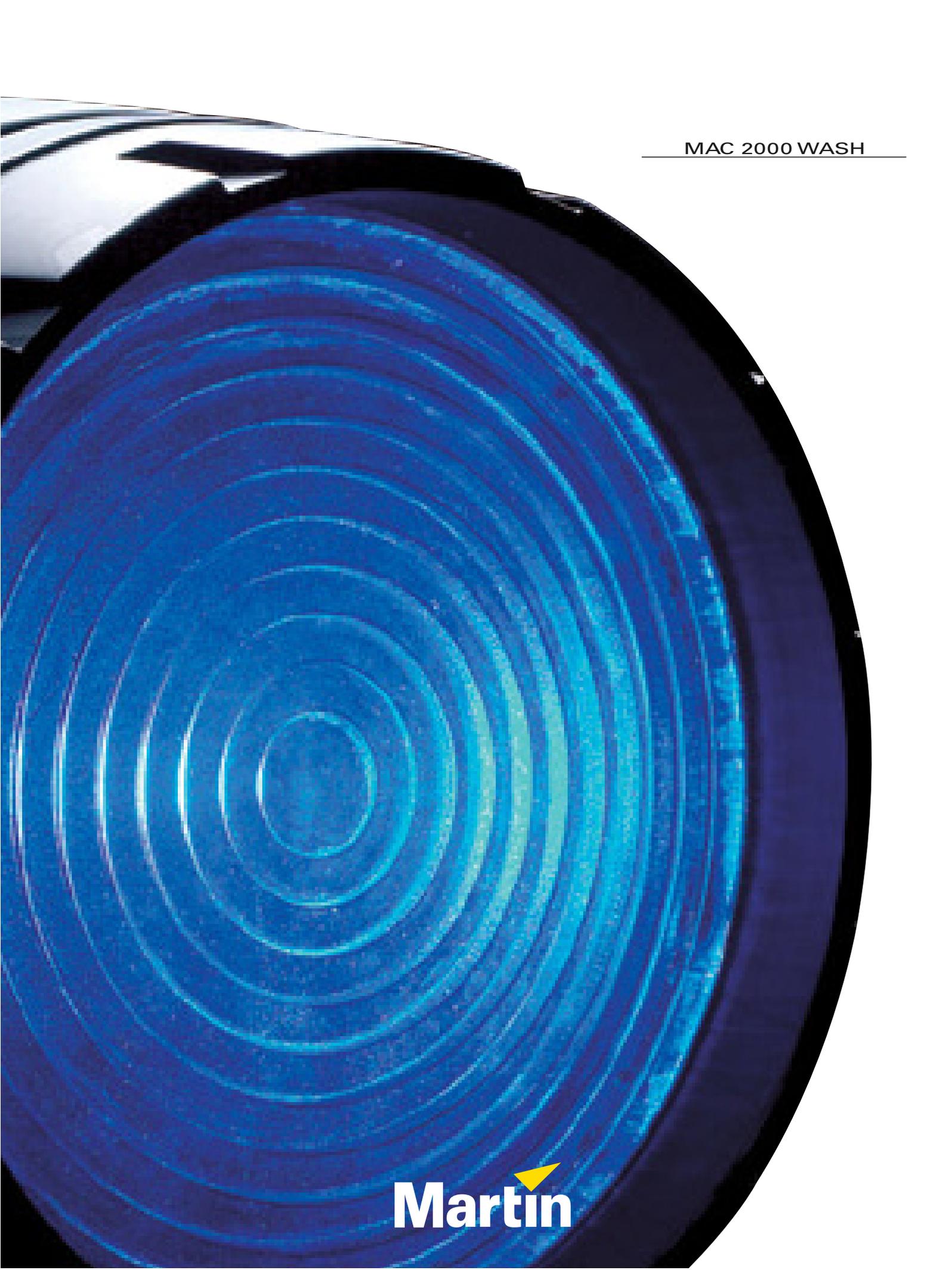


MAC 2000 WASH



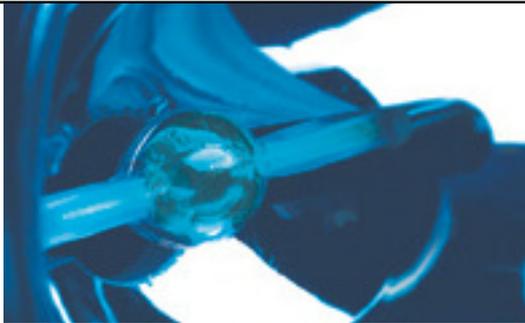
**Martin**

**The MAC 2000 Wash has been produced for one main reason: the market asked for it.**

The MAC 2000 Profile and MAC 2000 Performance have already been highly successful and to complement these, a washlight fixture in the MAC 2000 Series was demanded.

