

Hybrid

HMH 150



User Manual

Please read the instructions carefully before use

Safety Instructions



Please read the instructions carefully which includes important information about the installation, usage and maintenance.

WARNING

Please keep this User Guide for future consultation. If you sell the unit to another user, be sure that they also receive this instruction 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.

- Unpack and check carefully that there is no transportation damage before using the unit.
- The unit is for indoor use only. Use only in a dry location.
- DO install and operate by qualified operator.
- DO NOT allow children to operate the fixture.
- Use safety chain when fixing the unit. Handle the unit by carrying its base instead of head only.
- The unit must be installed in a location with adequate ventilation, at least 50cm from adjacent surfaces.
- Be sure that no ventilation slots are blocked, otherwise the unit will overheat.
- Before operating, ensure that the voltage and frequency of the power supply match the power requirements of the unit.
- It's important to ground the yellow/green conductor to earth in order to avoid electric shock.
- The maximum ambient temperature is TA: 40°C. DO NOT operate it when the temperature is higher.
- DO NOT connect the device to any dimmer pack.
- During initial start-up some smoke or a smell may arise. This is a normal process and does not necessarily mean that the device is defective. It will decrease gradually within 15 minutes.
- Make sure there are no flammable materials close to the unit while operating to avoid a fire hazard.
- Examine the power wires carefully; replace them immediately if there is any damage.
- The Unit's surface temperature may reach up to 85°C. DO NOT touch the housing bare-handed during its operation. Allow about 15 minutes for cooling the unit down before replacing bulb or maintenance as it could be very hot.
- Avoid any flammable liquids, water or metal objects entering the unit. If this happens, cut off

the main power supply immediately.

- DO NOT operate in dirty or dusty environments. Clean fixtures regularly.
- DO NOT touch any wire during operation as there might be a hazard of electric shock.
- DO NOT let cables twist together.
- The minimum distance between light output and the illuminated surface must be more than 12 meters.
- Disconnect main power supply before fuse/lamp replacement or servicing.
- Replace fuse/lamp only with the same type.
- In the event of serious operating problem, stop using the unit immediately.
- Never turn the unit on and off repeatedly .
- The housing, the lenses, or the ultraviolet filter must be replaced if they are visibly damaged.
- DO NOT open the unit as there are no user serviceable parts inside.
- Never try to repair the unit by yourself. Repairs carried out by unskilled people can lead to damage or malfunction. Please contact the nearest authorized technical assistance center if needed.
- Disconnect the main power supply if the fixture is has not been used for a long time.
- Use the original packing materials before transporting it again.

Cautions:

- To prevent or reduce the risk of electrical shock or fire, do not expose the unit to rain or moisture.
- Hot lamp explosion hazard. DO NOT open the unit within 15 minutes after switching off.
- Replace the bulb once it is damaged, deformed or life-expired.
- DO NOT look directly at the light while the bulb is on.
- Never touch bulb with bare fingers, as it is very hot after use.
- DO NOT turn on the unit without bulb enclosure or when housing is damaged.

Installation:

The unit is fully operational in three different mounting positions, hanging upside-down from a ceiling or set on a flat level surface. To avoid internal damage to the unit, never mount the unit on its side as illustrated above. Be sure this fixture is kept at least 0.5m 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.

Technical Specifications

Power supply

- AC 100~240V 50/60Hz

Power Consumption

- 200W

Light Source

- 1 X 150W LED

Angle

Rotating Gobo: 12° → 23° (with zoom lens)

Movement

- Pan: 540°
- Tilt: 270°
- Pan/Tilt moving speed adjustable.
- Automatic Pan/Tilt correction.
- Easy calibration and maintenance by magnetic home positioning.

Dimmer/Shutter

- Blackout, 0~100% smooth dimming, independent shutter and various strobe effect.

Colour wheel

- 8 fixed colours plus white
- Rainbow effect in both directions.

