



IBM UPS 500 and UPS 675 USB

User's Guide

Note: Before using this information and the product it supports, read the information under “Appendix C. Product warranty and notices” on page C-1.

First Edition (October 2001)

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Safety

Before installing this product, read the Safety Information.

Avant d'installer ce produit, lisez les consignes de sécurité.

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About this book

This manual contains instructions for installing and using the UPS 675 USB and 500 Options. The manual is divided into the following parts:

Part 1: Installation and user's guide

This User's Guide is provided in the following languages:

- English
- French
- Spanish

To view the online hardware User's Guide included with this option:

- Insert the CD, if it does not start automatically, click **Start**, and then click **Run**.
- Type `e:\launch.bat` where *e* is the drive letter of your CD-ROM or DVD-ROM drive and click **OK**.
- In the browser window, you will see a link to the User's Guide.

Part 2: Appendixes

This section contains help and service, warranty, and notice information.

Registering your option

Thank you for purchasing this IBM® product. Please take a few moments to register your product and provide us with information that will help IBM to better serve you in the future. Your feedback is valuable to us in developing products and services that are important to you, as well as in developing better ways to communicate with you. Register your option on the IBM Web site at

<http://www.ibm.com/pc/register>

IBM will send you information and updates on your registered product unless you indicate on the Web site questionnaire that you do not want to receive further information.

Installation and user's guide

Read this chapter before using your UPS 675 USB or UPS 500 option. Save the original carton and styrofoam inserts. If you require service, your warranty might be voided if the UPS is sent back to IBM in improper packaging.

This UPS will protect your equipment from power problems: blackouts, brownouts, surges, spikes and line noise. Its reliable battery backup power will allow you to complete work, save data and safely shut down your system in the event of a blackout. The UPS protects your equipment on both the ac and modem/fax line. When ac power is present and the UPS power button is turned ON, the UPS is keeping the battery constantly charged, and connected equipment is powered directly from the ac power line. A communication port allows remote power management.

Safety: Read first

This section provides installation safety warnings.

CAUTION: Do not use of any of the UPS Systems in a life support application where a malfunction or failure of a IBM UPS System could cause failure or significantly alter the performance of the life support device.

DANGER: Do not allow the UPS to be exposed to moisture, rain, dust, excessive heat or direct sunlight. Do not block the cooling vents on the UPS. Position the UPS at least 15 cm (6 in.) away from any monitors or floppy disks. Small magnetic fields present during backup operation can cause monitor interference or disrupt information on disks.

Connect the UPS to a two-pole, three-wire, grounded ac power outlet. To reduce the risk of fire, connect only to a circuit provided with 15 amperes overcurrent protection (in accordance with the National Electrical Code, ANSI/NFPA 70 or your local electrical code.)

Never plug a UPS into itself; this will damage the unit and void your warranty. Never plug a surge suppressor into any of the outlets; this will overload the UPS when operating from battery power. Since the UPS already has surge suppression built in, adding extra surge suppression is not necessary.

The UPS might be damaged if connected to a motor-powered ac generator with voltage and frequency output beyond nominal accepted ranges. Consult the generator manufacturer or IBM Customer Service before connecting the UPS to a generator.

Battery Safety Warnings

CAUTION: Batteries can present a risk of electrical shock and burn from high short circuit current. Observe proper precautions. Do not dispose of the batteries in a fire. Do not open the UPS or the batteries. Do not short or bridge the battery terminals with any object.

There are no user-serviceable parts inside the UPS. Battery replacement should be performed only by authorized service personnel using the same number and type of batteries (Sealed Lead-Acid). The batteries are recyclable. Refer to your local codes for disposal requirements or, in the USA only, call 1-800-SAV-LEAD (1-800-728-5323) for complete recycling information.

CAUTION: Batteries left discharged will suffer a permanent loss of capacity. If the UPS is stored or not used for three months or longer, fully recharge the batteries by plugging the UPS into a live AC outlet, turning the power button ON and letting the UPS charge for 4-6 hours.

When UPS protection is ON, the Battery Backup Protected/Surge Protected Outlets are energized from the internal battery, even when the unit is not plugged in.

Installing the UPS 500 or UPS 675 USB option

This section contains installation instructions for the UPS 500 or UPS 675 USB option.

To install the UPS 675 USB option, do the following:

1. Plug the UPS into an electrical outlet that does not share a circuit with a heavy electrical load. For example, an air conditioner or a refrigerator. All the UPS LEDs will light up and the UPS will beep as it conducts a 10-second self-test. When the self-test is complete, only the "Line" LED should remain lit. Check the "Troubleshooting" on page 1-9 if the "Battery" or "Overload" LED is lit.
2. Determine the total VA or wattage draw of all the equipment you plan on connecting to the Battery Backup Protected/Surge Protected Outlets. Look on the equipment nameplate for this information. If the equipment is listed in amps, multiply the number of amps by 120 to determine VA. For example, 1 amp x120 = 120 VA. The total VA for all equipment cannot exceed the UPS's output capacity.
3. Plug your computer and monitor into the three Battery Backup Protected/Surge Protected outlets. (Remember they provide both surge and battery backup protection.)

Note: Do not plug laser printers into these outlets.

4. Connect devices such as printers, scanner or fax machines into the Surge Protected Outlets. (Note that they will not be supplied with battery power during a power failure.)

Optionally, you can do the following:

1. Connect the USB port of your UPS to a USB port on your computer using the cable provided. Install the Power Management Utility from the included CD.
2. Plug a single telephone line into the IN jack. Plug a telephone, a modem from your computer or a fax device into the OUT jack on the UPS; a 2 m (6 ft) cord set is included for this purpose.

To install the UPS 500 option:

1. Plug the UPS into an electrical outlet that does not share a circuit with a heavy electrical load, for example an air condition or refrigerator. All the UPS LEDs will light and the UPS will beep as it conducts a 10-second self-test. When the self-test is complete, only the Line LED should remain lit. Check the "Troubleshooting" on page 1-9 if the Battery/Overload LED is lit or blinking.
2. Determine the total VA or wattage draw of all the equipment you plan on connecting to the Battery Backup Protected/Surge Protected Outlets. Look on the equipment nameplate for this information. If the equipment is listed in amps, multiply the number of amps by 120 to determine VA. For example, 1 amp x120 = 120 VA. The total VA for all equipment cannot exceed the UPS's output capacity.
3. Plug your computer and monitor into the Battery Backup Protected/Surge Protected outlets. (These outlets provide both surge and battery backup protection.)

Note: Do not plug laser printers into these outlets.

4. Insert devices such as printers, scanners or fax machines into the Surge Protected Outlets. (These devices are not supplied with battery power during a power failure.)

Optionally, you can do the following:

1. Connect the DB9 port of your UPS to a DB9 port on your computer using the cable provided. Install Power Management Utility from the included CD. This installation step is optional; your UPS will function properly without this connection
2. Plug a single telephone line into the IN jack. Plug a telephone, modem from your computer or fax device into either or both of the two OUT jacks; a 2 m (6 ft) cord is included for this purpose. This installation step is optional; your UPS will function properly without this connection.

