Long Distance Controller

User Guide

Contents

Overview

The Long Distance Controller offers the possibility to control all LED strips of Series B and all monochrome LED tiles and strips of the L-Series from Schnick-Schnack-Systems.

The unit offers six independent RGB outputs on a multicore system plug connection. Each of the six RGB-outputs can be freely addressed. The system has a Test Mode in order to check the correct connection of the LED modules.

The Long Distance Controller is built in accordance with the "Common Anode-Principle". Each output has a common anode and three pulsed cathodes for each of the colours red, green and blue. As the only device of its kind the Long Distance Controller is working with three separate, and separately operated, switched-mode power supplies for each colour.

Although there is just one common anode, it works with three different voltages for each of the primary colours. In conjunction with the current regulator ICs for the LED-Strips, the Long Distance Controller can achieve cable lengths up to 30m between the LED-Strips and the Long Distance Controller.

All outputs are protected against short-circuit. In the case of a short-circuit, only the faulty output is switched off. The flashing display shows Output Error and a graphic indicates which error there is. The other outputs continue to work normally.

Connectivity

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

Do not cover the air inlets and clean
them regularly.

DMX
IN

DMX
OUT

LED
OUT

Do not cover the air inlets and
clean them regularly.

Main
Connector

DMX In- or Output	Neutrik XLR–5pin
LED Output	Harting B24
Main Connector	115–230V AC, 50–60Hz

Installation

Check the device for any damage incurred during transit immediately after unpacking. A damaged unit should not be used.

If the Long Distance Controller has been taken from a cold environment into a warm interior after transportation, allow at least three hours for it to warm up before it is put into operation. Because of that, possibly formed condensation can evaporate and the electronics are therefore not endangered.

When installing into a rack, ensure that there is sufficient circulating air supply to the front and rear sides. The supply air temperature should not exceed 35°C.

The Long Distance Controller is to be fitted into the rack installation using the appropriate rails so that the rack−bars take the load off the front panel of the Long Distance Controller and the unit is clearly accessible for maintenance. Be sure to successively lock the cable connections for the DMX in− and output as well as the necessary LED outputs, when connecting cables. After all connections are made, turn on the device, ensuring that any power is also turned on at the sub−distribution. After approximately one second the Long Distance Controller is ready for use.

Keep the unit out of direct sunlight at all times. Never clean the device with aggressive cleaners. For cleaning purposes, the wiping of the device with a moist cloth is sufficient. In the case of stubborn dirt, a mild cleaner can be used on the moistened cloth.

Cleaning of air filters

No tools are necessary in order to clean the air filters.

The fan guard can be removed easily by hand. After that the filter cartridge can be removed and cleaned using compressed air for example. The filter cartridge can then be replaced before refitting the fan guard. Please only use original filters.

System Cabling

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

The HAN B output of the Long Distance Controller should be connected using a load cable having a conductor cross section area of at least 1.5mm² and run to a length not exceeding 30m.

The LED-boards are connected with the aid of a Multicore System plug solution. It is not important to which of the two entry pins on the LED-board the inlet is put.

The LED-boards are connected to each other with short connecting cables which are small, lightweight and ideal for this purpose.

The exact number of the to be controlled LED products, cabling- and calculating examples can be found in the data sheets for each LED components.

Menu

On the front of the device you will find the
following connection options:
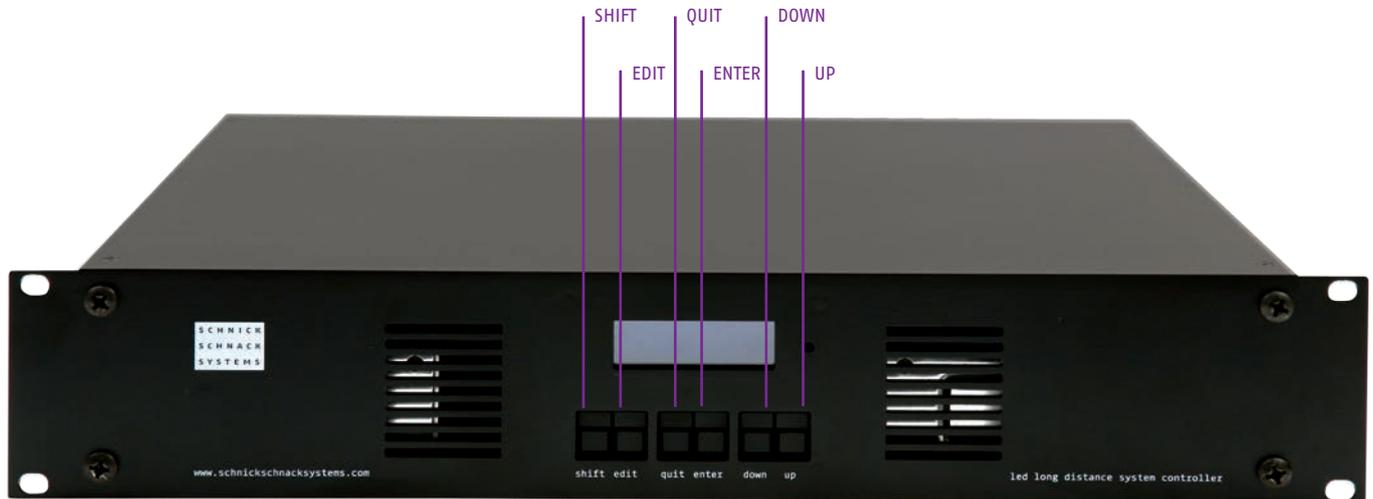
SHIFT+		used in conjunction with...
	EDIT	to move the cursor backwards through the data fields
	ENTER	to confirm certain actions
EDIT		navigates the mouse pointer
QUIT		exits the currently–selected mode or the sub menu
ENTER		to confirm certain actions e. g. mode changes
UP		moves upward through the mode list. Increases the value in the selected data field
DOWN		moves downwards through the mode list. Decreases the value in the selected data field

