



NEMA 4X

EMERGENCY LIGHTING UNIT

INSTALLATION INSTRUCTIONS

U.S. Patent No.s 6,135,624; 6,193,395; 6,502,044 B1
-Other patents pending-

U.S. Versions:

6V- INDX618 / INDX654 / INDX6100

**12V- INDX1236 / INDX1254 / INDX12100 /
INDX12125**

24V- INDX24100

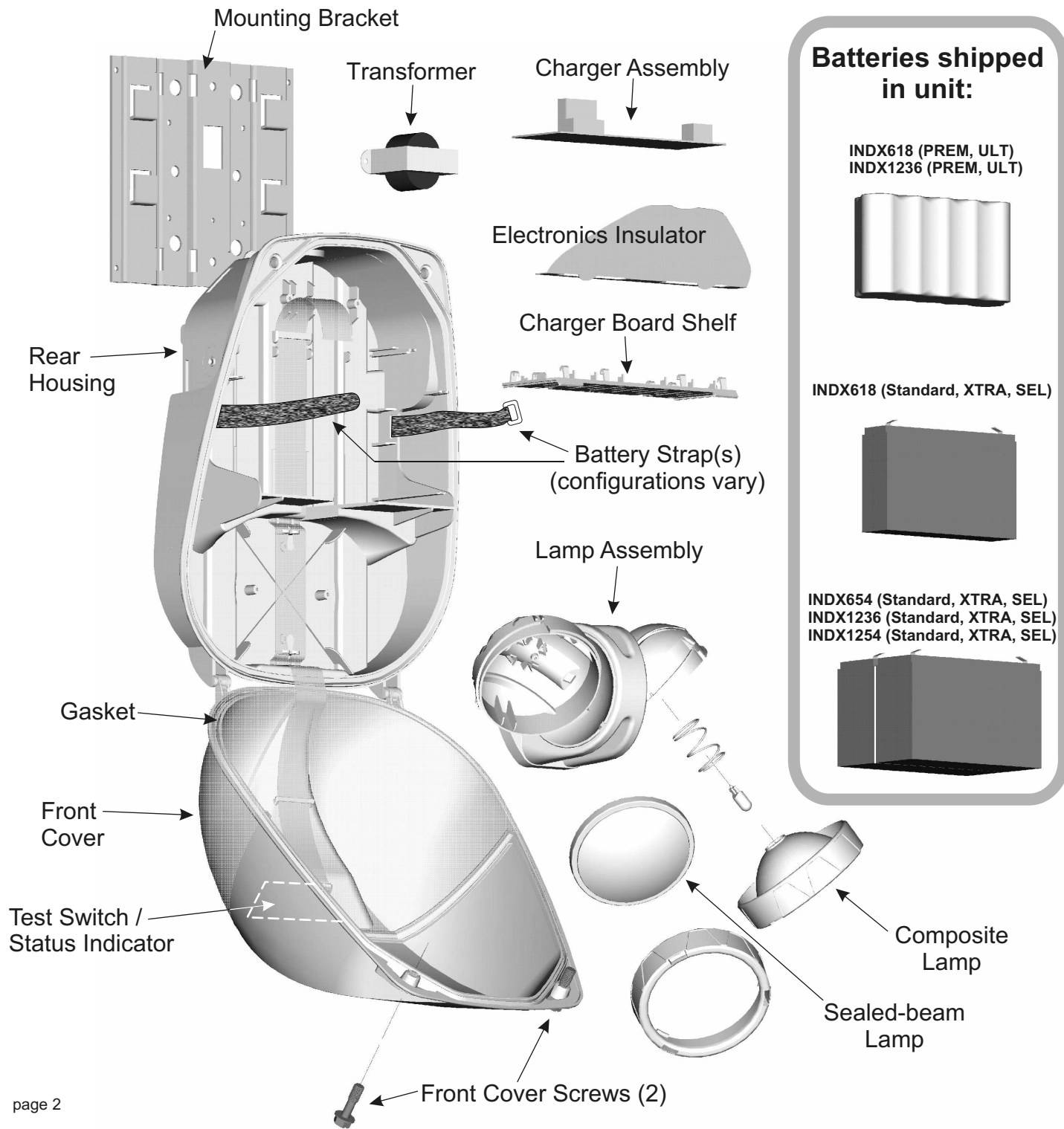
IMPORTANT SAFEGUARDS

1. READ AND FOLLOW ALL SAFETY INSTRUCTIONS.

2. Before wiring to power supply, turn off electricity at fuse or circuit breaker.
3. Disconnect A.C. power and unplug battery before servicing.
4. All servicing should be performed by qualified personnel.
5. Consult your local building code for approved wiring and installation.
6. Do not mount near gas or electric heater.
7. Equipment should be mounted in locations and at heights where it will not be readily subjected to tampering by unauthorized personnel.
8. The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.
9. Do not use this equipment for other than intended use.
