Operation/Reference Guide

NXA-UPS1500

Uninterruptible Power Supply

US version (120 Vac)
Int'l version (240 Vac)

AMX Limited Warranty and Disclaimer

All products returned to AMX require a Return Material Authorization (RMA) number. The RMA number is obtained from the AMX RMA Department. The RMA number must be clearly marked on the outside of each box. The RMA is valid for a 30-day period. After the 30-day period the RMA will be cancelled. Any shipments received not consistent with the RMA, or after the RMA is cancelled, will be refused. AMX is not responsible for products returned without a valid RMA number.

Warranty Repair Policy

- AMX will repair any defect due to material or workmanship issues during the applicable warranty period at no cost to the AMX Authorized Partner., provided that the AMX Authorized Partner is responsible for in-bound freight and AMX is responsible for out-bound ground freight expenses.
- The AMX Authorized Partner must contact AMX Technical Support to validate the failure before pursuing this service.
- AMX will complete the repair and ship the product within five (5) business days after receipt of the product by AMX. The AMX Authorized Partner will be notified if repair cannot be completed within five (5) business days.
- Products repaired will carry a ninety (90) day warranty or the balance of the remaining warranty, whichever is greater.
- Products that are returned and exhibit signs of damage or unauthorized use will be processed under the Non-Warranty Repair Policy.
- AMX will continue to provide Warranty Repair Services for products discontinued or replaced by a Product Discontinuance Notice.

Non-Warranty Repair Policy

- Products that do not qualify to be repaired under the Warranty Repair Policy due to age of the product or Condition of the product may be repaired utilizing this service.
- The AMX Authorized Partner must contact AMX Technical Support to validate the failure before pursuing this service.
- Non-warranty repair is a billable service.
- Products repaired under this policy will carry a ninety (90) day warranty on material and labor.
- AMX will notify the AMX Authorized Partner with the cost of repair, if cost is greater than the Standard Repair Fee, within five (5) days of receipt.
- The AMX Authorized Partner must provide a Purchase Order or credit card number within five (5) days of notification, or the product will be returned to the AMX Authorized Partner.
- The AMX Authorized Partner will be responsible for in-bound and out-bound freight expenses.
- Products will be repaired within ten (10) business days after AMX Authorized Partner approval is obtained.
- Non-repairable products will be returned to the AMX Authorized Partner with an explanation.
- See AMX Non-Warranty Repair Price List for minimum and Standard Repair Fees and policies.

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NXA-UPS1500 Uninterruptible Power Supply

Overview

The NXA-UPS1500 is an Uninterruptible Power Supply (UPS) featuring Double AVR Boost and Double Buck, Pure Sine Wave Output, LCD Display and Hot-Swappable Battery. The NXA-UPS1500 supports RS232 control.

The NXA-UPS1500 UPS is available in two models - the 120V version (**FG678-15)** is suitable for use in the US, and the 220V version (**FG678-20**), for International usage.

The NXA-UPS1500 features tower/rack-convertible design making it ideal for use with AMX's line of MAX devices (FIG. 1).
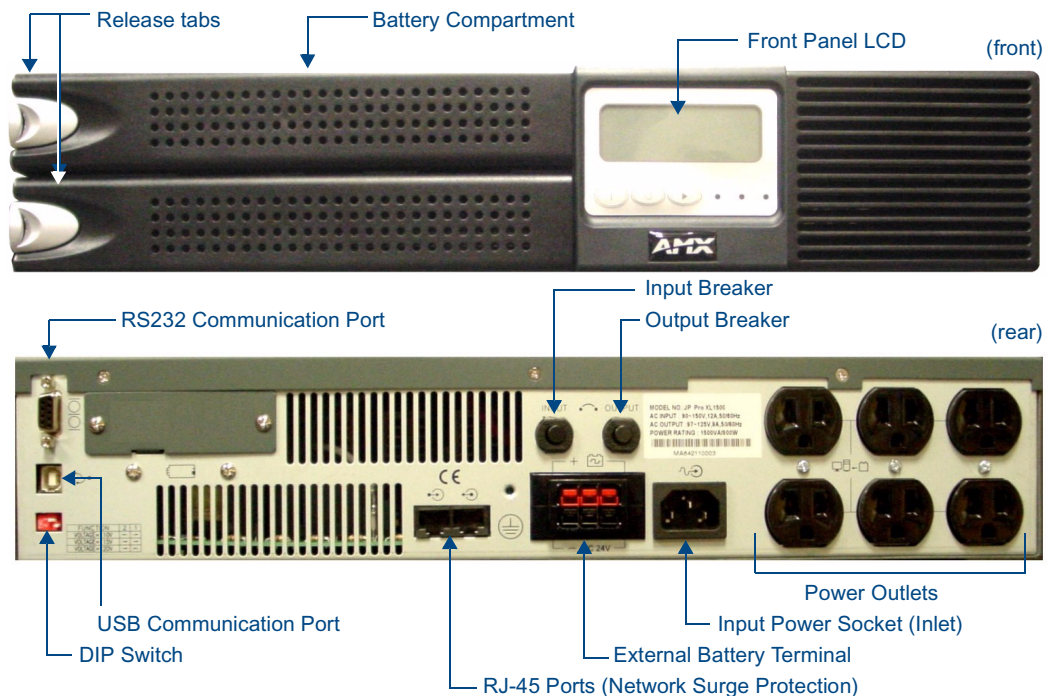
FIG. 1 NXA-UPS1500 Uninterrupted Power Supply

Features

- Sine Wave Output provides assurance of compatibility with all kinds of loads.
- LCD panel displays system status including load level, battery level, AVR-Boost/Buck and fault status for easy service.
- 90% High Efficiency in Normal Mode meets high energy saving standard and reduces noise and heat generated by other topology UPS.
- Easy Swappable Battery Function may save the time and money by swapping the batteries by end-user without sending it back for a factory service.
- Cold Start Function enables to turn on the UPS without connecting to the Utility.
- User-friendly Plug and Play design can easily be installed.
- The NXA-UPS1500 EPM Extended Power Module (FG 678-15), available as an optional accessory, works with the NXA-UPS1500 to increase the duration of backup power, providing up to 3X additional battery run time.

Product Specifications

NXA-UPS1500 Product Specifications	

Input:	Voltage Window (DIP Switch selectable):
	
	   120V version (**FG678-15**): 110/115/120 Vac +35% ˜ -32%
	
	   240V version (**FG678-20**): 220/230/240 Vac +35% ˜ -32%
	
	Frequency: 45 ˜ 65Hz (50/60Hz auto-sensing)

Output:	Voltage Window (AC Mode):
	
	   120V version (**FG678-15**): 110/115/120 Vac +8% ˜ -12%
	
	   240V version (**FG678-20**): 220/230/240 Vac +8% ˜ -12%
	
	Voltage Window (INV Mode):
	
	   120V version (**FG678-15**): 110/115/120 Vac +/-5%
	
	   240V version (**FG678-20**): 220/230/240 Vac +/-5%
	
	• Capacity (VA/W):1500/900
	• Wave Form: Pure sine wave
	• Frequency: 50Hz/60Hz +/-0.1Hz
	• Transfer Time:2 ms typical
	• Autonomy: > 8 min.
	• DC Start: Yes

Battery:	• Type: 12V, sealed lead acid maintenance-free
	• Capacity: 9AH
	• Quantity: 4 12V batteries required
	• Voltage:
	
	   120V version (**FG678-15**): 24 Vdc
	
	   240V version (**FG678-20**): 48 Vdc
	
	• Recharge Time: 2 ˜ 4 hours to 90%
	• Storage: Store at -15 to +30 °C (+5 to +86 °F), charge the UPS battery every 6 months / Store at +30 to +45 °C (+86 to +113 °F), charge the UPS battery every 3 months.

LED indicators:	• Utility mode • Backup mode • Battery conditions
Display LCD:	• Load level (%) • Battery level (%) • Bypass • AVR-Boost/AVR Buck • Battery Low/Replace/Fault • UPS Fault • Site Wiring Fault • Overload
Overload Protection:	• AC Mode: >110% Buzzer continuously alarms, and shuts down in 10 minutes. • Inverter Mode: >120% Buzzer continuously alarms, and shuts down in 10 seconds.
Short Circuit Protection:	• AC Mode: Breaker and electronic circuit • Inverter Mode: Shut down automatically in 8 cycles
Self-Diagnostics:	• Upon Power-on
Alarms:	• Line Failure • Battery Low • Overload and Fault
Operation Environment:	• Temperature: 32° - 104°F (0-40° C) • Operation Humidity: 95% RH Maximum, non-condensing
	•

NXA-UPS1500 Product Specifications (Cont.)	
Dimensions (HWD):	• 3.46" x 17.32" x 18.97" (8.80cm x 44.0cm x 48.2 cm)
	• 2U rack height
Control Communication:	• RS-232
Weight (with batteries):	• 70.3 lbs (31.89 kg)
Certifications:	• EN50091-1-1:1996 (Safety)
	• FCC Part 15, Subpart B - Class A
	• UL: YEDU.E166979
Included Accessories:	• AC Input Power Cord
	• Tower and rack-mounting accessories
Other AMX Equipment:	• NXA-UPS1500 EPM Extended Power Module (**FG 678-16**)
	• NXA-UPS1500ECJ, European Cable Jumpers (**FG 678-17**)
	• NXA-UPS1500UKCJ, United Kingdom Cable Jumpers (**FG678-18**)
	• NXA-UPS1500ACJ, Australian Cable Jumpers (**FG678-19**)

Front Panel LCD

FIG. 2 describes the elements of the front panel LCD:

1. Utility (Green LED)
2. Fault (Red LED)
3. On Switch
4. Off Switch
5. Battery Replacement
6. Battery Backup (Amber LED)
7. Battery Low
8. Bypass
9. Utility Low, UPS Boost
10. Utility High, UPS Buck
11. UPS Output Indicator
12. Polarity Error or Ground Fault
13. Overload
14. Load/Battery Level (%)
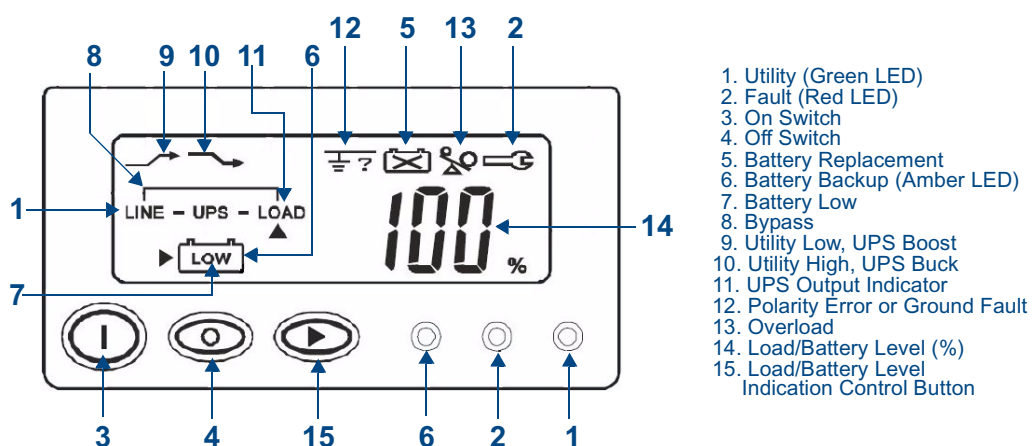15. Load/Battery Level Indication Control Button

FIG. 2 Elements Of The Front Panel LCD

IMPORTANT SAFETY INSTRUCTIONS

Important Notice

- The UPS has its own internal energy source (battery). Should the battery be switched on when no AC power is available, there could be voltage at the output sockets.

- Make sure that the AC Utility outlet is correctly grounded.

- Do not open the case, as there are no serviceable parts inside. Your warranty will be void.

- Please make sure that the input voltage of the UPS matches the supply voltage.

- To eliminate any overheating of the UPS, keep all ventilation openings free from obstruction, and do not store "things" on top of the UPS. Keep the UPS 30cm away from the wall.

