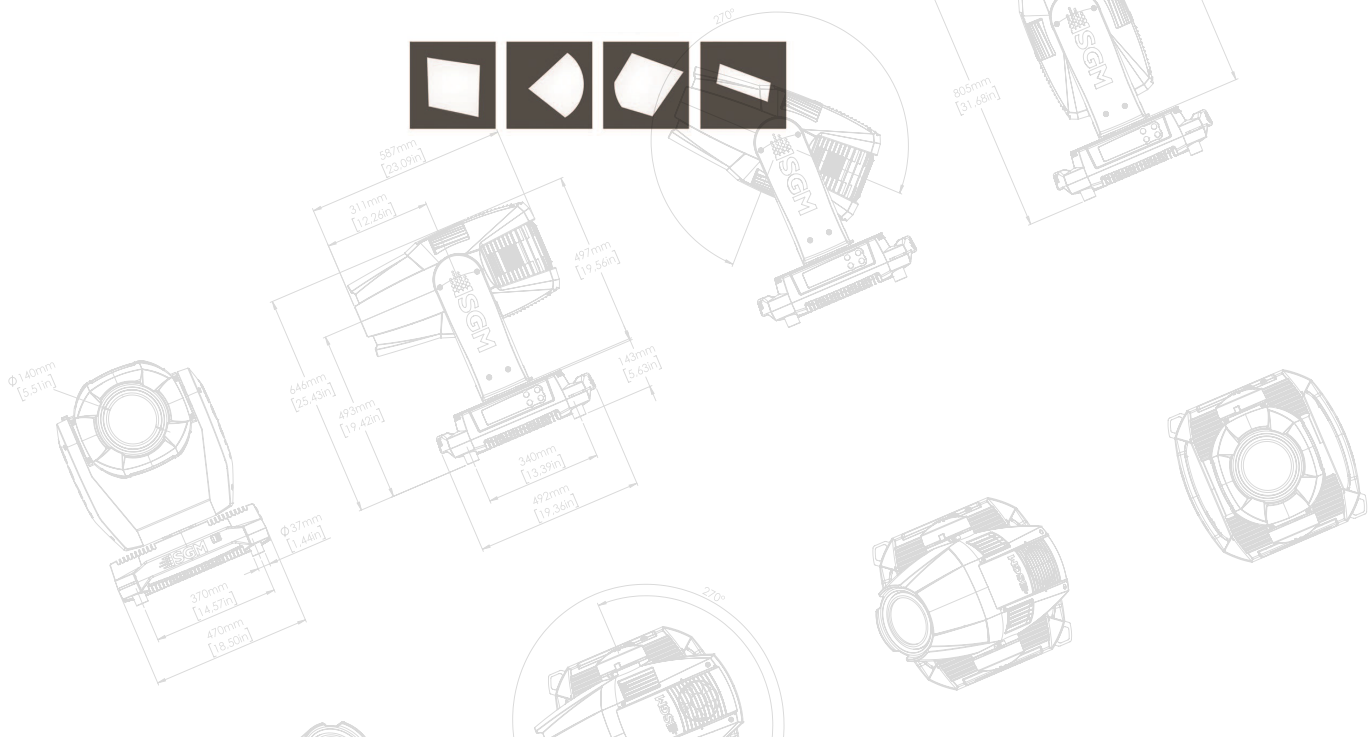


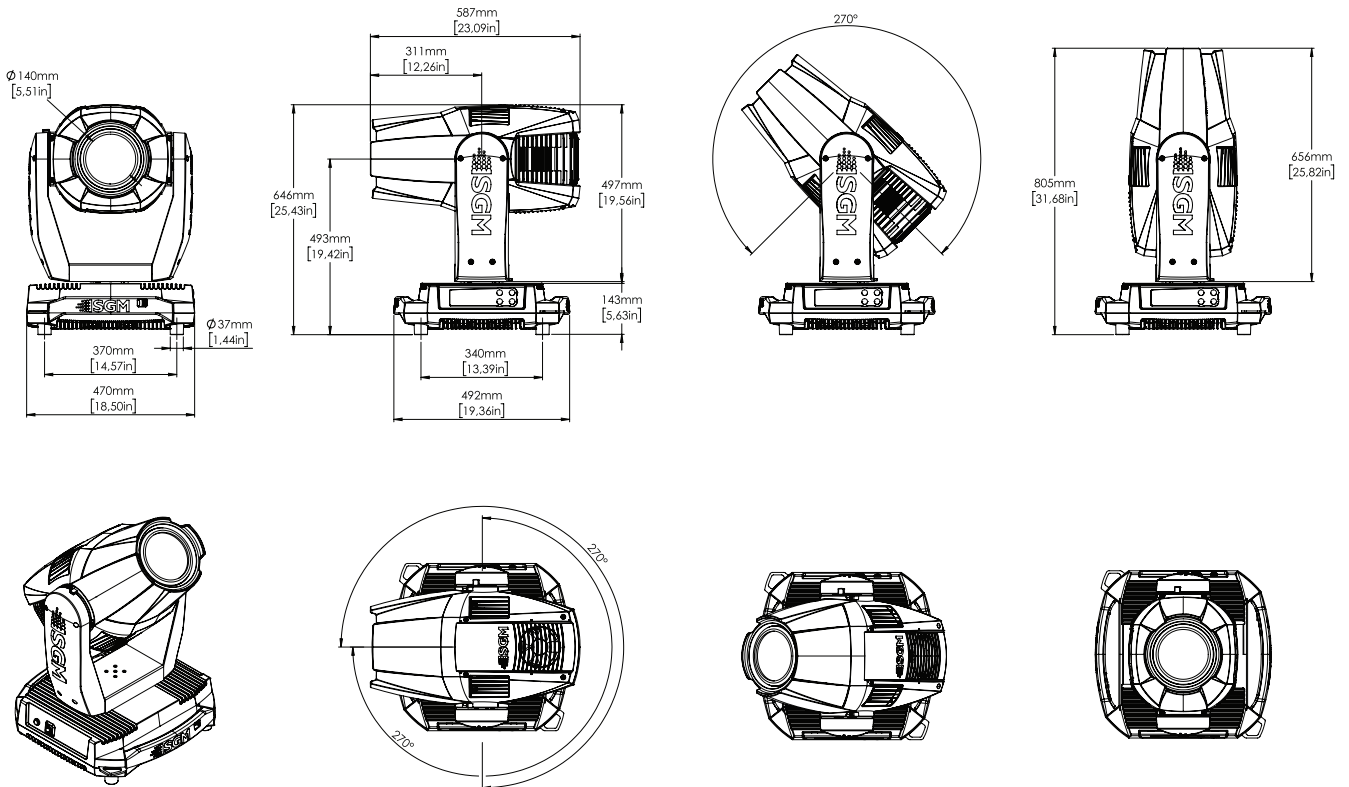
USER MANUAL



MOVING HEADS SERIES G-PROFILE TURBO



G-Profile Turbo dimensions



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

This manual covers installation, use, and maintenance of the G-Profile Turbo. A digital version is available at www.sgmlight.com, or upon request via support@sgmlight.com.

G-PROFILE TURBO USER MANUAL REV. A

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This edition applies to firmware version 2.09 or later.

English edition

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Safety information



WARNING!

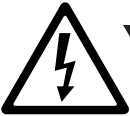
Read the safety precautions in this section before installing, powering, or operating this product.



SGM luminaires are intended for professional use only. They are not suitable for household use.

Les luminaires SGM sont impropres à l'usage domestique. Uniquement à usage professionnel.

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 when working at height to prevent injury due to falls.
- 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.
- For elevated installations, secure the fixture with suitable safety cables, and always comply with relevant load dimensioning, safety standards and requirements.
- 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-Profile Turbo features:

- An IP65-rated LED light source with a powerful Red - Lime - Blue (RLB) LED engine.
- An extended color palette.
- One gobo wheel with five rotatable, indexable and interchangeable gobos + one open.
- Four controllable shutter blades; individually adjustable +/-30°.
- Two independent effect wheels with semi-continuous effect.
- Ability to work within 8° to 43° zoom range.
- Preset stand-alone/scenes programs.
- Both wired and wireless DMX control.
- Full RDM protocol.
- Multi-environmental capability.
- Low power consumption, and an expected lifetime of 50,000 hours*.

