

# **MAC Allure™ Wash PC**

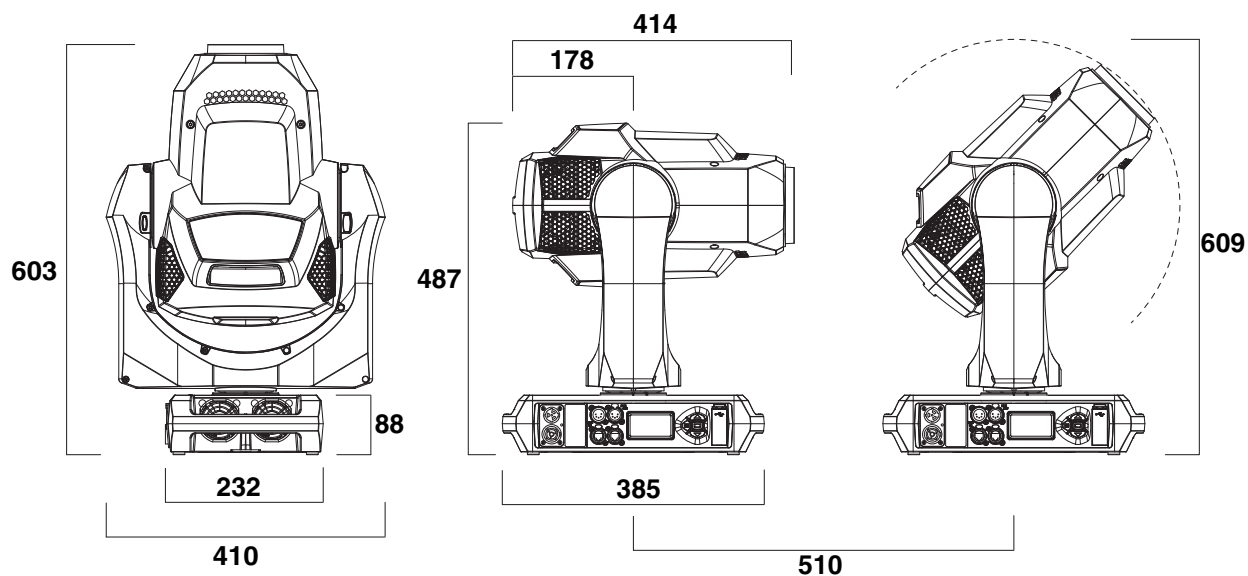
## **Safety and Installation Manual**



**Martin**<sup>®</sup>  
by HARMAN

# Dimensions

All measurements are given in millimeters



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# Safety Information



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

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



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



**DANGER!**  
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!** Refer to user documentation.



**Warning! The MAC Allure™ Wash PC from Martin® contains components that are accessible and live at high voltage while the fixture is connected to power. These components remain under tension for up to 30 minutes after power is disconnected. Only technicians who are authorized by Martin and who have access to the Martin service documentation for the MAC Allure Wash PC are permitted to open the fixture.**



**Warning! Risk Group 3 product according to EN 62471, IEC/TR 62778. This product produces intense light output that may be hazardous if suitable precautions are not taken. Do not view the light output with optical instruments or any device that may concentrate the beam.**



This product 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.

**Read this manual** before installing, powering or servicing the fixture. Follow the safety precautions and observe all warnings in this manual, in the MAC Allure Wash PC User Guide, and printed on the fixture.

The latest versions of this Safety and Installation Manual and the MAC Allure Wash PC User Guide are available for download from the MAC Allure Wash PC area of the Martin website at [www.martin.com](http://www.martin.com). Before you install, operate or service the MAC Allure Wash PC, 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.

This product is for professional use only. It is not for household use. Respect all locally applicable laws, codes and regulations when installing, powering, operating or servicing the fixture.

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

The latest software, manuals and other documentation for all Martin products are available for download at [www.martin.com](http://www.martin.com)

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



## PROTECTION FROM ELECTRIC SHOCK

- Do not expose the fixture to rain or moisture.
- Do not remove any cover from the fixture except as described under “Service and maintenance” on page 14.
- Disconnect the fixture from AC power before servicing it and when it is not in use.
- Ensure that the fixture is electrically connected to ground (earth).
- Use only a source of AC power that complies with local building and electrical codes and has both overload and ground-fault (earth-fault) protection.
- The fixture accepts AC mains power at 100-120/200-240 V (nominal), 50/60 Hz. Do not connect the fixture to power that is not within this range.
- The voltage and frequency at the power throughput socket are the same as that applied at the power input socket.
- Do not connect devices to power in a chain that will exceed the electrical ratings of any cable or connector used 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 more than three MAC Allure Wash PC fixtures in total to each other in an interconnected chain when supplying the fixture with mains power from 100 V to 120 V.
  - Do not connect more than six MAC Allure Wash PC fixtures in total to each other in an interconnected chain when supplying the fixture with mains power from 200 V to 240 V.
- Connect only other MAC Allure Wash PC fixtures to the power throughput socket. Do not connect any other type of device to this socket.
- Power input and throughput cables must be rated 20 A minimum, 12 AWG or 2.5 mm<sup>2</sup> minimum conductor size and heat-resistant to 90° C (194° F) minimum. Cables must have three conductors and an outer cable diameter of 6 - 12 mm (0.24 - 0.47 in.). In North America the cable must be UL/CSA-recognized, hard usage, type SJT, SJOOW or better. In the EU, the cable must be type HO5VV-F, H07RN-F or better.
- Connect only a Neutrik powerCON TRUE1 NAC3FX-W type cable connector to the power input socket. Connect only a Neutrik powerCON TRUE1 NAC3MX-W type cable connector to the power throughput socket.
- Before using the fixture, check that all power distribution equipment and cables are in perfect condition and rated for the current requirements of all connected devices.
- Isolate the fixture from power immediately if the power plug or any seal, cover, cable, or other component is damaged, defective, deformed, wet or showing signs of overheating. Do not reapply power until repairs have been completed.
- The MAC Allure Wash PC contains components that are accessible and live at high voltage while the fixture is connected to power and that remain under tension for 30 minutes after power is disconnected. Only technicians who are authorized by Martin and who have the Martin service documentation for the MAC Allure Wash PC are permitted to open the fixture.
- Refer any service operation not described in this manual or in the MAC Allure Wash PC User Guide to Martin Service or an authorized Martin Service partner.
- The light source contained in this fixture shall be replaced by Martin Service or an authorized Martin Service partner only.



