

# INSTALLATION INSTRUCTIONS

## F Series Floodlight

### IMPORTANT:

Read carefully before installing. All work should be performed by a qualified Electrician. These instructions may not provide directions to cover every variation and detail. To obtain additional information, consult your vendor or contact the factory directly for assistance before attempting anything with uncertainty. Improper installation and/or utilization may void manufacturer's warranty.

This fixture must be grounded in accordance with local codes and the NATIONAL ELECTRIC CODE. Failure to do so may result in serious personal injury. HID luminaires should be operated on grounded systems only.

Ungrounded power distribution systems may carry high transient voltages which can cause failure of any type electrical equipment. Use of this equipment on ungrounded systems will **VOID THE WARRANTY**.

### GENERAL:

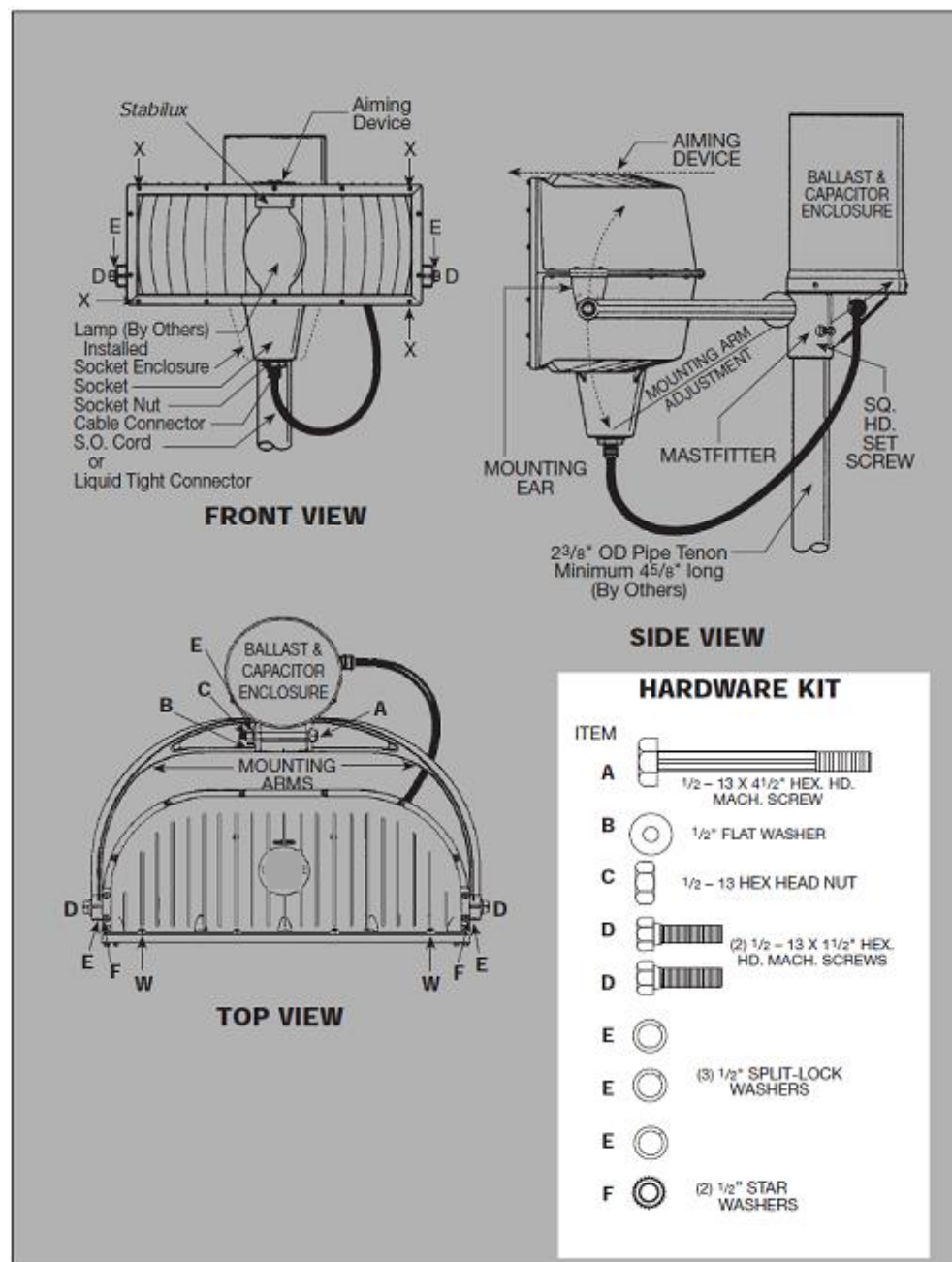
Upon receipt, inspect for any freight damage, which should be brought to the attention of the delivering carrier. See "Damage and Shortage Claims" for proper steps in filing claims with the carrier. Compare the catalog description listed on the packing slip with the label on the carton to assure you have received the correct material.

