

DORTRON[®]

Pro Lighting and Sound

MHS575-E001

Moving Head Spot 575, 16CH

User Manual



**FOR YOUR OWN SAFETY, PLEASE READ THIS USER MANUAL CAREFULLY
BEFORE YOU INITIAL START - UP!**

1. Safety instructions

Every person involved with installation and maintenance of this device have to:

- be qualified
- follow the instructions of this manual

CAUTION!
***Be careful with your operations.
With a high voltage you can suffer
a dangerous electric shock when touching the wires!***

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

Important:

The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual or any unauthorized modification to the device.

Please consider that damages caused by manual modifications to the device are not subject to warranty.

Never let the power-cord come into contact with other cables! Handle the power cord and all connections with the mains with particular caution!

Make sure that the available voltage is not higher than stated on the rear panel.

Always plug in the power plug least. Make sure that the power-switch is set to OFF-position before you connect the device to the mains. The power plug has to be accessible after installing the device.

Make sure that the power-cord is never crimped or damaged by sharp edges. Check the device and the power-cord from time to time.

Always disconnect from the mains, when the device is not in use or before cleaning it. Only handle the power-cord by the plug. Never pull out the plug by tugging the power cord.

This device falls under protection class I. Therefore it is essential to connect the yellow/green conductor to earth.

The electric connection, repairs and servicing must be carried out by a qualified employee.

Do not connect this device to a dimmer pack.

Do not switch the fixture on and off in short intervals as this would reduce the lamp's life.

During the initial start-up some smoke or smell may arise. This is a normal process and does not necessarily mean that the device is defective.

Do not touch the device's housing bare hands during its operation (housing becomes hot)!

For replacement use lamps and fuses of same type and rating only.

CAUTION! EYEDAMAGES!
***Avoid looking directly into the light source
(meant especially for epileptics)!***

2. Operating determinations

This device is a moving-head for creating decorative effects and was designed for indoor use only.

If the device has been exposed to drastic temperature fluctuation (e.g. after transportation), do not switch it on immediately. The arising condensation water might damage your device. Leave the device switched off until it has reached room temperature.

Never run the device without lamp!

Do not shake the device. Avoid brute force when installing or operating the device.

Never lift the fixture by holding it at the projector-head, as the mechanics may be damaged. Always hold the fixture at the transport handles.

When choosing the installation-spot, please make sure that the device is not exposed to extreme heat, moisture or dust. There should not be any cables lying around. You endanger your own and the safety of others!

The minimum distance between light output and the illuminated surface must be more than 2 meters.

Make sure that the area below the installation place is blocked when rigging, derigging or servicing the fixture.

Always fix the fixture with an appropriate safety rope. Fix the safety rope at the correct holes only.

Only operate the fixture after having checked that the housing is firmly closed and all screws are tightly fastened.

The lamp must never be ignited if the objective-lens or any housing-cover is open, as discharge lamps may explode and emit a high ultraviolet radiation, which may cause burns.

The maximum ambient temperature 40°C must never be exceeded. Otherwise, the lamp is switched off and the fixture is out of operation for 5 minutes.

CAUTION!

The lens has to be replaced when it is obviously damaged, so that its function is impaired, e. g. due to cracks or deep scratches!

Operate the device only after having familiarized with its functions. Do not permit operation by persons not qualified for operating the device. Most damages are the result of unprofessional operation!

CAUTION!

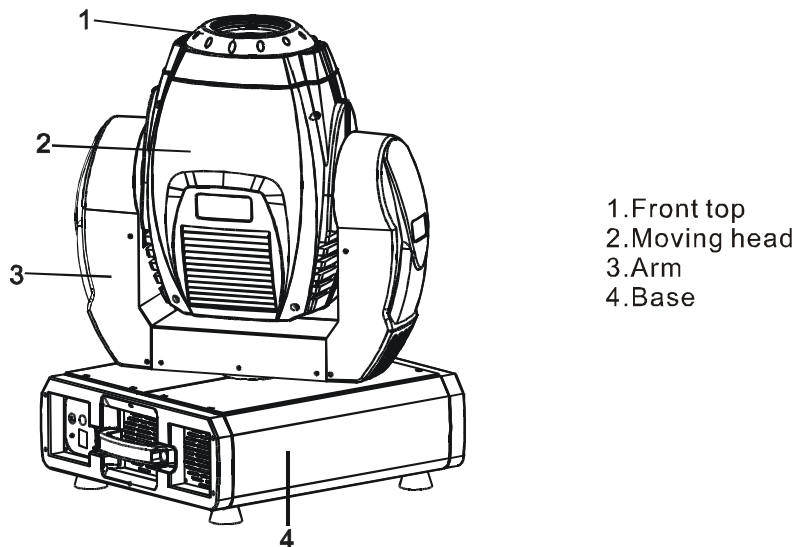
The lamp has to be replaced when it is damaged or deformed due to the heat!