## PROTECTION FROM BURNS AND FIRE

- The exterior of the fixture becomes hot during use. After 5 minutes of operation a surface temperature of 70° C (158° F) shall be expected. The maximum steady state surface temperature is also 70° C (158° F). Avoid contact by persons and materials.
- Allow the fixture to cool for at least 30 minutes before handling.
- Keep all combustible materials (e.g. fabric, wood, paper) at least 0.2 m (8 in.) away from the fixture.
- Keep flammable materials well away from the fixture.
- Ensure that there is free and unobstructed airflow around the fixture.
- Provide a minimum clearance of 0.2 m (8 in.) around fans and air vents.
- Do not illuminate surfaces within 1.0 m (3.3 ft.) of the fixture.
- Do not expose the front glass to sunlight or any other strong light source from any angle. Lenses can focus the sun's rays inside the fixture, creating a potential fire hazard.
- Do not attempt to bypass thermostatic switches or fuses.
- Do not operate the fixture if the ambient temperature (Ta) exceeds 40° C (104° F).

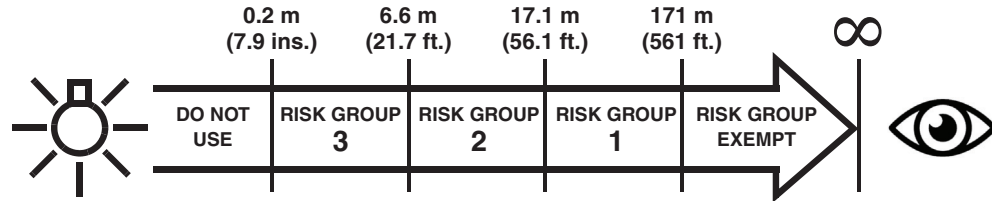


- Do not modify the fixture in any way not described in this manual or the fixture's User Guide or install other than genuine Martin parts. Do not stick filters, masks or other materials onto any lens or other optical component. Use only accessories approved by Martin to mask or modify the light beam.



## PROTECTION FROM EYE INJURY

- This fixture is a Risk Group 3 product according to EN 62471, IEC/TR 62778. It emits possibly hazardous optical radiation. It falls into the Risk Group categories shown below according to EN 62471, IEC/TR 62778:



- At a distance of less than 6.6 m (21.7 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 6.6 m (21.7 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 6.6 m (21.7 ft.) from the fixture, and so that prolonged staring into the light output at less than 17.1 m (56.1 ft.) from the fixture is not expected.
- Do not look directly into the fixture's light output.
- Do not look at LEDs with magnifiers, telescopes, binoculars or similar optical instruments that may concentrate the light output.
- Ensure that persons are not looking at the fixture when the fixture lights up suddenly. This can happen when power is applied, when the fixture 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

- Fasten the fixture securely to a fixed surface or structure when in use. The fixture is not portable when installed.
- Do not lift or carry the fixture alone.
- Use two evenly spaced omega brackets with clamps to suspend the fixture from rigging structures. Do not use only one clamp.
- When clamping the fixture to a truss or other supporting structure, use two half-coupler 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.
- When suspending the fixture, check that the supporting structure and all hardware used to suspend the fixture can hold at least 10 times the weight of all devices suspended from them and that the installation respects all similar safety factors that are required by locally applicable regulations. Check that the structure and hardware are in perfect condition and suitable for their purpose.
- If the fixture is installed in a location where it may cause injury or damage if it falls, install as described in this manual a secondary attachment such as a safety cable that is approved by an official body such as TÜV as a safety attachment for the weight that it secures. The safety cable must comply with EN 60598-2-17 Section 17.6.6 or BGV C1 / DGUV 17, and must be capable of bearing a static suspended load at least six times (or more if required by locally applicable regulations) the weight that it secures.
- Eliminate as much slack as possible in the safety cable (by looping it more than once around the rigging truss, for example). Make sure that, if the primary 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.
- 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.
- Allow enough clearance around the head to ensure that it cannot collide with a person or object such as another fixture when it moves.

# Introduction

Thank you for selecting the MAC Allure™ Wash from Martin®. This moving-head spotlight offers the following features:

- Powerful RGBW LED engine
- RGB(W) color mixing and color temperature control
- Rotating beamshaper
- Motorized zoom and focus
- Pre-programmed synchronizable FX (effect combination presets)
- Full-range dimming with four dimming curve options
- Electronic shutter effect with variable speed regular and random strobe
- Backlit graphic display and battery power (mains power not required for fixture setup)
- Auto-sensing switch-mode power supply.
- Power daisy-chaining with Neutrik powerCON TRUE1 input and throughput connectors

For the latest firmware updates, documentation, and other information about this and all Martin products, please visit the Martin website at <http://www.martin.com>

Comments or suggestions regarding this document may be e-mailed to [service@martin.dk](mailto:service@martin.dk).

## Unpacking

The MAC Allure Wash PC is packed in a cardboard box that is designed to protect the fixture during shipment. Two packaging options are available in the cardboard box – the fixture can be supplied in either:

- expanded polystyrene that is not intended for re-use, or
- a SIP (Superior Impact Protection) insert that is designed to be installed in the 3-unit Martin MAC Allure flightcase or custom-made flightcases.

This Safety and Installation Manual is included with the fixture. The MAC Allure Wash PC User Guide, containing full details of setting up, controlling and monitoring the fixture, is available for download from the MAC Allure Wash PC 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.

### Tilt lock

Release the tilt lock before applying power to the fixture.

