SMART HYBRID300

300W LED BSW
Movinghead
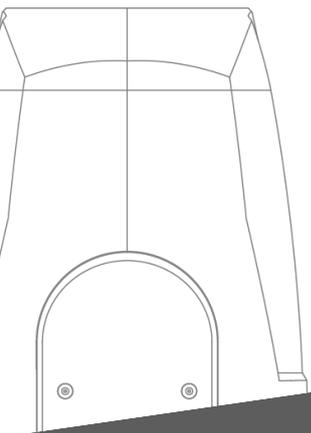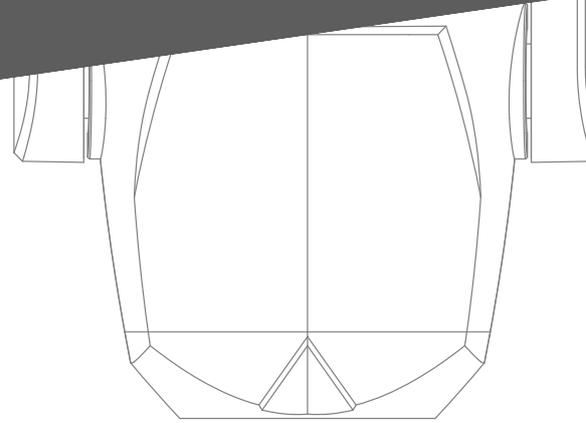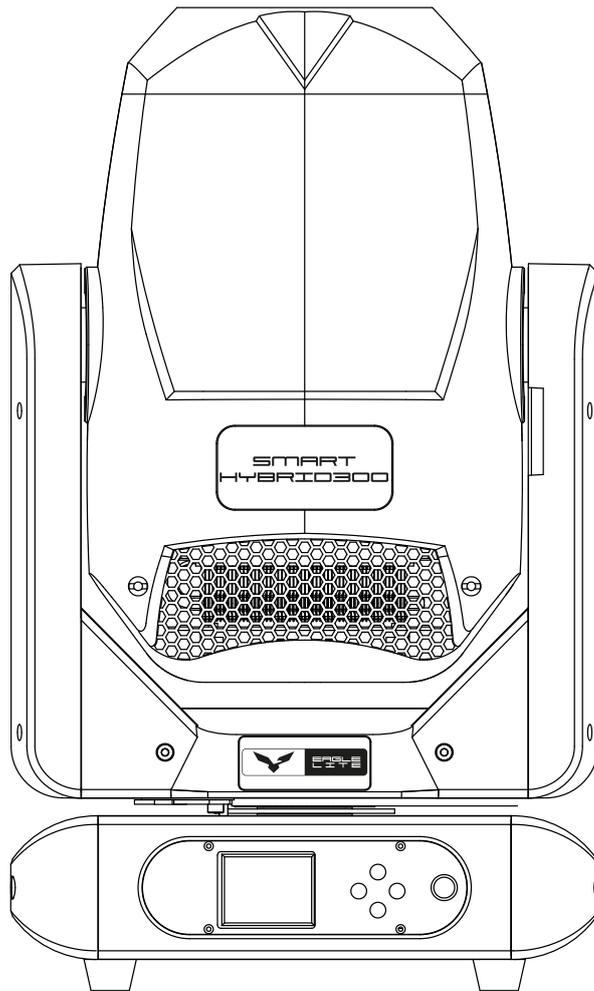
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Content

Info about the product

Thank you for purchasing our Eagle Lite SMART - HYBRID300. The manual below will review the product's features and functions.

Product features

Eagle Lite SMART - HYBRID300 is a quality moving head that is ready for touring, big events, festivals etc. HYBRID300 is made to be the perfect all-rounder, but without it being a fixture that weighs too much and is too big. Some of the important features with SMARTHYBRID300 are.

- 300W LED High performance module (6700K).
- Compact and lightweight design
- CMY
- CTO
- IRIS
- 16 bit dimmer 0-100%
- Adjustable PWM
- Zoom of 5-45°
- AUTO Focus
- 2 Gobo Reels 1 Static & 1 Rotating wheel
- 1 color wheel
- 8-Facet prism with rotation
- Low noise fans with different modes
- PowerCON TRUE1 in/out
- 3 & 5-Pin DMX IN & OUT
- ArtNET in
- Can be updated over DMX.

What does the package contain?

- 1x SMART HYBRID300
- 1x PowerCON TRUE1 Cable
- 1x 5-Pin DMX cable
- 2x 1/4 Turn Omega brackets

General information before use

Accountability and attention are requested when using the device.
With high-voltage electricity, there is a danger of shock when touching exposed wires.

Risk of eye damage
Never look directly into the light source. Always wear protection if it is necessary to look directly into the light source.

Always check that you are using the product correctly!
Correct voltage in relation to the specified specifications of the device or manual. Be sure that the device is always grounded. Never open the unit until power is taken off! Check periodically that the cord is not pinched or damaged of any kind. Always check the device and cord time to time. When replacing a fuse, it must be replaced with the same type and rating.

For your own safety and understanding of the device, we strongly recommend that the manual be read through before using the product. Always read warnings and recommendations before use.

Warning: Hot surface This symbol indicates that the device may become hot in certain places on the device. The device may become hot during use. Therefore, it is recommended to let the device cool for at least 10 minutes after use. In this way, injury is avoided and best cared for on the device.

Should only be operated by qualified persons.
We strongly recommend that all persons who will be using the device do the following, read the manual before using the device, are qualified to use the device, and can rig equipment properly.

