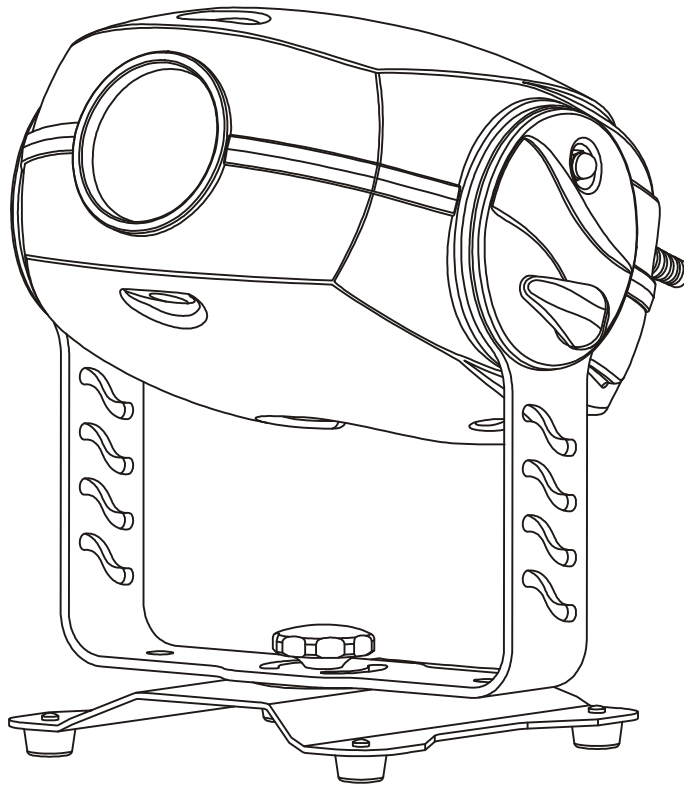


ColorMix Wash **150** AT



at series

USER MANUAL

COLORMIX 150 AT WASH

Table of contents

1. Safety instructions	3
2. Operating determinations	4
3. Description of the device	5
4. Installation	6
4.1 Fitting/Exchanging the lamp	6
4.2 Lamp alignment	6
4.3 Changing the beam angle	7
4.4 Rigging	8
4.5 Connection to the mains	10
4.6 DMX- 512 connection, master/slave connection	11
5. DMX Protocol 8-bit	12
6. Controller mode	13
6.1 DMX addressing	13
6.2 Remotely controllable functions	13
7. Stand - alone mode	14
8. Functions of the control panel	15
8.1 Addressing	15
8.2 Slave control	16
8.3 Fixture informations	16
8.4 Personality options	18
8.5 Test sequences	19
8.6 Stand-alone setting	20
8.7 Reset function	21
8.8 Special functions	21
9. Error and information messages	23
10. Technical specifications	23
11. Maintenance and cleaning	25
12. Appendix 1 - Menu map	27
13. Appendix 2 - Changing the power supply settings	28

CAUTION!

***Keep this device away from rain and moisture!
Unplug mains lead before opening the housing!***

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

1. Safety instructions

Caution ! Be careful with your operations. With a dangerous 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:

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

If the device has been exposed to 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.

This device falls under protection-class I. The power plug must only be plugged into a protection class I outlet. 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.

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.

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.

Caution: During the operation, the housing becomes very hot.

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

HEALTH HAZARD!

Never look directly into the light source, as sensitive persons may suffer an epileptic shock (especially meant for epileptics) !

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

Keep away children and amateurs !

2. Operating determinations

This device is a projector for creating decorative effects and was designed for indoor use only.

This device is designed for professional use, e.g. on stages, in discotheques, theatres etc.

Lighting effects are not designed for permanent operation. Consistent operation breaks will ensure that the device will serve you for a long time without defects.

Never run the device without lamp!

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

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 0,8 meter.

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.

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 fresnel-lens or any housing-cover is open, as discharge lamps may explode

The maximum ambient temperature t_a must never be exceeded.

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!

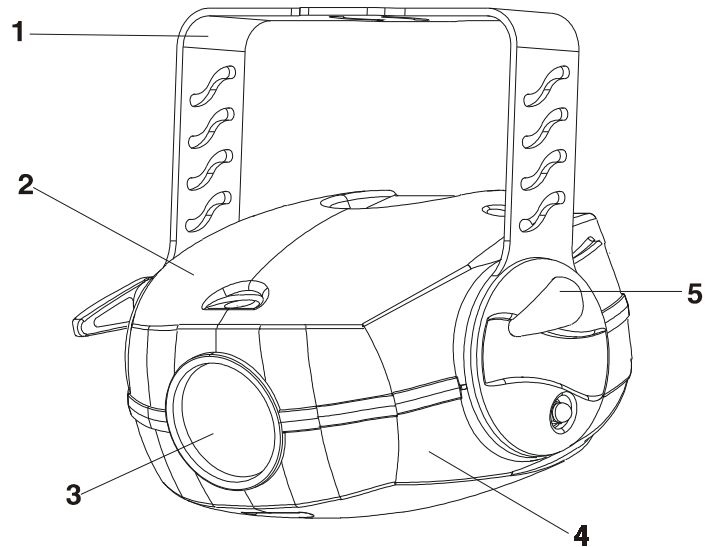
Please use the original packaging if the device is to be transported.

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

Never remove the serial barcode from the device as this would make the guarantee void.

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, lamp explosion, crash etc.

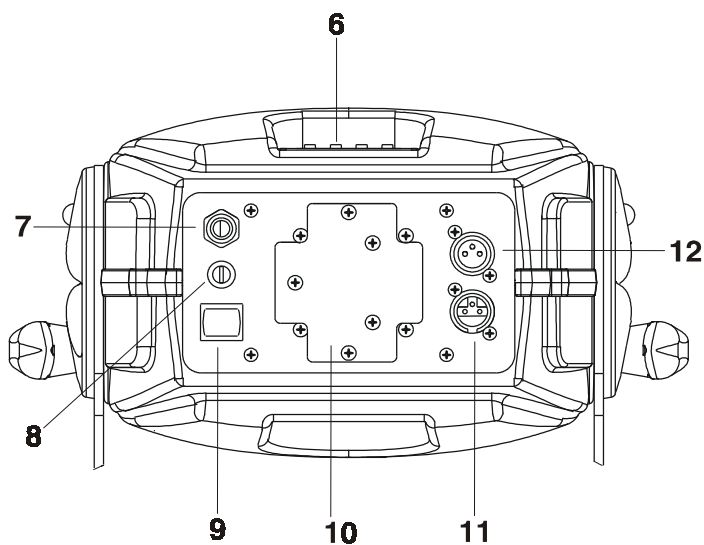
3.Description of the device



- 1 - Mounting bracket
- 2 - Top cover
- 3 - PC lens

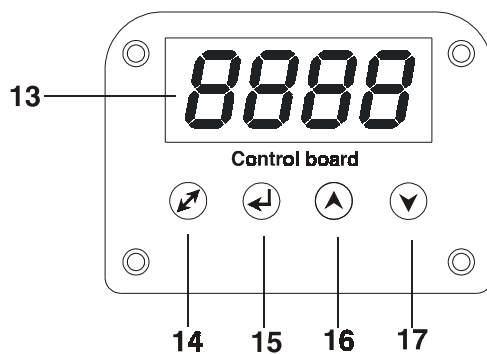
- 4 - Bottom cover
- 5 - Adjusting screw

Rear view of the fixture



- 6 - Control board
- 7 - Power cord
- 8 - Fuse holder
- 9 - Power switch
- 10 - Lamp cover
- 11 -DMX output
- 12 -DMX input

