

# USERMANUAL

---

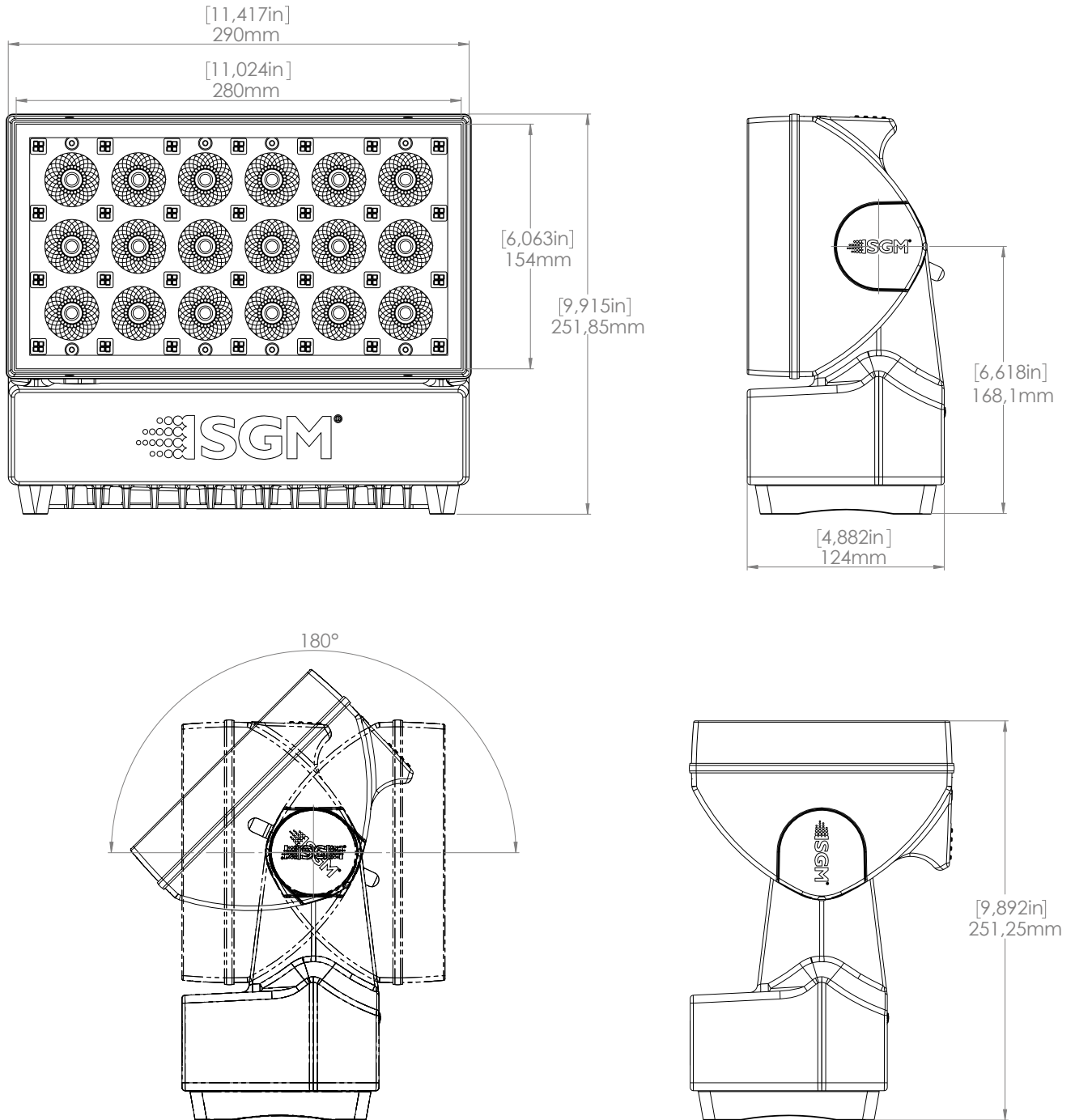
## P-3



PRELIMINARY



## P-3 VISION DIMENSIONS

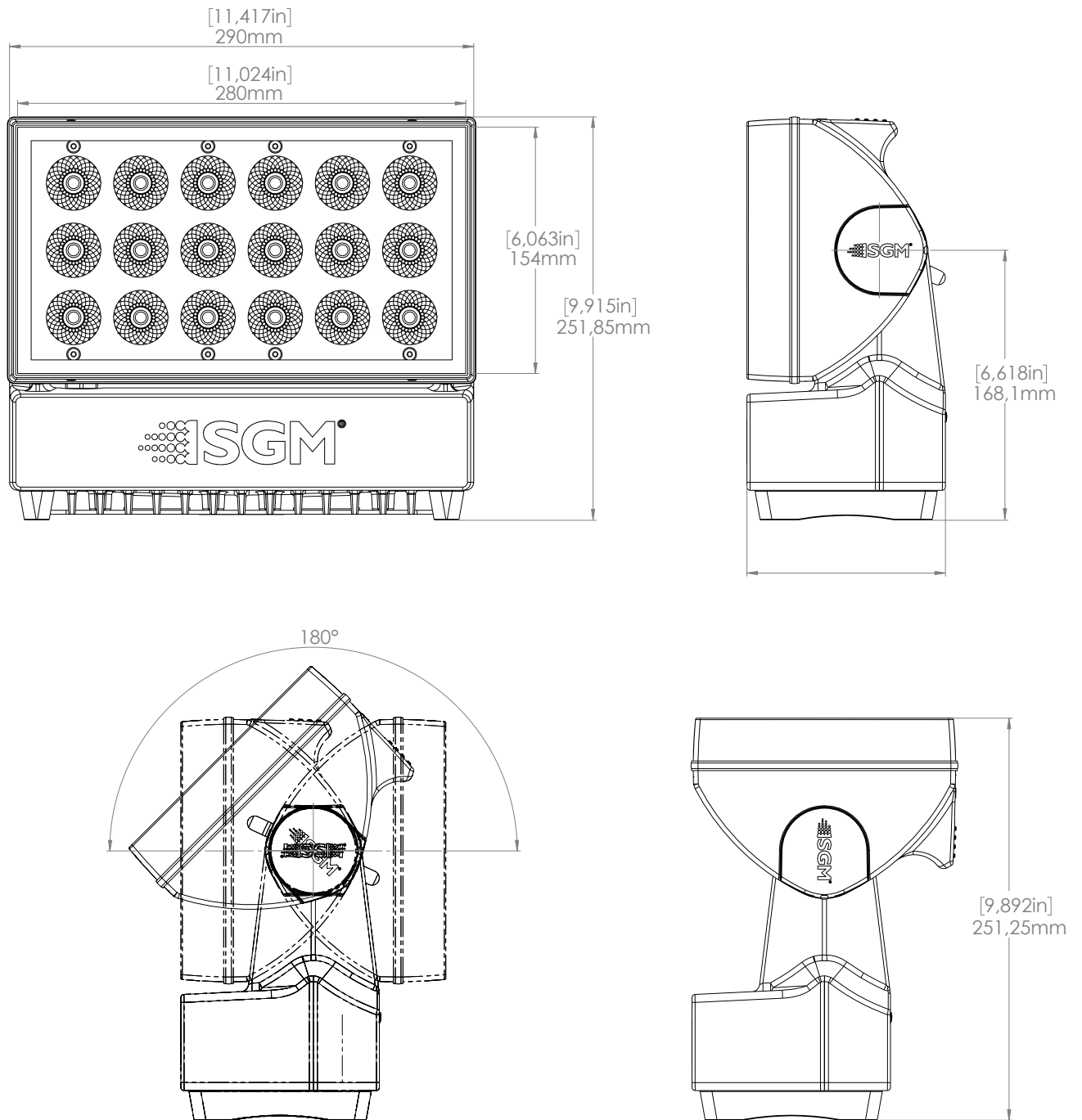


All dimensions in millimetres and inches. Drawing not to scale

*This manual covers installation, use, and maintenance of the P-3 SGM Series. A digital version is available at [www.sgmlight.com](http://www.sgmlight.com) or upon request via [support@sgmlight.com](mailto:support@sgmlight.com). 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. This edition applies to firmware version 1.17 or later.*

English edition © 2023 SGM Light A/S®.

## P-3 WASH DIMENSIONS



All dimensions in millimeters and inches. Drawing not to scale

<b>2</b>	<b>P-3 VISION DIMENSIONS</b>	
<b>3</b>	<b>P-3 WASH DIMENSIONS</b>	
<b>6</b>	<b>SAFETY INFORMATION</b>	
<b>7</b>	<b>BEFORE INSTALLING THIS PRODUCT</b>	
<b>8</b>	<b>OVERVIEW</b>	
8	Fixture Types	
8	Cabling on Wash and Vision	
8	Control Options	
<b>9</b>	<b>INSTALLATION P-3</b>	
9	Identification and terminology of P-3 Vision	
10	Identification and terminology of P-3 Wash	
11	Unpacking	
11	Application considerations	
11	Handling and Transportation	
<b>12</b>	<b>RIGGING</b>	
13	Omega bracket	
14	Safety Wire	
14	Tilt Lock	
15	Arraying	
<b>16</b>	<b>POWER AND DATA</b>	
16	P-3 Vision and Wash Power	
16	P-3 Vision and Wash Data	
17	DMX	
17	Ethercon	
17	Connecting a wireless transmitter	
1	Signal priority	7
<b>18</b>	<b>USER INTERFACE</b>	
18	Using the display panel	
18	Shortcuts	
<b>19</b>	<b>DISPLAY</b>	
19	Operational mode (A)	
19	Fixture Universe (B)	
19	DMX Address (C)	
19	External data protocol (D)	
19	External data indicator (E)	
19	Next available address (F)	
19	Information panel (G)	
19	Warning Indicator	
<b>20</b>	<b>CONFIGURATION</b>	
20	About DMX	
20	DMX Start address	
20	Setting Universe and address	



<b>21</b>	<b>MANUAL OPERATION</b>
<b>21</b>	<b>USING STANDALONE OPERATION</b>
<b>22</b>	<b>CONFIGURATION WITH DMX/RDM ADDRESSING TOOL</b>
<b>23</b>	<b>FIXTURE PROPERTIES AND DEFAULT SETTINGS</b>
23	Individual Fixture Settings
23	LED Engine
23	Beam Angle
<b>24</b>	<b>RDM</b>
24	Supported RDM functions
24	Sensors
<b>25</b>	<b>CONTROLLING P-3 VISION</b>
25	Operation from a single controller
26	Operation from two controllers using Hybrid Mode
<b>29</b>	<b>ACCESSORIES</b>
29	Arraying bracket
29	Filter frame
<b>30</b>	<b>MAINTENANCE</b>
30	Firmware Updates
31	Cleaning
31	SGM Vacuum Test kit
<b>32</b>	<b>TROUBLESHOOTING</b>
<b>33</b>	<b>FIXTURES AND ACCESSORIES</b>
33	Ordering information
<b>34</b>	<b>SUPPORT HOTLINE</b>
<b>34</b>	<b>APPROVALS AND CERTIFICATIONS</b>
<b>35</b>	<b>USER NOTES</b>



**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 fixtures 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 inhérents.