10. **CAUTION:** Halogen cycle lamp(s) may be used in this fixture. To avoid shattering, do not operate lamp in excess of rated voltage. Protect lamp against abrasions, scratches, and against liquids when lamp is operating. Dispose of lamps with care. Halogen lamps operate at high temperatures. Do not store or place flammable materials near lamps.

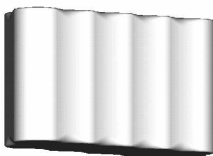
SAVE THESE INSTRUCTIONS



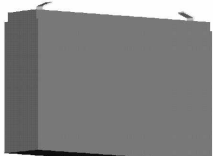


Batteries shipped in unit:

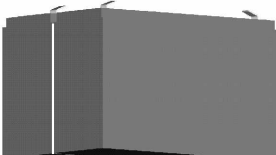
INDX618 (PREM, ULT)
INDX1236 (PREM, ULT)



INDX618 (Standard, XTRA, SEL)

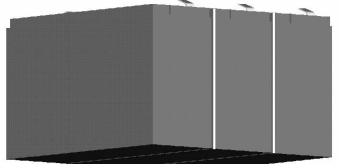


INDX654 (Standard, XTRA, SEL)
INDX1236 (Standard, XTRA, SEL)
INDX1254 (Standard, XTRA, SEL)

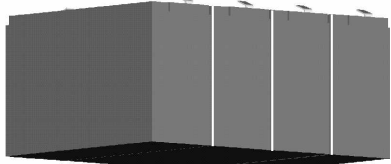


Batteries shipped separately:

INDX6100 (Standard, XTRA, SEL)
(actual batteries may vary)



INDX12125 (Standard, XTRA, SEL)
INDX24100 (Standard, XTRA, SEL)



