

USER MANUAL

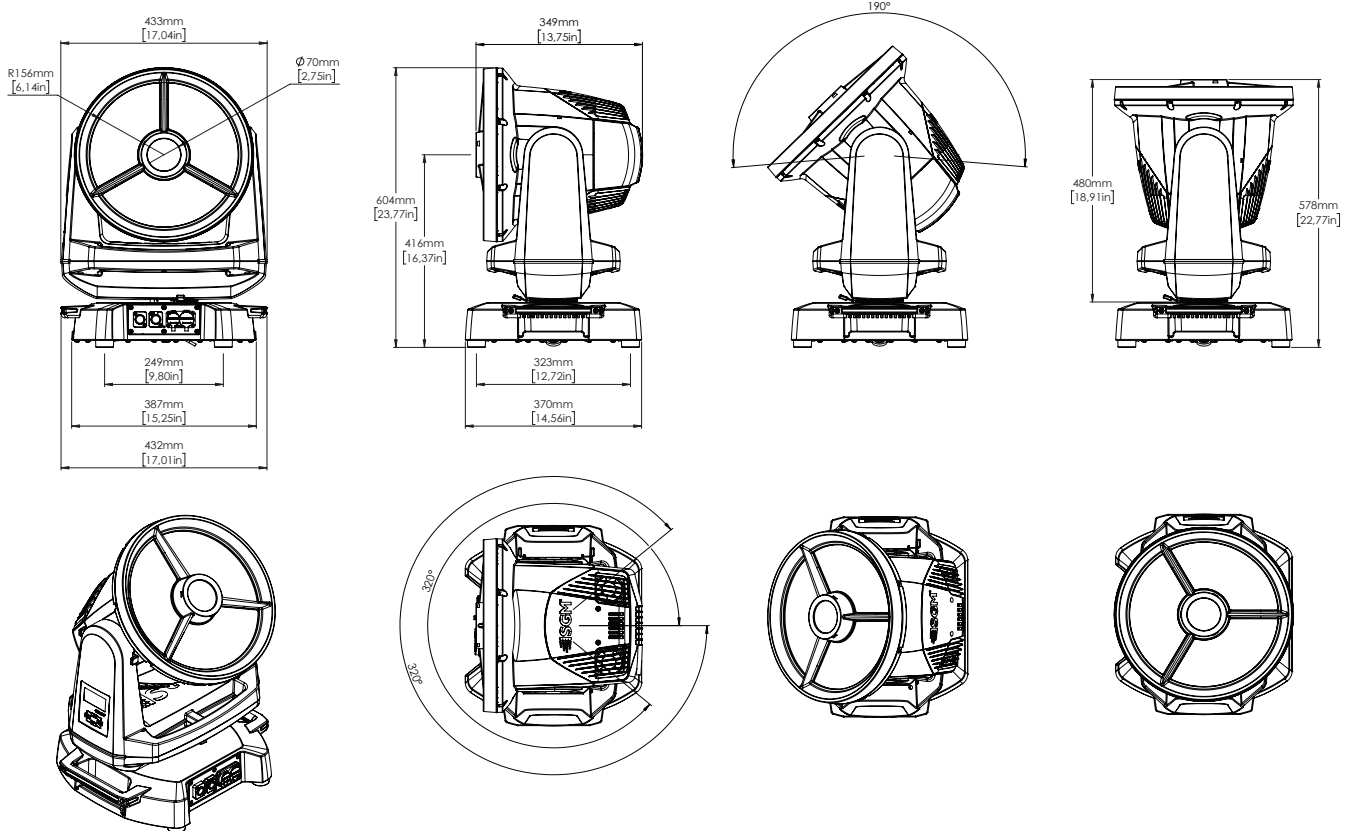


G-7 SERIES

G-7 BEAST



G-7 BeaSt dimensions



All dimensions are in millimetres and inches. Drawing not to scale.

This manual covers installation, use, and maintenance of the SGM BeaSt.
A digital version is available on www.sgmlight.com, or upon request at support@sgmlight.com.

G-7 BEAST USER MANUAL

© 2019 SGM Light A/S®. The information in this document is subject to change without notice. SGM and all affiliated companies disclaim liability for any injury, damage, direct or indirect loss, consequential or economic loss, or any other loss occasioned by the use of, inability to use, or reliance on the information contained in this manual. The SGM logo, the SGM name, and all other trademarks in this document pertaining to SGM services or SGM products are trademarks owned or licensed by SGM, its affiliates, and subsidiaries.

English edition

Contents

Safety information	4
Overview	5
Parts identification and terminology	5
Preparing for installation	6
Unpacking	6
Location / application	6
Transportation	6
Installing / Rigging the G-7 BeaSt	6
Rigging process using the SGM Omega bracket	7
Connecting AC power	8
Configuring the device	8
Wireless signal strength(A)	8
Display panel (B)	8
Next DMX Address (C)	8
DMX Start Address (D)	8
DMX Mode (E)	9
Using the keyboard (F)	9
Using stand-alone operation	9
Manual control / Internal sequence editor	9
Editor	9
Connecting to a DMX control device	10
Connecting a wireless transmitter	10
Disconnecting a wireless transmitter	10
Signal priority	10
Configuring the device for DMX control	10
About DMX	10
DMX Start address	11
Setting the DMX address	11
DMX modes	11
G-7 BeaSt Connection diagram	11
Control menu	12
Display settings	14
Flipping the OLED display	14
Setting the display saver	14
Factory default	15
RDM	15
Supported RDM functions	15
RDM functions	15
Sensors	15
Troubleshooting	16
Errors	16
Fixture properties	17
Motorized collimation	17
High-precision pan and tilt	18
Dual high-speed strobe effect	18
Colour wheels position	18
Gobo wheel	19
Identification of Gobos	19
Gobo replacement	20
Polytetrafluoroethylene Membrane	22
Maintenance	23
SGM Vacuum Test kit	23
SGM Uploader cable	23
Upgrading the firmware	23
Cleaning	23
Ordering information	24
G-7 BeaSt fixtures	24
G-7 BeaSt accessories	24
G-7 BeaSt Consumables	24
Support hotline	24
Approvals and certifications	24
Base bracket drawing	25
User Notes	26

Safety information



WARNING!

Read the following safety precautions carefully before unpacking, installing, powering, or operating the device.



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.

This product must be installed in accordance with the applicable installation code by a person familiar with the construction and operation of the product and the hazards involved.

Ce produit doit être installé selon le code d'installation pertinent, par une personne qui connaît bien le produit et son fonctionnement ainsi que les risques inhérent.



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.
- Mount at least 102 mm (4 inches) above ground level.



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 300mm (12 in.) away from objects to be illuminated.
- Install only in accordance with applicable building codes.
- Ensure a minimum clearance of 100mm (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 = 66 °C (151 °F). Steady state = 77 °C (171 °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 4mm.

Overview

The G-7 BeaSt is a fast, compact, and lightweight mid-sized Beam Strobe moving head with high-output and low power consumption, designed for multiple applications, including when wireless operation is essential.

The G-7 BeaSt features:

- An IP66 rated moving head with two separated white LED engines: a 6,500K Beam and a 8,000K Strobe Blinder*.
- 2 colour wheel with 18 colours including CTO and open.
- Motorized collimation from -1° to 30°.
- Built-in wireless DMX.
- Full RDM compatible
- 1 aerial gobo wheel with 6 rotatable gobos including Frost + open.
- Low power consumption.
- Superior thermal management for high reliability.

*The light sources of the fixture are expected to run until about 20,000 hours LM-70/TM-21.