Gobo wheel

1 Rotating gobo wheel with 7 gobos plus open

Prism

- Prism : 6 facet prism and comet prism rotating in both directions

Focus

- Motorized focus

Zoom

- Motorized linear zoom system

Protocols

- DMX 512
- Date input/output: 3/5 Pin XLR socket
- Weight 12 Kg

Turn on the unit, press the **MENU** button, and press the **UP/DOWN** button until the required function is shown on the monitor. Select the function by the **ENTER** button. Use the **UP/DOWN** button to choose the submenu, press the **ENTER** button to store and automatically return to the last menu.

The main functions are shown below (the grey boxes are preset settings) :

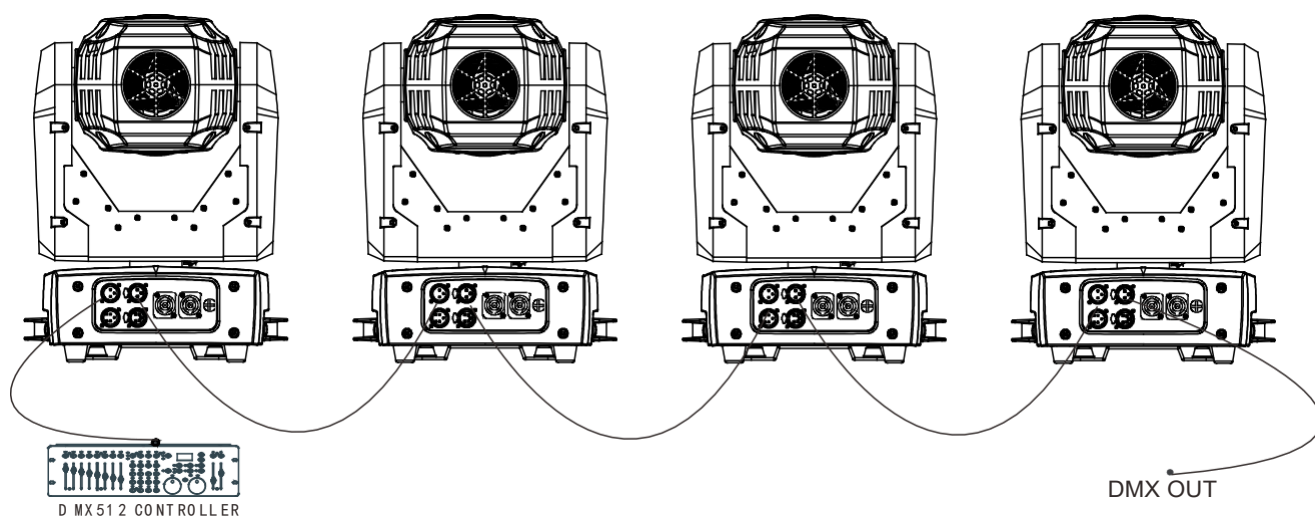
Address		
	001	DMX address set
Run Mode		
	DMX 15CH/9CH	9/15 channels select
	Slave	Slave 1-Slave 4
	Auto	Auto mode
	Sound	Sound mode
	IR	None
	Manual	
	----Pan-----0~255	Pan movement 0-540 degrees
	----Pan Fine-----0~255	Tilt movement 0-270 degrees
	----Color-----0~255	Select Colour options
	----Gobo-----0~255	Select Gobo options
	----Gobo Rotate-----0~255	Rotate gobo
	----Prism-----0~255	Select prism and rotate
	----Focus-----0~255	Manual adjust focus
	----Zoom-----0~255	Manual adjust Zoom
	----Dimmer-----0~255	Set dimmer value
	----Shutter-----0~255	Set shutter and strobe
Setup		
	Pan Reverse-----YES/NO	Pan normal or Reverse
	Tilt Reverse-----YES/NO	Tilt normal or Reverse
	Screen Reverse-----YES/NO	Display normal or Reverse
	Pan Angle-----540/360/180	Pan angle selection
	Tilt Angle-----270/180/90	Tilt angle selection
	Totem mode----- OFF/UP/DOWN	Set pan/tilt angle
	Sensitivity-----0-100	Set sound sensitivity
	Reset-----YES/NO	Reset the device
	Factory Set-----YES/NO	Load factory default
SysInfo		
	Ver: V1.0	Software version
	Running Mode: DMX	Current running mode
	DMX Address: 001	Current dmx address
	Temperature: Open	None