INDX12100 PREM, ULT

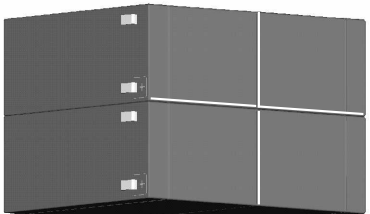
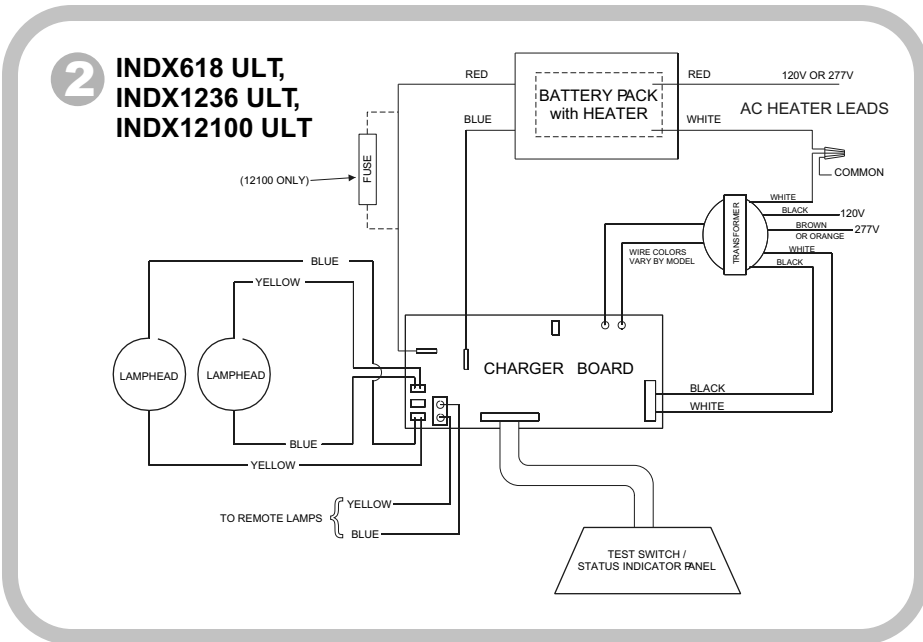
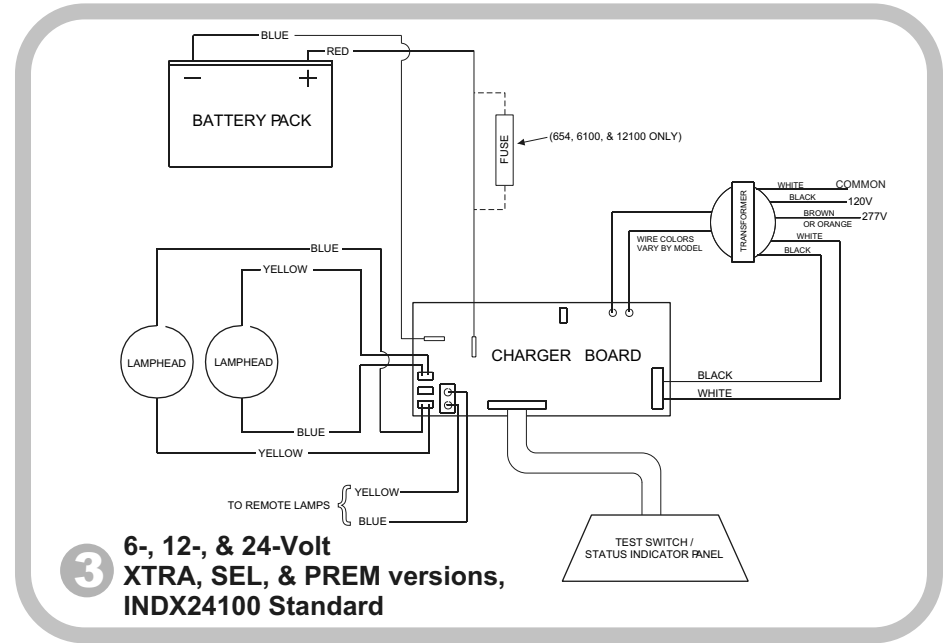
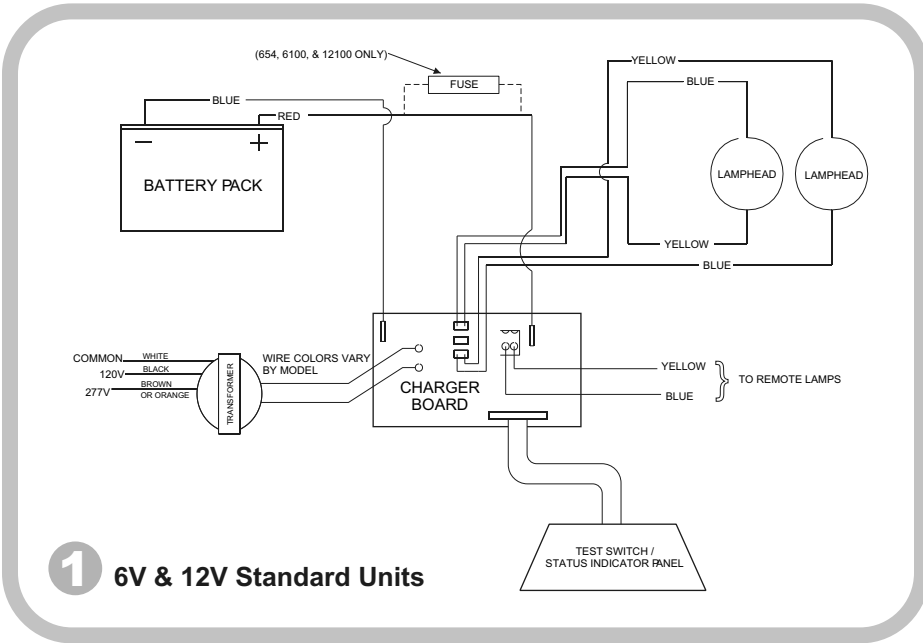


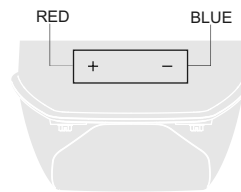
Figure 1
EXPLODED VIEW
Note: various components not shown

