

## IMPORTANT SAFEGUARDS READ AND FOLLOW ALL SAFETY INSTRUCTIONS.

When using electrical equipment, basic safety precautions should always be followed including the following:

- **DISCONNECT AC POWER SUPPLY BEFORE SERVICING.**
- Installation and servicing of this equipment should be performed by qualified service personnel only.
- Ensure that the electrical wiring conforms to the National Electrical Code NEC® and local regulations if applicable.
- For use with metal enclosure wiring systems.
- Do not mount near gas or electrical heaters.
- Do not use outdoors.
- Equipment should be mounted in locations and at heights where it will not be readily subjected to tampering by unauthorized personnel.
- The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.
- Any modification or use of non-original components will void the warranty and product liability.
- Do not use this equipment for other than intended use.
- Allow battery to charge for 24 hours before first use.

## SAVE THESE INSTRUCTIONS!

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# 900EX Series

## Installation Instructions

### Surface Ceiling Installation

1. Remove the end cap with the test button and LED indicator holes by loosening the (2) flat head screws and set aside. (Fig. 1)
2. Carefully slide out the homeplate assembly and panel assembly from the inside of the housing and set aside. (Fig. 1)
3. Prepare the housing. (Fig. 2) For ceiling mounting, punch out the desired knockouts on the top of the housing. Secure the canopy to the desired location on the enclosure using (2) sets of #6-32 screws and nuts provided.
4. Connect the battery to the PCB, if applicable. (Fig. 3)
5. Route the wires out through the canopy. (Fig. 3)
6. Slide the homeplate back into the housing. (Fig. 3)
7. Slide the panel assembly back into the housing. (Fig. 3)
8. Secure the end cap assembly using the (2) flat head screws from before. (Fig. 3)
9. Route the wires out through the center hole of the mounting plate. Ensure that the mounting plate is oriented such that the two flanges will be pointing away from the J-Box. (Fig. 4)
10. Make electrical connections; see **Electrical Connections** section.
11. Secure the mounting plate to the junction box.
12. Secure the canopy to the mounting plate with (4) #6-32 screws (provided).

Fig. 1

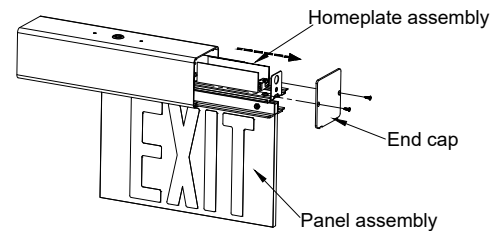


Fig. 2

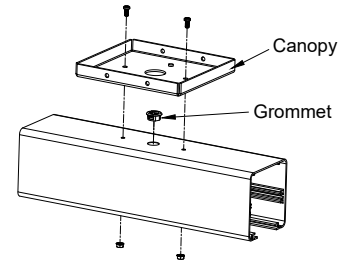


Fig. 3

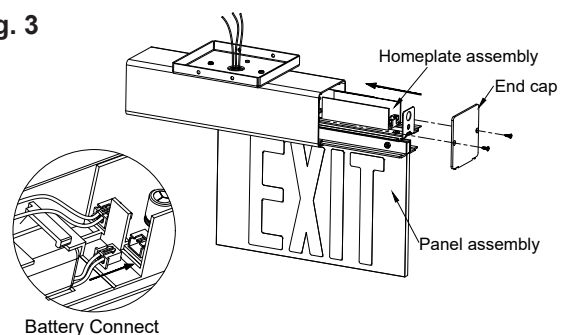
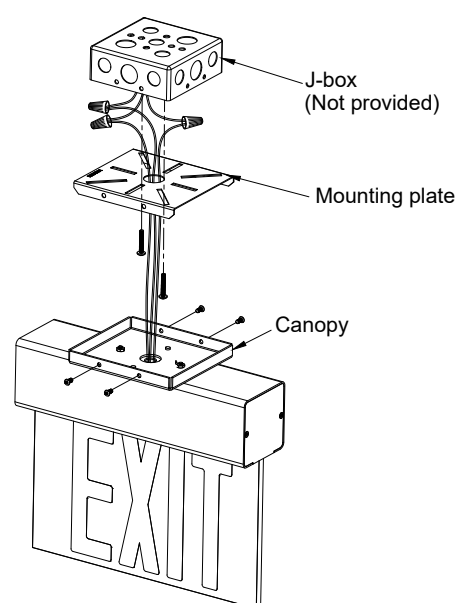