For indoor use only: The fixture must only be used indoors and in dry environments. It must also not be exposed to water or other liquids, as this is only IP20 rated.

Description of the product

Specifications

Description	Data
Power supply:	90-240V AC 50/60Hz.
Power consumption:	500W Max
IP class:	IP20
LED:	300W White LED Module 6700K
Dimmer/Shutter:	16-Bit linear dimmer / 0-20 Hz
Gobo static:	14 static goboos + open
Gobo rotating:	6 Rotating goober + open
Farvehjul/CMY/CTO	Complete CMY with two leaves for one color all over the source. CTO 11 Colors + open
Prism	8-Facet Rotating Prism
Spredningsvinkel/Zoom:	5-45°
Focus:	Motorized focus and built-in Auto focus
Frost:	1 pcs frost filter 0-100%
Iris:	Motorized IRIS, with built-in macro or manual adjustment
Tilt:	16-Bit Tilt with Auto Correction 270°
PAN:	16-Bit Pan with Auto Correction 540°

Control:	DMX, ArtN0ET, W-DMX*, Auto, Master Slave, manual
DMX Channels:	Normal Mode(25ch)
Power connection:	Truecon TR1 in & out
DMX connection:	3-Pin dmx IN & OUT 5-Pin dmx IN & OUT ArtNET IN
RDM:	Yes, the device is with built-in RDM
Cooling/Køling:	Low Noise fans temperatures controlled, with adjustable modes, adjustable over DMX or manually
Display type/Display	LCD Screen
Workspace	5°C~40°C
Size:	Depth: 212mm
	Width: 337mm
	Height: 583mm
Weight:	15KG

Service and maintenance of the device

- The device is not designed for permanent operation; therefore, it is important to the device for consistent operational breaks. This helps to ensure service life without defects.
- Never turn the device on and off at short intervals. This will significantly reduce the service life.
- If the device has been subjected to drastic temperature fluctuations, do not turn it on immediately. The arising condensation can destroy the device. Allow the device to reach ambient temperature before connecting. Wait until condensation has evaporated.
- After use, the unit must always be allowed to cool before it is derigged if this is not complied with, and the unit is subsequently defective. The warranty does not apply.
- Please use the original packaging to protect the device from vibration, dust and moisture during transport or storage.
- If a serial number label is affixed to the device, do not remove the label as this will void the warranty.

Cleaning the product

The outside of the device should be cleaned periodically to remove contaminants such as dust, etc. Especially the lens must be clean to ensure maximum light output. In addition, it is also recommended to check for other foreign objects in the device.

1. Disconnect the power and allow the device to cool down before cleaning.
2. Clean the surface with a soft, lint-free and damp cloth. Never use alcohol or solvents, as these can damage the surface. Make sure that no liquid can get into the device.
3. The device must be dry before the power is reconnected.

