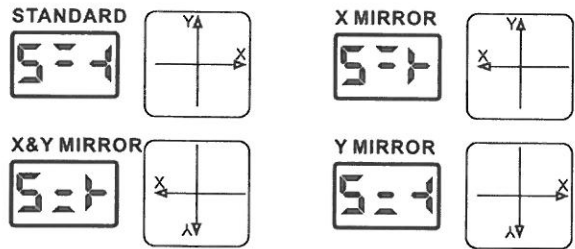


## GENERAL SETTINGS

### Pattern X/Y mirror control setup:

- Press the FUNC-button until the display shows one of the 4 displays on the right.
- Press the UP / DOWN buttons to choose one of the four mirror options:
- Press the ENTER-button to confirm your choice.



### MUSIC INPUT SENSITIVITY:

The unit can work to rhythm of the beat when used in sound activated mode  
To set the input sensitivity, follow these steps:

- Press the FUNC-button until the display shows "S 0" ... "S 9"
- Press the ENTER-button to confirm your choice.
- Use DOWN and UP button to select a value between "S 0" (very low sensitivity) and "S 9" (high sensitivity).
- Once the mode is selected, press the ENTER button save it.

## You can operate the unit in 5 ways:

### #1 STANDALONE:

The laser automatically runs a preprogrammed sequence. Select this mode when only 1 laser is used (standalone) or when the laser is placed as the first (master) unit in a chain with several LASERS.

- Press the FUNC-button until the display shows one of the following: Soo, Son, SoL, Sob, S3d, Sou, Auo, Aun, AuL, Aub, or A3d.
- Now use the UP or DOWN buttons to select one of the options (see chart below). You have the choice between automatic programs (Auo, Aun, AuL, Aub, A3d) or sound controlled programs (Soo, Son, SoL, Sob, S3d, Sou)
- Press the ENTER-button to confirm your choice.

The laser automatically runs a preprogrammed sequence.

You can connect several SPECTRA 3DLASERS together: just put the first unit of the chain in one of the automatic effect modes and all other units in "Slave mode" (display shows "SLA") to make them all work in perfect sync!

DISPLAY	STAND ALONE MODE PREPROGRAM EFFECT
AUT	Automatic Random Show of the 5 Effects
A3d	Laser 3D Effect Auto Show
AUB	Scanned Beam Effect Auto Show
AUL	Laser Lumia Effect Auto Show
AUN	Burst Grating Effect Auto Show
AUO	Laser Universal Effect Auto Show
Sou	Sound Activated Random Show of the 5 Effects
S3d	Sound Activated Show of the 3D effect
Sob	Sound Activated Show of the Scanned Beam Effect
SoL	Sound Activated Show of the Laser Lumia Effect
Son	Sound Activated Show of the Burst Grating Effect
Soo	Sound Activated Show of the Laser Universal Effect

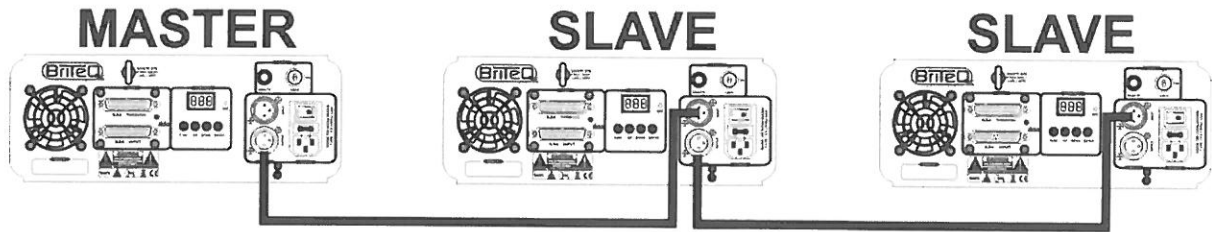
**#2 MASTER / SLAVE MODE:**

You can connect several SPECTRA 3DLASERS together: just put the first unit of the chain in one of the standalone effect modes (see #1Standalone)and all other units in "Slave mode" (display shows "SLA") to make them all work in perfect sync!