This floodlight is designed for outdoor lighting and should not be used in areas with limited ventilation or within enclosures having high ambient temperatures. It is provided with an integral mastfitter for mounting on a vertical 2-3/8" OD tenon x 4-1/2" tall. The flood light is UL listed for wet locations (UL1598) and may be aimed above horizontal.

**WARNING: In no case mount this floodlight to either a horizontal tenon or inverted tenon.**

**IMPORTANT:** The flood light optical assembly are separately packaged. After uncartoning, inspect for any damage. If damage is noticed, see "Damage and Shortage Claims Form" (yellow) for proper steps in filing claims with the carrier.

**NOTE:** Illustrations depict a 400 watt fixture. Assembly and installation procedures are the same for 1000 watt and 1500 watt fixtures.



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### FIXTURE and BALLAST ASSEMBLY

#### STEP 1

Loosen the socket nut and remove from the socket/cord assembly. Remove socket housing from the fixture. Pull the S.O. cord through the socket housing.

**CAUTION:** Make sure the weatherproof gasket is between the socket and inside of socket housing as shown in **FIGURE 1**.

Install the socket nut and tighten to 15 ft-lbs. to assure a good weatherproof seal.

### LAMPING

#### STEP 2

Prior to installing lamp into socket, check to make sure it is the correct type and wattage.

**CAUTION:** Observe lamp manufacturer's recommendations and restrictions on lamp operation, particularly regarding ballast type and burning position.

### STABILUX LAMP SOCKET

#### STEP 3

This floodlight has a stabilux lamp socket that grips the top of the lamp which holds the lamp in alignment and offers protection against breakage when the fixture is subjected to vibration. Before installing lamp into the fixture you will need to determine the correct stabilux holder required for the particular lamp purchased. This determination is dependent on the lamp shape. "BT", "ED" or "E" shaped (See **FIGURE 2**).

### BT SHAPED LAMPS

Install lamp into socket. Attach socket housing to the fixture, making sure end of lamp securely engages the fiberglass tape-lined stabilux (split collar). Be sure socket housing gasket is seated properly, and then tighten the screws securely.

### E OR ED SHAPED LAMPS

This lamp shape is primarily found in 400 watt size lamps. The "BT" stabilux collar must be removed before installing an "E" or "ED" shaped lamp. This is

accomplished by compressing the "BT" (split collar) by hand and removing from the fixture. Inside the stabilux cavity of the fixture there is a "E" lamp stabilux (found on 400 watt floodlights only). Bend the "E" stabilux (fiberglass tape-covered cone) down into the fixture. Install lamp into socket. Attach socket housing to the fixture, making sure the "E" stabilux cone firmly engages the lamp dimple. Be sure the socket housing gasket is seated properly, and then tighten the screws securely.

