Acclaim™

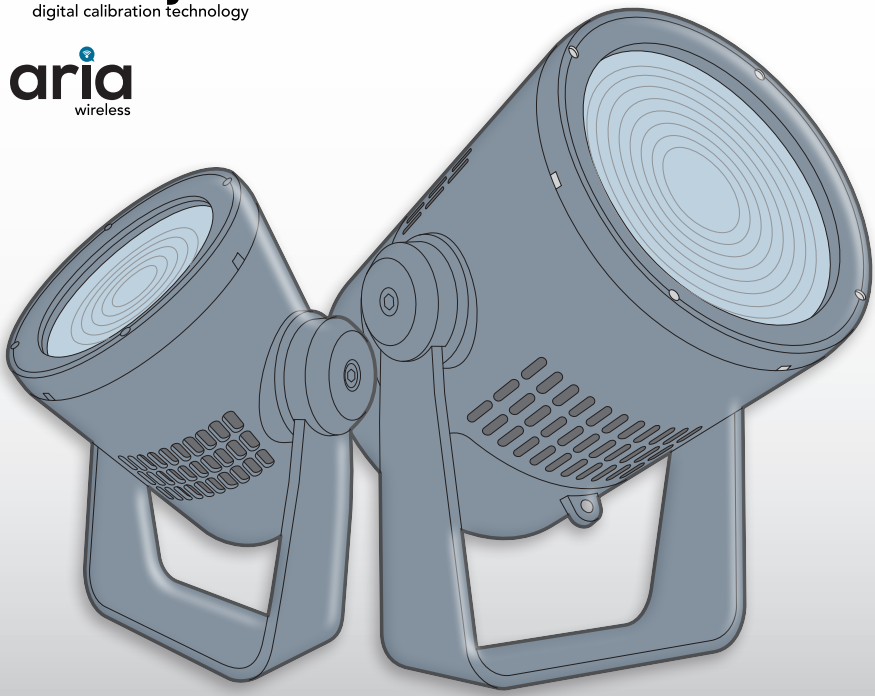
AcclaimModular systems

SpectrumFive technology

OutdoorLink system

ColorSync digital calibration technology

aria wireless



Unity™ series

User guide

Contents

Introduction

Welcome

Welcome to Unity™ series from Acclaim Lighting. These rugged fixtures bring new levels of flexibility, performance and refinement to exterior illumination. The Spectrum Five light engine (red, green, blue, amber and lime) offers exceptional brightness and clarity. In addition to RGBAL saturated color mixing, a specially calibrated CCT control channel allows you to dynamically configure any color temperature of white. The advanced polymer fresnel lenses ensure the 10-degree native beam is fully homogenized and totally free of color striations.

External control using DMX-512A is supported either through direct cable connection or via the built-in Aria™ wireless DMX receiver (transmitter available as an optional extra).

A clear daylight-readable OLED touch-screen user display provides access to a comprehensive configuration menu system (see page 29). Alternatively, the industry standard RDM (Remote Device Management) format can be used to configure numerous key settings without the need to visit each fixture (see page 40).

For standalone applications, Unity fixtures provide an automation feature which will output a predetermined color/white mix as the ambient light falls below a certain level, paired with a configurable timer for auto shut off. The internal auto-sensing power supply can accept mains inputs between 100 to 277VAC at 50 or 60Hz.

Each Unity fixture is supplied with a detachable 9' (2.7m) control/power input cord (with bare-wire tails). The corresponding input socket on the Unity rear panel is also directly compatible with the Outdoor Link System, which greatly simplifies the task of distributing power and control to multiple fixtures (see page 25).

A full range of mounting, suspension, connection and light shaping options are available to allow Unity to easily adapt to the needs of any installation (see from page 4).

Safety

- When fixtures are mounted off-ground, ensure they are securely fitted to an appropriate mounting surface.
- Ensure that the power input is supplied from a correctly fused, earthed and environmentally protected location.

Maintenance

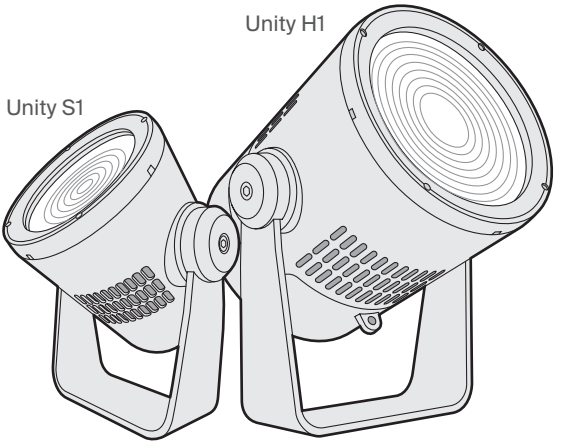
CAUTION: Always isolate mains power before starting maintenance operations.

- Ensure that all mounting (and device) screws/bolts are fully tight and free of corrosion.
- Ensure there is no deformation to the housing, lenses or fixing points.
- Check that all power supply cables are free from physical damage or material fatigue.
- Use only genuine spare parts supplied by Acclaim Lighting.

Cleaning

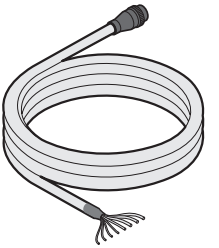
- Use a moist, lint-free cloth when cleaning each fixture.
- Never use alcohol or solvents.

Supplied items

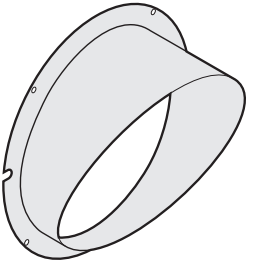


Unity S1 / H1

Supplied with integral mounting yoke and detachable 9 foot (2.7m) combined power and control tail. Optional Outdoor Linking System feed cables are directly compatible - see page 7.



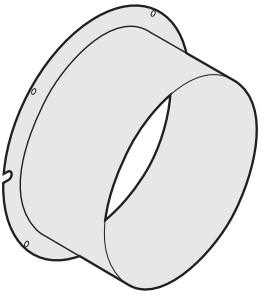
Optional extras



Half snoots

	Unity S1	Unity H1
Gray	UNBHSG	UNAHSG
Black	UNBHSB	UNAHSB
White	UNBHSW	UNAHSW
Custom*	UNBHSC	UNAHSC

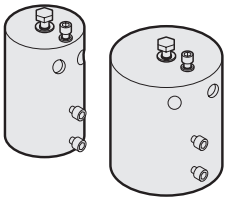
** RAL # also required*



Full snoots

	Unity S1	Unity H1
Gray	UNBFSG	UNAFSG
Black	UNBFSB	UNAFSB
White	UNBFSW	UNAFSW
Custom*	UNBFSC	UNAFSC

Optional extras (continued)

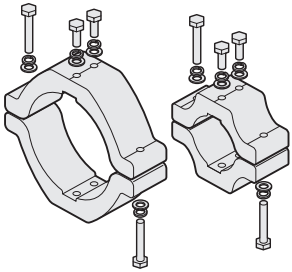


Tenon mounts

For use with Schedule 40 pipe: 2.51" (56mm) and 4.13" (105mm) inner diameter respectively

2" pole	4" pole
Gray	TM2G	TM4G
Black	TM2B	TM4B
White	TM2W	TM4W
Custom*	TM2C	TM4C

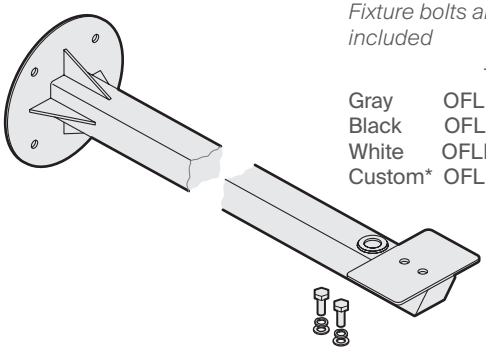
** RAL # also required*



Pipe clamps

For use with Schedule 40 pipe. Can mount 1x Unity H1 or up to 2x Unity S1 fixtures (polished aluminum finish)

2" pipe PC2
4" pipe PC4



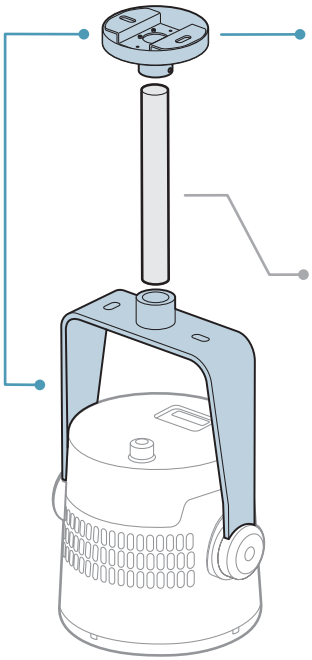
Extender arms

Fixture bolts and washers plus cable access seal included

	1'	2'	3'
Gray	OFLEB1G	OFLEB2G	OFLEB3G
Black	OFLEB1B	OFLEB2B	OFLEB3B
White	OFLEB1W	OFLEB2W	OFLEB3W
Custom*	OFLEB1C	OFLEB2C	OFLEB3C

** RAL # also required*

Optional extras (continued)



Pendant mount set

Includes ceiling mount and replacement fixture yoke. NPS pipe required (see below).

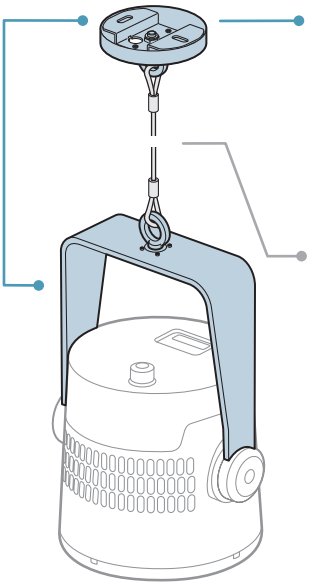
	Unity S1	Unity H1
Gray	UNBPMSG	UNAPMSG
Black	UNBPMSB	UNAPMSB
White	UNBPMSW	UNAPMSW
Custom*	UNBPMSC	UNAPMSC

NPS pipe

One length required to accompany a pendant mount set (1" NPS, OD=1.315").

	12"	24"	36"
Gray	UNANPS1-12G	UNANPS1-24G	UNANPS1-36G
Black	UNANPS1-12B	UNANPS1-24B	UNANPS1-36B
White	UNANPS1-12W	UNANPS1-24W	UNANPS1-36W
Custom*	UNANPS1-12C	UNANPS1-24C	UNANPS1-36C

** RAL # also required*



Aircraft cable mount set

Includes ceiling mount and replacement fixture yoke. Stainless steel cable required (see below).

	Unity S1	Unity H1
Gray	UNBAMSG	UNAAMSG
Black	UNBAMSB	UNAAMSB
White	UNBAMSW	UNAAMSW
Custom*	UNBAMSC	UNAAMSC

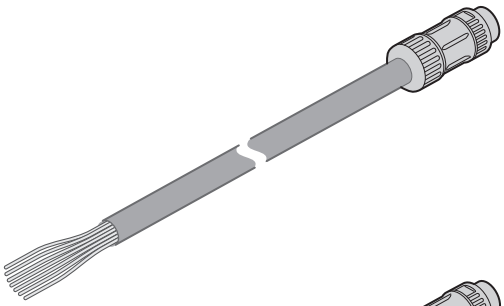
Steel cable

One length required to accompany an aircraft cable mount set.

	2'	5'	10'
Gray	UNAAC2G	UNAAC5G	UNAAC10G
Black	UNAAC2B	UNAAC5B	UNAAC10B
White	UNAAC2W	UNAAC5W	UNAAC10W
Custom*	UNAAC2C	UNAAC5C	UNAAC10C

** RAL # also required*

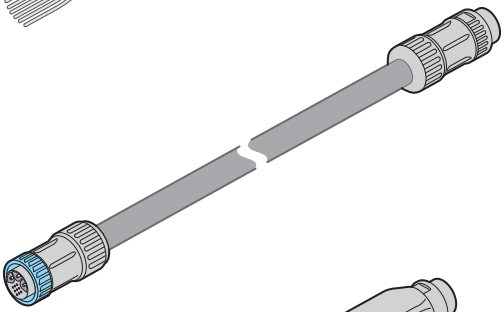
Outdoor Linking System part codes



Feed cables

1’ (30cm)	OLSF1#-V2
5’ (1.5m)	OLSF5#-V2
10’ (3m)	OLSF10#-V2
25’ (7.6m)	OLSF25#-V2
50’ (15.2m)	OLSF50#-V2

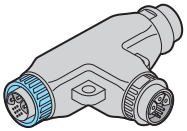
 # = color: G-Gray, B-Black, W-White, C-Custom (RAL# required)



Link cables

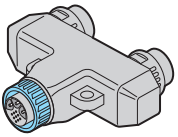
1’ (30cm)	OLSL1#-V2
5’ (1.5m)	OLSL5#-V2
10’ (3m)	OLSL10#-V2
25’ (7.6m)	OLSL25#-V2
50’ (15.2m)	OLSL50#-V2

 # = color: G-Gray, B-Black, W-White, C-Custom (RAL# required)



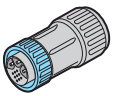
T-junction

OLST2-B	Black
OLST2-W	White



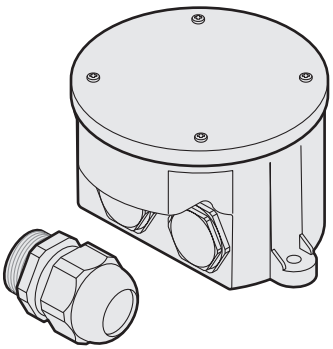
Y-junction

OLSY2-B	Black
OLSY2-W	White



End cap with DMX termination

OLSEC-B	Black
OLSEC-W	White



IP66 junction box plus outlet cable gland

See page 23

AJBOX1

Installation

Mounting the unit

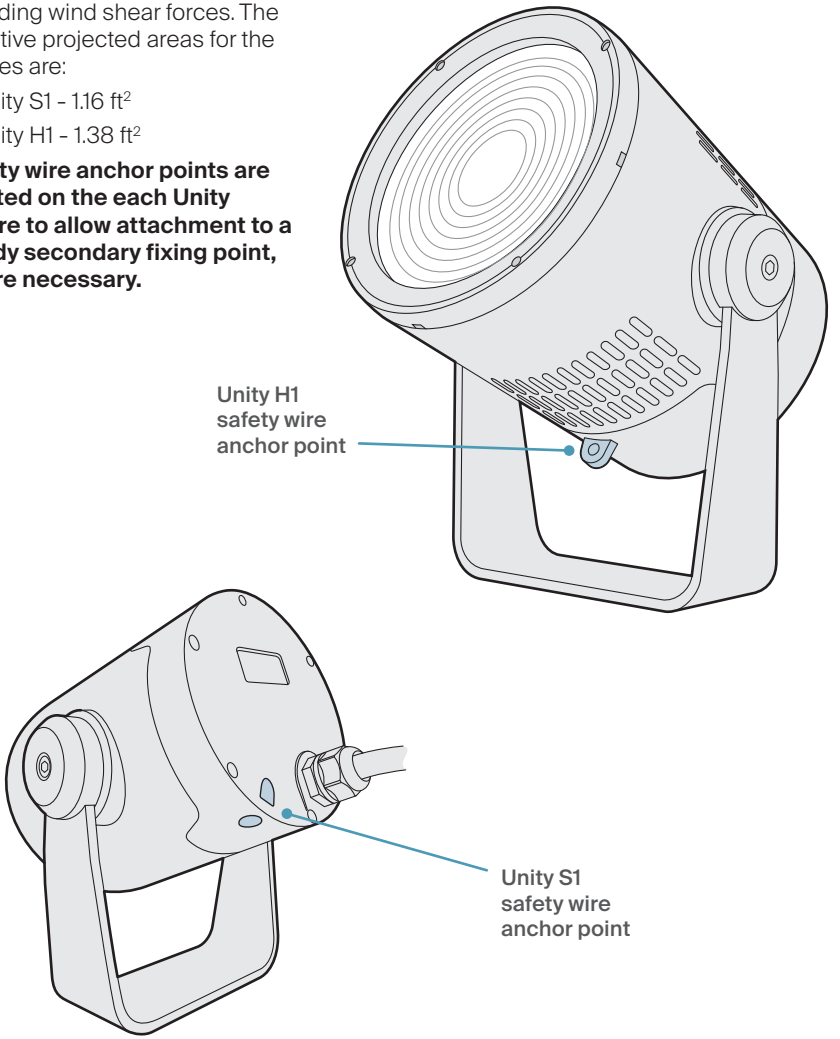
Each Unity fixture includes a sturdy yoke mount with multiple holes in its base for various fixing options. The fixtures weigh:

- Unity S1 - 19.4 lbs (8.8 kg)
- Unity H1 - 26.9 lbs (12.2 kg)

Ensure that the mounting surface and the fixings used are sufficiently rated for the task, including wind shear forces. The effective projected areas for the fixtures are:

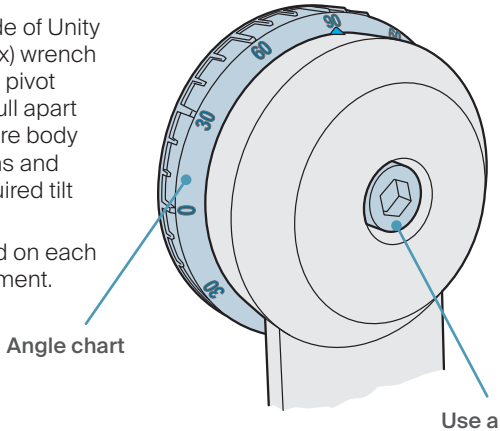
- Unity S1 - 1.16 ft^2
- Unity H1 - 1.38 ft^2

Safety wire anchor points are located on the each Unity fixture to allow attachment to a sturdy secondary fixing point, where necessary.



