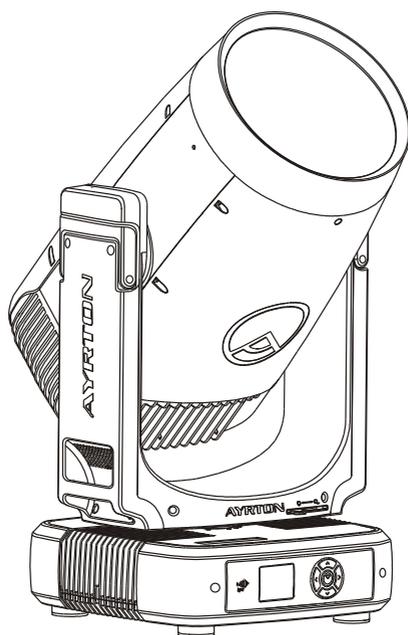


USER INFORMATION

ENGLISH - VERSION 1

MAMBA

ULTRA BEAM



AYRTON

Digital Lighting



2 Rue de Vitruve,
91140 Villebon-sur-Yvette,
France

CONTENTS

1. SAFETY INSTRUCTIONS	3
2. FEATURES	4
3. GETTING STARTED	5
4. CONTROL AND FUNCTIONS	8

Keep this manual for future needs.

Errors and omissions for all information given in this user manual are possible.
All information is subject to change without prior notice.



1. SAFETY INSTRUCTIONS

1.1 > IMPORTANT SAFETY WARNINGS

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.

For safety reasons, please be aware that all modifications to the product are forbidden. We will not be liable for any damage or injury caused by installation, use, maintenance or service that not follow this manual.

In order to install, operate and maintain the lighting fixture safely and correctly we suggest that the installation and operation be carried out by qualified technicians and these instructions be carefully followed.

1.2 > PHOTOBIOLOGICAL SAFETY

The light source of this product is based on laser diodes. This product qualifies for the laser products safety standard IEC 60825-1:2014, edition 3, "part 4.4, Laser products designed to function as conventional lamps", under which it is classified as CLASS 1 LASER PRODUCT. Alternately evaluated under the standard IEC 62471-5:2015 "Photobiological safety of lamps and lamp systems", the photobiological risk classification is assigned as RISK GROUP 3 (RG3).

point of human access where the beam radiance or irradiance exceeds the applicable exposure limit.

- The operators shall control the product to prevent human exposure to the luminaire(s) light within the HD. Hazard distances (according to different settings):

US HD (United States Hazard Distance) = 90 meters (312 feet)
 Non US HD = 70 meters (230 feet).
 Hazard Distance (worst case) is measured at full power and narrowest beam angle for 0.25 seconds.
 However, do not illuminate personnel closer than this distance under any circumstances.

- Do not operate with personnel exposure shorter than the declared hazard distance due to risk of skin or corneal burns.
- This Laser Product is designated as Class 1 / RG3 during all procedures of operation.
- Internal (embedded) laser parameters:
 - Laser Wavelengths: 449 - 461 nm.
 - Laser Power max: 70 W (at light engine aperture).
 - Beam Diameter: 26 mm.
 - Divergence: 910 mrad.
 - Emissions: 1.2 kHz, varying duty cycle: 0 - 97%.
- Luminaire Wavelengths: 445 nm - 700 nm.
- **CAUTION! The user must not modify the unit or remove protective covers or housings except as required for service. The laser product is never to be operated if the unit is defective or the cover or seal is damaged.**
- **Danger - class 4 laser light when open. Avoid eye or skin exposure to direct or scattered light.**
- No maintenance is required or allowed by the user.
- Service is only to be performed by trained and authorized personnel. Consult service manual for laser safety procedures before opening unit.
- As required by US state and federal OSHA requirements, maintenance and service is to be performed under the terms of ANSI Z136.1, "Safe Use of Lasers". Wear laser safety eyewear when servicing the unit.
- All laser light shows shall be under the direct and personal control of trained, competent operator(s). The operator(s) shall:
 - Be an employee of the variance holder who will be responsible for the training and the conduct of the operator.
 - Be located where all beam paths can be directly observed at all times.
 - Immediately terminate the emission of light show radiation in the event of any unsafe condition; or for outdoor shows, upon request by any air traffic control officials.
- Hazard distances (HD) for all relevant viewer-related risk groups below RG3: Not Applicable. In no case expose personnel closer than the Hazard Distance indicated above.



