

USER MANUAL

**Moving head 17R, 350W BEAM+WASH+SPOT,
DMX 512**

LIGHT086



Code LIGHT086

1 About this manual

This user manual applies to the product Moving head 17R, 350W BEAM+WASH+SPOT, DMX 512 (code LIGHT086).

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.
- Replace the fuse only with the power disconnected and always with a fuse of the same type and rating: 7 A.
- 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.

WARNING Operating temperature range is -5 °C to 45 °C. Do not operate when the ambient temperature is around 40 °C or above.

WARNING Relative humidity must not exceed 50%. The site must be kept dry.

WARNING Maintain a minimum distance of 1.5 meters between the fixture and illuminated objects.

WARNING Keep flammable materials (such as alcohol, gasoline, or paper) at least 1 meters away from the fixture.

DANGER Do not operate the fixture without the optical lens filter installed, as direct emission poses UV radiation hazards.

CAUTION Allow the fixture to cool down for at least 15 minutes before replacing the lamp or servicing.

CAUTION Do not touch the quartz lamp bulb with bare hands; use gloves or wipe it clean with alcohol and a clean cloth before installation.

3 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: 17 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.

The device can be installed directly on the floor or suspended.

The safety cable must be capable of bearing at least 12 times the weight of the fixture, and any extension or drop distance must not exceed 20 cm.

4 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 IN/OUT (3-pin, 5-pin)	Signal input and output
Power line	Power supply connection
DMX OUT (3-pin XLR)	DMX output to daisy-chain fixtures or connect a terminator
DMX IN (3-pin XLR)	DMX signal input

5 Operation

Setting the DMX address

- 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 Standard (24CH) mode: 24.
- 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 Standard (24CH) mode, you can use, for example, the start addresses 1, 25, 49, 73.
- The DMX mode set on the device must match the fixture profile (personality) used in the controller.

NOTE Connect a maximum of 32 moving heads to a single DMX signal line.

NOTE Do not split the DMX output signal into two outputs without a splitter. For long cable runs, use a heavy-gauge cable or a signal amplifier.

NOTE Align the lamp position using screws marked X, Y, and Z on the rear panel.

6 DMX channels

Mode	Channels
Standard (24CH)	24
Simple (16CH)	16

Mode Standard (24CH)

16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

CH	Function	DMX	Description
1	Pan	0–255	Pan
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt	0–255	Tilt
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Speed Pan/Tilt	0–255	P/T Speed
6	Macro Function	0–19	Reserve
		20–24	230W power
		25–29	350W power
		30–49	Reserve
		50–59	Reserve
		60–69	Reserve
		70–79	P/T Rotate Off Light
		80–89	P/T Rotate On Light
		90–99	Reserve
		100–109	Reserve
		110–119	Reserve
		120–129	Reserve
		130–139	Lamp
		140–149	P/T Reset
		150–189	Effect Reset
		190–199	Reserve
		200–209	Whole Reset
		210–229	Reserve
		230–239	Lamp Off
		240–255	Reserve
7	Macro Color	0–128	Linear Colour
		128–130	White
		130–135	Colour 1
		135–139	Colour 2
		139–144	Colour 3
		144–148	Colour 4
		148–153	Colour 5
		153–158	Colour 6

CH	Function	DMX	Description
		158–162	Colour 7
		162–167	Colour 8
		167–172	Colour 9
		172–177	Colour 10
		177–181	Colour 11
		181–186	Colour 12
		186–190	Colour 13
		190–221	FAST ROTATION - SLOW ROTATION
		221–225	STOP
		225–255	SLOW ROTATION - FAST ROTATION
8	Macro Color Fine	0–255	Fine adjustment of CH 7
9	Gobo	0–3	White
		4–9	Gobo 1
		10–15	Gobo 2
		16–21	Gobo 3
		22–27	Gobo 4
		28–33	Gobo 5
		34–39	Gobo 6
		40–45	Gobo 7
		46–51	Gobo 8
		52–57	Gobo 9
		58–63	Gobo 10
		64–69	Gobo 11
		70–75	Gobo 12
		76–81	Gobo 13
		82–87	Gobo 14
		88–95	Gobo 1 Jitter
		96–103	Gobo 2 Jitter
		104–111	Gobo 3 Jitter
		112–119	Gobo 4 Jitter
		120–127	Gobo 5 Jitter
		128–135	Gobo 6 Jitter
		136–143	Gobo 7 Jitter
		144–151	Gobo 8 Jitter
		152–159	Gobo 9 Jitter
		160–167	Gobo 10 Jitter
		168–175	Gobo 11 Jitter
		176–183	Gobo 12 Jitter
		184–191	Gobo 13 Jitter
		192–199	Gobo 14 Jitter
		200–201	White
		202–227	FAST ROTATION - SLOW ROTATION