The yoke adjusters on each side of Unity require a 5/16" (8mm) Allen (hex) wrench to focus the fixture. Loosen the pivot bolt on each side and gently pull apart the yoke arms to allow the fixture body to rotate. Release the yoke arms and tighten the bolts when the required tilt angle is achieved.

A useful angle chart is provided on each side to assist with initial adjustment.



When installing each Unity fixture, ensure the surface is level and that nothing is protruding to damage the mounting yoke. The yoke has multiple mounting holes and is suitable for mounting directly onto steel, aluminum, concrete or wood structures. Bolts or screws (not supplied) should be suitable for the surface (and the weight of the fixture, plus safety factor) and ensure a secure mount for the fixture.

Using a tenon mount

Optional tenon mounts are available for use when Unity needs to be mounted **on top** of a vertical pole. Tenon mounts are available for use with Schedule 40 pipe 2" and 4" poles of sufficient rigidity for the weight of the fixture. *Note: The mounts have 2.51" (56mm) and 4.13" (105mm) inner diameters respectively.*

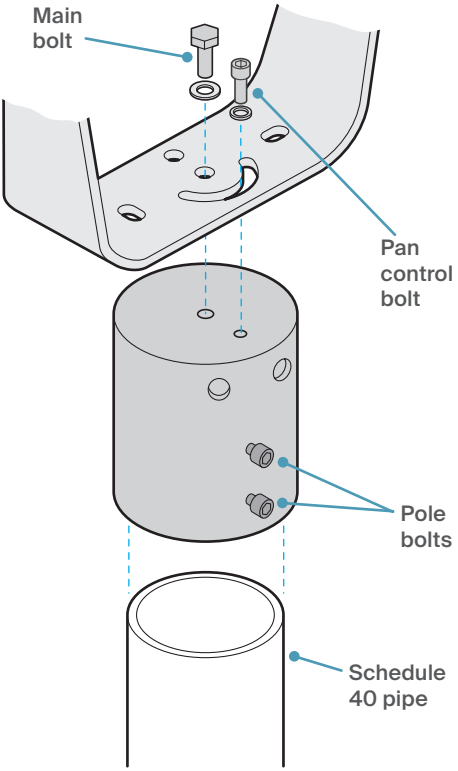
IMPORTANT: Tenon mounts are suitable only for vertical pole mounting where the fixture sits on top of the pole. Tenon mounts must NEVER be used to hang a Unity fixture below a pole. For pendant-type installations, use the pendant mount set (see page 13).

To use a tenon mount

1 Slide the tenon mount onto the vertical pole and tighten the two bolts on the side using a 1/4" (6mm) Allen (hex) wrench.

2 Secure the Unity yoke to the tenon mount using the supplied main bolt and partially tighten using a 11/16" (17mm) A/F wrench. Rotate the fixture to the required position and insert the pan control bolt - tighten using a 1/4" (6mm) Allen (hex) wrench. Fully tighten the main bolt.

3 Secure the feed cable neatly and securely down the pole.



Using a pipe clamp

Optional pipe clamps are available to mount Unity fixtures on either 2" (50mm) or 4" (100mm) (Schedule 40) tubes and poles.

Note: Up to two Unity S1 fixtures can be mounted simultaneously on a single pipe clamp.

IMPORTANT: Ensure the pipe (Schedule 40) and its mountings have sufficient load capacity for the Unity fixture(s) to be mounted.

To use a pipe clamp

1 Separate the two halves of the clamp, if they are already bolted together.

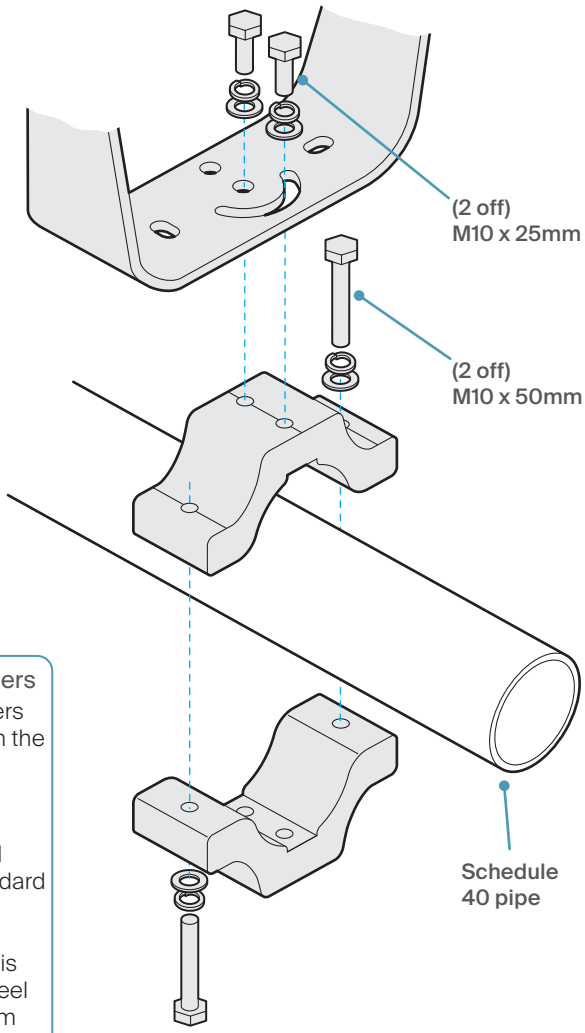
2 Place the two halves of the clamp around the pipe.

3 Use the two longer bolts, one from each side to join the two halves - see below about the correct use of the supplied washers.

4 Tighten the two main bolts evenly until the clamp is held firmly in place.

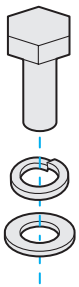
5 Use the two smaller bolts (with spring and standard washers) to fix the Unity yoke to one side of the clamp and tighten.

6 Secure the feed cable neatly and securely along the pole.



Using the supplied washers

The supplied spring washers help to maintain tension on the bolts to prevent loosening.



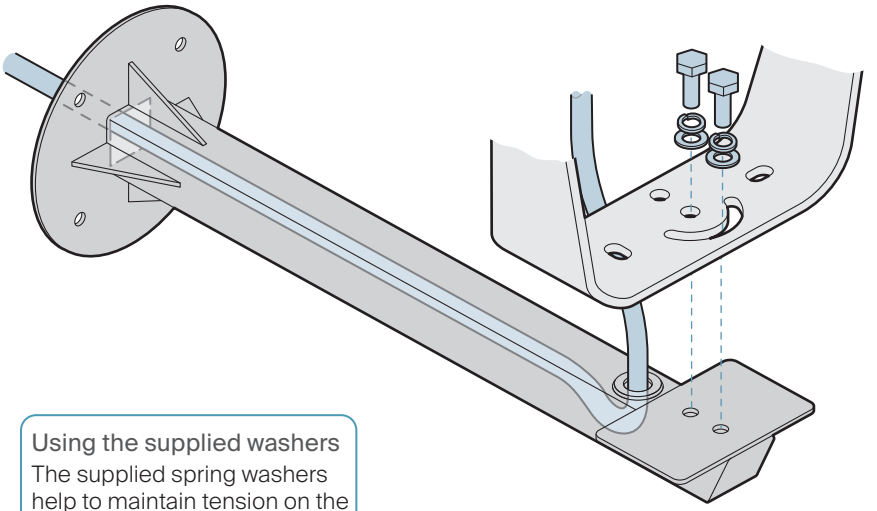
Always place the spring washer on each bolt first and then add the standard washer, before inserting the bolt into the clamp. This will prevent the steel spring washer from denting the softer aluminum body of the clamp.

Using an extender bar

Optional extender bars in various lengths (see page 5 for part numbers and page 51 for dimensions) are available to allow each Unity fixture to be held a certain distance from a vertical mounting surface.

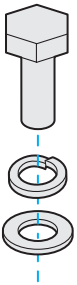
Each extender bar is manufactured entirely from aluminum to minimize weight and is supplied with two sets of bolts, spring washers and standard washers to secure the fixture swivel mount base (see note below).

There are four Ø7/16" (Ø11mm) holes in the backplate to allow for secure attachment to the mounting surface. Wall screws are not provided; ensure the ones used are suitable for the wall surface and have sufficient tensile strength for the combined weight and leverage of the fixture plus the bar.



Using the supplied washers

The supplied spring washers help to maintain tension on the bolts to prevent loosening.



Always place the spring washer on each bolt first and then add the standard washer, before inserting the bolt into the clamp. This will prevent the steel spring washer from denting the softer aluminum body of the yoke.

Concealed cabling

Each extender bar features an access hole on the top to allow power/control cord access through the hollow bar and backplate into the wall surface. A waterproof seal for the cable access hole is also provided.

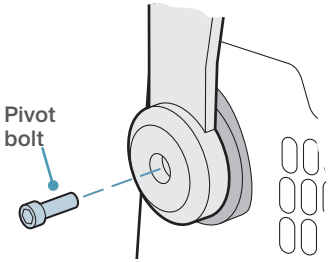
Fitting a pendant mount set

IMPORTANT: The pendant mount requires a solid, weight-bearing horizontal mounting surface. You also need to source mounting hardware appropriate to the mounting surface, rated to safely hold the weight of the total fixture plus safety factor. If the power/control cord will be fed up through the pole, a hole will also need to be made through the mounting surface to accommodate the cord.

To fit a pendant mount set

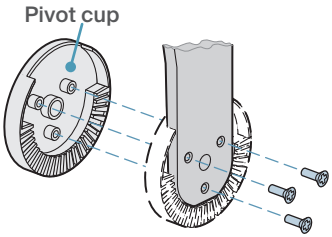
1 Remove the existing yoke from the Unity fixture:

- Lay down a protective surface, such as a thick blanket or the foam insert from the Unity box, and place the Unity fixture face down on the surface.
- Use a 5/16" (8mm) Allen (hex) wrench to remove the large pivot bolt from each side of the yoke.
- Gently pull the arms of the yoke out from the fixture body so that the pivot points disengage - thus freeing the yoke from the fixture body.



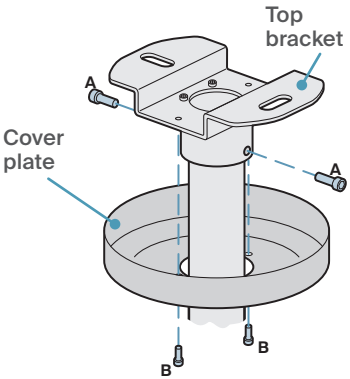
2 Transfer the two pivot cups from the original yoke to the new pendant yoke:

- Use a #2 Phillips driver to remove the three screws holding each pivot cup to the arms of the original yoke.
- Using the removed screws, attach each pivot cup to the outside of the arms of the new pendant yoke.



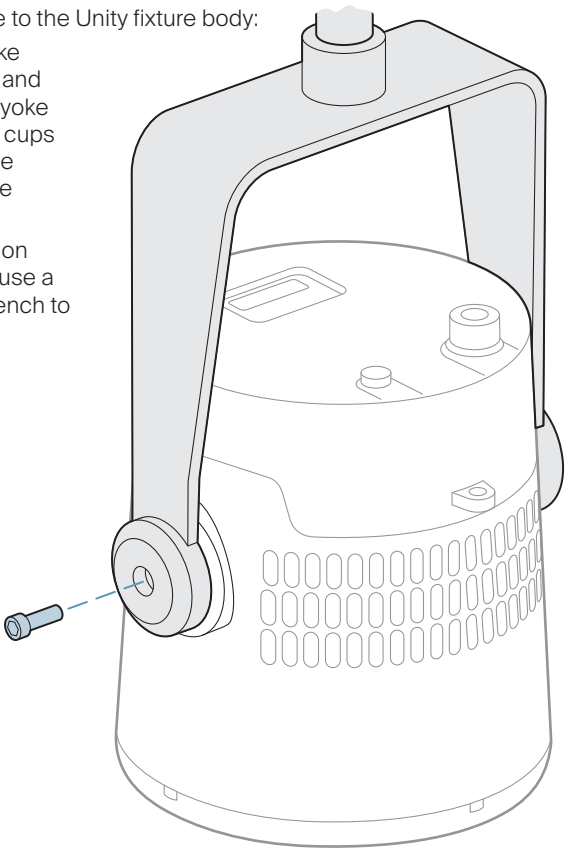
3 Separate the top bracket from the new pendant yoke:

- Use a 3/16" (4mm) Allen (hex) wrench to remove the two bolts (**A**) that lock the NPS pipe in place within the top bracket.
- Use a 1/8" (3mm) Allen (hex) wrench to remove the two small bolts (**B**) that secure the cover plate to the top bracket.
- Slide down the cover plate and unscrew the top bracket from the NPS pipe. *Tip: Keep the cover plate safely in place on the NPS pipe.*



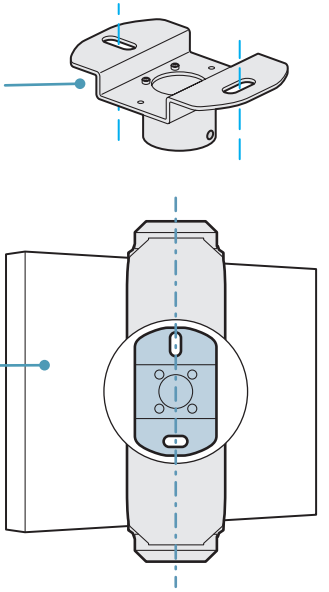
4 Attach the new pendant yoke to the Unity fixture body:

- Place the new pendant yoke over the Unity fixture body and gently pull the arms of the yoke out a little so that the pivot cups can correctly mesh with the corresponding pivots of the fixture.
- Insert the large pivot bolts on each side of the yoke and use a 5/16" (8mm) Allen (hex) wrench to tighten them.



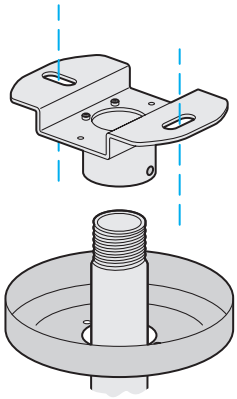
5 Attach the top bracket securely to the ceiling:

- Use two fixings (appropriate for the weight of the Unity fixture and the mounting surface) to securely attach the top bracket.
- *Note: When the NPS pipe is fitted to the top bracket and correctly secured with the two locking bolts, the pendant yoke will always become aligned with the axis of the top bracket's two mounting slots (see right). This becomes important if the Unity fixture will need to be tilted to illuminate in a particular direction. If the fixture will point straight down then the top bracket orientation is not a limiting factor.*
- *Note: If the power cord is to be fed up through the NPS pipe, first drill a hole in the mounting surface that will lie at the center of the top bracket position. However, do not yet plug the cord to the input socket on the Unity fixture.*
- See page 50 for top bracket dimensions.



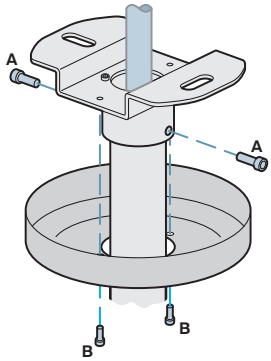
6 Attach the *pendant assembly* (the NPS pipe, pendant yoke and Unity fixture) to the top bracket.

