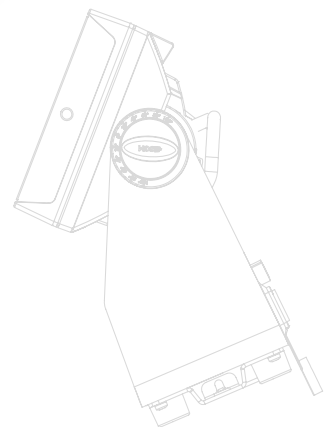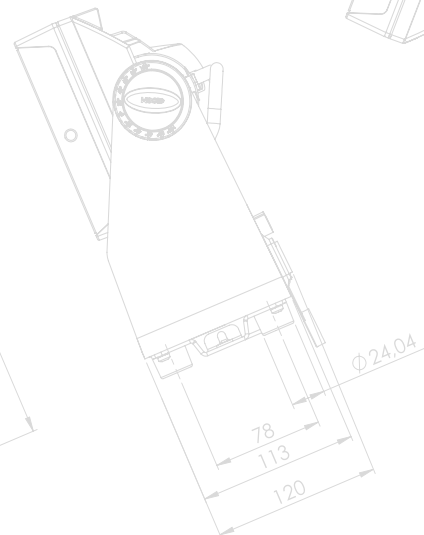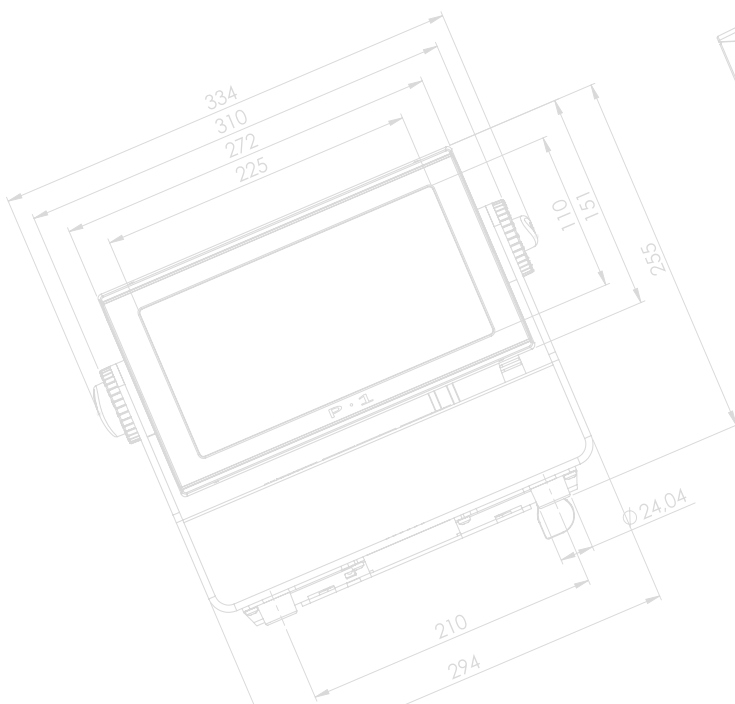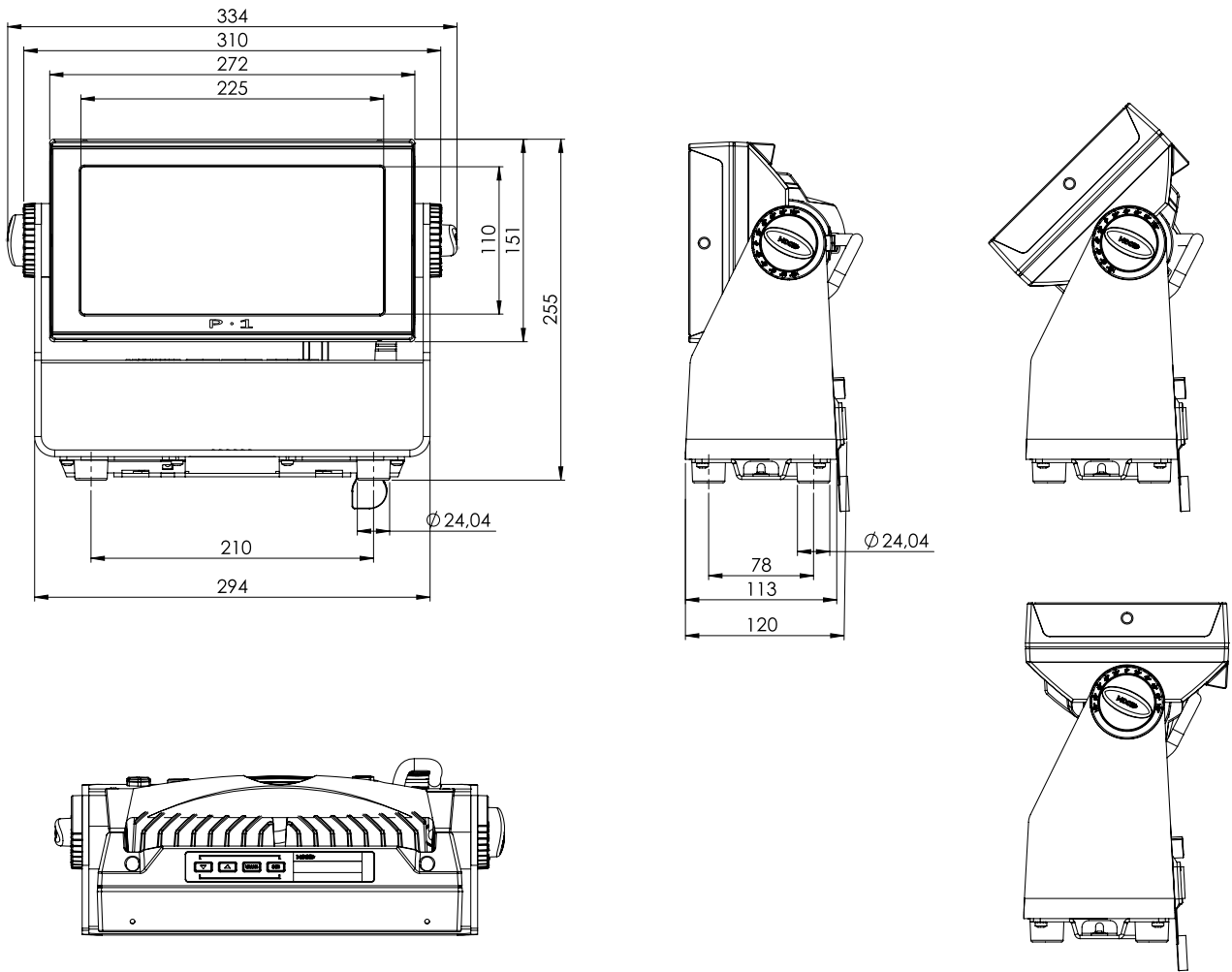# USER
MANUAL

P-1

P-1 Dimensions

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

This manual covers installation, use, and maintenance of the SGM P-1.
A digital version is available at www.sgmlight.com, or upon request via support@sgmlight.com.

