SOLARIS

QUASAR 15K

Operating Manual

PRELIMINARY

R080709

GENERAL INFORMATION

Important: Read this manual before powering or installing the unit. Follow the safety precautions listed herein. Observe all warnings in this manual and printed on the unit.

For technical service or other product related questions, please contact TMB at tmb-info@tmb.com
or contact any of the following locations worldwide:

TMB LA
10643 Glenoaks Blvd., Pacoima, CA 91331 USA.
Tel +1 818.899.8818 Fax +1 818.899.8813.

TMB UK
21 Armstrong Way, Southall, UB2 4SD England.
Tel +44 (0)20.8574.9700 Fax +44 (0)20.8574.9701.

TMB NY
100 Asia Place, Carlstadt, NJ 07072 USA.
Tel +1 201.896.8600 Fax +1 201.896.8601.

TMB Canada
409 Saddler St. West, Durham, Ontario N0G 1R0 Canada.
Tel +1 519.369.9990 Fax +1 519.369.9992.

TMB Beijing
No. 309, Building 6, San Li Tun Nan Lu,
Chao Yang District, Beijing 100027 PRC.
Tel +86 10.8492.1587 Fax +86 10.8492.7635

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OVERVIEW

Note for the customer

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 190-240VAC 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.

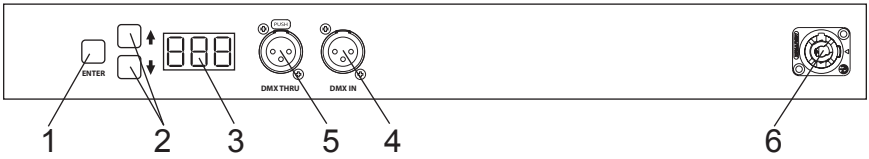
Checking accessories

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

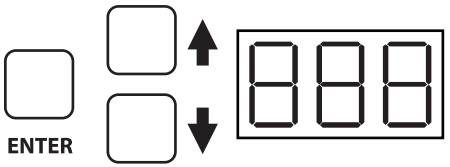
- Use connectors with protective earthed ground only.
- Connect the unit with controls set at minimum values.
- Check connection. Loose connections may cause malfunction.
- Programmed settings are retained even after a power loss. When powering up, the unit will return to its last known settings.

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 four (4) Menu options. Each of these Menu modes is entered by pressing the MENU/ ENTER button.

Pressing MENU/ENTER once will allow entry into DMX Channel Address option.

Pressing MENU/ENTER will allow entry into Control Type (DMX/HF/TEST) option.

Pressing MENU/ENTER three times enters TURBO Enable/ Disable menu mode.

Pressing MENU/ENTER four times enters the Continuous mode option.

Menu Option 1: DMX Address

Entering DMX Mode

Press the MENU/ENTER button once. The current DMX base address (Channel 1) will 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 to as the new DMX Base Address.

Chaining multiple units

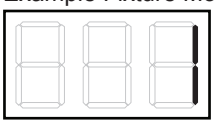
Independent unit control of multiple flash units requires unique channel addresses to be programmed into each fixture. As each unit requires two channels of DMX, these addresses must be spaced by a value of two or more. If identical control of multiple units from a single control source is desired, each unit may have the same DMX base address.

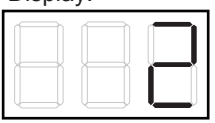
Menu Option 2: Fixture Modes

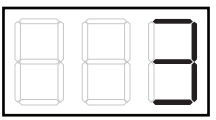
The Quasar Fixture has three (3) modes of operation: DMX, HF, and Test. Entry into one of the modes occurs by pressing the MENU/ENTER button twice.

The current mode is depicted on the numeric display.

Example Fixture Mode Display:


DMX Mode


HF Mode


Test Mode

Pressing the UP/DOWN navigation buttons will increment or decrement the Mode value on the numeric display. A single tap will alter the displayed Mode by one, while pressing and holding a navigation button will cause the Mode to change rapidly.

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%.

HF Mode Features:

The Quasar unit can be remotely controlled by optional Solaris Remote or High End® flash control protocol. Similar to DMX operation, two sequential channels are programmed.

In HF mode fixture Intensity and flash Strobe Frequency are controlled by the refresh rate of the HF signal on Channel 1.

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

FX Channel			
0-25	No FX	Normal strobe operation	
26-50	Ramp Up		
51-75	Ramp Down		
76-100	Ramp Up/Down		
101-125	Ramp Down/Up		
126-150	Random 1	Async.	Random Intensity
151-175	Random 2	Sync.	
176-200	Random 3	Async.	Constant Intensity
201-225	Random 4	Sync.	
226-250	Random 5	Random Intensity & Duration	
251-255	FX Restart		

TEST Features

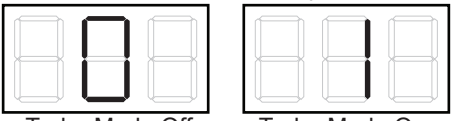
The Test Mode causes effects and other pre-programmed operations to continuously occur. The purpose of this mode is to demonstrate the capability and operability of the fixture.

Menu Option 3: Turbo Mode

The Quasar unit has a Turbo Mode. When Turbo is selected, the power consumption in Strobe Mode is doubled. Turbo has no effect in Continuous Mode.

Pressing the MENU/ENTER button three times will enter Turbo Mode and the current value (0 for Off and 1 for On) will be depicted in the center of the numeric display. Once displayed, use up and down arrows to enable or disable Turbo Mode. When desired setting is found, pressing the MENU/ENTER button will save the new value.

