

# USER MANUAL



## I-SERIES

I-2 RGBW (POI)

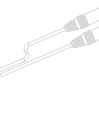
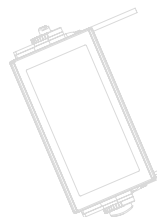
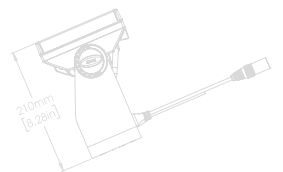
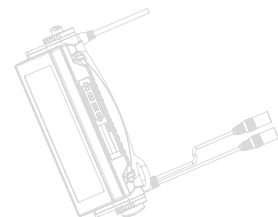
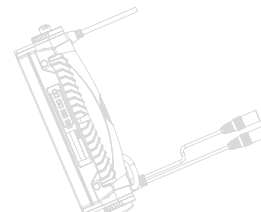
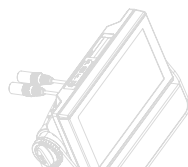
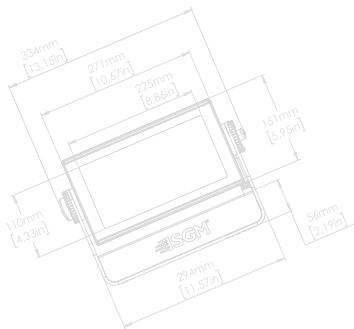
I-2 RED (POI)

I-2 GREEN (POI)

I-2 BLUE (POI)

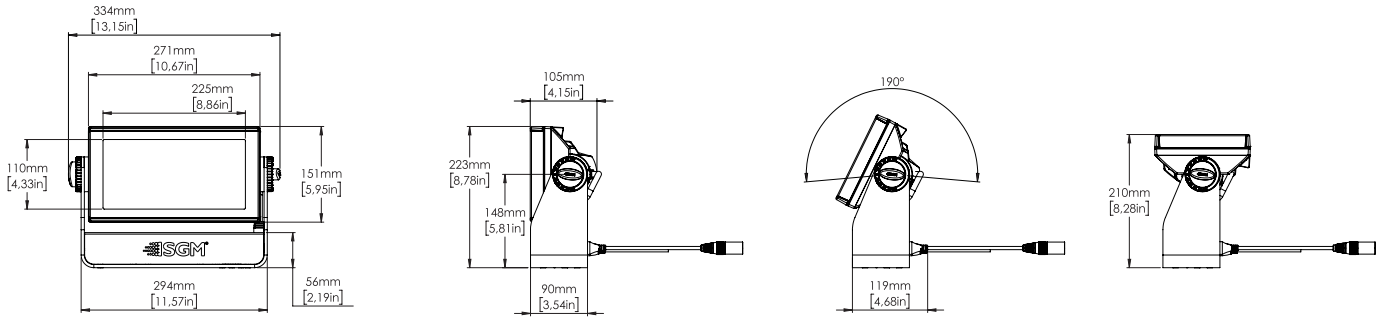
I-2 WHITE (POI)

I-2 UV (POI)

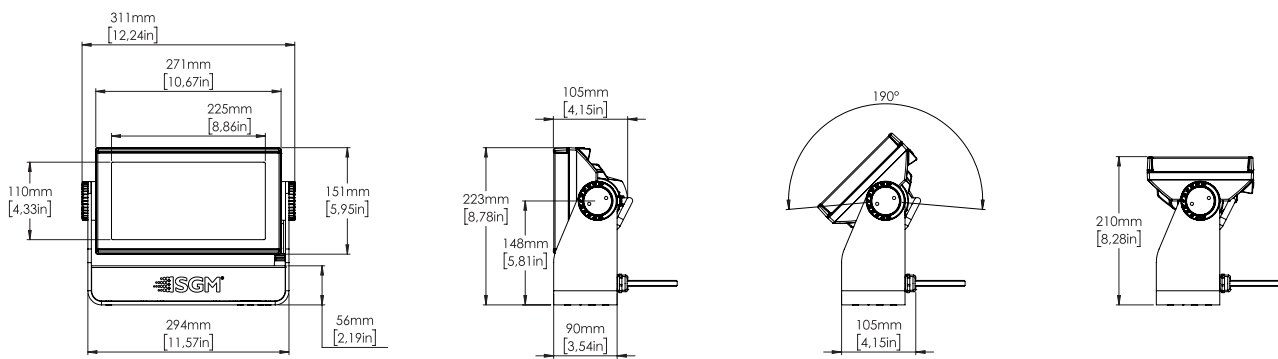


## i-2 Series dimensions

### *i-2 RGBW / i-2 RED / i-2 GREEN / i-2 BLUE / i-2 WHITE / i-2 UV*



### *i-2 RGBW POI / i-2 RED POI / i-2 GREEN POI / i-2 BLUE POI / i-2 WHITE POI / i-2 UV POI*



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

This manual covers installation, use, and maintenance of the SGM i-2 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).

## I-2 SERIES USER MANUAL REV. B

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This edition applies to firmware version 1.73 or later.

English edition

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## Safety information



### **WARNING!**

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



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

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

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

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



**DANGER!** Risk of electric shock. Do not open the device.

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



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

- Install in a location that prevents accidental contact with the device.
- Install only in a well-ventilated space.
- Install at least 0.3 m (12 in.) away from objects to be illuminated.
- Install only in accordance with applicable building codes.
- Ensure a minimum clearance of 0.1 m (4 in.) around the cooling fans.
- Do not paint, cover, or modify the device, and do not filter or mask the light.
- Keep all flammable materials well away from the device.
- Allow the device to cool for 15 minutes after operation before touching it

**CAUTION:** Exterior surface temperature after 5 min. operation = 47 °C (117 °F). Steady state = 56 °C (133 °F).



**WARNING!** Take measures to prevent personal injury.

- Do not look directly at the light source from close range.
- Take precautions when working at height to prevent injury due to falls.
- For Permanent Outdoor Installations (POI), ensure that the fixture is securely fastened to a load-bearing surface with suitable corrosion-resistant hardware.
- For a temporary installation with clamps, ensure that the quarter-turn fasteners are turned fully and secured with a suitable safety cable. The standard safety wire cable must be approved for a safe working load (SWL) of 10 times the weight of the fixture, made of a grade AISI 316 steel, and it must have a minimum gauge of 3 mm.
- For elevated installations, secure the fixture with suitable safety cables, and always comply with relevant load dimensioning, safety standards, and requirements.

