

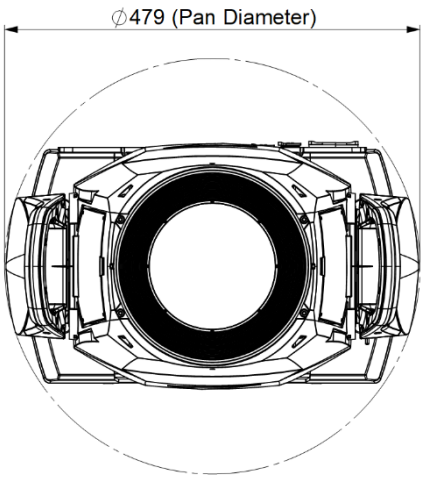
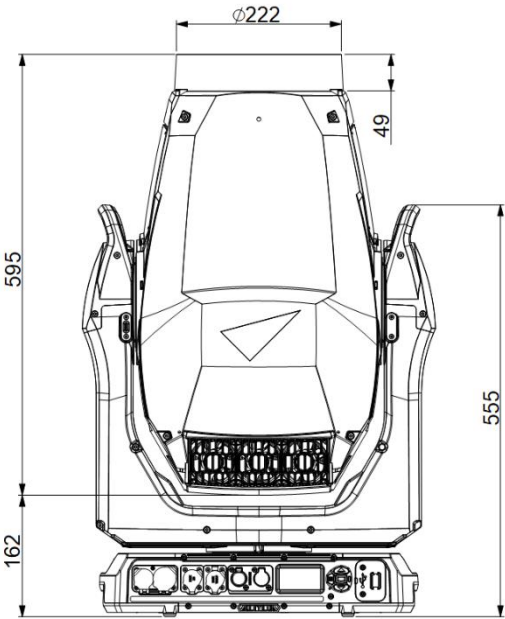
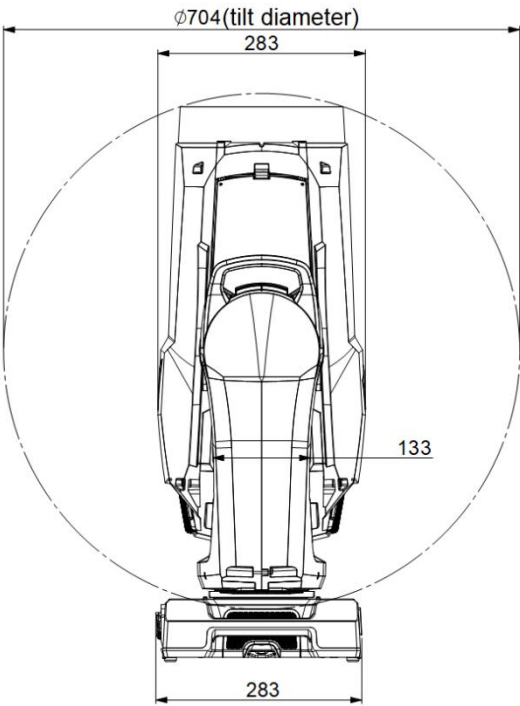
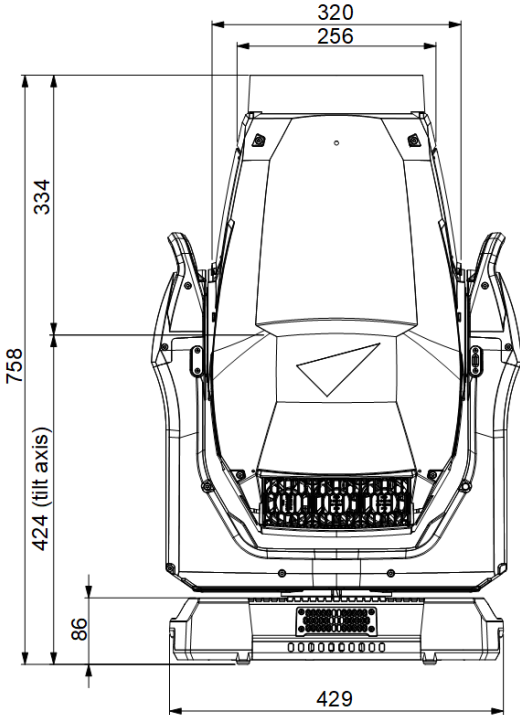
# **MAC Viper XIP**

## **Safety and Installation Manual**



**Martin**<sup>®</sup>

# Dimensions



All dimensions are in millimeters

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MAC Viper XIP Safety and Installation Manual, English, P/N 5145649-00 Revision A

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# Safety information



## WARNING!

**Read the safety precautions in this manual before installing, powering, operating or servicing this product.**

The following symbols are used to identify important safety information on the product and in this manual:



**Warning!**

***Safety hazard.  
Risk of severe  
injury or death.***



**Warning!**

***Hazardous  
voltage. Risk  
of lethal or  
severe electric  
shock.***



**Warning!**

***Fire hazard.***



**Warning!**

***Burn hazard.  
Hot surface.  
Do not touch.***



**Warning!**

***Intense light  
emission.***



**Warning!**

***See user  
documentation.***



Warning! Risk Group 3 product according to EN 62471 and Risk Group 2 product according to EN 62471, IEC/TR 62778 (see “Protection from eye injury” on page 8 for full details).

Possibly hazardous radiation emitted from this product. May be harmful to the eyes. Do not stare directly into the light output from the product. Position the product so that prolonged staring into the product at a distance closer than 56 m (184 ft.) is not expected. Do not view the light output with optical instruments or any device that may concentrate the beam.



The MAC Viper XIP lighting fixture presents risks of severe injury or death due to fire and burn hazards, electric shock and falls if the safety precautions in this manual are not followed.



You may carry out external cleaning and service as described in the fixture’s user documentation, following the warnings and instructions provided, but any service operation not described in this Safety and Installation manual or in the fixture’s User Manual must be referred to an authorized Martin service technician.