**DANGER! RISK OF ELECTRIC SHOCK DO NOT OPEN THE DEVICE!**

- Do not open the device; there are no user-serviceable parts inside.
- Disconnect power before installing or servicing to avoid electrical shock.
- 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 only in accordance with applicable building codes.
- 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 = 42°C (108°F).**  
**STEADY STATE = 48°C (118°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 elevated installations, secure the fixture with suitable safety cables, and always comply with relevant load dimensioning, safety standards, and requirements.

Please visit [www.sgmlight.com](http://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](http://www.sgmlight.com).



### VISUAL INSPECTION

All users of the 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 the SGM fixtures must periodically check the external housing of the fixture for structural breaks, deterioration, 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

When installing fixtures in a permanent installation, ensure power and data 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.

Separation of field installed power limited circuit (dimming/control) wiring from the branch circuit wiring in the outlet box are to be made in accordance with local and/or national electrical installation codes.



### SAFETY PRECAUTIONS

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

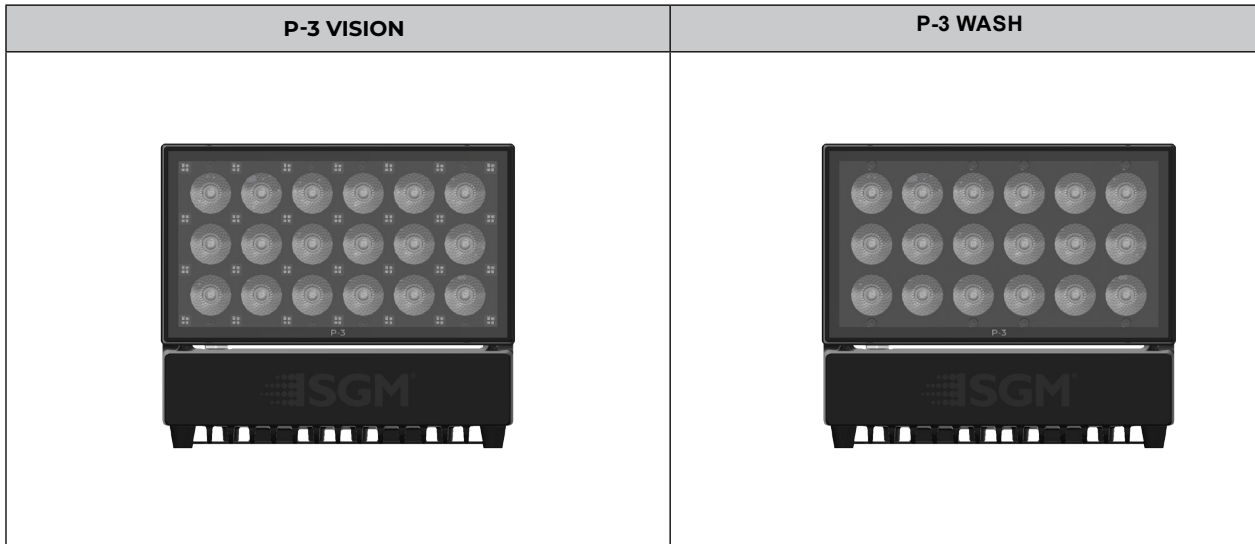
- Do not mount near gas or electric heaters.
- Permanently installed equipment should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.
- The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.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

**READ AND FOLLOW ALL SAFETY INSTRUCTIONS.**

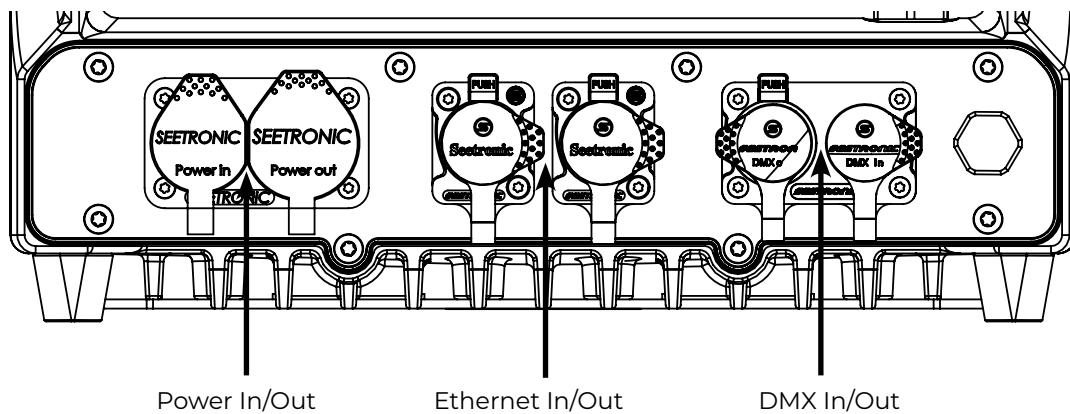
## OVERVIEW

The P-3 series of fixtures are designed to provide even and powerful washes over various flat surfaces such as stages and building facades. The range features multiple beam angles, LED engines and control protocols. P-3 is an exterior, IP66 rated product intended for permanent or temporary mounting.

### FIXTURE TYPES



### CABLING ON WASH AND VISION

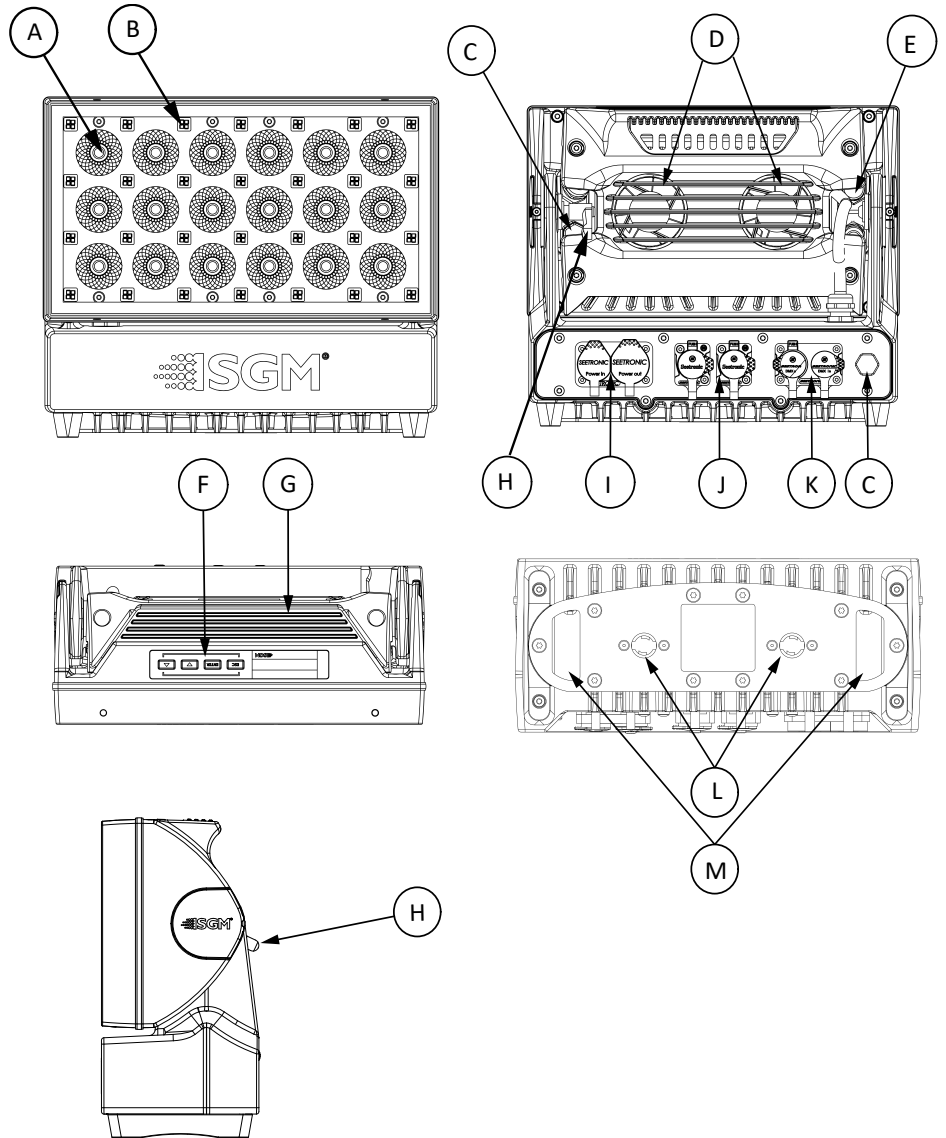


### CONTROL OPTIONS

- DMX
- sACN
- Art-Net
- Wireless DMX (CRMX)

## IDENTIFICATION AND TERMINOLOGY OF P-3 VISION

- A: 24 x RGBW LEDs
- B: 28 x RGB pixels
- C: GORE-TEX membrane
- D: Cooling fans
- E: Dehumidifier
- F: Control Panel
- G: Handle
- H: Tilt Lock
- I: Power In/Out
- J: Ethernet In/Out
- K: DMX In/Out
- L: Holes for Omega bracket
- M: Safety wire attachment point



Illustrations might vary from received products. This is subject to change without notice.

