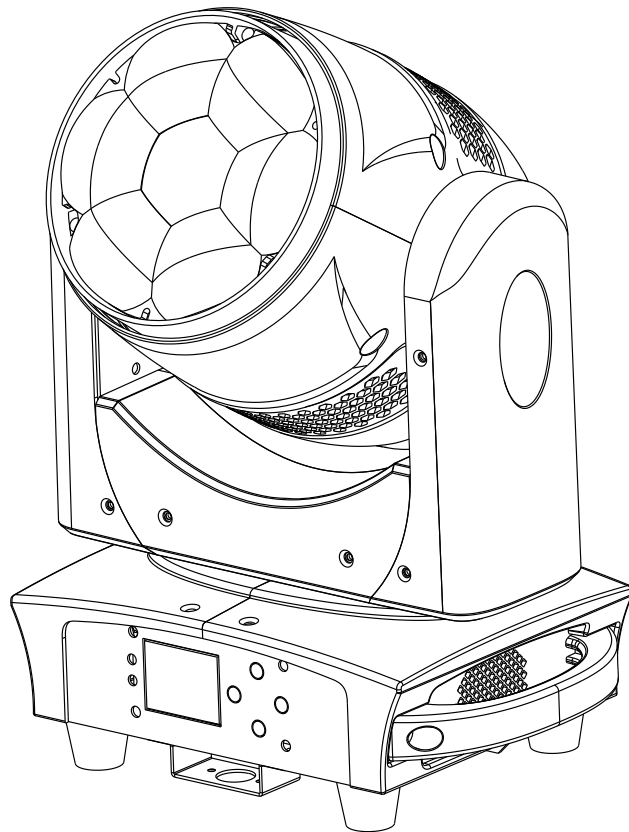# INTRUDER

ENGLISH
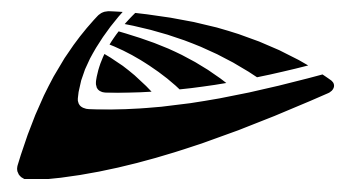## Operation Manual

Other languages can be downloaded from:
WWW.JB-SYSTEMS.EU

CE

Version: 1.0

JBSYSTEMS

EN - DISPOSAL OF THE DEVICE

Dispose of the unit and used batteries in an environment friendly manner according to your country regulations.

FR - DÉCLASSER L'APPAREIL

Débarrassez-vous de l'appareil et des piles usagées de manière écologique Conformément aux dispositions légales de votre pays.

NL - VERWIJDEREN VAN HET APPARAAT

Verwijder het toestel en de gebruikte batterijen op een milieuvriendelijke manier conform de in uw land geldende voorschriften.

DU - ENTSORGUNG DES GERÄTS

Entsorgen Sie das Gerät und die Batterien auf umweltfreundliche Art und Weise gemäß den Vorschriften Ihres Landes.

ES - DESHACERSE DEL APARATO

Reciclar el aparato y pilas usadas de forma ecologica conforme a las disposiciones legales de su pais.

PT - COMO DESFAZER-SE DA UNIDADE

Tente reciclar a unidade e as pilhas usadas respeitando o ambiente e em conformidade com as normas vigentes no seu país.

OPERATION MANUAL

Thank you for buying this JB Systems® product. To take full advantage of all possibilities and for your own safety, please read these operating instructions very carefully before you start using this unit.

FEATURES

- Powerful but extremely compact moving wash equipped with 7x40W RGBW LEDs
- Very fast pan and tilt movements
- 5-50° zoom controlled by DMX
- 0-100% dimming and different strobe effects.
- Silent operation even at full output.
- Excellent built-in programs for wonderful, ever-changing, light shows.
- Multiple working modes:
  - DMX-control: via 7, 11, 16 or 21 channels
  - Standalone: automatic and sound activated with internal mic
  - Master/slave: Wonderful synchronized shows in standalone mode
- Prepared for wireless DMX: just plug-in an optional WTR-DMX DONGLE ! (Briteq® order code: B04645)
- The 40W RGBW LEDs are driven at 30W for excellent cooling and long-lasting performance of the LEDs.
- Color LCD-display for easy menu navigation
- 3p XLR connectors for DMX in- and output.
- PowerCon® compatible power in- and output

BEFORE USE

- Before you start using this unit, please check if there's no transportation damage. Should there be any, do not use the device and consult your dealer first.
- **Important:** This device left our factory in perfect condition and well packaged. It is absolutely necessary for the user to strictly follow the safety instructions and warnings in this user manual. Any damage caused by mishandling is not subject to warranty. The dealer will not accept responsibility for any resulting defects or problems caused by disregarding this user manual.
- Keep this booklet in a safe place for future consultation. If you sell the fixture, be sure to add this user manual.

