

MICROH

PROFESSIONAL PRODUCTS

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USER MANUAL

LED ULTRA SPOT 500

Keep this manual for future reference.

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1. INTRODUCTION AND UNPACKING

Thank you for purchasing the MICROH LED ULTRA SPOT 500 moving head spot. For your own safety and knowledge, please read this manual before installing or operating the device. This manual covers the important information on installation and applications. Please install and operate the fixture according to instructions. Meanwhile, please keep this manual for future reference.

The MICROH LED ULTRA SPOT 500 moving head spot is made of a new type of high temperature cast aluminum casing and plastics. The fixture is designed and manufactured strictly following CE standards, complying with international standard DMX512 protocol. This fixture is applicable but not limited to large-scale live performances, theater, studio, nightclubs and discos.

The MICROH LED ULTRA SPOT 500 uses the powerful LUMINUS 90W which features high brightness and stability. Please carefully unpack it when you receive the fixture and check if it was damaged during the transportation. And please check whether the following items are included inside the box:

Fixture – One XLR Signal Cable – One Omega Clamp - Two Safety Chain – One
User Manual - One

2. SAFETY INSTRUCTIONS



This device has left the factory in perfect condition. In order to maintain this condition and to ensure safe operation, it is absolutely necessary for the user to follow the safety instructions and warning notes written in this user manual.



Important:

Damages caused by the disregard of this user manual are not subject to warranty. The dealer will not accept liability for any resulting defects or problems.

If the device has been exposed to temperature changes, do not switch it on immediately. The arising condensation could damage the device. Leave the device switched off until it has reached room temperature, and is dry.

This device falls under protection-class I, therefore it is essential that the device be grounded. The electrical connection must be carried out by a qualified technician.




The device should only be used with rated voltage and frequency. Make sure that the available voltage is not higher than

120V as stated at the end of this manual.

Make sure the power cord is never crimped or damaged in any way, as this could cause shock and damage. If your power cord is damaged in any way, please purchase a new cable from your local MICROH dealer. Always disconnect power, when the device is not in use or before cleaning it. Never pull out the plug by tugging the power cord.

During initial start-up, some smoke or smell may arise. This is a normal process, and does not necessarily mean that the device is defective. It should decrease gradually. Please do not project the beam onto combustible substances.

Fixtures cannot be installed on or near combustible substances. Keep more than 50cm distance from wall for proper ventilation and air flow. If your fixture is or has become damaged in any way, it shall be exclusively replaced or repaired by the manufacturer to avoid any hazard.

	CAUTION! Never touch the device during operation! The housing may heat up
	CAUTION! Never look directly into the light source, as sensitive persons may suffer an epileptic shock.
	CAUTION! The electric connection must only be carried out by a qualified electrician.

3. OPERATION INSTRUCTIONS

- Do not turn on the fixture if it has been through severe temperature differences. Damage may occur to the fixture. Wait until unit is at room temperature to operate.
- The unit should be protected from any tremor or agitation during transport.
- Do not lift the fixture from the head or arms, it may cause damage to the mechanical parts.
- Do not expose the fixture in any excessive heat, moisture or any environment with too much dust when installing. Do not lay any power cables on the floor. It may cause electronic shock or damage to persons or equipment.
- Make sure to attach the safety chain and ensure the screws are properly screwed in when installing the fixture.
- Make sure the lens is in good condition. It is recommended to replace the unit if there are any damages or severe scratches.
- Make sure the fixture is operated and installed by qualified personnel.
- Keep the original packaging in case of defective product.
- Any non-manufacturer additions, modifications or changes in any way will void all warranty.
- Please do not attempt to open unit. It is only to be serviced by an authorized technician. If this occurs, or is apparent, the warranty will be voided.
- The fixture's warranty will be voided if there are any malfunctions from not following the user manual or any illegal operation (shock short circuit, electronic shock, lamp broke, etc.)
- To reset the fixture motors select "RESET" from the main menu and use the UP and DOWN buttons to select "=ON". The unit will reset and return to its original program.

- To perform a factory reset from the main menu select "SPECIAL" from the main menu and press ENTER. The display will read "RESET DEFAULT" press ENTER. The unit will now reset all memory and motors. NOTE: This will erase any edited programs from the on board menu.

MASTER/SLAVE MODE

- By connecting the 3 or 5 pin DMX, you can daisy chain up to 30 units on master/ slave mode. Daisy chain the fixtures together by plugging from the DMX output of the first fixture into the DMX input of the second fixture, and so on...