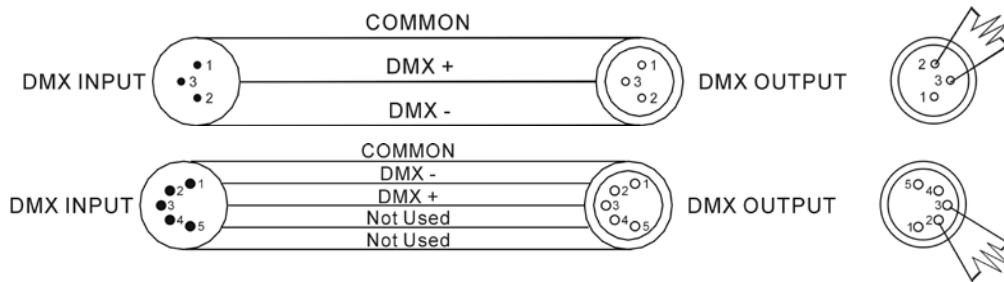
Home Position Adjustment

Press the **MENU** button for about 3 seconds into offset mode to adjust the home position. Press the **UP/DOWN** button to select the password <2323>, press the **ENTER** button to confirm

PARAMETER	DEFAULT	FUNCTION
PAN	128	PAN MOTOR
TILT	128	TILT MOTOR
COLOUR	128	COLOUR WHEEL
GOBO	128	GOBO WHEEL
GOBO ROTATE	128	GOBO ROTATION
PRISM	128	PRISM SELECTION
PRISM I	128	PRISM ROTATION
FOCUS	128	FOCUS SELECTION
ZOOM	128	ZOOM SELECTION
DIMMER	128	DIMMER SELECTION

Connection





ATTENTION

Termination reduces signal errors and to avoid signal transmission problems and interference. It is always advisable to connect a DMX terminal (Resistance 120 ohm 1/4W between pin2 (DMX-) and pin3 (DMX+) of the last fixture).

1. At the last unit, the DMX cable has to be terminated with a terminator. Solder a 120-ohm 1/4W resistor between pin 2(DMX-) and pin 3(DMX+) into a 3-pin XLR-plug and plug it in the DMX-output of the last unit.
2. Connect the unit together in a “daisy chain” plug the XLR cable from the output of the unit to the input of the next unit. The cable cannot be branched or split to a “Y” cable. DMX 512 is a very high-speed signal. Inadequate or damaged cables, soldered joints or corroded connectors can easily distort the signal and shut down the system.
3. The DMX output and input connectors are pass-through to maintain the DMX circuit, when one of the units’ power is disconnected.
4. Each lighting unit needs to have a DMX address to receive the data by the controller. The address number is between 0-511 (usually 0 & 1 are equal to 1).
5. The end of the DMX 512 system should be terminated to reduce signal errors.
6. 3 pin XLR connectors are more popular than 5 pins XLR.
 - 3 pin XLR: Pin 1: GND, Pin 2: Negative signal (-), Pin 3: Positive signal (+)
 - 5 pin XLR: Pin 1: GND, Pin 2: Negative signal (-), Pin 3: Positive signal (+), Pin4, Pin5 not used.

Address Setting

If you use a universal DMX controller to control the units, you have to set the DMX address from 1 to 512 so that the units can receive DMX signal.

Press the **MENU** button to enter menu mode, select **DMX Functions**. Press the **ENTER** button to confirm, use the **UP/DOWN** button to select **DMX Address**. Press the **ENTER** button to confirm, the present address will blink the display, use the **UP/DOWN** button to adjust the address from 001 to 512,

press the **ENTER** button to store. Press the **MENU** button to go back to the last menu or idling let the unit idle for one minute to exit menu mode.

Please refer to the following diagram to address your DMX512 channel for the first 4 units.