Please use the original packaging if the device is to be transported.

Please consider that unauthorized modifications on the device are forbidden due to safety reasons!

If this device will be operated in any way different to the one described in this manual, the product may suffer damages and the guarantee becomes void. Furthermore, any other operation may lead to dangers like short-circuit, burns, electric shock, burns due to ultraviolet radiation, lamp explosion, crash etc.

3. Description of the device



4. Installation

4.1 Fitting the lamp

DANGER !
Install the lamps with the device switched off only.
Unplug from mains before !

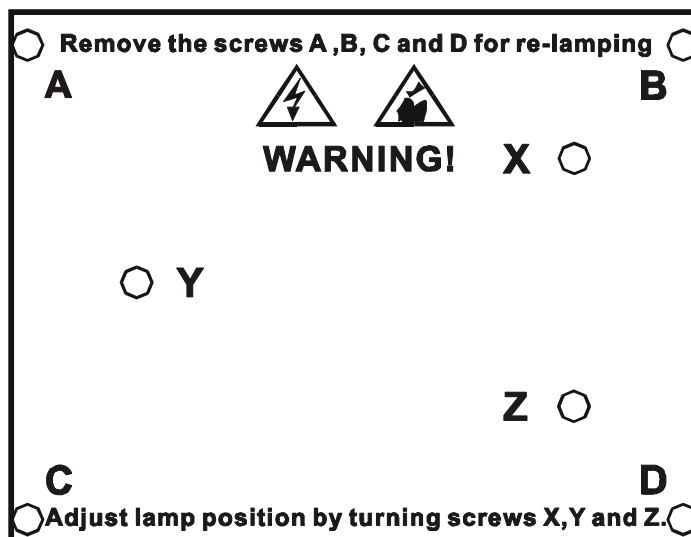
To insert the lamp loosen the lamp cover at the rear of head (see the drawings) by removing the 4 fastening screws which are marked "A,B,C, D". Carefully pull out the cover with the lamp socket assembly. If changing the lamp, remove the old lamp from the socket. Insert the lamp to the socket.

Do not install a lamp with a higher wattage! A lamp like this generates temperatures the device is not de-signed for. Damages caused by non-observance are not subject to warranty. Please follow the lamp manufacturer's notes! Do not touch the glass-bulb with bare hands during the installation! Make sure that the lamp is installed tightly into the lampholder system.

Reclose the lamp cover and tighten the 3 screws.

Do not operate this fixture with opened housing-cover!

4.2 Lamp adjustment



3 adjustment screws "X,Y,Z"

The MHS575-E001 lamp holder is aligned at the factory. Due to differences between lamps, fine adjustment may improve light performance.

Strike the lamp, open the shutter and set the dimmer intensity onto 100% and aim the light on a flat surface (wall). Center a hot-spot (the brightest part of the image) by using the 3 adjustment screws "X,Y,Z". Turn one screw after another a quarter-turn clockwise (counter-clockwise) to set the hot-spot in the center of the image. If you cannot detect the hot-spot, adjust the lamp until the light is evenly distributed.

4.3 Connection to the mains

Verify the power supply settings before applying power!


If you wish to change the power supply settings, see the chapter below.

Connect the fixture to the mains with the power cord.

If the plug on the flexible cord is not the right type for your socket outlets, do not use an adaptor, but remove the plug from the cord and discard. Carefully prepare the end of the the supply cord and fit a suitable plug.

The earth has to be connected!

Cord plug connections:

Cable (EU)	Cable (US)	Pin	International
Brown	Black	Live	L
Light blue	White	Neutral	N
Yellow/Green	Green	Earth	

4.4 Rigging the fixture

DANGER TO LIFE!
Please consider the respective national norms during the installation!
The installation must only be carried out by an authorized dealer!