## Overview

The i-2 / i-2 POI is an IP65 / IP66-rated RGBW LED wash light with a small footprint and high output, designed for multiple applications, including when wireless operation is essential (POI only). It can be acquired in different variants:

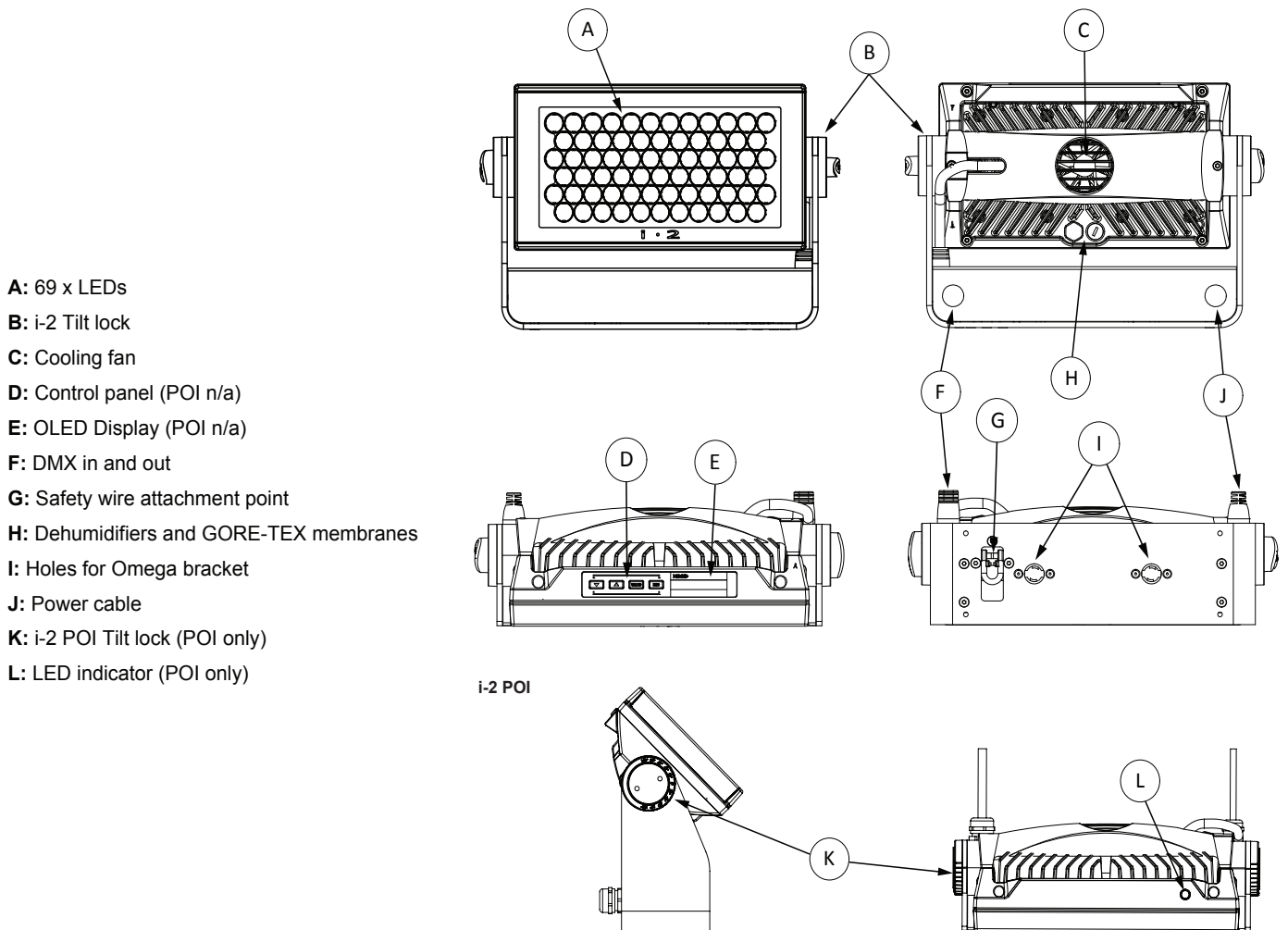
- i-2 RGBW.
- i-2 Red.
- i-2 Green.
- i-2 Blue.
- i-2 White.
- i-2 UV.

### i-2 Series features:

- A wash light weighing only 6.1 kg/13.4 lbs, with powerful beam and narrow angle of 8.5°.
- Multi-environmental luminaire due to its IP65/IP66-rating that enable operation in all kinds of environmental settings and in temperatures from -40 °C to 50 °C.
- 69 high-power LEDs with an expected lifetime of 50,000 hours\*.
- Programmable standalone programs.
- Fully RDM implemented, compliant with the USITT DMX512 standard.
- High output and low power consumption.
- Fully RGBW color mixing and adjustable color temperature correction (CTC) from 2,000K to 10,000K (i-2 RGBW only).
- Optional accessories, such as barndoors, diffusers and anti-glare shields.
- Optional internal honeycomb, to eliminate undesired light spill.
- Built-in wireless DMX (POI only).
- Corrosion classified C5-M (marine) for coastal and offshore areas with high salinity (POI only).

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

## Parts identification and terminology



- A:** 69 x LEDs
- B:** i-2 Tilt lock
- C:** Cooling fan
- D:** Control panel (POI n/a)
- E:** OLED Display (POI n/a)
- F:** DMX in and out
- G:** Safety wire attachment point
- H:** Dehumidifiers and GORE-TEX membranes
- I:** Holes for Omega bracket
- J:** Power cable
- K:** i-2 POI Tilt lock (POI only)
- L:** LED indicator (POI only)

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

**Figure 1: Parts identification and terminology**

# Preparing for installation

## Unpacking

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

The i-2 Series are shipped with:

- 1 x Omega bracket with 1/4-turn fasteners (standard only).
- 1 x Mounting bracket with fasteners (standard only).
- 1 x Spanner with magnet (POI only).
- 2 x M-10 screws (POI Only).
- Safety information leaflet

## Location / application

**The standard fixture is IP65-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 jets of water from any direction.

**The POI fixture is IP66-rated and designed for use in outdoor installations. This means that it is protected from:**

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

**When selecting a location for the device, ensure that:**

- It is situated away from public thoroughfares and protected from contact with people.
- It has adequate ventilation.
- It is not immersed in water.

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

- The DMX out of the last fixture 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 (according to the RS485 standard), and the DMX out is properly sealed, in accordance with the ingress protection (IP) requirements. Note that it can be connected a maximum of 32 fixtures to the same DMX link.

## Transportation

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

Never carry the fixture by connected cables or wires.

## Installing / rigging the i-2 Series

The i-2 may be installed in any orientation, on the ceiling or on a wall surface.

When installed horizontally with a downward beam-angle, water, moist, or grime can potentially pool in the fan wells. Under normal operation the moisture will evaporate.

In locations with high rainfall, you may wish to fabricate a rain shield above the fixture, or modify the position and orientation of the fixture to minimize pooling.

All SGM luminaries 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. However, while the base of the i-2 standard fixture include 1/4 turn fasteners camlocks to mount the omega brackets, the POI products come with M-10 nuts for M-10 screws.

Always use the supplied omega bracket to rig a standard i-2. Lock the bracket with the 1/4-turn fasteners.

