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# Littfinski DatenTechnik 050042 Master-Module for Decoder for Switchboard Lights User Manual

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Master-Module for Decoder for Switchboard Lights User Manual

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## Littfinski DatenTechnik 050042 Master-Module for Decoder for Switchboard Lights



Master-Module for Decoder for Switchboard Lights from the Digital-Professional-Series ! GBS-Master-MM-F Part-No.: 050322

### **Suitable for the data format Märklin-Motorola**

The GBS-Master-Module together with the Display-Module GBS-Display will build the Decoder for Switchboard Lights GBS-DEC. Up to 4 Display Modules can be connected onto each Master-Module.

Each Display-Module GBS-Display can control

16 turnout symbols, up to 32 track-occupancy symbols or different 2- to 4-aspects DB-light signal symbols.

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.

## Introduction/Safety instruction

You have purchased the Master-Module GBS-Master as a kit or as a finished module for the Decoder for Switchboard Lights GBS-DEC.

The Master-Module GBS-Master is a high quality product that is supplied within the Digital-Professional-Series of Littfinski DatenTechnik (LDT).

We are wishing you having a good time using this product.

Our components of the Digital-Professional-Series can be easily and without any problems operated on your digital model railway.

The Master-Modules GBS-Master-MM is suitable for the Märklin-Motorola data format.

The finished module 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.

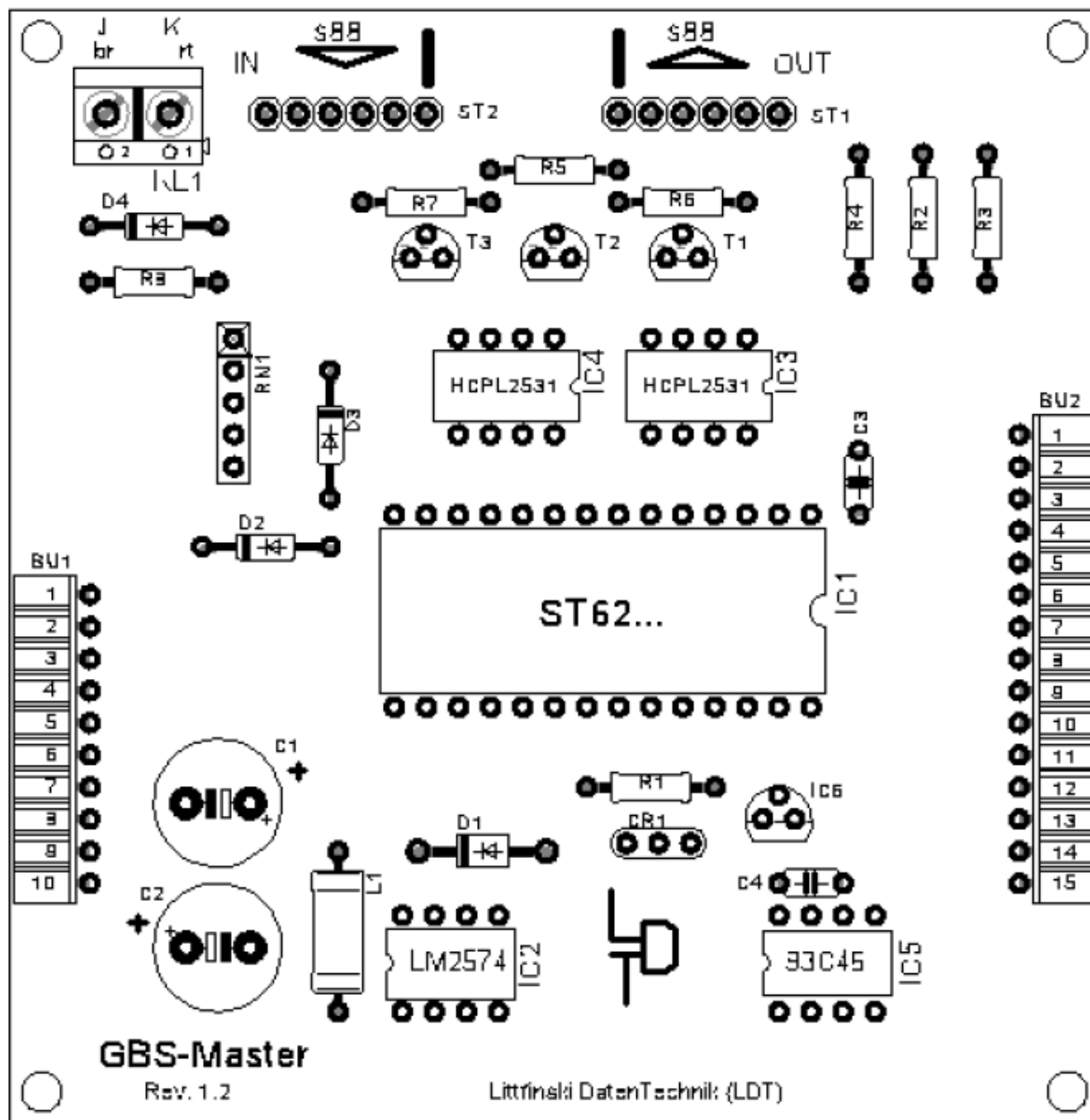
### Connecting GBS-Modules:

**Attention:** Before starting the installation switch off the drive voltage by pushing the stop button or disconnect the main supply.