The MAC Viper XIP is for professional use as a stage light only. It is not for household or general lighting applications. Respect all locally applicable laws, codes and regulations when installing, powering, operating or servicing the fixture.

Ensure that the installation complies with the provisions of ANSI/ESTA E1.58-2017. This standard gives important information on the temporary use of stage and studio lighting equipment outdoors that is supervised by qualified personnel while energized and inaccessible to the general public in the USA as referred to by NFPA 70 article 520.10. Touring shows in Canada must obtain a permit from the relevant authority before the first performance. Respect national and local regulations at all times.

The light source contained in this fixture must be replaced by Martin® Service or an authorized Martin Service partner only.



Install, operate and service Martin products only as directed in their user documentation, or you may create a safety hazard or cause damage that is not covered by product warranties.

Read this manual before installing, powering, operating or servicing the fixture. Follow the safety precautions and observe all warnings in this Safety and Installation Manual, in the fixture’s User Manual, and printed on the fixture.

The latest versions of this Safety and Installation Manual and the fixture's User Manual are available for download from the MAC Viper XIP area of the Martin website at [www.martin.com](http://www.martin.com). Before you install, operate or service the fixture, check the Martin website and make sure that you have the latest user documentation for the fixture. Document revisions are indicated at the bottom of page 2.

### Technical Support

If you have questions about how to install or operate the fixture safely, please contact Harman Professional Technical support:

- For technical support in North America, please contact  
*HProTechSupportUSA@harman.com*  
*Phone: (844) 776-4899*
- For technical support outside North America, please contact your national distributor.



### Protection from electric shock

The fixture has an ingress protection rating of IP54 that is applicable in EN/IEC regions (Europe and other countries). It has a 'Damp locations' rating that is applicable in the USA and Canada. Damp locations are considered to be partially protected locations under stage and event canopies, marquees, tents, roofed open bars and similar locations.

An IP54 rating means that a fixture can withstand rain, splashing water, condensation etc. but not high-pressure water jets. The fixture is designed to be used under any weather conditions, but it must not be exposed to an artificially high volume of water (in a fountain, waterfall or shower, for example). The most extreme rain ever recorded had a volume of 400 mm / 16 inches per hour. The fixture is designed to withstand such a condition. A fountain, waterfall or shower can create a much bigger volume of water (up to 15 000 mm / 50 feet per hour). The fixture is not designed to withstand conditions like these.

Do not immerse the fixture in water.

Shut down power to the fixture immediately if extreme conditions such as flooding arise.

Do not expose the fixture to high-pressure water jets.

The fixture is designed for temporary outdoor installation only. Installing it permanently in an outdoor location could cause accelerated aging that would potentially affect its IP54 rating. This would create a potential safety hazard and a risk of damage. Do not use the fixture for permanent outdoor lighting.

Do not install the fixture in locations where the air is aggressive to materials (where the air has a high salt or chlorine content, close to the sea or a swimming pool, for example).

Do not operate the fixture if the ambient temperature ( $T_a$ ) falls below  $-10^{\circ}\text{C}$  ( $14^{\circ}\text{F}$ ). Do not operate the fixture in ambient temperatures below  $5^{\circ}\text{C}$  ( $41^{\circ}\text{F}$ ) if ice is forming on the fixture. Protect the fixture from snow and ice. Freezing water may deform the fixture's housing, creating a safety hazard. Monitor weather conditions and take all appropriate safety precautions if a freezing hazard is forecast or present.

The fixture is rated IP54 / 'Damp locations' only when the following types of connector are used on cables connected to the fixture:

- Neutrik powerCON TRUE1 NAC3FX-W-TOP connector at the power IN socket,
- Neutrik powerCON TRUE1 NAC3MX-W-TOP connector at the power THRU socket,
- Neutrik TOP series 5-pin locking XLR connectors at the XLR (DMX, RDM) data sockets, and
- Neutrik TOP series etherCON connectors at the Ethernet (Art-Net, sACN) data sockets.

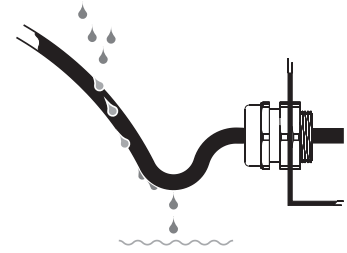
Use only these connector types and use only cables that are suitable for the given application with respect to humidity, water and sunlight resistance.

The power and data connectors are fitted with rubber caps to protect from water ingress. Keep rubber caps installed at all times on all connectors that are not in use.

Do not install the fixture with the connections panel facing upwards in locations that require an IP54 / 'Damp locations' rating.

Support the weight of cable runs. Do not allow a length of cable to hang from a connector.

Arrange cables so that they arrive at connectors from below. Create a 'drip loop' if necessary (see drawing on right). With this arrangement, gravity will cause any condensation or water droplets to run away from connectors.



*Drip loop*

The fixture accepts AC mains power at 100-240 V~ (nominal), 50/60 Hz. Do not connect the fixture to mains power that is not within this range.

The fixture has a maximum total power consumption of 1040 W.

The fixture draws a maximum total current of:

- 11.0 A when connected to mains power at 100 V~
- 5.2 A when connected to mains power at 200 V~
- 4.6 A when connected to mains power at 240 V~.

Do not connect a device – or an interconnected daisy chain of devices – to power if the maximum resulting current draw will exceed the electrical ratings of any cable or connector used to supply power.

Before connecting any devices to the fixture's power throughput socket, check the maximum current draw of all the devices that you will connect to power in a chain. Do not exceed a total of 16 amps maximum when you add together the current draw for the entire chain, including the first device in the chain.