CH	Function	DMX	Description
10	Gobo 2	228–229	STOP
		230–255	SLOW ROTATION - FAST ROTATION
		0	S white
		1–4	L white
		5–8	Gobo 2 -1
		9–12	Gobo 2 -2
		13–16	Gobo 2 -3
		17–20	Gobo 2 -4
		21–24	Gobo 2 -5
		25–28	Gobo 2 -6
		29–32	Gobo 2 -7
		33–36	Gobo 2 -8
		37–40	Gobo 2 -9
		41–48	Gobo 2 -1 Jitter
		49–56	Gobo 2 -2 Jitter
		57–64	Gobo 2 -3 Jitter
		65–72	Gobo 2 -4 Jitter
		73–80	Gobo 2 -5 Jitter
		81–88	Gobo 2 -6 Jitter
		89–96	Gobo 2 -7 Jitter
		97–104	Gobo 2 -8 Jitter
		105–112	Gobo 2 -9 Jitter
		113–119	L white
		120–185	FAST ROTATION - SLOW ROTATION
		186–189	STOP
		190–255	SLOW ROTATION - FAST ROTATION
11	Gobo 2 Rotation	0–128	Rotation
		128–191	FAST ROTATION - SLOW ROTATION
		191–193	STOP
		193–255	SLOW ROTATION - FAST ROTATION
12	Gobo 2 Rotation Fine	0–255	Fine adjustment of CH 11
13	Prism	0–63	Empty
		64–127	Prism-1
		128–191	Prism-2
		192–255	Prism-1/Prism-2
14	Prism 1 Rotation	0–127	Rotation
		128–189	FAST ROTATION - SLOW ROTATION
		190–192	STOP
		193–255	SLOW ROTATION - FAST ROTATION
15	Prism 2 Rotation	0–127	Rotation
		128–189	FAST ROTATION - SLOW ROTATION
		190–192	STOP

CH	Function	DMX	Description
		193–255	SLOW ROTATION - FAST ROTATION
16	Frost	0–64	Reserve
		65–255	Linear Frost
17	Zoom	0–255	Linear Zoom
18	Zoom Fine	0–255	Fine adjustment of CH 17
19	Focus	0–255	Focus
20	Focus Fine	0–255	Fine adjustment of CH 19
21	Reserve	0–255	Reserve
22	Shutter	0–31	Closed
		32–63	Open
		64–95	SLOW - FAST
		96–127	Open
		128–143	FAST STROBE-SLOW STROBE
		144–159	SLOW STROBE - FAST STROBE
		160–191	Open
		192–223	RANDOM SLOW - FAST
		224–255	Open
23	Dimmer	0–255	Linear Dimmer
24	Reserve	0–255	

Mode Simple (16CH)

CH	Function	DMX	Description
1	Pan	0–255	Pan
2	Tilt	0–255	Tilt
3	Speed Pan/Tilt	0–255	P/T Speed
4	Macro Function	0–19	Reserve
		20–24	230W power
		25–29	350W power
		30–49	Reserve
		50–59	Reserve
		60–69	Reserve
		70–79	P/T Rotate Off Light
		80–89	P/T Rotate On Light
		90–99	Reserve
		100–109	Reserve
		110–119	Reserve
		120–129	Reserve
		130–139	Lamp
		140–149	P/T Reset
		150–189	Effect Reset
		190–199	Reserve
		200–209	Whole Reset

CH	Function	DMX	Description
5	Macro Color	210–229	Reserve
		230–239	Lamp Off
		240–255	Reserve
		0–127	Linear Colour
		128–129	White
		130–134	Colour 1
		135–138	Colour 2
		139–143	Colour 3
		144–147	Colour 4
		148–152	Colour 5
		153–157	Colour 6
		158–161	Colour 7
		162–166	Colour 8
		167–171	Colour 9
		172–176	Colour 10
		177–180	Colour 11
		181–185	Colour 12
		186–189	Colour 13
		190–220	FAST ROTATION - SLOW ROTATION
		221–224	STOP
		225–255	SLOW ROTATION - FAST ROTATION
6	Gobo	0–3	White
		4–9	Gobo 1
		10–15	Gobo 2
		16–21	Gobo 3
		22–27	Gobo 4
		28–33	Gobo 5
		34–39	Gobo 6
		40–45	Gobo 7
		46–51	Gobo 8
		52–57	Gobo 9
		58–63	Gobo 10
		64–69	Gobo 11
		70–75	Gobo 12
		76–81	Gobo 13
		82–87	Gobo 14
		88–95	Gobo 1 Jitter
		96–103	Gobo 2 Jitter
		104–111	Gobo 3 Jitter
		112–119	Gobo 4 Jitter
		120–127	Gobo 5 Jitter
		128–135	Gobo 6 Jitter