- With assistance from a co-worker, lift up the pendant assembly to the top bracket.
- Carefully engage the screw thread of the NPS pipe with the top bracket and rotate the pendant assembly clockwise to fully engage the thread.
- Keep rotating the pendant assembly until the two holes either side of the top bracket align with the corresponding holes in the NPS pipe.



7 Complete the installation:

- Carefully feed the power/control cord up through the yoke , NPS pipe and top bracket into the mounting surface hole and ceiling space above.
- Raise up the cover plate and align it with the two small holes in the underside of the top bracket.
- Insert the two small bolts (**B**) removed earlier and tighten.
- Insert the two larger bolts (**A**) into the top bracket holes that are either side of the NPS pipe. It is important that the corresponding holes in the NPS pipe align with these holes and the bolts are fully engaged.
- Plug the power/control cord into the socket on the rear panel of the Unity fixture.
- If necessary, tilt the fixture to the required angle by loosening the pivot bolts.



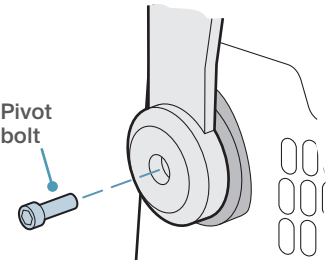
Fitting an aircraft cable mount set

IMPORTANT: The aircraft cable mount requires a solid, weight-bearing horizontal mounting surface. You also need to source mounting hardware appropriate to the mounting surface, rated to safely hold the weight of the total fixture plus safety factor. If the power/control cord will be fed up through the top bracket, a hole will also need to be made through the mounting surface to accommodate the cord.

To fit an aircraft cable mount set

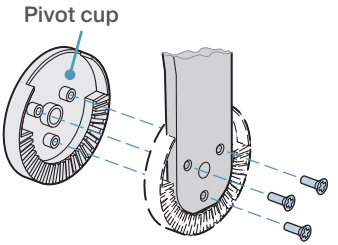
1 Remove the existing yoke from the Unity fixture:

- Lay down a protective surface, such as a thick blanket or the foam insert from the Unity box, and place the Unity fixture face down on the surface.
- Use a 5/16" (8mm) Allen (hex) wrench to remove the large pivot bolt from each side of the yoke.
- Gently pull the arms of the yoke out from the fixture body so that the pivot points disengage - thus freeing the yoke from the fixture body.



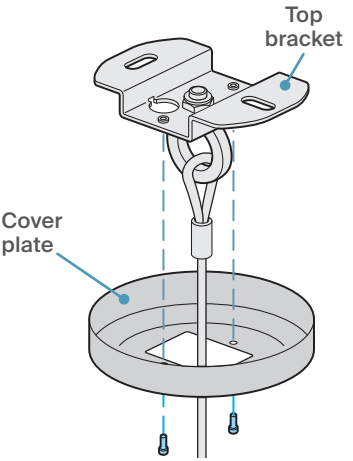
2 Transfer the two pivot cups from the original yoke to the new cable mount yoke:

- Use a #2 Phillips driver to remove the three screws holding each pivot cup to the arms of the original yoke.
- Using the removed screws, attach each pivot cup to the outside of the arms of the new cable mount yoke.



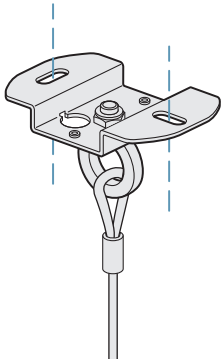
3 Release the cover plate from the top bracket of the new mount:

- Use a 1/8" (3mm) Allen (hex) wrench to remove the two small bolts that secure the cover plate to the top bracket.
- Slide the cover plate down the suspension cable.



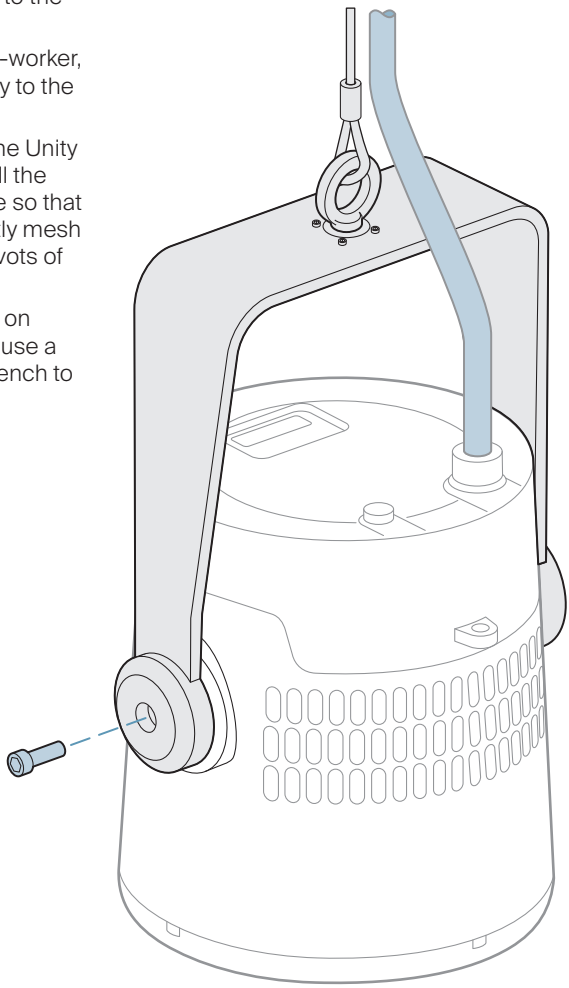
4 Attach the top bracket securely to the ceiling:

- Use two fixings (appropriate for the weight of the Unity fixture and the mounting surface) to securely attach the top bracket.
- *Note: If the power cord is to be fed up through the top bracket, first drill a hole in the mounting surface that will align with the cord hole within the top bracket.*
- See page 50 for top bracket dimensions.



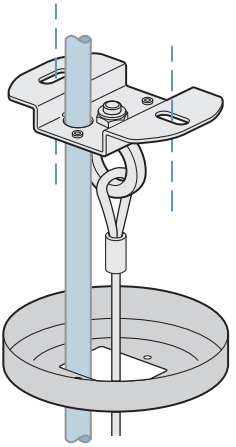
5 Attach the Unity fixture body to the new yoke:

- With assistance from a co-worker, lift up the Unity fixture body to the suspended yoke.
- Place the new yoke over the Unity fixture body and gently pull the arms of the yoke out a little so that the pivot cups can correctly mesh with the corresponding pivots of the fixture.
- Insert the large pivot bolts on each side of the yoke and use a 5/16" (8mm) Allen (hex) wrench to tighten them.



6 Complete the installation:

- Feed the power/control cord up through the rectangular hole in the cover plate, through the cord hole in the top bracket and into the ceiling space.
- Raise up the cover plate and align it with the two small holes in the underside of the top bracket.
- Insert the two small bolts removed earlier and tighten.
- Plug the power/control cord into the socket on the rear panel of the Unity fixture.
- If necessary, tilt the fixture to the required angle by loosening the pivot bolts.



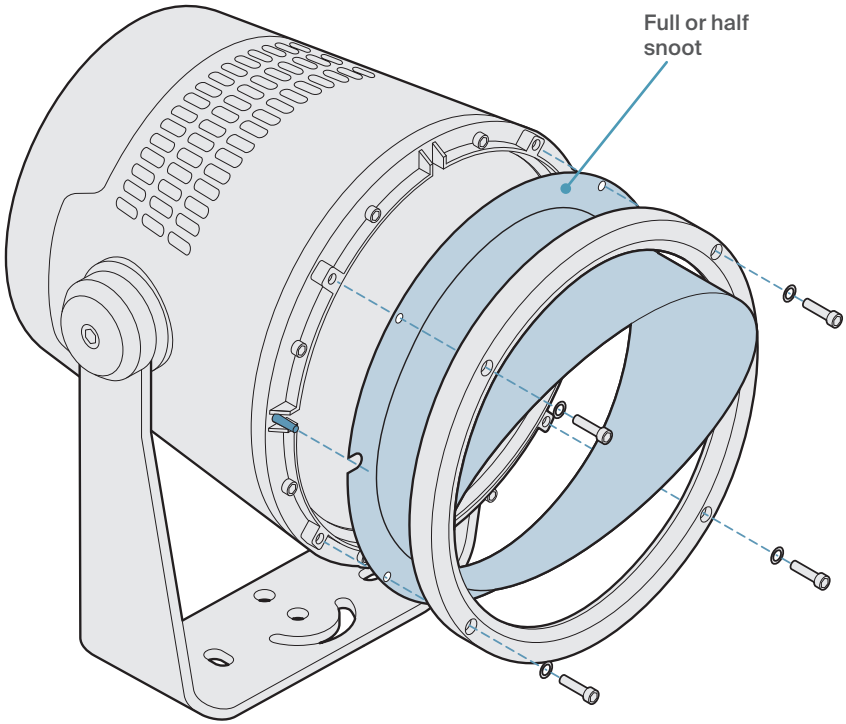
Fitting a snoot

Snoots help to reduce or eliminate light spill into unwanted areas. The full and half snoots available from Acclaim Lighting are attached to the Unity fixture in the same way.

Tip: Adding a snoot is made easier when the fixture's front face is pointing vertically upwards.

1 Use a 1/8" (3mm) Allen (hex) wrench to remove the four bolts that secure the front ring and remove the ring.

2 Remove the front ring and place the snoot onto the front of the fixture. The snoot mounting holes must align with the same threads that are used by front ring. There are also two slots either side of the snoot which must fit onto the small locating pins either side of the fixture.



3 Replace the front ring and tighten the bolts evenly.

Changing a spread lens

Spread lenses are fitted to order before delivery, however, occasionally it may be necessary to change the fitted lens. It is possible to use both a spread lens and a snoot. Fit the lens first and then add the snoot.

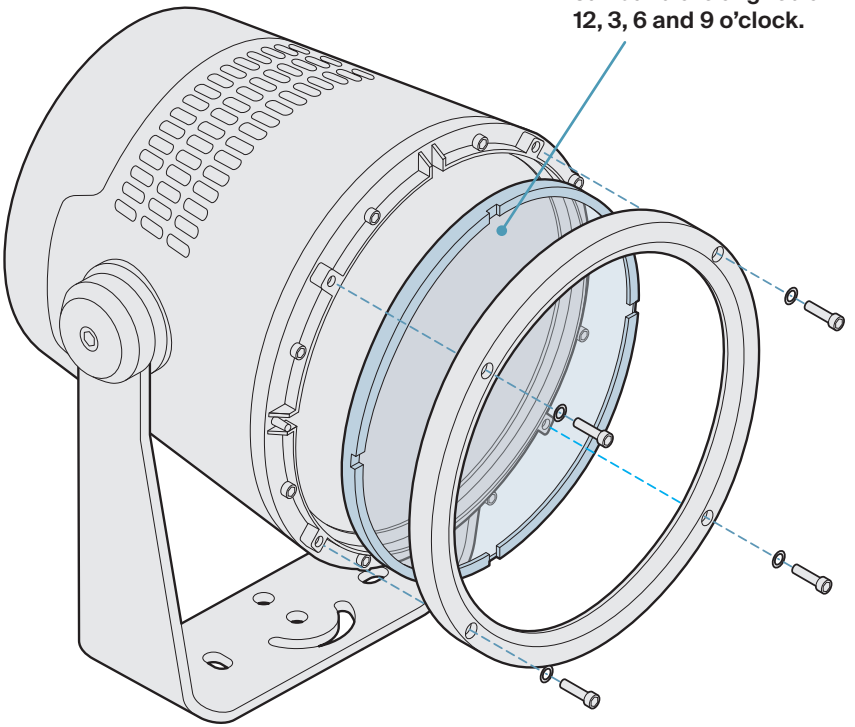
Tip: Adding accessories is much easier if the fixture's front face is pointing vertically upwards.

1 Use a 1/8" (3mm) Allen (hex) wrench to remove the four bolts that secure the front ring and remove the ring.

2 Remove the existing lens and then remove the protective films on each side of the new lens.

IMPORTANT: The frosted side of the lens must face inwards to the emitters.

Imagine the front face as a clock; ensure the four notches of the rubber surround are aligned at 12, 3, 6 and 9 o'clock.



3 Place the new lens into the inner ring of the emitter face - note the frosted side of the lens must facing inwards towards the emitters.

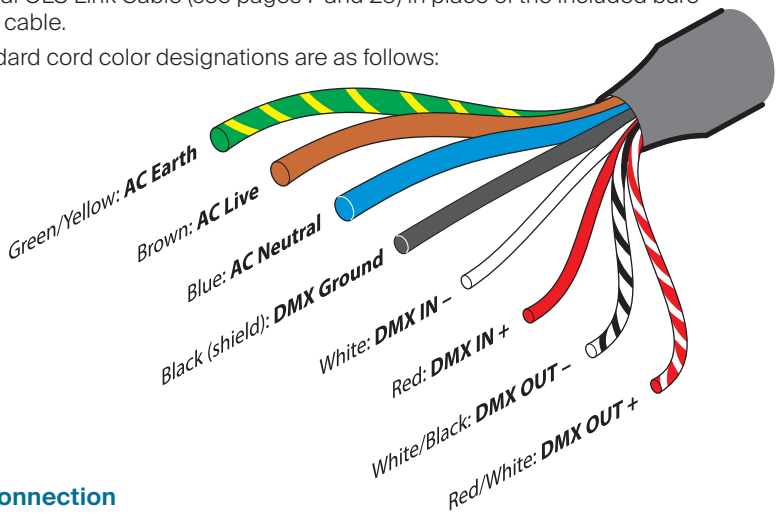
To allow water drainage, the lens' rubber surround **must face outwards** and be placed so that two of the notches are vertically aligned.

4 Replace the front ring and tighten the bolts evenly.

Power cabling

The supplied combined power and control cord (roughly 9 feet, 2.7m in length and with bare wire tails) attaches to the rear of the fixture via an IP66-rated composite connector. If you need to connect Unity to an Outdoor Link System configuration, use an optional OLS Link Cable (see pages 7 and 25) in place of the included bare wire feed cable.

The standard cord color designations are as follows:

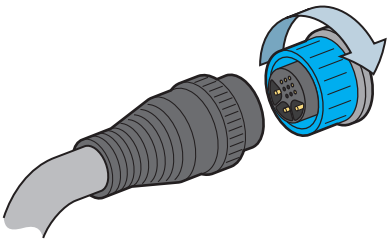


Power connection

Note: Do not connect or disconnect the cord when power is applied.

The power and control cord is attached at the rear panel via an IP66-rated composite connector. Align and push the plug in to connect. Be sure to confirm the connection is made by gently pulling the connector to ensure it has locked into place.

To disconnect: Twist and hold the blue collar while you withdraw the black connector.



Power requirements

The power requirements are as follows:

- Voltage: 100-277VAC 50/60Hz
- Power: Unity S1 - 160W, Unity H1 - 330W

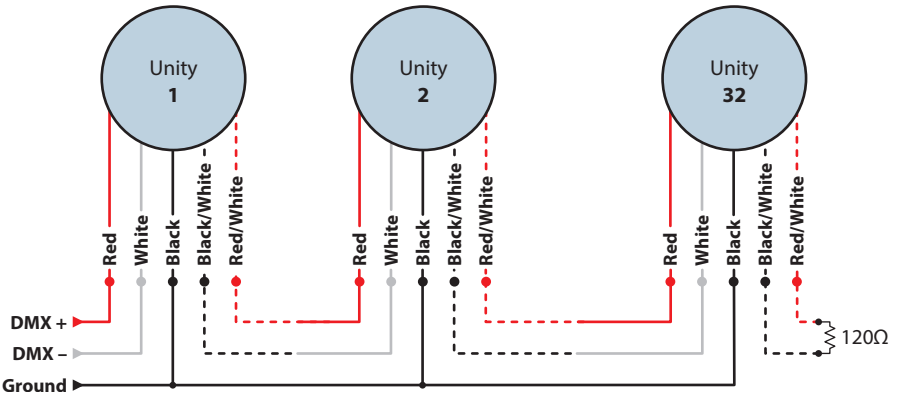
IMPORTANT: While Unity features internal surge protection, Acclaim also recommends taking proper precautions for external surge protection, as control and power electronics can be damaged by major events.

In-rush current

Although LED fixtures are low power devices compared to their incandescent equivalents, their power supplies exhibit a trait known as 'in-rush current' when they are first powered on. This is caused by the various components within the switching power supplies topping themselves up with power. The in-rush current period lasts only milliseconds and does not cause any effect when a handful of units are powered on at the exact same time. However, if many fixtures are linked to the same power input, they will momentarily pull a current that may greatly exceed their normal operating level. This may affect over-current trips when power is applied. For this reason it is advisable to limit the number of fixtures on any one power input.