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

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

### PLEASE NOTE!!

**The supplied omega bracket is not rated for POI (Permanent Outdoor Installation C5-M rated material). See more about “Installation and rigging the i-2 POI” on page 16.**

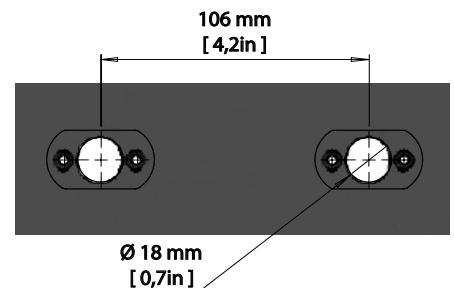
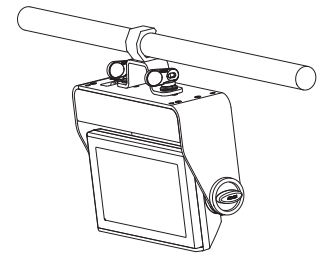


Figure 2: i-2 Series locking points

## Rigging process using SGM Omega brackets

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

1. Check that the clamp/bracket is undamaged and can bear at least 10 times the weight of the fixture. Check that the structure can bear at least 10 times the weight of all installed fixtures, lamps, cables etc.
2. Bolt the clamp/bracket securely to the omega bracket with a M12/ ½ bolt (min. grade 8.8 C5M) and a lock nut.
3. Align the omega bracket with the i-2 Series base. For standard Omega Bracket, insert the fasteners into the i-2 Series 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.
4. Working from a stable platform, hang the fixture on a truss or other structure. Tighten the clamp/bracket.
5. Install a safety wire that can bear at least 10 times the weight of the fixture. The safety wire attachment point is designed to fit a carabiner AISI316 grade.
6. Verify that there are no combustible materials, cables, or surfaces to be illuminated within 0.3 m (12 in.) of the fixture.
7. Check that there is no risk of the head/yoke colliding with other fixtures or structures.



**Figure 3: Installing the i-2**



**WARNING!** Always secure an elevated fixture with a safety wire

Fasten a safety wire (not shown) between the load-bearing support structure and the safety wire attachment point on the device. The safety cable (not included in the package) must:

- Bear at least 10 times the weight of the device (SWL).
- Have a minimum gauge of 3 mm.
- Have a maximum length (free fall) = 30 cm (12 in.).

### CAUTION!!

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



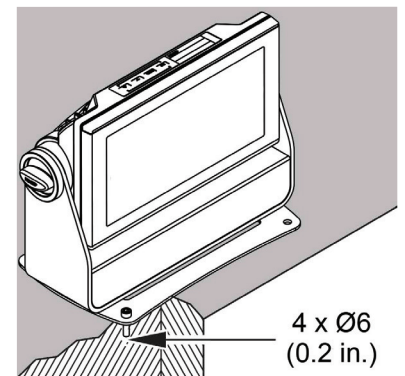
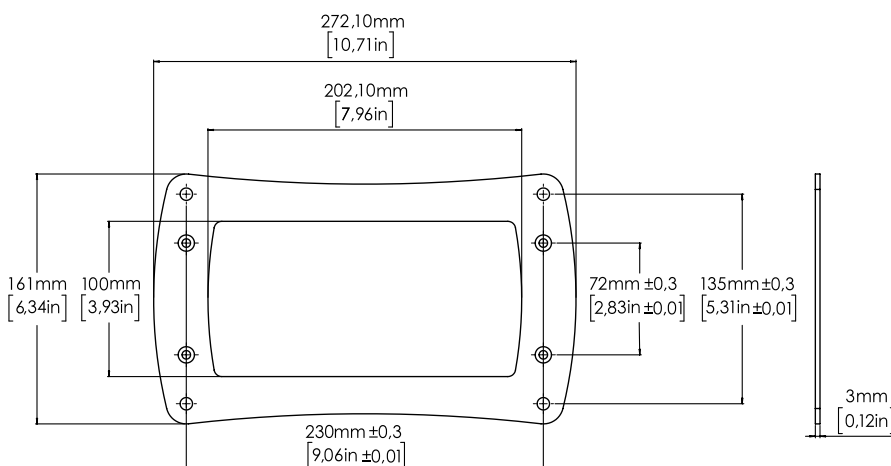
**Figure 4: Safety wire attachment point**

## i-2 Mounting bracket

The standard i-2 includes a mounting bracket with fasteners that can be attached to the fixture. The four rubber push-in bumpers prevent the fixture from sliding while operating, and protect delicate surfaces from scratching.

**Please note this item is not intended for permanent outdoor installation.**

When installing the fixture indoors on the ground or on a wall, remove the four rubber push-in bumpers from the mounting bracket. Then securely fasten the fixture on the ground/wall by using 4 x 6 mm (1/4 in.) fasteners on the resulting holes.



**Figure 5: i-2 mounting bracket**



# Tilt lock

The fixture can be tilted from 0° - 180°.

In i-2 standard versions, there is no need for any special tools to adjust the tilt angle. Take the following steps for adjusting the tilt in standard i-2:

1. Loosen the two tilt screws (one on each side) by turning them counter-clockwise.
2. Tilt the fixture to the angle desired and hold it.
3. Lock the position by re-tightening both tilt lock screws clockwise.

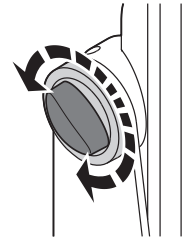


Figure 6: i-2 Standard tilt lock

If you feel resistance when tilting the fixture, you might not have loosened the tilt screws enough.

**CAUTION!!**

**If the fixture has been operating, always allow it to cool for 15 minutes before handling.**

**NOTE: In POI versions, SGM provides a POI Spanner with a pig-nose key for tilt adjustment. Either use the large or the small pig-nose key, depending on the type of fixture. See page 16 to know more about the tilt lock in i-2 POI.**

# Connecting AC power

The i-2 Series can operate on any 100–277 V, 50/60 Hz AC mains power supply, and it draws approximately 1,2A at full power (230V).

Connect the fixture to AC power by mounting a power connector to the bare ended mains cable. The fixture must be grounded/earthed and be able to be isolated from AC power. The AC power supply must incorporate a fuse or circuit breaker for fault protection.

The power cable color coding is given in figure 7:

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

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

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

Figure 7: Connecting AC Power

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

**NOTE: In POI versions, the power is wired as the standard versions by mounting a power connector to the bare ended mains cable. Please refer to pages 16-17 for connecting AC power in POI fixtures.**

After connecting the i-2 to power, run the on-board test by selecting the option "TEST→ SELFTEST" in the menu, to ensure that the fixture and each LED are functioning correctly. POI versions have to be tested through RDM.

**CAUTION!!**

**Do not open the fixture to replace the supplied power cable.**

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



## Configuring the device

The i-2 Series can be set up by using the control panel and OLED multi-line display on fixture's head or through RDM.

**Please note: In POI versions there is no display mounted in the fixture. The adjustments are made through RDM. See page 15 for more information.**

The OLED display is the human interface of the fixture as it displays the current status and menu of the fixture. The display panel can be used to configure individual fixture settings, check the fixture's wireless status, confirm the firmware version, and read error messages. The complete list of the menu and all commands available are listed in "Control Menu" on page 13.

Before turning on the i-2, make sure the power cable is properly connected. When the fixture is powered on it boots and resets 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.

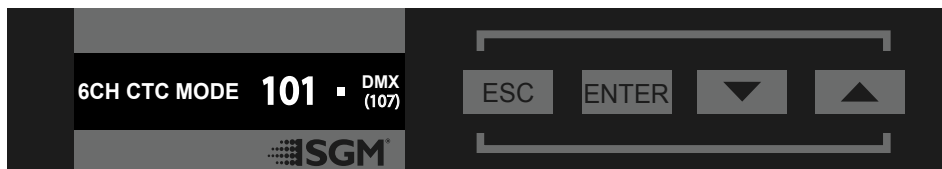


Figure 8: OLED display and control panel

### Using the display panel

- Press the 'ENTER' button to access the menu or make a selection.
- Press the arrow buttons to scroll up and down in the menus.
- Press the 'ESC' button to take a step back in the menu.

