EK

*SHOW*PRO

R3

USER MANUAL

RGBW Beam • Wash
with 4°-34° linear zoom

R₃

TABLE OF CONTENTS

FEATURES

• 4°-34° linear zoom
• Compact, lightweight, fast
• Two pan/tilt speed modes (normal & turbo)
• Onboard user preset library (save/load)
• Built-in color and strobe macros
• RGB Gamma adjustment
• White color temp presets from 2500～8000K
• Flawless 16-bit 540°/270° motorized pan/tilt movement
• Selectable PWM frequency for flicker-free video with any camera
• DMX, RDM control

SPECIFICATIONS

PHOTOMETRICS
Light Source:	7 x 40W RGBW LEDs
Linear zoom:	4° - 34°
Output (lux):	18144lx ~ 439lx (min ~ max beam angle) @ 5 meters

POWER
Mains:	100 - 240 VAC, 50/60 Hz
Consumption:	310W @ 230V
Power connections:	PowerCon In/Out

KEY FEATURES
Color mixing:	RGBW
Macros:	Colors, Strobe
Strobe:	1 ~ 30Hz + strobe effects
Dimming:	0-100% with 4 dimming curve modes
Pan movement:	540°
Tilt movement:	270°
Pan/Tilt modes:	Normal / Turbo

CONTROL
Protocol:	DMX, RDM
DMX channels:	16 / 20
Data connections:	XLR In/Out for DMX
Onboard menu:	TFT display with 4-button navigation

PHYSICAL
Material:	Plastic and aluminium
Finish:	Matte black
IP rating:	IP20
Cooling:	Active (variable speed fan + silent mode)
Dimensions:	249 x 183 x 345 mm
Weight:	6.6 KG
Mounting:	Omega Bracket (included)

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Package contents	• R3	
	• Power cable	• Mounting bracket
	• User manual	• Warranty card

DIMENSIONS

164.5

183

248.6

Φ142

355.8

227.2

107

OVERVIEW

Omega bracket mounting plate

Menu Display   Menu navigation buttons

Fuse   Power In/Out   DMX In/Out

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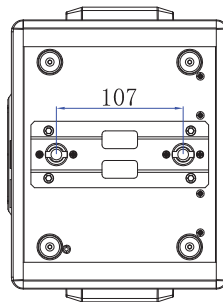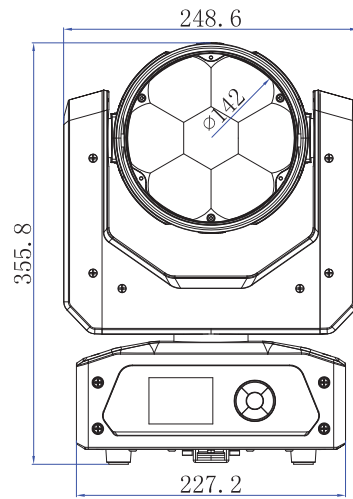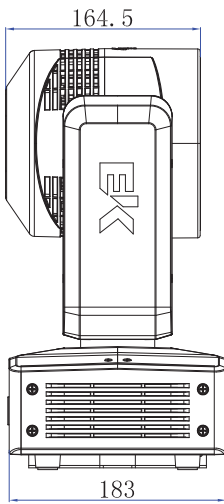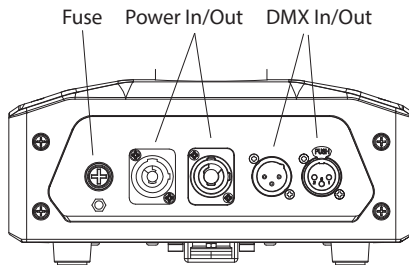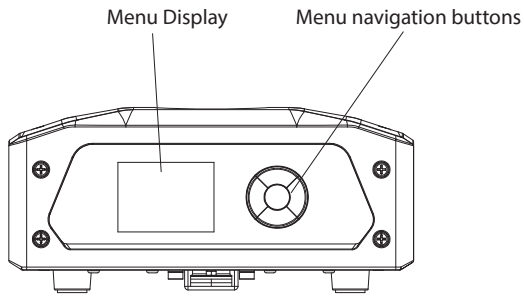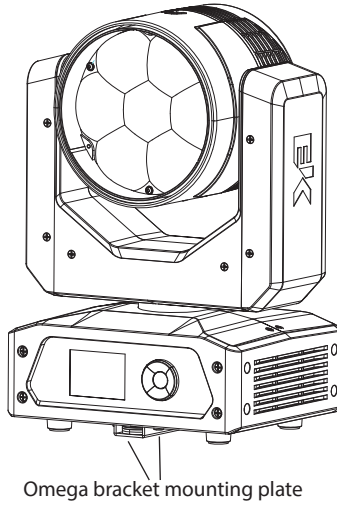
FUNCTIONS and OPERATION