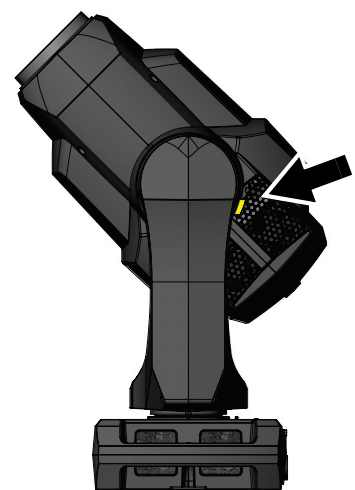
See Figure 1. Release the tilt lock by pushing the lock in towards the yoke (you can reapply the tilt lock by first checking that the power is off and then pushing the lock back in towards the yoke from the other side).

## Packing

**Important!** *Allow the fixture to cool and release the tilt lock before packing it in its flightcase.*

A rugged three-unit flightcase is available from Martin for the MAC Allure Wash PC. The flightcase accepts durable molded SIP (Superior Impact Protection) foam inserts that are supplied in cardboard boxes with fixtures if you select the SIP option at time of ordering.

The SIP inserts are designed to protect the head without the tilt lock (see Figure 1) applied. Release the tilt lock before putting a fixture into a flightcase for transport. Leaving the tilt lock applied may cause damage that is not covered by the product warranty.



**Figure 1: Tilt lock**



# Physical installation



**Warning!** The MAC Allure Wash PC has a powerful pan motor. The torque reaction when the head is panned suddenly can cause the base to move if the fixture is standing unsecured on a surface. Do not apply power to the MAC Allure Wash PC unless the base is securely fastened to a surface or to rigging hardware.

**Warning!** Use two clamps to rig the fixture. Do not hang the fixture from only one clamp. Lock each clamp with both 1/4-turn fasteners. Fasteners are locked only when turned a full 90° clockwise.

**Warning!** When suspending the fixture above ground level, secure it against failure of primary attachments by attaching a safety wire that is approved as a safety attachment for the weight of the fixture to the attachment point in the base. Do not use the carrying handles for secondary attachment.

**Warning!** When clamping the fixture to a truss or other structure at any other angle than with the yoke hanging vertically downwards, use two clamps of half-coupler type. Do not use any type of clamp that does not completely encircle the structure when fastened.



**Warning!** Position or shade the head so that the front lens will not be exposed to sunlight or another strong light source from any angle – even for a few seconds. See Figure 2. The MAC Allure Wash PC's lens can focus the sun's rays, creating a potential fire hazard and causing damage.

**Important!** Do not point the output from other lighting fixtures at the MAC Allure Wash PC, as powerful light can damage the display.

See Figure 2. Lenses can focus sunlight and strong light, presenting a risk of fire and damage to the fixture. Shield or shade the head if necessary.

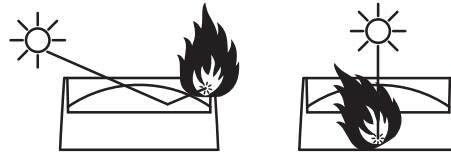


Figure 2: Potential sunlight damage

The MAC Allure Wash PC can be fastened to a surface such as a stage or clamped to a truss in any orientation. Clamps must be half-coupler type (see Figure 4) or equivalent type that fully encircles the truss unless the fixture is installed with the yoke hanging vertically downwards, in which case other clamp types that are approved for the supported weight may be used.

The mounting points in the base allow omega brackets and rigging clamps to be fastened as shown in Figure 3.

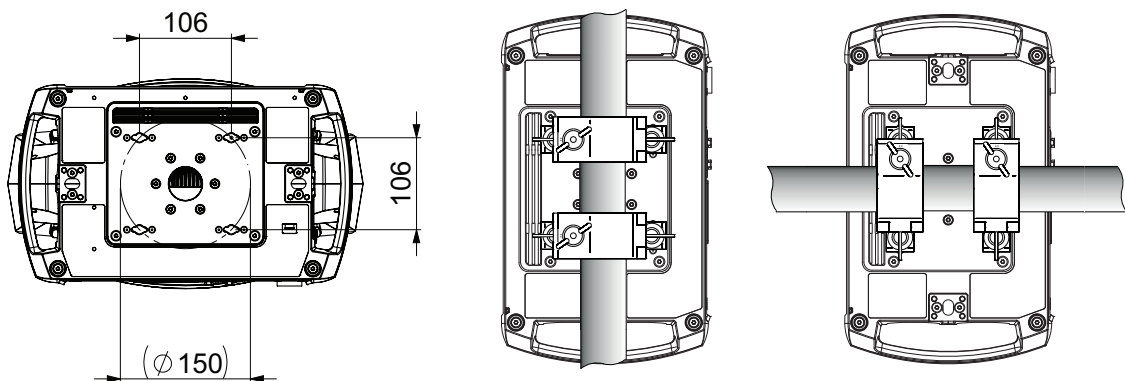
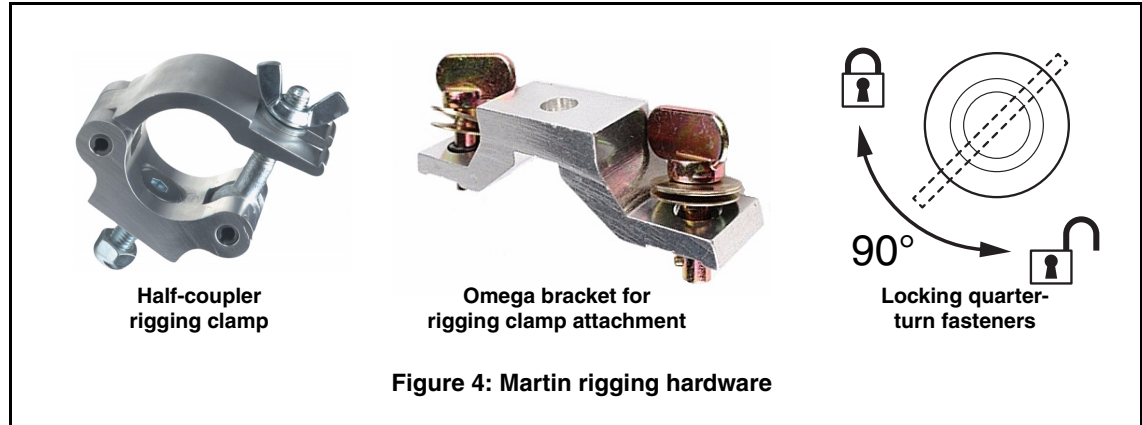