### 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.

## Display

### 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.

### DMX Address (B)

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

### External data indicator (C)

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

### External data protocol (D)

Shows the external data protocol (CRM<sup>TM</sup> or DMX).

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

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

### Error Indicator

If any errors are detected, the message 'ERR' will be flashing in the display for easy detection.

To read the error message, select ENTER → INFO → ERRORS in the menu.



- A - Operational mode
- B - DMX address
- C - External data indicator (DMX)
- D - External data protocol + next available DMX address

Figure 9: i-2 Display

## Connecting to a DMX control device

The i-2 Series is controllable using a DMX control device, and it can be connected using either a DMX cable, or via the fixture's built-in CRMX wireless receiver system (POI only).

When using a cabled DMX system, connect the DMX-In cable (with male 5-pin XLR plug) to the input connector and DMX-Out cable (with female 5-pin XLR plug) to the output, both located on the rear of the fixture's base. For outdoor installations, use only IP-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.

Note that SGM fixtures provide a passive DMX Thru signal as DMX Out, instead of an active output signal.

### NOTE!!

For POI versions, please refer to page 16-17 to see how to connect DMX and AC power.

## Configuring the device for DMX control

### About DMX

The i-2 Series 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 i-2 Series 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 i-2 must be assigned its own DMX start address. For example, if the first i-2 RGBW is set to 6ch CTC DMX mode with a start DMX address of 101, the following i-2 RGBW 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 i-2s 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.

### Set/edit DMX address

The DMX address is shown on the OLED display in the control panel. To change the address setting, press the up and down arrows. When the desired address is displayed, press ENTER to save the setting. For your convenience, the next available DMX address is displayed to the right. Note that channel spacing is determined by the number of channels of the DMX mode.

See "Configuring the device" on page 9 for instructions on using the display panel.

The i-2 Series also offers the option to set the DMX address through RDM.

**NOTE: the POI versions are only addressable via RDM. See "POI Permanent Outdoor Installation" on page 15.**

### Setting the DMX mode

When selecting ENTER → MODE → Select mode in the control panel, it is possible to choose the DMX mode that provides the fixture the controls that you require. Confirm the chosen mode by pressing 'Enter'.

### DMX charts

The i-2 Series operates in different DMX modes. Each DMX mode has its own DMX chart. All DMX charts are available for download at [www.sgmlight.com](http://www.sgmlight.com) under the respective product, or upon request via [support@sgmlight.com](mailto:support@sgmlight.com).

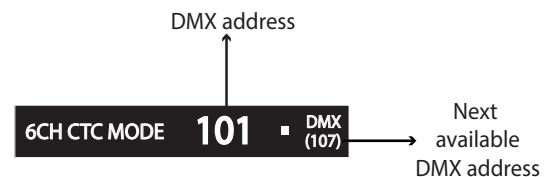


Figure 10: Set/edit DMX address

## Setting a static color manually

The i-2 standard 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

See “Control menu” on page 13 for detailed information about the manual menu.

**Please note: In POI versions, configuring the fixtures can only be done by RDM.**

## Using 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 RGB and shutter settings.

Each scene has a definable fade-in time for the transition from one color to the next, and a wait (static) time of up to 120 minutes and 59 seconds.

To 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.

See “Control menu” on page 13 for detailed information about the manual menu.

**Please note: In POI versions, configuring the fixtures can only be done through RDM.**

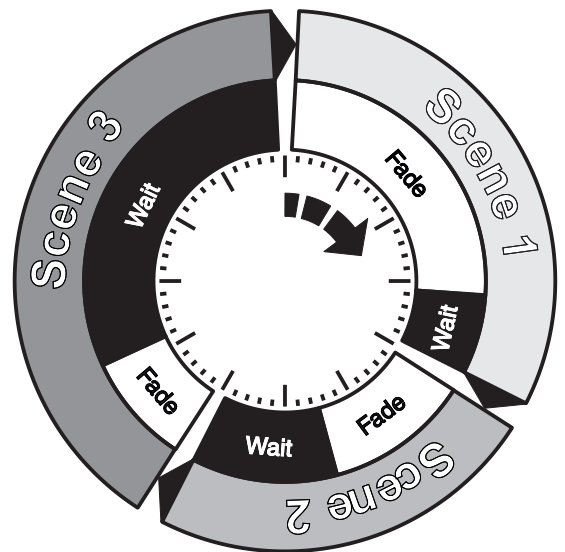


Figure 11: Standalone operation

# Fixture properties

## Factory default

When restoring the i-2 Series to the factory defaults, the following settings will be set:

- DMX address = 1
- DMX mode = Default mode (6 channel)
- Startup mode = DMX
- Display saver = Off
- Flip screen = Off
- RDM device label set to = Fixture type name
- Internal program reset

## Effects

### i-2 range and colors mixing

The i-2 Series features 69 high-power LEDs, and can be acquired in RGBW version or in single LED color (Red, Green, Blue, White and UV). The i-2 RGBW version contains 18 Red, 18 Green, 9 Blue and 24 White LEDs, and can be operated in RGB calibrated mode which ensures that colors are compatible across the range of SGM fixtures. However, the i-2 RGBW also offers the ability to operate in RAW mode with full control of each color.

### Color temperature correction (RGBW version only)

The i-2 RGBW / i-2 RGBW POI offers seamless CTC (color temperature correction) control from 2000° Kelvin - 10000° Kelvin.

### Ultra high-speed strobe effect

The ultra high-speed strobe effect generates random strobe and pulse effects with variable speed.

### Beam angle

The i-2 Series has a native 8.5° beam angle, transformed in 18°, 40° & 60°x10° when using the optional diffuser filters.

### Internal honeycomb (optional)

The i-2 series can be ordered with an optional honeycomb, to control the light spill, increasing the contrast and highlighting volumes. The honeycomb is available as an internal accessory and will fit between the front glass and the optics.

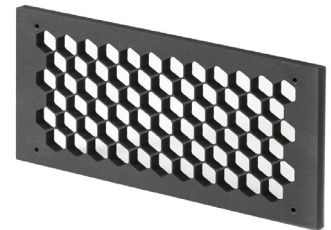


Figure 12: i-2 Series Honeycomb

## Individual fixture settings

### Setting the dimming curve

The setting of the dimming curve will determine the fixture's behaviour, when changing the light intensity between 0% - 100%. Linear control provides uniform adjustment throughout the control action, whereas gamma corrected dimming provides finer control at low light levels, where the eye is more sensitive to change. By default, the i-2 uses gamma corrected dimming. For a uniform response, set all fixtures to the same dimming curve.

### 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 dims down 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.

NOTE: To avoid the risk of display deterioration caused by long term usage, 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 in high temperatures, it is possible to adjust the default fan speed by going to SETTINGS → FAN MODE in the menu.

