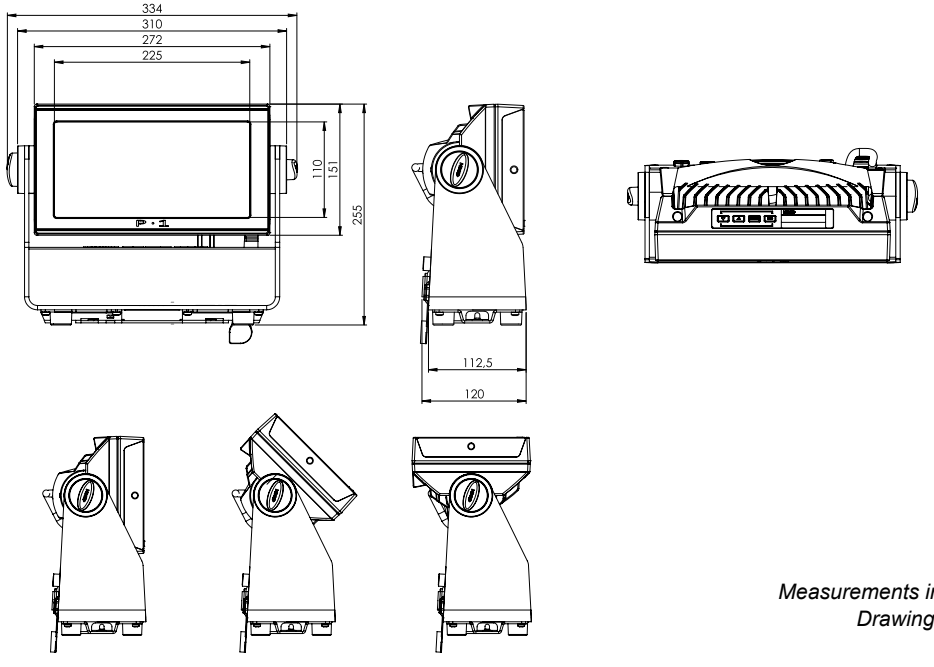
SGM®

P-1 WASH LIGHT

Dimensions



Measurements in millimetres.
Drawing not to scale.

P-1 WASH
USER MANUAL

The original edition of this document is in English.
All other language editions are translations of the original edition.

This edition applies to firmware version **1.56** or later.

Rev. A

Contents

Safety information

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

The P-1 is intended for professional use only. It is not suitable for household use. **Impropre a l'usage domestique.**

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

Preventing electric shock

***WARNING!** Risk of electric shock.*

- Always power off/unplug the fixture before removing covers or dismantling the product.
- Ensure that the mains power is off when wiring the fixture to the AC mains supply.
- Ensure that the fixture is electrically connected to earth (ground).
- Do not apply power if the fixture is in any way damaged.
- Do not immerse the fixture in water or liquid.

Preventing burns and fire

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

- Install in a location that prevents accidental contact with the fixture.
- 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.
- Do not paint, cover or modify the fixture.
- Keep all flammable materials away from the fixture.
- Allow the fixture to cool for 15 minutes after operation, before touching it.

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

LI-ION battery

WARNING! *LI-ION Battery*

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

- Do not place the battery in fire or heat the battery.
- 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, 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 surrounding temperature is in the range +5 to +35°C (41° to 95°F). Charging the battery at temperatures outside of this range may cause the battery to become hot or break. Charging the battery outside of this temperature range 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.

Avoid personal injury

WARNING! *Take measures to prevent personal injury.*

- Do not look directly at the light source from close range.
- Take precautions to prevent injury when working at height.
- Ensure that the fixture is always securely fastened with suitable hardware.
- For elevated installations, secure the fixture with suitable safety cables, and always comply with relevant load dimensioning, safety standards and requirements.

Overview

The P-1 is an IP65-rated battery-driven RGBW LED wash light with a small footprint and high output, designed for multiple applications, including applications where wireless operation is essential.

Being IP-65, weighing only 5.7 kg/12.9 lbs. and able to operate in temperatures from -20˚C to 50˚C in all kinds of weather makes the P-1 a lightweight, maintenance free and multi-environmental luminaire.

The P-1 provides built-in wireless DMX and programmable stand-alone programs.

The 8 high power RGBW LEDs provides a staggering output, it has an variable color temperature via the color temperature correction channel.

Via a patented technology, its standard 10° beam angle can be manipulated in various ways.
Shape the beam and achieve different beam angles with an optional set of four magnetic holographic filter frames (19°, 45°, 63°x12° elliptical, 12°x63° elliptical plus an empty color frame).

The fixture also offers very low power consumption and an expected lifetime of the multiple LED's of 50,000 hours*.

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 being battery powered, makes the P-1 extremely versatile and able to serve a vast variety of creative purposes.

This manual covers installation and use of the P-1.
All documentation is also available on the SGM website:

www.sgmlight.com

* At 70% of luminous output under the manufacturer's test conditions.

Parts identification and terminology

A: Dehumidifiers and GORE-TEX membranes

B: DMX in and out

C: Power in

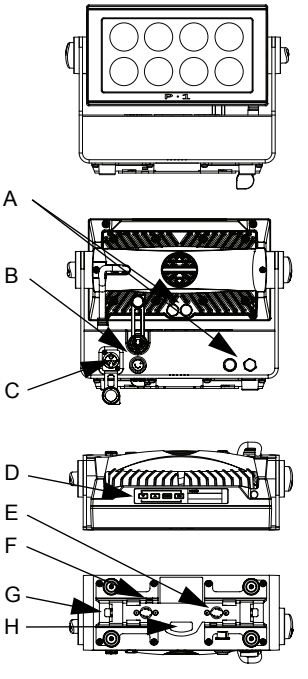
D: Display panel

E: Holes for omega bracket

F: Kensington lock socket

G: Base bracket

H: Safety wire attachment point



Preparing for installation

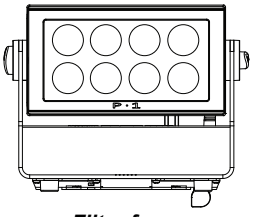
Unpacking

Unpack the fixture and inspect it to ensure that it has not been damaged in transport.

