

SOLARIS STROBES

Quasar 15K



Operating Manual



PRELIMINARY

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CONTENTS

OVERVIEW	3
Safety precautions	3
Main features	4
INSTALLATION	5
Unpacking	5
Checking accessories	5
Controls and switches	6
Best location for installation	6
CONNECTING THE UNIT	7
Connection to mains power	7
Connection to a DMX 512 network	7
UNIT CONFIGURATION	8
Menu Operation	8
Menu Option 1: DMX Address	9
Entering DMX mode	9
DMX Features	9
Chaining Multiple Units	9
Menu Option 2: Fixture Modes	10
Operating the Unit	14
Recommended Controllers	15
ADDITIONAL INFORMATION	15
Maintenance	15
Changing the Flash Tube	15
MENU MAP	16
TECHNICAL SPECIFICATIONS	17
CONTACT INFORMATION	18

OVERVIEW

Thank you for purchasing the Solaris Quasar professional strobe. Please read this manual carefully before operation and keep it for future reference.

CAUTION! To avoid danger of fire and electric shock, do not expose the unit to water or moisture and do not attempt to remove its cover. Repairs should be done by qualified and authorized personnel only. During operation, the unit's discharge tube may draw power exceeding limit values.

CAUTION! Do not look directly or indirectly into the discharge tube without eye protection such as welder's goggles.

1. Prior to installation, ensure that the mains voltage is between 190-260 VAC and the mains frequency is between 50-60 Hz.
2. Make sure that the mains outlet used for powering the unit is of the earthed/grounded type and in perfect condition.
3. Should any kind of liquid or solid material penetrate the unit, terminate operation immediately, then unplug the connector from the mains outlet, and contact an authorized repair facility.
4. Do not cover the vents on the unit. Adequate ventilation is required for satisfactory operation and ensures long operating life.
5. Even when turned off, the unit is powered if the connector is plugged into the mains outlet.

6. If you do not intend to use the strobe for a long period of time, unplug the connector from the outlet. When disconnecting from AC power, grab the mains connector securely and pull. Do not pull on the power lead.
7. Replacing the connector should only be done by an authorized repair person. Do not tamper with or remove the mains plug from the end of the cord. Improper connection may cause fire owing to the unit's high power consumption.
8. Note to qualified service personnel: Before changing the discharge tube, switch off the equipment, unplug the mains lead, and wait for the strobe to cool down.

Main Features

- Quasar, DMX 512, turbo, normal
- Extra-high intensity flashes
- Optional Continuous duty (100 Hz)
- DMX-512 In/Out
- Software controlled overdrive protection (ETV)
- Auto-detection of mains frequency
- Overheating protection
- Extra-high accuracy of flashes
- 3-phase compatibility
- Internal/external controllability: pulse, manual, DMX
- Chain compatibility (MASTER – SLAVE)
- Compact
- Self-test functions
- LED indication

INSTALLATION

Unpacking

Do not dispose of the shipping box and the packaging, as they are useful for transporting the unit. Before shipping, make sure the unit is packed the same way it was at the factory. During unpacking, check if the unit is undamaged and clean. If the unit is damaged, contact the freight company immediately. If the unit has become wet in the box, make sure it is completely dry before power-up. If operation should fail, contact the freight company with your complaint.

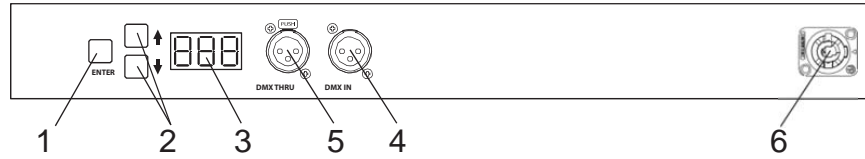
Checking Accessories

After unpacking the unit, check all accessories and the condition of the discharge tube (use the mirror behind the tube). If the tube is damaged, report it to the freight company immediately.

Accessories:

- XOP 15 (or equivalent) discharge tube
- Mains lead with powerCON connector
- Operating manual
- Rack ears
- 2 barn doors

Controls and switches



1. Menu / Enter Button
2. Up / Down Menu Navigation buttons
3. Menu LED
4. DMX Out/Thru
5. DMX Input
6. powerCON Mains Input Connector

Best Location for Installation

Install the unit in a location with adequate ventilation. Avoid locations where the strobe may be exposed to heat, dust, vibration, or physical shock. Choose a location that enables easy connection of both the mains lead and control cables. Install the unit first before connecting the leads.

CAUTION: The operating temperature of this fixture may exceed 120° C (240° F). Even after shutting down, touching the body of the unit may cause burns. Always wait for the fixture to cool down before handling. Do not place the unit near flammable materials.

