New Software Versions for Decoders MX620, MX630 and MX640

In some of the latest Software versions (from 25.0) and with some types of drive, jerky behaviour appears (seen on the MX640) or bucking (random acceleration of the motor, seen on the MX630).

Remedial help is provided in the latest updated versions of the decoder software available on the ZIMO Website http://www.zimo.at/: current **Version 26.6**; but the development continues, with the Fleischmann BR50, with the notorious round motor as the main test platform, as there are still some possibilities for more optimization; see the information on the website, under UPDATE, Decoder, Info Lists and Update Collection Files.

By the way….**Interference Suppression** in the locomotives brings more problems, because most manufacturers use excessively large inductors and capacitors (which are cheaper than before) and therefore there is no reason to abandon such devices... except that the behaviour is affected; Here is a brief report from Paolo Portigliatti (ZIMO main dealer for Italy, with the experience of specific equipment):

TRIX locos: generally I remove the big choke between the rails and decoder socket. In some cases (MX640) the speed is not always constant, and I'm doing some tests to understand this.

FLEISCHMANN locos: In case of the "old" round motor, I leave chokes and I remove capacitor. I use low CV 58 values, to avoid irregular movements at low speeds.

FLEISCHMANN locos with "new" Buhler motor, generally all is ok.

Minitrix and Fleischmann Piccolo locos: it's impossible to give a rule! Some motors run well with MX620 previous firmware version. I remove capacitors, but not chokes. I saved all decoder versions and, in case of problem, I upload the various versions till I find the best result.

Generally, no problem with **Roco**, **Hornby** and **Brawa** motors.

The MX632 fills the gaps in the ZIMO Decoder Range . . .
. . . and also includes an important innovation! Delivery likely in December 2009.

The new decoder family includes often-heard requests for features on the loco decoders. Technically a development from the MX630 (which has only been on the market for a few months), the new MX32 family has advanced features (common to all ZIMO decoders) as well as very high tolerance and robustness (withstanding voltages of 50V).

The standard types of the decoder family MX632 and the prices:

MX632	00/H0, 0	High performance decoder, 1,8 A, 8 Function outputs	RRP	36,00 (euros)
MX632R	00/H0, 0	as above, 8-pin plug with wires (NEM 652)		38,00
MX632D	00/H0, 0	High performance decoder, 1,8 A, 21-pin interface		36,00
MX632C	00/H0	Special decoder for C-Sinus-Circuit board, 21-pin		36,00
MX632V	00/H0, 0	High performance decoder, low voltage1,5 V for FA's		46,00
MX632W	00/H0, 0	High performance decoder, low voltage 5 V for FA's		46,00
MX632DV	00/H0, 0	High performance coder, 21-pin., low voltage. 1,5 V for FA's		46,00
MX632DW	00/H0, 0	High performance decoder, 21-pin., low voltage 5 V for FA's		46,00

Physical dimensions, all types of MX632: 26,5 x 15,5 x 4,5 mm

MX632D, MX632DV, MX632DW with 21-pin interface, the successor to the MX64D, etc.. . .

The gap in the range which was created by the expiry of the MX64D has now been filled by the MX632, while creating this new product, some other improvements have been made, such as a higher output current (1.8 A), and an integrated capacitor interface. However, the MX632D takes more space in the loco (length 26.5 mm), and for cases where this is a problem, use could be made of the planned MX631 (only 20.5 mm long, average power, no capacitor connection).

MX632 (any type) as the new performance decoder in a small format, successor to the MX64H . . .

The MX632 is designed for power hungry (e.g. two motors) 00/H0 locos, and also for small large-scale loco (e.g.. G-Spur); the later should only be used where there is a genuine lack of space (i.e. where the large scale MX69 will not fit) as the way the motor is controlled is designed differently.

MX632 (any type) with 8 function-outputs, also in imitation of the MX64H . . .

Unlike the MX54D, the MX632 has the latest ZIMO outputs for servo motors. For the SUSI interface, there is just solder pads (no longer a jumper), as SUSI is seldom used and does not have much practical application for sound (for sound applications, the MX640 sound decoder is more useful).

MX632V, MX632W, MX632DV, MX632DW, with low voltage outputs, successor to MX64V1, etc

The new outputs of 1.5v or 5V for lights and/or smoke generators, is more powerful than previous types, this can be added to the other advantages of the MX632 family, with the higher current (1.8A) and the integrated capacitor interface.

The innovation in the MX632: Capacitor connection for optimal energy storage solution . . .