Control panel

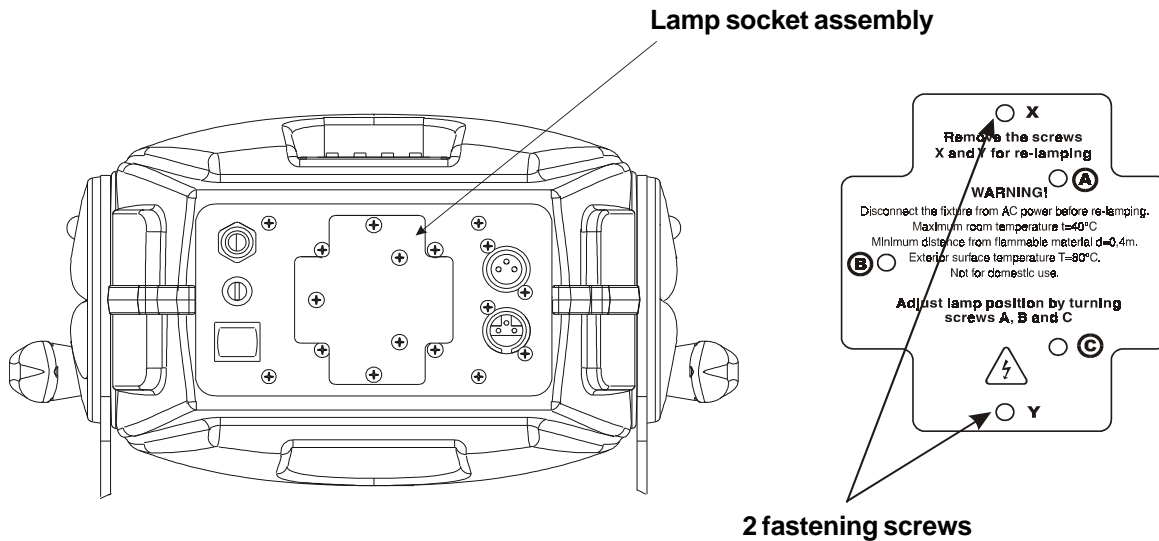


- 13 - Display
- 14 - Mode-button
- 15 - Enter-button
- 16 - Up-button
- 17 - Down-button

4. Installation

4.1 Fitting/Exchanging the lamp

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



To insert the lamp (CDM-SA/T 150W/942):

1. Disconnect the fixture from power and allow it to cool.
2. Loosen the 2 screws „X, Y” on the lamp socket assembly at the back of the fixture.
3. Gently pull the lamp socket assembly out of the fixture. Hold this assembly while replacing the lamp.
4. Holding the lamp by its ceramic base, carefully pull the lamp straight out of the lamp socket.
5. Holding the new lamp by its ceramic base, gently insert the lamp to the lamp socket. Make sure that the lamp is installed tightly into the lamp socket.

Do not install a lamp with a higher wattage! A lamp like this generates temperatures the device is not designed for. Damages caused by non-observance are not subject to warranty. Please follow the lamp manufacturer's notes! Do not touch the glass bulb bare hand during the installation!

6. Reinsert the lamp socket assembly and tighten the 2 screws again.
7. Align the new lamp (see instructions below)
8. Reset the "LAti/rSEt" and "LAsT/rSEt" counters in the "InFO" menu on the control panel, by pressing the [▲] and [▼] buttons in one time and then confirming with the [↵] button.

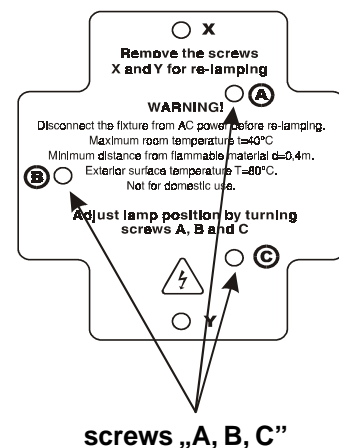
Do not operate this fixture with opened housing-covers!

4.2 Lamp alignment

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

1. Switch on the fixture and after reset turn on the lamp
2. Cancel all effects, open the shutter and set the dimmer intensity to maximum and focus the light on a flat surface (wall) using either DMX controller or function "LAA" in the "Special functions" of the control board.
3. Center the hot-spot (the brightest part of the beam) using the 3 adjustment screws „A, B, C”. Turn one screw at a time to drag the hot-spot, diagonally across the projected image. If you cannot detect a hot-spot, adjust the lamp until the light is even.

To reduce a hot-spot, pull the lamp in by turning all three screws „A, B, C”



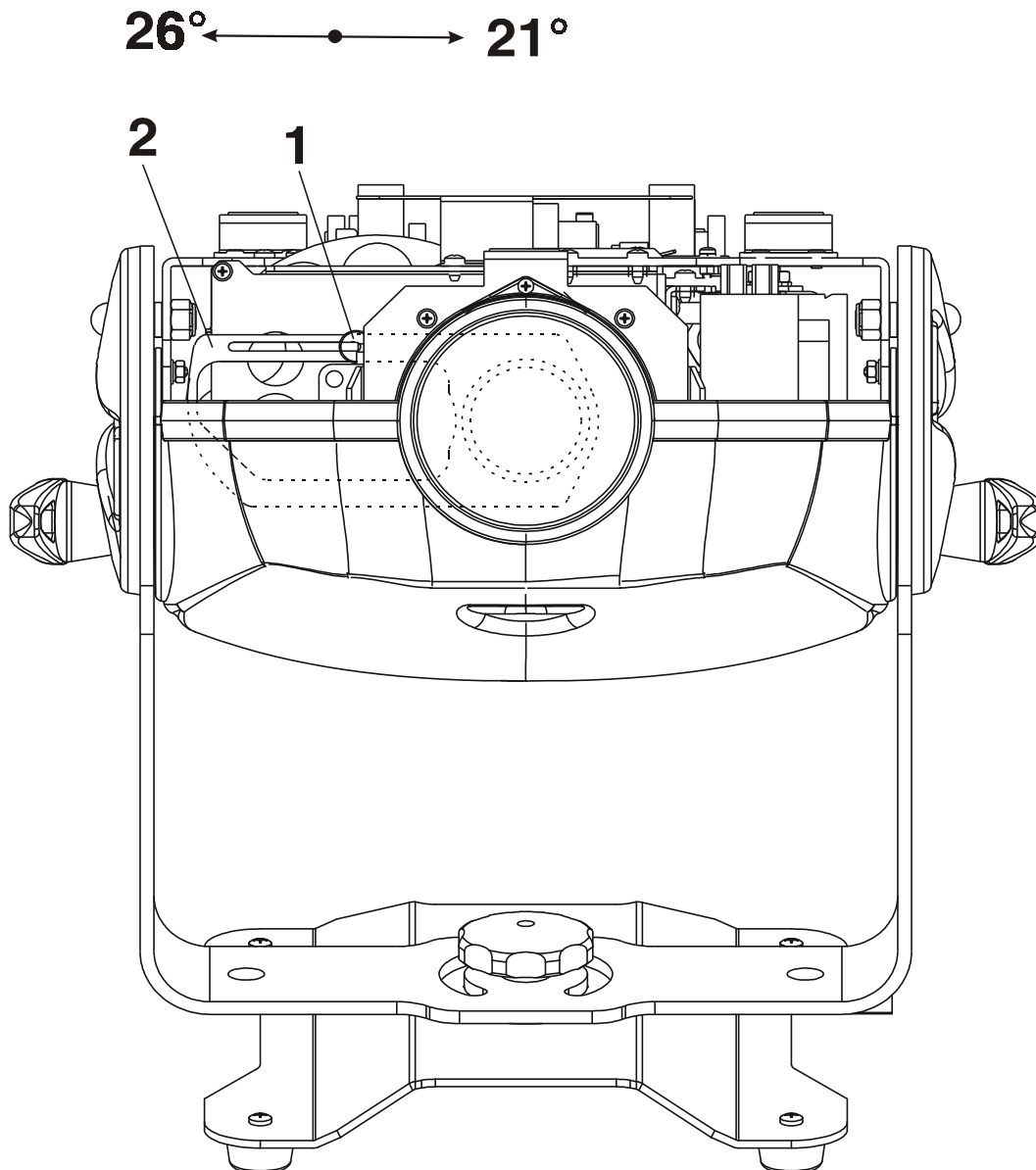
clockwise 1/4-turn at a time until the light is evenly distributed.

If the light is brighter around the edge than it is in the center, or if light output is low, the lamp is too far back in the reflector. „Push” the lamp out by turning the screws „**A, B, C**” counterclockwise 1/4-turn at a time the light is bright and evenly distributed.

4.3 Changing the beam angle

If you want to change the beam angle (21° or 26°), follow the instructions:

1. Disconnect the fixture from AC power.
2. Remove the top cover (cover with display) by loosening 3 screws.
3. Loosen the screw (1) and move the lens holder (2) to the required position.
4. Tighten the screw (1) and put back the top cover.



4.4 Rigging

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 fixture 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 fixture 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 fixture. 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 fixture has to be installed out of the reach of people.
If the fixture shall be lowered from the ceiling or high joists, professional trussing systems have to be used. The fixture 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 fixture's weight.

Danger of fire !

