

FOLLOWSPOT SPECIFICATION

August 8, 2013

Part 1 GENERAL

1.01 RELATED DOCUMENTS:

Drawings and general provisions of Contract, including General and Supplementary Conditions, apply to work of this section

1.01 DESCRIPTION OF WORK:

- a. The Intent of this specification is to provide for the furnishing, testing and placing in operation Metal Halide Followspots. This equipment is designed to provide high quality lighting capabilities and specific features, with maximum ease of use and reliability for the wide variety of functions housed in these facilities.
- b. This Contractor shall provide all labor and materials and make all necessary arrangements, except as specifically noted herein, so that when the Contractor is finished, a fully working Followspot system will be turned over to the Owner. Any errors, omissions, or ambiguities are not to condition this requirement, but shall be brought to the attention of the Owner in their possible effect on the intent of this specification.

1.02 WORK EXCLUDED:

The following work is not included in this section:

- a. Receiving, uncrating, and placing in position of the Followspots;
- b. Electrical work, including the wiring of power receptacles to feed the Followspots.

1.03 QUALITY ASSURANCE:

- a. The equipment specified is the result of efforts to select equipment for reliability, ease of maintenance, and suitability for the Owner's purposes. Strict adherence to these specifications shall be required.
- b. Manufacturers:
 1. Provide products by the manufacturers indicated on the drawings and specifications. This apparatus is fully catalogued and described with complete technical data available from the manufacturers.
 2. Manufacturer approval shall not relieve the manufacturer from meeting the full requirements and intent of these specifications on each product specified
 3. Alternate Manufacturers or Products shall be acceptable only when they are submitted and approved at least ten days prior to the bid. Only equipment that in the opinion of the Owner equals or exceeds the features specified will be considered.
 - A. The Bidder shall provide working samples of proposed alternate equipment including lamping for any lighting fixtures, to be delivered to the premises designated, for examination by the Architects, Engineers, and such representatives as the Owner may direct. Handling shipping and delivery to, or removal from the site, of any sample required shall be at the cost of the Bidder.

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- B. The bidder shall further provide evidence of the alternate manufacturer's ability and plans to support the Followspots with parts and accessories.
 - C. Proposals which fail to address specification requirements or review comments will be rejected.
- 4. Equipment by a manufacturer which has not been approved prior to the bid shall not be acceptable.
- c. Warranties:
 - 1. The Followspots specified herein (except lamps) shall be warranted by the manufacturer to be free from defects of material or workmanship for a period of two year from the date of acceptance. During the period of this warranty, parts which prove to be defective shall be repaired or replaced at no charge. Followspots with warrantees less than two (2) tears are not acceptable.
 - 2. This contractor shall coordinate all warranty repairs and replacements in cooperation with the owner.

OPERATION AND MAINTENANCE MANUALS:

When the installation is complete, the owner shall be supplied with:

- 3. Three (3) sets of **Operation and Maintenance Manuals**, including Safety and Maintenance information on all major units and principal components of the system.

1.04 PRODUCT STORAGE, DELIVERY AND HANDLING:

- a. Deliver Followspots securely protected in factory containers.
- b. Handle equipment and controls carefully to prevent breakage, denting and scoring finish. Do not install damaged equipment and controls; replace and return damaged units to equipment manufacturer.

Part 2 PRODUCTS

2.01 FOLLOWSPOT

- a. The basis of this design shall be the M2 Modular follow spotlight, as manufactured by Lycian Stage Lighting of Sugar Loaf, NY.
- b. Physical
 - 1. The unit frame and enclosure shall be constructed of cold rolled steel and sturdy aluminum extrusions, free of burrs and protected by a gray and black powder coat finish.
 - 2. The unit will be manufactured from interchangeable modules and delivered pre-configured. The unit must be able to be ordered with short, medium or long throw lens modules, 1200 or 2500 watt lamphouses and external magnetic or internal electronic power supplies. The magnetic ballast must be external while the electronic power supply must be integrated into the unit. Available interchangeable lamp house and lens modules allow for field conversion to change operating characteristics.
 - 3. The unit shall be mounted on a stable, folding three-legged floor stand (short and medium throw) or folding four legged (long throw) with adjustable yoke mounts. The bases shall include locking casters and leveling jacks for each leg. If ordered with underhanging yoke, the base becomes optional.