Wired DMX control

When connecting multiple fixtures (not using the Outdoor Linking System) connect the DMX output of the controlling device to the input wires of the first fixture and feed the output of that fixture to the next. The final fixture in the line should have a 120Ω terminating resistor connected between its DMX + (red/white) and DMX – (black/white) output lines:



Cable selection

We recommend the following Belden signal cables:

- Indoor exposed or inside conduit above grade: .....Belden 9842
- Indoor plenum: .....Belden 82842
- Outdoor exposed, direct burial, or inside conduit below grade: Belden 3107DB

Suitable alternative cables must meet all of the following requirements:

- Construction: Shielded, twisted pair (or multi-pair).
- Impedance: Between 90 and 120Ω.
- Capacitance: 15pF or less.

General cabling requirements

Ensure that:

- The mains input is derived from a suitable overload-protected supply.
- All cable access points, plus the enclosure cover are correctly sealed.
- All local codes are followed during planning and installation.
- Only suitable cable connectors are used within the junction box.
- Connections are made, inspected and certified by a qualified electrician.

Tips for achieving successful DMX control

- Do not exceed a total cable length of 1,500 ft (457m) without buffering.
- Do not exceed a total of 32 fixtures on a single line without buffering.
- Use only connection cables with a characteristic impedance of 120Ω, preferably where the DMX + and DMX – data lines are twisted around each other and the ground link exists as a coaxial screen surrounding the inner cores.
- Connect a 120Ω terminating resistor between the DMX + and DMX – output connections of the final fixture.
- Do not introduce a passive Y-split into the control cabling. If it is necessary to split the control link in order feed fixtures located in different directions, use a powered DMX splitter/buffer.
- Ensure that the DMX + and DMX – connections do not become crossed at any point.

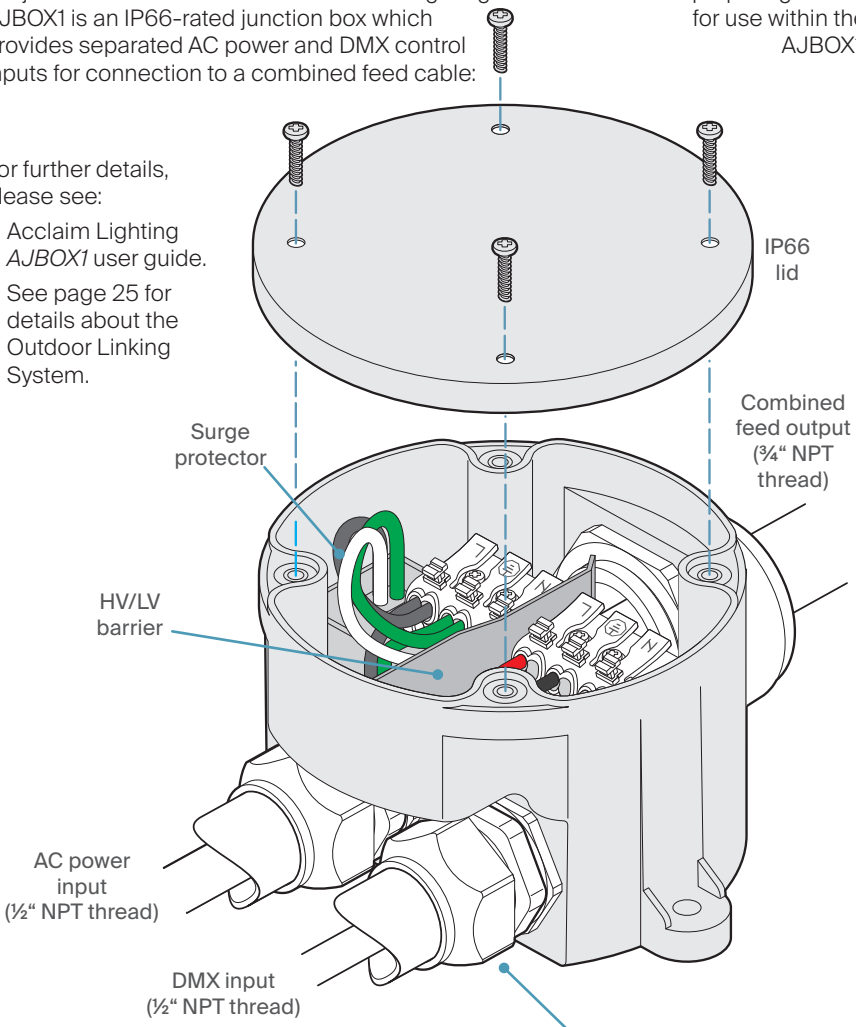
Input wiring protection (AJBOX1)

Ensure that appropriate care is taken to protect the junction where the mains and control inputs are joined to the feed cable. The Acclaim Lighting AJBOX1 is an IP66-rated junction box which provides separated AC power and DMX control inputs for connection to a combined feed cable:

See page 24 for details about preparing cables for use within the AJBOX1.

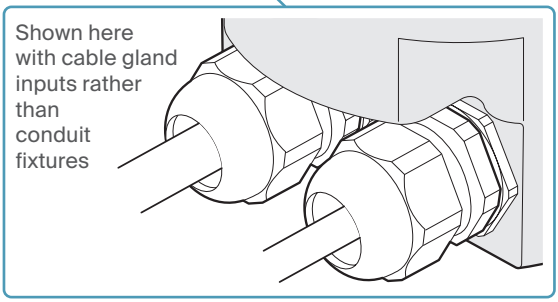
For further details, please see:

- Acclaim Lighting *AJBOX1* user guide.
- See page 25 for details about the Outdoor Linking System.



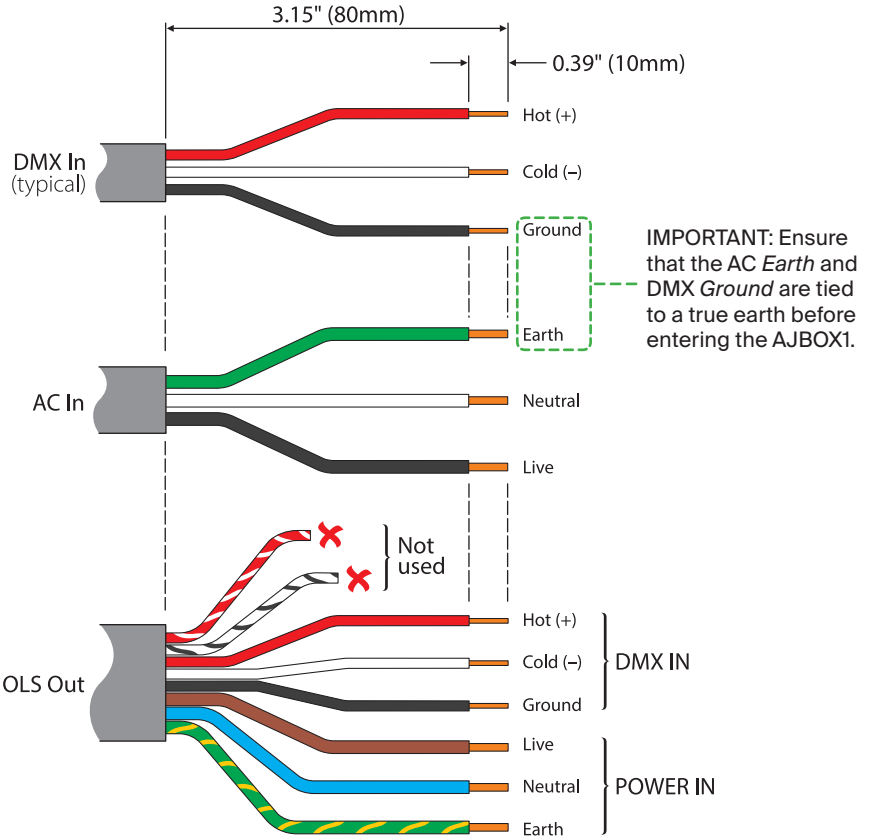
Input fixtures/glands

You will need to source 3rd-party conduit fixtures/cable glands for the inputs, as suits your installation. The large cable gland for the output is provided with the AJBOX1.



AJBOX1 FEED Cable prep

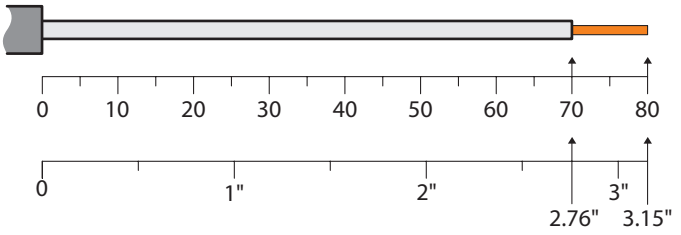
The AJBOX1 is quite compact considering the number of connections required within it. For best results we recommend that you prepare all cables in the manner shown here in order to provide just enough flexibility without filling the box with excess cable.



The DMX hot and cold out connections (red/white and white/black striped) are not used and can be trimmed. We suggest that you cut them short at slightly different lengths and ensure that no conductors are visible. Optionally, you could also cap them off. Double check that they cannot short together and are well away from the mains connections.

Cable trim ruler

When this document is printed at 100%, the gauge below is accurate to scale.

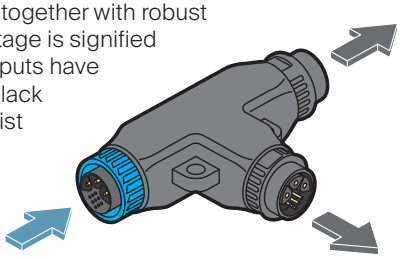


Cabling with OLS

OutdoorLink system

Unity fixtures are directly compatible with the Outdoor Link System. OLS greatly simplifies the task of distributing power and control to multiple fixtures.

OLS is a collection of feed and link cables (of various lengths) plus two styles of junction and a terminator, all utilizing IP67-rated connectors together with robust all-weather construction. The input to each stage is signified by a connector with a blue collar, while all outputs have connectors with black collars. The blue and black connectors mate quickly and easily, with a twist of the collar to lock them securely in place.



A typical configuration is shown on the next page.

For part numbers, see page 7.

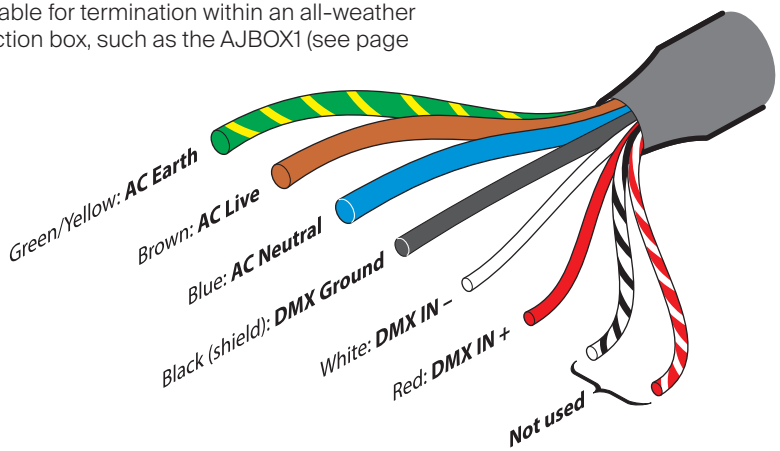
Limits

Feed current must not exceed 15A, which results in the realistic limits listed here:

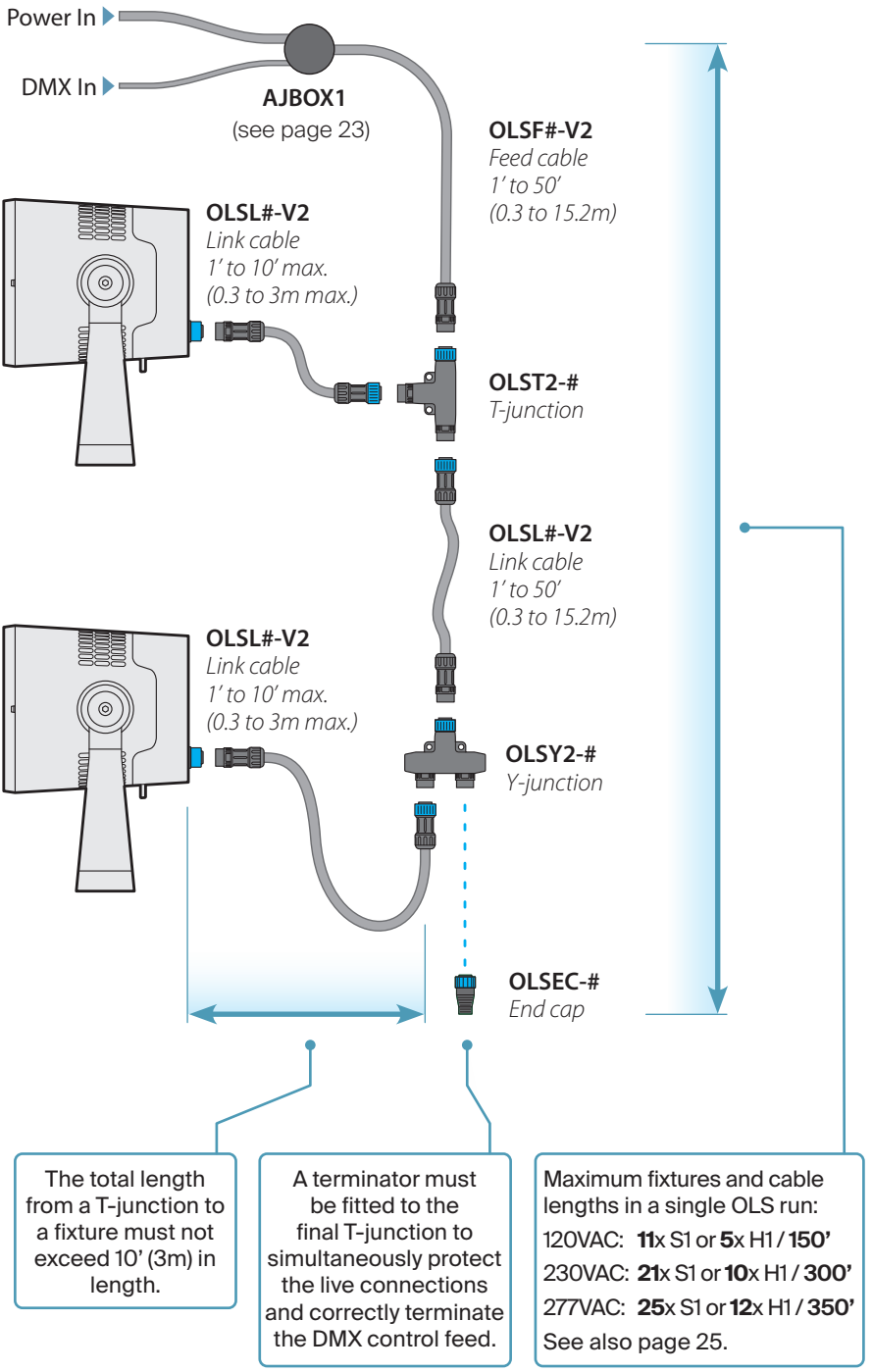
Line voltage:	**120VAC**	**230VAC**	**277VAC**
Max power:	1,800W	3,450W	4,155W
Max run length:	150'	300'	350'
Max number of fixtures:			
Unity S1	11	21	25
Unity H1	5	10	12

Feed cable connections

OLS feed cables provide bare tail connections suitable for termination within an all-weather junction box, such as the AJBOX1 (see page 23):



Typical OLS configuration



The total length from a T-junction to a fixture must not exceed 10' (3m) in length.

A terminator must be fitted to the final T-junction to simultaneously protect the live connections and correctly terminate the DMX control feed.

Maximum fixtures and cable lengths in a single OLS run:

120VAC: **11**x S1 or **5**x H1 / **150'**

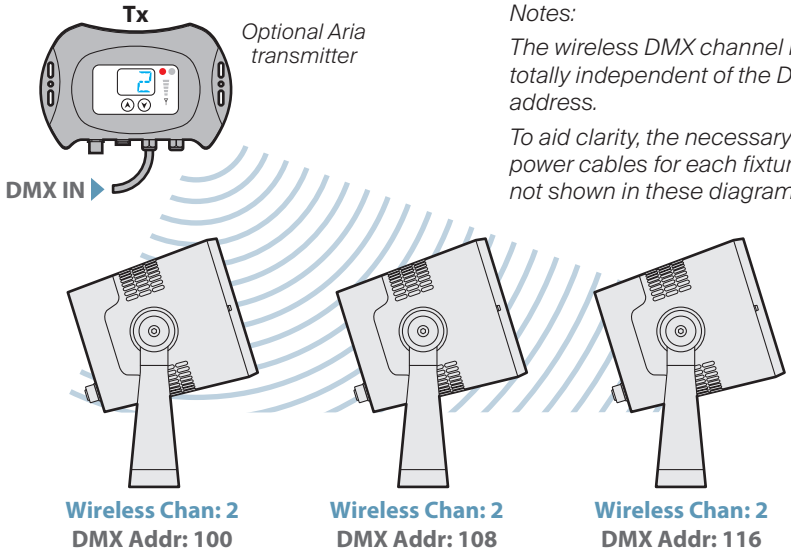
230VAC: **21**x S1 or **10**x H1 / **300'**

277VAC: **25**x S1 or **12**x H1 / **350'**

See also page 25.