There are no repairable parts inside. Do not open the housing. Do not attempt to repair the device, as this may result in damage. Maintenance and service operations may only be carried out by authorized repairers. If you need spare parts, please use original parts. Should you have any further questions, please contact your dealer.
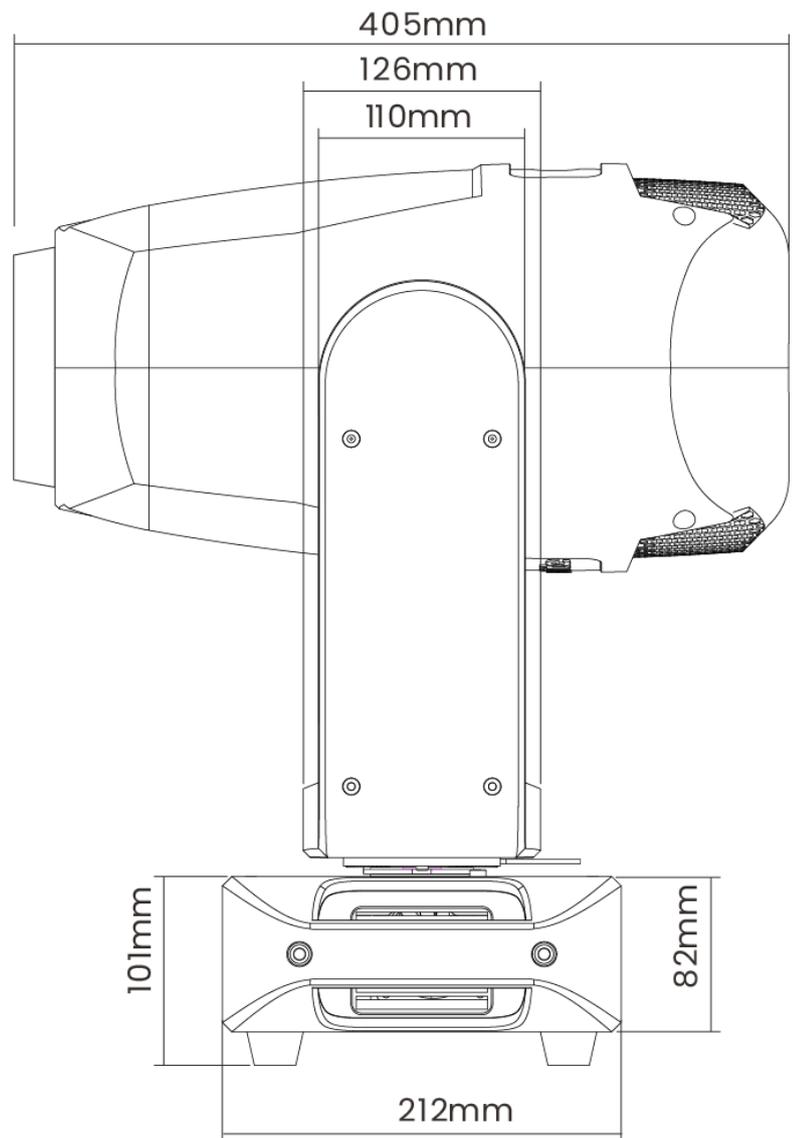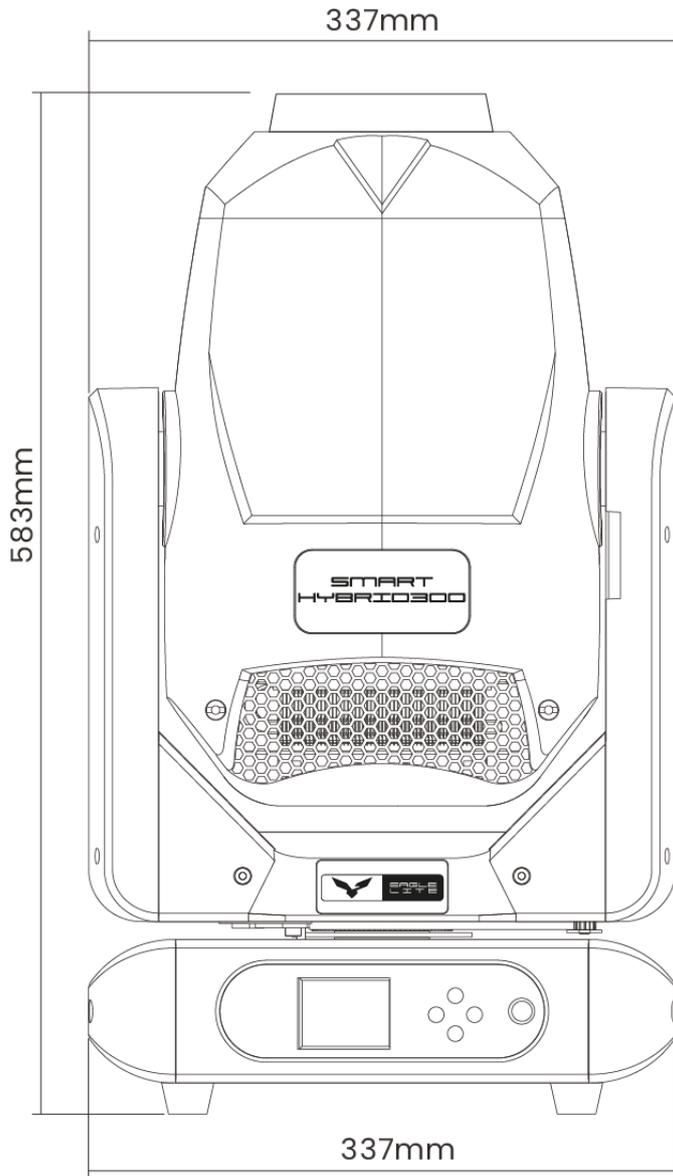
Physical size

337mm

583mm

337mm

405mm

126mm

110mm

101mm

82mm

212mm

482mm

420mm

308mm

219mm

Effects wheel overview

COLOR WHEEL

STATIC GOBO WHEEL

1 2 3 4 5 6 7

8 9 10 11 12 13 14

ROTATING GOBO WHEEL

1 2 3 4 5 6 7
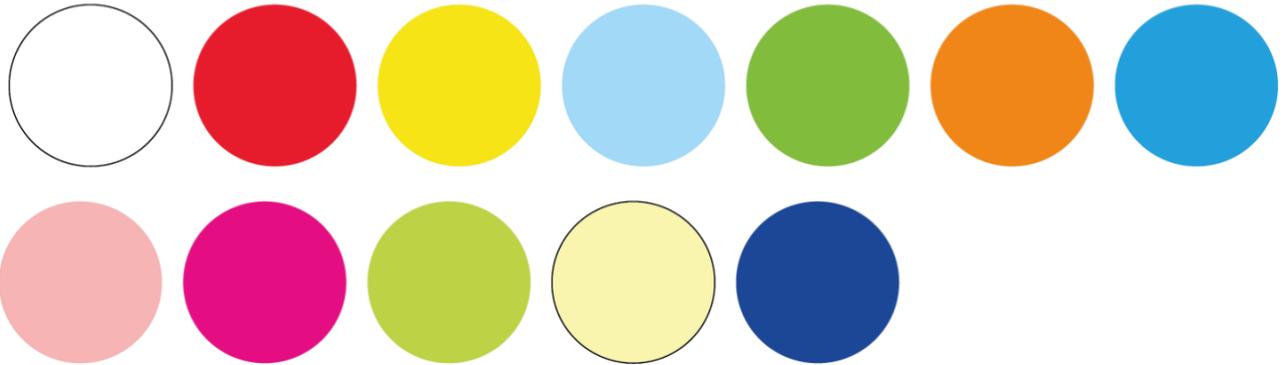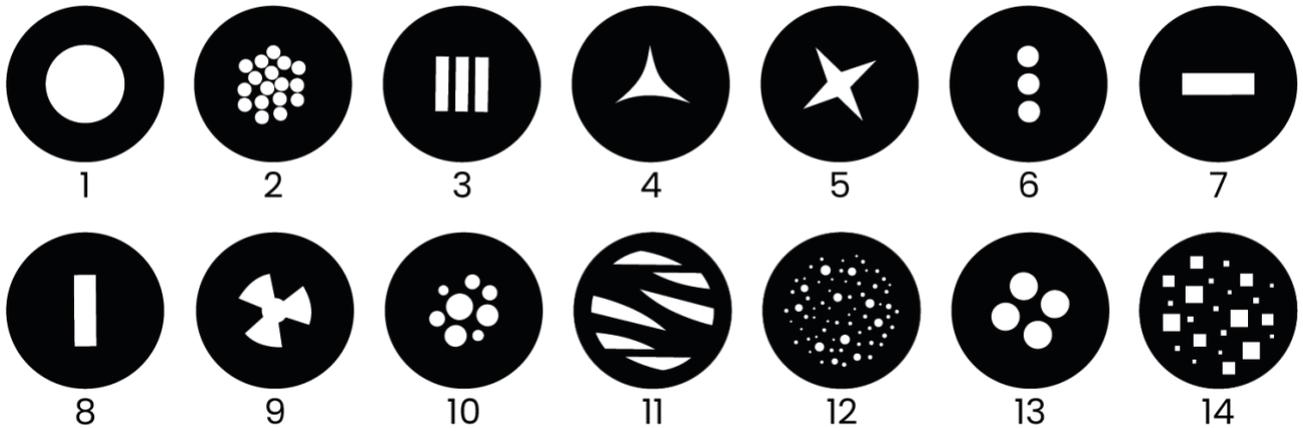
Menu overview