If you relay power from one fixture to another using power throughput sockets, observe the following safety limits, or you may create a risk of fire and electric shock:

- Do not connect a MAC Viper XIP device to the fixture's mains power thru/output socket when supplying the fixture with mains power from 100 V to 120 V. Do not connect any device that draws more than 5 A when operating within this mains power voltage range.
- Do not connect more than three (3) MAC Viper XIP fixtures in total to each other in an interconnected chain when supplying the fixture with mains power from 200 V to 240 V.

The fixture draws a typical half-cycle RMS inrush current of 17.0 A for the first 10 milliseconds when mains power is first applied to the fixture at 230 V~, 50 Hz.

The voltage and frequency at the power throughput socket are the same as that applied at the power input socket.

To connect the fixture to mains power, you must first obtain 12 AWG or 2.5 mm<sup>2</sup> power input cable that is 16 A rated and temperature-rated to suit the installation environment. In the USA and Canada, the cable must be UL-listed, type SJTW or equivalent. In the EU, the cables must be type H05RN-F or equivalent. Suitable cables with the correct connectors are available from Martin.

Ensure that the fixture is electrically connected to ground (earth) via the power input cable. Do not remove the protective coating on the housing or loosen screws to establish a separate ground (earth) connection from the fixture's chassis.

Use only a source of mains power that complies with local building and electrical codes and has both overload and ground-fault (earth-fault) protection.

Socket outlets or external power switches used to supply the fixture with power must be located near the fixture and easily accessible so that the fixture can easily be disconnected from power.

Disconnect the fixture from AC mains power before carrying out any installation, cleaning or maintenance work and when the fixture is not in use.

Isolate the fixture from power immediately if the power plug or any seal, cover, cable, or other component is damaged, defective, deformed, showing signs of water ingress or showing signs of overheating. Do not reapply power until repairs have been completed.

Before using the fixture, check that all power distribution equipment and cables are in perfect condition and rated for the electrical requirements of all connected devices.

Do not remove any cover from the fixture except as described in the fixture's user documentation.

The fixture contains components that are accessible and live at high voltage while the fixture is connected to power and that remain under tension for up to five minutes after power is disconnected. Wait for at least five minutes after disconnecting from power before opening any of the fixture's covers.

The DMX and Ethernet transceivers of the fixture are isolated/SELV to prevent ground loops and for safety reasons.

Do not use this equipment at an altitude of more than 2000 m (6570 ft.) above sea level.



### Protection from burns and fire

Do not operate the fixture if the ambient temperature ( $T_a$ ) exceeds 40° C (104° F).

The exterior of the fixture becomes hot during use. After 5 minutes of operation a surface temperature of 80° C (176° F) shall be expected. The maximum steady state surface temperature is also 80° C (176° F). Avoid contact by persons and materials.

Allow the fixture to cool for at least 15 minutes before handling.

Keep flammable materials well away from the fixture. Keep all combustible materials (e.g. fabric, wood, paper) at least 0.2 m (8 in.) away from the fixture.

Ensure that there is free and unobstructed airflow around the fixture. Provide a minimum clearance of 0.5 m (1.7 ft.) around fans and air vents.

Do not use the fixture to illuminate surfaces within 3.25 m (10.7 ft.) of the fixture.

Do not stick filters, masks or other materials onto any optical component.

See drawing on right. The fixture's lenses can focus the sun's rays inside the fixture, creating a risk of fire and damage. Do not expose the front of the fixture to sunlight or any other source of powerful light from any angle, even for a few seconds. Make sure that the head will be pointing away from the sun and from any other potential source of powerful light at all times, even when the fixture is not in use.



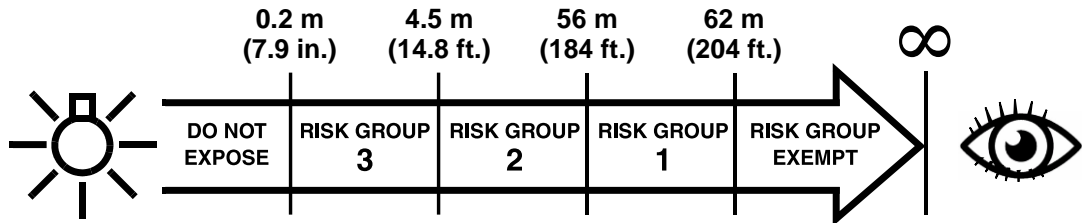
Do not attempt to bypass thermostatic switches or fuses.





### Protection from eye injury

This fixture corresponds to Risk Group 3 according to EN 62471 when all photobiological risks are considered and Risk Group 2 according to IEC/TR 62778 for blue light only. It emits possibly hazardous optical radiation. It falls into the Risk Group categories shown below according to EN 62471 and IEC/TR 62778 under worst-case conditions:



At a distance of less than 4.5 m (14.8 ft.) from the fixture, the light output can potentially cause eye or skin injury before an exposed person's natural aversion responses (blink reflex and reaction to skin discomfort) can protect them. At distances greater than 4.5 m (14.8 ft.), potential eye and skin injury hazards from the light output are normally prevented by natural aversion reflexes.

Position the fixture so that persons cannot be exposed to the fixture's light output at a distance of less than 4.5 m (14.8 ft.) from the fixture and so that prolonged staring into the light output at less than 56 m (184 ft.) is not expected.

Do not look directly into the fixture's light output.

Do not look at the light output with magnifiers, telescopes, binoculars or similar optical instruments that may concentrate the light output.

Ensure that persons are not looking directly into the front of the fixture when the product lights up suddenly. This can happen when power is applied, when the product receives a DMX signal, or when certain control menu items are selected.

Disconnect the fixture from power at all times when the fixture is not in use.

Provide well-lit conditions to reduce the pupil diameter of anyone working on or near the fixture.



### Protection from injury

The fixture weighs 36.8 kg (81.2 lbs.) not including rigging hardware.

When the fixture is in use, it must be either:

- fastened to a secure, stable structure such as a rigging truss, or
- standing on a stable horizontal surface where it will not present a danger of tripping or falling.

