



LDT 1-DEC-DC-G 4-Fold Decoder for Single Coil Turnouts Instruction Manual

[Home](#) » [LDT](#) » LDT 1-DEC-DC-G 4-Fold Decoder for Single Coil Turnouts Instruction Manual 

Contents

- [1 LDT 1-DEC-DC-G 4-Fold Decoder for Single Coil Turnouts](#)
- [2 Introduction/Safety instruction](#)
- [3 Connecting turnout drives](#)
- [4 Troubleshooting](#)
- [5 Documents / Resources](#)
 - [5.1 References](#)
- [6 Related Posts](#)



LDT 1-DEC-DC-G 4-Fold Decoder for Single Coil Turnouts



Introduction/Safety instruction

You have purchased the 4-fold turnout decoder 1-DEC-DC for your model railway as finished module in a case supplied within the assortment of Littfinski DatenTechnik (LDT). We wish you having a good time using this product. The 1-DEC-DC decoder (receiver device is marked with a yellow dot) is suitable for the DCC-Format as used by the systems of Lenz-Digital Plus, Arnold-, Märklin-Digital, Intellibox, TWINCENTER, Roco-Digital, EasyControl, ECoS, KeyCom-DC, Digitrax, DiCoStation and Zimo. The decoder 1-DEC-DC can control the turnouts either via turnout addresses or via loc-addresses. Therefore is it possible to switch the turnouts for example by using the push buttons F1 to F4 of the Lokmaus 2® or R3®? The finished module in a case comes with 24 month warranty.

- Please read the following instructions carefully. Warranty will expire due to damages caused by disregarding the operating instructions. LDT will also not be liable for any consequential damages caused by improper use or installation.
- We designed our devices for indoor use only.

Connecting the decoder to your digital model railway layout:

- Attention: Before starting any installation switch off all power supply to the digital layout by pushing the stop button or disconnect all main supply to the transformers.

The decoder receives the digital information via the clamp KL2. Connect the clamp with a rail or even better connect the clamp directly to the command station or to a booster assuring the supply of digital information free from any interference. DCC-Digital systems are using different cable colors respectively different designations for the two digital cables. Common identification can be found next to clamp KL2. It is not necessarily required to follow those markings because the decoder will automatically identify the correct signal. The decoder receives the voltage-supply via the two-pole clamp KL1. The voltage shall be in the range of 12 to 18V~ (alternating voltage output of a model railway transformer) or 15 to 24Volt = (direct voltage output of an insulated power supply unit).

Connecting turnout drives

The Decoder 1-DEC-DC is suitable for digital switching of single coil turnout drives. Those drives contain two connection wires. This wires shall be directly connected with one of the output clamps KL6 to KL9. ROKUHAN turnout drives shall be supplied with a voltage of 10 to 12 Volt only. For reducing the voltage is it required to apply two 9,1Volt Z-Diodes on each output. The connection sample 1275 to be downloaded from our internet site from the section "Sample Connection" will show the wiring. The 1-DEC-DC can switch all KATO UNITRACK turnouts with the exception of the Double Crossover Track 20-210. This unit contains several drive-coils which need together more than 1 Ampere switch-current.

Programming the decoder address:

To program the decoder address a turnout drive has to be connected to the output 1 (clamp KL9) of the decoder.

- Switch on the power supply of your model railway.
- Press the programming key S1. Do not touch the integrated circuits of the pc-board because any electrostatic discharge can destroy the IC's.
- The turnout drive connected to output 1 will now move every 1.5 seconds. This indicates that the decoder is in the programming mode.

Switching turnouts via turnout addresses:

- Press now one key of a key group to be assigned to the decoder. For programming the decoder address you can also release a turnout switch signal via a personal computer over the model railway software.

Remarks: The decoder addresses for magnetic accessories are combined in groups of four. The addresses 1 to 4 build the first group. The addresses 5 to 8 build the second group etc. Each 1-DEC-DC decoder can be assigned to any of these groups. Which turnout of a group will be activated for the addressing does not matter.

- If the decoder has recognized the assignment correctly the connected turnout will move a little faster. Afterwards the movement slows down to the initial 1.5 seconds again. In case the decoder will not recognize the address it could be that the two digital information connections (clamp 2) are wrong way connected. For testing this, switch the power supply off, exchange the connection on KL2 and start addressing again.
- Leave the programming mode by pressing the programming key S1 again. The decoder address is now permanently stored but it can be changed at any time by repeating the programming as described above.
- If you press now the first key of the programmed group of keys or you send a switch signal for this turnout from a PC the addressed turnout drive should move into the called direction (round or straight) until end stop. In case the movement goes in the wrong direction please exchange the turnout connection.