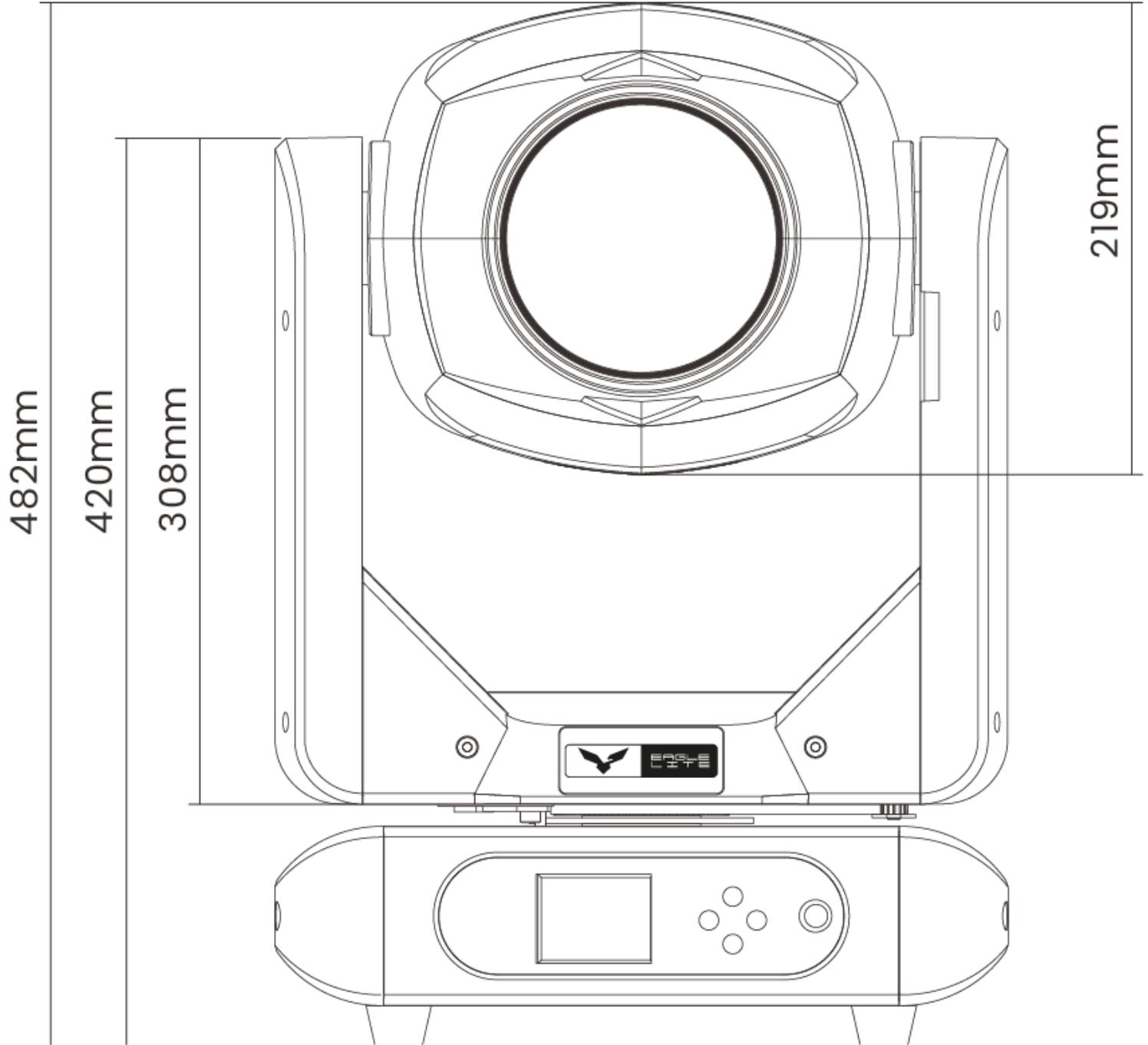| Main menu	Parameter	Options/Value	Description
Information	Address	001-512	DMX Address
	Runtime		Displays number of operating hours and LED source operating hours
	Version		Displays current software on the device.
	Temperature		Displays temperature in unit and LED source temperature
	Fan-Speed		Displays revolutions (RPM) for all fans in the unit
	Error Message		Displays detected error codes in the device
Setting	Reset	Reboot	Resets all motor/sensors in the unit
		Default Data	Resets all settings to factory settings
	Channel Mode	25ch	Default
	Signal mode	DMX512	DMX analog control
		Demo	Demo mode
		Sound	Sound active mode
		ArtNet	Use the device as an ArtNet splitter
		W-DMX	W-DMX control (Optional when ordering)
	Offline/Setting	Home	The unit returns to default DMX values and blackout
		Hold	Keeps last DMX value received until signal is restored.
	Fan Mode	Normal	Fan speed based on device temperature
		Quiet	Reduce fan speed to minimize fan noise
		Performance	Fan run at its highest to optimize cooling of the unit
	Wirelsess Set	(reserved)	
	Adjust*	X-Adjustment	Reverse, offset or reset PAN
		Y-Adjustment	Reverse, offset, or reset TILT
		Zoom	Reset or offset Zoom
		Rotate	Reset or offset PAN/TILT
		Fan	Manual fan override
	Artnet		Set artnet information IP address, subnet mask, universe
	RDM UID		Device RDM information
Lamp		Auto On	
		Light Up	
		Lamp Adjust	Max value adjustment
		Lamp Fail	Shows error on led source