Check the contents:
Check that the carton contains the following items:
- INTRUDER unit
- 1 Omega-bracket
- Power cable with Lockable Power Connector
- Operating instructions

SAFETY INSTRUCTIONS:

CAUTION: To reduce the risk of electric shock, do not remove the top cover. No user-serviceable parts inside. Refer servicing to qualified service personnel only.

The lightning flash with arrowhead symbol within the equilateral triangle is intended to alert the use or the presence of un-insulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock.

The exclamation point within the equilateral triangle is intended to alert the user to the presence of important operation and maintenance (servicing) instructions in the literature accompanying this appliance.

This symbol means: indoor use only

This symbol means: Read instructions

CAUTION: Do not stare at operating lamp.
May be harmful to the eyes.

- To protect the environment, please try to recycle the packing material as much as possible.
- To prevent fire or shock hazard, do not expose this appliance to rain or moisture.
- To avoid condensation to be formed inside, allow the unit to adapt to the surrounding temperatures when bringing it into a warm room after transport. Condense sometimes prevents the unit from working at full performance or may even cause damages.
- This unit is for indoor use only.
- Don't place metal objects or spill liquid inside the unit. Electric shock or malfunction may result. If a foreign object enters the unit, immediately disconnect the mains power.
- Locate the fixture in a well ventilated spot, away from any flammable materials and/or liquids. The fixture must be fixed at least 50cm from surrounding walls.
- Don't cover any ventilation openings as this may result in overheating.
- Prevent use in dusty environments and clean the unit regularly.
- Keep the unit away from children.
- Inexperienced persons should not operate this device.
- Maximum safe ambient temperature is 40°C. Don't use this unit at higher ambient temperatures.
- Make sure the area below the installation place is free from unwanted persons during rigging, de-rigging and servicing.
- Allow the device about 10 minutes to cool down before to start servicing.
- Always unplug the unit when it is not used for a longer time or before to start servicing.
- The electrical installation should be carried out by qualified personal only, according to the regulations for electrical and mechanical safety in your country.
- Check that the available voltage is not higher than the one stated on the unit.
- The power cord should always be in perfect condition. Switch the unit immediately off when the power cord is squashed or damaged. It must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
- Never let the power-cord come into contact with other cables!
- This fixture must be earthed in order to comply with safety regulations.
- Don't connect the unit to any dimmer pack.
- Always use an appropriate and certified safety cable when installing the unit.
- In order to prevent electric shock, do not open the cover. There are no user serviceable parts inside.
- **Never** repair a fuse or bypass the fuse holder. **Always** replace a damaged fuse with a fuse of the same type and electrical specifications!
- In the event of serious operating problems, stop using the fixture and contact your dealer immediately.
- The housing and the lenses must be replaced if they are visibly damaged.
- Please use the original packing when the device is to be transported.
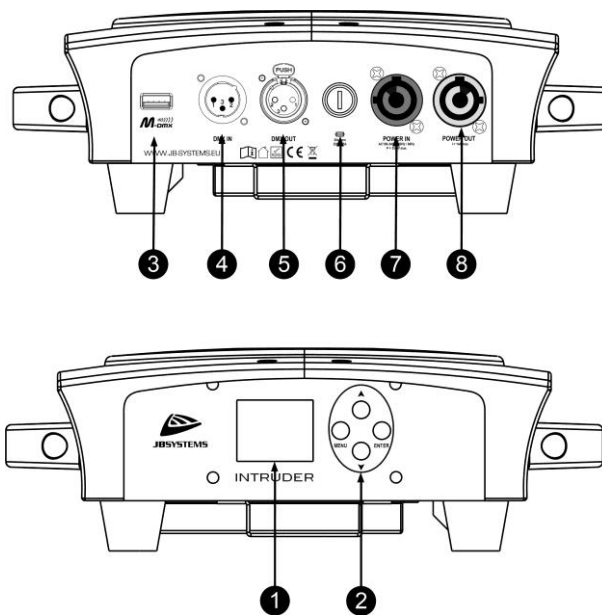- Due to safety reasons it is prohibited to make unauthorized modifications to the unit.