When installing the device, make sure there is no highly inflammable material (decoration articles, etc.) in between a distance of min. 0,5 m.

CAUTION!

Make sure that the device is fixed properly! Ensure that the structure (truss) to which you are attaching the fixtures is secure.

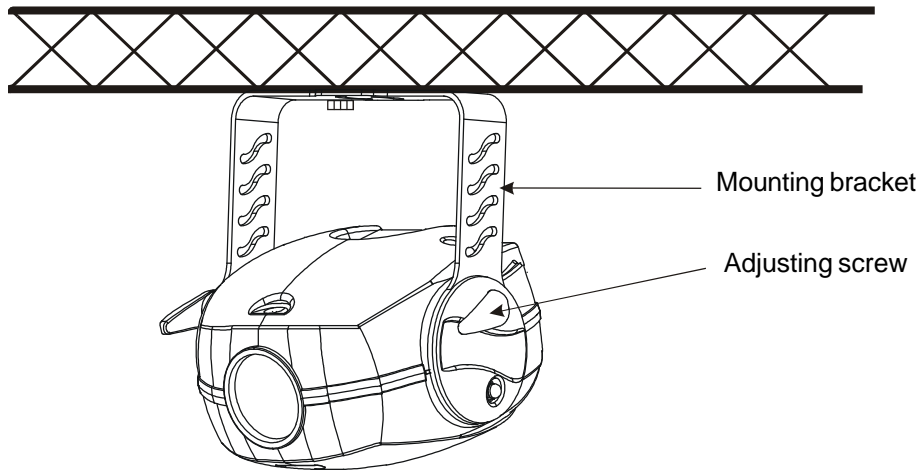
The projector can be placed directly on the stage floor or rigged in any orientation on a truss without altering its operation characteristics .

Overhead installation.

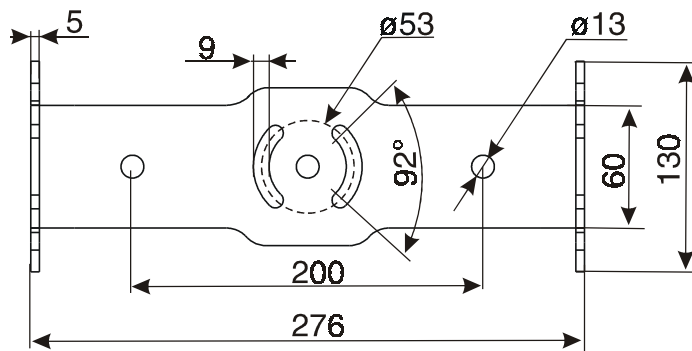
The mounting bracket provides 3 holes (a diameter of 13mm) and 2 quarter-circle slots.

To adjust the inclination-angle, loosen the 2 adjusting screws. Turn the projector to the desired angle and retighten the adjusting screws.

For overhead use, always install a safety rope that can hold at least 10 times the weight of the fixture. Pull the safety rope through the mounting bracket and over the trussing system etc.



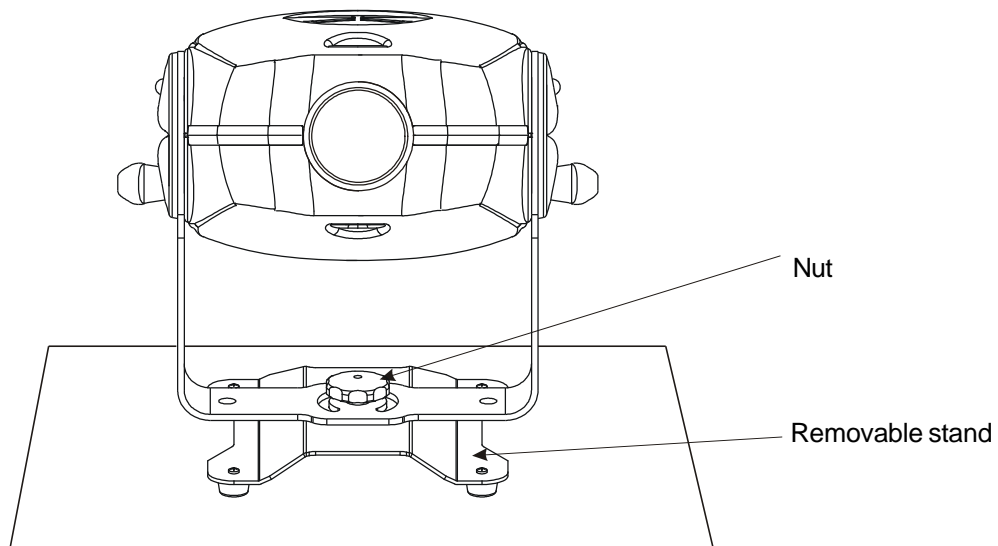
Mounting bracket (groundplan):



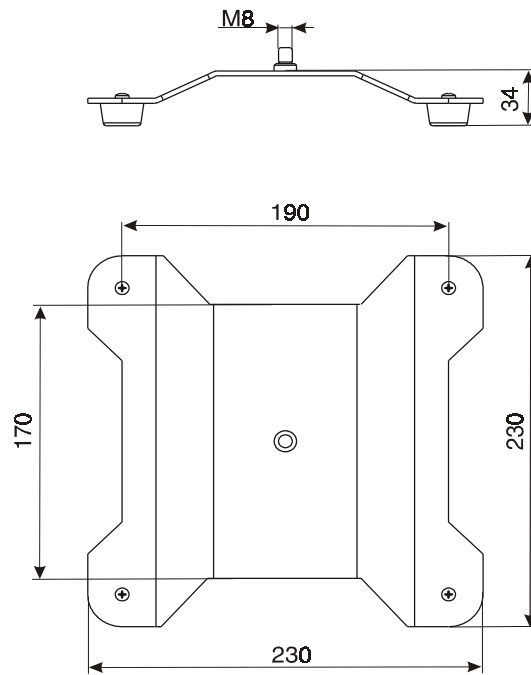
Measurements are in millimetres

Floor installation.

The projector can stand directly on the floor by standing on the removable stand which is mounted with the nut M8 to the projector's mounting bracket.



Removable stand:



Measurements are in millimetres

DANGER TO LIFE!
Before taking into operation for the first time, the installation has to be approved by an expert!

When installing fixtures side-by-side, avoid illuminating one fixture with another!

4.5 Connection to the mains

Verify the power supply settings before applying power!

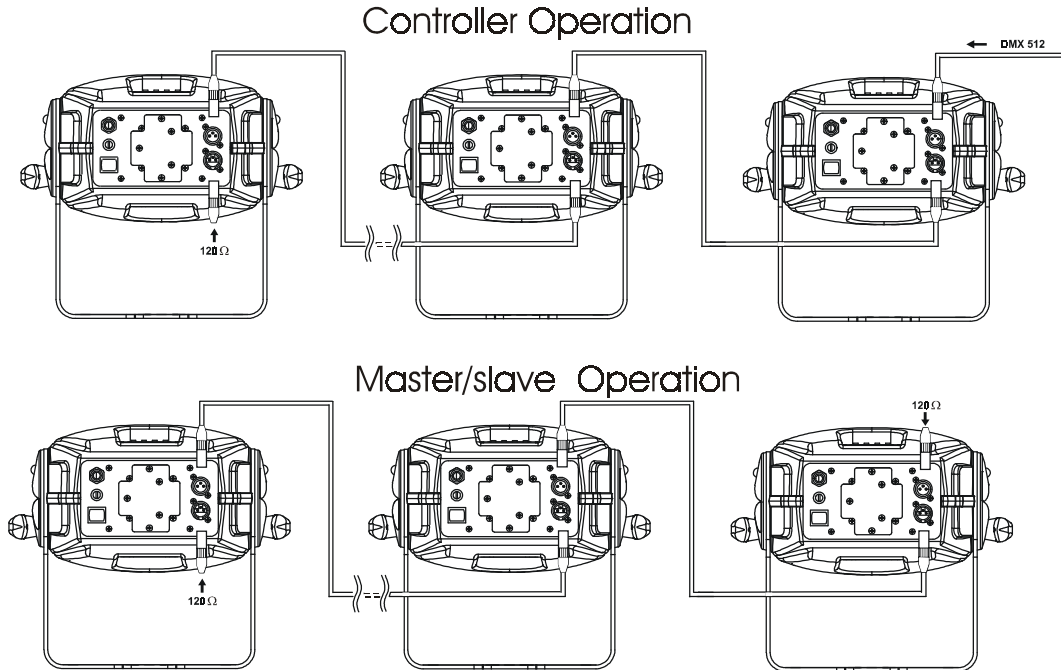
If you wish to change the power supply settings, see the chapter Appendix.
 Connect the fixture to the mains with the enclosed power plug. If you need to install other power plug on the power cable, follow the identification table below.
 The earth has to be connected!