RISK GROUP 3



Caution! Possibly hazardous optical radiation emitted from this product. do not look at operating lamp source. Eye injury may result.



RG3
 Hazard distance: Refer to the manual.
 Not for household use.
 EN/IEC 62471-5

- **CAUTION! Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.**
- The US Food and Drug Administration (FDA) requires that the owner of the product be a holder of a valid FDA CDRH laser light show variance and operate the product in accordance with the terms of the variance. (variance is a "permit" issued by FDA). It requires the operator (if not the owner) of the product to be a legal employee of the variance holder and to have completed a laser safety training course and an operators training course.
- This product is in conformity with performance standards for laser products under 21 CFR 1040, except with respect to those characteristics authorized by Variance Number FDA-2023-V-1465 effective (September 27, 2023)
- The product is in excess of the Exempt Risk Group, the viewer-related risk is dependent upon how the user installs and uses the product.
- Operators shall control access to the beam within the hazard distance or install the product at the height that will prevent spectators' eyes from being within the hazard distance.
- Hazard Distance (HD) is the distance from the projector's nearest

CAUTION



High voltage. Risk of severe or fatal electric shock.



Always disconnect mains supply before removing any fixture covers.



Never touch the device during operation. covers may be hot.

	Fixture exposed to salt water should not be stored in its foam insert without being cleaned with fresh water first. It is best practice that fixture be stored dry.
	Never look directly into the light source.
	Light collimation system This product contains internal light collimation system. Avoid intense light from any angle.
	Not suitable for household illumination.
	Not for residential use.
	Disposing. This product is supplied in compliance with European directive 2012/19/EU - Waste Electrical and Electronic Equipment (WEEE). To preserve the environment please dispose / recycle this product at the end of its life according to the local regulation.

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a class A digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.



1.3 > GENERAL GUIDELINES

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

- Under no circumstances should the fixture be pointed at the sun. Sunlight, combined with the high efficiency lenses used in the product can cause significant damage to the fixture. Ensure the sealing rubber covers of powerCON TrueOne and XLR connectors are fitted properly when the device is not in use, to avoid water ingress.
- Be aware that even when lens is not pointed directly at the sun damage may occur. It is best practice to ensure that the lens is pointed away from the sun, preferably in the opposite direction.
- Always dry and clean your fixture before storing it for any length of time.
- Never use any abrasive cleaning products on the fixture as this may damage the coating of the fixture impacting its anti-corrosion protection.
- This product is intended for the following applications: trade show

or convention, indoor arena, outdoor arena, outdoor unenclosed arena, stage, studio, theater, event, venues, theme parks, architecture and similar applications.

- If the device has been exposed to temperature changes due to environmental conditions, do not power on immediately. The resulting condensation could damage the device. Leave the device powered off until it has reached room temperature.
- Ensure the sealing rubber covers of powerCON and XLR connectors are fitted properly when the device is not in use, to avoid water ingress.
- This device falls under protection-class I. Therefore, it is essential that the device be earthed.
- If either lenses or display are damaged (damage may include cracks or gashes in the material) they must be replaced.
- Electrical connections, such as replacing the power plug, must be performed by a qualified person.
- Make sure that the available voltage is not higher than that which is stated in this manual.
- Make sure the power cord is never crushed or damaged by sharp edges. If this should be the case, replacement of the cable must be done by an authorized dealer.
- If the external flexible power cord of this device is damaged, it shall be exclusively replaced by the manufacturer or their service agent or a similar qualified person in order to avoid injury.
- When the device is not in use or before performing maintenance or service, always disconnect the device from the mains. Only handle the power cord from the plug. Never pull the plug out of a socket by tugging the power cord.
- When powered on for the first time, some smoke or smell may occur. This is caused by coating on metal parts when heated and is normal. If you are concerned, please contact your distributor.
- Do not focus the beam onto flammable surfaces. The minimum distance between the exiting lens of the device and the illuminated surface must be min. 35 m. The minimum distance from fixture head to combustible materials must be min. 0.1 m. (for personnel exposure distances, refer to the above mentioned Hazard Distances).
- The projection system shall be securely mounted or immobilized to prevent unintended movement or misalignment. Beam masking will be provided as an inherent part of the system design to prevent overfilling of screens, beam stops, targets, etc.
- This fixture is only allowed to be operated within the maximum alternating current as stated in the technical specifications in section 2 of this manual.
- Handle the device with care, avoid shaking or using force when installing or maintaining the device.
- If you use the quick lock cam when rigging the device, make sure the quick lock fasteners are located in the quick lock holes correctly and securely.
- Operate the device only after having familiarized yourself with its functions. Do not permit operation by persons not qualified for operating the device. Most damage is the result of unprofessional operation.
- Please use the original packaging if the device is to be transported.
- The applicable temperature for the device is between -20 °C and 45 °C. Do not use the device outside of this temperature range. (Note: When the temperature detected by laser source between -20 °C and 0 °C, the fixture needs to wait for the heater to increase the internal temperature to be above 0 °C before illumination will occur.)