Fig. 4



### Surface Wall Installation

1. Remove the end cap with the test button and LED indicator holes by loosening the (2) flat head screws and set aside. (Fig. 5)
2. Carefully slide out the homeplate assembly and panel assembly from the inside of the housing and set aside. (Fig. 5)
3. Prepare the housing. (Fig. 6) For wall mounting, punch out the desired knockouts on the side of the housing. Secure the canopy to the desired location on the enclosure using (2) sets of #6-32 screws and nuts provided.
4. Connect the battery to the PCB, if applicable. (Fig. 7)
5. Route the wires out through the canopy. (Fig. 7)
6. Slide the homeplate back into the housing. (Fig. 7)
7. Slide the panel assembly back into the housing. (Fig. 7)
8. Secure the end cap assembly using the (2) flat head screws from before. (Fig. 7)
9. Route the wires out through the center hole of the mounting plate. Ensure that the mounting plate is oriented such that the two flanges will be pointing away from the J-Box. (Fig. 8)
10. Make electrical connections; see **Electrical Connections** section.
11. Secure the mounting plate to the junction box.
12. Secure the canopy to the mounting plate with (4) #6-32 screws (provided).

Fig. 5

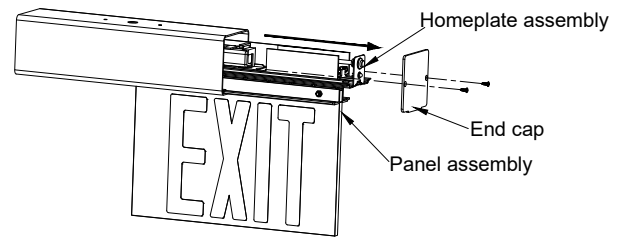


Fig. 6

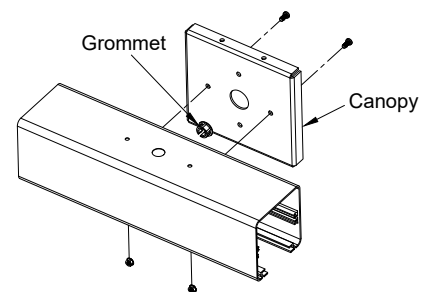


Fig. 7

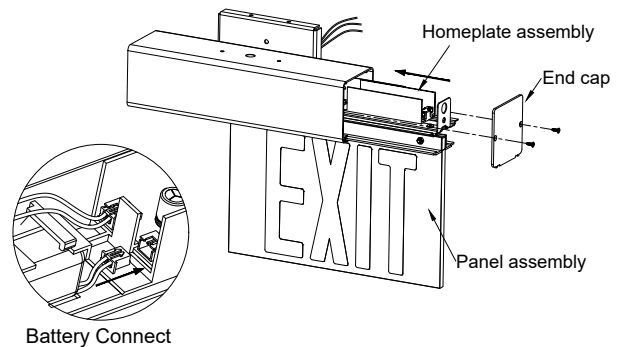
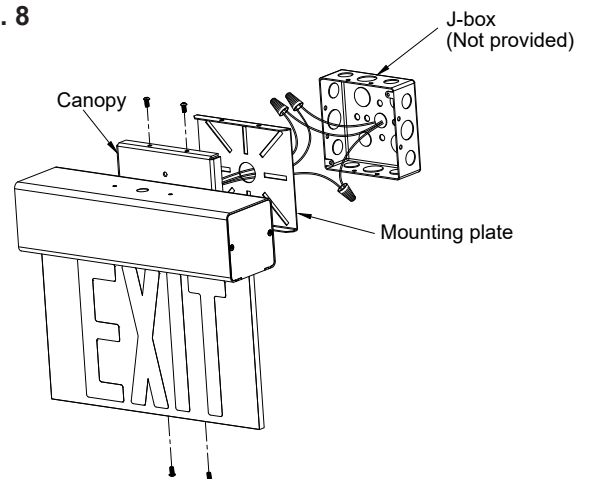