Wireless DMX control

The embedded Aria™ wireless system allows you to control any number of Unity fixtures that are within range of an Aria transmitter set to use the same wireless channel:



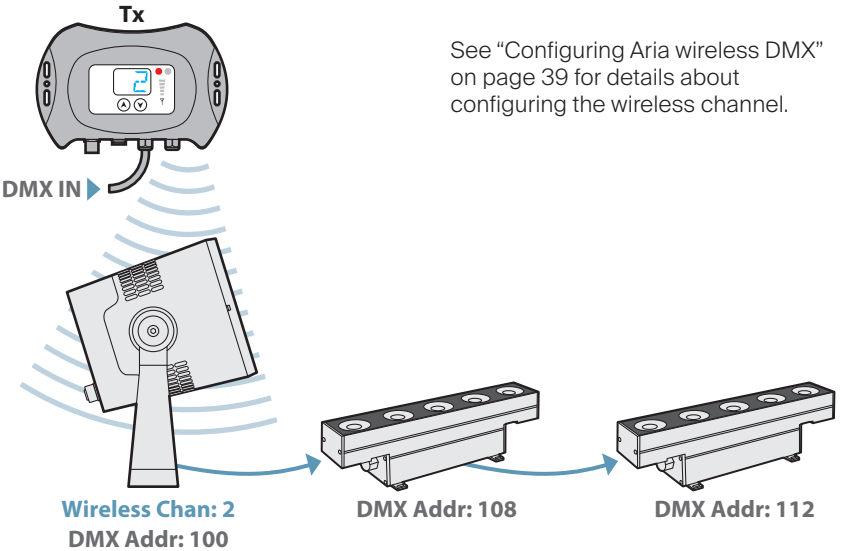
Notes:

The wireless DMX channel is totally independent of the DMX address.

To aid clarity, the necessary power cables for each fixture are not shown in these diagrams.

Using Unity as a wireless hub

When a Unity fixture receives a wireless input (and it has no wired DMX input signal), it will automatically output the full received DMX universe on its output wires. This means that you can wire through and control up to 32 non-Aria DMX fixtures (such as Pixel Graze), or more, if an active repeater is used.



See “Configuring Aria wireless DMX” on page 39 for details about configuring the wireless channel.

Non-Aria equipped fixtures (e.g. Pixel Graze)

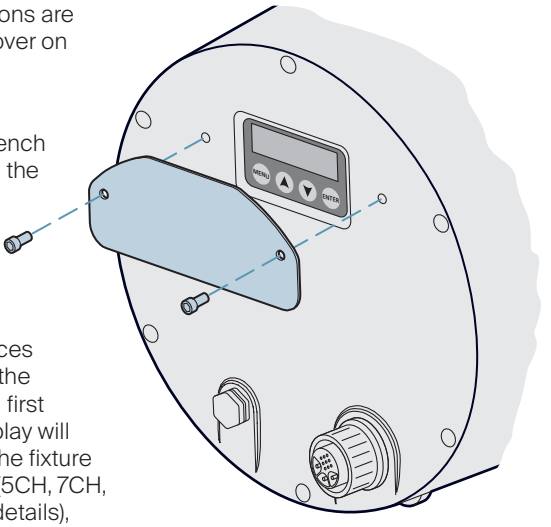
Configuration

Removing the display cover

The user display and control buttons are protected behind a removable cover on the rear panel of the Unity fixture.

To remove the display cover

- Use a 1/8" (3mm) Allen (hex) wrench to remove the two bolts holding the display cover.



Operation of the fixture commences as soon as power is applied and the user display on the rear panel will first show **ACCLAIM UNITY**. The display will then show the DMX address* of the fixture and the selected channel mode (5CH, 7CH, 10CH or 13CH - see page 32 for details), before blanking out. The fixture may or may not immediately show output from its emitters - this will depend upon the settings within the menu and/or control input.

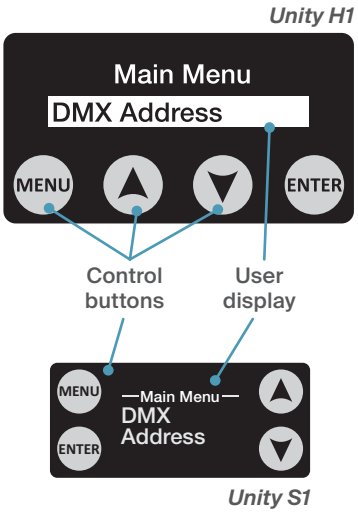
Note: The sealed control buttons use capacitive sensors similar to your smartphone screen and will not respond to touch if you are wearing gloves.

** Note: If either the Black Out or Internal Color states are active, the display will list them instead of showing the DMX address.*

Entering the menu

Press and hold the **MENU** button for roughly 7 seconds until the ***Main Menu*** entry is shown, then use the buttons to navigate the menu, as described below. The menu will automatically exit roughly six seconds after the last button press.

For a certain period after the menu has first been entered, and then exited, you will only need to tap any button to re-enter. After that period a locked symbol will be shown and you will need to once again press and hold the **MENU** button for roughly 7 seconds to unlock it.

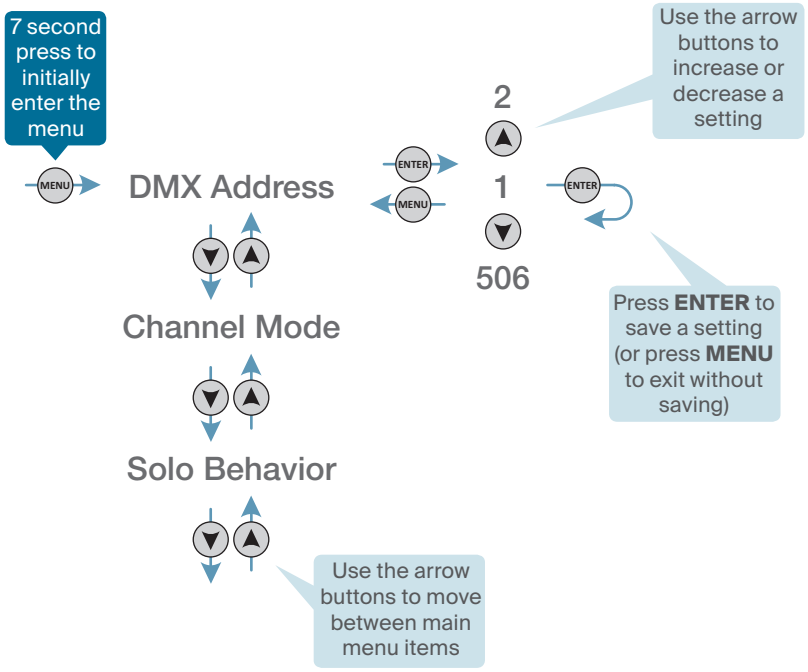


See also

- "Main menu items" on page 30

Menu navigation

Once you have entered the menu you can use the four control buttons to navigate around the menu and alter settings as necessary. The next page lists the main menu items.



Main menu items

DMX Address	Sets the DMX start address for this fixture. Depending on the channel mode, either five or seven DMX channels are required. See page 31.
Channel Mode	Determines whether 5, 7 (default), 10 or 13 DMX channels are required to control the fixture. See page 32.
Solo Behavior	Determines how the fixture should behave when there is no external control input. See page 34.
Internal Color	Allows you to create a static color mix that will be shown depending on the status of the DMX input and the setting of the Solo Behavior (and also Photocell) option. See page 34.
Photocell	Determines the configuration of the internal photocell automation features. See page 35.
Color Calibration	Allows you to disable the calibration settings that are programmed during manufacture. See page 35.
Aria Wireless DMX	Determines the configuration of the internal wireless DMX receiver. See page 39.
White Balance	Allows you to bias the intensities of any of the five emitter colors in order to achieve a particular white balance. See page 38.
System Test	Cycles through the various emitters to confirm correct operation. See page 38.
Fan Mode	Options are Auto and Quiet - the latter will limit overall output by up to 20% to reduce the need for cooling. See page 34.
Display Settings	Allows various changes to the user display, such as invert, backlight timeout, temperature units, etc. See page 37.
Frequency	Determines the base frequency used to control the LED emitters. This can be changed to eliminate visible flickering on video images. See page 36.
Gamma	Defines the relationship between the input control values and how the various LED emitters respond across their dimming ranges, from 0 to 100%. See page 36.
Fixture Information	Provides various details including the current LED temperature, usage times and firmware version. See page 31.
Factory Setting	Clears all user settings and returns all options to their default states. Also resets the DMX base address to 1. See page 31.

Setting the DMX address

When external control (wired or wireless) is used, the DMX start address of the fixture needs to match the start address being used by the controlling device. Unity uses either 5, 7, 10 or 13 DMX channels (depending on the chosen channel mode - see page 32), beginning with the one chosen here.

Notes:

- *The DMX address can also be configured via RDM, see page 40.*
- *The DMX address is completely independent of the Aria wireless radio channel setting.*
- *When a valid DMX input is attached to the Unity fixture it will override any internal color output.*

To set the DMX address

1 Enter the user menu (see page 29).

2 Press **ENTER** to choose the ***DMX Address*** menu item.

3 Use the ▼ and ▲ buttons to choose a start address from 1 to 506 (508 in 5 channel mode, 503 in 10 channel mode or 500 in 13 channel mode).

4 Press **ENTER** to save. The DMX start address is now fixed.

Returning to factory settings

This option returns the fixture to its default settings. The DMX address will be reset to 1.

To return to factory settings

1 Enter the user menu (see page 29).

2 Use the ▼ or ▲ buttons to locate the ***Factory Setting*** option and press **ENTER**. The display will show ***Reset to factory defaults***.

3 Press **ENTER**. The display will show ***Are you sure?***

4 Use the ▼ button to show ***Yes*** and press **ENTER**.

Viewing fixture information

This option contains four useful information read-outs:

- LED Temperature - shows the current temperature measured at the centre of the LED emitter face. See page 37 for details about changing the temperature read-out units between ^{O}F and ^{O}C, and also about enabling over-temperature warnings.
- Fan Speed - displays the current speed (in RPM) of the cooling fan.
- Fixture Usage (hours) - displays the total number of hours that the fixture has been powered on.
- LED Usage (hours) - displays the total number of hours that the LED emitters have been raised above 0% output.
- Firmware Version - displays the software versions for both the boot loader and the main application.

Note: All of these items are for information only, no changes are possible.

To view fixture information

1 Enter the user menu (see page 29).

2 Use the ▼ or ▲ buttons to locate the ***Fixture Information*** option and press **ENTER**.

3 Use the ▼ or ▲ buttons to locate the required read-out and press **ENTER**.

Selecting the channel mode

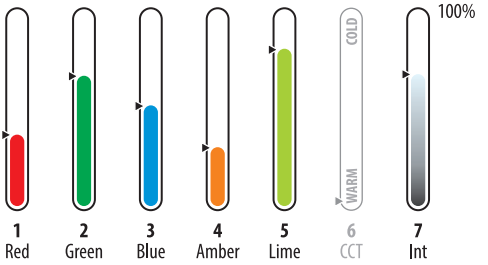
Unity fixtures provide four different channel modes to determine how received DMX input values are mapped to the various emitter colors. Two of the channel modes use 8-bit color mixing, where the level for each color (between 0 and 100%), is determined in 255 steps. Alternatively, there are two 16-bit channel modes, which offer much greater color mixing precision by using 65,535 steps to determine each level between 0 and 100%.

See “To select the Channel mode” on page 33.

Note: The channel mode can also be configured via RDM, see page 41.

7 Channel (8-bit) mode

Allows you to control the five emitter colors individually or alternatively to choose a particular color temperature of white. An intensity channel is provided.



Mixing colors individually

Use channels 1 to 5 to mix the required shade.

Use channel 7 to determine the overall output intensity.

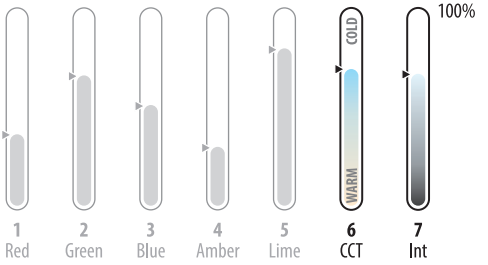
*Note: **Channel 6** must be at **zero**.*

Choosing a temperature of white

Use channel 6 to select the required correlated color temperature (CCT) ranging from 1800K (at 1%) to 8000K (at 100%).

See page 44 for a full list of color temperatures and the DMX input values required at channel 6.

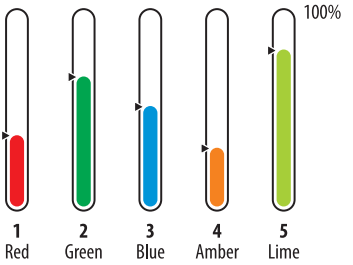
Use channel 7 to control the overall output intensity.



Note: When channel 6 receives any value other than zero, the input values of channels 1 to 5 will be ignored.

5 Channel (8-bit) mode

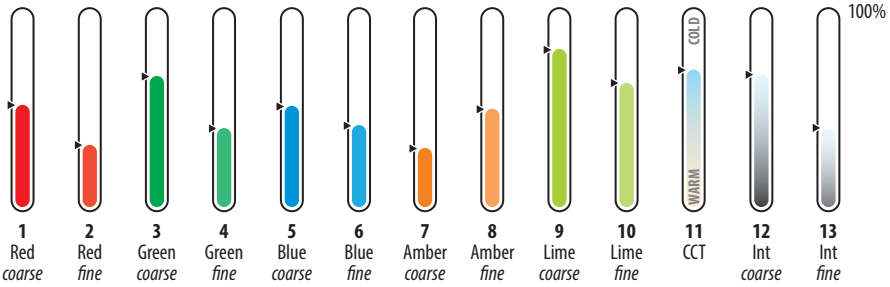
Allows you to mix the required shade using the five distinct emitter colors. No intensity channel is used.



13 Channel (16-bit) mode

Allows you to control the five emitter colors individually, using two DMX channels per color (to achieve a 16-bit value). For each color (and the intensity control), the first channel is the coarse value and the second provides the fine value. Use channels 12 and 13 to control the overall output intensity.

*Note: **Channel 11** must be at **zero** to allow color mixing. When channel 11 receives any value other than zero, the input values of channels 1 to 10 will be ignored.*

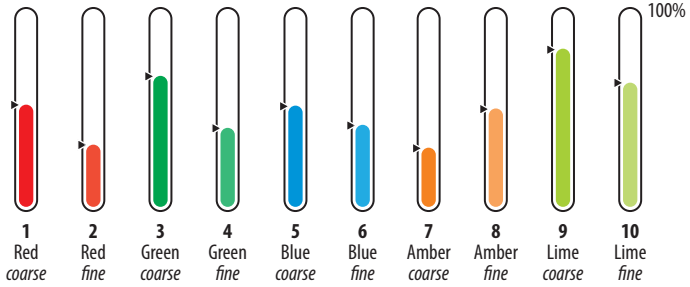


Choosing a temperature of white

Use channel 11 to select the required correlated color temperature (CCT) ranging from 1800K (at 1%) to 8000K (at 100%). See page 44 for a full list of color temperatures and the DMX input values that need to be presented at channel 11.

10 Channel (16-bit) mode

Allows you to mix the required shade using the five distinct emitter colors - each controlled by two DMX channels to achieve a 16-bit value. No intensity channels are used.



To select the Channel mode

1 Enter the user menu (see page 29).

2 Use the ▼ or ▲ buttons to locate the ***Channel Mode*** option and press **ENTER**. The currently selected mode will be shown.

3 Press **ENTER** and then use the ▼ or ▲ buttons to show the required mode: *5CH-8BIT, 7CH-8BIT, 10CH-16BIT or 13CH-16BIT*.