Install the fixture only as directed in this manual.

The fixture is not portable when installed.

Ensure that all supporting structures and hardware used can hold at least six (6) times the weight that they support (or more if required by locally applicable regulations).

Ensure that all rigging hardware items (rigging clamps, omega brackets etc.) are in perfect condition, are approved by a professional body such as TÜV for the weight that they will support, and that they comply with all locally applicable regulations.

Ensure that all supporting structures and rigging hardware items are suitable for the installation environment and will be safe under all weather and temperature conditions. Monitor weather conditions and take all appropriate safety precautions if a hazard is forecast or present.

If suspending from a rigging structure, fasten the fixture to a truss or similar support using two rigging clamps and omega brackets. Do not try to suspend the fixture from only one rigging clamp. Do not use safety cables as the primary means of support.



When clamping a fixture to a truss or other supporting structure in any orientation apart from hanging vertically with the head pointing downwards, use half-coupler-type rigging clamps. Do not use G-clamps, quick-trigger clamps or any other type of clamp that does not completely encircle the supporting structure when fastened.

If there is any danger that this product may cause injury or damage if the primary means of attachment fails, secure it as described in this user manual with a securely anchored safety cable that will catch it if it falls. Ensure that all safety cables used for secondary attachment are in perfect condition, are approved by a professional body such as TÜV for the weight that they will secure, and that they comply with all locally applicable regulations.

Remove as much slack as possible from the safety cable (by looping it more than once around the chord of a rigging truss, for example). Make sure that, if a primary means of attachment fails, the fixture cannot fall more than 20 cm (8 inches) maximum before the safety cable catches it.

If the safety cable attachment point becomes deformed, do not suspend the fixture. Have the fixture repaired by an authorized Martin service partner.

Allow enough clearance around the head to ensure that it cannot collide with an object or another fixture when it moves.

Check that all external covers and rigging hardware are securely fastened.

Block access below the work area and work from a stable platform whenever installing, servicing or moving the fixture. Make sure that there is no risk of injury from falling parts, tools or other materials.

Do not operate the fixture with missing or damaged covers, shields or any optical component.

Do not lift or carry the fixture by its head. Support the fixture by its base only.

In the event of an operating problem, stop using the fixture immediately and disconnect it from power. Do not attempt to use a fixture that is obviously damaged.

Do not modify the fixture in any way not described in the fixture's user documentation. Install only parts and accessories that are supplied by or approved by Martin for the fixture.

Refer any service operation not described in this manual to Martin Service or an authorized Martin service partner.

# Introduction

Thank you for selecting the MAC Viper XIP moving head lighting fixture from Martin®.

This Safety and Installation Manual is supplied with the fixture. It gives details of installing and servicing the fixture as well as connecting to mains power. The MAC Viper XIP User Manual, containing full instructions for connecting to control data, setting up, controlling and monitoring the fixture is available for download from the MAC Viper XIP area of the Martin website at [www.martin.com](http://www.martin.com). If you have any difficulty locating this document, please contact your Martin supplier for assistance.

Before installing, operating or servicing the MAC Viper XIP, please check the fixture's area of the Martin website at [www.martin.com](http://www.martin.com) and make sure that you have the latest user documentation for the product.

Not all product specifications are included in the fixture's user documentation. You can find full specifications for the fixture in the MAC Viper XIP area of the Martin website. The online specifications include information to help you order accessories such as cables, flightcases etc.

The fixture is supplied with this Safety and Installation manual and two Martin omega brackets for fastening a rigging clamp to the fixture base.

## Packing and unpacking

Allow the fixture to cool for 30 minutes before packing it for storage or transport in a flightcase or packaging. If the fixture is wet, wipe it with a soft, dry cloth and apply power until the fixture is completely dry before packing. This will avoid moisture damage and mold.

If you move the fixture from a cold to a warm environment, remove it from its flightcase or packaging and give it at least two hours to acclimatize before you apply power. This will help to avoid damage due to internal condensation.

## Condensation

When using the fixture in outdoor locations – especially locations with wide temperature variations and/or high humidity – we recommend that you keep power applied to the fixture at all times in order to reduce any tendency for condensation to form inside the fixture. However, it is possible to shut down power to the fixture for up to 18 hours if followed by a period of 6 hours with power applied.

## Before using the product for the first time

1. Check the support pages on the Martin Professional website at [www.martin.com](http://www.martin.com) for the most recent user documentation and technical specifications for the fixture. Martin user manual revisions are identified by the revision letter at the bottom of the inside cover.
2. Read 'Safety information' on page 3 before installing, operating or servicing the fixture.
3. Unpack and ensure that there is no transportation damage before using the fixture. Do not attempt to operate a damaged fixture.
4. Check that the voltage and frequency of the local power source match the mains power requirements of the fixture.
5. Either hard-wire the fixture's power input cable to an AC mains power source or install as described in this manual a power plug (cord cap) that is suitable for local power outlets on the power input cable and connect the cable to an AC mains power outlet. If you need to fabricate a power cable, use only the cable and connector specified in this manual.

## Applying mains power

The fixture does not have an on/off switch. It becomes active as soon as AC mains power is applied at the power input connector. Be prepared for the head to move and for the fixture to suddenly emit bright light.

Each time power is applied to the fixture, it will reset all effects and functions to their home positions. A reset typically takes around 45 seconds.