- Make sure the UPS is installed within the proper environment as specified (0-40° C and 30-90% non-condensing humidity).

- Do install the UPS in direct sunlight.

- Install the UPS indoors as it is not designed for installation outdoors.

- Dusty, corrosive and salty environments can do damage to any UPS.

- Install the UPS away from objects that give off excessive heat and areas that are excessively wet.

- The battery will discharge naturally if the system is unused for any length of time.

- It should be recharged every 2-3 months if unused. When installed and being used, the batteries will be automatically recharged and kept in top condition.

- Do not install the UPS in an environment with sparks, smoke or gas.

- Make sure the UPS is completely turned off when moving the UPS from one place to another. It might cause electrical shock if the output is not cut completely.

Storage Instructions

For extended storage through moderate climate, the batteries should be charged for 12 hours every 3 months by plugging the UPS power cord into the wall receptacle and turn on input breaker on front panel.

Repeat this procedure every 2 months under high temperature environment.

Assembling the Battery Pack

Overview

The UPS battery needs to be assembled before installation: the battery pack consists of four individual batteries, a connector wiring package (one large wire harness with two black and two red wires attached to a four-pin connector and two separate red wires), and the aluminum battery case components.

Each battery has color-coded contacts, with red for "positive" and black for "negative". Each battery will lie on its side in the battery case, as part of a pair, with the contacts of one at the opposite end as the contacts of the other. The completed battery case will not slide into the unit when wired if the batteries are not in this position when the case is assembled. (See FIG. 6).
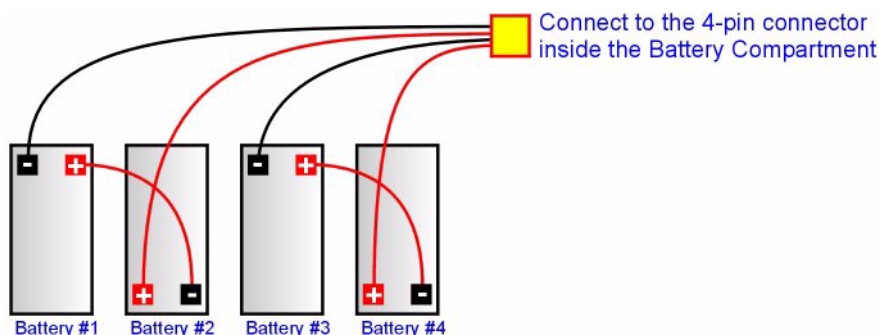

FIG. 3 Connecting the batteries to each other and to the 4-pin connector

1. Remove the batteries from their packing material and stand them upright on the bottom of the battery case, making two pairs. Alternate the batteries so the contacts of one in each pair are opposite the contacts of the other. (See FIG. 3)

2. With the contacts facing up, take the large wire harness (the one with the yellow 4-pin connector at one end) and connect each pair to the assembly. Make sure that the color of each wire, red or black, matches the color of the battery contact. Only attach one wire from the harness to each battery.

When attaching the wire harness to the battery pairs, note the red-black wire pairs coming from the connector. The black and red wires in each set emerging from the connector must be attached to its matching contact in only one battery pair; connecting a red wire to one battery pair and a black wire to the other battery pair will not complete the circuit and the battery pack will not work.

NOTE

3. The remaining two wires from the wiring package complete the serial circuit. Connect the red wire first to a red contact on one battery and then to a black contact on the other in the pair. Likewise, connect the black wire first to the remaining black contact, then to the remaining red contact in the second pair.

4. At this point, flip the batteries so that their wide and long sides face down. Make sure that the contacts of each battery face the side containing contacts on the other in its pair. Gently put tension on the wires to take up any slack; the wire harness should be hanging to one side. The wires themselves should run between the battery pairs until they emerge from the side. If any wire should hang over the top of the batteries, gently press it down between the batteries to keep it out of the way.

5. Assemble the battery case around the battery pairs. When installing the battery in the unit, the wire assembly will hang out from the right side of the battery pack.
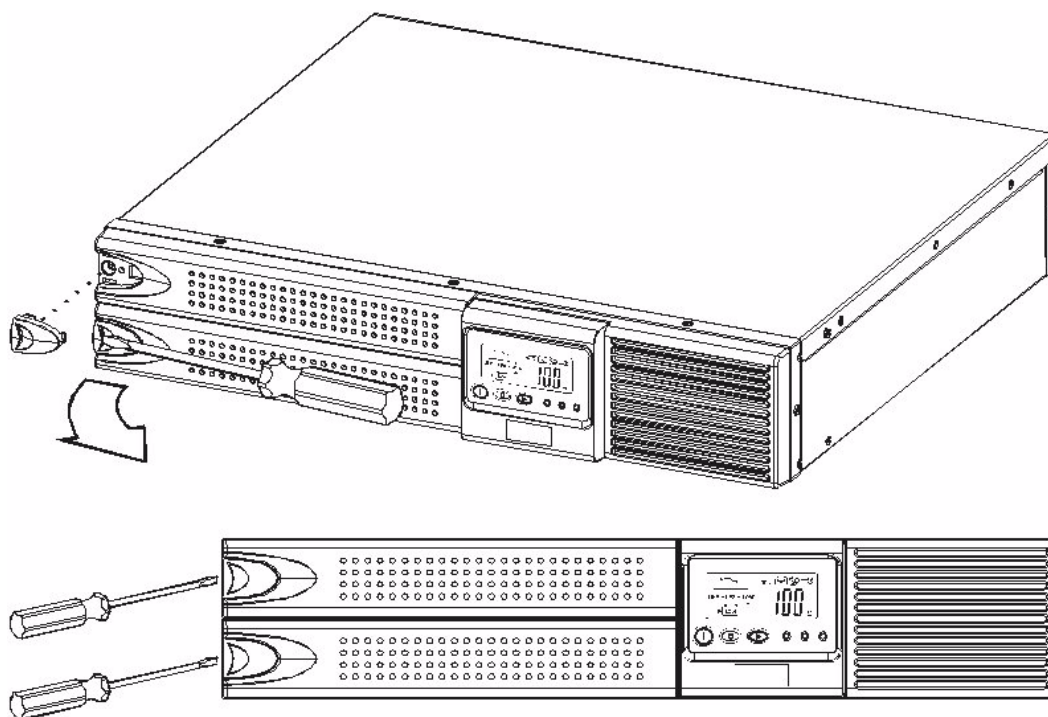
Accessing the Battery Compartment - Step One

FIG. 4 Replacing the Battery - Step 1

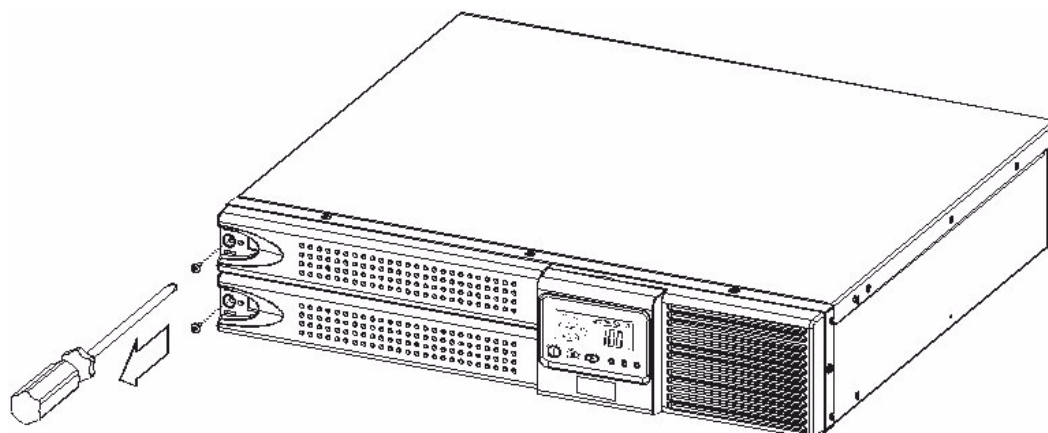### Accessing the Battery Compartment - Step Two

FIG. 5 Replacing the Battery - Step 2

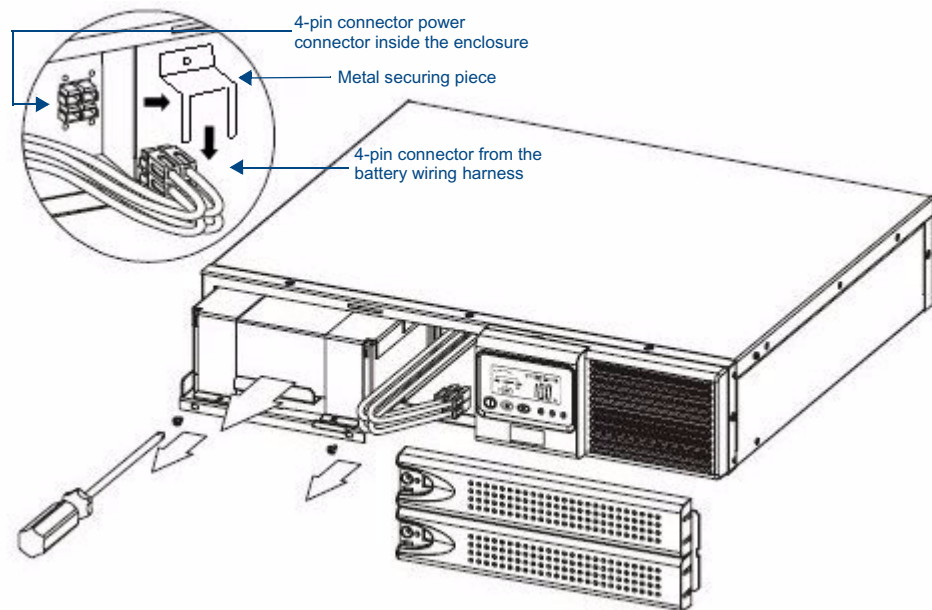## Accessing the Battery Compartment - Step Three

FIG. 6 Remove the two screws that secure the Battery Compartment Cover. Remove the metal securing piece, connect it to the battery cable harness, and connect the harness to the matching connector inside the unit.

1. Remove the Release tabs on the front panel to expose the screws that secure the Battery Compartment Cover.

2. Remove the screws beneath the Release tabs.

3. Remove the two screws that secure the Battery Compartment Cover

4. Remove the Battery Compartment Cover to access the Battery Compartment.

5. Remove the screw holding the metal securing piece in place.

6. Slide the metal securing piece into the groove on the 4-pin connector (red) from the battery cable harness.

7. Connect the 4-pin connector to the matching connector inside the unit.

8. Reattach the metal securing piece above the connector with the screw.

Mounting the NXA-UPS1500

Place the UPS Properly

The UPS should be placed in a well-ventilated & low humid environment.

