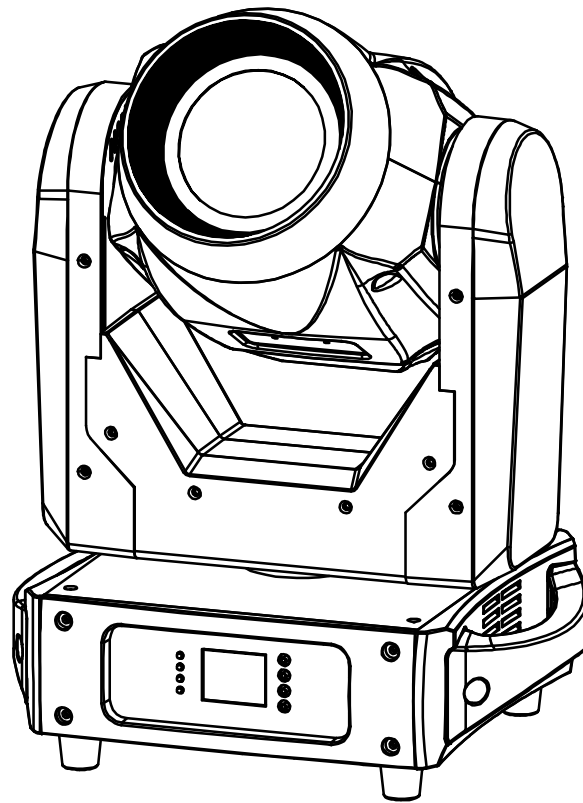


# CHALLENGER BSW

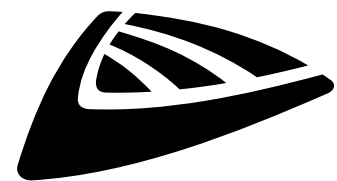


## ENGLISH Operation Manual

Other languages can be downloaded from:  
[WWW.JB-SYSTEMS.EU](http://WWW.JB-SYSTEMS.EU)



*Version: 1.0*



**JB SYSTEMS**



### **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 país.

### **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

- 3in1 LED Moving Head – Beam/Spot/Wash
- Ideal for rental companies, DJ's, stage,...
- Based on a 150W high power LED
- Focus controlled by DMX
- Zoom controlled by DMX
- 3 facet rotating prism
- 0-100% dimming and different strobe effects
- Separate gobo wheel with 7 fixed gobos + open
- Separate gobo wheel with 6 rotating gobo's + open (diameter gobo 21,8mm – pattern max. 19mm)
- Color wheel with 8 colors + open
- Excellent built-in programs for wonderful, ever changing, light shows.
- Multiple working modes:
  - DMX-control: via 5, 17 or 20 channels
  - Standalone: sound activated with internal mic
  - Master/slave:
    - Wonderful synchronized shows in standalone mode
    - Innovative 5CH SMART-DMX
- Prepared for wireless DMX: just plug-in an optional WTR-DMX DONGLE ! (Briteq® order code: B04645)
- Color LCD-display for easy menu navigation
- 3p and 5p XLR connectors for DMX 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:

- [CHALLENGER BSW] unit
- 2 Omega-brackets
- ProCon-power cable
- Operating instructions

## SAFETY INSTRUCTIONS:



**CAUTION**  
RISK OF ELECTRIC SHOCK  
DO NOT OPEN



**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 user 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

**RISK GROUP 2**  
**CAUTION:**  
Do not stare at operating lamp

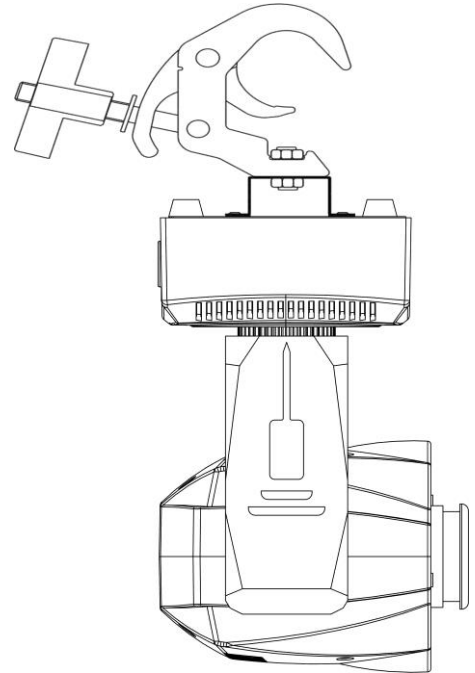
**CAUTION:** Do not stare at operating lamp.  
May be harmful to the eyes.

