



Uninterruptable Power Supplies

2.0 KVA, 100-120 Volts - A1353A

2.0 KVA, 200-240 Volts - A1354A

3.0 KVA, 200-220 Volts - A1356A

Battery Pack - A1357A

User Guide

Hewlett-Packard PowerTrust II-LR Uninterruptable Power Supplies

2.0 KVA, 100-120 Volts - A1353A

2.0 KVA, 200-240 Volts - A1354A

3.0 KVA, 200-220 Volts - A1356A

Battery Pack - A1357A

User Guide



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Printing History

The manual printing date and part number indicate its current edition. The printing date will change when a new edition is printed. Minor changes may be made at reprint without changing the printing date. The manual part number will change when extensive changes are made.

Manual updates may be issued between editions to correct errors or document product changes. To ensure that you receive the updated or new editions, you should subscribe to the appropriate product support service. See your local HP support representative for details.

First Edition: January 2000

SERIOUS ERRORS, such as technical inaccuracies that may render a program or a hardware device inoperative, should be reported to your HP Response Center or directly to your local HP support representative.

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1 Safety Instructions

IMPORTANT: SAVE THESE SAFETY INSTRUCTIONS.

For your protection, this product has been tested to various national and international regulations and standards. The scope of this regulatory testing includes electrical/mechanical safety, radio frequency interference, ergonomic, acoustic, and hazardous materials. Where required, approvals obtained from third-party test agencies are shown on the product label. In addition, various regulatory bodies require some of the information under the following headings.

Safety Considerations

This product and related documentation must be reviewed for familiarization with safety markings and instructions before operation. The following figure shows some of the safety symbols used on the product to indicate various safety considerations.

WARNING



The WARNING sign denotes a hazard. It calls attention to a procedure, practice, or the like, which, if not done correctly or adhered to, could result in injury. Do not proceed beyond a WARNING sign until the indicated conditions are fully understood and met.

CAUTION



The CAUTION sign denotes a hazard. It calls attention to an operating procedure, practice, or the like, which, if not done correctly or adhered to, could damage or destroy part or all of the product. Do not proceed beyond a CAUTION sign until the indicated conditions are fully understood and met.

Please read all safety considerations carefully. You should understand all WARNINGS and CAUTIONS before using your PowerTrust II-LR UPS.

Physical Safety Considerations

- ◆ Each PowerTrust II-LR UPS consists of an Electronics Unit weighing about 14kg (31 lbs) unpacked.
- ◆ Each Battery Pack (A1357A) weighs about 30 kg (66 lbs) unpacked.

WARNING



Be very careful when lifting or moving either the UPS or the Battery pack. Follow the installation (Section 2) instructions carefully.

-
- ◆ Each PowerTrust II-LR UPS system contains powerful batteries and large capacitors. Therefore, the unit may contain hazardous voltages, even when it is disconnected from the input AC source receptacle, or when the AC power has failed.

WARNING



Batteries can present a risk of electrical shock and/or burn from high short circuit current. Observe proper precautions. Do not stack battery trays on top of each other. Do not allow anything to touch the battery terminals. Do not pierce battery pack wiring insulation. Do not allow conductive tools or jewelry to touch battery packs or battery terminals.

Electrical Safety Considerations

- ◆ DO NOT use an extension cord or multiple outlet power strips to provide electrical power to the unit, or any other computer equipment.
- ◆ DO NOT install the unit next to open windows or where uncontrolled environmental conditions could affect it.

WARNING



To reduce the risk of fire, connect the A1353A PowerTrust II UPS North American unit only to a circuit provided with 20 amperes maximum branch circuit overcurrent protection in accordance with the National Electrical Code, ANSI/NFPA 70.
The A1354A and A1356A may be connected to a circuit provided with 15 amperes maximum branch circuit overcurrent protection in accordance with local codes.

CAUTION

- ◆ Do not place magnetic media on the UPS.
- ◆ Avoid plugging the unit into a wall outlet controlled by a switch. If the outlet is controlled by a switch, cover or protect the switch from being turned off accidentally. The switch will not turn off the PowerTrust UPS; instead, the PowerTrust UPS will go to battery mode, allowing electrical current to continue to flow to its outputs until the batteries are discharged.
- ◆ During power failure conditions, the PowerTrust II-LR A1353A output will be nominal 120 volts. The PowerTrust II-LR A1354A and A1356A output will be nominal 230 volts.

CAUTION

- ◆ The PowerTrust II-LR UPS should not be operated from line stabilizers, ferro-resonant transformers, or other types of line conditions. AC waveform distortion caused by these devices may cause unexpected transfer from line operation to UPS battery operation.
- ◆ These units should NOT be operated from non-sinusoidal AC voltage sources. AC input waveforms having distortion caused by large phase controlled devices, poor utility power, or poor site power may cause unexpected transfer from line operation to UPS battery operation.

Product Warnings

WARNING



- ◆ The PowerTrust II-LR system is capable of supplying AC voltage even if there is no input power present. Although the output enable switch on the front of the unit is protected from accidental actuation, do not allow the unit to become enabled without the operator's knowledge.
 - ◆ A battery can present a risk of electrical shock and/or burn from high short-circuit current. Observe proper precautions.
 - ◆ Both the Mains and Bypass circuit breakers are the Mains disconnect when the Service Bypass switch is in the NORMAL position. The facility branch circuit is the Mains disconnect when the PowerTrust II-LR is in BYPASS operation.
 - ◆ Both the Battery switch and the battery cable are the battery disconnect devices.
 - ◆ DO NOT touch uninsulated battery terminals.
-

Battery Notices

The products described in this manual contain sealed, lead acid batteries. Replace the entire battery pack (A1357A).

When recycling used batteries, adhere to local codes or follow the return instructions included with the replacement battery pack.

WARNING Fire, explosion, and severe burn hazard!



DO NOT crush, disassemble, heat, incinerate, or expose the A1357A battery pack to water.

DO NOT puncture or subject batteries to mechanical shock.

IT Power System

WARNING This product has not been evaluated for connection to an IT power system (an AC distribution system having no direct connection to earth according to IEC 950/EN50091-1).



Leakage Current

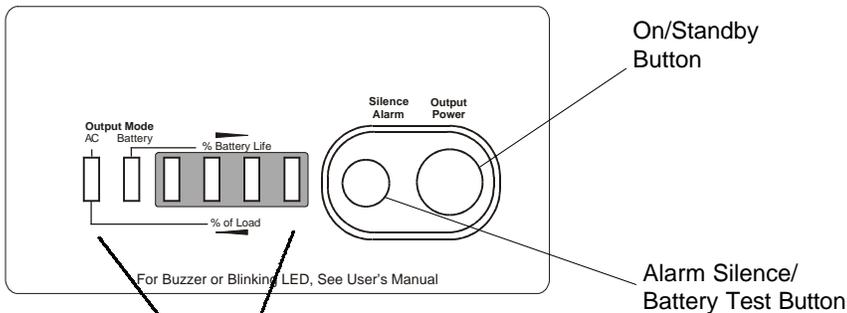
WARNING To reduce the risk of electric shock, never operate this product with the input or output ground conductors disconnected. An earth connection is essential before connecting the supply. Due to the types of products that can be connected to this product, there is a risk of high leakage current (>3.5mA). Reliable ground circuit continuity is vital for safe operation of this product. It is imperative that the power cord must remain attached at all times. **DO NOT PERFORM POWER FAILURE TESTS BY DISCONNECTING THE POWER CORD.** To perform a power-fail test, interrupt the mains circuit at the facility circuit breaker.