Using the controls

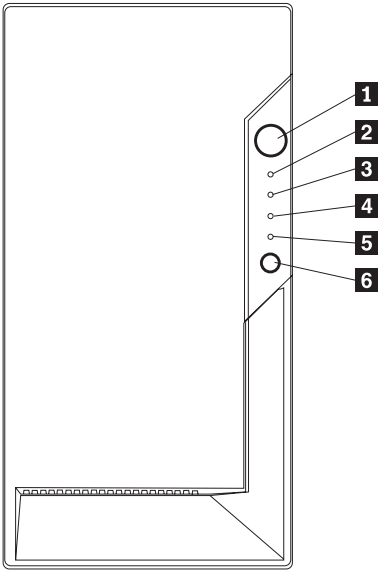


Figure 1-1. Front view of the UPS 675 USB option

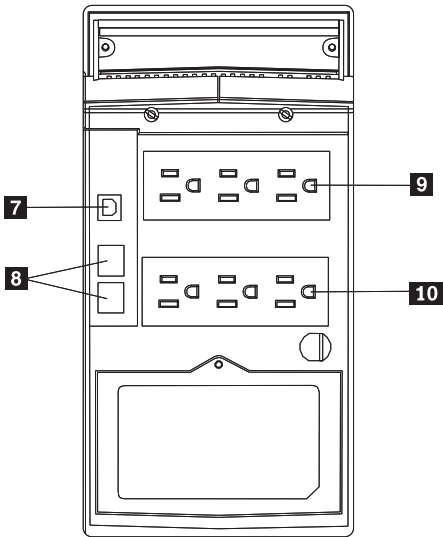


Figure 1-2. Rear view of the UPS 675 USB option

This section contains information on the controls for the UPS 675 USB option.

- **1 INV ON/INV OFF Button:** This button controls your UPS's inverter, and has three functions:

Toggle UPS Protection OFF/ON: While the UPS is connected to utility power, press and hold this button until you hear a beep in order to turn UPS protection OFF (or ON again). If UPS protection is OFF, the UPS will only provide power at its outlets while it is receiving utility power: it will not provide power from battery reserves during a blackout. If you turn UPS protection OFF, the "Line" LED will flash until UPS protection is turned ON again.

Shut Down: To turn your UPS completely OFF, first disconnect connected equipment, then unplug the UPS from AC power, then hold this button down until you hear a beep. You may also shut the UPS down by holding this button down until you hear a beep while the UPS is providing battery backup power.

Cold Start: If your UPS's batteries are charged, you may cold start the UPS to use it as a stand-alone power supply in the absence of AC power. To do so, hold this button until you hear a beep.

- **2 Green "Line" Light-emitting diode (LED):** The LED lights continuously when the UPS is ON and receiving normal ac power, indicating, that the battery is charging and connected equipment is receiving power. When ac power is interrupted, this LED turns off. It will blink if UPS protection is turned OFF.
- **3 Yellow "Invert" LED:** This LED lights up when the UPS is providing power from battery backup.
- **4 Red "Battery" LED:** During inverter operation or after a self-test, this LED lights up to indicate that the UPS battery might need replacing. For more information, see the "Troubleshooting" on page 1-9.
- **5 Red "Overload" LED:** During inverter operation or after a self-test, this LED lights up if the UPS is overloaded. For more information, see the "Troubleshooting" on page 1-9.
- **6 Mute/Test Button:** This button has two functions:

Silence the Audible Alarm: Press this button to silence the Audible Alarm.

Audible Alarm: The UPS beeps when the UPS is plugged in as it performs a self-test. The UPS will also beep intermittently when the UPS is in inverter operation to alert you that it is supplying power from the battery. When the batteries are about to be depleted, the UPS will sound continuously (and cannot be silenced), warning you to save open files and shut down your equipment immediately.

Run Self-Test: While your UPS operating from utility power, press and hold this button until you hear a beep to run a UPS self-test. The test will run for about 10 seconds, during which time the UPS will beep and all the UPS

LEDs will light up. When the self-test is complete, only the Line LED should remain lit. Check the Troubleshooting Guide on the reverse if the Battery or Overload LED is lit.

- **7 USB Communication Port:** This USB communication port can be used to connect your UPS to any personal computer with a USB port. Use with the Power Management Utility program and the cabling included to automatically save open files and shut down equipment during a blackout. This port can send signals that indicate line-fail and low-battery status.

Note: Connecting a computer to the USB port is optional. The UPS can work properly without this connection.

- **8 RJ45 Modem/Fax Surge Suppressor Jacks:** These RJ45 jacks can provide protection against the surges on a single telephone or network line. Plug a single telephone or network line into the UPS's IN jack. Plug a telephone, a modem from your computer or a fax device into the UPS's OUT jack; a 2 m (6 ft) RJ45 cord set is included for this purpose.

Note: Connecting equipment to the RJ45 jacks is optional. The UPS can work properly without this connection.

- **9 Battery Backup Protected/Surge Protected Outlets:** These outlets provide both battery backup and surge protection. Plug your computer, monitor and other critical equipment into these outlets.

Note: Do not plug printers or surge suppressors into these outlets.

- **10 Surge Protected Outlets:** While all six outlets will provide surge and line noise protection, the three Surge Protected Outlets will not supply battery backup. Plug equipment that does not require battery backup during utility power failures (such as printers, scanners and fax machines) into these outlets.

This section contains information on the controls for the UPS 500 option.

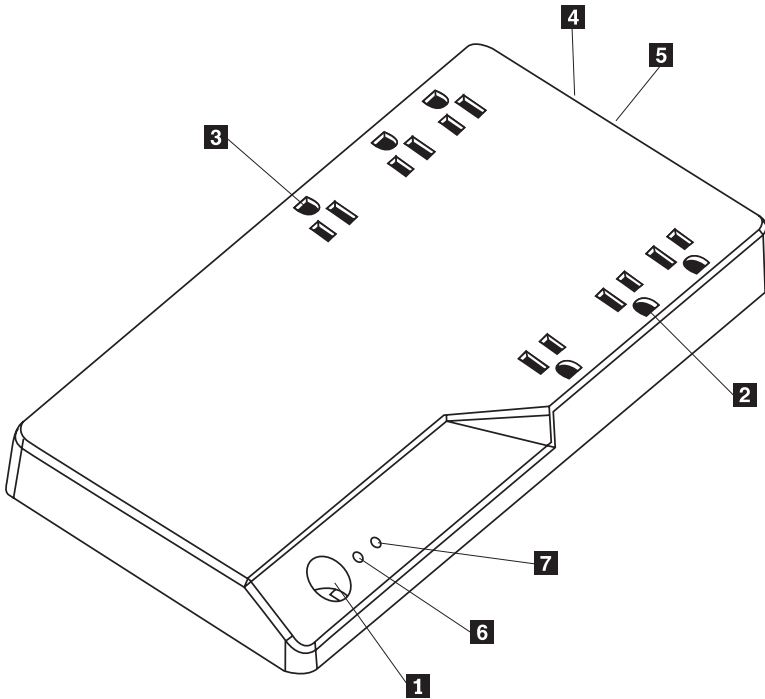


Figure 1-3. UPS 500 controls

- **1 INV ON/INV OFF Button:** This button controls your UPS's inverter, and has three functions:
 - **Toggle UPS Protection OFF/ON:** While the UPS is connected to utility power, press and hold this button until you hear a beep in order to turn UPS protection OFF (or ON again). If UPS protection is OFF, the UPS will only provide power at its outlets while it is receiving utility power: it will not provide power from battery reserves during a blackout. When you turn UPS protection OFF, the Line LED will flash until UPS protection is turned ON again.
 - **Shut Down:** To turn your UPS completely OFF, first disconnect connected equipment, then unplug the UPS from ac power, then hold this button down until you hear a beep. You may also shut the UPS down by holding this button down until you hear a beep while the UPS is providing battery backup power.
 - **Cold Start:** If your UPS's batteries are charged, you may cold start the UPS to use it as a stand-alone power supply in the absence of ac power. To do so, press this button until you hear a beep.

- **2 Battery Backup Protected/Surge Protected Outlets:** These outlets provide both battery backup and surge protection. Plug your computer, monitor and other critical equipment into these outlets.

Note: Do not plug printers or surge suppressors into these outlets.

- **3 Surge Protected Outlets:** While all six outlets will provide surge and line noise protection, the three Surge Protected Outlets will not supply battery backup. Plug equipment that does not require battery backup during utility power failures into these outlets.
- **4 DB9 Communication Port:** This DB9 communication port can be used to connect your UPS to any personal computer with a DB9 port. Use with the Power Management Utility program and the cabling included to automatically save open files and shut down equipment during a blackout. This port can send signals to indicate line-fail and low battery status.