## IDENTIFICATION AND TERMINOLOGY OF P-3 WASH

A: 24 x RGBW LEDs

B: GORE-TEX membrane

C: Cooling fans

D: Dehumidifier

E: Control Panel

F: Handle

G: Tilt Lock

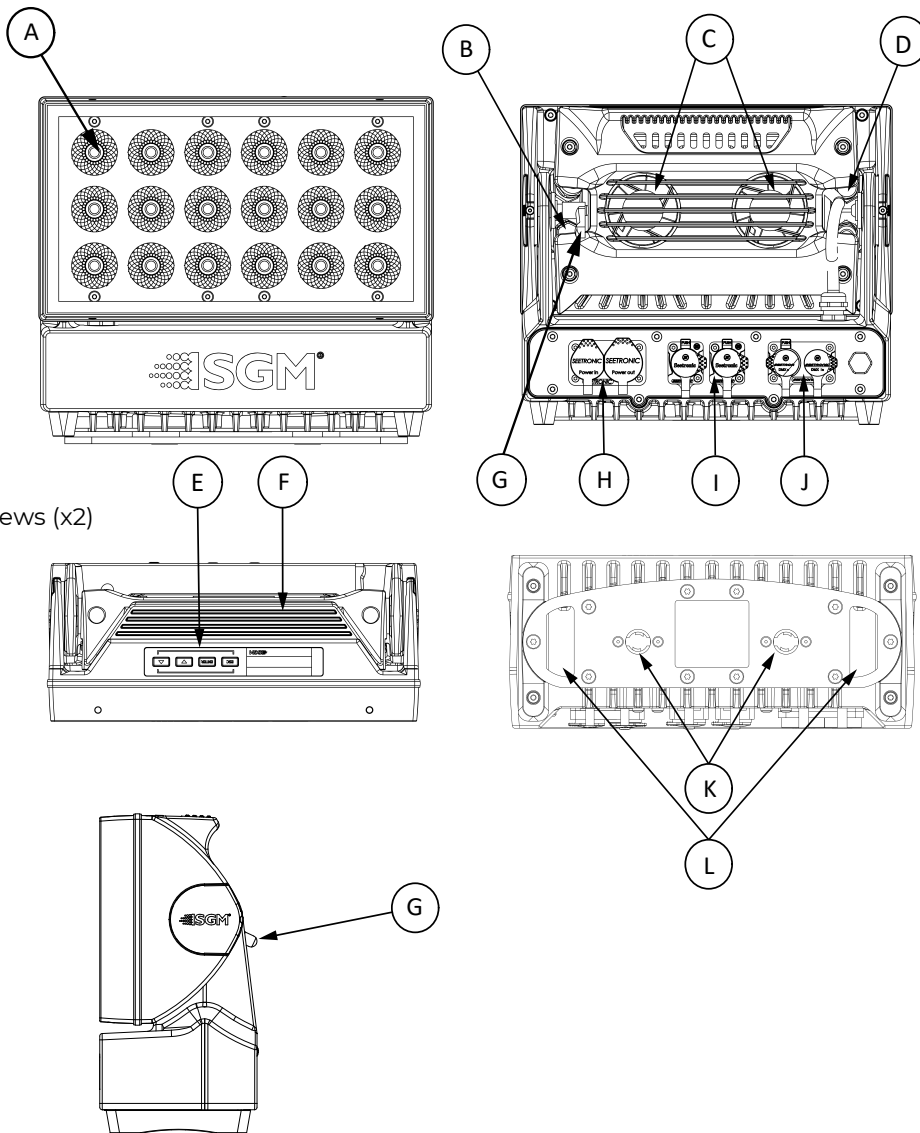
H: Power In/Out

I: Ethernet In/Out

J: DMX In/Out

K: Holes for Omega bracket / M-10 screws (x2)

L: Safety wire attachment point



## UNPACKING

Before permanent mounting, ensure the fixture is not visibly damaged and that all parts and components are present. Testing the fixture for proper function is also recommended. During testing, configuration and addressing can be done. The P-3 is an addressable product and is most efficiently configured before installation. This is especially true in installations where the fixtures will be in inaccessible areas.

Configuration can be done either via the display or by using SGM Configuration software. This PC based software is available for download from the SGM website. Once all fixtures, parts and software are available, configuration and installation can begin.

## APPLICATION CONSIDERATIONS

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

The standard fixture is IP66-rated and is designed for both indoor and outdoor events. This means that it is protected from:

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

When using standard fixtures outdoors or in wet locations, ensure that:

- The DMX connection out of the last fixture in a chain is properly sealed, in accordance with the ingress protection (IP) requirements.
- The DMX out of the last fixture is terminated with a 120 Ohm resistor between pin 2 and 3 (as per RS485 standards).

## HANDLING AND TRANSPORTATION

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

## RIGGING

The P-3 can be installed in any orientation, in any free-air cooled application. There are numerous mounting options via 3 adjustable brackets.

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

All SGM fixtures have locking points in the base for installation and rigging. In both standard and POI fixtures, the distance between the points from center to center is always 106 mm. Standard versions include 1/4 turn fasteners to mount SGM omega brackets. POI versions come with M-10 captive nuts for M-10 screws.

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

**PLEASE NOTE! 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 BRACKETS.**

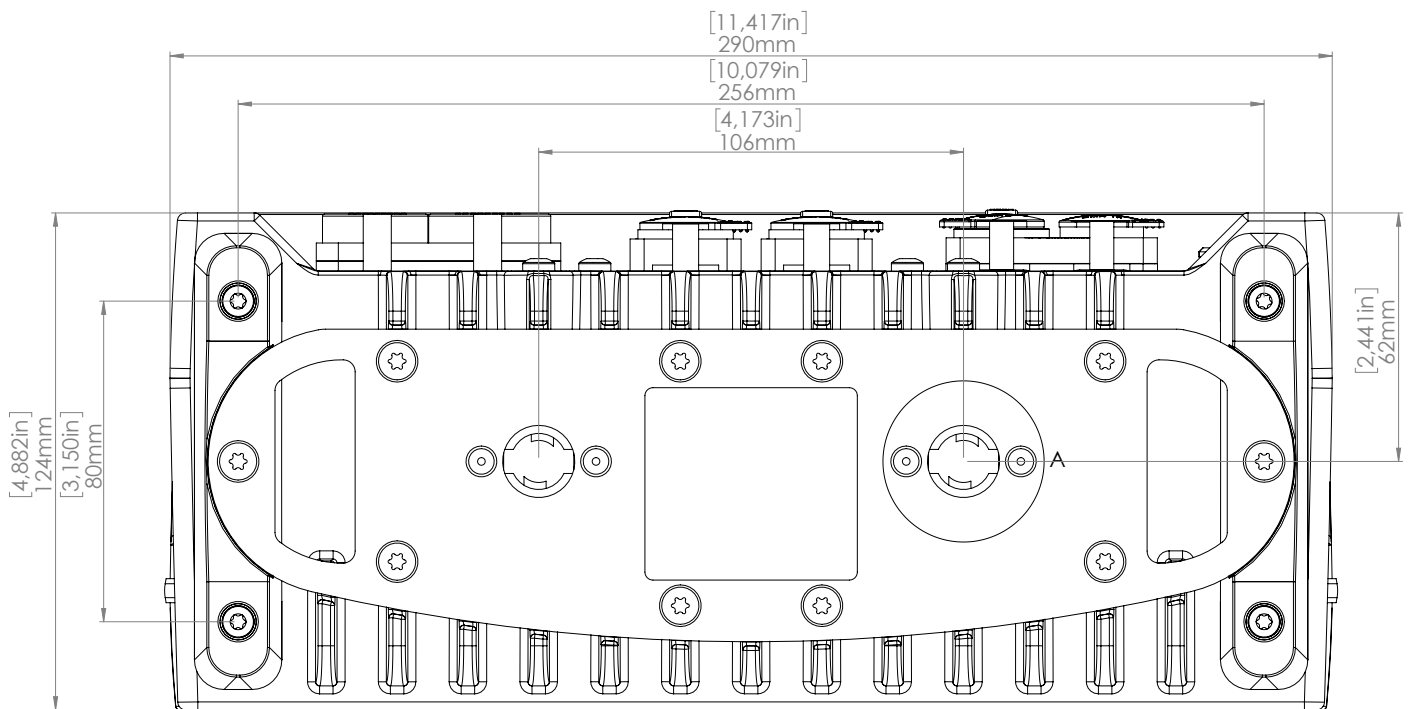


Figure 1 : Dimensions for base locking points



## OMEGA BRACKET

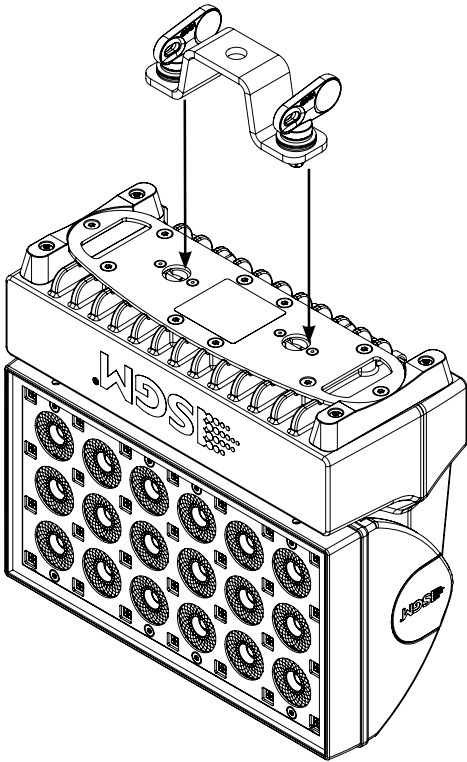


Figure 2: Installing the P-3

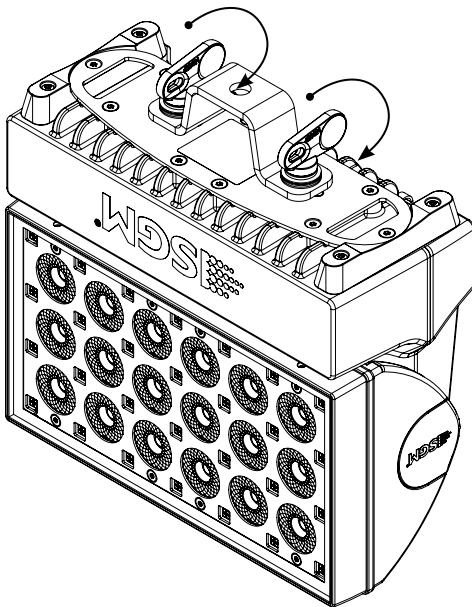


Figure 3 : Installing the P-3

Step 1. Check that the clamp/bracket is undamaged. Supporting structure should be capable of bearing at least 10 times the weight of all installed fixtures, lamps, cables etc.