2 HP PowerTrust II-LR Features

The HP PowerTrust II-LR provides protection against power problems, including power outages, brownouts, and sudden increases in power. It also provides spike suppression and line noise filtering to protect your equipment. Front panel LEDs and an audible alarm keep you aware of the unit's status. Use the drawings on this and the following page to identify features of the unit.

HP PowerTrust II LR Controls and Indicators

Figure 1 HP PowerTrust II LR Controls and Indicators



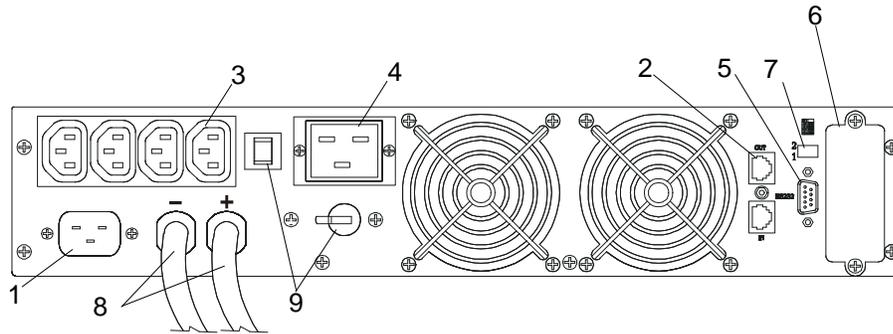
Load / Battery Indicators (See Section 5)

The HP PowerTrust II-LR utilizes six LEDs (Light Emitting Diodes) and an acoustic alarm to indicate various conditions. The Alarm Silence/Battery Test button is used to silence acoustic alarms if they are present. In the absence of an alarm condition, this button is used to initiate the battery test. See Section 5 for the interpretation of the indicators and the acoustic alarm.

NOTE: When the HP PowerTrust II-LR UPS is plugged into the power line, it is ready to operate. It will recharge batteries even though no indication is given on the Control Panel. Depressing the On/Standby button for three seconds connects the external load to the UPS. Depressing the On/Standby button for three seconds a second time will disconnect the load but leave the HP PowerTrust II-LR still energized.

HP PowerTrust II LR Back Panel Views

Figure 2 Typical PowerTrust II-LR UPS Rear Panel



- | | |
|-------------------------------|--------------------------------------|
| 1. Input Power Connector C 20 | 6. Communications Slot Cover |
| 2. RJ45 Jacks | 7. Output Voltage Selection Switches |
| 3. IEC 320 Outlets | 8. External Battery Cables |
| 4. C19 Outlet | 9. Circuit Breaker |
| 5. DB9 Communication Port | |

3 Installation

CAUTION: HP PowerTrust II-LR units **MUST** be installed using support rails in the rack. This product must **NOT** be mounted with the mounting brackets alone.



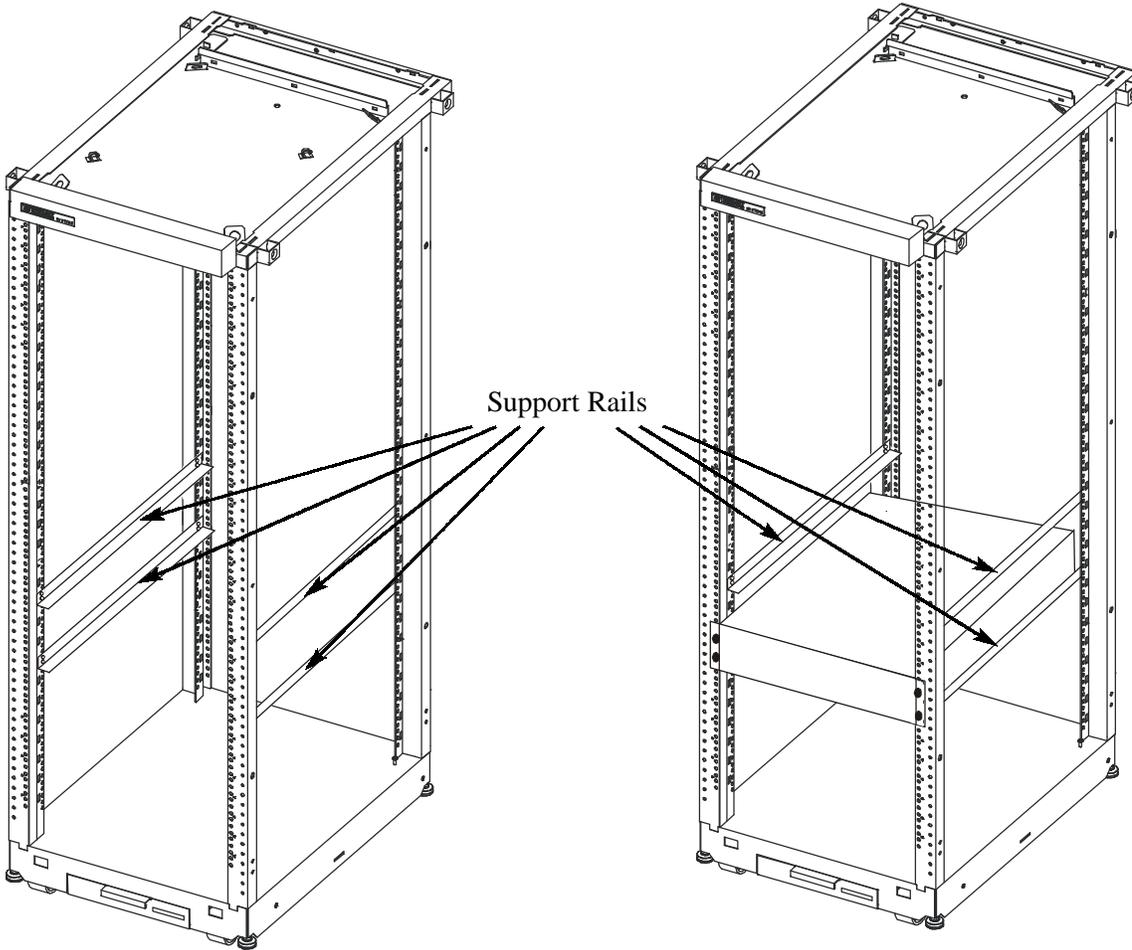
Mount the HP PowerTrust II-LR in a 19-inch (483-mm) EIA 310 C standard rack. The HP PowerTrust II-LR and its battery pack(s) must be mounted in racks with support rails or trays. Figure 3 shows a generic rack with four support rails installed. Figure 4 shows the same rack with an HP PowerTrust II-LR A1357A Battery Pack installed.

NOTE: Hewlett-Packard does not support nor recommend the mounting of the HP PowerTrust II-LR in a 23 inch rack.

All PowerTrust II-LR UPS and Battery Pack units come with Hewlett-Packard A1362A mounting rails suitable for current Hewlett-Packard equipment racks. Earlier Hewlett-Packard racks require the optional A1361A mounting rail kits. (Contact your local Hewlett-Packard support representative to obtain the A1361A kits.) Figures 5 through 8 show the installation of the A1362A mounting rail kit and the associated UPS or Battery Pack. Figures 9 through 12 show the installation in earlier racks with the optional A1361A mounting kit.