CONNECTING THE UNIT

Connection to 230 V mains

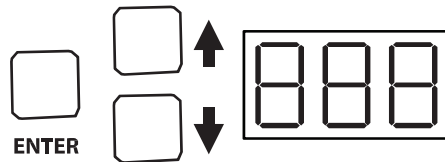
- Use connectors with protective earthed ground only.
- Connect the unit with controls set at minimum values.
- Check connection. Loose connections may cause malfunction.
- Programmed settings are retained even after a power loss. When powering up, the unit will return to its last known settings.

Connection to a DMX-512 Network

- Use standard (XLR 5) connectors. Check for loose connections, as they are a common source of malfunction.
- Use high-quality professional DMX cables only.
- The last strobe unit in a chain should have a TMB Arnold (or equivalent 120 Ω termination plug) installed into its DMX THRU XLR connector.
- It is possible to change input connections and DMX base address while the strobe is turned on. The unit will recognize, execute, and indicate commands even during operation.

UNIT CONFIGURATION

Configuration of the Quasar unit is performed using the integrated menu system. Selection of menu options occurs using the Menu/Enter Key and the Up and Down navigation buttons. Menu options and user input are shown on an alphanumeric display. These panel features are depicted below:



DMX addressing and Fixture Mode are configured using these panel controls to operate the unit menu.

Menu Operation

Fixture Mode is set across eleven (11) Menu options. Pressing the MENU/ENTER button will alternate between fixture mode and DMX address.

Menu Option 1: DMX Address

Entering DMX Mode

Press the MENU/ENTER button once. The current DMX base address (Channel 1) will be depicted on the numeric display. Pressing the UP/DOWN navigation buttons will increment or decrement the base address on the display. A single tap will alter the displayed address by one, while pressing and holding a navigation button will cause the address to change rapidly. Valid addresses will range from 1 to 511. Once the desired Base Address for Channel 1 is reached, pressing the MENU/ENTER Button will save this address as the new DMX Base Address.

DMX Features

The Quasar unit can be remotely controlled using industry standard DMX-512 protocol. In DMX Mode, Channel 1 dictates the Strobe Rate. DMX values from 1-90% increase the frequency of strobe flash from 1-24 Hz. Above 90% activates Continuous Mode (constant light output). Channel 2 accepts values which dictate flash intensity above 10%.

Chaining Multiple Units

Independent unit control of multiple flash units requires unique channel addresses to be programmed into each fixture. If identical control of multiple units from a single control source is desired, each unit may have the same DMX base address.

Menu Option 2: Fixture Modes

The Quasar Fixture has eleven (11) modes of operation (see menu map, pg. 16).

A - Automatic Mode. Use for standalone operation. The mode contains menus for Intensity, Duration, and Repeat Rate.

AE2 - Automatic Effect Mode. Use for stand-alone operation. The mode contains menus for Intensity, Effect Speed, and Effect Select.

AC1 - Atomic Compatible Mode (1 Channel). This mode is comparable to an Atomic in 1 Channel mode. Allows for control of Rate on 1 channel of DMX.

DMX Channel	Value	Percent	Function
1	0-5	0-2	Blackout
	6-249	3-97	Flash Rate Slow to Fast
	250-255	98-100	Continuous On Effect

AC3 - Atomic Compatible Mode (3 Channel). This mode is comparable to an Atomic in 3 Channel mode. Allows for control of Intensity, Duration, and Rate on 3 channels of DMX.

DMX Channel	Value	Percent	Function	
1	Intensity	0-5	0-2	Blackout
		6-255	3-100	1-100%
2	Duration	0-255	0-100	0-650ms @50Hz or, 0-530ms @ 60Hz
3	Rate	0-5	0-2	No Flash
		6-255	3-100	0.5-25Hz @ 50Hz or, 0.6-30Hz @ 60Hz

AC4 - Atomic Compatible Mode (4 Channel). This mode is comparable to an Atomic in 4 Channel mode. Allows for control of Intensity, Duration, Rate, and Effect on 3 channels of DMX.

DMX Channel		Value	Percent	Function
1	Intensity	0-5	0-1	Blackout
		6-255	2-100	1-100%
2	Duration	0-255	0-100	0-650ms @50Hz or, 0-530ms @ 60Hz
3	Rate	0-5	0-1	No Flash
		6-255	2-100	0.5-25Hz @ 50Hz or, 0.6-30Hz @ 60Hz
4	Effect	0-5	0-2	No Effect
		6-42	2-16	Ramp up
		43-85	17-33	Ramp down
		86-128	34-50	Ramp up-down
		129-171	51-67	Random
		172-214	68-84	Lightning
		215-255	85-100	Spikes

SLF - Self Test. This mode will flash the strobe in order to test for proper lamp operation.

