

# LokControl

Decentralised control device for  
digital control EasyControl

Art.-Nr. 25-01-110



Manual

**Information and tips:**

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Subject to technical modification.



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### 1. What is LokControl?

The LokControl is a non-central control device for your model railroad, and is used in conjunction with the digital control EasyControl. It is connected to the EasyNet in addition to the central unit MasterControl. It is possible to connect up to 64 LokControls or other non-central control devices to one EasyNet. This enables you to control your model railroad from various positions either alone, or together with other operators.

The LokControl sends the control instructions to the MasterControl which passes on the instructions to every kind of decoder on your layout. The LokControls allows the access to data in the locomotive database of the MasterControl and enables you to change the data.

The display and controls of the LokControls and their mode of operation tally with those of the MasterControl. This allows completely unproblematic changes between the MasterControl and any connected LokControl(s) during operation.

## 2. Getting started

### Checking contents

Please make sure that your package contains:

- the decentralised control device LokControl,
- patch (RJ 45)-cable for connecting the LokControl to the MasterControl,
- this manual.

### Safety instructions

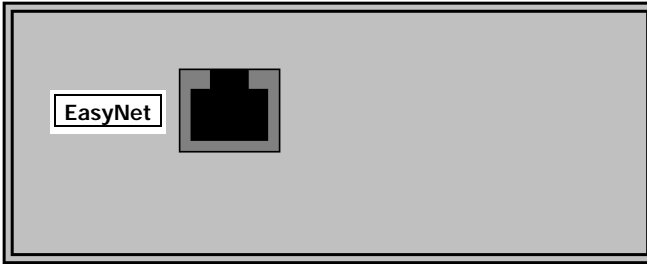
The LokControl should only be used in digital model railways in concordance with these instructions. It is not suitable for use by children under 14. Incorrect use can be dangerous. In particular there is a risk of electric shock through contact with metal parts under power, especially when an incorrect voltage is used, or when operated in a too humid or wet environment. Therefore the following precautions should be observed:

- Wiring should only be carry out when the control is disconnected.
- Only operate indoors in a dry environment.
- Only use proprietry transformers with the correct voltage.
- Only connect the transformer in an authorised manner to the house power supply.
- Use adequetly thick cable for all wiring. Too thin a cable can overheat.
- If the layout is exposed to condensation, allow at least two hours for drying out.

### Remarks concerning this manual

The operation of the LokControl does not differ from that of the MasterControl. For that reason we have refrained from repeating corresponding passages from the manual of the MasterControl and have confined ourselves to stating the differences and the particularities of the LokControl.

### 3. Connecting the LokControl to the MasterControl



Connect the LokControl via a patch (RJ 45)-cable to the EasyNet interface of the MasterControl. Any Ethernet patch cable (used in Computer networks) will work. You may interrupt or restore the connection of the LokControl to the EasyNet at any time – also during operation.

→ Section 7 Operation / „Plug and play“

#### Connecting several LokControls

You may connect up to 64 LokControls or other decentralised control devices to one EasyNet. If you intend to connect more than one control device you will also need:

- up two control devices: a distributor BusControl (optional extra). The BusControl is sufficient to control max. nine control devices. If you intend to connect further devices you need additional BusControls.
- up five control devices: an additional AC power pack (optional extra). An additional AC Power Pack is sufficient to supply eight further control devices. If you intend to connect further devices you need additional power packs.

Also see the BusControl's manual.

### 4. The display and controls of the LokControl

The MasterControl and LokControl look alike. To distinguish between them, the speed control knob has different colours:

MasterControl: red / LokControl: black

→ Section 4 Display and controls of the MasterControl (MasterControl's manual)

## 5. The features of your LokControl

You can use your LokControl to

- enter control instructions to every kind of decoder on your layout,
- call up and change parameters in the locomotive database of the connected MasterControl,
- change the configuration variables of locomotive and function decoders for the DCC format via the main track programming,
- set the parameters of the LokControl.

### Locomotive database

The LokControl does not have a locomotive database of it´s own, it accesses to the data of the connected MasterControl. The inputs made at the LokControl are saved in the database of the MasterControl.

## 6. Setting parameters

Navigating through the menu of the LokControl is identical with navigating through the menu of the MasterControl.

→ Section 6 Adjusting parameters of the digital control (manual of the MasterControl)

The range of the input menu of the LokControl is minor compared to that of the the MasterControl – corresponding to the minor performance range of the LokControl.

### Menu structure of the LokControl

Main menu	Submenu level 1	Submenu level 2
1. Locomotive menu	1.1. Choose 1.2. Data format 1.3. Name 1.4. Entry	→ Section 6.1. Adjusting parameters in the locomotive menu (MasterControl´s manual)
2. DCC main track programming	The other DCC programming modes are not available with the LokControl.	→ Section 6.2. Programming DCC decoders (MasterControl´s manual)
(3. Layout status)	Menu point not available.	
(4. Settings )	Menu point not available.	
(5. Software Update)	Menu point not available.	→ Section 6.5. Updating the software of external devices (MasterControl´s manual) → Abschnitt 8. Software-Update
6. LCD backlight		→ Section 6.6. Adjusting display backlight (MasterControl´s manual)
7. Version and serial number		→ Section 6.7. Checking version and serial number (MasterControl´s manual)
8. Exit		→ Section 6.8. Exit (MasterControl´s manual)

## 7. Operation

In operation you can use and handle the LokControl in the same way as the MasterControl. With your LokControl you can

- stop the operation of your model railroad by pressing **[stop]** or **↑ + [stop]** (stop or halt mode)
- drive locomotive and function decoders
- create, drive and cancel double tractions
- drive solenoid accessory decoders
- reset your system by simultaneously pressing the **[stop]** und **[go]** keys.