2. FEATURES

POWER SUPPLY

- AC100-240 V~, 50/60 Hz
- Power: 800 W maximum

OPTICS

- Beam aperture: 0.7° to 15°
- Fast motorised linear zoom

LIGHT SOURCE

- Laser 500 W, White, Colour Temperature 10,000 K
- Rated life (L70): up to 12,000 hours

MOVEMENT

- Highly accurate positioning; moving-head operated via either 8- or 16-bit resolution
- Pan and tilt automatic repositioning
- Moving-head range: infinite pan and tilt rotation

COLOURS

- Sophisticated CMY colour mixing
- Static colour wheel with variable CTO, 15 complementary colour filters, 2 minus green filters, 2 multicolour filters and 3 coloured animation sections

GOBOS

- One indexable rotating gobo wheels with 12 quartz glass gobos, plus open position
- Adjustable-speed rotating gobo in both directions
- Static multiposition gobo wheel with instant access to 80 metal gobos

FROST

- 2 frost filters: one light, one heavy

EFFECTS

- Monochromatic graphical animation effects wheel with continuous rotation in both directions
- 12 combinable rotating and indexable prisms

DIMMER / STROBE

- Electronic dimmer, allowing perfect light adjustment from 0 to 100% without colour variation
- Strobe effect: 1 to 25 flashes per second

SOFTWARE FEATURES

- Local DMX addressing and optional parameters through its built-in LCD control panel
- Remote DMX addressing and optional parameters through a standard RDM DMX controller
- Information menu including hour counter, temperature, software version

HARDWARE FEATURES

- Graphic LCD display for addressing and special functions settings, with flip function
- 5 menu buttons to set functions
- Integrated wireless CRMX TiMo RDM receiver from LumenRadio™
- IP65 XLR-5 pin male and female connectors for DMX connection
- IP65 RJ45 IN / OUT connectors for ArtNet connection
- IP65 powerCON TRUE1 TOP male connector for power connection

CONTROL

- DMX 512 protocol, through DMX cable or a wireless system
- DMX-RDM compatible
- ArtNet & sACN protocol through Ethernet cable
- Local control panel, with IP65 LCD display
- DMX mode (47 DMX channels)

COOLING SYSTEM

- Advanced liquid cooling system
- Self-adjusting variable speed fans for quiet operation (Auto mode)
- Selectable ventilation user modes with a new Silent Mode
- Safety protection against excess temperature

HOUSING

- IP65 protection rating (IP66 optional)

INSTALLATION

- 2 Omega ¼ turn brackets
- 4 ¼ turn mounting points
- Safety cable attachment point

OPERATING PARAMETERS

- Operating positions: all (device on floor or fixed to a support)
- Maximum permitted: 45 °C (113 °F)
- Minimum permitted: -20 °C (-4 °F)
- Minimum usage distance: 35 m (114.83 ft)

COMPLIANCE

- CE, UKCA, ETL

SIZE

- Product: 404 x 749 x 366 mm (l x h x d)
- Foam: 680 x 640 x 500 mm (l x h x d)