The goal was to produce a fixture consistent with the look and quality of the existing MAC 2000s and to create a large scale washlight capable of long throw projection. We believe that this goal has been achieved with a fixture that is the brightest Martin Professional has ever produced.

### Pure brilliance



The MAC 2000 Wash has an HMI 1200 Watt lamp at its source and features a newly designed reflector, specially developed for this high powered washlight.

### Optical system

To make the fixture as flexible as possible, the MAC 2000 Wash features a fully motorized zoom system. The zoom and optical system operate in conjunction with 3 interchangeable front lenses to provide a wider choice of beam angles.

To the zoom system has been added a very special feature, a 'hyper mode' which allows you to remove the zoom lens entirely from the light path to give a fixed but intensely powerful beam - over 33,000 lumens. The fact that this can be automated and controlled by DMX is unique to the MAC 2000 Wash.



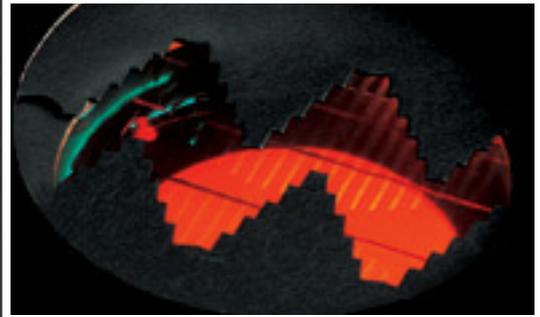
### Flexible lens options



For added flexibility, the Wash comes supplied with 3 different front lens options. In conjunction with the zoom they provide a choice of spread angles. The Fresnel lens allows a zoom range of 15° - 40°, the PC lens a range of 12° - 34° and, for flat and even projection over short distances, a Super-wide lens allows a zoom range of 70° - 80°. The fixture also comes with 4 different aperture rings. These increase the range of available beam angles for each lens.

### Dimmer/Shutter

The MAC 2000 Wash comes complete with a combined dimmer/shutter system which provides both full microstep dimming and a variable speed strobe. The strobe can also be dimmed whilst running. Within the fixture menu are two selectable dimming curves.



### Color options

The MAC 2000 Wash also features two color wheels each with four replaceable color options plus open.

In order to aid lighting designers in achieving the largest variety of colors, the second wheel is replaceable to allow a number of further color possibilities.



### CMY Color Mixing



A large number of color options has been a top priority in the design of the Wash. The MAC 2000 CMY system, based on a subtractive color mixing technique, mixes extremely even colors in a snap. The system employs six coated dichroic flags providing a full spectrum of fantastic rich colors, and mechanically short distances make for extremely fast color bumps.

### Motorized Barn Door System

One of the most exciting developments for the MAC 2000 Wash is the availability of an optional motorized barn door module. The mechanism which attaches to the front of the fixture consists of four individually controlled blades which allow you to cut the beam wherever desired. The entire mechanism can then be rotated for maximum flexibility.

Commonplace on most generic washlight fixtures in theaters and television studios, barn doors are traditionally positioned manually. Where Martin Professional is taking a step forward is to place the barn doors under motorized control, operated via a DMX console.



### CTC

An innovative color temperature correction (CTC) system adds another capability that makes the MAC 2000 Wash extremely useful in televisual and theatrical applications. MAC 2000 CTC flexibility makes it possible to gradually and smoothly increase or decrease color temperature between 6000K and 2900K. When dimming, color shades remain constant over the entire beam projection.



### Operation



The MAC 2000 Wash uses Martin's own 3-Phase motor technology to ensure that multiple parameters such as speed and smooth linear movement are guaranteed - an important requirement for theater applications.

Pan movement is 540° with a tilt range of 267°, and pan/tilt speed is fast and instant.

The MAC 2000 Wash employs an intelligent position correction system that automatically returns the luminaire to its original position, if accidentally knocked out of place.

The fixture is fitted with a new, specially engineered multi-layered PCB that swivels out for easy maintenance.

### Electrical



As a first for this type of fixture, the MAC 2000 Wash is fitted with a switch mode power supply. This auto detects the local voltage and frequency being supplied to the fixture and adjusts its power settings automatically without the need for any re-wiring by technicians. This is a useful feature when traveling from one country to another with a different electrical supply, or if you are running equipment from generators one day and a mains system the next. The switch mode power supply operates at 50 or 60 Hz at voltages from 100–130 and 200–260.

