

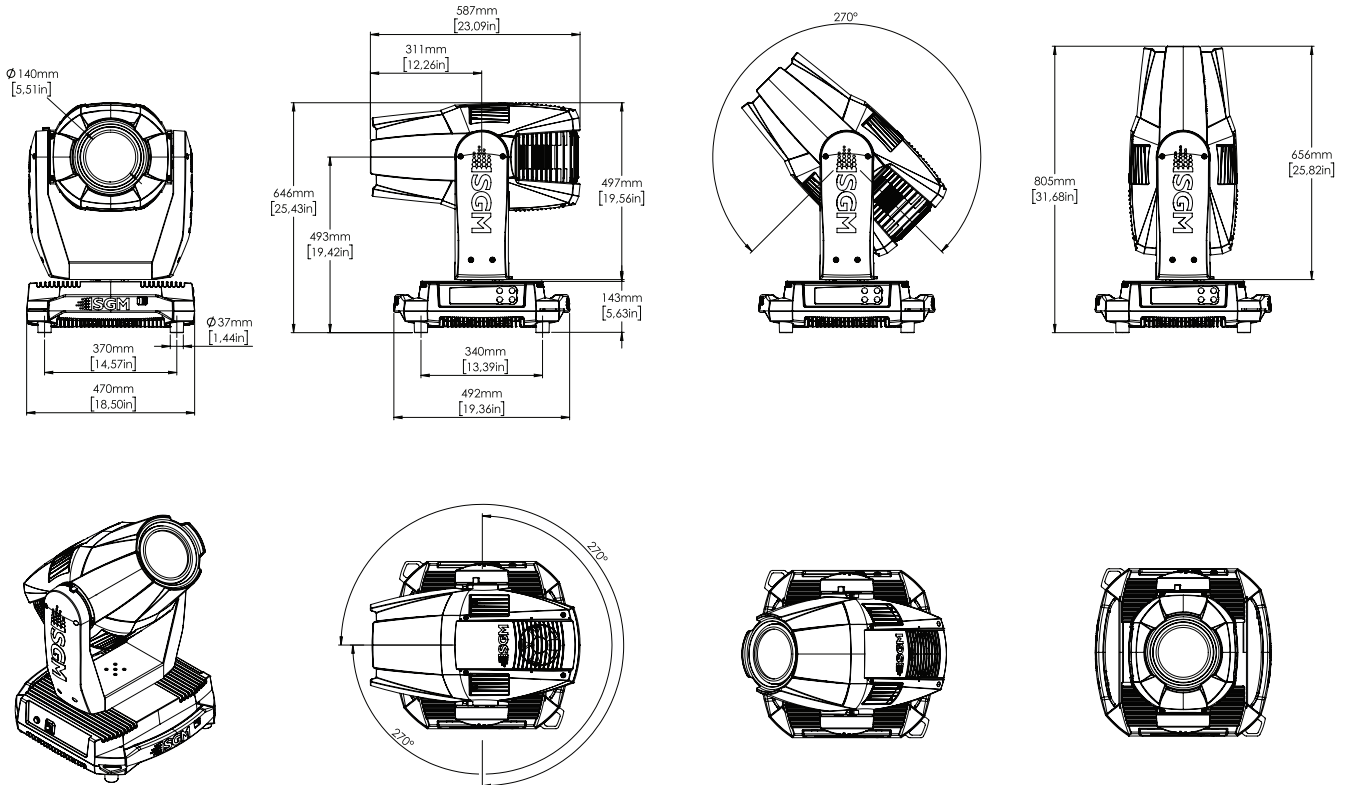
# USER MANUAL



## MOVING HEADS SERIES G-SPOT TURBO



## G-Spot Turbo dimensions



All dimensions in millimeters and inches. Drawing not to scale.

## G-SPOT TURBO USER MANUAL REV. A

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This edition applies to firmware version 2.05 or later.

English edition

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## Safety information



### **WARNING!**

*Read the safety precautions in this section before installing, powering, or operating this product.*



*SGM luminaries are intended for professional use only. They are not suitable for household use.*  
***Impropre a l'usage domestique.***

*Review the following safety precautions carefully before installing or operating the device.*



**DANGER!** *Risk of electric shock. Do not open the device.*

- Do not open the device; there are no user-serviceable parts inside.
- Ensure that power is cut off when wiring the device to the AC mains supply.
- Ensure that the device is electrically connected to earth (ground).
- Do not apply power if the device or mains cable is in any way damaged.
- Do not immerse the fixture in water or liquid.



**WARNING!** *Take measures to prevent burns and fire.*

- Install in a location that prevents accidental contact with the device.
- Install only in a well-ventilated space.
- Install at least 0.3 m (12 in.) away from objects to be illuminated.
- Install only in accordance with applicable building codes.
- Ensure a minimum clearance of 0.1 m (4 in.) around the cooling fans.
- Do not paint, cover, or modify the device, and do not filter or mask the light.
- Keep all flammable materials well away from the device.
- Allow the device to cool for 15 minutes after operation before touching it.

**CAUTION:** Exterior surface temperature after 5 min. operation = 55 °C (131 °F). Steady state = 65 °C (149 °F).



**WARNING!** *Take measures to prevent personal injury.*

- Do not look directly at the light source from close range.
- Take precautions to prevent injury due to falls when working at height.
- For Permanent Outdoor Installations (POI), ensure that the fixture is securely fastened to a load-bearing surface with suitable corrosion-resistant hardware.
- For a temporary installation with clamps, ensure that the quarter-turn fasteners are turned fully and secured with a suitable safety cable.
- The standard safety wire cable must be approved for a safe working load (SWL) of 10 times the weight of the fixture, and it must have a minimum gauge of 5 mm.

# Overview

## The G-Spot Turbo features:

- An IP65 rated LED Light source with a powerful Red - Lime - Blue (RLB) LED engine
- Multi-environmental fixture with an extended color palette
- Able to work within 8° to 43° zoom range
- Providing a built-in wireless DMX and preset stand-alone/scenes programs
- Fully RDM implemented
- Two independent rotating gobo wheels
- Can easily be controlled by wired and wireless DMX
- Offers RFID and NFC, low power consumption, and an expected lifetime of 50,000 hours\*

\*The lightsource of the fixture is expected to run until about 50,000 hours LM-70/TM-21.

*This manual covers installation, use, and maintenance of the G-Spot Turbo.  
All documentation is also available on the SGM website: [www.sgmlight.com](http://www.sgmlight.com)*

## Parts identification and terminology

A: Tilt Lock

B: Head fan grill (one of two shown)

C: Base handle

D: Pan lock

E: Display Panel

F: Safety wire attachment point

G: DMX in

H: Fuse

I: Power in

J: DMX out

K: Power cord

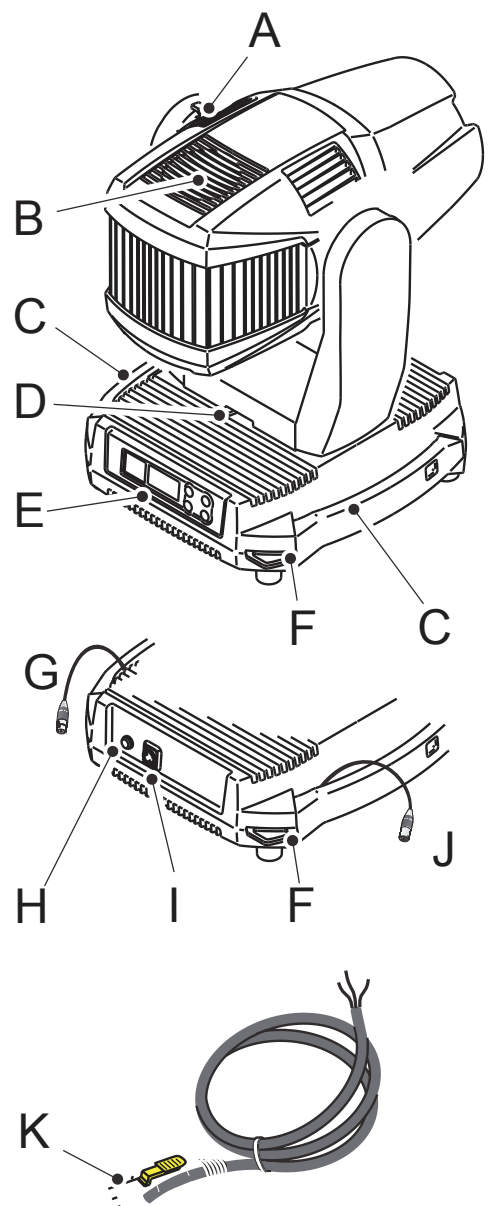


Figure 1: G-Spot Turbo parts and terminology

## Preparing for installation

### Unpacking

Unpack the device and inspect it to ensure that it has not been damaged during transport.