Note: Connecting the computer to a DB9 port is optional. The UPS can work properly without this connection.

- **5 RJ11 Modem/Fax Surge Suppressor Jacks:** These RJ11 jacks can provide protection against surges on a single telephone line. Plug a single telephone line into UPS's IN jack. Plug a telephone, a modem from your computer or a fax device into either or both of the UPS's two OUT jacks; a 2 m (6 ft) RJ11 cord set is included for this purpose. (Only one connected device can communicate over the incoming cable at a time).

Note: Connecting equipment to the RJ11 jacks is optional. The UPS can work properly without this connection.

- **6 Green "Line" LED:** This LED lights continuously when the UPS is ON and receiving normal ac power, indicating that the battery is charging and connected equipment is receiving power. This LED also lights continuously when the UPS is first turned on and a start-up self test is in progress. This LED blinks when the UPS is in inverter operation (operating from the battery) indicating that the battery is discharging. If the alarm sounds continuously and Red Battery/Overload LED lights while this light is blinking, the UPS is nearly out of power: you should save files and shut down your equipment immediately.
- **7 Red Low Battery/Overload LED:** This LED lights up during the UPS self-test when the UPS is first plugged in. It will also light up when the UPS is overloaded, and blink when the UPS batteries are nearly drained. If this light is lit or blinking after the UPS self-test, go to "Troubleshooting" on page 1-9.
- **8 Audible Alarm:** The UPS beeps when the UPS is plugged in as it performs a self-test. The UPS will also beep intermittently when the UPS is in inverter operation to alert you that it is supplying power from the battery.

When the batteries are about to be depleted, the UPS will sound continuously to warn you to save open files and shut down your equipment immediately

Note: All indicator lights are OFF when the UPS is not plugged into a live ac outlet and is not turned ON.

Troubleshooting

For troubleshooting information, refer to the following table.

SYMPTOM	PROBLEM	CORRECTION
All indicator lights are off.	UPS is not plugged into a live ac outlet.	Plug the UPS into a live ac outlet. If power is not present, be sure that the building circuit breaker has not been accidentally turned off.
UPS does not provide expected run time.	Battery is not charged enough or has been depleted by frequent power outages.	Allow the battery to charge for 4-6 hours.
UPS alarm beeps. Runtime is diminished. UPS 500: Low Battery/Overload LED lights and remains ON. USB 675 USB: Overload LED lights.	The Battery Backup/Surge Protected Outlets are overloaded.	Remove some of the load from the receptacles; then run a UPS self-test by pressing the Mute/Test Button (UPS 675 USB only) or by restarting the UPS.
UPS alarm beeps. Runtime is diminished. UPS 500: Low Battery/Overload LED blinks ON and OFF. UPS 675 USB: Battery LED lights.	The UPS batteries might need to be replaced.	Allow the battery to charge for 12 hours; then run a UPS self-test by pressing the Mute/Test Button (UPS 675 USB only) or by restarting the USB. If the condition persists, contact IBM to arrange battery replacement.

Maintaining the option

This UPS contains no user-serviceable parts.

Installation et guide de l'utilisateur

Lisez ce chapitre avant d'utiliser votre option UPS 675 USB ou UPS 500. Conservez les dispositifs de protection en carton et en polystyrène : si vous devez faire appel aux services de maintenance, votre garantie peut être annulée si le système d'alimentation de secours est retourné à IBM dans un emballage incomplet.

Ce système d'alimentation de secours protégera votre équipement des incidents d'alimentation : coupures de courant, baisses de tension, surtensions et parasites. En cas de coupure de courant, ses batteries de secours d'une grande fiabilité vous permettront d'achever votre travail, de sauvegarder vos données et d'arrêter votre système en toute sécurité. L'alimentation de secours protège votre équipement tant au niveau du circuit électrique que de la ligne de modem/télécopie. Lorsque le système est branché sur le secteur, si le bouton d'alimentation de l'UPS est en position de marche (ON), la batterie est en charge en permanence et l'équipement connecté est alimenté directement depuis le secteur. Un port de communication permet une gestion de l'alimentation à distance.

Sécurité : A lire en premier

La présente section contient des avertissements relatifs à la sécurité de l'installation.

ATTENTION: N'utilisez pas de système d'alimentation de secours dans le cas d'équipements de survie : un incident ou une anomalie du système IBM UPS risquerait de provoquer un arrêt anormal ou de modifier de façon significative les performances du dispositif de survie.

DANGER: N'exposez pas l'UPS à l'humidité, la pluie, la poussière, une chaleur excessive ou la lumière directe du soleil. Ne bloquez pas les conduits de refroidissement de l'UPS. Placez l'appareil à une distance d'au moins 15 cm (6 pouces) de tout écran ou unité de disquette. La présence de champs magnétiques de faible intensité lors d'une sauvegarde risque de provoquer des interférences au niveau de l'écran ou d'interrompre la transmission des informations vers les disques.

Connectez l'UPS à une prise d'alimentation c.a. dipôle à trois fils et reliée à la terre. Pour réduire les risques d'incendie, ne connectez l'appareil qu'à un circuit protégé contre des surtensions électriques de 15 A (conformément au National Electrical Code, ANSI/NFPA 70 ou à la norme locale en vigueur).

Ne branchez jamais une UPS en boucle : cela endommagerait l'unité et annulerait votre garantie. Ne branchez jamais un parasurtenseur sur l'une des prises : cela provoquerait une surcharge de l'UPS en cas de fonctionnement sur batterie. L'UPS possédant déjà une fonctionnalité intégrée contre les surtensions, il n'est pas nécessaire d'ajouter un système supplémentaire.

L'UPS risque d'être endommagée si vous la connectez à un générateur de courant c.a. alimenté par moteur et dont la tension et la fréquence en sortie dépassent les plages nominales autorisées. Avant de brancher l'UPS sur un générateur, contactez le fabricant du générateur ou le service clientèle d'IBM.

Avertissements de sécurité relatives aux batteries

ATTENTION: Les batteries peuvent présenter un risque de choc électrique et de brûlure en raison du courant électrique qui les traverse. Manipulez-les avec de grandes précautions. Ne jetez pas les batteries au feu. N'ouvrez pas l'UPS ni les batteries sans raison. Ne raccourcissez pas et ne reliez pas les bornes de batterie à d'autres objets.

L'UPS ne contient aucune pièce à entretenir par l'utilisateur. Le remplacement de la batterie doit être effectué exclusivement par du personnel de maintenance autorisé, en utilisant le même nombre et le même type de batterie (à bac hermétique). Les batteries sont recyclables. Pour les instructions de traitement, reportez-vous aux codes locaux ou, aux Etats-Unis, appelez le 1-800-SAV-LEAD (1-800-728-5323) pour obtenir des informations sur le recyclage.

ATTENTION : Les batteries laissées déchargées risquent de souffrir d'une perte de capacité permanente. Si l'UPS est stockée ou n'est pas utilisée pendant trois mois ou plus, rechargez complètement les batteries en branchant l'UPS sur une prise c.a. sous tension, en mettant le bouton d'alimentation sur la position ON et en laissant l'UPS en charge pendant 4 à 6 heures.

Lorsque la protection de l'UPS est en position de marche, les prises Battery Backup Protected/Surge Protected (protégées par batterie de secours/protégées contre les surtensions) sont alimentées par la batterie interne, même lorsque l'unité n'est pas branchée.

Installation de l'option UPS 500 ou UPS 675 USB

La présente section contient des instructions d'installation pour l'option UPS 500 ou UPS 675 USB.

Pour installer l'option UPS 675 USB, procédez comme suit :

1. Branchez l'UPS sur une prise de courant qui ne partage pas de circuit avec un appareil nécessitant une charge électrique importante comme un système de climatisation ou un réfrigérateur. Tous les voyants (DEL) de l'UPS s'allument et l'UPS émet des signaux sonores pendant qu'elle effectue

un autotest de 10 secondes. Lorsque l'autotest est terminé, seul le voyant de ligne ("Line") doit rester allumé. Si les voyants "Battery" (batterie) ou "Overload" (surcharge) sont allumés, consultez la section «Identification et résolution des incidents» à la page 1-20.

