

MAC 500



Martin

The MAC 500 is a powerful automated moving head profile spot luminaire with a reputation for road-proven durability. This industry workhorse is one of the most successful automated moving heads in the lighting industry.

The MAC 500 offers an impressive array of effects and is used wherever sharp-edged profile projection is needed. Specified the world over in a variety of applications, the MAC 500 has an unmatched performance and specification.

Two Color Wheels



Dual color wheels combine to produce 67 different color shades. One wheel offers 9 easily replaceable color slots. Color Temperature Correction (CTC) filters are included as well.

Two Projection Wheels

One wheel houses 5 replaceable indexable rotating gobos. The second wheel is fixed with 9 replaceable gobo slots.



Iris, Prism, Focus

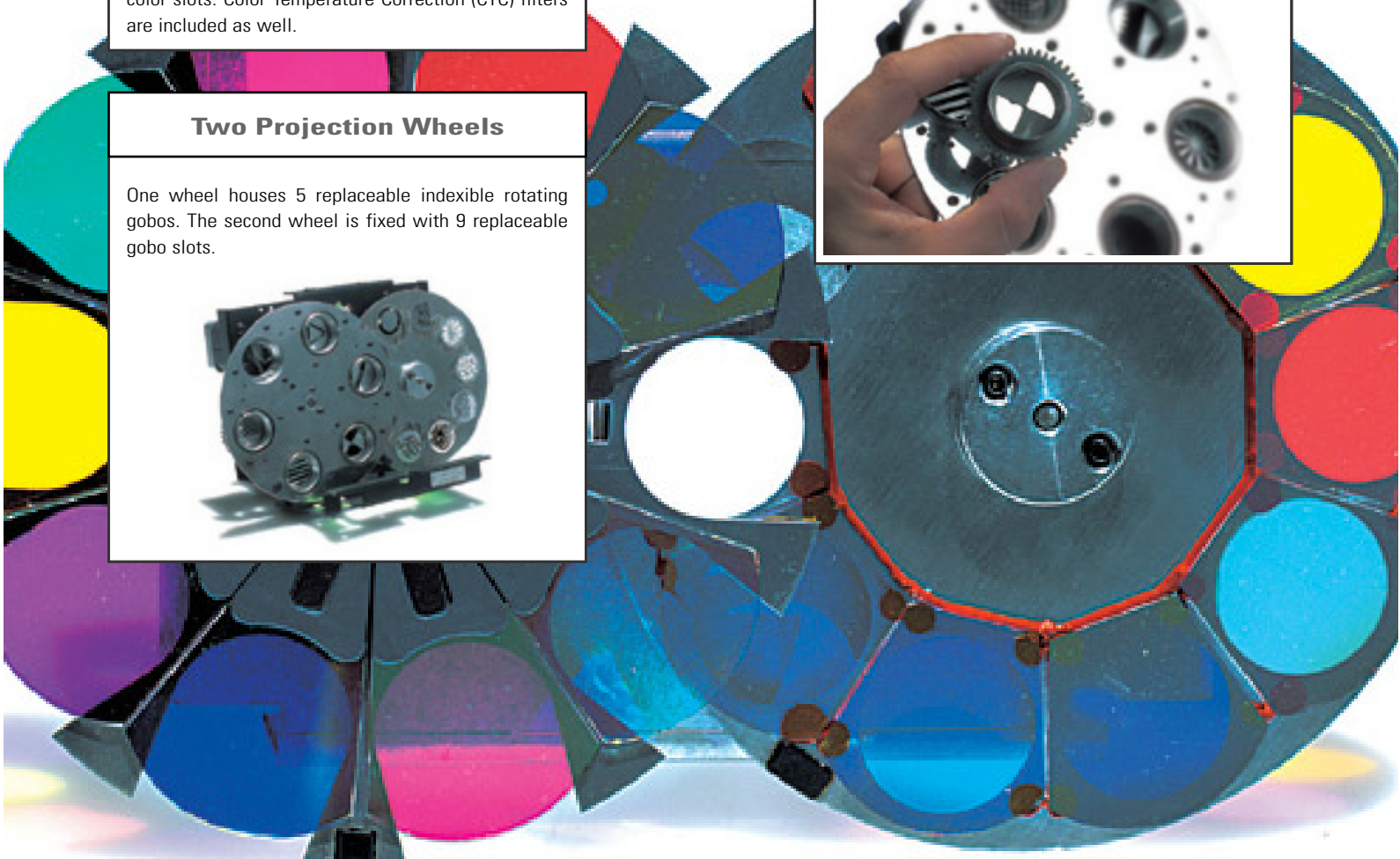
A motorized iris, rotating 3-facet bi-directional prism and motorized focus are incorporated to enhance beam effects.