The G-Spot Turbo is shipped with:

- One Neutrik TRUE1 power input connector, 2 m (78 in.)
- Two omega brackets with 1/4-turn fasteners

### Location / application

The fixture is IP65-rated and designed for both indoor and outdoor events. This means that it is protected from:

- Dust, to the degree that dust cannot enter the device in sufficient quantities as to interfere with its operation
- Lower pressure jets of water from any direction

When selecting a location for the device, ensure that:

- It is situated away from public thoroughfares and protected from contact with people
- It is not immersed in water or exposed to high-pressure water jets
- It has adequate ventilation

When using the fixture with a DMX controller, ensure that:

- The DMX out of the last fixture is terminated with a 120 Ohm resistor between pin 2 and 3 (according to the RS485 standard)
- The DMX out is properly sealed, in accordance with the IP65 requirements
- A maximum of 32 fixtures are connected to the same DMX link

### Transportation

Always use the supplied packaging or suitable flight case for transportation and storage.

Release the pan/tilt locks when transporting the fixture. Leaving the pan/tilt locks blocked may cause damage to the fixture.

Never carry the fixture by connected cables or wires, use the handles.

## Installing / Rigging the G-Spot Turbo

The G-Spot Turbo may be installed in any orientation.

Always use two Omega brackets to rig the fixture. Lock each bracket with both 1/4-turn fasteners.

**Note: The 1/4-turn fasteners are only locked when turned fully clockwise.**

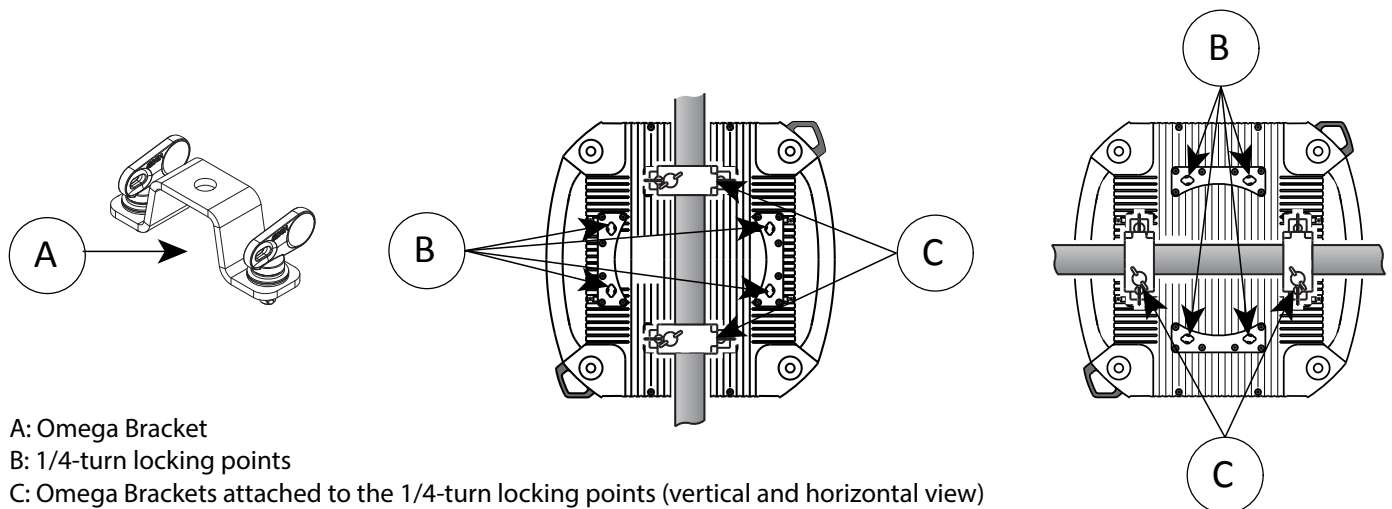


Figure 2: G-Spot Turbo base with Omega brackets

## Rigging process

Start the rigging process by blocking the lower working area, and make sure the work is performed from a stable platform.

1. Check that the clamps are undamaged and can bear at least 10 times the weight of the fixture. Ensure also that the structure can bear at least 10 times the weight for all installed fixtures, clamps, cables, etc.
2. Bolt each clamp securely to an Omega bracket with an M12 / ½" bolt (min. grade 8.8) and lock nut.
3. Align an Omega bracket with two 1/4-turns in the base. Insert the fasteners into the base and turn both levers a full 1/4-turn clockwise to lock. Install the second Omega bracket.
4. Working from a stable platform, hang the fixture on a truss, or other structure. Note the position of the base. The front of the base is to the right, when looking at the display panel, and when the fixture is sitting on the base. Tighten the clamps.
5. Install two safety wires that each can bear at least 10 times the weight of the unit. The attachment points are designed to fit a carabiner.
6. Check that the pan/tilt locks are released (A and B). Verify that there are no combustible materials or surfaces to be illuminated within 0.3 m (12 in.) of the fixture.
7. Check that there is no possibility of head or yoke colliding with other fixtures.

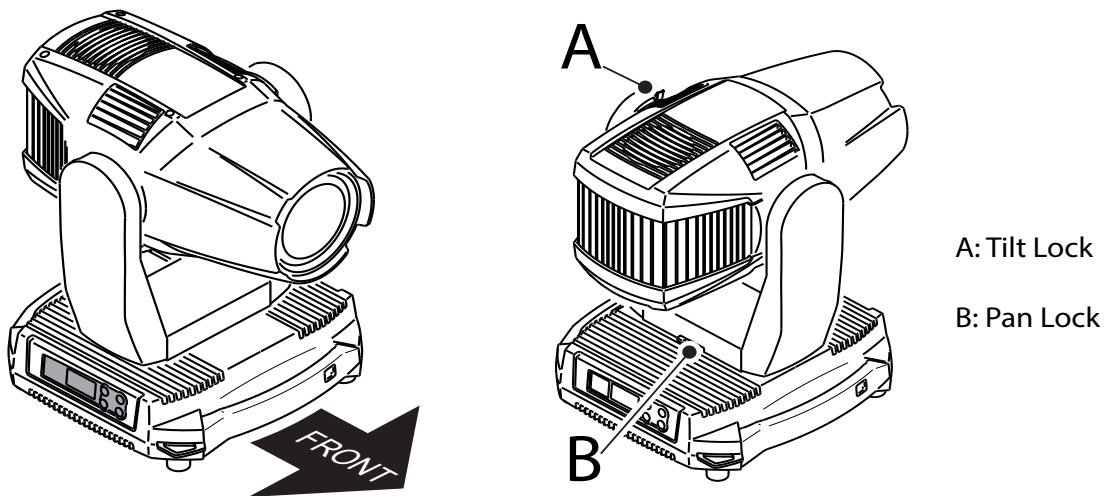


Figure 3: Pan and tilt locks



**WARNING!** Always secure an elevated G-Spot Turbo with a safety wire

Fasten a safety wire (not shown) between the load-bearing support structure and the safety wire attachment points of the device. The safety cable (not included in the package) must be able to bear at least 10 times the weight of the device (SWL) and have a minimum gauge of 5 mm.

### CAUTION!!

- Always use 2 safety wires
- Min. safety wire gauge = 5 mm
- Max. safety wire length (free fall) = 30 cm (12 in.)
- Make sure the slack of the safety wire is at a minimum.
- Never use the carrying handles for secondary attachment.