The installation of the projector 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 catch net. This secondary safety attachment must be constructed in a way that no part of the installation can fall down if the main attachment fails.

When rigging, derigging or servicing the fixture staying in the area below the installation place, on bridges, under high working places and other endangered areas is forbidden.

The operator has to make sure that safety-relating and machine-technical installations are approved by an expert before taking into operation for the first time and after changes before taking into operation another time.

The operator has to make sure that safety-relating and machine-technical installations are approved by an expert after every four year in the course of an acceptance test.

The operator has to make sure that safety-relating and machine-technical installations are approved by a skilled person once a year.

The projector should be installed outside areas where persons may walk by or be seated.

IMPORTANT! OVERHEAD RIGGING REQUIRES EXTENSIVE EXPERIENCE, including (but not limited to) calculating working load limits, installation material being used, and periodic safety inspection of all installation material and the projector. If you lack these qualifications, do not attempt the installation yourself, but instead use a professional structural rigger. Improper installation can result in bodily injury and/or damage to property.

The projector has to be installed out of the reach of people.

If the projector shall be lowered from the ceiling or high joists, professional trussing systems have to be used.

The projector must never be fixed swinging freely in the room.

Caution: Projectors may cause severe injuries when crashing down! If you have doubts concerning the safety of a possible installation, do NOT install the projector!

Before rigging make sure that the installation area can hold a minimum point load of 10 times the projector's weight.

Danger of fire !
When installing the device, make sure there is no highly inflammable material (decoration articles, etc.) in a distance of min. 0,7 m.

CAUTION!
Use 2 appropriate clamps to rig the fixture on the truss.
Follow the instructions mentioned at the bottom of the base.
Make sure that the device is fixed properly! Ensure that the structure (truss) to which you are attaching the fixtures is secure.

The projector can be placed directly on the stage floor or rigged in any orientation on a truss without altering its operation characteristics.

For overhead use, always install a safety-rope that can hold at least 10 times the weight of the fixture. You must only use safety-ropes with screw-on carabines. Pull the safety-rope through the two apertures on the bottom of the base and over the trussing system etc. Insert the end in the carabine and tighten the fixation screw.

Fixation via the omega holders

1. Bolt each clamp (1) to the omega holder (4) with M12 bolt and lock nut through the hole in the holder.
2. Fasten the omega holders on the bottom of the base by inserting both quick-lock fasteners (3) into the holes of the base and tighten fully clockwise.
3. Fasten the safety-rope (2) through the two apertures on the bottom of the base and over the trussing system.

4.5 DMX-512 connection

The fixture is equipped with both 3-pin sockets for DMX input and output. The sockets are wired in parallel. Only use a shielded twisted-pair cable designed for RS-485 and 3-pin XLR-plugs and connectors in order to connect the controller with the fixture or one fixture with another.

DMX - output
XLR mounting-sockets (rear view):

DMX-input
XLR mounting-plugs (rear view):





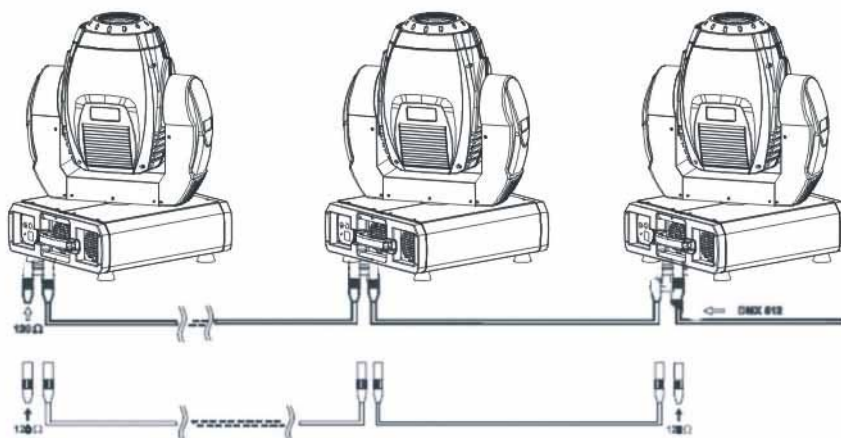
- 1 - Shield
- 2 - Signal (-)
- 3 - Signal (+)

- 1 - Shield
- 2 - Signal (-)
- 3 - Signal (+)

If you are using the standard DMX controllers, you can connect the DMX output of the controller directly with the DMX input of the first fixture in the DMX-chain. If you wish to connect DMX-controllers with other XLR-outputs, you need to use adapter-cables.