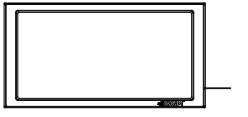
The P-1 is shipped with:

- User manual
- One Neutrik TRUE1 power input connector, 2 m (78 in.)
- One Omega bracket with 1/4-turn fasteners
- Filters (optional)
- Ceiling / wall mount (optional)
- Barndoor (optional)

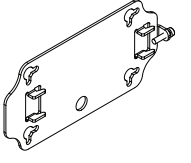
P-1



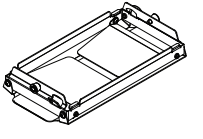
Filter frame



Ceiling / wall mount



Barndoor



Location/application

The fixture is IP65-rated and designed for use in wet locations. This means that it is protected from:

• Dust; to the degree that dust cannot enter the fixture in sufficient quantities to interfere with its operation.

• Lower pressure jets of water from any direction.

When selecting a location for the fixture, ensure that:

• It is situated away from public thoroughfares and protected from contact with people.

• It is not immersed in water or exposed to high-pressure water jets.

• It has adequate ventilation.

When using the fixture outdoors or in wet locations, ensure that:

• For wireless DMX or standalone operation: That the DMX out cable is properly attached to the DMX-in connection.

• For cabled DMX operation: That the DMX out of the last fixture is properly sealed, in accordance with the IP65 requirements.

Transportation

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

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

Installation / Rigging

WARNING! *Always secure elevated fixtures with a safety cable.*

The P-1 may be installed in any orientation.

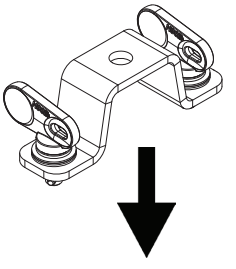
Always use an omega bracket to rig the fixture. Lock the bracket with the 1/4-turn fasteners.

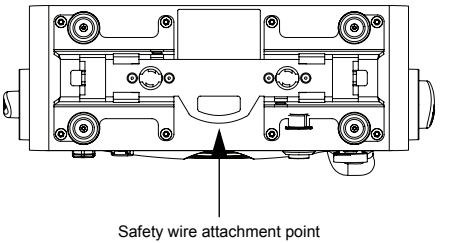
The fasteners are locked only when turned fully clockwise.

Always fasten a safety wire between the load-bearing support structure and the attachment point on the fixture. The safety cable must be able to bear at least 10 times the weight of the fixture.

CAUTION:

- Always use a safety wire.
- Min. safety wire gauge = 4 mm.
- Max. safety wire length (free fall) = 30 cm (12 in.)
- Make sure the slack of the safety wire is at a minimum.
- Never use the carrying handles for secondary attachment.





Rigging process

Start the rigging process by blocking the work 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, clamps, cables etc.

2 Bolt the clamp securely to an omega bracket with a M12 / ½" bolt (min. grade 8.8) and lock nut.

3 Align the omega bracket with two 1/4-turns in the base bracket. 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 attachment point is designed to fit a carbine.

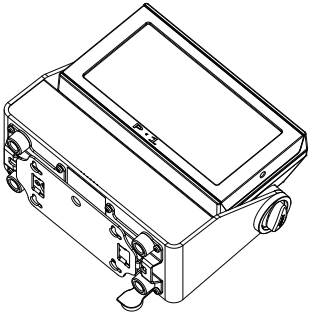
6 Verify that there are no combustible materials or surfaces to be illuminated within 0.3 m (12 in.) of the fixture.

7 Check that there is no possibility of head or yoke colliding with other fixtures.

Ceiling / wall mount

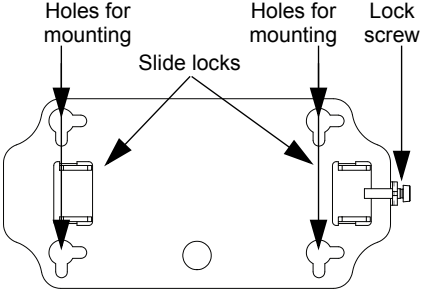
The P-1 can be installed with an optional ceiling / wall mount.

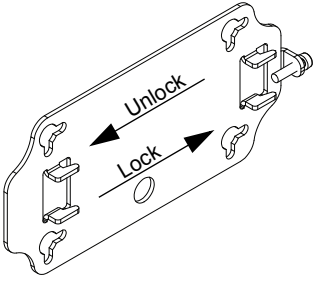
The ceiling / wall mount is design to fit the base bracket on the P-1.

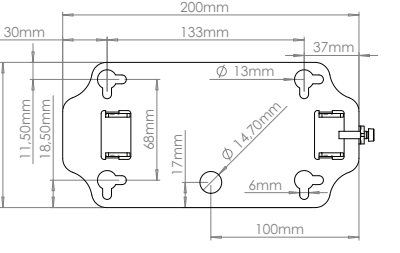


Installation

- Loosen the lock screw on the ceiling / wall mount.
- Install the ceiling / wall mount to the surface.
- Position the fixture over the four slide locks and slide to the locked position
- Fasten the lock screw.







Connecting AC power

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

Connect the fixture to power using a cable with a Neutrik TRUE1 power connector (supplied with the fixture).

The P-1 can also run on battery power, up to 12 hours with the possibility to extend the battery time up to 24 hours.

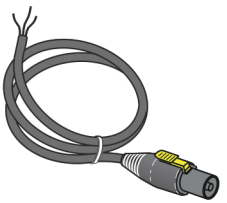
For permanent installation, have a qualified electrician wire the mains cable directly to a suitable branch circuit.