2. Déterminez le VA (voltampère) ou la puissance totale tirée par tous les équipements que vous prévoyez de connecter aux prises de courant protégées par batterie de secours/protégées contre les surtensions (Battery Backup Protected/Surge Protected Outlets). Vous trouverez ces informations sur les plaques signalétiques des équipements. Si la puissance d'un équipement est indiquée en ampères, multipliez le nombre d'ampères par 120 pour déterminer le VA. Ainsi, $1 \text{ A} \times 120 = 120 \text{ VA}$. Le VA total de tous les équipements ne doit pas dépasser la capacité en sortie de l'UPS.
3. Branchez votre ordinateur et votre moniteur sur les trois prises protégées par batterie de secours/contre les surtensions. (N'oubliez pas : elles fournissent à la fois une protection contre les surtensions et une batterie de secours.)

Remarque : Ne branchez pas d'imprimante laser sur ces prises.

4. Branchez les périphériques tels qu'imprimantes, scanners ou télécopieurs sur les prises Surge Protected (protégées contre les surtensions). (Remarque : ces appareils ne seront pas alimentés par la batterie en cas de coupure d'alimentation.)

Vous pouvez éventuellement effectuer les opérations suivantes :

1. Connectez le port USB de votre UPS à un port USB de votre ordinateur à l'aide du câble fourni. Installez l'utilitaire Power Management Utility (utilitaire de gestion de l'alimentation) à partir du CD-ROM fourni.
2. Branchez une seule ligne de téléphone sur la prise **IN**. Branchez un téléphone, un modem ou un télécopieur sur la prise **OUT** de la batterie ; un cordon de 2 m (6 pieds) est fourni à cet effet.

Pour installer l'option UPS 500 :

1. Branchez l'UPS sur une prise de courant qui ne partage pas de circuit avec un appareil nécessitant une charge électrique importante comme un système de climatisation ou un réfrigérateur. Tous les voyants (DEL) de l'UPS s'allument alors et l'UPS émet des signaux sonores pendant qu'elle effectue un autotest de 10 secondes. Lorsque l'autotest est terminé, seule le voyant Line doit rester allumé. Si le voyant Battery/Overload (batterie/surcharge) reste allumé ou clignote, reportez-vous à la section «Identification et résolution des incidents» à la page 1-20.
2. Déterminez le VA (voltampère) ou la puissance totale tirée par tous les équipements que vous prévoyez de connecter aux prises de courant protégées par batterie de secours/protégées contre les surtensions (Battery Backup Protected/Surge Protected Outlets). Vous trouverez ces informations sur les plaques signalétiques des équipements. Si la puissance

d'un équipement est indiquée en ampères, multipliez le nombre d'ampères par 120 pour déterminer le VA. Ainsi, 1 A x 120 = 120 VA. Le VA total de tous les équipements ne doit pas dépasser la capacité en sortie de l'UPS.

3. Branchez votre ordinateur et votre moniteur sur les prises protégées par batterie de secours/contre les surtensions. (Elles fournissent à la fois une protection contre les surtensions et une batterie de secours.)

Remarque : Ne branchez pas d'imprimante laser sur ces prises.

4. Branchez les périphériques tels qu'imprimantes, scanners ou télécopieurs sur les prises Surge Protected (protégées contre les surtensions). (Ces périphériques ne seront pas alimentés par la batterie en cas de coupure d'alimentation.)

Vous pouvez éventuellement effectuer les opérations suivantes :

1. Connectez le port DB9 de votre UPS à un port DB9 de votre ordinateur à l'aide du câble fourni. Installez l'utilitaire Power Management Utility (utilitaire de gestion de l'alimentation) à partir du CD-ROM fourni. Cette étape de l'installation est facultative ; votre UPS fonctionnera correctement sans cette connexion.
2. Branchez une seule ligne de téléphone dans la prise **IN**. Raccordez un téléphone, un modem ou un télécopieur dans l'une des prises **OUT** ou dans les deux ; un cordon de 2 m (6 pieds) est fourni à cet effet. Cette étape de l'installation est facultative ; votre UPS fonctionnera correctement sans cette connexion.

Utilisation des contrôles

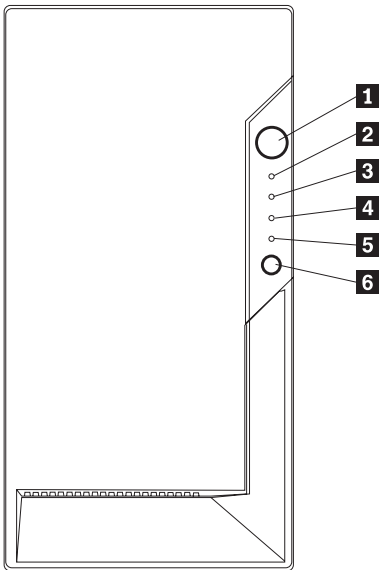


Figure 1-1. Vue avant de l'option UPS 675 USB

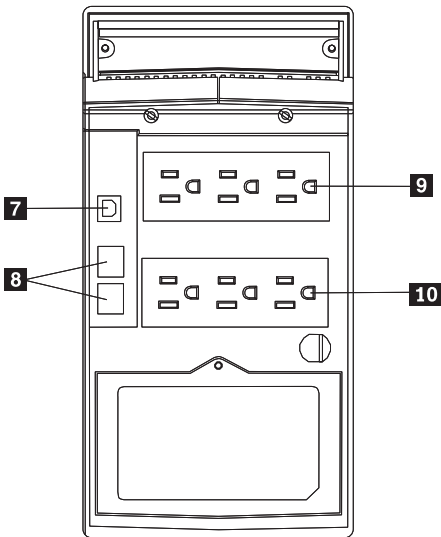


Figure 1-2. Vue arrière de l'option UPS 675 USB

La présente section contient des informations sur les contrôles de l'option UPS 675 USB.

- **1** Bouton **INV ON/INV OFF** : Ce bouton contrôle l'onduleur de votre UPS et offre trois fonctions :

Toggle UPS Protection OFF/ON (*basculer protection UPS OFF/ON*) : Lorsque l'UPS est branchée sur le secteur, appuyez sur ce bouton et maintenez-le enfoncé jusqu'à ce que vous entendiez un signal sonore indiquant que la protection de l'UPS est désactivée (OFF) ou de nouveau activée (ON). Si la protection est désactivée, l'UPS alimente les prises en courant uniquement lorsqu'elle est branchée sur le secteur ; elle ne fournira pas d'électricité à partir des réserves des batteries en cas de coupure de courant. Si vous désactivez la protection de l'UPS, le voyant "Line" clignote jusqu'à ce que la protection de l'UPS soit de nouveau activée.

Shut Down (procédure d'arrêt) : Pour désactiver totalement votre UPS, commencez par déconnecter l'équipement connecté, débranchez l'UPS de l'alimentation c.a., puis maintenez ce bouton enfoncé jusqu'à ce que vous entendiez un signal sonore. Vous pouvez également fermer l'UPS en maintenant ce bouton enfoncé jusqu'à ce que vous entendiez un signal sonore lorsque l'UPS sert de batterie de secours.

Cold Start (démarrage à froid) : Si les batteries de votre UPS sont chargées, vous voudrez peut-être effectuer un démarrage à froid de l'UPS pour l'utiliser comme alimentation électrique autonome en l'absence d'alimentation c.a. Pour cela, maintenez ce bouton enfoncé jusqu'à ce que vous entendiez un signal sonore.

