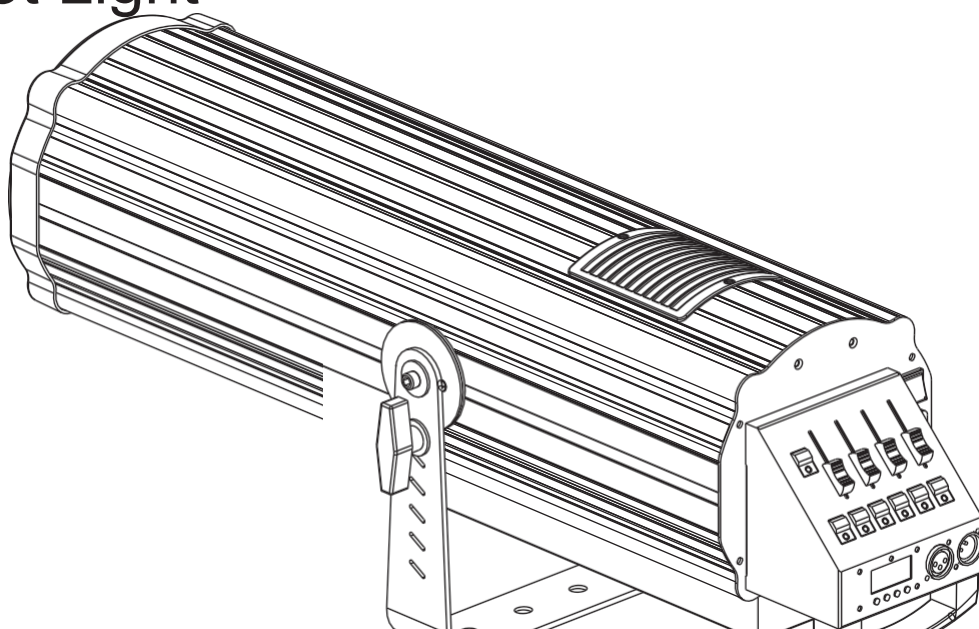# LED
FL-350
DMX Follow Spot Light

User Manual

LED FL-350 DMX Follow Spot Light

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Every person involved with the installation, operation and maintenance of this device has to
- be qualified
- follow the instructions of this manual
- consider this manual to be part of the total product
- keep this manual for the entire service life of the product
- pass this manual on to every further owner or user of the product
- download the latest version of the user manual from the Internet

INTRODUCTION

Thank you for having chosen one of our products. If you follow the instructions given in this manual, we are sure that you will enjoy this device for a long period of time.

Product features

DMX controlled follow spot with a powerful 300 W WW LED
- ☐ Operable in manual mode or via DMX
- ☐ DMX512 control possible via any commercial DMX controller (occupies 6 channels)
- ☐ Suitable for a projection area of up to 30 meters
- ☐ Manual control via control panel with buttons and faders
- ☐ DMX addressing via LED display and four operating buttons
- ☐ Color wheel with 5 different, dichroic color filters and open
- ☐ Strobe effect with adjustable speed (1-20 flashes/sec.)
- ☐ Four correction filters: CTB, Cyan, Magenta, Yellow
- ☐ Steplessly adjustable iris from 5 - 100%
- ☐ Dimmer for stepless adjustment of the light-output brightness between 0 % and 100 %
- ☐ Manual focus
- ☐ Manual zoom (from 7° to 13°)
- ☐ Mounting bracket for installation on a stand
- ☐ Equipped with 1 x 300 W LED
- ☐ Switch-mode power supply for operation between 100 and 240 volts
- ☐ Power connection via P-Con socket and included power cable

SAFETY INSTRUCTIONS

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Intended use

☐ This device is an LED projector for creating decorative lighting effects. This device is designed for professional use in the field of event technology, e.g. on stage. It is not suitable for household lighting.

☐ Only use the device according to the instructions given herein. Damages due to failure to follow these operating instructions will void the warranty! We do not assume any liability for any resulting damage.

☐ We do not assume any liability for material and personal damage caused by improper use or non-compliance with the safety instructions. In such cases, the warranty/guarantee will be null and void.

☐ Unauthorized rebuilds or modifications of the device are not permitted for reasons of safety and render the warranty invalid.

Danger due to electricity

☐ The device is suitable for indoor use only. Do not use it outdoors. Never expose it to rain or moisture. Do not store it in rooms exposed to moisture.

☐ To reduce the risk of electric shock, do not open any part of the device. There are no serviceable parts inside the device.