Unpacking

1. Take the UPS out of the PE foam.

2. Remove the packing materials.

3. Standard Package includes:

   - Installation Guide

   - AC Input Power Cord

   - Accessories for Tower and Rack Mount

Accessories for Tower and Rack Mount

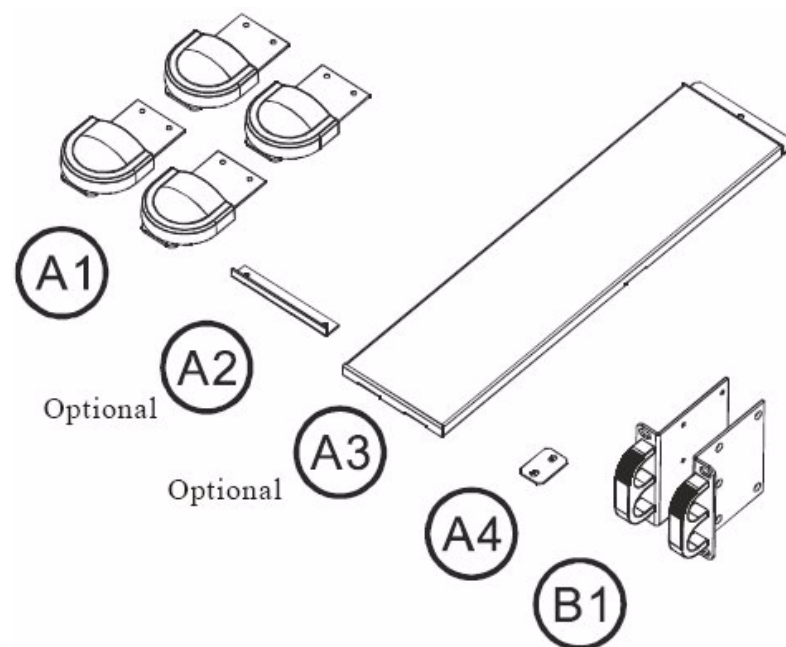FIG. 7 shows the accessories for tower and rack-mounting the UPS:

FIG. 7 Accessories for Tower and Rack Mount

⚠ **CAUTION**   *This unit may require at least two people to install due to its weight.*

Selecting Installation Position

It is necessary to select a proper environment to install the unit, in order to minimize the possibility of damage to the UPS and extend the life of the UPS (FIG. 8).
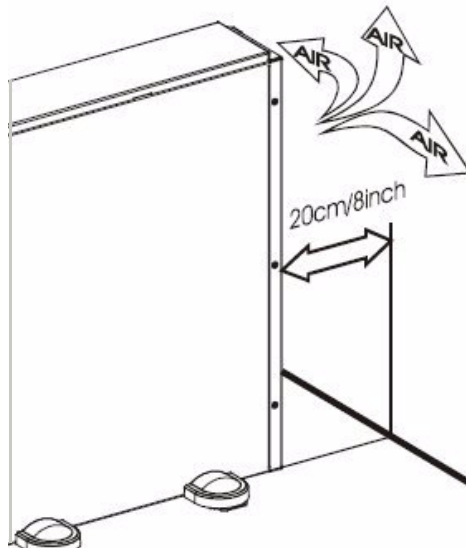
- Keep at least 20cm (8") clearance from the rear panel of the UPS from the wall or other obstructions.
- Do not block the air-flow to the ventilation openings of the unit.
- Please ensure that the installation site environmental conditions are in accordance with the UPS working specifications to avoid overheat and excessive moisture.
- Do not place the UPS in a dusty or corrosive environment or near any flammable objects.
- This UPS is not designed for outdoor use.

FIG. 8 Selecting Installation Position

UPS Setup

The UPS offers a flexible form factor enabling integration into a wide variety of environments (FIG. 9). The UPS with space-saving design only occupies 2 RU.
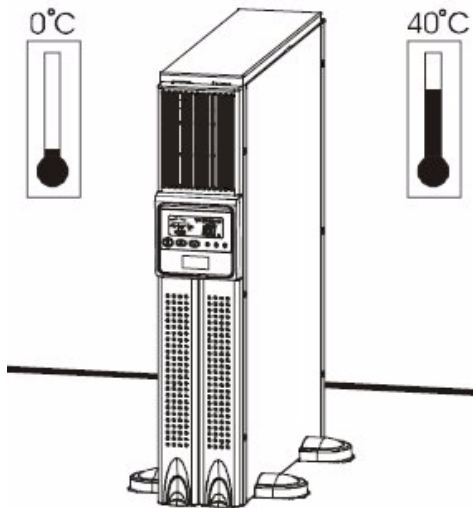

FIG. 9 UPS Setup

If you are installing the UPS in a tower, continue to the following section, "Tower Setup", otherwise; continue to "Rack-Mount Setup".
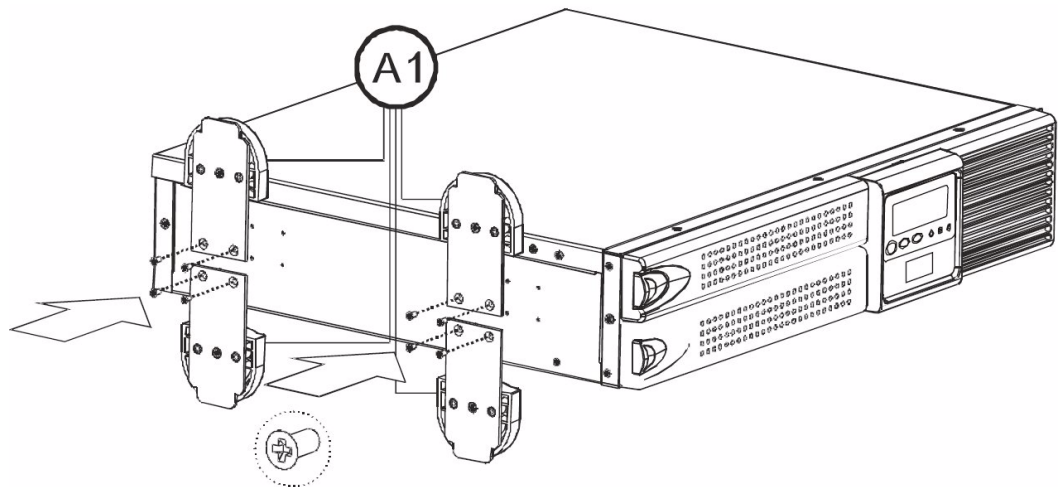
Tower Setup

Tower Setup - Step One

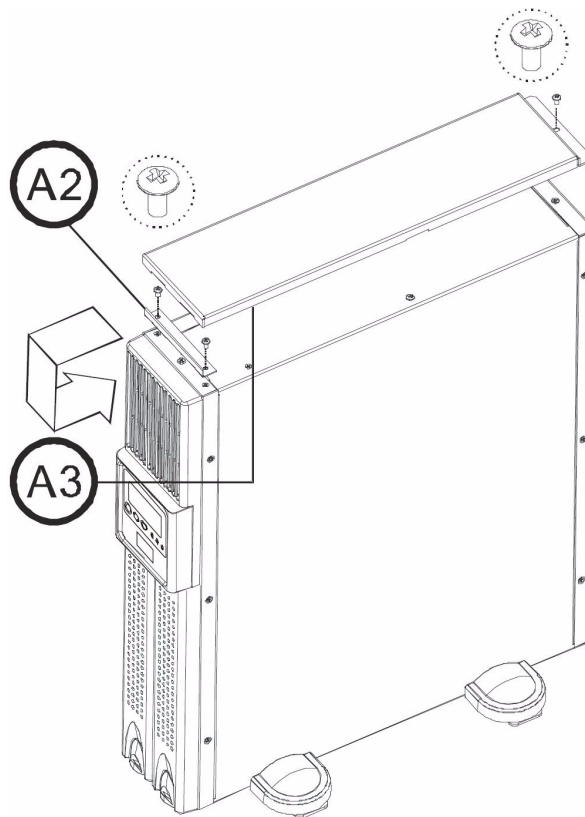**FIG. 10** Tower Setup - Step 1

Tower Setup - Step Two

FIG. 11 Tower Setup - Step 2
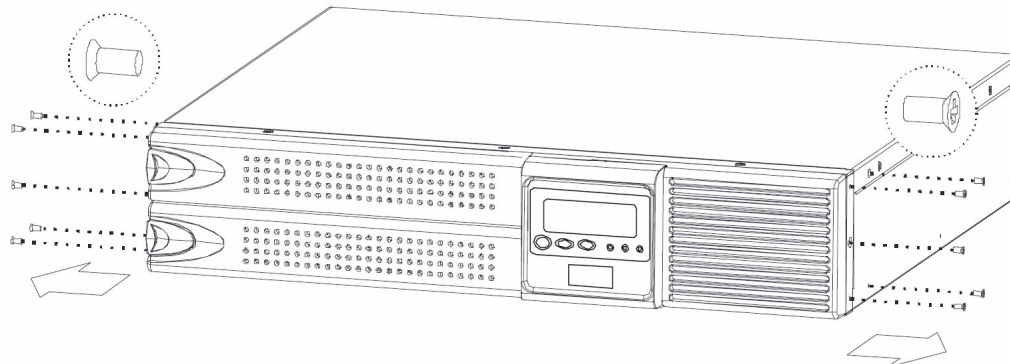
Rack-Mount Setup

Rack-Mount Setup - Step One

FIG. 12 Rack-Mounting the UPS. - Step 1
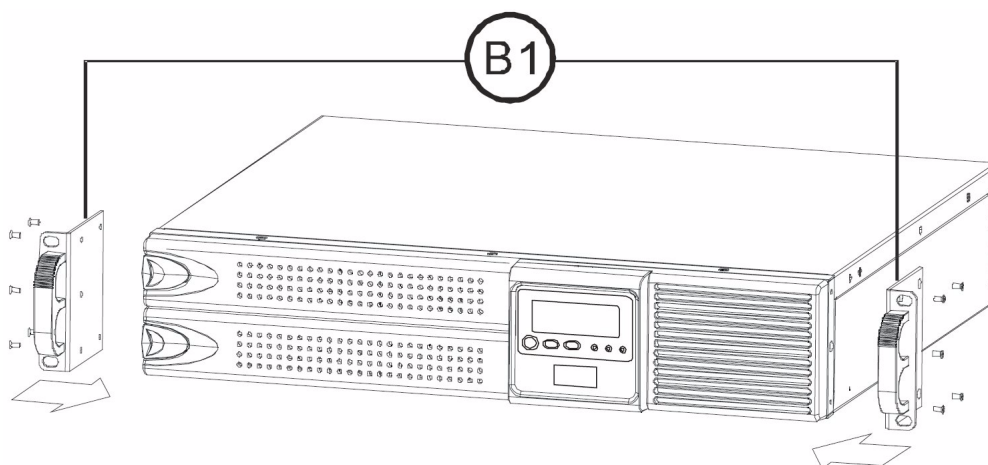
Rack-Mount Setup - Step Two

FIG. 13 Rack-Mounting the UPS. - Step 2

NOTE

In order to mount the NXA-UPS1500 into an equipment rack, you must use a rack shelf (not included with the UPS), as indicated in FIG. 14, FIG. 15 and FIG. 16.
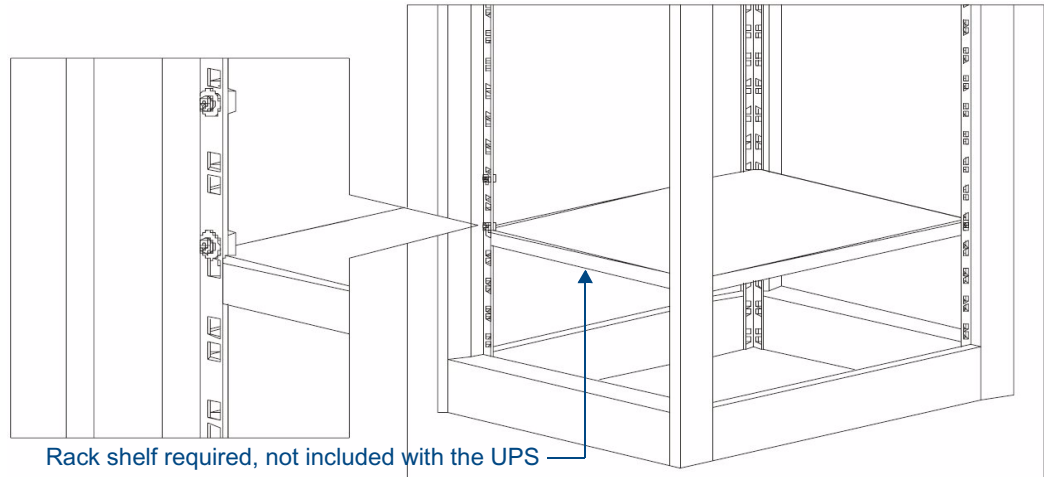
Rack-Mount Setup - Step Three