Building

a serial



DMX-chain:

Connect the DMX-output of the first fixture in the DMX-chain with the DMX-input of the next fixture. Always connect one output with the input of the next fixture until all fixtures are connected.

Caution: At the last fixture, the DMX-cable has to be terminated with a terminator. Solder a 120 Ω resistor between Signal (-) and Signal (+) into a 3-pin XLR-plug and plug it in the DMX-output of the last fixture.

5. 575 II -DMX Protocol-version 1.0

12CH	16CH	Visiosn575 II DMX Channel Control	
		CH1 Dimmer	0 dark 255 Lightest
		Ch2 IRIS	0-127 128-189 191-255
		CH3 Shut	0 1 2 7 8 63 64 71 72 127 128 135 Close Open Open 136 191 192 199 200 217 218 235 236 253 254 255 Rondow shut slow to fast Open Open
		CH 4 Pan/ Tilt speed	0 Fast to slow 250 255 Reset
		CH 5 Pan cors	0 0° 540°
		CH 6 Tilt cors	0 0° 280°
		CH 7 Color wheel	0-15 White 16-31 Red 32-47 Yellow 48-63 Purple 64-79 Green 80-95 Orange 96-111 Blue 112-127 Pink 128-187 fast slow 188-195 Stop 196-255 slow fast
		CH 8 Gobo1	0-12 circle 13-25 Gobo1 26-38 Gobo2 39-51 Gobo3 52-64 Gobo4 65-77 Gobo5 78-90 Gobo6 91-103 Gobo7 104-116 Gobo1 shake 117-129 Gobo2 shake 130-142 Gobo3 shake 143-155 Gobo4 shake 156-168 Gobo5 shake 169-181 Gobo6 shake 182-194 Gobo7 shake 195-224 fast show 225-226 Stop 227-255 slow fast slow fast slow fast slow fast slow fast slow fast slow fast
		CH 9 Gobo1 rotation	0 Stop 1 127 C.W rotation slow to fast 128 Stop 129 130 255 C.C.W rotation slow to fast
		CH 10 Gobo1 indexing	0 0°-360° Indexible 255
		CH 11 Prism	0 127 128 255 3 facet prism
		CH 12 Prism rotation	0 Stop 1 127 C.W rotation slow to fast 128 Stop 129 130 255 C.C.W rotation slow to fast
		CH 13 Prism indexing	0 0°-360° Indexible 255
		Ch14 Focus	0 3M In focus nearer 127 In focus nearer 255
		CH 15 Pan fine	0 Pan adjustment 255 0° 540°
		CH 16 Tilt fine	0 Tilt adjustment 255 0° 280°

6. Controller mode

The fixtures are individually addressed on a data link and connected to the controller. The fixtures respond to the DMX signal from the controller.

DMX addressing

The control panel on the front panel of the fixture allows you to assign the DMX fixture address, which is defined as the first channel from which the MHS575-E001 will respond to the controller.

If you set, for example, the address to channel 13, the MHS575-E001 will use the channel 13 to 24 for control (if mode 1 is selected).

Please, be sure that you don't have any overlapping channels in order to control each MHS575-E001 correctly and independently from any other fixture on the DMX data link.

If two, three or more MHS575-E001 are addressed similarly, they will work similarly.

For address setting, please refer to the instructions under "Fixture Address".

Controlling:

After having addressed all MHS575-E001, you may now start operating these via your lighting controller.