- From the main menu select "AUTO PROGRAM" and press ENTER. Using the UP and DOWN buttons select either "AUTO PROGRAM" or "MUSIC CONTROL" and press ENTER. The display will now show "=MASTER" or "=ALONE". Select "MASTER" and press ENTER to confirm. To set your SLAVE fixtures follow these same steps and select "=ALONE" and press ENTER to confirm.

AUTO RUN/ SOUND ACTIVE MODE

- From the main menu select the "AUTO PLAY" function press ENTER. Then use the UP or DOWN buttons to select "AUTO RUN" or "MUSIC CONTROL" and press ENTER to confirm. The unit will now run random internal shows.

DMX CONTROL (PLEASE REFER TO SECTION 5)

- From the main menu select "DMX ADDRESS", press ENTER. The display will now read "Axxx". Using the UP and DOWN buttons, select your desired address and press ENTER. The unit will now operate with DMX control.

4. MOUNTING AND INSTALLATION

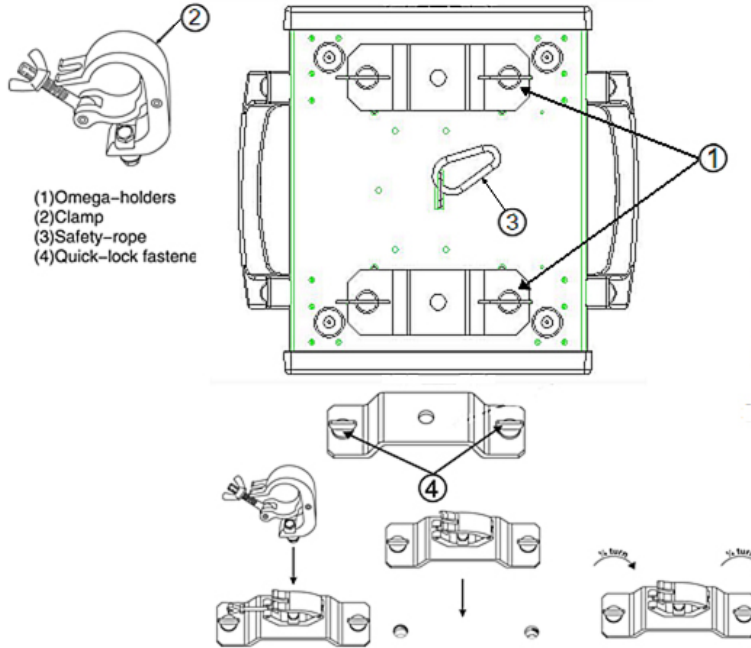
Caution: For added protection, mount the fixtures in areas outside walking paths, seating areas, or in areas where the fixture might be reached by unauthorized personnel. Before mounting the fixture to any surface, make sure that the installation area can hold a minimum point load of 10 times the device's weight. Fixture installation must always be secured with a secondary safety attachment, such as an appropriate safety cable. Never stand directly below the device when mounting, removing, or servicing the fixture.

Whether installing inverted on a truss or ceiling, or set on a flat level surface (see illustration below). Be sure this fixture is kept at least 0.5m (1.5 ft) away from any flammable materials (decoration etc.). Always use and install the supplied safety cable as a safety measure to prevent accidental damage and/or injury in the event the clamp fails.

Mounting Points: Overhead mounting requires extensive experience, including calculating working load limits. A knowledge of the installation material being used, and periodic safety inspection of all installation material and the fixture are all imperative and should only be performed by a qualified technician. Improper installation can result in bodily injury and damage.

Be sure to complete all rigging and installation procedures before connecting the main power cord to the appropriate wall outlet.

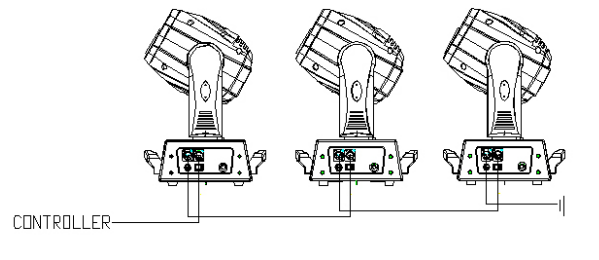
Clamp Mounting: The MICROH LED ULTRA SPOT provides a unique mounting bracket assembly that integrates the bottom of the base, the included "Omega Bracket," and the safety cable rigging point in one unit (see the illustration below). When mounting this fixture to truss be sure to secure an appropriately rated clamp to the included omega bracket using a M10 screw fitted through the center hole of the "omega bracket". As an added safety measure be sure to attached at least one properly rated safety cable to the fixture using on of the safety cable rigging point integrated in the base assembly

