

USER MANUAL

Moving head LED BEAM+BEAM, 2x12 W RGBW, DMX512

LED140



Code LED140

1 About this manual

This user manual applies to the product Moving head LED BEAM+BEAM, 2x12 W RGBW, DMX512 (code LED140).

Read this manual carefully before installing the product and putting it into operation for the first time, follow all of its instructions, and keep it for future reference. If you pass the product on to another person, include this manual.

Safety notices are marked with signal words according to the severity of the hazard: DANGER – an imminent hazard that will result in death or serious injury; WARNING – a potential hazard that could result in death or serious injury; CAUTION – a potential hazard that could result in minor injury or property damage; NOTE – additional information for correct and safe use.

NOTE This product is designed for stage and effect lighting. It is not suitable for household room illumination.

2 Safety instructions

WARNING

- This device is intended for professional use. Installation, connection, setup and maintenance must be carried out only by suitably qualified persons who have read this manual.
- Use the device only for its intended purpose and as described in this manual.
- Do not open the housing and do not modify or tamper with the device. Refer all repairs to an authorized service center.
- Do not use the device if its housing, power or data cable, or a connector is damaged, if the device has been dropped, or if liquid or a foreign object has entered it. In such a case, have it checked by a service center.
- Disconnect the device from the power supply before cleaning, maintenance or any work on the connections.
- After moving the device from a cold to a warm environment, let it reach room temperature before switching it on to prevent condensation inside.
- The device is not a toy; keep it out of the reach of children.

WARNING

- Connect the device only to a properly installed mains outlet with a protective earth (ground) contact. The outlet or other means of disconnection must remain easily accessible.
- Power supply: AC 100 – 240 V, 50/60 Hz. Before connecting, make sure that the mains voltage matches this value and the value on the rating plate of the device.
- Do not connect the device to a dimmer or to a dimmed circuit.
- Use only the original power cable or a cable with identical ratings. Protect the cable from damage, do not run it over sharp edges, and never unplug it by pulling on the cable.
- When connecting several devices to one circuit, do not exceed its permitted load.
- Do not touch the device with wet hands.

WARNING

- This device is designed for indoor use only. Protect it from rain, splashing water, moisture and dust, and do not place containers with liquids on it.
- Do not operate the device in high humidity, near water, or where condensation can form on it.

CAUTION

- This device emits intense light. Do not look directly into the light source or the beam at close range; doing so may damage your eyes.
- Do not aim the beam at the eyes of people or animals at close range, and do not view the light source through optical instruments (binoculars, camera lenses).
- Do not aim the beam at flammable or heat-sensitive materials at close range.

CAUTION

- Strobe and fast flashing light effects can trigger epileptic seizures in susceptible people (photosensitive epilepsy) and can cause nausea or disorientation.
- Inform the audience and performers in advance that strobe effects will be used, for example with a notice at the entrance, and do not use them longer than necessary.

WARNING

- The moving parts of the device (for example the head or arms) can move quickly and unexpectedly at any time – after power-on, during a reset, or on a command from the controller.
- Keep yourself and any objects out of the range of movement. While the device is switched on, do not touch the moving parts, move them by hand, or obstruct their movement; this can cause injury (pinching) and damage the drive.
- Do not carry the device by its moving parts. If the device has a transport lock, engage it before transport and release it before switching on.

CAUTION Keep the fixture at least 0.5 m (1.5 ft) away from flammable materials (decorations, etc.).

3 Product description

Double sided LED moving heads Wash and Beam with infinite TILT rotation. Heads are available as Beam+Beam, Wash+Beam and Wash+Wash. RGBW LED diodes can mixing random colors, for each side independently.

Package contents

- 1× Moving head LED BEAM+BEAM, 2x12 W RGBW, DMX512
- 1× XLR power cable
- 1× User manual
- 1× Omega bracket

4 Installation

WARNING

- Rigging must be carried out only by qualified persons in accordance with applicable regulations, in particular those for work at height.
- The supporting structure and fixings must safely carry the weight of all suspended devices; verify their load capacity in advance.
- Weight of the device: 2.5 kg.
- Use suitable mounting hardware (for example truss clamps) and tighten all screw connections properly.
- Always secure the suspended device against falling with a safety cable of adequate load capacity, routed through a fixed point of the device and around the supporting structure.
- During installation and removal, keep people out of the area below the work position.