**NOTE: In POI version, the fan mode adjustment is possible through RDM.**

# Control menu

Level 1	Level 2	Level 3	Level 4	Function	
MODE	Select Mode	-	-	Select DMX mode.	
INFO	Product Type	-	-	Display product type.	
	Firmware Version	-	-	Display installed firmware version.	
	Serial Number	-	-	Display fixture's serial number.	
	RDM ID	-	-	Display fixture's RDM ID. (Unique RDM ID for identification).	
	DMX View	-	-	Display received DMX channels.	
	Temperatures	-	-	Display temperatures (mainboard, left, center and right LED panel).	
	Power on time	-	-	Display fixture total power on time.	
	LED On Time	-	-	Display LED total power on time. (R, G, B, W).	
	Log	-	-	Display recorded operation data and error codes.	
SETTINGS	Startup Mode	Select Startup Mode	DMX Standalone Quickcolor	Default operating mode when fixture is powered on: 1. DMX (factory default) 2. Stand-alone 3. Quick Color	
		Startup Program	1 → 3	Stand-alone program 1, 2 or 3. Only used if the startup mode is set to "stand-alone". Program 1 is default.	
	Flip Display	Enable / Disable	[X] / [ ]	Flips the display up-site down when enabled.	
	Display Saver	Display DIM	[X] / [ ]	Dim OLED display when control panel is not in use.	
		Display OFF	[X] / [ ]	Turn off OLED display when control panel is not in use.	
	Fan Mode	Standard	-		
		Silent	-		
		Max Power	-		
	LED Frequency	LED frequency	[X] / [ ]		
		Custom frequency	[X] / [ ]		
	Minimum Values	Red 1	Red 2		Set minimum values for individual segments.
		Green 1	Green 2		
		Blue 1	White 2		
		White 1	White 3		
	Factory Default	-	-	-	Reset the fixture to factory default settings. See "Factory defaults" on page 12.
	Service Pin	-	-	-	Enter service pin to access service menu.
	Service Menu	Product Type	-	-	
Calibration Info		-	-		
PSU Voltage		-	-		
PWM Out		-	-		
MANUAL	Quick Color	Red	1 → 255	Set fixture to quick color startup mode. Press enter to set static red mix (0-255).	
		Green	1 → 255	Set fixture to quick color startup mode. Press enter to set static green mix (0-255).	
		Blue	1 → 255	Set fixture to quick color startup mode. Press enter to set static blue mix (0-255).	
	Run program	1, 2 or 3	-	-	Run internal sequence 1, 2 or 3.
	Stop program	-	-	-	Enter to stop current running internal sequence or Quick Color.
	Editor	Program	-	1 → 3	Select program to edit (1, 2 or 3).
		Scene	-	1 → 24	Select program to edit (1-24).
		Red	-	1 → 255	Select value for red.
		Green	-	1 → 255	Select value for green.
		Blue	-	1 → 255	Select value for blue.
		White	-	1 → 255	
		Shutter	-	1 → 255	Blackout (0-7); Open (8-15); Variable Strobe (16-151); Pulso Open (152-175); Pulse Close (175-199); Variable Random Strobe (200-244); Open (245-255)
		Fade time (minutes)	-	0 → 511	Set fade-in (transition) time to current scene in min. (0-511).
Fade time (seconds)		-	0 → 59	Set fade-in (transition) time to current scene in sec. (0-59).	
Wait time (minutes)		-	0 → 998	Set waiting (static) time in current scene in min. (0-998).	
Wait time (seconds)	-	0 → 59	Set waiting (static) time in current scene in sec. (0-59).		
TEST	Selftest	-	-	Initiates a self-test sequence.	
	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 through the colors.	

# RDM

## Supported RDM functions

The i-2 Series 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.

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

### RDM functions

PID	Actions allowed	Name
0x0082	GET / SET	Device label
0x0081	GET	Manufacturer Label
0x00E0	GET / SET	DMX Personality
0x00E1	GET	DMX Personality Description
0x0200		Sensor Definition
0x0201		Sensor Value
0x0080	GET	Device Model Description
0x0400	GET / SET	Device Hours
0x0051	GET	Parameter Description
0x0501	GET	Display Invert / Level (POI n.a.)

PID	Actions allowed	Name
0x0500		Display Invert
0x0090	SET	Factory Defaults
0x1001	SET	Reset Device
0x0120		Slot Info
0x0121		Slot Description
0x0122		Default Slot Value
0x8060	GET	Serial number
0x8625	GET / SET	FAN 0=AUTO 1=LOW 2=HIGH 3=FULL
0x8620	GET / SET	Led freq (197647Hz) / value

**Please note:** The RDM controller communicates with the fixtures to show only the available options for each RDM function. The table is subject to change without notice.

### Sensors

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

**Please note:** The RDM controller communicates with the fixtures to show only the available sensors for this fixture. The table is subject to change without notice.

Name	Sensor Type
Mainboard	Temperature
LED Left	Temperature
LED Center	Temperature
LED Right	Temperature
Humidity	Other
LED On time Hours Red 1	Time
LED On time Hours Green 1	Time
LED On time Hours Blue 1	Time
LED On time Hours White 1	Time

Name	Sensor Type
LED On time Hours Red 2	
LED On time Hours Green 2	
LED On time Hours Blue 2	
LED On time Hours White 2	
LED On time Hours Red 3	
LED On time Hours Green 3	
LED On time Hours Blue 3	
LED On time Hours White 3	

## 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.
	Main fuse is blown.	Contact your local SGM dealer or support@sgmlight.com
Fixture suddenly turned off.	Power was turned off.	Check the power supply, switches and breakers.
Fixture suddenly stopped responding.	The DMX console was disconnected/tampered with.	Inspect the DMX console and connections.
	DMX cables was disconnected.	Inspect DMX cables.
Fixture operates irregularly / abnormal.	DMX cable polarization is inverted (pin 2 + 3).	Reverse the polarity.
	DMX link is not terminated.	Install a XLR 120ohm DMX termination at the end of the DMX link.
	Corrupted DMX cable.	Replace or repair defective cables and/or connections.
	The fixture operates an internal program.	Enter in the meny and go to → MANUAL → STOP PROGRAM.
	A corrupted fixture generates noise/disruptions on the DMX link.	Track and isolate the corrupted fixture.
"Firmware not loaded" in display (POI n.a.)	The RFD is malfunctioning.	Contact your local SGM dealer or support@sgmlight.com
Color is uneven in low output	The minimum values is out of calibration.	Contact your local SGM dealer or support@sgmlight.com
	The SGM Calibration Data set has been lost	Contact your local SGM dealer or support@sgmlight.com

# POI Permanent Outdoor Installation

The SGM POI versions are designed for permanent outdoor installation and are IP66-rated or higher. POI versions are designed for use in maritime and offshore environments, as per the C5-M corrosion-resistance class.

## Physical differences

The POI version differs from the standard version by having fixed-chassis power and DMX cables, and heavy-duty cable glands. The display and control panel have been removed.

## Configuration

The i-2 POI does not include a display, therefore it has to be configured through RDM (Remote Device Management). See “RDM” on page 14 for more information.

In i-2 POI, the DMX address and DMX mode can only be set through RDM. When addressing through USB powered DMX / RDM devices, ensure DMX link is terminated, and keep a short cable length as far as possible.

Regarding the DMX modes for POI, they are the same as the i-2 standard. Visit [www.sgmlight.com](http://www.sgmlight.com) to see all DMX charts available under the respective product, or upon request via [support@sgmlight.com](mailto:support@sgmlight.com).

### PLEASE NOTE!!

**Remote Device Management (RDM) requires a correct DMX cabled installation and termination.**

**When setting addresses through RDM and using USB dongles, disable the USB selective suspend to ensure a proper voltage on the DMX link. If any lag or trouble occurs when addressing, decrease the cable length range to <12 m. and only address one fixture at a time.**

## LED Indicator

The LED indicator is located on the fixture's head (same place where the display is located in standard i-2), and shows the current status of the fixture.