P-1
USER MANUAL REV. D

This edition applies to firmware version 2.00 or later.

English edition

Contents

Safety information

WARNING!

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

SGM fixtures are intended for professional use only. They are not suitable for household use.
Les luminaires SGM sont impropre 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.

- Always power off/ unplug the fixture before removing covers or dismantling the product.
- Ensure that the mains 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 0.3 m (12 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.

Important note:

In order to preserve battery lifespan make sure the unit is fully charged before storage.

If stored for long periods of time, the batteries will need to be recharged every 3 months.

CAUTION: Exterior surface temperature after 5 min. operation = 38 °C (100 °F). Steady state = 68 °C (154 °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 4 mm.

Before installing this product

Please visit the SGM official website at www.sgmlight.com for the latest version of this user manual/ safety information leaflet. Due to continuous improvements, the instructions may change without notice. SGM always recommends the latest available firmware version from www.sgmlight.com.

(!)   *External cleaning and visual inspection of the fixture*

All users of SGM fixtures should regularly clean those parts of the fixture directly exposed to the elements, such as the external housing and front lenses. Additionally, all owners of SGM fixtures must periodically check the external housing of the fixture for structural breaks, components in bad shape, cracked lenses, or loose screws. To ensure proper operation, but also to prevent the risk of potential accidents, do not use the fixture if the lens, housing, or power cables are damaged. If parts of the fixture appear to be missing, cease use immediately and contact SGM support.

(!)   *Wiring and conduit / containment*

SGM fixtures supplied with power and data cable leads are not intended for installation in permanently installed conduit or containment. When installing fixtures in a permanent installation, ensure cable leads are installed as a service loop to an appropriately rated junction box using suitable cable strain reliefs/ glands. All installed fixtures must be securely mounted and service loop appropriately protected for installation location. All electrical wiring and connections should be completed by a qualified electrician.

(!)   *Safety Precautions*

When using electrical equipment, basic safety precautions should always be followed including the following:

1. Do not mount near gas or electric heaters.
2. Permanently installed equipment should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.
3. The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.
4. Do not use this equipment for other than intended use.
5. Refer service to qualified personnel or authorized service centers.
6. Do not look directly into the beam for long periods of time, when the fixture is on.
7. The fixture shall, under no circumstance, be covered with insulating material of any kind.

READ AND FOLLOW ALL SAFETY INSTRUCTIONS.

Misusing the battery may cause the battery to get hot, rupture, or ignite, and cause serious injury. Make sure to follow the safety informations listed below:

- Do not put the battery in fire, attempt to heat it, or use it in a high temperature environment.
- Do not install the battery backwards with reversed polarity.
- Do not connect the positive terminal to the negative terminal of the battery with any metal object (such as a wire).
- Do not carry or store the battery together with necklaces, hairpins, or other metal objects.
- Do not pierce the battery with nails, strike the battery with a hammer, step on the battery, or otherwise subject it to strong impacts or shocks.
- Do not expose the battery to water or salt water, or allow the battery to get wet.
- Do not disassemble or modify the battery. The battery contains safety and protection devices, which, if damaged, may cause the battery to generate heat, rupture or ignite.
- Do not place the battery on or near fires, stoves, or other high-temperature locations. Do not place the battery in direct sunlight. Doing so may cause the battery to generate heat, rupture, or ignite. Using the battery in this manner may also result in a loss of performance and a shortened life expectancy.
- Do not place the battery in microwave ovens, high-pressure containers, or on induction cookware.
- Immediately discontinue use of the battery if, while using, charging, or storing, the battery emits an unusual smell, feels hot, changes color or shape, or appears abnormal in any other way.
- Only charge the battery mounted in the fixture with the built-in charger. Do not use a third party charger.
- Do not charge unattended.
- Only charge the battery if the surrounding temperature is in the range of +7 to +35°C (45° to 95°F). Charging the battery outside of this temperature range may cause the battery to heat up or break. It may also harm the performance of the battery or reduce the battery's life expectancy.
- Do not replace the battery in the fixture with other types of rechargeable batteries.
- Do not replace the battery in the fixture with non-rechargeable batteries, such as dry-cell batteries etc.
- When the battery is worn out, insulate the terminals with adhesive tape or similar materials before disposal.
- Follow applicable laws and regulations for transport, shipping, and disposal of batteries. For details on recycling lithium, lithium-phosphate, and lithium-ion batteries, please contact a government recycling agency or your waste-disposal service.

This warning applies to all SGM battery-driven products, due to the inside LI-ION battery.

Overview

The P-1 is a battery-driven RGBW LED wash light with a small footprint and high output, designed for multiple applications, including applications where wireless operation is essential.

P-1 features:
- A wash light, a strobe light, and a pixel light, weighing only 5.7 kg/ 12.9 lbs.
- Multi-environmental luminaire due to its IP65 rating that can operate in many environments and in temperatures from -20° C to 50° C.
- 8 high-power RGBW LEDs divided into two vertical, individually controllable LED segments.
- Fully adjustable color temperature correction (CTC) from 2,000K to 10,000K.
- Different beam angles available by using optional set of four magnetic easy-fit holographic filter frames (19°, 45°, 63°x12° elliptical, 12°x63° elliptical).
- Built-in wireless DMX and programmable standalone programs.
- Fully RDM compliant.
- Very low power consumption.
- Rubber feet meant for delicate surfaces, and prevent fixture from sliding.

The fixture also offers running for up to 12 hours in standard operation mode, the P-1 can easily be configured to provide an even output over longer periods of time. The combination of wireless DMX and battery power makes the P-1 extremely versatile and able to serve a vast variety of creative purposes.

