

LED LONG DISTANCE CONTROLLER OPERATING INSTRUCTIONS

Version 2.0



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1.0 Overview

The **LED-Long Distance Controller** (LD Controller) is designed to drive LED-Streifen B. RGB strips manufactured by Schnick-Schnack-Systems GmbH and provides six independent RGB outputs, via a built-in multicore connector.

Up to 5.75 metres of LED-Streifen B 25-250 or 2.5 metres of LED-Streifen B 12-250 can be driven from each output. Smooth blending of colour is achieved using patented Lehmann Modulation. Each of the 6 RGB outputs can be independently addressed.

The LD Controller features a test mode to help ensure correct connection of the LED-Streifen B strips. In this mode, the individual colours cycle in sequence with step of three seconds.

The LD Controller is based on the Common Anode principle: each RGB output features a common anode and individual pulsed cathodes for each of the three colours.

The LD Controller is only unit of its kind to feature independent power supplies for each colour.

These, in conjunction with current-controlling ICs in the LED-Streifen B strips, allow a combined total length of strips and cables, of up to 30 metres on each output. All outputs are short-circuit protected. In the unlikely case of a short-circuit, the faulty output will be switched off. All other outputs will continue to work normally.

2.0 Connectivity

The following connectors are located at the rear of the unit:

Fan Inlet
DO NOT COVER!
Clean regularly.

Fan Inlet
DO NOT COVER!
Clean regularly.



DMX In and Out:
LED Output:
Power connector:

Neutrik XLR 5-pin
Harting HAN-B 24
Power Input 115-230 V

3.0 System Installation

Examine the LD-Controller immediately after unpacking, for any damage which may have occurred during transit. A damaged unit should not be used under any circumstances.

If the LD Controller is moved from a cold to a warm environment, then a period of three hours should be allowed to pass before use, to allow for the evaporation of any condensation which may have formed as a result of the temperature change.

(Example: „Rack Mount Instructions-The following or similar rack-mount instructions are included with the installation instructions:

A) Elevated Operating Ambient-If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature (T_{ma}) specified by the manufacturer.

B) Reduced Air Flow-Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.

C) Mechanical Loading-Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.

D) Circuit Overloading-Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.)

If the LD Controller is to be installed in a rack, care must be taken to ensure that there is sufficient airflow around both the front and back of the unit, to prevent overheating. The temperature of the surrounding air should not exceed 35 °C.

The use of rails is recommended for rack-mounting, to relieve strain on the front panel.

Connect the DMX In and (if necessary) Out cables, followed by the LED outputs.

Power-up the LD Controller, by connecting Power Supply Plug. After approximately one second, the LD Controller is ready for use. Power-off the LD Controller, by disconnecting the Power Supply Plug. The socket-outlet shall be installed near the equipment and shall be easily accessible.

GROUNDING INSTRUCTIONS:

This product must be grounded. If it should malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This product is equipped with a cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances. **WARNING**-Improper connection of the equipment-grounding conductor is able to result in a risk of electric shock. Check with a qualified electrician or serviceman if you are in doubt as to whether the product is properly grounded. Do not modify the plug provided with the product-if it will not fit the outlet, have a proper outlet installed by a qualified electrician).

Do not operate the LD Controller in direct sunlight. Do not use water or aggressive solvents to clean the LD Controller; wiping with a damp cloth should be sufficient. Heavy soiling may be removed using a mild detergent.

CLEANING THE AIRFILTER:

No tools are required to change the air filters. The grille can easily be removed, using only the fingers, to allow replacement of the filter. The grille can then be replaced.

Please use only original filters, specified for use with this fan.