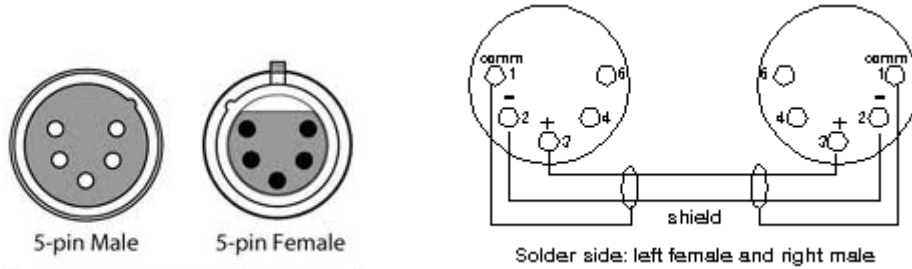


Regardless of the rigging option you choose for your MICROH LED ULTRA SPOT 500 moving head spot fixture, always be sure to secure your fixture with a safety cable. The fixture provides a built-in rigging point for a safety cable on the hanging bracket as illustrated above. Be sure to only use the designated rigging point for the safety cable and never secure a safety cable to a carrying handle.

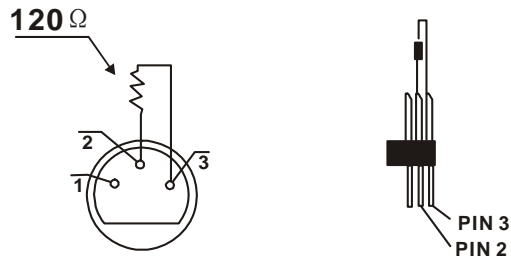
5. DMX-512 CONTROL CONNECTIONS

This fixture complies with international USITT DMX standards and can be used with either a 3 pin or 5 pin DMX connector. Plug in the provided 3 pin XLR cable to the female 3-pin XLR output of your controller and the other side to the male 3-pin XLR input of the MICROH LED ULTRA SPOT 500. To connect the units to DMX, you must daisy chain the fixtures together as referred in the diagram below. Always end your DMX-512 connection with a DMX terminator.





For installations where the DMX cable has to run a long distance, or is in an electrically noisy environment, it is recommended to use a DMX terminator. This helps in preventing corruption of the digital control signal by electrical noise. The DMX terminator is simply an XLR plug with a 120 Ω resistor connected between pins 2 and 3, which is then plugged into the output XLR socket of the last fixture in the chain. Please see illustrations below.



6. MENU NAVIGATION

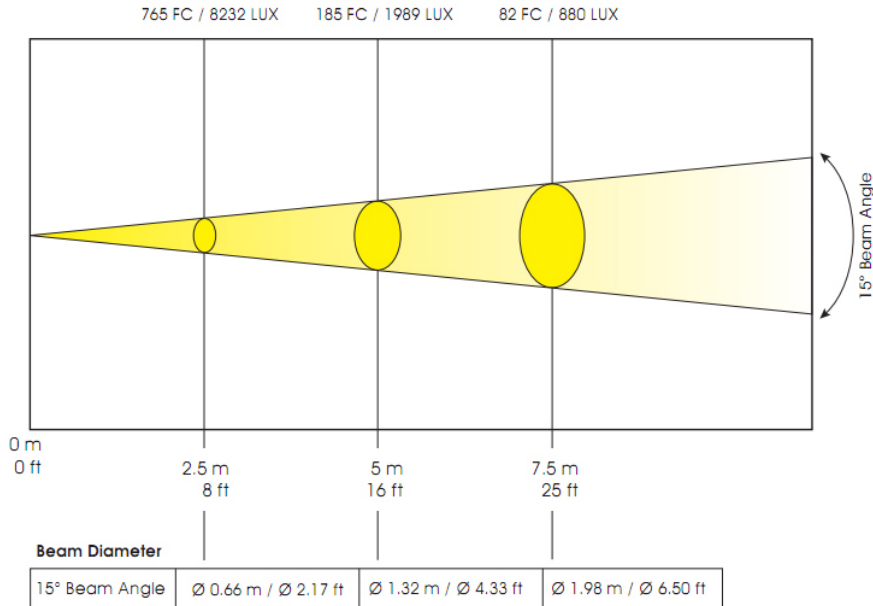
DMX Address	A001~Axxx			
Auto Play	Auto Run Music Control			
Reset	On/Off			
Reverse Pan	On/Off			
Reverse Tilt	On/Off			
Special	Reset Default	On/Off		
Edit Program	Auto Program1 .. Program8	Steps(1..48) Scenes 01 .. Scenes XX	Pan=XXX... ... Time=xx.xS	