- **2 DEL (diode électro-luminescente) "Line" verte** : Ce voyant est allumé en permanence lorsque l'UPS est sous tension et alimentée par courant c.a. normal ; il indique que la batterie est en charge et que l'équipement connecté reçoit du courant. Lorsque le courant est coupé, ce voyant s'éteint. Il clignote si la protection de l'UPS est désactivée.
- **3 DEL "Invert" jaune** : Ce voyant s'allume lorsque l'UPS fournit du courant à partir des batteries de secours.
- **4 DEL "Battery" rouge** : Lors du fonctionnement de l'onduleur ou à la suite d'un autotest, ce voyant s'allume pour indiquer que la batterie de l'UPS doit peut-être être remplacée. Pour plus d'informations, consultez la section «Identification et résolution des incidents» à la page 1-20.
- **5 DEL "Overload" rouge** : Lors du fonctionnement de l'onduleur ou à la suite d'un autotest, ce voyant s'allume si l'UPS est en surcharge. Pour plus d'informations, consultez la section «Identification et résolution des incidents» à la page 1-20.
- **6 Bouton Mute/Test** : Ce bouton offre plusieurs fonctions :

Silence the Audible Alarm : Appuyez sur ce bouton pour faire taire l'alarme sonore.

Audible Alarm : L'UPS émet des signaux sonores lorsqu'elle est branchée et effectue un autotest. Elle émet également des signaux sonores intermittents lorsqu'elle est en mode onduleur, afin de signaler que le courant fourni provient de la batterie. Lorsque les batteries sont presque épuisées, l'UPS

sonne en permanence (et ne peut pas être mis en mode silencieux), indiquant que vous devez sauvegarder vos fichiers et fermer votre équipement immédiatement.

Run Self-Test : Lorsque l'UPS est branchée sur le secteur, appuyez sur ce bouton et maintenez-le enfoncé jusqu'à ce que vous entendiez un signal sonore pour exécuter un autotest de l'UPS. Ce test prend environ 10 secondes, pendant lesquelles l'UPS émet un signal sonore et toutes les DEL sont allumées. Une fois l'autotest terminé, seule le voyant Line doit rester allumé. Consultez le Guide de résolution des incidents à propos des inversions d'alimentation si le voyant Battery ou Overload est allumé.

- **7 Port de communication USB** : Ce port vous permet de connecter l'UPS à n'importe quel ordinateur personnel doté d'un port USB. Utilisez le programme Power Management Utility (utilitaire de gestion de l'alimentation) pour sauvegarder automatiquement les fichiers ouverts et fermer tout équipement en cas de coupure de courant. Ce port peut envoyer des signaux indiquant un état de coupure de ligne et de niveau de batterie faible.

Remarque : La connexion d'un ordinateur au port USB est facultative. L'UPS peut parfaitement fonctionner sans cette connexion.

- **8 Prises RJ45 de parasurtenseur pour modem/télécopie** : Ces prises peuvent offrir une protection contre les surtensions sur une ligne réseau ou une ligne téléphonique unique. Branchez une ligne (téléphonique ou réseau) unique sur la prise IN de l'UPS. Branchez un téléphone, un modem ou un télécopieur sur la prise OUT de l'UPS ; un cordon RJ45 de 2 m (6 pieds) est fourni à cet effet.

Remarque : La connexion d'un équipement aux prises RJ45 est facultative. L'UPS peut parfaitement fonctionner sans cette connexion.

- **9 Prises protégées par batterie de secours/protégées contre les surtensions** : Ces prises de courant fournissent à la fois une batterie de secours et une protection contre les surtensions. Branchez votre ordinateur, votre écran et tout équipement critique sur ces prises.

Remarque : Ne branchez pas d'imprimante ou de parasurtenseur sur ces prises.

- **10 Prises protégées contre les surtensions** : Si les six prises de courant fournissent une protection contre les surtensions et les parasites, ces trois prises ne sont pas raccordées aux batteries de secours. Branchez sur ces prises de courant tout équipement qui ne nécessite pas de batterie de secours en cas de coupure de courant (c'est le cas, notamment, des imprimantes, des scanners et des télécopieurs).

La présente section contient des informations sur les contrôles de l'option UPS 500.

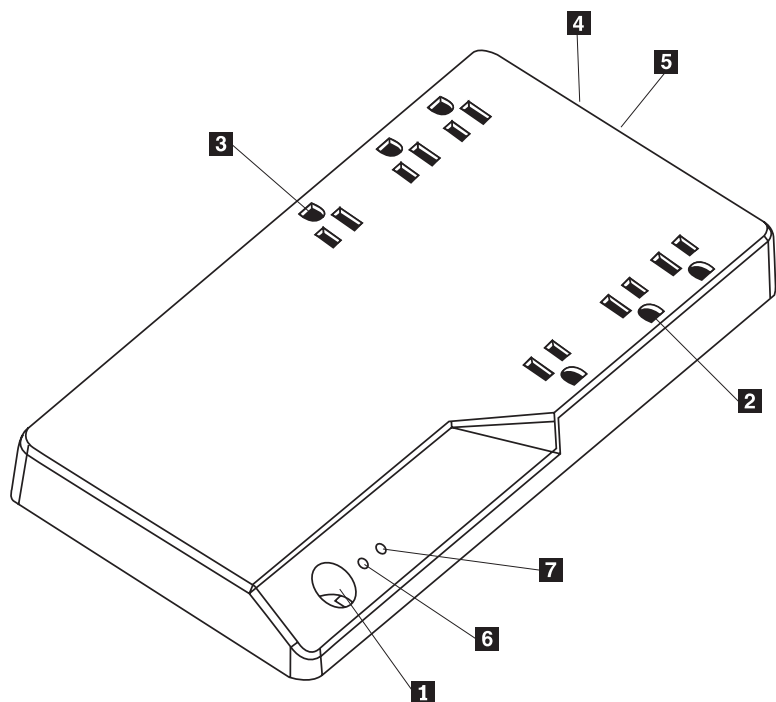


Figure 1-3. Contrôles de l'UPS 500

- **1** Bouton **INV ON/INV OFF** : Ce bouton contrôle l'onduleur de votre UPS et offre trois fonctions :
 - **Toggle UPS Protection OFF/ON (basculer protection UPS OFF/ON)** : Lorsque l'UPS est branchée sur le secteur, appuyez sur ce bouton et maintenez-le enfoncé jusqu'à ce que vous entendiez un signal sonore indiquant que la protection de l'UPS est désactivée (OFF) ou de nouveau activée (ON). Si la protection est désactivée, l'UPS alimente les prises en courant uniquement lorsqu'elle est branchée sur le secteur ; elle ne fournira pas d'électricité à partir des réserves des batteries en cas de coupure de courant. Lorsque vous désactivez la protection de l'UPS, le voyant "Line" clignote jusqu'à ce que la protection de l'UPS soit de nouveau activée.
 - **Shut Down (procédure d'arrêt)** : Pour désactiver totalement votre UPS, commencez par déconnecter l'équipement connecté, débranchez l'UPS de l'alimentation c.a., puis maintenez ce bouton enfoncé jusqu'à ce que vous entendiez un signal sonore. Vous pouvez également fermer l'UPS en

maintenant ce bouton enfoncé jusqu'à ce que vous entendiez un signal sonore lorsque l'UPS sert de batterie de secours.

- **Cold Start (démarrage à froid)** : Si les batteries de votre UPS sont chargées, vous voudrez peut-être effectuer un démarrage à froid de l'UPS pour l'utiliser comme alimentation électrique autonome en l'absence d'alimentation c.a. Pour cela, appuyez sur ce bouton jusqu'à ce que vous entendiez un signal sonore.
- **2 Prises protégées par batterie de secours/protégées contre les surtensions** : Ces prises de courant fournissent à la fois une batterie de secours et une protection contre les surtensions. Branchez votre ordinateur, votre écran et tout équipement critique sur ces prises.

Remarque : Ne branchez pas d'imprimante ou de parasurtenseur sur ces prises.