Parts identification and terminology

A: 8 x RGBW LEDs

B: Tilt lock

C: Power in

D: DMX in and out

E: Kensington lock socket

F: Safety wire attachment point

G: Dehumidifiers and GORE-TEX membranes

H: Control panel

I: OLED Display

J: Holes for Omega bracket
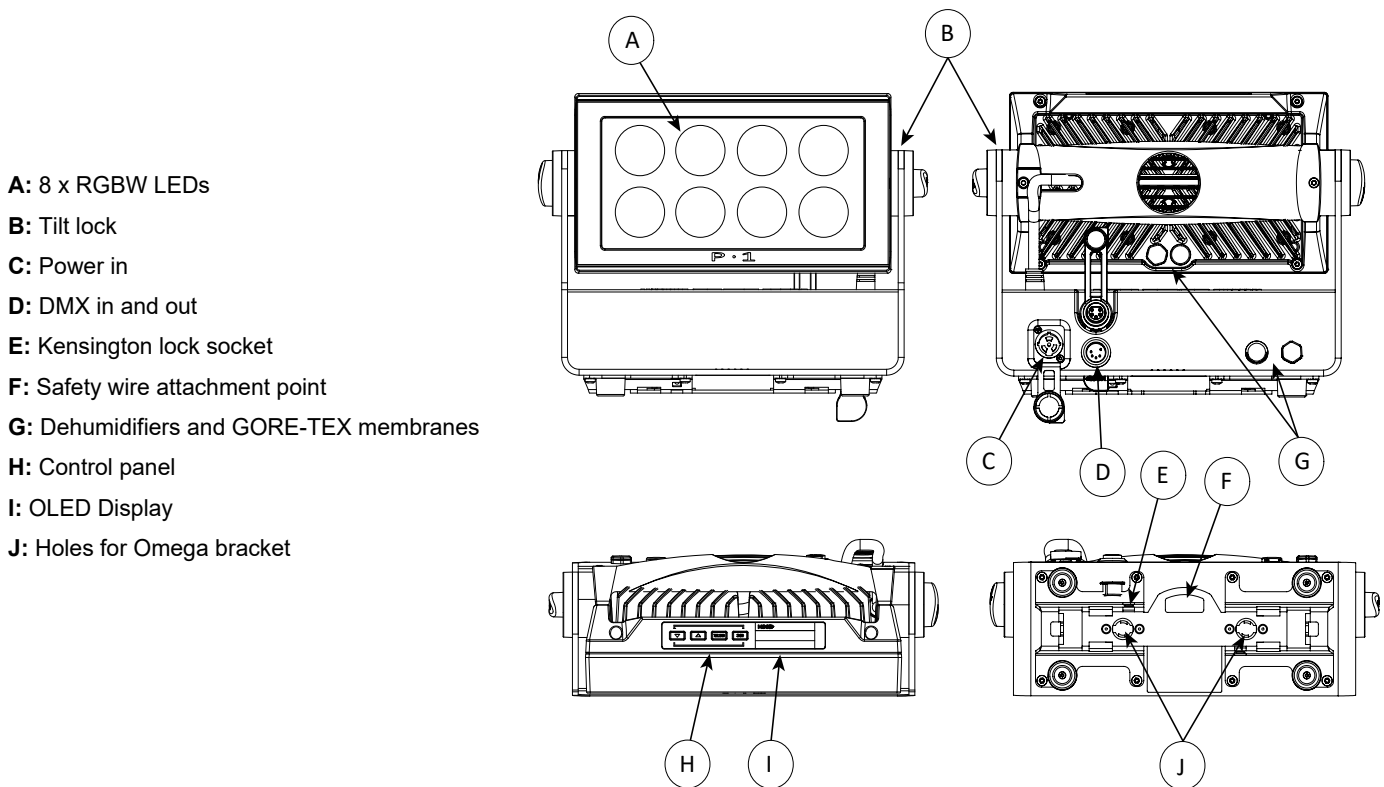
Figure 1: Parts identification and terminology

Preparing for installation

Unpacking

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

The P-1 is shipped with:

- One IP66 power input connector, 2 m (78 in.).
- One Omega bracket with 1/4-turn fasteners.
- Filters (optional).
- Ceiling/ wall mount (optional).
- Barndoor (optional).

Location/ application

The fixture is IP65-rated and designed for both indoor and outdoor events. This means that it is protected from:
- Dust, to the degree that dust cannot enter the device in sufficient quantities as to interfere with its operation.
- Lower pressure water jets from any direction.

When selecting a location for the device, ensure that:
- It is situated away from public thoroughfares and protected from contact with people.
- It is not immersed in water or exposed to high-pressure water jets.
- It has adequate ventilation.

Transportation

Always use the supplied packaging or suitable flight case for transportation and storage.
Never carry the fixture by connected cables or wires.

Installing/ rigging the P-1

The P-1 may be installed in any orientation. Always use an omega bracket to rig the fixture and lock the bracket with the 1/4-turn fasteners.

Please note:
The 1/4-turn fasteners are only locked when turned fully clockwise.
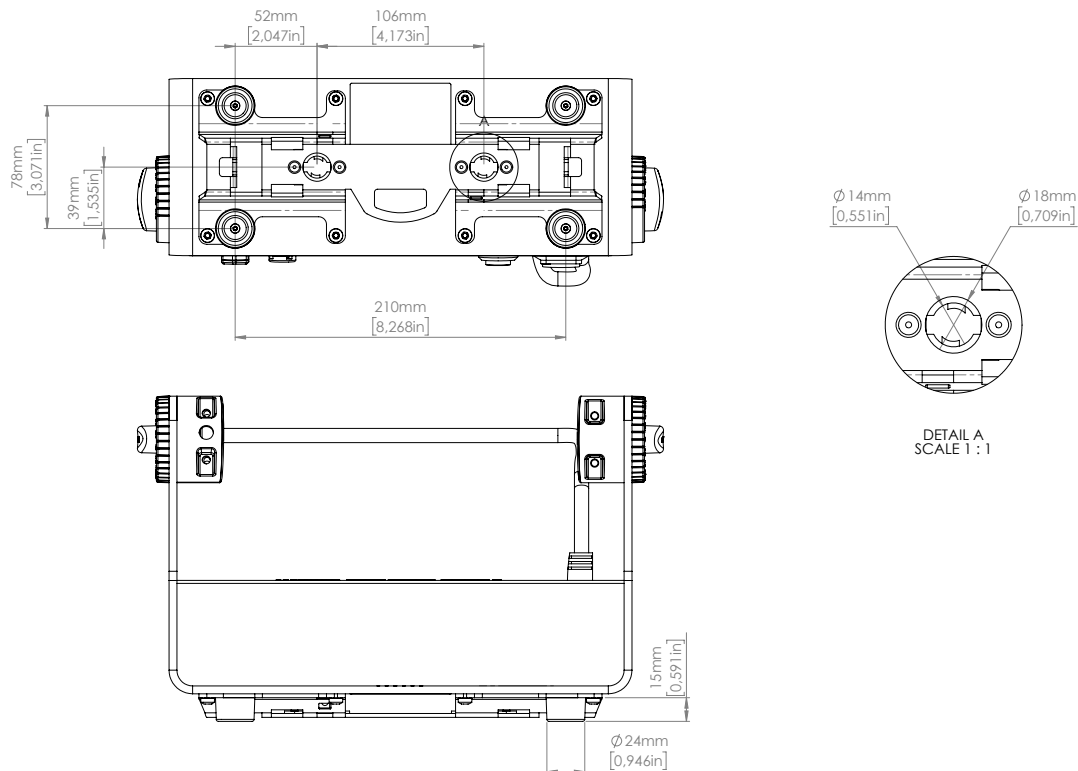
Figure 2: Dimensions for P-1 base locking points

Rigging process

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

1. Check that the clamp 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 securely to the omega bracket with a M12 ½ bolt (min. grade 8.8) and a lock nut.