- Regularly inspect the fixings and the safety cable for damage, corrosion and loosening.

Mount the fixtures away from walkways, seating areas, or places where unauthorized personnel could reach them.

Before mounting to any surface, make sure the installation area can support a minimum point load of 10 times the device's weight.

Never stand directly below the device when mounting, removing, or servicing it.

The fixture can be suspended from a ceiling or placed on a flat, level surface.

Complete all rigging and installation procedures before connecting the main power cord to the wall outlet.

5 Connections

- Use shielded cable designed for DMX512 with an impedance of 110 Ω . Ordinary microphone cable is not suitable for DMX, especially over longer distances.
- Connect the devices in a daisy chain: connect the DMX OUT of one device to the DMX IN of the next. Do not split the line with Y-cables or wire it in a star; the line may be split only with a DMX splitter.
- Connect the shield to pin 1 only. Do not connect the shield (ground) to the metal shell of the connector; this can cause short circuits or erratic behavior.
- XLR pin assignment: pin 1 – shield (ground), pin 2 – Data- (Data Complement), pin 3 – Data+ (Data True). On 5-pin connectors, pins 4 and 5 are not connected; a 5-pin connector can be connected to a 3-pin one with a cable adapter.
- Terminate the end of the line (for impedance matching): plug an XLR connector with a 120 Ω , ¼ W resistor between pins 2 and 3 into the DMX OUT of the last device. This reduces the risk of erratic behavior.
- Connect no more than 32 devices to one DMX line. For more devices or longer runs, use a DMX splitter or booster.

Connector	Purpose
DMX output (3-pin XLR socket)	Serial linking / DMX output
DMX input (3-pin XLR socket)	DMX input

6 Operation

Control panel

Button	Function
MENU	–
DOWN	–
UP	–
ENTER	–
Mode/Esc-button	Return to the main menu

Switches and indicators

Control	Function
Encoder	Select and adjust settings by turning or pressing the encoder
Microphone	Picks up sound for sound-controlled operation

Display menu

Code	Values	Function
Addr	001-512	Set DMX address.
ChMd	=CH16, =CH22	Set DMX channel mode.
SLMd	=Master, =Slave	Set operating mode.
SHMd	=001-008	Select internal program. Select internal auto program from =001 to =008.
Soun	=OFF, =ON	Sound control. =OFF or =ON.
PAN	=OFF, =ON	X/Pan reverse. =OFF or =ON.
TIL	=OFF, =ON	Y/Tilt reverse. =OFF or =ON.
dISP	=OFF, =ON	Display reverse. =OFF or =ON.
rFAC	=OFF, =ON	Reset to factory defaults. =OFF or =ON.
rST		Reset the fixture motors.

Auto mode

Run the 8 internal programs in master mode.

Sound mode

Run sound-controlled operation.

DMX mode

Control via DMX in 16-channel or 22-channel mode.

Setting the DMX address

- Select using the encoder.
- Press the encoder and adjust the DMX address by turning it.
- Press the encoder to confirm.
- Press Mode/Esc-button to return to the main menu.
- The device occupies as many consecutive channels in the DMX universe as the selected DMX mode uses, starting at the set start address.
- Number of channels occupied in 22CH mode: 22.
- Choose start addresses so that the channels of individual devices do not overlap and the last occupied channel does not exceed 512. Devices with the same start address and mode respond identically.
- For several devices in a row in 22CH mode, you can use, for example, the start addresses 1, 23, 45, 67.
- The DMX mode set on the device must match the fixture profile (personality) used in the controller.

Master/Slave mode

- In Run mode, choose Master or Slave mode. In Master mode, the 8 internal programs can be run.
- In Master/Slave mode, one device (Master) controls the other devices (Slaves), which copy its behavior in sync. No controller is needed.
- Connect the devices with DMX cable in a daisy chain, just as for control from a desk (DMX OUT to the DMX IN of the next device), and terminate the end of the line.
- On the master device, select the desired standalone mode (auto mode or sound mode, depending on the device), and set all other devices to Slave mode.
- Only one master device may be on the line; do not connect a DMX controller to the line in Master/Slave mode.
- For reliable synchronization, link only devices of the same type.