Figure 3: Clamp bracket positions

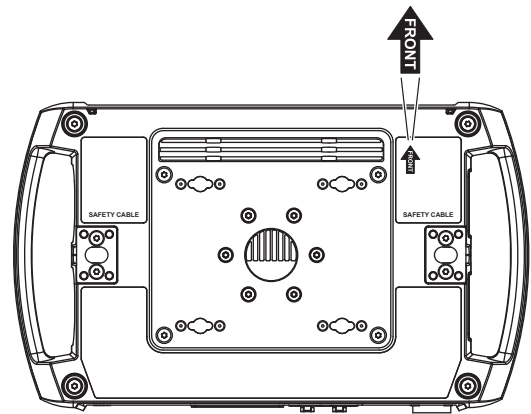


## Clamping the fixture to a truss

1. Check that all rigging hardware is undamaged and can bear at least 10 times the weight of the fixture or as required by locally applicable regulations. Check that the supporting structure can safely bear the weight of all installed fixtures, clamps, cables, auxiliary equipment, etc. and complies with locally applicable regulations.
2. Bolt each rigging clamp securely to an omega bracket with an M12 bolt (minimum grade 8.8) and self-locking nut.

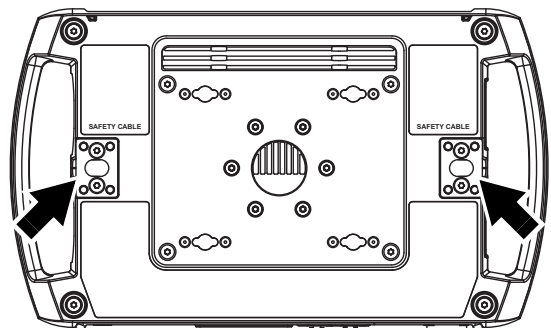


3. See Figure 3 on page 8. Align the first clamp and bracket with 2 mounting points in the base, and engage both the clamp bracket's quarter-turn fasteners in corresponding sockets in the base. See Figure 4. Turn the levers on the quarter-turn fasteners a full 90° clockwise to lock. Repeat for the second clamp.
4. Block access under the work area. See Figure 5. Note the position of the arrow marked **FRONT** on the base of the fixture. Working from a stable platform, hang the fixture on the truss with the arrow marked **FRONT** facing towards the area to be illuminated. Tighten the rigging clamps.



**Figure 5: Front of fixture**

5. See Figure 6. Install a safety cable that is approved as a safety attachment for the weight of the fixture by looping it through a safety attachment point (arrowed) in the bottom of the base and around a secure anchoring point so that the safety cable will catch the fixture if a primary attachment fails. Remove as much slack as possible from the safety cable (by looping it more than once around the truss bar, for example).
6. Check that the tilt lock is released. Check that there are no combustible materials within 0.2 m (8 in.) or surfaces to be illuminated within 1.0 m (3.3 ft.) of the fixture, and that there are no flammable materials nearby.
7. Check that there is no possibility of heads or yokes colliding with other fixtures.
8. Check that other lighting fixtures cannot project light at the MAC Allure Wash PC, as powerful illumination can damage the fixture's display.



**Figure 6: Safety cable attachment points**

# AC power



**Warning! Read “Safety Information” on page 4 before connecting the fixture to AC mains power.**

**For protection from electric shock, the fixture must be electrically connected to ground (earth). The AC mains power distribution circuit must be equipped with a fuse or circuit breaker and ground-fault (earth-fault) protection.**



## Power input



**Important! Connect the MAC Allure Wash PC directly to AC power. Do not connect it to a dimmer system; doing so may damage the fixture.**



The MAC Allure Wash PC features an auto-sensing switch-mode power supply that automatically adapts to AC mains power at 100-120/200-240 V (nominal), 50/60 Hz. Do not connect the fixture to power that is not within this range.

The MAC Allure Wash PC requires a power input cable with a Neutrik powerCON TRUE1 NAC3FX-W 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 cables with female TRUE1 input connectors 1.5 m (4.9 ft.) or 5 m (16.4 ft.) long. Alternatively, Martin can supply loose female TRUE1 input connectors (see “Accessories” on page 34).

## Connection to an AC mains power source

The power cable can be hard-wired to a building installation circuit or fitted with a mains plug (cord cap) to allow connection to local AC mains power outlets.

If you install a mains plug on the power cable, install a grounding-type (earthed) plug rated minimum 16A, 250 V (example rating: EN 60309-2 CEE 2P+E 16A/250VAC), following the plug manufacturer’s instructions. Table 1 shows some possible mains power pin identification schemes; if the pins are not clearly identified, or if you have any doubts about proper installation, consult a qualified electrician.

Wire Color (US)	Wire Color (EU)	Pin	Symbol	Screw (US)
black	brown	live	<b>L</b>	yellow or brass
white	blue	neutral	<b>N</b>	silver
green	yellow/green	ground (earth)	 or 	green

**Table 1: Cord cap (mains plug) connections**

If you need to install a Neutrik powerCON TRUE1 connector on a power cable, follow the instructions on the Neutrik website at [www.neutrik.com](http://www.neutrik.com).

## Linking fixtures to power in a chain

If you 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 from Martin (see “Accessories” on page 21), you can relay mains power from one fixture to another by connecting fixtures to power in a linked daisy-chain, MAINS OUT throughput socket to MAINS IN input socket. If you create a linked daisy-chain like this, you must respect the following safety limits, or you may create a risk of fire and electric shock:

Using 12 AWG / 2.5 mm<sup>2</sup> cables from Martin, you can link:

- maximum three (3) MAC Allure Wash fixtures total in one chain at 100-120 V, or
- maximum six (6) MAC Allure Wash fixtures total in one chain at 200-240 V.

If you connect multiple 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 because of inrush current. If the only available power circuits have type C MCBs, you may need to connect maximum four (4) fixtures per daisy-chain at 200-240 V in order to avoid tripping breakers unnecessarily.