3. Align the omega bracket with the two 1/4 turn sockets in the base. Insert the fasteners into the base bracket and turn both levers a full 1/4-turn clockwise to lock.

4. Working from a stable platform, hang the fixture on a truss or other structure. Tighten the clamp.

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. Verify that there are no combustible materials, cables, or surfaces to be illuminated within 0.3 m (12 in.) of the fixture.

7. Check that there is no risk of the head/ yoke colliding with other fixtures or structures.

Omega bracket

Holes for omega bracket
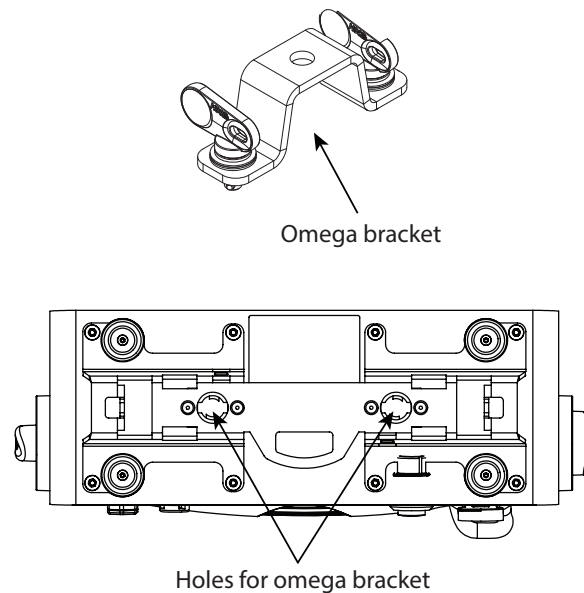
Figure 3: Base with omega bracket

WARNING! *Always secure an elevated P-1 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. 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 4 mm.
- Have a maximum length (free fall) = 30 cm (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 for secondary attachment.**
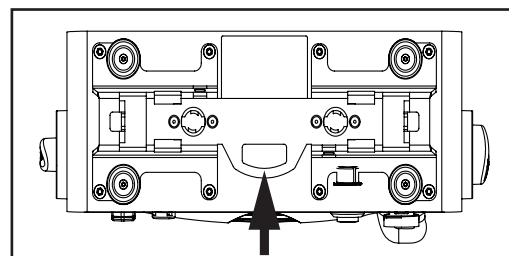
Figure 4: Safety wire attachment point

Ceiling/ Wall mount

The P-1 can be installed with an optional ceiling/ wall mount. The ceiling/ wall mount is design to fit the base bracket on the P-1.

To install the ceiling/ wall mount:

1. Loosen the lock screw on the ceiling/ wall mount.
2. Install the ceiling/ wall mount to the surface.
3. Position the fixture over the four slide locks and slide into the locked position.
4. Fasten the lock screw.
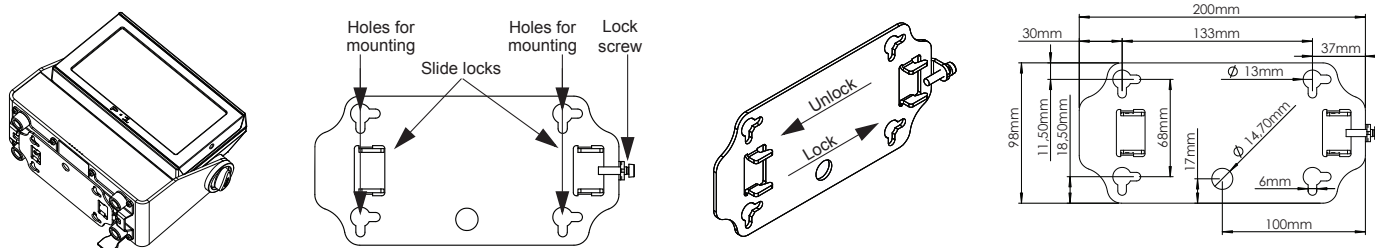
Figure 5: P-1 Ceiling / Wall mount

Connecting AC power

The P-1 can operate on any 100-240 V, 50/ 60 Hz AC mains power supply.

Connect the fixture to AC power using the supplied 8 mm cable (see figure 6) with a power connector or similar with a maximum of 20 A to ensure the correct ingress protection (IP rating). The P-1 can also run on battery power for up to 12 hours with the possibility of extending the battery time up to 24 hours.

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

Wire	Color	Symbol	Conductor
▬▬	Black	L	live
▬▬	White	N	neutral
▬▬	green/yellow	⏚ or ⏚	ground (earth)
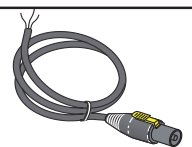
Figure 6: Connecting AC Power/P-1 power cable 8 mm

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

For permanent installation, have a qualified electrician to wire the mains cable directly to a suitable branch circuit. The ingress protection (IP) rating of the connector and junctions must be suitable for the location.

After connecting the P-1 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 see "Control menu" on page 15.

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.

PLEASE NOTE:
The protective caps must be securely mounted on any unused DMX or power connector in order to maintain the IP65 rating.

AC Power, battery and charging

AC Power loss function

By default the P-1 is set by default to continue on battery power when AC power is disconnected.
This can be configured in the settings of the P-1 menu by selecting one of the following options:

- **Battery backup** - the fixture continues on battery power if AC power is disconnected.
- **Emergency light** - the fixture continues on battery power with static white light at full output if AC power is disconnected.
- **Power off** - the fixture turns off if AC power is disconnected.

Normal operation will resume when AC power is re-established to the P-1.

Battery charging and use

The batteries are charging when the P-1 is connected to AC power and:

- When the P-1 is off.
- When the P-1 is on, but idle/ not in use.

The batteries do not charge while the fixture is in active use, e.g. when the light source is on.

Charging from a discharged state to full voltage and: 70% of full capacity - 3.5 hours*; 100% - 6.5 hours*.
After >1000 full cycles the expected battery capacity will be 85%* of the initial capacity. (Full cycle = 0% to 100% to 0%).
If the batteries are not fully charged/ discharged, the number of cycles is higher.