Figure 3 Generic Rack Mounting

Figure 4 Generic Rack With A1357A



Mounting Instructions For Current HP Racks

1. Remove the regular rear tie downs from each rail and install the special PowerTrust II-LR tie downs. See Figures 5 and 8.
2. Mount the rails as shown in the rail kit instructions. See Figure 5.
3. Slide the UPS or Battery Pack onto the rails as in Figure 6.
4. Mount the UPS or Battery Pack to the rack with four screws as in Figure 7.
5. Secure the two (2) Rear Tie Down brackets as shown in Figure 8.

Figure 5 Current HP Rackmount Detail (A1362A)

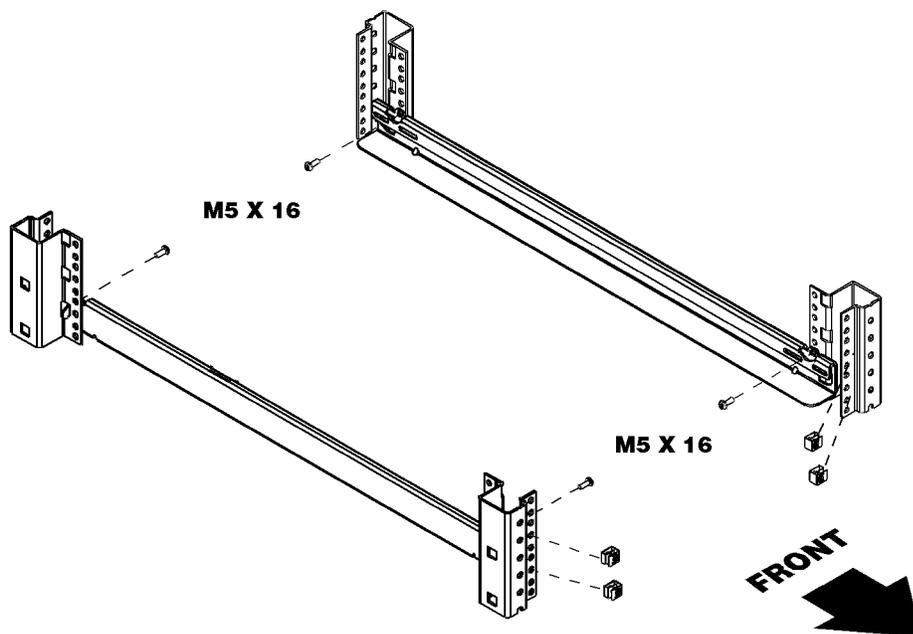


Figure 6 Mounting Units on Support Rails

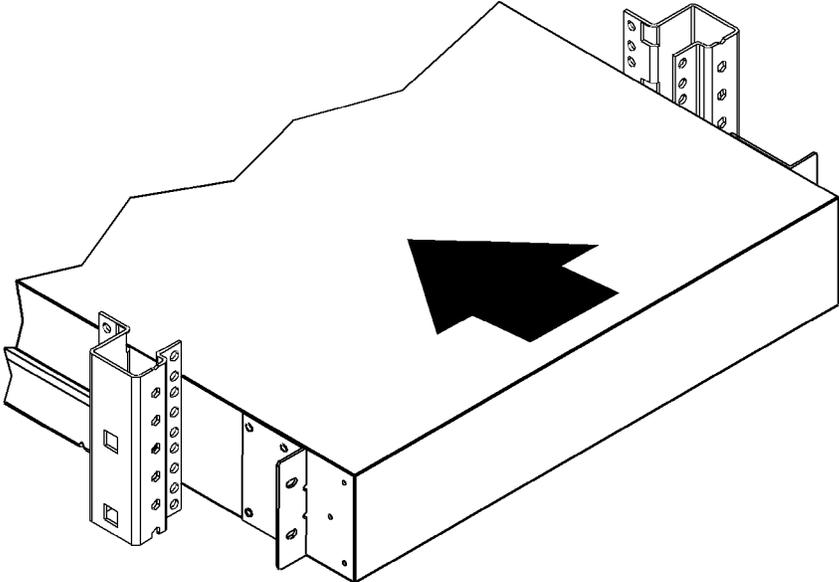


Figure 7 Securing Units to Front

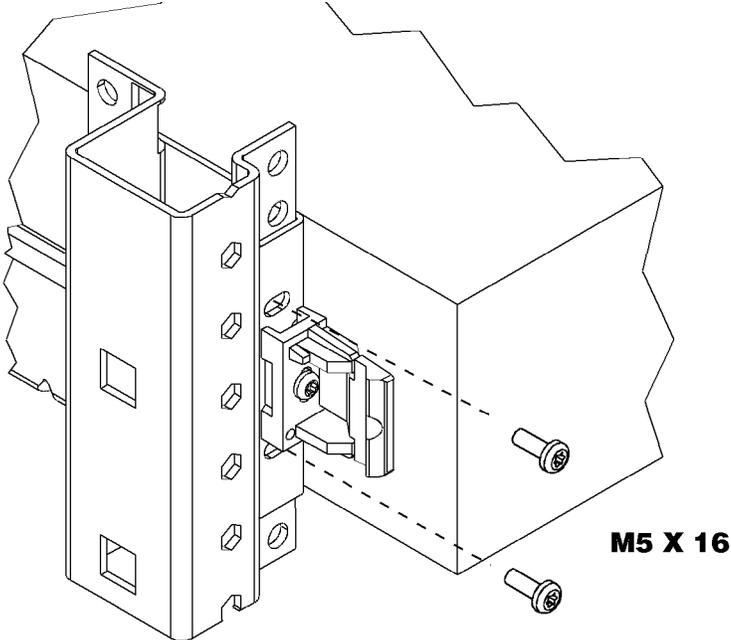
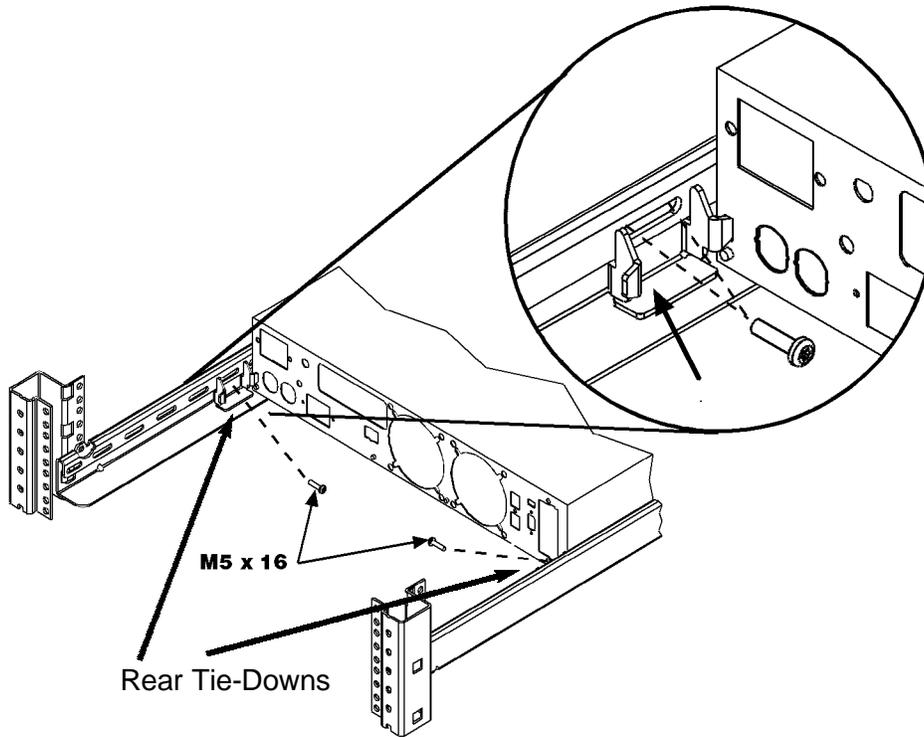