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

Parts identification and terminology

A: Tilt Lock

B: Head fan grid (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

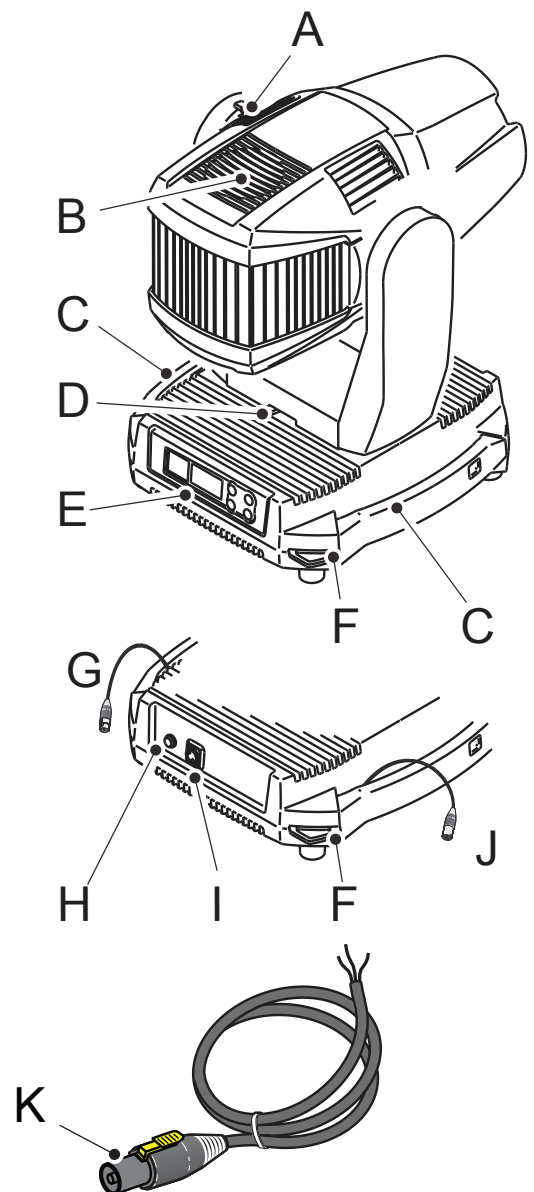


Figure 1: G-Profile Turbo parts and terminology

Preparing for installation

Unpacking

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

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

- Smoke fluid, dust, dirt, and airborne pollution to the degree that they cannot enter the device in sufficient quantities to interfere with its operation.
- Humidity and 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 has adequate ventilation.
- It is not exposed to high-pressure water jets or immersed in water.

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 a suitable flight case for transportation and storage of the device.

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

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

Installing / Rigging the G-Profile Turbo

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

Always use the two included 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.

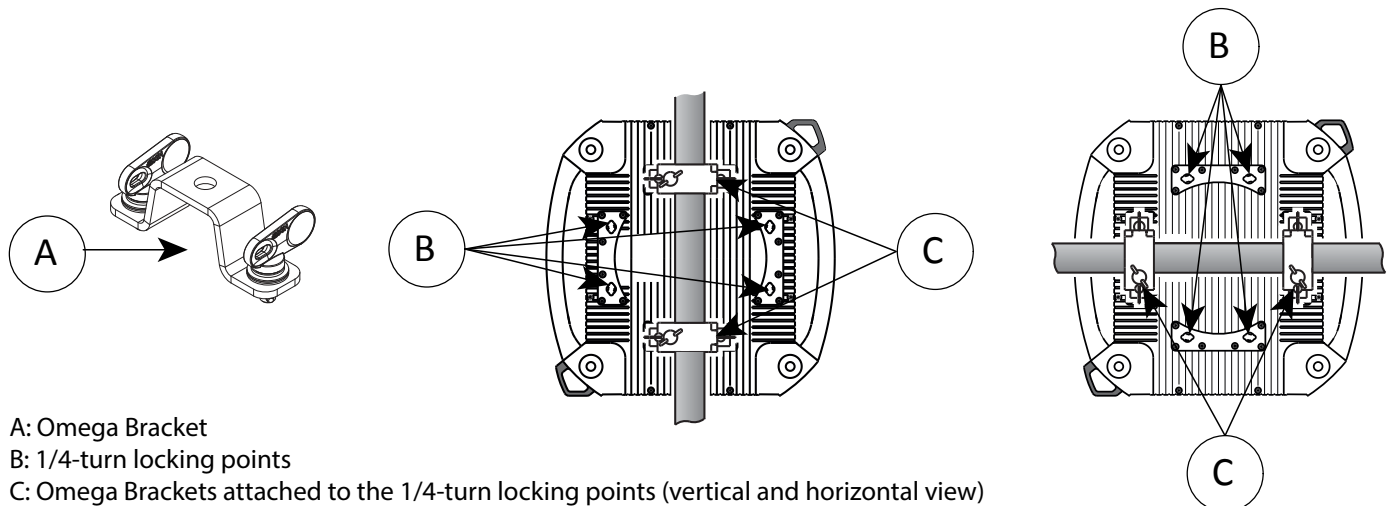


Figure 2: G-Profile Turbo (POI) base with Omega brackets

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. Also ensure 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 / 1/2" 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 the head or yoke colliding with other fixtures.