4 Press **ENTER** to set the displayed mode.

Determining solo behavior

You can choose how the fixture should behave when it is running solo, either because an external control input is not being used at all or because a connection has been temporarily lost.

There are three solo behavior choices:

- Black Out - In this mode, when no external control is present, the emitter output will be extinguished.
- Internal Color Mode - In this mode, when no external control is present, the fixture can be made to show a pre-programmed static color. Ensure that a color mix (or selected white) output setting is stored within the ***Internal Color*** option (see below).
- Hold Last DMX Value - In this mode, when no external control is present, the emitter output will remain as per the last received instruction.

To determine the solo behavior

1 Enter the user menu (see page 29).

2 Use the ▼ or ▲ buttons to locate the ***Solo Behavior*** option and press **ENTER**. The display will show the currently selected solo behavior mode .

3 Use the ▼ or ▲ buttons to show the required solo behavior mode and press **ENTER**.

Setting an internal color

This option allows you to mix a static color (or selected white) which will be displayed whenever the following two criteria are met:

- The ***Solo Behavior*** option is set to ***Internal Color Mode*** *(see above),* and
- There is no DMX input signal.

To set an internal color

1 Enter the user menu (see page 29).

2 Use the ▼ or ▲ buttons to locate the ***Internal Color*** option and press **ENTER**.

3 Use the ▼ or ▲ buttons to locate the required color/intensity sub-option.

4 Press **ENTER**.

5 Use the ▼ or ▲ buttons to change the dimming setting and press **ENTER**.

Tip: In 7 or 13 channel modes, the intensity level must be above zero in order to see any output.

6 Repeat steps 3 to 5 until the required overall color output is achieved.

Fan mode

The internal automated cooling fan ensures that the LED emitters and control circuitry remain safely within operational limits. Auto is the default mode and allows optimum fixture output. Selecting Quiet mode will reduce the fan speed, with a corresponding reduction in maximum output, which could be up to 20% less than in Auto mode.

To change the fan mode

1 Enter the user menu (see page 29).

2 Use the ▼ or ▲ buttons to locate the ***Fan Mode*** option and press **ENTER**. The display will show the currently selected setting .

3 Use the ▼ or ▲ buttons to change the setting and press **ENTER**.

Using the automation features (Photocell)

The fixture includes two related features which allow you to automate standalone operation:

- The built-in photocell can trigger a pre-mixed color/white output when the ambient light conditions fall below a pre-determined level.
- The auto shutoff timer determines how long the fixture should remain outputting after it has been triggered by the photocell.

For the photocell feature to successfully output a color/white mix, ensure:

- There is no external DMX signal.
- A color mix (or selected white) output setting is stored within the ***Internal Color*** option - see page 34.
- The Solo Behavior is set to ***Internal Color Mode*** - see page 34.

To configure Photocell Automation

1 Enter the user menu (see page 29).

2 Use the ▼ or ▲ buttons to locate the ***Photocell*** option and press **ENTER**. The display will show ***Photocell On/Off***.

3 Press **ENTER**. If the display shows ***Off***, use the ▼ or ▲ buttons to change the entry to ***On*** and press **ENTER**.

4 Use the ▼ or ▲ buttons to show ***Photocell Sensitivity*** and press **ENTER**. The display will show the ambient light level at which the fixture should begin outputting (***100*** is the most sensitive to light). Some experimentation will be required to determine the optimum setting (the default is 70).

5 Use the ▼ or ▲ buttons to show the required sensitivity setting (from 0 to 100) and press **ENTER**.

6 Use the ▼ or ▲ buttons to show ***Photocell Timer*** and press **ENTER**. The display will show the number of hours that the fixture is currently configured to show output, once triggered by the photocell.

7 Use the ▼ or ▲ buttons to show the required number of hours (from 1 to 24) and press **ENTER**.

Color calibration

Each Unity undergoes ColorSync calibration at our Los Angeles headquarters in order to maintain consistent color matching between fixtures when displaying the various temperatures of white in 7 or 13 channel modes. It is possible to disable the internally held calibration values with the possible result of noticeable differences in output between neighboring Unity fixtures.

To enable/disable color calibration

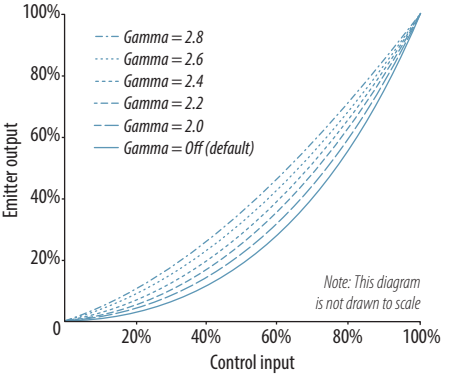
1 Enter the user menu (see page 29).

2 Use the ▼ or ▲ buttons to locate the ***Color Calibration*** option and press **ENTER**. The display will show the currently selected setting .

3 Use the ▼ or ▲ buttons to change the setting and press **ENTER**.

Adjusting the gamma setting

Like most light sources, the manner in which LED emitters operate means they exhibit a non-linear response. This means that to achieve changes in output levels which look proportional and correct to the eye (particularly on camera), it is necessary to vary the rate of change at the lower and upper ends of the dimming range in comparison to the middle. This is achieved using a dimming response curve.



As a high specification fixture, Unity provides the option to adjust the nature of the dimming response curve so that the emitters (for every color) respond differently for given control input levels. This is referred to as the *Gamma* setting. By default, the gamma setting is set to ***Off*** to produce a mild and progressive response. If the gamma setting is enabled and increased, from ***2.0*** through ***2.8***, you will notice a higher response to dimming changes, particularly at the lower end. The graph above simulates the effects upon dimming (applied equally to each channel) of choosing the various gamma setting options.

To adjust the Gamma setting

1 Enter the user menu (see page 29).

2 Use the ▼ or ▲ buttons to locate the ***Gamma*** option and press **ENTER**. The current Gamma setting will be shown.

3 Press **ENTER** and then use the ▼ or ▲ buttons to show the required gamma setting.

4 Press **ENTER** to set the new gamma value.

Adjusting the PWM frequency

As with most LED fixtures, Unity dims its emitters by using a technique called *Pulse Width Modulation (PWM)*. This involves switching the emitters on and off at a high frequency and then varying the lengths of the respective on and off periods according to the required dimming level. The frequencies used all lie beyond the ability of the naked eye to distinguish the on/off transitions, however, some camera systems can detect flickers at certain frequencies. To solve this potential issue, Unity allows you to change the default 1200Hz base PWM frequency to lower, or much higher ones that respond better to particular cameras. Options range from 900 to 25,000Hz.

Note: Setting higher refresh rates may result in reduced smoothness in dimming performance.

To adjust the PWM frequency setting

1 Enter the user menu (see page 29).

2 Use the ▼ or ▲ buttons to locate the ***Frequency*** option and press **ENTER**. The current PWM base frequency will be shown.

3 Press **ENTER** and then use the ▼ or ▲ buttons to show the required frequency.

4 Press **ENTER** to set the new value.

Changing the display settings

This option contains four settings related directly to the user display:

- Invert - allows you to invert the text on the user display so that it reads correctly when the fixture is mounted upside-down.
- Display Warning - when set to On, a warning will appear on the display if the internal temperature becomes too high, either due to the external environment or an internal issue. The message reads: ***Temperature warning - please check fixture***.

  Note: In addition to showing a warning, the fixture will protect its emitters by automatically reducing output to 50% if the maximum allowable operating temperature is exceeded. If the over-temperature condition persists for more than 10 minutes, the fixture will shut itself down.
- Temperature Unit - allows you to change between °F and °C when displaying readings in the ***Fixture Information > LED Temperature*** section.
- Display Backlight Timeout - determines whether the user display should automatically blank out when it is not being used, or should remain on permanently to allow the DMX address to be seen at all times. When set to Off, the time-out feature will be disabled and the display will not blank out.

To change display settings

1 Enter the user menu (see page 29).

2 Use the ▼ or ▲ buttons to locate the ***Display Settings*** option and press **ENTER**.

3 Use the ▼ or ▲ buttons to locate the required sub-option and press **ENTER**.

4 Use the ▼ or ▲ buttons to change the sub-option setting and press **ENTER**.

Running a system test

This option assists in testing all of the emitters. When engaged, the fixture will cycle through the individual emitter colors.

To run a system test

1 Enter the user menu (see page 29).

2 Use the ▼ or ▲ buttons to locate the ***System Test*** option and press **ENTER**. The fixture will change between emitter outputs. The user display will flash ***Testing.....*** while the test proceeds.

3 Press either the **MENU** or the **ENTER** buttons to halt the test.

Setting a white balance

White balance is a legacy feature from Acclaim Lighting Dyna Drum fixtures which allows you to 'bias' particular colors so that when the R, G, B, A and L channels are all brought up, your pre-programmed bias will achieve a desired shade of white. For example: a balanced warm white derived from a significant red output, with a moderate green output, while the other colors are scaled back.

To achieve identical white balance across a collection of fixtures, you will need to program the same settings on each Unity unit.

To set a white balance

1 Enter the user menu (see page 29).

2 Use the ▼ or ▲ buttons to locate the ***White Balance*** option and press **ENTER**. You now have access to the separate ***Red***, ***Green***, ***Blue, Amber*** and ***Lime*** options, which are all set to 255 by default.

3 Use the ▼ or ▲ buttons to choose a color and press **ENTER**.

4 Use the ▼ or ▲ buttons to reduce the chosen color from 255 down to a minimum of 125 to reduce the intensity of that color, and press **ENTER** to save.

5 Repeat step 4 for each color that needs to be biased to achieve the required balance.

To cancel a white balance

1 Enter the user menu (see page 29).

2 Select the ***White Balance*** option. In turn visit each color and ensure that they are all returned to 255.

Configuring Aria wireless DMX

Each Unity fixture includes an internal Aria™ wireless DMX receiver unit to allow it to be remotely controlled by an Acclaim Lighting Aria transmitter. Fifteen radio channels are available to choose from, allowing you to avoid potential interference sources, such as WiFi access points, and set up parallel wireless links between different sets of Aria units. Unity fixtures are shipped with the wireless system disabled and the radio channel set to 0 as standard. For more details about choosing the most suitable radio channel, see page 45.

Notes:

- *Although Aria wireless settings can be configured via RDM over a wired DMX link, the Aria wireless link itself does not support RDM (which requires 2-way communication).*
- *The Aria wireless radio channel setting is completely independent of the DMX address.*
- *If a valid wired DMX control input is applied to the fixture, it will take precedence over the Aria wireless control link.*

To configure Aria wireless DMX

1 Enter the user menu (see page 29).

2 Use the ▼ or ▲ buttons to locate the ***Aria Wireless DMX*** option and press **ENTER**. The display will show ***Wireless On/Off***.

3 Press **ENTER**. If the display shows ***Off***, use the ▼ or ▲ buttons to change the entry to ***On*** and press **ENTER**.

4 Use the ▼ or ▲ buttons to show ***Wireless Channel*** and press **ENTER**.

5 Use the ▼ or ▲ buttons to choose the required radio channel (from 0 to 14 - to match that used by the Aria transmitter) and press **ENTER**.

Note: Ensure the Aria transmitter and any other related fixtures are set to use the same wireless radio channel.

Unity configuration via RDM

The use of RDM (Remote Device Management) with the Unity series allows the following tasks to be completed remotely without having to visit each fixture:

- Configure the DMX address - see below,
- Set the channel mode - see page 41,

Various third party DMX/RDM tools are available; we recommend the XMT-500.

Configuring the DMX address via RDM

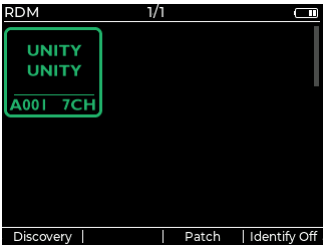
When external control (wired or wireless) is used, the DMX start address of the fixture needs to match the start address being used by the controlling device. Unity uses either five or seven DMX channels (depending on the chosen channel mode - see page 41), beginning with the one chosen here.

Note: The DMX address is completely independent of the Aria wireless channel setting.

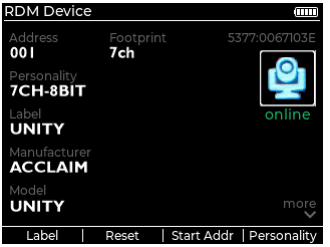
To configure the DMX address using the XMT-500

1 Connect the XMT-500 to the DMX input line of the Unity installation.

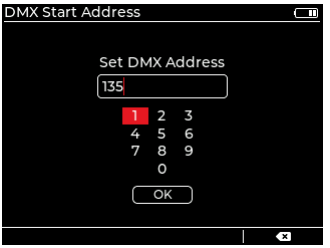
2 On the XMT-500 main menu, highlight the RDM app and press ☑ - the XMT-500 will search for RDM devices and after a short while it will display a list of all located fixtures:



3 Highlight the Unity fixture and press ☑ to view the fixture details:



4 Press the • **[Start Addr]** softkey to set the address:



- Use the arrow buttons to move the red highlight between digits.
- Press ☑ to enter a digit into the address box.
- Use the • [⌫] softkey to delete a digit.

5 When the address is complete, either long press ☑ or highlight **OK** and press ☑.

6 Press ↩ to return to the RDM app.

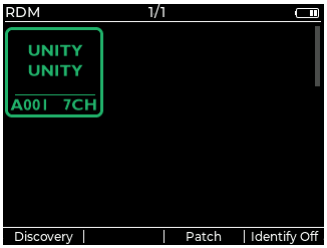
Setting the channel mode via RDM

For general information about the channel modes, see page 32.

To set the channel mode using the XMT-500

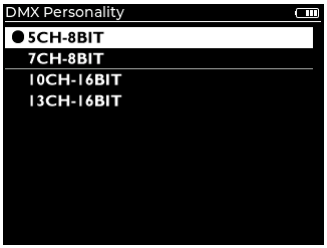
1 Connect the XMT-500 to the DMX input line of the Unity installation.

2 On the XMT-500 main menu, highlight the RDM app and press ☑ - the XMT-500 will search for RDM devices and after a short while it will display a list of all located fixtures:



3 Highlight the Unity fixture and press ☑ to view the fixture details:

4 Press the • **[Personality]** softkey:



5 Use the ⊕⊖ buttons to highlight the required channel mode and press ☑ to return to the previous page.

6 Press ↩ to return to the RDM app.

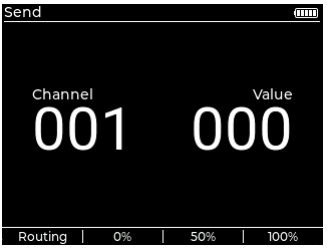
Testing emitter output via RDM

After you have addressed each Unity fixture we recommend that you also test each one. This can be achieved either using the ***System Test*** option within the internal menu (see page 38) or using your RDM (Remote Device Management) tool. Various third party DMX/RDM tools are available; we recommend the XMT-500 for this task.

To test emitter output using the XMT-500

1 Connect the XMT-500 to the DMX input line of the Unity installation.

2 On the XMT-500 main menu, highlight the Send app and press ☑:



3 Use the XMT-500 buttons to determine the values sent out to the fixture(s):

- Choose DMX channel: CH+ CH−
- Change the value: + −
- Use preset values: • **[0%] [50%] [100%]**
- View the Settings page: ⚙

Note: If you wish to send DMX values to all addresses simultaneously (rather than cycling through them individually), when the XMT-500 is showing address 001, press the left button once to change to ***ALL CHANNELS****. Now when you set the level it will affect all emitters equally.*

Further information

Troubleshooting

No light output is visible when expected

- Check that there is no damage to the power input cord and that power is correctly applied to the fixture.
- When the 7 or 13 channel modes are being used, ensure that the intensity control channel(s) (7 or 12 and 13) are above zero.
- Use the menu to perform an emitter test - see page 38.
- Use an RDM tool to perform an emitter test - page 42.
- Use the menu to check the internal temperature of the fixture - see page 31.
- If external DMX control is being used, check that the DMX address set within the fixture matches that being output by the controlling source device.
- If external DMX control is being used, check the DMX output near to the source to confirm a valid signal is being originated. When a valid DMX input is attached to Unity, the user display will show the configured DMX address.
- If external DMX control is being used, check that the DMX + (hot) and DMX - (cold) lines have not been crossed.
- If external control is not used and *Solo Behavior* is set to *Internal Color Mode* but no output is shown, check that a static color or white output has been correctly programmed into the *Internal Color* option (see page 34). Also check whether the *Photocell* feature is activated (see page 35) - if it is enabled and the ambient light level is higher than the programmed sensitivity setting, this will prevent the mixed color/white from being shown.
- If Aria wireless DMX control is being used, check that the fixture is set to the same wireless channel as the transmitter (the wireless channel is independent of the DMX address). Try changing the transmitter and receiving fixture(s) to different (but equal) wireless channels to check for clear space in the radio spectrum from interference by other devices, such as WiFi.

output appearance is not as expected

- Flickering is noticeable when viewed on camera. Adjust the *Frequency* setting to use a dimming frequency that does not clash with the camera operation - see page 36.
- Results do not appear to be correct when selecting temperatures of white in 7 channel mode. Check that the *Color Calibration* is set to on - see page 35.
- Responses to color mixing/dimming changes do not match other types of fixtures within the same installation. Try selecting one of the alternative *Gamma* settings built into the Unity fixture - see page 36.