The "slave" lasers follow the instructions given by the first Spectra 3D laser (master) in the chain.

Settings for the slave units:

- Connect the DMX input of the laser to the DMX output of the previous laser in the chain.
- Press the FUNC-button until the display shows "SLA"
- Press the ENTER-button to confirm your choice.

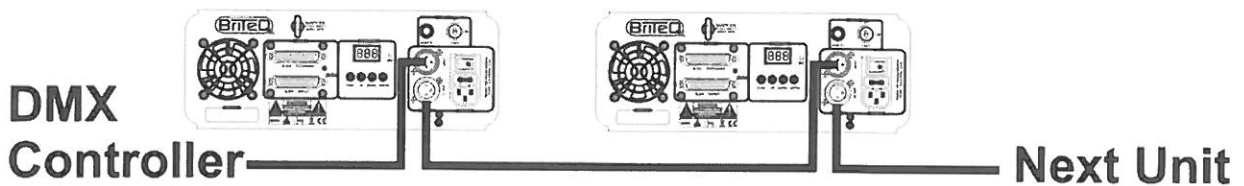


**#3 DMX512 MODE:**

The laser can be controlled by any standard DMX-controller in 3 different DMX-modes:

- **1 CHANNEL MODE:** for extremely easy setup and use! (display shows "1Ch")
- **2 CHANNEL MODE:** for extremely easy setup and use! (display shows "2Ch")
- **19 CHANNEL MODE:** for full control of all possibilities. (display shows "19h")
- Connect the DMX input of the laser to the DMX output of the previous unit in the chain or directly to the DMX-output of your controller.
- Press the FUNC-button until the display shows: "1Ch", "2Ch" or "19h".
- Press the UP/DOWN buttons to select the DMX-mode. (1Ch, 2Ch or 19ch)
- Press the ENTER-button to confirm your choice.
- Press the FUNC-button: the 3 digit number on the display starts blinking.
- Press the UP/DOWN buttons to select the DMX-address
- Press the ENTER-button to confirm your choice.

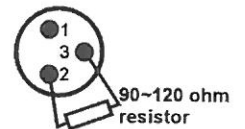
**Note:** the display blinks when the unit is in DMX-mode and no DMX-signal is detected.



**Some more information on DMX512:**

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 light effects with a good quality XLR M/F balanced cable. 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!

Each effect in the chain needs to have its proper starting address so it knows which commands from the controller it has to decode.



**DMX Channels Chart When ILDA is NOT connected**

**1-CHANNEL DMX-CONFIGURATION (ILDA IS NOT CONNECTED):**

CHANNEL	VALUE	FUNCTION
CH 1 MODE	000-018	Laser OFF ①
	019-036	AUT Auto Show with Mixed 5 effect
	037-054	A3D Laser 3D Effect Auto Show
	055-072	AUB Scanned Beam Effect Auto Show
	073-090	AUL Laser Lumia Effect Auto Show
	091-108	AUN Burst Grating Effect Auto Show
	109-126	AUO Laser Universal Effect Auto Show
	127-144	SOU Sound Show with Mixed 5 Effect
	145-162	S3D Sound show with LASER 3D
	163-180	SOB Sound show with Scanned Beam
	181-198	SOL Sound show with LASER LUMIA
	199-216	SON Sound show with Burst Grating
	217-234	SOO Sound show with Laser Universal
	235-255	SOU Sound Show with Mixed 5 Effect


**2-CHANNEL DMX-CONFIGURATION (ILDA IS NOT CONNECTED):**







CHANNEL	VALUE	FUNCTION
CH 1 MODE	000-018	Laser OFF ①
	019-036	AUT Auto Show with Mixed 5 effect
	037-054	A3D Laser 3D Effect Auto Show
	055-072	AUB Scanned Beam Effect Auto Show
	073-090	AUL Laser Lumia Effect Auto Show
	091-108	AUN Burst Grating Effect Auto Show
	109-126	AUO Laser Universal Effect Auto Show
	127-144	SOU Sound Show with Mixed 5 Effect
	145-162	S3D Sound show with LASER 3D
	163-180	SOB Sound show with Scanned Beam
	181-198	SOL Sound show with LASER LUMIA
	199-216	SON Sound show with Burst Grating
	217-234	SOO Sound show with Laser Universal
	235-255	AUT Auto Show with Mixed 5 effect
CH2	000-234	Slow to Fast
	235-255	ORIGINAL SPEED