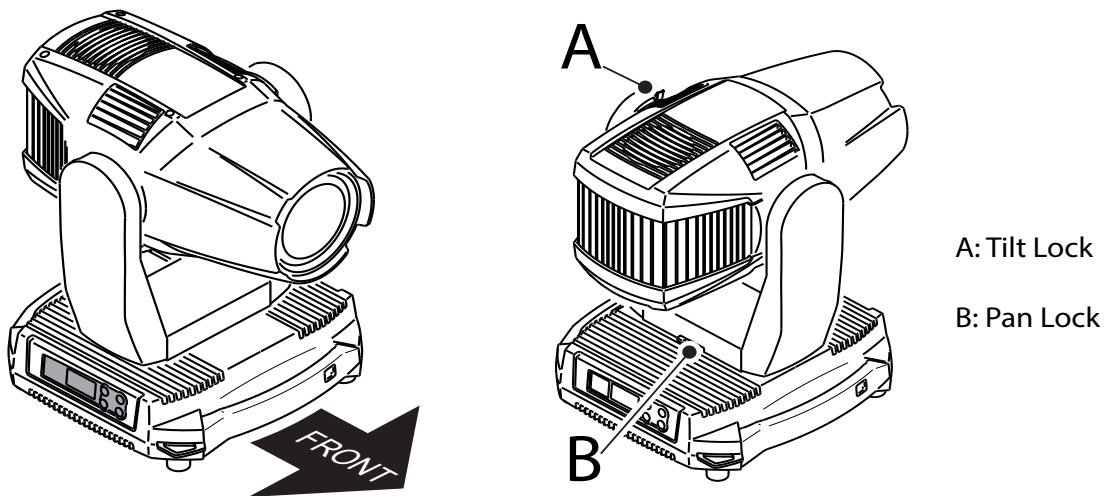


Figure 3: Pan and tilt locks



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

Always fasten the safety wires (not included) between the load-bearing support structure and the safety wire attachment points of the device - not shown.

The safety cables 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

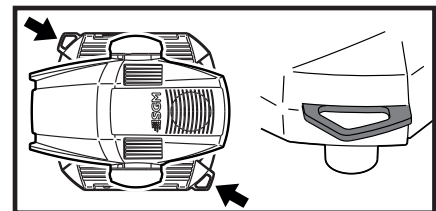


Figure 4: Safety Wire attachment points

Connecting AC power

The G-Profile Turbo can operate on any 100–240 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), to ensure the correct ingress protection (IP-rating).

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

- 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

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

For assistance with alternative configurations, contact your SGM representative.

After connecting the G-Profile 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.

Do not connect the fixture to an electrical dimmer system, as doing so may cause damage.

Configuring the device

The G-Profile Turbo can be set up by using the control panel in the base of the fixture, or through RDM.

After powering on, the G-Profile 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

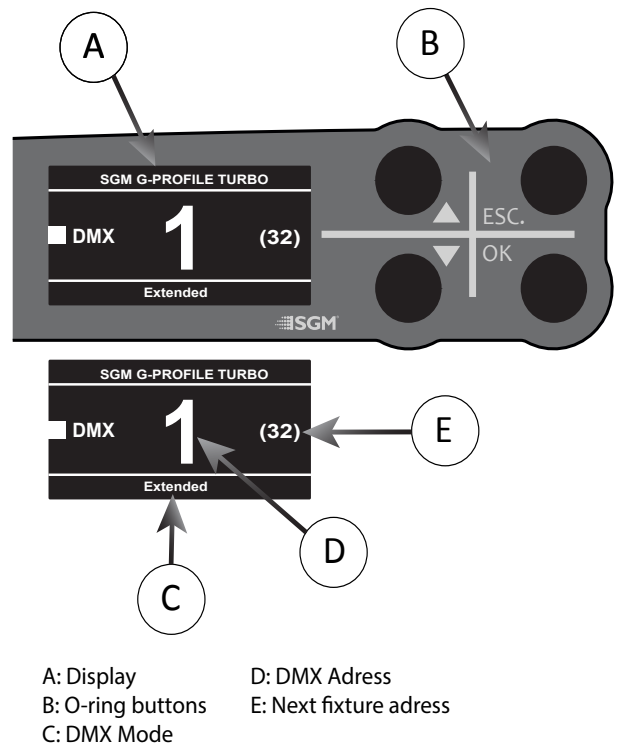


Figure 6: Display panel view

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-Profile.

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 www.sgmlight.com, or upon request via 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 previously created scene.

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.