Electronic ballast gives the added advantages of flicker free operation, hot lamp restrike, extended lamp life and a 700 Watt power-saving mode. This feature activates automatically when the shutter is employed for more than 10 seconds. The power reverts to 1200 Watts when the shutter is reopened.

### Control



A user-friendly 4-digit LED display for easy fixture programming is standard. The display provides easy to use maintenance menus and concise error messages.

Software can be easily uploaded via a serial link using the Martin MP2 Uploader, a maintenance device that stores up to 14 fixture personality files.

The MAC 2000 Wash has both 3 pin and 5 pin XLR connectors on board for its DMX control connection. The fixture uses either 19 or 21 channels, depending on whether you select 8 or 16 bit movement control.

5 channels of DMX allocation are included in the fixture personality for the motorized barn door system - whether they are connected to the fixture or not. These channels have been included to save on re-programming should you wish to add barn doors after a fixture has been hung and programmed.

### Rigging

The MAC 2000 Wash flight case is the most advanced flight case ever developed for an intelligent moving head luminaire. Made of durable ply and covered in a tough, water-repellent black grained finish, the MAC 2000 flight case has been designed with user friendly features including a handy pullout drawer which makes fixture access fast and simple.

Omega clamps, half-couplers, G-clamps and TV spigots can all be utilized. Multiple rigging points, Martin's own 1/4 turn fastening system, dedicated anchoring points and a mid-pan range locator help to make rigging fast and foolproof.

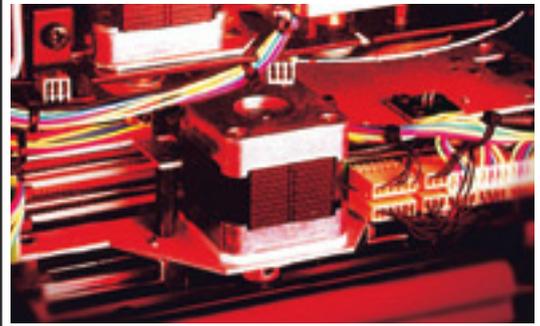
A pan/tilt-lock mechanism has been added to make maintenance and handling even easier.



### Modularity

The MAC 2000's reinforced molded plastic shell is constructed around a durable, ultra-solid metal frame to which all modular components are fixed. The shell is ultra-tough and easily opens via convenient 1/2 turn fasteners.

Two convenient access lids provide for trouble-free access to internal components. Built-in modules make for easy de-assembling, repair and assembling, and dust filters protect internal components including lenses from dirt and dust.



### Silence



The MAC 2000 Wash is extremely quiet. Through sophisticated electronics, Martin engineers have succeeded in reducing noise to the low levels required by theaters and television studios. Temperature sensors in the base and head ensure that fan speed is kept to the absolute minimum required for effective cooling.



## Specifications

### Description

The MAC 2000 Wash is a 1200 Watt moving head wash light that provides CMY color mixing, color correction (CTC), two color wheels, each with four removable colors, a combined dimmer/shutter, a zoom with a range of 10° to 73° (subject to the type of lens fitted), 540° of pan, and 267° of tilt. The MAC 2000 Wash is fitted with an electronic ballast that provides flicker-free operation and an economic power-saving mode. It also has a switch mode power supply allowing it to 'auto sense' and automatically adjusts to the local electrical power. The MAC 2000 Wash has a Fresnel lens mounted as standard, and is supplied with an additional PC lens; a super-wide-angle lens is also available.

### Physical

- Length: 408 mm (16.0 in)
- Width: 490 mm (19.3 in)
- Height: 750 mm (29.5 in)
- Weight: 34 kg (74.8 lbs)

### Source

- Lamp: 1200 W short arc discharge
- Base: Double-ended SFC 10-4 with key
- Approved models: Osram HMI 1200 W/S short-arc
- Control: automatic and remote on/off, hot re-strike
- Ballast: Electronic

### AC Supply

- AC input: 3 m trailing cable w/o cord cap
- Operating ranges: 100-130 / 200-260 V, 50 / 60 Hz
- Power supply: Electronic auto-ranging