The ingress protection (IP) rating of the TRUE1 connector and junction's must be suitable for the location.

The chassis mounted female TRUE1 power connector has to be covered when using the P-1 on battery power in order to maintain the fixtures IP65 rating, i.e by utilizing the rubber cap mounted with the connector.

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.

Wire	*Color*	*Symbol*	*Conductor*
	Black	**L**	live
	White	**N**	neutral
	Green	⏚ or ⏚	ground (earth)



CAUTION: Do not connect the fixture to an electrical dimmer system, as doing so can damage the fixture.

AC power, battery and charging

AC power loss function

By default the P-1 is configured to continue on battery power when AC power is disconnected.
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.
If the P-1 runs on battery power when AC power is connected, AC power will take over operation.

Battery charging and use

The batteries are charging when connected to AC power and; when the P-1 is off or 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% of full capacity, 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 are higher.

Only charge and 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.

Battery time and battery extension

When using the P-1 running on battery power the estimated battery capacity is up to 12 hours.
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.

Display panel operations

The display panel can be used to configure individual fixture settings, check the fixture's wireless status, firmware version and error messages. When the fixture is powered on, it boots and resets, before displaying the DMX start address.

Using the display panel

- Press the 'ENTER' button to enter a menu or make a selection.
- Press the arrow buttons to scroll up and down the menus.
- Press the 'ESC' button to take a step back.
- Press the 'UP' and 'DOWN' arrows simultaneously to flip the display upside-down.
- 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.

Shortcuts

ESC + ENTER: "Press 'ENTER' to confirm factory defaults"

ESC + DOWN: "Press 'ENTER' to unpair CRMX"

ESC + UP: "Press 'ENTER' to start LED test"

Display

Wireless signal strength

Displays the signal strength of the wireless CRMX connection. The wireless signal 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

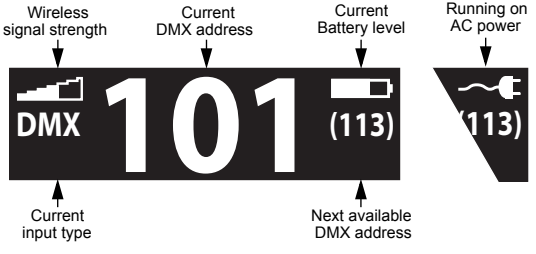
- When ‘DMX’ is displayed: The fixture responds to data received through cabled DMX.
- When ‘CRMX’ is displayed: The fixture responds to data received through wireless DMX.

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 / Current battery level

Displays the current power source, indicated by a power cable symbol or a battery symbol.
Displays the current battery level.



If any errors are detected ‘ERR’ will be flashing in the display for easy detection.

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 build-in LumenRadio CRMX wireless receiver system.

If using a cabled DMX system, connect the DMX in- and output cables to the connectors on the rear of the base of the fixture (chassis mounted 5-pin XLR connectors). Terminate the DMX out cable of the last fixture in the data link.
For outdoor installations, use only IP65-rated XLR connectors.

If using a wireless DMX system, ensure that the DMX connectors are properly covered.

Both DMX in and DMX out has to be connected or covered in order to maintain the fixtures IP65 rating.

Connecting a wireless transmitter

If the P-1 is not paired to a wireless transmitter it is designed to look for wireless transmitters in 'connect' state.

To connect the P-1 to a wireless transmitter:

- Log off the currently paired wireless transmitter. See "Disconnecting a wireless transmitter" on page 23.
- Press the connect button on the wireless transmitter.
- Confirm that the fixture has paired with the wireless transmitter.

Disconnecting a wireless transmitter

To disconnect the fixture from the currently paired wireless transmitter:

- Go to MENU → SETTINGS → WIRELESS DMX → LOG OFF.

Signal priority

The P-1 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. See "Current input type" on page 22.

Configuring the fixture for DMX control

About DMX

The P-1 can be controlled using signals sent by a DMX controller on a number of channels (USITT DMX512-A). The P-1 operates in various DMX modes. See “DMX modes overview” on page 37 for details.

The first channel used to receive data from a DMX control device is known as the DMX start address. Each P-1 must have a DMX start address set. For example, if a fixture has a DMX address of 10 and it is in 3-channel DMX mode, it uses channels 10, 11, and 12. The following device in the DMX chain could then be set to a DMX address of 13. If two or more DMX devices of the same type have the same DMX address, they will mimic each other’s behaviour. Incorrect settings will result in unpredictable responses to the lighting controller.

DMX start address

The DMX address is the first channel used to receive instructions from the controller, known as the DMX start address. For independent control, each fixture must be assigned its own address. If two fixtures is given the same address, they will behave identically. Address sharing can be useful for diagnostic purposes and symmetrical control.

Set/edit DMX address

The DMX address is shown in the OLED display on the display panel. To change the address setting, press the up and down arrows. When the desired address is displayed, press ‘OK’ to save the setting. For your convenience, the next available DMX address is displayed to the right.

The P-1 also offers the option to set the DMX address through RDM. See “RDM” on page 28.

See “Display panel operations” on page 21 for instructions on using the display panel.

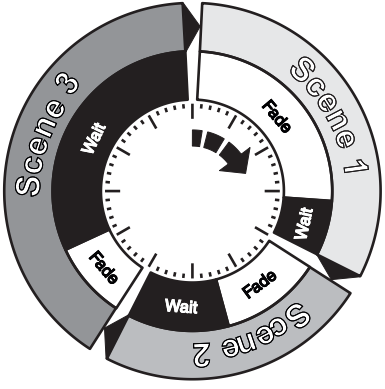
Using stand-alone operation

Stand-alone operation is where the fixture is not connected to a control device, but is preprogrammed with a series of up to 24 scenes, that play continuously in a loop. Up to three stand-alone 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 started.

Each of the three available stand-alone programs contains 24 user-definable scenes, each scene 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, each of up to 120 minutes and 59 seconds in duration.
To define a stand-alone program, use the “Manual → Editor” menus (see “Control menu” on page 32).