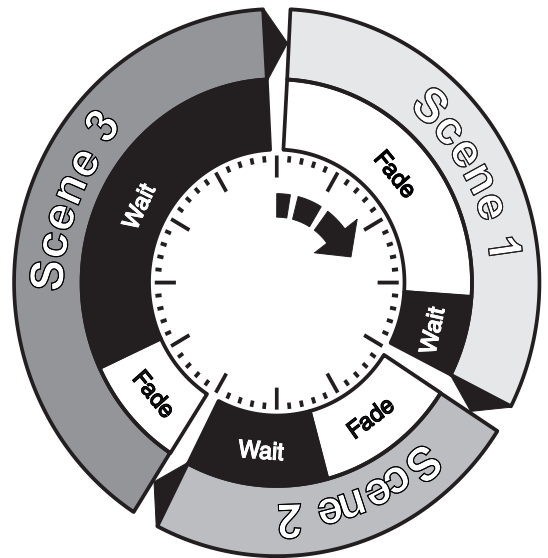


Figure 7: Stand-alone operation

Connecting to a DMX control device

The G-Profile 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 (male 5-pin XLR connector), and the DMX out to the output cable (female 5-pin XLR plug), both located in the internal side of the handles. When facing the display of the fixture, the male connector is located in the left handle, and the female connector in the right handle. Remember to terminate the DMX out cable of the last fixture in the data link.

For temporary outdoor installations, use only IP65-rated XLR connectors suitable for outdoor use. If using a wireless DMX system, ensure that the DMX output is connected to the DMX in connector and it is properly inserted. Connect both DMX in and DMX out cables in order to maintain the fixture's IP65-rating.

Connecting a wireless transmitter

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

To connect the G-Profile 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:

OK → SETTINGS → WIRELESS DMX → LOG OFF.

Signal priority

The G-Profile 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 by a square under the wireless signal strength indicator.

Configuring the device for DMX control

About DMX

The G-Profile 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). DMX is the USITT DMX512-A standard, based on the RS-485 standard. The signal is sent as DMX data from a console (or a controller) to the fixture(s) via a shielded, twisted pair cable designed for RS-485 devices.

The cables can be daisy chained, and up to 32 fixtures can be connected to the same DMX link. Up to 300 meters (1000ft.) of cable is achievable with high quality DMX cables. All DMX links must be terminated in the last fixture by connecting a DMX termination plug to the last fixture's 5 pin DMX out connector.

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 fixture's DMX out.

DMX modes

The G-Profile Turbo operates in different modes.

See all the DMX charts available at www.sgmlight.com under the respective products, or upon request via support@sgmlight.com.

DMX start address

As mentioned above, the G-Profile Turbo can be operated in different DMX modes. Regardless of which DMX mode is selected, the first channel used to receive data from a DMX control device is known as the DMX start address.

For independent control, each fixture must have a DMX start address configured. For example, if the first G-Profile Turbo is set to a start DMX address of 10 and it is in 25-channel DMX mode, then it uses channels from 10 to 34. The following G-Profile Turbo in the DMX chain could then be set to a DMX address of 35, as the first fixture uses all the first 25 DMX channels (10+25 >> 35).

If two or more fixtures of the same type have the same DMX address, they will behave identically. Incorrect settings will result in unpredictable responses from the lighting controller. Address sharing can be useful for diagnostic purposes and symmetrical control.

Setting the DMX address

The DMX address is shown on the display in the control 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-Profile Turbo also offers the option to set the DMX address through RDM.

Full color calibration and Color Temperature Correction (CTC)

The Full Color Calibration (FCC) and Color Temperature Correction (CTC) enables the fixture to mimic different color temperatures, ensuring uniform colors 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 www.sgmlight.com, or upon request via 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-Profile 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 www.sgmlight.com under G-Profile Turbo, or upon request via support@sgmlight.com.

The refresh rate can be set between 100,00 kHz and 1,41 kHz. It is recommended to have the G-Profile 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