POWER ON/OFF

The fixture is powered on by connecting the included power cable to mains power (100 - 240 VAC, 50/60 Hz). Upon receiving power, the fixture will cycle through a motor reset program. To power off, disconnect the power cable or turn off power remotely using a switch.

MENU NAVIGATION

The control panel features five-button navigation of the onboard menu.

If the panel is password-protected, go to the Advanced menu, in the Menu locking submenu, enter the Unlock code using the navigation buttons:

1234
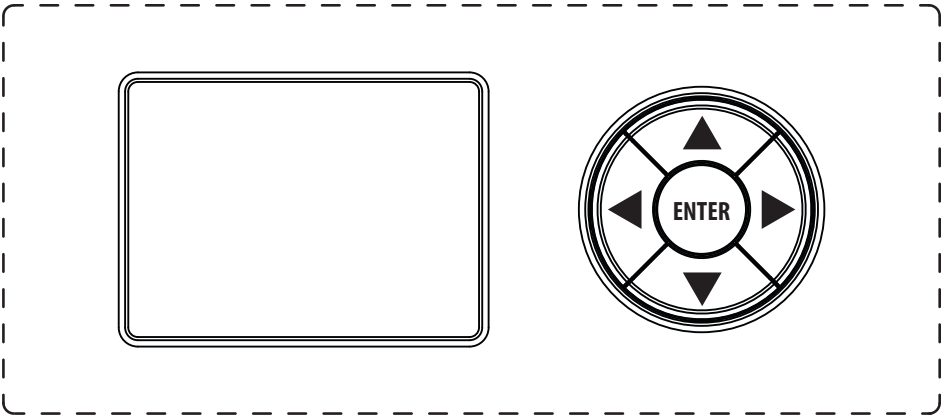
UP	DOWN	LEFT	RIGHT	ENTER
Increase the displayed value, or scroll thru previous menu items	Decrease the displayed value, or scroll thru next menu items	Return to higher menu levels	Advance displayed unit values by 10x and 100x	Confirm displayed values, or activate displayed functions, or enter submenus

Main Menu	Submenu	Submenu	Submenu	Defaults
1 SETUP	DMX Address	1-512		Default: 1
	DMX Channel	16CH		Default:Basic 20CH
		20CH		
2 OPTION	Pan / Tilt	Invert Pan	Off	Default: Off
			On	
		Invert Tilt	Off	Default: Off
			On	
		Swap Pan-Tilt	Off	Default: Off
			On	
		Encoder Pan-Tilt	Off	Default: On
			On	
		P/T Homing Mode	Standard	Default: Standard
			Sequenced	
		Pan Home Def Pos	0 degree	Default: 270 degree
			90 degrees	
			180 degrees	
			270 degrees	
		Tilt Home Def Pos	0%	Default: 50%
			12.50%	
			25%	
			50%	
			75%	
			87.50%	
			100%	
		P/T Enable	On	Default: On
			Off	
	Display	Off		Default: Off
		On		
	Warning Cue	Off		Default: Off
		On		
	Fan Mode	Auto		Default: Auto
		SLN		
	Special Functions	Pan / Tilt speed	Normal	Default: Fast
			Fast	
		Dimmer Curve	Dimmer Curve 1	Default: Dimmer Curve 1
			Dimmer Curve 2	
			Dimmer Curve 3	
			Dimmer Curve 4	
		RGB Gamma	Gamma 1.0	Default: Gamma 2.0
			Gamma 1.5	
			Gamma 2.0	