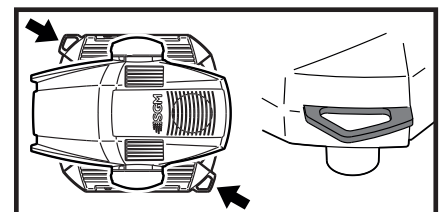


Figure 4: Safety Wire attachment points

## Connecting AC power




The G-Spot Turbo can operate on any 200–240 V, 50/60 Hz AC mains power supply. The maximum power consumption is 1150W.

Connect the fixture to power using a cable with a Neutrik powerCON TRUE1 connector (supplied with the fixture). Connect both DMX in and DMX out cables in order to maintain the fixture's IP65.

For a temporary installation, the mains cable must be fitted with a grounded connector intended for exterior use.

**Please note: Both DMX in and DMX out must be connected in order to maintain the IP65-rating.**

- Connect the black wire to live
- Connect the white wire to neutral
- Connect the green wire to ground (earth)

Wire	Color	Symbol	Conductor
	Black	L	live
	White	N	neutral
	green/yellow	⊥ or Ⓧ	ground (earth)

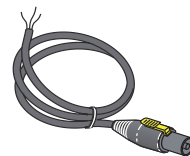


Figure 5: Connecting AC Power

The fixture must be grounded/earthed and be able to be isolated from AC power. The AC power supply must incorporate a fuse or circuit breaker for fault protection.

For assistance with alternative configurations, contact your SGM representative.

After connecting the G-Spot Turbo to power, run the on-board test by pressing OK → TEST →AUTOMATED TEST in the menu, to ensure that the fixture and each LED are functioning correctly. Please see “Control menu” on page 14

**CAUTION: Do not open the fixture to replace the supplied power cable, or connect the fixture to an electrical dimmer system, as this can damage it.**

## Configuring the device

The G-Spot Turbo can be set up by using the control panel in the base of the fixture or through RDM. After powering on, the G-Spot Turbo boots and resets. The current DMX start address and any status messages will be displayed thereafter. Navigate the menus and options using the arrows and select items using the OK button.

The complete list of the menu and all commands available are listed in “Control Menu” on page 13.

### Display panel (A)

The display shows the current status and menu of the fixture and can be used to configure individual fixture settings, check the fixture's wireless status, firmware version, and see error messages. In the settings, the display can be set to turn off if desired.

### Using the O-ring buttons (B)

- Press the 'OK' button to access the menu or make a selection
- Press the arrow buttons to scroll up and down in the menus
- Press the 'ESC' button to take a step back in the menu
- Press the 'UP' and 'DOWN' arrows simultaneously to flip the display upside-down
- Press ESC + OK simultaneously to confirm RESET options

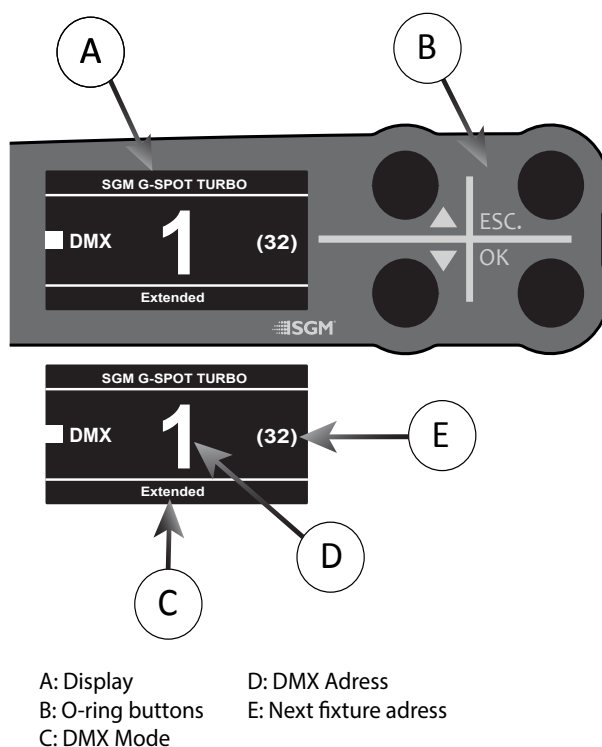


Figure 6: Display panel view

### DMX Mode (C)

Display the current DMX mode within 4 options: Standard, Extended, Standard Compatible and Extended Compatible. The Standard and Extended Compatible are used when it's intended to get the same features/colors as the regular G-Spot.

### DMX Start Address (D)

Display the current DMX address. The DMX address will flash if no data input. Select DMX address using the arrow buttons. The DMX start address is the first channel used to receive instructions from the controller. For independent control, each fixture must be assigned its own control channels. If you give two fixtures the same address, they will behave identically. Address sharing can be useful for diagnostic purposes and symmetrical control.

### Next DMX Address (E)

Showing the next available DMX address depending on the fixture's DMX footprint.



## Using stand-alone operation

In a stand-alone operation mode the fixture is not running connected to a control device, but it is pre-programmed with a series of up to 24 scenes, playing continuously in a loop. This program can be set up to run by default whenever the fixture is powered on.

### **Manual control / Internal sequence editor**

The editor option offers the ability to adjust all DMX parameters of the fixture. Each scene has its own DMX settings with the possibility to define a fade-in time for the transition from the previous scene, and a wait (static) time, each with a fade time up to 4000 seconds and a wait time up to 4000 seconds.

The 24 scenes can be preset directly from the control menu of the fixture by using the editor.

Locate the editor by pressing 'OK' in the menu and selecting 'MANUAL'.

The following option will be available:

- **Editor**
- Run Program
- Stop Program
- Run on power on
- Capture DMX

The editor of the fixture can also capture live DMX values, or the DMX values can be captured from the controller when using the 'Control Channel'. The 'Control Channel' can be found in the DMX charts table, available at <http://www.sgmlight.com>, or upon request via [support@sgmlight.com](mailto:support@sgmlight.com).

To set a single static scene, set the fade time of scene 2 to 0.0 seconds, this will keep the fixture running scene 1.

To make a sequence of up to 24 scenes, set the fade time of the scene following the last one to 0.0 seconds. This will keep the fixture looping between scene 1 to the scene before the scene with 0.0 seconds fade time.

The copy/paste function offers the ability to create replicas of a previous created scenes.

### **Editor**

Select Editor by pressing OK. The following options will show up:

- Scene - Press OK and choose a scene (1 to 24). Confirm with OK.
- Wait Time - Press OK and set the wait time (0 to 4000 seconds). Confirm with OK.
- Fade Time - Press OK and set the fade time of the selected scene (0 to 4000 seconds). Confirm with OK.
- Copy Scene - Press OK to copy the selected scene to the clipboard.
- Paste Scene - Press OK to paste copied scene from the clipboard to the selected scene.
- Clear Scene - Press OK to clear the selected scene and set the default settings.

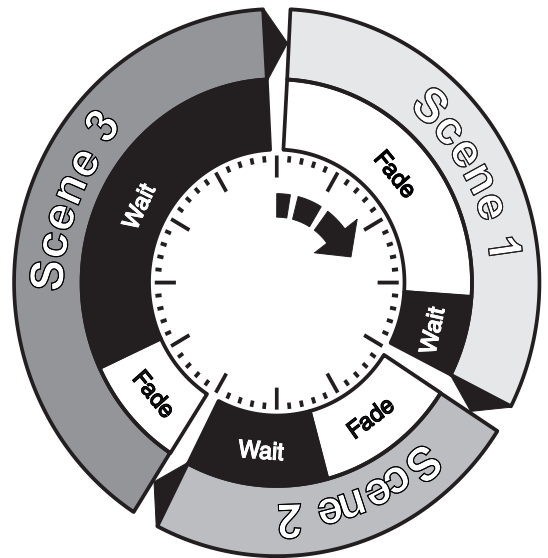
Scroll down in the display to see all controllable features.

To change a value of a feature:

- Select the feature to change
- Press OK and change the value.
- Confirm with OK.

Channels operating in 8 bit mode will allow you to set a value from 0 to 255.

Channels operating in 16 bit mode will allow you to set a value from 0 to 65535.



**Figure 7: Stand-alone operation**

## Connecting to a DMX control device

The G-Spot Turbo is controllable using a DMX control device and it can be connected using either a DMX cable or via the fixture's built-in LumenRadio CRMX wireless receiver system.