Motorized focus of the optical bank allows for very sharp and clear projection. Smooth crossfades are possible as well as immediate changes in projection length. The focus ranges from 2 meters to infinity.



Easily replaceable gobos

Gobos are replaced in seconds by simply removing a single spring mechanism and then removing the gobo slot.



Lamp



A powerful 575 Watt discharge lamp provides 2000 hours of lamp life. The MAC 500 accepts four different lamp models from two top industry manufacturers.

Optics

Achromatic lenses provide hard-edged 17° and 23.5° beam angles. A unique bayonet mounting system makes beam angle changes a breeze.



Dimmer and Shutter



A combined microstep-driven, full range dimmer/shutter can strobe up to 23 Hz. It provides fluid, linear or simulated tungsten dimming curves.

LED Display

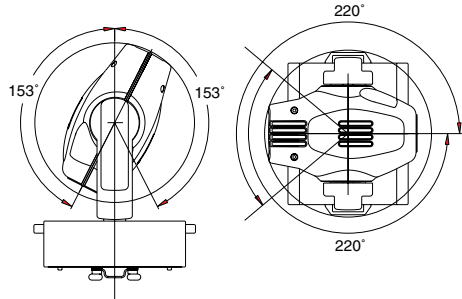


A 4-digit LED readout allows the user to customize settings for easy programming. Error messages are easily understood, lamp and fixture usage is displayed and the readout flips for easy reading in any position.

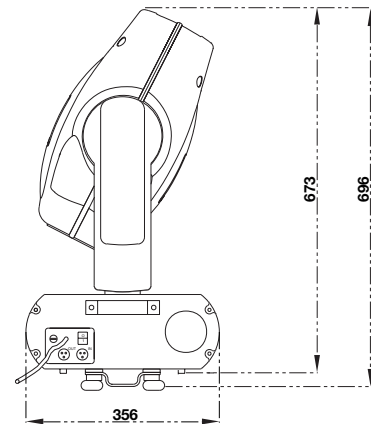
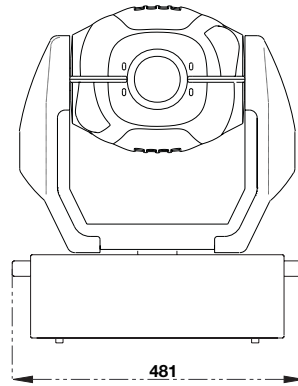


Pan and Tilt

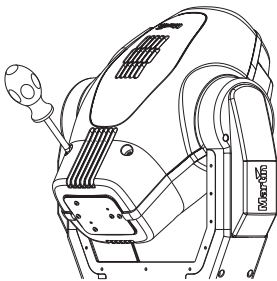
The lumination head features 440° of horizontal pan and 306° of vertical tilt. Self-adjusting motor belts insure smooth and quick adjustments.