WEIGHT

- Product: 41 kg

3. GETTING STARTED

3.1 › UNPACKING

After unpacking, you will find the following items in the package:

- MAMBA fixture 1
- User Information manual 1
- Power Cable 1
- Omega Bracket 2

3.2 › PLACEMENT OF LABELS

Please check and read carefully the labels on the fixture before using:

CONFORMS TO UL STD. 1573
 CERTIFIED TO CSA STD. C22.2 NO:166
 MODEL: MAMBA
 100-240VAC, 50/60Hz, 800W

Intertek
 3104374

NOT FOR RESIDENTIAL USE
 NON DESTINE A UN USAGE DOMESTIQUE
 NOT FOR HOUSEHOLD USE
 NON DESTINE A UN USAGE DOMESTIQUE
 SUITABLE FOR WET LOCATIONS
 CONVIENT AUX EMPLACEMENTS MOUILLES

Warning!
 Possibly hazardous optical radiation emitted from this product. Do not look at operating lamp source. Eye injury may result.

RG5
 Hazard Distance: Refer to the manual
 Groupe de risque 3

Attention:
 ce produit peut émettre un rayonnement lumineux nocif. Ne regardez pas la source en fonctionnement.
 Des blessures oculaires peuvent en résulter.

FCC

Trade Mark AYRTON. Model Number MAMBA.
 This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
 (1) This device may not cause harmful interference, and
 (2) This device must accept any interference received, including interference that may cause undesired operation.

CAN ICES-003 (A) / NMB-003 (A)

Maximum temperature of the external surface 30°C
 Minimum distance to illuminated surface [~35.0m] (narrowed zoom with fullpower)
 Minimum distance from fixture head to combustible material=0.1m.
 Distance minimum à surface éclairée [~35.0m] (zoom minimum à pleinepuissance)
 Distance minimum de la tête de l'appareil aux Matériaux combustibles=0.1m.

AYRTON
 2 rue Vitruve 91140
 Villebon-sur-Yvette, France
 Model MAMBA
 Picos de MFG: Hoeyang

This product is in conformity with performance standards for laser products under 21 CFR 1040, except with respect to those characteristics authorized by Vertice Number FDA-2023-V-1465 effective on September 27, 2023.

Date of manufacture: _____
 Month/Year: _____

CLASS 1 RADIATION PRODUCT
 LASER PRODUCT
 EMISSION CLASSIFICATION
 (See Manual for Hazard Distance (HD))

Not for household use.
 Etiquetted Laser Wavelength 440 - 461nm.
 Luminaire emission(s) 440 - 700nm.

CAUTION:
 LASER LIGHT IS BRIGHT AND MAY CAUSE VISUAL INTERFERENCE
 DO NOT STARE AT APERTURE OR VENTILATION OPENINGS

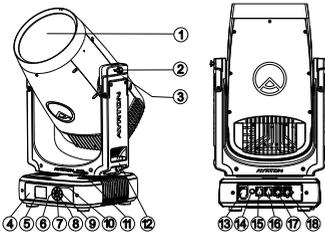
CAUTION: Risk of electric shock. Disconnect input power before opening. **PRECAUTION:** Risque de choc électrique. Déconnecter l'alimentation avant d'ouvrir.
 Warning: This apparatus must be earthed.
 Avertissement: Cet appareil doit être relié à la terre.

CAUTION: Fixture exposed to salt water should not be stored in the foam insert being opened with fresh water first. It is best practice that fixture be stored dry.