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MENU FUNCTION CHART

Main Menu	Submenu	Submenu	Submenu		Defaults
2 OPTION	Special Functions	PWM Frequency	600Hz		Default:2000Hz
			1200Hz		
			2000Hz		
			4000Hz		
			6000Hz		
			25000Hz		
	Setting	Default Preset	Reset To Default	Are you sure ? Yes / No	
			Go Back		
		User Preset 1	Load preset 1	Are you sure ? Yes / No	
			Save to preset 1		
		User Preset 2	Load preset 2	Are you sure ? Yes / No	
			Save to preset 2		
		User Preset 3	Load preset 3	Are you sure ? Yes / No	
			Save to preset 3		
3 INFORMATION	System Errors				
	Fixture Hours	Total Hours			
		Partial Hours	Reset		
			Go Back		
	Led Hours	Total Hours			
		Partial Hours	Reset		
			Go Back		
	System Version	DISP:V1.0			
		CTR1-XY:V1.0			
		CTR2-MOTOR:V1.0			
		CTR3-MOTOR:V1.0			
	DMX Monitor				
	Fans Monitor	Base Fan 100%			
		Led Fan 100%			
	UID	030F050*****			

MENU FUNCTION CHART

	Main Menu	Submenu	Submenu	Submenu		Defaults
4	MANUAL CONTROL	Reset	No			
			Yes			
		Channel				
5	TEST	Pan/Tilt				
		Colour				
		Zoom				
		All				
6	ADVANCED		Calibration	Pan Offset	000-255	
				Tilt Offset	000-255	
				Zoom Offset	000-255	
				Red	125-255	
				Green	125-255	
				Blue	125-255	
				White	125-255	
			Menu Locking	Unlock Code		Default: 1234
				XXXX		

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PHOTOMETRICS (4° RGBW Beam)

Beam Angle: 4°

Luminance (lux)
Projection distance (m)

	1m	3m	5m	7m	10m
R	97200	10800	3888	1983	972
G	170100	18900	6804	3471	1701
B	34290	3810	1371	699	342
W	187200	20800	7488	3820	1872
ALL	453600	50400	18144	9257	4536
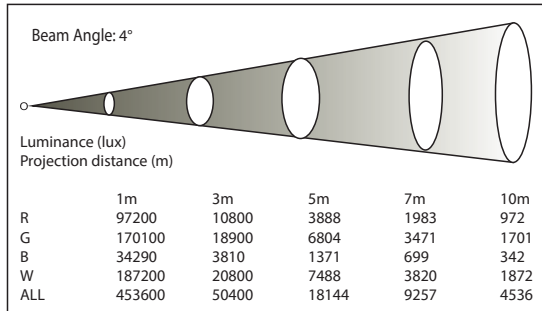
PHOTOMETRICS (34° RGBW Wash)

Beam Angle: 34°

Luminance (lux)
Projection distance (m)