**19 CHANNEL DMX-CONFIGURATION (ILDA IS NOT CONNECTED):**

**IMPORTANT REMARK:** DMX Channel1 is used to set the different working modes of the laser.

- To use the laser in full 19 channel mode, channel 1 must be set to value 235 or higher.
- Depending on the DMX-values of channel1, different mode can be applied:

CHANNEL	VALUE	FUNCTION
CH 1 MODE	000-018	Laser OFF ⊕
	019-036	AUT Auto Show with Mixed 5 effect
	037-054	A3D Laser 3D Effect Auto Show
	055-072	AUB Scanned Beam Effect Auto Show
	073-090	AUL Laser Lumia Effect Auto Show
	091-108	AUN Burst Grating Effect Auto Show
	109-126	AUO Laser Universal Effect Auto Show
	127-144	SOU Sound Show with Mixed 5 Effect
	145-162	S3D Sound show with LASER 3D
	163-180	SOB Sound show with Scanned Beam
	181-198	SOL Sound show with LASER LUMIA
	199-216	SON Sound show with Burst Grating
	217-234	SOO Sound show with Laser Universal
	235-255	DMX MODE
CH 2 GROUP	000-051	1 Group Patterns.
	052-103	2 Group Patterns
	104-155	3 Group Patterns
	156-207	4 Group Patterns
	208-255	5 Group Patterns
CH 3 PATTERN	000-255	Every 16 for 1 Group, total 16 patterns.
CH 4 COLOR	000-007	Original
	008-015	Red
	016-023	Green
	024-031	Yellow
	032-039	Blue
	040-047	Purple
	048-055	Light Blue
	056-063	White
	064-111	Color Rolling
	112-159	Color Jumping
	160-127	Color Moving
	208-255	Strobing 

<b>CH 5 CLIPPING</b>	000	Full pattern without clipping
	001-127	0%~99% fixed pattern clipped
	128-255	Clipping Speed 
<b>CH 6 ZOOMING</b>	000-127	100%-5% fixed pattern zoomed
	128-169	Zooming IN
	170-209	Zooming OUT
	210-255	Alternately Zooming
<b>CH 7 ZOOM SPEED</b>	000-255	Fast to Slow 
<b>CH 8 Y AXIS ROLLING</b>	000-127	0 -359 degree fixed Y axis rolled
	128-191	Clockwise rolling
	192-255	Anticlockwise rolling
<b>CH 9 ROLL SPEED</b>	0-255	Fast to Slow 
<b>CH 10 X AXIS ROLLING</b>	000-127	0 -359 degree fixed X axis rolled
	128-191	Clockwise rolling
	192-255	Anticlockwise rolling
<b>CH 11 ROLL SPEED</b>	0-255	Fast to Slow 
<b>CH 12 Z AXIS ROLLING</b>	000-127	0 -359 degree fixed Z axis rolled
	128-191	Clockwise rolling
	192-255	Anticlockwise rolling
<b>CH 13 ROLL SPEED</b>	0-255	Fast to Slow 
<b>CH 14 Y AXIS MOVING</b>	000-127	128 different fixed position on X axis
	128-191	Clockwise moving
	192-255	Anticlockwise moving
<b>CH 15 MOVE SPEED</b>	0-255	Fast to Slow 
<b>CH 16 X AXIS MOVING</b>	000-127	128 different fixed position on Y axis
	128-191	Clockwise moving
	192-255	Anticlockwise moving
<b>CH 17 MOVE SPEED</b>	0-255	Fast to Slow
<b>CH18 Grating Rotation</b>	000-004	No grating rotating
	005-127	Clockwise grating rotating
	128-133	No grating rotating
	134-255	Anticlockwise grating rotating