- 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.

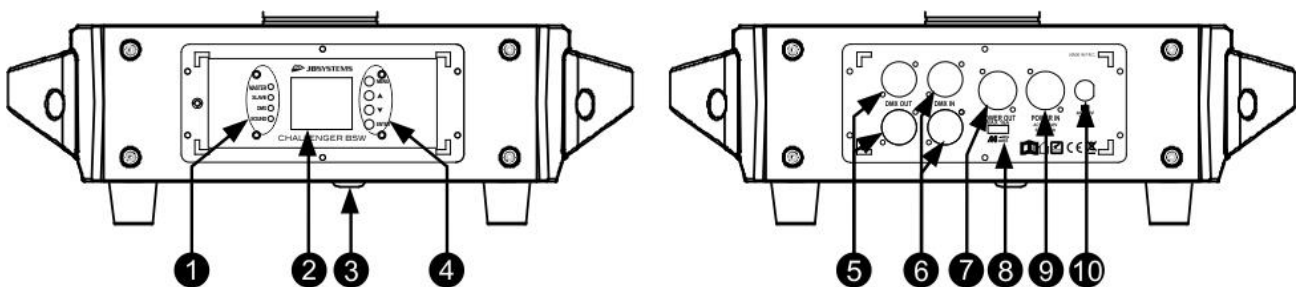
**Important:** Never look directly into the light source! Don't use the effect in the presence of persons suffering from epilepsy.

## 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. Indicator LEDs [MASTER-SLAVE-DMX-SOUND]
2. **[DISPLAY]:** shows the information on the different modes and functions.
3. Microphone for sound mode.
4. **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.
5. **[DMX OUT]:** 3p and 5p XLR Female connector to connect other projectors or use in Master/slave mode.
6. **[DMX IN]:** 3p and 5p XLR Male connector receive DMX data from a console or use in Master/slave mode.
7. **[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!

- 8. **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)*
- 9. **[POWER IN]:** Connect the mains input cable here.
- 10. **FUSE HOLDER**

**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
DMX Functions	DMX Address	001 - xxx
	DMX Channel	5MSL
		17CH
		20CH
	No DMX	Sound
		Freeze
		Blackout
	View DMX Value	1. Pan
		2. Pan Fine
		3. Tilt
		4. Tilt Fine
		5. P/T Speed
		6. Show Mode
		7. P/T Macro
		8. P/T Macro Speed
		9. Color
		10.Gobo1
		11.Gobo2
		12.RGobo2
		13.Focus
14.Prism		
15.Rprism		
16.Zoom		
17.Shutter		
18.Dimmer		
19.Dimmer Fine		
20.Special Function		
Show Settings	Show Chase	show 1
		show 2
		show 3

		show 4
	Slave Mode	Slave1
		Slave2
	Sound Trigger	on
		off
	Sound Sense	000-100
Fixture Settings	Pan Inverse	No
		Yes
	Tilt Inverse	No
		Yes
	P/T Feedback	No
		Yes
	Dimmer Curve	Linear
		Square
		Inv SQ
		S Curve
Dimmer Speed	Fast	
	Smooth	
Show Focus	5m	
	10m	
	25m	
Display Settings	Display Inverse	No
		Yes
	Backlight Switch	Off
		On
Backlight Intensity	001-010	
Temperature Unit	°C	
	°F	
Fixture Test	Auto Test	
	Manual Test	1. Pan
		2. Pan Fine
		3. Tilt
		4. Tilt Fine
		5. P/T Speed
		6. Show Mode
		7. P/T Macro
		8. P/T Macro Speed
		9. Color
		10.Gobo1
		11.Gobo2
		12.RGobo2
		13.Focus
		14.Prism
		15.Rprism
16.Zoom		