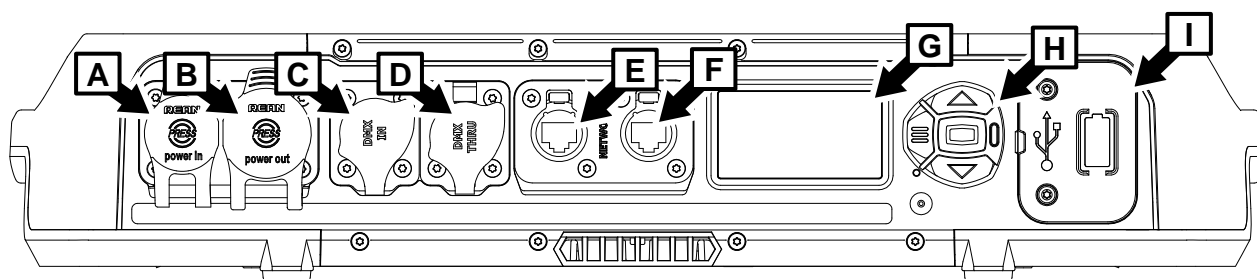
## Cold starting

At +5° C (41° F) and below, the fixture starts up in cold-start mode. In this mode, the current to some motors is increased and reset speed is reduced. This makes sure that the fixture can reset safely without any step loss. After a successful reset, the fixture stays in cold-start mode until it has warmed up. In cold-start mode there is a slight increase in noise from the fixture. Some effects (especially gobo changes and speed) are slower than normal.

The fixture exits cold-start mode as soon as it reaches an internal temperature of approximately 20° C (68° F).

To warm up the fixture as quickly as possible, set LED output to full intensity. If you prefer the fixture not to project light during warmup, set the CMY and CTO flags to 99%, i.e. almost fully closed, and set all framing blades to 99%, i.e. almost fully inserted. Note that if you set these effects to 100%, LED output will be shut down and the LED warmup effect will be lost.

## Overview



**A – AC mains power IN (accepts Neutrik powerCON TRUE1 TOP or compatible)**

**B – AC mains power OUT/THRU (accepts Neutrik powerCON TRUE1 TOP or compatible)**

**C – DMX data IN (5-pin locking male XLR)**

**D – DMX data OUT/THRU (5-pin locking female XLR)**

**E – Control data Ethernet port A in/out**

**F – Control data Ethernet port B in/out**

**G – Control panel display**

**H – Control buttons**

**I – Cover for CR123A lithium battery and USB port (port can be used with accessory options)**

# Physical installation



**Warning! Read 'Safety information' on page 4 before installing the fixture.**

**To avoid head collisions when installing MAC Viper XIP fixtures next to each other, allow a minimum center-to-center distance between fixtures of 704 mm (27.8 inches).**

Martin can supply installation hardware such as rigging clamps and safety cables that are suitable for use with the fixture (see the product specifications on the MAC Viper XIP product page on the Martin website at [www.martin.com](http://www.martin.com)).

## Installation location

The MAC Viper XIP is designed for permanent or temporary indoor use or for temporary outdoor use. A fixture with an IP54 rating can withstand rain and splashing water, but it cannot withstand high pressure water jets or immersion in water.

Fasten the fixture to a secure structure or surface or stand it on a surface where it cannot be moved or fall over. If you install the fixture in a location where it may cause injury or damage if it falls, secure it as directed in this manual using a securely anchored safety cable that will hold the fixture if the primary fastening method fails.

## Installation environment

The fixture has a rugged construction and is designed to withstand outdoor conditions. However, it is not designed for use in extreme environments such as air with a high content of salt, chlorine, acid or other aggressive agents. Exposure to harsh environmental conditions like these may result in deterioration of the product that is not covered by the product warranty. If the fixture is exposed to salt etc., rinse it carefully in pure water.

The fixture is designed and tested according to the IP54 standard. This means that the fixture is dust-protected, not dust-tight. Ingress of dust is not entirely prevented, but it shall not enter in sufficient quantity to interfere with the safe operation of the fixture. If the fixture is used in dusty or sandy environments, cleaning will be required after use. Before using the fixture in a dusty or sandy environment, we recommend that you replace the gauze air filters in the head with the disposable air filters with a paper element that are available from Martin in sets of 12 (P/N 50400765). Air filter replacement takes no more than a few seconds.

## Avoiding damage from other light sources

Do not point the light output from other lighting fixtures at the MAC Viper XIP, as powerful light can damage the display.

## Standing the fixture on a flat surface

The fixture can be placed on a hard, fixed, flat horizontal surface provided that there is no risk that it may cause an obstruction or be knocked over. Ensure that the surface can support at least six (6) times the weight of all items that it will support.

If you install the fixture in a location where it may cause injury or damage if it falls, secure it as directed in this chapter with a securely anchored safety cable.

## Mounting the fixture on a truss

The fixture can be clamped to a truss or similar rigging structure in any orientation. Use half-coupler type clamps (see illustration on right) that completely encircle the truss chord or tubular support.

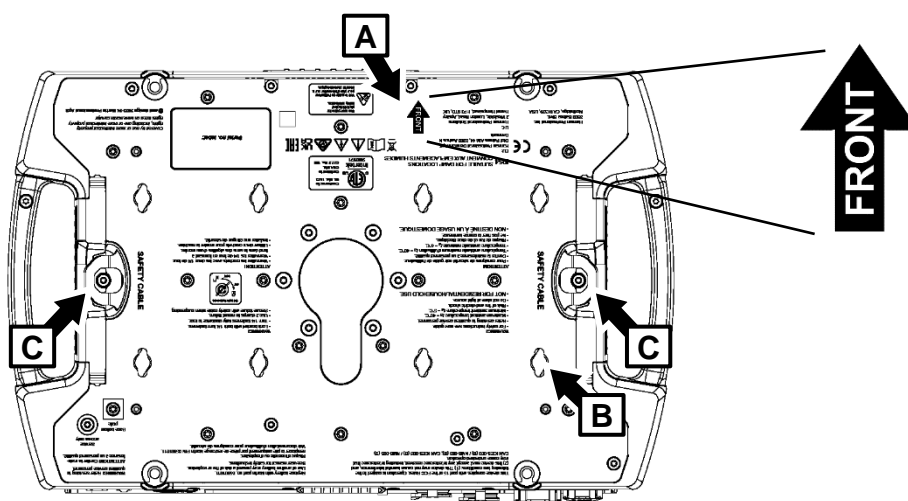
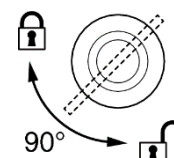
If installing the fixture outdoors, mount it so that the connections panel does not face upwards. Ensure that cables arrive from below the fixture, creating 'drip loops' in cables if necessary. Check that all rigging hardware is suitable for outdoor use.