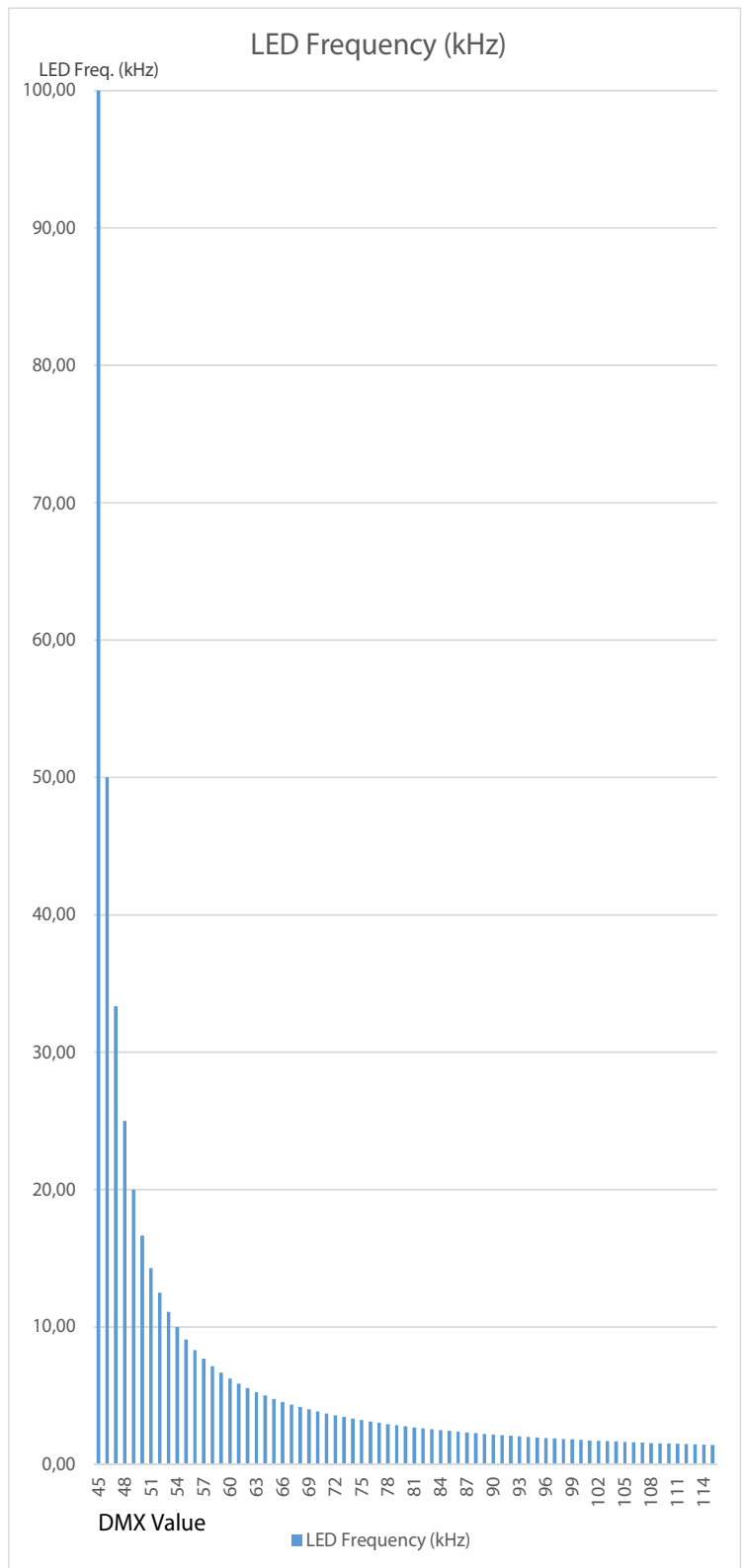


Figure 8: LED Frequency chart

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

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

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

Color temperature correction

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

Four individually controllable framing blades

The four individually controllable framing blades are each adjustable ± 30 degrees, while the module is rotatable through ± 45 degrees. The framing blades allow the G-Profile Turbo to perform beam-shaping images and projections - see examples on figure 9.



Figure 9: G-Profile Turbo projections

Independent rotating gobo wheel

The independent rotating gobo wheel has five slots plus one open position 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 coloured gobos.

Combination of framing techniques and rotating gobos

The G-Profile Turbo provides the option of combining framing techniques with 5 rotating gobos, and opens for gobo animation and interaction when framing is used.

Effect wheel

The G-Profile Turbo has two effect wheels for generating optical effect. The effect wheels feature continuous rotation with variable speed and direction.

High-precision pan and tilt

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

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-Profile.	
	Extended Comp.			Select Extended Compatible mode, for compatibility with regular G-Profile.	
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-Profile 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-Profile 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