The occupation of the connection-cables is as follows:

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

Do not connect the projector to a dimmer system!

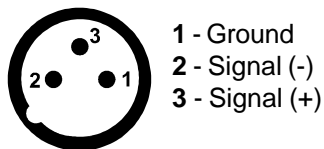
4.6 DMX- 512 connection, master/slave connection



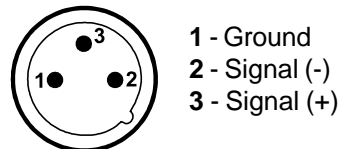
Only use a shielded twisted-pair cable designed for RS-485 and 3-pin XLR-plugs and connectors in order to connect the controller with the fixture or one fixture with another.

Occupation of the XLR-connection:

**DMX - output
XLR mounting-socket:**



**DMX-input
XLR mounting-plug:**



Building a serial DMX-chain:

If you are using the standard 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.

Connect the DMX-output of the first fixture in the DMX-chain with the DMX-input of the next fixture. Always connect 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 Ohm resistor between Signal (-) and Signal (+) into a 3-pin XLR-plug and plug it in the DMX-output of the last fixture.

Building a master/slave-chain:

Connect the DMX-output of the master fixture in the data-chain with the DMX-input of the first slave. Always connect output with the input of the next slave until all slaves are connected (up to 9 fixtures).

Caution: It's necessary to insert the XLR termination plug (with 120 Ohm) into the input of the master fixture and into the output of the last slave fixture in the link in order to ensure proper transmission on the data link.

5.DMX Protocol 8-bit

Channel	Value	Function	Type of control
1	0	Colours Open/white	proportional
	10	Turquoise	proportional
	21	Red	proportional
	32	Cyan	proportional
	42	Light green	proportional
	53	Magenta	proportional
	64	Light Blue	proportional
	74	Yellow	proportional
	85	Green	proportional
	96	Pink	proportional
	106	Blue	proportional
	117	Orange	proportional
128-189	Forwards rainbow effect from fast to slow	proportional	
190-193	No rotation	proportional	
194-255	Backwards rainbow effect from slow to fast	proportional	
2	0-255	Dimmer intensity Intensity from 0 to 100%	proportional
3	0	Shutter,Strobe,Reset Shutter closed	step
	1-63	Light intensity from 0 to 100%	proportional
	64-95	Shutter open	step
	96-127	Strobe-effect from slow to fast (max 8 flashes/s)	proportional
	128-139	Reset	step
	140-159	Shutter closed	step
	160-175	Pulse-effect in sequences with increasing speed	proportional
	176-191	Pulse-effect in sequences with decreasing speed	proportional
	192-223	Random strobe effect with increasing speed	proportional
	224-255	Shutter open	step

The COLORMIX 150 AT WASH WASH can be operated with a controller in **controller mode** or without the controller in **stand-alone mode**.

Both modes are described in the texts below.

6.Controller mode

The fixtures are individually addressed (001-510) on a data link and connected to the controller.The fixtures respond to the DMX signal from the controller.

6.1 DMX addressing

The control panel on the front side of the base allows you to assign the DMX fixture address, which is defined as the first channel from which the COLORMIX 150 AT WASH WASH will respond to the controller.

If you set, for example, the address to channel 5, the COLORMIX 150 AT WASH WASH will use the channel 5 to 7 for control.

Please, be sure that you don't have any overlapping channels in order to control each COLORMIX 150 AT WASH correctly and independently from any other fixture on the DMX data link.

If two, three or more COLORMIX 150 AT WASH are addressed similarly, they will work similarly.

For address setting, please refer to the instructions under "Addressing"(menu "**A001**").

Controlling:

After having addressed all COLORMIX 150 AT WASH , you may now start operating these via your lighting controller.

Note:After switching on, the COLORMIX 150 AT WASH 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 COLORMIX 150 AT WASH
- 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.

6.2 Remotely controllable functions

Colour - wheel

The COLORMIX 150 AT WASH contains a colour wheel with 12 colour positions - 11 of these with dichroic colours and the last one white. The colour-wheel can be positioned between two adjacent colours in any position. It is also possible to rotate the colour- wheel continuously at different speeds("Rainbow effect" in both directions).

Dimmer

The dimming (0-100%) is provided by the mechanical dimmer unit.

Shutter/Strobe

The shutter is executed by the mechanical shutter unit. This unit may also be used for strobe effect (1 - 8 flashes per second).

7. Stand - alone mode

The fixtures on a data link are not connected to the controller but can execute pre-set programs which can be different for every fixture. To set the program to be played, see the "Stand-alone setting" (menu "St.AL.").

"Stand-alone operation" can be applied to the single fixture (the fixture may be set to the master /slave mode or controller mode) or to multiple fixtures operating synchronously.

Synchronous operation of multiple fixtures requires that they must be connected on a data link and one of them is set as a master (master mode) and the rest as the slaves (slave mode). The slaves are assigned to SLA1-SLA9 and on the certain slave address can be connected only one fixture. To set the fixture as the master or slave , see the "Addressing" (menu "A001").

If the master fixture runs a reset or plays test(program) ,all slaves will execute these acts too.

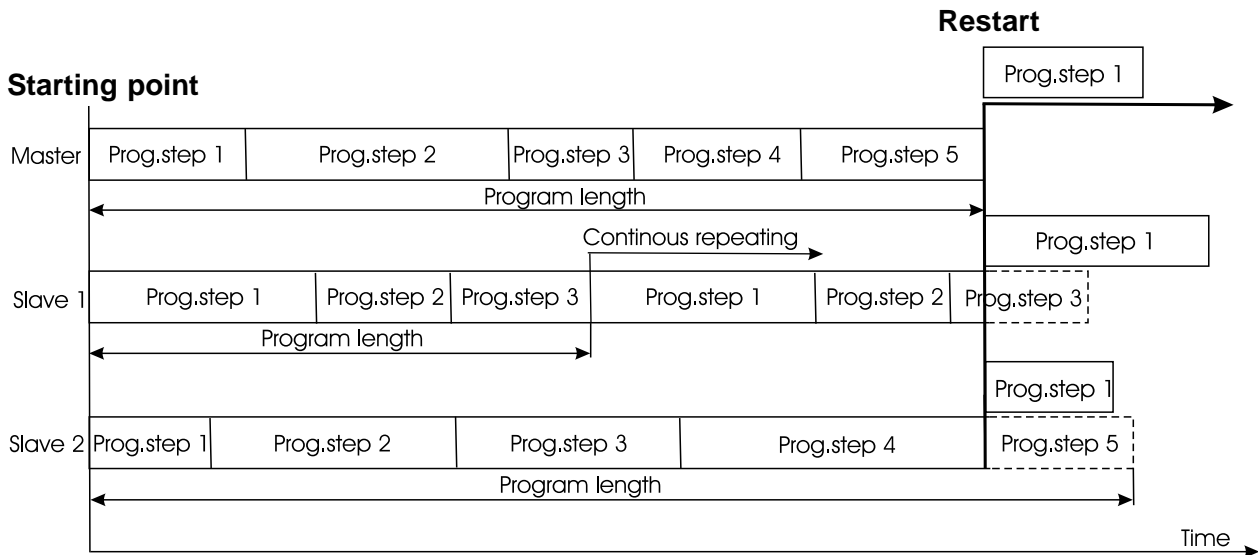
You can't play or edit any programs on the slaves by their control panels if the master is switched on and connected to the master/slave chain.

The master fixture starts simultaneous program start in the other slave fixtures. All fixtures have a definite, synchronized starting point when playing back their programs. The number of running program is the same in all slaves and depends on the master's choice (menu "St.AL."). Every fixture runs its program repeatedly ,starting the program step No.1 when requested by the master .

For example:

If the slave fixture has a shorter program length, it will continuously repeat its program until the master fixture finishes its own program and restarts its program running (slave 1- prog. step 3 will not be finished).

If the slave fixture has a longer program length, it will restart at prog. step 1 before it completes all its prog.steps (slave 2 - prog. step 5 will not be played)- see the picture below.