The LED indicator has three different colors and three possible stages: static, flashing, or off.

- **Static green:** fixture is powered on (receiving or not DMX signal).
- **Flashing orange (when using the magnet):** fixture is connecting to / disconnecting from an external wireless transmitter.
- **Static/flashing red:** an error message is stored; review via the SGM RDM Addressing Tool, reboot the fixture, or contact SGM support for diagnostic help.
- **Off:** fixture is off or indicator LED is set to auto dimming (set via RDM).

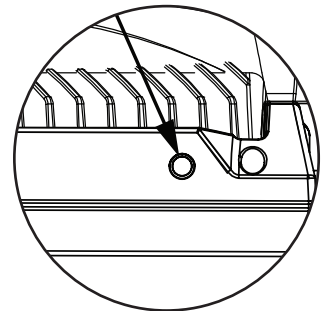


Figure 13: i-2 POI LED indicator

## SGM Addressing Tool

SGM provides a Windows software tool designed to allow the user to address and configure the fixtures through RDM. Changing the settings is done in the exact same way as it is in the display.

This tool is available for download at [www.sgmlight.com](http://www.sgmlight.com), and has to be used with the SGM USB 5-Pin-XLR Uploader cable (available from your SGM dealer).

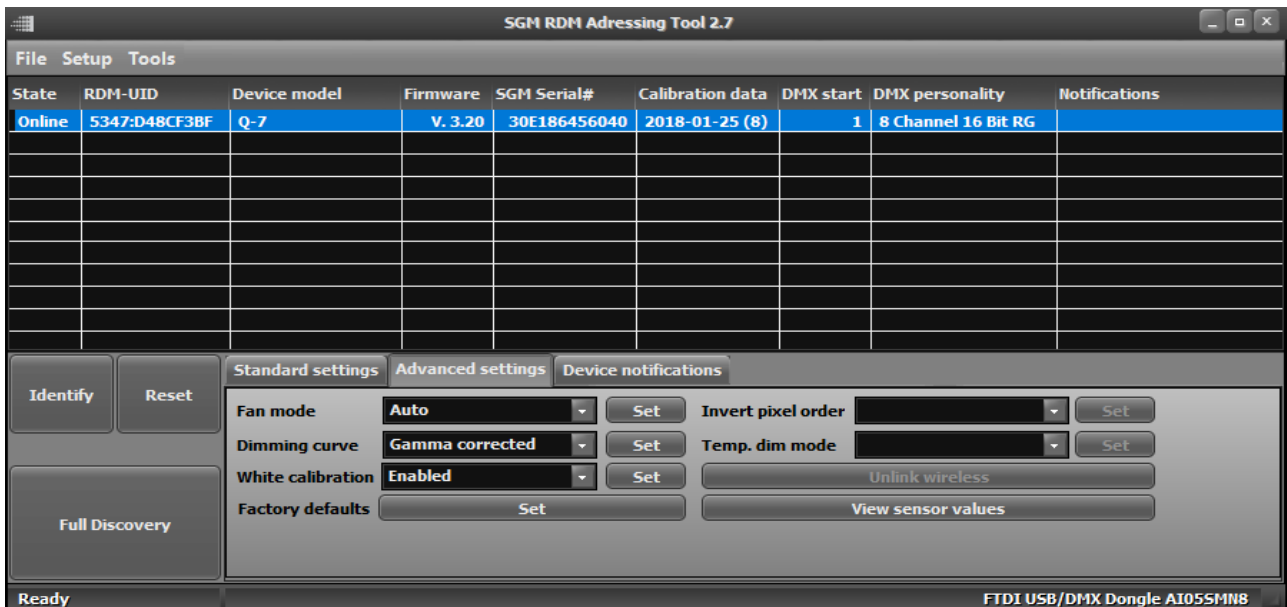


Figure 14: SGM Addressing tool



## POI Spanner

The i-2 POI includes a spanner with magnet, which function is to establish connection between the fixture and the wireless transmitter.

The spanner also has two types of pig-nose keys used for tilt adjustment in POI fixtures. Depending on the type of fixture, either use the large or the small pig-nose keys.

In i-2 POI devices the largest pig-nose key is used for tilt adjustment.

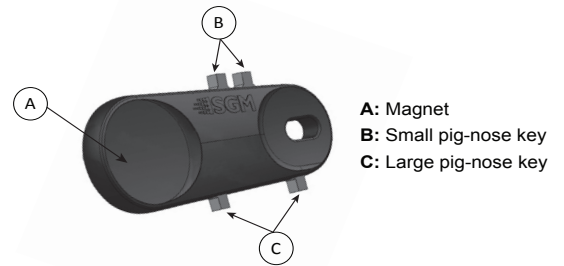


Figure 15: POI Spanner

## POI Tilt lock

The tilt angle in POI fixtures may be adjusted by using the large pig-nose key provided in the spanner.

To adjust the tilt angle in i-2 POI take the following steps:

1. Make sure the fixture is cooled down before handling.
2. Take the spanner and turn both tilt lock screws (one on each side) counter-clockwise by using the large pig-nose key. Screws are loosened by turning counter-clockwise.
3. Tilt the fixture to the angle desired and hold it.
4. Lock the position by tightening the tilt lock screws clockwise with the same pig-nose key.

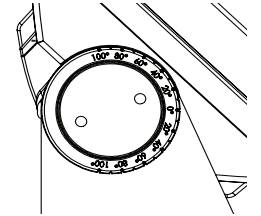


Figure 16: i-2 POI Tilt lock

## Installation and rigging the i-2 POI

While the base of the standard products include 1/4 turn fasteners camlocks for omega brackets, the base of POI products come with M-10 nuts for M-10 screws. The M-10 screws are included in the package in the same amount as the number of M-10 nuts of the base.

The i-2 POI has two M-10 nuts in the base that can be used for installation and rigging. The SGM Omega bracket (not included) or a customized bracket is needed to install the fixture. Consider the dimensions below of the i-2 POI base for customized mounting brackets purposes.

The SGM POI Omega bracket suited for M-10 holes can be ordered as an accessory. Contact your local SGM dealer for further information on correct POI rated mounting.

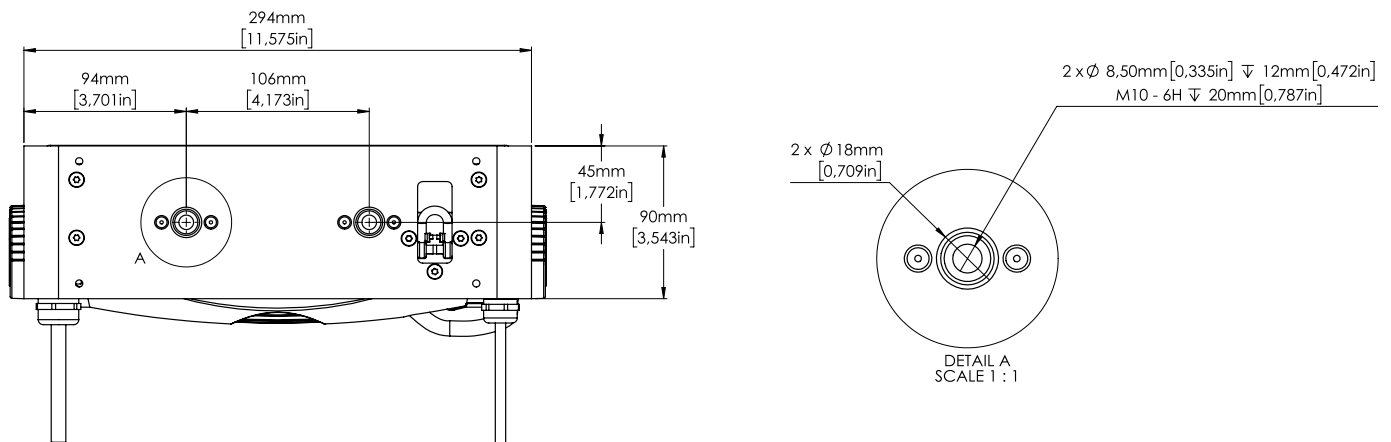


Figure 17: i-2 POI base with dimensions

## Connecting DMX and AC power in POI

DMX in and DMX out are in the same cable. See more in figure 18 about the SGM POI DMX cable.