Channel mode	Unit 1 Address	Unit 2 Address	Unit 3 Address	Unit 4 Address
9 channels	1	10	19	28
15 channels	1	16	31	46

DMX 512 Configuration

Please refer to below configurations to control the fixtures

Attentions:

1. The unit will maintain the last condition until reset if you cut-off the DMX signal.
2. For the channel Function, keep the value for about 5 seconds, then the corresponding function will take into effect.

9 Channels :

Channel	Function	Value	
1	Pan	0-255	0-540°
2	Tilt	0-255	0-270°
3	Colour wheel	0-7	White
		8-15	Colour 1
		16-23	Colour 2
		24-31	Colour 3
		32-39	Colour 4
		40-47	Colour 5
		48-55	Colour 6
		56-63	Colour 7
		64	White
		65-189	Colour wheel index
		190-221	Counter-Clockwise rotation, fast to slow
		222-223	Stop
224-255	Clockwise rotation, slow to fast		
4	Gobo wheel	0-7	Open
		8-15	Gobo 1
		16-23	Gobo 2
		24-31	Gobo 3
		32-39	Gobo 4
		40-47	Gobo 5

		48-55	Gobo 6
		56-63	Gobo 7
		64-71	Gobo 7 shake,slow to fast
		72-79	Gobo 6 shake,slow to fast
		80-87	Gobo 5 shake,slow to fast
		88-95	Gobo 4 shake,slow to fast
		96-103	Gobo 3 shake,slow to fast
		104-111	Gobo 2 shake,slow to fast
		112-119	Gobo 1 shake,slow to fast
		120-127	Open
		128-189	Counter-Clockwise rotation, fast to slow
		190-193	Stop
		194-255	Clockwise rotation, slow to fast
5	Gobo Rotation	0-63	Index
		64-145	clockwise rotation slow to fast
		146-149	Stop
		150-231	Counter-clockwise rotation slow to fast
		232-255	Bounce slow to fast
6	Prism & Prism rotation	0-3	None
		4-6	6 facet prism
		7-65	6 facet prism clockwise rotation slow to fast
		66-123	6 facet prism Counter-clockwise rotation slow to fast
		124-127	6 facet prism
		128-131	None
		132-134	Comet prism effect
		135-193	Comet prism clockwise rotation slow to fast
		194-251	Comet prism Counter-clockwise rotation slow to fast
		252-255	Comet prism effect
7	Focus	0-255	From far to near
8	Shutter	0-3	Closed
		4-7	Open
		8-76	slow to fast strobe
		77-145	Pulse slow to fast
		146-215	Random slow to fast
		216-255	Open
9	Zoom	0-255	From narrow to wide

15 Channels :

Channel	Function	Value	
1	Pan	0-255	0-540°
2	Pan 16bit	0-255	Pan fine 16bit
3	Tilt	0-255	0-270°
4	Tilt 16bit	0-255	Tilt fine 16bit
5	P/T Speed	0-255	Pan/Tilt speed from fast to slow
6	Colour wheel	0-7	White
		8-15	Colour 1
		16-23	Colour 2
		24-31	Colour 3
		32-39	Colour 4
		40-47	Colour 5
		48-55	Colour 6
		56-63	Colour 7
		64	White
		65-189	Color wheel index
		190-221	Counter-Clockwise rotation, fast to slow
		222-223	Stop
		224-255	Clockwise rotation, slow to fast
		7	Gobo wheel
8-15	Gobo 1		
16-23	Gobo 2		
24-31	Gobo 3		
32-39	Gobo 4		
40-47	Gobo 5		
48-55	Gobo 6		
56-63	Gobo 7		
64-71	Gobo 7 shake,slow to fast		
72-79	Gobo 6 shake,slow to fast		
80-87	Gobo 5 shake,slow to fast		
88-95	Gobo 4 shake,slow to fast		
96-103	Gobo 3 shake,slow to fast		
104-111	Gobo 2 shake,slow to fast		
112-119	Gobo 1 shake,slow to fast		
120-127	Open		
128-189	Counter-Clockwise rotation, fast to slow		
190-193	Stop		
194-255	Clockwise rotation, slow to fast		
8	Gobo Rotation	0-63	Index
		64-145	clockwise rotation slow to fast
		146-149	Stop
		150-231	Counter-clockwise rotation slow to fast