☐ Only connect the device to a properly installed mains outlet. The outlet must be protected by residual current breaker (RCD). The voltage and frequency must exactly be the same as stated on the device. If the mains cable is equipped with an earthing contact, then it must be connected to an outlet with a protective ground. Never defeat the protective ground of a mains cable. Failure to do so could result in damage to the device and possibly injure the user.

☐ The mains outlet must be easily accessible so that you can unplug the device quickly if need be.

☐ Never touch the mains plug with wet or damp hands. There is the risk of potentially fatal electric shock.

☐ The mains cable must not be bent or squeezed. Keep it away from hot surfaces or sharp edges.

☐ Never pull the mains cable to disconnect the mains plug from the mains outlet, always seize the plug.

☐ Unplug the device during lighting storms, when unused for long periods of time or before cleaning.

☐ Do not expose the device to any high temperatures, direct sunlight, dripping or splashing water, strong vibrations or heavy mechanical stress.

☐ Do not place any objects filled with liquids on the device.

☐ Do not place any open sources of fire, such as burning candles, on or directly next to the device.

☐ Make sure that objects cannot fall into the device, in particular metal parts.

☐ Only have repairs to the device or its mains cable carried out by qualified service personnel. Repairs are required when the device or the mains cable is visibly damaged, liquid has been spilled or objects have fallen into the device; when the device has been exposed to rain or moisture, has been dropped or malfunctions occur.

☐ Cleaning of the device is limited to the surface. Make sure that moisture does not come into contact with any areas of the terminal connections or mains voltage control parts. Only wipe off the product with a soft lint-free and moistened cloth. Never use solvents or aggressive detergents.

Danger to children and people with restricted abilities

☐ This product is not a toy. Keep it out of the reach of children and pets. Do not leave packaging material lying around carelessly. Never leave this device running unattended.

☐ This device may be used only by persons with sufficient physical, sensorial, and intellectual abilities and having corresponding knowledge and experience. Other persons may use this device only if they are supervised or instructed by a person who is responsible for their safety.

Warning – risk of burns and fire

☐ The admissible ambient temperature range (Ta) is -5 to +40°C. Do not operate the device outside of this temperature range.

☐ The housing temperature (Tc) can be up to 50°C during use. Avoid contact by persons and materials.

☐ Do not illuminate surfaces within 50 cm of the device. This value is indicated on the device by the symbol.

☐ Do not use the device near highly flammable materials. Always place the device at a location where sufficient air circulation is ensured. Leave 50 cm of free space around the device. Never cover the air vents of the housing.

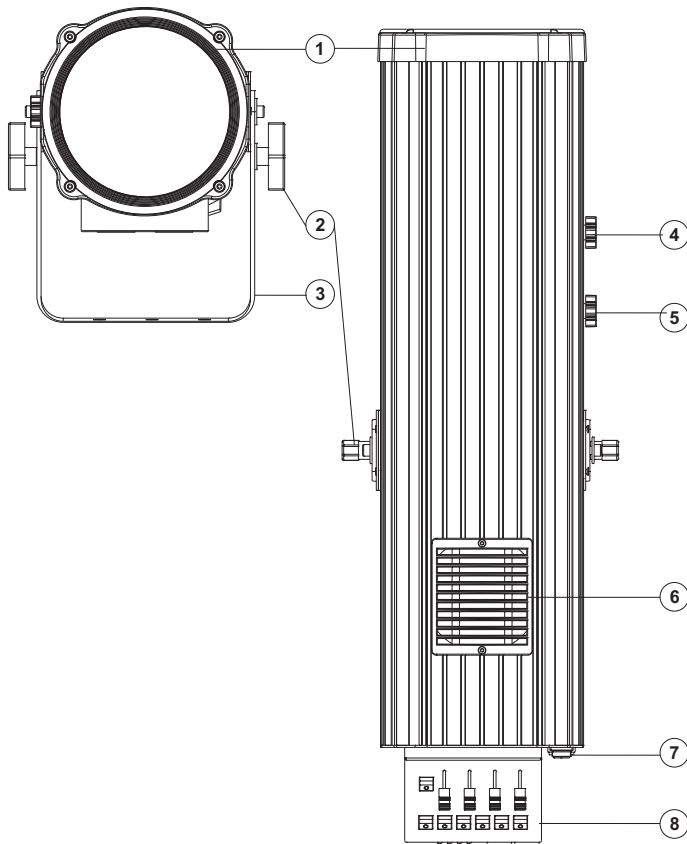☐ Only operate the device in moderate climate, never in tropical climate.