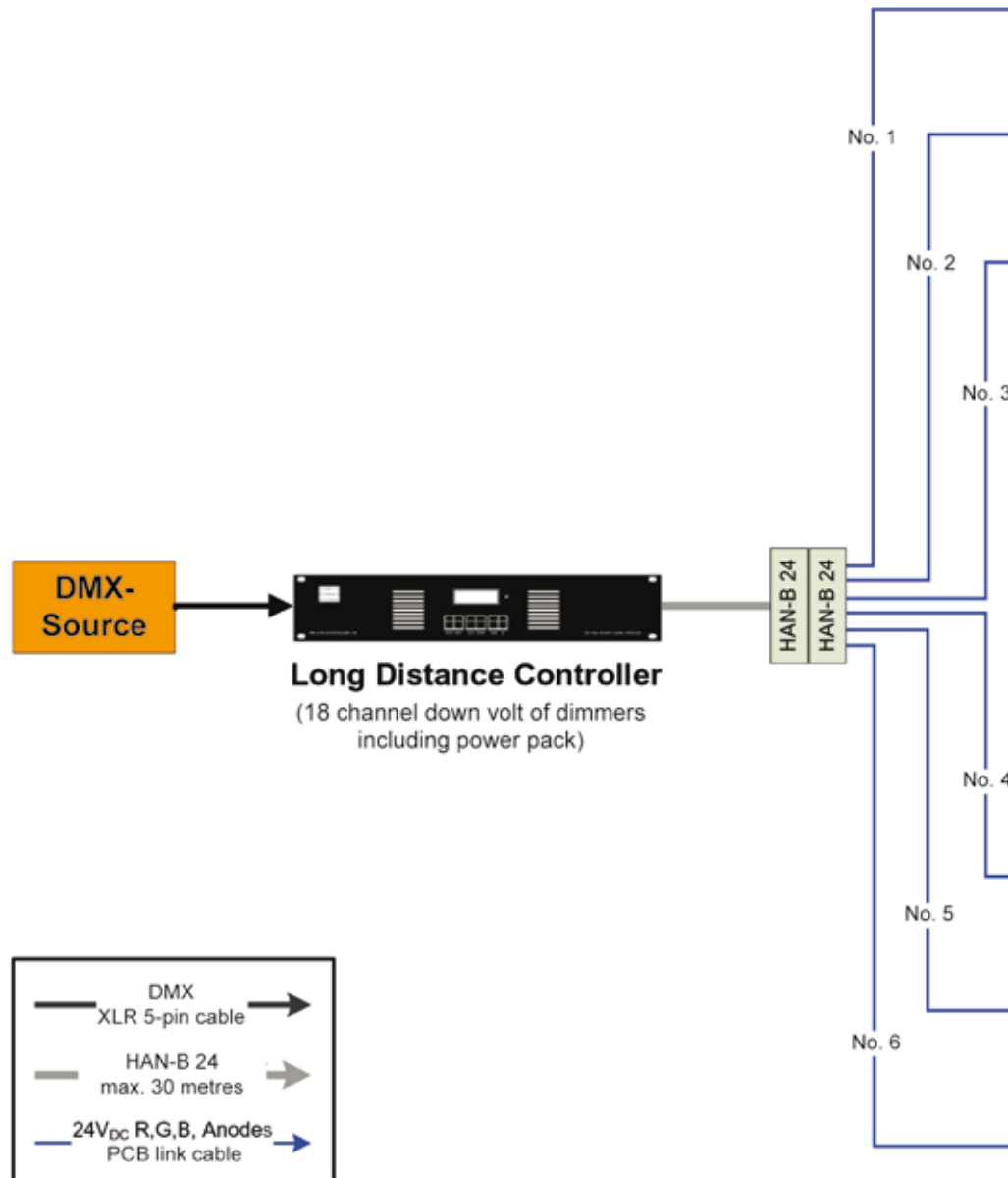
4.0 System Cabling

Cabling of the system is very simple, although the following points should be considered:

Output cables should be connected using a Harting HAN B 24 connector and should have a conductor cross-section of at least 1.5 mm². The combined length of cable and LED-Streifen B strips should not

4.1 Cabling with extensions @ System Multicore Fanout

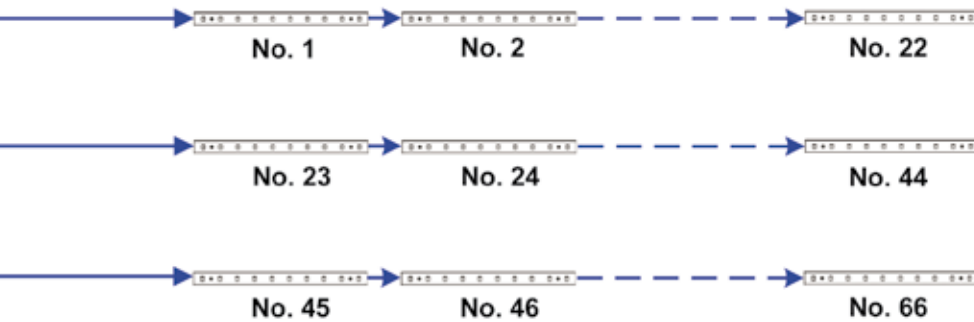
The Multicore System Fanout can be extended to a maximum run of 30 metres.



exceed thirty metres per output.
The LED strips are connected to the load cable via 4-pin system connectors; it does not matter which of the two connectors on the strip are used.