Fig. 8



# 900EX Series

## Installation Instructions

### Side Mount Installation

1. Remove the end cap with the test button and LED indicator holes by loosening the (2) flat head screws and set aside. (Fig. 9)
2. Carefully slide out the homeplate assembly and panel assembly from the inside of the housing. (Fig. 9)
3. Connect the battery to the PCB, if applicable. (Fig. 10)
4. Punch out the desired knockouts on the canopy to the desired location.
5. Slide the homeplate back into the housing. (Fig. 10)
6. Route the wires out through the canopy. (Fig. 10)
7. Secure the canopy to the desired location on the enclosure using self-tapping screws PWA3\*12mm. (Fig. 10)
8. Route the wires out through the center hole of the mounting plate. Ensure that the mounting plate is oriented such that the two flanges will be pointing away from the J-Box. (Fig. 10)
9. Make electrical connections; see **Electrical Connections** section.
10. Secure the mounting plate to the junction box.
11. Secure the canopy to the mounting plate with (4) #6-32 screws (provided).

### Electrical Connections

**Note:** Cap off the UNUSED input lead. Failure to do so can cause an unsafe operating condition.

- If using 120VAC, connect the black and white wires to the building utility.
- If using 277VAC, connect the orange and white wires to the building utility.
- For **AC Input Only** please refer to (Fig. 11)
- For **Emergency Battery Backup** please refer to (Fig. 11)
- For **Dual AC Input Only** please refer to (Fig. 12)

### Chevron Placement (Fig. 13)

- If chevron is needed remove only the instruction film.
- If no chevron is needed, remove both the instruction film and chevron together.

Fig. 9

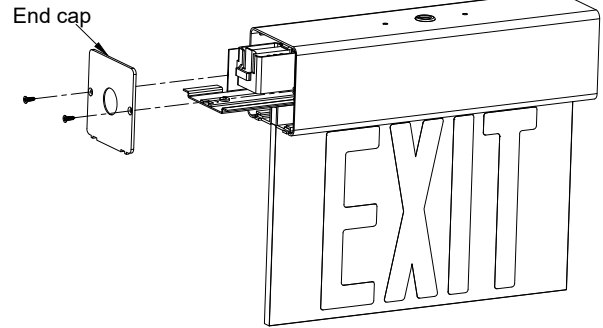


Fig. 10

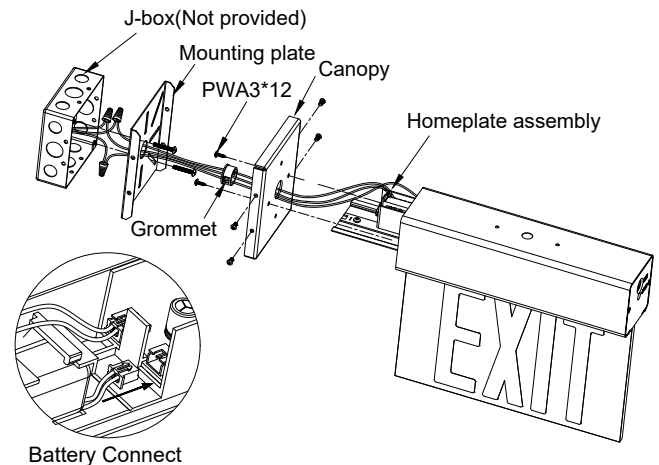


Fig. 11

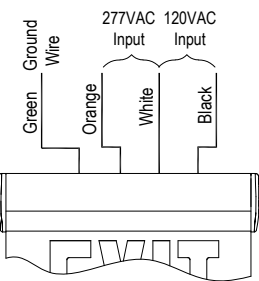


Fig. 12

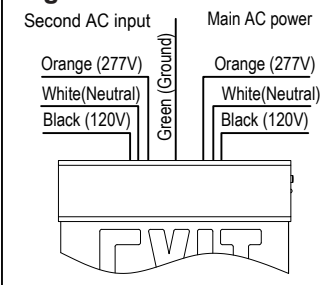


Fig. 13



### Self-Test/Self-Diagnostics (G2)

#### Operation

The battery in this unit may not be fully charged. After electricity is connected to the unit for at least 24 hours, then normal operation of this unit should take effect. To check, press the “TEST” button. The EXIT sign should stay illuminated by battery backup and the LED indicator will be turned off. Release the “TEST” button, LED indicator will be turned on.

In accordance with NFPA 101, your emergency lighting system must be tested monthly for a minimum of 30 seconds and annually for 90 minutes. Refer to your local codes for any additional requirements that may apply.