Rack shelf required, not included with the UPS

FIG. 14 Rack-Mounting the UPS. - Step 3

Rack-Mount Setup - Step Four
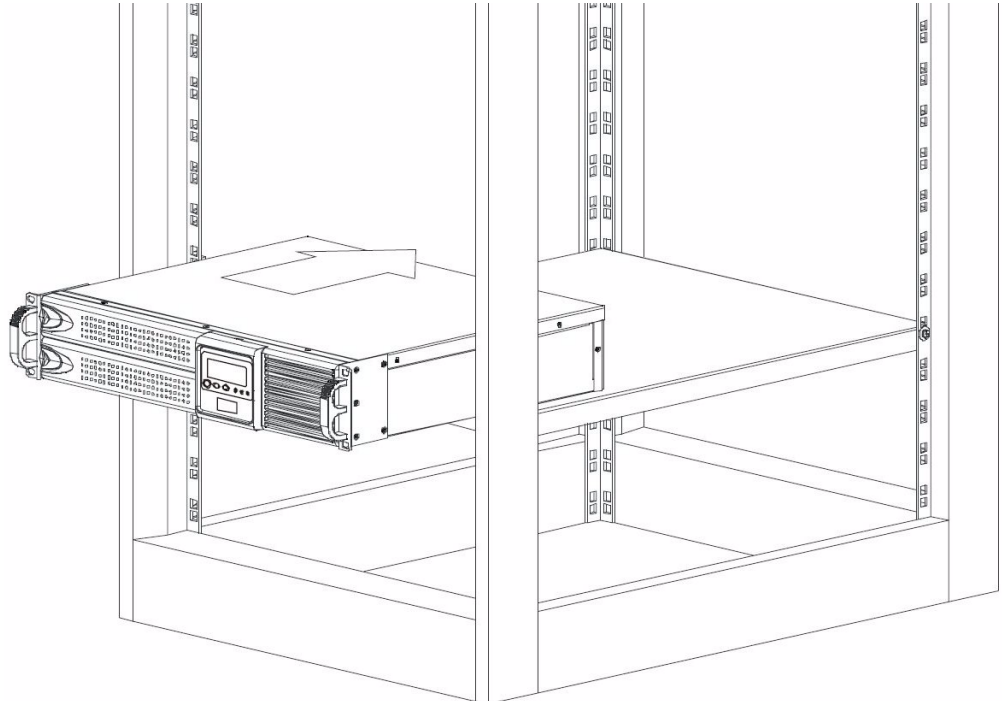

FIG. 15 Rack-Mounting the UPS. - Step 4
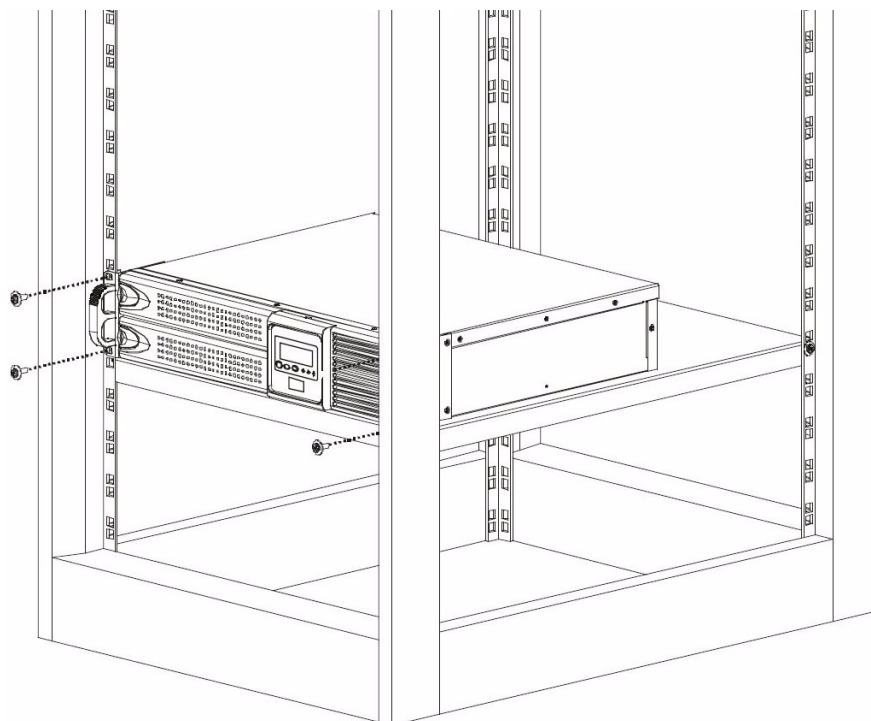
Rack-Mount Setup - Step Five

FIG. 16 Rack-Mounting the UPS. - Step 5

Connecting the UPS

Connect Utility and Load

First, connect the UPS with Utility, then plug the loads into the Outlets on the rear of the UPS (FIG. 17). To use the UPS as a master "On/Off" switch, make sure that all of the loads are switched "on".

These UPS outlets provide battery backup and surge protection to the equipment when Utility voltage is out of window.
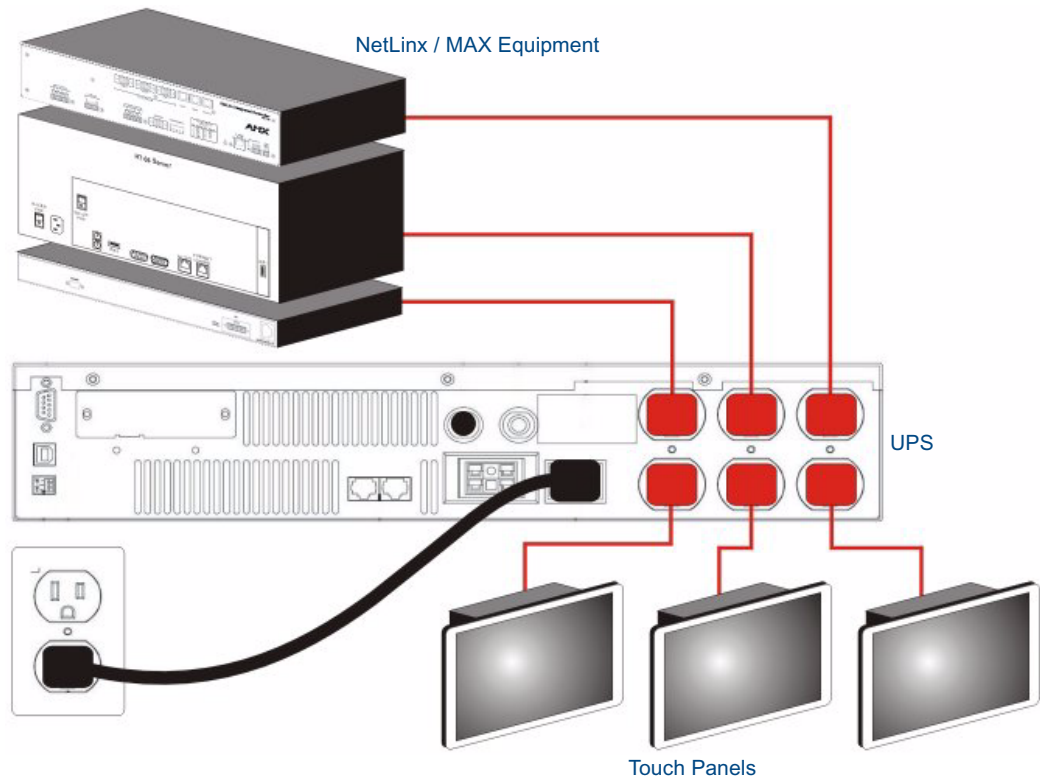

FIG. 17 Plug The Loads Into the UPS

⚠ **CAUTION**

Do not connect a laser printer to the UPS outlets!

Connect Network Surge Protection

Connect a 10Base-T/100 Base-T network cable to the RJ45 network surge protection "IN" jack on the rear of the UPS. Connect from the "OUT" jack with network equipment (FIG. 18).
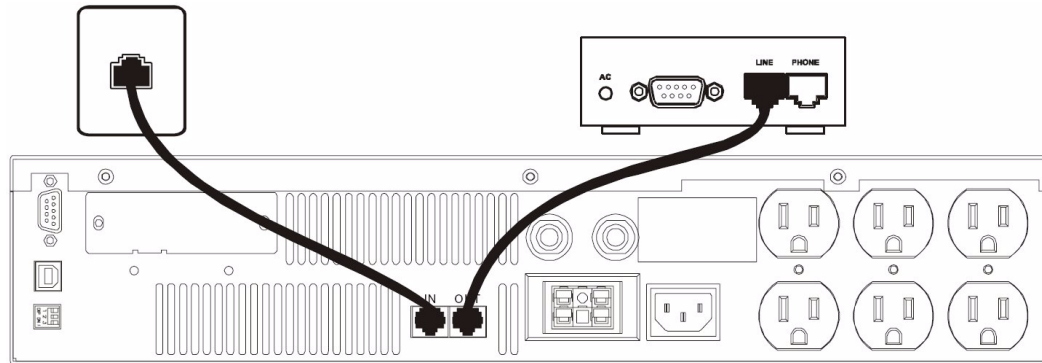

FIG. 18 Connect Network Surge Protection

CAUTION

If using the NXA-UPS1500 as part of a MAX system, do not run the A/V segment of the network through the RJ45 network surge protection jack on the UPS. The A/V segment of a MAX network requires a GB Ethernet switch, and the NXA-UPS1500 only provides a 10/100 connection. You can connect the Control segment of the MAX network to the UPS, since it does not require a GB connection to operate properly.

Connect the RS-232 Communication Port

Connect the supplied RS-232 interface cable between the RS-232 port on the rear of the UPS and an available RS-232 port on the NetLinx Master (FIG. 19).
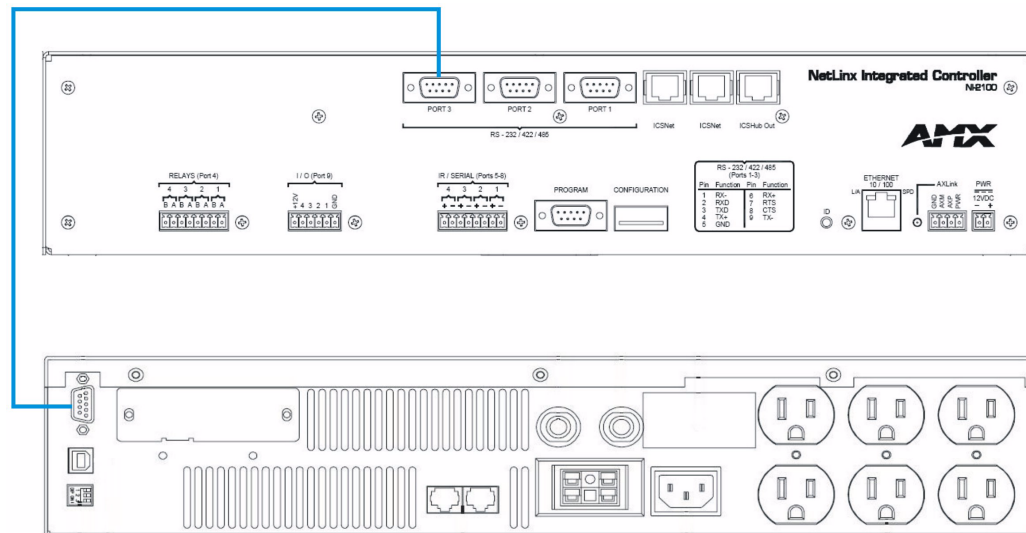

FIG. 19 Connect RS-232 Communication Port

RS-232 Communication Port Pin Assignment

The NXA-UPS1500 provides a DB9F (9-pin female) connector to communicate via RS-232. The pinout configuration for the RS-232 Communication Port connector is shown in FIG. 20:
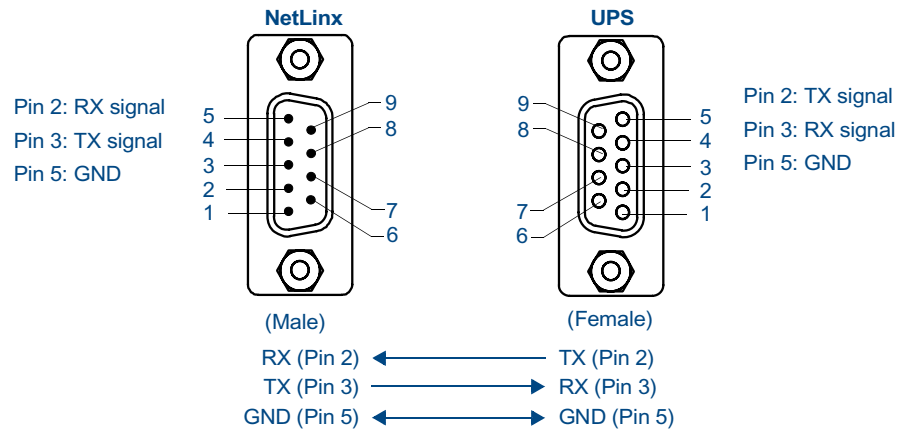

FIG. 20 RS-232 Communication Port Pin Assignment

RS-232 Communication Port Pin Assignment	
Pin	**Assignment Description**
1	n/c
2	UPS TX signal
3	UPS RX signal
4	n/c
5	GND (ground)
6	n/c
7	n/c
8	n/c
9	n/c

Operation

Turn On the UPS

1. Connect the UPS to the wall receptacle. LCD will display "OFF", when Utility is normal. If there is nothing on the LCD, go to step 3.

