MAC ULTRA PERFORMANCE

1150 W HIGH OUTPUT LED MOVING HEAD PROFILE WITH FRAMING

SPEC SHEET



The MAC Ultra Performance has raised the bar for extremely bright moving lights and features benchmark output across the zoom range, a true next generation framing system, higher definition optics and astoundingly low noise levels.

Built to support the biggest live events, this powerful workhorse is based on our all new 1150 W, 5800 K proprietary LED light engine and the fixture pushes an incredible 46,500 lumens in projection. The 50,000+ hour light engine also provides high resolution dimming, strobing and Martin's unique Animotion effect.

A 1:7 zoom-range and precision focus-control is provided from the refined optical system. The extensive feature package includes uniform color mixing, variable CTO, additional color and spectral correction filters, Martin's innovative Extended Framing system, two layers of rotating gobos, full function animation wheel, iris, frost and prism effects, and truly responsive and accurate pan and tilt. And, these features are all packed into a compact, sturdy and legendary Martin design.

The MAC Ultra Performance is perfect for a wide range of concert and touring productions but is equally applicable for noise-sensitive broadcast and theater stage lighting applications. Simply put, when it comes to workhorse fixtures that push the boundaries of output and performance execution, the MAC Ultra Performance stands boldly in a class all its own.

KEY MESSAGES

INCREDIBLE LUMEN OUTPUT

The MAC Ultra Performance produces an incredible 46,500 projection lumens. With our tailor-made light engine and optics designed as a single unified system, MAC Ultra excels on keeping output across the zoom range. With high luminous flux and intensity at narrow zoom angles, MAC Ultra delivers the punch needed for the longest throws and highest trims - no stage or venue is too big for MAC Ultra Performance.

SEEING IS BELIEVING

Our proprietary LED light engine is the foundation for MAC Ultra visual quality, built around the very latest technology to meet ever-stretched performance requirements. Our engine not only provides impressive metrics, but most importantly is more pleasing to the human eye. With higher red content and 5800 K color temperature for better daylight balance, it delivers richer, more vivid colors and more natural skin-tones.

VISUAL EXCELLENCE FOR LIFE

MAC Ultra was designed to not only deliver best-in-class output and quality in its first hour of use, but throughout its product life. The minimum LED lifetime exceeds 50,000 hours and the engine delivers over 90 percent of its initial output after 20,000 hours of full output. In real-world applications, this equals rock-solid performance and stability. Our engineering team has achieved these results through a sophisticated cooling system and by never driving the 1680 W LED package at more than 70 percent of its maximum rating. This combination ensures visual excellence and peace of mind throughout the life of the product.

HARMAN PROFESSIONAL INC. • 8500 BALBOA BOULEVARD • NORTHRIDGE • CA 91329 • USA • +1 818 893 8411

©2021 HARMAN Professional. All rights reserved. Martin® is a registered trademark of HARMAN Professional Inc. registered in the United States and/or other countries. Features, specifications, and appearance are subject to change without notice. Rev. 202311

Martin® by HARMAN

MAC ULTRA PERFORMANCE

1150 W HIGH OUTPUT LED MOVING HEAD PROFILE WITH FRAMING

SPEC SHEET

KEY MESSAGES (Cont.)

PRECISION OPTICS

With remarkably higher projection resolution and definition, incredible sharpness across the field and enhanced contrast, the MAC Ultra Performance features our most impressive projection system ever. The 1:7 zoom system with accurate focus capability maintains a flat field. The beam stays bright at the edge for higher visual impact and white tones and colors stay more consistent across the beam. Thanks to this optical design, MAC Ultra delivers excellent morphing from one gobo plane to the other and outstanding results when using framing and gobos together.

EXTENDED FRAMING SYSTEM

MAC Ultra Performance truly raises the bar with a next-generation framing system. It offers more flexibility, easy programming, quick response time and enhanced shutter angling. Where existing systems have no tilting of the shutter blades at the very edge of the beam and only obtain their specified tilt range when the blades are fully inserted, the Martin Extended Framing System offers fully specified shutter tilting from the very outside of the beam all the way across to the opposite side. This results in limitless, full curtain functionality and the ability to throw more light onstage. And, the MAC Ultra Performance keeps the four framing blades in just two layers, offering more even focus across all four blades.

ULTRA QUIET OPERATION

The sophisticated MAC Ultra cooling system ensures a precise operating temperature window and sets a new standard for low acoustic levels. It's not only ideal for a range of concert and touring productions but is equally applicable for noise-sensitive broadcast and theater stage lighting applications.