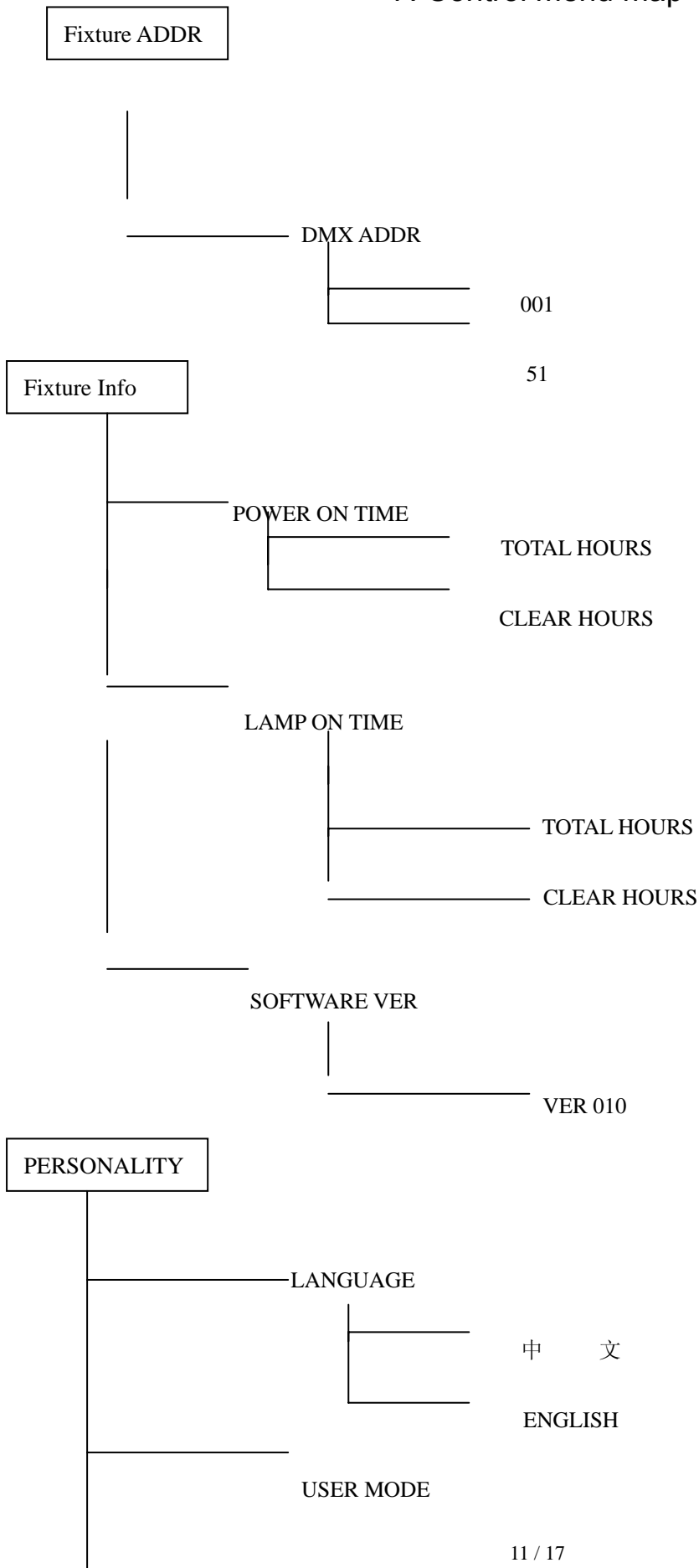
Note: After switching it on, the MHS575-E001 will automatically detect whether DMX 512 data is received or not. If there is no data received at the DMX-input, the display will start to flash "A001" with actually set address.