CH	Function	DMX	Description
		136–143	Gobo 7 Jitter
		144–151	Gobo 8 Jitter
		152–159	Gobo 9 Jitter
		160–167	Gobo 10 Jitter
		168–175	Gobo 11 Jitter
		176–183	Gobo 12 Jitter
		184–191	Gobo 13 Jitter
		192–199	Gobo 14 Jitter
		200–201	White
		202–227	FAST ROTATION - SLOW ROTATION
		228–229	STOP
		230–255	SLOW ROTATION - FAST ROTATION
7	Gobo 2	0	S white
		1–4	L white
		5–8	Gobo 2 -1
		9–12	Gobo 2 -2
		13–16	Gobo 2 -3
		17–20	Gobo 2 -4
		21–24	Gobo 2 -5
		25–28	Gobo 2 -6
		29–32	Gobo 2 -7
		33–36	Gobo 2 -8
		37–40	Gobo 2 -9
		41–48	Gobo 2 -1 Jitter
		49–56	Gobo 2 -2 Jitter
		57–64	Gobo 2 -3 Jitter
		65–72	Gobo 2 -4 Jitter
		73–80	Gobo 2 -5 Jitter
		81–88	Gobo 2 -6 Jitter
		89–96	Gobo 2 -7 Jitter
		97–104	Gobo 2 -8 Jitter
		105–112	Gobo 2 -9 Jitter
		113–119	L white
		120–185	FAST ROTATION - SLOW ROTATION
		186–189	STOP
		190–255	SLOW ROTATION - FAST ROTATION
8	Gobo 2 Rotation	0–127	Rotation
		128–190	FAST ROTATION - SLOW ROTATION
		191–192	STOP
		193–255	SLOW ROTATION - FAST ROTATION
9	Prism	0–63	Empty
		64–127	Prism-1

CH	Function	DMX	Description
10	Prism 1 Rotation	128–191	Prism-2
		192–255	Prism-1/Prism-2
		0–127	Rotation
		128–189	FAST ROTATION - SLOW ROTATION
11	Prism 2 Rotation	190–192	STOP
		193–255	SLOW ROTATION - FAST ROTATION
		0–127	Rotation
		128–189	FAST ROTATION - SLOW ROTATION
12	Frost	190–192	STOP
		193–255	SLOW ROTATION - FAST ROTATION
		0–64	Reserve
		65–255	Linear Frost
13	Zoom	0–255	Linear Zoom
14	Focus	0–255	Focus
15	Shutter	0–31	Closed
		32–63	Open
		64–95	SLOW - FAST
		96–127	Open
		128–143	FAST STROBE-SLOW STROBE
		144–159	SLOW STROBE - FAST STROBE
		160–191	Open
		192–223	RANDOM SLOW - FAST
16	Dimmer	224–255	Open
		0–255	Linear Dimmer

7 Technical specifications

Parameter	Value
Design	3-in-1 (WASH + BEAM + SPOT)
Light source	Osram 17R 350 W discharge lamp
Luminous flux	13000 lm
Color temperature	8000 K
Zoom	0-5° (Beam), 5-40° (Spot), 50° (Wash-frost)
DMX channels	16 or 24
Controls	touch LCD display
Power supply	AC 100 – 240 V, 50 / 60 Hz
Power consumption	500 W
Total power	350 W
Fuse	7 A
Weight	17 000 g

8 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.

Clean the front optical lens to prevent reduced brightness (once a week).

Clean the cooling fan to ensure proper cooling for the lamp (once a month).

Check and clean the air filter mesh (regularly).

Clean internal dust using a soft brush, vacuum cleaner, or compressed air (at least every six months).

Clean the color wheel, gobo plate, and internal optical components (once a month).

Lubricate bearings for the gobo plate and lens with appropriate lubricating oil (every 6 months).

Clean dust and dirt from the PCB using a soft brush or low-pressure compressed air (once every three months).

Check moving parts and screws for tightness, including the color wheel fixing screw (on a regular basis).

Clean internal glass surfaces (reflectors, color filters, textured mirrors).

Replace the lamp (before 2500 hours, which is over 125% of average life expectancy).

Fuse replacement.

9 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.

10 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.

11 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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