Elevations

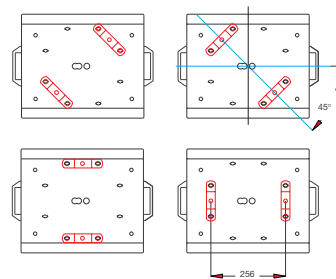


Service Friendly



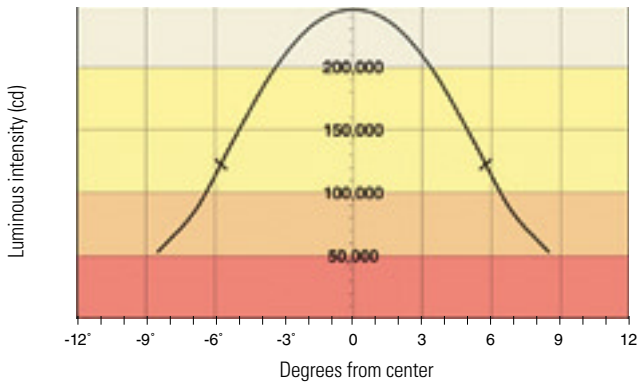
Convenient 1/2 turn screws make for easy component accessibility and simple lamp adjustments.

Rigging

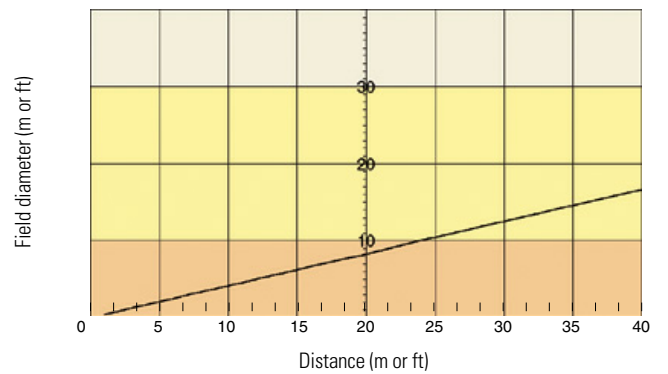
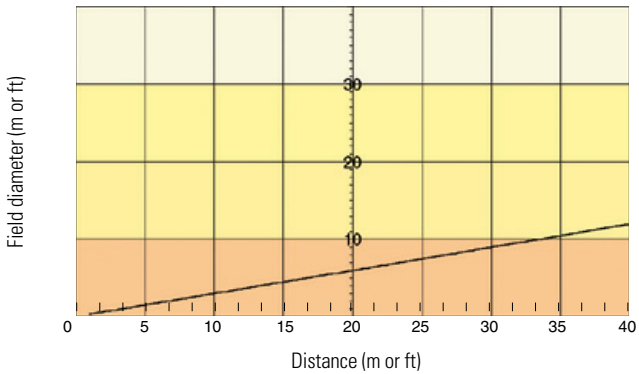
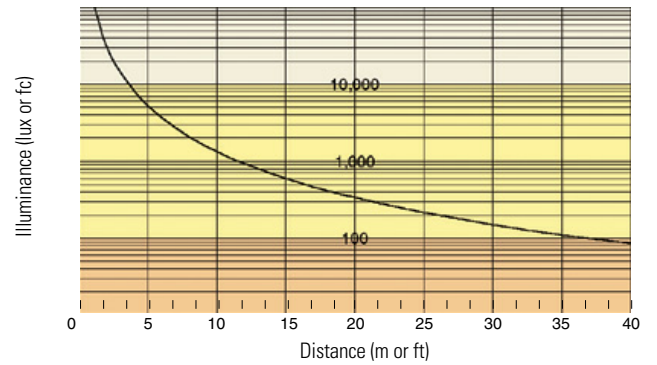
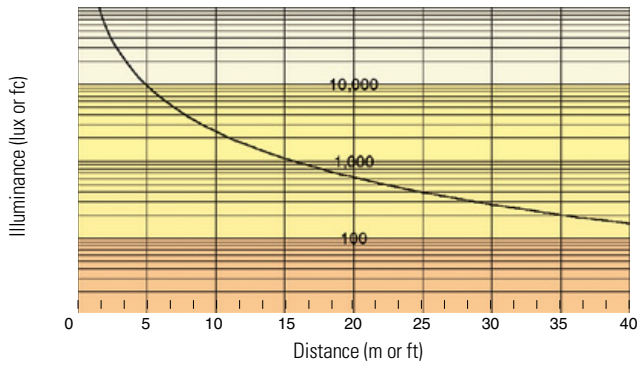
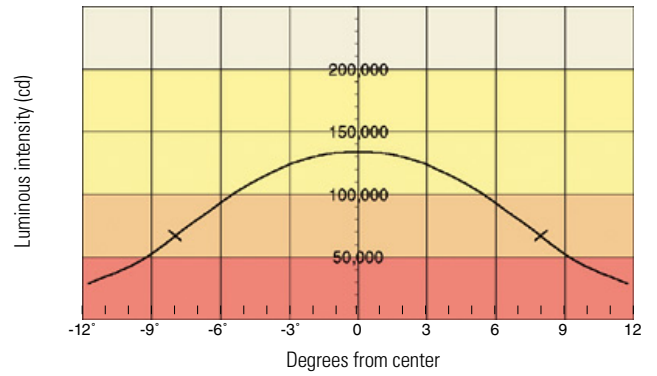