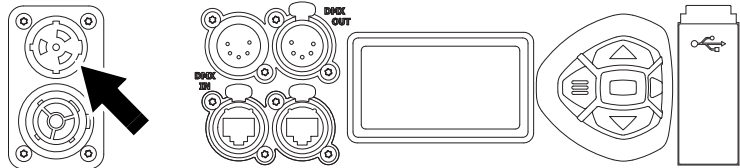
## Connecting to power

**Warning!** The MAC Allure Wash PC does not have a power On/Off switch. As soon as you connect an energized power input cable to the fixture or apply power to a power input cable that has already been connected, the fixture will power up: check that there is no safety risk from head movement or intense light output.

To apply power to the MAC Allure Wash PC:

1. Check that the tilt lock is released and that the base is held securely. Be prepared for the fixture to light up and the head to move suddenly when power is applied.

2. See Figure 7. line up the keys in the power input cable's TRUE1 connector with the keyways in the MAINS IN socket (arrowed). Insert the connector into the socket and twist clockwise to engage. If the connector seems difficult to twist, remove it from the socket, check that you have lined up the keyways correctly



**Figure 7: Mains input socket**

and try again – do not use excessive force. Make sure that the connector latch clicks and that the connector is locked into the socket.

3. Apply power to the power input cable to power the fixture on.

To disconnect the MAC Allure Wash PC from power, pull the yellow latch on the connector towards you to unlock the connector, twist the connector counter-clockwise, and then withdraw it from the MAINS IN socket.

# Data links

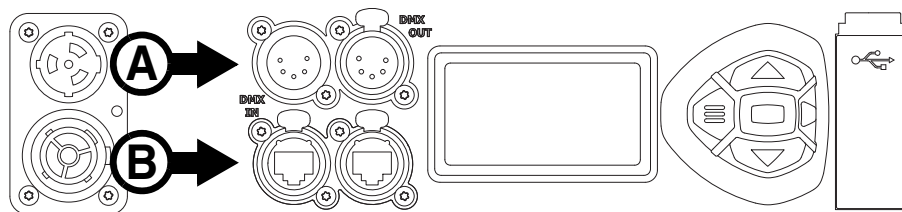
**Important!** Shut down power to the fixture before connecting to or disconnecting from data.

## DMX and RDM

The MAC Allure Wash PC has 5-pin locking XLR sockets for DMX and RDM input and output (see **A** in Figure 8). The default pin-out on both sockets is:

- pin 1 to shield
- pin 2 to data 1 cold (-)
- pin 3 to data 1 hot (+).

Pins 4 and 5 are not used by the fixture but are bridged between input and output sockets. These pins can therefore be used as a pass-through connection for an additional data signal if required.



**Figure 8: Data connections**

### Tips for reliable data transmission

- Use shielded twisted-pair cable designed for RS-485 devices: standard microphone cable cannot transmit control data reliably over long runs. 24 AWG cable is suitable for runs up to 300 meters (1000 ft). Heavier gauge cable and/or an amplifier is recommended for longer runs.
- To split the data link into branches, use a *Martin RDM 5.5 Splitter* optically isolated splitter-amplifier (see “Related Items” on page 21).
- Do not overload the DMX data link. You can connect up to a maximum of 32 devices on a serial DMX link.
- Install a DMX termination plug on the last fixture on the link.

### Connecting to data via DMX cable

To connect the MAC Allure Wash PC to DMX and/or RDM data carried over DMX cable:

1. Shut down power to the fixture.
2. Connect the DMX data output from the controller to the MAC Allure Wash PC's data input (male XLR) socket using good-quality DMX cable.
3. Run DMX cable from the MAC Allure Wash PC's data output (female XLR) socket to the data input of the next fixture and continue until the link is complete.
4. Terminate the data link by connecting a 120 Ohm, 0.25 Watt resistor between the data 1 hot (+) and cold (-) conductors at the data output of the last fixture on the link. If the link is divided into branches using a DMX splitter, terminate each branch of the link.
5. You can now apply power.

## Ethernet

The MAC Allure Wash PC has Neutrik etherCON data sockets (see **B** in Figure 8) that support DMX and RDM over Art-Net and sACN as well as Martin P3 video (see Figure 7 on page 11). Either socket can be used for input and the other socket used for throughput.

The etherCON data sockets have a fail-safe bypass feature. This means that the fixture will relay a data signal from the socket used for input to the socket used for throughput even if power to the fixture is shut down or lost.

## **Connecting to data via Ethernet cable**

To connect the MAC Allure Wash PC to DMX, RDM and/or P3 video data carried over Ethernet cable using Art-Net, streaming ACN or P3 video protocols:

1. Shut down power to the fixture.
2. Connect the Ethernet cable to either of the fixture's EtherCON data sockets.
3. Run Ethernet cable from the fixture's other EtherCON data socket to a data socket on the next fixture.
4. Continue connecting data sockets as described above until the link is complete.
5. You can now apply power.

# Service and maintenance



**Warning!** Read “Safety Information” on page 4 before servicing the MAC Allure Wash PC.

**Warning!** Disconnect the fixture from AC mains power and allow to cool for at least 30 minutes before handling. Do not stare into the light output. Be prepared for the fixture to light and move suddenly when connected to power.



**Warning!** The MAC Allure Wash PC contains components that are accessible and live at high voltage while the fixture is connected to power and that remain under tension for 30 minutes after power is disconnected. Only technicians who are authorized by Martin and who have the Martin service documentation for the MAC Allure Wash PC are permitted to open the fixture. Users may carry out external cleaning as described in this section, following the warnings and instructions provided, but any service operation not described in this manual or in the fixture’s User Guide must be referred to a qualified service technician.



**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.



The user must clean the MAC Allure Wash PC periodically to maintain optimum performance and cooling. The user may also upload firmware (fixture software) to the fixture via the DMX data input port, USB port or Ethernet port using firmware and instructions from Martin. All other service operations on the MAC Allure Wash PC must be carried out by Martin, its approved service agents or trained and qualified personnel using the official Martin service documentation for the MAC Allure Wash PC.

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.

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.

## Tilt lock

The tilt position of the head can be locked for service. See Figure 1 on page 7. Push the lock in towards the yoke in one direction to lock the head and back in from the other side to unlock the head.