WIRING DIAGRAMS

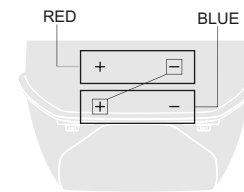


BATTERY INTERCONNECTIONS (Lead-Acid Versions):

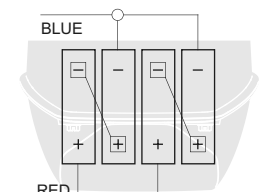
(Batteries should be oriented in the Rear Housing as indicated in the Top Views below:)



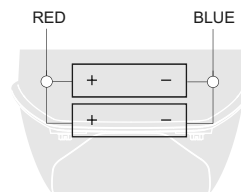
INDX618



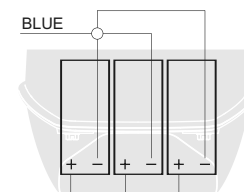
INDX1236, INDX1254



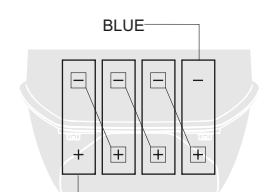
INDX12100, INDX12125



INDX654



INDX6100



INDX24100

INSTALLATION AND WIRING:

IMPORTANT: Provide each unit with a single unswitched power supply from a 120V or 277V circuit used for normal lighting.

Note: Before installation, choose a location that allows adequate clearance to slide the housing downward onto the Mounting Bracket (minimum 2" above top edge of Bracket--see also Figures 3 & 4).

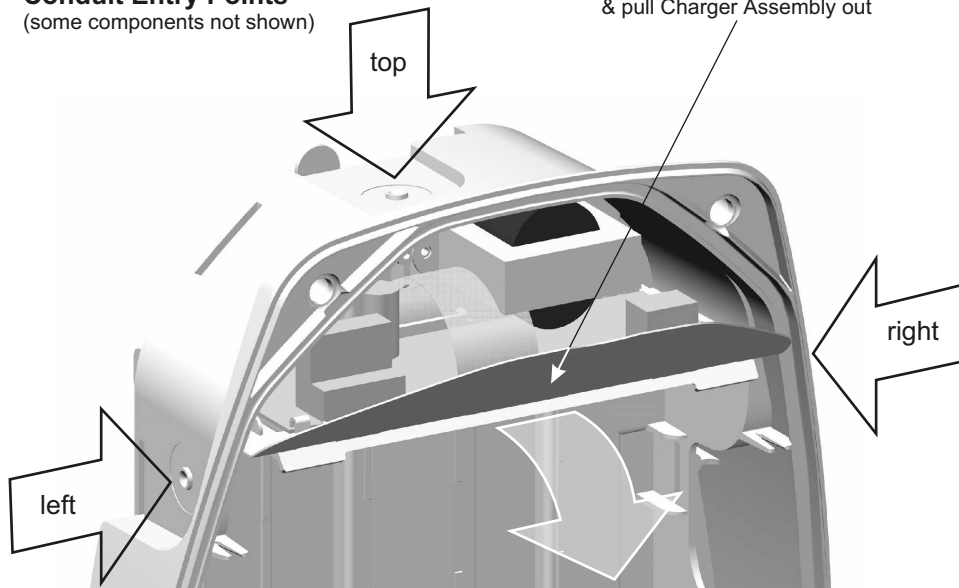
Conduit Entry Points:

Open the Front Cover of the unit by unscrewing the two Screws at the upper corners. (**Hint:** the Screws will stay in their captive position in the Front Cover if you unscrew each one a little at a time, alternating between). Drill guide features are molded into the Rear Housing at the top, left, and right conduit entry points. A hole saw is recommended to open the desired entry point. Depending on the unit model and the conduit entry point selected, it is strongly recommended to remove the Charger Assembly and/or Battery while opening the entry point, to avoid damage to these components. After creating the opening, remove any shavings or dust from the enclosure, as they may harm the electronic components or compromise the enclosure seal. Install a U.L.-listed water-tight fitting appropriate to the installation into the opening. Replace the Charger Assembly, being careful to align the ends of the Printed Circuit Board Shelf properly into the channels in the Rear Housing, and push it firmly until it snaps into place.