DISPLAY	Language	English/Russian/Chinese	Select the desired language
	Back light	ON / OFF / FLASH	
	Reverse	ON / OFF / AUTO	Orientation of the LCD screen.
USER	Settings Lock	Input code	Locks adjustable parameter default code is (1234)
	KEY LOCK	ON / OFF	Locks buttons (Do NOT activate unless RDM is enabled)
	TEST	ON / OFF	Test program
	Program	Prog. 1 – 8	Built-in programs.

PAN/TILT Invert & adjustments

How to adjust PAN/TILT

1. Make sure the device is unlocked with the code provided.
2. Go to "SETTING" > Press enter to enter the menu.
3. Select "ADJUST"
4. Here, select X-Alignment or Y-Alignment -> Press Enter
5. Choose between "Reverse" or "Offset", then press Enter
6. Select yes to Flip or set your desired adjustments.

Built-in battery

The SMART HYRBID300 has the option to install a 3.7V lithium-ion battery that allows the user to use specific menu functions, such as preset the DMX address, without having to connect the device to a power source. The battery recharges when the device is connected to power.

Approved battery for use

- 14500 3.7V AA protected rechargeable lithium-ion.
- Eagle Lite battery activated devices do NOT have battery installed upon delivery, due to shipping rules.
- Do not use batteries other than those listed above.

Install the battery in the Device.

The battery mounting location is behind the LCD screen and buttons

1. Loosen the 4 screws located at the top of the base of the device closest to the LCD screen.
2. Remove the shield that is now loose.
3. Carefully insert the battery into the mounting position, with the positive side up.
4. Reassemble the shield and screws.
5. Now you are ready to adjust/set up the device without it being connected to a power source.

To adjust/set the device on battery, simply press the round button on the front.
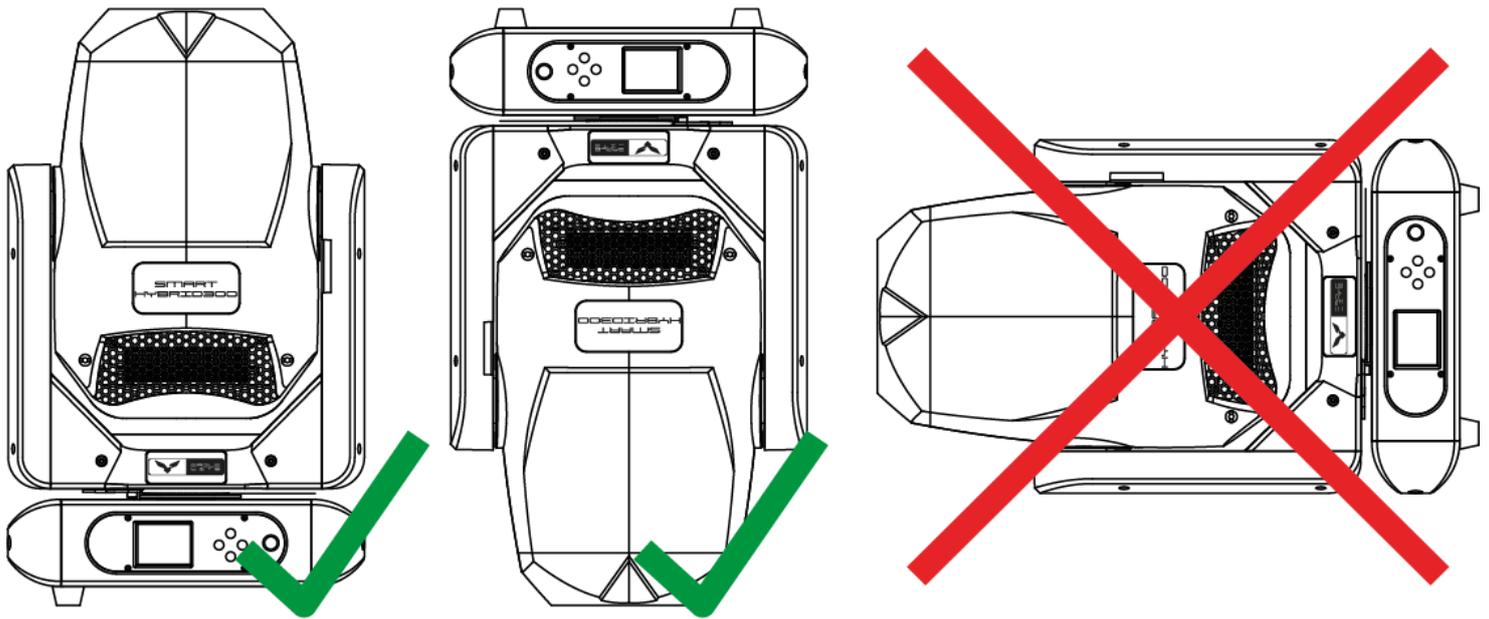
Rigging