NOTE When displaying each channel's DMX 512 value, the display automatically shows the channel whose value is changing.

7 DMX channels

Mode	Channels
16CH	16
22CH	22

Mode 16CH

CH	Function	DMX	Description
1	Pan	0–255	Pan position
2	Pan Movement	0–7	No function
		8–255	X Motor move back and forth (Slow to fast)
3	Tilt	0–255	Tilt position
4	Tilt Rotation	0–7	No function
		8–255	Y Motor Rotation (Slow to fast)
5	Dimmer	0–255	Dimmer 0-100%
6	Shutter	0–9	Shutter closed
		10–250	Strobe effect slow to fast
		251–255	Shutter open
7	Red	0–255	Red 0-100%
8	Green	0–255	Green 0-100%
9	Blue	0–255	Blue 0-100%
10	White	0–255	White 0-100%
11	Color Macro Side 1	0–7	No function
		8–127	Y1-Macro Color Just (Slow from slow to fast)
		128–255	Y1-Macro Color Line (Slow from slow to fast)
12	Color Macro Side 2	0–7	No function
		8–127	Y2-Macro Color Just (Slow from slow to fast)
		128–255	Y2-Macro Color Line (Slow from slow to fast)
13	Auto Play	0–7	No function
		8–37	LED Auto Play 1
		38–67	LED Auto Play 2
		68–97	LED Auto Play 3
		98–127	LED Auto Play 4
		128–157	LED Auto Play 5
		158–187	LED Auto Play 6
		188–217	LED Auto Play 7
		218–247	Macro Color Line
		248–255	LED Sound Control Mode
14	Auto Play Speed	0–255	Speed slow to fast
15	Pan/Tilt Auto Run	0–7	No function
		8–32	X/Y auto run 1
		33–58	X/Y auto run 2

CH	Function	DMX	Description
		59–84	X/Y auto run 3
		85–110	X/Y auto run 4
		111–136	X/Y auto run 5
		137–162	X/Y auto run 6
		163–188	X/Y auto run 7
		189–239	X/Y auto run 8
		241–255	X/Y Sound Control
16	Reset	250–255	Reset (10s)

Mode 22CH

CH	Function	DMX	Description
1	Pan	0–255	Pan position
2	Pan Movement	0–7	No function
		8–255	X Motor move back and forth (Slow to fast)
3	Speed Pan/Tilt 1	0–255	X Speed
4	Tilt	0–255	Tilt position
5	Tilt Rotation	0–7	No function
		8–255	Y Motor Rotation (Slow to fast)
6	Speed Pan/Tilt 2	0–255	Y Speed
7	Dimmer	0–255	Dimmer 0-100%
8	Shutter	0–9	Shutter closed
		10–250	Strobe effect slow to fast
		251–255	Shutter open
9	Red 1	0–255	Red 1 0-100%
10	Green 1	0–255	Green 1 0-100%
11	Blue 1	0–255	Blue 1 0-100%
12	White 1	0–255	White 1 0-100%
13	Red 2	0–255	Red 2 0-100%
14	Green 2	0–255	Green 2 0-100%
15	Blue 2	0–255	Blue 2 0-100%
16	White 2	0–255	White 2 0-100%
17	Color Macro Side 1	0–7	No function
		8–127	Y1-Macro Color Just (Slow from slow to fast)
		128–255	Y1-Macro Color Line (Slow from slow to fast)
18	Color Macro Side 2	0–7	No function
		8–127	Y2-Macro Color Just (Slow from slow to fast)
		128–255	Y2-Macro Color Line (Slow from slow to fast)
19	Auto Play	0–7	No function
		8–37	LED Auto Play 1
		38–67	LED Auto Play 2
		68–97	LED Auto Play 3
		98–127	LED Auto Play 4

CH	Function	DMX	Description
		128–157	LED Auto Play 5
		158–187	LED Auto Play 6
		188–217	LED Auto Play 7
		218–247	Macro Color Line
		248–255	LED Sound Control Mode
20	Auto Play Speed	0–255	Speed slow to fast
21	Pan/Tilt Auto Run	0–7	No function
		8–32	X/Y auto run 1
		33–58	X/Y auto run 2
		59–84	X/Y auto run 3
		85–110	X/Y auto run 4
		111–136	X/Y auto run 5
		137–162	X/Y auto run 6
		163–188	X/Y auto run 7
		189–239	X/Y auto run 8
		241–255	X/Y Sound Control
22	Reset	250–255	Reset (10s)