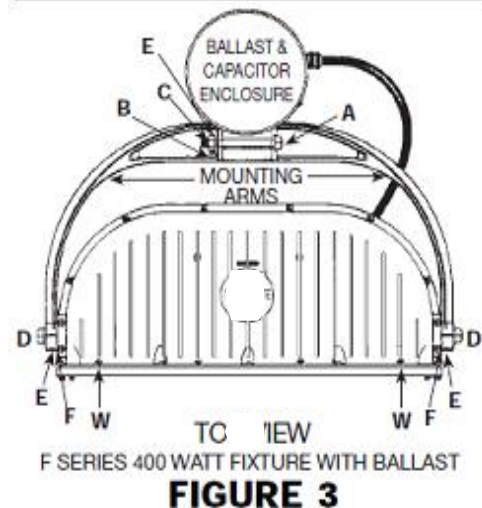
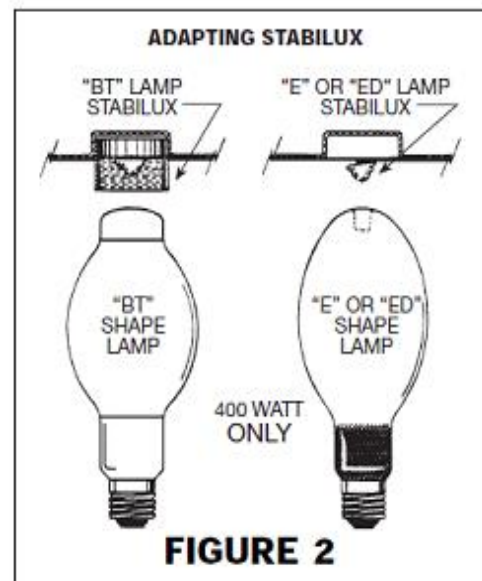
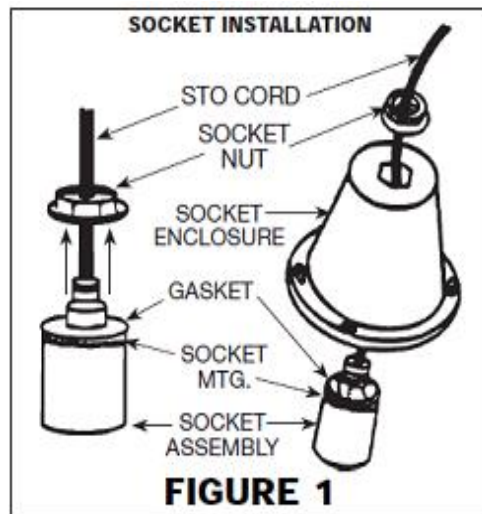
### BALLAST ASSEMBLY

#### STEP 4

Attach fixture mounting arms to ballast enclosure/mastfitter assembly with the 4-1/2" long machine bolt, 1/2" flat washer, 1/2" split-lock washer, and 1/2 - 13 hex head nut (provided in fixture hardware kits). Arms should be set in their proper aiming position. Tighten the 1/2 - 13 hex head nut slightly (See **FIGURE 3**)

#### STEP 5

Mount fixture head to mounting arms. Install star washers, and attach the two 1-1/2" long machine bolts and 1/2" split-lock washers (provided in fixture hardware kit). Fixture at this stage may be set at the proper vertical aiming angle by using the degree markings on the mounting ears. (Aiming angle may also be set after the fixture and ballast assembly are mounted to the pole or 2-3/8" OD vertical tenon). If proper aiming angle has been set, tighten the two 1-1/2" long machine bolts securely, then tighten the 1/2 - 13 hex head nut on mastfitter to 25 ft-lbs (See **FIGURE 4**).



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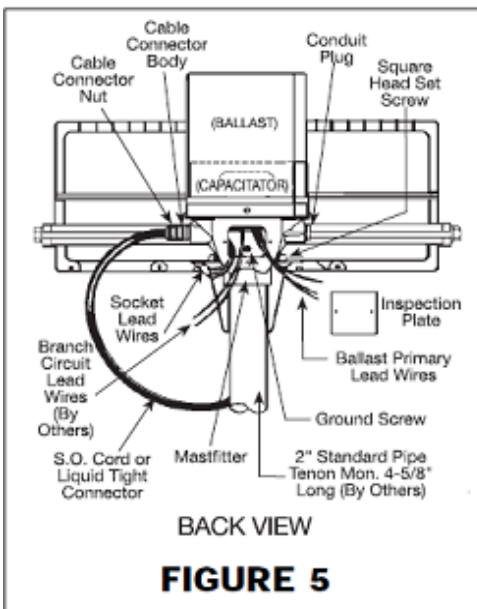
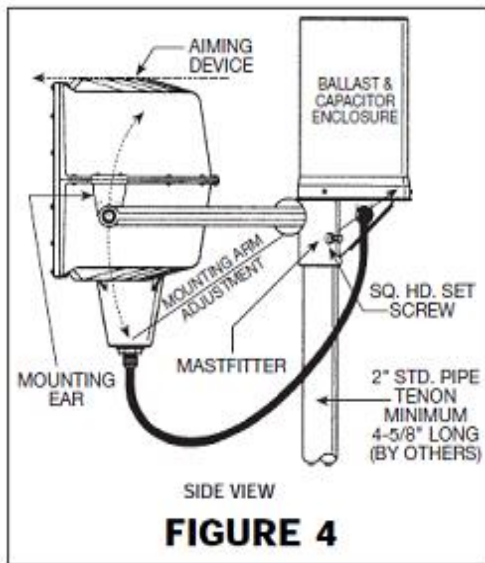
## F Series Floodlight

### FIXTURE WIRING

This fixture must be wired in accordance with the NEC and applicable local codes.