	1m	3m	5m	7m	10m
R	2169	241	86	44	21
G	4248	472	169	86	42
B	860	95	34	17	8.6
W	4545	505	181	92	45
ALL	10980	1220	439	224	109
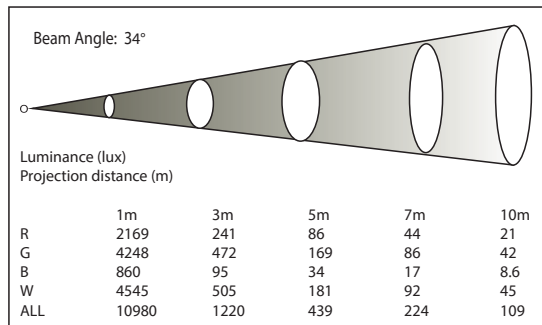
PHOTOMETRICS (19° White Spot)

Beam Angle: 19°

Luminance (lux)
Projection distance (m)

	1m	3m	5m	7m	10m
2500K	19900	2211	796	406	199
3200K	21300	2366	852	434	213
4000K	22700	2522	908	463	227
5000K	24075	2675	963	491	240
5600K	24875	2763	995	507	248
6000K	25500	2833	1020	520	255
7000K	25750	2861	1030	525	257
8000K	27250	3027	1090	556	272
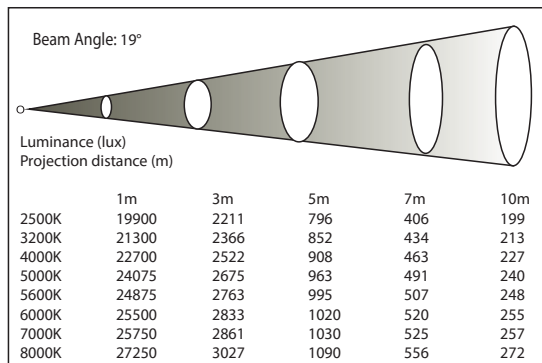
White color temp presets:	CRI	R9	TM-30-15rg/rf	TLCI
• 2500K :	94.3	97.1	113/83	66.3
• 3200K :	95.4	94.8	106/91	84.4
• 4000K :	94	93.2	106/91	84.6
• 5000K :	92.7	97.7	106/91	83.8
• 5600K :	91.4	90.3	106/90	85
• 6000K :	90.8	97.3	107/89	85.6
• 7000K :	90.1	98	107/88	87.8

MASTER / SLAVE LINKING

In a connected series of the same fixture, when not using an external controller, a master unit can be assigned to control slave units in the series.

• Set the first fixture in the series to MASTER in the onboard menu
• Set subsequent fixtures to SLAVE
• Connect the DMX OUT of the master unit to the DMX IN of the first slave unit
• Daisy-chain subsequent slave units from DMX OUT to DMX IN

DMX STARTING ADDRESS

To set the starting address of each fixture:

• Press the ENTER button and use the UP/DOWN buttons to scroll the menu
• Select the CONNECT menu and press ENTER
• Use the UP/DOWN buttons to scroll to the ADDRESS menu
• Press ENTER and use the UP/DOWN buttons to select the DMX address
• Press ENTER to confirm the chosen DMX address
• Press the MENU button to save changes and exit

EXAMPLE OF DMX ADDRESSING

The below table shows an example of starting addresses for four fixtures assuming a first fixture with starting address of 001.

The actual starting addresses will be determined by the operator as needed to match external controller settings.

DMX ALLOCATION	1st Fixture	2nd Fixture	3rd Fixture	4th Fixture
20 channels	001	021	041	061

16CH	20CH			
1	1	Red	000-255	
-	2	Red Fine	000-255	
2	3	Green	000-255	
-	4	Green Fine	000-255	
3	5	Blue	000-255	
-	6	Blue Fine	000-255	
4	7	White	000-255	
-	8	White Fine	000-255	
5	9	CTO	000-009	OFF
			010-053	8000K~7000K
			054-098	7000K~6000K
			099-116	6000K~5600K
			117-143	5600K~5000K
			144-187	5000K~4000K
			188-223	4000K~3200K
			224-254	3200K~2500K
			255	2500K
6	10	Macro color	000-009	Macro Color OFF
			10	Red
			11	Green
			12	Blue
			13	Cyan
			14	Yellow
			15	Magenta
			16	White 7000K
			17	White 3700K
			18	White 5000K
			19	Black
			020-022	Medium Yellow
			023-026	Straw Tint
			027-028	Surprise Peach
			29	Fire
			30	Medium Amber
			31	Gold Amber
			032-034	Dark Amber
			035-044	Sunrise Red
			45	Light Pink
			046-048	Medium Pink
			049-061	Pink Carnation
			062-067	Light Lavender
			068-077	Lavender
			078-088	Sky Blue
			089-099	Just Blue
			100-109	Dark Yellow Green