Designed by AYRTON in France, Made in China | | IP66 | | | | www.ayrton.eu

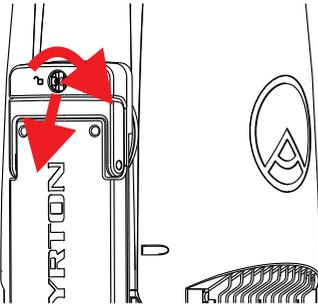
AYRTON

3.3 > FIXTURE OVERVIEW

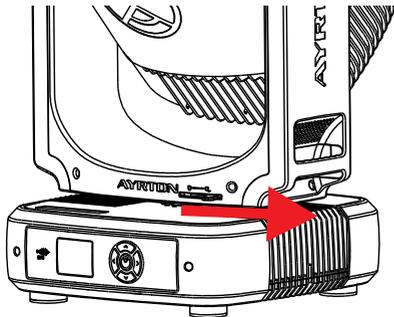


- | | | |
|----------------|------------------|--------------|
| 1. Front Lens | 7. Down-button | 13. Power In |
| 2. Tilt Lock | 8. Center-button | 14. Valve |
| 3. Handle | 9. Right-button | 15. RJ45 In |
| 4. NFC | 10. Up-button | 16. RJ45 Out |
| 5. Display | 11. Pan lock | 17. DMX In |
| 6. Left-button | 12. Handle | 18. DMX Out |

3.4 > UNLOCK THE PAN AND TILT BEFORE USING



Release the Tilt lock by pulling it out and turn 90°.



Release the Pan lock by pulling it to the right side.

3.5 > INSTALLATION INSTRUCTIONS - RIGGING THE FIXTURES

CAUTION

Please consider the respective national norms during the installation, the installation must only be carried out by a qualified person.

- The installation of the effect has to be built and constructed in a way that it can hold 10 times the weight for 1 hour without any harming deformation.
- The installation must always be secured with a secondary safety attachment, e.g. an appropriate safety rope.

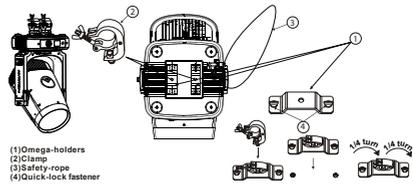
- Never stand directly below the device when mounting, removing or servicing the fixture.
- The operator has to make sure the safety relating and machine technical installations are approved by an expert before taking the device into operation for the first time.
- These installations have to be approved by a skilled person once a year.

RIGGING USING THE OMEGA BRACKETS

- Fix the clamp to the bracket by tightening the M12 nut and bolt to the bracket through the $\Phi 13$ hole in the middle of the bracket.
- Insert the quick-lock fasteners of the first Omega holder into the respective holes on the bottom of the device. Tighten the quick-lock fasteners fully clockwise.
- Install the second Omega holder.
- Pull the safety cable through the holes on the bottom of the base and over the trussing system or another suitable rigging point. Insert the end into the carabiner and tighten the safety screw.

CAUTION

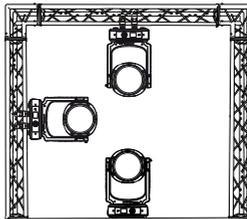
This step is very important to ensure safe rigging of the fixture.



- | | |
|------------------|------------------------|
| 1. Omega bracket | 3. Safety rope |
| 2. Clamp | 4. Quick-lock fastener |

RIGGING DRAWINGS

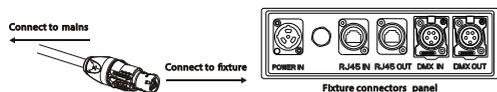
The fixtures can be installed by sitting on floor, hanging on truss upside down (on ceiling) or hanging vertically (on wall), as shown on the drawing below:



- Be sure this fixture is kept at least 0.1 m away from any flammable materials (decoration etc.).
- Always use and install a supplied safety cable as a safety measure to prevent accidental damage and/or injury in the event the clamp fails.
- Rig the projector high enough to provide clearance for people who may walk beneath the beam path or establishing a restricted access area that extends beyond the beam hazard distance.
- **CAUTION! Please DO NOT let other external intense lights to shine through the fixture front lens, it may cause significant internal damages!**
- When install fixture outdoor at day time (with power off), please make sure that the fixture front lens is NOT facing the sun.
- When use fixture outdoor at day time (with power on), please avoid fixture front lens facing the sun.
- When fixture is on standby outdoor at day time (with power ON and no DMX signal), please make sure the "sun protection" mode is ON (default).