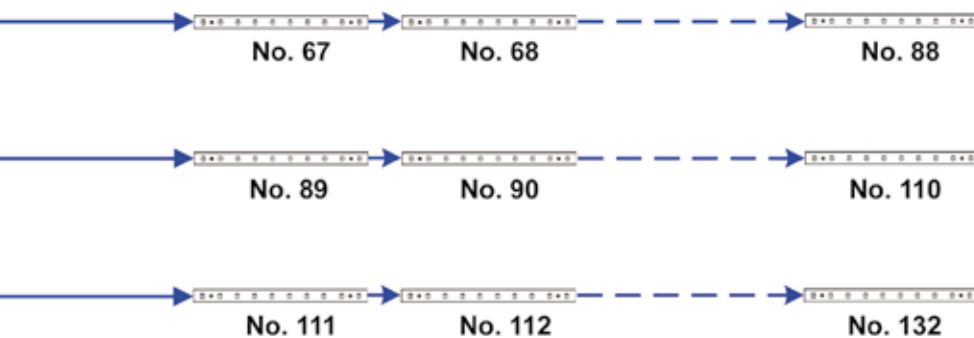
The strips are connected together with short system cables; to a maximum of 22 LED-Streifen B 25-250 per output.

at

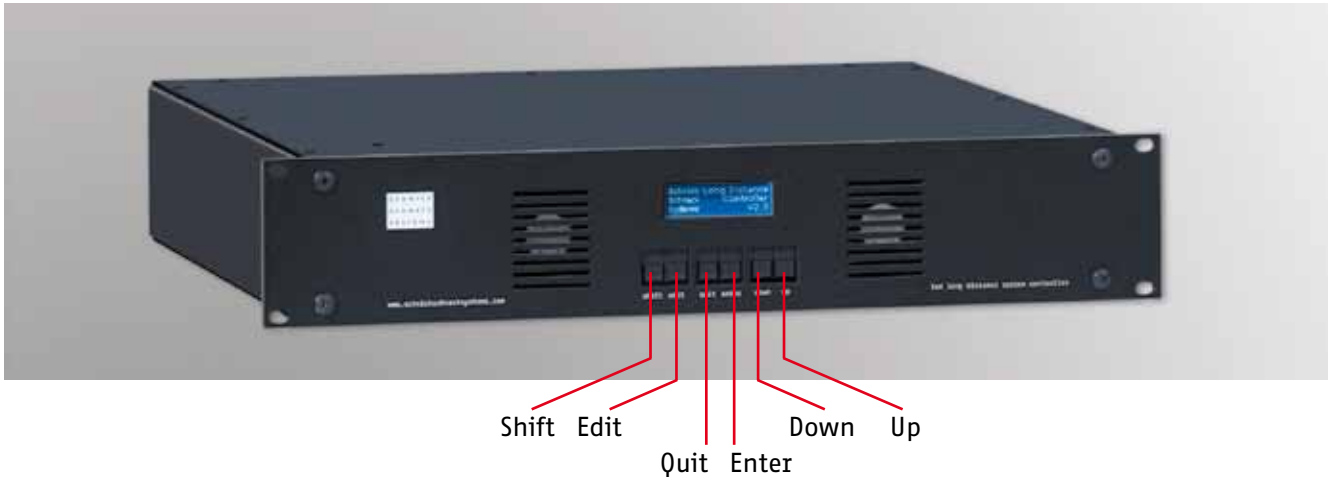


**Each of the 6 exits of HAN-B 24 can touch with up to
22 LED-Streifen B 25-250 (corresponds 5.50 meters) to be loaded
or
11 LED-Streifen B 25-250 (corresponds 2.75 meters)
to be loaded**

The Multicore cable can be meters long up to 30



5.0 Menu Guide



5.1 Addressing

The field marked **DMX-Start-Ch.**, to the top left corner of the display, shows the base address for the entire LD Controller unit.

DMX-Start-Ch: 001			RCV: GOOD		
001	004	007	010	013	016

To set the base address, push the **EDIT** button repeatedly, until this field is highlighted. Use the **UP/DOWN** buttons to raise or lower the address by one channel at a time. Pressing and holding the **SHIFT** button, while pressing the **UP/DOWN** buttons, will change the base address by twenty channels at a time.

The line of six, numbered boxes below the base address, show the addresses for the six individual outputs. These are set automatically, in line with the base address; so set individual output addresses, see **Section 5.1.2** on Page 8.