Important: Never look directly into the light source! Don't use the effect in the presence of persons suffering from epilepsy.

OVERHEAD RIGGING

- **Important:** **The installation must be carried out by qualified service personal only. Improper installation can result in serious injuries and/or damage to property. Overhead rigging requires extensive experience! Working load limits should be respected, certified installation materials should be used, the installed device should be inspected regularly for safety.**
- Make sure the area below the installation place is free from unwanted persons during rigging, de-rigging and servicing.
- Locate the fixture in a well-ventilated spot, far away from any flammable materials and/or liquids. The fixture must be fixed **at least 50cm** from surrounding walls.
- The device should be installed out of reach of people and outside areas where persons may walk by or be seated.
- Before rigging make sure that the installation area can hold a minimum point load of 10times the device's weight.
- Always use a certified safety cable that can hold 12 times the weight of the device when installing the unit. This secondary safety attachment should be installed in a way that no part of the installation can drop more than 20cm if the main attachment fails.
- The device should be well fixed; a free-swinging mounting is dangerous and may not be considered!
- Don't cover any ventilation openings as this may result in overheating.
- The operator has to make sure that the safety-relating and machine-technical installations are approved by an expert before using them for the first time. The installations should be inspected every year by a skilled person to be sure that safety is still optimal.

HOW TO SET UP THE UNIT
FRONT + BACK PANEL:

1. **DISPLAY:** shows the information on the different modes and functions.
2. **DISPLAY MODE BUTTONS:**
   - ▼ button : press this button to go down in the menu
   - ▲ button : press this button to go up in the menu
   - **ENTER:** press this button to confirm the selected function in the menu
   - **MENU:** press this button to go back to the main menu or to leave submenus.
3. **M-DMX INPUT:** Please note that this USB-connector is NOT used for updates or to connect the unit to a PC! Instead this USB-connector makes it very easy to add wireless DMX to the unit! Just add the (optional) WTR-DMX DONGLE from BRITEQ® and you will get wireless DMX! Moreover you will be able to connect other DMX-controlled equipment to the DMX-output so you can share the wireless DMX function with all connected units! No extra settings to be made in the setup menu, just follow the procedure in the user manual supplied with the WTR-DMX DONGLE from BRITEQ®. *The separate WTR-DMX DONGLE is available from WWW.BRITEQ-LIGHTING.COM (order code: B04645)*

4. **DMX IN:** 3p XLR Male connector receive DMX data from a console or use in Master/slave mode.
5. **DMX OUT:** 3p XLR Female connector to connect other projectors or use in Master/slave mode.
6. **FUSE HOLDER**
7. **POWER IN:** Connect the mains input cable here.
8. **POWER OUT:** used to daisy chain the power to several other fixtures. Always pay attention to the maximum load while adding fixtures! Special combi cables (power + DMX XLR-cables) are available: see our website!

SETUP MENU:

- This is the list of all the functions in the machine.
- To select any of these functions, press the MENU button and use the ▲/▼ buttons to browse the menu.
- Select the desired function with the ENTER button.
- Use ▲/▼ buttons to change the mode or value.
- Once the required mode or value is selected, press the ENTER button to select.