			110-111	Spring Yellow
			112	Light Amber
			113	Stra
			114	Deep amber
			115-116	Orange
			117	Light Rose
			118	English Rose
			119	Light Salmon
			120	Middle Rose
			121-122	Dark Pink
			123-124	Magenta
			125	Peacock Blue
			126	Med Blu Green
			127	Steel Blue
			128	Light Blue
			129-130	Dark Blue
			131-133	Leaf Green
			134-135	Dark Green
6	10	Macro color	136-137	Mauve
			138-141	Bright Pink
			142-144	Medium Blue
			145	Deep Golden Amber
			146	Pale Lavender
			147-148	Special Lavender
			149-150	Primary Green
			151-156	Bright Blue
			157-161	Apricot
			162-167	Pale Gold
			168-171	Deep Orange
			172-173	Bastard Amber
			174	Flame Red
			175-178	Daylight Blue
			179	Lilac Tint
			180-183	Deep Lavender
			184-190	Dark Steel Blue
			191-206	Congo Blue
			207	Alice Blue
			208	Dirty White
			209-255	White

7	11	Strobe	000-003	Closed
			004-103	Slow to Fast Strobe(1-25Hz)
			104-107	Open
			108-207	Slow to Fast Pulsation
			208-212	Open
			213-225	Random Slow Strobe
			226-238	Random Medium Strobe
			239-251	Random Fast Strobe
			252-255	Open
8	12	Dimmer	000-255	
9	13	Dimmer Fine	000-255	
10	14	Pan	000-255	
11	15	Pan Fine	000-255	
12	16	Tilt	000-255	
13	17	Tilt Fine	000-255	
14	18	Zoom	000-255	Zoom linearly moves from narrow to wide beam
15	19	Function	000-011	None
			012-024	Fast P&T speed (Default)
			025-037	Normal P&T speed
			038-042	Dimmer curve 1 (Default)
			043-047	Dimmer curve 2
			048-052	Dimmer curve 3
			053-057	Dimmer curve 4
			058-062	Raw color channels gamma 1
			063-067	Raw color channels gamma 1.5
			068-072	Raw color channels gamma 2.2 (Default)
			073-077	Color Calibration Off (Dafault)
			078-082	Color Calibration Adjust
			083-087	Color Calibration Calibration (Only Base Mode)
			088-167	FREE
			168-188	PWM frequency=600Hz
			189-199	PWM frequency=1200Hz (Default)
			200-210	PWM frequency=2000Hz
			211-221	PWM frequency=4000Hz
			222-232	PWM frequency=6000Hz
			233-243	PWM frequency=25000Hz
			244-255	Default function recall
16	20	Reset	000-025	No Function
			026-076	Zoom Reset (Hold 5S)
			077-127	Pan / Tilt Reset (Hold 5S)
			128-255	Complete Reset (Hold 5S)

SET UP MENU

DMX ADDRESS : Set starting address value

DMX CHANNEL : Select 16- or 20-channel mode

OPTION MENU

PAN / TILT : Set values for: • Invert Pan
                              • Invert Tilt
                              • Swap Pan-Tilt
                              • Encoder Pan-Tilt
                              • Pan/Tilt Homing Mode
                              • Pan Home Default Position
                              • Tilt Home Default Position
                              • Pan/Tilt Enable