Step 2. Bolt a clamp or bracket securely to the omega bracket with a M12 bolt (min. grade 8.8) and a lock nut. For longer term installations, choose outdoor-rated hardware.

Step 3. Align the omega bracket with the fixture base. For standard Omega Bracket, insert the fasteners into the fixture base bracket, and turn both levers a full 1/4 turn clockwise to lock. (When using the POI Omega Bracket, insert the included M-10 screws through the bracket holes and tighten them with a M-10 key until they are fully attached to the base.

Step 4. Hang the fixture on a truss or other structure. Tighten the clamp/bracket.

Step 5. Verify that there are no combustible materials, cables, or surfaces to be illuminated within 0.3 m (12 in.) of the fixture.

Step 6. Check that there is no risk of the head/yoke colliding with other fixtures or structures.

## SAFETY WIRE

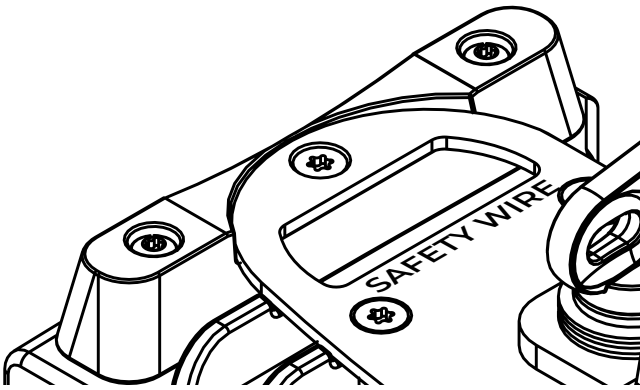


Figure 4 : Safety wire attachment point

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.).



**WARNING! ALWAYS SECURE AN ELEVATED FIXTURE WITH A SAFETY WIRE. 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/HANDLE FOR SECONDARY ATTACHMENT.**

## TILT LOCK

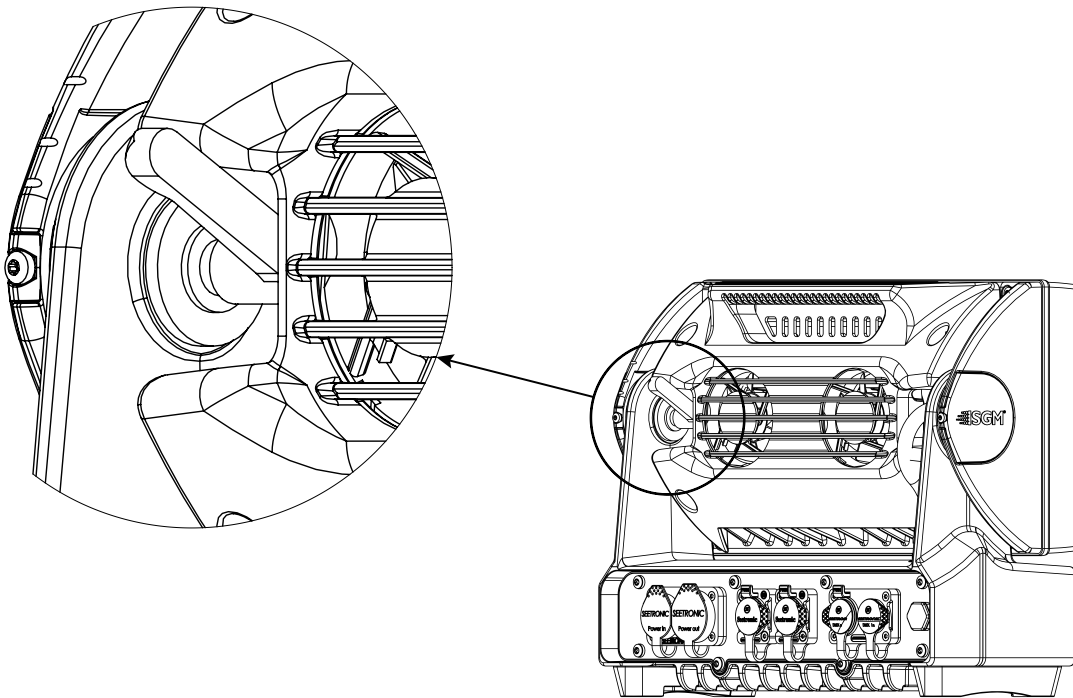


Figure 5: Tilt Lock

Pushing the lever on the left hand side of the fixture will tighten the tilt. it may take several rotations to fully lock the fixture head in place.

## **CAUTION!**

**ALWAYS LEAVE A FIXTURE TO COOL OFF FOR 15 MINUTES AFTER OPERATION BEFORE HANDLING.**

# ARRAYING

**PLEASE NOTE! APPLICABLE TO P-3 VISION AND WASH VARIANTS ONLY.**

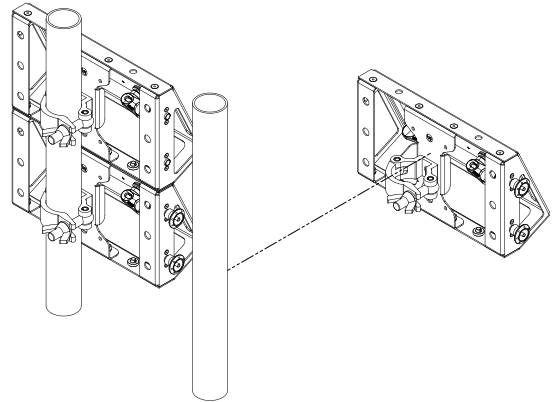
The P-3 Vision and Wash are designed to work with an arraying bracket which locks the fixtures together in x and y axis. This bracket aligns the fixtures only, they are not designed to be self-supporting.

**PLEASE NOTE: NEVER RIG FIXTURES FROM THE ARRAYING BRACKET WITHOUT A SUPPORTING STRUCTURE.**

### Step 1:

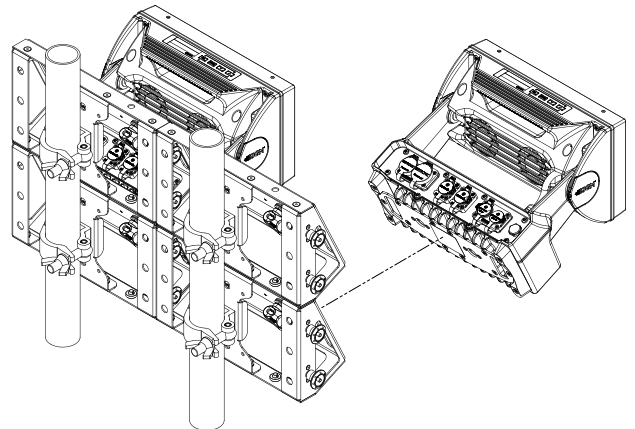
Create a substructure which is spaced appropriately to have the arraying brackets connected together in the shape desired.

All connecting hardware must be sized and rated to safely hold the weight of the fixture and the arraying bracket together.



### Step 2:

Attach fixtures to the arraying brackets using the quarter turn fasteners one line at a time. This is so that all fixtures can be configured and verified via the control screen and keypad.



### Step 3:

Cable each line of fixtures and verify boot and configuration settings are correct.

Repeat steps 2 and 3 for grid style and other x & y axis shapes.

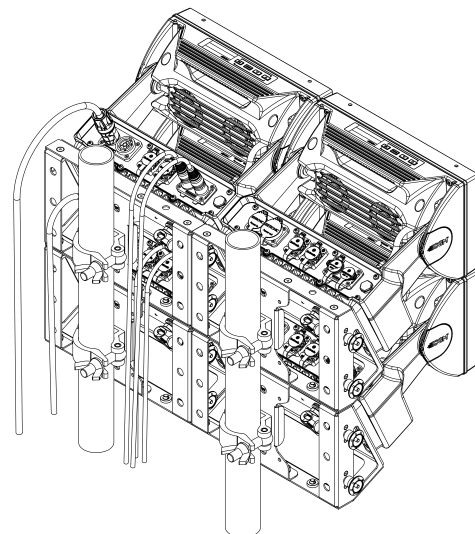


Figure 6: Installation with arraying brackets

## POWER AND DATA

The P-3 series has cable and connectors for power and signal located on the back.

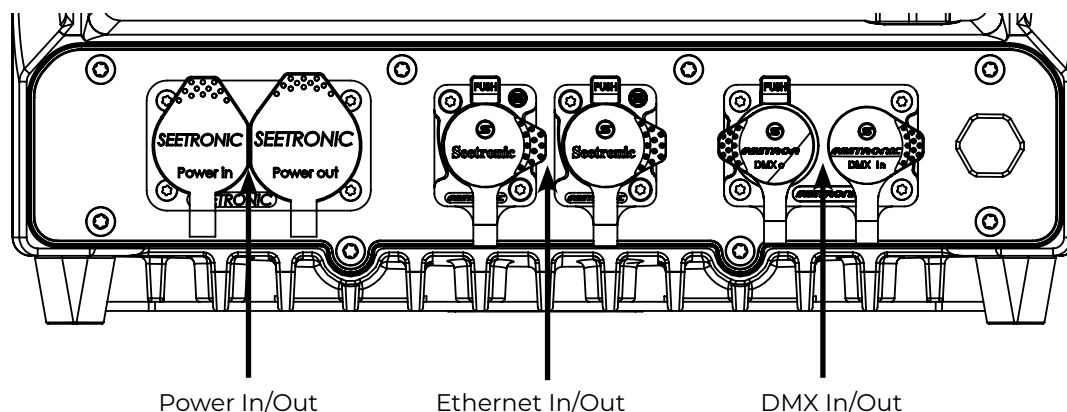


Figure 7: Power and Data connectors

### P-3 VISION AND WASH POWER

The power input required is 100–277 V, 50/ 60 Hz AC mains power supply, and draws a maximum of 360 Watts (P-3 Vision) or 330W (P-3 Wash) . Both are connected to power via “Powercon” type connectors. Power plug is as per local code.