		17.Shutter
		18.Dimmer
		19.Dimmer Fine
		20.Special Function
Fixture Information	Fixture use time	
	Firmware Version	A.V10 B.V10 C.V10
Reset	Pan/Tilt	No
		Yes
	Effect	No
		Yes
	All	No
		Yes
Special Function	Factory Setting	No
		Yes
	Password	000-999

**[DMX Functions > 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.

**[DMX Functions > DMX Channel]**

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:
  - **5MSL mode:** [PAN/TILT] are music controlled while the dimmer, strobe speed, gobos, colors & [PAN/TILT] –speed can be set using only 5 DMX channels.
  - **17 CH mode:** same as the 20CH mode but without Pan/Tilt/Dim Fine adjustment possibility.
  - **20 CH mode:** Full DMX-control on all functions.
- Once the correct option shows on the display, press the [ENTER] button to confirm.

**[DMX Functions > No DMX]**

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:
  - **Sound:** the projector starts working in audio mode.
  - **Freeze:** output based on the last valid DMX-signal is kept on the projector.
  - **Blackout:** 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.*

**[DMX Functions > View DMX Value]**

Shows the value of each function of the fixture on every moment. Used for problem solving.

- Press the [MENU] button to access the different functions in the menu.
- Press the ▲/▼ buttons until the desired function is showing on the display.



**[Show Settings > Show Chase]**

Used to select the installation position of the projector while used in standalone 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 to select the desired show mode.
  - [show 1]
  - [show 2]
  - [show 3]
  - [show 4]
- Once the right mode is shown on the display, press the [ENTER] button to confirm.

**[Show Settings > Slave Mode]**

Used to make the slave unit work in opposite to the master or to work in complete sync.

- 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:
  - **Slave 1:** the slave operates in complete sync with the master.
  - **Slave 2:** the slave operates in the opposite mode as compared with the master.
- Once the correct option shows on the display, press the [ENTER] button to confirm.

**[Show Settings > Sound Trigger]**

Used to make the unit work in audio 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:

**[Show Settings > Sound Sense]**

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.

**[Fixture Settings > Pan Inverse]**

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 Settings > Tilt Inverse]**

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 Settings > P/T Feedback]**

This function corrects the PAN/TILT positions automatically if someone bumps onto the machine.

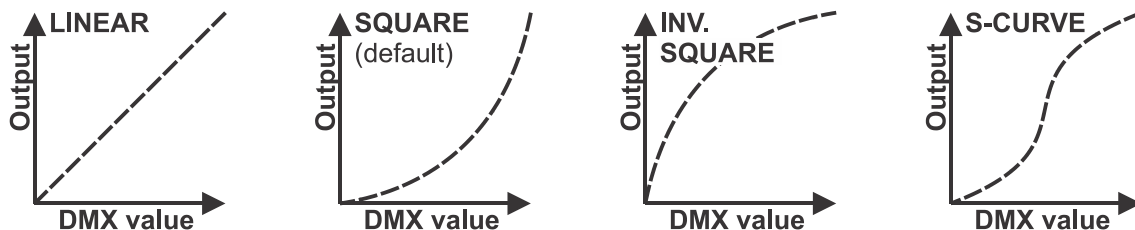
- Press the [MENU] button to access the different functions in the menu.
- Press the ▲/▼ buttons until the desired function is showing on the display.
- Press the [ENTER] button: the values can be changed

- Use ▲/▼ buttons to toggle between [No] and [Yes].
- Press the [ENTER] button to confirm.

### [Fixture Settings > Dimmer 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 Settings > Dimmer Speed]

Used to set the dimmer speed 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 speed can be changed to [Fast] or [Smooth].
- Use ▲/▼ buttons to selected the desired dimming speed.
- Press the [ENTER] button to confirm.

### [Fixture Settings > Show Focus]

Used to set the focus for a fixed distance. (works only in Show 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: you can select 5m, 10 or 25m distance.
- Use ▲/▼ buttons to selected the desired dimming speed.
- Press the [ENTER] button to confirm.

### [Display Settings > Display Inverse]

Used to turn the display over 180°. [Yes] = display is upsidedown.

- 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 can be turned by selecting [Yes] or [No].
- Use ▲/▼ buttons to select the desired display position.
- Press the [ENTER] button to confirm.