Parts identification and terminology

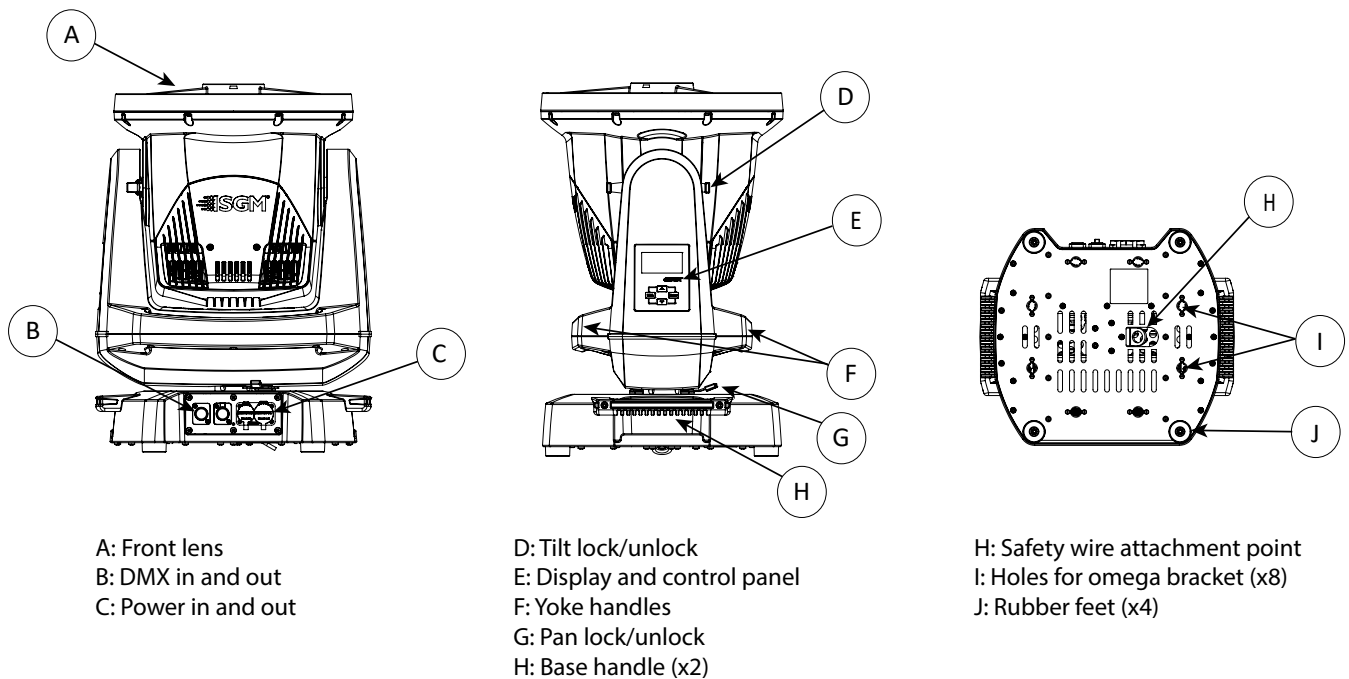


Figure 1: G-7 BeaSt parts and terminology

Preparing for installation

Unpacking

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

The G-7 BeaSt is shipped with:

- 2m (78 in.) power cable with IP connector
- Two omega brackets with 1/4-turn fasteners
- Safety information leaflet

Location / application

The fixture is IP66-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.
- 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.
- It has adequate ventilation.

When using the fixture with a DMX controller ensure that:

- According to RS485 standard, the DMX out of the last fixture should be terminated with a 120 Ohm resistor between pin 2 and 3.
- If the resistor is not installed, make sure that the DMX out is properly sealed by mounting the protection cap, in accordance with the ingress protection (IP) requirements.
- A maximum of 32 fixtures are allowed to be connected to the same DMX link.

Transportation

- Always use the supplied packaging or suitable flight case for transportation and storage.
- Release the tilt lock when transporting the fixture. Leaving the tilt lock blocked may cause damage to the fixture.
- Never carry the fixture by connected cables or wires, use the handles.

Installing/ Rigging the G-7 BeaSt

All SGM luminaries have locking points at the base for installation and rigging. The distance between the points from centre to centre is always 106 mm (Fig. 2). The base of the standard G-7 BeaSt include 1/4 turn fastener cam locks to mount the omega brackets. For further details of the bracket dimensions see page: 25, or contact SGM support.

The G-7 BeaSt may be installed in any orientation, with or without base, on the ceiling or on a wall surface.

Always use the supplied omega brackets and lock with 1/4-turn fasteners (fig 3).

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

Depending on the structure, please use appropriate and secure methods for mounting the Omega bracket.

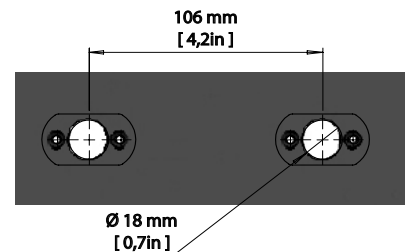
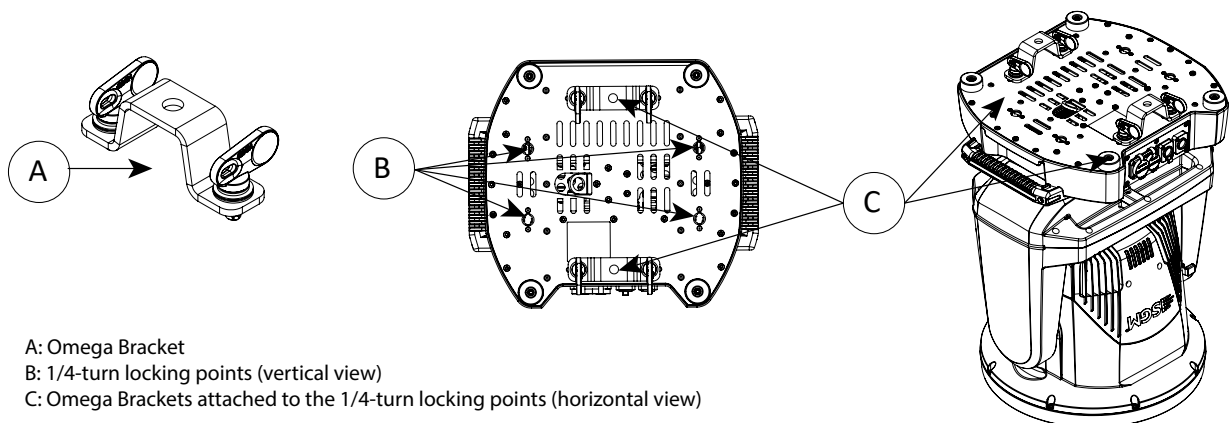


Figure 2: SGM locking points



- A: Omega Bracket
B: 1/4-turn locking points (vertical view)
C: Omega Brackets attached to the 1/4-turn locking points (horizontal view)

Figure 3: G-7 BeaSt base with Omega brackets

Rigging process using the SGM Omega bracket

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 clamp/bracket is undamaged and can bear at least 10 times the weight of the fixture. Check that the structure can bear at least 10 times the weight of all installed fixtures, lamps, cables etc.
2. Bolt the clamp/bracket securely to the omega bracket with a M12/ ½ bolt (min. grade 8.8 C5M) and a lock nut.
3. Align an Omega bracket with two 1/4-turns in the G-7 BeaSt base. Insert the fasteners into the G-7 BeaSt base and turn both levers a 1/4-turn clockwise to lock, make sure that the levers are completely locked. Install the second Omega bracket.
4. Working from a stable platform, hang the fixture on a truss, or any other structure, and tighten the clamps. Note the orientation of the base.
5. Install a safety wire that can bear at least 10 times the weight of the fixture. The safety wire attachment point is designed to fit a carabiner.
6. Check if the tilt and pan lock is released (fig. 4). If not, push the slide button shown in the figure 4 to the right to release the tilt lock.
7. Verify that there are no combustible materials or surfaces to be illuminated within 300mm (12 in.) of the fixture.
8. Check that there is no possibility of head or yoke colliding with other fixtures.

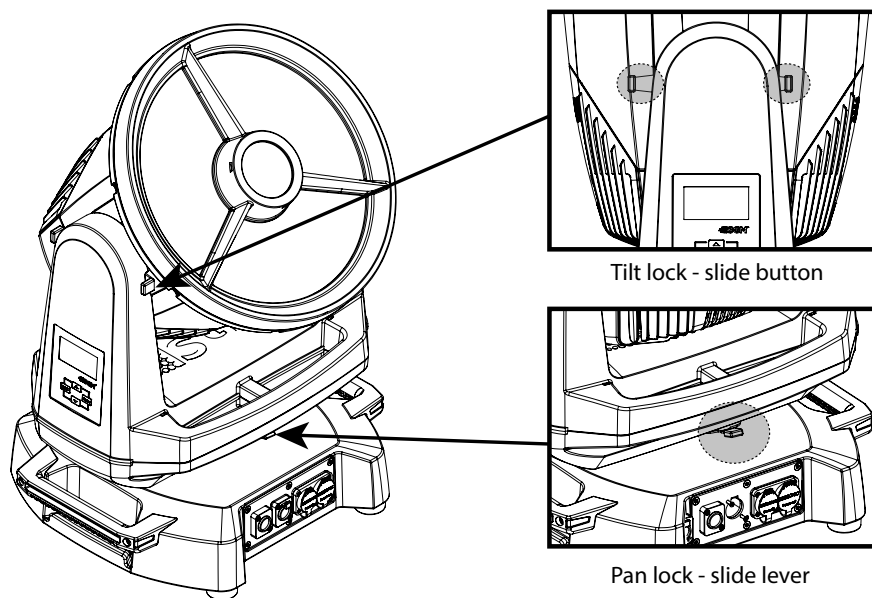


Figure 4: G-7 BeaSt tilt lock



WARNING! Always secure an elevated G-7 BeaSt with a safety wire

Fasten a safety wire (not shown) between the load-bearing support structure and the safety wire attachment point on the device (fig. 5).