PLEASE NOTE
Only use the P-1 connected to AC power when ambient temperatures are between 0°C and 45°C.
Running on battery power, the P-1 can be used when the ambient temperatures are between -20°C and 50°C.
Only charge the P-1 connected to AC power when ambient temperatures are between 7°C and 45°C.

Battery time and battery extension

In a 20°C surrounding ambient temperature, the fully charged P-1 batteries last approximately 3 hours when all LEDs are on. The P-1 can be configured to extend the battery time for up to 24 hours by dimming the output accordingly. Go to MENU → SETTINGS → BATTERY EXTENSION.

The battery extension time set in the menu only applies to a fixture with fully charged batteries.
The battery time is reduced when using the P-1 in cold environments.

* Under the manufacturer's test conditions.

Configuring the device

The P-1 can be set up by using the control panel and OLED multi-line display at the top of the fixture's head or through RDM.

The OLED display is the human interface of the fixture, as it displays the current status and menu of the fixture. The display panel can be used to configure individual fixture settings, check the fixture's wireless status, confirm the firmware version, and read error messages. The complete list of the menu and all commands available is listed in "Control menu" on page 15.

When the fixture is powered, it displays the currently selected operating mode and the DMX start address. Navigate through the menus and options using the arrow buttons, and select items using the ENTER button.

Figure 7: OLED display and control panel

Using the display panel

- 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.
- To turn off the P-1, press and hold the 'ESC' button until the fixture turns off, or go to MENU → POWER OFF.
- To turn on the P-1, press any button and the fixture will power on.

Display

Wireless signal strength

Displays the signal strength of the wireless CRMX connection. The wireless signal's strength symbol will be flashing if the paired transmitter is out of range. If no transmitter is paired the symbol will be off.

Current input type

- When 'DMX' is displayed: The fixture responds to data received through cabled DMX.
- When 'CRMX' is displayed: The fixture responds to data received through wireless DMX.

Current DMX address

Displays the current DMX address. The DMX address is altered directly from this view. The next available DMX address is displayed to the right. The DMX address will flash on no data input.

Current power source/ battery level

Displays the current power source, indicated by a power cable symbol or a battery symbol.
Displays the current battery level.
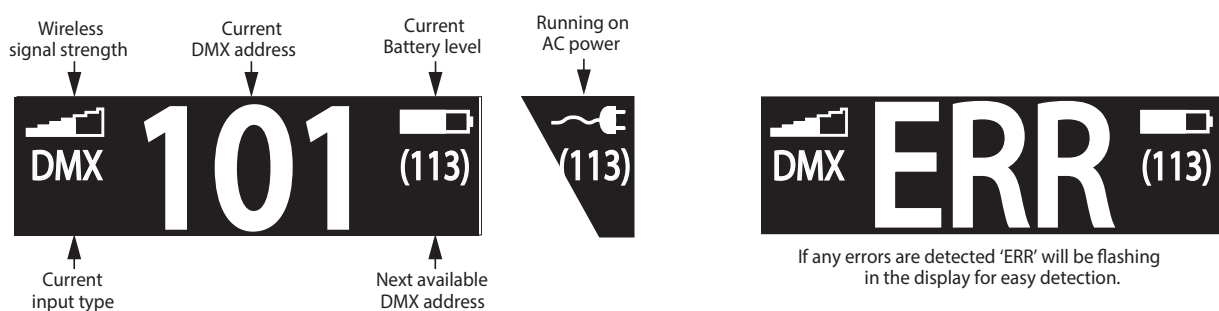
Figure 8: Display view

Error Indicator

If any errors are detected, the message 'ERR' will be flashing in the display for easy detection.
To read the error message, select ENTER → INFO → ERRORS in the menu.

Shortcuts

- ESC + ENTER: Press ENTER to confirm factory defaults.
- ESC + UP: Press ENTER to start LED test.
- ESC + DOWN: Press ENTER to unpair CRMX.
- UP + DOWN arrows simultaneously = flip the display upside-down.

Connecting to a DMX control device

The P-1 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 and DMX-Out cable to the output. Both connectors are located on the rear of the fixture's base (chassis mounted male 5-pin XLR connectors). Terminate the DMX-Out cable of the last fixture in the data link.

For outdoor events, use at least IP65-rated XLR connectors.

Connecting a wireless transmitter

The P-1 is designed to look for wireless transmitters in 'connect' state when this option is not yet enabled.
To connect the P-1 to a wireless transmitter:
- Log off the currently paired wireless transmitter - see "Disconnecting a wireless transmitter" on page 13.
- 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 in the menu.

Signal priority

The P-1 can be paired to an active wireless transmitter while is it connected to a DMX cable. 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

The P-1 can be controlled using signals sent by a DMX controller on a number of DMX channels. 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.

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.**

DMX start address

The P-1 can be operated in different DMX modes. For any of the modes, the first channel used to receive data from a DMX controller is known as the DMX start address. For independent control, each P-1 must be assigned its own address. If two fixtures of the same type have the same DMX address, they will behave identically. Address sharing can be useful for diagnostic purposes and symmetrical control.

For independent control, each P-1 must be assigned its own address to have a DMX start address set. For example, if the first P-1 is set to 3ch DMX mode with a DMX address of 10, it uses the channels 10, 11 and 12. Then the following P-1 in the DMX chain should be set to a DMX address of 13. As the first fixture uses the prior 3 DMX channels, including channel 12, the next available channel is 13 (10+3=13 >> 13).

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

NOTE!

When using power link connection, make sure the maximum power capacity is not exceeded in order to avoid short-circuit and damaging of the fixture.

Set/ edit DMX address

The DMX address is shown on the OLED display in the control panel.
To change the address setting, press the up and down arrows. When the desired address is displayed, press ENTER to save the setting.

For your convenience, the next available DMX address is displayed to the right.
See instructions on how to use the display panel in "Configuring the device" on page 11.

The P-1 also offers the option to set the DMX address through RDM.

DMX modes

The P-1 operates in different DMX modes. All detailed DMX charts are available at www.sgmlight.com under the respective products, or upon request via support@sgmlight.com.

Using standalone operation

Standalone operation can be used when the fixture is not connected to a control device. It can be programmed with a series of up to 24 scenes, playing continuously in a loop. Up to three standalone programs can be defined and run from the menus, and one of the programs can be set to run by default whenever the fixture is powered on.

Each of the three available standalone programs contains 24 user-definable scenes with its own RGB and shutter settings.
Each scene has a definable fade-in time for the transition from one color to the next, and a wait (static) time of up to 120 minutes and 59 seconds.