Addressing

In the upper left field of the display on the Long Distance Controller, you can enter the DMX start address.

All following outputs are then automatically addressed in logical sequence. By using the **UP/DOWN** keys and holding the **SHIFT** key, the address value rises or falls by ten or without the **SHIFT** key, by the value of one.

The **RCV** field gives information about the status of the received DMX signal. **NONE** indicates that there is no DMX signal. **GOOD** indicates that a data stream is being received.

```
DMX-Start-Ch: 001   RCV: NONE
069  075  170  170  370  432
```

Addressing – Individual Outputs

In order to address outputs separately press **EDIT** repeatedly, until the required output field is showing. Then enter the required address for the output.

As soon as the address of a single output is changed, DMX-**Start-Ch: OFF** appears as the general starting position for the next address entry.

If a general DMX address is entered more than once, all changes to the output addresses are discarded and the addresses then follow the general address in ascending order again.

```
DMX-Start-Ch: 001   RCV: GOOD
069  075  170  170  370  432
```
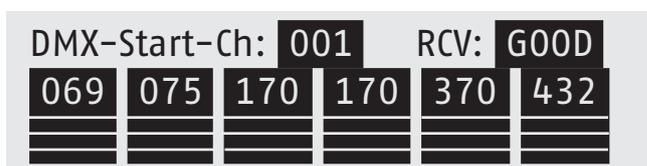
Level indicator

Below the six start addresses of the outputs, there is a level indicator for each output that indicates the respective signal intensity (using horizontally running beams) for the red, green and blue on the LED-Strips.

Test Mode

To switch the Long Distance Controller into Test Mode, press and hold **SHIFT** and press **ENTER** simultaneously. The display will now appear as indicated in the figure (see right).

All outputs will change simultaneously between red, green and blue, up to 100% brightness in a three second cycle (approximately). In order to leave the Test Mode, simply press **QUIT**.

```
SCHNICK          Test Mode
SCHNACK          Quit to stop
SYSTEMS
```
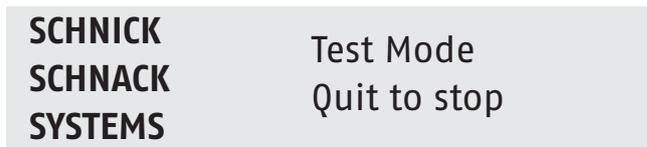
Technical Data

Case	19 inch, two height unit
Dimensions	483 × 88 × 407mm (W × H × D)
Operating voltage	115–230V, 50–60Hz
Power consumption	700VA
Power Input Connector	IEC plug, lockable
Protocol	DMX 512 A–1990 USITT
DMX IN	Neutrik XLR–5pin–Buchse
DMX OUT	Neutrik XLR–5pin–Buchse
Output Red	27V/6 × 900mA
Output Green	24V/6 × 1,1mA
Output Blue	24V/6 × 1,1mA
Output Power	maximum 3A per RGB channel
Maximum LED input	$30m \times 1,5mm^2 + 6m \times 0,34mm^2$
LED Output	HAN B24 configured with six channels, one red, green and blue anode per channel
Maximum length of LED–Strips	5,50m= 22 LED–Strips B25–250 or 2,75m= 11 LED–Strips B12–250 per RGB–channel
Weight	9kg

Pin Connection

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

Declaration of Conformity

EC-Declaration of conformity

I hereby declare that the product

18 Kanal LED-System mit RGB - Streifenplatinen

(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

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Koeln, 14th. February 2005

(Place, Date of issue)

(Signature)

Dipl. Ing. (FH) Erhard Lehmann

(Name in block letters)

Why Schnick Schnack Systems?

As installation times become increasingly shorter the complexity of systems simultaneously increases as do the requirements of customers.

We are a supplier who delivers high-quality reliable systems – under tight deadline constraints that are not only quick to install but also simple to operate and service.

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