If using a cabled DMX system, connect the DMX in cable to the input connector under the base of the fixture (chassis mounted male 5-pin XLR connector), and the DMX out to the output cable, also, under the base (female 5-pin XLR plug). Terminate the DMX out cable of the last fixture in the data link.

For outdoor events, use only IP65-rated XLR connectors. If using a wireless DMX system, ensure that the DMX output is connected to the DMX in connector and properly inserted. Connect both DMX in and DMX out cables in order to maintain the fixtures IP65 rating.

### **Connecting a wireless transmitter**

The G-Spot Turbo is not paired to a wireless transmitter. It is designed to look for wireless transmitters in 'connect' state.

To connect the G-Spot Turbo to a wireless transmitter:

- Log off the currently paired wireless transmitter. See "Disconnecting a wireless transmitter" below.
- Press the connect button on the wireless transmitter.
- Confirm that the fixture has paired with the wireless transmitter.

### **Disconnecting a wireless transmitter**

To disconnect the fixture from the currently paired wireless transmitter, go to:

MENU → SETTINGS → WIRELESS DMX → LOG OFF.

### **Signal priority**

The G-Spot Turbo can be paired to an active wireless transmitter simultaneously as being connected to cabled DMX. The fixture will prioritize cabled DMX over wireless DMX. The active input type is displayed under the wireless signal strength indicator.

## Configuring the device for DMX control

### **About DMX**

The G-Spot Turbo can be controlled using signals sent by a DMX controller on a number of DMX channels (which varies depending on the DMX mode that has been set).

The first channel used to receive data from a DMX control device is known as the DMX start address. Each G-Spot Turbo must have a DMX start address set. For example, if a fixture has a DMX address of 10 and it is in 25-channel DMX mode, then it uses channels from 10 to 34. The following device in the DMX chain could then be set to a DMX address of 35. If two or more DMX devices of the same type have the same DMX address, then they will mimic each other's behavior. Incorrect settings will result in unpredictable responses from the lighting controller.

#### **Please Note:**

**Standard microphone cable is not suitable for transmitting DMX.**

**The last fixture must always be fitted with a DMX termination plug to the fixtures DMX out.**

### **Setting the DMX address**

The DMX address is shown in the display panel. To change the address setting, press the up and down arrows. When the desired address is displayed, press 'OK' to save the setting. For your convenience, the next available DMX address is displayed to the right. Note that channel spacing is determined by the DMX mode.

The G-Spot Turbo also offers the option to set the DMX address through RDM.

### **DMX modes**

The G-Spot Turbo operates in different modes.

Please see all the DMX charts available on the SGM website: <http://www.sgmlight.com> under the respective products or upon request via [support@sgmlight.com](mailto:support@sgmlight.com).

### **Full color calibration and Color temperature correction**

Features full color calibration when you mix two or three colors to ensure uniform color between products. Adjusting one color does not activate full color calibration.

For further information about full color calibration please see all the DMX charts available at <http://www.sgmlight.com>, or upon request via [support@sgmlight.com](mailto:support@sgmlight.com).

## **LED refresh rate (frequency)**

### ***About LED refresh rate***

When using LED lighting with cameras, flickering can occur due to incompatible frequency settings, which means the LEDs and the cameras are not synchronised.

In order to avoid flickering and horizontal banding (rolling shutter), the refresh rate (frequency) can be adjusted in order to achieve flicker-free performance.

### ***Setting the LED refresh rate (frequency) via DMX***

The G-Spot Turbo offers the ability to adjust the refresh rate (frequency) of the LEDs via DMX, by using the 'Control Channel'. To find all 'Control Channel' settings, see the DMX charts available at <http://www.sgmlight.com> under G-Spot Turbo, or upon request via [support@sgmlight.com](mailto:support@sgmlight.com).

The refresh rate can be set between 100,00 kHz and 1,41 kHz. It is recommended to have the G-Spot Turbo configured to operate the default refresh rate by setting the 'Control channel' to 0 through DMX whenever possible (0% - factory default settings), to maintain the best possible dimming performance.

The refresh rate settings are active as long as the value of the 'Control Channel' is set up. The value should be stored as a preset or as a default value for the 'Control Channel' in the control device.

Be aware that the 'Control Channel' is also used for fixture reset functions and DMX capture for the internal sequence editor.

When adjusting a custom value, you want to choose a frequency high enough to avoid flickering, and/or horizontal banding (rolling shutter), but low enough to maintain a good dimming performance.

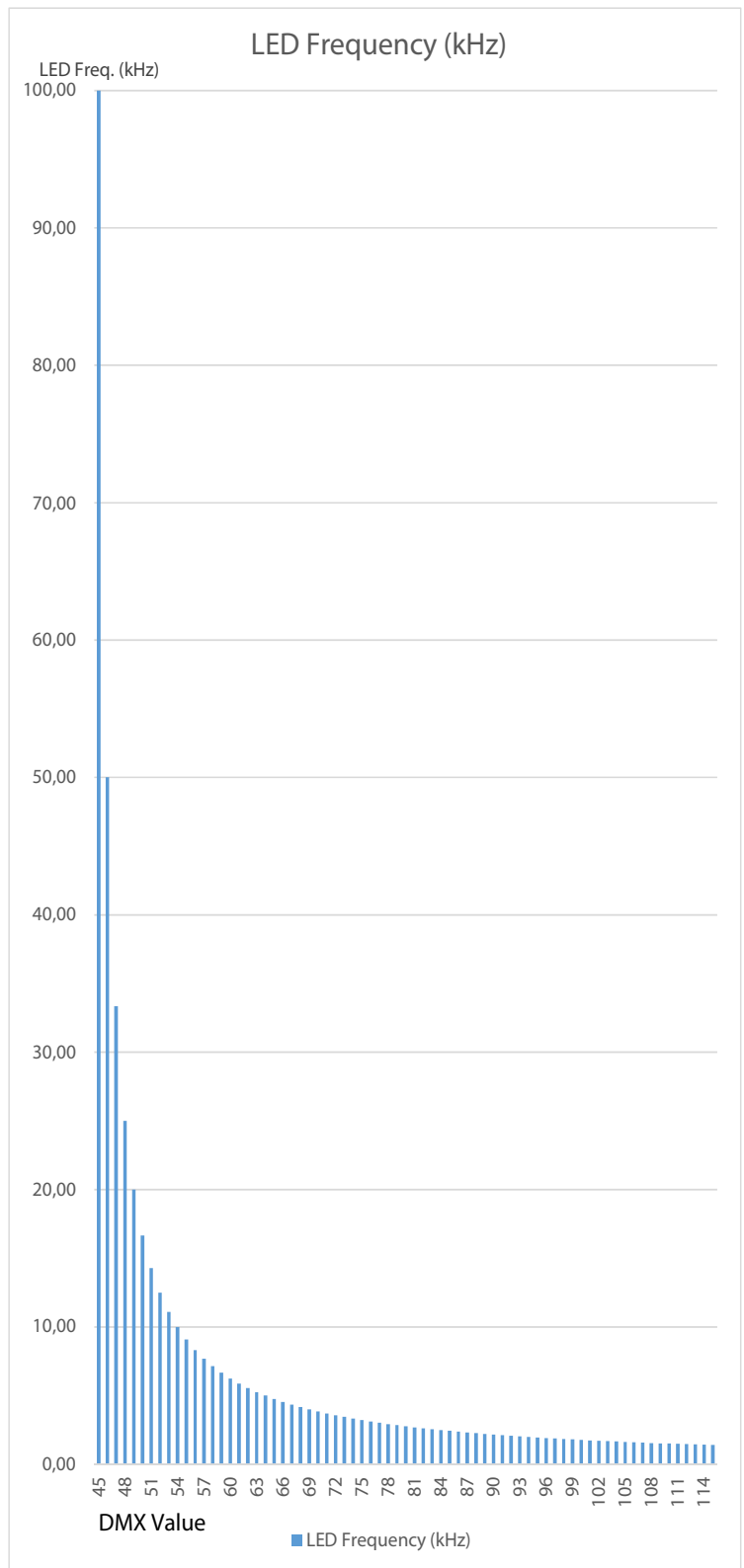
Since there are differences between camera models, exposure settings etc., the optimal refresh rate settings will differ. In order to achieve the best result, adjust the refresh rate through a preview monitor connected to the cameras.