Energy storage for bridging power interruption has great benefits and already small capacitors of 100 uF have positive effects. The connection of an energy storage capacitor to the decoder has been recommended by ZIMO for a long time, but the circuit requires some protection with additional components (resistor and diode ..... available in the sets MSPEIK, MSPEIKG....). In the MX632, it is possible, for the first time, to connect a capacitor directly (without additional components) which is much more convenient. The advantages are:

- Avoidance of getting stuck on dirty track or points, or lighting flickering, especially in conjunction with ZIMO method of avoiding the effect of current-less places
    (some effect with capacitors as low as 220 uF, really helpful from1000 uF),

- Reduces the heating up of decoders, especially in low impedance motors

    (takes effect as early as a capacitor of 220 uF)

- when using RailCom technology: reduces the energy loss in the RailCom gap,
    RailCom induced reduction of engine noise,
     Improvement of the quality (= readability) of the RailCom signals.
    (take effect with a capacitor of 220 uF)

    "RailCom" is a trade mark of Lenz GmbH

A small capacitor of 220 uF is included with the MX632, as an introduction to energy storage technology. Larger capacitors (in-stalled in parallel) are recommended. A Goldcap bank (8 Goldcaps with a voltage of 25V, for example), can be used.
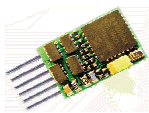
Here is an example of the MX632D (but this can be used for all types of MX632):
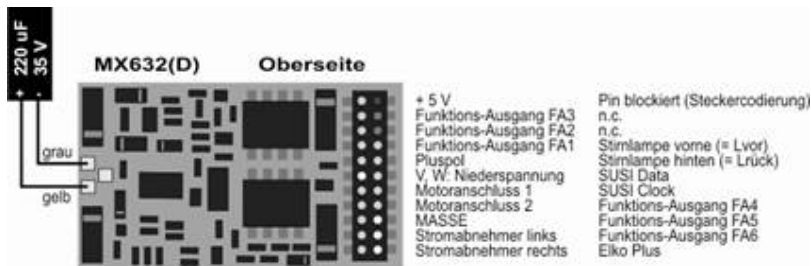
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ZIMO Loco Decoder - current overview:

Family **MX620** (Miniature) **. . .**

MX620: 13,5 x 8,8 x 2,5 mm, 0,8 A, 4 Function outputs, 7 Wires
MX620N: as above, but 6-pin Plug direct (NEM 651)
MX620R: as above, but 8-pin Plug on wires (NEM 652)
MX620F: as above, but 6-pin Plug on wires (NEM 651)

Family **MX630** (H0, ..) **. . .**

MX630: 20,5 x 11 x 3,5 mm, 1,2 A, 6 Function outputs, 11 Wires
MX630R: as above, but 8-pin Plug on wires (NEM 652)
MX630F : as above, but 6-pin Plug on wires (NEM 651)
MX630P: as above, but PluX-16 plug connection

Family **MX631** (H0, 0 increased performance, version with 21-pin plug C-Sinus, …. from 2010) **. . .**

MX631: 20,5 x 15,5 x 4,5 mm, 1,4 A, 6 Function outputs, 11 Wires
MX631D: as above, but 21-pin direct connection (MTC)
MX631C: as above, special version for C-Sinus, Softdrive-Sinus, 21-pin direct connection

Family **MX632** (H0, 0 High performance version 21-pin, low voltage, … from December 2009) **. . .**

MX632:   26,5 x 15,5 x 4,5 mm, 1,8 A, 8 Function outputs, capacitor connection, 13 Wires
MX632R: as above, but 8-pin Plug on wires (NEM 652)
MX632D: as above, but 21-pin direct connection (MTC)
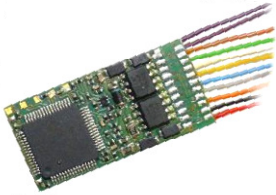MX632C: as above, special version for C-Sinus, Softdrive, 21-pin direct connection
MX632V: 26,5 x 15,5 x 4,5 mm, 1,8 A, 8 outputs., capacitor., low voltage 1,5 V for FA's
MX632W: 26,5 x 15,5 x 4,5 mm, 1,8 A, 8 outputs., capacitor., low voltage 5 V for FA's
MX632DV: 26,5 x 15,5 x 4,5 mm, 1,8 A, 8 outputs., capacitor., low voltage 1,5 V, 21-pin
MX632DW: 26,5 x 15,5 x 4,5 mm, 1,8 A, 8 outputs., capacitor., low voltage 5 V, 21-pin

Family **MX640 (SOUND) . . .**

MX640: 32 x 16 x 5 mm, 1,2 A, 6 Function outputs, 11 Wires
MX640R: as above, but 8-pin Plug on wires (NEM 652)
MX640F: as above, but 8-pin Plug on wires(NEM 652)
MX640D: as above, but 21-pin direct connection (MTC)
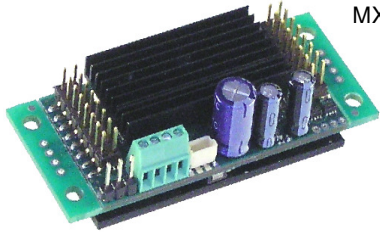MX640C: special version for C-Sinus, Softdrive-Sinus, 21-pin direct connection (MTC)

Family **MX69** (Large Scales) **. . .**

MX69L: 55 x 29 x 10 mm, 2 A, 8 Function outputs
MX69S: 55 x 29 x 18 mm, 3 A, 8 Function outputs
MX69V: 5 A, 14 Function outputs with adjustable low voltage for functions

Family **MX690** (Large Scales, SOUND) **–**

MX690S: 55 x 29 x 18 mm, 3 A, 8 Function outputs
MX690V:' 5 A, 14 Function outputs with adjustable low voltage

In addition: 12 special types for large scale, with enhancement boards (10 W Audio, etc.)

