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Warning

> For your own safety, please read this user manual carefully
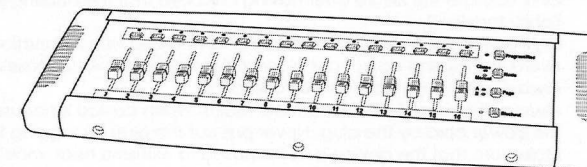> before your initial start-up!

Unpacking Instructions

Immediately upon receiving this product, carefully unpack the carton and check the contents to ensure that all parts are present, and have been received in good condition. Notify the dealer immediately and retain packing material for inspection if any parts appear damaged from shipping or the carton itself shows signs of mishandling. Save the carton and all packing materials. In the event that a fixture must be returned to the factory, it is important that the fixture be returned in the original factory box and packing.

Your shipment includes:

- Showtec Easy 16
- DC power adapter (1,75 m)
- User manual

> CAUTION!
> Keep this device away from rain and moisture!
> Unplug mains lead before opening the housing!

Safety Instructions

Every person involved with the installation, operation and maintenance of this device has to:
- be qualified
- follow the instructions of this manual

> CAUTION! Be careful with your operations.
> With a dangerous voltage you can suffer
> a dangerous electric shock when touching the wires!

Before your initial start-up, please make sure that there is no damage caused by transportation. Should there be any, consult your dealer and do not use the device.
To maintain perfect condition and to ensure a safe operation, it is absolutely necessary for the user to follow the safety instructions and warning notes written in this manual.
Please consider that damages caused by manual modifications to the device are not subject to warranty.
This device contains no user-serviceable parts. Refer servicing to qualified technicians only.

IMPORTANT:

The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual or any unauthorized modification to the device.

- Never let the power cord come into contact with other cables! Handle the power cord and all connections with the mains with particular caution!
- Never remove warning or informative labels from the unit.
- Never use anything to cover the ground contact.
- Never leave any cables lying around.
- Do not insert objects into air vents.
- Do not open the device and do not modify the device.
- Do not connect this device to a dimmerpack.
- Do not switch the device on and off in short intervals, as this would reduce the device's life.
- Do not shake the device. Avoid brute force when installing or operating the device.
- Only use device indoor, avoid contact with water or other liquids.
- Only operate the fixture after having checked that the housing is firmly closed and all screws are tightly fastened.
- Only operate the device after having familiarized with its functions.
- Avoid flames and do not put close to flammable liquids or gases.
- Always keep case closed while operating.
- Always disconnect power from the mains, when device is not used or before cleaning! Only handle the power cord by the plug. Never pull out the plug by tugging the power cord.
- Make sure that the device is not exposed to extreme heat, moisture or dust.
- Make sure that the available voltage is not higher than stated on the rear panel.
- Make sure that the power cord is never crimped or damaged. Check the device and the power cord from time to time.
- If device is dropped or struck, disconnect mains power supply immediately. Have a qualified engineer inspect for safety before operating.
- If the device has been exposed to drastic temperature fluctuation (e.g. after transportation), do not switch it on immediately. The arising condensation water might damage your device. Leave the device switched off until it has reached room temperature.
- If your Showtec device fails to work properly, discontinue use immediately. Pack the unit securely (preferably in the original packing material), and return it to your Showtec dealer for service.
- For adult use only. Device must be installed out of the reach of children. Never leave the unit running unattended.
- The user is responsible for correct positioning and operating of the Easy 16. The manufacturer will not accept liability for damages caused by the misuse or incorrect installation of this device.
- This device falls under protection class I. Therefore it is essential to connect the yellow/green conductor to earth.
- Repairs, servicing and electric connection must be carried out by a qualified technician.
- WARRANTY: Till one year after date of purchase.

Operating Determinations

- This device is not designed for permanent operation. Consistent operation breaks will ensure that the device will serve you for a long time without defects.
- The minimum distance between light-output and the illuminated surface must be more than 1 meter.
- The maximum ambient temperature ta = 40°C must never be exceeded.
- The relative humidity must not exceed 50 % with an ambient temperature of 40° C.
- If this device is operated in any other way, than the one described in this manual, the product may suffer damages and the warranty becomes void.
- Any other operation may lead to dangers like short-circuit, burns, electric shock, crash etc.

You endanger your own safety and the safety of others!

Connection with the mains

Connect the device to the mains with the power-plug.
Always pay attention, that the right color cable is connected to the right place.