See on page 12 the LED Frequency in kHz according with the different DMX steps/values.

# LED Frequency Settings

CONTROL CHANNEL		
DMX (Step)	DMX (%)	LED Freq. (kHz)
45	17,6%	100,00
46	18,0%	50,00
47	18,4%	33,33
48	18,8%	25,00
49	19,2%	20,00
50	19,6%	16,67
51	20,0%	14,29
52	20,4%	12,50
53	20,8%	11,11
54	21,2%	10,00
55	21,6%	9,09
56	22,0%	8,33
57	22,4%	7,69
58	22,7%	7,14
59	23,1%	6,67
60	23,5%	6,25
61	23,9%	5,88
62	24,3%	5,56
63	24,7%	5,26
64	25,1%	5,00
65	25,5%	4,76
66	25,9%	4,55
67	26,3%	4,35
68	26,7%	4,17
69	27,1%	4,00
70	27,5%	3,85
71	27,8%	3,70
72	28,2%	3,57
73	28,6%	3,45
74	29,0%	3,33
75	29,4%	3,23
76	29,8%	3,13
77	30,2%	3,03
78	30,6%	2,94
79	31,0%	2,86
80	31,4%	2,78

CONTROL CHANNEL		
DMX (Step)	DMX (%)	LED Freq. (kHz)
81	31,8%	2,70
82	32,2%	2,63
83	32,5%	2,56
84	32,9%	2,50
85	33,3%	2,44
86	33,7%	2,38
87	34,1%	2,33
88	34,5%	2,27
89	34,9%	2,22
90	35,3%	2,17
91	35,7%	2,13
92	36,1%	2,08
93	36,5%	2,04
94	36,9%	2,00
95	37,3%	1,96
96	37,6%	1,92
97	38,0%	1,89
98	38,4%	1,85
99	38,8%	1,82
100	39,2%	1,79
101	39,6%	1,75
102	40,0%	1,72
103	40,4%	1,69
104	40,8%	1,67
105	41,2%	1,64
106	41,6%	1,61
107	42,0%	1,59
108	42,4%	1,56
109	42,7%	1,54
110	43,1%	1,52
111	43,5%	1,49
112	43,9%	1,47
113	44,3%	1,45
114	44,7%	1,43
115	45,1%	1,41



## Fixture properties

### ***Factory default***

When restoring factory defaults the following settings will be set:

- DMX address = 1
- Startup mode = DMX
- Display saver = Off
- Flip screen = Off
- RDM device label set to = Fixture type name
- Internal program reset

## Effects

### ***Colors***

The G-Spot Turbo series has an extended color palette due to the usage of Lime LEDs instead of the Green LEDs used on the G-Spot. With the Lime LEDs, it is possible to achieve warmer pastel colors, richer yellows, and a wider variety of green shades.

The G-Spot Turbo is also able to create deep saturated greens and even more contrasted colors.

The G-Spot Turbo offers an extra channel for independent control of the green dichroic flag.

### ***Two independent rotating gobo wheels***

The two independent rotating gobo wheels have five slots plus one open position on each to control the shape of emitted light. Each gobo is indexable with bi-directional rotation. The standard gobo set includes both breakup patterns, geometric gobos, and full colored gobos.

### ***Effect wheels***

The G-Spot Turbo has two effect wheels for generating optical effect. The two effect wheels operate as an extension of one another to achieve continuous animation effect.

### ***High-precision pan and tilt***

The G-Spot Turbo has a 16-bit pan and tilt control, with a 540° pan and 270° tilt movement with feedback.

### ***Color temperature correction***

The G-Spot Turbo offers seamless CTC (color temperature correction) control from 2,000° Kelvin - 10,000° Kelvin.

### ***Ultra high-speed strobe effect***

The ultra high-speed strobe effect introduces instant color control and the possibility to strobe between two or more colors at any speed. Random strobe and pulse effects can be generated with variable speed.

### ***Prism***

4-facet rotating prism.

### ***Frost***

The soft high-quality frost filter is variable from 0% to 100%.

### ***Flipping the OLED display***

If the fixture is installed hanging upside down, it might be useful to flip the display so that it is easier to read.

To flip the display, use the “Settings→Display Flip” menu, or press the up and down buttons on the control panel at the same time.

# Control menu

Level 1	Level 2	Level 3	Level 4	Function	
DMX MODE	Standard			Select Standard DMX mode.	
	Extended			Select Extended DMX mode.	
	Standard Comp.			Select Standard Compatible mode, for compatibility with regular G-Spot.	
	Extended Comp.			Select Extended Compatible mode, for compatibility with regular G-Spot.	
INFO	GENERAL INFO	Product		Display product type.	
		SN (Serial number)		Display fixtures serial number.	
		RDM Label		Display RDM label.	
		RDM ID		Display RDM ID (unique RDM ID for identification).	
	SOFTWARE VERSION	Main			Display current firmware version.
		SMPS			Display SMPS version.
		PAN			Display PAN version.
		TILT			Display TILT version.
		Gobo			Display GOBO version.
		Zoom			Display ZOOM version.
		TIMERS	RED D: H:		
	GREEN D: H:				Display total running days and hours for green LED.
	BLUE D: H:				Display total running days and hours for blue LED.
	Running Hours D: H:				Display total running days and hours of the fixture.
	DMX VIEW	001 ↓ 507			Display received DMX levels. Up to 507 channels. Press 'UP' or 'DOWN' to scroll between the channels.
	TEMPERATURES	LED R: G: B:			Display LED temperature.
		SMPS:			Display SMPS temperature.
		Pan: Tilt:			Display pan and tilt temperature.
		Gobo: Focus:			Display gobo and focus temperature.
		Base: Head:			Display base and head temperature.
		Humidity B: H:			Display % of humidity in the base and head.
	SENSORS	Hall Pan1			Display the sensors of the fixture. Press 'OK' to see more sensor values.
		Hall Pan 2			
		Hall Pan			
		ABS HUMIDITY Head			
		ABS HUMIDITY Base			
		Gobo Sensor S: I:			Display the sensors of the fixture.
		Framming Rot.			
		Effect Wheel			
	FANS	LED Fan 1			Display the rotation per minute (RPM) of the LED Fan 1.
		LED Fan 2			Display the rotation per minute (RPM) of the LED Fan 2.
		Head			Display the rotation per minute (RPM) of the head fan.
		Base			Display the rotation per minute (RPM) of the base fan.
Zoom				Display the rotation per minute (RPM) of the zoom fan.	
LOG	Firmware V.			Display current firmware version .	
	Build (date)			Display date of manufacture.	
	Build (hour)			Display hour of manufacture.	
	Uptime D: H: M: S:			Display fixture's uptime in days, hours, minutes, and seconds.	
ERRORS	Mainboard			Press 'OK' to display any active mainboard errors.	
	SMPS			Press 'OK' to display any active SMPS errors.	
	PAN			Press 'OK' to display any active PAN errors.	
	TILT			Press 'OK' to display any active TILT errors.	
	GOBO			Press 'OK' to display any active gobo errors.	
	ZOOM			Press 'OK' to display any active zoom errors.	