The safety cable (not included in the package) must:

- Bear at least 10 times the weight of the device (SWL).
- Have a minimum gauge of 4mm.
- Have a maximum length (free fall) = 300mm (12 in.).

CAUTION!!

- Always use a safety wire of a grade AISI 316 steel.
- Make sure the slack of the safety wire is at a minimum.
- Never use the yoke or the carrying handles for secondary attachment.

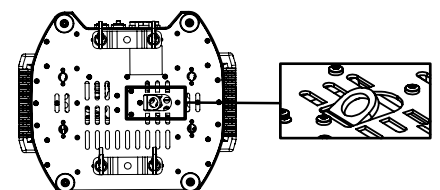


Figure 5: Safety Wire attachment point

Connecting AC power

The G-7 BeaSt can operate on any 100–240V, 50/60Hz AC mains power supply. The maximum power consumption is 640W.

Connect the fixture to AC power by using the supplied 2m (78 in.) power cable (fig.6) with IP connector, or similar with a maximum of 20A, to ensure the correct ingress protection (IP-rating).

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.

The power cable colour coding is given in figure 7:

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

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

Figure 7: Connecting AC Power

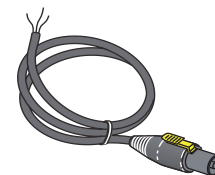


Figure 6: Power cable

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

For permanent installations, a qualified electrician must wire the mains cable directly to a suitable branch circuit. The junction's ingress protection (IP) rating must be suitable for the location. Always use a junction box with a proper IP class suitable for the environment.

When installing standard type C circuit breakers there will be no limitations due to the fixture in-rush current. For assistance with alternative configurations, contact your SGM representative.

After connecting the G-7 BeaSt to power, run the on-board test by selecting TEST → AUTOMATED TEST in the menu, to ensure that the fixture and each LED are functioning correctly.

PLEASE NOTE!

The protective caps must be securely mounted on any unused DMX connectors, in order to maintain the IP-rating.

CAUTION!!

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

Configuring the device

The G-7 BeaSt can be set up by using the control panel located in the yoke of the fixture or through RDM. After powering on, the G-7 BeaSt 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 ENTER button (fig 8).

Wireless signal strength(A)

Wireless icon appears if the fixture is connected to a wireless transmitter.

Display panel (B)

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.

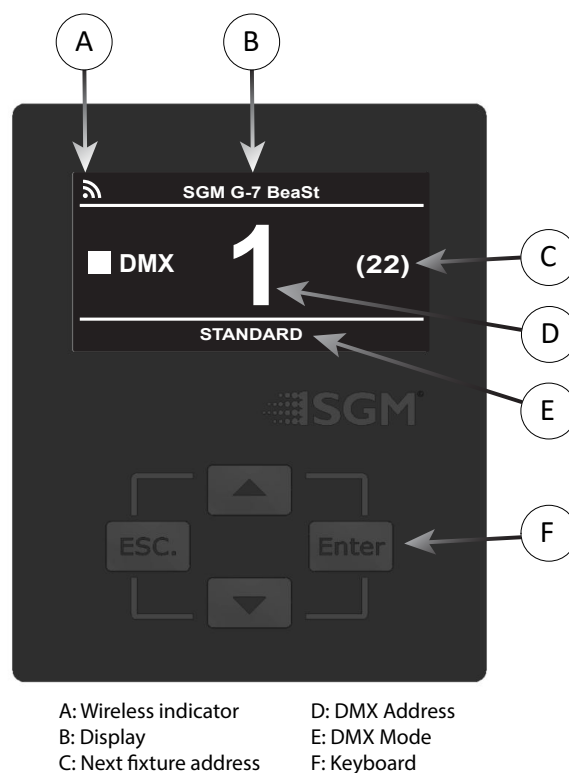
Next DMX Address (C)

To The next available DMX address depending on the fixture's DMX mode footprint.

DMX Start Address (D)

The current DMX address for the fixture, to select another DMX address, use the arrow buttons. The DMX address will flash if no data input is detected.

The DMX start address is the first channel used to receive instructions from the controller. For independent control, each fixture must be assigned to 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.



- A: Wireless indicator
- B: Display
- C: Next fixture address
- D: DMX Address
- E: DMX Mode
- F: Keyboard

Figure 8: Control panel view

DMX Mode (E)

Display the current DMX mode.

Using the keyboard (F)

- Press the 'ENTER' 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.

Using stand-alone operation

In 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 (fig. 9). 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 4,000 seconds and a wait time up to 4,000 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

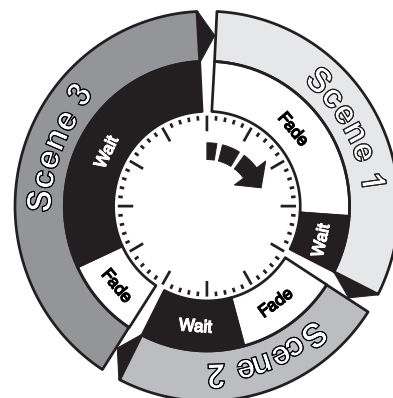


Figure 9: Stand-alone operation

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 4,000 seconds). Confirm with OK.
- Fade Time - Press OK and set the fade time of the selected scene (0 to 4,000 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.

Connecting to a DMX control device

The G-7 BeaSt is controllable using a DMX control device and it can be connected using either a DMX cable or via the fixture's built-in CRMX wireless receiver system.

If using a cabled DMX system, connect the DMX IN cable to the input connector (male 5-pin XLR plug), and the DMX OUT to the output connector (female 5-pin XLR plug), both connectors on the rear of the fixture's base. For outdoor events, use at least 1 P66-rated or higher XLR connectors.

NOTE!

If using a wireless DMX system, remember to use the protective caps in any unused DMX connector in order to maintain the fixture's IP-rating.

Connecting a wireless transmitter

The G-7 BeaSt is designed to look for wireless transmitters in 'connect' status, even if this option is not yet enabled.

To connect the G-7 BeaSt to a wireless transmitter:

- Log off the currently paired wireless transmitter (by default the fixture is linked to the SGM factory transmitter). See "Disconnecting a wireless transmitter" below.
- While in the WIRELESS DMX menu; make sure the fixture's wireless is enabled.
- 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:

SETTINGS → WIRELESS DMX → LOG OFF.

Signal priority

The G-7 BeaSt 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. The signal strength can also be checked via RDM data by using an external RDM device (e.g. the SGM A-4).

Configuring the device for DMX control

About DMX

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 fixtures via a shielded twisted pair cable designed for RS-485 devices.

The G-7 BeaSt 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. Visit www.sgmlight.com to see all DMX charts under the respective product, or upon request via support@sgmlight.com.

The cables can be daisy chained between the fixtures, with a possibility of having connected up to 32 fixtures on the same DMX link. Up to 300 meters (1000 ft.) 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.**
- **Up to 32 fixtures can be linked to the same DMX chain. Additional fixtures will overload the link.**
- **The last fixture must always be fitted with a DMX termination plug to the fixture's DMX out.**

DMX Start address

The G-7 BeaSt can be operated in different DMX modes. For any of the modes, the first channel used to receive data from a DMX control device is known as the DMX start address.

For independent control, each G-7 BeaSt must be assigned its own DMX start address. For example, if the first G-7 BeaSt is set to 22ch DMX mode with a start DMX address of 10, the following G-7 BeaSt in the DMX chain should then be set to a DMX address of 32. As the first fixture uses all the first 22 DMX channels, including channel 10 and 31, the next available channel is 32. See formula below:

$$\text{Start address} + \text{Channels used} = \text{Next free DMX channel}$$

If two or more G-7 BeaSts have the same DMX start 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 in the display of 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 number of channels of the DMX mode.

See "Configuring the device" on page 8 for instructions on using the display panel.

The G-7 BeaSt also offers the option to set the DMX address through RDM.

DMX modes

All DMX charts are available at www.sgmlight.com under the respective product, or upon request via support@sgmlight.com.