International	EU Cable	UK Cable	US Cable	Pin
L	BROWN	RED	YELLOW/COPPER	PHASE
N	BLUE	BLACK	SILVER	NEUTRAL
⏚	YELLOW/GREEN	GREEN	GREEN	PROTECTIVE GROUND

Make sure that the device is always connected properly to the earth!

Improper installation can cause serious damage to people and property!

⚠ Return Procedure ⚠

Returned merchandise must be sent prepaid and in the original packing, call tags will not be issued. Package must be clearly labeled with a Return Authorization Number (RMA number). Products returned without an RMA number will be refused. Highlite will not accept the returned goods or any responsibility. Call Highlite 0031-455667723 or mail aftersales@highlite.nl and request an RMA prior to shipping the fixture. Be prepared to provide the model number, serial number and a brief description of the cause for the return. Be sure to properly pack fixture, any shipping damage resulting from inadequate packaging is the customer's responsibility. Highlite reserves the right to use its own discretion to repair or replace product(s). As a suggestion, proper UPS packing or double-boxing is always a safe method to use.

Note: If you are given an RMA number, please include the following information on a piece of paper inside the box:
01) Your name.
02) Your address.
03) Your phone number.
04) A brief description of the symptoms.

Claims

The client has the obligation to check the delivered goods immediately upon delivery for any short-comings and/or visible defects, or perform this check after our announcement that the goods are at their disposal. Damage incurred in shipping is the responsibility of the shipper; therefore the damage must be reported to the carrier upon receipt of merchandise.
It is the customer's responsibility to notify and submit claims with the shipper in the event that a fixture is damaged due to shipping. Transportation damage has to be reported to us within one day after receipt of the delivery.
Any return shipment has to be made post-paid at all times. Return shipments must be accompanied with a letter defining the reason for return shipment. Non-prepaid return shipments will be refused, unless otherwise agreed in writing.
Complaints against us must be made known in writing or by fax within 10 working days after receipt of the invoice. After this period complaints will not be handled anymore.
Complaints will only then be considered if the client has so far complied with all parts of the agreement, regardless of the agreement of which the obligation is resulting.

Description of the device

Features

The Showtec Easy 16 is a light controller equipped with very useful features:
- 32 channel programmable DMX controller
- Total output channels: 16 x 2 (pages)
- Program 12 scenes
- Manual Mode
- Built-in chase
- Adjustable speed: 0,1 sec - 10 min.
- Adjustable fade time: 0-100 %
- Adjustable chase direction
- Universal DMX-512 controller
- Output connector: 3 pole Female XLR
- Input connector: 3-pin XLR male
- Power Input DC 9V-500 mA
- 3HE (3U) 19" rack mount

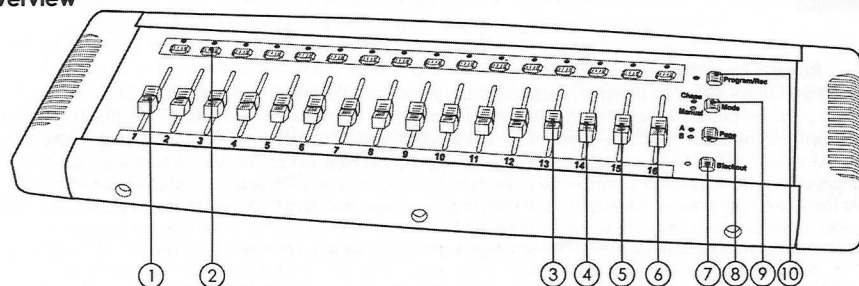NOTE: Knowledge of DMX i is required to fully utilize this unit.

Overview

Fig. 01

01) Channel faders
   For adjusting DMX values, Ch 1~16 can be adjusted immediately, Ch 17~32 after pressing the Page select button.
02) Scene select buttons
   Universal bump buttons representing scene location for storage and selection
03) Direction Fader
04) Output Fader
05) Speed Fader
   This will adjust the hold time of a scene or a step within a chase (range of 0.1 second to 10 minutes).
06) Fade Fader
   Used to adjust the fade time. Fade time is the amount of time it takes for a scanner (or scanners) to move from one position to another, for the dimmer to fade in or fade out.
07) Blackout button
   Press this button to enable or disable relevant DMX output. When its LED is lit, that means the relevant DMX output is disabled. Press this button again the LED will be "off", that means the DMX output is reactivated.
08) Page button
   Used to select page between Page A (I-16) and Page B (17-32). The corresponding Page LED (A/B) will light up.
09) Mode button
   Operating mode status, (Chase / Manual). The corresponding Mode LED (Chase / Manual) will light up.
10) Program / Rec button
   Activates program mode.