FUNCTIONAL INDUSTRIAL DESIGN

MAC Ultra features a unique and compact industrial design. Martin's patented yoke handles provide better ergonomics and safer handling of the light. To benefit stage and set designers, all connectors and the UI are placed on the same side of the unit, leaving the opposite side free from visual distraction. Follow-spot handles are also permanently incorporated, and tool-free replacement of air-inlet filters is easier than ever to access.

FEATURES

LIGHT SOURCE

- 1150 W proprietary LED light engine
- 84 x 20 W white LEDs
- Minimum LED lifetime: >50,000 hours (see specs for further details)

PHOTOMETRIC DATA

- Light Engine Luminous Output: 90,000 lumens
- Fixture Luminous Output: 46,500 lumens
- Peak Luminous Intensity: 3,000,000 cd
- CCT: 5800 K (+/- 250 K)

OPTICS

- 160 mm front Lens
- 1:7 zoom range (8.0° - 54° field angle)
- High resolution projection system

DYNAMIC EFFECTS

- 0 - 100% continuous dimming and strobe effects
- Choice of four dimming curves
- CMY color mixing
- Color temperature control (5800 - 2850 K)
- Color wheel with 6 x interchangeable dichroic filters, including Spectral Enhancement Filter
- Rotating gobo wheel 1 includes 5 interchangeable gobos + open
- Rotating gobo wheel 2 includes 5 interchangeable gobos + open
- Gobo animation wheel, indexing, continuous rotation with variable angle
- Frost (fade in)
- 4-facet prism
- Iris
- Zoom
- Focus with auto tracking
- Extended Framing module with individual +/- 30° across entire beam and +/- 83° rotation
- Pan: 540°
- Tilt: 268°
- P3 videomapping of fixture color and/or intensity (10 segments)
- Pre-programmed effects: Two ranges of pre-programmed FX

COOLING AND NOISE

- Low noise cooling system
- User-selectable output vs. sound level control

CONSTRUCTION

- Height (head straight up): 864 mm (34.1 in.)
- Height (maximum): 876 mm (34.5 in.)
- Weight: 44.0 kg (97.0 lbs.)

CONTROL

- DMX-512 in/out
- Ethercon in/out for P3, Art-Net, sACN
- Built in Ethernet switch with fail-safe bypass

HARMAN PROFESSIONAL INC. • 8500 BALBOA BOULEVARD • NORTHRIDGE • CA 91329 • USA • +1 818 893 8411

©2021 HARMAN Professional. All rights reserved. Martin® is a registered trademark of HARMAN Professional Inc. registered in the United States and/or other countries. Features, specifications, and appearance are subject to change without notice. Rev. 202311

Martin® by HARMAN

MAC ULTRA PERFORMANCE

1150 W HIGH OUTPUT LED MOVING HEAD PROFILE WITH FRAMING

SPEC SHEET

ORDERING INFORMATION

- MAC Ultra Performance, SIP (in cardboard box with SIP foam flight case insert) ..... P/N 90250055HU
- MAC Ultra Performance, white finish, SIP (in cardboard box with SIP foam flight case insert) ..... P/N 90250060HU

INCLUDED ITEMS

- Two omega brackets with 1/4 turn fasteners for rigging clamp attachment
- Heavy-frost/wash filter (prism replacement) ..... P/N MAR-91614060HU
- Safety and Installation Manual

ACCESSORIES

OPTICAL ACCESSORIES

- Heavy-frost/wash filter (prism replacement) ..... P/N MAR-91614060HU

TRANSPORT AND STORAGE

- Flightcase for 2 x MAC Ultra Performance/ Wash without SIP inserts ..... P/N 91515055

CONSUMABLES

- Air filter, MAC Quantum / MAC Ultra, set of 12 ..... P/N 50400765
- CR123A 3-volt lithium battery ..... P/N 05801011

POWER INPUT CABLES

- Power Input Cable, H07RN-F, 2.5 mm2, bare ends to TRUE1 NAC3FX-W TOP (female), 1.5 m (4.9 ft.) ..... P/N 91611797
- Power Input Cable, H07RN-F, 2.5 mm2, bare ends to TRUE1 NAC3FX-W TOP (female), 5 m (16.4 ft.) ..... P/N 91611786
- Power Input Cable, SJOOW, 12 AWG, bare ends to TRUE1 NAC3FX-W TOP (female), 1.5 m (4.9 ft.) ..... P/N 91610173
- Power Input Cable, SJOOW, 12 AWG, bare ends to TRUE1 NAC3FX-W TOP (female), 5 m (16.4 ft.) ..... P/N 91610174