Wire	Color	Symbol	Conductor
	Black	L	live
	White	N	neutral (L2)
	green/yellow	$\perp$ or $\oplus$	ground (earth)

The power cable color coding is given in figure 8:

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

Figure 8: Connecting AC Power/P-1 power cable 8 mm

The power cable must be fitted with a grounded connector intended for exterior use.

**PLEASE NOTE! PROTECTIVE CAPS MUST BE SECURELY MOUNTED ON ANY UNUSED CONNECTORS, IN ORDER TO MAINTAIN INGRESS PROTECTION (IP RATING).**

**CAUTION! DO NOT CONNECT THE FIXTURE TO AN ELECTRICAL DIMMER SYSTEM, AS DOING SO MAY CAUSE DAMAGE**

### P-3 VISION AND WASH DATA

The fixture is controllable using a DMX, sACN or Art-Net control device, and can be connected using either a DMX cable, Ethercon style cable, or via the fixture’s built-in CRMX wireless receiver system.

## DMX

When using a cabled DMX system, connect the DMX-In cable to the input connector and DMX-Out cable to the output. Both are located on the rear of the fixture's base (chassis mounted male and female 5-pin XLR plugs).

For outdoor installations, use only IP65-rated XLR connectors suitable for outdoor use. Terminate the DMX out cable of the last fixture in the data link with a 120-ohm DMX termination.

**PLEASE NOTE! SGM FIXTURES PROVIDE A PASSIVE DMX THRU SIGNAL AS DMX OUT, INSTEAD OF AN ACTIVE OUTPUT SIGNAL.**

## ETHERCON

Using sACN or Art-Net is done through the ethernet connectors. These are compatible with all Ethercon or RJ45 style connectors. The 2 ethernet ports can serve in either a daisy chain topology or can be fed directly with the ethernet lines, providing a double input for ethernet protocols. For outdoor installations, use only IP65-rated XLR connectors suitable for outdoor use. In a setup where the ethernet ports are in a daisy chain, the fixture will still pass through the ethernet signal in the event the fixture loses power.

## CONNECTING A WIRELESS TRANSMITTER

The fixture is designed to look for wireless transmitters in 'connect' state when this option is not yet enabled. The fixture comes tested for wireless functionality from the factory, therefore the beginning of the pairing process is disconnect from the factory wireless DMX transceiver.

To connect the fixture to a wireless transmitter:

1. Log off the currently paired wireless transmitter. Go to SETTINGS → WIRELESS DMX → LOG OFF in the menu. Fixture confirms logged off.
2. Initialize connection on the wireless transmitter.
3. Confirm that the fixture has paired with the wireless transmitter.

## SIGNAL PRIORITY

The fixture can be paired to an active wireless transmitter while also being connected to a cabled DMX or ethernet signal. By default, the fixture will prioritize cabled DMX signal. If there is not cabled DMX signal, it will use the ethernet signal. If it is also not receiving any ethernet signal, it will switch to wireless DMX.

Through the Settings menu in the display or RDM, this can be changed so that the fixture will prioritize wireless DMX over Cabled DMX and ethernet.

The active input type is displayed in the top right corner of the display. The wireless signal strength can be checked from the System menu in the display or via RDM by using an external RDM device.

## USER INTERFACE

The fixture can be set up by using the control panel and OLED multi-line display on fixture's head or through RDM. The OLED display shows the current status and menu of the fixture. It is used to configure individual fixture settings and read error messages. The complete list of the menu and all commands available are listed in "[Control menu](#)". Before turning on the fixture, make sure the power cable is properly connected. When the fixture is powered on it will boot and reset before displaying the selected operating mode and DMX start address. Navigate through the menus and options using the arrow buttons, and select items using the ENTER button.

### 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.

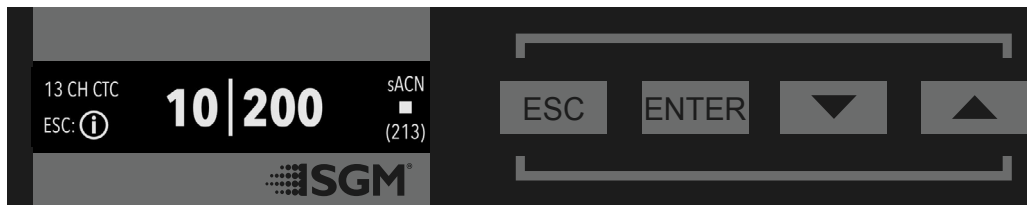


Figure 9: OLED display and control panel

### SHORTCUTS

- ESC + ENTER: Press ENTER to confirm factory defaults.
- ESC + UP: Press ENTER to start LED test.
- UP + DOWN arrows simultaneously = flip the display upside-down.
- ENTER + DOWN (hold down for 10 sec): Keypad unlock

## OPERATIONAL MODE (A)

Displays the current mode (quick color, stand-alone, or DMX mode). The fixture is set by default to be controlled in DMX mode.

## FIXTURE UNIVERSE (B)

Displays the current fixture universe. The universe is altered directly from this view.

## DMX ADDRESS (C)

Displays the current DMX address. The DMX address is altered directly from this view.

## EXTERNAL DATA PROTOCOL (D)

Shows the external data protocol.

- 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.
- When 'ART' is displayed: the fixture responds to data received through Art-Net.
- When 'sACN' is displayed: the fixture responds to data received through sACN.

When '-H' is shown after one of the above protocols this is an indication that Hybrid Mode is enabled.

## EXTERNAL DATA INDICATOR (E)

The DMX signal indicator will flash when the DMX signal is received.

## NEXT AVAILABLE ADDRESS (F)

The next available DMX address will show immediately, depending on the fixture's DMX footprint.

## INFORMATION PANEL (G)

The information panel is accessed by pressing ESC. It functions as a way to quickly get an overview of errors, notifications and important settings. Errors will always be shown first, followed by a divider line. All other information such as custom PWM frequency, Vision universe and address, ... will be shown below the divider line. The current page and the total amount of pages of information is shown in the top right corner of the display.

## WARNING INDICATOR

If any errors are detected, the exclamation point will alternate with the current display for easy detection.

To read the error message, do to the information panel by pressing ESC.

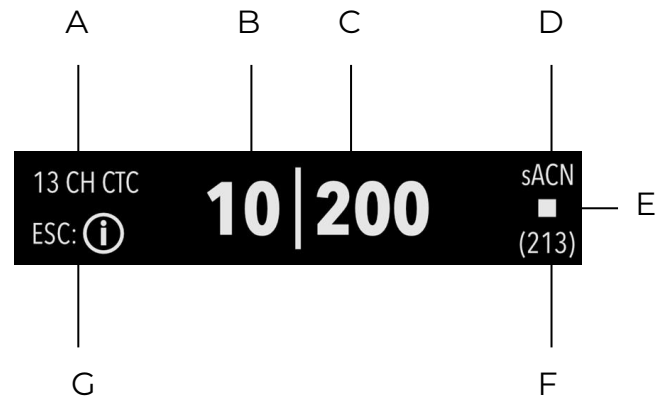


Figure 10: Display



Figure 11: Information panel



Figure 12: Warning indicator

## CONFIGURATION

P-3 Vision and Wash are configured using either the user interface or SGM software; the SGM software, the SGM RDM Addressing Tool. This software is Windows® PC based and connects to the fixtures via DMX512/RDM using the SGM USB uploader cable.

### ABOUT DMX

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

The cables can be daisy chained between the fixtures, and up to 32 fixtures can be connected on the same DMX link. Up to 300 m. (~1000ft.) of cable is achievable with high quality DMX cables. All DMX links must be terminated 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.**

### DMX START ADDRESS

The fixture 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 fixture must be assigned its own DMX start address. For example, if the first RGBW fixture is set to 6ch CTC DMX mode with a start DMX address of 101, the following RGBW fixture in the DMX chain should then be set to a DMX address of 107. As the first fixture uses all the first 6 DMX channels, including channel 101, the next available channel is 107 (101+6=107 >> 107).

If two or more fixtures 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 UNIVERSE AND ADDRESS

The fixture universe and address are shown on the OLED display in the control panel. To change the universe and address, start by pressing the up or down button once. Use the up and down button to first change the universe. When the desired universe is shown press ENTER to start changing the address by using the up and down buttons. Once the correct address is shown press ENTER to store the universe and address. Note that if the fixture is

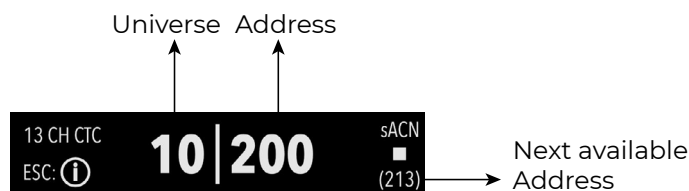


Figure 13: Setting universe and address

controlled through cabled/wireless DMX, the universe setting has no effect. The universe is only used if the fixture is controlled via Art-Net or sACN using the ethernet port. For your convenience, the next available DMX address is displayed in the bottom right corner of the display. See "User Interface" on page 18 for instructions on using the display panel. The fixture also offers the option to set the universe and address through RDM.

### SETTING DMX MODE

From firmware version 3 onwards, a legacy and standard set of DMX modes are available. To select the DMX mode of choice, a menu layer is implemented. To access the modes:

1. Press [ENTER]
2. "MODE" is displayed, Press [ENTER]
3. "Select Mode" and current DMX mode is displayed.
4. Press [Up] or [Down] to enter DMX Operation Mode.
5. Press [ENTER]
6. Press [Up] or [Down] to select "Standard" or "Legacy" DMX modes.
7. Press [ENTER]
8. Press [ESC]
9. Press [Up] or [Down] to navigate to list of DMX modes.
10. Press [ENTER]
11. Navigate to DMX mode of choice by pressing [UP] or [DOWN]
12. Press [ENTER]

**PLEASE NOTE: DMX CHARTS FOR ALL MODES ARE AVAILABLE FOR DOWNLOAD AT [WWW.SGMLIGHT.COM](http://WWW.SGMLIGHT.COM) OR BY EMAILING SUPPORT AT [SUPPORT@SGMLIGHT.COM](mailto:SUPPORT@SGMLIGHT.COM)**



---

## MANUAL OPERATION

The standard fixture can be configured to display a predefined and static color.