**Important!** Release the tilt lock before applying power to the fixture and before packing the fixture in its flightcase.

## Cleaning

Regular cleaning is very important for fixture life and performance. Buildup of dust, dirt, smoke particles, fog fluid residues, etc. degrades the fixture’s light output and cooling ability.

Cleaning schedules for lighting fixtures vary greatly depending on the operating environment. It is therefore impossible to specify precise cleaning intervals for the MAC Allure Wash PC. Cooling fans suck in airborne dust and smoke particles, and in extreme cases fixtures may require cleaning after surprisingly few hours of operation. 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 few 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.

Follow these precautions when cleaning the fixture:

- Work in a clean, dry, well-lit area.
- Use gentle pressure only. Do not use any product that contains abrasives. Do not use solvents. Use care when cleaning optical components: surfaces are fragile and easily scratched.
- Use a vacuum cleaner – do not use a pressurized air jet. A vacuum cleaner will remove dirt from the fixture and from the area where you are working. An air jet may blow dirt into the fixture, and this can cause visible objects in projections and possibly even damage to the fixture.
- Do not apply a strong vacuum directly to a cooling fan, as the strong airflow may spin the fan blades fast enough to cause damage. Instead, hold the vacuum cleaner nozzle a few centimeters away from the fan and dislodge dust with a soft brush.

## Cleaning procedure

To clean the fixture:

1. Disconnect the fixture from power and allow it to cool for at least 30 minutes.
2. Vacuum dust and loose particles from the outside of the fixture and the air vents at the back and sides of the head and in the base.
3. Clean the front glass on the front of the head by wiping gently with a soft, clean, lint-free cloth moistened with a weak detergent solution. Do not rub the surface 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. Check that the fixture is dry before reapplying power.

## Lubrication

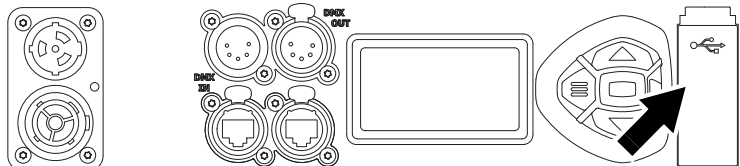
The MAC Allure Wash PC does not require lubrication under normal circumstances. Moving parts can be checked and a long-lasting teflon-based grease reapplied by a Martin service partner if necessary.

## 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 Allure Wash PC 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.

See Figure 9. The battery is located in the USB port / battery compartment next to the control panel on the base of the fixture.



**Figure 9: Battery compartment**



To replace the battery:

1. Order Martin P/N 05801011 (CR123A, 3 V lithium battery).
2. Disconnect the fixture from AC mains power and allow to cool.
3. See Figure 10. Push down on the locking tab (arrowed) with a screwdriver to release the USB port / battery compartment cover and remove the cover.
4. Remove the used battery and insert the new one, respecting the correct battery polarity (positive terminal facing downwards, away from the head).
5. Reinstall the compartment cover and check that it is closed securely before reapplying power.
6. Dispose of the used battery responsibly: send to an authorized waste recycling and disposal center.



**Figure 10: Battery compartment**

# Using the fixture

Before using the fixture, download and read the latest version of the MAC Allure Wash PC User Guide from the MAC Allure Wash PC area of the Martin website at [www.martin.com](http://www.martin.com). The User Guide contains details of:

- The effects available in the fixture.
- The control options available using DMX, RDM and/or P3.
- The setup, monitoring and control options available using the onboard control and display panel.
- Software service functions.

## Applying power



**Warning! Before applying power to the fixture:**

- **Read the safety information section of this manual starting on page 4.**
- **Read “Connecting to power” on page 11.**
- **Check that the installation is safe and secure.**
- **Check that the base is fastened securely so that the torque reaction when the head moves will not cause the base to move.**
- **Check that the head tilt lock is released (see “Tilt lock” on page 7).**
- **Be prepared for the fixture to light up suddenly. Check that no-one is looking at the fixture from close range.**
- **Be prepared for the head to move suddenly. Check that there will be no risk of collision with persons or objects.**

The MAC Allure Wash PC does not have an On/Off switch. To apply power to the fixture, apply power to the power input cable.

# Troubleshooting

Problem	Probable cause(s)	Remedy
One or more of the fixtures is completely dead.	No power to fixture.	Check that power is switched on and cables are plugged in.
	Fuse blown or internal fault.	Contact Martin Service or authorized service partner. Do not remove base or yoke covers, attempt to replace a fuse or carry out any repairs or service that are not described in this Safety and Installation Manual unless you have both authorization from Martin and official Martin service documentation.
Fixtures reset correctly but respond erratically or not at all to the controller.	Bad data link.	Inspect connections and cables. Correct poor connections. Repair or replace damaged cables.
	Data link not terminated.	Insert DMX termination plug in data output socket of the last MAC Allure Wash PC on the data link.
	Incorrect addressing of fixtures.	Check fixture address and protocol settings.
	One of the fixtures is defective and is disturbing data transmission on the link.	Unplug the XLR in and out connectors and connect them directly together to bypass one fixture at a time until normal operation is regained. Have the fixture serviced by a qualified technician.
Timeout error after fixture reset.	Effect requires mechanical adjustment.	Check fixture's stored error messages for more information. Contact Martin Service or authorized Martin service partner.
Mechanical effect loses position.	Mechanical train requires cleaning, adjustment, or lubrication.	Check fixture's stored error messages for more information. Contact Martin Service or authorized Martin service partner.
Light output cuts out intermittently.	Fixture is too hot.	Check fixture's stored error messages for more information. Allow fixture to cool. Clean fixture. Reduce ambient temperature.

**Table 2: Troubleshooting**

# Specifications

## Physical

Length (head) . . . . .	414 mm (16.3 in.)
Length (base) . . . . .	385 mm (15.2 in.)
Width (across yoke) . . . . .	410 mm (16.2 in.)
Height (maximum) . . . . .	609 mm (24.0 in.)
Height (head straight up) . . . . .	603 mm (23.8 in.)
Weight . . . . .	17.0 kg (37.5 lbs.)
Minimum center-to-center distance in side-by-side installation . . . . .	510 mm (20.1 in.)