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Backside

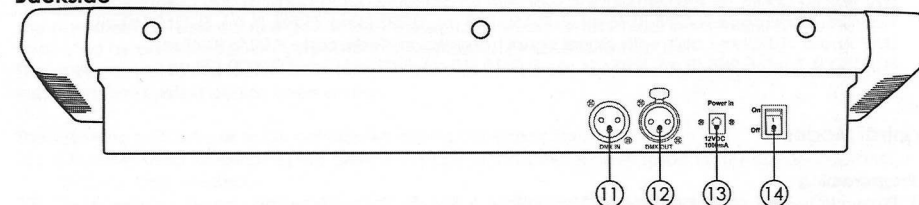**Fig. 03**

11) 3-pin DMX input connector
12) 3-pin DMX output connector
13) DC Input DC 9V-500mA
14) ON/OFF power switch turns the controller on and off

Installation

Remove all packing materials from the Easy 16. Check if all foam and plastic padding is removed. Connect all cables.
Do not supply power before the whole system is set up and connected properly.
Always disconnect from electric mains power supply before cleaning or servicing.
Damages caused by non-observance are not subject to warranty.

Set Up and Operation

Follow the directions below, as they pertain to your preferred operation mode.
Before plugging the unit in, always make sure that the power supply matches the product specification voltage. Do not attempt to operate a 120V specification product on 230V power, or vice versa. Connect the device to the main power supply. The device can be sound-controlled as it is equipped with a built-in microphone.

Fixture Linking

You will need a serial data link to run light shows of one or more fixtures using a DMX-512 controller or to run synchronized shows on two or more fixtures set to a master/slave operating mode. The combined number of channels required by all the fixtures on a serial data link determines the number of fixtures the data link can support.

Important: Fixtures on a serial data link must be daisy chained in one single line. To comply with the EIA-485 standard no more than 30 devices should be connected on one data link. Connecting more than 30 fixtures on one serial data link without the use of a DMX optically isolated splitter may result in deterioration of the digital DMX signal.

⚠ Maximum recommended DMX data link distance: 100 meters
Maximum recommended number of fixtures on a DMX data link: 30 fixtures

Data Cabling

To link fixtures together, you must obtain data cables. You can purchase DAP Audio certified DMX cables directly from a dealer/distributor or construct your own cable. If you choose to create your own cable please use data-grade cables that can carry a high quality signal and are less prone to electromagnetic interference.

DAP Audio DMX Data Cables
- DAP Audio Basic microphone cable for allround use. bal. XLR/M 3-pin > XLR/F 3-pin.
  Ordercode FL01150 (1,5 m), FL013 (3 m), FL016 (6 m), FL0110 (10 m), FL0115 (15 m), FL0120 (20 m).
- DAP Audio X-type data cable XLR/M 3-pin > XLR/F 3-pin. **Ordercode** FLX0175 (0,75 m), FLX01150 (1,5 m), FLX013 (3 m), FLX016 (6 m), FLX0110 (10 m).
- DAP Audio cable for the demanding user with exceptional audio-qualities and connector made by Neutrik®. **Ordercode** FL71150 (1,5 m), FL713 (3 m), FL716 (6 m), FL7110 (10 m).

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- DAP Audio cable for the demanding user with exceptional audio-qualities and connector made by Neutrik®. **Ordercode** FL7275 (0,75 m), FL72150 (1,5 m), FL723 (3 m), FL726 (6 m), FL7210 (10 m).
- DAP Audio 110 Ohm cable with digital signal transmission. **Ordercode** FL0975 (0,75 m), FL09150 (1,5 m), FL093 (3 m), FL096 (6 m), FL0910 (10 m), FL0915 (15 m), FL0920 (20 m).

Control Modes

1. Programming
01) Press PROGRAM and then press SCENE buttons 1, 5, 6, 8.
02) Use the fader and PAGE button (**8**) to set the DMX value.
03) Hold down the PROGRAM button (**10**) and choose the position for the SCENE to be saved
04) Save the current scene in the current SCENE.

2. Exit programming
01) To exit Program mode, first press the PROGRAM button (**10**) and then the BLACKOUT button (**7**).

3. Chase / Manual
01) Press MODE (**9**), you can select 2 different modes: AUTO and MANUAL.
02) You can control the controller manually or automatically.