Figure 8 Rear Tie-Down Mounting Detail (A1362A)



Mounting Instructions For Older HP Racks (A1361A)

1. Mount the rails as shown in the rail kit instructions. Do NOT secure the front of the rail to the rack. See Figure 9.
2. Slide the UPS or Battery Pack onto the rails as in Figure 10. Remove the existing mounting brackets from the unit and replace with the mounting brackets supplied as shown in Figure 10.
3. Mount the UPS or Battery Pack to the rack with four screws as in Figure 11.
4. Remove the bezel clamps from the original brackets and install the bezel clamps as shown in Figure 11. Snap the front bezel into place.
5. Install the two (2) Rear Tie Down brackets as shown in Figure 12.

Figure 9 Earlier HP Rackmount

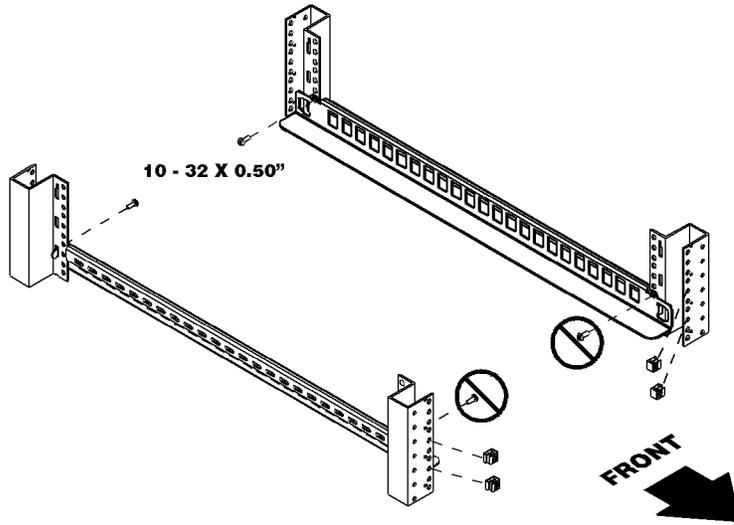


Figure 10 Removal And Replacement Of Mounting Brackets

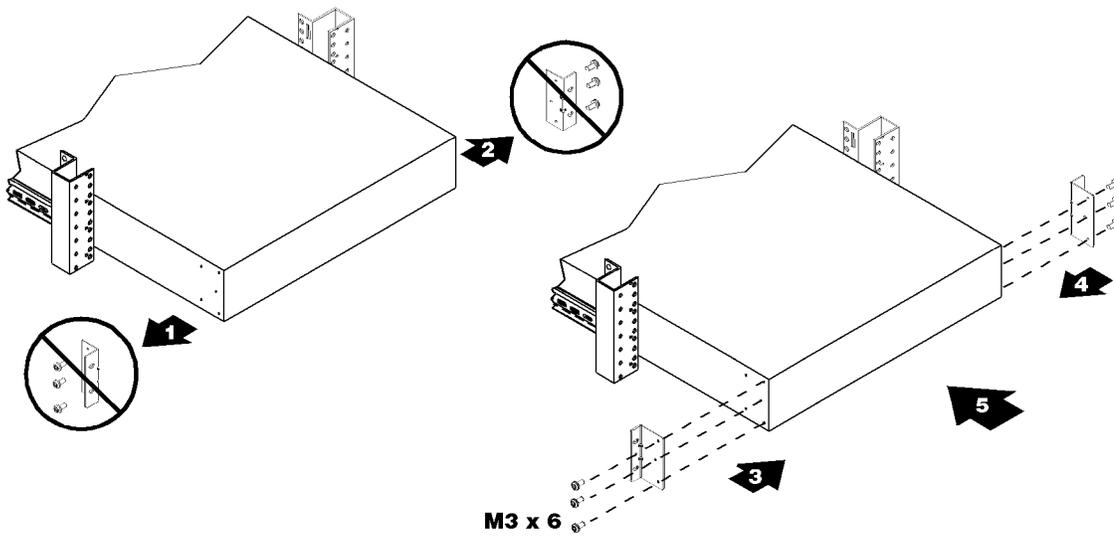


Figure 11 Securing Unit At Front And Mounting Bezel Clamp

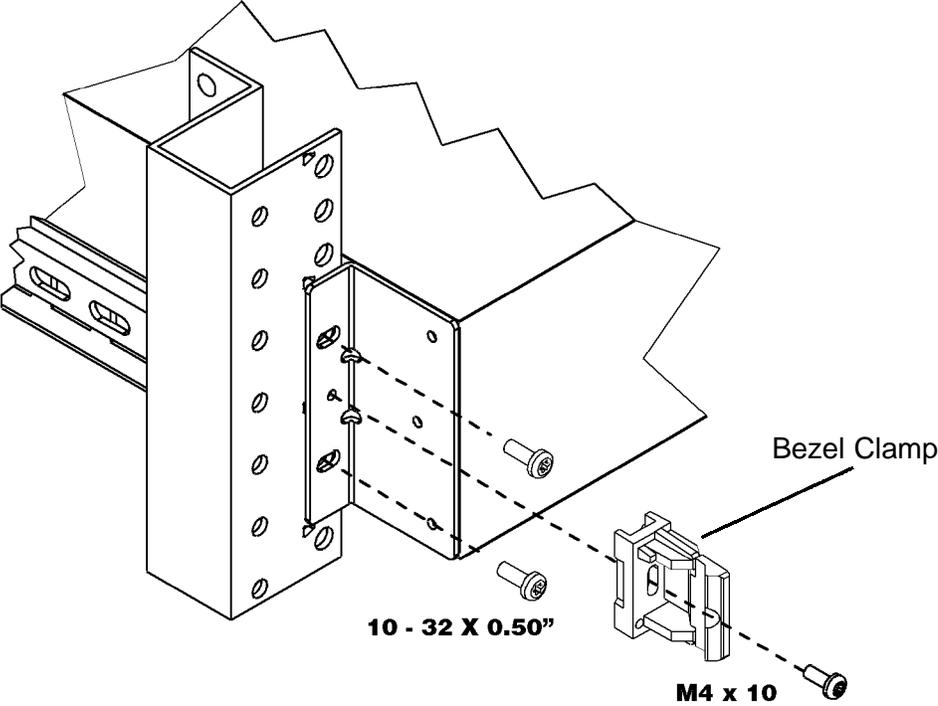
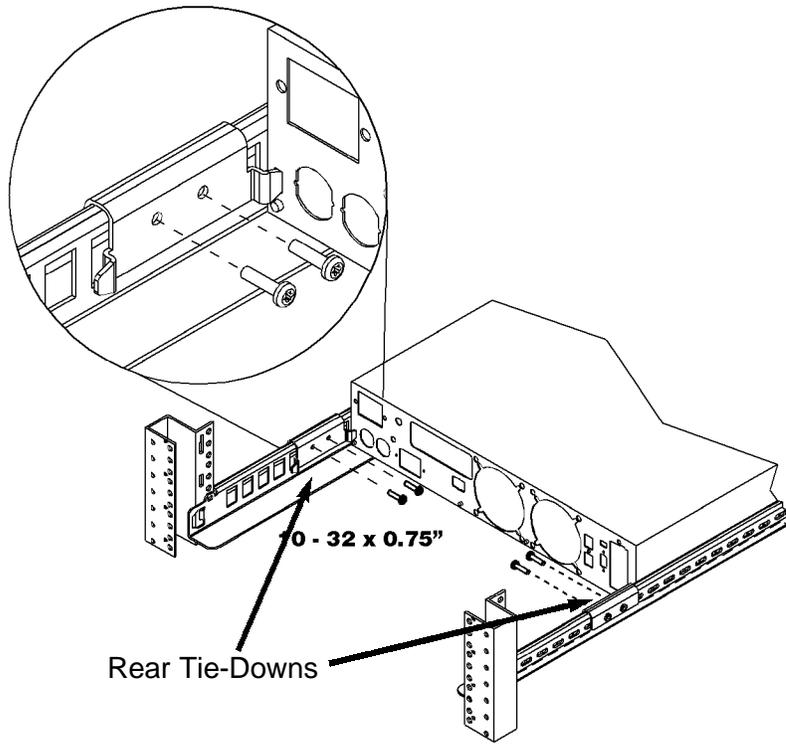
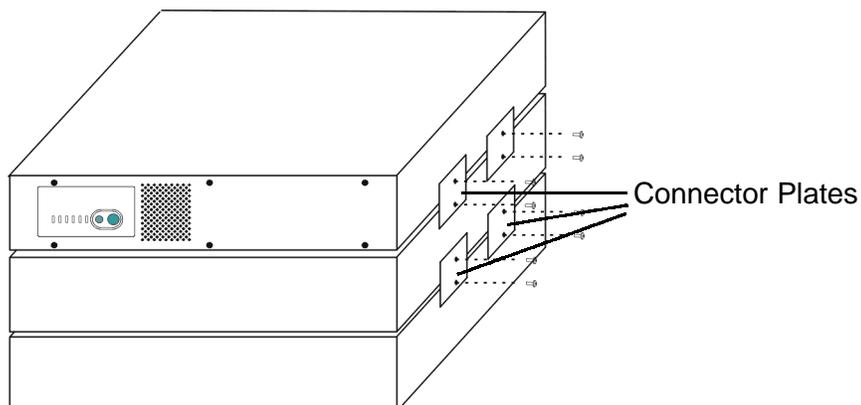


Figure 12 Rear Tie-Down Mounting Detail



Floor Installation

Figure 13 Desk Side Mounting



If the HP PowerTrust II-LR UPS is to be mounted on the floor, the A1357A Battery Packs should be placed first. The UPS should be on the top of the stack. The units should be secured together with the HP A1363A Deskside Hardware Kit. Each kit consists of four connector plates and eight screws. Two connector plates should be mounted on each side of a unit to join it to the one below. See Figure 13.