Level 1	Level 2	Level 3	Remarks
DMX address	000-512		
Fixture	DMX Mode	STD/HSI/EXT/EASY	
	Run Mode	DMX/Manual/Sound/Master	
	Pan Invert	OFF/ON	
	Tilt invert	OFF/ON	
	No Signal	BO/Freeze	
	Dim Curve	Linear/S-curve/Exp1,5/Exp2,0	
	Sensitivity	0--99	
Manual	Pan	0-255	
	Pan fine	0-255	
	Tilt	0-255	
	tilt fine	0-255	
	…		
Display	Display Flip	OFF / ON	
	Display Mode	60s / Show	
Information	Time	Current time	
		Total time	
	Error	Pan	
		Tilt	
		Zoom	
		Temp	
		Fan	
	Temperature	Head temp	
	Software version	Panel	
Factory	Password	000 - 255	Password = 122
	Pan	000 - 255	
	Tilt	000 - 255	
	Zoom	000 - 255	
	Rotate	000 - 255	
	Red	000 - 255	
	Green	000 - 255	
	Blue	000 - 255	
	White	000 - 255	
Reset	All reset	Off/Reset	
	Factory	Off/Reset	

DMX Address
Used to set the desired DMX-address.
- Press the MENU button to access the different functions in the menu.
- Press the ▲/▼ buttons until the desired function is showing on the display.
- Press the ENTER button: the values can be changed
- Use ▲/▼ buttons to select the desired DMX512 address.
- Once the correct address shows on the display, press the ENTER button to confirm.

Fixture > DMX Mode
Used to set the desired channel mode.
- Press the MENU button to access the different functions in the menu.
- Press the ▲/▼ buttons until the desired function is showing on the display.
- Press the ENTER button: the values can be changed
- Use ▲/▼ buttons to select the desired mode:
  - **Easy:** A very compact 7CH mode.
  - **HSI:** Basic HSI controlled mode
  - **STD:** Standard 8-bit mode
  - **EXT:** Extended 16-bit mode
- Once the correct option shows on the display, press the ENTER button to confirm.

Fixture > Run Mode
Used to set the desired run mode.
- Press the MENU button to access the different functions in the menu.
- Press the ▲/▼ buttons until the desired function is showing on the display.
- Press the ENTER button: the values can be changed
- Use ▲/▼ buttons to select the desired mode:
  - **DMX:** enables the control through DMX.
  - **Manual:** set the wash to a fixed position.
  - **Sound:** activates sound controlled effects
  - **Master:** activates master mode
- Once the correct option shows on the display, press the ENTER button to confirm.

Fixture > Pan Invert
Used to select if the PAN movements are inverted or not.
- Press the MENU button to access the different functions in the menu.
- Press the ▲/▼ buttons until the desired function is showing on the display.
- Press the ENTER button: the values can be changed
- Use ▲/▼ buttons to toggle between No and Yes.
- Press the ENTER button to confirm.

Fixture > Tilt Invert
Used to select if the TILT movements are inverted or not.
- Press the MENU button to access the different functions in the menu.
- Press the ▲/▼ buttons until the desired function is showing on the display.
- Press the ENTER button: the values can be changed
- Use ▲/▼ buttons to toggle between No and Yes.
- Press the ENTER button to confirm.

Fixture > No signal
Used to set how the projector reacts when the DMX-signal disappears.
- Press the MENU button to access the different functions in the menu.
- Press the ▲/▼ buttons until the desired function is showing on the display.
- Press the ENTER button: the values can be changed
- Use ▲/▼ buttons to select the desired mode:
  - **Freeze:** output based on the last valid DMX-signal is kept on the projector.
  - **BO:** output turns black while no DMX is detected.
- Once the correct option shows on the display, press the ENTER button to confirm.

Note: as soon as the input detects a DMX-signal, blackout, freeze or audio mode will be cancelled.

Fixture > Dim Curve
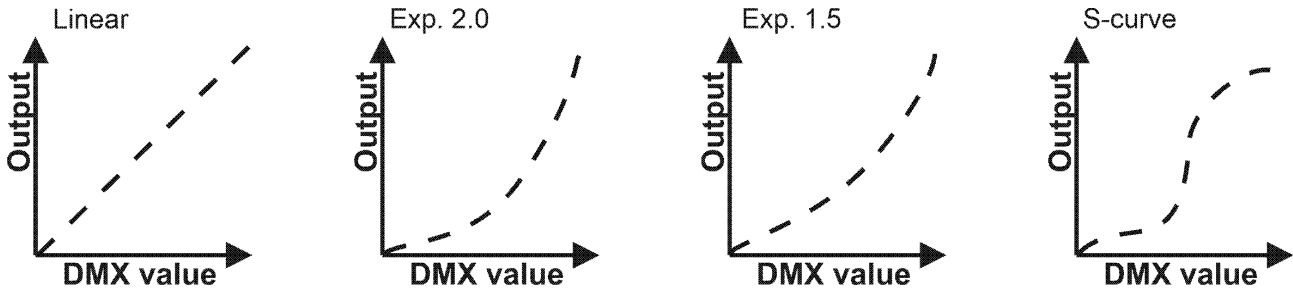**Used to set the dimmer curve of the master dimmer.**
- Press the MENU button to access the different functions in the menu.
- Press the ▲/▼ buttons until the desired function is showing on the display.
- Press the ENTER button: the values can be changed
- Use ▲/▼ buttons to selected the desired curve:

- Once you have the desired curve, press the ENTER button to save it.

Fixture > Sensitivity
- **Used to adjust the sensitivity of the build in microphone.**
- Press the MENU button to access the different functions in the menu.
- Press the ▲/▼ buttons until the desired function is showing on the display.
- Press the ENTER button: the values can be changed
- Use the ▼/▲ buttons to choose a value between "000" (very low sensitivity) and "100" (high sensitivity).
- Press the ENTER button to confirm the desired sensitivity.

Manual
Used to test or set all functions one by one manually.
- Press the MENU button to access the different functions in the menu.
- Press the ▲/▼ buttons until the desired function is showing on the display.
- Press the ENTER button. A list with all the functions will appear.
- Press the ▲/▼ buttons to select the function you want to test.
- Press the ENTER button to confirm.
- Press the ▲/▼ buttons to change the value for testing.
- Press the MENU button to stop the program.

Display > Display Flip
Used to flip the display to match the fixture mounting
- Press the MENU button to access the different functions in the menu.
- Press the ▲/▼ buttons until the desired function is showing on the display.
- Press the ENTER button: the values can be changed
- Use ▲/▼ buttons to toggle between ON and OFF.
- Press the ENTER button to confirm.

Display > Display Mode
Used to set the display ON time.
- Press the MENU button to access the different functions in the menu.
- Press the ▲/▼ buttons until the desired function is showing on the display.
- Press the ENTER button: the values can be changed
- Use ▲/▼ buttons to select the desired mode:
  - **60s:** Display turns off after 60s
  - **Show:** Display stays on
- Once the correct option shows on the display, press the ENTER button to confirm.

Information > Time
Used to check the working hours of the fixture.
- Press the MENU button to access the different functions in the menu.
- Press the ▲/▼ buttons until the desired function is showing on the display.
- Press the ENTER button
  - **Current Time:** Shows the working time since power on
  - **Total Time:** Shows the total on time
- Once the correct option shows on the display, press the ENTER button to confirm.

Information > Error
Used to check faulty sensors.
- Press the MENU button to access the different functions in the menu.
- Press the ▲/▼ buttons until the desired function is showing on the display.
- Press the ENTER button to view if errors are present.

Information > Temperature
Used to the head temperature sensor.
- Press the MENU button to access the different functions in the menu.
- Press the ▲/▼ buttons until the desired function is showing on the display.
- Press the ENTER button to view the head temperature.

Information > Software Version
Shows the current firmware version in the projector.
- Press the MENU button to access the different functions in the menu.
- Press the ▲/▼ buttons until the desired function is showing on the display.
- Press the ENTER button: the display shows the firmware versions of the main board

Factory
Used to adjust the factory calibration
- Press the MENU button to access the different functions in the menu.
- Press the ▲/▼ buttons until the desired function is showing on the display.
- Press the ENTER button
- Press the ▲/▼ buttons to enter the password:122
- Press the ENTER button to confirm
- Use the ▲/▼ buttons, to navigate, the values can now be changed

Reset > All Reset
Used to reset all the functions of the projector.
- Press the MENU button to access the different functions in the menu.
- Press the ▲/▼ buttons until the desired function is showing on the display.
- Press the ENTER button: select the All Reset option
  - **Off:** No reset is performed
  - **Run:** Run the reset function