Stand-alone mode at fixture startup is enabled using the
“Settings → Startup mode → Select startup mode → Standalone” menu.

The program to be run is selected using the “Settings → Startup mode → Startup program” menu (see “Control menu” on page 32).
The chosen program will run its length cyclically whenever the fixture is powered on.



To run an internal program to go:

MENU → MANUAL → RUN PROGRAM.

To stop an active internal program go to:

MENU → MANUAL → STOP PROGRAM.

Accessories

Filter frames

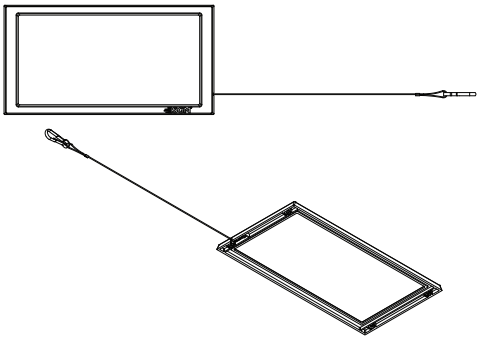
The P-1 features various optional, magnetic holographic filter frames.

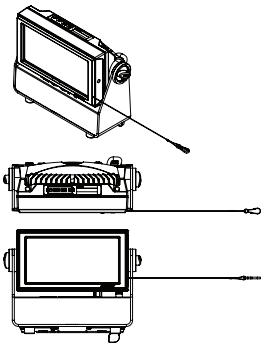
19°, 45°, and two elliptical 63°x12° / 12°x63° horizontal and vertical, plus an empty color frame.

The frames are easily mounted due to their magnetic capabilities.
Installing the frames only requires positioning it in front of the light, and it quickly snaps in to place.

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

The a filter frame can be mounted simultaneously with a barndoor.





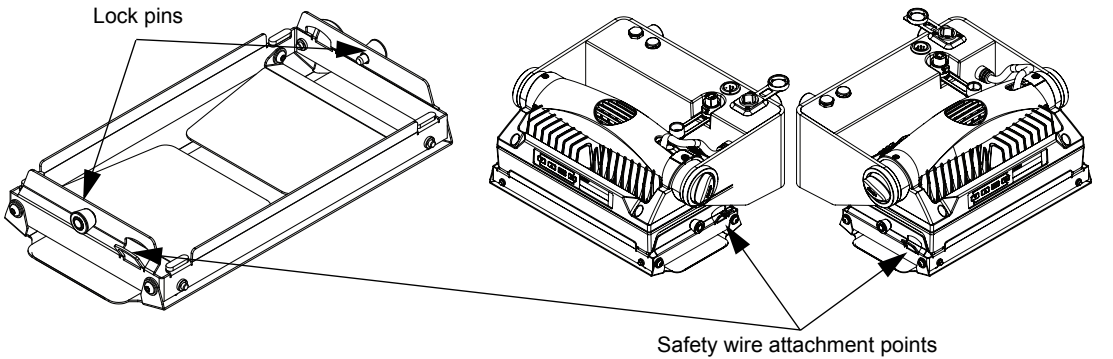
Barndoor

The P-1 features optional 4-way and 8-way barndoors.

The barndoors are designed to be mounted on the fixture without the use of any tools.

- Pull the two lock pins to the unlocked position and place the barndoor on the front of the head.
- Release the lock pins and check that the lock pins are correctly in place.
- 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.



RDM

The P-1 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. See the table below for supported RDM functions.

The controller communicates with the fixtures to show only the available options for each RDM function.

The P-1 supports and enable RDM, Remote Device Management, as per the ANSI E1.20 standard.

PID	Actions Allowed		Name	PID	Actions Allowed		Name
0x00F0	GET	SET	DMX Start Address	0x0080	GET		Device Model Description
0x00E0	GET	SET	DMX Personality / Mode	0x0400	GET	SET	Device Hours
0x00E1	GET		DMX Personality Description	0x0051	GET		Parameter Description
0x1000	GET	SET	Identify	0x0501	GET	SET	Display Level, 0=OFF, 1 and above=ON
0x1001		SET	Reset Device	0x0500	GET	SET	Display Invert
0x0200	GET		Sensor Definition	0x8626		SET	CRMX Log Off
0x0201	GET	SET	Sensor Value				
				0x8631	GET	SET	Battery Extension Hours
0x0082	GET	SET	Device Label	0x0090		SET	Factory Defaults
0x0081	GET		Manufacturer Label				
0x8060	GET		Serial Number				

Sensors

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

Name	Sensor Type	Name	Sensor Type
Main Board Temp.	Temperature	AC power connected	Contacts
LED left	Temperature	Battery PCT (percentage)	Other
LED right	Temperature	Battery charging	Contacts
Humidity	Other	Battery voltage	Voltage
Wireless signal strength	Other		
Wireless Paired	Other		

Service

There are no user-serviceable components in the fixture. Do not open the P-1, as doing so will likely damage its ingress protection (IP) rating. Consult your SGM dealer if the fixture operates abnormally, is defective or otherwise is in need of service or repair.

Cleaning

To obtain optimal performance, regular cleaning is essential. Cleaning schedules will vary greatly depending on the operating environment, and the installation should therefore be checked at frequent intervals within the first few weeks of operation to see whether cleaning is necessary. This procedure will allow an assessment of cleaning requirements in the particular installation environment. If in doubt, consult your SGM dealer for a suitable cleaning schedule.

Clean the P-1 using a soft cloth dampened with a solution of water and a mild detergent. Do not use any product that contains solvents, abrasives or caustic agents for cleaning, as they can cause damage to both hardware, cables, connectors, plastic and painted surfaces.

Support hotline

SGM offers 24/7 technical support hotline.