Warning – risk of injuries

☐ Do not look directly at the light source. Persons with light-sensitive epilepsy may suffer from epileptic seizures or fall unconscious.

☐ Make sure that the product is set up or installed safely and expertly and prevented from falling down. Comply with the standards and rules that apply in your country, in particular EN 60598-2-17.

☐ If you lack the qualification, do not attempt the installation yourself, but instead use a professional installer. Improper installation can result in bodily injury and or damage to property.

☐ The manufacturer cannot be made liable for damages caused by incorrect installations or insufficient safety precautions.

☐ For overhead use, always secure the device with a secondary safety attachment such as a safety bond or safety net.

☐ Make sure that the area below the installation place is blocked when rigging, derigging or servicing the device.

☐ For commercial use the country-specific accident prevention regulations of the government safety organization for electrical facilities must be complied with at all times.
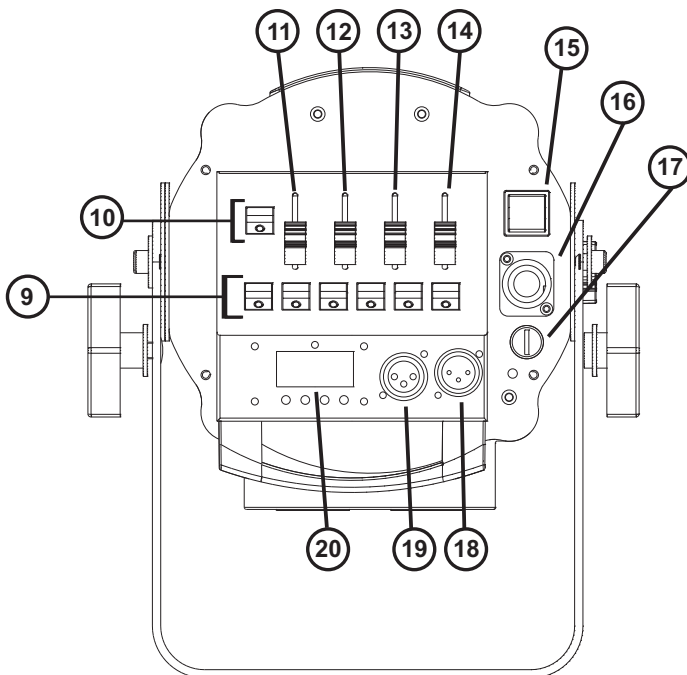
Caution – material damage

☐ This device must not be connected to the mains voltage by means of a dimmer.

☐ Lighting effects are not designed for permanent operation. Consistent operation breaks will ensure that the device will serve you for a long time without defects.

☐ Never switch the device on and off at short intervals. This will considerably reduce the service life of the device.

☐ If the device has been exposed to drastic temperature fluctuation, do not switch it on immediately. The resulting condensation may destroy the device. Allow the device to reach room temperature before connecting it. Wait until the condensation has evaporated.

☐ Please use the original packaging to protect the device against vibration, dust and moisture during transportation or storage.

☐ If a serial number label is affixed to the device, do not remove the label as this would make the guarantee void.

DESCRIPTION OF THE DEVICE

1. Lens
2. Fixation screws
3. Mounting bracket
4. Zoom knob
5. Focus knob
6. Ventilation slots
7. On/Off switch, power in and fuse holder on the rear of the housing
8. Control panel

Control Panel:

9. Color buttons
10. LED On/Off
11. CTB/CMY-fader:
   Convert-to-blue, Cyan, Magenta, Yellow
12. Iris-fader
13. Dimmer-fader
14. Strobe-fader: Includes strobe, pulse and random modes
15. On/Off switch
16. Power supply
17. Fuse holder
18. DMX IN
19. DMX OUT
20. LED display with operating buttons and DMX control LED

INSTALLATION

Please note: All devices, lighting effects and crossbeams attached on a stand must be secured with a secondary attachment!

1. Attach an appropriate adapter or TV-adapter to the top end of the stand and fasten it with the fixation screw.

2. Attach the mounting bracket of the follow spot onto the TV-adapter and tighten the fixation screw.

3. The given carrying capacity of the stand must not be exceeded. Please consult the appropriate user manual for further information.

4. To align the device, release the fixation screws at the mounting bracket, adjust the desired inclination angle and retighten the fixation screws.