		232-255	Bounce slow to fast
9	Prism & Prism rotation	0-3	None
		4-6	6 facet prism
		7-65	6 facet prism clockwise rotation slow to fast
		66-123	6 facet prism Counter-clockwise rotation slow to fast
		124-127	6 facet prism
		128-131	None
		132-134	Comet prism effect
		135-193	Comet prism clockwise rotation slow to fast
		194-251	Comet prism Counter-clockwise rotation slow to fast
		252-255	Comet prism effect
10	Focus	0-255	From far to near
11	Dimmer	0-255	0-100%
12	Shutter	0-3	Closed
		4-7	Open
		8-76	slow to fast strobe
		77-145	Pulse slow to fast
		146-215	Random slow to fast
		216-255	Open
13	Special function	0-7	None
		8-15	blackout while Pan/Tilt Moving
		16-23	blackout while Colour changing
		24-31	blackout while Gobo changing
		32-39	blackout while Pan/Tilt Colour Moving
		40-47	blackout while Pan/Tilt Gobo Moving
		48-55	blackout while Pan/Tilt Colour Gobo Moving
		56-87	None
		96-103	Pan reset
		104-111	Tilt reset
		112-119	Colour wheel reset
		120-127	Gobo wheel reset
		136-143	Prism reset
		144-151	Focus and Zoom reset
		152-159	All reset
		160-255	None
14	Pan&Tilt Marco	0-7	None
		8-23	Pan&Tilt Marco 1
		24-39	Pan&Tilt Marco 2
		40-55	Pan&Tilt Marco 3
		56-71	Pan&Tilt Marco 4
		72-87	Pan&Tilt Marco 5
		88-103	Pan&Tilt Marco 6
		104-119	Pan&Tilt Marco 7

		136-151	Sound actived Pan&Tilt Marco 1
		152-167	Sound actived Pan&Tilt Marco 2
		168-183	Sound actived Pan&Tilt Marco 3
		184-199	Sound actived Pan&Tilt Marco 4
		200-215	Sound actived Pan&Tilt Marco 5
		216-231	Sound actived Pan&Tilt Marco 6
		232-247	Sound actived Pan&Tilt Marco 7
		248-255	Sound actived Pan&Tilt Marco 8
15	Zoom	0-255	From narrow to wide

Troubleshooting

The following are a few common problems that may occur during operation. Here are some suggestions for easy troubleshooting:

A. The unit does not work, it has no light and the fan does not work

1. Check the power cable is connected and main fuse.
2. Measure the main power supply's voltage on the main connector.
3. Check the power on LED to see if it can be lit up or not.

B. Not responding to DMX controller

1. The DMX LED should be on. If not, check DMX connectors, and the cables to see if they are linked properly.
2. If the DMX LED is on and there is no response to the channel, check the address settings and DMX polarity.
3. If you have intermittent DMX signal problems, check the pins on connectors or on PCB of the unit or the previous one.
4. Try to use another DMX controller.
5. Check to see if the DMX cables run near or run alongside to high voltage cables, this may cause damage or interference to DMX interface order.

C. One of the channels is not working well

1. The stepper motor might be damaged or the cable connected to the PCB is broken.
2. The motor's drive IC on the PCB might be out of condition.

D. The lamp is cutting out intermittently

1. If the lamp is not working well, check to see if the main power supply's voltage is either too high or too low.
2. Internal temperature may be too high. Check if replacement of fan is needed on the head.

Cleaning

The cleaning of internal and external optical lenses and/or mirrors must be carried out periodically to optimize light output. Cleaning frequency depends on the environment in which the fixture operates: damp, smoky or particularly dirty surrounding can cause greater accumulation of dirt on the unit's optics.

- Clean with soft cloth and use normal glass cleaning liquid.
- Always dry the parts carefully.
- Clean the external optics at least every 20 days. Clean the internal optics at least every 30/60 days.