4. Chase Mode
A chase is created by using previously created scenes. Scenes become steps in a chase.
01) In Chase Mode the scenes will automatically be played one after the other.
02) In AUTO mode: fader 13 controls the running direction of the CHASE
                     fader 14 controls the dimmer of the chase   (0-100%)
                     fader 15 control the run speed of the chase CHASE (0.1s-10m)
                     fader 16 control FADE of the chase   (0-100%)
03) In MANUAL mode: fader 1-16 and the PAGE button control the output of each channel.

5. Delete a Chase
01) Press PROGRAM (**10**) and then press SCENE buttons 1, 5, 6, 8. You're now in Program mode.
02) To delete a chase, press and hold down the PROGRAM (**10**) + MODE button (**9**).
03) All LEDs will flash, indicating all programs have been deleted.

6. Blackout
01) Press the BLACKOUT button (**7**) to enable or disable relevant DMX output. When its LED is lit, that means the relevant DMX output is disabled. Press this button again the LED will be "off", that means the DMX output is reactivated.

Maintenance

The operator has to make sure that safety-related and machine-technical installations are to be inspected by an expert after every year in the course of an acceptance test.
The operator has to make sure that safety-related and machine-technical installations are to be inspected by a skilled person once a year.

The following points have to be considered during the inspection:
01) All screws used for installing the device or parts of the device have to be tightly connected and must not be corroded.
02) There may not be any deformations on housings, fixations and installation spots.
03) Mechanically moving parts like axles, eyes and others may not show any traces of wearing.
04) The electric power supply cables must not show any damages or material fatigue.

The Showtec Easy 16 requires almost no maintenance. However, you should keep the unit clean. Disconnect the mains power supply, and then wipe the cover with a damp cloth. Do not immerse in liquid. Do not use alcohol or solvents.
Keep connections clean. Disconnect electric power, and then wipe the DMX and audio connections with a damp cloth. Make sure that the connections are thoroughly dry before linking equipment or supplying electric power.

Troubleshooting

This troubleshooting guide is meant to help solve simple problems.
If a problem occurs, carry out the steps below in sequence until a solution is found. Once the unit operates properly, do not carry out following steps.

No Light
If the Easy 16 does not operate properly, refer servicing to a technician.
Suspect two potential problem areas: the power supply, the LEDs.
01) Power supply. Check if the unit is plugged into an appropriate power supply.
02) The LEDs. Return the Easy 16 to your Showtec dealer.
03) A LED effect does not respond to the Easy 16: Check the DMX-address of the fixture and the controller. Make sure that they match. Make sure that the connections are correct.
04) Check if blackout is inactive.
05) If all of the above appears to be O.K., plug the unit in again.
06) If nothing happens after 30 seconds, unplug the device.
07) If you are unable to determine the cause of the problem, do not open the Easy 16, as this may damage the unit and the warranty will become void.
08) Return the device to your Showtec dealer.

No Response to DMX
Response: Suspect the DMX cable or connectors, a controller malfunction, a light effect DMX card malfunction.
01) Check the DMX setting. Make sure that DMX addresses are correct.
02) Check the DMX cable: Unplug the unit; change the DMX cable; then reconnect to electrical power. Try your DMX control again.
03) Determine whether the controller or light effect is at fault. Does the controller operate properly with other DMX products? If not, take the controller in for repair. If so, take the DMX cable and the light effect to a qualified technician.

Product Specifications

Model:	Easy 16
Input Voltage:	DC 9Volt - 500mA
Dimensions:	535 x 195 x 100 mm (LxWxH)
	3HE (3U) 19" rack mount
Weight:	2,8 kg
Operation and Programming	
Signal pin OUT:	pin 1 earth, pin 2 (-), pin 3 (+)
DMX Channels:	32 (16x2pages)
Signal input:	3-pin XLR signal connector IN (male)
Signal output:	3-pin XLR signal connector OUT (female)
Electro-mechanical effects	
Program 12 scenes	
Manual Mode	
Built-in chase	
Adjustable speed:	0,1 sec - 10 min.
Adjustable fade time:	0-100 %
Adjustable chase direction	
Housing:	Grey Metal & Flame-retardant plastic
Connections:	Power adapter & Data connector
Max. ambient temperature t_a:	40°C
Minimum distance:	
Minimum distance to lighted object:	1 m

Design and product specifications are subject to change without prior notice.

CE

Website: www.Showtec.info
Email: service@highlite.nl

Dimensions