Dedicated anchoring points, a quarter-turn fastening system and mid-pan-range locator make for versatile and trouble-free rigging.

Standard 17° Lens



Optional 23.5° Lens



Illuminance (lux or fc) 245,826 cd / distance² (m or ft)
 Diameter 0.30 x distance
 Field angle 17°
 Measurement conditions 230 V, 50 Hz; no color or effects applied
 Measurement source Philips MSR 575/2

Illuminance (lux or fc) 134,298 / distance² (m or ft)
 Diameter 0.42 x distance
 Field angle 23.5°
 Measurement conditions 230 V, 50 Hz; no color or effects applied
 Measurement source Philips MSR 575/2

The MAC 500 is also available in an electronic ballast version, the MAC 500 E.

Distinguishing characteristics of the MAC 500 E

Description for MAC 500 E

The MAC 500 E is an electronic ballast version of the MAC 500 automated moving head profile spotlight. In addition to the regular features of the MAC 500, the electronic ballast provides flicker-free operation, an economic power-saving mode, compatibility with 100 and 120 volt AC supplies, and considerably lighter weight.

Physical

- Length: 356 mm (14.0 in)
- Width: 481 mm (18.9 in)
- Height (head at maximum tilt): 673 mm (26.5 in)
- 26.1 kg (57.4 lbs)

AC Supply

- AC input: 3 m trailing cable w/o cord cap
- Wiring options, MAC 500 E:
100/110/120/210/220/230/240 V,
50-60 Hz

Ordering information

- MAC 500 E, black: 90215200
- MAC 500 E, white: 90215338

Maximum power and current

Option	Watts	Amps
100 V, 50-60 Hz	730	8.5
110 V, 50-60 Hz	725	7.6
120 V, 50-60 Hz	715	7.2
210 V, 50-60 Hz	700	3.4
220 V, 50-60 Hz	700	3.3
230 V, 50-60 Hz	700	3.2
240 V, 50-60 Hz	700	3.1

Specification

General

The luminaire is an automated yoke-mounted profile spotlight, with electronic ballast, that employs a 575 Watt discharge lamp as the light source.

Electrical

The luminaire operates on 50 Hz and 60 Hz supplies at 100, 110, 120, 200, 210, 220, 230, and 240 volts; +/- five percent. It is fitted with a 3 meter (9.8 ft.) length of three conductor 1.5 sq. mm (16 AWG) electrical cable for connection to AC power. The luminaire must be electrically grounded.

The luminaire, without operator intervention, reduces lamp power 40 percent within ten seconds of being set to blackout condition. Lamp power is restored to full without visible delay upon opening of the dimmer.

The luminaire conforms with CE standards EN 60598-1 and EN 60598-2-17 for safety, and with CE standards EN 50 081-1 and EN 50 082-1 for electromagnetic compatibility.

Physical

Size (head at maximum tilt): 356 x 481 x 673 mm (14.0 x 18.9 x 26.5 in)

Weight: 26.1kg (57.4 lbs)



Specifications

Description

The MAC 500 is an automated moving head profile spotlight designed for a 575 Watt discharge source. It provides 18 combinable dichroic color filters, nine replaceable static and five replaceable indexed-rotation gobos, variable iris and focus, rotating three-facet prism, continuous full-range dimming, strobe effects up to 23 Hz, and 16-bit resolution movement.