Reset > Factory
Used to reset all the settings of the projector to factory settings.
- Press the MENU button to access the different functions in the menu.
- Press the ▲/▼ buttons until the desired function is showing on the display.
- Press the ENTER button: select the All Reset option
  - **Off:** No reset is performed
  - **Run:** reset the device
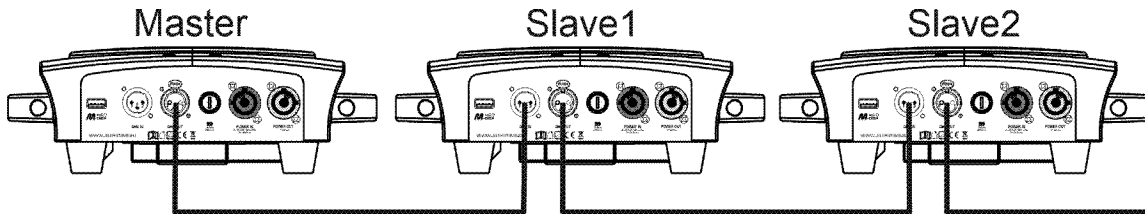
ELECTRICAL INSTALLATION + ADDRESSING

⚠ **Important:** **The electrical installation should be carried out by qualified personal only, according to the regulations for electrical and mechanical safety in your country.**

Electrical installation for 1 standalone unit:
● Just insert the mains cable. The unit starts working immediately in stand-alone mode.

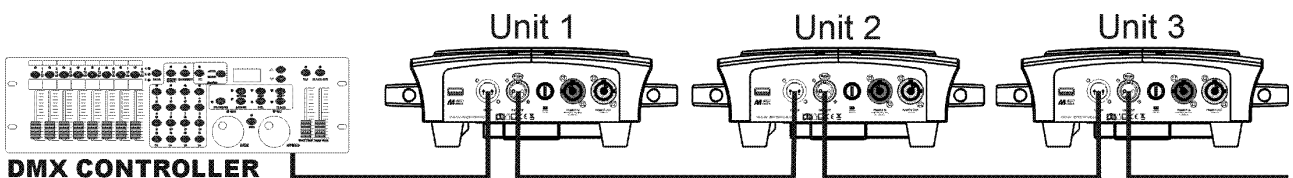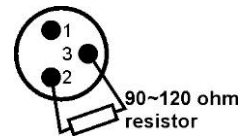**Electrical installation for two or more units in master/slave:**
In this mode the units will show a synchronized show, working to the rhythm of the beat.

● Connect 2 to maximum 16 units together using good quality balanced microphone cables. Put the first unit in the chain in master mode (see Setup menu) and the other units as slaves (see Setup menu).
● Make sure that all units are connected to the mains.
● Done!

Electrical installation in DMX-mode:
● The DMX-protocol is a widely used high speed signal to control intelligent light equipment. You need to "daisy chain" your DMX controller and all the connected units with a good quality balanced cable.
● Both XLR-3pin and XLR-5pin connectors are used, however XLR-3pin is more popular because these cables are compatible with balanced audio cables.
   Pin layout XLR-3pin: Pin1 = GND ~ Pin2 = Negative signal (-) ~ Pin3 = Positive signal (+)
● To prevent strange behavior of the light effects, due to interferences, you must use a 90Ω to 120Ω terminator at the end of the chain. Never use Y-splitter cables, this simply won't work!
● Make sure that all units are connected to the mains.
● Each light effect in the chain needs to have its proper starting address so it knows which commands from the controller it has to decode. In the next section you will learn how to set the DMX addresses.

HOW TO SET THE RIGHT STARTING ADDRESS:
Refer to the setup menu to learn how to set the starting address on this unit. The starting address of each unit is very important. Unfortunately it is impossible to tell you in this user manual which starting addresses you have to set because this completely depends on the controller you will use, the number of fixtures and their number of DMX channel they use.