### [Display Settings > Backlight Switch]

Used to adjust whether the display stays lit or not after the last time it was used.

- 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 Backlight Switch can be turned [On] or [Off].
- Use ▲/▼ buttons to select [On] (display backlight will turn off after 30s) or [Off] (display stays lit).
- Press the [ENTER] button to confirm.

### [Display Settings > Backlight Intensity]

Used to set the brightness of the backlight.

- 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 brightness of the backlight can be set from 000 to 010.
- Use ▲/▼ buttons to select the desired value.
- Press the [ENTER] button to confirm.

**[Display Settings > Temperature Unit]**

Used to set the temperature measurement in °C or °F.

- 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 temperature can be set in °C or °F.
- Use ▲/▼ buttons to select the desired temperature measurement.
- Press the [ENTER] button to confirm.

**[Fixture Test > Auto Test]**

Used to start the automatic test function: all functions will be tested.

- 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 projector starts an automatic AUTOTEST program until you stop it.
- Press the [MENU] button to stop the program.

**[Fixture Test > Manual Test]**

Used to test 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.

**[Fixture Information > Fixture use time]**

Used to show the number of hours the fixture has been used.

- 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 will show the used time.
- Press the [MENU] button to stop the program.

**[Fixture Information > Firmware 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 different processors in the projector: A-Vxx, B-Vxx, C-3xx

**Note:** The firmware of this unit can be upgraded using the [Firmware Updater] (order code : B04319) from Briteq with Windows® software.

**[Reset > Pan/Tilt]**

Used to reset the Pan and Tilt 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: the display shows [Pan/Tilt]
- Press the [ENTER] button again to start resetting [Pan/Tilt] functions.

**[Reset > Effect]**

Used to reset the effect 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: the display shows [Effect]
- Press the [ENTER] button again to start resetting the effect functions.

**[Reset > All]**

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: the display shows [ALL]
- Press the [ENTER] button again to start resetting ALL functions.

**[Special Function > Factory Setting]**

Used to reset the functions of the projector to the 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: the display shows [Special Function>Factory Setting].
- Press the [ENTER] button again to select [No] or [Yes].

**[Special Function > Password]**

Used to reset the effect 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: the display shows [Special Function>Password]
- Press the [ENTER] button to set a password (from 000 to 999).

## MOTOR OFFSET MENU

This is a hidden menu where you can fine-tune the offset of several functions. To access this menu do as follows: press the [ENTER] button for about 2 seconds while you are in the [MAIN Menu] (any option, not important). Now the [Motor Offset] menu shows up:

The home position from the following functions can be adjusted (between -128 and 127) :

- [Pan]
- [Tilt]
- [Color]
- [Gobo2]
- [RGobo2]
- [Gobo1]
- [Prism]
- [RPrism]
- [Focus]
- [Zoom]

- Press the ▲/▼ buttons until the desired function is showing on the display.
- Press the [ENTER] button to select the desired function to adjust.
- Press the ▲/▼ buttons until the desired function is showing on the display.
- Press the [ENTER] button to confirm the value.

## ELECTRICAL INSTALLATION + ADDRESSING



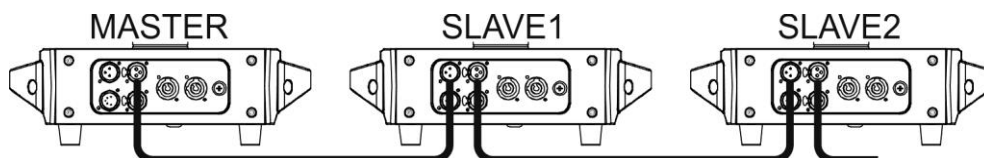
**Important:** The electrical installation should be carried out by qualified personal only, according to the regulations for electrical and mechanical safety in your country.

### 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:

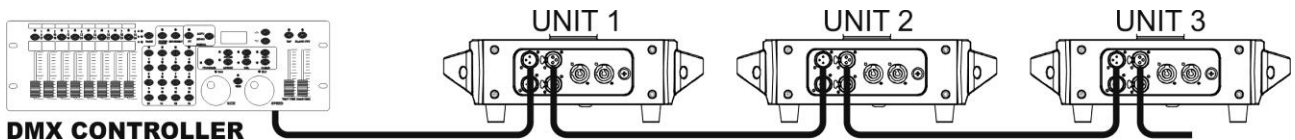
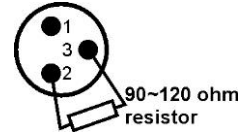
In this mode the units will show a synchronized show, working to the rhythm of the beat.