Figure 2:

Conduit Entry Points (some components not shown)

Before opening top conduit entry, grasp Printed Circuit Board Shelf & pull Charger Assembly out



Mounting Options:

- 1. Wall mounting:** Install Mounting Bracket in desired location, using four 30-lb.-minimum-pullout-rated fasteners (see Fig. 3).
- 2. Pole Mounting:**
 - a. "UniStrut ®" Mounting holes for most standard configurations.
 - b. Steel Banding Slots for routing around poles and I-beams.
- 3. I-Beam Mounting with Steel Banding or "UniStrut ®" configurations:** UniStrut ® holes are placed at 2.8" apart. A Steel Banding accessory kit is provided as an option from Lithonia Lighting distributors or standard banding 3/4" in width or less can be used.
- 4. Ceiling Mounting:** Some product versions may be back-mounted flush to ceiling surfaces by incorporating a Ceiling Mount Accessory Kit (order separately).

MOUNTING BRACKET INSTALLATION:

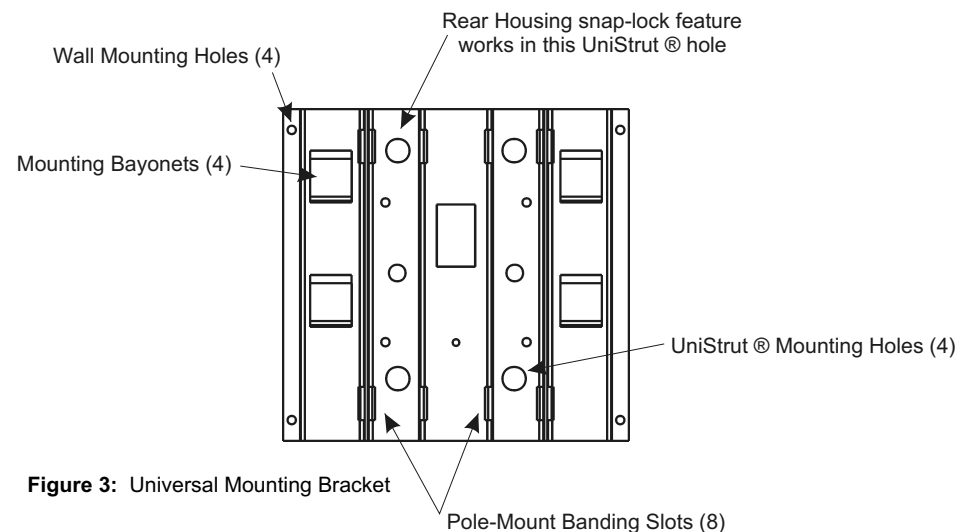


Figure 3: Universal Mounting Bracket

ATTACHING ENCLOSURE TO MOUNTING BRACKET:

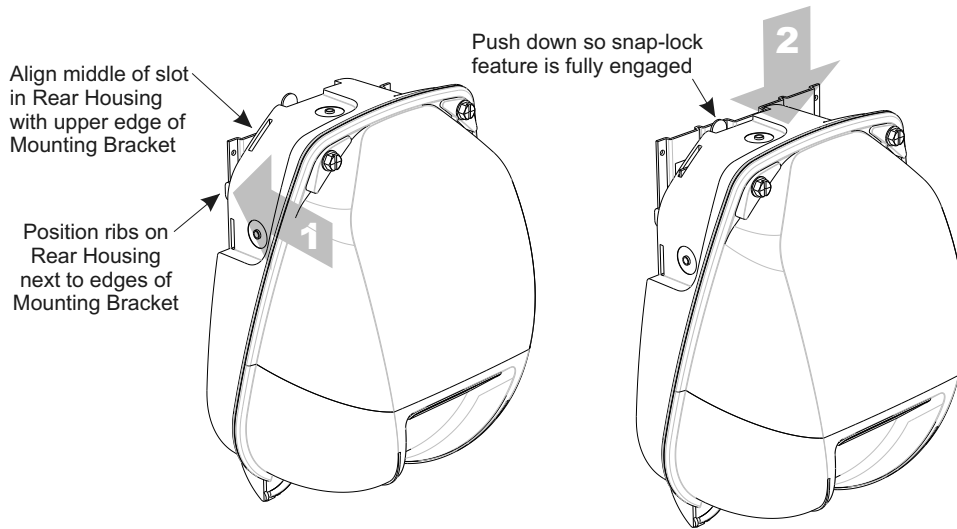


Figure 4: Attaching unit to Mounting Bracket

ENCLOSURE MOUNTING AND WIRE CONNECTIONS

(see Figures 2-4, & **Wiring Diagrams**, page 3):

a. After the Mounting Bracket is in place and the conduit is near, slide the enclosure downward onto the Mounting Bayonets (See Figures 3 & 4). The enclosure will be in place when the snap-lock feature is engaged in the hole in the Mounting Bracket.

b. Connect the red lead from the positive terminal of the charger board to the battery. Connect the blue lead (if not already connected) from the negative terminal of the charger board to the battery (see **Wiring Diagrams**).