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- A. Mounting shall incorporate the following design features:
 - 1) Unobstructed access
 - 2) Easy height adjustments
 - 3) Horizontal Pan Knob and Vertical Tilt Control Levers
 - B. In order to provide extra smooth Pan and Tilt operation, mounting shall incorporate low friction materials.
 - C. The unit must be able to convert to left hand operation. The color boomerang and gate shall be easily reversed to left hand operation by turning thumb screws and remounting to the opposite side.

c. Controls/ Cooling

- A. The Lamphouse shall incorporate the following:- Quiet forced-air cooling by internally wired fan (1200) or blower (2500)
- B. Bulb operation elapsed hour meter
- C. On/Off ignition controls by pushbutton located on followspot body. Units with On/Off controls located only on remote power supply shall be unacceptable.
- D. Lamp field focus controls to adjust the lamp's focal position relative to the reflector in three dimensions.
- E. HMI spring mounted bulb assembly, allowing the unit to be safely transported with the bulb in place.
- F. Mounted safety switch that turns the unit off should the hood be removed

The body of the unit shall, as minimum incorporate the following:

- G. A centrally located gate module
- H. Rigidly mounted automatic self-canceling six color boomerang (front mounted on short throw)
- I. Southco screws to facilitate field conversions
- J. Trombone style one handed zoom focus (medium and long throw)
- K. A six color, automatic, self-canceling boomerang which shall include an easily removable access panel

d. Optical

- 1. The unit's optical train shall consist of :
 - A. Choice of lamp houses that accommodate 1200 watt or 2500 watt double ended Metal-Halide lamp, with hot restrike capability.
 - B. A choice of three (3) available interchangeable lenses (short, medium, long)
 - C. Precision deep ellipse aluminum triple flatted reflector
 - D. High- temperature condenser lens
 - E. Heavy duty nichrome iris with heat shield
 - F. Independent horizontal and vertical shutters

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- G. Gobo slot
 - H. Two dichroic rings
 - I. Variable frost filter
 - J. Fader
2. The zoom focus shall increase light intensity as it decreases the spot diameter (medium and long)
 3. The light color temperature shall be 5600° Kelvin ($\pm 200^\circ$ K.).
- e. Electrical- 1200 Watt Lamp House
4. Lamp system input shall be 110- 120V.AC, 60 Hertz, single phase, 15 amp maximum operation with magnetic ballast. A universal magnetic ballast will operate on international currents.
Lamp system with internal electronic ballast will operate from 100-240V AC 50/60 Hz at a maximum of 20 amps. Electronic ballast shall be of the flicker-free type.
 5. Line cords shall be bare ended.
 6. Lamp shall be Osram order code 54268 or Ushio order code 5000235
- e. Electrical- 2500 Watt Lamp House
1. Lamp system input shall be 208-240V, AC, 50/60 Hertz, single phase, 30 ampere maximum for magnetic and electronic ballasts. Electronic ballasts shall be flicker-free type.
 2. Line cords shall be bare ended.
 3. Lamp shall be Osram order code 54068.
- g Optical Performance
4. Adjusted for flat field the units shall produce as follows at a distance of 100':
 - A. 1200 watt with short throw lens, fixed focus- 131 foot candles, maximum diameter 11.5 feet
2500 watt with short throw lens, fixed focus- 179 foot candles, maximum diameter 11.5 feet
1200 watt with short throw, zoom narrow- 70 foot candles at maximum diameter 15.69 feet
2500 watt with short throw, zoom narrow- 128 foot candles at maximum diameter 15.69 feet
1200 watt with short throw, zoom wide- 32 foot candles at a maximum diameter of 23.75 feet
2500 watt with short throw, zoom wide- 60 foot candles at a maximum diameter of 23.75 feet
 - B. 1200 watt with medium throw lens, fixed focus- 400 foot candles, maximum diameter 6.66 feet
2500 watt with medium throw lens, fixed focus- 467 foot candles, maximum diameter 6.66 feet
1200 watt with medium throw lens zoom narrow- 269 foot candles, maximum diameter 8.62 feet
2500 watt with medium throw lens zoom narrow- 384 foot candles, maximum diameter 8.62 feet
1200 watt with medium throw lens zoom wide- 80 foot candles, maximum diameter 15.55 feet
2500 watt with medium throw lens zoom wide- 134 foot candles, maximum diameter 15.55 feet