The power is wired as the standard version. See “Connecting AC power” on page 8.

For permanent installations, have a qualified electrician wire the mains cable directly to a suitable branch circuit. The junction’s ingress protection (IP) rating must be suitable for the location.

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

### PLEASE NOTE!!

- Standard microphone cable are not suitable for transmitting DMX.
- Up to 32 fixtures can be on the same DMX link. Additional fixtures will overload the link.
- The last fixture must always be fitted with a DMX termination plug to the fixtures DMX out.
- SGM fixtures provide a passive DMX Thru signal as DMX Out, instead of an active output signal.

## i-2 POI connection diagram

SGM POI DMX Cable

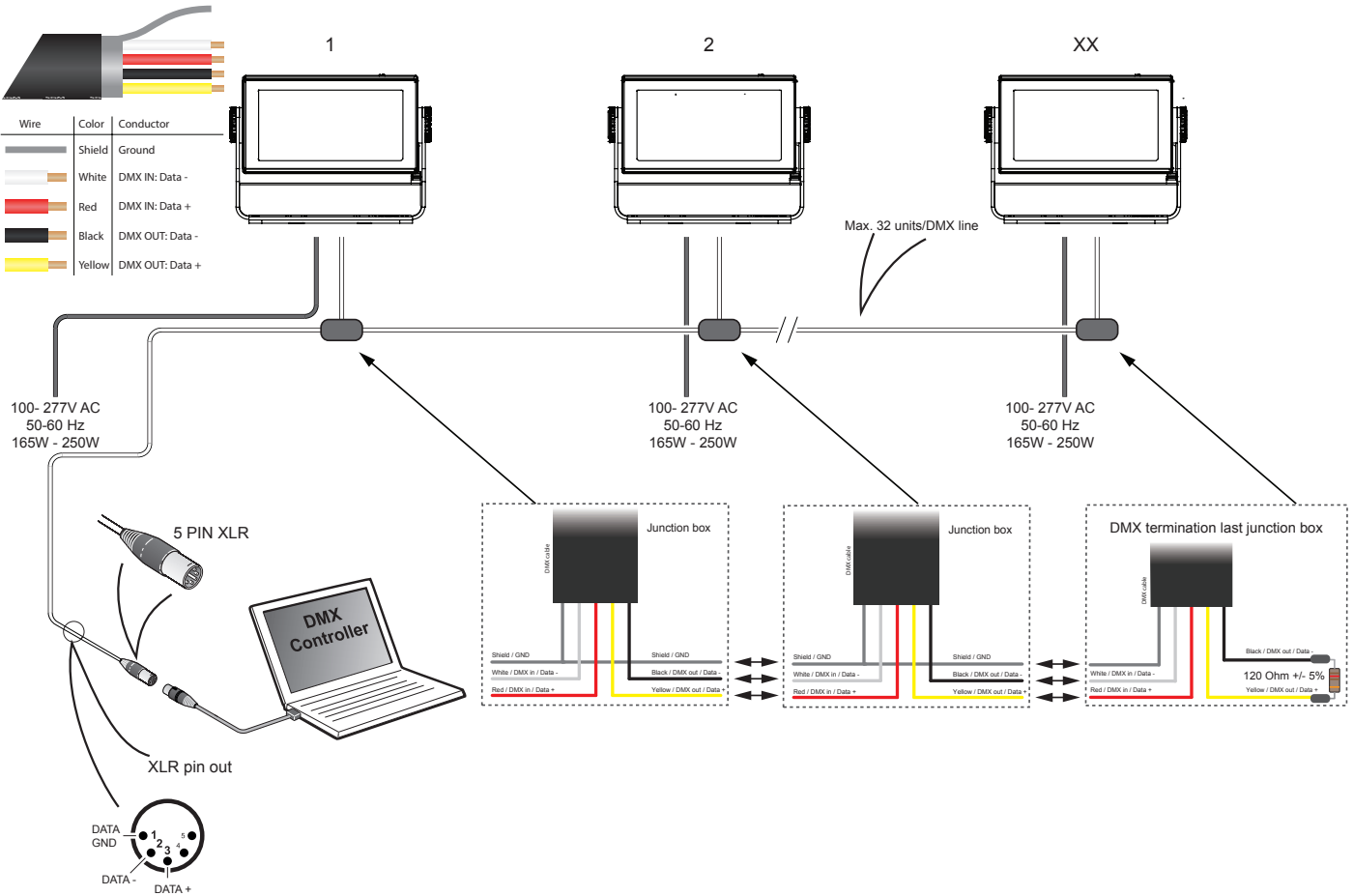


Figure 18: Connecting DMX and AC Power in i-2 POI

### Connecting a wireless transmitter in POI

In POI versions with wireless it is necessary to pair the fixture with a new transmitter (by default the fixture is linked to the SGM factory transmitter).

In order to do so, make sure the fixture is powered on before taking the following steps:

1. Take the spanner that comes with the fixture, place the magnet close to the LED indicator, and wait 3 seconds. The LED indicator will blink orange for 1-2 seconds, before switching to static green again. The fixture can now be paired to a new transmitter.
2. Go to the wireless transmitter and press “connect” or “link”. Now the external third-party transmitter and the internal SGM receiver should be linked together.

Repeat the process to link the fixture to another transmitter.

### Disconnecting a wireless transmitter in POI

To disconnect the i-2 POI from the currently paired wireless transmitter, simply hold the magnet for 3 seconds over the LED indicator. The LED indicator blinks orange for 1-2 seconds, switching later to green again. The fixture is now logged off.

## Accessories

The i-2 Series can be used with various accessories such as barndoors, color frame, and anti-glare shields.

To get to know all the available i-2 Series accessories, see [www.sgmlight.com](http://www.sgmlight.com), or contact your local SGM dealer.

### Accessory holder

The Accessory holder is a mandatory base for holding Barndoors and Color frames to the i-2 Series fixture. It is a clip-on accessory that includes a safety wire to be attached to the bracket of the fixture, and a knob on the side to allow the sliding of barndoors, color frames or rigid diffusion filters.



Figure 19: i-2 Series Accessory holder

### Barndoors

The i-2 Series has 4-way and 8-way barndoors. The difference between the two types is that the 8-way barndoors give an extra control when cutting the light, by extending and adjusting the width of the side flaps.