- **3 Prises protégées contre les surtensions** : Si les six prises de courant fournissent une protection contre les surtensions et les parasites, ces trois prises ne sont pas raccordées aux batteries de secours. Branchez sur ces prises de courant tout équipement qui ne nécessite pas de batterie de secours en cas de coupure de courant.
- **4 Port de communication DB9** : Ce port vous permet de connecter l'UPS à n'importe quel ordinateur personnel doté d'un port DB9. Utilisez le programme Power Management Utility (utilitaire de gestion de l'alimentation) pour sauvegarder automatiquement les fichiers ouverts et fermer tout équipement en cas de coupure de courant. Ce port peut envoyer des signaux indiquant un état de coupure de ligne et de niveau de batterie faible.

Remarque : La connexion d'un ordinateur au port DB9 est facultative. L'UPS peut parfaitement fonctionner sans cette connexion.

- **5 Prises RJ11 de parasurtenseur pour modem/télécopie** : Ces prises peuvent offrir une protection contre les surtensions sur une ligne réseau ou une ligne téléphonique unique. Branchez une seule ligne de téléphone dans la prise IN de l'UPS. Branchez un téléphone, un modem ou un télécopieur sur l'une des prises OUT de l'UPS (ou sur les deux) ; un cordon RJ11 de 2 m (6 pieds) est fourni à cet effet. (Un seul périphérique connecté peut communiquer via le câble entrant à la fois.)

Remarque : La connexion d'un équipement aux prises RJ11 est facultative. L'UPS peut parfaitement fonctionner sans cette connexion.

- **6 DEL "Line" verte** : Ce voyant est allumé en permanence lorsque l'UPS est sous tension et alimentée par courant c.a. normal ; il indique que la batterie est en charge et que l'équipement connecté reçoit du courant. Le voyant est également allumé lors du premier allumage de l'UPS et lorsqu'un autotest de démarrage est en cours. Ce voyant clignote lorsque l'UPS est en mode onduleur (fonctionne à partir de la batterie), indiquant

que la batterie est en train de se décharger. Si l'alarme sonne en continu et que le voyant rouge Battery/Overload s'allume alors que ce voyant clignote, l'UPS n'a presque plus de batterie : vous devez sauvegarder vos fichiers et fermer immédiatement votre équipement.

- **7 DEL "Battery/Overload" rouge** : Ce voyant s'allume pendant l'autotest de l'UPS et lorsque l'UPS est branchée pour la première fois. Il s'allume également en cas de surcharge de l'UPS et clignote lorsque les batteries de l'UPS sont quasiment épuisées. Si ce voyant est allumé ou clignote après l'autotest de l'UPS, reportez-vous à la section «Identification et résolution des incidents».
- **8 Audible Alarm** : L'UPS émet des signaux sonores lorsqu'elle est branchée et effectue un autotest. Elle émet également des signaux sonores intermittents lorsqu'elle est en mode onduleur, afin de signaler que le courant fourni provient de la batterie. Lorsque les batteries sont presque épuisées, l'UPS sonne en permanence pour indiquer que vous devez sauvegarder vos fichiers et fermer votre équipement immédiatement.

Remarque : Tous les voyants sont en position OFF lorsque l'UPS n'est pas branchée sur une prise de courant c.a. sous tension et n'est pas en position ON.

Identification et résolution des incidents

Pour des informations sur la résolution des incidents, consultez le tableau suivant :

SYMPTOME	INCIDENT	CORRECTION
Tous les voyants sont éteints.	L'UPS n'est pas branchée sur une prise c.a. sous tension.	Branchez l'UPS sur une prise sous tension. S'il n'y a pas de courant, vérifiez que le disjoncteur du bâtiment n'a pas été mis hors tension accidentellement.
L'UPS n'offre pas le temps de chargement prévu.	La batterie n'est pas suffisamment chargée ou a été épuisée par des coupures de tension fréquentes.	Laissez la batterie se recharger pendant 4 à 6 heures.
L'alarme de l'UPS sonne. Le temps de chargement est diminué. UPS 500 : le voyant Low Battery/Overload s'allume et reste en position ON. USB 675 USB : le voyant Overload s'allume.	Les prises Battery Backup/Surge Protected (batteries de secours/protégé contre les surtensions) sont en surcharge.	Retirez certaines des charges des prises ; exécutez ensuite un autotest de l'UPS en appuyant sur le bouton Mute/Test (UPS 675 USB uniquement) ou en redémarrant l'UPS.

SYMPTOME	INCIDENT	CORRECTION
<p>L'alarme de l'UPS sonne. Le temps de chargement est diminué. UPS 500 : le voyant Low Battery/Overload clignote de la position ON à la position OFF. UPS 675 USB : le voyant Battery est allumé.</p>	<p>Les batteries de l'UPS doivent peut-être être remplacées.</p>	<p>Laissez la batterie se recharger pendant 12 heures ; exécutez ensuite un autotest de l'UPS en appuyant sur le bouton Mute/Test (UPS 675 USB uniquement) ou en redémarrant l'UPS. Si l'incident persiste, contactez IBM pour organiser le remplacement de la batterie.</p>

Maintenance de l'option

L'UPS ne comporte aucune pièce utilisable par l'utilisateur.

Guía de instalación y del usuario

Lea este capítulo antes de utilizar la opción UPS 675 USB o UPS 500. Guarde el embalaje original y los protectores de espuma de estireno. Si necesitase obtener servicio técnico, la garantía podría anularse si se devuelve la UPS a IBM en el embalaje inapropiado.

Esta UPS protegerá a su equipo de problemas con la alimentación: apagones, bajadas de tensión, sobrevoltajes, puntas de voltaje y ruidos en la línea. La fiable alimentación de reserva de la batería le permitirá finalizar el trabajo, guardar los datos y cerrar con seguridad el sistema en el caso de un apagón. La UPS protege al equipo en la línea de CA así como en la de módem/fax. Cuando la alimentación de CA está presente y el botón de alimentación de la UPS está encendido, la UPS mantiene la batería cargada constantemente y el equipo conectado recibe la alimentación directamente de la línea de CA. Un puerto de comunicaciones permite la gestión de la alimentación remota.

Seguridad: Lea primero

Esta sección proporciona avisos de seguridad de la instalación.

PRECAUCIÓN: No utilice ninguno de los sistemas UPS en una aplicación de soporte activa donde un mal funcionamiento o una anomalía de un sistema UPS de IBM podría causar una anomalía o alterar de manera significativa el rendimiento del dispositivo de soporte activo.

PELIGRO: No exponga la UPS a humedad, lluvia, polvo, calor excesivo o luz solar directa. No obstruya los ventiladores de refrigeración de la UPS. Coloque la UPS a unos 15 cm (6 pulg.) como mínimo de cualquier monitor o disquete. Los pequeños campos magnéticos presentes durante la operación de copia de seguridad pueden causar interferencias en el monitor o desorganizar la información de los discos.

Conecte la UPS a una toma de alimentación de CA de dos polos, tres cables y con toma de tierra. Para reducir el riesgo de incendios, realice la conexión solamente en un circuito provisto de protección contra sobrecorriente de 15 amperios (de acuerdo con el National Electrical Code (Código eléctrico nacional), ANSI/NFPA 70 o con el código eléctrico de su región).

Nunca conecte la UPS a si misma, ya que esto dañaría la unidad y anularía la garantía. Nunca conecte un supresor de puntas de voltaje a ninguna de las tomas de alimentación. Esto sobrecargará la UPS cuando funcione con energía de la batería. Puesto que la UPS ya tiene supresión de puntas de voltaje incorporada, no es necesario añadir supresión de puntas de voltaje adicional.

La UPS se podría dañar si se conecta a un generador de CA que funcione a motor con un voltaje y una salida de frecuencia superior a los rangos nominales aceptados. Consulte al fabricante del generador o al Servicio al cliente de IBM antes de conectar la UPS a un generador.

Avisos de seguridad de la batería

PRECAUCIÓN: Las baterías pueden presentar un riesgo de descarga eléctrica y quemaduras por un cortocircuito de alta corriente. Siga las precauciones apropiadas. No deseche la batería tirándola al fuego. No abra la UPS ni las baterías. No acorte o puentee los terminales de la batería con ningún objeto.