Switching turnouts via loc-addresses (Lokmaus 2® or R3®):

The decoder 1-DEC-DC can also control turnouts via loc addresses. For example with the function keys F1 to F4 of the Lokmaus 2® or R3®. The turnout connected to output 1 will be switched with the functional key F1 and the turnout connected to output 2 with key F2 etc. Each pressing of a function key will release a movement of the respective turnout from turning to straight or vice versa. To program the loc-addresses a turnout drive has to be connected to the output 1 (clamp KL9) of the decoder.

- Switch on the power supply of your model railway.
- Adjust the speed of all connected speed controllers respectively all lokmauses to zero (center position of the adjusting dial).
- Press the programming key S1. Do not touch the integrated circuits of the pc-board because any electrostatic discharge can destroy the IC`s.
- The turnout drive connected to output 1 will now move every 1.5 seconds. This indicates that the decoder is in the programming mode.
- Now adjust the required address on one Lokmaus and turn the speed control dial away from the center position. If the decoder has recognized the assignment correctly the connected turnout will move a little faster. The decoder 1-DEC-DC will accept loc-addresses between 1 and 99.
- Adjust the speed control to zero again. The movement of the connected turnout will slow down to the initial 1.5 seconds.
- Leave the programming mode by pressing the programming key S1 again.
- If you press the functional key F1 the turnout connected to output 1 will be switched over by each key stroke. In case some further turnouts are connected to output 2 to 4 of the decoder 1-DEC-DC this turnouts will be switched with the functional keys F2 to F4 with each respective key stroke.

Attention:

- Each of the 4 decoder outputs can switch 1 Ampere max. For securing the decoder components and the connected turnout drives the decoder 1-DEC-DC includes an overload fuse. This is an automatic fuse which will switch back to normal operation with a few seconds delay as soon as the current load will be below the maximum value.

Troubleshooting

What to do if something is not working as described above? If you have purchased the decoder as a kit, please check carefully all parts and soldered joints. Here some possible functional errors and possible solutions:

1. During programming of the decoder addresses the turnout moves within 1.5 seconds, but does not confirm the programming with faster movement by pressing any key.
 - Change cable connections at KL2.
 - Interfered digital information at KL2 respectively larger lost of voltage at the tracks! Connect the decoder directly with cables to the digital control unit or to the booster instead to the tracks.
2. The programming of the decoder address functions as described, nevertheless, the connected consumers can not be activated.
 - Interfered digital information on KL2 respectively larger lost of voltage at the tracks result to unsafe data transfer! Connect the decoder directly with cables to the command station or the booster.

Further Products from our Digital-ProfessionalSeries:

S-DEC-4

4-fold turnout decoder for four magnet accessories with freeprogrammable decoder addresses and possible separate power supply.

SA-DEC-4

4-fold switch decoder with 4 bistable relays for switching up to 2A each. With free programmable decoder addresses.

LS-DEC

Lightsignal-Decoder for up to four LED-equipped signals. Signal aspects will be switched as real by up- and down dimming and will be switched directly via decoder addresses. All components can be purchased as easy-to-assemble complete kits, as finished modules or as ready-finished modules in a case.

Turnouts can also be controlled via loc-addresses (e.g. Lokmaus 2® and R3®).

For the digital control of:

- up to four LGB turnout drives. (LGB Part No. EPL 12010)
- up to four PIKO G turnout drives. (PIKO Part No. 35271)
- up to four KATO UNITRACK, TOMIX and ROKUHAN turnout drives.
- switching current up to 1 Ampere on each output.

This product is not a toy! Not suitable for children under 14 years of age! The kit contains small parts, which should be kept away from children under 3! Improper use will imply danger of injuring due to sharp edges and tips! Please store this instruction carefully.

Made in Europe by

Littfinski DatenTechnik (LDT)

Bühler electronic GmbH

Ulmenstraße 43

15370 Fredersdorf / Germany


Phone: +49 (0) 33439 / 867-0

Internet: www.ldt-infocenter.com

Subject to technical changes and errors. 09/2022 by LDT

Arnold, Digitrax, Lenz, LGB, Märklin, and Roco have registered trademarks.

Documents / Resources

	<p>LDT 1-DEC-DC-G 4-Fold Decoder for Single Coil Turnouts [pdf] Instruction Manual</p> <p>1-DEC-DC-G 4-Fold Decoder for Single Coil Turnouts, 1-DEC-DC-G, 4-Fold Decoder for Single Coil Turnouts, Single Coil Turnouts, Coil Turnouts, Turnouts</p>
--	---

References

- [de:ldt-infocenter \[LDT\]](#)