NOTE For Desk Side Mounting, a maximum of three (3) A1357A Battery Packs is permitted due to weight considerations.

Connection to External Battery Packs

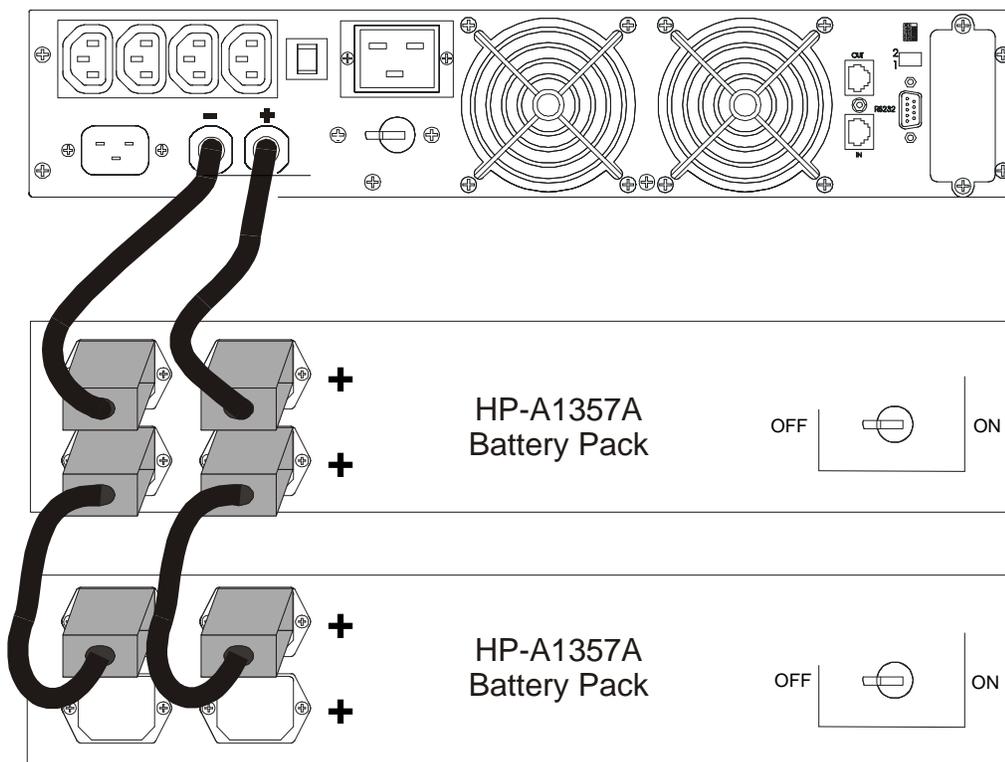
Before connecting the input power cord, connect all intended battery packs to the HP PowerTrust II-LR by following the guidelines below.

The battery packs for the HP PowerTrust II-LR units may be daisy-chained to a maximum of five packs. A maximum of three battery packs is permitted for Desk Side Mounting. Do not exceed these limits.

Turn OFF the circuit breaker of all battery packs before connecting the cables. The receptacles on each battery pack are keyed, to prevent improper connections between the battery packs and the HP PowerTrust II-LR. Make certain that battery cable connectors match the receptacles the battery pack; “+” connectors to “+” sockets, “-” connectors to “-” sockets.

After connecting all battery pack cables as shown in Figure 14, turn ON all the battery circuit breakers.

Figure 14 - Battery Pack Connections - Rack Mount - Rear View



4 Quick Startup

- 1 Connect the battery packs (A1357A) to the UPS. Set all battery circuit breakers “ON.” Connect your HP PowerTrust II-LR UPS power cord to the back of the unit. Plug the HP PowerTrust II-LR UPS into a wall outlet.

Let the unit charge the batteries for at least 8 hours per battery. You may use the unit while the batteries charge, but the battery backup runtime will be reduced until the batteries are fully charged. Three beeps every five minutes is normal indication of battery charging.

