

USER'S MANUAL

6W SCAN LASER



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

1. Maintenance

The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual or any unauthorized modification to the device.

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

During the operation the housing becomes hot). Allow the fixture to cool approximately 20 minutes prior to manipulate with it.

Make sure that the available voltage is not higher than stated on the rear panel. to completely remove power from unit when not in use or before cleaning or servicing the fixture.

Make sure that the power-cord is never crimped or damaged by sharp edges. Check the device and the power-cord from time to time.

Always disconnect from the mains, when the device is not in use or before cleaning it. Only handle the power-cord by the plug. Never pull out the plug by tugging the power cord.

This device falls under protection class I. Therefore it is essential to connect the yellow/green conductor to earth.

The electric connection, repairs and servicing must be carried out by a qualified employee. Do not connect this device to a dimmer pack.

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

During the initial start-up some smoke or smell may arise. This is a normal process and does not necessarily mean that the device is defective.

Do not touch the device's housing bare hands during its operation (housing becomes hot)!

For replacement use fixtures and fuses of same type and rating only.



CAUTION!

Be careful with your operations.

With a high voltage you can suffer a dangerous electric shock when touching the wires!

2. Operating determination

Attention: The powerCON is a connector without breaking capacity, i.e. the powerCON should not be connected or disconnected under load or live!

If the device has been exposed to drastic temperature fluctuation (e.g. after transportation), do not switch it on immediately. The arising condensation water might damage your device. Leave the device switched off until it has reached room temperature.

Before switching the fixture OFF, turn the fixture OFF and allow the fixture to cool for a while.

Never run the device without fixture!

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

Never lift the fixture by holding it at the projector-head, as the mechanics may be damaged.

Always hold the fixture at the transport handles.

When choosing the installation-spot, please make sure that the device is not exposed to extreme heat, moisture or dust. There should not be any cables lying around. You endanger your own and the safety of others!

The minimum distance between light output and the illuminated surface must be more than 8 meters.

Make sure that the area below the installation place is blocked when rigging, derigging or servicing the fixture.

Always fix the fixture with an appropriate safety rope. Fix the safety rope at the correct holes only.

Only operate the fixture after having checked that the housing is firmly closed and all screws are tightly fastened.

The fixture must never be ignited if the objective-lens or any housing-cover is open, as discharge fixtures may

explode and emit a high ultraviolet radiation, which may cause burns.

The maximum ambient temperature 45°C must never be exceeded.

3. Attention Item

- 1. For guarantee the life of product, please do not put it on the wet place and not use it the place over 40 degree.**
- 2. Please don't lay the product on the un-fixable or shakable place.**
- 3. Ask for the professional to maintain the product in order to avoid the danger of get an electric shock.**
- 4. Power supply should not be changed over +&-10% while the light is using, it will be decreased the life of fixture if the power is too high, but it will be influenced the luminosity if the power is too low.**
- 5. After power off, if it is need used again, please cool down over 20 minuter.**
- 6. Please look round the manual for ensure the product can be used normally.**

4. Rigging the fixture

A structure intended for installation of the fixture(s) must safely hold weight of the fixture(s) placed on it. The structure has to be certificated to the purpose.

The fixture (fixtures) must be installed in accordance with national and local electrical and construction codes and regulation.

For overhead installation, the fixture must be always secured with a safety wire that can bear at least 10 times the weight of the fixture

When rigging, derigging or servicing the fixture staying in the area below the installation place, on bridges, under high working places and other endangered areas is forbidden.

The operator has to make sure that safety-relating and machine-technical installations are approved by an expert before taking into operation for the first time and after changes before taking into operation another time.

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

Allow the fixture to cool for ten minutes before handling.

The projector should be installed outside areas where persons may walk by or be seated.

IMPORTANT! OVERHEAD RIGGING REQUIRES EXTENSIVE EXPERIENCE

including calculating working load limits, installation material being used, and periodic safety inspection of all installation material and the projector. If you lack these qualifications, do not attempt the installation yourself, but use a help of professional companies.