5. After installation, the device requires inspections periodically to prevent the possibility of rot, deformation and looseness.
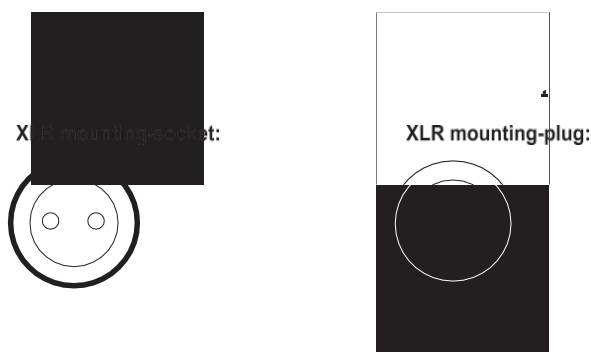
CONNECTIONS

DMX512 control

A DMX512 data link is required in order to control the device via DMX. The device provides 3-pin XLR connectors for DMX connection.

1   Connect the output of your DMX controller to the DMX input DMX IN of the light set with a DMX cable.

2   Connect the DMX output DMX OUT of the light set to the DMX input of the next unit in the chain. Always connect one output to the input of the next unit until all units are connected.

3   At the last unit, the DMX cable has to be terminated. Plug the terminator with a 120 Ω resistor between Signal (–) and Signal (+) in the DMX output of the last unit.

XLR connection:

XLR mounting-socket:

XLR mounting-plug:

Connection to the mains

The device uses an auto-range power supply that accepts input voltages between 100 und 240 volts.

1   Connect the device via the mains cable to a grounded mains socket. Thus the unit is switched on.

2   To switch off the unit, disconnect the power plug.

3   Do not connect the unit to the mains voltage via a dimmer. For a more convenient operation, use a mains outlet which is switchable.

OPERATION

After you connected the effect to the mains, the light starts running. The power switch is on the right side of the panel.

During the reset of 30 seconds, the motors are trimmed and the device is ready for use afterwards.

Via the **Lamp ON/OFF** switch you can turn the LED on and off.

The **strobe fader** controls three different strobe effects: Up to 50% of the fader path controls *strobe speed*, from 50% to 75% of the fader is *pulse effect* and from 75% to 100% is *random mode*.

Half-tones can be created by pressing the desired adjoining color buttons simultaneously.

Please note: white and red can not produce a half-tone.

Focusing

Step 1: Loosen the focus button on the side of the device.
Step 2: Adjust the focus by sliding the lens housing forward or backward.
Step 3: Tighten the focus button.

Zooming

Step 1: Loosen the zoom button on the side of the device.
Step 2: Set the desired beam angle (7° - 13°).
Step 3: Tighten the focus button.

Control Board

The Control Board offers several features: you can easily set the starting address or execute a reset.

Enter the menu by pressing the MODE-button. Browse through the menu by pressing UP or DOWN. Press ENTER in order to select the desired menu. You can change the selection by pressing UP or DOWN. Press ENTER in order to confirm. You can leave every mode by pressing MODE. The functions provided are described in the following sections.

Menu structure

Mode	Setting	Function
A001	001 - 511	Set starting address
REST	ON / OFF	Execute reset

DMX operation

Setting the DMX starting address

For operation with a controller with DMX512 protocol, the device is equipped with 6 control channels. To be able to operate the device with a DMX controller, the DMX starting address must be set for the first DMX channel. The starting address depends upon which DMX controller is being used. Please refer to the controller's documentation.

1 Press the **MODE** button so many times until **A001** is indicated in the display. Confirm with the **ENTER** button.

2 The red LED above the display will blink when DMX signals are being received. If no control signals are available, the red LED above the display will not blink.

Note: Please make sure that you do not have any overlapping channels in order to control each device correctly and independently from any other fixture on the DMX chain. If several devices are addressed similarly, they will work synchronically.

Functions in DMX mode

Channel:	Value:	Function:
1 **Colors**	000 - 015	White
	016 – 039	White + Red
	040 – 063	Red
	064 – 087	Red + Green
	088 - 111	Green
	112 - 135	Green + Yellow
	136 - 159	Yellow
	160 - 183	Yellow + Blue
	184 - 207	Blue
	208 - 231	Blue + Orange
	232 - 255	Orange
2 **CTB / CMY**	000 – 050	Open
	051 – 101	4500K CTB
	102 – 152	Cyan
	153 – 203	Magenta
	204 – 255	Yellow
3	000 - 255	Iris
4	000 - 255	Dimmer with increasing brightness
5 **Strobe**	000 - 000	No function
	001 - 127	Strobe-Effect with increasing speed
	128 - 159	Pulse-Effect – fade out - with increasing speed
	160 - 191	Pulse-Effect – fade in - with increasing speed
	192 - 255	Random Effect
6 **Reset**	000 - 199	No function
	200 - 239	Reset
	240 - 255	No function

CLEANING AND MAINTENANCE

The outside of the device should be cleaned periodically to remove contaminants such as dust etc. The lens, in particular, should be clean to ensure that light will be emitted at maximum brightness.