FS – Fixture Settings. Allows control of power reduction, display intensity, and menu mode.

d - DMX Mode. Controls Rate and Intensity on 2 channels of DMX.

DMX Channel		Value	Percent	Function
1	Rate	0-230	0-90	Slow to Fast
		231-255	91-100	Continuous On Effect
2	Intensity	0-255	0-100	0 -100%

dE2 - DMX Effect Mode (2 Channel). Controls Rate/Effect and Intensity on 2 channels of DMX.

DMX Channel	Value	Percent	Function	
1	Rate/Effects	0-117	0-45	Rate Slow to Fast
		118-127	46-50	Continuous On Effect
		128-148	51-58	Ramp up (slow to fast)
		149-168	59-66	Ramp down (slow to fast)
		168-188	67-74	Ramp up-down (slow to fast)
		189-209	75-82	Ramp down-up (slow to fast)
		210-229	83-90	Random (slow to fast)
		230-250	91-98	Spikes (slow to fast)
		251-255	99-100	No effect
2	Intensity	0-255	0-100	0-100%

dE4 - DMX Effect Mode (4 Channel). Controls Rate, Intensity, Effect, and Effect Speed on 4 channels of DMX.

DMX Channel	Value	Percent	Function	
1	Rate	0-255	0-100	Slow to Fast
2	Intensity	0-255	0-100	0-100%
3	Effect	0-26	0-10	No Effect
		27-247	11-97	Random Lighting slow to fast
		248-251	98	constant on
		252-255	99-100	nothing
4	Effect Amplitude	0-255	0-100	Size Small to Large

H - Allows the unit to be controlled by optional Solaris Remote or High End[®] flash control protocol. Similar to DMX operation, two sequential channels are programmed. In H mode fixture Intensity and flash Strobe Frequency are controlled by the refresh rate of the H signal on Channel 1.

The H mode provides preset effects which are selected based upon the value issued to Channel 2. These values and the effect selected are depicted below.

DMX Channel	Value	Percent	Function	
1	Intensity	0-255	0-100%	
2	Control	0-10	0-1	Constant Fast Strobe
		11-255	2-100	Constant On Effect

Operating the unit

After proper installation, connection, and Menu Setup, you can start using all the outstanding features that the Quasar offers.

- Extra-high intensity output. This can be achieved by selecting Turbo Mode, which will double the unit's light output (except when in Continuous mode).
- Continuous flashes. The unit can fire flashes at a rate of 100 or 120 Hz if the mains frequency is 50 or 60 Hz, respectively. Such a high rate of flashes is perceived as continuous illumination. Regardless of the kind of controller system being used, this function is always available.
- During operation, the flash tube is under constant electronic overdrive protection (EVD). In Continuous Mode and with maximum intensity, the protection allows flashes for 3.5 seconds, with a subsequent downtime of 51.2 seconds. In Turbo and Normal Modes, the protection times are 11.7 and 52.5 seconds, respectively. Even if the unit is used for shorter periods of time, the system switches the tube off as soon as overall duration reaches the given protection time. Protection time increases with lower intensity.

In order to ensure maximum safety, the strobe has two more protection systems against overheating. Both systems are designed to activate in unusual operating conditions and are "self-resetting".

When turned on for the first time, the unit automatically detects mains frequency. No manual setting is required.

- Quasar can produce more accurate “jitter free” flashes, even at frequencies higher than 10Hz.
- Any fixture connected to any phase can be controlled in the same way. When using more than one strobe, it is advisable to assign different phases to the fixtures owing to high power draw.

Recommended Controllers

- Solaris Quasar Controller
- High End Dataflash AF1000 Mini Controller (Switch the JUMPER from DMX to DFLASH position on the PCB).