G-7 BeaSt Connection diagram

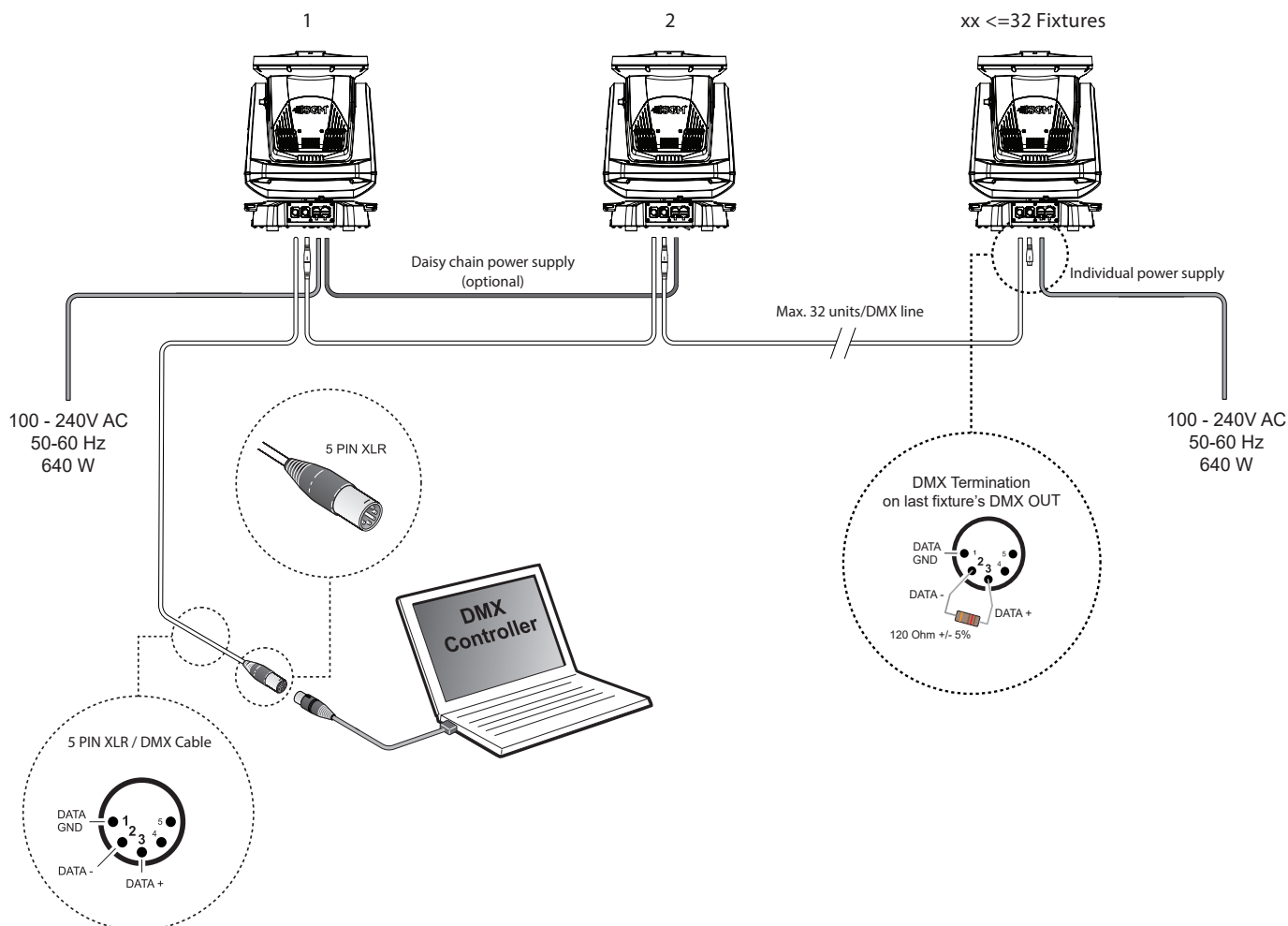


Figure 10: Connecting DMX in G-7 BeaSt

Control menu

Level 1	Level 2	Level 3	Level 4	Function
DMX MODE	Standard			Select Standard DMX mode.
	Extended			
	Extended +			
	Simplified			
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
		DATE		Displays the day of firmware installation
		TIME		Displays the time of firmware installation
		Head		Displays the firmware of the head
	TIMERS	LED D:H:M		Displays the total run time of the LEDs
		LED RES D:H:M		Displays the resettable run time of the LEDs
		ON D:H:M		Displays the total run time of the fixture
		ON RES D:H:M		Displays the resettable run time of the fixture
		Current Time		Displays current time
		Hold Enter to reset Tim		Hold Enter to reset time
	DMX VIEW	001 ↓ 507		Display received DMX levels. Up to 507 channels Press 'UP' or 'DOWN' to scroll between the channels
	SENSORS	Main PCB Temp.		Display main PCB temperature
		Head PCB Temp.		Display head PCB temperature
		LED Beam Temp.		Display beam LED temperature
		LED STROBE Temp.		Display strobe LED temperature
		Pan Angle		Display pan angle
		Tilt Angle		Display tilt angle
		Wireless Signal		Display % of wireless strength
		Wireless Paired		Displays if the fixture is connected to a wireless transmitter
		Humidity Yoke		Displays yoke humidity
		Humidity Head		Displays head humidity
		Light PWM		Shows beam PWM output
		Strobe PWM		Shows strobe PWM output
		Voltage 52v		Shows voltage
		Voltage 12v		Shows voltage
	EFFECT SENSORS	Colour Wheel 1:1		Shows when the colour wheel 1 is in default position [0 / 1]
		Colour Wheel 2:1		Shows when the colour wheel 2 is in default position [0 / 1]
		Gobo :1 Rot :0		Shows when the Gobo wheel and gobo holder is in default position [0 / 1]
	COMPENSATION CNT	Pan		The number of times the pan / tilt has lost steps and has been compensated to obtain correct position
		Tilt		
		Colour Wheel 1		
		Colour Wheel 2		
		Gobo Rot Select		
		Gobo Rot		
	ERRORS			See "Errors" on page 16

Control menu

Level 1	Level 2	Level 3	Level 4	Function
SETTINGS	WIRELESS DMX	ENABLE	[X] / []	Press 'Enter' to enable / disable - [X] / []
		Log Off	-	Press 'Enter' to log off wireless DMX
		STATUS	Signal Strength %	Display the signal strength % of the connection
			CRMX PAIRD	Display CRMX PAIRD: YES or NO
	FLIP DISPLAY	[X] / []		Press 'Enter' to enable / disable - [X] / [] flipped display
	DISPLAY OFF	[X] / []		Press 'Enter' to enable / disable [X] / [] display light
	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
	SERVICE PIN	-		Service use only Contact your SGM dealer or SGM support to request the service pin
	SERVICE MENU	CALIBRATION		Service use only
		RECALIBRATE PAN		
		HIDE ERRORS		
		FIXTURE TYPE		
		LINK QUALITY		
		MINIMUMS LEVELS		
	FACTORY DEFAULT	Factory default / set		Press 'OK' to set the fixture to factory default and 'ESC' to unset See "Factory default" on page 15
TEST	AUTOMATED TEST	-		Initiates a self-test sequence. Select 'OFF' to stop self-test sequence.
	DISPLAY TEST	↑ - ↓		Lights display in different patterns to ease troubleshooting
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

Continued on next page

Control menu

MANUAL	EDITOR	Scene	1 - 24	Please visit www.sgmlight.com , or contact your local SGM support for a complete DMX description chart.
		Wait Time	0.0 - 4,000.0	
		Fade Time	0.0 - 4,000.0	
		Copy Scene		
		Paste Scene		
		Clear Scene		
		Capture P/T		
		SHUTTER	0 - 255	
		DIMMER	0 - 255	
		COLOUR WHEEL 1	0 - 255	
		COLOUR WHEEL 2	0 - 255	
		PAN	0 - 65535	
		TILT	0 - 65535	
		GOBO 1	0 - 255	
		GOBO 1 ROT	0 - 65535	
		COLLIMATOR	0 - 255	
		STROBE DIMMER	0 - 255	
		STROBE DURATION	0 - 255	
		STROBE RATE	0 - 255	
		STROBE EFFECT	0 - 65535	
		STROBE PIX 1	0 - 255	
		STROBE PIX 2	0 - 255	
		STROBE PIX 3	0 - 255	
		STROBE PIX 4	0 - 255	
		MACRO	0 - 255	
	RUN PROGRAM			When pressed the program starts after 5 seconds
	STOP PROGRAM			Stops the program
	RUN ON POWER ON	[X] / []		Enable automatic start of manual program when powering on the fixture.

Display settings

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 go to: SETTINGS → FLIP DISPLAY in the menu, or press the up and down buttons on the control panel at the same time.

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: SETTINGS → DISPLAY OFF.

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.

Factory default

When restoring factory defaults at: SETTINGS → FACTORY DEFAULT, the following settings will be set:

- DMX address = 1
- Start-up mode = DMX
- Display saver = Off
- Flip screen = Off
- RDM device label set to = SGM G-7 BeaSt
- Internal program reset

RDM

Supported RDM functions

The G-7 BeaSt 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

To get access to all RDM functions please contact support@sgmlight.com.