## Dynamic Effects

Color mixing . . . . .	RGBW, independently variable 0 - 100%
Color temperature control . . . . .	Variable 2000 - 8000 K
Color wheel effect . . . . .	Virtual: multiple colors, split colors and open, indexing, continuous rotation, random color
Beamshaper . . . . .	Indexing, continuous rotation
Dimmer/shutter . . . . .	0 - 100% continuous dimming, regular and random strobe and pulse effects, instant open and blackout
Dimming options . . . . .	Choice of four dimming curves
Pre-programmed effects . . . . .	Two ranges of FX, independent or synchronized/combined
Focus . . . . .	Range varies with zoom angle, from approx. 2 m (6.6 ft.) / 6 m (19.7 ft.) to infinity
Zoom . . . . .	Motorized
Pan . . . . .	540°
Tilt . . . . .	268°
Position correction system . . . . .	Absolute position monitoring

## Control and Programming

DMX channels . . . . .	28 or 64 depending on DMX mode
Setting and addressing . . . . .	Control panel, RDM, RDM via Art-Net or P3
16-bit control . . . . .	Dimming, zoom, focus, pan and tilt 16-bit RGB control of individual pixels in Extended DMX mode
Movement control options . . . . .	Tracking and vector
Fixture identification . . . . .	User-settable ID number
DMX compliance . . . . .	USITT DMX512-A
RDM compliance . . . . .	ANSI/ESTA E1.20
Art-Net compliance . . . . .	Art-Net 1, 2, 3 and 4 including RDM over Art-Net
sACN compliance . . . . .	ANSI E1.31
Martin P3 compliance . . . . .	P3 System Controller Software 5.0.0 or newer
Ethernet Transceiver . . . . .	10/100 Mbit
DMX/RDM Transceiver . . . . .	Opto-isolated RS-485
Fixture software update . . . . .	USB memory device, over DMX link or over Ethernet link

## Optics

Zoom range . . . . .	12° - 36° one-tenth peak (1:3)
Light source . . . . .	7 x 60 W RGBW LEDs
Total LED engine power . . . . .	400 W approx.
Minimum LED lifetime . . . . .	50 000 hours (to >80% luminous output)*

*\*Figure obtained under manufacturer's test conditions*

## Photometric Data

Light engine luminous output	14 000 lumens
Fixture luminous output	6 000 lumens
Calibrated default white	6500 K
CRI (Color Rendering Index)	>80
CQS (Color Quality Scale)	86
TM-30 Rf (IES TM-30-15 Fidelity Index)	79
TM-30 Rg (IES TM-30-15 Gamut Index)	108
TLCI (Television Lighting Consistency Index)	78

## Construction

Color	Black
Housing	High-impact flame-retardant thermoplastic
Protection rating	IP20

## Installation

Mounting points	2 pairs of 1/4-turn locks
Location	Dry location only, must be fastened to surface or structure
Orientation	Any
Minimum distance to combustible materials	0.2 m (8 in.)
Minimum distance to illuminated surfaces	1.0 m (3.3 ft.)

## Connections

AC mains power input	Neutrik TRUE1 socket (accepts Neutrik TRUE1 NAC3FX-W connector)
AC mains power throughput	Neutrik TRUE1 socket (accepts Neutrik TRUE1 NAC3MX-W connector)
DMX and RDM data in/out	5-pin locking XLR
Ethernet (Art-Net, sACN and P3) in/out, including fail-safe bypass	Neutrik etherCON
Firmware from flash memory	USB 2.0 port

## Electrical

AC power	100-120/200-240 V (nominal), 50/60 Hz
Power supply unit	Auto-ranging electronic switch mode
Maximum total power consumption	525 W
Maximum total current at 100-120 V	5.3 A
Maximum total current at 200-240 V	2.6 A
Power consumption, all effects static, zero light output	73 W
Half-cycle RMS inrush current at 230 V, 50 Hz	16.6 A
Recommended MCB (Miniature Circuit Breaker) per IEC 60898/UL489/CSA C22.2 No. 5	Type D

## Typical Power and Current

### ***Typical power data, extended color mode, all LEDs at 100% intensity***

100 V, 60 Hz	4.8 A, 480 W, PF 0.99
120 V, 60 Hz	4.0 A, 480 W, PF 0.99
208 V, 60 Hz	2.4 A, 480 W, PF 0.97
230 V, 50 Hz	2.1 A, 480 W, PF 0.97
240 V, 50 Hz	2.0 A, 480 W, PF 0.97

### ***Typical power data, calibrated mode, full intensity at 6500 K***

100 V, 60 Hz	3.7 A, 370 W, PF 0.99
120 V, 60 Hz	3.1 A, 370 W, PF 0.99
208 V, 60 Hz	1.9 A, 370 W, PF 0.96
230 V, 50 Hz	1.7 A, 370 W, PF 0.96
240 V, 50 Hz	1.6 A, 370 W, PF 0.95

*Figures are typical, not maximum. Measurements made at nominal voltage with all LEDs at full intensity.*

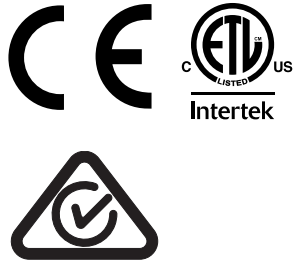
*Allow for a deviation of +/- 10%.*

*PF = power factor*

## Thermal

Cooling	Combined convection and forced air (temperature-regulated, low noise, user-definable levels)
Maximum surface temperature, steady state, at Ta 40° C	70° C (158° F)
Maximum ambient temperature (Ta max.)	40° C (104° F)
Minimum ambient temperature (Ta min.)	5° C (41° F)
Maximum total heat dissipation (calculated, +/- 10%)	1800 BTU/hr.