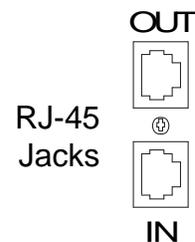
- 2 Start the HP PowerTrust II-LR by pressing and holding the On/Standby button (large button in the center of the front panel) in for two seconds. Note: To turn the unit either on or off, the On/Standby button must be pressed for two seconds.
 - 2.a. When it starts, the unit beeps and lights the front panel LEDs, turns them off and lights them again. **Next, the HP PowerTrust II-LR applies AC output to the back panel receptacles.** It does a brief self test, turning various front panel LEDs off and on.
 - 2.b. After ten seconds or less, the self test is complete. The left and right green LEDs will come on and remain on. If the unit beeps, or if the left LED does not remain on even though input power is available from the wall outlet, go to Troubleshooting, Section 5.

- 3 Switch off the equipment you want to protect, and plug each load into the outlets on the back of the HP PowerTrust II-LR .

- 4 Switch on the protected equipment, one load at a time. If the UPS beeps an alarm when you start your equipment, the UPS may be overloaded. See the Troubleshooting section.

The right four LEDs on the front of the UPS show the % of load capacity that your equipment is using. See Symbols, LEDs and Audible Beeps Section for more information.

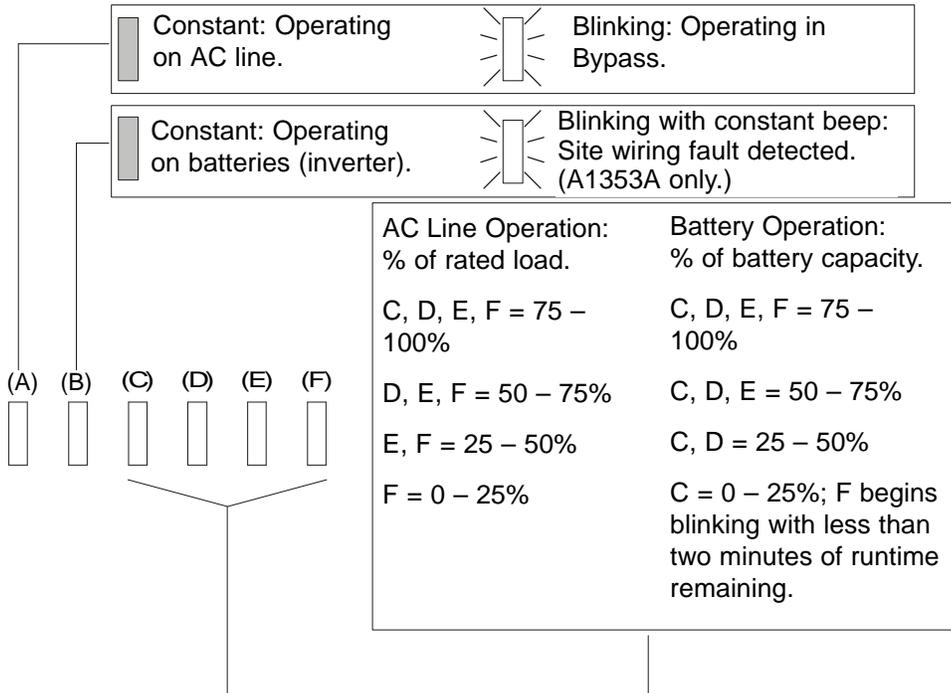
- 5 The RJ-45 Surge Protection jacks will protect equipment that uses an RJ-45 connection. Plug the 10BASE-T network connection into the surge protection jack labeled “IN” on the back of the HP PowerTrust II-LR. Plug the protected equipment into the surge protection jack labeled “OUT.” Network cabling is not provided. *This connection is optional. It is not needed to use the HP PowerTrust II-LR.*



5 Symbols, LEDs and Audible Beeps

The front panel indicators (LEDs) and an audible beep indicate the unit status. The unit beeps whenever the unit is on battery power or an alarm exists. See Figure 15 for information about the LEDs and Table 1 for information about alarm displays.

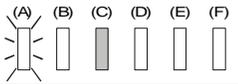
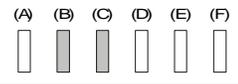
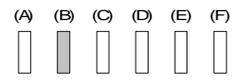
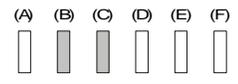
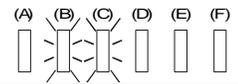
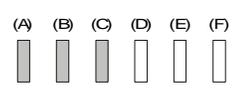
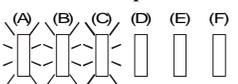
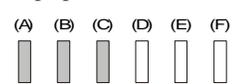
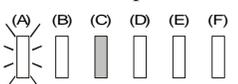
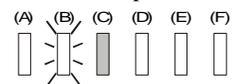
Figure 15: Front Panel LEDs



LEDs (A), (D), (E), and (F) are green. LEDs (B) and (C) are amber (yellow.). LEDs (A), (B), and (C) are used to show operating mode or alarm conditions. LEDs (C), (D), (E), and (F) are used to indicate load or remaining battery capacity. An Alarm Condition exists when LED (C) is blinking or when an audible beep is sounding. (Three beeps every five minutes is normal indication of battery charging.)

The alarm display in Table 1 shows several things: it shows the number of beeps per time period (for example, 3 beeps every 5 seconds), or a constant beep or no beeps, and the LED configuration. LEDs are shown as being off (no shading), on (shaded), or blinking (radiating lines).

Table 1: Alarm Conditions

Alarm Display	Alarm Description	What You Should Do
2 beeps per second. 	The UPS is overloaded (in Line Mode). Your equipment needs more power than the UPS can supply. The UPS is operating in Bypass.	Shut off the least important equipment connected to the UPS. If this solves the overload problem, the UPS will switch from bypass back to normal operation.
2 beeps per second. 	The UPS is overloaded (in Battery Mode). Your equipment needs more power than the UPS can supply.	Shut off the least important equipment connected to the UPS. Restart the unit by turning it off and on again.
No beep. 	The UPS is performing a battery test.	No action needed. The UPS returns to normal operation when it successfully completes the battery test.
Continuous beep. 	Battery test has determined the batteries are overcharged.	Turn off protected loads. Turn off the UPS and contact your local Hewlett-Packard Support Representative.
3 beeps every 5 seconds. 	Battery test has determined the batteries should be replaced.	Contact your local Hewlett-Packard Support Representative.
Continuous beep. 	High internal temperature.	Make sure the unit's fans and vent holes are not blocked, and the ambient temperature is not above 40 degrees C (104 °F). If these conditions do not exist, contact your local Hewlett-Packard Support Representative.
Continuous beep. 	High output voltage or inverter short circuit.	Contact your local Hewlett-Packard Support Representative.
2 beeps per second. 	High internal DC bus voltage.	Contact your local Hewlett-Packard Support Representative.
Continuous beep. 	Short circuit in the bypass static transfer switch.	Contact your local Hewlett-Packard Support Representative.
Continuous beep. 	Short circuit in the inverter static transfer switch.	Contact your local Hewlett-Packard Support Representative.

To silence an alarm, press the alarm silence button on the front panel for three seconds. The beep will stop, but the alarm light will stay on. Note: Silencing the alarm does not solve the problem that caused it. See Tables 2 and 3.