To clamp the fixture to a truss:

1. Check that the rigging structure can support at least six times (or more if required by local regulations) the weight of all fixtures and equipment to be installed on it.
2. Block access under the work area.
3. The fixture is supplied with two omega-type brackets. Bolt a half-coupler type rigging clamp that is in perfect condition and approved for the weight that it will support securely to the each bracket. Use M12, grade 8.8 steel minimum bolts with self-locking nuts.
4. Fasten the two omega brackets complete with rigging clamps to the base of the fixture by locking each bracket's quarter-turn fasteners into two of the receptacles (see **B** in illustration below) in the base of the fixture. The brackets must be spaced evenly. Turn quarter-turn fasteners a full 90° to lock them as shown on right.



**Half-coupler clamp**

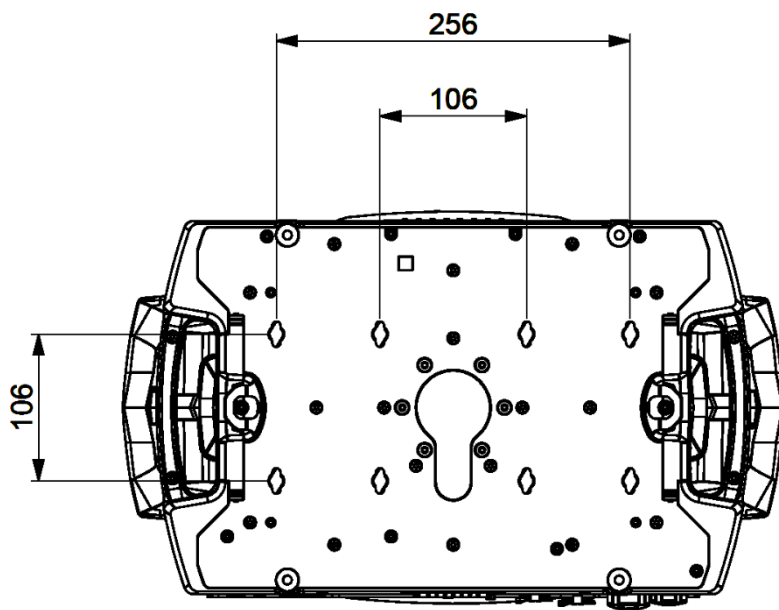


5. Note the position of the arrow marked **FRONT** (see **A** in illustration above). Working from a stable platform, hang the fixture on the truss and fasten the two rigging clamps onto the truss with **FRONT** pointing towards the main area to be illuminated.
6. Secure the fixture with a safety cable as directed below.
7. Make sure that there is no possibility of the head colliding with other fixtures or objects when it moves through its full pan and tilt ranges.

## Securing with a safety cable

1. Obtain a safety cable that is approved for the weight of the fixture.
2. Fasten the cable to one of the safety cable attachment points in the base of the fixture (see **C** in illustration on previous page) by either looping it around or fastening a carabiner clip to the attachment point. Do not use one of the fixture's carrying handles as the attachment point for the safety cable.

3. Remove as much slack as possible from the safety cable (by looping the cable around the truss chord, for example) and fasten it to a secure anchoring point.
4. Make sure that the safety cable will hold the fixture if a primary attachment fails.



**Quarter-turn receptacles in base**

# AC mains power



**Warning! Read ‘Safety information’ on page 4 before connecting the fixture to AC mains power.**

The fixture has an auto-ranging power supply that accepts AC mains power at 100-240 V at 50/60 Hz. Do not apply AC mains power at any other voltage or frequency to the fixture.



The fixture's maximum current draw is as follows:

- At 100-120 V~: 11.0 A
- At 200-240 V~: 5.2 A

Typical half-cycle RMS inrush current: 17.0 A at 230 V, 50 Hz.

Typical earth-leakage current: 0.7 mA.

The fixture requires a power input cable with an IP65-rated Neutrik powerCON TRUE1 NAC3FX-W (TOP) or equivalent female cable connector for AC mains power input. The cable must meet the requirements listed under “Protection from electric shock” on page 5. Martin can supply suitable input cables with connectors 1.5 m (4.9 ft.) or 5 m (16.4 ft.) long, as well as loose input connectors (see the Martin website at [www.martin.com](http://www.martin.com)).

The fixture can be hard-wired to a building electrical installation if you want to install it permanently. Alternatively, you can connect it to local power outlets if you install a suitable power plug on the power input cable. When installing a power plug, follow the plug manufacturer's instructions and connect the wires in the power cable following the color coding guide in the table below:

	Live or L	Neutral or N	Earth, Ground or ⊕
US system	Black	White	Green
EU system	Brown	Blue	Yellow/green

If you need to install a Neutrik powerCON TRUE1 (TOP) or equivalent IP65-rated connector on a power cable, follow the connector manufacturer's instructions (normally published on the manufacturer's website or included with the product), respecting the color coding guide above.

## Linking fixtures to power in a chain at 100-120 V

If you are supplying the fixture with AC mains power at 100-120 V, do not connect any other MAC Viper XIP fixture to the mains power OUT/THRU socket on the fixture's connections panel. Do not connect any device to the mains power OUT/THRU that draws a current of more than 5 A.