2. Push the "On" Switch on the front panel to start the UPS. Both the LCD and Utility LED (Green) are lit. The start-up procedure is completed and the loads are supplied by the UPS.

3. To cold start the UPS, press the "On" Switch on the front panel for approximately 3 seconds until the LCD lights up and buzzer sounds, then release the "On" Switch. The UPS starts operating and Battery Backup LED (Amber) lights up. The cold start-up procedure is completed and the loads are supplied by the UPS.

4. The UPS will run under Backup mode and the buzzer alarms every 2 seconds in case of blackout or over/under voltage. On the contrary, If Utility is back to normal and then the UPS will run under Utility mode and silence alarm.

Turn Off the UPS

1. Press the "Off" Switch for at least 3 seconds to turn off the UPS. If you press the "Off" Switch less than 3 seconds, the UPS will not execute shutdown command due to insufficient pressing time.

2. In some occasions, the UPS will shut itself down in case of overload, output short-circuit or battery cutoff point reached in the Backup mode.

3. The UPS will automatically shut off the output and beep for 5 seconds then completely shut itself down.

Plug-In Charge

1. If the Input Power Cord is connected to the wall receptacle properly and the utility is normal, the UPS will start charging automatically without processing "Turn On" procedure.

2. You have to charge for at least 8 hours every 3 months to avoid from battery self over-discharge naturally, if the UPS is in an idle condition.

Auto-Restart

If the Input Power Cord is connected to the wall receptacle properly and Utility is back to normal, the UPS will automatically restart to provide energy to the output after battery cut.

Alarm Silence

1. The Alarm might be turned off by pressing the "On" Switch for approximately 1 second in the "Backup" mode.

2. Unless any other warning or fault condition occurs, the alarm remains at Silence condition once the "Alarm Silence" is turned off.

Self Test

1. Under Utility Normal condition, press the "On" Switch for 3 seconds to execute the Battery Self-test function.

2. In case the battery is normal, it will enter into the Battery Backup Mode for 10 seconds then return to Utility Mode.

3. If the battery voltage is detected lower than set limit, the Battery Replacement mark will blink for 5 times then extinguish to stop self-test procedure. And if battery is detected weak or dead, the Battery Replacement mark will steadily illuminate.

The UPS will remain at "NO" output, if the start-up operation is not proceeded properly even though the Input Power Cord is connected to the wall receptacle.

CAUTION

IMPORTANT - Plug the UPS onto the wall receptacle to charge the UPS for over 8 hours after initial installation.

NOTE

Store at -15 to +30 °C (+5 to +86 °F), charge the UPS battery every six months.
Store at +30 to +45 °C (+86 to +113 °F), charge the UPS battery every three months.

NOTE

Battery Replacement

Overview

1. When the Battery Replacement LED (Red) lights up, you may leave the UPS to be re-charged for at least 8~10 hours to see whether the Red LED will be extinguished after the Self-Test function is executed again.

2. In case the Red LED remains unchanged, you may unscrew the Hot Swappable Battery cover to replace a new battery, then press the "On" Switch to disable the Red LED.

⚠ **CAUTION**

Once the battery is disconnected, the loads are not protected from power outages.

Assembling the Battery Pack

The UPS battery needs to be assembled before installation: the battery pack consists of four individual batteries, a connector wiring package (one large wire harness with two black and two red wires attached to a four-pin connector and two separate red wires), and the aluminum battery case components.

Refer to the *Assembling the Battery Pack* section on page 7 for details on wiring the Battery Pack.

Replacing the UPS Battery - Step One

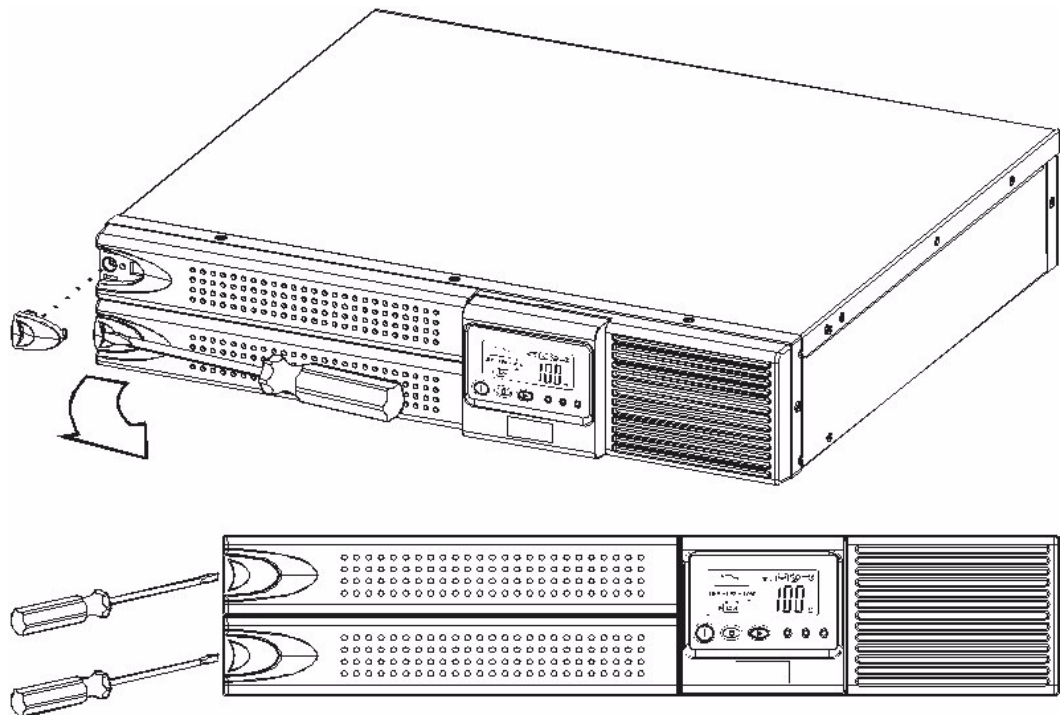Remove the Release Tabs on the front panel (FIG. 21):

FIG. 21 Replacing the Battery - Step 1

Replacing the UPS Battery - Step Two

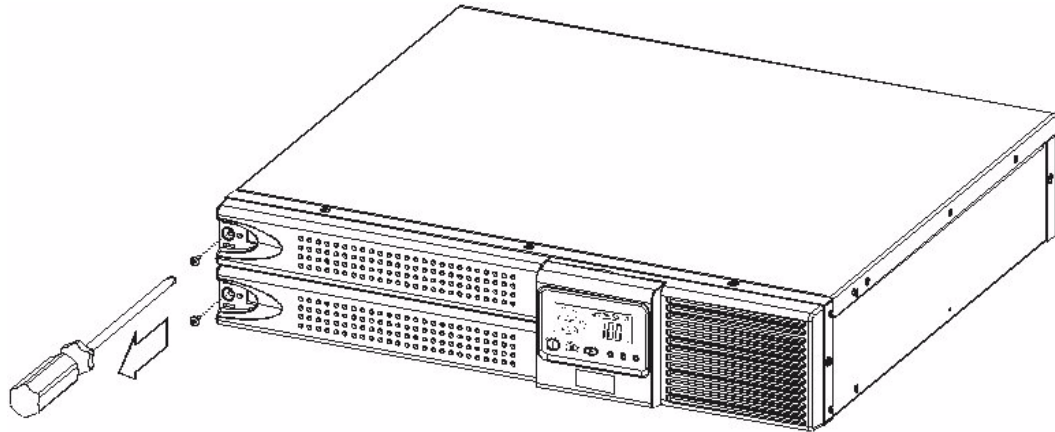Remove the two screws that secure the Battery Compartment Cover (FIG. 22)

FIG. 22 Replacing the Battery - Step 2

Replacing the UPS Battery - Step Three

Disconnect the four-pin power connector from the battery wiring harness from the power connector inside the unit, and slide the battery tray out of the unit (FIG. 23):
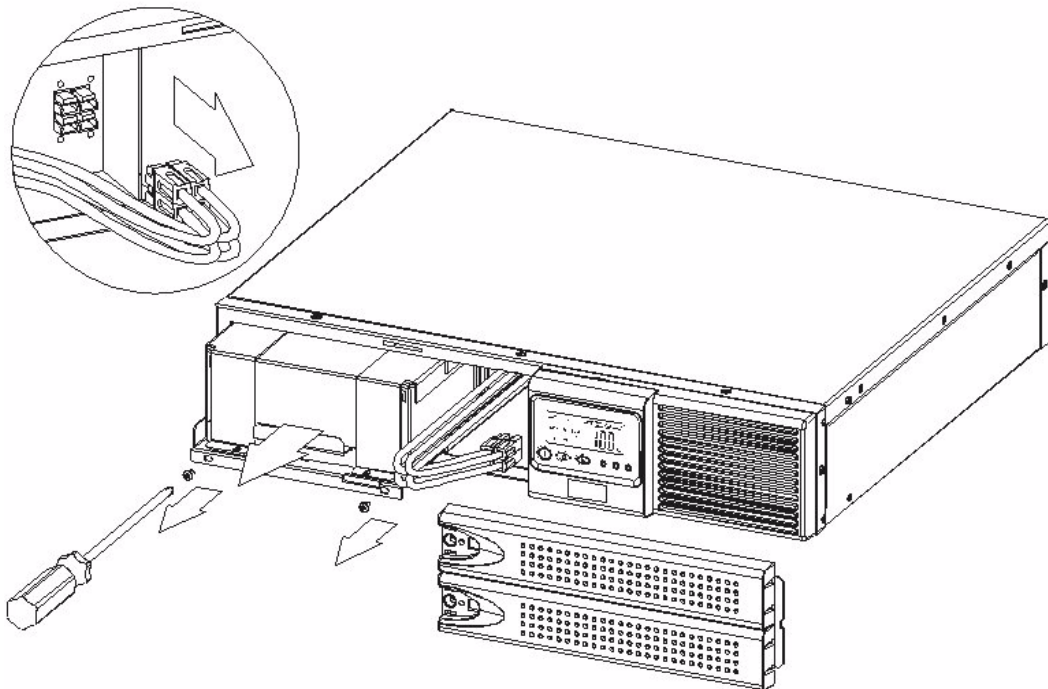
FIG. 23 Replacing the Battery - Step 3

Recycling the Used Battery

Contact your local recycling or hazardous waste center for information on proper disposal of the used battery.