1 Disconnect the device from power and allow it to cool before cleaning.
2 Clean the surface with a soft lint-free and moistened cloth. Never use alcohol or solvents as these may damage the surface. Make sure that no liquids can enter the device.
3 The device must be dry before reapplying power.

There are no serviceable parts inside. Do not open the housing. Do not try to repair the device by yourself as this may result in damage. Maintenance and service operations are only to be carried out by authorized dealers. Should you need any spare parts, please use genuine parts. Should you have further questions, please contact your dealer.

Replacing the fuse

If the fine-wire fuse of the device fuses, only replace the fuse by a fuse of same type and rating.

1 Disconnect the device from power and allow it to cool.
2 Open the fuse holder at the mains connection with a fitting screwdriver.
3 Remove the old fuse from the fuse holder and replace it with a new fuse.
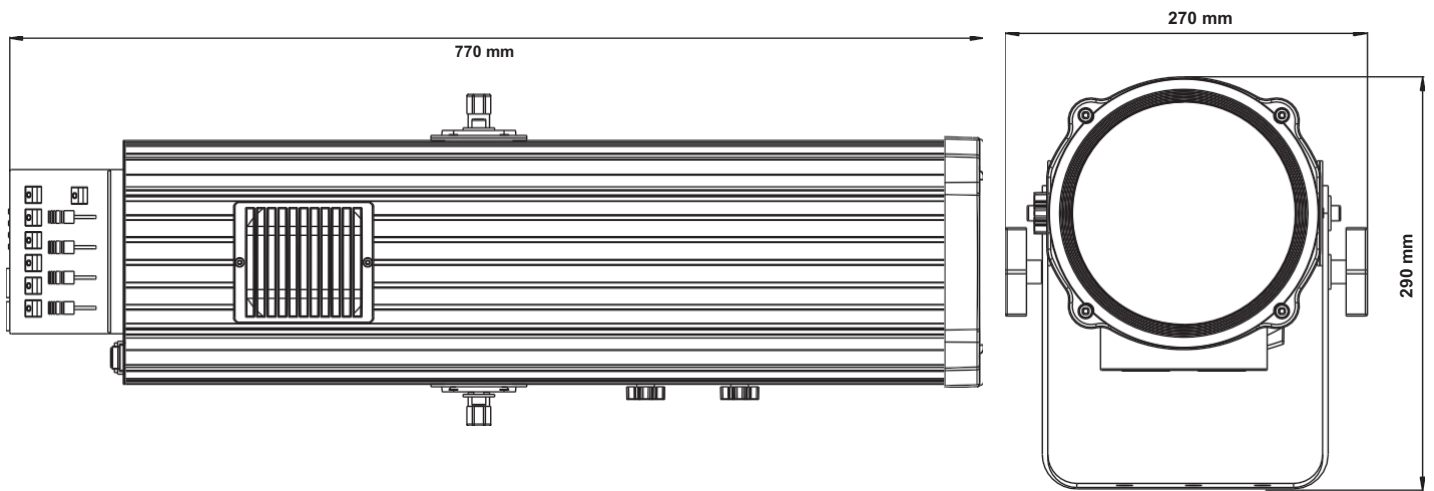4 Carefully screw the fuse holder back into its position before reapplying power.

PROTECTING THE ENVIRONMENT

Disposal of old equipment

TECHNICAL SPECIFICATIONS

Power supply:	100-240 V AC, 50/60 Hz
Power consumption:	440 W
Protection class:	I
Fuse:	T5A, 250V
DMX control channels:	6
DMX512 connection:	3-pin XLR
LED type:	300 W WW
Number of LEDs:	1
Color temperature:	3500 K
Beam angle:	7° - 13°
Flash rate:	1-20 Hz
Dimensions (L x W x H):	770 x 270 x 290 mm
Weight:	11.3 kg

All information is subject to change without prior notice. ©