**WARNING: Proper grounding is required to insure personal safety.**

Connect the green or bare copper fixture-ground lead to a suitable ground connector. Use approved connectors for all electrical connections.

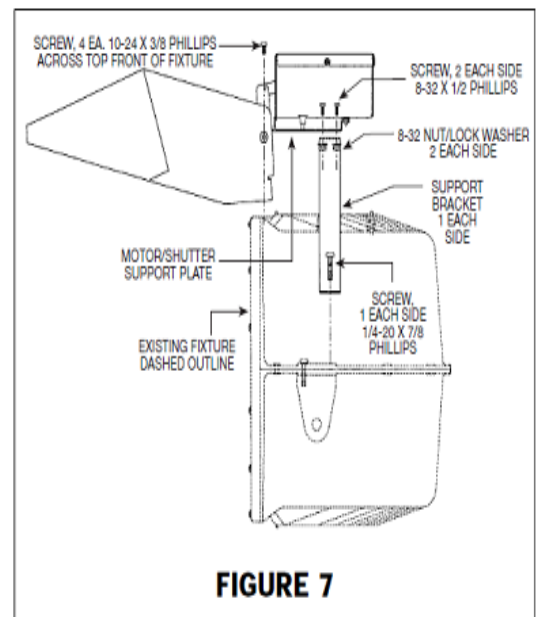
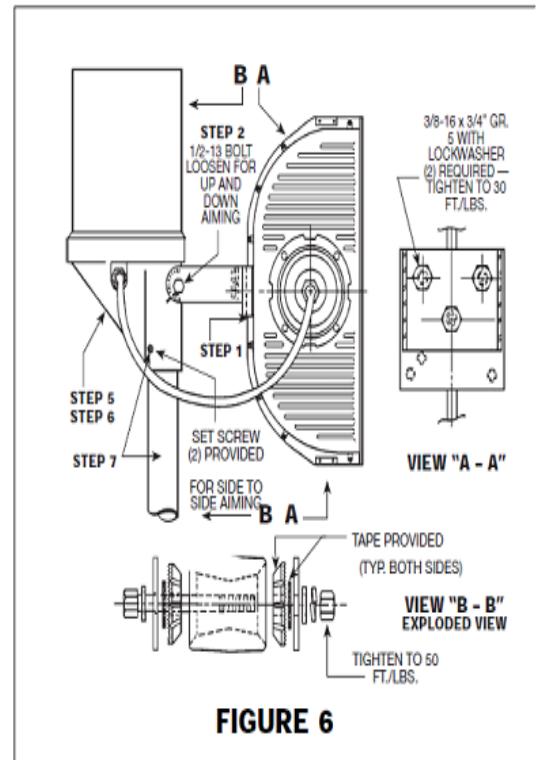


### STEP 6

Unscrew and remove the cable connector nut from cable connector on side of ballast mastfitter, (See **FIGURE 5**). Remove the rubber grommet from cable connector body. Slide cable connector nut up the S.O. cord, then slide the rubber grommet approximately 3" up the S.O. cord. Insert S.O. cord into cable connector body, then attach and securely tighten the cable connector nut to 15 ft-lbs.

### STEP 7

Remove inspection plate and gasket from back of mastfitter by removing the two screws (See **FIGURE 5**). Mount fixture/ballast assembly to 2-3/8" OD vertical pipe tenon (by others) after pushing branch circuit lead wires (by others) through the mastfitter and out inspection plate opening. Service may also be made by removing the 1/2" pipe plug from the mastfitter and attaching a proper watertight connector (by others), and then inserting an S.O. cord with branch circuit lead wires (by others). Tighten the two 3/8" square head set screws on the side of the mastfitter against the pipe tenon to 8 ft-lbs.





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### STEP 8

Make proper electrical connections as indicated on wiring diagram located on the ballast enclosure. Connect line lead to the black lead, neutral lead to white and ground lead to the green grounding screw inside the mastfitter splice box.

On 120 volt and 277 volt systems, connect the voltage supply lead to the ballast lead marked with the voltage marker. Connect the neutral supply lead marked COM.

On other voltage systems, connect one supply lead to the ballast lead marked with the proper voltage and the other supply lead to the ballast lead marked COM.

**WARNING: On quad voltage ballast (QV), leads not required should always remain with the insulated connector intact.**

### STEP 9

Before closing the mastfitter splice box, check to be sure proper voltage leads have been selected to match the supply voltage before energizing. Improper wiring may result in ballast failure and void warranty.