- 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 [CHALLENGER BSW] IN 5, 17 AND 20CH MODE:**

**5 CHANNEL MODE :**

DMX Channel	DMX-value	function	remarks
1	000-255	Dimmer (0 - 100%)	
2	000-007	Open	
	008-037	Random strobe	
	038-067	Sound strobe	
	068-255	Strobe	<b>Strobe (slow -&gt; fast)</b>
3	000-007	White	
	008-037	Red	
	038-067	Orange	
	068-097	Yellow	
	098-127	Green	
	128-157	Blue (dark)	
	158-187	Magenta	
	188-217	Cyan	
	218-247	Pink	
248-255	Original colors		
4	000-007	No gobo	

	008-037	Gobo 1	
	038-067	Gobo 2	
	068-097	Gobo 3	
	098-127	Gobo 4	
	128-157	Gobo 5	
	158-187	Gobo 6	
	188-217	Gobo 7	
	218-247	Gobo 8	
	248-255	Original gobos	
<b>5</b>	000-007	HOLD (Freeze)	
	008-255	Pan/Tilt sound control	

**17 CHANNEL MODE :**

<b>DMX Channel</b>	<b>DMX-value</b>	<b>function</b>	<b>remarks</b>
<b>1</b>	000-255	Pan	
<b>2</b>	000-255	Tilt	
<b>3</b>	000-255	Pan/Tilt Speed	<b>Fast -&gt; slow</b>
<b>4</b>	000-015	No function	
	016-063	Show 1	
	064-127	Show 2	
	128-191	Show 3	
	192-255	Show 4	
<b>5</b>	000-007	No function	<b>PAN/TILT Macro's</b>
	008-015	Macro 1	
	016-023	Macro 2	
	024-031	Macro 3	
	032-039	Macro 4	
	040-047	Macro 5	
	048-055	Macro 6	
	056-063	Macro 7	
	064-071	Macro 8	
	072-079	Macro 9	
	080-087	Macro 10	
	088-095	Macro 11	
	096-103	Macro 12	
	104-111	Macro 13	
	112-119	Macro 14	
	120-127	Macro 15	
	128-135	Macro 16	
	136-143	Macro 17	
	144-151	Macro 18	
	152-159	Macro 19	
	160-167	Macro 20	
168-175	Macro 21		

	176-183	Macro 22	
	184-191	Macro 23	
	192-199	Macro 24	
	200-207	Macro 25	
	208-215	Macro 26	
	216-223	Macro 27	
	224-231	Macro 28	
	232-239	Macro 29	
	240-247	Macro 30	
	248-255	Macro 31	
<b>6</b>	000-255	Speed Pan/Tilt Macro	<b>Fast -&gt; slow</b>
<b>7</b>	000-015	White	
	016-018	Red/White	
	019-021	Red	
	022-024	Orange/Red	
	025-027	Orange	
	028-030	Yellow/Orange	
	031-033	Yellow	
	034-036	Green/Yellow	
	037-039	Green	
	040-042	Blue (Dark)/Green	
	043-045	Blue (Dark)	
	046-048	Magenta/Blue (Dark)	
	049-051	Magenta	
	052-054	Blue (Light)/Magenta	
	055-057	Blue (Light)	
	058-060	Pink/Blue (Light)	
	061-063	Pink	
	064-127	Positioning colors	<b>Step by step</b>
	128-189	Rainbow effect	<b>CCW (Fast-&gt;slow)</b>
190-193	Stop		
194-255	Rainbow effect	<b>CW (Slow-&gt;fast)</b>	
<b>8</b>	000-007	Open	<b>Fixed gobos</b>
	008-015	Gobo 1	<b>Very narrow beam</b>
	016-023	Gobo 2	<b>Narrow beam</b>
	024-031	Gobo 3	<b>Medium beam</b>
	032-039	Gobo 4	<b>Large beam</b>
	040-047	Gobo 5	<b>Wide beam</b>
	048-055	Gobo 6	
	056-062	Gobo 7	
	063-127	Gobo 1-7 shaking	
	128-190	Gobo wheel rotation	<b>CCW (Fast-&gt;slow)</b>
	191-192		<b>Stop</b>
	193-255	Gobo wheel rotation	<b>CW (Slow-&gt;fast)</b>
<b>9</b>	000-008	Open	<b>Rotating gobos</b>