At first connect the Master-Module GBS-Master to a Display-Module GBS-Display via the 10-poles pin-plug-bar BU1. For setting the addresses and operating modes connect the Master-Module GBS-Master additionally to a Service-Module GBS-Service via the 15-poles pin-plug-bar BU2.

Avoid any offset of the pin-plug-bar of the Display- and the Service-Module to the pin-socket-bar of the Master-Module. For this issue please attend to the operating instructions of the Display- and Service-Module. The picture 1 at the rear side of the Service-Module operating instruction shows the correct connection of the Display-, Master- and Service Module.

Up to 4 Display-Modules GBS-Display can be connected to each Master-Module GBS-Master. For this layout has the second Display-Module to be connected to the first Display-Module via the 10-poles pin-plug-bar. Corresponding has the third module to be connected to the second and the fourth to the third module.



## Connecting the decoder to the digital layout

By using the Master-Module GBS-Master-MM the Decoder for Switchboard Lights GBS-DEC is suitable for the data format Märklin-Motorola.

The Master-Module receives the digital information via the connection clamp KL1. Supply the Master-Module with this information via a connection-rail or even better directly from the control unit or from a booster (separate digital-ring-supply for all decoders) for an interference-free transmittance of data.

Attend to the mark at the clamp KL1. The colors "red" and "brown" next to the clamp is common on Märklin-Motorola layouts.

The Master-Module GBS-Master receives the voltage supply always from the first Display-Module. More information to this issue can be found within the operating instruction of the Display-Module GBS-Display at the paragraph voltage supply to the Display-Module.

Also details for the connection of the switchboard lights symbols (light emitting diodes and incandescent lamps) to the Decoder for Switchboard Lights GBS-DEC can be found within the operating instruction of the Display-Module.

Colored sample connections can be found on our Web-Site [www.ldt-infocenter.com](http://www.ldt-infocenter.com) at the section "Sample Connection".

## Setting address- and operation modes

### Putting into operation:

If the Decoder for Switchboard Lights will be connected to the power supply firstly all connected light diodes and incandescent lamps will lighten for 2 seconds at a brightness of 50% (lamp test). The display of the service module indicates GBS-DEC MOT Vx.y. If the information at the display of the service module is not clearly readable during the first start of operation please turn carefully the trim-pot R1 a half turn to the left and to the right by using a small screw driver until the information at the display is optimal readable.

**Setting the number of connected Display-Modules:**

On top of the Service-Module are 4 keys located which will be identified within the following description as >left<, >right<, above< und >below<.

At first push the key >right<. The display shows Anzahl DIS: 1 (quantity of Display-Modules).

If the start information remains to be at the display after pushing the key >right< there will be no Märklin-Motorola commands transmitted from the digital central unit or the digital information to clamp KL1 at the Master-Module is wrong connected. Check the correct connection of the digital information (red and brown) and call a loc with Märklin-Motorola-Locdecoder via the digital central unit. Actual traveling of the loc is not required. For setting the address- and operation mode it is sufficient if Märklin-Motorola commands will be continuously transmitted.

If you depress the key >right< during switching-on the Decoder for Switchboard Lights you will get in any case into the address and operation mode. Do not release the key before you can read the message GBS-DEC MOT Vx.y at the display of the service module.

Push now the key >above< as many times until the display indicates the amount of connected display-modules. It is possible to operate at a maximum 4 Display-Modules on one Master-Module.

**Setting the address for a Display-Module:**

If the display of the service-modules shows Anzahl DIS: x (with "x" for the quantity of connected Display-Modules) please push the key >right< for getting to the address setting of the first Display-Module. The display shows now the current address of the first Display-Module as DIS1 ADR:016-001.

At this moment is the address section from 1 to 16 adjusted for the first Display-Module. Each Display-Module receives 16 coherent addresses. To each address are two outputs assigned. One output for turnout round and one output for turnout straight.

The picture 3 at the rear side of the Display-Module Operating Instruction shows the cohesion.

By pushing the keys >above< and >below< you can now select one of 20 address sections with 16 coherent addresses each for the Display-Module. The highest address within the Märklin-Motorola data format is 320. The display of the Service-Module shows in this case the text DIS1 ADR:320-305 for the address section 305 till 320.