3.6 > CONNECTIONS – CONNECTING POWER AND SIGNAL CABLES

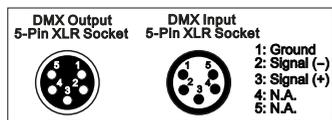
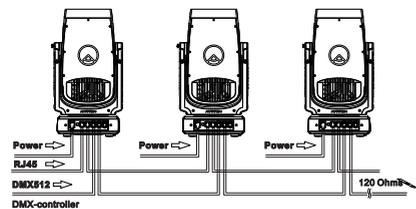
POWER CONNECTION



- Connect the power cable to the “Power In” socket of the fixture: Insert the power cable connector and turn clockwise until it clicks to lock.
- Connect the power cable plug to the mains: AC100-240 V~, 50/60 Hz, Power 800 W.

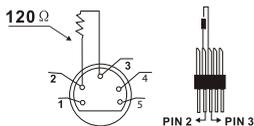
DMX-512 / ART-NET CONTROL CONNECTION

Connect the provided male side of the XLR cable to the female XLR output of your controller and the female side of the XLR cable to the male XLR input of the device. You can connect multiple devices together in a serial fashion. The cable needed should be two core, screened cable with XLR input and output connectors. Please refer to the diagram below.



DMX-512 CONNECTION WITH DMX TERMINATOR

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



DEVICE DMX START ADDRESS SETTING

All fixtures should be given a DMX starting address when using a DMX signal, so that the correct fixture responds to the correct control signals. This digital starting address is the channel number from which the fixture starts to “listen” to the digital control information sent out from the DMX controller. The allocation of this starting address is achieved by setting the correct address number on the display located on the base of the device.

You can set the same starting address for all fixtures or a group of fixtures, or set different addresses for each fixture individually.

If you set the same address on all devices, all the devices will start to “listen” to the same control signal from the same channel number. In

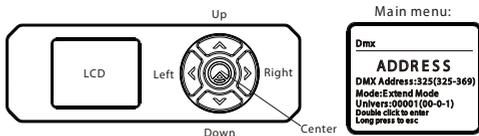
other words, changing the settings of one channel will affect all the fixtures simultaneously.

If you set a different address, each unit will start to “listen” to the channel number you have set, based on the quantity of control channels of the unit. That means changing the settings of one channel will affect only the selected device.

In the case of the moving head, in 46 channel mode, you should set the starting address of the first unit to 1, the second unit to 47 (46 + 1), the third unit to 93 (46+47), and so on.

3.7 > DISPLAY SETTINGS OPERATION

The fixture offers LCD Display and Buttons for setting display menus, you can use the buttons to set or check the Address, Mode, Options, Test, Info and Preset menus.



Center button	Double click to activate display, or confirm setting, or go into submenu; Long pressing 2s on main menu to access the shortcut menus; Long pressing 2s on submenu to exit or go back to previous menu.
Left button	Click to go left to other submenu
Right button	Click to go right to other submenu.
Up button	Click to go up to other submenu, or increase the setting values.
Down button	Click to go down to other submenu, or decrease the setting values.

After accessing the submenu in edit mode, if no operation, it will automatically exit to the main menu after 15 seconds from the last button operation. When the fixture is powered on and the signal is connected, after 5 minutes, the display will switch off automatically.

USING THE DISPLAY MENUS

Double click to activate display, then on the main menu double click to enter into the following menus, click the up button or down button to browse and select the desired menu:



ADDRESS	To set the DMX address.
MODE	To set the user mode.
OPTIONS	To set the status setting, fan control, signal, dimming curve and others.
INFO	To check the time, software version, fan info and others.
TEST	To reset the fixture, do the calibration and others.
PRESET	To edit prog. and scenes.

3.8 > NFC

When the fixture is powered on, you can use a NFC smartphone installed with the Ayrton NFC App to scan the NFC tag area of the fixture to read some of the information or settings inside the display menu, such as product name, software version, UID, DMX Start Address, Universe, User Mode, Options, Information, etc. You can also change some of the settings and push to write inside the fixture menu.

When the fixture is not powered on, you can still use the App to read the NFC info and write the settings into the NFC tag, the written data will be automatically synchronized into the fixture menu at next time the fixture is powered on.

Link to download the application: <https://qrstud.io/ayrtonnfc>

Note:

- Before using, make sure there is NFC function on your smartphone and it is activated. Download and install the Ayrton NFC App;
- The NFC tag on the fixture is right under the LCD window;
- The NFC reader area vary on different smartphones, identify the correct area on your smartphone before scanning the NFC tag on the fixture;
- When scanning, make sure the NFC reader area of your smartphone close enough to the LCD window and hold still the smartphone for 3 seconds until reading successfully.