Worldwide: +45 3840 3840

US: +1 877 225-3882

support@sgmlight.com

Upgrading the firmware

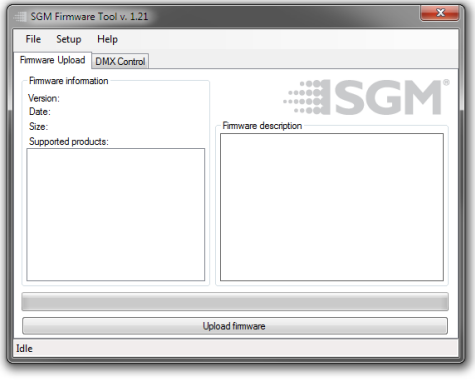
The firmware currently installed on the fixture can be identified in various ways, through RDM (see “RDM” on page 28) or:

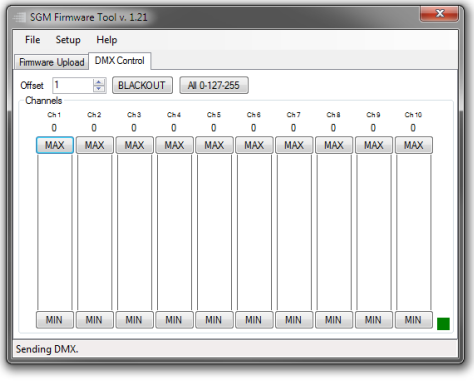
1 When powering on the fixture, the display will show the currently installed firmware.

2 Go to the MENU → INFO → FIRMWARE VERSION.

To perform firmware updates, use a Windows-based personal computer, the SGM Firmware Tool software (available on the SGM website, **www.sgmlight.com**) and a SGM USB 5-Pin-XLR upload cable (available from your SGM dealer).

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





We recommend to keep the fixture’s firmware up-to-date. Visit **www.sgmlight.com** to download the latest firmware.

Control menu

Level 1	Level 2	Level 3	Level 4	Level 5	Info
MODE					Select mode. See “DMX modes overview” on page 37
MANUAL	QUICK COLOR	RED			
		GREEN			
		BLUE			
	RUN PROGRAM				
	STOP PROGRAM				
	EDITOR	PROGRAM	1-3		Select program to edit
		SCENE	1-24		Select scene to edit
		RED	0-255		Set value for red
		GREEN	0-255		Set value for green
		BLUE	0-255		Set value for blue
		SHUTTER	0-255		Set value for shutter
		FADE TIME (minutes)	0-120		Set fade time in minutes

Level 1	Level 2	Level 3	Level 4	Level 5	Info
MANUAL (continued)	EDITOR (continued)	FADE TIME (seconds)	0-59		Set fade time in seconds
		WAIT TIME (minutes)	0-120		Set wait time in minutes
		WAIT TIME (seconds)	0-59		Set wait time in seconds
		CLEAR PROGRAM			Clear current selected program
INFO	PRODUCT TYPE				Show product type
	FIRMWARE VERSION				Show the current software version.
	SERIAL NUMBER				Show the fixture's serial number.
	RDM ID				Show the fixture's RDM ID.
	DMX VIEW				View DMX data and DMX rate.
	SONSORS				Monitor various sensor values.
	POWER ON TIME				Show the fixture's power on time.
	LED ON TIME				Show the LEDs on time.
	ERRORS				Show stored error messages.
SETTINGS	WIRELESS DMX	LOG OFF			Log off the paired wireless transmitter.
		STATUS			Show status of the wireless connection.

Level 1	Level 2	Level 3	Level 4	Level 5	Info
SETTINGS (continued)	WIRELESS DMX (continued)	EXTERNAL ANTENNA			Switches between the antenna in the head and the external (secondary) antenna on the rear of the head.
	STARTUP MODE	SELECT STARTUP MODE	DMX		Fixture starts up in DMX mode.
			STANDALONE		Fixture starts up with selected standalone program.
			QUICKCOLOR		Fixture starts up with defined quickcolor.
		STARTUP PROGRAM	1-3		Select program to run at start-up.
	AC POWER LOSS FUNCTION	BATTERY BACKUP			Continue on battery power upon loss of AC power. (Default)
		EMERGENCY LIGHT			Turn on white static light upon loss of AC power.
		POWER OFF			Fixture turns off upon loss of AC power.
	BATTER EXTENSION	Off-1-2-...-24			Extends the maximum battery time up to 24 hours by dimming the maximum output.
	FLIP DISPLAY				Flips the display up-site down when enabled.
	DISPLAY OFF				Display will turn off after 10 seconds when enabled.
	FACTORY DEFAULT				Restore settings to factory settings. See “Factory defaults” on page 36 for details.

Level 1	Level 2	Level 3	Level 4	Level 5	Info
SETTINGS (continued)	SERVICE PIN				Enter service pin to enable service menu.
	SERVICE MENU	MINIMUM VALUES			
		NO. OF BATTERIES	0-4		The quantity of batteries installed in the fixtures needs to be set in order to calculate the battery extension feature.
		PWM OUT			Show the actual PWM output to the light source.
TEST	SELFTEST				Test all features of the fixture.
	DISPLAY TEST				Show multiple test patterns.
	COLOR TEST				Test each color of the light source. Each panel is tested separately, use the arrow keys to cycle the through the colors.
POWER OFF					Power off fixture.

Factory defaults

When restoring factory defaults the following settings will be set:

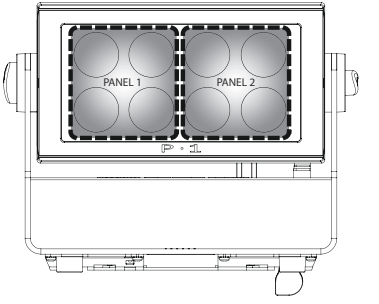
- DMX address = 1
- DMX mode = Default mode (6 channel)
- Startup mode = DMX
- Screen saver = Off
- Flip screen = Off
- Power loss function = Battery backup
- RDM device label set to = Fixture type name
- Internal program reset

LED panels

The P-1 offers the possibility to separate the LEDs into two panels.