Dimming and/or chase changes are jerky when using Aria

- Check for WiFi sources near to the transmitter or receiver devices. Try changing the transmitter and receiving fixture(s) to different (but equal) wireless channels to check for clear space, from interference by other devices, in the radio spectrum - see pages 45 and 46.

Correlated color temperature selection

This chart lists the DMX values which must be presented in order to achieve an output with a particular correlated color temperature (CCT) of white. In 7 Channel (8-bit) mode [7CH-8BIT], CCT is determined by the value presented at channel **6**; in 13 Channel (16-bit) mode [13CH-16BIT], CCT is determined by the value presented at channel **11**.

Note: Unity must either be in the [7CH-8BIT] or [13CH-16BIT] modes to use CCT selection - see "Selecting the channel mode" on page 32.

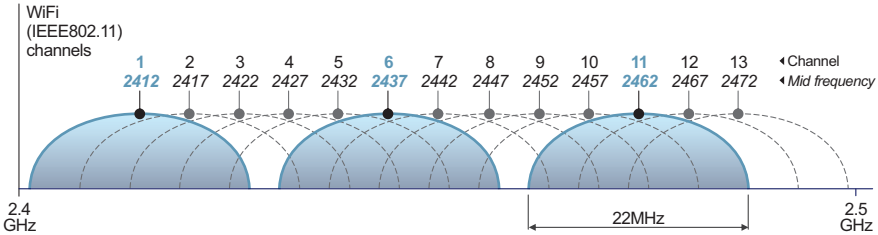
DMX input value	Color temperature
0	Off
001-002	1800K
003-004	2200K
005-008	2500K
009-013	2600K
014-017	2700K
018-022	2800K
023-026	2900K
027-031	3000K
032-035	3100K
036-040	3200K
041-044	3300K
045-049	3400K
050-053	3500K
054-058	3600K
059-062	3700K
063-067	3800K
068-071	3900K
072-076	4000K
077-080	4100K
081-085	4200K
086-089	4300K
090-094	4400K
095-098	4500K
099-103	4600K
104-107	4700K
108-112	4800K
113-116	4900K
117-121	5000K
122-125	5100K

DMX input value	Color temperature
126-130	5200K
131-134	5300K
135-139	5400K
140-143	5500K
144-148	5600K
149-152	5700K
153-157	5800K
158-161	5900K
162-166	6000K
167-170	6100K
171-175	6200K
176-179	6300K
180-184	6400K
185-188	6500K
189-193	6600K
194-197	6700K
198-202	6800K
203-206	6900K
207-211	7000K
212-215	7100K
216-220	7200K
221-224	7300K
225-229	7400K
230-233	7500K
234-238	7600K
239-242	7700K
243-247	7800K
248-251	7900K
252-255	8000K

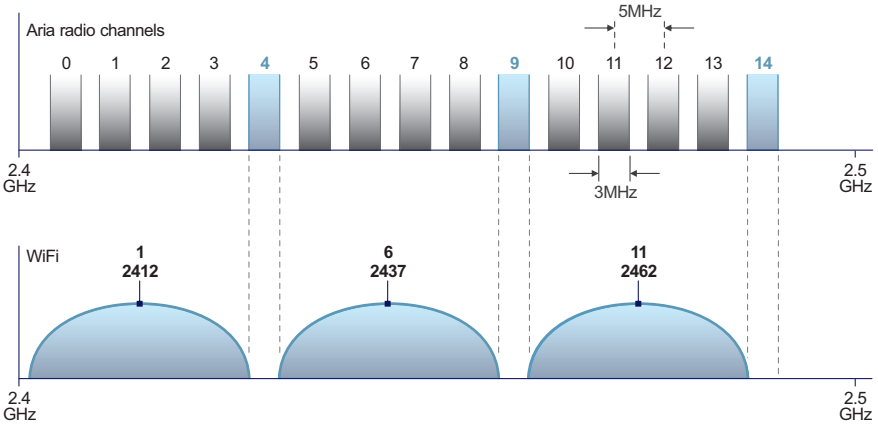
Optimizing signal strength via channel selection

Aria™ wireless transceivers use radio frequencies contained within the Industrial Scientific and Medical (ISM) band, which runs between 2.4GHz and 2.5GHz. As one of the few license-free radio bands agreed upon in most countries, many other devices also use this band, most notably WiFi. Aria units use the ISM band in a different manner than WiFi and the two can coexist. However, where distances between Aria units are great and WiFi access points are reasonably close, then interference can become an issue. See “Choosing the right location” on page 46.

WiFi uses the IEEE802.11 standard, which divides the ISM band into 13 (sometimes 14) channels, each of which is 22MHz wide. However, the channels overlap and so cannot all be used simultaneously. Hence, most WiFi access points settle upon channels 1, 6 and 11 to avoid any overlap:



Aria uses the IEEE802.15.4 standard, with channels that are 3MHz in width and not overlapping. Many Aria channels do, however, coincide with the common WiFi channels. The notable exceptions are Aria channels 4, 9 and 14, which fall into the gaps between the most commonly used WiFi channels:



Before installing Aria wireless devices, such as Unity, we strongly recommend you carry out a radio spectrum survey to determine any potential sources of temporary or permanent interference issues.

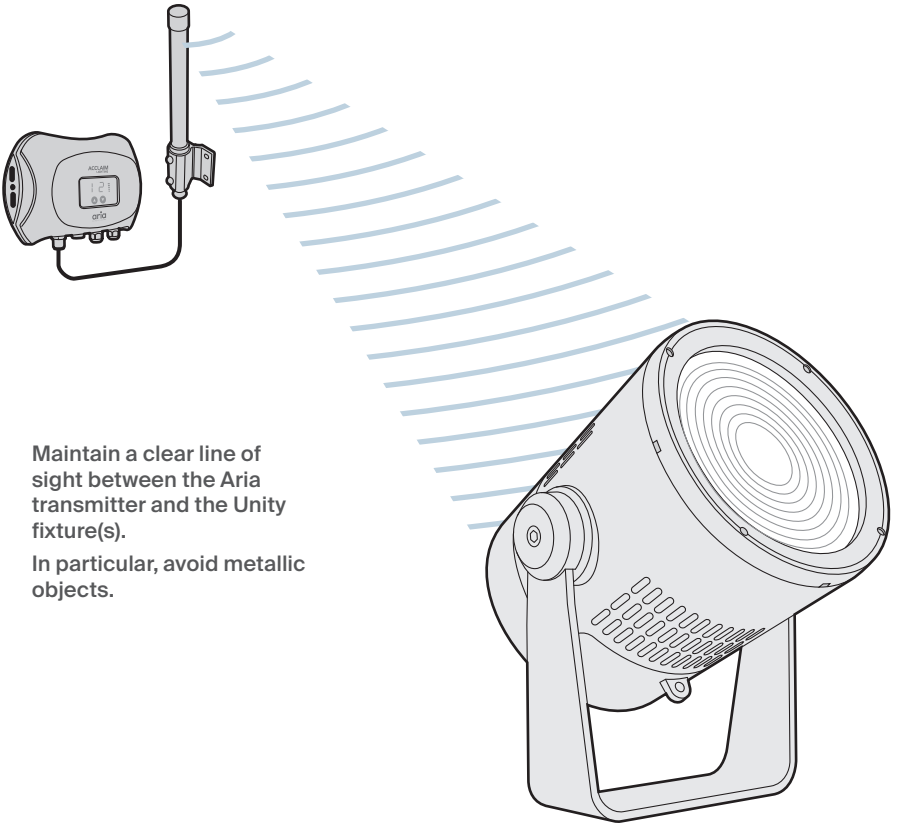
If you have control over the nearest WiFi access points, it is suggested that you lock them down to one or more of the common channels (to prevent them from roaming) and select radio channels that sit comfortably alongside.

Note: The Aria channel notations (0 to 14) are directly equivalent to the IEEE802.15.4 channels 11 to 25, inclusive.

Choosing the right location

Your choice of installation locations for your Aria transmitter(s) and Unity fixture(s) can have a significant effect on their range and speed of communication.

- Avoid installing either the Aria transmitter or the Unity fixtures(s) near to metallic objects.
- Maintain a clear 'line of sight' path between the Aria transmitter and the Unity fixture(s).



Maintain a clear line of sight between the Aria transmitter and the Unity fixture(s).

In particular, avoid metallic objects.

Interference created by objects

The composition of nearby objects can have a significant impact on the quality of the RF signal. Here are a few examples:

- Standard drywall does not present much of an issue to the 2.4GHz wireless spectrum. However, things inside or attached to the drywall, such as copper pipe, electrical conduit, and circuit breaker panels, will partially block RF signal propagation.
- Hollow cement block walls will dampen the RF signal.
- Reinforced concrete walls typically contain rebar that will contribute to significant RF signal strength loss.
- Large metal structures such as metal cabinets, HVAC units, machinery, brew kettles, etc. may partially or completely block the RF signal.

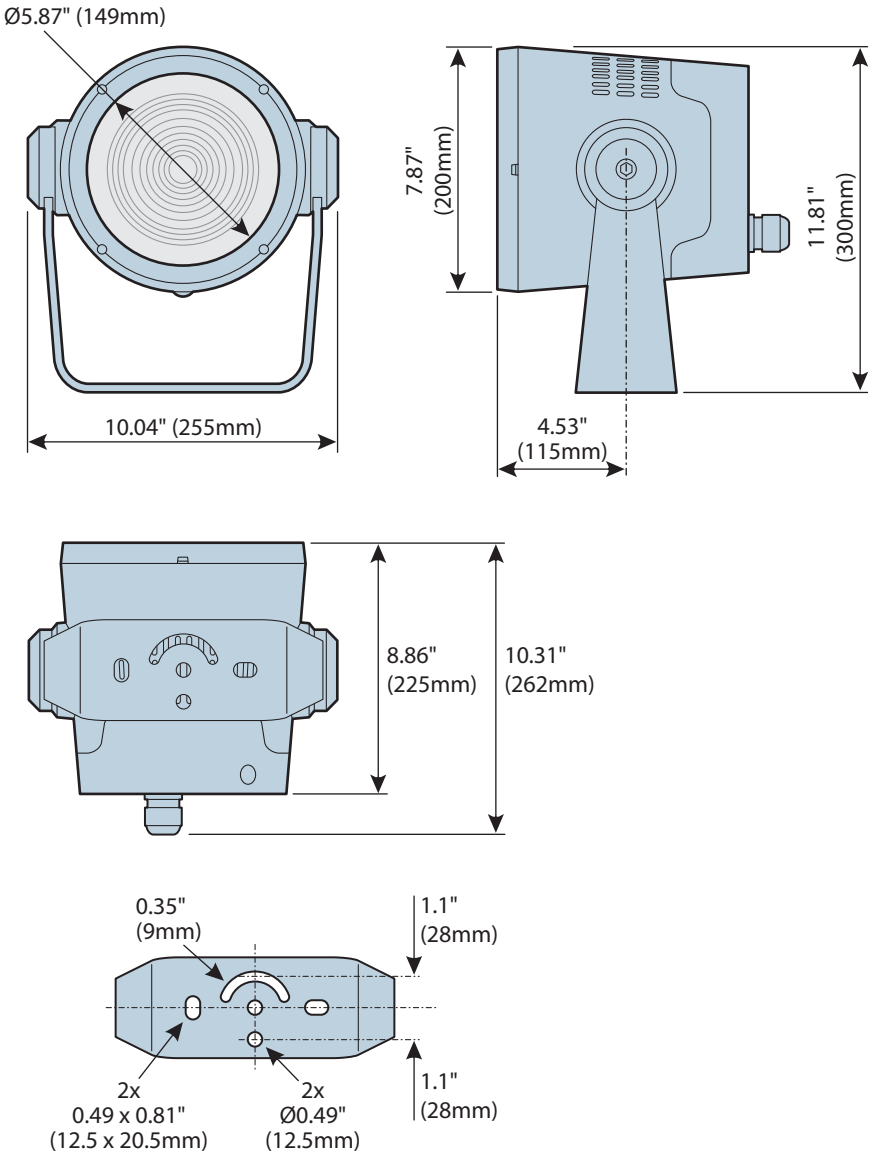
Specifications

Colors	Spectrum Five technology: Red, Green, Blue, Amber and Lime Color temperatures of white selectable from 1800K to 8000K
Beam angle options	10° native, other beam angles via optional spread lenses: 10° x 60°, 20° x 20°, 30° x 30°, 30° x 60°, 40° x 40°, 50° x 50°, 80° x 80°, 100° x 100°
Lumen maintenance	L_{70} 100,000 hours (@ 25°C)
Control	Wired DMX with RDM, plus built-in Aria Wireless DMX
Max fixtures in series	32 via wired DMX. Power local to each fixture or use Acclaim's Outdoor Link System (power limits apply - see page 25).
Operating voltage	100-277VAC, 50/60Hz
Power consumption	Unity S1: 160W, Unity H1: 330W
Connection	9' (2.7m) NEC-compliant hybrid cable with bare tails, attached via composite connector (IP66), AC power plus DMX/RDM
Finish	Gray (RAL 7047), black (RAL 9005), white (RAL 9003) or custom colors (provide RAL #)
Effective projected area	Unity S1: 1.16 ft^2, Unity H1: 1.38 ft^2
Material	Die cast aluminum with a glass lens Optional marine environment coating available
Ingress protection	IP66, wet location
Impact protection	IK07, protection against 2 joule impact (40cm distance)
Vibration protection	ANSI C136.31, 3G-rated for high vibration and bridge applications
Operating temperature	-40° F to 125° F (-40° C to 51° C)
Weight	Unity S1: 19.4 lbs/8.8 kg, Unity H1: 26.9 lbs/12.2 kg
Certifications	Intertek, CE, FC, UK CA, 3G LUMINAIRE VIBRATION