To set up a static color select ENTER → MANUAL → QUICK COLOR.

Note that, once the MANUAL → QUICK COLOR settings are changed, the fixture will be set, by default, 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.

The current quick color program can always be stopped by going to:

ENTER → MANUAL → STOP PROGRAM

**PLEASE NOTE! IN POI VERSIONS, CONFIGURING THE FIXTURES IS DONE BY RDM.**

---

## USING STANDALONE OPERATION

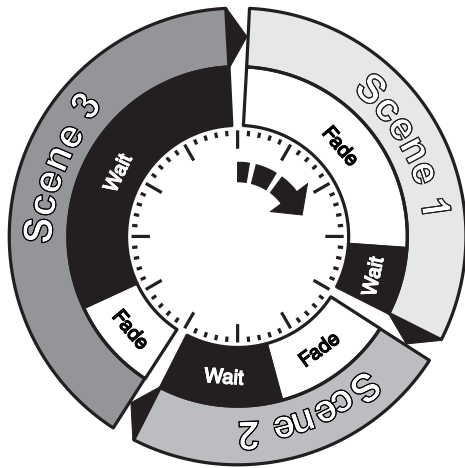


Figure 14: Standalone operation

Standalone operation is not running when the fixture is connected to a control device, but when it is pre-programmed with a series of up to 24 scenes, playing 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 powered on.

Each of the three available standalone programs contains 24 user-definable scenes with its own 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 define a stand-alone program, press ENTER → MANUAL → EDITOR.

The standalone mode of the fixture's startup is enabled by selecting:

ENTER → SETTINGS → STARTUP MODE → SELECT STARTUP MODE → STANDALONE.

To select the fixture's startup program, press:

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.

**PLEASE NOTE! IN POI VERSIONS, CONFIGURING THE FIXTURES IS DONE THROUGH RDM.**



### INDIVIDUAL FIXTURE SETTINGS

#### Flipping the OLED display (POI n.a.)

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, 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 (POI n.a.)

By default, the OLED display turns off after a short period when the control panel is 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 → DISPLAY SAVER.

**PLEASE NOTE! TO AVOID THE RISK OF DISPLAY DETERIORATION CAUSED BY LONG TERM USE, IT IS RECOMMENDED TO SELECT THE SETTING → DISPLAY OFF.**

#### Setting the fan mode

For operating environments where low-noise is a requirement, or where the fixture will be operating at high temperatures, it is possible to adjust the default fan speed by going to SETTINGS → FAN MODE in the menu.

### LED ENGINE

All variants in the P-3 Series feature 18 high-power multichip LEDs. These are either RGBW or Tunable White LEDs, divided into 3 individually controllable segments.

The P-3 Vision Variant also included 28 RGB LED clusters which are individually controllable.

This generates wide-ranging color effects and pixel-mapping combinations for creative lighting designs.

The P-3 Series offers seamless CTC (color temperature correction) control from 2000° Kelvin - 10000° Kelvin.

### BEAM ANGLE

The standard P-3 offers a native 10°, 25° and 35° beam angle that can be modified using different optional mechanical spread filters.

## SUPPORTED 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. A RDM controller is needed to get control over the supported parameters. See the tables below for supported RDM functions.

**PLEASE NOTE! THE RDM CONTROLLER COMMUNICATES WITH THE FIXTURES TO SHOW ONLY THE AVAILABLE OPTIONS FOR EACH RDM FUNCTION. TABLES ARE SUBJECT TO CHANGE WITHOUT NOTICE.**

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
0x0400	GET/ SET	Device Hours
0x0401	GET/ SET	Lamp Hours
0x0051	GET	Parameter Description
0x0501	GET/ SET	Display Level
0x0500	GET/ SET	Display Invert
0x0090	GET/ SET	Factory Defaults
0x1001	SET	Reset Device
0x0120	GET	Slot Info
0x0121	GET	Slot Description
0x0122	GET	Default Slot Value
0x0030	GET	Status Messages
0x0031	GET	Status Id Description

PID	ACTIONS ALLOWED	NAME
0x8626	SET	CRM Log Off
0x8060	GET	Serial Nr.
0x8625	GET/ SET	FAN 0=AUTO 1=LOW NOISE 2=OFF

## 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
Humidity	Other
Voltage	Other
Wireless Signal Strength	Other
Wireless Paired	Other
LED PWM WASH	Other
Fixture Derating	Other

NAME	SENSOR TYPE
MAIN Temp	Temperature
LED Temp 1	Temperature
LED Temp 2	Temperature
LED Temp 3	Temperature
PIXEL Temp ( only P3 Vision )	Temperature

OPERATION FROM A SINGLE CONTROLLER

The P-3 Vision can be controlled from either one or two controllers at the same time. When Hybrid Mode is disabled, the fixture will behave as a standard lighting fixture in the sense that it will only receive and use data from a single controller. This can be done using DMX, Art-Net and sACN. An in depth explanation of Hybrid Mode is on the following pages.

There is a selection of DMX modes available that range from small footprint and easy to setup to more complex DMX modes that offer more possibilities.

Note that the Crossfade channel is always present in every DMX mode but has no effect as long as Hybrid Mode is not enabled in the fixture's menu or through RDM. This channel and its use is further explained on the following pages.

Below is a drawing showing which of the DMX channels correspond to which section of the fixture. The DMX mode used in this example is 13 Channel CTC.

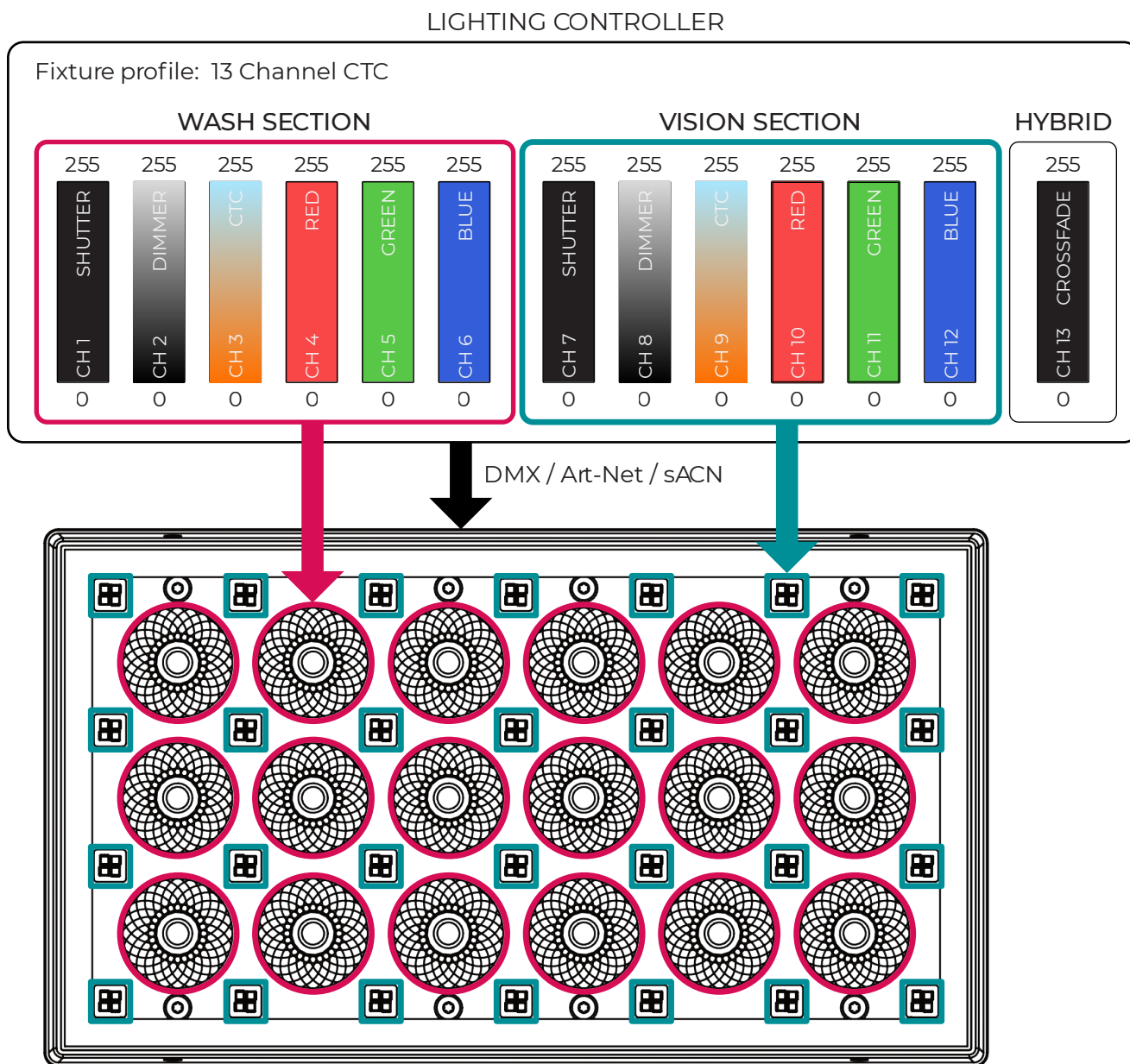


Fig 16: Lighting controller

## OPERATION FROM TWO CONTROLLERS USING HYBRID MODE

Hybrid Mode is a new feature that allows control over the Vision section from two different controllers by dividing the P-3 Vision into two separately patchable fixtures with each fixture using its own universe and address.

One of the advantages of using the Hybrid Mode and two data sources is that the lighting operator is not forced to use a large footprint mode or do any pixel mapping effects. It is always possible to use a simple low channel mode while the media server operator still has full 8 or 16 bit pixel control over the Vision section. This can be useful in scenarios where the amount of time to program the lighting show or the amount of available DMX channels and universe is limited.

This is the result of having the Crossfade channel available in each DMX mode. This channel gradually merges the data coming in from two controllers to the Vision section.