Note: Some battery configurations ship separately from the unit. Additional wiring to connect these configurations will ship with the batteries. (See **Wiring Diagrams**, page 3, for wiring information.)

Caution: Damage to the battery will occur if it is connected to the Charger Board for a prolonged period of time (seven days, in most cases) without AC power provided. Damage will also occur to the Charger Board if proper polarity is not observed when connecting the battery.

c. Connect the conduit and route the AC input leads into the Rear Housing.

d. Wiring: Connect AC input leads as follows:

120V AC: Black and White Transformer Leads

277V AC: Orange (or Brown) and White Transformer Leads

Note: This equipment must be connected to an unswitched circuit.

Note: Unused lead(s) must be properly insulated using wrenut(s) or other approved method.

e. Route and connect remote lamp leads (if applicable) to the Remote Lamps terminal block on the Printed Circuit Board.

f. Dress all wires so that the Electronics Insulator closes properly, with the AC connections concealed behind it.

g. Close the Front Cover, making sure no wires or other components will interfere with the gasket seal, and tighten the Screws into the Rear Housing, using caution not to overtighten them.

Lamp Operation:

a. Sealed Beam Lamps do **not** have adjustable beam focus.

b. Composite Lamp beam focus can be adjusted by rotating the bezel as shown in Figure 5. **Note:** for most one foot-candle average illumination requirements, the recommended setting for Krypton lamps is the medium position and the recommended setting for Halogen lamps is the spot position. For minimum one footcandle requirements, it is recommended that a Halogen lamp be used in the medium position. If this is a specified job, please refer to your lighting fixture schedule to determine the illumination requirements.

Figure 5

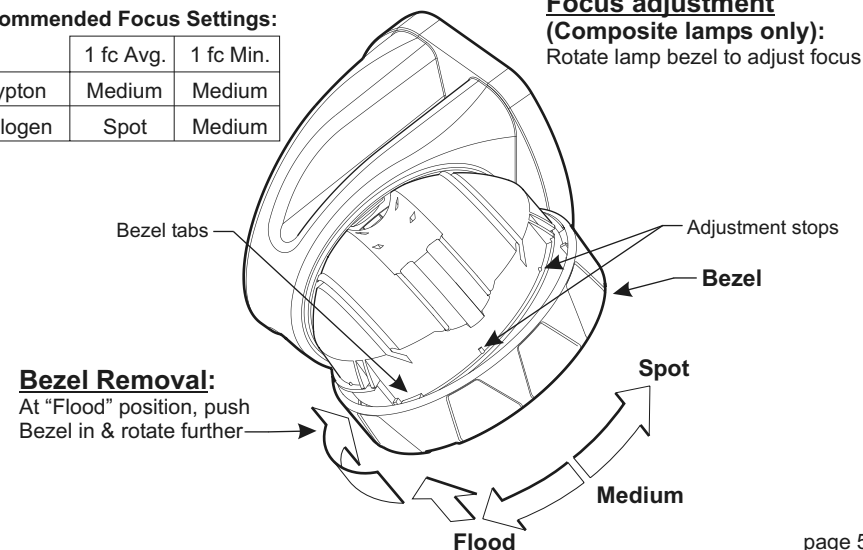
Recommended Focus Settings:

	1 fc Avg.	1 fc Min.
Krypton	Medium	Medium
Halogen	Spot	Medium

Focus adjustment

(Composite lamps only):

Rotate lamp bezel to adjust focus



Inspection and Maintenance:

Note: Emergency lighting systems should be tested as often as local codes require, or at least quarterly, to ascertain that all components are operational.