Eagle Lite does not recommend rigging the SMART HYBRID300
with the yoke horizontally. As the weight from the head can
cause unnecessary strain on the Pan/Tilt motors.

Standing

Make sure the device stands on a flat and stable surface. Do not attempt to place it on the ground with omega brackets installed.

Hanging

- Use the included omega mounts (2) to attach the device to your mount.
- The hole in the omega fitting is size M10.
- When mounting the device overhead, always use a safety weigher. Always attach the safety shield to the dedicated loop on the device.

Safety instructions

Uses

- This device is an LED projector for creating decorative lighting effects. The device is designed for professional use in event technology, such as on stage. It is not suitable for household lighting.
- Use the device only in accordance with the instructions herein. Damage resulting from failure to comply with this manual will void the warranty! We accept no liability for any resulting damages.
- We accept no liability for material and personal damage caused by improper use or non-compliance with safety instructions. In such cases, the warranty/warranty will be void.
- Unauthorized modifications or modifications to the device are not permitted for safety reasons and void the warranty.

Danger from electricity

- The device is suitable only for indoor use. Do not use it outdoors. Never expose it to rain or moisture. Should not be stored in a room exposed to moisture.
- To reduce the risk of electric shock, do not open any electrical parts. There are no repairable parts inside the device.
- The device must be opened only in extreme emergencies related to the removal of external objects.
- Just connect the device to a properly installed outlet. The outlet must be protected by a circuit breaker (RCD). The voltage and frequency must be the same as indicated on the device. If the wire is equipped with a grounding switch, then it must be connected to an outlet with a protective ground. Never remove the protective grounding of the wire. Removing the ground wire may result in damage to the device and possibly injure the user.
- Never touch the device with wet or damp hands. There is a risk of potentially fatal electric shock.
- Unplug the device during a thunderstorm, when it will not be used for an extended period or before cleaning.

Instructions for using the device.

- The specified working temperature of the device is +5 to +45°C. Do not operate the device outside this temperature range.
- The device can grow up to 65°C during use. Avoid contact with people and materials.
- The device should have at least 80 cm to the nearest surface.
- Do not use the device near flammable materials. Always place the device in a place where adequate air circulation is ensured. Leave 50 cm of free space around the device. Never cover the vents of the unit.
- Use the device only in a moderate climate, never use the device outside the specified working temperature.
- Do not look directly at the light source. People with photosensitive epilepsy may suffer from seizures or incur other injuries.
- Make sure that the product is set up or installed safely and expertly and prevented from falling. Comply with the standards and regulations applicable in your country, especially EN 60598-2-17.
- Eagle Lite cannot be held liable for damage caused by incorrect installations or inadequate security.
- When using the unit overhead, the unit must always be secured with a safety weigher or safety net.
- Make sure the area below the installation site is blocked when rigging, derigging, or servicing the device.