Note: Disconnect the fixtures from the DMX controller before master/slave operating ,otherwise data collisions can occur and the fixtures will not work properly!

It's necessary to insert the XLR termination plug (with 120 Ohm) into the input of the master fixture and into the output of the last slave fixture in the data link in order to ensure proper transmission on the data link.

From the master's control panel is possible to control any slave in a master/slave chain.

8. Functions of the control panel

The control panel situated on the front side of the base offers several features. You can simply set the DMX address, master/slave mode, read the number of lamp or unit hours, run test, make a reset and also use many functions for setting and service purposes.

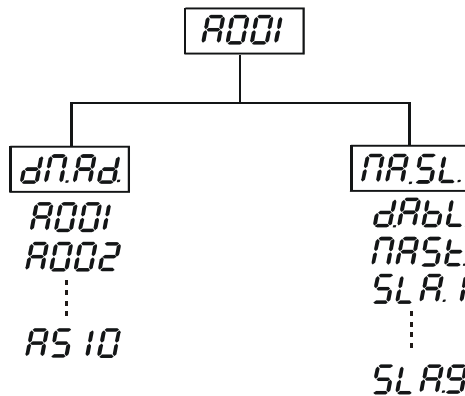
The main menu of the control panel is accessed by pressing the [↗] button - press this one so many times until the display shows message "A001" (with actually stored address). Browse through the menu by the pressing [▲] or [▼] buttons - the display shows step by step these messages: **A001, SLct, InFO, PErS, tESt, StAL, rESE, SPEC**. Press [↵] if you wish to select one of them. The functions are described in the following sections and the function hierarchy is shown below.



8.1 Addressing



By this menu you can set the DMX address or address the fixture as a master/slave.



1. Press the [↗]-button so many times until the display shows message "A001" (with actually stored address).
 2. Press [↵]-button and use the [▲] and [▼] buttons to select "dM.Ad."-menu.
 3. Press [↵]-button (the letter "A" flashes) and by [▲] and [▼] buttons select required address (001 - 510), press [↵]-button to confirm.
 4. Select "M.ASL."-menu, press [Enter]-button and use [▲] and [▼] buttons to select "d.AbL." (no master or slave), press [↵]-button to confirm.
 5. Press the [↗]-button. Chosen address is shown on the display.
- If message "A001" (with actually stored address) flashes - no DMX data received at the DMX-input.



1. Press the [↗]-button so many times until the display shows message "A001" (with actually stored address).
 2. Press [↵]-button and use the [▲] and [▼] buttons to select "MA.SL."-menu.
 3. Press [↵]-button (display flashes) and select "MASt" (to set the fixture as the master in a chain of multiple fixtures) or "SLA.1" - "SLA.9" (to set the fixture to be the slave in a chain of multiple fixtures) and press [↵] to confirm. If you want address no master or slave, select "d.AbL.".
 4. Press the [↗]-button. Chosen address is shown on the display.
- If message "MASt." fast flashes - DMX signal is received at the DMX-input - disconnect DMX controller!

Only one fixture may be the master. Up to the 9 slaves may be connected to the master and on the certain address can be connected only one slave fixture (SLA1-SLA9).

Note: Disconnect the fixtures from the DMX controller before master/slave operating, otherwise data collisions can

occur and the fixtures will not work properly!

If the fixture is set as the master and DMX signal is connected to its input, the error message "MAEr" will appear on its display and the fixture's address will be set to its DMX address in order to respond to DMX signal from the controller.

For example:

The master fixture has this address setting: "dM.Ad."-menu.....**A004**

"MA.SL."-menu.....**MASt** (is displayed)

The DMX signal is connected to the master fixture. The message "**MASt**" starts fast flashing and after 20s error message "MA.Er" appears on its display and the fixture automatically will be switched to its DMX address (master address is disabled).

Now the fixture has the address setting: "dM.Ad."-menu.....**A004** ("A004"/" MA.Er"blinks)

"MA.SL."-menu.....**d.AbL.**

If the fixture is set as the slave and DMX signal is connected to its input, the fixture will respond to DMX signal from the controller (in dependence on the fixture's DMX address).

8.2 Slave control



This function allows you to control the slaves from the master's control panel in a master/slave operation.

Select this function from the main menu and press [↵]-button. Browse the list of all connected slaves ("SL.C.1" - "SL.C.9") by pressing [▲] and [▼] buttons. Select the desired slave and press [↵]-button. The slave's control panel is available from the master's control panel.

If no slave is connected to the master, messages "SL.C.1", "SL.C.2", "SL.C.3"... "SL.C.9" still round repeat.

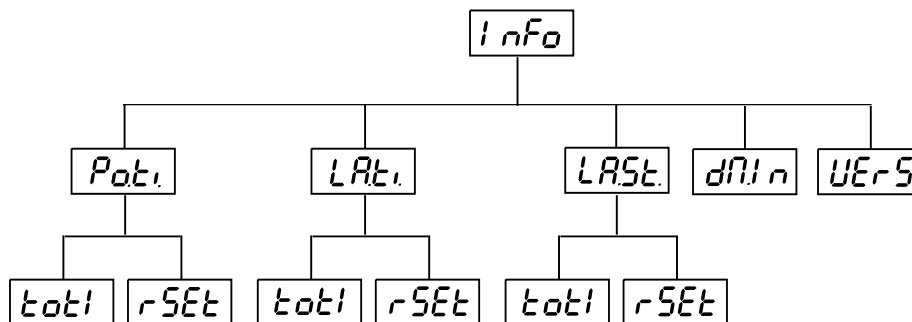
Note: This function is available from the master fixture only.

8.3 Fixture informations



The menu allows you to read a useful information about the fixture as the lamp life, lamp strikes, software version, etc.

Press [▲] or [▼] buttons to select the desired option and press [↵] to see the value or next submenu.



Power On time



-By this option you can read the total number of the operation hours since the

COLORMIX 150 AT WASH has been fabricated. Press [↵] or [↶] to return to the menu.

rSet - The number of the hours that the COLORMIX 150 AT WASH has been powered On since the counter was last reset. Press [↵] or [↗] to return to the menu. In order to reset this counter to 0, you have to hold the [▲] and [▼]-button and press the [↵]-button.

LAt. **Lamp On time**

totl - This option enables you to read the total number of the operation hours with the lamp on since the COLORMIX 150 AT WASH has been fabricated. Press [↵] or [↗] to return to the menu.

rSet - The number of hours that the lamp has been powered On since the counter was last reset. Press [↵] or [↗] to return to the menu. In order to reset this counter to 0, you have to hold the [▲] and [▼]-button and press the [↵]-button.

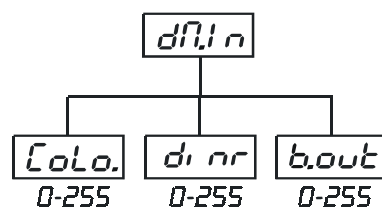
LSt. **Lamp strikes**

totl - By this option you can read the total number of the lamp strikes since the COLORMIX 150 AT WASH has been fabricated. Press [↵] or [↗] to return to the menu.

rSet - The number of the lamp strikes since the counter was last reset. Press [↵] or [↗] to return to the menu. In order to reset the counter to 0, you have to hold the [▲] and [▼]-button and press the [↵]-button.

dM.n. - **DMX values**

Readout DMX values of each channel received by the fixture. Use the [▲] and [▼] buttons to select desired channel and press [↵] to read its value coming to the fixture or [↗] to cancel and return to the menu.



Ue-r-5. - **Software version**

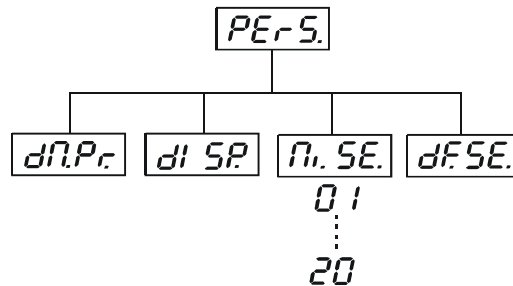
By this function you can read the software version of the display module. Press [↵] to read its value or [↗] to return to the menu.

8.4 Personality options



These options allow you to modify COLORMIX 150 AT WASH operating behavior.

Press [▲] and [▼] buttons to select the desired option and press [↵] to set the value or to see next submenu.