DISPLAY : Set display behavior (on/off)

FAN MODE : Select Auto or Silent fan mode

SPECIAL FUNCTIONS :

• Pan/Tilt speed: Select Normal or Fast
• Dimmer curve: Select one of four dimmer curves
• RGB Gamma: Select desired gamma setting
• PWM Frequency: Select frequency to avoid camera flicker

SETTING : Load parameter presets for :   • Factory defaults
                                            • User presets 1
                                            • User presets 2
                                            • User presets 3

INFORMATION MENU

Displays stored data and values for: • System errors
                                       • Fixture operating hours
                                       • LED hours
                                       • System firmware versions
                                       • DMX monitor
                                       • Fans monitor
                                       • Unique RDM identifier

MANUAL CONTROL

RESET : Force fixture to reset

CHANNEL : Set output for each DMX channel

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TEST MENU

Run live tests of these functions:
- Pan / Tilt
- Color
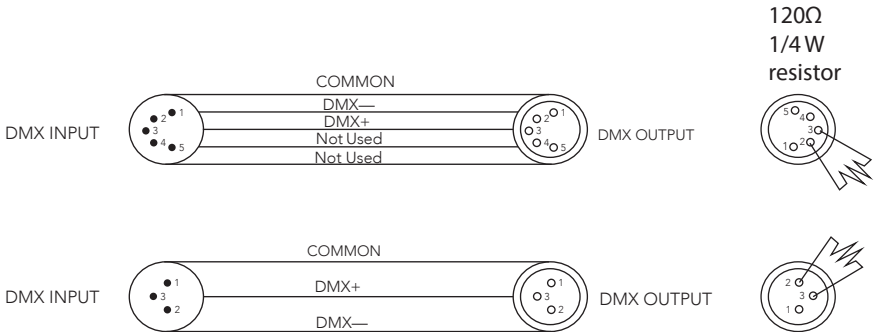- Zoom
- All

ADVANCED MENU

Enter access code (default: 1234) to calibrate physical offsets of the pan, tilt, zoom, and to adjust individual red, green, blue and white LED output to achieve proper white balance.
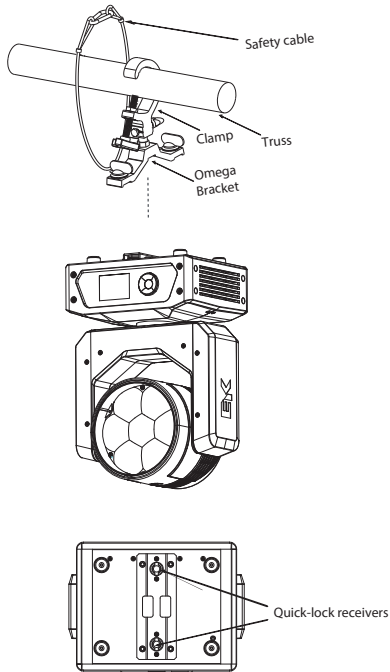
DMX CABLE PIN-OUTS and TERMINATION

Depending on the length of the DMX cable run, or other factors, it may be advisable to install a terminator at the last fixture in the run.

The illustration below shows the correct placement of a 120Ω 0.25W resistor in a terminator, as well as the standard DMX signal pin-outs.

120Ω
1/4 W
resistor

DMX INPUT   COMMON   DMX OUTPUT
                         DMX—
                         DMX+
                         Not Used
                         Not Used

DMX INPUT   COMMON   DMX OUTPUT
                         DMX+
                         DMX—

INSTALLATION

Safety cable

Clamp   Truss

Omega
Bracket

Quick-lock receivers

WARNING! Before carrying out any operations with the unit, carefully read this instruction manual and keep it with cure for future reference. It contains important information about the installation, usage and maintenance of the unit.