## Linking fixtures to power in a chain at 200-240 V

If you are supplying the fixture with AC mains power at 200-240 V, you can connect up to three (3) fixtures in total to mains power in a linked daisy chain as follows:

1. Obtain a 12 AWG / 2.5 mm<sup>2</sup> power input cable and 12 AWG / 2.5 mm<sup>2</sup> power relay cables (available from Martin – see the Martin website at [www.martin.com](http://www.martin.com)).
2. Relay mains power from one fixture to another by connecting fixtures to power in a linked daisy-chain, mains power OUT/THRU socket to mains power IN socket. This daisy-chain may contain up to a maximum of three (3) fixtures total.



If you are supplying a fixture with AC mains power at 200-240 V, do not connect any device – or chain of devices – that draws a current of more than 10.8 A to the mains power OUT/THRU socket of that first fixture.

If you connect three fixtures to power in a daisy-chain, we recommend that you draw power from a circuit that is protected by a type D MCB (Miniature Circuit Breaker). This will avoid the breaker tripping unnecessarily due to inrush current.

### **Connecting to power**

Connect the fixture to AC mains power by lining up the keys in the IP65 power input cable connector with the keyways in the mains power IN connector in the connections panel, inserting the connector and twisting clockwise. Twist the cable connector counterclockwise and remove it from the connections panel to disconnect.

The mains power connectors support hot-plugging, but it is still good practice to shut down power to the power input cable before connecting to or disconnecting from the fixture if you can do this without inconvenience.

The fixture does not have an on/off switch. It becomes active as soon as power is applied at the power input connector. Be prepared for the head to move suddenly and for the fixture to emit bright light as soon as power is applied.

## **Data connections**

See the MAC Viper XIP User Manual available for download from [www.martin.com](http://www.martin.com) for full details of connecting the fixture to control data.

Use shielded twisted-pair Ethernet cable of type S/UTP, SF/UTP, S/STP or SF/STP only for the data link. The cable must be rated Cat 5e or better. The cable shield must be electrically connected to connector housings, and the other devices on the data link must also support shielded connections.

# Service and maintenance



**Warning! Read 'Safety information' on page 4 before servicing the fixture.**

**Refer any service or repair operation not described in this manual or in the fixture's User Manual to an authorized Martin service technician. Do not try to carry out such an operation yourself, as doing so may present a health or safety risk. It may also cause damage or malfunction, and it may void your product warranty. The LED light source is not user-replaceable.**

Installation, on-site service and maintenance can be provided worldwide by the Martin Professional Global Service organization and its approved agents, giving owners access to Martin's expertise and product knowledge in a partnership that will ensure the highest level of performance throughout the product's lifetime. Please contact your Martin supplier for details.

The user must clean the MAC Viper XIP periodically to maintain optimum performance and cooling, removing air filters from the head and base as described in this chapter for inspection and cleaning. The user may replace the fixture's 3-volt lithium battery and install or uninstall an optional wireless DMX accessory. The user may also upload firmware (fixture software) to the fixture via the DMX data input port, Ethernet port or USB port using firmware and instructions from Martin. Finally, the user may install custom gobos and optional accessories for the fixture as directed in the fixture's User Manual (available for download from the Martin website at [www.martin.com](http://www.martin.com)). All other service operations on the MAC Viper XIP must be carried out by Martin, its approved service agents or trained and qualified personnel using the official Martin service documentation for the MAC Viper XIP.

It is Martin policy to apply the strictest possible calibration procedures and use the best quality materials available to ensure optimum performance and the longest possible component lifetimes. However, optical components are subject to wear and tear over the life of the product, resulting in gradual changes in color over many thousands of hours of use. The extent of wear and tear depends heavily on operating conditions and environment, so it is impossible to specify precisely whether and to what extent performance will be affected. However, you may eventually need to replace optical components if their characteristics are affected by wear and tear after an extended period of use and if you require fixtures to perform within very precise optical and color parameters.

## Service mode

Pressing MENU and ENTER buttons immediately when the fixture name appears in the display while powering the fixture on puts the fixture into service mode, in which pan and tilt motors are deactivated and SERV appears in the display. To take the fixture out of service mode, power off and then power on again normally.

The MAC Viper XIP User Guide (available for download from the MAC Viper XIP page on [www.martin.com](http://www.martin.com)) gives full details of the menus in the fixture's control panel.

## Cleaning

**Important! Excessive dust, smoke fluid, and particle buildup degrades performance, causes overheating and will damage the fixture. Damage caused by inadequate cleaning or maintenance is not covered by the product warranty.**

At regular intervals, the front glass must be cleaned to optimize light output and air filters must be removed for inspection and cleaning. Cleaning schedules for lighting fixtures vary greatly depending on the operating environment. It is therefore impossible to specify precise cleaning intervals for the fixture. Environmental factors that may result in a need for frequent cleaning include:

- Use of smoke or fog machines.
- High airflow rates (near air conditioning vents, for example).
- Presence of cigarette smoke.
- Airborne dust (from stage effects, building structures and fittings or the natural environment at outdoor events, for example).

If one or more of these factors is present, inspect fixtures within their first 100 hours of operation to see whether cleaning is necessary. Check again at frequent intervals. This procedure will allow you to assess

cleaning requirements in your particular situation. If in doubt, consult your Martin dealer about a suitable maintenance schedule.

Use gentle pressure only when cleaning, and work in a clean, well-lit area. Do not use any product that contains solvents or abrasives, as these can cause surface damage.

To clean the fixture:

1. Disconnect the fixture from power and allow it to cool for at least 15 minutes.
2. Vacuum or gently blow away dust and loose particles from the outside of the fixture and air vents with low-pressure compressed air. Holding cooling fan blades stationary with a screwdriver will protect them from spinning too fast and possibly being damaged when you apply a vacuum or air jet.
3. Clean surfaces using warm water with a little detergent and a soft cloth, sponge or soft brush of the type used for washing cars. Do not rub glass surfaces hard: lift particles off with a soft repeated press. Dry with a soft, clean, lint-free cloth or low-pressure compressed air. Remove stuck particles with an unscented tissue or cotton swab moistened with glass cleaner or distilled water.
4. Wipe the fixture with a soft, dry cloth after cleaning. We recommend that you apply power to the fixture for a short time, which will allow it to warm up slightly and dry out completely, before putting it into storage.