3.9 > DMX PROTOCOL

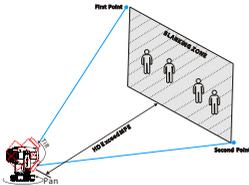
Scan the QR code on the cover page to download the DMX CHART.

3.10 > SAFETY SETTINGS

For safety purposes, before the operator begins to control the fixture remotely, the operator must pre-define, from a computer (MAC or PC) App a safety (blanking) zone which prevents operations above the MPE (Maximum Permissible Exposure) within the safety zone(or other). The safety (blanking) zone should be set to include any area in which the fixture may be pointed where there is a reasonable expectation of the public being present. Where the operator determines there will be no members of the public present or no members of the public present within the Hazard Distance of the product (please see table below), no safety (blanking) zone is needed to be set.

US HD (United States Hazard Distance) = 90 meters (312 feet).
 Non US HD = 70 meters (230 feet).
 Hazard Distance (worst case) is measured at full power and narrowest beam angle for 0.25 seconds.
 However, do not illuminate personnel closer than this distance under any circumstances.

BLANKING ZONE SETTINGS



Steps to set blanking zone: please refer to the "Blanking zone setting guide"

SAFETY PROTECTION

This fixture had been designed with Safety Protection feature: When error occurs, not only the light output itself will be cut immediately, but also the CMY filters, Colour filter and Frost filter will be brought into the light path and the Zoom will go to

max immediately to block the light output lens to provide multi-protection layers.

SAFETY MONITORING SYSTEM - SEPARATE REDUNDANCY CONTROL

This fixture had been designed with a Safety Monitoring System with Separate Redundancy Control, the failure safety system shuts down or dims to safe level immediately when any safety monitored value is reported outside of expected value: When light output (as measured by current) is out of expected range; when Pan or Tilt are forced from proper location, or do not arrive at proper location; when zoom is forced from proper location, or do not arrive at proper location.

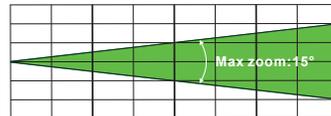
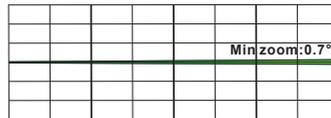
4. CONTROLS AND FUNCTIONS

4.1 > PAN AND TILT MOVEMENT, DMX CHANNELS 1-7

4.2 > DIMMER INTENSITY (USE WITH STROBE CHANNEL AT FULL), DMX CHANNELS 8-10



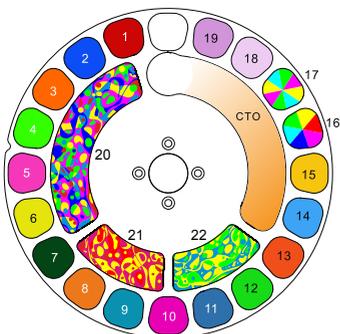
4.3 > ZOOM (USE WITH FOCUS CHANNEL), DMX CHANNELS 14-17



4.4 > CMY, DMX CHANNELS 23-28



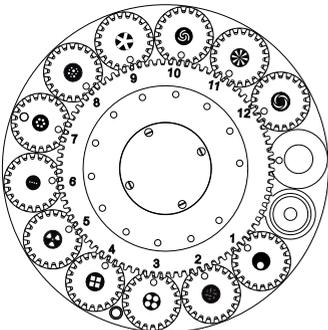
4.5 > COLOUR WHEEL WITH CTO, DMX CHANNELS 11-12, 21-22



COLOUR WHEEL

1	Red	12	Dark Green
2	Blue	13	Dark Amber
3	Orange	14	Medium Blue
4	Green	15	Oklahoma Yellow
5	Pink	16	Multicolour #1
6	Yellow	17	Multicolour #2
7	Velvet Green	18	Minus Green ¼
8	Amber	19	Minus Green ½
9	Light Blue	20	Multicolour Animation
10	Follies Pink	21	Red/Yellow Animation
11	Slate Blue	22	Green/Yellow Animation