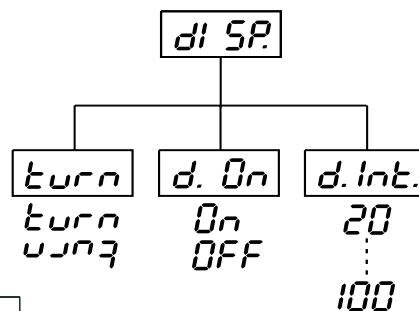


The function makes possible to select DMX- channels settings (if they exist)

Channel	Mode 1 (default)
1	Colours
2	Dimmer
3	Shutter,Strobe,Reset



This function allows you to adjust the display settings:



With this function you can adjust the display intensity from 20% to 100% . Use the [▲] or [▼] buttons to select the level of the display intensity and press [↵] to confirm or [↵] to cancel and return to the menu.



With this function, you can rotate the display by 180°. Use the [▲] or [▼] buttons to select "normal display" or "display turned by 180°" and press [↵] to confirm or [↵] to cancel and return to the menu.



This function allows you to keep the display on or to turn off automatically 2 minutes after last pressing any button on the control panel. Use the [▲] or [▼] buttons to select "On" if you wish to keep the display on or "Off" if you wish to turn off automatically 2 minutes after last pressing any

button on the control panel and press [↵] to confirm or [↶] to cancel and return to the menu.

n. 5E. - Microphone -sensitivity

With this function you can adjust the microphone sensitivity from 1(maximum) to 20(minimum) . Use the [▲] or [▼] buttons to select the level of the microphone sensitivity and press [↵] to confirm the chosen level or [↶] to cancel and return to the menu.

Example:



underexited



right level

(upper segment blinks by the bass rhythm)



overexited

df.5E. - Default settings

Press [↵] to reset all fixture personalities (not the adjusting functions) to the default values. On the display will appear "rSt" meaning that the fixture makes the reset. See the table of personality setting and their default positions.

Personality	Display	Default values (SHADED)
Display-On	d On	On OFF
Display intensity	d Int	20 40 60 80 100
Display- reverse	t urn	t urn u r n
Music trigger	Audi	On OFF
Microphone sensitivity	n. 5E	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20

8.5 Test sequences



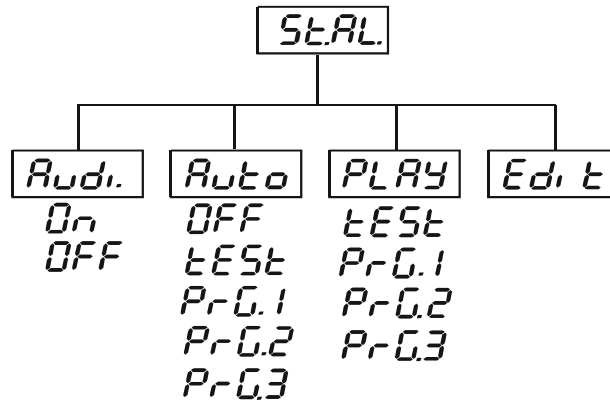
This function allows you to run a special demo-test sequences without an external controller, which will show you some possibilities of using COLORMIX 150 AT WASH. Press [↵]-button to run the test.If the test program is running,messages "run/test" blink on the display.

If you want to pause the runnig program in the required position, press the [↵]-button(messages"PAUS"/" test" blink).To continue the program running,press the [↵]-button again.

8.6 Stand-alone setting

StAL.

This menu offers options for stand-alone mode as a selection of the playing program, programming and modifying current programs.



Audi - Music trigger

The COLORMIX 150 AT WASH enables the sound control of the running programs via the built-in microphone. Use the [▲] or [▼] buttons to select "On" if you wish this feature or "Off" if you don't wish this feature and press [↵] to confirm or [↶] to cancel and return to the menu.

Auto - Presetting playback

This function allows you to select the program which will be played in the stand-alone mode after switching the fixture On. Use the [▲] or [▼] buttons to select desired program ("tEst" - built-in program) or "OFF" if you don't want trigger any program after switching the fixture On and press [↵] to confirm or [↶] to cancel and return to the menu. Selected program will be played continuously in a loop as long as it appears on the display.

This option should be set "OFF" for all slaves in the master/slave chain by reason of the right program starts.

For example: You have selected program "PrG.3" in this menu and:

this fixture is set as a single fixture (master/slave or controller operating) - the fixture will run its program "PrG.3".

this fixture is set as a master in a data chain - the fixture will run its program "PrG.3".

this fixture is set as a slave in a data chain - the fixture will run its program according to the master (if the master runs its own program "PrG.1", the slave will run its own program "PrG.1" also).

Note: If the fixture operates in the controller mode (DMX controller is connected) and any program from this menu is selected, in this case the fixture will not respond to the DMX controller after switching On and will play selected program.

PLAY - Playing program

This function allows you to run a built-in program "tEst" and the 3 freely-programmable programs "PrG.1, PrG.2, PrG.3". Press [▲] or [▼] buttons to select the desired program and press [↵] to run the program which will be played continuously in a loop.

If you want to pause the running program in the required position, press the [↵]-button (messages "PAUS"/"program No." blink). To continue the program running, press the [↵]-button again.

Note: If the fixture operates in the controller mode (DMX controller is connected) and any program from this function is selected in this case the fixture will not respond to the DMX controller and will play selected program.

You can't play programs on the slave fixtures from their control panels if the master fixture is switched On and connected to the slaves (playing is forced by the master).

Edi t. - Editing program

This menu item allows you to select a program to edit or create. The COLORMIX 150 AT WASH has one built-in program ("tEst") and the 3 free programs, each up to 99 steps.

If the fixture is set as a master, then you may edit any program in the slaves. You can't edit programs on the slave fixtures from their control panels if the master fixture is switched on and connected to the slaves (editing is possible by the master control panel only).

Procedure:

1. Press [▲] or [▼]-button to select the program you want to edit ("PrG.1" - "PrG.3") and press [↵].
2. Press [▲] or [▼]-button to select the desired fixture ("MASt." - "SLA.9") and press [↵]-button.
3. Press [▲] or [▼]-button to select the desired program step ("St.01" - "St.99") and press [↵]-button.
4. Press [▲] or [▼]-button to select the desired item and press [↵]-button. Now you can edit by [▲] or [▼] buttons the DMX value for selected item:

"P.End" - a total number of the program steps, value 1-99. **This value you must set before start programming** (e.g. if you want to create program with the 10 steps, set the value onto 10).

"Colo." - a colour wheel, value 0-255

"dimr" - a dimmer, value 0-255

"b.out." - a strobe, value 0-255

"S.tim." - a step time, value 0,1-25,5 seconds

"COPY." - a copying the current prog. step to the next prog. step. If the last prog. step is copied to the next prog. step, parameter "P.End" is increased about 1 by itself (except step 99).

5. Press [↵]-button to confirm adjusted value.

6. Press [↵]-button, select next prog. step and repeat this procedure (steps 4 and 6).

The editing programs "PrG.1, PrG.2, PrG.3" are saved in the current modified fixture (master or slave 1-9).

8.7 Reset function

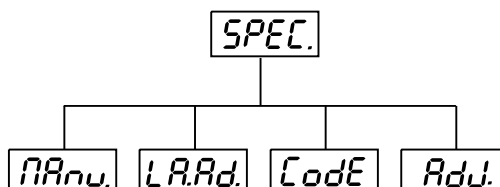


Press [↵] button to run a reset. This option enables the COLORMIX 150 AT WASH to index all effects (functions) and return to their standard positions.

8.8 Special functions

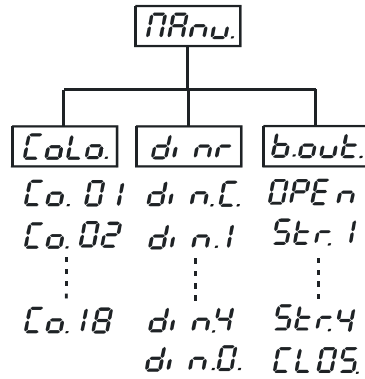


Use the [▲] or [▼] buttons to browse through the special functions and select the one by pressing [↵]-button.



MANu. - Manual control of effects

The function allows you to control manually the channel functions of the fixture. Use the [▲] or [▼] buttons to select desired function and press [↵] to adjust the effect or [↵] to cancel and return to the menu.