### How to enable Hybrid Mode?

You can enable Hybrid Mode through RDM or the fixture's display by pressing the Enter key once and then scrolling until VISION is shown on the display. Enter this menu and you will have a list of different settings available. You can enable / disable Hybrid Mode, set the Vision Universe and Address, change the resolution from 8 to 16 bit and change the PWM frequency of the Vision section.

**PLEASE NOTE! WHEN HYBRID MODE IS ENABLED, THE SECONDARY VISION FIXTURE WILL BE DISCOVERABLE ON RDM WHICH MAKES IT POSSIBLE TO ALTER ALL OF THE ABOVE SETTINGS OVER RDM.**

### How to use Hybrid Mode?

Once Hybrid Mode is enabled, start off by patching the P-3 Vision in both the lighting controller and the media server.

The lighting controller can use any of the DMX profiles available according to the P-3 Vision DMX chart.

The media server can use either an 84 channel (28x RGB 8 bit) or 168 channel (28x RGB 16 bit) profile.

Then set the fixture's main universe and address in the root screen on the display or via RDM and set the Vision universe and address in the Vision menu in the fixture's display or via RDM. Make sure these do not overlap each other.

To control the main fixture you can choose to use DMX, Art-Net or sACN and to control the Vision section, you can choose to use Art-Net or sACN.

Once the fixture is connected, patched and addressed to both controllers, you are ready to start programming.

To prevent the media server programmer from being dependent on the lighting operator to set the Vision Dimmer and Crossfade channel to 255, the fixture will detect that it is not receiving any data on its main universe and address, and open up full RGB pixel control on the Vision. This is useful if the lighting operator is not yet on site or if the lighting controller is not connected/powered on yet.

### How to use the Crossfade channel?

The Crossfade channel is a DMX channel that is present as the last one in every P-3 Vision DMX Mode. It allows the lighting operator to choose whether the Vision Section outputs RGB content from the lighting controller or the media server or a mix of both. This channel is always present but only usable when Hybrid Mode is enabled.

When the Crossfade channel is at 0, the lighting controller will have full control over the Vision section and it can be seen as a standard lighting fixture. The Vision section will not output any of the media server's content.

When the Crossfade channel is at 255, the lighting controller hands over the RGB control of the Vision Section to the media server.

**PLEASE NOTE! DIMMER, SHUTTER, CTC, ... CHANNELS WILL ALWAYS BE CONTROLLABLE FROM THE LIGHTING CONTROLLER, REGARDLESS OF THE CROSSFADE CHANNEL VALUE. SO IN ORDER FOR THE MEDIA SERVER OUTPUT TO BE SHOWN ON THE VISION SECTION, THE DIMMER CHANNEL MUST BE SET TO THE DESIRED LEVEL.**

On the following pages there are examples to show the effect of using the crossfade channel to merge data coming from both a lighting controller and a media server.

Hybrid Mode enabled and the crossfade channel at 0

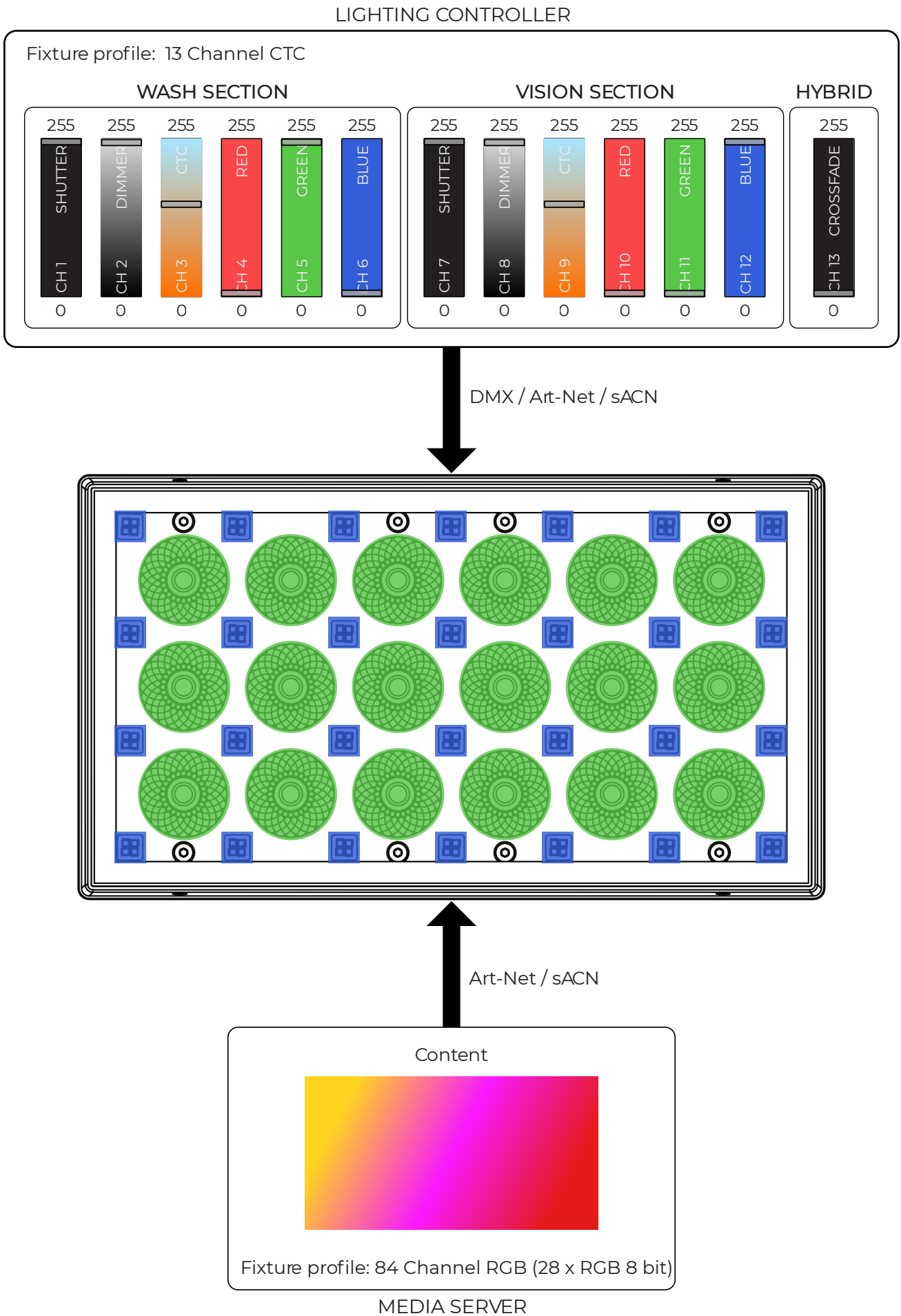


Fig 17: Lighting controller



Hybrid Mode enabled and the crossfade channel at 255

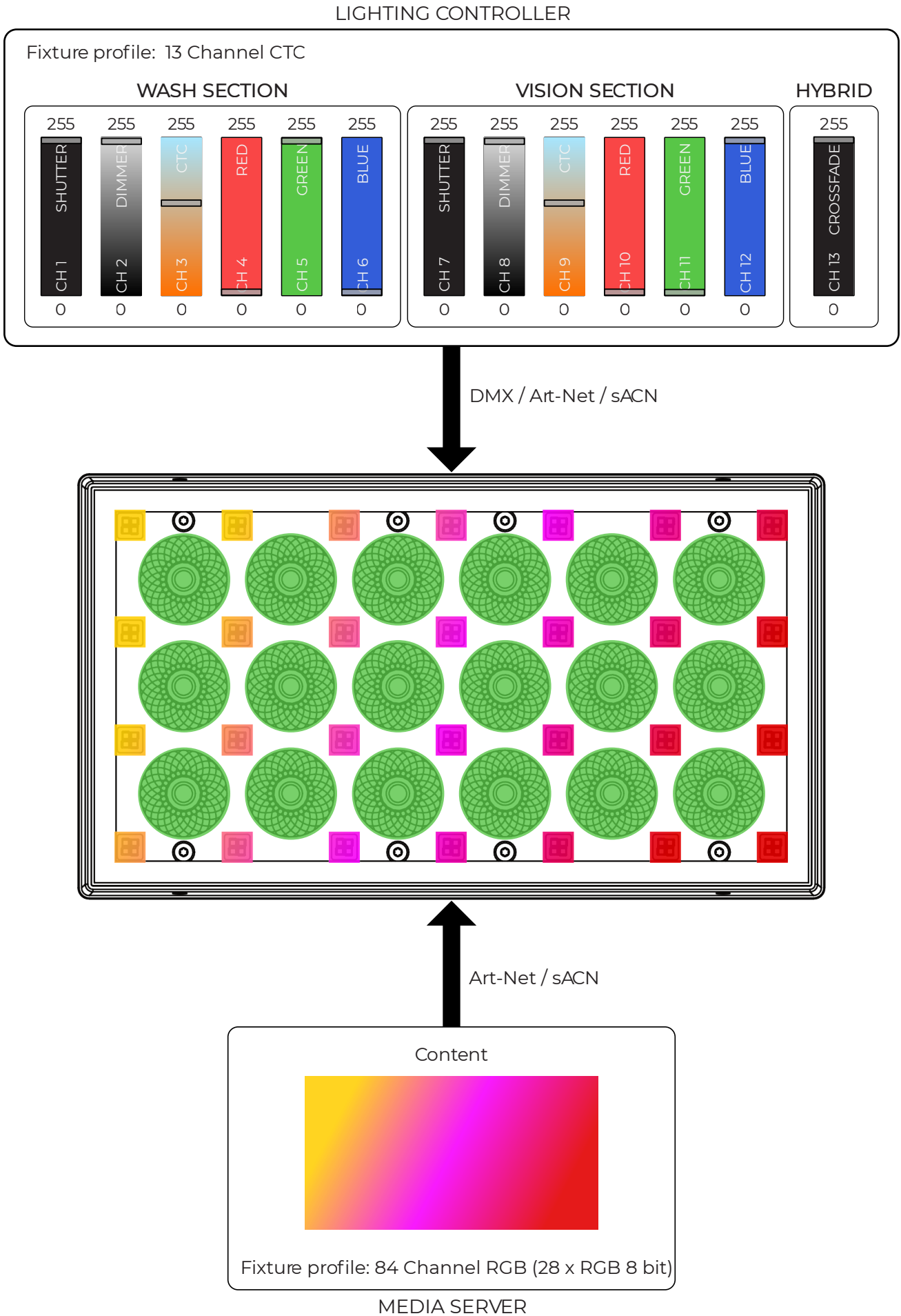


Fig 18: Lighting controller



## ARRAYING BRACKET

The arraying bracket is an accessory which provides a mounting point for the P-3 while maintaining the required spacing to help build a sub-structure when arraying the P-3 in grids and shapes. PLEASE NOTE: The arraying bracket is not meant for cascading or drifted mounting of multiple fixtures without a supporting sub-structure.