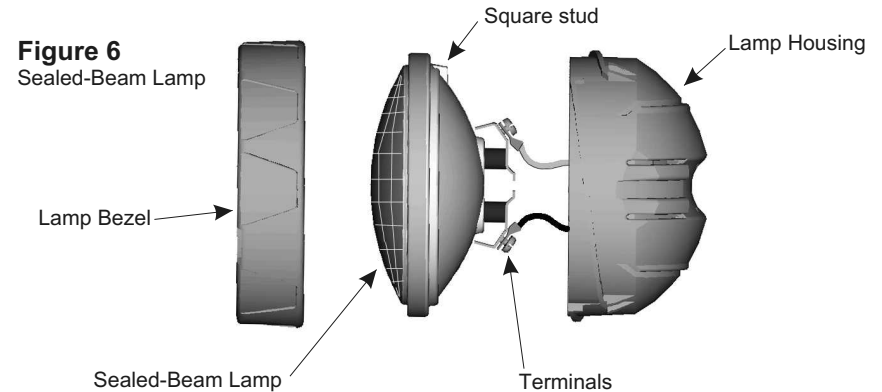
Note: Allow battery to charge 24 hours before initial testing, and 168 hours for maximum charge.

Caution: Damage to the battery will occur if it is connected to the Charger Board for a prolonged period of time (seven days, in most cases) without AC power provided.

- a. **NORMAL OPERATION:** When unit is functioning properly with A.C. power provided, the "Status" indicator light will be on. See also "**Test Switch / Status Indicator Panel**", next section.
- b. **TO TEST:** Press "Test" switch. The DC Lamps should turn on. If the unit is equipped with Remote Test option, it can also be tested by pressing the button on the remote transmitter.
- c. **CHARGER BOARD REPLACEMENT:** Disconnect the battery and other leads coming from the Charger Board as shown in the wiring diagrams. Release snaps on Circuit Board Shelf to remove Charger Board. Replace the Charger Board and reconnect wiring as shown in the appropriate wiring diagram.
- d. **BATTERY REPLACEMENT:** Disconnect the battery leads and release the battery strap(s). Replace only with manufacturer's recommended replacement. Referring to the appropriate wiring diagrams, reconnect the battery leads and strap(s).
- e. **TRANSFORMER REPLACEMENT:** Disconnect wiring as shown in the appropriate wiring diagram. Remove mounting screws and transformer. Replace and reconnect wiring.
- f. **FUSE REPLACEMENT (INDX654 / 6100 /12100 / 12125 only):** Before replacing a blown fuse, locate and correct its cause, making sure that no hazards to personal safety or property will persist after the fuse is replaced. Depress and unscrew the cap of the fuseholder, located along the left or right inside of the Rear Housing. Remove and replace the fuse with one of the same type and electrical rating. Re-dress the fuseholder and its wires into a safe position inside the Rear Housing.

g. LAMP REPLACEMENT:

Sealed-Beam Lamps: Twist the Lamp Bezel counter-clockwise until it comes off the Lamp Housing. Remove the lamp and disconnect its wires from the terminals. Reconnect an identical replacement lamp. Position the square stud on the new lamp between a pair of ribs in the Lamp Housing and twist the Lamp Bezel on clockwise until tight.



Composite Lamps: Twist the Lamp Bezel fully clockwise to the Spot position (see "**Lamp Operation**", page 5). Firmly, but carefully, pull the lamp out of its socket. Replace it with an identical lamp.

Caution: When handling Halogen composite lamps, use extra care NOT to scratch the surface of the glass bulb or to contaminate it with liquids or oils, as these may cause it to shatter during operation.

Re-set the Lamp Bezel to the desired focus.

Test Switch / Status Indicator Panel

All models have a Test Switch and Status Indicator light.

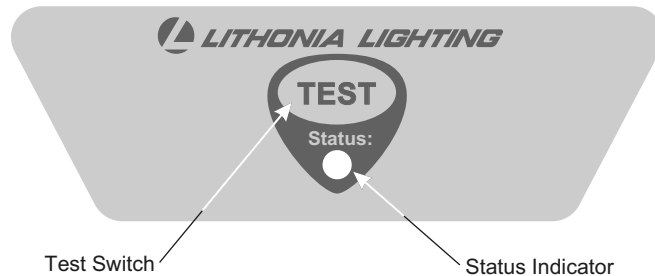
- a. **Standard Models:** When the Test Switch is depressed in a properly-functioning unit, the DC lamps will turn on. When the unit returns to normal mode, the Status Indicator shows that AC power is applied and the unit is charging.
- b. **Self-Diagnostic Models:** When the Test Switch is depressed, the DC lamps will turn on while a 30-second diagnostic test runs. (**Note:** there must be sufficient battery charge to manually initiate a diagnostic test. If an insufficient charge is indicated after the Test Switch is pressed, the unit must be allowed to charge longer before a diagnostic test can be initiated manually). The status indicator shows the unit's charging state if no diagnostic failures are detected during the test.

