

**MICROH DJ**

[www.microhdj.com](http://www.microhdj.com)



**USER MANUAL**  
**PLASMAWAVE 1 RGB**

**Keep this manual for future reference.**



## 1. INTRODUCTION AND UNPACKING

Thank you for purchasing the MICROH PLASMAWAVE effect fixture. 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 PLASMAWAVE effect fixture is manufactured following CSA 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 PLASMAWAVE laser features a RGB laser effect. Please carefully unpack it when you receive the fixture and check if it was damaged during the transportation. Please check whether the following items are included inside the box:

Fixture – One

Power Cord – One

User Manual – One

## 2. SAFETY INSTRUCTIONS



This device has been delivered in safe working 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.

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

### 3. 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 / 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 PLASMAWAVE provides a unique mounting bracket assembly that integrates 2 brackets to be used to mount on a truss or the floor. When mounting this fixture to truss, be sure to secure an appropriately rated clamp to the included bracket fitted through the

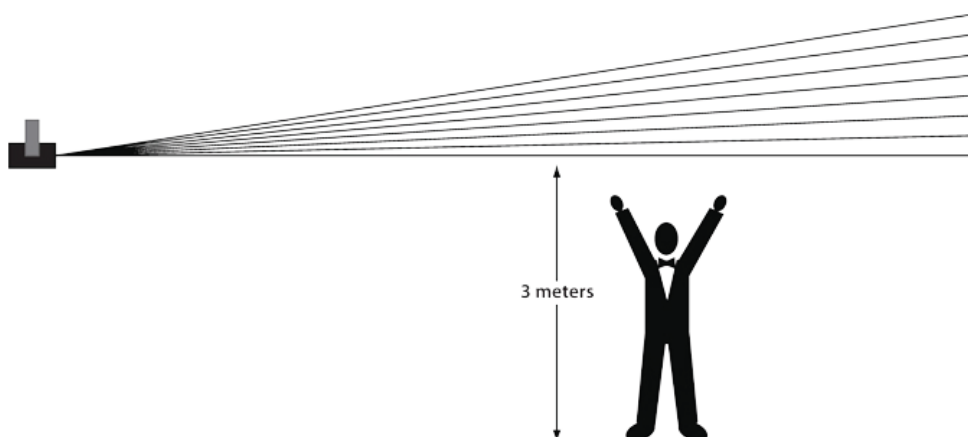
center hole. As an added safety measure, be sure to attach at least one properly rated safety cable to the fixture.



Regardless of the rigging option you choose for your MICROH PLASMAWAVE, 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.

**Proper Usage:** This product is for overhead mounting only. For safety purposes, MICROH DJ recommends mounting lighting effect products on steady elevated platforms or sturdy overhead supports using suitable hanging clamps. In all cases, use safety cables. Obtain appropriate mounting hardware from your lighting vendor.

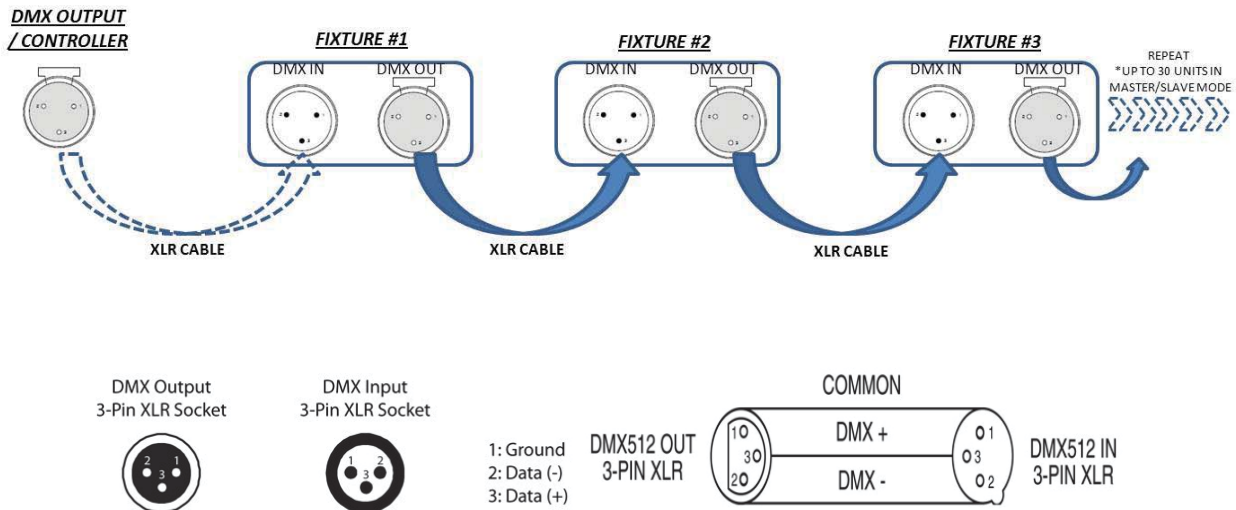
**International laser safety regulations require that laser products must be operated in the fashion illustrated below, with a minimum of 3 meters (9.8 ft) of vertical separation between the floor and the lowest laser light. Additionally, 3 meters of horizontal separation is required between laser light and audience or other public spaces.**