Service and maintenance of the device

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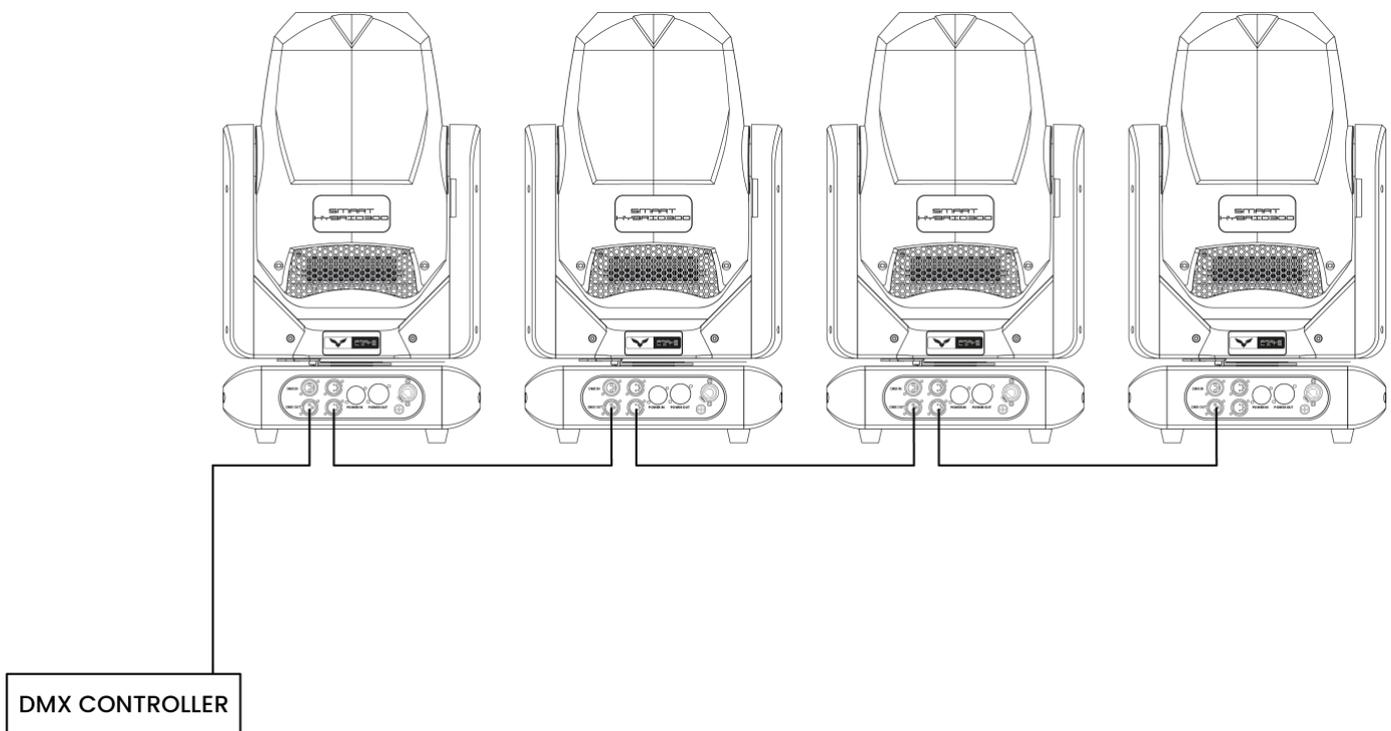
- Please use the original packaging to protect the device from vibration, dust and moisture during transport or storage.
- If a serial number label is affixed to the device, do not remove the label as this will void the warranty.

DMX 512 setup guide

DMX CONTROLLER

Explanation of DMX/XLR Connections

DMX OUT
1. Group
2. Signal (-)
3. Signal (+)

DMX IN
1. Group
2. Signal (-)
3. Signal (+)
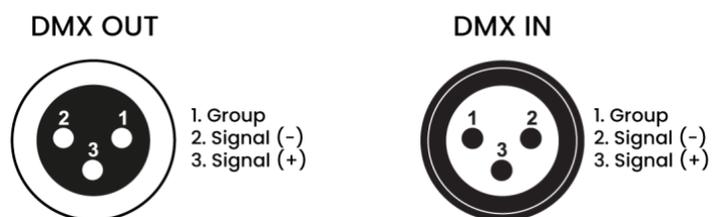
If you use the DMX controller for this device, you can connect the DMX controller's DMX output directly to the DMX input on the first device in the DMX chain. If you want to connect DMX control with other XLR outputs, simply pull cables from the output on the device and thereby link further.

Connect the DMX output of the first device in the DMX chain with the DMX input of the next device. Always connect an output with the input of the next device until all devices are connected.

DMX-512 setup with DMX Terminator:
For installations where the DMX cable needs to be pulled over a long distance, or is in an area with a lot of electrical noise, such as a disco, larger productions, or other, it is recommended to use a DMX terminator. This helps prevent interference with the digital signal by electrical noise.
The DMX terminator is simply an XLR connector with a 120 resistor connected between pins 2 and 3, which is then inserted into the XLR output of the last device in the chain.

Power setup

Proper current and voltage are very important for the proper functioning of the device. SMART - HYBRID300 run on 100 to 240 volt AC (+/- 10%, auto adjustment). The device includes an automatic power supply for adjusting voltage.

Correct connection
Use the included power cable or one of the same rating. When using another cable, it is important that the following is observed.

Cable color	Connection explanation	International characters
Brown	Plus	L
Blue	Minus	N
Yellow/Green	Earth	⏚

Link options

HYBRID300 has built-in PowerCON TRUE1 OUT connectivity to daisy-chain subsequent devices. You can connect the power supply to multiple devices based on the voltages below:

Volt:	Number of devices
110-120V	4
208V	6
230-240V	8

DMX CHART

Normal mode (25ch)	Function	DMX Value	Description
1	Pan	0-255	0-540°
2	Pan Fine (16-Bit)	0-255	Pan Fine
3	Tilt	0-255	0-270°
4	Tilt Fine (16-Bit)	0-255	Tilt Fine
5	Color Wheel	0-7	Open
		8-15	Red
		16-23	Yellow
		24-31	Cyan
		32-39	Green
		40-47	Orange
		48-55	Blue
		56-63	Pink
		64-71	Magenta
		72-79	Lime
		80-87	Light Yellow
		88-95	UV
		96-103	Open
		104-221	Color Wheel Indexing
		222-238	Colour scroll – CCW 0-100%
		239-255	Colour scroll – CW 0-100%
6	Cyan	0-255	Cyan 0-100%
7	Magenta	0-255	Magenta 0-100&
8	Yellow	0-255	Yellow 0-100&
9	CTO	0-255	6700-2900K
		0-64	6700K
		87-87	5600K
		110-110	5850K
		145-145	5100K
		180-180	4040K
		205-205	3600K
		242-242	3100K
		255-255	2500K
10	Static Gobo wheel	0-3	Open
		4-7	Gobo 1
		8-11	Gobo 2
		12-15	Gobo 3
		16-19	Gobo 4
		20-23	Gobo 5
		24-27	Gobo 6
		28-31	Gobo 7
		32-35	Gobo 8
		36-39	Gobo 9