### Power Consumption

- 100 V, 50 Hz: 1530 W, 20.9 A
- 100 V, 60 Hz: 1570 W, 20.9 A
- 120 V, 50 Hz: 1520 W, 18.0 A
- 120 V, 60 Hz: 1520 W, 17.7 A
- 208 V, 50 Hz: 1450 W, 10.4 A
- 208 V, 60 Hz: 1450 W, 10.2 A
- 230 V, 50 Hz: 1450 W, 9.5 A
- 230 V, 60 Hz: 1460 W, 9.4 A
- 250 V, 50 Hz: 1450 W, 8.8 A
- 250 V, 60 Hz: 1460 W, 8.6 A

### Thermal

- Maximum ambient temperature (Ta): 40° C (104° F)
- Maximum surface temperature: 140° C (284° F)
- Total heat dissipation: ca. 5120 Btu/hr

### Photometrics (Standard)

- Measurement conditions: Standard **Fresnel lens**, 50 mm aperture ring (A range of aperture rings are included that enable narrower beam angles - 30 mm (1.2 in), 40 mm (1.6 in), 45 mm (1.8 in), and the standard 50 mm (2 in))
- Hyper mode (no diffuser): 31300 lumens, beam angle 11° (measured at 7.6 meters)
- Zoom narrow: 21130 lumens, beam angle 15° (measured at 7.6 meters)
- Zoom wide: 32027 lumens, beam angle 40° (measured at 3.8 meters)
- Measurement source: Osram HMI 1200 W/S

### Photometrics (Optional)

- Measurement conditions: **PC lens**, 50 mm aperture ring (A range of aperture rings are included that enable narrower beam angles - 30 mm (1.2 in), 40 mm (1.6 in), 45 mm (1.8 in), and the standard 50 mm (2 in))
- Hyper mode (no diffuser): 33125 lumens, beam angle 12° (measured at 7.6 meters)
- Zoom narrow: 23421 lumens, beam angle 12° (measured at 7.6 meters)
- Zoom wide: 32550 lumens, beam angle 34° (measured at 2.3 meters)
- Measurement source: Osram HMI 1200 W/S

### Photometrics (Optional)

- Measurement conditions: **Super-wide angle lens**, 50 mm aperture ring (A range of aperture rings are included that enable narrower beam angles - 30 mm (1.2 in), 40 mm (1.6 in), 45 mm (1.8 in), and the standard 50 mm (2 in))
- Hyper mode (no diffuser): beam angle 66° (measured at 2.4 meters)
- Zoom narrow: beam angle 70° (measured at 1.7 meters)
- Zoom wide: beam angle 80° (measured at 1.7 meters)
- Measurement source: Osram HMI 1200 W/S

### Control & Programming

- Protocol: USITT DMX-512
- Control channels: 19 or 21
- Receiver: Opto-isolated RS-485
- Data I/O: locking 3-pin & 5-pin XLR, pin 1 shield, pin 2 cold (-), pin 3 hot (+)
- Setting and addressing: LED control panel, remote w/ MP-2 uploader
- Pan/tilt resolution: 8- or 16-bit
- Movement control: tracking and vector
- Software installation: serial upload (MUF)

### Electromechanical effects

- Cyan: 0 - 100%
- Magenta: 0 - 100%
- Yellow: 0 - 100%
- Color correction: 0 - 178 mireds
- Color wheels (x2): Each with 4 removable filter positions and an open position
- Motorized zoom (see photometrics sections for zoom ranges)
- Dimmer/shutter: full range dimming and variable speed flash
- Pan: 540°
- Tilt: 267°

### Design standards

- EU EMC: EN 50 081-1, EN 50 082-1
- EU safety: EN 60598-1, EN 60598-2-17
- Canadian safety: CSA C22.2 No. 166
- US safety: ANSI/UL 157

### Construction

- Housing: UV-resistant fiber-reinforced composite
- Colors: black
- Protection factor: IP 20

### Installation Details

- Mounting points: 8 pairs of 1/4-turn locks, offset 45°
- Orientation: any

### Ordering information

- MAC 2000 Wash in 2-unit flight case: P/N 90203000
- MAC 2000 Wash in single flight case: P/N 90203010

### Included items

- Osram HMI 1200 W/S lamp.
- 2 x Omega bracket, 1/4-turn
- User manual
- Aperture rings: 30 mm (1.2 in), 40 mm (1.6 in), 45 mm (1.8 in), and 50 mm (2 in - fitted as standard)

### Accessories

- MP-2 Uploader: P/N 90758420
- G-clamp: P/N 91602003
- Half-coupler clamp: P/N 91602005
- The Wife DMX Tester: P/N 91611038
- Super-wide-angle lens: P/N 55203012
- Barndoor system: P/N tba



# Martin