DMX-CONFIGURATION OF THE INTRUDERIN 7, 11, 16 AND 21CH MODE:

EASY	STD	EXT	HSI	Function		Value	
1	-	-	-	PAN	000-255	*CH7 is set to 000-005*	
2	-	-	-	TILT	000-255	*CH7 is set to 000-005*	
3	-	-	-	Dimmer (0 - 100%)	000-255		
4	-	-	-	open	000-004		
	-	-	-	Normal strobe slow to fast	005-125		
	-	-	-	open	126-134		
	-	-	-	Random strobe slow to fast	135-255		

				Name	Range	Description
	-	-	-		000-005	White
					006-097	COLOR index
5	-	-	-	Color	098-148	Color fade (slow to fast)
	-	-	-		149-199	Color changing (slow to fast)
	-	-	-		200-255	Color changing sound
6	-	-	-	Zoom	000-255	*small → large*
	-	-	-		000-005	MANUAL PAN/TILT (CH1 + CH2 are active)
7	-	-	-	P/T Macros	006-010	PAN/TILT HOLD (Freeze)
	-	-	-		011-249	Random PAN/TILT movement speed
	-	-	-		250-255	Random PAN/TILT sound control
-	**1**	**1**	**1**	Pan	000-255	
-	**2**	**2**	**2**	Pan fine	000-255	
-	**3**	**3**	**3**	Tilt	000-255	
-	**4**	**4**	**4**	Tilt fine	000-255	
-	**5**	**5**	**5**	PT speed	000-255	
-	**6**	**6**	**6**	Dimmer	000-255	
-	-	**7**	-	Dimmer fine	000-255	
					000-003	Closed
					004-010	Open
					011-103	Strobe slow to fast
					104-107	Open
-	**7**	**8**	**7**	Strobe	108-207	Pulse strobe slow to fast
					208-212	Open
					213-225	Random strobe slow
					226-238	Random strobe Medium
					239-251	Random strobe Fast
					252-255	Open
-	**8**	**9**	-	Red	000-255	
-	-	**10**	-	Red fine	000-255	
-	**9**	**11**	-	Green	000-255	
-	-	**12**	-	Green fine	000-255	
-	**10**	**13**	-	Blue	000-255	
-	-	**14**	-	Blue fine	000-255	
-	**11**	**15**	-	White	000-255	
-	-	**16**	-	White fine	000-255	
-	-	-	**8**	Hue	000-255	
-	-	-	**9**	Saturation	000-255	
					000-009	No Function
					010-050	1800K
					051-091	3200K
-	**12**	**17**	-	CCT	092-132	4000K
					133-173	5600K
					174-214	6500K
					215-255	8000K
-	**13**	**18**	**10**	Zoom	000-255	
					000	No function
					001-025	Color pulse
-	**14**	**19**	-	effect	026-051	Color chase
					052-077	Color fade
					078-103	Red wave

					104-129	Green wave
					130-155	Blue wave
					156-181	Yellow wave
					182-207	Magenta wave
					208-233	Cyan wave
					234-255	White wave
-	15	20	-	effect speed	000-255	
-	16	21	11	Control	000-009	No function
					010-127	Auto program
					128-229	Motor reset (after 5s)
					230-255	Sound mode

MAINTENANCE

- Make sure the area below the installation place is free from unwanted persons during servicing.
- Switch off the unit, unplug the mains cable and wait until the unit is cooled down.

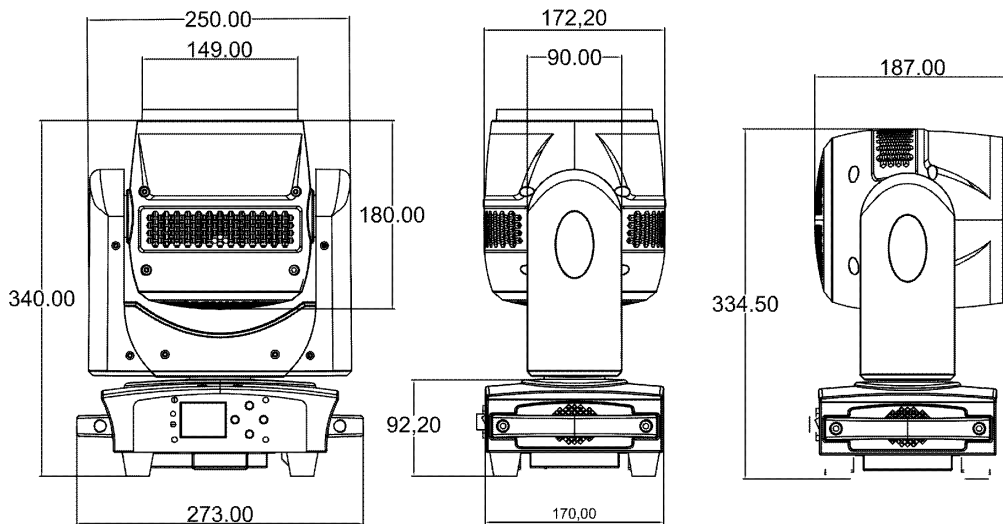**During inspection the following points should be checked:**