NXA-UPS1500 EPM Installation

Overview

NXA-UPS1500 EPM Extended Power Module (**FG 678-15**) works with the NXA-UPS1500 to increase the duration of backup power, providing up to 3X additional battery run time (FIG. 24).
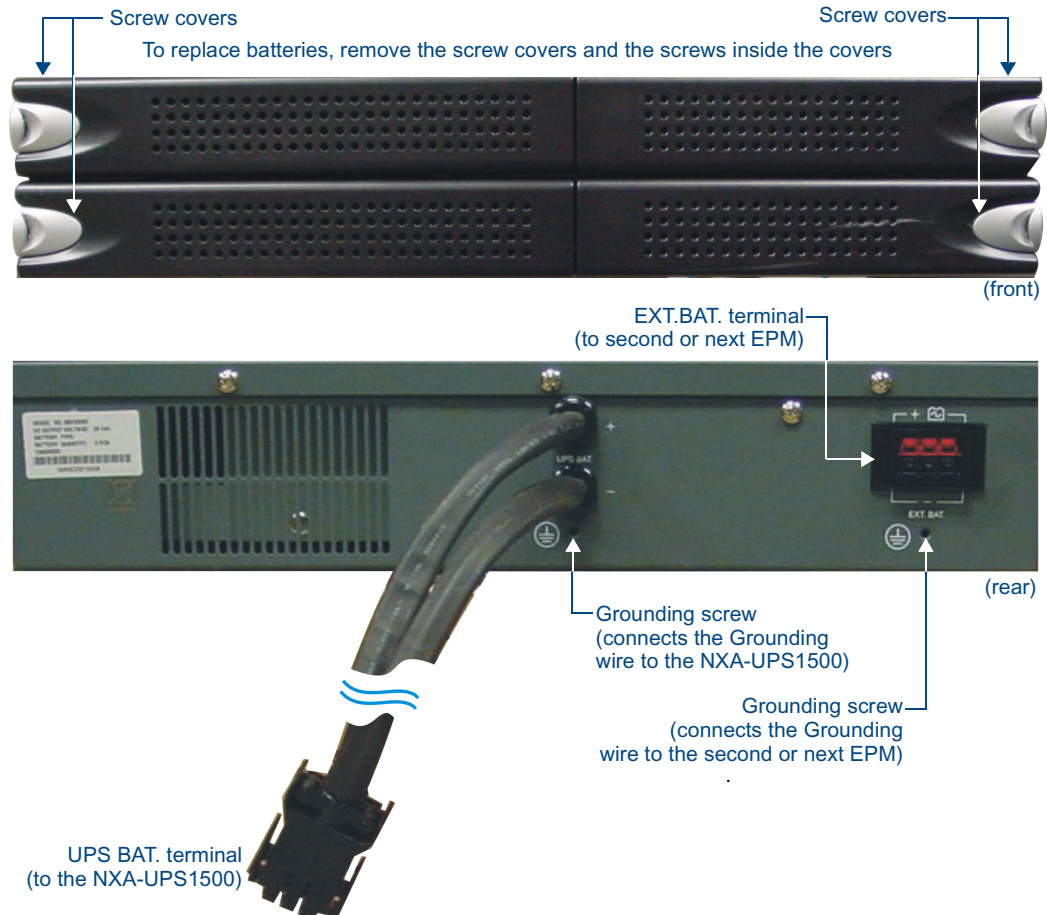

FIG. 24 NXA-UPS1500 EPM Extended Power Module (optional accessory)

IMPORTANT SAFETY INSTRUCTIONS
SAVE THESE INSTRUCTIONS

This manual contains important instructions that should be followed during installation and maintenance of the EPM and batteries.

IMPORTANT NOTICE

- *The EPM which is supplied with a factory input plug can be safely connected to the wall receptacle.*

- *This EPM is connected to an UPS. There will be voltage at the output terminals if the UPS is turned on even if the input AC Mains is not available.*

- *Make sure that the AC Utility outlet is correctly grounded.*

- *Use a certified input power cable with the correct plugs and sockets for the appropriate voltage system.*

- *To eliminate any overheating of the EPM, keep all ventilation openings free from obstruction and do not place any foreign objects on top of the EPM.*
  Keep the EPM 20 cm away from the wall.

- *Make sure the EPM is installed within the proper environment as specified.*
  (0-40°C and 30-90% non-condensing humidity)

- *This EPM is designed for indoor use only.*

- *This EPM is not designed for use in dusty, corrosive and salty environment.*

- *The battery will discharge naturally if the system is unused for a period of time.*

- *It should be recharged every 2-3 months if unused. During normal operation, the batteries will automatically remain in charged condition.*

- *When replacing batteries, replace with the same quantity, type & capacity.*

- ***CAUTION** - Do not dispose of battery or batteries in an open fire. The battery may explode.*

- ***CAUTION** - Do not open or mutilate the batteries. The electrolyte from the batteries is toxic and harmful to the skin and eyes.*

- ***CAUTION** - **Risk of Electric Shock** - Battery circuit is not isolated from AC, hazardous voltage may exist between battery terminals and ground. Test before touching with bare hands.*

- ***CAUTION** - A Battery can present a risk of electrical shock and high short circuit current. The following precautions should be observed when working on batteries:*

a. *Remove watches, rings, or other metal objects.*

b. *Use tools with insulated handles.*

c. *Wear rubber gloves and boots.*

d. *Do not lay tools or metal parts on top of batteries.*

e. *Disconnect charging source prior to connecting or disconnecting battery terminals.*

EPM Specifications

CAUTION

EPM connectors are color coded as shown below. Do not try to install the EPM with connectors that are a different color from the EPM connector in the UPS.

- **Nominal System Voltage**: 24V

- **Connector color**: Red(+), Black (-)

EPM - Installation and Operation

The packing condition and the external outlook of the unit should be inspected carefully before installation. Retain the packing material for future use.

Unpacking

1. Take the EPM out of the PE foam.

2. Remove the packing materials.

NOTE

The EPM module is approx. 12.5~50 kgs, be cautious when unpacking and lifting the unit to avoid injury.

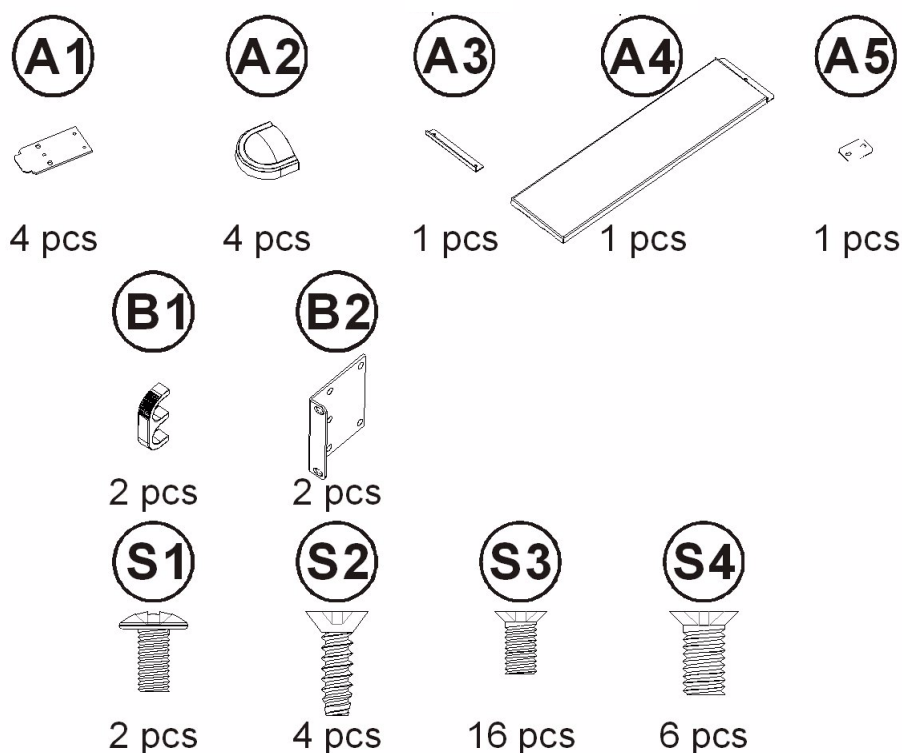The EPM includes accessories for tower and rack mount (FIG. 25).

A1 4 pcs
A2 4 pcs
A3 1 pcs
A4 1 pcs
A5 1 pcs
B1 2 pcs
B2 2 pcs
S1 2 pcs
S2 4 pcs
S3 16 pcs
S4 6 pcs

FIG. 25 EPM Accessories for Tower and Rack Mount

Selecting Installation Position

It is necessary to select a proper environment to install the unit, in order to minimize the possibility of damage to the EPM and extend the life of the batteries. Please follow the instructions below:

1. Keep at least 20cm (8 inches) clearance from the rear panel of the EPM from the wall or other obstructions (see FIG. 8 on page 12).

2. Do not block the air-flow to the ventilation openings of the unit.

3. Please ensure the installation site environmental conditions are in accordance with the EPM working specifications to avoid overheat and excessive moisture (see FIG. 9 on page 12).