All existing loco decoders (including the large scale decoders) are part of a generation of decoders which have **identical software**.
Therefore ZIMO Decoders are almost identical with each other in the way they behave, the usage of CVs, and functionality.

- Motor- and Function current 1,2 to 1,8 A (MX630 and others) and 0,8 A (MX620),
- Overload protection (with tolerance for short-term loads of 2 or 3 A) and high temperature protection,
- 6 Function outputs (MX630), 8 (MX632H) and 4 Function outputs (MX620), in each case up to 0.5A load,
-depending on type 2 to 5 Logic level (externally amplified) or LED outputs, in addition to the function outputs,
- depending on type 2 or 4 connection or servo motors in addition to the function outputs,
- suitable for all DC motors, including coreless motors,
- ZIMO motor control with selectable parameters for further optimization,
- ZIMO acceleration settings ("sub-standard" according to NMRA, in addition "adaptive", "exponential", ...),
- Shunting function (half-speed, reduction or shutdown of braking and motion effects) either with F3, F4 or MAN key,
- time-limited coupling control and "coupling dance" (automatic on/off),
- full NMRA Function mapping, with ZIMO extensions (including directional assignments for lights and Swiss light system etc.),
- Blinking, dimming, American and other lighting effects (including soft start, brake lights, flickering, time-out,...)
- SUSI-Interface, depending on type, on solder pads, on PluX plug (MX630P) or on 21-pin plug (MX64D, MX640D),
- Braking on DC, ABC, "Märklin",
- ZIMO "signal dependant train control" (HLU),
- ZIMO Train number identification,
- km/h-speed control (by speed step 1/2 km/h, 1 km/h or 2 km/h) as an alternative to conventional speed step control,
- Constant baking distance in two versions,
- Analogue control either regulated or unregulated (MX630 also AC-Analogue),
- Further Features in development (e.g.. CV-Sets, ..)

- **RailCom**: km/h feedback, CV "on-the-main" read and confirm programming, RailCom address feedback,
  many more RailCom applications are planned in future software versions.
  "RailCom" is a trade mark of Lenz GmbH

- **Updatable Software**: new software versions can be loaded without dismantling the loco, with the help of the ZIMO decoder updated device (MXDECUP), or the MX31ZL controller, by the computer, using the decoder update program, or (with the MX31ZL) direct from a USB stick.

MX64 and MX64R in small quantities still available:

For those users that still want to stock up, there are 400 of the MX64 and MX64R still available. Completely sold out are the MX63, MX64H, MX64V and MX64D (for the replacement types see the MX632 above)!

ZIMO Sound Decoder with Special Sound Projects "Heinz Däppen" - for Rhätische Bahn and American Locos

Specially produced from original recordings by **Heinz Däppen (Rhätische Bahn, American Steam Locos)** are now available, not only as "pre-loaded" into newly purchased sound decoders, but can be downloaded as encrypted projects from the ZIMO Sound Database.

For more information see the ZIMO Newsletter October 2009 and http://www.zimo.at/ !

Due to illness of the author, there was some delay in the publication of these numerous projects, but a large number have now been added to the ZIMO Sound Database and there are more to follow.

ZSP Version 1.7 supports Load-Code management:

Among other innovations, the latest version of ZSP allows the reading out of the decoder Id, which is needed when ordering the "Load-Code", and is used by the sound project provider to generate the specific "Load-Code" for this decoder.

The new era –
– the new ZIMO system –
– Base station MX10 and controller MX32

More about this in the next ZIMO news (in December)!

Nuremberg 2010: ZIMO in Transport Museum!

Due to the unacceptable behaviour of the management of the Nuremburg Toy Fair (Spielwarenmesse), we have broken with our 25 year old tradition of attending this Toy Fair since 2009. For business reasons we are continuing with a "presence" in Nuremburg. After the experiment in 2009, in the Nuremburg Ofenwerk, we have found, for 2010, a particularly attractive and easily accessible place, the:-

DB Museum (Transport Museum) – Lessingstraße 6 (U-Bahn Opernhaus)

ZIMO Exhibition and Meeting point from 4. - 7. February 2010, from 14:00 to 19:00

Many of you will know this location and for visitors to the Toy Fair, it is very easy to stop by between a visit to the Toy Fair and the evening programme. Admission is free and you can take a look around the museum as well!

We do not bring a full exhibition stand, but we will be able to show off most of our products, including the new ZIMO system, MX and MX32, the decoders and the sound decoders. Mainly we want to meet our customers. From our side, likely to be present are Hubinger and Ziegler (from ZIMO), Schild (ZIMO distribution) and Sperr (PfuSch).

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