	009-017	Gobo 1	
	018-026	Gobo 2	
	027-035	Gobo3	
	036-044	Gobo 4	
	045-053	Gobo 5	
	054-063	Gobo 6	
	064-127	Gobo 1-6 shaking	
	128-190		<b>CCW (Fast-&gt;slow)</b>
	191-192		<b>Stop</b>
	193-255		<b>CW (Slow-&gt;fast)</b>
<b>10</b>	000-127	Gobo rotation	<b>Step by step</b>
	128-190		<b>CW (Fast-&gt;slow)</b>
	191-192		<b>Stop</b>
	193-255		<b>CCW (Slow-&gt;fast)</b>
<b>11</b>	000-063	Beam	
	064	Medium spot	
	065-127	Spot	
	128-255	Wash	
<b>12</b>	000-009	No function	
	010-255	Prism	
<b>13</b>	000-127	Prism rotating	<b>Step by step</b>
	128-190		<b>CCW (Fast-&gt;slow)</b>
	191-192		<b>Stop</b>
	193-255		<b>CW (Slow-&gt;fast)</b>
<b>14</b>	000-255	Focus	
<b>15</b>	000-007	Shutter/strobe off	
	008-015	ON	
	016-131	Strobe	<b>Slow-&gt;fast</b>
	132-139	Open	
	140-181	Open/close	<b>Slow-&gt;fast</b>
	182-189	Open	
	190-231	Close/open	<b>Slow-&gt;fast</b>
	232-239	Open	
	240-247	Random strobe	
	248-255	Open	
<b>16</b>	000-255	Dimmer (0-100%)	
<b>17</b>	000-069	No function	<b>Special functions</b>
	070-079	Pan/Tilt	Blackout enabled
	080-089	Pan/Tilt	Blackout disabled
	090-099	Color changing	Blackout enabled
	100-109	Color changing	Blackout disabled
	110-119	Gobo changing	Blackout enabled
	120-129	Gobo changing	Blackout disabled
	130-139	No function	
	140-149	Pan/Tilt RESET	



	150-159	Effect RESET	
	160-199	No function	
	200-209	RESET all functions	
	210-219	Pan/Tilt/Color/Gobo	Blackout enabled
	220-229	Pan/Tilt/Color/Gobo	Blackout disabled
	230-255	No function	

**20 CHANNEL MODE :**

<b>DMX Channel</b>	<b>DMX-value</b>	<b>function</b>	<b>remarks</b>
<b>1</b>	000-255	Pan	
<b>2</b>	000-255	Pan fine	
<b>3</b>	000-255	Tilt	
<b>4</b>	000-255	Tilt fine	
<b>5</b>	000-255	Pan/Tilt Speed	<b>Fast -&gt; slow</b>
<b>6</b>	000-015	No function	
	016-063	Show 1	
	064-127	Show 2	
	128-191	Show 3	
	192-255	Show 4	
<b>7</b>	000-007	No function	<b>PAN/TILT Macro's</b>
	008-015	Macro 1	
	016-023	Macro 2	
	024-031	Macro 3	
	032-039	Macro 4	
	040-047	Macro 5	
	048-055	Macro 6	
	056-063	Macro 7	
	064-071	Macro 8	
	072-079	Macro 9	
	080-087	Macro 10	
	088-095	Macro 11	
	096-103	Macro 12	
	104-111	Macro 13	
	112-119	Macro 14	
	120-127	Macro 15	
	128-135	Macro 16	
	136-143	Macro 17	
	144-151	Macro 18	
	152-159	Macro 19	
	160-167	Macro 20	
	168-175	Macro 21	
	176-183	Macro 22	
	184-191	Macro 23	
192-199	Macro 24		