Physical

- Length: 356 mm (14.0 in)
- Width: 481 mm (18.9 in)
- Height (head at maximum tilt): 673 mm (26.5 in)
- Weight: 32.8 kg (72.2 lbs)

Source

- Lamp: 575 W discharge
- Base: GX 9.5
- Approved models: Philips MSR 575/2, MSD 575; Osram HSR 575/2, HSD 575
- Control: automatic and/or remote on/off

Performance

- Light output: (standard lens, MSR 575/2 lamp) 9000 lumens

Gobos

- Diameter: 27.9 mm + 0.0 / - 0.3 mm (1.098 in. + 0.000 / - 0.012 in.)
- Maximum image diameter: 23 mm (0.905 in.)
- Thickness, rotating: 0.5 to 4 mm (0.020 to 0.157 in.)
- Thickness, static: 0.5 mm (0.020 in.)
- Glass type: high-temperature Borofloat or better
- Glass coating: dichroic or enhanced aluminum
- Metal type: aluminum (steel ok for short-term use)

Thermal

- Maximum ambient temperature (Ta): 40° C (104° F)
- Maximum surface temperature: 80° C (176° F)
- Total heat dissipation: 2660 Btu/hr

Control and programming

- Control options: USITT DMX-512, Martin RS485
- Setting and addressing: LED control panel, remote with MP-2 Uploader
- Firmware update: serial upload (MUF)
- Pan/tilt resolution: 8- or 16-bit
- DMX speed control: tracking and/or vector
- DMX channels: 12 - 16
- Receiver: Opto-isolated RS-485
- Data I/O: locking 3-pin XLR female; pin 1 shield, pin 2 cold (-), pin 3 hot (+) socket

AC Supply

- AC input: 3 m trailing cable w/o cord cap
- Wiring options, MAC 500: 200/230/245 V, 50 Hz; 208/227 V, 60 Hz
- Maximum power and current

Maximum power and current

Option	Watts	Amps
200 V, 50 Hz	780	4.4
230 V, 50 Hz	780	4.1
245 V, 50 Hz	780	3.7
208 V, 60 Hz	730	4.0
227 V, 60 Hz	740	3.8

Design standards

- EU EMC: EN 50 081-1, EN 50 082-1
 - EU safety: EN 60598-1, EN 60598-217
 - Canadian safety: CSA C22.2 No. 166*
 - US safety: ANSI/UL 1573*
- *MAC 500 US only

Electromechanical effects

- Color wheel 1: 9 replaceable filters + open, split
- Color wheel 2: 9 filters + open, split
- Static-gobo wheel: 9 replaceable gobos + open
- Rotating-gobo wheel: 5 replaceable gobos + open
- Gobo rotation: indexable variable speed and direction
- Dimmer/Shutter: variable flash up to 23 Hz 0 - 100%
- Rotating 3-facet prism: in/out variable speed and direction
- Focus: 2 m (6.5 ft.) - infinity
- Iris: 0 - 85% closed
- Pan: 32,768, 440°
- Tilt: 45,567, 306°

Construction

- Housing: steel and aluminum with molded plastic covers
- Colors: black or white
- Metal finish: electrostatic powder coating
- Protection factor: IP 20, IP 44 with Outdoor Protection Dome

Installation

- Mounting points: 8 pairs of 1/4-turn locks, offset 45°
- Orientation: any
- Omega bracket, MAC 500/600, 1/4-turn: 91602000
- Minimum installation distance, center-to-center: 490 mm (19.3 in)
- Minimum distance to combustible materials: 1 m (39 in)
- Minimum distance to illuminated surfaces: 1 m (39 in)

Ordering information

- MAC 500, black: 90215000
- MAC 500, white: 90215032

Included items

- 2 x Omega bracket, MAC 500/600, 1/4-turn: 91602001
- Extra gobos, MAC 500: 56600012
- XLR cable, 5 m, black, 3-pin: 11820008
- User manual: 35000016