POWER INPUT CONNECTOR

- Cable Connector, Neutrik powerCON TRUE1 NAC3FX-W TOP (female) ..... P/N 91611789HU

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

RELATED ITEMS

- Martin Companion Cable (for firmware update over DMX) ..... P/N 91616091
- Martin RDM 5.5 Splitter ..... P/N 90758150
- Martin Companion Software (for firmware update over DMX): Free download from www.martin.com

TECHNICAL SPECIFICATIONS

DYNAMIC EFFECTS

Pre-programmed effects ..... Two ranges of FX, independent or synchronized/combined

Color mixing ..... CMY, independently variable 0 - 100%

Color wheel ..... 6 x interchangeable dichroic filters + open (incl. Spectral Enhancement Filter), indexing, continuous rotation, random color

Gobo animation ..... Interchangeable animation wheel, indexing, continuous rotation with variable angle, speed and direction

Iris ..... Variable 0 - 100%, pulse effects

Zoom ..... Motorized

Color temperature control ..... Variable 5800 - 2850 K

Framing ..... Rotatable framing module, +/- 83°, 4 x individually controllable full curtain blades with full variable angle (+/- 30°) through the entire insertion path from 0 - 100%

Prism ..... 4-facet, indexing and continuous rotation

Frost ..... Variable 0 - 100%, second (heavy) frost available as optional replacement for Prism

Dimmer/shutter ..... 0 - 100% continuous dimming, regular and random strobe and pulse effects, instant open and blackout

Dimming options ..... Choice of four dimming curves

Pan ..... 540°, coarse & fine control and speed

Tilt ..... 268°, coarse & fine control and speed

HARMAN PROFESSIONAL INC. • 8500 BALBOA BOULEVARD • NORTHRIDGE • CA 91329 • USA • +1 818 893 8411

©2021 HARMAN Professional. All rights reserved. Martin® is a registered trademark of HARMAN Professional Inc. registered in the United States and/or other countries. Features, specifications, and appearance are subject to change without notice. Rev. 202311

Martin® by HARMAN

MAC ULTRA PERFORMANCE

1150 W HIGH OUTPUT LED MOVING HEAD PROFILE WITH FRAMING

SPEC SHEET

TECHNICAL SPECIFICATIONS (Cont.)

DYNAMIC EFFECTS (Cont.)

P3:	Videomapping of fixture color and/or intensity with variable crossfade between DMX control and video control
Focus	Motorized, range varies with zoom angle, from approx. 4.5 m (14.8 ft.) to infinity
Rotating gobo wheel 1	5 x interchangeable gobos + open, indexing, continuous rotation and shake
Rotating gobo wheel 2	5 x interchangeable gobos + open, indexing, continuous rotation and shake
Gobo Color Temperature Correction	Automatic

CONTROL AND PROGRAMMING

Control Protocols	DMX, RDM, Art-Net, RDM over Art-Net, sACN and P3
Protocol detection	Automatic
Setting and addressing	Display Menu, RDM, RDM over Art-Net or P3
DMX Modes	One
DMX channels	48
16-bit Controllable Parameters	Dimming, Color Mixing + CTC, Gobo Rotation/Indexing, Zoom, Focus, Pan and Tilt
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 - 2016
Martin P3 Compliance	P3 System Controller Software 5.1.0 or newer
DMX/RDM Transceiver	Galvanic-isolated RS-485
Ethernet Transceiver	10/100Mbit (with fail-safe bypass)
Firmware update	USB memory device, via DMX using Martin Companion or via Ethernet using P3 System Controller
Local User Interface	Backlit LCD Display with battery-powered operation

OPTICS

Front Lens Diameter	160 mm
Zoom Range	8.0° - 54° (1:7 field angle)
Light Source	84 x 20 W White LEDs in a custom Martin engine
Minimum LED lifetime	>50,000 hours (to >80% luminous output)* / >20,000 hours (to >90% luminous output)*
Maximum Total LED Engine Power	1150 W

**Figure obtained under manufacturer's test conditions*

PHOTOMETRIC DATA

Light Engine Luminous Output	90,000 lumens
LED refresh rate	3000 Hz

PHOTOMETRIC DATA (Cont.)