4. Do not place the EPM in a dusty or corrosive environment or near any flammable objects.

5. This EPM is not designed for outdoor use.

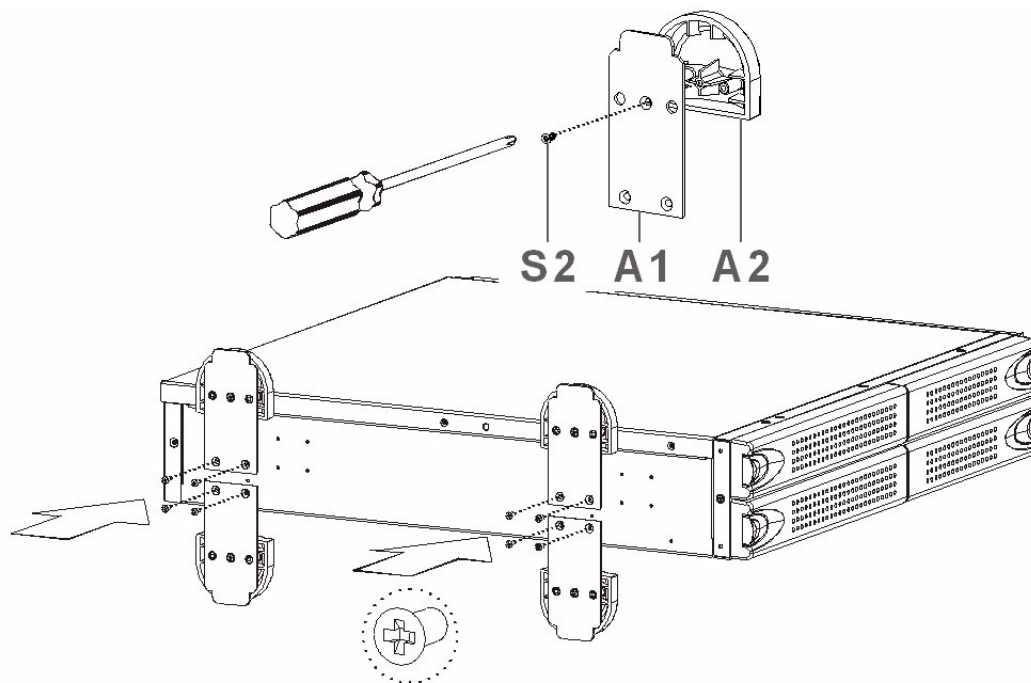## EPM Installation Instructions

Tower Installation - Step One

FIG. 26 EPM - Tower Installation - Step 1

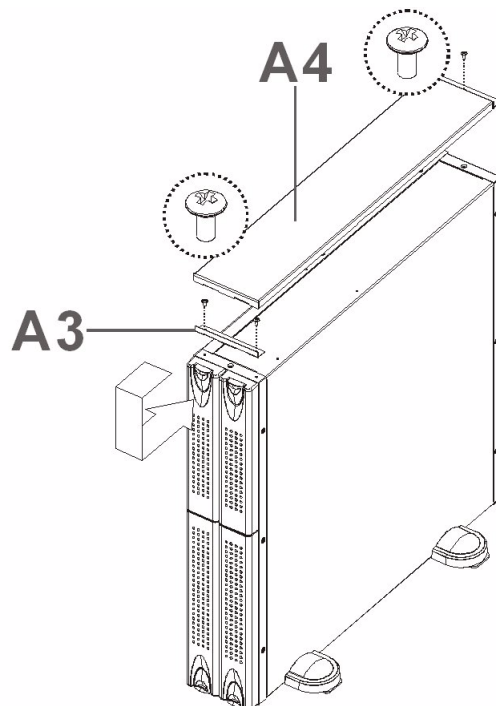### Tower Installation - Step Two

FIG. 27 EPM - Tower Installation - Step 2

Using the EPM With The UPS
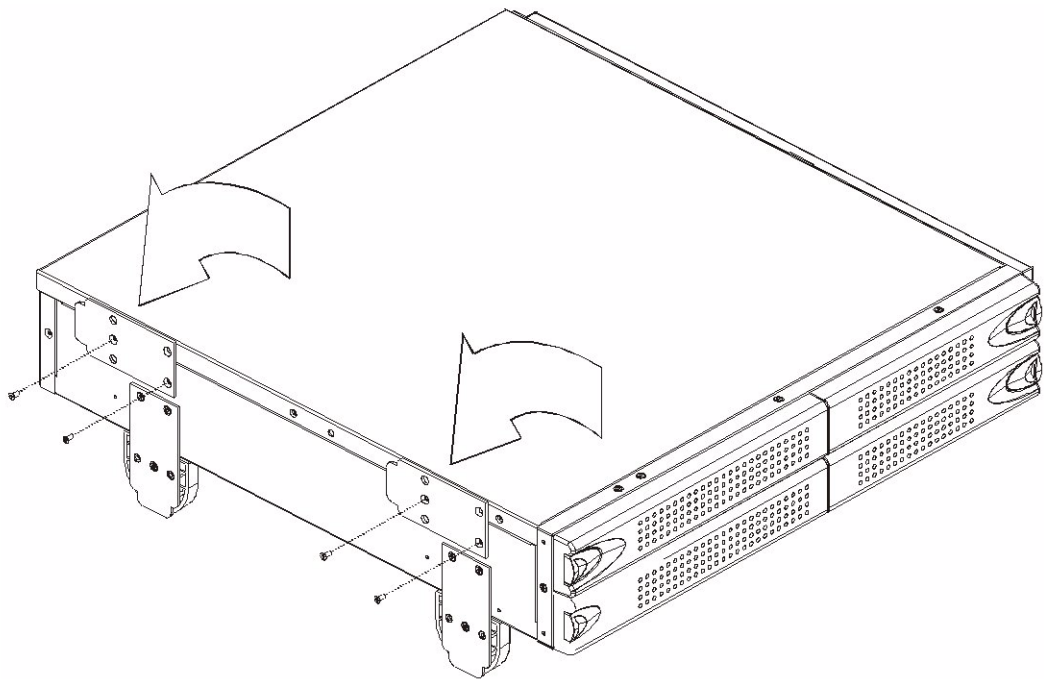
Use With UPS - Step One

FIG. 28 Use With UPS - Step 1
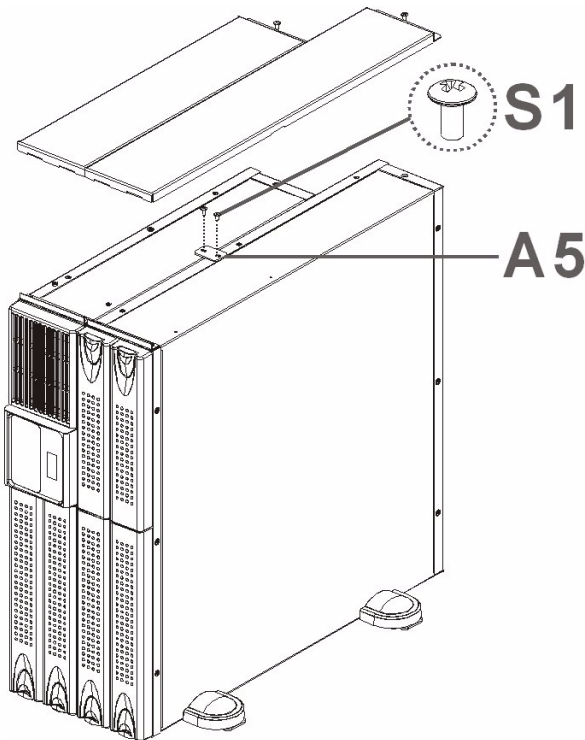
Use With UPS - Step Two

FIG. 29 Use With UPS - Step 2

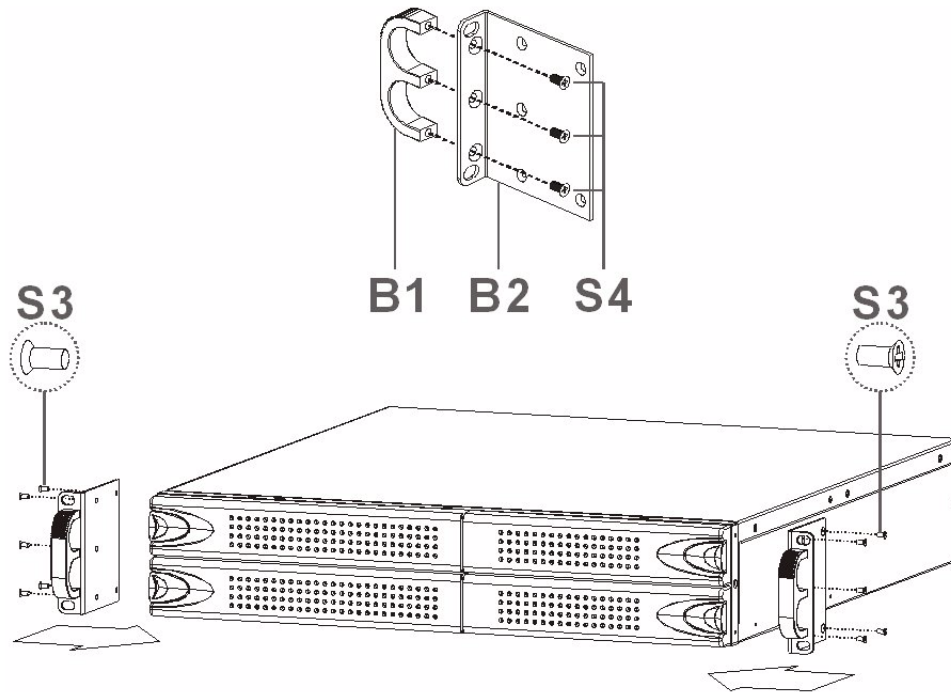# EPM - Rack Mount Installation

Rack Mount Installation - Step One

FIG. 30 Rack Mount Installation - Step 1

NOTE

In order to mount the EPM into an equipment rack, you must use a rack shelf (not included with the EPM), as indicated in FIG. 31, FIG. 32 and FIG. 33.

Rack Mount Installation - Step Two
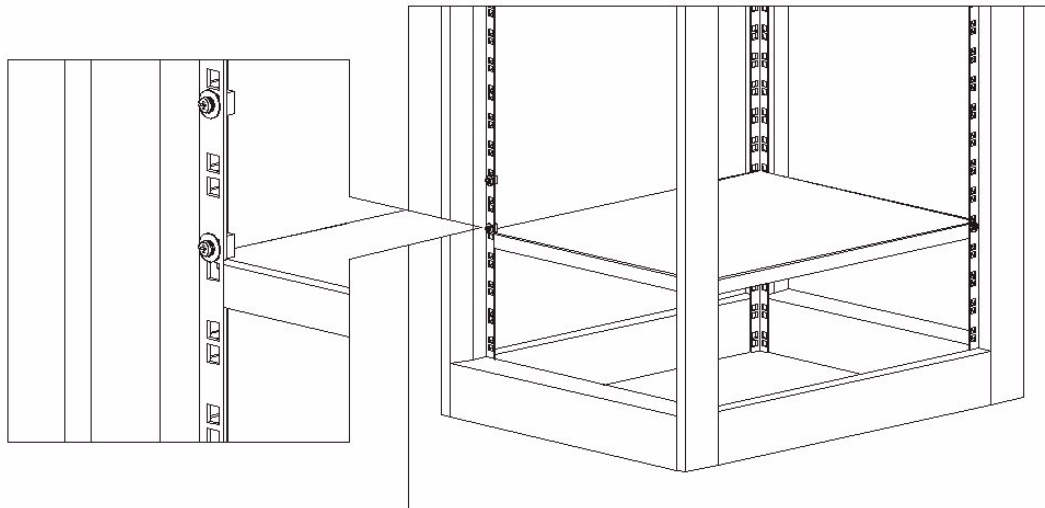
FIG. 31 Rack Mount Installation - Step 2

Rack Mount Installation - Step Three
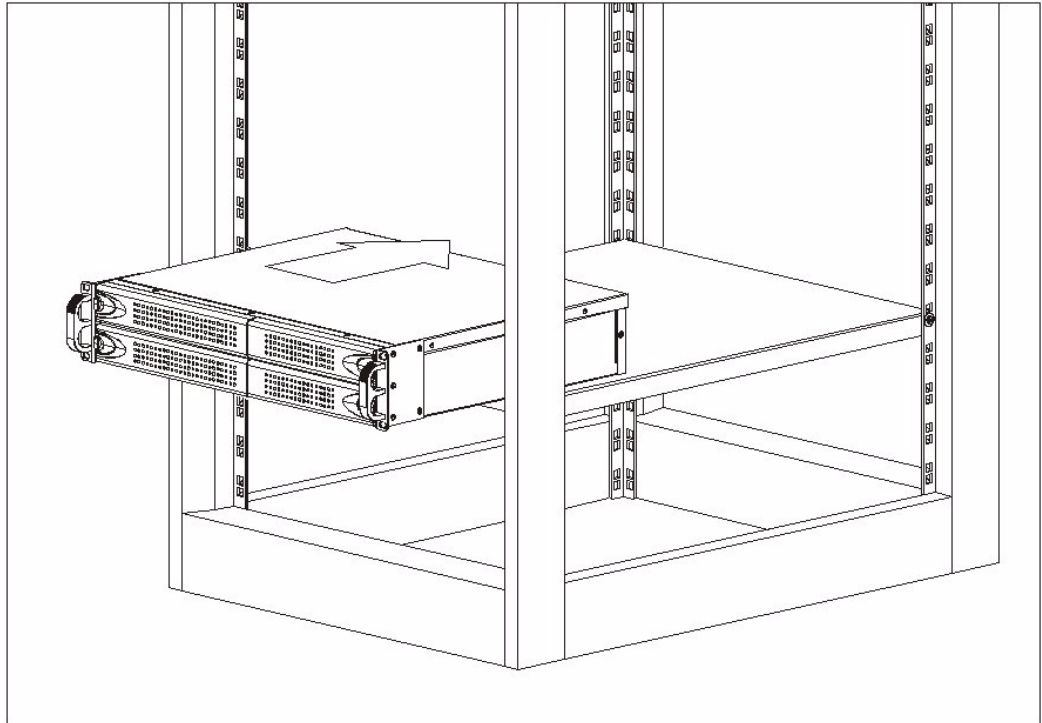
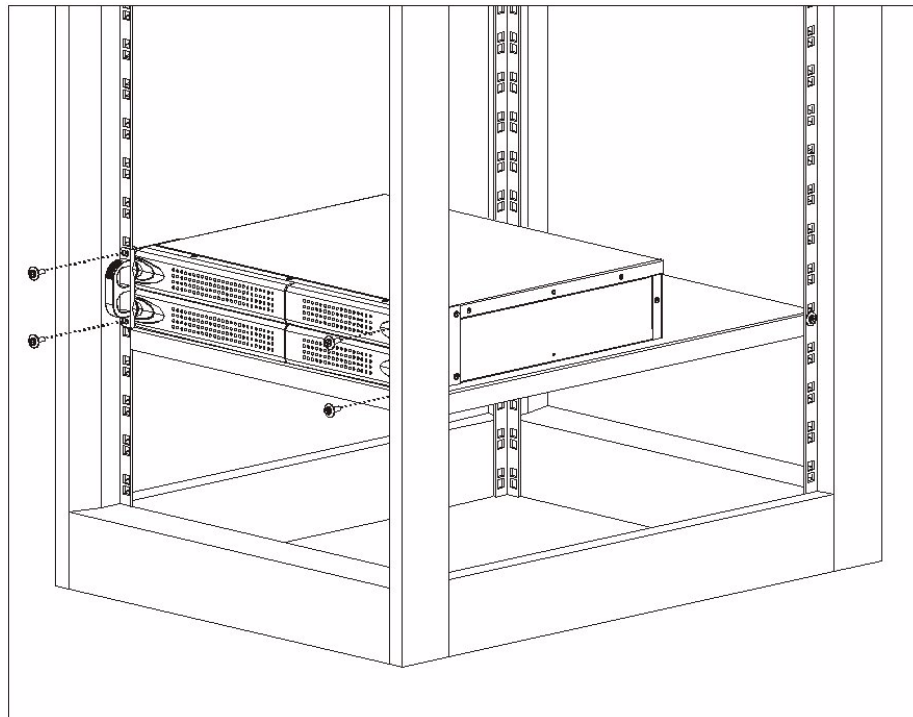**FIG. 32** Rack Mount Installation - Step 3