To record a standalone program, press ENTER → MANUAL → EDITOR.

The standalone mode of the fixture's startup is enabled by pressing:
ENTER → SETTINGS → STARTUP MODE → SELECT STARTUP MODE → STANDALONE.

To select the fixture's startup program, go to:
ENTER → SETTINGS → STARTUP MODE → STARTUP PROGRAM.
The chosen program will run its length cyclically whenever the fixture is powered on.

To run an internal program, go to:
ENTER → MANUAL → RUN PROGRAM.

To stop an active internal program, go to:
ENTER → MANUAL → STOP PROGRAM.
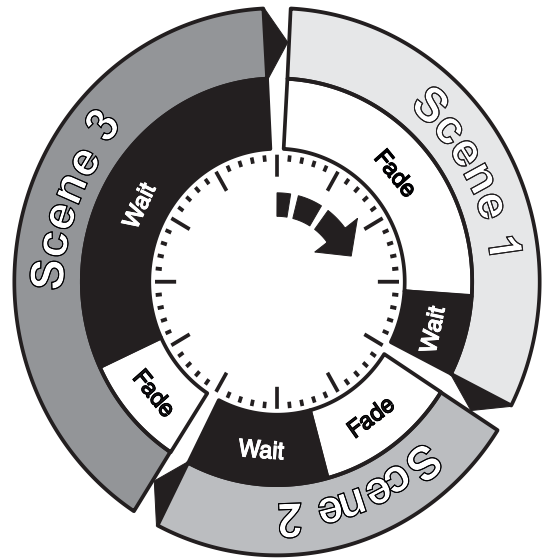
Figure 8: Standalone operation

Setting a static color manually

The P-1 can be configured to display a predefined static color or color preset.
To set up a static color based on RGBW mixing, select ENTER → MANUAL → QUICK COLOR.

Note that once the MANUAL → QUICK COLOR settings are changed, the fixture will, by default, be set to automatically start in quick color mode whenever it is powered on. This can be reset through the menu SETTINGS → STARTUP MODE → SELECT STARTUP MODE.

Since firmware version 2.24, the P-1 includes a number of color presets accessible via display. To set up a color preset, select: ENTER → MANUAL → COLOR PRESETS.

The current quick color program or selected color preset can always be stopped by selecting:
ENTER → MANUAL → STOP PROGRAM.

See "Control menu" on page 15 for detailed information.

Fixture properties

Factory default

When restoring factory defaults in the P-1, the following will be set:

- Set DMX address to 1.
- Set 6 Channel CTC DMX mode.
- Set screensaver to OFF.
- Disable Startup Programs.
- Set all Quick Color values to zero.
- Disable DMX Loss.
- Set all values in Manual Programs to zero.
- Set Fan mode to Standard.
- Set Frequency to Default.
- Set AC Power Loss Function to Battery Backup.

Figure 9: P-1 Pixel segments

Effects

Colors and LED Panels

The P-1 features 8 high-power 12.5W RGBW LEDs, divided into two individually controllable panels (left and right). Each panel represents a cluster of four lenses.
The fixture can operate in RGB calibrated mode which ensures that colors are compatible across the range of SGM fixtures. However,

the P-1 also offers the ability to operate in RAW mode with full control of each color.

Color temperature correction

The P-1 offers seamless CTC (color temperature correction) control from 2000° Kelvin - 10000° Kelvin. The color temperature can also be modified via color presets when in manual operation (see above).

Beam angle

The P-1 is equipped with a fixed 10° beam angle. The beam angle can be manipulated in various ways by using one of the optional magnetic holographic filters (19°, 45°, 63°/12° elliptical), and 4/8 way barndoors.

Individual fixture settings

Flipping the display

If the fixture is installed hanging upside down, it may be useful to flip the display so that it is easier to read.
To flip the display, press ENTER and select SETTINGS → FLIP DISPLAY, or press the up and down buttons on the control panel at the same time.

Setting the OLED display saver

By default the OLED display dims down after a short period when the control panel is in the root menu and not in use. The display can also be set to turn off completely, ideal when a pitch-black environment is required. Pressing any key will always turn on the display or restore it to normal brightness.

To configure the display settings, press ENTER → SETTINGS.

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

Control menu

Level 1	Level 2	Level 3	Level 4	Function
Mode	Select mode	-	-	Select DMX mode.
Manual	Quick color	Red	0-255	Static quick color - red mix (0-255). Sets fixture to quick color startup mode.
		Green	0-255	Static quick color - green mix (0-255). Sets fixture to quick color startup mode.
		Blue	0-255	Static quick color - blue mix (0-255). Sets fixture to quick color startup mode.
		White	0-255	Static quick color - white mix (0-255). Sets fixture to quick color startup mode.
		Full color calib.	On or off	Select between color calibrated or RAW color mode.
	Color preset	Intensity	0-255	Dimmer.
		Color	White 3200 K	Color preset #.
			White 5600 K	
			White 10000 K	
			Congo	
			Red	
			Green	
			Blue	
			Orange	
			Light green	
			Pink	
			Light blue	
			Purple	
			Neon green	
			Magenta	
			Cyan	
			Yellow	
			CTC	
	Run program	1, 2 or 3	-	Runs internal sequence 1, 2 or 3.
	Stop program	-	-	Stops current running internal sequence or Quick Color.
	Editor	Program	-	Edits scenes.