STANDARD

Fixture luminous output	46,500 lumens
CRI (Color Rendering Index)	66 (+/- 3)
TM-30 Rf (IES TM-30-15 Fidelity Index)	66
TM-30 Rg (IES TM-30-15 Gamut Index)	95
CCT	5800 K (+/- 250 K)
Peak Luminous Intensity	3,000,000 cd

WITH SPECTRAL ENHANCEMENT FILTER AT 5300 K

Fixture luminous output	23,500 lumens
CRI (Color Rendering Index)	83 (+/- 3)

WITH CTO AND CYAN AT 3200 K

Fixture luminous output	12,000 lumens
CRI (Color Rendering Index)	90 (+/- 3)

CONSTRUCTION

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

GOBOS

Maximum image diameter	30 mm (1.181 in.)
External diameter	37.5 mm +0 / -0.2 mm (1.476 in. +0 / -0.008 in.)
Maximum gobo thickness	1.1 mm (0.04 in.)
Coating	Heavy matted aluminum
Material	Borofloat 33

INSTALLATION

Mounting points	2 pairs of 1/4-turn points for 106 mm (4.17 in.) center-to-center omega brackets
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	4.75 m (15.6 ft.)

CONNECTIONS

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

HARMAN PROFESSIONAL INC. • 8500 BALBOA BOULEVARD • NORTHRIDGE • CA 91329 • USA • +1 818 893 8411

©2021 HARMAN Professional. All rights reserved. Martin® is a registered trademark of HARMAN Professional Inc. registered in the United States and/or other countries. Features, specifications, and appearance are subject to change without notice. Rev. 202311

Martin® by HARMAN

MAC ULTRA PERFORMANCE

1150 W HIGH OUTPUT LED MOVING HEAD PROFILE WITH FRAMING

SPEC SHEET

TECHNICAL SPECIFICATIONS (Cont.)

ELECTRICAL

AC power	200-240 V AC nominal, 50/60 Hz
Power supply unit	Auto-ranging electronic switch mode
Maximum total power consumption	1450 W
Typical half-cycle RMS inrush current at 230 V, 50 Hz	17 A
Maximum total current at 200 V	8.0 A
Maximum total current at 240 V	6.7 A
Power consumption, all effects static, zero light output	100 W

TYPICAL POWER AND CURRENT

208 V, 60 Hz	6.8 A, 1380 W, PF 0.99
230 V, 50 Hz	6.0 A, 1380 W, PF 0.99
240 V, 50 Hz	5.8 A, 1380 W, PF 0.99

Measurements made at nominal voltage. Allow for a deviation of +/- 10%.

PF = power factor.

THERMAL

Cooling	Forced air (temperature regulated, low noise)
Maximum Ambient Temperature (Ta max)	40° C
Minimum Ambient Temperature (Ta min)	5° C
Maximum surface temperature, steady state, at 40° C ambient	85° C (185° F)
Total heat dissipation (calculated, +/- 10%)	4950 BTU/hr.

ACOUSTIC DATA

Sound Pressure Level (LpA) @ 1 m (default regulated fan mode, full output)	36.5 dB(A)
Sound Pressure Level (LpA) @ 1 m (constant fan mode ultra low)	35.1 dB(A)

WARRANTY

Fixture	2 years
Light Engine	5 years

APPROVALS

EU safety	EN 60598-2-17 (EN 60598-1), EN 62471, EN 62493
EU EMC	EN 55032; EN 61547; EN 55035; EN 61000-3-2,-11
US safety	UL 1573
US EMC	FCC Part 15 Class B
Canadian safety	CSA C22.2 No. 166
Canadian EMC	ICES-003 Class B, ICES-005 Class B
Australia/NZ	RCM
Global CB Certification/IECEE	IEC 60598-2-17 (IEC 60598-1)





HARMAN PROFESSIONAL INC. • 8500 BALBOA BOULEVARD • NORTHRIDGE • CA 91329 • USA • +1 818 893 8411

©2021 HARMAN Professional. All rights reserved. Martin® is a registered trademark of HARMAN Professional Inc. registered in the United States and/or other countries. Features, specifications, and appearance are subject to change without notice. Rev. 202311