Table 2: Audible Beeps

Number of Beeps	What It Means
1 every 5 seconds	Line Loss: The unit is on battery power. See Table 3 for more information.
2 every 5 seconds	Low Battery Alarm: The unit was running on battery power and shut down due to very low battery voltage. The unit will restart automatically when acceptable power returns.
3 every 5 seconds	Replace the Battery: The battery needs to be replaced. See “Replacing the Batteries.”
3 every 5 minutes	Battery is charging: The battery is being charged and will not deliver full runtime.
2 beeps every second	Output Overload: Too much load equipment. Turn off or disconnect one or more pieces of protected equipment.
Continuous	UPS Fault or Site Wiring Fault: UPS internal failure or error in building power outlet.

6 Troubleshooting

If you have a question or problem, the troubleshooting table may help (See Table 3.) If you need assistance, contact your local Hewlett-Packard support representative. Please have the model number and serial number (located on the rear of the unit) available.

Table 3: Troubleshooting

Problem	Possible Reasons	What To Do
Green LINE LED is not on even though AC line input seems to be available, and the UPS beeps every few seconds.	<ol style="list-style-type: none">1. No input power may be available to the UPS.2. The input circuit breaker (or fuse) on the back of the UPS has been tripped (or opened).	<ol style="list-style-type: none">1. Make certain the UPS is plugged into a receptacle with power applied.2. Reset the breaker (or replace the fuse) and restart the UPS.
The UPS operates normally but some or all of the protected loads will not operate.	<ol style="list-style-type: none">1. The loads are not connected to the UPS.2. If the output receptacle has a circuit breaker, it has been tripped.	<ol style="list-style-type: none">1. Make certain the loads are plugged into the receptacles of the UPS.2. Reset the circuit breaker for the receptacle by pressing the button or resetting the switch.
The amount of time that the UPS can run on batteries is less than the rated time.	The battery may not be fully charged, it may be bad or the charger may have failed.	Recharge the battery for at least 10 hours by connecting the UPS to a source of AC line input. Then retest the battery backup time. If the problem has not been solved by recharging the batteries, contact your local Hewlett-Packard Support Representative.
The amber battery LED is blinking. (Model A1353A only.)	Site wiring fault.	The wall outlet is improperly connected. Contact an electrician to check and repair the wiring to the wall outlet.

7 Communication Port

The HP PowerTrust II-LR can be managed by various computer operating systems. A direct connect interface cable for the following systems is provided:

1. HP 9000 HP-UX and compatible UNIX systems running **ups_mond**.
2. HP 3000 MPE/iX systems with MPE patch **MPELX33**. (Some HP 3000 systems may require an alternate cable or cable adapter.)

For Windows NT 4.0+ and HP-UX or compatible UNIX systems, use SNMP via the HP PowerTrust II-LR A1359A SNMP/Web Adapter.

DB-9 Pinouts

Pin 1 *RS232 Receive Data:* Receives incoming RS232 communication data.

Pin 2 *RS232 Transmit Data:* Sends outgoing RS232 communication data.

Pin 3 *Normally Open On-Battery Contact:* A normally open contact that closes 15 seconds (pulls to Common) after the UPS switches to battery power.

Pin 4 *Common:* The signal ground for all signal pins.

Pin 5 *Normally Open Low-Battery-Alarm Contact:* A normally open contact that closes (pulls to Common) during a Low Battery Alarm. This tells CheckUPS II and other shutdown software when to start a computer shutdown.

Pin 6 *Reserved.*

Pin 7 *Remote Shutdown:* Shorting this pin to common for at least 5 seconds, while the UPS is operating on battery, shuts the UPS off after 120 seconds. NOTE: The shutdown sequence must continue even if AC line returns during the 120 second countdown.

Pin 8 *Normally Closed On-Battery Contact:* A normally closed contact that opens (releases from Common) 15 seconds after the UPS switches to battery power.

Pin 9 *Normally open bypass switch status contact.* A normally open contact that closes (pulls to common) whenever the UPS is in an Internal Bypass mode or is being externally bypassed through the use of a bypass switch.

Contacts consist of open collector circuits capable of switching up to +30 VDC, 6 mA resistive load. The internal pull-up voltage on pins 3, 5, 8, and 9 is +12 VDC.

An Emergency Power Off (EPO) function is available through the DB-9 port with a special “Y” cable. Contact your local Hewlett-Packard support representative for details.

HP PowerTrust II-LR A1359A SNMP/ Web Adapter

The HP PowerTrust II-LR communication slot accepts HP PowerTrust II-LR A1359A SNMP/Web adapter. The insertion of a card into the communication slot replaces the normal communication channel from the HP PowerTrust II-LR DB-9 Communication Port. The DB-9 port becomes the connection point for configuring the A1359A.

See the A1359A SNMP/Web Adapter manual for more details.

8 Specifications

Hewlett-Packard reserves the right to change specifications without prior notice.

Line Transient Protection: Passes ANSI/IEEE C62.41 Category A testing.

Safety Compliance: *Models A1353A:* Tested to electrical requirement of UL1449; listed to UL1778, and CAN/CSA C22.2 No. 107.1 M95.

Models A1354A and A1356A: ERG/GS listed.

EMC Compliance: *Models A1353A:* FCC Class A.
Models A1354A and A1356A: CISPR 22 Class A, EN55022, CE Mark Self-certified to: CE Marking Directive 93/68/EEC, Low Voltage Directive 73/23/EEC; (Australia/New Zealand) Conforms with electromagnetic compatibility standards as required under the Radio Communications Act.

Noise (RF) Suppression: Full-time EMI/RFI filtering.

Efficiency: > 87% on-line operation (full load; fully charged, at least 50% load).

Capacity VA/Watts: *Models A1353A and A1354A* 2000VA / 1400W;
Model A1356A 3000VA / 2100W

Input Voltage: *Models A1353A* 120 VAC
(Nominal) *Models A1354A and A1356,* 230 VAC

Output Voltage: *Models A1353A* 0 to 160 VAC operating on battery, with 90 to 138 VAC normal input voltage range.
(Configurable) *Models A1354A and A1356A* 0 to 300 VAC operating on battery, with 180 to 264 VAC normal input voltage range.

Frequency: 50/60 Hz auto-sensing 55 - 65 Hz (60 Hz); 45 - 55 Hz (50 Hz) (50/60 Hz \pm 0.5 Hz on battery.)

Minimum Runtime (minutes):

Models A1353A and A1354A:

(1 - A1357A)	Full load:	14 minutes.	Half load:	39 minutes.
(2 - A1357A)	Full load:	35 minutes.	Half load:	85 minutes.
(3 - A1357A)	Full load:	60 minutes.	Half load:	155 minutes.
(4 - A1357A)	Full load:	85 minutes.	Half load:	180 minutes.
(5 - A1357A)	Full load:	115 minutes.	Half load:	240 minutes.

Model A1356A:

(1 - A1357A)	Full load:	7 minutes.	Half load:	24 minutes.
(2 - A1357A)	Full load:	24 minutes.	Half load:	50 minutes.
(3 - A1357A)	Full load:	35 minutes.	Half load:	79 minutes.
(4 - A1357A)	Full load:	50 minutes.	Half load:	120 minutes.
(5 - A1357A)	Full load:	64 minutes.	Half load:	161 minutes.