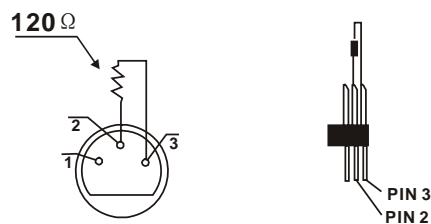
**CAUTION! USE OF CONTROLS, ADJUSTMENTS, OR PROCEDURES OTHER THAN THOSE SPECIFIED IN THIS USER MANUAL MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.**

## 4. 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 PLASMAWAVE. 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  $\Omega$  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.



## ILDA Control Mode

- This unit has the ILDA DB25 port, and it can be controlled by the PC, There is auto transform set in the inside of the unit to transform the ILDA and preprogrammed show. when connecting with the 25 pin cable, the unit will be control by PC, when disconnect the unit, it will be preprogrammed program control.
- In theory, as long as the ILDA DB25 is connected, It can control this unit. In the reality, some laser software may not control this unit. Pins 4 and 17 on the output of the card are not connected. In fact this is an easy problem. As long as you connect them. It can control this unit.

## 5. SETUP MENU


<i>MODE</i>	<i>SIGNAL</i>	<i>001</i>		
		<i>SLAVE</i>		
	<i>MIRROR</i>	<i>SY:N SX:N</i>	<i>SY:Y SX:Y</i>	
	<i>AUTO</i>		<i>LASER UNIVERSAL</i>	
			<i>BURST GRATING</i>	
			<i>LASER LUMIA</i>	
			<i>SCANNED BEAM</i>	
			<i>LASER 3D</i>	
			<i>MIXED 5 EFFECT</i>	
	<i>SOUND</i>		<i>MIXED 5 EFFECT</i>	
			<i>BURST GRATING</i>	
			<i>LASER LUMIA</i>	
			<i>SCANNED BEAM</i>	
			<i>LASER 3D</i>	
			<i>MIXED 5 EFFECT</i>	
	<i>SENSITIVITY</i>			

## 6. DMX CHANNEL MODES







DMX chart with ILDA control connected

CHANNEL		VALUE	DESCRIPTION
CH1	Grating Rotation	000-004	No grating rotating
		005-127	Clockwise grating rotating
		128-133	No grating rotating
		134-255	Counter clockwise grating rotating
CH2	Grating Effect	000-031	Laser 3D Effect
		032-063	Scanned Beam Effect (Pattern Effect)
		064-095	Laser Lumia Effect
		096-127	Scanned Beam Effect (Pattern Effect)
		128-159	Burst Grating Effect
		160-191	Scanned Beam Effect (Pattern Effect)
		192-223	Laser Universal Effect
		224-255	Scanned Beam Effect (Pattern Effect)

DMX chart with ILDA control NOT connected

CHANNEL		VALUE	FUNCTION
CH 1	MODE	000-018	Ⓛ Laser OFF
		019-036	AUT Auto Show with Mixed 5 effect
		037-054	A3D Laser 3D Effect Auto Show
		055-072	AUB Scanned Beam Effect Auto Show
		073-090	AUL Laser Lumia Effect Auto Show
		091-108	AUN Burst Grating Effect Auto Show
		109-126	AUO Laser Universal Effect Auto Show
		127-144	SOU Sound Show with Mixed 5 Effect
		145-162	S3D Sound show with LASER 3D
		163-180	SOB Sound show with Scanned Beam
		181-198	SOL Sound show with LASER LUMIA
		199-216	SON Sound show with Burst Grating
		217-234	SOO Sound show with Laser Universal
		235-255	DMX MODE
CH 2	GROUP	000-051	1 Group Patterns.
		052-103	2 Group Patterns
		104-155	3 Group Patterns
		156-207	4 Group Patterns
		208-255	5 Group Patterns
CH 3 PATTERN		000-255	Every 16 for 1 Group, total 16 patterns.
CH 4	COLOR	000-007	Original
		008-015	Red
		016-023	Green
		024-031	Yellow
		032-039	Blue
		040-047	Purple
		048-055	Light Blue
		056-063	White
		064-111	Color Rolling
		112-159	Color Jumping
		160-127	Color Moving
		208-255	 Strobe



