Ensure wires in pole are strain-relieved. Place connected wires into the mastfitter splice box and replace inspection plate and gasket. Tighten the inspection plate screws securely to 1 ft-lbs.

## AIMING

### STEP 10

If fixture was not aimed during assembly (step 5), loosen the two 1-1/2" long machine bolts on mounting ears. Set fixture to proper aiming angle by using either the degree markings on the mounting ears or the built-in aiming device on top of fixture.

## OPTIONS

### Vertical Floodlight

Follow steps 1 through 3 above. Next attach the "U" bracket to the ballast mastfitter as shown in **FIGURE 6**.

**CAUTION:** the two holes in the bracket for the 3/4" long bolts must be

toward the top as shown in **FIG. 6**. Mount fixture to the "U" bracket and attach the three 3/8"-16 mounting bolts and lock washers.

**IMPORTANT:** The 1/2" long bolt is centered over the fixture flange and to the bottom of the mount. Tighten all bolts to 30 ft-lbs.

Follow wiring and aiming instructions covered in steps 6 through 10 above.

### LQ-70 Hot/Cold Quartz Restrike with Time Delay

Automatically controls an integral quartz lamp (provided by user) anytime the main lamp is extinguished and the ballast is energized. (Q150/DC is recommended for all HID lamps except 1000 watt, which have two DC Bayonet base sockets, two 250w (250Q/DC) quartz lamps for -70°F operation or two 150w quartz lamps for normal LQ operation are required).

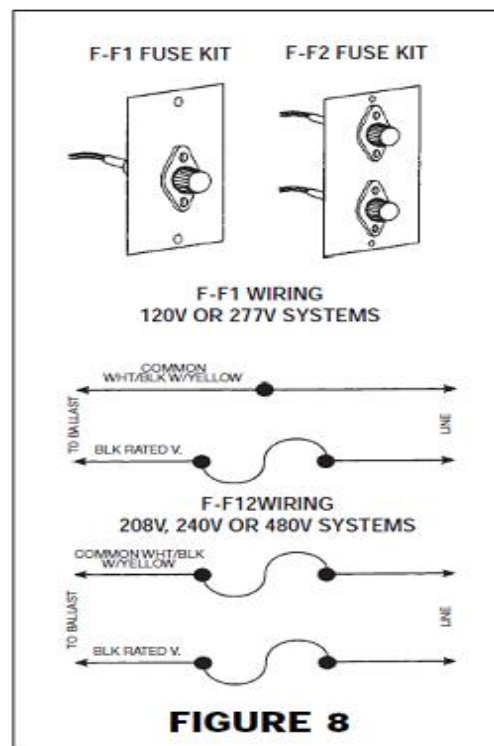
Following a cold start or a momentary power interruption the quartz lamp is energized by a solid state controller located inside the fixture housing. The quartz lamp remains on until after the main HID lamp reaches approximately 40% light output. Combined current of the quartz lamp and HID lamp never exceed the main lamp current at full output.

The quartz socket(s) is prewired with S.O. cord off the back side of the fixture housing and is wired to the ballast by removing the 1/2" pipe plug and installing a watertight connector (provided by user), and then inserting the S.O. cord and wire to the ballast as shown per the wiring diagram.

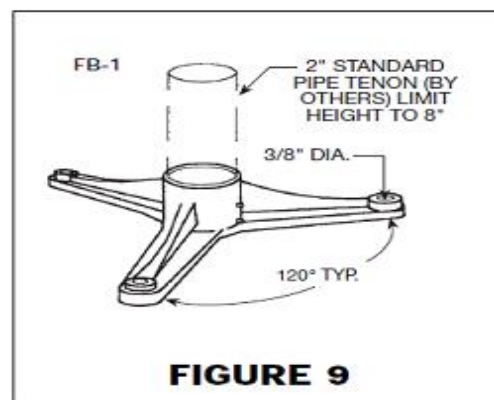
### Eclipse

Provides full bright to blackout to instant full bright illumination for special theatrical effects in indoor arenas and stadiums.

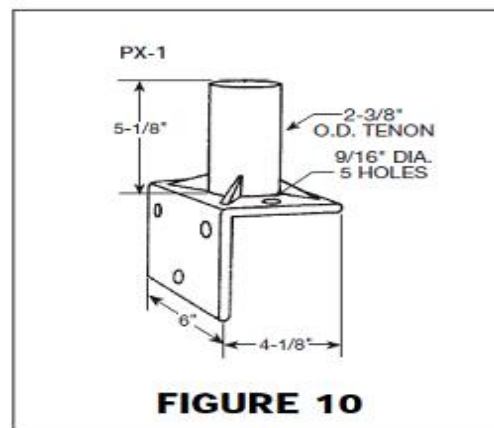
**DANGER:** Not suitable for outdoor applications must be used indoors only.