PID	Actions allowed	Name
0x0082	GET / SET	Device Label
0x0081	GET	Manufacturer Label
0x00E0	GET / SET	Dmx Personality
0x00E1	GET	Dmx Personality Description
0x0200	GET	Sensor Definition
0x0201	GET / SET	Sensor Value
0x0080	GET	Device Model Description
0x1001	SET	Reset Device
0x0051	GET	Parameter Description
0x0090	SET	Factory Defaults
0x0501	GET / SET	Display Level

PID	Actions allowed	Name
0x0500	GET / SET	Display Invert
0x0400	GET / SET	Device Hours
0x0401	GET	Lamp Hours
0x0121	GET	Slot Description
0x0120	GET	Slot Info
0x0122	GET	Default Slot Value
0x8626	SET CRMX	Log Off
0x8633	GET / SET	Enable Wireless DMX
0x8625	GET / SET	FAN 0=AUTO 1=LOW 2=HIGH 3=FULL

Sensors

To get access to all sensors please contact support@sgmlight.com.

Name	Sensor Type
Main PCB Temp	Temperature
Head PCB Temp	Temperature
LED Beam Temp	Temperature
LED Strobe Temp	Temperature
Pan Angle	Angle
Tilt angle	Angle
Wireless Signal	Other
Wireless Paired	Other

Name	Sensor Type
Humidity Yoke	Humidity
Humidity Head	Humidity
Light PWM	Other
Strobe PWM	Other
Voltage 52 (for general power supply)	Voltage
Voltage 12 (for PCB)	Voltage

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 power connector is inserted and turned to its locked position
Fixture suddenly turned off.	Power was turned off	Check the 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 incorrect	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
Pan/tilt is skipping/shuddering	Obstacles are within the required pan/tilt clearance	Inspect and remove any obstacles that constrain free operation of the pan/tilt
Pan/tilt does not reset correctly.	Calibration values are missing or incorrect	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

Errors

The OLED display indicates whenever an error occurs. Note that lost steps in pan/ tilt are corrected continuously and therefore do not show as an error, but registered in the compensation count menu (cnt menu) instead.

Control panel display view	Menu location	Detailed description
ERR - CW 1 / CW 2 / Gobo Sel Comp.	Main	Colour wheel 1, Colour wheel 2, Rotating gobo effect wheel. It has been detected that the stepper motor has lost steps. The function has been re-initialized (reset) to compensate for a wrong stepper motor position and is again correctly positioned. The "ERR" message will remain until the function has been manually reset from the control panel / RDM or a power cycle
ERR - Gobo Rot 1-6 Magnet	Main	Gobo wheel, rotating gobo effect is not detected. Actual effect wheel is missing or damaged / magnet is missing
ERR - Colour Wheel 1 / Colour Wheel 2 / Gobo Rot Sel / Gobo Rot	Main	An error during initialization (reset) of the function has occurred. In this case, it can not be expected that the function is working properly and a manual reset from the control panel / RDM or a power cycle is required
Pan/ Tilt	Main / Info / Compensation Cnt	The number of times the pan / tilt has lost steps and has been compensated to obtain correct position. Note that this compensation cnt will not be displayed as an error since these functions are continuously corrected

Fixture properties

Motorized collimation

The collimation system of the G-7 BeaSt, is based on a small motorized convex reflector that bounces light from the LED engine to a fixed concave parabolic reflector (fig. 11). The movement of the controllable convex reflector modifies the focal point, allowing users to collimate the light. When the movable reflector is located at its furthest position, the fixture outputs a narrow beam angle. As the small reflector moves closer to the light source, the beam angle becomes wider.

This optical design is able to provide negative (1), coherent (2), and expanded (3) aerial beams of light:

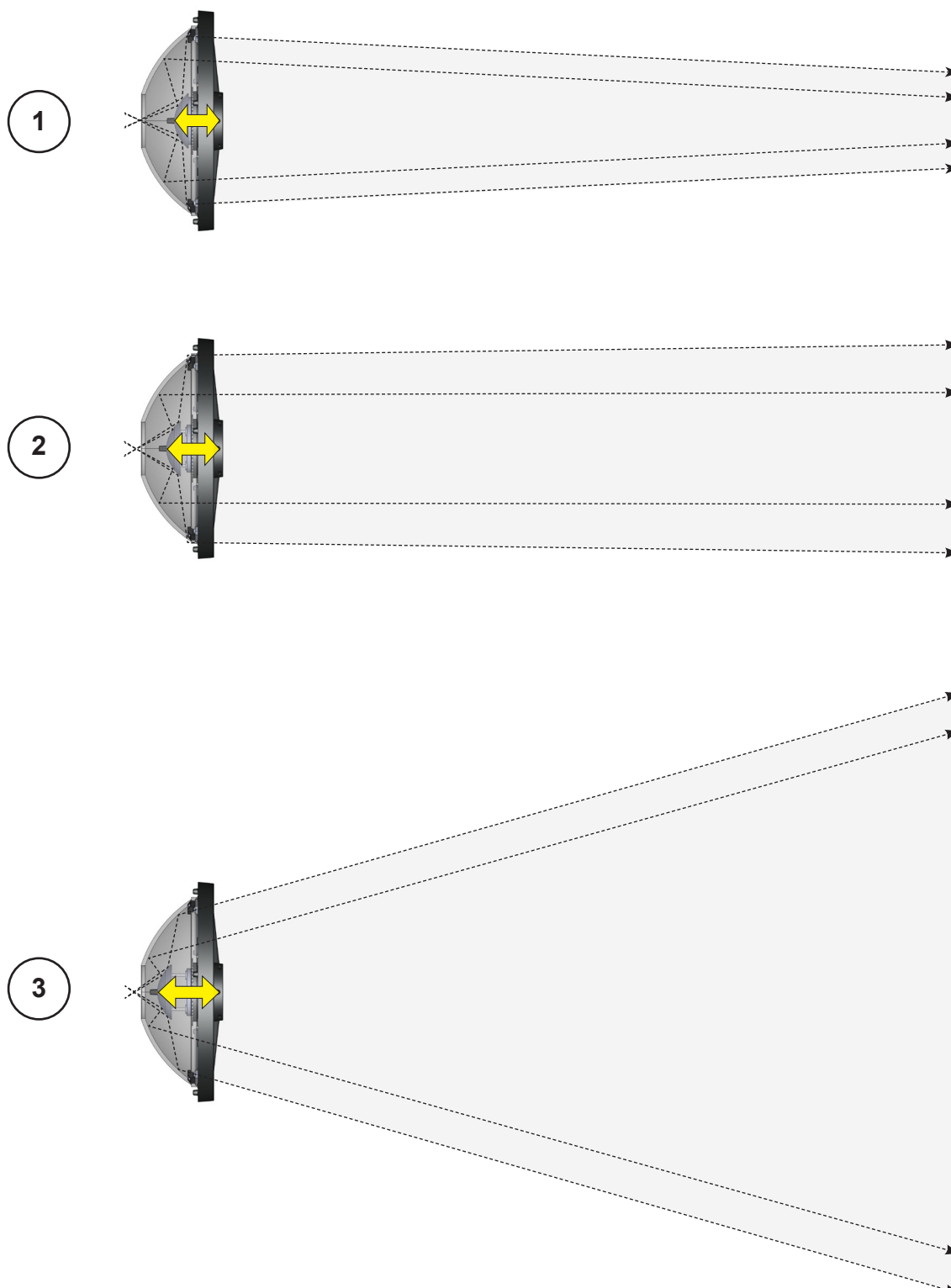


Figure 11: Collimation range.

High-precision pan and tilt

The G-7 BeaSt has a fast pan and tilt movement, with a 640° pan and 190° tilt movement.

Dual high-speed strobe effect

The G-7 BeaSt has two separated white LED engines; both can generate strobe effects.

In the Beam light source, the ultra high-speed strobe effect introduces instant white colour control. Random strobe and pulse effects can be generated with variable speed.

In the Strobe Blinder light source, three different DMX channels can control duration, rate, and pre-programmed sequences for strobe effects. Variable speed can be controlled via duration and rate. The effect channel reproduces different strobe looks similar to traditional strobe fixtures.

Color wheels position

The G-7 BeaSt includes two independent colour wheels, each with 9 individual colours (see figure 12 and tables below for identification), and four modes: snap, split colour, and scroll mode. See our website www.sgmlight.com or contact SGM support, for a complete dmx chart.

- Colour wheel 1 consist of 9 solid colours + open position.
- Colour wheel 2 consist of 9 colours including CTO and open position.