7. PHOTOMETRIC DATA

Photometric Beam Angle Data

15° Beam Angle

$$\text{LUX} \times 0,0929 = \text{FC}$$














**Comparison between
MICROH LED Ultra Spot 500
and
Standard 575W Discharge Moving Head Spot**





Colour	LED Ultra Spot 500	Standard 575W Moving Head Spot
White	1989 L	1900 L
Red	75 L	60 L
Light Blue	978 L	1100 L
Dark Blue	863 L	700 L
Green	345 L	220 L
Yellow	1150 L	1100 L
Orange	300 L	
Pink	295 L	320 L

8. DMX CHANNELS

MODE #1 – 16 BIT MODE MODE #2 – 8 BIT MODE MODE#3 –DESIGN MODE

Mode #1	Mode #2	Mode #3	Function	Values	Description
1	1	10	Pan	0-255	Pan Movement
2			Pan Fine	0-255	Fine control of Pan movement
1	2	11	Tilt	0-255	Tilt Movement
4			Tilt Fine	0-255	Fine control of Tilt movement
5	3	3	Colour	0-015	Open/White
				016-031	Red
				032-047	Green
				048-063	Blue
				064-079	Yellow
				080-095	Pink
				096-111	Cyan
				112-127	Orange
				128-189	Forwards rainbow effect from fast to slow
				190-193	Color rotation stop
194-255	Backwards rainbow effect from slow to fast				
6	4	4	Gobo	0-009	Open
				010-019	 Gobo 1
				020-029	 Gobo 2
				030-039	 Gobo 3
				040-049	 Gobo
				050-059	 Gobo 5

				060-069	 Gobo 6
				070-079	 Gobo 7
				080-099	Gobo 1 shake slow to fast
				100-119	Gobo 2 shake slow to fast
				120-139	Gobo 3 shake slow to fast
				140-159	Gobo 4 shake slow to fast
				160-179	Gobo 5 shake slow to fast
				180-199	Gobo 6 shake slow to fast
				200-219	Gobo 7 shake slow to fast
				220-255	Rot. gobo wheel cont. rotation slow to fast
7	5	5	Gobo 1 Rot.	0-003	Gobo rotation stop
				004-127	Forwards gobo rotation from fast to slow
				128-131	Gobo rotation stop
				132-255	Backwards gobo rotation from slow to fast
8	6	6	Gobo 2	0-009	Open/Spot
				010-019	 Gobo 1
				020-029	 Gobo 2
				030-039	 Gobo 3
				040-049	 Gobo 4
				050-059	 Gobo 5

				060-069	 Gobo 6
				070-079	 Gobo 7
				080-089	 Gobo 8
				090-099	 Gobo 9
				100-111	Gobo 1 shake slow to fast
				112-123	Gobo 2 shake slow to fast
				124-135	Gobo 3 shake slow to fast
				136-147	Gobo 4 shake slow to fast
				148-159	Gobo 5 shake slow to fast
				160-171	Gobo 6 shake slow to fast
				172-183	Gobo 7 shake slow to fast
				184-195	Gobo 8 shake slow to fast
				196-207	Gobo 9 shake slow to fast
				208-255	Gobo wheel rotation from slow to fast
				0-031	Shutter closed
				032-063	shutter open
9	7	1	Shutter	064-095	Strobe effect slow to fast
				096-127	shutter open
				128-159	Pulse-effect in sequences (Slow – Fast)
				160-191	shutter open
				192-223	Random strobe effect slow to fast
				224-255	shutter open
10	8	2	Dimmer	0-255	Dimmer 0%...100%
11	9	8	Focus	0-255	In(near) to out(far)
12	10	9	Prism	0-005	OFF
				006-127	ON
				128-189	Forwards rotation from fast to slow
				190-193	Prism rotation stop
				194-255	Backwards rotation from slow to fast
13	11	7	Iris	0-191	Max. diameter to Min. diameter
				192-223	Pulse opening fast to slow
				224-255	Pulse closing slow to fast