The field marked **RCV**, to the top right of the display, shows the status of incoming DMX signal.

NONE indicates that no DMX signal is being received.

GOOD indicates that a valid DMX signal is being received.

5.1.2 Addressing Individual Outputs

Firstly, set the base address for the whole unit, as described in **Section 5.1** on Page 7.

DMX-Start-Ch: OFF			RCU: GOOD		
069	075	170	170	370	432

To set the addresses of the outputs individually, press the **EDIT** key repeatedly, until the required output is highlighted. Use the **UP/DOWN** and **SHIFT** buttons to set the address on the selected output.

N.B.-If a new DMX base address is entered, any addresses set for individual outputs will be reset to new values, determined by the new base address.

5.1.3 Output Indicators

Below the start address of each output, is an level indicator consisting of three horizontal bars, which show the intensity of the red, green and blue channels for that output.

DMX-Start-Ch: 001			RCU: GOOD		
001	004	007	010	013	016

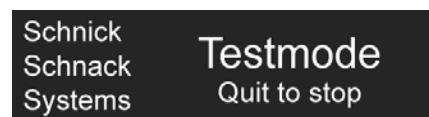
Red =

Green =

Blue =

5.2 Test Mode

To run the LD Controller in Test Mode, press the **SHIFT** and **ENTER** buttons together. The display will show the selected mode.



In the Test Mode, all outputs will cycle simultaneously through red, green and blue at full intensity, at intervals of three seconds.

To exit the Test Mode, press **QUIT**.

6.0 Specifications

Housing: Dimensions (mm):	19" rack, 2U high 483x88x407 (WxHxD)
Input Voltage: Power Consumption: Power Input Connector:	115-230 V, 50/60 Hz 700 VA 6-3 A (Rubber connector)
Protocol: DMX In: DMX Out:	DMX 512 A-1990 USITT, isolated and protected Neutrik XLR 5-pin, male Neutrik XLR 5-pin, female
Red Output: Green Output: Blue Output:	27 V 6x1000 mA 24 V 6x1000 mA 24 V 6x1000 mA
Output Current:	Maximum 3 A per RGB channel
Maximum Output Cable Dimensions:	30 m x 1.5 mm ² + 6 m x 0.34 mm ²
LED Output Connector:	HAN-B 24 split into six channels 1x Red, 1x Green, 1x Blue and 1x common anode per output
Max. length of LED-Streifen B strips:	5.50 m/22x LED-Streifen B 25-250 or 2.75 m/11x LED-Streifen B 12-250 per output
Weight:	9 kg

6.1 Connector Wiring

1	2	3	4	5
Data GND	Data -ve	Data +ve	n/c	n/c

1	2	3	4	5	6	7	8	9	10	11	12
Red 1	Green 1	Red 2	Green 2	Red 3	Green 3	Red 4	Green 4	Red 5	Green 5	Red 6	Green 6
Blue 1	Anode 1	Blue 2	Anode 2	Blue 3	Anode 3	Blue 4	Anode 4	Blue 5	Anode 5	Blue 6	Anode 6
13	14	15	16	17	18	19	20	21	22	23	24

7.0 Contact Information

Schnick-Schnack-Systems GmbH
Mathias-Brüggen-Straße 79
50829 Köln

Phone: 02 21/99 20 19-0
Fax: 02 21/99 20 19-22

Mail: info@schnickschnacksystems.com
Website: www.schnickschnacksystems.com

8.0 Declaration of EU conformity

**SCHNICK
SCHNACK
SYSTEMS**

EC-Declaration of conformity

I hereby declare that the product

LED-Beleuchtungssystem bestehend aus „LED-Systemnetzteil 4“, „LED-Kachel B“, „LED Streifen 25“ mit „Intelligenz“ und Verkabelung nach Bedienungsanleitung.

(Name of product, type or model, batch or serial number)

meets the essential requirements referred to in Article 3 of the Council Directive 99/5/EC.

The following harmonized standards have been applied:

EN 60950-1:2003

EN 55015:2000

MANUFACTURER or AUTHORISED REPRESENTATIVE:

Address:

Schnick-Schnack-Systems GmbH

Gunther-Plueschow Strasse 6

50829 Koeln

Germany

Tel.: +49 221 992 019 - 0

Fax.: +49 221 992 019 - 22

Koeln, 7th. February 2005

(Place, Date of issue)



(Signature)

Dipl. Ing. (FH) Erhard Lehmann

(Name in block letters)