Martin® by HARMAN

MAC ULTRA PERFORMANCE

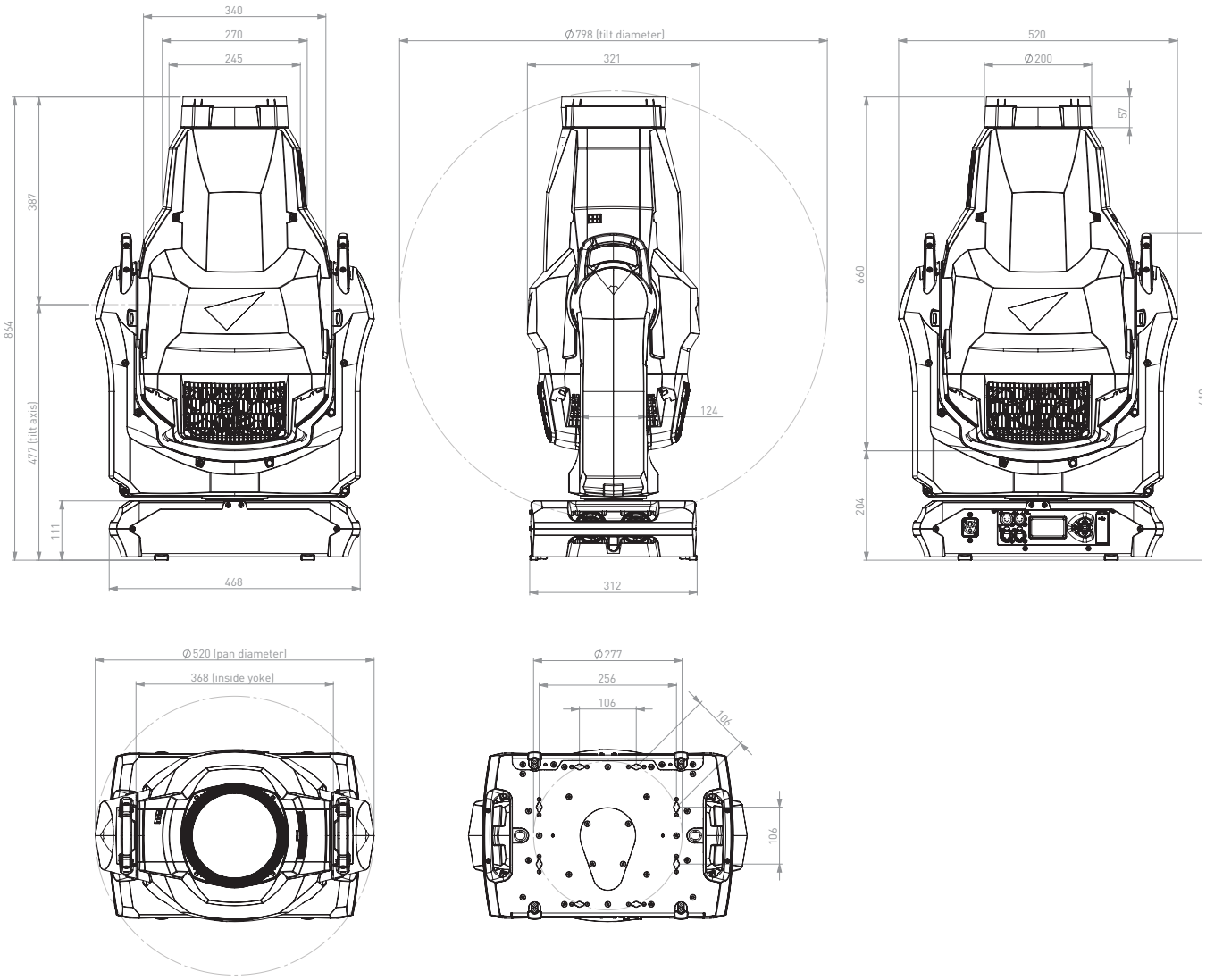
1150 W HIGH OUTPUT LED MOVING HEAD PROFILE WITH FRAMING

SPEC SHEET

DIMENSIONS

PHYSICAL

Weight ..... 44.0 kg (97.0 lbs.)
Minimum center-to-center distance in side-by-side installation ..... 830 mm (32.7 in.)
Length (head) ..... 660 mm (26.0 in.)
Length (base) ..... 468 mm (15.5 in.)
Width (base) ..... 312 mm (12.3 in.)
Width (across yoke) ..... 520 mm (20.5 in.)
Height (head straight up) ..... 864 mm (34.1 in.)
Height (maximum) ..... 876 mm (34.5 in.)



All dimensions are in mm

HARMAN PROFESSIONAL INC. • 8500 BALBOA BOULEVARD • NORTHRIDGE • CA 91329 • USA • +1 818 893 8411

©2021 HARMAN Professional. All rights reserved. Martin® is a registered trademark of HARMAN Professional Inc. registered in the United States and/or other countries. Features, specifications, and appearance are subject to change without notice. Rev. 202311

Martin® by HARMAN