CAUTION: Fixtures may cause severe injuries when crashing down! If you have doubts concerning the safety of a possible installation, do not install the fixture!

The fixture has to be installed out of the reach of public.

The fixture must never be fixed swinging freely in the room.

Danger of fire !

When installing the device, make sure there is no highly inflammable material (decoration articles, etc.) in a distance of min. 1 m.

The minimum distance of 8 meters between light output from the moving head and the lit objects must be kept!

CAUTION!

Use 2 appropriate cfixtures to rig the fixture on the truss.

Follow the instructions mentioned at the bottom of the base.

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

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

For securing a fixture to the truss, install two safety wires which can hold at least 10 times the weight of the fixture. Use only the safety wires with screw-on carabines.

5. DMX-512 connection

The fixture is equipped with both 3-pin sockets for DMX input and output. The sockets are wired in parallel.

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

DMX - output

XLR mounting-sockets (rear view):

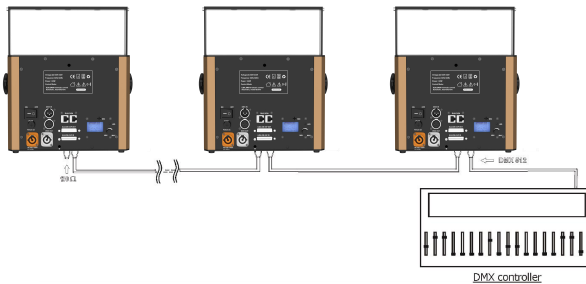


DMX-input

XLR mounting-plugs (rear view):



Building a serial DMX-chain:



Connect the DMX-output of the first fixture in the DMX-chain with the DMX-input of the next fixture. Always connect one output with the input of the next fixture until all fixtures are connected. Up to 32 fixtures can be connected.

Caution: At the last fixture, the DMX-cable has to be terminated with a terminator.

Solder a 120 Ω resistor between Signal (-) and Signal (+) into a 3-pin (5-pin) XLR-plug and plug it in the DMX-output of the last fixture.

6. Technical Specifications

Light source parameters	
Laser Wavelength:	R-638nm, G-520nm, B-450nm
Spot Size (laser window spot)	5.5mm
Light Source Divergence Angle	<1.2mrad
Modulation Mode	0~5V analog, up to 50khz/TTL
Laser Class	Class IV
Imaging System	
Imaging Color	Red, green, blue, yellow, purple, cyan, white mixed colors
Evenness	>98%
Lens Horizontal Offset	-30% to +30%
Lens Vertical Offset	-30% to +30%
Imaging Mode	3D/2D pattern and animation (with software)
Projection Distance	<100M The best distance is 18~60M
Playback Rate	20 KPPS
Playback Angle	Max60°
Security System	
Safety Standard	Follow the IEC60825 standard
Safety Item	Overcurrent and voltage protection
Degree Of Protection	IP20
Operating Temperature	15℃~45℃
Interface And Control System	
Control Interface	ILDA In/Out , DMX In/Out ,RJ45 In/Out
DMX Channel	10/18CH
Power Interface	Neutrik PowerCon
Cooling System	
Cooling Method	air cooled
Structure	60mm plug-in heat dissipation layer
Bentilation Fan	60mm fan in* 2 , 60mm fan out* 2
Power Consumption	
Working Power	100~240V AC 50/60HZ
Power Consumption	Max 150W
Physical Parameters	
Product Size	12.99x11.81x8.66 inch / 33x30x22 cm
Product Weight	5.16 Kg
Pack Size	14.57x13x9.45 inch / 37x33x24 cm
Package Weight	7 Kg

7. Maintenance and cleaning

It is absolutely essential that the fixture is kept clean and that dust, dirt and smoke-fluid residues must not build up on or within the fixture. Otherwise, the fixture's light-output will be significantly reduced. Regular cleaning will not only ensure the maximum light-output, but will also allow the fixture to function reliably throughout its life.

A soft lint-free cloth moistened with any good glass cleaning fluid is recommended, under no circumstances should alcohol or solvents be used!