→ Section 7. Operation (MasterControl´s manual)

The interplay between the components connected to the EasyControl (MasterControl, LokControls, and other external control devices) is controlled and coordinated by the MasterControl.

→ Section 7.5. Operation with MasterControl and non-central control devices (MasterControl´s manual)

### Switching on and off the LokControl

The LokControl is supplied with power via the EasyNet. It starts automatically as soon as the connected MasterControl is switched on.

### „Plug and play“

You can connect your EasyControl to the EasyNet or disconnect it from the EasyNet at any time – also during operation. As soon as you have restored the connection to the EasyNet, the last locomotive address called (and the corresponding locomotive name if it exists) is shown in the display as well as the status of the functions and the set speed level. You can immediately enter driving instructions for this locomotive address. In case the status of the functions or the speed level for that locomotive address has been changed from the MasterControl or another control device, the LokControl shows the altered settings.

Locking an address from being taking-over by another control device has the following effects with „plug and play“:

- As soon as a LokControl is disconnected from the EasyNet, the lock set at this device is turned off automatically.
- In the case that the last called address is locked from another control device while the LokControl is disconnected from the EasyNet, the LokControl cannot show the address after restoring the connection to the EasyNet.

## 8. Software Update

Your LokControl is a state-of-the-art product, which is constantly improved and adapted to occurring changes. To benefit from this development, you can update the MasterControl to the newest software version.

Disconnect **all** external control devices from the EasyNet – including the LokControl you want to update. Whilst simultaneously pressing  and  of the LokControl restore the connection to the EasyNet. The LokControl will then display „Boot Loader“, the version number (= update application) as well as the hardware version, e.g. „HW = 13“.

Next select the menu point „Software Update“ at your MasterControl and confirm your input with  / ok. The MasterControl will then display in the second line „...Download...“

Now please connect the MasterControl to your PC and execute the update application.

Please note: Always connect the MasterControl to your PC before executing the update application. Otherwise your PC might have difficulties detecting the interface.

Follow the instructions of the update application.

### Update-Service

Our update service gives you the ability to keep the LokControl up-to-date. You can update the software, if you have a PC running Microsoft Windows or Linux as well as a serial or a USB cable. The most recent version of the software can be found on our website. Alternatively, you can order a CD or send us your MasterControl to update it. Request further information at our hotline or on our website.



## 9. Check list for troubleshooting

### Errors occurring while operating

- After connecting the LokControl to the EasyNet the display remains dark.  
Possible reason: The LokControl has been connected to the side of the BusControl not supplied with power. Connect the LokControl the other side of the BusControl. For further information see the BusControl´s manual.  
Possible reason: The power supply is not sufficient. → Connect an additional AC power pack. For further information see the BusControl´s manual.
- As soon as an additional LokControl is connected to the EasyNet, malfunctions occur in the whole model railroad layout.  
Possible reason: The power supply is not sufficient. → Connect an additional AC power pack. For further information see the BusControl´s manual.

### Errors occurring during software update

- After the software update, the LokControl won't start and / or displays "incompatible software".  
Possible reason: You updated using the wrong software file, for instance an update for the MasterControl. → Update again.
- While updating, the progress bar jumps back (often).  
This is not an error. The update application checks continuously, if the data transferred is correct. If this is not the case, it repeats the transfer.

## 10. Technical Specifications

Power supply:	via EasyNet
Power consumption (without consumer):	approx. 180 mA
Interfaces:	EasyNet
Protection:	IP 00
Ambient temperature while operating:	0 - + 60 °C
Ambient temperature while not operating:	-10 bis + 80 °C
Maximum humidity:	max. 85 %
Dimensions:	approx. 180 x 105 x 55 mm

## 11. CE-Certification, EMC and warranty

### CE-Certification

This product is developed and tested in accordance with the European standards EN 55014-1 and EN 61000-6-3. This product conforms with the EC- directive 2004/108/EG on electromagnetic radiation and is therefore CE certified.

### EMC declaration

To guarantee the electromagnetic tolerance in operation you must take the following precautions:

- Connect the transformer only to an approved mains socket installed by an authorised electrician.
- Make no changes to the original parts and accurately follow the instructions included with this manual.
- Use only original spare parts if you have to repair module.

### Guarantee Conditions

This product carries a two year guarantee covering material defect and fabrication errors. We also guarantee the adherence to the product specifications, as long as the operation of this product has been conducted according to the instructions in this manual. Claims will be satisfied either through repair or replacement, failing this a reimbursement of the purchase price will be considered.

Claims that exceed the requirements of German law are not covered, in particular for damage or injury that may be brought in connection with the use of this product. Further more the following cases invalidate this guarantee:

- damage through incorrect or careless use,
- when the product has been modified or tampered with,
- when the product has been overloaded or connected to a incorrect power supply,
- damages caused by external influences i.e. a third party or an accident.