LAAd - Lamp adjustment

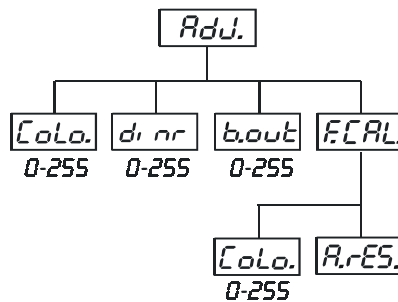
This function can be used when you make the fine adjustment of the lamp. If you select "LAAd" pressing by [↵]-button, all effects will be canceled, shutter will be opened and the dimmer intensity will be set to maximum. Now you can aim the light at a flat surface (wall) and perform the fine lamp adjustment.

Code - Fixture code

The option contains identification code (1-9999) for the fixture, which is used for the master/slave operation.

Adj. - Adjusting the default position of the colour wheel

By this function you can calibrate and adjust the colour-wheel to its standard/right positions. Use the [▲] and [▼] keys to browse through the adjusting menu - the display shows step by step these messages: " **Colo**, **dimr**, **bout**, **FCAL**" by which you can adjust the fixture to the required/desired position (0-255) before the function calibration. Then when the positioning is finished use the last "FCAL" function (Fixture calibration).



1. Calibration via the control board

Press [↵] and the [▲] and [▼] keys in order to display message "Colo" for very smooth function calibration. Press [↵] and use the [▲] and [▼] keys in order to adjust its right value from 0 to 255. Then press [↵] to confirm or [↵] to cancel and return to the menu. When the calibration is finished, it is necessary to use the "ArES" function in order to write the calibration value to the memory (EPROM) and to make a reset in order to check the newly adjusted position of the colour-wheel. When the reset of the fixture is finished, the display will show the "FCAL" message. Press [↵] to repeat the calibration or [↵] to return to the "Adj" menu.

2. Calibration via the external controller

Press [↵] and the [▲] and [▼] keys in order to display the following message: "Colo" - calibration parameter and press [↵]. Now you can calibrate the colour-wheel by your controller. The DMX calibration protocol is described in the table mentioned below.

DMX Calibration protocol:

DMX Channel	1	2	3
Function	COLOUR	DIMMER	STROBE
	CALIBRATION 0-255	STANDARD PROTOCOL	STANDARD PROTOCOL
	S. M. MOVEMENT		

After having calibrated required functions press [↵] to confirm (or [↶] to cancel and return to the menu without reset by the "A.rES." function) and use the "A.rES." function in order to write the calibration value to the memory (EEPROM) and to make a reset in order to check the new adjusted position of the colour wheel.

9. Error and information messages

M.b.Er.

This message informs you that the main PCB does not communicate correctly with the Control Panel.

Co.Er.(color-wheel error)

This message will appear after the reset of the fixture if the magnetic-indexing circuit malfunctions (sensor failed or magnet missing) or the stepping-motor is defective (or its driver circuit on the main PCB). The color-wheel is not located in the default position after the reset.

Po.Er.

This message will appear if the fixture was shortly disconnect from the main.

MA.Er.(Master error)

The message informs you that the fixture was addressed as a master and DMX signal is connected to its input. Disconnect the DMX controller from fixture's input and address the fixture as the master again.

10. Technical specifications

Power supply:

EU-model:	208/230/240V AC, 50/60Hz ~
Fuse:	T 2.5A @ 230V
US-model:	100/120/208/230/240V AC, 50/60Hz ~
Fuse:	T 5.0A @ 120V
Power consumption:	300 VA

Lamp:

Philips CDM-SA/T 150W/942, G-12

Colours:

- 11 dichroic-filters plus white
- Colour-wheel with variable rotation speed

Dimmer:

- Dimmer from 0 - 100 %

Shutter/Strobe:

- Strobe effect with variable speed (1 - 8 flashes per second)

Motors:

- 3 high quality stepping-motors controlled by microprocessors

Cooling:

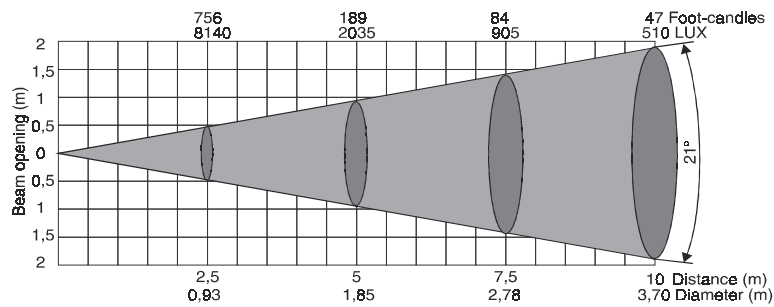
- One axial fan

Optical System:

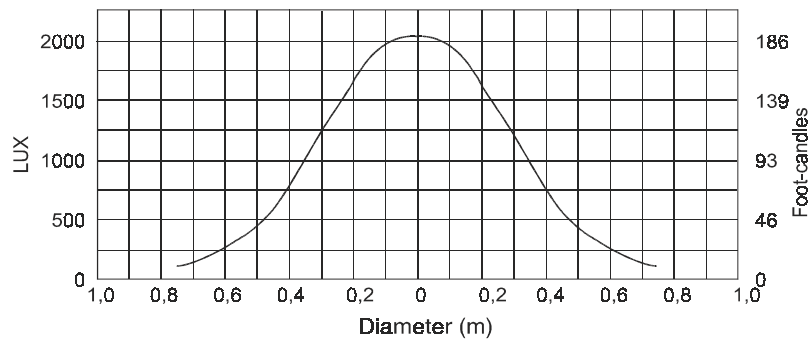
- High luminous-efficiency parabolic system and PC lens of diameter 88 mm
- 21° or 26° beam angle .

Beampath

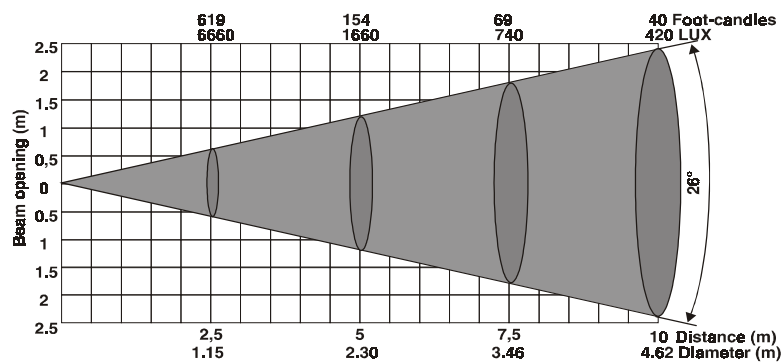
21° radiation angle



21° radiation angle, Distance=5m



26° radiation angle



Electronics

- Built-in microphone for music trigger
- Master/slave operation
- Digital serial input DMX-512
- 3 control channels (8-bit protocol)

Rigging

- Stands directly on the floor with removable stand
- Mounts horizontally or vertically with mounting bracket
- Vertical head adjusting range: 135°

Temperatures

Maximum ambient temperature t_a : 40° C

Maximum housing temperature t_b (steady state): 75° C

Minimum distances

Min.distance from flammable surfaces: 0.5m

Min.distance to lighted object: 0.8m

Weight (net)

EU-version:8.5 kg

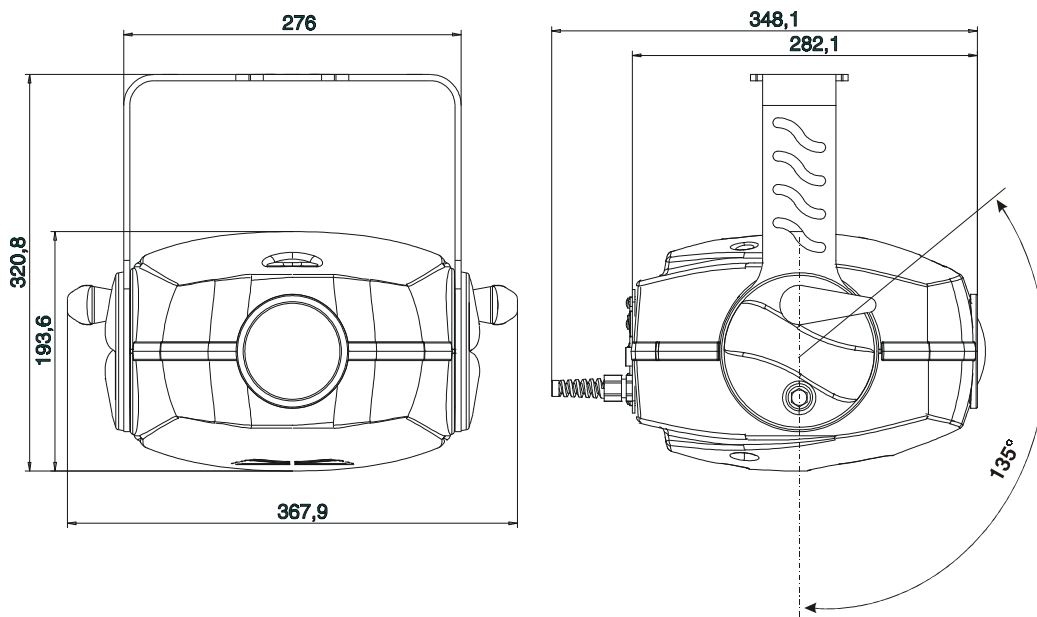
US-version:10 kg

Shipping weight

EU-version:13.5 kg

US-version:15 kg

Dimensions (mm)