**FIGURE 8**



**FIGURE 9**



**FIGURE 10**

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Requires special remote “MPB” Eclipse Bi-Level™ ballast for satisfactory operation.

Assemble two support brackets to motor/shutter support plate with four 8-32 x 1/2” screws and 8-32 nut/lock washer as shown in **FIGURE 7**.

Remove two each 1/4-20 screws from the fixture mounting ears and assemble eclipse shutter to the fixture using the two 1/4-20 screws previously removed.

**WARNING: Make sure screws are completely tightened. Failure to completely tighten these screws can/will lead to equipment failure and/or personal injury.**

Install the four 10-24 x 3/8” phillips threaded cutting screws across the top front of the fixture (four cored holes)

**WARNING: Failure to install these screws can lead to erratic operation, equipment failure and/or personal injury.**

Socket and lamp installation are similar to steps mentioned for the standard floodlight. Fixture assembly is also similar, except the mounting arms will be attached to appropriate mastfitter (MF-1, MF-2 or HV-1) for fixture without integral ballast. S.O. socket cord should be attached to the remote ballast secondary. Wire per applicable wiring diagram packed with the Eclipse Bi-Level™ ballast.

### ACCESSORIES

#### F-F1 or F-F2 Ballast Fusing

If individual fusing or ballast is desired, accessory fusing is available and may be installed during wiring of the ballast. Unless otherwise specified, fuses furnished for all ballast 1500 watt through 150 watt will be KTK 30 amp rated. 100 watt and below will be KTK 10 amp rated.

Fuses and holders are usually the external type (see **FIGURE 8**) and should be wired according to diagram shown. F-F1 fuse kits are a single fuse for 120V or 277V. F-F2 fuse kits are a double fuse for 208V, 240V, or 480V.

#### FB1 Flat Base Mount

Flat mounting casting with provisions for vertical 2-3/8” OD tenon (by others) for mounting to flat horizontal surfaces. Mounting hardware for anchoring provided by user. **CAUTION: Limit height of tenon to no more than 8”.** (See **FIGURE 9**).

#### PX-1 Cross Arm Bracket

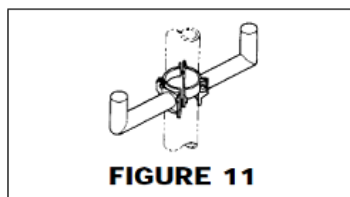
Cast aluminum angle bracket with 2-3/8” OD vertical tenon for installing floodlights to wooden or steel cross-arms. **CAUTION: Back plate of bracket installs to cross member opposite fixture lens.**

There are five 9/16” mounting holes for securing the PX-1 to the cross member, three of which can be utilized without bolt interference. These are the two on top and the lower horizontal hole in the back plate. As a minimum these three holes must be utilized. Mounting hardware 1/2” bolts provided by user. (See **FIGURE 10**).

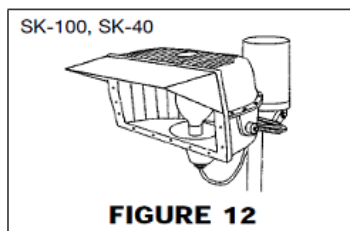
#### PM-(\*) Wood Pole Mounting Brackets

Aluminum wood pole mounts with vertical 2-3/8” OD tenon for mounting floodlights to wood poles with 6” minimum to 12” maximum diameter. (See **FIGURE 11**)

(\*) Number which represents the number of floodlights (maximum is four) that can be mounted to a PM wood pole bracket  
Example: PM2 will handle up to two floodlights.



**FIGURE 11**



**FIGURE 12**

#### SK-100 or SK-40 Top Glare Shield

Remove two or one lens retainer fastener screw(s) on each side of the fixture lens frame. Install shield to the top of fixture utilizing the four cored holes and the four thread cutting screws (provided in kit). Secure the side of the shield to the lens retainer using the one or two lens retainer screws previously removed. Tighten all screws securely (See **FIG 12**)

#### AL-10-F or AL-4-F Auxiliary Polycarbonate Lens

Remove one lens retainer screw from each corner of the fixture lens frame. Assembly hardware and install auxiliary lens as shown in **FIGURE 13**.