SAFETY

General instruction

· The products referred to in this manual conform to the European Community Directives and are therefore marked with CE.
· The unit is supplied with hazardous network voltage (230V~). Leave servicing to skilled personnel only. Never make any modifications on the unit not described in this instruction manual, otherwise you will risk an electric shock.
· Connection must be made to a power supply system fitted with efficient earthing (Class I appliance according to standard EN 60598-1). It is, moreover, recommended to protect the supply lines of the units from indirect contact and/or shorting to earth by using appropriately sized residual current devices.
· The connection to the main network of electric distribution must be carried out by a qualified electrical installer. Check that the main frequency and voltage correspond to those for which the unit is designed as given on the electrical data label.
· This unit is not for home use, only professional applications.
· Never use the fixture under the following conditions:
  - in places subject to vibrations or bumps;
  - in places with a temperature of over 40 ℃.
· Make certain that no inflammable liquids, water or metal objects enter the fixture.
· Do not dismantle or modify the fixture.
· All work must always be carried out by qualified technical personnel. Contact the nearest sales point for an inspection or contact the manufacturer directly.
· If the unit is to be put out of operation definitively, take it to a local recycling plant for a disposal which is not harmful to the environment.

Warnings and installation precautions

· If this device will be operated in any way different to the one described in this manual, it may suffer damage and the guarantee becomes void. Furthermore, any other operation may lead to dangers like short circuit, burns, electric shock, etc.
· Before starting any maintenance work or cleaning the projector, cut off power from the main supply.
· Always additionally secure the projector with the safety rope. When carrying out any work, always comply scrupulously with all the regulations (particularly regarding safety) currently in force in the country in which the fixture's being used.
· Install the fixture in a well ventilated place.
· Keep any inflammable material at a safe distance from the fixture.
· Shields, lenses or ultraviolet screens shall be changed if they have become damaged to such an extent that their effectiveness is impaired.
· The lamp (LED) shall be changed if it has become damaged or thermally deformed.
· Never look directly at the light beam. Please note that fast changes in lighting, e. g. flashing light, may trigger epileptic seizures in photosensitive persons or persons with epilepsy.
· Do not touch the product's housing when operating because it may be very hot.

- 1.2 - MAINTENANCE

MAINTENANCE AND CLEANING THE UNIT
*   Make sure the area below the installation place is free from unwanted persons during setup.
*   Switch off the unit, unplug the main cable and wait until the unit has cooled down.
*   All screws used for installing the device and any of its parts should be tightly fastened and should not be corroded.
*   Housings, fixations and installation spots (ceiling, trusses, suspensions) should be totally free from any deformation.
*   The main cables must be in impeccable condition and should be replaced immediately even when a small problem is detected.
*   It is recommended to clean the front at regular intervals, from impurities caused by dust, smoke, or other particles to ensure that the light is radiated at maximum brightness. For cleaning, disconnect the main plug from the socket. Use a soft, clean cloth moistened with a mild detergent. Then carefully wipe the part dry. For cleaning other housing parts use only a soft, clean cloth. Never use a liquid, it might penetrate the unit and cause damage to it.

TROUBLESHOOTING

Problems	Possible causes	Checks and remedies
Fixture does not light up	• No mains supply • Dimmer fader set to 0 • All color faders set to 0 • Faulty LED • Faulty LED board	• Check the power supply voltage • Increase the value of the dimmer channels • Increase the value of the color channels • Replace the LED board • Replace the LED board
General low light intensity	• Dirty lens assembly • Misaligned lens assembly	• Clean the fixture regularly • Install lens assembly properly
Fixture does not power up	• No power • Loose or damaged power cord • Faulty internal power supply	• Check for power on power outlet • Check power cord • Replace internal power supply
Fixture does not respond to DMX	• Wrong DMX addressing • Damaged DMX cables • Bouncing signals	• Check control panel and unit addressing • Check DMX cables • Install terminator as suggested

Contact an authorized service center in case of technical problems or not reported in the table can not be resolved by the procedure given in the table.