## Control menu - continued

Level 1	Level 2	Level 3	Level 4	Function
SETTINGS	WIRELESS DMX	Log Off	-	Press 'OK' to log off wireless DMX.
		STATUS	Signal Strength %	Display the signal strength % of the connection.
			CRMX PAIRD	Display CRMX PAIRD: YES or NO.
			DMX Active	Display DMX Active: YES or NO.
			CRMX RATE	Display CRMX RATE (oH2).
	ENABLE	[X] / [ ]	Press 'OK' to enable / disable - [X] / [ ] .	
	DIMMING CURVE	LINEAR		Press 'OK' to select linear dimming.
		GAMMA CORRECTED		Press 'OK' to select gamma corrected dimming.
	INVERT PAN	[X] / [ ]		Press 'OK' to enable / disable - [X] / [ ] .
	INVERT TILT	[X] / [ ]		Press 'OK' to enable / disable - [X] / [ ] .
	SWAP PAN TILT	[X] / [ ]		Press 'OK' to enable / disable - [X] / [ ] .
	FLIP DISPLAY	[X] / [ ]		Press 'OK' to enable / disable - [X] / [ ] .
	DISPLAY OFF	[X] / [ ]		Press 'OK' to enable / disable - [X] / [ ] .
	FAN MODE	Standard		Fan speed according to internal fixture temperature.
		Silent		Low fan speed for quiet operation.
		Max Power		High fan speed for better cooling effect.
		Always 100%		Always maximum fan speed for high cooling effect.
	CALIBRATION	PAN HOME	CALIBRATION → XXXXX Pan Pos XXXX - REV. X.XX	Display PAN HOME position. Scroll 'UP' and 'DOWN' to define PAN HOME position. Confirm with 'OK'.
		TILT HOME	CALIBRATION → XXXXX Pan Pos XXXX - REV. X.XX	Display TILT HOME position. Scroll 'UP' and 'DOWN' to define TILT HOME position. Confirm with 'OK'.
		GOBO 1 SELECT	CALIBRATION → XXXXX	Define home position for each effect. Scroll 'UP' and 'DOWN' to define home position for each position. Confirm with 'OK'.
		GOBO 2 SELECT	CALIBRATION → XXXXX	
		EFFECT WHEEL 1	CALIBRATION → XXXXX	
		EFFECT WHEEL 2	CALIBRATION → XXXXX	
		FROST	CALIBRATION → XXXXX	
		PRISM	CALIBRATION → XXXXX	
	IRIS	CALIBRATION → XXXXX		
	SERVICE PIN	-		Service use only. Contact your SGM dealer or SGM support to request the service pin.
	SERVICE MENU	FIXTURE TYPE		Service use only.
		DEBUG		
		LINK QUALITY		
		MINIMUS LEVELS		
		Recalibration SMPS		
FACTORY DEFAULT	Factory default / set		Press 'OK' to set the fixture to factory default and 'ESC' to unset. See 'Factory default' on page 13.	
TEST	OFF	-	Stops test sequence execution.	
	AUTOMATED TEST	-	Initiates a self-test sequence. Select 'OFF' to stop self-test sequence.	
	LED TEST	Testing Red 2		Scroll 'UP' and 'DOWN' to test the different colors. Service use only.
		Testing Red 1		
		Testing Blue 2		
		Testing Blue 1		
		Testing Yellowish Green		
Testing Green				
DISPLAY TEST	-		Service use only.	
RESET	PAN TILT		Press 'OK' to reset the PAN TILT.	
	EFFECT MODULE		Press 'OK' to reset the EFFECT MODULE.	
	Zoom Focus Module		Press 'OK' to reset the ZOOM FOCUS MODULE.	
	ALL		Press 'OK' to reset all.*	

\*When the G-Spot Turbo is subjected to extreme exposure it might not reset correctly. Should this be the case, the fixture will automatically heat up the gobo bearings at maximum light output for approx. five minutes and attempt to reset the fixture again. If this not solve the issue, disconnect the fixture from power and power it back, to repeat the heat-up procedure. If none of this resolve the issue, contact your local SGM distributor or SGM Technical Support. See <http://sgmlight.com> for more details.

## Control menu - continued

Level 1	Level 2	Level 3	Level 4	Function
MANUAL	Editor	Scene	1 → 24	Display current scene. Press 'OK' and scroll 'UP' and 'DOWN' to choose a scene (1 to 24). Confirm with 'OK'.
		Wait Time (Sec.)	0 → 4000	Wait (static) time in current scene in seconds. Press 'OK' and scroll 'UP' and 'DOWN' to set the wait time (0 to 4000 seconds) of the selected scene. Confirm with 'OK'.
		Fade Time (Sec.)	0 → 4000	Fade-in (transition) time to current scene in seconds. Press 'OK' and scroll 'UP' and 'DOWN' to set the fade time (0 to 4000 seconds) of the selected scene. Confirm with 'OK'.
		Copy Scene	-	Press 'OK' to copy the selected scene to the clipboard.
		Paste Scene	-	Press 'OK' to paste copied scene from the clipboard to the selected scene.
		Clear Scene	-	Press 'OK' to clear the selected scene and set the default settings.
		Shutter	1 → 255	Scroll 'UP' and 'DOWN' to set shutter value in currently selected scene, according to latest DMX chart.
		Dimmer	1 → 255	Scroll 'UP' and 'DOWN' to set dimmer in currently selected scene, according to latest DMX chart.
		Red	1 → 255	Scroll 'UP' and 'DOWN' to set red value in currently selected scene.
		Green	1 → 255	Scroll 'UP' and 'DOWN' to set green value in currently selected scene.
		Blue	1 → 255	Scroll 'UP' and 'DOWN' to set blue value in currently selected scene.
		CTC	1 → 255	Press 'OK' and scroll 'UP' and 'DOWN' to set CTC in currently selected scene.
		Pan	1 → 65535	Scroll 'UP' and 'DOWN' to set Pan position in currently selected scene. Center = 32767
		Tilt	1 → 65535	Scroll 'UP' and 'DOWN' to set Tilt position in currently selected scene. Center = 32767
		Gobo 1	1 → 255	Scroll 'UP' and 'DOWN' to set Gobo 1 in currently selected scene, according to latest DMX chart.
		Gobo 1 Rot.	1 → 65535	Scroll 'UP' and 'DOWN' to set Gobo 1 rotation in currently selected scene.
		Gobo 2	1 → 255	Scroll 'UP' and 'DOWN' to set Gobo 2 in currently selected scene, according to latest DMX chart.
		Gobo 2 Rot.	1 → 65535	Scroll 'UP' and 'DOWN' to set Gobo 2 rotation in currently selected scene.
		Iris	1 → 255	Scroll 'UP' and 'DOWN' to set Iris in currently selected scene, according to latest DMX chart.
		Effect Wheel	1 → 255	Scroll 'UP' and 'DOWN' to set Effect Wheel in currently selected scene, according to latest DMX chart.
		Prism	1 → 255	Scroll 'UP' and 'DOWN' to set Prism in currently selected scene, according to latest DMX chart.
		Frost	1 → 255	Scroll 'UP' and 'DOWN' to set Frost in currently selected scene, according to latest DMX chart.
		Zoom	1 → 255	Scroll 'UP' and 'DOWN' to set Zoom in currently selected scene, according to latest DMX chart.
		Focus	1 → 255	Scroll 'UP' and 'DOWN' to set Focus in currently selected scene, according to latest DMX chart.
	Run Program	Running Program		Press 'OK' to run an internal sequence.
	Stop Program	-		Stops current running internal sequence.
	Run On Power on	[X] / [ ]		Press 'OK' to enable / disable - [X] / [ ] .
	Capture DMX	Scene	1 → 24	Press 'OK' and scroll 'UP' and 'DOWN' to choose a scene (1 to 24). Confirm with 'OK'.
		Wait Time	0 → 4000	Press 'OK' and scroll 'UP' and 'DOWN' to set the wait time (0 to 4000 seconds) of the selected scene. Confirm with 'OK'.
		Fade Time	0 → 4000	Press 'OK' and scroll 'UP' and 'DOWN' to set the fade time (0 to 4000 seconds) of the selected scene. Confirm with 'OK'.
		Capture DMX		Capture DMX values of all channels from DMX input.



# RDM

## Supported RDM functions

The G-Spot Turbo features support for various RDM functions.

RDM (Remote Device Management) is a protocol enhancement to USITT DMX512 that allows bi-directional communication between the fixtures and the controller over a standard DMX line. This protocol will allow configuration, status monitoring, and management.

You will need a RDM controller to get control over the supported parameters. See the tables below for supported RDM functions.

## RDM functions

**Please note:** The RDM controller communicates with the fixtures to show only the available options for each RDM function. The table is subject to change without notice.