### **Cleaning air filters**

The MAC Viper XP has two wire gauze air filters in the head (one on either side of the head) and two wire gauze air filters in the base. When using the fixture in dusty conditions we recommend the use of head air filters with paper elements. These are available as accessories in sets of 12 from Martin suppliers by ordering P/N 50400765.

#### **Head air filters**

To service the head air filters:

1. Disconnect the fixture from power and allow to cool for 30 minutes.
2. Position the head pointing upwards so that the head air filter covers are accessible.
3. See illustrations below. Unclip and remove the two head air filter covers, one on each side of the head.



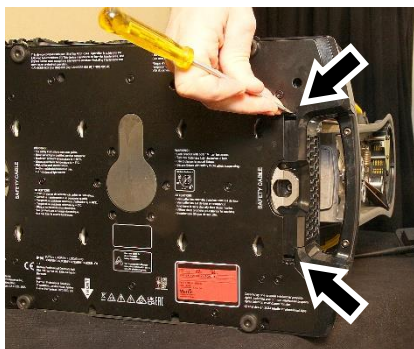
4. Remove the air filters from their recesses in the head. Dispose of paper air filters. Do not try to clean or re-use a paper air filter. Clean metal air filters with a soft brush and vacuum cleaner or compressed air, taking care to avoid damaging the filter mesh. If metal filters are greasy, you can clean them in a household dishwasher at maximum 50° C (122° F), short cycle recommended. Dry them completely before reinstalling. The metal filter is designed to be re-used, but replace it with a new item if it is not in clean, undamaged condition after cleaning.

- Place the clean air filters into their recesses in the head, making sure that there is no gap for air to pass around the edges of the filter.
- Hook the rear end of each filter cover into the head and push the front end into the head until its clip engages fully. Check that the covers are held securely and cannot fall out of the head.

### Base air filters

To service the base air filters:

- See illustrations below. For each of the two air filters, push on the air filter cover retaining clips (arrowed) to release them, then remove the filter from the base.



- Remove dust from each filter with a soft brush and/or low-pressure compressed air. Remove grease with warm soapy water. You can clean the filters in a household dishwasher at maximum 50° C (122° F), short cycle recommended.
- Dry each filter carefully, then push it back into its recess in the base until both retaining clips lock into place. Make sure that the filter is held securely.

### Battery replacement

**Warning! Disconnect the fixture from AC power before replacing its battery. Do not attempt to recharge the battery, or you may create a risk of fire or explosion.**

The MAC Viper XIP has a non-rechargeable 3-volt lithium battery that provides power to the control panel and display when the fixture is not connected to AC mains power. If the battery runs flat, you must replace it. Do not attempt to recharge it.

The battery is located behind a cover in the USB-C port / battery compartment next to the control panel on the base of the fixture. If a wireless DMX module accessory is installed, the battery is behind this module.

To replace the battery:

- Order Martin P/N 05801011 (CR123A, 3 V lithium battery).
- Disconnect the fixture from AC mains power and allow to cool.
- See illustration on right. Remove the two Torx10 screws from their holes (arrowed) in the black USB port / battery compartment cover.
- Carefully lever the cover off the fixture base with a flathead screwdriver. Take care not to damage seals.



- See illustration on right. The battery is located behind a yellow rubber cover. Pull the yellow cover off the battery compartment and remove the used battery.
- Insert the new CR123A battery, respecting the correct battery polarity (positive terminal facing upwards, towards the head).
- Reinstall the yellow rubber cover over the battery compartment. Check the condition of the seal on the black cover (or the wireless DMX module, if used) that fits over the USB port / battery compartment. The seal must be in perfect



condition. If not, contact your Martin supplier for a replacement. Install the cover (or module), fastening it in position with its two screws. Check that it is closed securely before reapplying power.

8. Dispose of the used battery responsibly: send to an authorized waste recycling and disposal center.

### **Lubrication**

The MAC Viper XIP does not require lubrication under normal circumstances. Moving parts can be checked and a long-lasting Teflon-based grease reapplied by a Martin service partner if necessary.

## **Specifications**

For full product specifications, see the MAC Viper XIP area of the Martin website at [www.martin.com](http://www.martin.com)

## **FCC compliance**

This equipment has been tested and found to comply with the limits for a Class B digital device, 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. However, there is no guarantee that interference will not occur in a particular installation. 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.

## **FCC supplier's declaration of conformity declaration**

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

This device may not cause harmful interference, and

this device must accept any interference received, including interference that may cause undesired operation.

## **Canadian Interference-Causing Equipment Regulations – Règlement sur le Matériel Brouilleur du Canada**

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations. *Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le Matériel Brouilleur du Canada.*

CAN ICES-003 (B) / NMB-003 (B); CAN ICES-005 (B) / NMB-005 (B)

## **EU Declaration of Conformity**

An EU Declaration of Conformity covering this product is available for download from the MAC Viper XIP product area of the Martin website at [www.martin.com](http://www.martin.com).

## **Conditional connection**

For conformity with mains voltage fluctuations and flicker according to EN61000-3-11 during extensive use of continuous strobe effects the user must determine, in consultation with the mains power supply authority if necessary, that the equipment is connected to a supply impedance of less than 0.39 ohms at 50 Hz.

## **Disposing of this product**



Martin products are supplied in compliance with Directive 2012/19/EC of the European Parliament and of the Council of the European Union on WEEE (Waste Electrical and Electronic Equipment), where applicable.

Help preserve the environment! Ensure that this product is recycled at the end of its life. Your supplier can give details of local arrangements for the disposal of Martin products







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