ADDITIONAL INFORMATION

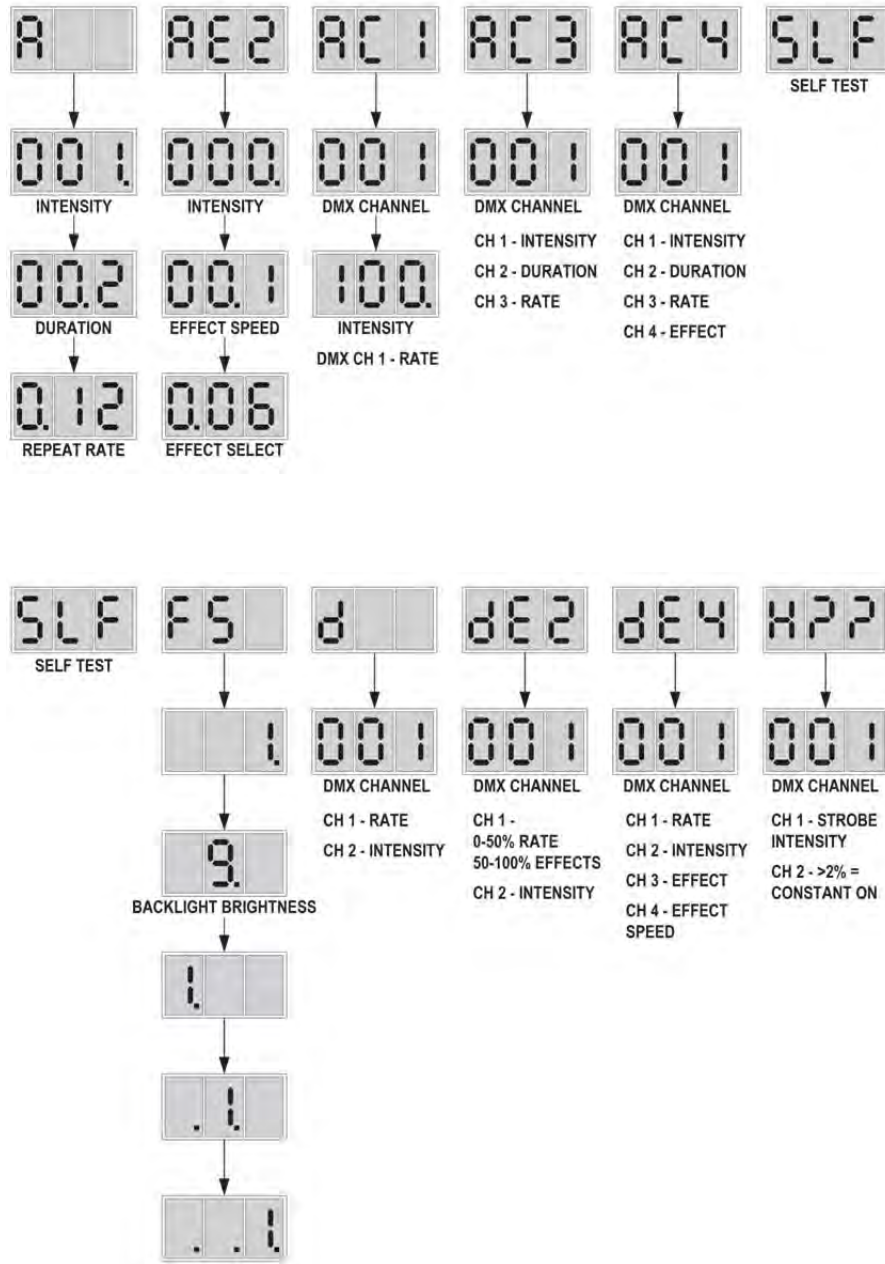
Maintenance

Keep the fan and surrounding area free of dust and dirt. The mirror can be cleaned without having to dismantle the unit. Simply blow air through the grid. The mirror does not require any further cleaning. More thorough cleaning of the mirror and its surroundings should **ONLY** be done by the manufacturer or qualified and authorized repair personnel.

Changing the Flash Tube

The Quasar flash tube may only be changed by the manufacturer or a qualified repair person authorized by the Manufacturer.

MENU MAP



TECHNICAL SPECIFICATIONS

LAMP	Maximum continuous flash discharge	57,000 Joules	
	Single flash discharge	150 Joules	
	Frequency of continuous mode	100 / 120 Hz	
	Flash tube type	Special Quasar tube (with plugs)	
	Color temperature	6,000° Kelvin	
PERFORMANCE	Intensity control	0-100 %	
	Adjustable flash frequency	0-20/24 Hz	
	Power draw (Turbo)	6 kW	
	Max. power draw (Continuous)	15 kW	
	Modes	Normal Turbo	
DEVICES	Electronic overdrive protection	3.5 seconds max.	
	Overheating protection	Dual, self-resetting	
	Programmed Self-Test	1	
CONTROL	Channel 1	Frequency	
	Channel 2	Intensity	
	# of possible starting addresses	511 max.	
	Connection type	XLR 3-Pin or 5-Pin	
	Data conversion	From DMX to PULSE	
	Protocol	DMX-512	
POWER	Nominal mains voltage	190-260 VAC, 50/60 Hz	
	Maximum power consumption	Continuous	60 A (3.5 sec.)
		Turbo	32 A (11.5 sec.)
FIXTURE	Protection from breaking flash tube	Protective grid	
	Mounting	Adjustable swivel yoke	
	Corrosion protection	Electrostatic sintering	
	Unit weight	7.8 lb. (3.6 Kg)	
	Shipping weight	10.6 lb. (4.8 Kg)	
	Unit Dimensions (HxWxD)	7.5" x 21.5" x 5.5" (19 x 54.6 x 14 cm)	
	Shipping Dimensions (HxWxD)	10.5" x 23.75" x 9" (27 x 60.5 x 23 cm)	

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