		40-43	Gobo 10
		44-47	Gobo 11
		48-51	Gobo 12
		52-55	Gobo 13
		56-59	No Gobo
		60-67	Gobo1 Shake From Slow To Fast
		68-75	Gobo2 Shake From Slow To Fast
		76-83	Gobo3 Shake From Slow To Fast
		84-91	Gobo4 Shake From Slow To Fast
		92-99	Gobo5 Shake From Slow To Fast
		100-107	Gobo6 Shake From Slow To Fast
		108-115	Gobo7 Shake From Slow To Fast
		116-123	Gobo8 Shake From Slow To Fast
		124-131	Gobo9 Shake From Slow To Fast
		132-139	Gobo10 Shake From Slow To Fast
		140-147	Gobo11 Shake From Slow To Fast
		148-155	Gobo12 Shake From Slow To Fast
		156-163	Gobo13 Shake From Slow To Fast
		164-167	No Gobo
		168-211	Rotate Left
		212-255	Rotate Right
11	Rotating Gobo wheel	0-7	No Gobo
		8-15	Gobo1
		16-23	Gobo2
		24-31	Gobo3
		32-39	Gobo4
		40-47	Gobo5
		48-55	Gobo6
		56-63	Gobo7
		64-71	No Gobo
		72-79	Gobo1 Shake From Slow To Fast
		80-87	Gobo2 Shake From Slow To Fast
		88-95	Gobo3 Shake From Slow To Fast
		96-103	Gobo4 Shake From Slow To Fast
		104-111	Gobo5 Shake From Slow To Fast
		112-119	Gobo6 Shake From Slow To Fast
		120-127	Gobo7 Shake From Slow To Fast
		128-135	No Gobo
		136-195	Rotate Left
		196-255	Rotate Right
12	Rotating Gobo Rotation	0-3	No Effect
		4-123	Gobo indexing Rotate
		124-187	Counter Clockwise Rotation, Fast to Slow
		188-191	Stop
		192-255	Clockwise Rotation, Slow to Fast

13	Dimmer	0-255	
14	Shutter	0-3	Open
		4-67	Fade Open <-> Close (Slow to Fast)
		68-99	Pulse Open - 0-100%
		100-131	Pulse Close - 0-100%
		132-175	Strobe mode 1 - 0-100%
		176-247	Strobe mode 2 - 0-100%
		248-251	Random Strobe Sync - 0-100%
		252-255	Random Strobe async - 0-100%
15	Dimmer Mode / Refresh Rate	0-63	1,200Hz - Auto PWM (Default 0)
		64-127	1,200Hz - Fast PWM
		128-`191	13,000Hz - Auto PWM
		192-255	13,000Hz - Fast PWM
16	Prism	0-31	No Prism/Open
		32-255	8-Facet Prism inserted
17	Prism Rotation	0-3	No rotation
		4-123	Prism Indexing
		124-187	Counter Clockwise Rotation, Slow to Fast
		188-191	Stop
		192-255	Clockwise Rotation, Slow to Fast
18	Zoom	0-255	Narrow to Wide, (Default 0)
19	Focus	0-255	
20	Auto Focus Distance	0-3	Auto-Focus Disabled
		4-63	5M
		64-127	7.5M
		65-191	10M
		192-255	15M
21	Auto Focus Distance Fine	0-255	Continuous Adjustment within the distance range set on Ch.20
22	Iris	0-127	Open to Close
		128-135	Closed
		136-173	Iris Pulse Close Slow -> Fast
		174-211	Iris Pulse Open Slow -> Fast
		212-249	Iris Fade Slow -> Fast
		250-255	Closed
23	Frost	0-9	Open
		10-255	0 - 100 % (Linear)
24	P/T Speed	0-255	Fast To Slow
25	Control/Reset (8 Sec. Activation Delay)	0-19	No Effect
		20-29	Reset ALL
		30-39	Reset Pan/Tilt
		40-49	Reset Color, Gobo, CMY/CTO Flags

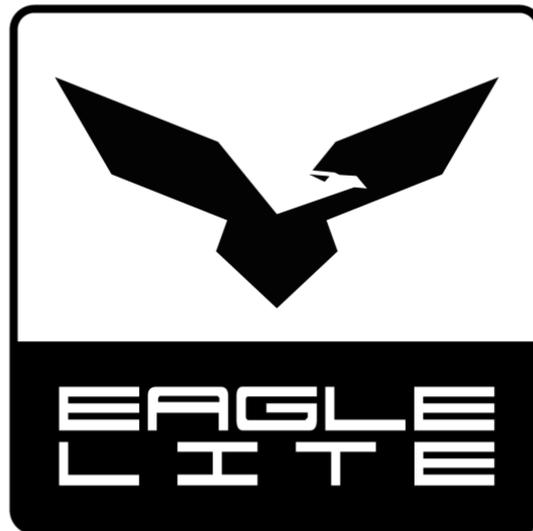|		50-59	Reset Zoom, Focus, Prism, Frost
		60-69	(Reserved)
		70-74	Display Default
		75-79	Display Off (Not retained after shutdown)
		80-84	Display On
		85-89	Fan - Quiet Mode - Low Speed (Retained after shutdown)
		90-94	Fan - Medium Speed (Retained after shutdown)
		95-99	Fan - High Speed (Retained after shutdown)
		100-255	(Reserved)

Company info

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Firma: Eagle Lite
CVR: DK39524627