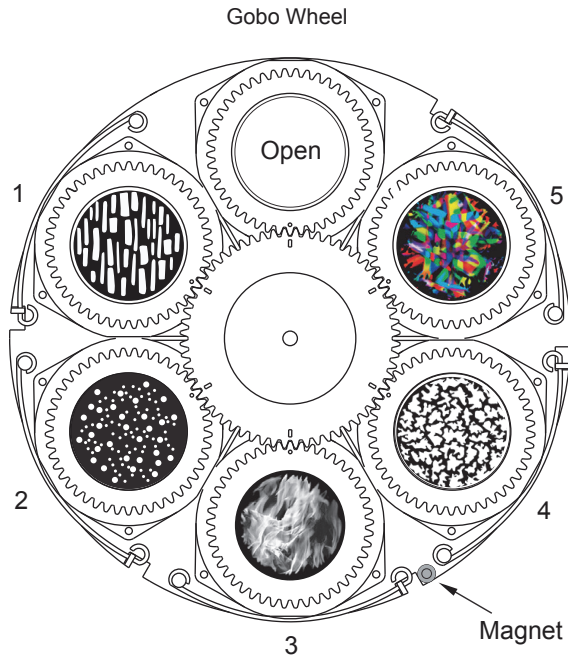
Name	Sensor Type
CRMX Signal Strength	Other
Humidity Base	Other
Humidity Head	Other
Fan 1 Led RPM	Velocity
Fan 2 Led RPM	Velocity
Fan Base RPM	Velocity
Fan Head RPM	Velocity
Fan Zoom RPM	Velocity
Errors	Other
Humidity Absolute	Other
Humidity Absolute	Other

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



Gobo Wheel		
No.	Description	Part No.
Open	Open gobo	37000001
1	Breakup bricks	37005006
2	Dots	37005003
3	Fire up close	37005001
4	Breakup foliage	37005011
5	Kaleidoscope gems	37002001

Figure 11: Identification of gobo wheel

Replacing gobos

To replace one or more rotating gobos:

1. Disconnect the fixture from power and allow it to cool.
2. Position the head and apply the tilt lock.
3. Remove the rear head hatch located on the same side as the pan lock (B), when the head of the fixture is facing upwards.
4. Remove the gobo wheel hatch for accessing the gobo wheel.
5. Turn the gobo wheel until the gobo you want to replace is accessible.

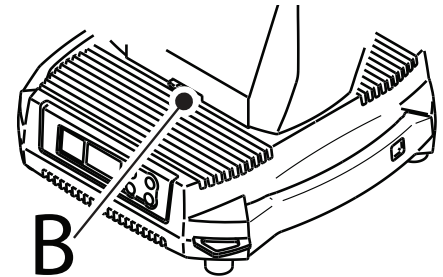


Figure 12: Pan lock

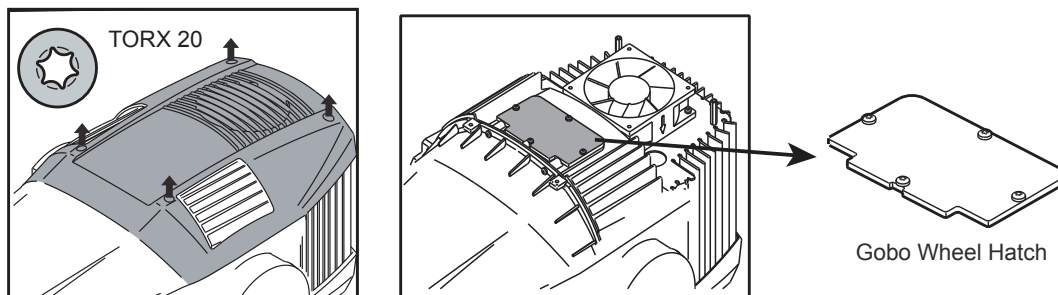


Figure 13: Replacing the gobos

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

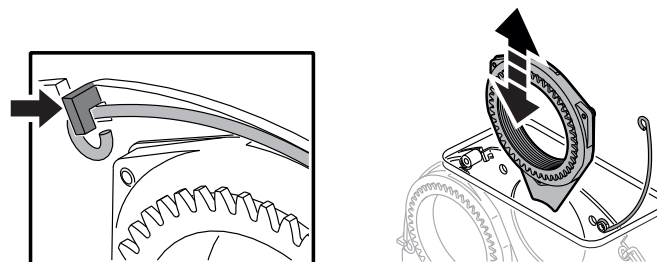


Figure 14: Replacing gobos in the gobo wheel

Replacing a gobo in a gobo holder

1. Remove the defective/old gobo.
2. Place the new gobo with silver side towards the light source.
3. Align the index marks of the gobo and the gobo holder, as shown below.
4. Insert the gobo holder and align it with the index mark in the gobo wheel, as shown below in figure 15.
Note that all the other five gobo holders must also be aligned with the respective index mark.

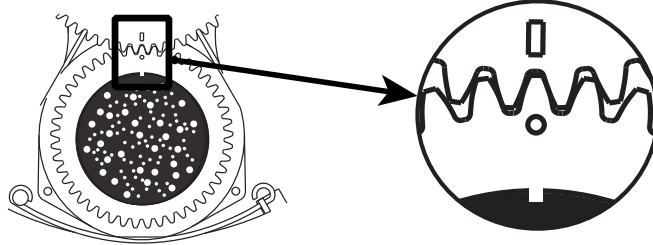


Figure 15: Replacing gobos in a gobo holder

5. Lock the spring. If necessary, continue replacing gobos one by one as described.
6. If no further service is necessary, reinstall the gobo wheel hatch. Fasten the screws with 1 Nm.