No hay piezas a las que el usuario pueda proporcionar servicio técnico dentro de la UPS. La sustitución de la batería sólo la debe realizar el personal de servicio autorizado utilizando el mismo número y tipo de baterías (plomo-ácido sellada). Las baterías son reciclables. Consulte los códigos locales para obtener los requisitos para desecharla o en los Estados Unidos llame simplemente al número 1-800-SAV-LEAD (1-800-728-5323) para obtener información completa sobre reciclaje.

PRECAUCIÓN: Las baterías que se dejen descargadas sufrirán una pérdida permanente de capacidad. Si la UPS se almacena o no se utiliza durante tres meses o más, recargue completamente las baterías enchufando la UPS a una toma de alimentación de CA activa, pulsando el botón de alimentación ON y dejando que la UPS se cargue durante 4-6 horas.

Cuando la protección de la UPS está activada (ON), las tomas de alimentación protegidas por batería y contra puntas de voltaje de la batería obtienen la energía de la batería interna, incluso cuando la unidad no está enchufada.

Instalación de la opción UPS 500 o UPS 675 USB

Esta sección contiene las instrucciones de instalación para la opción UPS 500 o UPS 675 USB.

Para instalar la opción UPS 675 USB, efectúe lo siguiente:

1. Enchufe la UPS a una toma de alimentación que no comparta un circuito con una gran carga eléctrica. Por ejemplo, un dispositivo de aire acondicionado o un refrigerador. Todos los LED de la UPS se encenderán y la UPS emitirá un pitido mientras realiza una autoprueba de 10 segundos. Cuando la autoprueba haya finalizado, sólo debe permanecer encendido el LED "Line" (Línea). Consulte el apartado "Resolución de problemas" en la página 1-32 si el LED "Battery" (Batería) o "Overload" (Sobrecarga) está encendido.
2. Determine la cantidad total de VA o vatios que va a precisar de todo el equipo que piensa conectar a las tomas de alimentación protegidas por batería y contra puntas de voltaje de la batería. Vea la placa del número del

equipo para obtener esta información. Si el equipo se lista en amperios, multiplique el número de amperios por 120 para determinar los VA. Por ejemplo, 1 amperio x 120 = 120 VA. El total de VA para todo el equipo no puede exceder la capacidad de salida de la UPS.

3. Enchufe el sistema y el monitor a las tres tomas de alimentación protegidas por batería/contra puntas de voltaje de la batería. (Recuerde que estas tomas de alimentación proporcionan protección contra puntas de voltaje y de batería.)

Nota: No enchufe impresoras láser a estas tomas de alimentación.

4. Conecte dispositivos como impresoras, escáneres o máquinas de fax a las tomas de alimentación protegidas contra puntas de voltaje. (Observe que a estos dispositivos no se les suministrará energía de la batería durante un corte de alimentación.)

Optativamente, puede efectuar lo siguiente:

1. Conecte el puerto USB de la UPS a un puerto USB del sistema utilizando el cable proporcionado. Instale el Programa de utilidad de gestión de alimentación desde el CD que se incluye.
2. Enchufe una sola línea telefónica al conector **IN**. Enchufe un teléfono, un módem del sistema o un dispositivo de fax al conector **OUT** de la UPS. Se incluye un conjunto de cables de 2 m (6 pies) para este propósito.

Para instalar la opción UPS 500:

1. Enchufe la UPS a una toma de alimentación que no comparta un circuito con una gran carga eléctrica, por ejemplo un dispositivo de aire acondicionado o un refrigerador. Todos los LED de la UPS se encenderán y la UPS emitirá un pitido mientras realiza una autoprueba de 10 segundos. Cuando la autoprueba haya finalizado, sólo debe permanecer encendido el LED Line (Línea). Consulte el apartado "Resolución de problemas" en la página 1-32 si el LED Battery/Overload (Batería/Sobrecarga) está encendido o parpadea.
2. Determine la cantidad total de VA o vatios que va a precisar de todo el equipo que piensa conectar a las tomas de alimentación protegidas por batería y contra puntas de voltaje de la batería. Vea la placa del número del equipo para obtener esta información. Si el equipo se lista en amperios, multiplique el número de amperios por 120 para determinar los VA. Por ejemplo, 1 amperio x 120 = 120 VA. El total de VA para todo el equipo no puede exceder la capacidad de salida de la UPS.
3. Enchufe el sistema y el monitor a las tomas de alimentación protegidas por batería/contra puntas de voltaje de la batería. (Estas tomas de alimentación proporcionan protección contra puntas de voltaje y de batería.)

Nota: No enchufe impresoras láser a estas tomas de alimentación.

4. Conecte dispositivos como impresoras, escáneres o máquinas de fax a las tomas de alimentación protegidas contra puntas de voltaje. (No se suministra energía de la batería a estos dispositivos durante un corte de alimentación.)

Optativamente, puede efectuar lo siguiente:

1. Conecte el puerto DB9 de la UPS a un puerto DB9 del sistema utilizando el cable proporcionado. Instale el Programa de utilidad de gestión de alimentación desde el CD que se incluye. Este paso de instalación es opcional ya que la UPS funcionará correctamente sin esta conexión.
2. Enchufe una sola línea telefónica al conector **IN**. Enchufe un teléfono, un módem del sistema o un dispositivo de fax a uno o a los dos conectores **OUT**. Se incluye un cable de 2 m (6 pies) para este propósito. Este paso de instalación es opcional ya que la UPS funcionará correctamente sin esta conexión.

Utilización de los controles

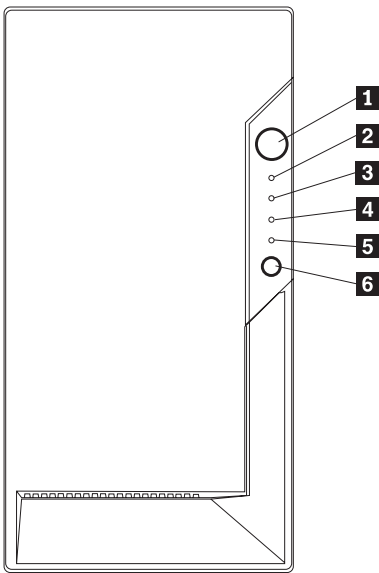


Figura 1-1. Vista frontal de la opción UPS 675 USB

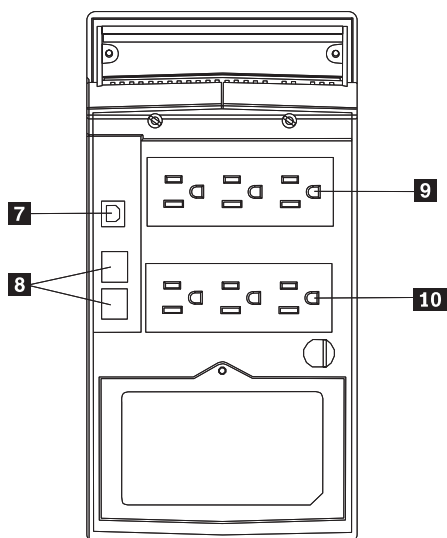


Figura 1-2. Vista posterior de la opción UPS 675 USB

Esta sección contiene información acerca de los controles para la opción UPS 675 USB.

- **1 Botón INV ON/OFF:** Este botón controla el inversor de la UPS y tiene tres funciones:

Commutar la protección de la UPS OFF/ON: Mientras la UPS esté conectada a la alimentación externa, pulse y mantenga pulsado este botón hasta oír un pitido a fin de apagar (OFF) la protección de la UPS (o de volver a encenderla (ON)). Si la protección de la UPS está en OFF, la UPS sólo proporcionará alimentación en las tomas de alimentación mientras esté recibiendo alimentación externa: no proporcionará energía de las reservas de la batería durante un apagón. Si apaga (OFF) la protección de la UPS, el LED "Line" (Línea) parpadeará hasta que la protección de la UPS se vuelva a encender (ON).