DANGER !

Disconnect from the mains before starting any maintenance work

The front objective lens will require weekly cleaning as smoke-fluid tends to building up residues, reducing the light-output very quickly. The cooling-fans should be cleaned monthly. The interior of the fixture should be cleaned at least annually using a vacuum-cleaner or an air-jet.

Remove dust and dirt from the fans and cooling vents using a soft brush and vacuum-cleaner.

Important! Check the air filters periodically and clean before they become clogged!

Clean two air filters placed in the fixture's covers and two in the fixture base. Use a vacuum cleaner, compressed air or you can wash them and put back dry.

8. Replacing the fuse.

Before replacing the fuse, unplug mains lead.

1. Remove the fuse holder on the rear panel of the base with a fitting screwdriver from the housing(anti-clockwise).
2. Remove the old fuse from the fuse holder.
3. Install the new fuse in the fuse holder (only the same type and rating).
4. Replace the fuse holder in the housing and fix it.

Checking plastic parts of the fixture.

The plastic parts of the fixture should be checked for damages and beginning cracks at least every two months.

In addition, the plastic part of the front lens has to be checked mechanically (by means of movement by the plastic part) if it is firmly fastened to the fixture. If hint of a crack is found on

some plastic part, do not use the fixture until the damaged part will be replaced.

Cracks or another damages of the plastic parts can be caused by the fixture transportation or manipulation and also ageing process may influence plastic materials.

This checking is necessary for both fixed installations and preparing fixtures for renting. Any free moving parts inside of the fixture head, cracked plastic or any plastic part of front lens not sitting properly in place need to be immediately replaced.

Menu	Value	Function		
FunctionMode	1.DMX-512 Mode	DMX 512 mode		
	2.Auto Mode	Run auto mode		
	3.Music Mode	Run sound mode		
	4.ILDA Mode			
Show Listing	ChooseList			
	All The List / 001-009	Select to play all the list or 1-9 list		
Playing Show	ChooseShow			
	AllTheShow			
	001-255			
Play Setup	Play Setup	Select Auto mode or Music(Sound) Mode		
	1.PlaySpeed	Set auto mode speed 1-100		
	2.PlayMode	Loop Play / Random play		
Address SetUp	001-512	DMX address 001-255		
Channel SetUp	Normal Mode	DMX512 channel mode (10CH)		
	Expert Mode	DMX512 channel mode (18CH)		
Laser Setup	<Laser Light			
	Scanner: 10-40	Scanner speed 10-40KPPS		
	Color: RGB	Color setting(Single/RGY/RBP/GBC/RGB/WYPC)		
	Laser: TTL / Analog	LaserType:	TTL / Analog Type	
		Bright Rmax:050-255	Red Dim	
		Bright Gmax:050-255	Green Dim	
		Bright Bmax:050-255	Blue Dim	
	Invert:Normal>	Normal	Normal XY laser scanning	
		Invert X	Invert X laser scanning	
		Invert Y	Invert Y laser scanning	
		Invert XY	Invert XY laser scanning	
	Image Size:XY>	ScanSize: X 100%	Set pattern X size rate 1-100%	
		ScanSize: Y 100%	Set pattern Y size rate 1-100%	
	Position:XY>	Position Setup		
		Position X:±50	Set pattern X position	
Position Y:±50		Set pattern Y position		
General Setup	GeneralSetup			
	1.Reset Default	Yes / No	Reset system	
	2.Safety Protected	Turn On/Off	Display screensaver On/Off	
	3.Master Setup	Turn On/Off	Master mode On/Off	

4.Back Light	Normally On	Display backlight On
	Delay 15S Off	Display backlight after 15S off
5.Language	Chinese	Chinese UI
	English	English UI
6.Display Setup	Rotate 180deg	Display invert 180 degree
	Normal Display	Normal display
7.About System	Laser System 2.9	Laser System version
	Software Version1.0	

9. DMX channel mode setting

Select the **Channel Setup** , press enter to select the **Normal Mode (Standard 25CH)** or **Expert Mode (Profession 42CH)**. Press the button to return to the previous menu or wait 30 seconds to automatically exit the menu mode.