Accessories

- MP-2 Uploader: 90758420
- Outdoor Protection Dome: 90525010
- Flight case for 2 x MAC 500/600: 91510002
- 23.5° lens kit for bayonet-mount system: 91610015
- 23.5° lens kit for screw-mount system: 91610009
- Focus lens (bayonet mount) retrieval tool: 50521600
- Frost filter for MAC 500/RS 918, assembled: 91611003
- Safety cable for head shell: 50300502
- G-clamp: 91602003
- Half-coupler clamp: 91602005
- The Martin King Dome

Specification

General

The luminaire is an automated yoke-mounted profile spotlight that employs a 575 Watt discharge lamp as the light source.

Mechanical effects

The luminaire has two color wheels, each with nine positions for dichroic glass color filters and an open position. The filters on one of the wheels are replaceable. The wheels overlap to provide 67 possible full-color combinations. The wheels rotate continuously clockwise and counterclockwise and are positionable between filters.

The luminaire has one wheel with nine replaceable static positions and one wheel with five replaceable rotating positions for user-selectable gobos. The rotating positions turn continuously clockwise and counterclockwise at variable speed and are indexable to 256 positions. The gobo wheels overlap to provide combined pattern effects, and the luminaire is capable of focusing either gobo wheel at a distance of 2 meters (6.5 ft.) to infinity.

The luminaire has an iris that reduces the beam width 85 percent, and it has a three-facet prism that rotates clockwise and counterclockwise at variable speed. The luminaire is prepared for an optional frost filter that may be installed in lieu of the prism.

The luminaire has a mechanical dimmer system to vary the intensity of the light output from 0 to 100 percent in 256 steps. The dimmer is capable of generating stroboscopic effects at speeds of up to 23 flashes per second.

The yoke pans 440° and the head tilts 306°.

Control

The luminaire responds to command signals conforming to either the USITT DMX512 (1990) standard or the Martin RS485 standard. All user-selected software settings are adjustable via an onboard control panel with LED display or via data cabling in conjunction with a remote control unit. The luminaire has two locking 3-pole XLR connectors for serial data transfer.

Performance

When fitted with a new MSR 575/2 discharge lamp, the luminaire emits a total luminous flux of 9000 lumens in a focused beam 17° wide.

Housing

The luminaire is constructed of sheet steel and aluminum alloy. The exterior finish is an electrostatically applied powder coating. Non-structural covers are constructed of molded plastic. The exterior color can be black or white.

Installation

The luminaire operates in any orientation. It is supplied with two brackets to which mounting clamps may be bolted. These brackets are attached to the base with quarter-turn fasteners such that the luminaire may be installed at any increment of 45° in a plane parallel to the structure. When installed above floor level, a secondary attachment is fastened to a reinforced clamping point in the luminaire's base.

Electrical

The luminaire operates on 50 Hz supplies at 200, 230, and 245 volts; and on 60 Hz supplies at 208 and 227 volts, +/- five percent. It is fitted with a 3 meter (9.8 ft.) length of three conductor 1.5 sq. mm (16 AWG) electrical cable for connection to AC power. The luminaire must be electrically grounded.

The luminaire conforms with CE safety standards EN 60598-1 and EN 60598-2-17, and with CE electromagnetic compatibility standards EN 50 081-1 and EN 50 082-1. Units intended for use in North America are cETL certified for compliance with CSA standard C22.2 No. 166, and ETL certified for compliance with ANSI/UL standard 1573.

Environmental

The luminaire must be located in a dry, well ventilated area in which the ambient temperature does not exceed 40° C (104° F). Where installed outdoors, the luminaire should be supplied with a protective housing with an IP rating of 44.

Physical

Size (head at maximum tilt): 356 x 481 x 673 mm (14.0 x 18.9 x 26.5 in)
Weight: 32.8 kg (72.2 lbs)

For a MAC 300 specification quote, see the Service and Support page on the Martin website: www.martin.dk

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