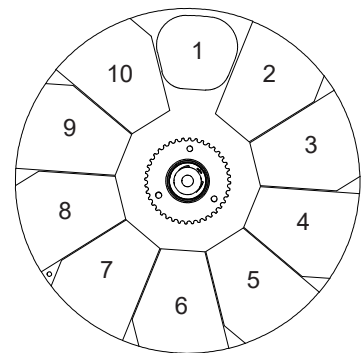


Figure 12: Identification of colour position

Colour wheel 1			
No.	Description	Part Number	XY Coordinates
1	Open		
2	G-7B Colour filter -Light Green	12000031-A	X 0.150266 Y 0.732946
3	G-7B Colour filter - Congo Blue	12000034-A	X 0.168150 Y 0.012605
4	G-7B Colour filter - Amber	12000033-A	X 0.550571 Y 0.444738
5	G-7B Colour filter - Cyan	12000027-A	X 0.157466 Y 0.177242
6	G-7B Colour filter - Lime	12000035-A	X 0.317640 Y 0.629761
7	G-7B Colour filter - Light Red	12000030-A	X 0.647861 Y 0.346560
8	G-7B Colour filter - Yellow	12000029-A	X 0.475045 Y 0.516444
9	G-7B Colour filter - Magenta	12000028-A	X 0.276437 Y 0.088168
10	G-7B Colour filter - Deep Blue	12000041-A	X 0.158741 Y 0.022253

Colour wheel 2			
No.	Description	Part Number	XY Coordinates
1	Open		
2	G-7B Colour filter - CTO	12000044-A	X 0.419125 Y 0.387084
3	G-7B Colour filter - Dark Magenta	12000043-A	X 0.506598 Y 0.215602
4	G-7B Colour filter - Medium Magenta	12000042-A	X 0.298359 Y 0.104614
5	G-7B Colour filter - Medium Blue	12000032-A	X 0.152902 Y 0.127135
6	G-7B Colour filter - Lavender	12000037-A	X 0.216985 Y 0.048248
7	G-7B Colour filter - Light Cyan	12000036-A	X 0.166628 Y 0.223336
8	G-7B Colour filter - Light Yellow	12000038-A	X 0.426559 Y 0.535431
9	G-7B Colour filter - Deep Green	12000040-A	X 0.10636 Y 0.546889
10	G-7B Colour filter - Deep Red	12000039-A	X 0.685176 Y 0.297799

Gobo wheel

The G-7 BeaSt comes with 7 rotatable, indexable, and exchangeable* gobos including:

- 2 split colours (open + cyan, orange + congo blue).
- 3 glass aerial gobo patterns.
- 1 frost filter
- 1 open Gobo

Note that the G-7 Beast comes with three gobo scroll cycles;

- Scroll through all gobos right
- Scroll through all gobos left
- Scroll back and forth no-color gobos (excluding coloured)

*See "Gobo replacement" on page 20.

Gobo wheel		
No.	Description	Item No.
Open		
1	Split Orange/Congo - Gobo G-7B	37005031-A
2	Split colour Cyan/ White - Gobo G-7B	37005033-A
3	Double opening - Gobo G-7B	37005034-A
4	Search light - Gobo G-7B	37005029-A
5	Bar - Gobo G-7B	37005028-A
6	Frost - Gobo G-7B	37005030-A

Identification of Gobos

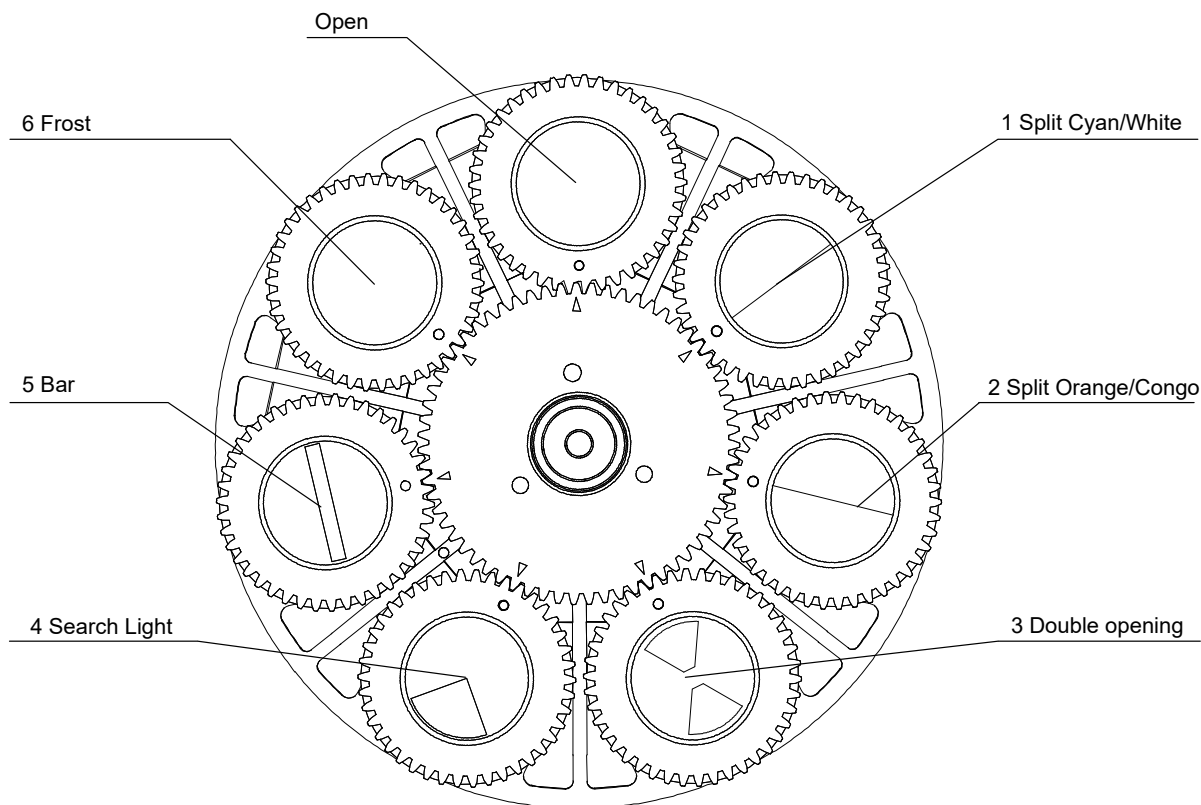


Figure 13: Identification of gobo wheel

Gobo replacement



WARNING! Handle components with care. Always wear suitable gloves. Every time the front is opened, the thermal pads have to be replaced. (item number 21400060)

BEFORE STARTING

- Be sure the fixture is in a clean, dust free, and dry environment before opening it.
- The internal thermal pads must be replaced when servicing the unit. Be sure extra thermal pads are available before opening the fixture.
- Prepare a dust free cloth to protect the reflectors when removed.
- Make sure an elevated, flat, and clean surface, or riser, is placed close to the front ring, so the front can rest over it while accessing the internal parts.
- Don't touch the reflectors, the colour filters, or the gobos, even while wearing gloves. This may cause permanent damage.
- Use only borosilicate glass gobos with 27.9 ± 0.2 mm or 27.8 ± 0.1 mm diameter size.

REMOVING THE FRONT RING

1. Turn the fixture off, disconnect it from mains and allow it to cool.
2. Place the fixture on a flat, level surface, with the front facing up, and activate the tilt lock.
3. Loosen up the 8 screws behind the front ring to remove it (figure 14).
4. Place the front ring, with the lens facing down, over the elevated flat, clean and scratch-free surface. Notice that the electrical wire connecting the light source to the head is short and located left of the tilt lock (figure 15). Avoid touching the reflector, and cover it with a dust-free cloth.
5. To release the front ring from the head, remove the small plate surrounding the front ring's cable (figure 16) by loosening the 2 screws, and disconnect the two wires by pressing the connectors' clip.