Level 1	Level 2	Level 3	Level 4	Function
Info	Product type	-	-	Displays product type.
	Firmware version	-	-	Displays installed firmware version.
	Serial number	-	-	Displays SGM serial #.
	DRM ID	-	-	Displays RDM ID. (Unique RDM ID for identification).
	DMX view	Up to 492 DMX addresses	-	Displays received DMX levels.
	Sensors	Mainboard	-	Displays fixture temperatures.
		Led left	-	
		Led right	-	
		Humidity	-	Displays humidity percentage.
		AC connected	-	Displays whether power is connected or not.
		Battery PCT	-	Displays battery level.
		Charging	-	Displays whether the battery is charging or not.
		Battery VDC	-	Displays battery voltage.
		Wireless signal	-	Displays wireless signal strength.
		Wireless paired	-	Displays wireless connection status.
		On time red 1	-	Display LED total power on time. (R, G, B, W).
		On time green 1	-	
		On time blue 1	-	
		On time white 1	-	
		On time red 2	-	
		On time green 2	-	
		On time blue 2	-	
		On time white 2	-	
	Power on time	-	-	Displays fixture total power on time.
	LED on time	-	-	Displays LED total power on time. (R, G, B, W).
	Errors	-	-	Displays error codes.
Settings	Wireless DMX	Log off	-	Sends Log off command to the CRMX System.
		Enable/ disable	-	Enables/ disables wireless DMX functionality.
		Bridge	-	Displays strength of the wireless connection.
		Status	-	Displays wireless connection status.
	Startup mode	Select startup mode	-	Default operating mode when fixture is powered on: 1. DMX (factory default). 2. Standalone. 3. Quick Color.
		Startup program	Select startup program	Standalone program 1, 2 or 3. Only used if the startup mode is set to "standalone". Program 1 is default.
	DMX loss	DMX hold	-	Select what happens if DMX signal is lost.
		All on	-	
		Blackout	-	
		Quick color	-	
	AC power loss function	Battery backup	-	Select what happens if AC power connection is lost.
		Emergency light	-	
		Power off	-	
	Battery extension	Set battery extension time	Off or 1-24h	Configures battery extension function.
	LED frequency	Set LED frequency	-	Sets LED frequency.
	Flip display	-	-	Flips control panel display.
	Display off	-	-	Toggles automatic display sleep.
	Factory default	-	-	Reset the fixture to factory default settings.
	Service pin	-	-	-
	Service menu	-	-	-
Test	Self test	Start/ stop self test	-	Activates automated self test.
	Display test	-	-	Test the fixture display.
	Color test	Start/ stop color test	-	Test the LED segments of the fixture.
Power off	-	-	-	Turns the fixture off.

RDM

Supported RDM functions

The P-1 features support for various RDM functions, as per the ANSI E1.20 standard.

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.

A RDM enabled controller is required to control the supported parameters. See the tables below for supported RDM functions.

RDM functions

PID	Actions	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
0x0200	GET	Sensor Definition
0x0201	GET/ SET	Sensor Value
0x0082	GET/ SET	Device Label
0x0081	GET	Manufacturer Label
0x8060	GET	Serial Number
0x0080	GET	Device Model Description
0x0400	GET/ SET	Device Hours
0x0051	GET	Parameter Description

PID	Actions	Name
0x0501	GET/ SET	Display Level, 0=OFF, 1 and above=ON
0x0500	GET/ SET	Display Invert
0x8626	SET	CRMX Log Off
0x8631	GET/ SET	Battery Extension Hours
0x0090	SET	Factory Defaults
0x0120	GET	Slot Info
0x0121	GET	Slot Description
0x0122	GET	Default Slot Value
0x8637	GET/ SET	Bridge ENABLE=1 DISABLE=2
0x8620	GET/ SET	Led freq (197647Hz)/ value
0x8634	GET/ SET	Quick color feature 0=HOLD 1=WHITE 2=OFF 3=Q COLOR
0x8636	GET	Active Error

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.*

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
Mainboard Temp.	Temperature
LED Left	Temperature
LED Right	Temperature
Humidity	Other
AC power connected	Contacts
Battery PCT (percentage)	Other
Battery charging	Contacts
Battery voltage	Voltage
Wireless signal strength	Other

Name	Sensor Type
Wireless paired	Other
Red LED Hours Pixel 1	Time
Green LED Hours Pixel 1	Time
Blue LED Hours Pixel 1	Time
White LED Hours Pixel 1	Time
Red LED Hours Pixel 2	Time
Green LED Hours Pixel 2	Time
Blue LED Hours Pixel 2	Time
White LED Hours Pixel 2	Time

Accessories

The P-1 can be used with various accessories such as cables, barndoors, and filter frames.
To get to know all the available P-1 accessories, visit www.sgmlight.com or contact your local SGM dealer.

Filter frames

The P-1 features various optional, magnetic holographic filter frames:

- Medium angle (19°).
- Wide angle (45°).
- Elliptical wide angle horizontal (63°x12°).
- Elliptical wide angle vertical (12°x63°).

The filter frames are easily installed due to their magnetic properties. To install them, position the filter frame in front of the light and snap it into place.

The frames are fitted with a safety wire to secure the frame to the yoke on the P-1.

A filter frame can be mounted simultaneously with a barndoor.

Filter frame front view

Filter frame back view

P-1 with filter frame
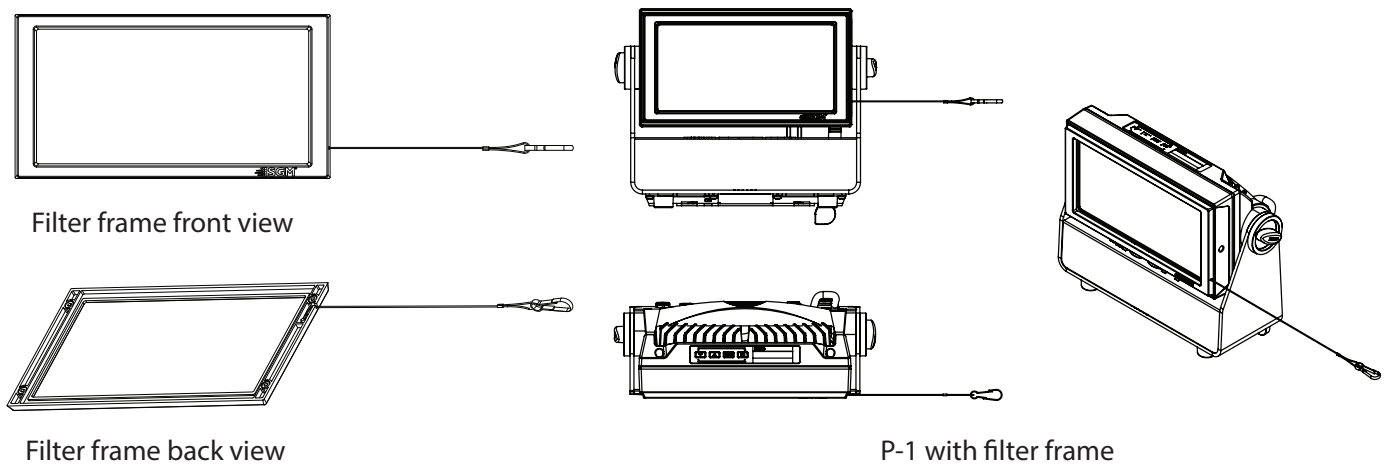
Figure 10: P-1 Filter frames

Barndoors

The P-1 features optional 4-way and 8-way barndoors. The barndoors are designed and intended to be mounted on the fixture without the use of any tools.

To install the barndoors:

1. Pull the two lock pins to the unlocked position and place the barndoor on the front of the P-1 head.
2. Release the lock pins and check the lock pins are correctly in place.
3. Attach a safety wire to the barndoor and secure it to the yoke on the P-1.