#### SMB-1000 or SMB-400 Shock Mounting Brackets

For mounting floodlights without integral ballasts in applications where severe vibrations may be present.

**CAUTION: Ballast must be remote mounted away from the vibration area and must be suited for outdoor use or indoor use depending upon where they can be mounted. If subjected to the weather they must be the outdoor type approved for wet locations (See FIGURE 14).**

Socket and lamp installation will be the same as covered in steps 1 through 3. To install the fixture in the shock mounting frame (discard the standard mounting arms as they are not required when using the “SMB” brackets), remove the two 1/2” x 1-1/4” machine screws that holds the back brace (part B) and slide fixture into the frame. **IMPORTANT: Make sure the lens frame is properly resting in the frame.** Re-install the back brace, making sure the back plate with neoprene rubber pads rest firmly against the back of the fixture, tighten screws securely.

Mount fixture/shock mounting bracket to a suitable flat surface utilizing the two 9/16” slots in the frame yoke (part A). Secure with two 1/2” mounting bolts (provided by user). Aim fixture as required and tighten all bolts to 30 ft-lbs. Make proper electrical connections in accordance to

nce to

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NEC and local codes. Follow wiring instruction on ballast.

**IMPORTANT:** If high pressure sodium remote ballast is used make sure the ballast is installed within the distance limitations published by the ballast manufacturer.

AL-10, AL-4

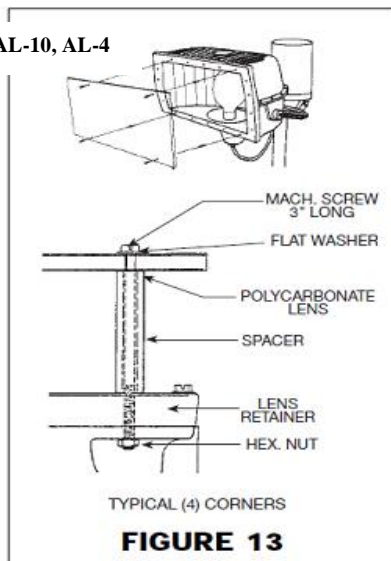


FIGURE 13

SMB-1000 AND SMB-400  
SHOCK MOUNTING BRACKET

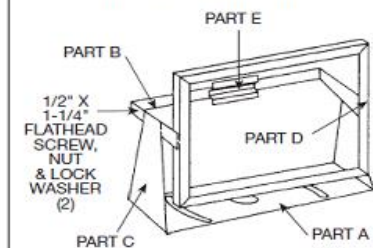


FIGURE 14

PCM-1

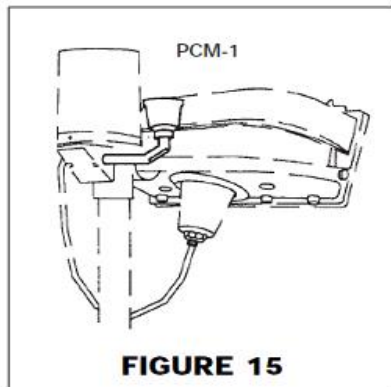


FIGURE 15

Remove 1/2" pipe plug from the ballast mastfitter base. Thread the 1/2" photocell receptacle into the mastfitter base, tighten securely. Check to see that the photocell (provided by user) is of proper voltage and wattage. Wire in accordance to wiring diagram. (See FIGURE 15).

### WG-10 or WG-4 Wireguard

Attach wireguard to cored holes on top and bottom of fixture with thread cutting screws provided in kit (see FIGURE 16).

### MF-1 Mastfitter for Less Ballast Models

Allows fixture head to be remote mounted on a vertical 2-3/8" OD tenon x 4-1/2" tall. Attach fixture mounting arms to the MF-1 using hardware as covered in steps 4 and 5 of fixture assembly. Remove pipe plug from MF-1 and route S.O. cord through a watertight cable connector (provided by user) for internal wiring to the remote ballast. Or, wiring can be external to an appropriate junction box or similar device (See FIGURE 17).

### HV-1 Trunion Base for Less Ballast Models

Can be mounted to any suitable horizontal or vertical surface suited for the purpose. Calibrate in 10° increments (0°-90°) for horizontal adjustment. There are three mounting holes, 7/16" nominal diameter for 3/8" mounting bolts (provided by user) for mounting the HV-1 attach fixture mounting arms to the HV-1 using hardware as covered in steps 4 and 5 of fixture assembly (See FIGURE 18).