* See table in next section for status indication.

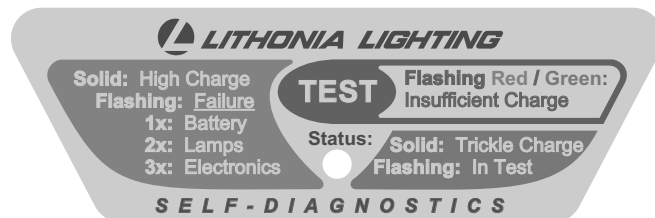
Standard Units:	
Indicator:	Status:
Off	Unit is in emergency mode
Green	Unit is in normal trickle-charge mode
Red	Unit is in normal high-charge mode

Self-Diagnostics Units:	
Indicator:	Status:
Off	Unit is in emergency mode
Green	Unit is in normal trickle-charge mode
Green flashing	Unit is in test mode
Red	Unit is in normal high-charge mode
Red flashing (single pulse)	Battery failure
Red flashing (double pulse)	Lamp failure
Red flashing (triple pulse)	Charging electronics failure
Red / Green flashing	Temporary insufficient battery charge

Standard Test Switch / Status Indicator Panel



Self-Diagnostic Test Switch / Status Indicator Panel



Self-Diagnostics / Self-Test Operation

(SEL, PREM, & ULT option packages):

Self-Test Schedule:

The unit automatically performs a 5-minute self-diagnostic test every 30 days. The unit also automatically performs a 30-minute self-diagnostic test every 6 months.

Self-Test Rescheduling:

If an automatic self-test occurs at a time when it is not desirable for the unit equipment DC lamps to be on, the self-test can be postponed for 8 hours by pressing the Test Switch once during the self-test.

Automatic Load-Learning Feature:

Self-Diagnostic units automatically determine their total connected lamp load during the first scheduled self-test. After the load has been learned, a lamp failure will be indicated anytime a reduction in total lamp load greater than 10% is detected.

-The load-learning function can also be initiated manually by pressing and holding the Test Switch for 15 seconds, during which the DC lamps will turn on. The unit will signal that the total lamp load has been learned by turning off the DC lamps. This manual load-learning feature should be initiated whenever the total connected lamp load to the unit is changed.

NOTE: Manual load-learning functions can not be initiated if there is inadequate charge in the battery. If this is the case, wait until the battery enters trickle-charge mode and then initiate the manual load-learning function.

Clearing Failure Indications:

After a failed component has been replaced, press the Test Switch once to clear the failure indication. **Note:** Failures can not be cleared using the RF Remote Test feature.

AUDIBLE FAILURE INDICATION (AFI):

In units equipped with Audible Failure Indication (SEL, PREM, & ULT option packages), failure indications are accompanied by a 15-second-long alarm tone every 15 minutes. The tone stops when the failure indication is cleared.

RF REMOTE TEST (RT):

Units equipped with RF Remote Test (XTRA option package) can be tested with the RF Remote Transmitter accessory (order "ELA RTT" separately). The RF remote option can only be used to test units. It has an effective testing range of 35 feet. It can not be used to clear failure indications on units equipped with Self-Diagnostics.

TIME DELAY (TD):

In units equipped with Time Delay (XTRA, SEL, PREM, & ULT option packages), the DC lamps stay on for 20 minutes after AC power is restored to the unit from the emergency mode, or until the battery reaches the Low Voltage Disconnect level. Time Delay operation can be cancelled at any time during this 20-minute period by pressing the test switch once.

RF Receiver Information to user:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following procedures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

WARRANTY

THREE-YEAR TOTAL CUSTOMER SATISFACTION

Complete Customers' Satisfaction...This unit is guaranteed to perform to our customers' complete satisfaction for a period of three years from date of invoice. Our guarantee covers any defect in manufacturing, provided the defect develops under normal and proper use. This liability does not include lamps or fuses and extends only to the replacement of the defective part. Labor charges will be honored by the factory only with prior written approval from our Post Sales Service Department.



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