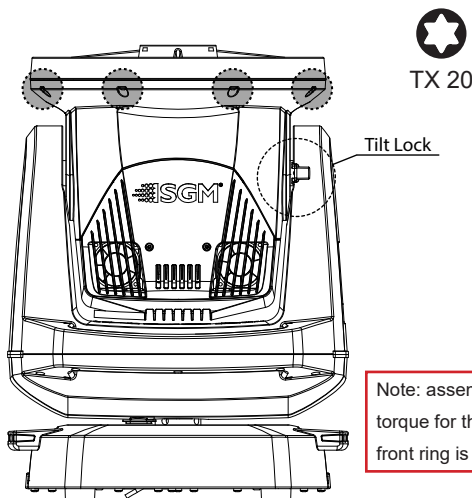


Figure 14

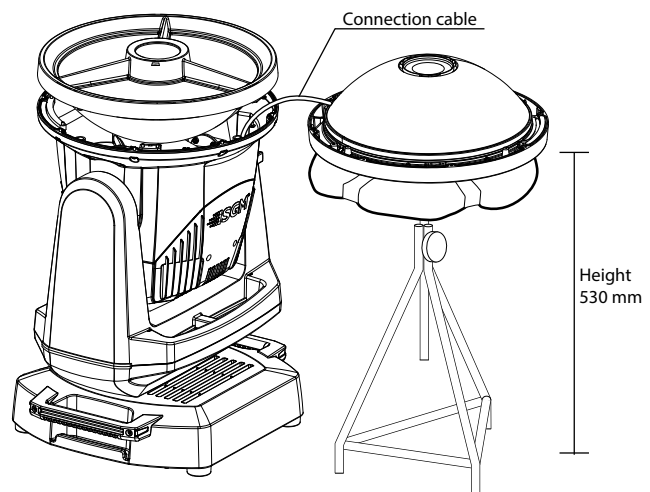


Figure 15

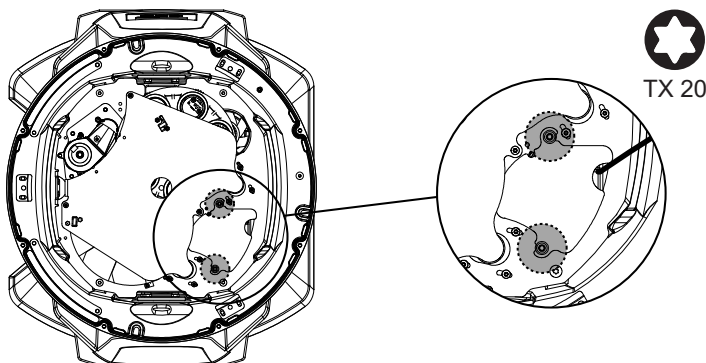


Figure 16

RELEASING THE GOBOS

1. The gobo is placed in the effect module as showed in illustration 17.
2. Turn the gobo wheel until the desired gobo wheel is accesible (see figure 18).
3. Release the gobo holder by pushing the holder down, and slide it out from the gobo wheel (figure 19). **Do not touch the gobo.**
4. The gobo is held in place in the gobo holder by a conical retaining spring. Unhook the end of the spring and pull the gobo out (figure 22).

Note: Do not detach or unscrew the module, as it will require readjustment by a certified SGM technician to maintain optimal operation.

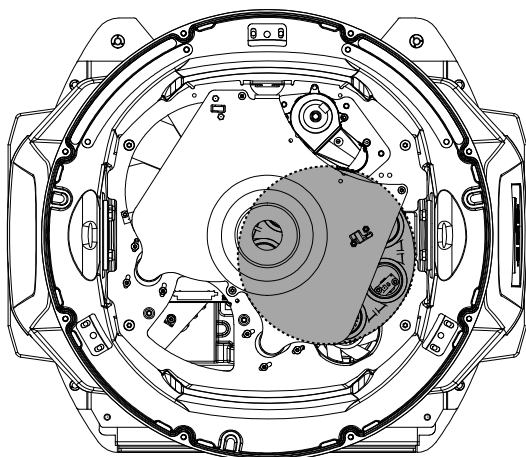


Figure 17: The gobo is under the marked area.

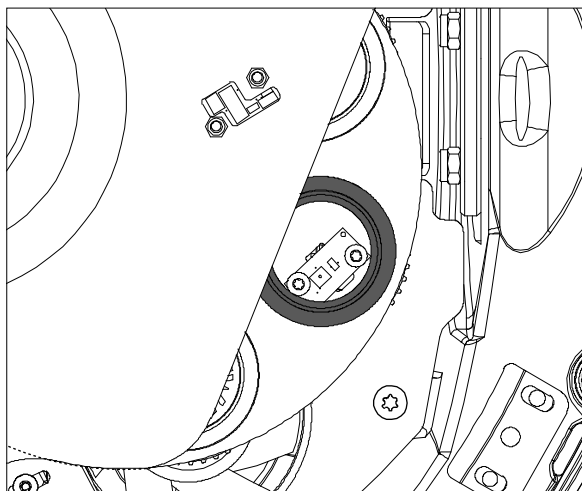


Figure 18: Turn the gobo to the position which is to be replaced

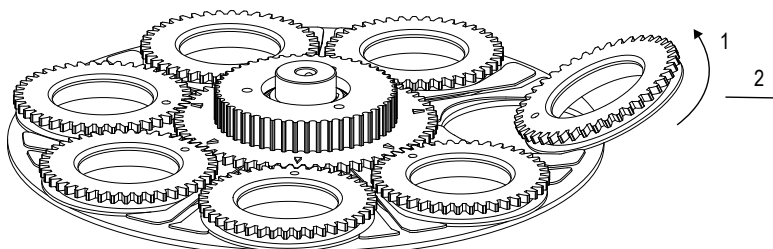


Figure 19: Gobo holder removal.

INSERTING NEW GOBOS

1. Identify the coated side of the new gobo.
 - If the gobo has a silver side, that is the coated side.
 - When there is no silver side, the identification can be made by holding an object (avoid using metallic or sharp-edged objects) close to the gobo, and checking which side shows a gap between the object and its reflection. The side showing no gap is the coated one (Figure 20).
2. Insert the new gobo into the gobo holder with **the coated side towards the light source** (coated side towards gobo holder) while aligning both index marks (figure 21) of the gobo and the gobo holder.
3. Insert the conical spring, with the narrow end against the gobo (figure 21 and 18), by pushing its end under the lip of the gobo holder. Check that the gobo is secured in place.
4. Insert the gobo holder into the gobo wheel and align the index marks (figure 22). All index marks around the wheel have to be aligned to the same position.
5. If necessary, continue replacing gobos one by one as described.
6. Reassemble the fixture (see page 22).

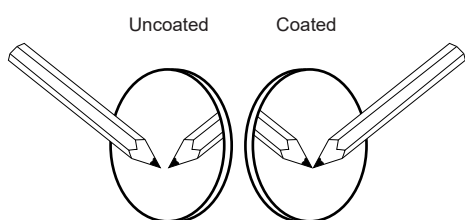


Figure 20: Locating coated side

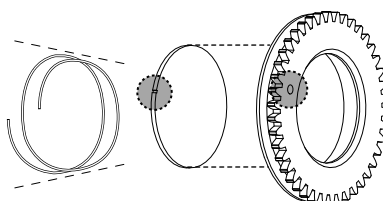


Figure 21: mounting gobo in holder

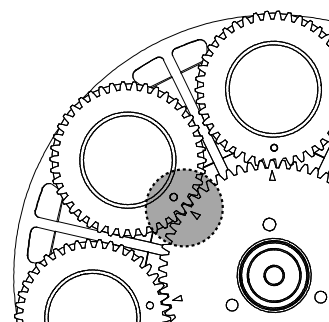


Figure 22: Alignment marks

REINSTALLING THE FRONT RING

1. Before reinstalling the front ring, the thermal pads have to be replaced (fig. 23). Clean the thermal sockets thoroughly before installing the new ones. For more information on how to replace G-7 BeaSt gobos and to order thermal pads, please contact support@sgmlight.com

Thermal pads order number: 21400060

2. When mounting the front ring, cross-tighten the permabond treated screws as illustrated on figure 24. Make sure to tighten the screws with increasing torque over three cross-tightening sequences to ensure the correct ingress protection.

When assembling the G-7 BeaSt after gobo or colour wheel replacement, it is recommended to use Permabond A1044 for all screws and to tighten with the correct torque, that is:

Front Ring: 1Nm

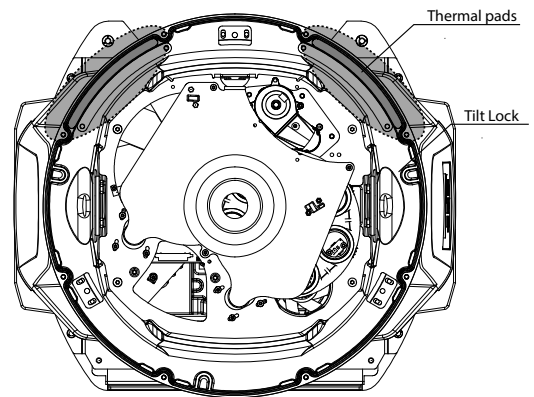


Figure 23 Thermal pads to be replaced

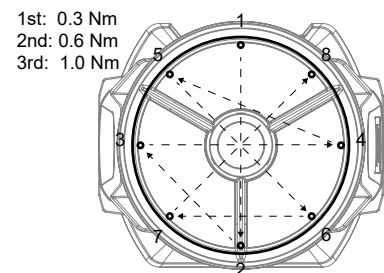


Figure 24 Criss-cross mounting

Polytetrafluoroethylene Membrane

The G-7 BeaSt includes an expanded polytetrafluoroethylene membrane, which allows the fixture to equalize air pressure. In order to vacuum test the fixture, the membrane has to be removed:

1. Turn the fixture off, disconnect it from mains and allow it to cool.
2. Place the fixture on a flat, level surface, with the front facing up.
3. Be sure that the tilt lock is located at the right and is activated.
4. Remove the back cover by loosening its 2 screws (figure 25).
5. The membrane is located at the right (figure 26).