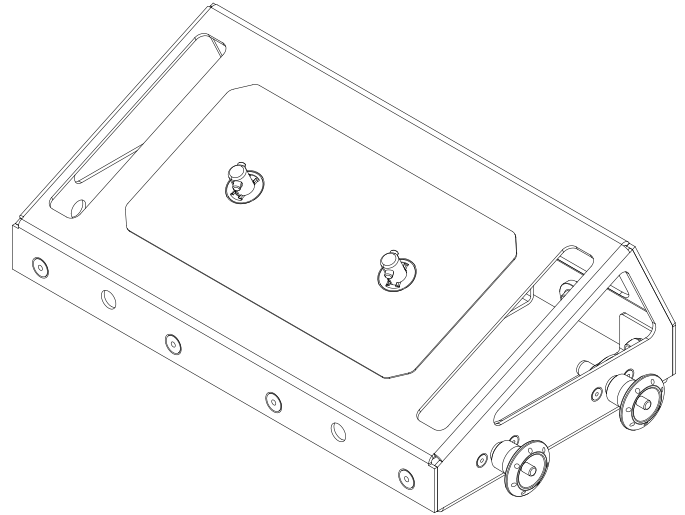


Figure 19 : Arraying bracket

## FILTER FRAME

The P-3 filter frame is designed to snap on to the front of the P-3 front bezel. Filters are interchangeable within the frame and are changed by snapping the filter into the frame first, then attaching the frame to the P-3.

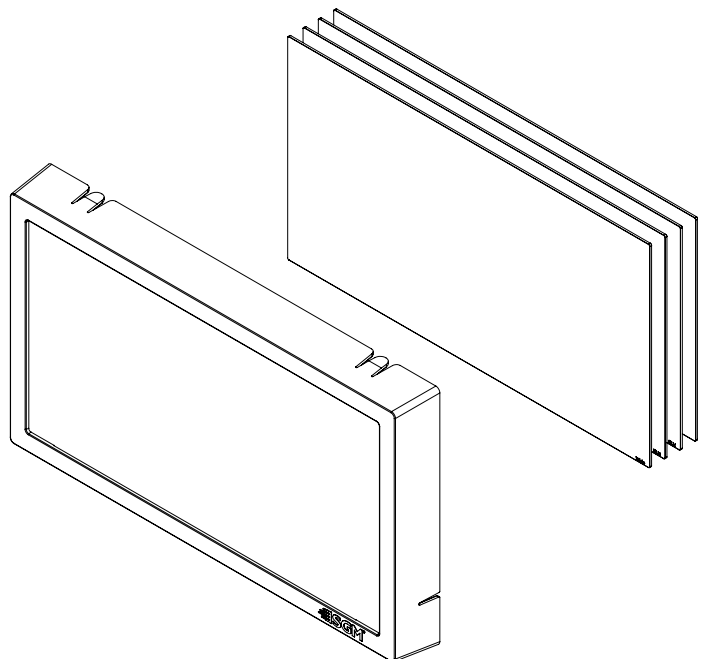


Figure 20: Filter frame Holder

## FIRMWARE UPDATES

The latest firmware, manuals and the SGM Network Admin tools are all available for free download at [www.sgmlight.com](http://www.sgmlight.com). The SGM Light firmware tool is used to update firmware:

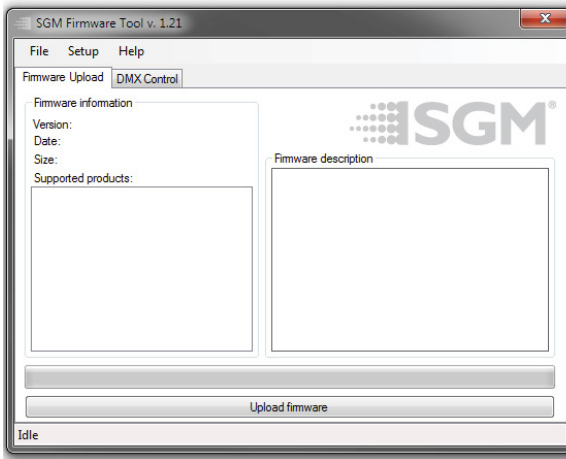


Figure 21: SGM Firmware tool

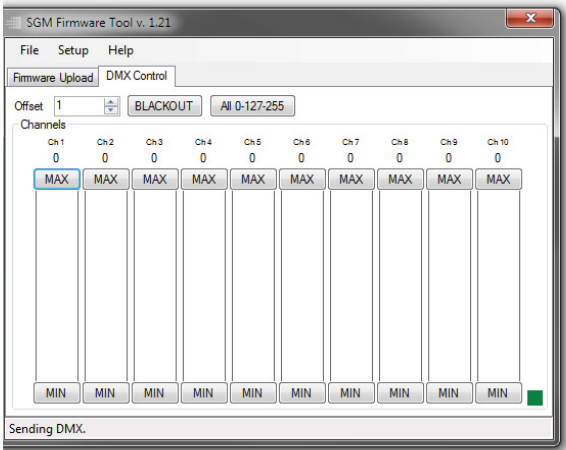


Figure 22: SGM Firmware tool

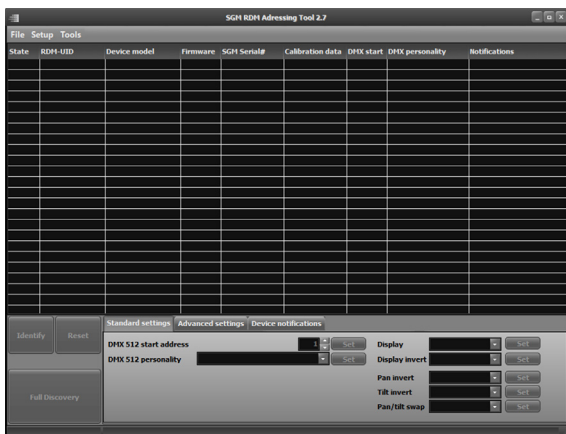


Figure 23: SGM Addressing Tool

Fixture firmware can be identified in two different ways:

### Standard Fixture

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

### POI Fixture

- Connect either Std or POI uploader cable depending on which is more suitable for the installation
- Launch the SGM RDM Addressing Tool
- Click “Full Discovery” fixture should show in the chart. Firmware will be displayed in the firmware column

To update a fixture 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](http://www.sgmlight.com)).

- Download the SGM Firmware Tool software from the SGM website
- Download latest firmware file from product web page on the SGM website
- Connect either Std or POI uploader cable depending on which is more suitable for the installation
- Launch SGM Firmware Tool on a windows PC
- Click “File” then “Open” and navigate to the firmware file needed, select it and click “Open”
- The firmware is now loaded in the uploader, click “Up-load Firmware”

The fixture will now update and reboot

The Firmware Tool software offers a simple DMX controller featuring 512 DMX channels for test purposes.

**IT IS RECOMMENDED KEEP FIRMWARE UPDATED. THE LATEST FIRMWARE VERSION IS ALWAYS AVAILABLE FOR DOWNLOAD UNDER THE RESPECTIVE PRODUCT AT WWW.SGMLIGHT.COM.**



Figure 24: SGM Vacuum Test Kit

## SGM VACUUM TEST KIT

The Vacuum Test Kit is an accessory suitable for all SGM IP-rated fixtures, made for testing the IP integrity upon reassembly.

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

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



Figure 25: SGM Uploader Cable

## USB - XLR UPLOADER CABLE

The SGM USB to DMX cable 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](http://www.sgmlight.com)).



Figure 26: SGM Uploader cable POI

## USB - POI UPLOADER CABLE

The SGM USB to DMX cable 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](http://www.sgmlight.com)).

## CLEANING

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

Whenever necessary, clean the fixture using a soft cloth dampened with a solution of water and a mild detergent. Do not use products that contain solvents, abrasives, or caustic agents for cleaning, as they can cause damage to 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 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.
	Main fuse is blown.	Contact SGM support or certified SGM service partner.
Fixture suddenly turned off.	Power was turned off.	Check the power supply, switches and breakers.
Fixture suddenly stopped responding.	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 phase-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.
	The SGM Calibration Data set has been lost.	Contact your local SGM dealer or support@sgmlight.

---

## FIXTURES AND ACCESSORIES

The fixture 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 LIST BELOW IS SUBJECT TO CHANGE WITHOUT NOTICE.**

### ORDERING INFORMATION

P-3 Vision, Std, BL..... P/N: 80032000

P-3 Wash, Std, BL..... P/N: 80032100

### ACCESSORIES

Filter Frame Set P-3 Series..... P/N: 83061193

Barndoor 4-way, BL, P-3..... P/N: 83061194

Anti-Glare Shield, P-3 Series ..... P/N: 83061195

Arraying Bracket, BL, P-3..... P/N: 83061196

Filter Frame Empty, P-3 Series..... P/N: 83061197

---

## SUPPORT HOTLINE

SGM offers 24/7 technical support.  
<https://sgmlight.com/about-sgm/contact-us>

---

## 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
- Conforms to ..... UK SI 2016 No. 1101: The Electric Equipment (Safety) Regulations 2016
- Conforms to ..... UK SI 2016 No. 1091: Electromagnetic Compatibility Regulations 2016
- Conforms to .....UK SI 2012 No. 3032: Restriction of the Use of Certain Hazardous Substances  
in Electrical and Electronic Equipment Regulations 2012 (RoHS2)



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





---

**SGM LIGHT A/S**

Sommervej 23

8210 Aarhus V

Denmark

Tel: +45 70 20 74 00

[info@sgmlight.com](mailto:info@sgmlight.com)

[www.sgmlight.com](http://www.sgmlight.com)