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- C. 1200 watt with long throw lens, fixed focus- 640 foot candles, maximum diameter 4.75 feet
 - 2500 watt with long throw lens, fixed focus- 704 foot candles, maximum diameter 4.75 feet
 - 1200 watt with long throw lens, zoom narrow- 410 foot candles, maximum diameter 6.25 feet
 - 2500 watt with long throw lens, zoom narrow- 557 foot candles, maximum diameter 6.25 feet
 - 1200 watt with long throw lens, zoom wide- 141 foot candles, maximum diameter 11.25 feet
 - 2500 watt with long throw lens, zoom wide- 243 foot candles, maximum diameter 11.25 feet

- Furnish _____ (2020-12) M2 followspots, complete with all necessary accessories.
- Furnish _____ (2020-12 UT) M2 followspots, complete with all necessary accessories.
- Furnish _____ (2020-12/E) M2 followspots, complete with all necessary accessories
- Furnish _____ (2040-12) M2 followspots, complete with all necessary accessories.
- Furnish _____ (2040-12 UT) M2 followspots, complete with all necessary accessories.
- Furnish _____ (2040-12/E) M2 followspots, complete with all necessary accessories
- Furnish _____ (2060-12) M2 followspots, complete with all necessary accessories.
- Furnish _____ (2060-12 UT) M2 followspots, complete with all necessary accessories.
- Furnish _____ (2060-12/E) M2 followspots, complete with all necessary accessories
- Furnish _____ (2020-25) M2 followspots, complete with all necessary accessories.
- Furnish _____ (2020-25/E) M2 followspots, complete with all necessary accessories
- Furnish _____ (2040-25) M2 followspots, complete with all necessary accessories
- Furnish _____ (2040-25/E) M2 followspots, complete with all necessary accessories
- Furnish _____ (2060-25) M2 followspots, complete with all necessary accessories
- Furnish _____ (2060-25/E) M2 followspots, complete with all necessary accessories

h. The following optional accessories shall be available at or after time of purchase:

1. Lo-Boy stand
2. Underhanging yoke

PART 3 EXECUTION

2.02 INSTALLATION:

- a.** This Contractor must examine areas and conditions under which followspots are to be installed and notify owner in writing of conditions detrimental to proper completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected in an acceptable manner.
- b.** Prior to energizing the followspots, all wiring shall be checked and tested by the owner to insure the system is free from grounds, opens and shorts.

2.03 SYSTEM COMMISSIONING:

- a.** After installation is complete, and before energizing the followspots, this contractor shall provide the services of a trained and authorized technician to commission the system as follows:
 - 1. Safely lamp each followspot
 - 2. Mechanically adjust the followspots to correct any misalignment caused by transportation or handling during the construction period.
 - 3. Trim the light output of each followspot to maximize intensity with flat field.
- b.** This contractor shall provide training to instruct persons designated in the safe operation and maintenance of the followspot system
- c.** The Contractor shall further submit certificates stating installed system is operating properly and complies with manufacturer's recommendations.

***** END OF SPECIFICATION *****