60s. These sound projects should not be a uniform, monotonous noise, which becomes tiring after 20 mins, but rather have the subtle sounds of the real prototype.

Actually there are already 22 "Däppen-Projects" (RhB und US Locos); more coming in 2010 – the most important are the following::

- V11 from Bachmann-Liliput,
- RhB Tm 2/2 15-26,91 and 92 from LGB,
- HSB Steam Loco Projects 99 6001 and 9972xx from LGB, currently being tested by HSB specialists in Harz ,
- Bernina dual-traction loco Gem 4/4 for the brass model from Kiss,
- US Loco "Forny" from Bachmann, scheduled for just after sales begin for this model,
- US Locos 2017 and the 2068 (Mogul Steam Loco) from LGB.

**Oliver Zoffi** has already contributed a significant number of Austrian locos (mostly narrow gauge), now he has been active with USA locos, lately he has added the EMD-SD40 and GP38. "Zoffi Projects" are often accompanied by detailed conversion instructions for models from USA Trains (Gauge 1).

For 2010 new attractive work is planned, for example, the "Doodlebug" (from Aristocraft, (<http://www.rd-hobby.de/shopping/catalog.php?id=428>) with a high quality Video camera, whose focal length and sharpness can be controlled by servos.

**Paolo Portigliatti** and **Keith Pearson** are working intensively on Italian and English Sound Projects. He already available projects in Italy from Paolo Portigliatti are already popular and accepted, since they are the only "real" projects (that is derived from original recordings) on the market.

With additional "**Sound Providers**" in Germany, Poland, Czech Republic, France, .... we work together, and prepare for this so that there will be a "lot of sound" in the future..



## *New version of STP and PfuSch (E. Sperrer)*

The **Decoder Programming Software - P.F.u.Sch.** is currently at **Version 3.05** and is available in English (other languages will follow). The new version is based on a MS Office compatible database with various search and filter possibilities. The CV Range was extended to 1023 (important for many ZIMO Decoders), more CV Sets per vehicle can now be managed.

For the control panel - **Stellpultsoftware STP - Version 5.2** is planned for 2010: with new Automatic and Schedule Functions, signal release settings, extensions of the program limits, enhancements in network operations, and, of course, support for Windows VISTA and Windows 7.



## New version of ESTWGJ (H.-W. Grandjean)

Numerous improvements are included in **Version 5.1 of ESTWGJ – the Command and Control System for model railways**; including Siemens control table fields as new display variants, Zoom-window (editable, freely movable panel excerpt), various types (single track, double track, ..) section blocks and self blocks, refinements in the area of group exits, overlapping and crossovers, (automatically rotating), etc. Routes can now be assigned to "number" (= PC Function Key) and made visible on the screen layout. The editing of interlocking has been further simplified, through step-by-step changes in table excerpts, also by copying via the clipboard to another layout; also expanded are description possibilities.

## Further development of ZIRC („ZIMO Rail Centre“)

The screenshot shows the ZIRC software interface with the following details:

- MX1:** 0% progress. Components: Geladene SW-Version (3.06), Vorhandene ABA-Set (0.N.), Vorhandene CV-Set (0.N.).
- MX31:** 53% progress. Components: Geladene SW-Version (1.22), Sprachen Set (0.N.), Geräte Einstellungen (0.N.).
- MX31ZL:** 0% progress. Components: Geladene SW-Version (3.08), Sprachen Set (0.N.), Geräte Einstellungen (0.N.).

The left sidebar contains instructions for connecting devices and searching for them on the CAN-Bus.

ZIRC, the "ZIMO Rail Centre", is the Windows Software to support ZIMO Products from the Computer: current functions are

- "Devices and Modules" – Base Stations, Controllers (CABs), Modules: Software updates implemented, loading of languages (controllers only).
- ZIMO Decoder: Software updates implemented, and loading of "Ready-to-use" Sound Projects from the ZIMO Sound Database.

Latest version: the reliability has been improved and the user guide has been expanded (still only in German!); soon there will be more programming options for ZIMO Decoders (CVs and Function Mapping).

## Hello ZIMO Customers in Munich and Nearby!

A loose association of digital model railway enthusiasts have been meeting every 2 months in Munich and would be happy to acquire new members to exchange experiences. Main contact:-

Peter Harrer, [peter.j.harrer@web.de](mailto:peter.j.harrer@web.de)

Every 2 months, on the 1st Friday, in Isarbräu (Stüberl), Kreuzeckstraße 23 (in the old railway station), 82049 Pullach im Isartal, at 6 pm.

Meetings this year: 5 March 2010, 7 May 2010, 9 July 2010, 3 September 2010, 5 November 2010, 3 December 2010.

# New ZIMO WEB (in the usual place: [www.zimo.at](http://www.zimo.at))

The ZIMO Website is undergoing a redevelopment – the new design should be easier to navigate and some of the new features will include:

- Replacement of the current header by a slimmer design to leave more space for information,
- Avoiding the use of frames, in order to facilitate search and printing,
- Ensure that the website works on most browser and to some extent on Smart Phones,

Here is a preview of the new design (draft):



Part of the ZIMO "Web2010" is already online is being further developed: the product information pages for the decoder. Here are presented in a structured manner, both the common features and the differences for each decoder.