- All screws used for installing the device and any of its parts should be tightly fastened and may not be corroded.
- Housings, fixations and installations spots (ceiling, truss, suspensions) should be totally free from any deformation.
- When an optical lens is visibly damaged due to cracks or deep scratches, it must be replaced.
- The mains cables must be in impeccable condition and should be replaced immediately when even a small problem is detected.
- In order to protect the device from overheat the cooling fans (if any) and ventilation openings should be cleaned monthly.
- The interior of the device should be cleaned annually using a vacuum cleaner or air-jet.
- The cleaning of internal and external optical lenses and/or mirrors must be carried out periodically to optimize light output. Cleaning frequency depends on the environment in which the fixture operates: damp, smoky or particularly dirty surroundings can cause greater accumulation of dirt on the unit's optics.
  - Clean with a soft cloth using normal glass cleaning products.
  - Always dry the parts carefully.
  - Clean the external optics at least once every 30 days.
  - Clean the internal optics at least every 90 days.

Attention: We strongly recommend internal cleaning to be carried out by qualified personnel!
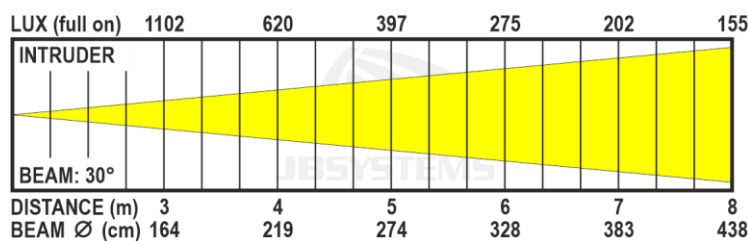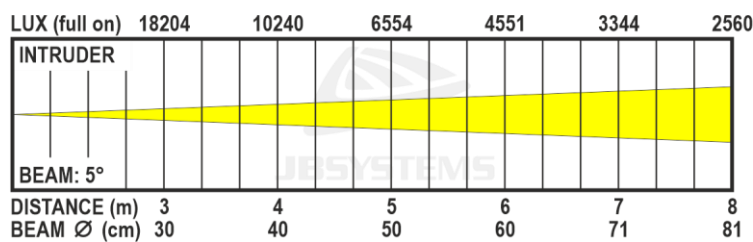
SPECIFICATIONS

This device carries the prescribed CE marking. It was tested for this purpose in a specialized CE lab and fully complies with all currently valid European and national standards. The corresponding CE conformity declarations can be found on the product page of this product on our website.

Mains Input:	AC 100 - 240V, 50/60Hz
Power consumption:	280 Watt (max)
Fuse:	250V 5A Slow blow (20mm glass)
Power connections:	Lockable Power Connector - 10A (Neutrik PowerCon® compatible)
DMX connections:	3pin-XLR male / female
DMX channels used:	7ch, 11ch, 16ch and 21ch
Lamp:	7 x 40W RGBW 4in1 LED
IP-Rating:	IP20
Pan movement:	540°
Tilt movement:	270°
Beam Angle:	5° to 30° (beam angle) / 10° to 50° (field angle)
Operating temperature (T$_a$):	0°C to 40°C
Size:	17.2 x 25 x 34cm (LxBxH)
Weight:	6.05 kg

Lux charts:

LUX (full on)	18204	10240	6554	4551	3344	2560
BEAM: 5°						
DISTANCE (m)	3	4	5	6	7	8
BEAM Ø (cm)	30	40	50	60	71	81

LUX (full on)	1102	620	397	275	202	155
BEAM: 30°						
DISTANCE (m)	3	4	5	6	7	8
BEAM Ø (cm)	164	219	274	328	383	438

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