14	12	12	Speed	0-255	max to min speed for Pan/Tilt
15	13	13	Special	0-019	NO FUNCTION
				020-029	NO FUNCTION
				030-039	NO FUNCTION
				040-079	NO FUNCTION
				080-099	Motor reset
				100-119	Internal program 1
				120-139	Internal program 2
				140-159	Internal program 3
				160-179	Internal program 4
				180-199	Internal program 5
				200-219	Internal program 6
				220-239	Internal program 7
240-255	Internal program 8				

9. KEY FEATURES

- The Luminus high power 90W white LED unit has an output comparable to the output of 575W discharge
- 765FC/8232LUX (2.5m), 185FC/1989LUX (5m), 82FC/880LUX(7.5m)
- 50,000 hours lifespan and low power consumption
- 16 bit smooth and precise resolution for PAN/TILT movement
- 540° pan and 270° tilt movement
- Scan position memory, pan and tilt correction.
- 1 color wheel with 7 dichroic colors plus open white
- Variable color wheel rainbow effects with speed control
- 1 rotatable gobo wheel with 7 rotatable interchangeable gobos plus open (3 metal gobos and 4 - glass gobos) with speed adjustable, stream effect, dithering effect and rotatable clockwise or anticlockwise
- 1 static gobo wheel with 9 fixed gobos plus open
- 1 rotatable 3-facet prism with speed adjustable and variable direction
- 2 meter to infinite electric focus
- 15° projection beam angle
- Smooth linear electronic iris
- 0-100% linear dimmer with 1-18 times/sec high speed electronic strobe
- LED shutter with variable speed
- 15 DMX channels or 13 DMX channels
- DMX512, Master/Slave, Sound Active and Auto (8 built-in programs)
- On board programming with step editing

GOBO REPLACEMENT – TO CHANGE ONE OF THE ROTATING GOBOS PLEASE FOLLOW THESE INSTRUCTIONS CAREFULLY OR ELSE ERRORS MAY RESULT IN VOIDED WARRANTY.



10. TECHNICAL SPECIFICATIONS

MODEL: LED ULTRA SPOT 500

LAMP: 1 x LUMINUS 90W

OPERATING TEMPERATURE: -25°C to 45°C

VOLTAGE: 120VAC 60Hz

FUSE: 3A

MAX: 240W

DIMENSIONS: 7.99" x 11.81" x 17.20" / 203 x 300 x 437 mm

PACKING DIMENSIONS: 9.96" x 13.78" x 19.17" / 253 x 350 x 487 mm

NET WEIGHT: 24.25 lbs / 11kgs

GROSS WEIGHT: 27.56 lbs / 12.5 kgs

WARRANTY: 2 Year Limited Warranty

11. MAINTENANCE AND CLEANING

The following points have to be considered during the inspection:

- 1) All screws for installing the device or parts of the device must be tightly connected, and must not be corroded.
 - 2) There must not be any deformations on the housing, colour lenses, fixations or installation spots (ceiling, suspension, trussing).
 - 3) Mechanically moved parts must not show any traces of wearing and must not rotate with unbalances.
 - 4) The electric power supply cables must not show any damage, material fatigue or sediments.
- Further instructions depending on the installation spot and usage must be handled by a skilled installer or technician. Any safety issues must be resolved.



In order to keep the fixture in good condition and extend the life, we suggest regular cleaning to the fixture.

- 1) Clean the inside and outside lens each week to avoid the light output from darkening due to accumulation of dust, dirt, etc.
- 2) Clean the fan each week.
- 3) A detailed electrical check by approved technician every three months is advised. Ensure the circuit contacts are in good condition, and prevent from overheating.

We recommend a frequent cleaning of the device. Please use a moist, lint-free cloth. Never use alcohol or solvents. There are no serviceable parts inside the device. Please refer to the instructions under "Installation instructions". Should you need any spare parts, please order genuine MICROH parts from your local dealer.

IF YOU SHOULD EXPERIENCE ANY PROBLEMS OR ISSUES PLEASE CONTACT MICROH PROFESSIONAL PRODUCTS BY EMAIL AT info@microhpro.com

In the event that your unit is defective in any way, please contact your local dealer to obtain an RA number for service repair.

DISCLAIMER – MICROH believes that the information contained within this user manual is accurate. However, Microh is not responsible for any error or addendums to this manual. If you have any comments or general suggestions on how this manual can be improved please contact info@microhpro.com. Thank you.

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