Each panel represents a cluster of four lenses.

See “DMX modes overview” on page 37 for modes offering separate panels.



DMX modes overview

The P-1 operates in 8 different modes.

1 x RGB (3 channel, calibrated)

MSB	LSB	Name
1		Red
2		Green
3		Blue

9 channel (calibrated)

MSB	LSB	Name
1		Shutter
2		Intensity
3		CTC
4		Red **PANEL 1**
5		Green **PANEL 1**
6		Blue **PANEL 1**
7		Red **PANEL 2**
8		Green **PANEL 2**
9		Blue **PANEL 2**

4 channel (RAW)

MSB	LSB	Name
1		Red
2		Green
3		Blue
4		White

6 channel (calibrated)

MSB	LSB	Name
1		Shutter
2		Intensity
3		CTC
4		Red
5		Green
6		Blue

2 x RGB (6 channel, calibrated)

MSB	LSB	Name
1		Red **PANEL 1**
2		Green **PANEL 1**
3		Blue **PANEL 1**
4		Red **PANEL 2**
5		Green **PANEL 2**
6		Blue **PANEL 2**

6 channel RAW

MSB	LSB	Name
1		Shutter
2		Intensity
3		Red
4		Green
5		Blue
6		White

See “DMX protocol” on page 39 for detailed DMX protocols, or visit www.sgmlight.com

11 channel RAW		
MSB	LSB	Name
1		Shutter
2		Intensity
3		CTC
4		Red **PANEL 1**
5		Green **PANEL 1**
6		Blue **PANEL 1**
7		White **PANEL 1**
8		Red **PANEL 2**
9		Green **PANEL 2**
10		Blue **PANEL 2**
11		White **PANEL 2**

16 channel 16 bit (calibrated)		
MSB	LSB	Name
1		Shutter
2	3	Intensity
4		CTC
5	6	Red **PANEL 1**
7	8	Green **PANEL 1**
9	10	Blue **PANEL 1**
11	12	Red **PANEL 2**
13	14	Green **PANEL 2**
15	16	Blue **PANEL 2**

See “DMX protocol” on page 39 for detailed DMX protocols, or visit www.sgmlight.com

DMX protocol

1 x RGB (3 channel, calibrated)

Channel	Name	DMX Value		DMX Percentage		Description	Info	Default DMX Value	Fader Type
1	Red	0	255	0,0%	100,0%	No Red -> Maximum Red	All panels	255 (100%)	Fade
2	Green	0	255	0,0%	100,0%	No Green -> Maximum Green	All panels	255 (100%)	Fade
3	Blue	0	255	0,0%	100,0%	No Blue -> Maximum Blue	All panels	255 (100%)	Fade

4 channel RAW

Channel	Name	DMX Value		DMX Percentage		Description	Info	Default DMX Value	Fader Type
1	Red	0	255	0,0%	100,0%	No Red -> Maximum Red	All panels	255 (100%)	Fade
2	Green	0	255	0,0%	100,0%	No Green -> Maximum Green	All panels	255 (100%)	Fade
3	Blue	0	255	0,0%	100,0%	No Blue -> Maximum Blue	All panels	255 (100%)	Fade
4	White	0	255	0,0%	100,0%	No White -> Maximum White	All panels	255 (100%)	Fade

2 x RGB (6 channel, calibrated)

Channel	Name	DMX Value		DMX Percentage		Description	Info	Default DMX Value	Fader Type
1	Red **PANEL 1**	0	255	0,0%	100,0%	No Red -> Maximum Red	**PANEL 1**	255 (100%)	Fade
2	Green **PANEL 1**	0	255	0,0%	100,0%	No Green -> Maximum Green	**PANEL 1**	255 (100%)	Fade
3	Blue **PANEL 1**	0	255	0,0%	100,0%	No Blue -> Maximum Blue	**PANEL 1**	255 (100%)	Fade
4	Red **PANEL 2**	0	255	0,0%	100,0%	No Red -> Maximum Red	**PANEL 2**	255 (100%)	Fade
5	Green **PANEL 2**	0	255	0,0%	100,0%	No Green -> Maximum Green	**PANEL 2**	255 (100%)	Fade
6	Blue **PANEL 2**	0	255	0,0%	100,0%	No Blue -> Maximum Blue	**PANEL 2**	255 (100%)	Fade

6 channel (calibrated)

Channel	Name	DMX Value		DMX Percentage		Description	Info	Default DMX Value	Fader Type
1	Shutter	0	7	0,0%	2,7%	Closed		10 (3,9%)	Snap
		8	15	3,1%	5,9%	Open			
		16	151	6,3%	59,2%	Strobe	Fast → Slow		
		152	175	59,6%	68,6%	Pulse - Open	Slow → Fast		
		176	199	69,0%	78,0%	Pulse - Close	Slow → Fast		
		200	244	78,4%	95,7%	Strobe - Random	Slow → Fast		
		245	255	96,1%	100,0%	Open			
2	Intensity	0	255	0,0%	100,0%	No light → Maximum light		0 (0%)	Fade
3	CTC	0	0	0,0%	0,0%	5600° Kelvin (Default)	**See CTC chart on www.sgmlight.com for details.**	182 (71,3%)	Fade
		1	4	0,4%	1,6%	No CTC (RAW)			
		5	255	2,0%	100,0%	CTC 2000° Kelvin - 10000° Kelvin			

Channel	Name	DMX Value		DMX Percentage		Description	Info	Default DMX Value	Fader Type
4	Red	0	255	0,0%	100,0%	No Red -> Maximum Red	All panels	255 (100%)	Fade
5	Green	0	255	0,0%	100,0%	No Green -> Maximum Green	All panels	255 (100%)	Fade
6	Blue	0	255	0,0%	100,0%	No Blue -> Maximum Blue	All panels	255 (100%)	Fade