PID	Actions allowed	Name
0x00F0	GET / SET	DMX Start Address
0x00E0	GET / SET	DMX Personality / Mode
0x00E1	GET	DMX Personality Description
0x1000	GET / SET	Identify
0x1001	SET	Reset Device
0x0080	GET	Device Model Description
0x0081	GET	Manufacturer Label
0x0082	GET / SET	Device Label
0x0090	SET	Factory Defaults

PID	Actions allowed	Name
0x0200	GET	Sensor Definition
0x0201	GET / SET	Sensor Value
0x0400	GET / SET	Device Hours
0x0401	GET	Lamp Hours
0x0051	GET	Parameter Description
0x0500	GET / SET	Display Invert
0x0501	GET / SET	Display Level 0=OFF, 1 and above=ON
0x8626	SET	Fan 0=AUTO 1=LOW 2=HIGH 3=FULL

## Sensors

RDM enables various sensor readouts for remote device monitoring. See the table below for sensors and sensor types.

**Please note:** The RDM controller communicates with the fixtures to show only the available sensors for this fixture. The table is subject to change without notice.

Name	Sensor Type
SMPS PCB	Temperature
Pan PCB	Temperature
Tilt PCB	Temperature
Gobo PCB	Other
Zoom PCB	Other
Base	Temperature
Head	Temperature
Red LED	Temperature
Green LED	Temperature
Blue LED	Temperature
Main PCB	Temperature

Name	Sensor Type
CRMX Signal Strength	Other
Humidity Base	Other
Humidity Head	Other
Fan 1 Led RPM	Velocity
Fan 2 Led RPM	Velocity
Fan Base RPM	Velocity
Fan Head RPM	Velocity
Fan Zoom RPM	Velocity
Errors	Other
Humidity Absolute	Other
Humidity Absolute	Other

# Troubleshooting

Problem	Potential cause(s)	Remedies
Fixture does not respond or appears to be off.	No power to the fixture.	Confirm that the power is switched on, that the cables are plugged in and the TRUE1 connector is inserted and turned to its locked position.
	Main fuse is blown.	Contact SGM support or certified SGM service partner.
Fixture suddenly turned off.	Power was turned off.	Check the power supply, switches and breakers.
Fixture suddenly stopped responding.	The wireless transmitter or connections, was disconnected/tampered with.	Inspect the wireless transmitter and connections.
	DMX cables was disconnected.	Inspect DMX cables.
Fixture operates irregularly / abnormal.	DMX address is incorret.	Inspect and enter the correct DMX address.
	DMX cable polarization is inverted (pin 2 + 3).	Install a phase-inverter or replace cables.
	DMX cable is corrupted.	Replace or repair defective cables and/or connections.
	DMX link is not terminated.	Install a XLR 120ohm DMX termination at the end of the DMX link.
	Corrupted DMX cable.	Replace or repair defective cables and/or connections.
	The fixture operates an internal program.	Go to MENU → MANUAL → STOP PROGRAM
	A corrupted fixture generates noise/disruptions on the DMX link.	Track and isolate the corrupted fixture.
Color is uneven	The SGM Calibration Data set has been lost	Contact your local SGM dealer or support@sgmlight.com
Pan or tilt skips/slutters	Obstacles is within the required clearance of pan/tilt	Inspect and remove any obstacles constraining free operation of pan/tilt.
Pan/tilt does not reset correctly.	Calibration values are missing.	Contact SGM support or certified SGM service partner
Display is turned on, but the fixture doesn't respond	Several causes	Contact your local SGM dealer or support@sgmlight.com

# Gobo replacement

## Identification of gobo wheel

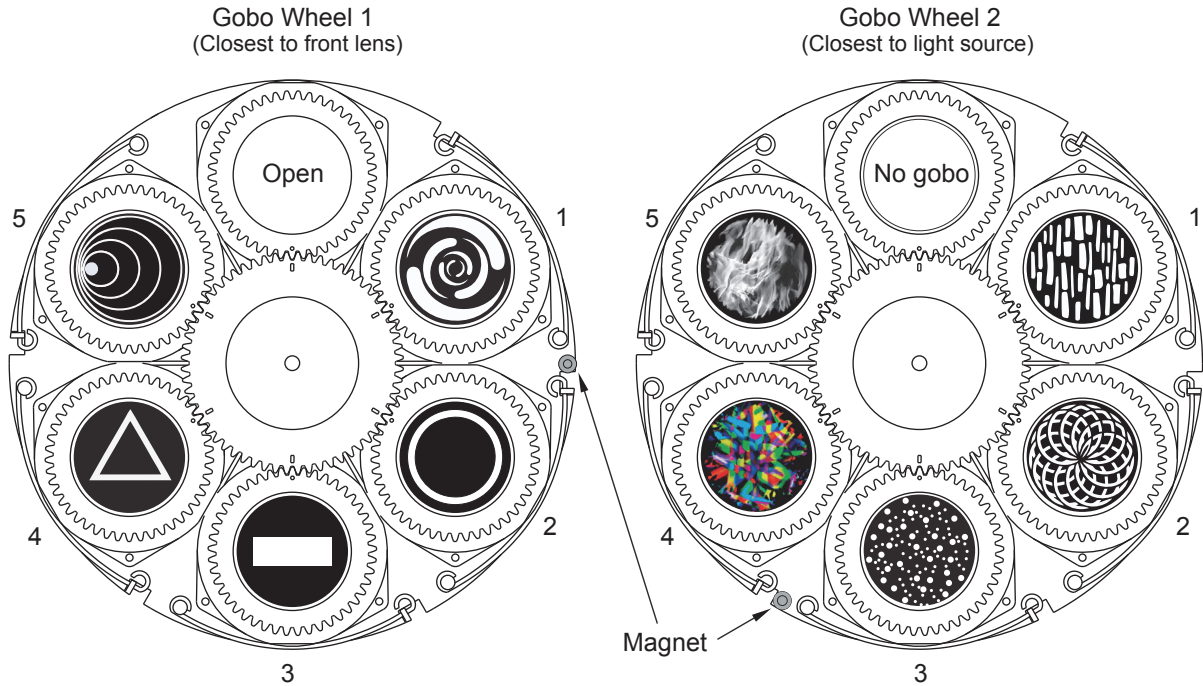


Figure 8: Identification of gobo wheels

Gobo Wheel 1		
No.	Description	Part No.
Open	Open gobo	37000001
1	Spin cycle	37005002
2	Ring	37005007
3	Bar	37005008
4	Triangle	37005009
5	Concentric	37005004

Gobo Wheel 2		
No.	Description	Part No.
No gobo	Empty	-
1	Breakup bricks	37005006
2	Spiral leaf	37005010
3	Dots	37005003
4	Kaleidoscope gems	37002001
5	Fire up close	37005001

## Replacing the gobos

To replace one or more gobos:

1. Disconnect the fixture from power and allow to cool.
2. Position the head and apply the tilt lock.
3. Before removing one of the rear head covers, identify where the gobo wheel hatch 1 and 2 are positioned. When the head of the fixture is facing upwards, cover gobo wheel 2 is located at the side of the head corresponding to the pan lock (B).
4. Remove the gobo wheel hatch for access to the gobo wheel.
5. Turn the gobo wheel until the gobo you want to replace is accessible.

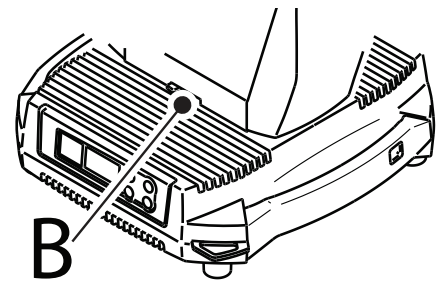


Figure 9: Pan Lock

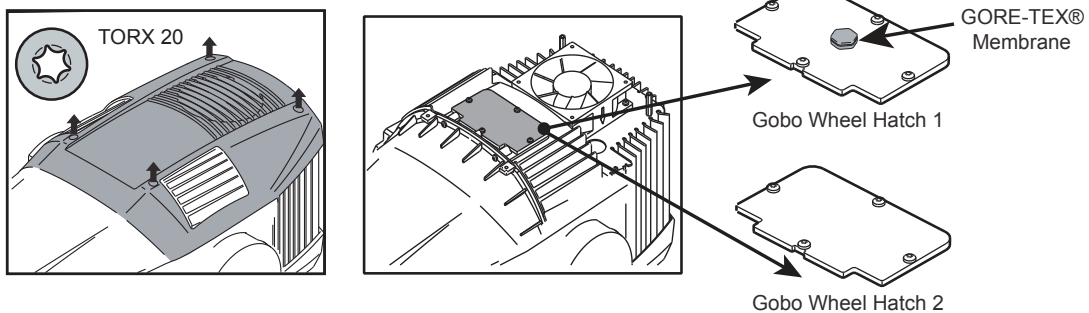


Figure 10: Replacing the gobos

- Unhook the end of the spring and turn it upwards. Pull the gobo holder out of the gobo wheel.