8 Technical specifications

Parameter	Value
Light source	2 pcs 12 W RGBW CREE LED diodes (4-in-1)
Beam angle	3° (beam diameter at 7 m is 0.6 m)
Operating modes	Auto, DMX512, Sound mode, Master/Slave linking
DMX channels	16/22 channels
Controls	LED display
Power supply	AC 100 – 240 V, 50/60 Hz
Power consumption	50 W
Dimensions	170 x 160 x 240 cm
Weight	2500 g

9 Maintenance and cleaning

- Before cleaning and maintenance, switch the device off, disconnect it from the power supply and let it cool down.
- Clean the housing with a soft, dry or slightly damp cloth. Do not use solvents, abrasive cleaners or pressure washers, and make sure no liquid gets into the device.
- Clean optical parts (lenses, front glass), if the device has any, with a soft lint-free cloth and a cleaner intended for optics or glass.
- Regularly inspect the housing, cables, connectors and fixings. Have damaged parts replaced by a service center.
- How often to clean depends on the environment; dust, smoke and fog make the device dirty much faster.

10 Troubleshooting

- The device does not switch on – check the supply voltage, the cables and the fuse, if the device has one.
- The device does not respond to DMX – check the start address, the selected DMX mode and whether it matches the profile in the controller, the cable connection to DMX IN, and the controller output (universe).
- The device behaves erratically or flickers – check the terminator at the end of the line, the condition and wiring of the cables (shield on pin 1 only), the number of devices on the line (32 at most), and that the line is not split without a splitter.
- Only some devices on the line respond – check the cable and connectors between the last working and the first non-working device, and make sure all devices on the line are switched on.
- Devices respond to the wrong channels or affect each other – check that the addresses do not overlap and that the DMX mode on the devices matches the patch in the controller.
- The device or the connected load does not light up although it receives DMX – check the values of the dimmer, shutter and strobe channels against the DMX channel table.
- Movement is reversed – check whether Pan/Tilt inversion is enabled in the device menu or in the controller.
- Moving parts do not reach the correct position after power-on or transport – switch the device off and on again to reset the position, and make sure the transport lock, if any, is released. If this does not help, contact a service center.

- Movement is jerky – check the value of the Pan/Tilt speed channel, if the device has one, and the stability of the DMX signal.

11 Disposal

The crossed-out wheeled bin symbol on the product, in the manual or on the packaging means that the product must not be disposed of with unsorted household waste at the end of its life.

Take the end-of-life equipment to a collection point, for example a municipal collection site or a retailer. Proper disposal enables materials to be recycled and helps prevent possible negative effects on the environment and human health.

Follow the regulations applicable in your country; in the Czech Republic, take-back is governed by Act No. 542/2020 Coll., on End-of-Life Products.

SOH Sound & Lights s.r.o. provides take-back through the collective compliance scheme ASEKOL a.s. (Československého exilu 2062/8, 143 00 Praha 4 – Modřany, www.asekol.cz).

Recycle the packaging materials according to their type.

12 Warranty and service

For products purchased from SOH, a buyer who is a consumer may, under the Czech Civil Code, notify the seller of a defect that becomes apparent within 24 months of taking delivery; this statutory right is not affected by any warranty. Defect claims for these products and out-of-warranty repairs are handled by sending the goods to SOH's premises or bringing them in person: SOH, Antala Staška 242/14, 140 00 Praha 4, Czech Republic. Further information (in Czech) is available at eshop.soh.cz/casto-kladene-otazky.

Statutory rights in respect of defects and the warranty are governed by applicable law and the seller's terms and conditions.

Submit any claim to the seller from whom you purchased the product. Enclose proof of purchase and as precise a description of the fault as possible.

Neither the statutory rights nor the warranty cover defects caused by the buyer, for example by installation or operation contrary to this manual, mechanical damage or unskilled tampering. Wear caused by normal use is not a defect either.

Service and technical support are provided by SOH Sound & Lights s.r.o., Antala Staška 242/14, 140 00 Praha 4.

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