	200-207	Macro 25	
	208-215	Macro 26	
	216-223	Macro 27	
	224-231	Macro 28	
	232-239	Macro 29	
	240-247	Macro 30	
	248-255	Macro 31	
<b>8</b>	000-255	Speed Pan/Tilt Macro	<b>Fast -&gt; slow</b>
<b>9</b>	000-015	White	
	016-018	Red/White	
	019-021	Red	
	022-024	Orange/Red	
	025-027	Orange	
	028-030	Yellow/Orange	
	031-033	Yellow	
	034-036	Green/Yellow	
	037-039	Green	
	040-042	Blue (Dark)/Green	
	043-045	Blue (Dark)	
	046-048	Magenta/Blue (Dark)	
	049-051	Magenta	
	052-054	Blue (Light)/Magenta	
	055-057	Blue (Light)	
	058-060	Pink/Blue (Light)	
	061-063	Pink	
	064-127	Positioning colors	<b>Step by step</b>
	128-189	Rainbow effect	<b>CCW (Fast-&gt;slow)</b>
190-193	Stop		
194-255	Rainbow effect	<b>CW (Slow-&gt;fast)</b>	
<b>10</b>	000-007	Open	<b>Fixed gobos</b>
	008-015	Gobo 1	<b>Very narrow beam</b>
	016-023	Gobo 2	<b>Narrow beam</b>
	024-031	Gobo 3	<b>Medium beam</b>
	032-039	Gobo 4	<b>Large beam</b>
	040-047	Gobo 5	<b>Wide beam</b>
	048-055	Gobo 6	
	056-062	Gobo 7	
	063-127	Gobo 1-7 shaking	
	128-190	Gobo wheel rotation	<b>CCW (Fast-&gt;slow)</b>
	191-192		<b>Stop</b>
	193-255	Gobo wheel rotation	<b>CW (Slow-&gt;fast)</b>
<b>11</b>	000-008	Open	<b>Rotating gobos</b>
	009-017	Gobo 1	
	018-026	Gobo 2	
	027-035	Gobo3	

	036-044	Gobo 4	
	045-053	Gobo 5	
	054-063	Gobo 6	
	064-127	Gobo 1-6 shaking	
	128-190		<b>CCW (Fast-&gt;slow)</b>
	191-192		<b>Stop</b>
	193-255		<b>CW (Slow-&gt;fast)</b>
<b>12</b>	000-127	Gobo rotation	<b>Step by step</b>
	128-190		<b>CW (Fast-&gt;slow)</b>
	191-192		<b>Stop</b>
	193-255		<b>CCW (Slow-&gt;fast)</b>
<b>13</b>	000-063	Beam	
	64	Medium spot	
	065-127	Spot	
	128-255	Wash	
<b>14</b>	000-009	No function	
	010-255	Prism	
<b>15</b>	000-127	Prism rotating	<b>Step by step</b>
	128-190		<b>CCW (Fast-&gt;slow)</b>
	191-192		<b>Stop</b>
	193-255		<b>CW (Slow-&gt;fast)</b>
<b>16</b>	000-255	Focus	
<b>17</b>	000-007	Shutter/strobe off	
	008-015	ON	
	016-131	Strobe	<b>Slow-&gt;fast</b>
	132-139	Open	
	140-181	Open/close	<b>Slow-&gt;fast</b>
	182-189	Open	
	190-231	Close/open	<b>Slow-&gt;fast</b>
	232-239	Open	
	240-247	Random strobe	
	248-255	Open	
<b>18</b>	000-255	Dimmer (0-100%)	
<b>19</b>	000-255	Dimmer fine	
<b>20</b>	000-069	No function	<b>Special functions</b>
	070-079	Pan/Tilt	Blackout enabled
	080-089	Pan/Tilt	Blackout disabled
	090-099	Color changing	Blackout enabled
	100-109	Color changing	Blackout disabled
	110-119	Gobo changing	Blackout enabled
	120-129	Gobo changing	Blackout disabled
	130-139	No function	
	140-149	Pan/Tilt RESET	
	150-159	Effect RESET	
	160-199	No function	

	200-209	RESET all functions	
	210-219	Pan/Tilt/Color/Gobo	Blackout enabled
	220-229	Pan/Tilt/Color/Gobo	Blackout disabled
	230-255	No function	