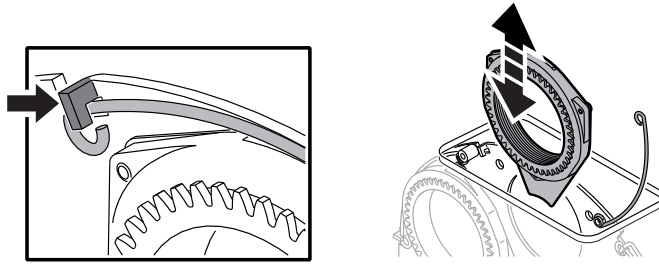


Figure 11: Replacing gobos in the gobo wheel

### Replacing a gobo in a gobo holder

- Remove the defective/old gobo.
- Place the new gobo with silver side towards the light source.
- Align both index marks of the gobo and the gobo holder, as shown below.
- Insert the gobo holder and align it with the index mark in the gobo wheel, as shown below. If necessary, continue replacing gobos one by one as described.

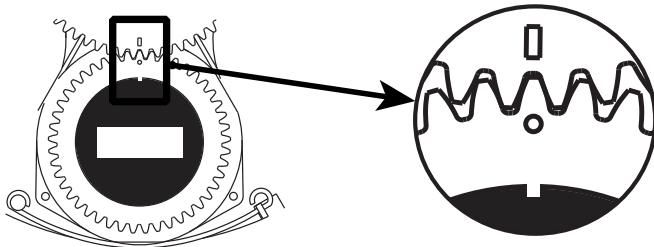


Figure 12: Replacing gobos in a gobo holder

- If no further service is necessary, reinstall the gobo wheel hatch. To maintain the fixture's IP65-rating, it is important to fasten the gobo covers to 1 Nm.

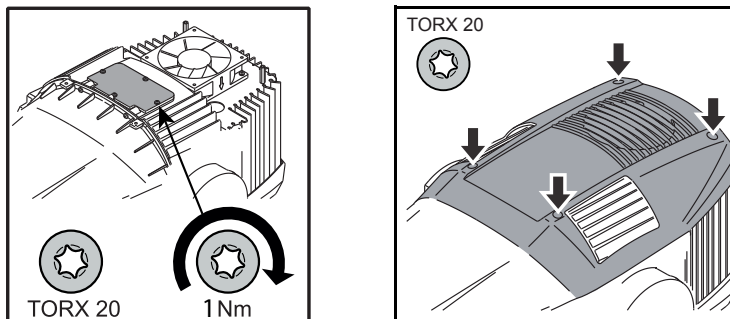
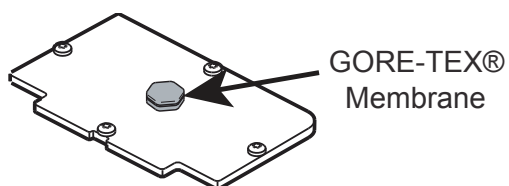


Figure 12: Fasten the gobo covers

## GORE-TEX® Membrane

The gobo wheel hatch includes a GORE-TEX® Membrane, which allows the fixture to breathe. In order to vacuum test the fixture, the GORE-TEX® membrane has to be removed.

For more information on how to vacuum test the G-Spot Turbo, please contact [support@sgmlight.com](mailto:support@sgmlight.com)



Gobo Wheel Hatch 1

Figure 13: GORE-TEX® Membrane

# Maintenance

## Upgrading the firmware

The firmware installed on the fixture can be identified in two ways:

1. When powering on the fixture, the display will show the currently installed firmware
2. Go to the MENU → INFO → SOFTWARE VERSION

To perform firmware updates, use a Windows-based personal computer, a SGM USB 5-Pin-XLR uploader cable available from your SGM dealer and the SGM Firmware Tool software, available on the SGM website <http://www.sgmlight.com>.

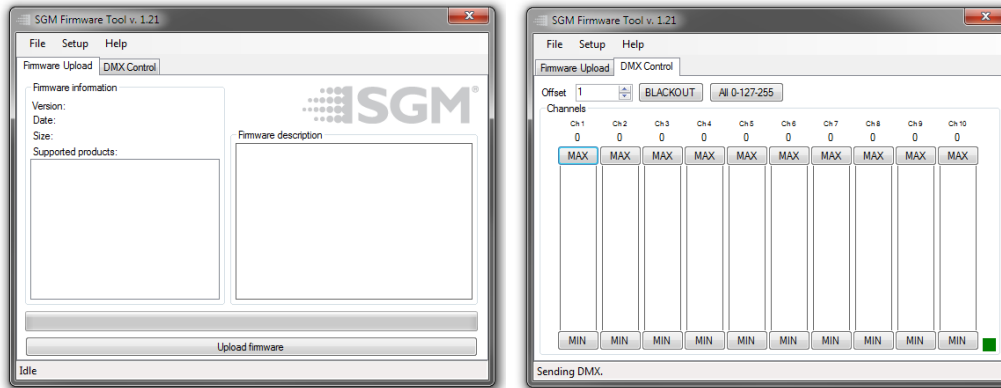


Figure 14: Firmware tool

Additionally, the Firmware Tool software offers a simple DMX controller featuring 512 DMX channels for test purposes.

We recommend that the fixture's firmware is always up-to-date. Visit <http://sgmlight.com> to download the latest firmware.

## Setting the display saver

By default the OLED display dims down after a short period when the control panel is not in use, but it can also be set to turn off completely. Pressing any key will always turn on the display or restore it to normal brightness. To change the display saver, go to OK → SETTINGS → DISPLAY OFF. This can also be changed via RDM - please see "RDM" on page 17.

NOTE: To avoid the risk of display deterioration caused by long term use in permanent installations, it is recommended to use the DISPLAY OFF setting.

## Cleaning

SGM luminaires with IP65 or IP66-rating do not need any cleaning procedures inside the fixture. However, cleaning the front lens may be needed to achieve the maximum light output after exposure to dust, sand, or dirt. Exterior housing can also be cleaned to get a better look. To maintain adequate cooling, fans must be cleaned periodically.

Whenever necessary, clean the G-Spot Turbo using a soft cloth dampened with a solution of water and a mild detergent. Do not use products that contain solvents, abrasives, or caustic agents for cleaning, as they can cause damage to both hardware, cables, and connectors.

Cleaning will vary greatly depending on the operating environment and installation. It should therefore be checked at frequent intervals within the first few weeks of operation to see how often cleaning is necessary.

## Fixtures and accessories

Contact your local SGM dealer to get latest pricing and news about available accessories.

**Please note: the listed below are subject to change without notice.**

### Included items

2 m power cable with Neutrik TRUE1 power connector.....	P/N: 07860040
2 x Omega brackets, BL / WH.....	P/N: 83060602 / 83061206

### Ordering information

G-Spot Turbo, Std, BL.....	P/N: 80021201
G-Spot Turbo, Std, WH.....	P/N: 80021202
G-Spot Turbo, Std, CU.....	P/N: 80021203
Single flightcase G-Spot, with labels.....	P/N: 82051001
SGM USB uploader cable .....	P/N: 83062011

## Support hotline

SGM offers 24/7 technical support hotline.

Worldwide: +45 3840 3840

US: +1 877 225-3882

support@sgmlight.com

## Approvals and certifications

**Conforms to  
Conforms to  
Conforms to**

**2014/35/EU: Low Voltage Directive  
2014/30/EU: EMC Directive  
2011/65/EU: RoHS2 Directive**



*The information in this document is subject to change without notice. For the latest information, see [www.sgmlight.com](http://www.sgmlight.com).*











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