The ZIMO decoders have been developed in such a way that many types and families have the same features and functions, so the usual method of a separate page for each product is not necessary.

From the table that appears initially, you can expand and see further details of technical data by clicking on the *i*, this expands the rows to show extensive documentation and useful background information. All the product photos (related to decoders) are shown here.

Part of the decoder page with expanded information on the servo outputs (as of January 2010, sorry in German, English will follow soon):

[Alle aufklappen](#) | [Alle schließen](#) | Alles Aufklappen ist zweckmäßig zum **Ausdrucken** der Gesamtinformation !

**FEATURES** - eine Liste für Alle. ZIMO Lok-Decoder sind untereinander funktionell weitgehend identisch. Gemeinsame Eigenschaften öffnen durch *i*-Symbol links !

**WELCHER ist der Richtige ?** Natürlich immer ein ZIMO Decoder, aber es gibt viele Typen und oft mehrere Möglichkeiten. Auswahlhilfe öffnen durch *i*-Symbol links !

LOK-DECODER									
	N, H0e, TT, (H0), ...	TT, H0, ...	Noch kein Bild. H0, (0), ...	H0, 0, (G), ...	H0, (0), ...	Noch kein Bild. H0, (0), ...	0, G, 1, 2	0, G, 1, 2	
DECODER-FAMILIE	Miniatur	Standard	Höhere Leistung	Hochleistung	H0 SOUND	H0 SOUND	Großbahn	Großbahn SOUND	
	<b>MX620</b>	<b>MX630</b>	<b>MX631</b>	<b>MX632</b>	<b>MX640</b>	<b>MX642</b>	<b>MX69</b>	<b>MX690</b>	
Kurz-Charakteristik der Decoder-Familien									
Abmessungen (mm)	13,5 x 8,8 x 2,5	20 x 11 x 3,5	20,5 x 15,5 x 4	28 x 15,5 x 4	32 x 15,5 x 5	30 x 15 x 4,5	55 x 29 x 18	55 x 29 x 18	
Dauerstrom Motor (= Total)	0,8 A	1,0 A	1,2 A	1,8 A	1,2 A	1,2 A	3 A (5 A gekühlt)	3 A (5 A gekühlt)	
Spitzenstrom (ca. 20 sec)	1 A	2 A	2 A	3 A	2 A	2 A	6 A	6 A	
"Normale" Fu-Ausgänge	4	6	6	8	6	8	8 (Typ S), 14 (V)	8 (Typ S), 14 (V)	
Strombegrenzung Fu-Ausg	in Summe 0,5 A	in Summe 0,8 A	in Summe 0,8 A	in Summe 0,8 A	in Summe 0,8 A	in Summe 0,8 A	3 Gruppen je 1 A	3 Gruppen je 1 A	
Logikpegel-Ausgänge	2	2	2	2	5 (= LED-Ausg.)	2 (= LED-Ausg.)	-	-	
LED-Ausgänge	-	-	-	-	5 / je 10 mA	2 / je 10 mA	-	-	
Servo - Ausgänge	2, alt. zu Logikp	2, alt. zu Logikp	2, alt. zu Logikp	2, alt. zu Logikp	2	2, alt. zu LED	4	4	
<i>kleines Ausschneiden</i>									
<b>Ausgänge für Servo-Steuerleitungen;</b> damit können handelsübliche Servos (Graupner, Robbe, usw.) angesteuert werden, wofür verschiedene Betriebsarten sowie Endstellungen, Umlaufzeiten, u.a. in den CV's 161 bis 182 bestimmt werden können. Bei Decodern mit Niederspannungs-Ausgang 5 V (MX632W, MX690V5) wird auch die Betriebsspannung für die Servos vom Decoder bereitgestellt; bei MX640 und MX642 ist dies begrenzt der Fall (nur für kleine Servos); ansonsten muss die 5 V -Spannung extern erzeugt werden; siehe Betriebsanleitung.									
Die Servo-Ausgänge benutzen meistens alternativ die Anschlüsse für die SUSI-Leitungen, wodurch SUSI dann nicht mehr verfügbar sind. Ausnahme sind die Großbahn-Decoder MX69 und MX690, wo Servos eigene (4 in diesen Fällen) Anschlüsse haben, und SUSI einen eigenen Stecker.									
	SUSI	ja, alt. zu Logikp	ja, alt. zu Logikp	ja, alt. zu Logikp	ja, alt. zu Logikp	ja, alt. zu Servo	ja, alt. zu LED	ja (SUSI-Stecker)	ja (SUSI-Stecker)
	Direkt. Energiespeich.-Anschl.	-	-	ja	ja	-	ja	nur mit Enhance.	nur mit Enhance.
	Niederspann. für Fu-Ausg.	-	-	-	nur Typen V...W	ja / 5 V, 200 mA	ja / 5 V, 200 mA	nur MX69V	nur MX690V