Release 3.1b

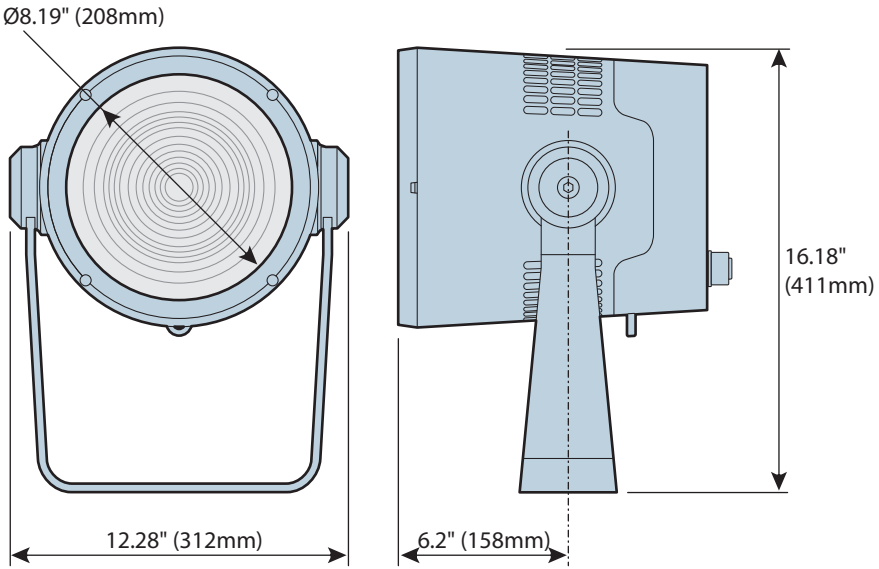
Dimensions

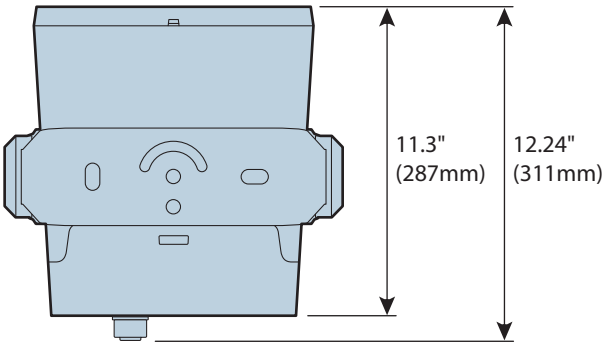
Unity S1

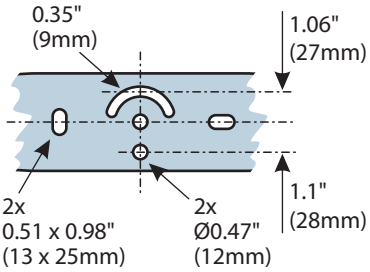


Dimensions

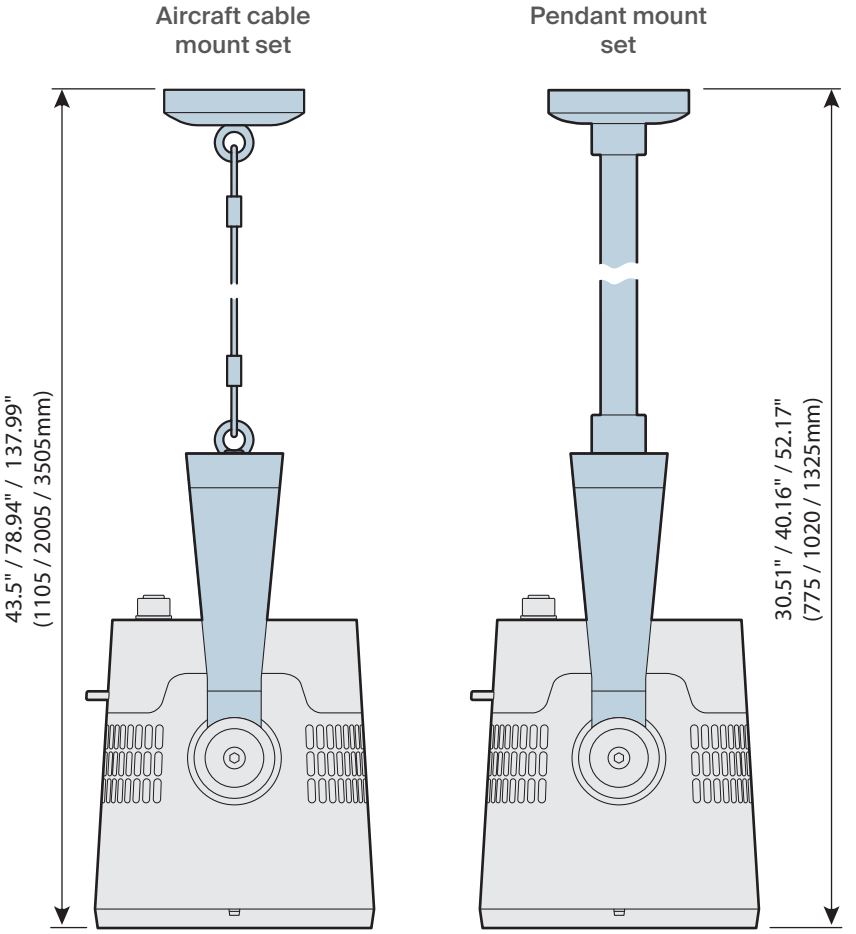
Unity H1





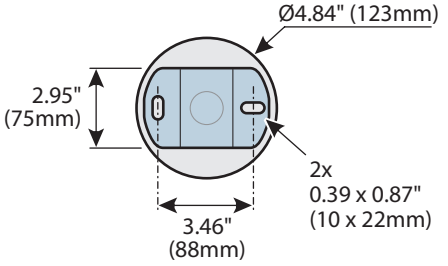


Dimensions (continued)



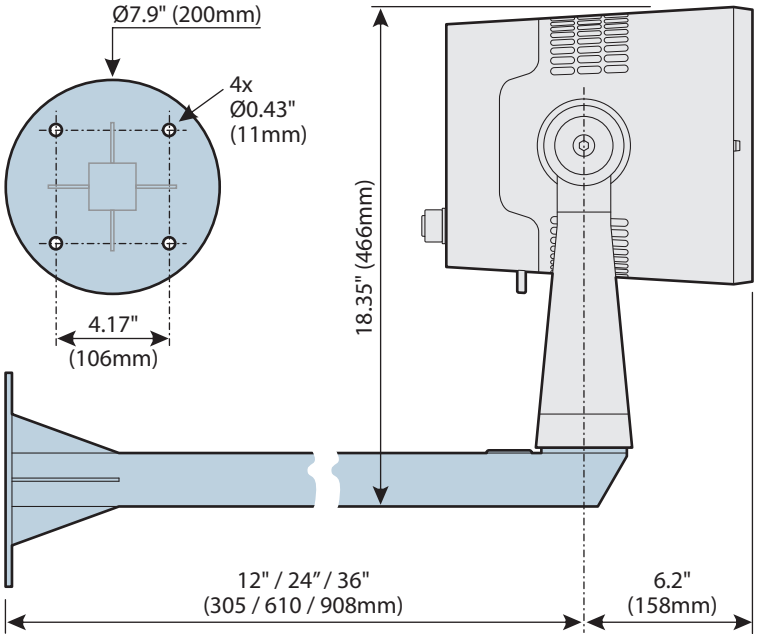
Note: Dimensions shown with Unity H1

Top bracket (both mount types)



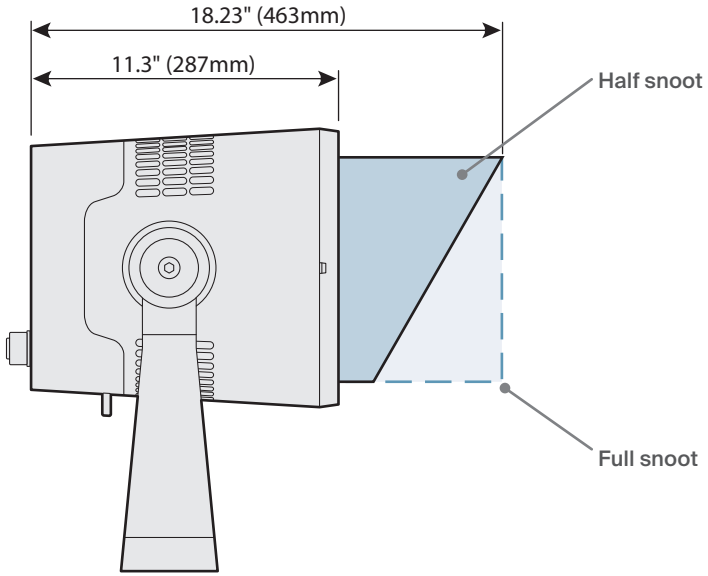
Dimensions (continued)

Extender arms



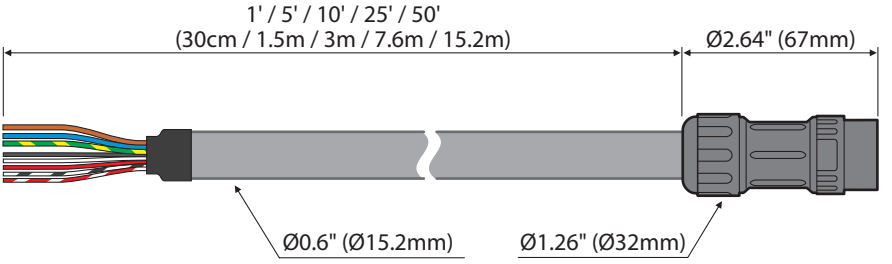
Note: Dimensions shown with Unity H1

Snoots

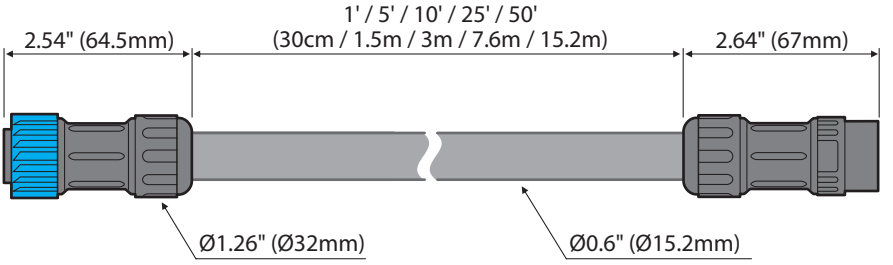


Dimensions (continued)

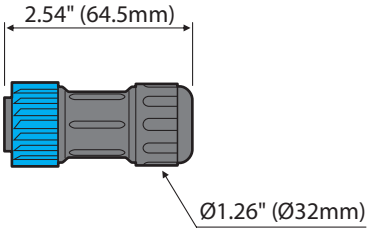
Link cable



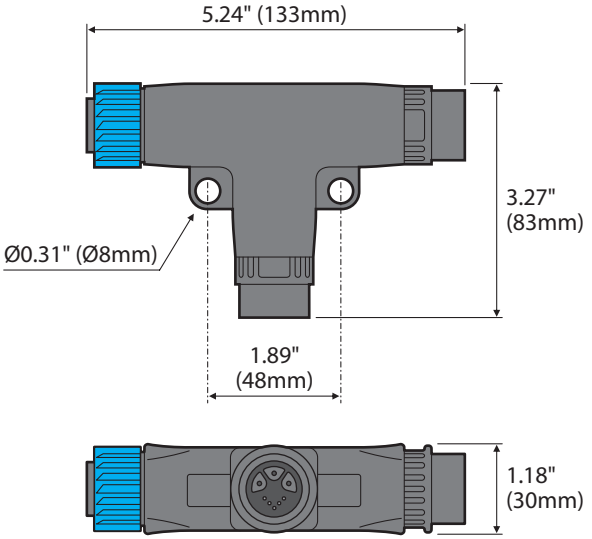
Link cable



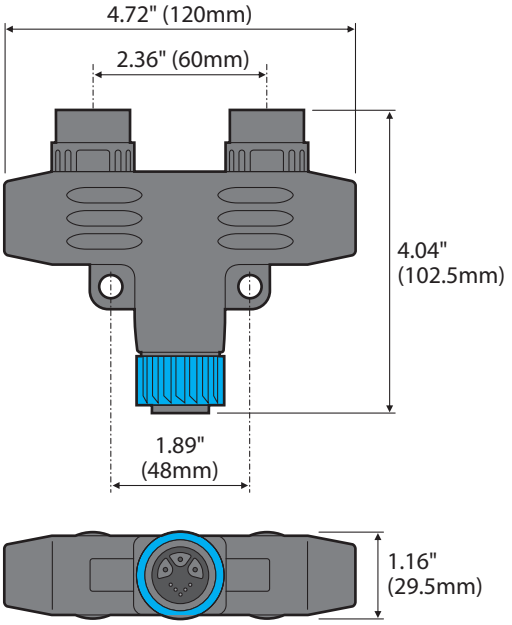
End cap with DMX termination

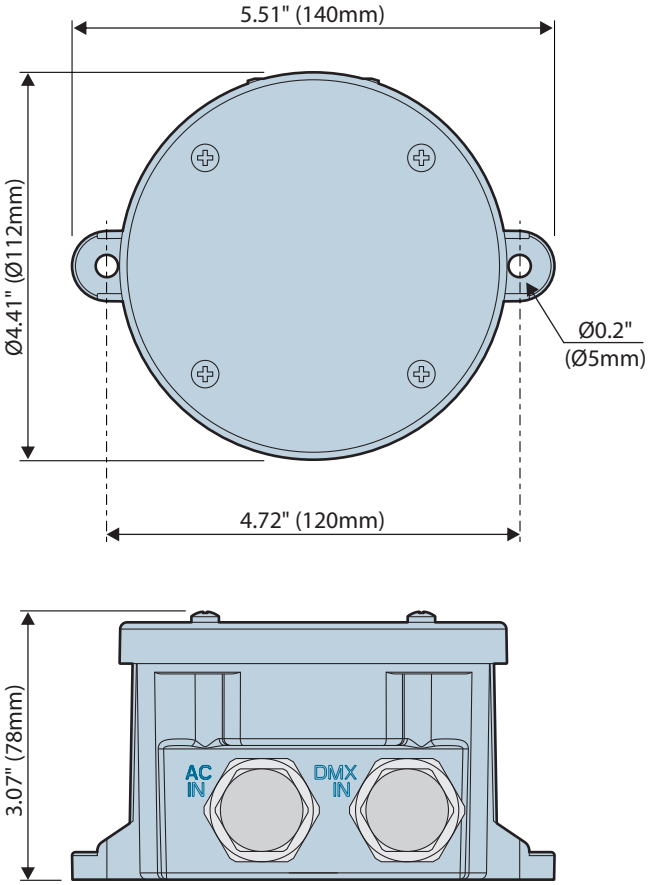


T-Junction



Y-Junction




5.51" (140mm)
Ø4.41" (Ø112mm)
Ø0.2"
(Ø5mm)
4.72" (120mm)
3.07" (78mm)
AC
IN
DMX
IN

FCC approval

This device complies with Part 15 of the FCC Rules.

Acclaim Lighting LLC
6122 S. Eastern Ave.
Los Angeles, CA 90040

This equipment has been tested and found to comply with the limits for a Consumer ISM equipment, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

Model Number: SNS2019

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

However, there is no guarantee that interference will not occur in a particular installation. Please note that changes or modifications of this product is not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on. the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio / TV technician for help.

Limited product warranty

A. Acclaim Lighting™ hereby warrants, to the original purchaser, Acclaim Lighting finished products to be free of manufacturing defects in material and workmanship for a standard period of:

- Fixtures: 5 Years (1,825 days) from the date of purchase.
- Drivers, power supplies and accessories: 5 Years (1,825 days) from the date of purchase.
- Flex Products: 3 Years (1,095 days) from the date of purchase.
- Controllers: 2 Years (730 days) from the date of purchase.

It is the owner's responsibility to establish the date and place of purchase and warranty terms by acceptable evidence, at the time service is sought.

B. For warranty service, send the product only to the Acclaim factory. All shipping charges must be pre-paid. If the requested repairs or service (including parts replacement) are within the terms of this warranty, Acclaim Lighting will pay return shipping charges only to a designated point within the United States. If the entire instrument is sent, it must be shipped in its original package. No accessories should be shipped with the product. If any accessories are shipped with the product, Acclaim Lighting shall have no liability whatsoever for loss of or damage to any such accessories, nor for the safe return there of. Acclaim reserves the right to replace the item with same or similar product at its discretion.

C. This warranty is void if the serial number has been altered or removed; if the product is modified in any manner which Acclaim concludes, after inspection, affects the reliability of the product; if the product has been repaired or serviced by anyone other than the Acclaim Lighting factory unless prior written authorization was issued to purchaser by Acclaim Lighting; if the product is damaged because not properly maintained as set forth in the instruction manual.

D. This is not a service contract, and this warranty does not include maintenance, cleaning or periodic check-up nor do we guarantee as part of this warranty any lumen performance during period. Parts not covered by this warranty include: fuses, external power supplies, third party items not manufactures by Acclaim lighting. During the period specified above, Acclaim Lighting will replace defective parts at its expense, and will absorb all expenses for warranty service and repair labor by reason of defects in material or workmanship. The sole responsibility of Acclaim Lighting under this warranty shall be limited to the repair of the product, or replacement thereof, including parts, at the sole discretion of Acclaim Lighting. At no time will installation or re-installation or products labor or liability costs will be assumed by Acclaim Lighting. All products covered by this warranty were manufactured after January 1, 2012, and bear identifying serial number marks to that effect.

E. Acclaim Lighting reserves the right to make changes in design and/or improvements upon its products without any obligation to include these changes in any products theretofore manufactured No warranty, whether expressed or implied, is given or made with respect to any accessory supplied with products describe above. Except to the extent prohibited by applicable law, all implied warranties made by Acclaim Lighting in connection with this product, including warranties of merchantability or fitness, are limited in duration to the warranty period set forth above. And no warranties, whether expressed or implied, including warranties of merchantability or fitness, shall apply to this product after said period has expired.

F. Marine or extreme weather location applications using Acclaim lighting products are subject to a 2 year limited warranty and Acclaim must be notified prior to delivery of units for such applications so that preventative treatment can be made to the products to ensure proper performance and product life with a special marine code coating / sealing process at an additional cost.

G. The consumer's and or dealer's sole remedy shall be such repair or replacement as is expressly provide above; and under no circumstances shall Acclaim Lighting be liable for any loss or damage, direct or consequential, arising out of the use of, or inability to use, this product. This warranty is the only written warranty applicable to Acclaim Lighting products and supersedes all prior warranties and written descriptions of warranty terms and conditions heretofore published.

www.acclaimlighting.com