Transfer Time to Bypass: Models A1353A: 0 ms.
Models A1354A and A1356A: 0-4 ms.

Automatic Battery Test: Automatic battery test occurs upon startup and every 14 days thereafter. Alarm will sound if the battery fails this test.

Battery Recharge Time (to 95% of capacity): All Models: 8 hours per battery.

Overcurrent Protection (on line): All Models: Circuit Breaker

AC input Plug Information: IEC C20 (16A), recessed plug.

AC Output Distribution: All Models - (4) IEC C13, (1) IEC C19

Load Compatibility: Can support 100% power factor corrected, switch-mode power supply load.

Audible Noise: < 52 dBA at one meter.

Ventilation: Air around the unit must be free of dust, chemicals, or other materials that corrode or contaminate. Air must be free to move around the unit.

Operating Temperature: 32° - 104° F (0° - 40° C).

Storage Temperature: 5° - 122° F (-15° to +50° C). Battery life is reduced above 77° F (25° C).

*If the HP PowerTrust II-LR unit is stored, the batteries should be recharged every 6 months.
If stored above 77° F (25° C), recharge the batteries every three months.*

Humidity: 0% - 95% RH (non-condensing).

Altitude: 3000 m (10,000 ft maximum)

Dimensions (Height x Width x Depth): All Models: 3.35 x 19 x 19.3 inches. (85.2 x 483 x 490mm)

Weight: Models A1353A, A1354A & A1356A: 30.8 lbs. (14.0 kg)
Model A1357A: 66.0 lbs. (30.0 kg)

9 Warranty Information

The HP PowerTrust II-LR family of Uninterruptable Power Supplies have a 1-year, on-site, next-day warranty. All PowerTrust II-LR assemblies are field-replaceable and do not have serviceable components inside. The PowerTrust II-LR is customer installable.

10 PowerTrust II-LR Regulatory Compliance Statements

Overview

Regulatory Compliance statements are required by some countries for international importation of PowerTrust II-LR Uninterruptable Power Supplies. The following information is provided:

- Regulatory Information
- Safety
- Battery Notice
- FCC Statement (USA Only)
- Canada RFI Statement
- European Union RFI Statement
- Acoustics (Germany)
- Japanese Radio Frequency Interference
- EMI (Australia and New Zealand)
- Korean RFI Statement
- Taiwan RFI Statement
- Declarations of Conformity

Regulatory Information

For your protection, this product has been tested for conformance to various national and international regulations and standards. The scope of this regulatory testing includes electrical and mechanical safety, electromagnetic emissions, immunity, acoustics and hazardous materials. When required, approvals are obtained from third party test agencies. Approval marks appear on the product label. In addition, various regulatory bodies require some information under the headings listed in this section.

Safety

This product has not been evaluated for connection to an “IT” power system (AC distribution system having no direct connection to earth according to IEC 950).

Locate the AC outlet near the computer! The AC power cord is this product's main AC disconnect device and must be easily accessible at all times.

Battery Notice

The A1357A Battery Pack contains sealed lead-acid batteries.

The batteries are not to be removed or replaced by the user. If a battery needs to be replaced, contact your Hewlett-Packard authorized service personnel.

Please properly recycle all used batteries.

FCC Statement (USA Only)

The United States Federal Communications Commission has specified that the following notice be brought to the attention of users of this product:

NOTICE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Hewlett-Packard's system verification tests were conducted with HP-supported peripheral devices and HP shielded cables, such as those you receive with your computer. Changes or modifications not expressly approved by Hewlett-Packard could void the user's authority to operate the equipment. Cables used with this device must be properly shielded to comply with the requirements of the FCC.

Canada RFI Statement

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

European Union RFI Statement

This is a Class A product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures.

Acoustics (Germany)

Acoustic noise level per ISO 9296 (25° C):

LpAm <52dB (operators position)

Geräuschemission nach ISO 9296 (25° C):

LpAm <52dB (Arbeitsplatte)

Japanese Radio Frequency Interference

注意

この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づく第一種情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

EMI (Australia and New Zealand)

All HP PowerTrust II-LR UPS systems meet the applicable requirements of the Australia and New Zealand EMC Framework.



Korean RFI Statement

시용시 안내문 (A급 기기)

이 기기는 업무용으로 전자파장애감정을 받은 기기이오니, 만약 잘못 구입하셨을 때에는 구입한 곳에서 비입무용으로 교환하시기 바랍니다.

Taiwan RFI Statement

警告使用者：這是甲類的資訊產品，在居住的環境中使用時，可能會造成射頻干擾，在這種情況下，使用者會被要求採取某些適當的對策。

DECLARATION OF CONFORMITY

according to ISO/IEC Guide 22 and EN 45014

Manufacturer's Name: Hewlett-Packard Company

Manufacturer's Address: 8000 Foothills Blvd.
Roseville, CA 95747
USA

declares, that the product

Product Name: Uninterruptible Power Supply
Model Number(s): HP A1354A, A1356A, A1357A
Product Options: N/A

conforms to the following Product Specifications:

Safety: IEC 950:1991+A1,A2,A3,A4 / EN60950:1992+A1,A2,A3,A4,A11
GB 4943-1995

EMC: CISPR 22:1993 +A1,A2 / EN 55022:1994 +A1,A2 - Class A¹
GB 9254-1988
EN 50024: 1998

IEC 61000-4-2:1995, EN 61000-4-2 1995

IEC 61000-4-3:1995, EN 61000-4-3 1996

IEC 61000-4-4:1995, EN 61000-4-4 1995

IEC 61000-4-5:1995, EN 61000-4-5 1995

IEC 61000-4-6:1996, EN 61000-4-6 1996

IEC 61000-4-8 1993, EN 61000-4-8 1993

IEC 61000-4-11:1994, EN 61000-4-11 1994

EN 61000-3-2:1995+A1,A2/IEC 1000-3-2:1995, Class A

EN 61000-3-3:1995 / IEC 1000-3-3:1994

Supplementary Information:

The product herewith complies with the requirements of the Low Voltage Directive 73/23/EEC and the EMC Directive 89/336/EEC and carries the CE marking accordingly.

1) The product was tested in a typical configuration with a Hewlett-Packard host computer.

Roseville, February 1st, 2000



Frank D. Dembski Jr., Quality Manager

European Contact: Your local Hewlett-Packard Sales and Service Office or Hewlett-Packard GmbH, Department HQ-TRE, Herrenberger Straße 130, D-71034 Böblingen (FAX: + 49-7031-14-3143)

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GB 4943-1995

EMC: CISPR 22:1993 +A1,A2 / EN 55022:1994 +A1,A2 - Class A¹
GB 9254-1988

IEC 61000-4-2:1995, EN 61000-4-2 1995

IEC 61000-4-3:1995, EN 61000-4-3 1996

IEC 61000-4-4:1995, EN 61000-4-4 1995

IEC 61000-4-6:1996, EN 61000-4-6 1996

IEC 61000-4-8 1993, EN 61000-4-8 1993

IEC 61000-4-11:1994, EN 61000-4-11 1994

Supplementary Information:

The product herewith complies with the requirements of the Low Voltage Directive 73/23/EEC.

1) The product was tested in a typical configuration with a Hewlett-Packard host computer.

Roseville, February 1st, 2000



Frank D. Dembski Jr., Quality Manager

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