<b>CH19 Grating Effect</b>	000-031	Laser 3D Effect
	032-063	Scanned Beam Effect (Pattern Effect)
	064-095	Laser Lumia Effect
	096-127	Scanned Beam Effect (Pattern Effect)
	128-159	Burst Grating Effect
	160-191	Scanned Beam Effect (Pattern Effect)
	192-223	Laser Universal Effect
	224-255	Scanned Beam Effect (Pattern Effect)

Pattern list

DMX	1	2	3	4	5
000-015					
016-031					
032-047					
048-063					
064-079					
080-095					
096-111					
112-127					
128-143					
144-159					
160-175					
176-191					
192-207					
208-223					
224-239					
240-255					

**DMX Channels Chart When ILDA is connected**

CHANNEL	VALUE	DESCRIPTION
<b>CH1 Grating Rotation</b>	000-004	No grating rotating
	005-127	Clockwise grating rotating
	128-133	No grating rotating
	134-255	Anticlockwise grating rotating
<b>CH2 Grating Effect</b>	000-031	Laser 3D Effect
	032-063	Scanned Beam Effect (Pattern Effect)
	064-095	Laser Lumia Effect
	096-127	Scanned Beam Effect (Pattern Effect)
	128-159	Burst Grating Effect
	160-191	Scanned Beam Effect (Pattern Effect)
	192-223	Laser Universal Effect
	224-255	Scanned Beam Effect (Pattern Effect)

**#4 ILDA CONTROL:**

This laser can be controlled by any PC equipped with ILDA compatible software + hardware. As soon as the ILDA-input (17) of the laser is connected with an ILDA compatible controller, it will automatically switch to ILDA control mode. From this moment on the laser will be completely controlled by the ILDA software: the possibilities of the ILDA software will determine what you can do or not...

ILDA soft- and hardware are available from several independent suppliers. Some possible choices are:

- PHOENIX software ([www.bocatec.de](http://www.bocatec.de))
- PANGOLIN software ([www.pangolin.com](http://www.pangolin.com))
- And many other, up to you and your finances to see what is best for your needs ...

**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 has been cooled down.

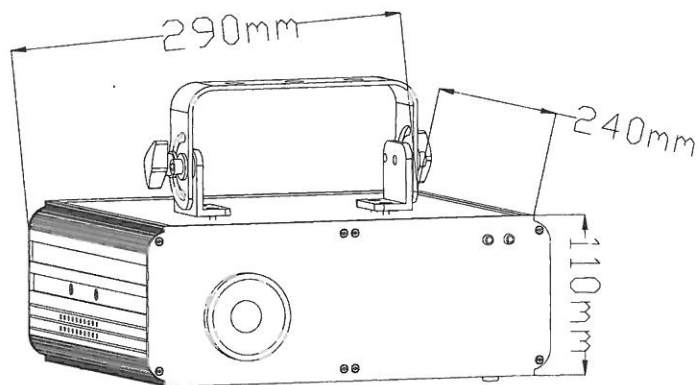
**During inspection the following points should be checked:**

- 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

<b>Mains Input:</b>	AC 100~240V, 50/60Hz
<b>Fuse:</b>	250V 1.6A slow blow (20mm glass)
<b>Total Power consumption:</b>	40W
<b>Sound Control:</b>	Internal microphone
<b>DMX connections:</b>	3pin XLR male / female
<b>DMX channels:</b>	1 or 19 channels
<b>DMX starting address:</b>	001 → 494
<b>Laser Power:</b>	300mW Blue CW laser ( $\lambda = 450\text{nm}$ ) 100mW Red CW laser ( $\lambda = 638\text{nm}$ ) 80mW Green CW laser ( $\lambda = 532\text{nm}$ )
<b>Laser radiation class:</b>	3B
<b>Working temperature:</b>	10°C to 40°C
<b>Laser Safety Standard:</b>	EN60825-1 2007
<b>Size:</b>	see picture below
<b>Weight:</b>	4.5kg



Every information is subject to change without prior notice  
You can download the latest version of this user manual on our website: [www.beglec.com](http://www.beglec.com)