4.6 > ROTATING GOBOS, DMX CHANNELS 29-31



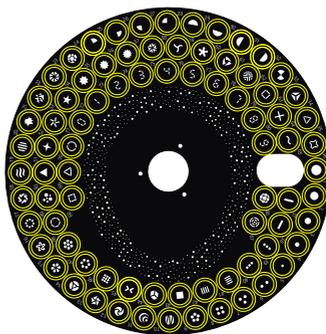
GOBO WHEEL 1

Rotating Gobo

1	310	Eccentric Dot	GPG0500248
2	358	Lines Mix	GPG0500249

3	328	Dot Square 4	GPG0500250
4	332	Square Beam 4	GPG0500251
5	149	Nuclear	GPG0500252
6	314	Dot Line 4	GPG0500253
7	320	Dot Ring 6	GPG0500254
8	324	Dot Mix	GPG0500255
9	342	Five Strokes	GPG0500256
10	114	Nested Half Rings	GPG0500257
11	343	Eight Spokes	GPG0500258
12	111	Nested Ring Lights	GPG0500259

4.7 > STATIC GOBOS, DMX CHANNELS 32



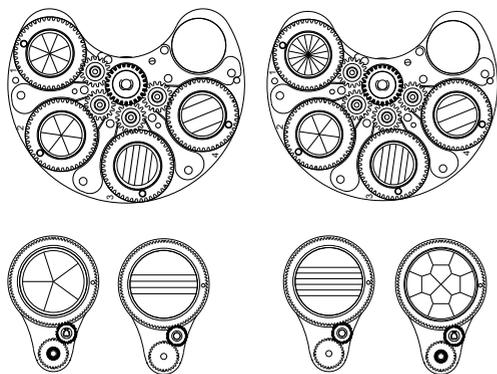
GOBO WHEEL 2

Static Gobo

1	302	80% Iris Beam	17	439	Circular Saw 4
2	304	60% Iris Beam	18	099	Waves Light
3	306	40% Iris Beam	19	274	Prison Bars 4
4	308	20% Iris Beam	20	269	Ink Stain
5	312	Dot Line 2	21	260	Arrows
6	326	Dot Triangle 3	22	265	Iris 8
7	328	Dot Square 4	23	326	Dot Mix 8
8	319	Dot Ring 5	24	290	Quarter Beam NE
9	257	Zig Zag Light	25	291	Quarter Beam SE
10	135	Vortex Light	26	292	Quarter Beam SW
11	110	Spiral	27	293	Quarter Beam NW
12	118	Helix 5	28	296	Half Beam Up
13	424	Triangle Beam	29	295	Half Beam Down
14	263	Daisy	30	298	Half Beam Left
15	373	Nested Star	31	299	Half Beam Right
16	368	Square Ring 8	32	418	Crash Test Icon

33	341	Split Triangle 4	57	262	Arrow Ring 6
34	426	Split Triangle 1	58	117	Helix 3
35	419	Iron Ball Light	59	342	Five Spokes
36	351	Vertical Line	60	261	Arrow Ring 3
37	350	Bold Line	61	435	Nested Cross
38	371	Square Line 3 V	62	421	Split Square 1
39	370	Square Line 3 H	63	431	X Cross
40	353	Four Lines H	64	348	Tilde
41	354	Four Lines V	65	188	Mirror Ball 9
42	330	Square Beam	66	417	Split Target
43	363	Rubik Cube	67	422	Split Square 2
44	437	Split Cross	68	427	Split Triangle 2
45	334	Square Beam 9	69	411	Split Circle 2
46	320	Dot Ring 6	70	450	Number 0
47	321	Dot Ring 7	71	451	Number 1
48	413	Split Circle 6	72	452	Number 2
49	324	Dot Mix	73	453	Number 3
50	340	Triangle Beam	74	454	Number 4
51	374	Compass 4	75	455	Number 5
52	346	Star Line 5	76	456	Number 6
53	345	Star 5	77	457	Number 7
54	378	Star 8	78	458	Number 8
55	380	Star 10	79	459	Number 9
56	382	Star 12			

4.8 > PRISMS (WITH FROST), DMX CHANNELS 33-45





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