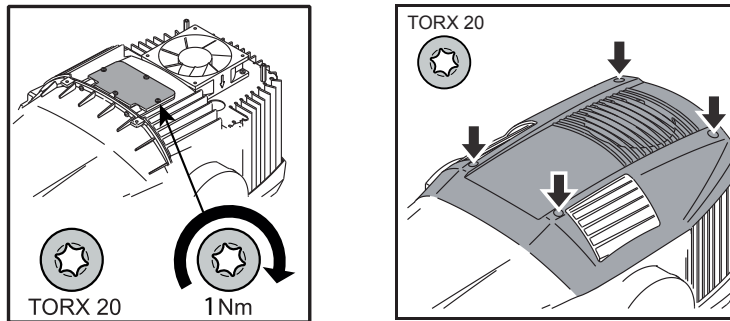


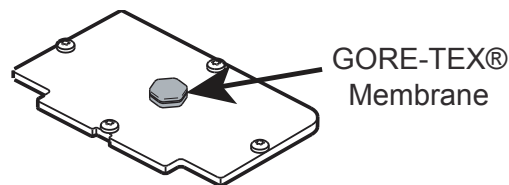
Figure 16: Fasten the gobo covers

NOTE: To ensure the fixture's IP65-rating, it is recommended to vacuum test the fixture.

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-Profile Turbo, please contact support@sgmlight.com



Gobo Wheel Hatch

Figure 17: GORE-TEX® Membrane

SGM Vacuum Test-Kit

The Vacuum Test Kit is an accessory suitable for all SGM IP-rated fixtures, made for testing the IP validity after having reassembled the fixture.

In order to ensure the IP-rating of the G-Profile Turbo, it's highly recommended that the fixture is always vacuum tested after installing or swapping any part that might compromise the IP-rating, e.g., replacing gobos.

SGM disclaims liability for any damage occasioned by the non-use, or inability to use, the vacuum test kit after reassembling the fixture.



Figure 18: SGM Vacuum Test-Kit

Maintenance

Upgrading the firmware

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

- When powering on the fixture, the display shows the current installed firmware version
- Going to the MENU → INFO → SOFTWARE VERSION

We recommend that the fixture's firmware is always up-to-date. The latest firmware version is available for download under the respective product at www.sgmlight.com.

To update your S-4 Fresnel with the latest firmware use an SGM USB 5-Pin-XLR uploader cable (available from your nearest SGM dealer) and a Windows-based computer with the SGM Firmware Tool software installed (also available for download at www.sgmlight.com).

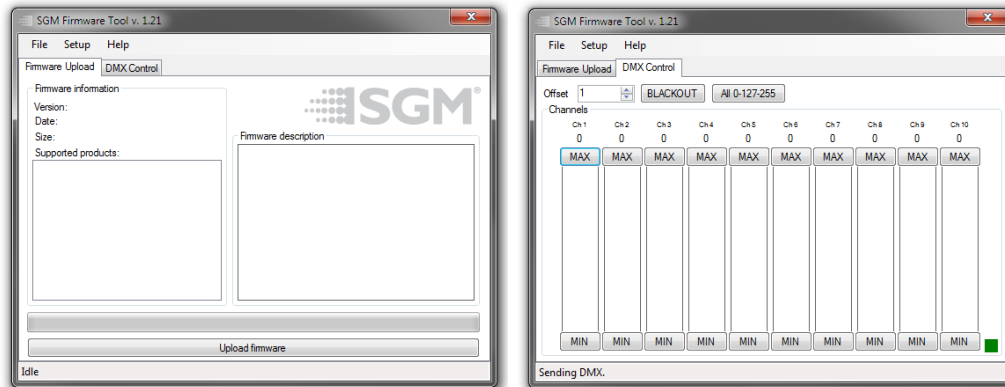


Figure 19: Firmware tool

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

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, in the menu. 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-Profile 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 the fixtures and 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-Profile Turbo, Std, BL.....	P/N: 80021211
G-Profile Turbo, Std, WH.....	P/N: 80021212
G-Profile Turbo, Std, CU.....	P/N: 80021213
SGM USB uploader cable	P/N: 83062011
Single flightcase G-Profile Turbo, with labels.....	P/N: 82051014

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.



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