Example Turbo Mode Display:



Turbo Mode Off Turbo Mode On

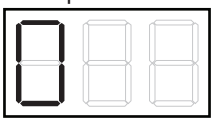
Menu Option 4: Continuous Mode

The Quasar has a Continuous light option. When Continuous is set to On, the unit will produce continuous light. When it is set to Off, it will operate as a strobe unit only.

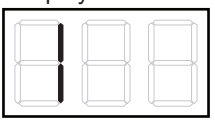
Pressing the red button four times will show the current Continuous setting (depicted as a single digit on the left column of the display).

Once displayed, use up and down arrows to select or deselect Continuous Mode. When the desired setting is found, pressing the Red button will save the new value.

Example Continuous Mode Display:



Continuous Mode Off



Continuous Mode On

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. Thus, 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

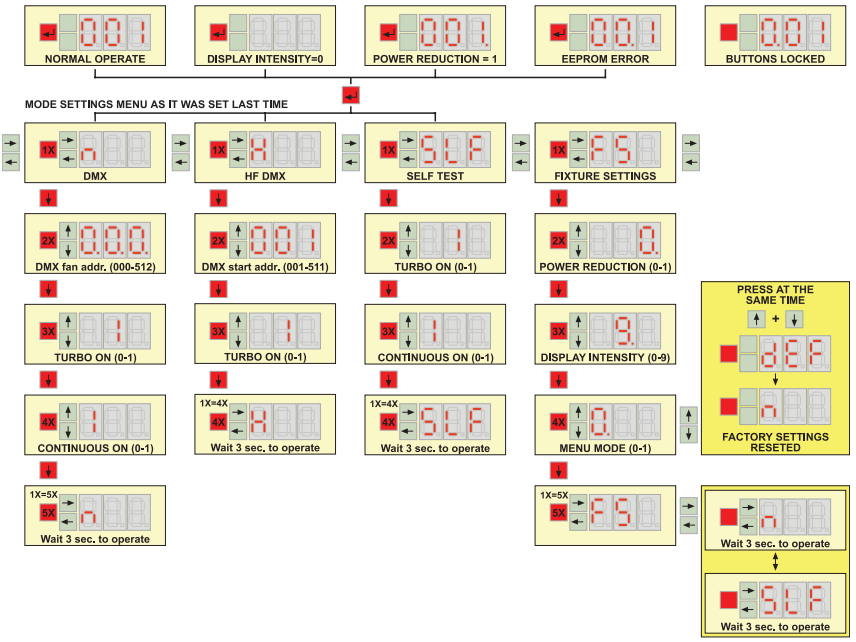
Keep the fan and surrounding area free of dust and dirt. The mirror can be cleaned without having to dismantle the unit. Simply blow air through the grid. The mirror does require any further cleaning. More thorough cleaning of the mirror and its surroundings should ONLY be done by the manufacturer or 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.

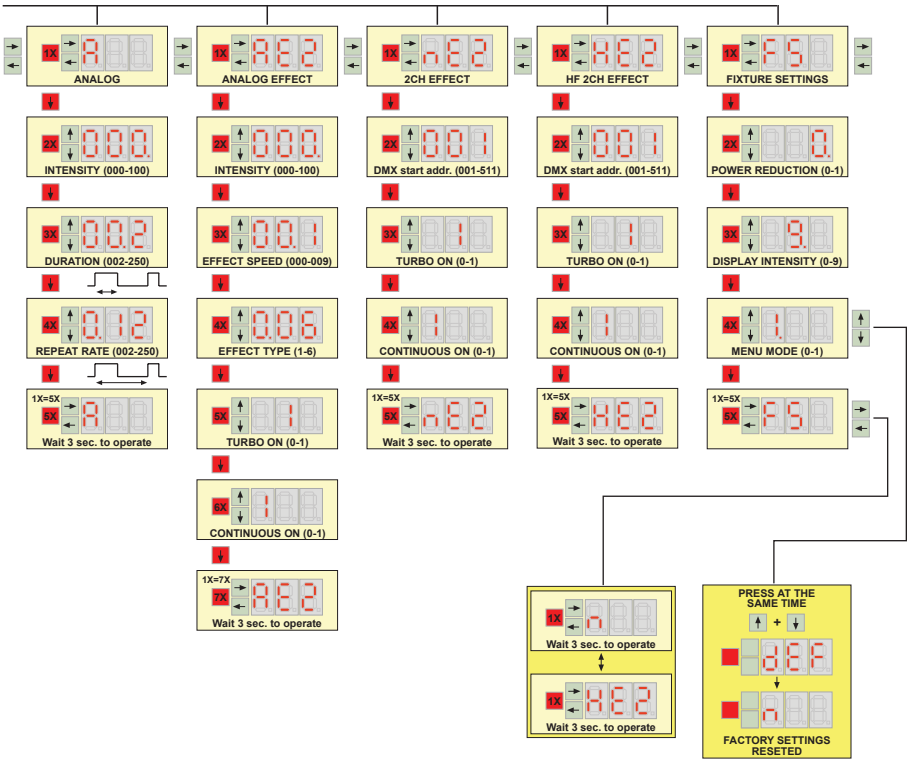
MENU MAP

Menu Mode = 0 (Standard Menu)



Menu Mode = 1 (Extended Menu)

Menu Mode = 1 (Extended Menu) continued



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	230/240VAC, 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)	