11. Maintenance and cleaning

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

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

The following points have to be considered during the inspection:

- 1) All screws used for installing the devices or parts of the device have to be tightly connected and must not be corroded.
- 2) There must not be any deformations on housings, fixations and installation spots (ceiling, suspension, trussing).
- 3) Mechanically moved parts like axles, eyes and others must not show any traces of wearing (e.g. material abrading or damages) and must not rotate with unbalances.
- 4) The electric power supply cables must not show any damages, material fatigue (e.g. porous cables) or sediments. Further instructions depending on the installation spot and usage have to be adhered by a skilled installer and any safety problems have to be removed.

DANGER TO LIFE !
Disconnect from the mains before starting
maintenance operation!

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.

Please use a moist, lint-free cloth. Never use alcohol or solvents!

The front PC lens will require weekly cleaning as smoke-fluid tends to building up residues, reducing the light-output very quickly. The cooling fan 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 and the internal lenses should be cleaned monthly.

There are no serviceable parts inside the device except for the lamp and the fuse. Maintenance and service operations are only to be carried out by authorized dealers.

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

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:

Step 1: Unscrew the fuseholder on the rear panel with a fitting screwdriver from the housing (anti-clockwise).

Step 2: Remove the old fuse from the fuseholder.

Step 3: Install the new fuse in the fuseholder.

Step 4: Replace the fuseholder in the housing and fix it.

Should you need any spare parts, please use genuine parts.

If the power supply cable of this device will be damaged (cable firmly connected with the device), it has to be replaced by authorized dealers only in order to avoid hazards.

If the power supply cable of this device will be damaged (replaceable cable), it has to be replaced by a special power supply cable available at your dealer.

Should you have further questions, please contact your dealer.

12. Appendix 1 - Menu map

Menu Level 1	Menu Level 2	Menu Level 3	Menu Level 4	Menu Level 5	Menu Level 6	DESCRIPTION	
A001	dM.Ad.	A001-A510				DMX addresss	
	MA.SL.	d.Abl.				Disable master/slave	
		MASt.					Set fixture as a master
		SLA.1-SLA9				slave address	
SL.Ct.	SL.C.1-SL.C.9					Select slave for remote control	
InFo	Po.ti.	totl				Total hours of operation since fabricated	
		rSEt				Hours of operation since counter reset	
	La.ti.	totl				Total hours of lamp operation since fabricated	
		rSEt				Lamp hours since counter reset	
	LA.St.	totl				Total number of lamp strikes since fabricated	
		rSEt				Number of lamp strikes since counter reset	
	dM.In.	Colo.	0-255				View DMX colour-wheel position value
dimr		0-255				View DMX dimmer position value	
b.out		0-255				View DMX shutter position value	
VERs						Software version	
PErS	dM.Pr.	Mod.1				Set channels setting 1	
	diSp.	turn	<i>normal</i>			Normal LED display	
			<i>inverted</i>			LED display turned by 180°	
		d.On	On			Display permanent on	
			OFF			Display turns off 2 min. after last key press	
	d.Int.	20,40,60,80, 100				Setting display intensity [%]	
Mi.SE.	1.. 10 ..20				Set microphone sensitivity		
dF.SE.					Return all personality options to factory default.		
tESt						Run demo	
St.Al.	Audi	On				Enable the sound control of the run. programs	
		OFF				Disable the sound control of the run.programs	
	Auto	OFF					No program runs after switching fixture on
		tESt					Test program runs after switching fixture on
		PrG.1					Program No.1 runs after switching fixture on
		PrG.2					Program No.2 runs after switching fixture on
	PLAy	PrG.3					Program No.3 runs after switching fixture on
		tESt	run				Test runs in loop
		PrG.1	run				Program No.1 runs in loop
		PrG.2	run				Program No.2 runs in loop
	Edit	PrG.1-PrG.3	MASt.-SLA.9 (only if Master is selected)	P.End	1-99		Set a total number of the program steps
				Colo.	0-255		Set DMX value for colour-wheel
				dimr	0-255		Set DMX value for dimmer
b.out				0-255		Set DMX value for shutter	
S.tim				0,1-25,5		Set step time [sec.]	
COPY					Copying current prog.step to next step		
rESE						Run a reset	
SPEC.	Manu.	Colo.	Co.0-Co.18			Select presetting colour-wheel position	
		dimr	dim.0-dimC			Select presetting dimmer position	
		b.out	OPEn-CLOS			Select presetting shutter position	
	LA.Ad.	dimr	0-255			Select dimmer intensity for lamp adjustment	
	Code					Fixture code	
	Adj.	Colo.	0-255				Select DMX value for colour -wheel position
		dimr	0-255				Select DMX value for dimmer position
		b.out	0-255				Select DMX value for shutter position
F.CAL		Colo.	0-255			Calibrate colour-wheel to required position	
		A.rES				Save calibration values to memory,reset	

Default settings=**Bold print**

13. Appendix 2 - Changing the power supply settings

Both the transformer and the ballast must be connected correctly for the local AC voltage and frequency. The wrong settings can cause poor performance or damage of the moving head. The factory settings are printed next to the power switch.

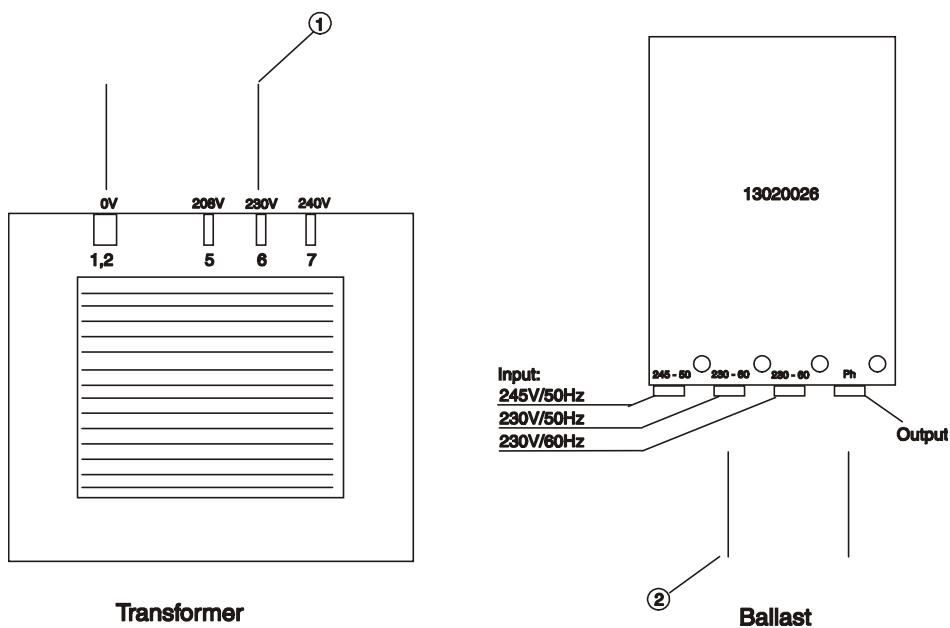
If you want to change the power supply settings, follow the instructions:

1. Disconnect the fixture from AC power.
2. Remove the top and bottom cover by loosening the 3 screws on each cover.
3. Move the wire ① on the transformer connection block to the position according to the desired voltage.
4. Move the wire ② on the ballast connection block to the position according to the desired frequency (voltage).
5. Put the covers back before applying AC power.

Examples:

EU-version

Power supply settings: 230V/50Hz



US-version

Power supply settings: 120V/60Hz