6 channel RAW

Channel	Name	DMX Value		DMX Percentage		Description	Info	Default DMX Value	Fader Type
1	Shutter	0	7	0,0%	2,7%	Closed		10 (3,9%)	Snap
		8	15	3,1%	5,9%	Open			
		16	151	6,3%	59,2%	Strobe	Fast → Slow		
		152	175	59,6%	68,6%	Pulse - Open	Slow → Fast		
		176	199	69,0%	78,0%	Pulse - Close	Slow → Fast		
		200	244	78,4%	95,7%	Strobe - Random	Slow → Fast		
		245	255	96,1%	100,0%	Open			
2	Intensity	0	255	0,0%	100,0%	No light → Maximum light		0 (0%)	Fade
3	Red	0	255	0,0%	100,0%	No Red -> Maximum Red	All panels	255 (100%)	Fade
4	Green	0	255	0,0%	100,0%	No Green -> Maximum Green	All panels	255 (100%)	Fade

Channel	Name	DMX Value		DMX Percentage		Description	Info	Default DMX Value	Fader Type
5	Blue	0	255	0,0%	100,0%	No Blue -> Maximum Blue	All panels	255 (100%)	Fade
6	White	0	255	0,0%	100,0%	No White -> Maximum White	All panels	255 (100%)	Fade

9 channel (calibrated)

Channel	Name	DMX Value		DMX Percentage		Description	Info	Default DMX Value	Fader Type
1	Shutter	0	7	0,0%	2,7%	Closed		10 (3,9%)	Snap
		8	15	3,1%	5,9%	Open			
		16	151	6,3%	59,2%	Strobe	Fast → Slow		
		152	175	59,6%	68,6%	Pulse - Open	Slow → Fast		
		176	199	69,0%	78,0%	Pulse - Close	Slow → Fast		
		200	244	78,4%	95,7%	Strobe - Random	Slow → Fast		
		245	255	96,1%	100,0%	Open			
2	Intensity	0	255	0,0%	100,0%	No light → Maximum light		0 (0%)	Fade
3	CTC	0	0	0,0%	0,0%	5600° Kelvin (Default)	**See CTC chart on www.sgmlight.com for details.**	182 (71,3%)	Fade
		1	4	0,4%	1,6%	No CTC (RAW)			
		5	255	2,0%	100,0%	CTC 2000° Kelvin - 10000° Kelvin			

Channel	Name	DMX Value		DMX Percentage		Description	Info	Default DMX Value	Fader Type
4	Red **PANEL 1**	0	255	0,0%	100,0%	No Red -> Maximum Red	**PANEL 1**	255 (100%)	Fade
5	Green **PANEL 1**	0	255	0,0%	100,0%	No Green -> Maximum Green	**PANEL 1**	255 (100%)	Fade
6	Blue **PANEL 1**	0	255	0,0%	100,0%	No Blue -> Maximum Blue	**PANEL 1**	255 (100%)	Fade
7	Red **PANEL 2**	0	255	0,0%	100,0%	No Red -> Maximum Red	**PANEL 2**	255 (100%)	Fade
8	Green **PANEL 2**	0	255	0,0%	100,0%	No Green -> Maximum Green	**PANEL 2**	255 (100%)	Fade
9	Blue **PANEL 2**	0	255	0,0%	100,0%	No Blue -> Maximum Blue	**PANEL 2**	255 (100%)	Fade

11 channel RAW

Channel	Name	DMX Value		DMX Percentage		Description	Info	Default DMX Value	Fader Type
1	Shutter	0	7	0,0%	2,7%	Closed		10 (3,9%)	Snap
		8	15	3,1%	5,9%	Open			
		16	151	6,3%	59,2%	Strobe	Fast → Slow		
		152	175	59,6%	68,6%	Pulse - Open	Slow → Fast		
		176	199	69,0%	78,0%	Pulse - Close	Slow → Fast		
		200	244	78,4%	95,7%	Strobe - Random	Slow → Fast		
		245	255	96,1%	100,0%	Open			
2	Intensity	0	255	0,0%	100,0%	No light → Maximum light		0 (0%)	Fade
3	CTC	0	0	0,0%	0,0%	5600° Kelvin (Default)	**See CTC chart on www.sgmlight.com for details.**	182 (71,3%)	Fade
		1	4	0,4%	1,6%	No CTC (RAW)			
		5	255	2,0%	100,0%	CTC 2000° Kelvin - 10000° Kelvin			

Channel	Name	DMX Value		DMX Percentage		Description	Info	Default DMX Value	Fader Type
4	Red **PANEL 1**	0	255	0,0%	100,0%	No Red -> Maximum Red	**PANEL 1**	255 (100%)	Fade
5	Green **PANEL 1**	0	255	0,0%	100,0%	No Green -> Maximum Green	**PANEL 1**	255 (100%)	Fade
6	Blue **PANEL 1**	0	255	0,0%	100,0%	No Blue -> Maximum Blue	**PANEL 1**	255 (100%)	Fade
7	White **PANEL 1**	0	255	0,0%	100,0%	No White -> Maximum White	**PANEL 1**	255 (100%)	Fade
8	Red **PANEL 2**	0	255	0,0%	100,0%	No Red -> Maximum Red	**PANEL 2**	255 (100%)	Fade
9	Green **PANEL 2**	0	255	0,0%	100,0%	No Green -> Maximum Green	**PANEL 2**	255 (100%)	Fade
10	Blue **PANEL 2**	0	255	0,0%	100,0%	No Blue -> Maximum Blue	**PANEL 2**	255 (100%)	Fade
11	White **PANEL 2**	0	255	0,0%	100,0%	No White -> Maximum White	**PANEL 2**	255 (100%)	Fade

16 channel, 16 bit (RAW)