**Setting the operation mode of single outputs:**

After setting the required address-section for the Display-Module (for example the display shows DIS1 ADR:032-017 for the address section 17 to 32) push again the key >right< for setting the operation mode of the single outputs. The display shows e.g. DIS1 K08-01:\*\*\*\*.

DIS1 identifies the Display-Module No. 1 which has been connected directly to the Master-Module.

K08-01 stays for clamp KL1 with outputs 1 to 8.

\*\*\*\* stays for 8 normal switched outputs which can control turnout symbols or 2-aspect DB-Block- or DB-Line-Close signal symbols.

With the keys >above< and >below< you can choose now one of three operation modes.

Additionally to the described operation mode \*\*\*\* for 8 normal switched outputs there are the operation modes Vo\*\* and VoHE available.

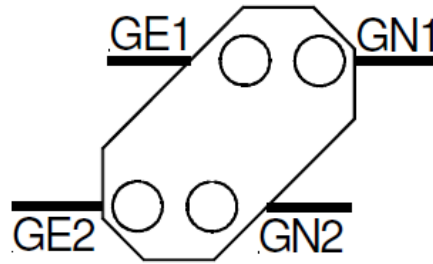
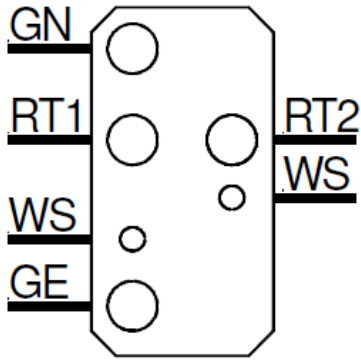
Vo\*\* stays for the possibility to control one 3-aspect DB-Advance- and one 2-aspect DB-Block-signal symbol. Picture 5 at the rear side of the operating instruction for the Display-Module shows the wiring of the signals at the clamp KL1. VoHE stays for the possibility to control one 3-aspect DB-Advance- and one 3-aspect Entry- or a 4-aspect Main-signal symbol. Picture 6 at the rear side of the operating instruction for the Display-Module shows the wiring of one Advance- and one Main-signal at the clamp KL1.

By connecting a 4-aspect DB-Exit-signal symbol to clamp KL1 the wires of the white LED's or lamps have to be connected to output 33 of the clamp KL5 of the Display-Module.

Shall a Main-signal operate on clamp KL2 will it be the output 34. With a Main-signal symbol at the clamp KL3 is it the output 35 and at the clamp KL4 is it output 36.

Further colored sample connections can be found on our Web-Site [www.ldt-infocenter.com](http://www.ldt-infocenter.com) at the section "Sample Connection".

The function of the control of the signal symbols on the switchboard panel via decoder addresses will be analogue to the control of signals via the Light Signal-Decoder LS-DEC-DB. The following draft clarifies the connection of decoder address and signal aspect. There will be an exit signal controlled via address 1 and 2 and an advance signal via address 3 and 4.



### Exit Signal

### Advance Signal

Hp00	Sh1	Vr0	
train stop	shunting drive	train stop	
red	red	red	red
1	2	3	4
green	green	green	green
proceed	slow proceed	proceed	slow proceed
Hp1	Hp2	Vr1	Vr2

If you selected the correct operation mode for the first clamp bar (KL1 with outputs 1 to 8) please push the key >right< for adjusting the operation mode at the clamp bar KL2 (outputs 9 to 16) with the keys >above< or >below<.

With the key >right< you can go to the operation mode adjustment for clamp bar KL3 and KL4.

Did you register further Display-Modules under 1.2 activate again the key >right< for setting the operation mode adjustments of the second Display-Module. The display of the Service-Module shows the text DIS2 K08-01:\*\*\*\*.

Have you completed the setting of the operation mode on all outputs of all available Display-Modules please push the key <left< repeatedly until the Decoder for Switchboard Lights performs a lamp test again. The display of the Service-Module shows now GBS-DEC MOT Vx.y. It is now ready for switching the connected switchboard panel symbols. If you require to change the operation mode adjustment please start again as described under 1.2. If you require an alteration at a particular setting only you can stop the adjustment from any step by a multiple pushing of the key <left< until the lamp test starts. During the normal switching operation it is not required to connect the Service-Module.

## Accessories

For the assembly of the pc-boards of the GBS-DEC inside your switchboard panel we offer assembly material under the order code MON-SET. The set consists of 4 plastic distance spacer and 4 matching wood-screws.

Made in Europe by

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## Documents / Resources



[Littfinski DatenTechnik 050042 Master-Module for Decoder for Switchboard Lights](#) [pdf] User Manual  
050042 Master-Module for Decoder for Switchboard Lights, 050042, Master-Module for Decoder for Switchboard Lights, Decoder for Switchboard Lights, Switchboard Lights

## References

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