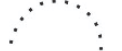










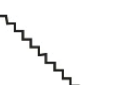











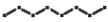








































CH 5	CLIPPING	0	Full pattern without clipping
		001-127	0%~99% fixed pattern clipped
		128-255	 Clipping Speed
CH 6	ZOOMING	000-127	100%-5% fixed pattern zoomed
		128-169	Zoom IN
		170-209	Zoom OUT
		210-255	Alternately Zooming
CH 7	ZOOM SPEED	000-255	 Fast to Slow
CH 8	Y AXIS ROLLING	000-127	0 -359 degree fixed Y axis rolled
		128-191	Clockwise rolling
		192-255	Counter clockwise rolling
CH 9	ROLL SPEED	0-255	 Fast to Slow
CH 10	X AXIS ROLLING	000-127	0 -359 degree fixed X axis rolled
		128-191	Clockwise rolling
		192-255	Counter clockwise rolling
CH 11	ROLL SPEED	0-255	 Fast to Slow
CH 12	Z AXIS ROLLING	000-127	0 -359 degree fixed Z axis rolled
		128-191	Clockwise rolling
		192-255	Counter clockwise rolling
CH 13	ROLL SPEED	0-255	 Fast to Slow
CH 14	Y AXIS MOVING	000-127	128 different fixed position on X axis
		128-191	Clockwise moving
		192-255	Counter clockwise moving
CH 15	MOVE SPEED	0-255	 Fast to Slow
CH 16	X AXIS MOVING	000-127	128 different fixed position on Y axis
		128-191	Clockwise moving
		192-255	Counter clockwise moving
CH 17	MOVE SPEED	0-255	Fast to Slow

CH18	Grating Rotation	000-004	No grating rotating
		005-127	Clockwise grating rotating
		128-133	No grating rotating
		134-255	Counter clockwise grating rotating
CH19	Different effect	000-031	Laser 3D Effect
		032-063	Scanned Beam Effect (Pattern Effect)
		064-095	Laser Lumia Effect
		096-127	Scanned Beam Effect (Pattern Effect)
		128-159	Burst Grating Effect
		160-191	Scanned Beam Effect (Pattern Effect)
		192-223	Laser Universal Effect
		224-255	* Do Not Use

\*May cause GOBO misalignment. Restart unit.

## 7. Laser Images

DMX	1	2	3	4	5
000-015					
016-031					
032-047					
048-063					
064-079					
080-095					
096-111					

112-127					
128-143					
144-159					
160-175					
176-191					
192-207					
208-223					
224-239					
240-255					

## 8. KEY FEATURES

- 9 channel DMX-512
- 3W RGBAW LED's for moonflower effect
- 7 Built-in program with speed adjustment
- Red and Green laser built in
- 8 x 3W WHT LED's for strobe
- Variable electronic strobe
- 7 Sound modes
- Warranty: 1 YEAR limited warranty

## 9. TECHNICAL SPECIFICATIONS

DIMENSIONS, WEIGHT and POWER	
Dimension	340mm X 250mm X 150mm
Net Weight	4.5Kgs
Gross Weight	5.5Kgs
Power input	Switched
Range	120V 6Hz
Rated Power	50W
Fuse	3A
LASER DIODE	
Red	638nm - 3000mw
Green	532nm - 150 mw
Blue	450nm - 600mw
Scanner	20K
CONTROL	
Modes	Sound - Auto - DMX - ILDA
DMX channels	19

## 10. 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.



**CAUTION  
DISCONNECT POWER BEFORE SERVICING.**

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.

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@microhdj.com](mailto:info@microhdj.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@microhdj.com](mailto:info@microhdj.com). Thank you.**

**Notes:**

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