Channel	Name	DMX Value		DMX Percentage		Description	Info	Default DMX Value	Fader Type
1	Shutter	0	7	0,0%	2,7%	Closed		10 (3,9%)	Snap
		8	15	3,1%	5,9%	Open			
		16	151	6,3%	59,2%	Strobe	Fast → Slow		
		152	175	59,6%	68,6%	Pulse - Open	Slow → Fast		
		176	199	69,0%	78,0%	Pulse - Close	Slow → Fast		
		200	244	78,4%	95,7%	Strobe - Random	Slow → Fast		
		245	255	96,1%	100,0%	Open			
2 3	Intensity	0	255	0,0%	100,0%	No light → Maximum light		0 (0%)	Fade
4	CTC	0	0	0,0%	0,0%	5600° Kelvin (Default)	**See CTC chart on www.sgmlight.com for details.**	182 (71,3%)	Fade
		1	4	0,4%	1,6%	No CTC (RAW)			
		5	255	2,0%	100,0%	CTC 2000° Kelvin - 10000° Kelvin			

Channel	Name	DMX Value		DMX Percentage		Description	Info	Default DMX Value	Fader Type
5 6	Red **PANEL 1**	0	255	0,0%	100,0%	No Red -> Maximum Red	**PANEL 1**	255 (100%)	Fade
7 8	Green **PANEL 1**	0	255	0,0%	100,0%	No Green -> Maximum Green	**PANEL 1**	255 (100%)	Fade
9 10	Blue **PANEL 1**	0	255	0,0%	100,0%	No Blue -> Maximum Blue	**PANEL 1**	255 (100%)	Fade
11 12	Red **PANEL 2**	0	255	0,0%	100,0%	No Red -> Maximum Red	**PANEL 2**	255 (100%)	Fade
13 14	Green **PANEL 2**	0	255	0,0%	100,0%	No Green -> Maximum Green	**PANEL 2**	255 (100%)	Fade
15 16	Blue **PANEL 2**	0	255	0,0%	100,0%	No Blue -> Maximum Blue	**PANEL 2**	255 (100%)	Fade

Effects

Colors

The P-1 features 8 high-power RGBW LEDs.
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.

Ultra high-speed strobe effect

The ultra high-speed strobe effect (1-50 Hz) introduces the possibility to strobe up to 50 times per second.
Random strobe and pulse effects can be generated with variable speed.

Beam angle

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

Panels

The P-1 offers the possibility to control two groups of LEDs (left and right) separately.

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, confirm that the cables are plugged in and the TRUE1 connector is inserted and turned to its locked position.
		The fixture has been turned off. Press any button on the control panel to turn on the fixture.
	The fixtures batteries are discharged.	Charge the batteries by connecting AC power.
	Main fuse is blown.	Contact SGM support or certified SGM service partner.
Fixture suddenly turned off.	Power was turned off.	Check the power supply, switches and breakers.
	The fixtures batteries are discharged.	Charge the batteries by connecting AC power.
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 or DMX mode is incorrect.	Inspect and enter the correct DMX address or mode.
	DMX cable polarization is inverted (pin 2 + 3).	Install a phase-inverter or replace cables.
	DMX link is not terminated.	Install a XLR 120ohm DMX termination at the end of the DMX link.

Problem	Potential cause(s)	Remedies
Fixture operates irregularly / abnormal. (continued)	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.
Power is turned off, fixture keeps running.	The fixture will continue to operate on battery power after removing the AC power supply if configured so. See “AC POWER LOSS FUNCTION” in the “Control menu” on page 32.	To turn off the fixture press and hold ‘ESC’ until the fixture turns off, or go to MENU → POWER OFF. *When operating on battery power, a symbol indicating the current battery level will be shown in the display.*
The fixture suddenly switched to static white light at full output.	The fixture is configured to emergency light mode. See “AC POWER LOSS FUNCTION” in the “Control menu” on page 32.	Configure the AC power loss function according to the requirements.
The fixture turned off when AC power was disconnected.	The fixture is configured to power off. See “AC POWER LOSS FUNCTION” in the “Control menu” on page 32.	

Fixtures and accessories

Included items

User manual
One omega bracket with 1/4-turn fasteners
2 m power cable with Neutrik TRUE1 power connector

Ordering information

P-1, Std, BL, (incl. 3 pcs batteries) ..... Order no: 80031501
P-1, Std, WH, (incl. 3 pcs batteries) ..... Order no: 80031511
P-1, Std, CU, (incl. 3 pcs batteries) ..... Order no: 80031521
1 pcs. Battery, Nominal:21,6V - Nominal:3350 mAh ..... Order no: 83061709
2 pcs. Battery, Nominal:21,6V - Nominal:3350 mAh ..... Order no: 83061710
Flightcase for 4 pcs. P-1 ..... Order no: 82051009
Flightcase for 4 pcs. P-1 incl. charger ..... Order no: 82051010
P-1 ceiling/wall mount ..... Order no: 83060614
Filter frame Medium angle - 19 deg. P-1 series ..... Order no: 83061140
Filter frame Wide angle - 45 deg. P-1 series ..... Order no: 83061141
Filter frame Elliptical horizontal - 63 deg. (horizontal) x 12 deg. (vertical) P-1 series ..... Order no: 83061142
Filter frame Elliptical vertical - 12 deg. (horizontal) x 63 deg. (vertical) P-1 series ..... Order no: 83061147
Barndoor 4-way, P-1 series ..... Order no: 83061138
Barndoor 8-way, P-1 series ..... Order no: 83061139
SGM USB uploader cable ..... Order no: 83062011
2 m power cable with Neutrik TRUE1 power connector ..... Order no: 07860040
Omega bracket ..... Order no: 83060602
LumenRadio CRMX transmitter (DMX only) ..... Order no: 80070229

BL= Black (RAL 9004)
WH = White (RAL 9010)
CU = Customer Color (Any RAL color)

APPROVALS AND CERTIFICATIONS

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

The information in this document is subject to change without notice

User’s notes

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