#### Testing and Reporting Instructions

- When AC power is supplied to fixture, the unit will automatically initiate a self-test and self-diagnostic test as follows:
  - Verifies battery disconnection, charger board failure at every 5 seconds.
  - 1 minute self-testing every month.
  - 30 minutes self-testing on every 6 months after installation.
  - 90 minutes self-testing on every 12 months after installation.
- Dual color LED lamp indicator shows the following status:
  - Green color: On / Ready  
blinking: Testing
  - Red color: (Service Alert)
  - Service Alert LED Code (Red color LED lamp indicator)

●	One blink, 4 second pause	Battery is not connected
● ●	Two blinks, 4 second pause	Battery voltage too low
● ● ●	Three blinks, 4 second pause	Charger board circuit failure
● ● ● ●	Four blinks, 4 second pause	Transfer function failure
● ● ● ● ● ● ●	Seven blinks, 4 second pause	LED strip failure

**Note:** After solving the fault of emergency equipment, please press test button for 2 seconds then release to reset. LED indicator will show green.

- “-G2” models also have a manual test function, press test button as follows:

Press test button once (within 2 seconds)	30 seconds discharge test
Press test button twice (within 2 seconds)	3 minutes discharge test
Press test button 3 times (within 2 seconds)	30 minutes discharge test
Press test button 4 times (within 2 seconds)	90 minutes discharge test

### **Battery Stock and Recharge Guideline**

Emergency fixtures use maintenance free batteries. When a fixture is on the shelf (stored) before an installation, all battery types need regular discharge and recharge to avoid battery deterioration. Deterioration can result in permanent capacity loss or complete battery failure. The manufacturer can not provide a quality warranty for a battery if proper maintenance is not done before installation. The recharge period is always taken from the Manufacture Date written on the battery's exterior.

**Lead-Acid battery:** Shelf life = Recharge Required = 3 months. (Recharge should involve full discharge and recharge to at least 50% rated capacity)

**Ni-Cad and Ni-MH battery:** Shelf life = Recharge Required = 9 months. (Recharge should involve full discharge and recharge to at least 50% rated capacity)

**LiFePO4 battery:** Shelf life = Recharge Required = 12 months. (Battery should recharge to at least 50% rated capacity) Battery discharge and recharge can be performed by the emergency fixture itself and can also be performed by other professional discharge and recharge equipment, see below instructions for reference.

Battery type	Operate by EM fixture	Operate by other equipment
Lead-Acid battery (Rated 6V battery)	Discharge then charge battery around 12 hours	Discharge 100% rated capacity, Charge current 0.3A max, constant voltage 7.2-7.35V* 12 hours
Ni-Cad and Ni-MH battery	Discharge then charge battery around 12 hours	Discharge current 0.2CA to 1V per cell cut off. Charge current 0.1C*12 hours
LiFePO4 battery	Charge battery around 12 hours	Charge current 0.2CA. Limit battery voltage 3.365V per cell

### **Emergency fixture in stock**

When a fixture is on the shelf (stored) before installation, the battery must not be connected to the PCBA in order to avoid self-discharge. Battery must be keep disconnected before installation.

If the battery is connected to the PCBA without charging the battery for over 10 days, the battery will deteriorate due to the battery self-discharge properties and cannot be recovered to its original capacity.

### **BATTERY SHIPPING**

We advise that when shipping batteries (of any type) over long distances, where the battery may be subjected to high temperatures for long periods of time, it is best practice to not charge the battery above 60% capacity. This practice helps to minimize permanent damage to the battery.

### **BATTERY SAFETY INFORMATION**

**Proposed long term storage temperature of 15°C-25°C and humidity of 45-85% for all battery types.**

#### **Lead-Acid battery handling and storage**

Store batteries in cool, dry, well-ventilated areas with impervious surfaces and adequate containment in the event of spills. Batteries should also be stored under a roof for protection against adverse weather conditions and separate from incompatible materials. Store and handle only in areas with adequate water supply and spill control. Avoid damage to containers. Keep away from fire, sparks and heat.

#### **Ni-cad battery / Ni-MH battery / LiFePO4 battery**

- Do not damage or remove the external tube.
- Never throw out cells in a fire or expose to high temperature.
- Do not soak cells in water and seawater.
- Do not expose to strong oxidizers.
- Do not give a strong mechanical shock or throw down to the ground.
- Never disassemble, modify or deform.
- Do not connect the positive terminal to the negative terminal with electrically conductive material.
- Do not short or install with incorrect polarity.
- Avoid direct sunlight, high temperature, high humidity and places where it is exposed to static electricity.