For more information on how to vacuum test the G-7 BeaSt, please contact support@sgmlight.com

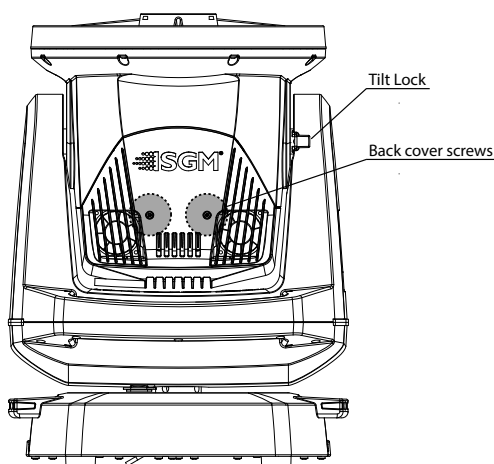


Figure 25: Back cover screws

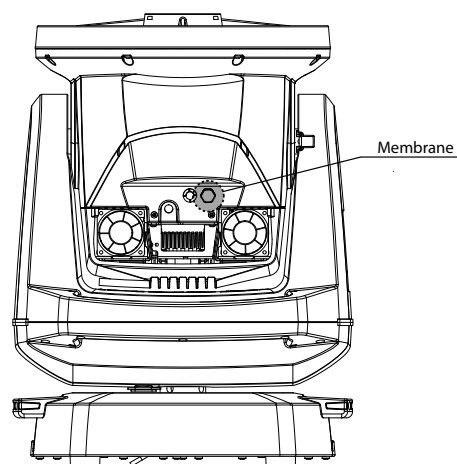


Figure 26: Membrane

Maintenance

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 (fig. 27).

In order to ensure the IP-rating of the G-7 BeaSt it is highly recommended that the fixture is always vacuum tested after installing or swapping any part that might compromise the IP-rating. SGM disclaims liability for any damage occasioned by the non-use, or inability to use, the vacuum test kit after reassembling the fixture.



Figure 27: SGM Vacuum Test Kit

SGM Uploader cable

The SGM USB to DMX cable (fig. 28) is an accessory used mainly to update the fixture with the latest SGM firmware. See below how to update the fixture with the latest firmware.

The SGM Uploader cable is also used for controlling the DMX values channel by channel through the Firmware Uploader Tool software (available for download at www.sgmlight.com).



Figure 28: SGM Uploader cable

Upgrading the firmware

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

- When powering on the fixture, the display shows the current installed firmware version (only standard).
- Go to INFO → FIRMWARE VERSION (only standard).
- Through RDM.

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 G-7 BeaSt with the latest firmware, use an SGM USB 5-Pin-XLR uploader cable, and a Windows-based computer with the SGM Firmware Tool software installed (available for download at www.sgmlight.com).

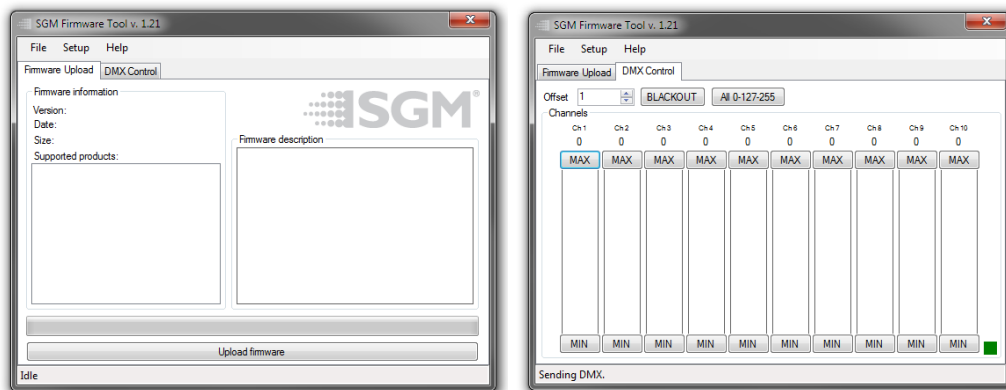


Figure 29: SGM Firmware tool

Additionally, the Firmware Tool software offers a simple DMX controller featuring 512 DMX channels for test purposes (fig. 29).

Cleaning

SGM luminaires with 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-7 BeaSt using a soft cloth dampened with water and the front lens with any regular glass cleaner. For a throughout cleaning of plastic and metal exterior a plastic cleaner such as SONAX PROFILINE Interior Plastic Cleaner is recommended. Do not use products that contain solvents, abrasives, or caustic agents for cleaning, as they can cause damage to hardware, cables, and connectors. Consult www.sgmlight.com or contact SGM Light support if you have any questions about cleaning and maintenance.

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.

Ordering information

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

G-7 BeaSt fixtures

G-7 BeaSt, Std, BL.....	P/N: 80103000
G-7 BeaSt, Std, WH.....	P/N: 80103001
G-7 BeaSt, Std, CU.....	P/N: 80103002

The G-7 BeaSt can be ordered in any RAL colour. Contact your local SGM dealer for ordering customized colour housings or for more information.

G-7 BeaSt accessories

2m (78 in.) power cable with IP connector.....	P/N: 07860275
2 x Omega brackets, BL / WH.....	P/N: 83060602 / 83061206
SGM USB uploader cable.....	P/N: 83062011
Flight case for 2 pcs G-7 Series.....	P/N: 82051020

G-7 BeaSt Consumables

Thermal pads.....	P/N: 21400060
-------------------	---------------

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

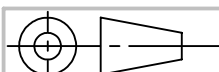
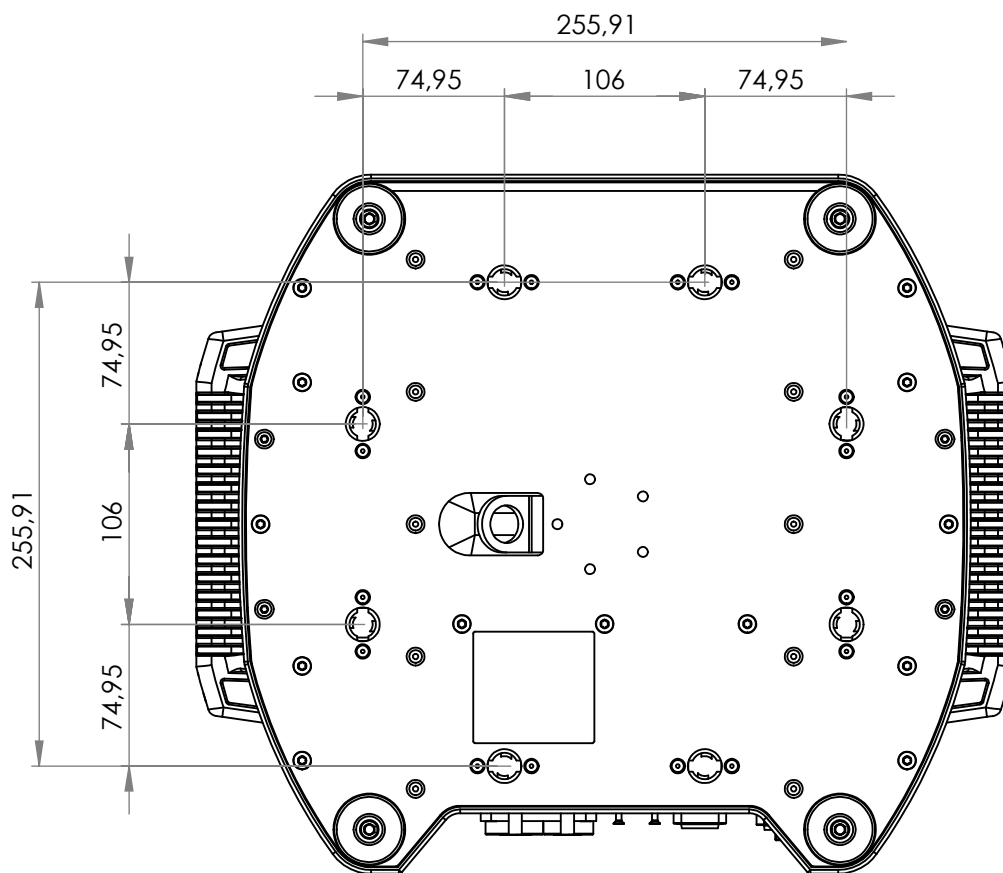
2014/35/EU: Low Voltage Directive

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.



All Dimensions
are in mm

TOLERANCE:

MATERIAL:

Material <not specified>

FINISH:

DEBURR AND BREAK
SHARP EDGES

Last saved by: peh
Wednesday,
20 November 2019

TITLE:

SGM[®]
Copyright © SGM Light A/S. All rights reserved.

G-7 Base asm

DWG NO.

Base bracket drawing

WEIGHT IN GRAMS: 7709.19

FIRST USED IN:

DO NOT SCALE DRAWING

SCALE:1:4

SHEET FORMAT: A4

SHEET 1 OF 1

User Notes

[illegible]



SGM Light A/S

Sommervej 23

8210 Aarhus V

Denmark

Tel: +45 70 20 74 00

info@sgmlight.com

www.sgmlight.com