### WB-1 Wall Mounting Bracket

For mounting floodlight with ballast or less ballast models to a flat vertical surface only. There are four 9/16" nominal mounting holes in the back plate for 1/2" mounting bolts (provided

through the bracket for applications where the wiring box is flush mounted. Or, can be wired externally to an appropriate junction box or similar device. (See FIGURE 19).

WG-10, WG-4

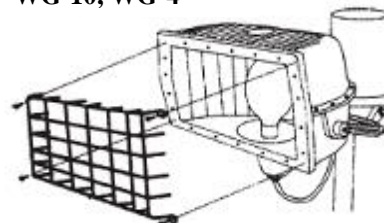


FIGURE 16

MF-1

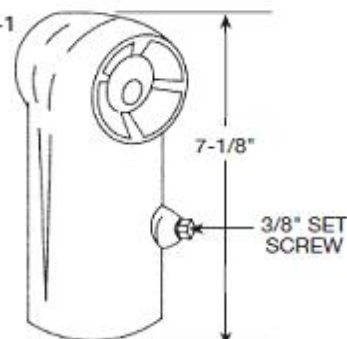


FIGURE 17

HV-1

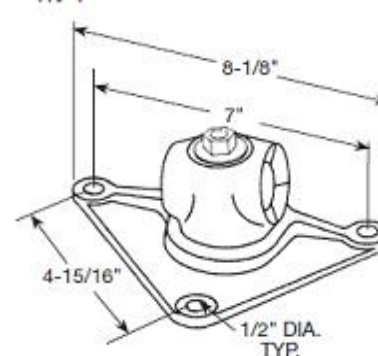


FIGURE 18

### PCM-1 Photocell Receptacle Only

by user). Wiring of fixture can be done internally (see wiring instructions)

# INSTALLATION INSTRUCTIONS

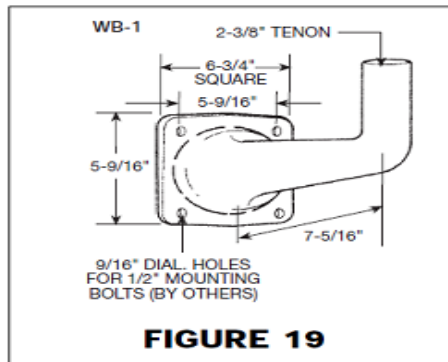
## F Series Floodlight

### WB-5 Surface Wiring Box

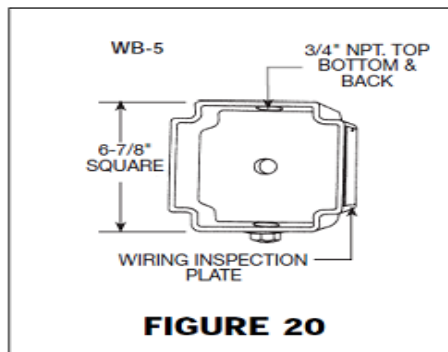
For use with WB-1 wall bracket. Serves as a wiring compartment and used where surface mounted conduit feed is used. Tapped at top, bottom, and back for 3/4" NPT conduit. Gasket provided for sealing box to the WB-1. Mounting hardware (1/2" mounting bolts) provided by user. The WB-5 box is supported by the same bolts used to support the WB-1 and need to be long enough to secure both the WB-1 and box to the wall. The box straddles the four mounting bolts. (See **FIGURE 20**).

### TH-1 Hanger for Less Ballast Models

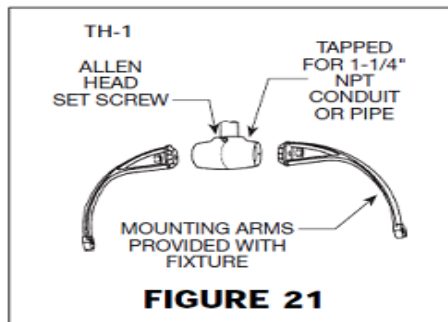
For mounting floodlights on standard lowering devices (by others). Base of TH-1 is tapped for 1-1/4" NPT conduit. For 1" tap a 1-1/4" to 1" reducer (provided by user) is required. Thread TH-1 on to lowering device and tighten set screw to lock to the stem. Install floodlight to TH-1 covered in steps 4 and 5 of fixture assembly. (See **FIGURE 21**).



**FIGURE 19**



**FIGURE 20**



**FIGURE 21**