## Approvals



EU safety	EN 60598-2-17, EN 62471, EN62493
EU EMC	EN 55015, EN 55032, EN 55103-2, EN 61000-3-2, EN 61000-3-3, EN 61547
US safety	UL 1573
US EMC	FCC Part 15 Class A
Canadian safety	CSA C22.2 No. 166
Canadian EMC	CAN ICES-003(A)/NMB-003(A); CAN ICES-005 (A) / NMB-005 (A)
Australia/NZ	RCM

## Included Items

Two omega brackets with 1/4 turn fasteners for rigging clamp attachment

## Spare Parts

CR123A 3-volt lithium battery	P/N 05801011
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## Accessories

### Power input cables

Power Input Cable, H07RN-F, 2.5 mm <sup>2</sup> , bare ends to TRUE1 NAC3FX-W (female), 1.5 m (4.9 ft.)	P/N 91611797
Power Input Cable, H07RN-F, 2.5 mm <sup>2</sup> , bare ends to TRUE1 NAC3FX-W (female), 5 m (16.4 ft.)	P/N 91611786
Power Input Cable, SJOOW, 12 AWG, bare ends to TRUE1 NAC3FX-W (female), 1.5 m (4.9 ft.)	P/N 91610173
Power Input Cable, SJOOW, 12 AWG, bare ends to TRUE1 NAC3FX-W (female), 5 m (16.4 ft.)	P/N 91610174

### Power connectors

Cable Connector, Neutrik powerCON TRUE1 NAC3FX-W (female)	P/N 91611789
Cable Connector, Neutrik powerCON TRUE1 NAC3MX-W (male)	P/N 91611788

### Power relay cables

Power Relay Cable, H07RN-F, 2.5 mm <sup>2</sup> , TRUE1 to TRUE1, 0.45 m (1.5 ft.)	P/N 91611784
Power Relay Cable, H07RN-F, 2.5 mm <sup>2</sup> , TRUE1 to TRUE1, 1.2 m (3.9 ft.)	P/N 91611785
Power Relay Cable, H07RN-F, 2.5 mm <sup>2</sup> , TRUE1 to TRUE1, 2.5 m (8.2 ft.)	P/N 91611796
Power Relay Cable, SJOOW, 12 AWG, TRUE1 to TRUE1, 0.45 m (1.5 ft.)	P/N 91610170
Power Relay Cable, SJOOW, 12 AWG, TRUE1 to TRUE1, 1.2 m (3.9 ft.)	P/N 91610171
Power Relay Cable, SJOOW, 12 AWG, TRUE1 to TRUE1, 2.5 m (8.2 ft.)	P/N 91610172

### Installation hardware

G-clamp (suspension with fixture hanging vertically downwards only)	P/N 91602003
Quick Trigger Clamp (suspension with fixture hanging vertically downwards only)	P/N 91602007
Half-coupler Clamp	P/N 91602005
Safety Cable, SWL 60 kg, BGV C1 / DGUV 17, black	P/N 91604006
Safety Cable, SWL 60 kg, BGV C1 / DGUV 17, silver	P/N 91604007

### Flightcases

Three-unit Flightcase for MAC Allure*	P/N 91515052
Additional SIP Foam Flightcase Insert for MAC Allure*	P/N 91611860HU

\*SIP variant fixtures are supplied packed in a SIP Foam Flightcase Insert

## Related Items

Martin® Companion software suite (incl. firmware uploader)	Free download from <a href="http://www.martin.com">www.martin.com</a>
Martin® Companion Cable USB/DMX hardware interface	P/N 91616091
Martin® RDM 5.5 Splitter	P/N 90758150

## Ordering Information

MAC Allure™ Wash PC EPS in cardboard box, polystyrene packaging . . . . . P/N 90250020HU  
MAC Allure™ Wash PC SIP in cardboard box with SIP foam flight case insert . . . . . P/N 90250025HU  
MAC Allure™ Wash PC, white finish, EPS in cardboard box, polystyrene packaging. . . . . P/N 90250015HU

*Specifications subject to change without notice. For the latest product specifications, including photometric data, see [www.martin.com](http://www.martin.com)*

## Photobiological Safety Warning

The label shown on the right is displayed on this product. If it becomes difficult or impossible to read, it must be replaced using the illustration on the right to reproduce a new label.

## FCC Compliance

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. 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. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

## Supplier's Declaration of Conformity

Harman Professional, Inc. have issued an FCC Supplier's Declaration of Conformity for this product. The Declaration of Conformity is available for download from the MAC Allure Wash PC area of the Martin website at [www.martin.com](http://www.martin.com)

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

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.  
*Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le Matériel Brouilleur du Canada.*  
CAN ICES-003 (A) / NMB-003 (A); CAN ICES-005 (A) / NMB-005 (A)

## EU Declaration of Conformity

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

## Hibernation Mode

'Hibernation mode' is intended as an option to reduce the consequences of having a product fully operational in dirty environments or in situations where noise level is crucial such as during live performances. The small reduction in energy consumption in Hibernation Mode is only a subordinate effect.

## Intellectual Property Rights

Martin® MAC Allure™ products are covered by one or more of these patents:

CN101430080; CN102713425; CNZL200810128720.0; CNZL200810128776.6; CNZL200810144668.8; CNZL201080025103.3; CNZL201180014884.0; CNZL201380004370.6; CZ17567; EP2058586; EP2113714; EP2117284; EP2136136; EP2326150; EP2443381; EP2536974; EP2550686; EP2828577; EP2881650; US6971770; US7,703,948; US7,789,543; US7,905,630; US7,942,535; US7,990,673; US7222997; US7498756; US8,449,141; US8,708,535; US8,770,762; US9217551; US9217559;

and/or one or more of these patent applications:

CN104696882; CN104698579; CN104976548; CN105402641; CN201410740291.8; CN201410742572; DKPA201700088; EP17167067.2; EP2091302; EP2881651; EP2881652; EP2881653; EP2927579; EP2995852; US2015/0285483; US20150159827; US20150159828; US20150159830; US20160069540; US20160102850;

and/or one or more other intellectual property rights, including one or more intellectual property rights listed on [www.martin.com/ipr](http://www.martin.com/ipr)



## 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.

This product contains a lithium battery. Ensure that it is disposed of correctly and responsibly by an authorized recycling or waste disposal center at the end of its life. Where applicable, Martin participates in schemes whose aim is to ensure that local recycling and/or waste disposal centers accept batteries from Martin products.