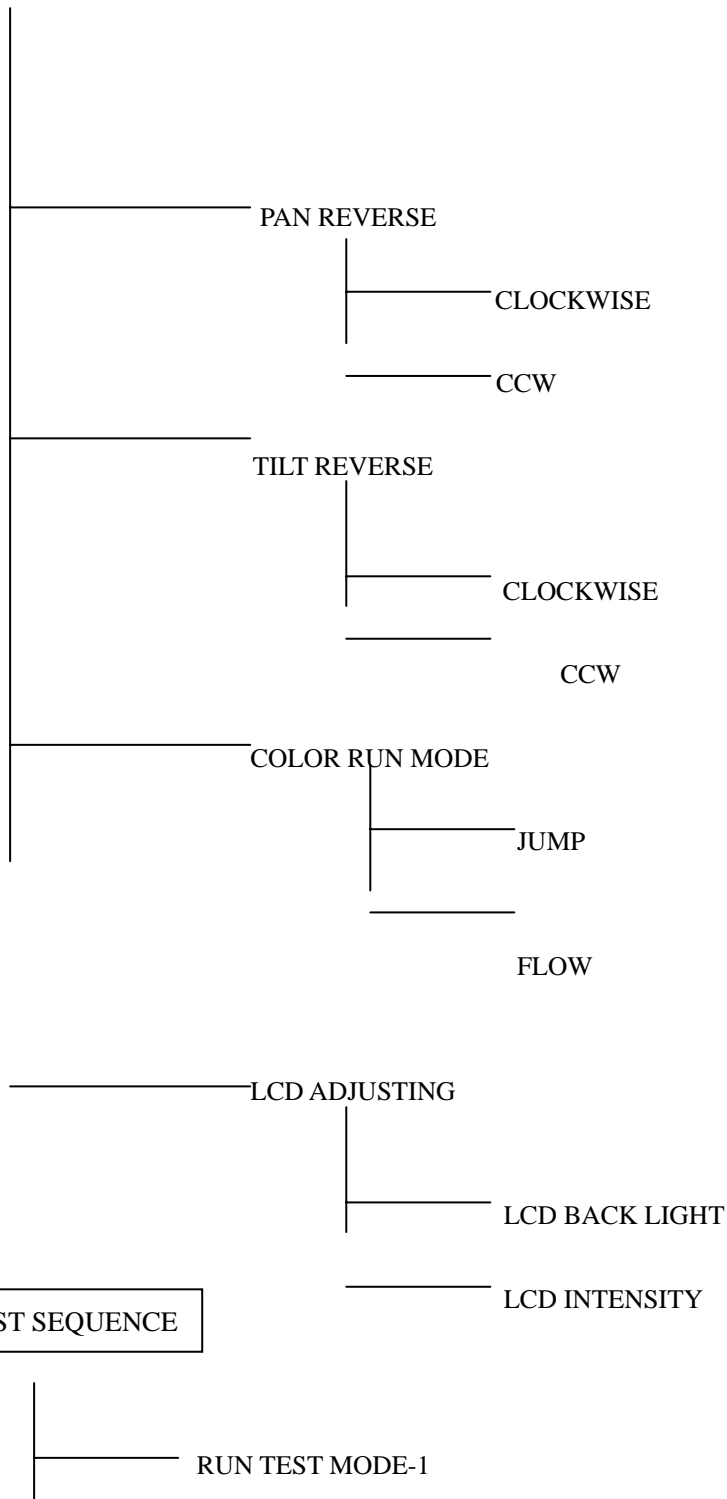
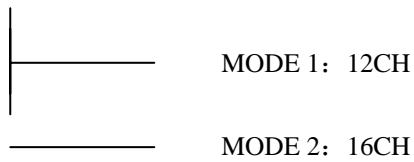
This situation can occur if:

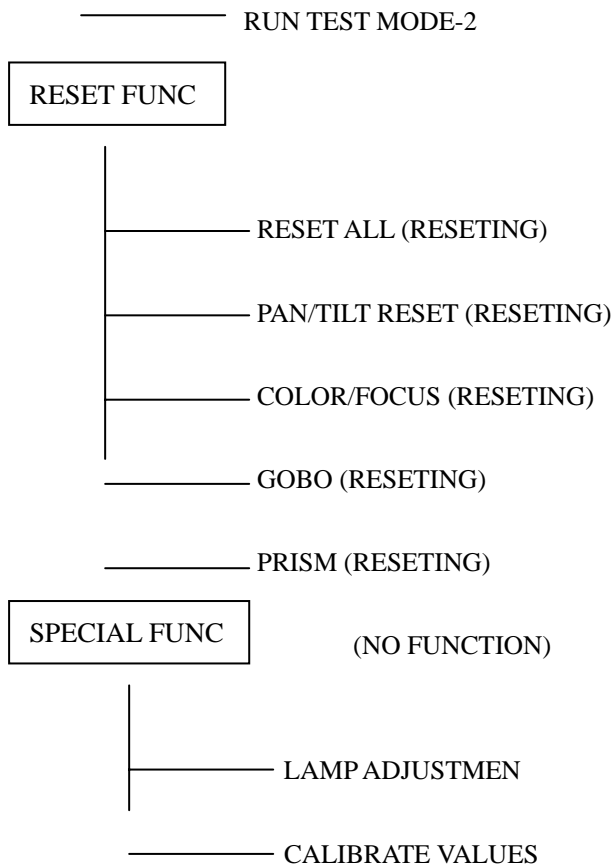
- the 3 PIN XLR plug (cable with DMX signal from controller) is not connected with the input of the MHS575-E001
- the controller is switched off or defective, the cable or connector is defective or the signal wires are swap in the input connector.