The barndoors are designed and intended to be mounted on the fixture without the use of any tools. It is only required the use of the accessory holder, where the barndoors will slide and fit in, by releasing the locking knob in the side of the accessory holder.

The i-2 Series barndoors are also compatible with the use of color frame and diffusion filters.



Figure 20: i-2 Series Barndoors

### Floorstand

The i-2 Series has available an optional floorstand, ideal when there is a frequent need of changing the position of the fixture between hanging and standing.

The i-2 floorstand it is easy to mount or remove, simply by the use of 1/4 turn fasteners.



Figure 21: i-2 Series Floorstand

### PLEASE NOTE!!

The accessory holder, the barndoors and the floorstand are not intended for permanent outdoor installations.

### Anti-glare shields

The i-2 Series features two different types of optional anti-glare shields:

- **Full anti-glare shield** - covers the full fixture's opening
- **Half anti-glare shield** - covers half of the fixture's opening

Using the anti glare shields will remove any unwanted uncomfortable glare and reflections.

The anti glare shields are easily mounted by removing the two tilt lock bolts, one in each side of the fixture. Refit the anti glare shield in position and screw both tilt locks bolts again.

**Note: This accessory is suitable for both permanent outdoor and indoor installations.**

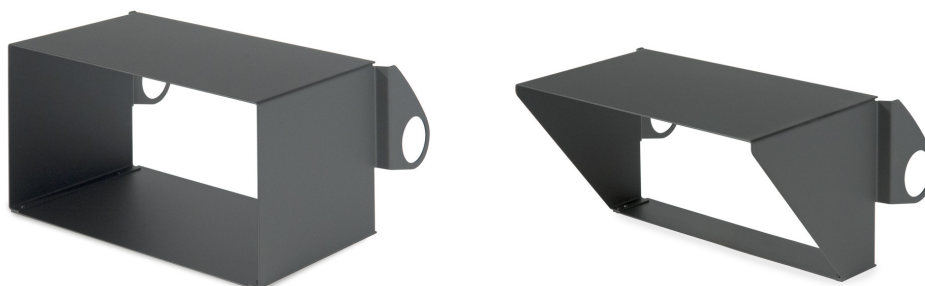


Figure 22: i-2 Series Anti-glare shields

**For further information and other possibilities see [www.sgmlight.com](http://www.sgmlight.com) or contact your local SGM dealer.**

## Maintenance

### SGM Vacuum Test kit

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

In order to ensure the IP-rating of the i-2 Series, 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 23: SGM Vacuum Test Kit

### SGM 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 24: SGM Uploader cable

### Upgrading the firmware

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

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

**We recommend that the fixture's firmware is always up-to-date.** The latest firmware version is available for download under the respective product at [www.sgmlight.com](http://www.sgmlight.com).

To update your i-2 Series 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)).

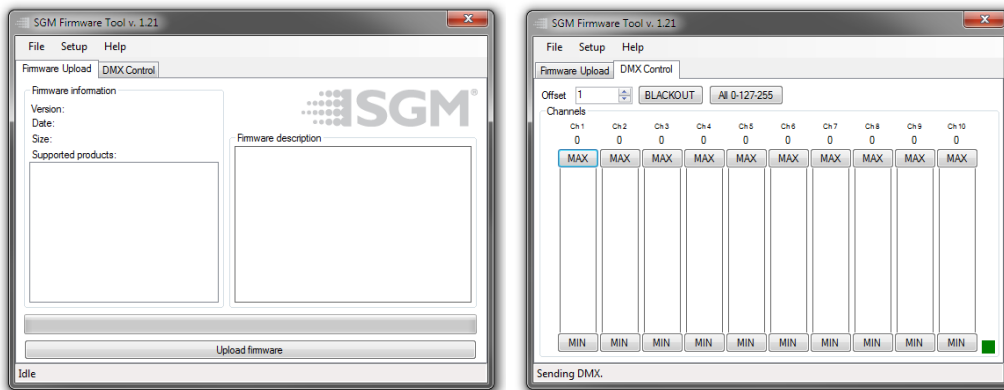


Figure 25: SGM Firmware tool

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

## Cleaning

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

Whenever necessary, clean the i-2 Series 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.

## Fixtures and accessories

The i-2 Series 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

I-2 RGBW Wash, 8,5deg, Std, BL / WH.....	P/N: 80031100 / 80031150
I-2 RGBW, POI, BL / WH.....	P/N: 80230503 / 80230504
I-2 RED Wash, 8,5deg, Std, BL / WH.....	P/N: 80031102 / 80031152
I-2 Red POI, BL / WH.....	P/N: 80231403 / 80231404
I-2 Green Wash, 8,5deg, Std, BL / WH.....	P/N: 80031103 / 80031153
I-2 Green, POI, BL / WH.....	P/N: 80231503 / 80231504
I-2 Blue Wash, 8,5deg, Std, BL / WH.....	P/N: 80031104 / 80031154
I-2 Blue, POI, BL / WH.....	P/N: 80231603 / 80231604
I-2 White Wash, 8,5deg, Std, BL / WH.....	P/N: 80031105 / 80031155
I-2 White, POI, BL / WH.....	P/N: 80230603 / 80230604
I-2 UV Wash, 8,5deg, Std, BL / WH.....	P/N: 80031106 / 80031156
I-2 UV, POI, BL / WH.....	P/N: 80231703 / 80231703

**The i-2 Series can be ordered in any RAL color, and with Honey Comb at request. Contact your local SGM dealer for ordering customized color housings or for more information.**

### i-2 Series accessories

Omega bracket w/Q-bolt,, BL / WH.....	P/N: 83060602 / 83061206
Omega bracket POI with M10 Screws, BL / WH.....	P/N: 83060623 / 83060624
SGM USB uploader cable.....	P/N: 83062011
Floorstand for i-2/P-2/Q-2.....	P/N: 83060613
Accessory Holder I-2/P-2 Series, BL.....	P/N: 83061127
Barndoor 4-way, i-2/P-2/Q-2 series, BL.....	P/N: 83061129
Barndoor 8-way, i-2/P-2/Q-2 series, BL.....	P/N: 83061130
Color frame, i-2/P-2/Q-2 series.....	P/N: 83061131
Half Anti-Glare Shield, Small, BL.....	P/N: 83061161
Full Anti-Glare Shield, Small, BL.....	P/N: 83061164
Honeycomb for i-2 Series.....	P/N: 36800040
Flight case for 4 pcs of P-2/Q-2 incl. barndoors.....	P/N: 82051503
SGM Vacuum test-kit.....	P/N: 83061136

**Barndoor 4-way, Barndoor 8-way, or Color Frame requires one Accessory Holder (Item No. 83061127) per fixture.**

## Support hotline

SGM offers 24/7 technical support hotline.  
Worldwide: +45 3840 3840  
US: +1 877 225-3882  
support@sgmlight.com

## Approvals and certifications

*Conforms to*  
*Conforms to*  
*Conforms to*  
*Conforms to*  
*Certified to*  
*Certified to*

*2014/35/EU: Low Voltage Directive*  
*2014/30/EU: EMC Directive*  
*2011/65/EU: RoHS2 Directive*  
*ANSI/UL Std. 1573*  
*CSA E60598-1, Ed: 2*  
*CSA-E598-2-17-98, Ed: 1*



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









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