**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:**

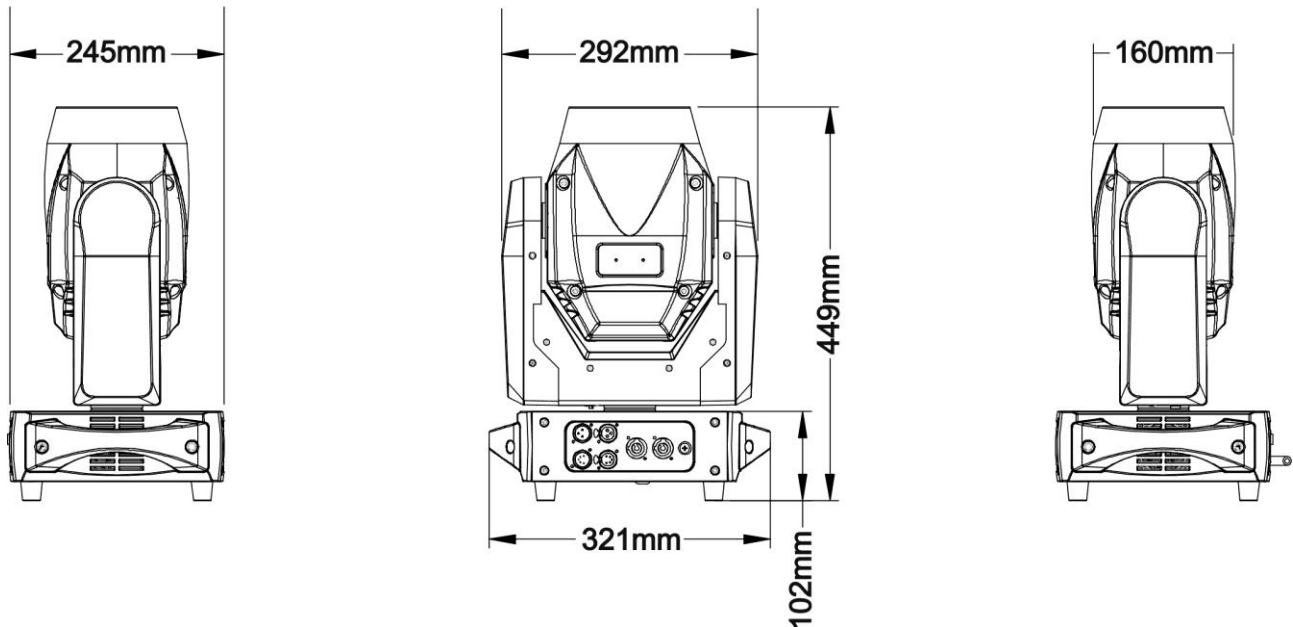
- All screws used for installing the device and any of its parts should be tightly fastened and may not be corroded.
- Housings, fixations and installations spots (ceiling, truss, suspensions) should be totally free from any deformation.
- When an optical lens is visibly damaged due to cracks or deep 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 unit is radio-interference suppressed. This product meets the requirements of the current European and national guidelines. Conformity has been established and the relevant statements and documents have been deposited by the manufacturer.

<b>Mains Input:</b>	AC 100 - 240V, 50/60Hz
<b>Power consumption:</b>	189 Watt (max)
<b>Fuse:</b>	250V 5A Slow blow (20mm glass)
<b>Power connections:</b>	ProCon - 10A
<b>DMX connections:</b>	Neutrik 3pin-XLR and 5pin-XLR male / female
<b>DMX channels used:</b>	5ch, 17ch, 20ch
<b>Lamp:</b>	150W LED Engine
<b>Color wheel:</b>	8 colors + open
<b>Gobo wheel:</b>	7 fixed gobos + open
<b>Rotating Gobo wheel:</b>	6 rotating gobos + open
<b>IP-Rating:</b>	IP20
<b>Operating temperature (T<sub>a</sub>):</b>	0°C to 40°C
<b>Size:</b>	45,2x29x25,6cm (LxBxH)
<b>Weight:</b>	12 kg



Every information is subject to change without prior notice  
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**JB SYSTEMS**

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