Note: It's necessary to insert the XLR termination plug (with 120 Ohm) to the last fixture in the link in order to ensure proper transmission on the DMX data link.

7. Control menu map







8. Control menu

The control panel situated on the front panel of the base offers several features. You can simply set the DMX address, read the number of the lamp or unit hours, switch On and Off the lamp, run test, make a reset and also use many functions for setting fixture behaviour.

Control elements on the control board:

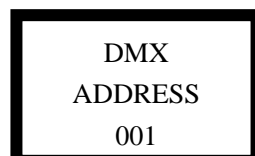
[RNS] encoder wheel-moves between menu items on the the same level, scrolls between values.

[BACK] button-leaves menu without saving changes

[ENTER] button-enters menu, confirms adjusted values and leaves menu

**After switching the fixture on,
the display shows the initial screen:**

**Press [ENTER],
the display shows current address:**



The main menu of the control panel is accessed by pressing [ENTER] button. To browse through the menu, rotate [RNS] wheel. To select a function or submenu, press [ENTER] button. Presetted options are displayed negative.

8.1 Fixture ADDR

Use this menu to set the DMX address.

DMX Address - Select this submenu to set DMX start address. Press "enter" confirm the Address.

8.2 Fixture info

Use this menu to read an useful information about the fixture.

Power On Time - Select this submenu to read the number of operation hours.

Total Hours - The function shows the total number of the operation hours since the MHS575-E001 has been fabricated.

Clear Hours - The function shows the number of the operation hours that the MHS575-E001 has been powered on since the counter was last reset. In order to reset this counter to 0, press [ENTER].

Lamp On Time - Select this submenu to read the number of the operation hours with the lamp on.

Total Hours - The function shows the total number of the operation hours with the lamp on since the MHS575-E001 has been fabricated.

Clear Hours - The function shows the number of the operation hours with the lamp on that the MHS575-E001 has been powered on since the counter was last reset. In order to reset this counter to 0, press [ENTER].

Software Version --- Select this function to read the software version of the fixture: Ver.010

8.3 Personality

Use this menu to modify MHS575-E001 operating behavior.

Language --- Select this submenu to choose the Chinese/English display

User mode --- MHS575-E001 allows you to recall up to 2 user settings.

Model 1: 12CH

Model 2: 16CH

Pan Reverse --- Select this function to invert the pan movement.

Tilt Reverse --- Select this function to invert the tilt movement.

Color Mode --- Select this function to set desired effects: jump/ flow

LCD Adjusting --- Select this function to set LCD background light off/on and adjust intensity of LCD.

8.4 Test sequences

Use this menu to run a special demo-test sequences without an external controller, which will show you some possibilities of using MHS575-E001.

Mode 1 --- This mode is suitable for projections on the wall, ceiling or ground without any head movement.

Mode 2 --- This mode uses all MHS575-E001 functions including pan/tilt movement and therefore is good for a complete introduction of the fixture.

8.5 Reset functions

The MHS575-E001 can be reset totally or by function modules. Select relevant function to run a reset:

Reset All --- This function enables the fixture to index all effects and return to their standard positions.

Pan/Tilt --- This function resets pan and tilt.

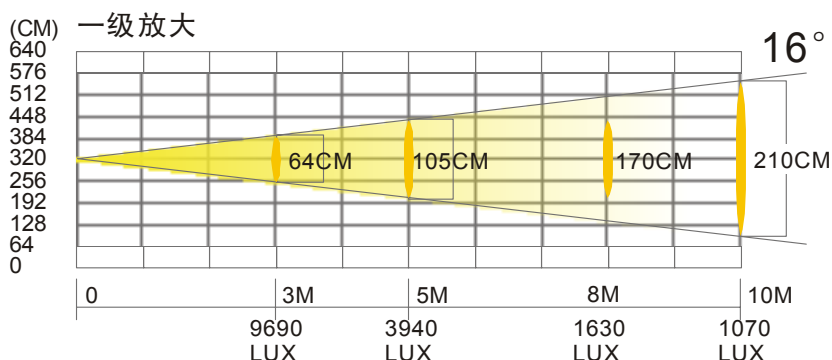
Colour/Focus --- This function resets colour wheels.

GOBO --- This function resets Focus/Dimmer module..