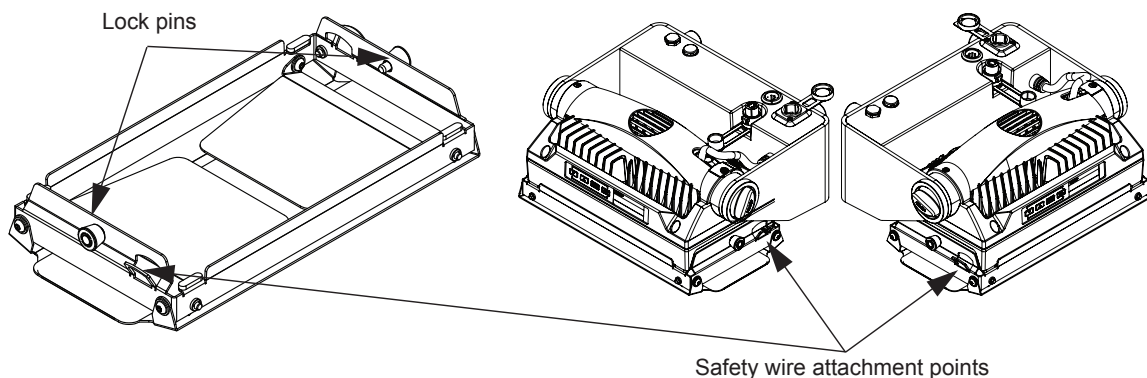The barndoor can be mounted simultaneously with a filter frame.

Lock pins

Safety wire attachment points

Figure 11: P-1 Barndoors

For further information and other possibilities visit www.sgmlight.com or contact your local SGM dealer.

Maintenance/ Service

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.
- Going to the MENU → INFO → FIRMWARE VERSION.
- 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 P-1 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).
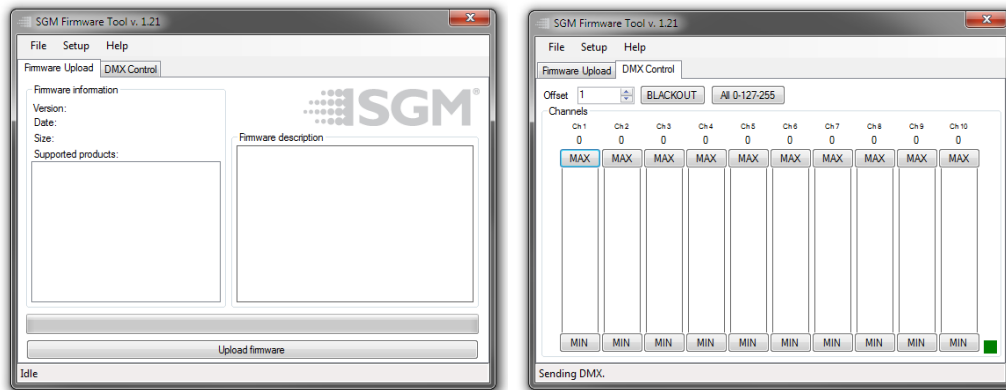

Figure 12: SGM Firmware tool

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

Cleaning

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

Whenever necessary, clean the P-1 using a soft cloth dampened in a solution of water and mild detergent. Do not use products that contain solvents, abrasives, or caustic agents for cleaning, as they can cause damage to hardware, cables, and connectors.

The level of cleaning required will vary greatly depending on the operating environment and installation. Therefore, it is recommended to do frequent check-ups during the first few weeks of operation to see how often cleaning is necessary.

Troubleshooting

Problem	Potential cause(s)	Remedies
Fixture does not respond or appears to be completely dead.	No power to the fixture.	Confirm that the power is switched on, confirm that the cables are plugged in, and the power cable is inserted and turned to its locked position.
	The batteries are discharged.	Charge the batteries by connecting AC power.
	The fixture has been turned off.	Press any button on the control panel to turn on the fixture.
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 were disconnected.	Inspect DMX cables.
Fixture operates irregularly/ abnormally.	DMX cable polarization is inverted (pin 2 + 3).	Install a polarity-inverter or replace cables.
	DMX link is not terminated.	Install a XLR 120 ohm DMX termination at the end of the DMX link.
	Corrupted DMX cable.	Replace or repair defective cables and/ or connectors.
	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 minimum values are out of calibration.	Contact your local SGM dealer or support@sgmlight.com
	The SGM Calibration Data set has been lost.	Contact your local SGM dealer or support@sgmlight.com

Fixtures and accessories

The P-1 can be used with a variety of accessories.
Contact your local SGM dealer to get the latest pricing and news about available accessories.

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

Ordering information

P-1, Std, BL (incl. 3 pcs Batt.. P/N: 80031501

P-1, Std, WH (incl. 3 pcs Batt ....P/N: 80031511

P-1, Std, CU (incl. 3 pcs Batt.. P/N: 80031521

P-1, Std, BL (excl. 3 pcs Batt.. P/N: 80031502

P-1, Std, WH (excl. 3 pcs Batt... P/N: 80031512

P-1, Std, CU (excl. 3 pcs Batt.. P/N: 80031522

P-1 Accessories

Power cable with IP connector .... P/N: 07860275

Omega bracket with quarter turn bolts, BL .... P/N: 83060602

Battery, Nominal: 21,6V - Nominal: 3350 mAh (1 pcs .... P/N: 83061709

Battery, Nominal: 21,6V - Nominal: 3350 mAh (2 pcs .... P/N: 83061710

SGM USB uploader cable ....P/N: 83062011

P-1 Ceiling/Wall mount, BL... P/N: 83060614

Filter Frame - Medium Angle, BL...P/N: 83061140

Filter Frame - Wide Angle, BL ....P/N: 83061141

Filter Frame - Elliptical Horz wide angle, BL..P/N: 83061142

Filter frame - Elliptical Vert wide angle, BL...P/N: 83061147

Barndoor 4-way, P-1 series, BL..P/N: 83061138

Barndoor 8-way, P-1 series, BL..P/N: 83061139

Flightcase for 4 pcs P-1.. P/N: 82051009

Flightcase for 4 pcs P-1 incl. charger .... P/N: 82051010

Flightcase Charger Cable Assembly Kit (4 pcs .... P/N: 83062044

Vacuum test kit ....P/N: 83061136

28 mm spigot adapter for omega bracket... P/N: 83060639

Support hotline

SGM offers 24/7 technical support hotline.
Worldwide: +45 3840 3840
US: +1 407-242-6217
support@sgmlight.com

Approvals and certifications

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

CE ☒ RoHS

The information in this document is subject to change without notice. For the latest information, visit www.sgmlight.com

User Notes

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