10. DMX address setting

Select the **Address Setup** , press the button to confirm, the current DMX address will be displayed on the display. Use the button to select the address 001-512, and save.

DMX Channel Summary - Normal Mode 10 CH Mode

Channel		Value	Function
CH1	On/Off	1-255	Laser source on
CH2	Strobe	0-255	Strobe slow to fast
CH3	Pattern size	0-255	Linear pattern size
CH4	X-coordinate	0-255	Pattern or animation X-coordinate movement
CH5	Y-coordinate	0-255	Pattern or animation Y-coordinate movement
CH6	Color	0-63	Color select (Single/RGB/RBP/GBC/RGB/WYPC)
		64-95	Change color speed slow to fast
		96-127	Changing color effect mode 1 (speed: slow to fast)
		128-159	Changing color effect mode 2 (speed: slow to fast)
		160-191	Changing color effect mode 3 (speed: slow to fast)
		192-223	Changing color effect mode 4 (speed: slow to fast)
CH7	Scan mode	0-127	Scan mode - Line
		128-255	Scan mode - Point

CH8	Library select	0-255	Animation select (per 2 values for one animation) (per 1 value for one pattern)
CH9	Pattern Animation library	0-7	Animation library 1
		8-15	Animation library 2
		16-23	Animation library 3
		24-255	Parrern library
CH10	Play speed	0-27	Animation playback speed (default)
		28-127	Animation playback speed (slow to fast)
		128-255	Sound mode (Sound sensitivity: low to high)

DMX Channel Summary - Expect Mode **18 CH Mode**

Channel		Value	Function
CH1	On/Off	1-255	Laser source on
CH2	Strobe	0-255	Strobe slow to fast
CH3	Pattern size	0-255	Linear patern size
CH4	X-coordinate	0-255	Pattern or animation X-coordinate movement
CH5	Y-coordinate	0-255	Pattern or animation Y-coordinate movement
CH6	Color	0-63	Color select (Single/RGB/RBP/GBC/RGB/WYPC)
		64-95	Change color speed slow to fast
		96-127	Changing color effect mode 1 (speed: slow to fast)
		128-159	Changing color effect mode 2 (speed: slow to fast)
		160-191	Changing color effect mode 3 (speed: slow to fast)
		192-223	Changing color effect mode 4 (speed: slow to fast)
		224-255	Changing color effect mode 5 (speed: slow to fast)
CH7	Scan mode	0-127	Scan mode - Line
		128-255	Scan mode - Point
CH8	Library select	0-255	Animation select (per 2 values for one animation) (per 1 value for one pattern)
CH9	Pattern Animation library	0-7	Animation library 1
		8-15	Animation library 2
		16-23	Animation library 3
		24-255	Parrern library
CH10	Play speed	0-27	Animation playback speed (default)
		28-127	Animation playback speed (slow to fast)
		128-255	Sound mode (Sound sensitivity: low to high)
CH11	Z-Rotation	0-127	Pattern Z-axis rotating 360°

		128-255	Rotating (speed: slow to fast)
CH12	X-Rotation	0-127	Pattern X-axis rotating 360°
		128-255	Rotating (speed: slow to fast)
CH13	Y-Rotation	0-127	Pattern Y-axis rotating 360°
		128-255	Rotating (speed: slow to fast)
CH14	X-axis move	0-127	Pattern or animation X-axis movement
		128-255	X-axis left to right move (speed:slow to fast)
CH15	Y-axis move	0-127	Pattern or animation Y-axis movement
		128-255	Y-axis left to right move (speed:slow to fast)
CH16	Zoom	0-127	Pattern or animation zoom
		128-255	Zoom in&out (speed:slow to fast)
CH17	Draw effect	1-255	Patern draw effect (speed:slow to fast)
CH18	Twisted	1-127	X-axis twisted Waves
	Waves	128-255	Y-axis twisted Waves