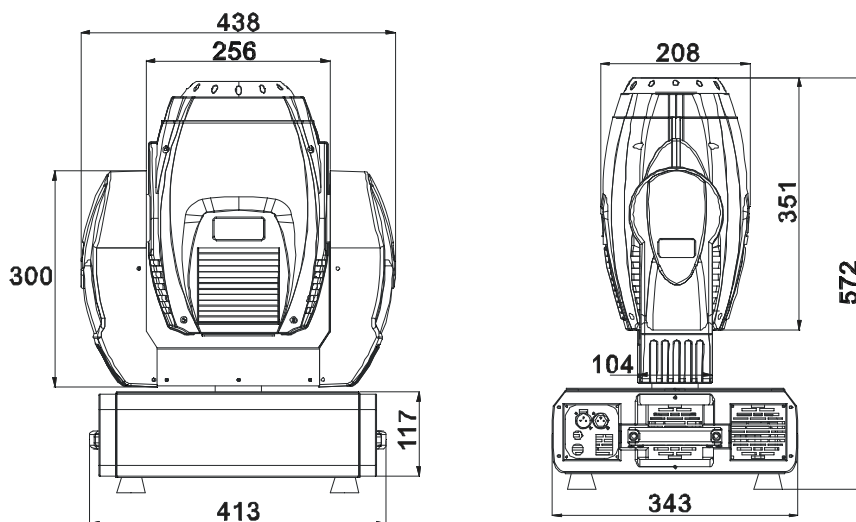
Prism --- This function resets prism module.

Beampath

Standard Fresnel lens+standard zoom lens:



Dimensions (mm)



9. Maintenance and cleaning

It is absolutely essential that the fixture is kept clean and that dust, dirt and smoke-fluid residues must not build up on or within the fixture. Otherwise, the fixture's light-output will be significantly reduced. Regular cleaning will not only ensure the maximum light-output, but will also allow the fixture to function reliably throughout its life.

A soft lint-free cloth moistened with any good glass cleaning fluid is recommended, under no circumstances should alcohol or solvents be used!

DANGER !
***Disconnect from the mains before starting any
maintenance work***

The front objective lens will require weekly cleaning as smoke-fluid tends to building up residues, reducing the light output very quickly. The cooling fans and airt vents should be cleaned monthly.

The interior of the fixture should be cleaned at least annually using a vacuum-cleaner or an air-jet.

The dichroic colour filters should be cleaned monthly.

There are no serviceable parts inside the device except for the lamp and the fuse.

Please refer to the instructions under "Fitting/Exchanging the lamp".

Maintenance and service operations are only to be carried out by authorized distributors.

Replacing the fuse

If the lamp burns out, the fine-wire fuse of the device might fuse, too. Only replace the fuse by a fuse of same type and rating.

Before replacing the fuse, unplug mains lead.

Procedure:

- 1) Unscrew the fuseholder on the rear panel of the base with a fitting screwdriver from the housing (anti - clockwise).
- 2) Remove the old fuse from the fuseholder.
- 3) Install the new fuse in the fuseholder.
- 4) Replace the fuseholder in the housing and fix it.

Technical Specifications

- Lamp: GE.CSR 575/DE or PHILIPS MSR 575/2
- COLOR SYMTEM: 7 colors+open,with rainbow effect
GOBO SYSTEM: 7 rotating interchangeable and indexible gobos+open position with gobo shake function, the speed of rotating adjust function roto-gobo effect
- PRISM: High-speed rotating 3 facet prism
- FOCUS: Linear focus
- Ballast: Magnetic or electronic ballast available for choice
- Reset: Reset by DMX or PANEL
- Strobe: Variable strobing 1-10 fls per sec.
Preprogrammed Macro with pulse effect
- IRIS: 5-100% linear adjustment
- Dimmer: 0-100% linear dimmer
- Pan/tilt movement range: PAN 540° , TILT 280°
Automatic Pan/Tilt position correction
- Pan.tilt movement resolution: 16 Bit
- Voltage: Magnetic ballast: 220V-240VAC/50HZ/60HZ
- Power consumption: 700W
- Control and programming: USITT DMX-512
Data IN/OUT: 3-pin XLR
Control channel: 16 CH
Display: LCD panel, background lighting can be adjusted
- Dimension(mm): L413*W343*H572
- Weight:20kg

Please note: Every information is subject to change without prior notice.