Rack Mount Installation - Step Four

FIG. 33 Rack Mount Installation - Step 4

Connecting the EPM To the UPS

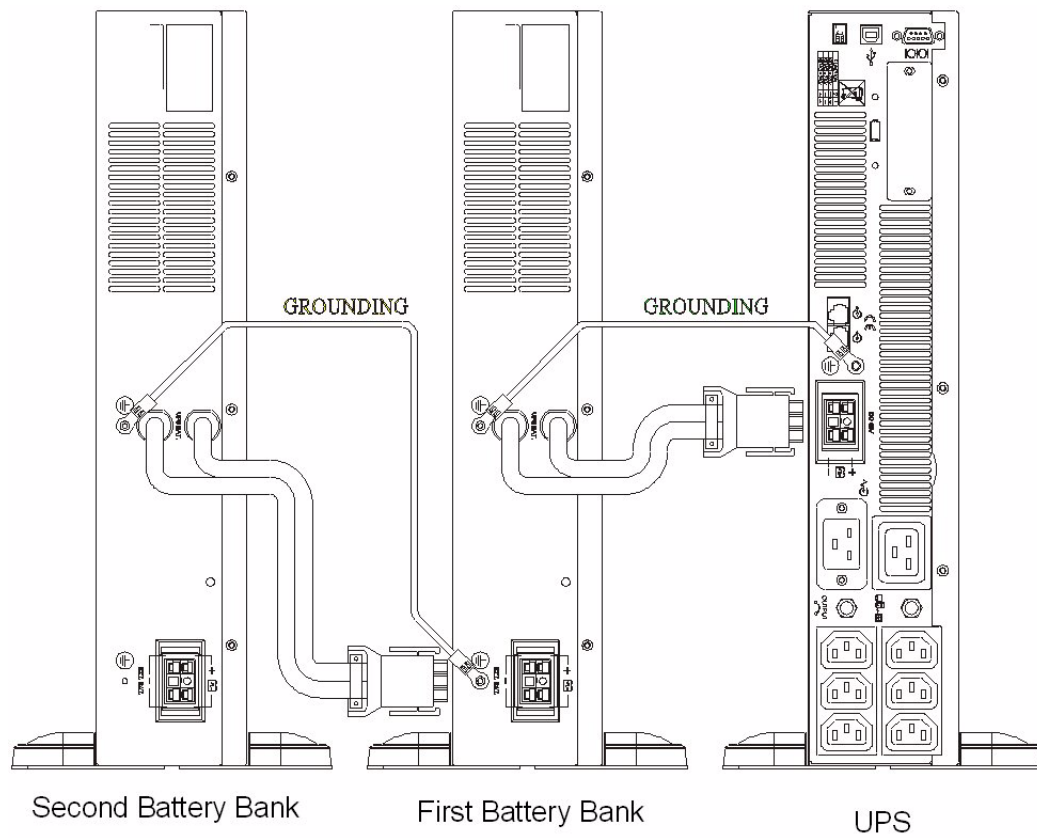FIG. 34 illustrates connecting the DC Cable on the EPM(s) to the UPS:

GROUNDING   GROUNDING

Second Battery Bank   First Battery Bank   UPS

FIG. 34 Connect DC Cable

EPM - Storage Instructions

For extended storage through moderate climate(-15 to +30 °C / +5 to +86 °F), the batteries should be charged for 12 hours every 6 months by plugging the UPS power cord into the wall receptacle.

Repeat this every 3 months under high temperature (+30 to +45 °C / +86 to +113 °F) environment.

Replacing the Battery In the EPM
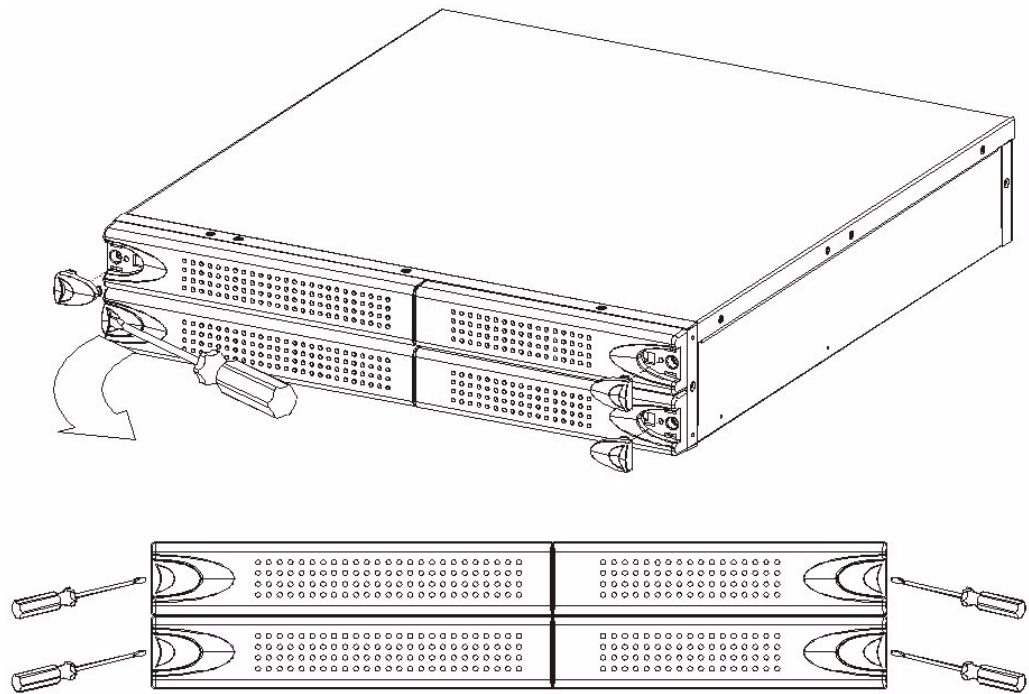
Replacing the Battery in the EPM - Step One

FIG. 35 Replacing the Battery in the EPM - Step 1
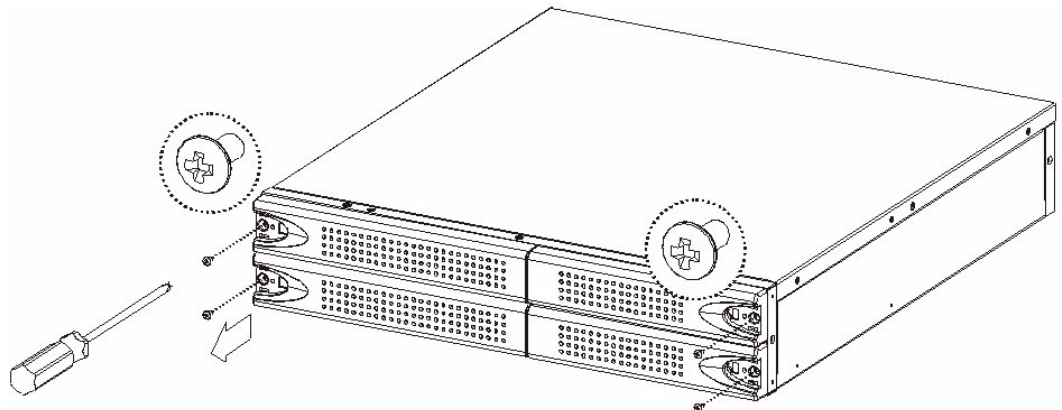
Replacing the Battery in the EPM - Step Two

FIG. 36 Replacing the Battery in the EPM - Step 2
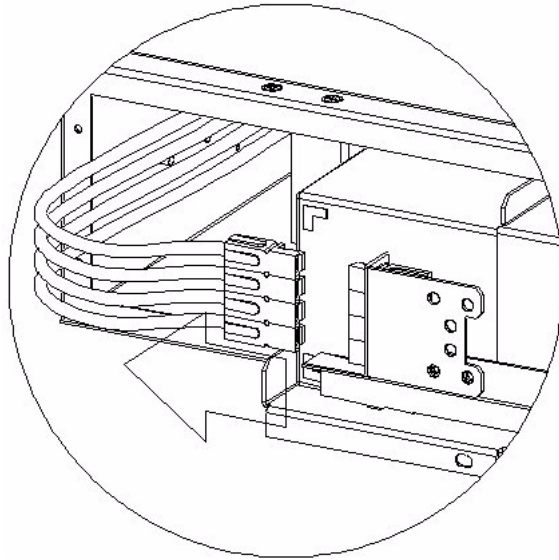
Replacing the Battery in the EPM - Step Three

FIG. 37 Replacing the Battery in the EPM - Step 3

Replacing the Battery in the EPM - Step Four
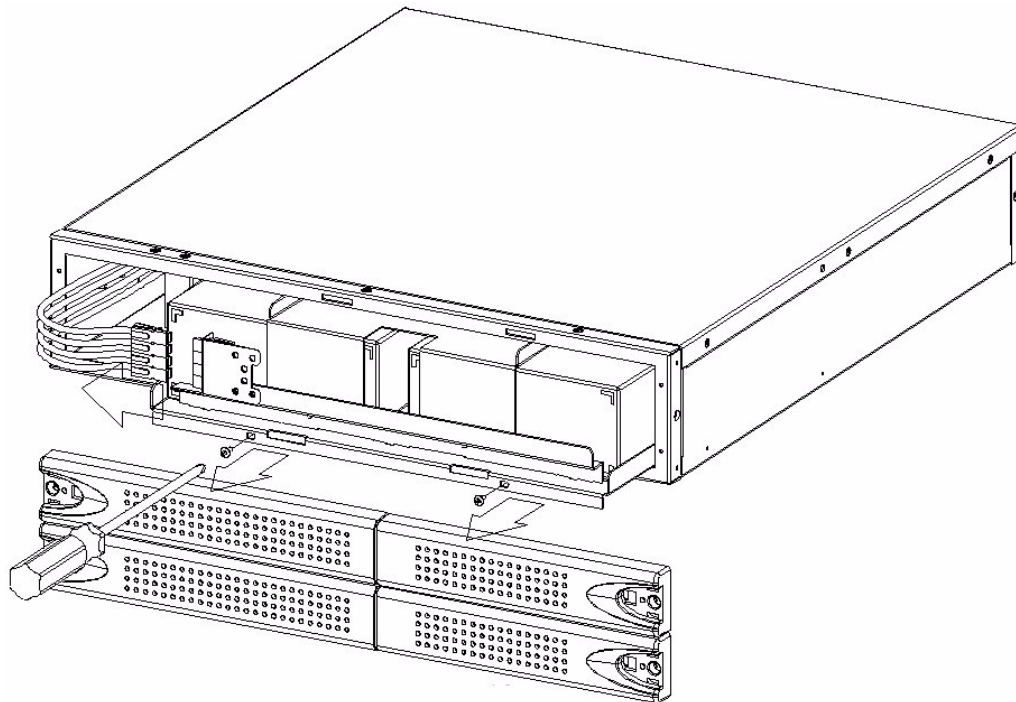

FIG. 38 Replacing the Battery in the EPM - Step 4

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