Apagar: Para apagar (OFF) la UPS completamente, desconecte en primer lugar el equipo conectado, desenchufe la UPS de la alimentación de CA y, a continuación, mantenga pulsado este botón hasta escuchar un pitido. También puede apagar la UPS manteniendo pulsado este botón hasta escuchar un pitido mientras la UPS proporciona alimentación de reserva de la batería.

Iniciar en frío: Si las baterías de la UPS están cargadas, puede iniciar en frío la UPS para utilizarla como un suministro de alimentación autónomo a falta de alimentación de CA. Para efectuar esto, mantenga pulsado este botón hasta oír un pitido.

- **2 Diodo emisor de luz (LED) "Line" (Línea) verde:** El LED está encendido continuamente cuando la UPS está encendida (ON) y recibe alimentación de CA normal, indicando que la batería se está cargando y que el equipo conectado recibe alimentación. Cuando se interrumpe la alimentación de CA, este LED se apaga. Parpadeará si la protección de la UPS se apaga.
- **3 LED "Invert" (Invertir) amarillo:** Este LED se enciende cuando la UPS proporciona alimentación de reserva de la batería.
- **4 LED "Battery" (Batería) rojo:** Durante la operación del inversor o después de un autoprueba, este LED se enciende para indicar que es posible que la batería de la UPS se necesite cambiar. Para obtener más información, vea el apartado "Resolución de problemas" en la página 1-32.
- **5 LED "Overload" (Sobrecarga) rojo:** Durante la operación del inversor o después de una autoprueba, este LED se enciende si la UPS está sobrecargada. Para obtener más información, vea el apartado "Resolución de problemas" en la página 1-32.
- **6 Botón Mute/Test (Silenciar/Prueba):** Este botón tiene tres funciones:
Silenciar la Alarma auditiva: Pulse este botón para silenciar la Alarma auditiva.

Alarma auditiva: La UPS emite un pitido cuando se enchufa mientras realiza una autoprueba. La UPS también emitirá un pitido de manera intermitente cuando esté en operación de inversión para avisarle de que está suministrando alimentación de la batería. Cuando las baterías estén a punto de agotarse, la UPS sonará continuamente (y no se podrá silenciar), advirtiéndole de que guarde los archivos abiertos y apague el equipo inmediatamente.

Ejecutar la autoprueba: Mientras la UPS está funcionando con alimentación externa, pulse y mantenga pulsado este botón hasta escuchar un pitido para ejecutar una autoprueba de la UPS. La prueba se ejecutará durante 10 segundos, tiempo en el cual la UPS emitirá un pitido y todos los LED de la misma se encenderán. Cuando la autoprueba haya finalizado, sólo debe permanecer encendido el LED Line (Línea). Consulte la Guía de resolución de problemas en el anverso si el LED Battery o Overload está encendido.

- **7 Puerto de comunicaciones USB:** Este puerto de comunicaciones USB se puede utilizar para conectar la UPS a cualquier PC con un puerto USB. Utilice este Programa de utilidad de gestión de alimentación y los cables incluidos para guardar automáticamente los archivos abiertos y apagar el equipo durante un apagón. Este puerto puede enviar señales que indican el estado de anomalía de la línea y de batería baja.

Nota: La conexión de un sistema al puerto USB es opcional. La UPS puede funcionar correctamente sin esta conexión.

- **8 Conectores de supresión de puntas de voltaje de módem/fax RJ45:** Estos conectores RJ45 pueden proporcionar protección contra las puntas de voltaje en una única línea de teléfono o de red. Enchufe una única línea de teléfono

o de red al conector IN de la UPS. Enchufe un teléfono, un módem del sistema o un dispositivo de fax al conector OUT de la UPS. Se incluye un conjunto de cables RJ45 de 2 m (6 pies) para este propósito.

Nota: La conexión del equipo a los conectores RJ45 es opcional. La UPS puede funcionar correctamente sin esta conexión.

- **9 Tomas de alimentación protegidas por batería/contra puntas de voltaje:** Estas tomas de alimentación proporcionan protección de la batería así como contra puntas de voltaje. Enchufe el sistema, el monitor y otro equipo crítico a estas tomas de alimentación.

Nota: No enchufe impresoras o supresores de puntas de voltaje a estas tomas de alimentación.

- **10 Tomas de alimentación protegidas contra puntas de voltaje:** Mientras las seis tomas de alimentación proporcionan protección contra puntas de voltaje y ruidos en la línea, las tres tomas de alimentación protegidas contra puntas de voltaje no proporcionan protección contra ruidos en la línea. Enchufe el equipo que no necesita la reserva de la batería durante cortes de alimentación externa (como por ejemplo impresoras, escáneres y máquinas de fax) a estas tomas de alimentación.

Esta sección contiene información acerca de los controles para la opción UPS 500.

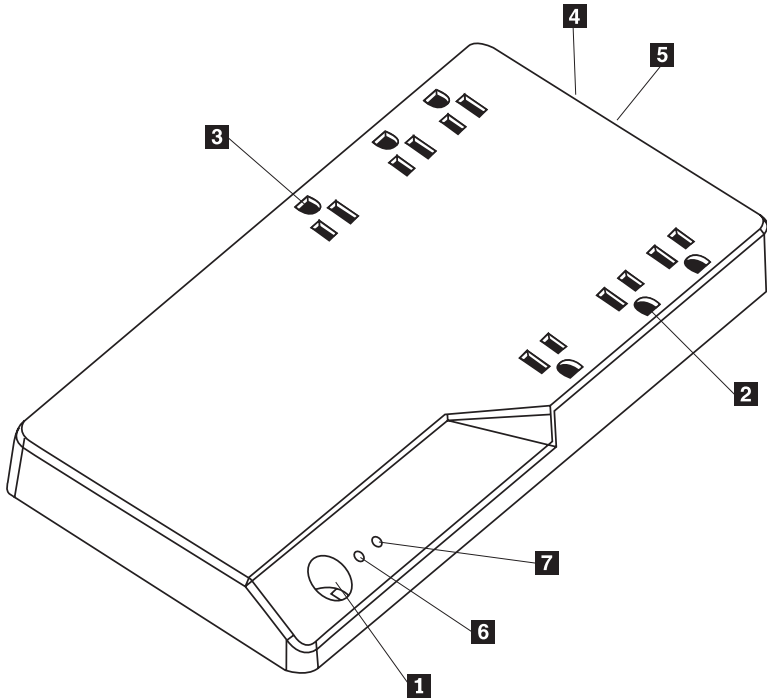


Figura 1-3. Controles de la UPS 500

- **1 Botón INV ON/OFF:** Este botón controla el inversor de la UPS y tiene tres funciones:
 - **Conmutar la protección de la UPS OFF/ON:** Mientras la UPS esté conectada a la alimentación externa, pulse y mantenga pulsado este botón hasta oír un pitido a fin de apagar (OFF) la protección de la UPS (o de volver a encenderla (ON)). Si la protección de la UPS está en OFF, la UPS sólo proporcionará alimentación en las tomas de alimentación mientras esté recibiendo alimentación externa: no proporcionará energía de las reservas de la batería durante un apagón. Si apaga (OFF) la protección de la UPS, el LED Line (Línea) parpadeará hasta que la protección de la UPS se vuelva a encender (ON).
 - **Apagar:** Para apagar (OFF) la UPS completamente, desconecte en primer lugar el equipo conectado, desenchufe la UPS de la alimentación de CA y, a continuación, mantenga pulsado este botón hasta escuchar un pitido.

También puede apagar la UPS manteniendo pulsado este botón hasta escuchar un pitido mientras la UPS proporciona alimentación de reserva de la batería.

- **Iniciar en frío:** Si las baterías de la UPS están cargadas, puede iniciar en frío la UPS para utilizarla como un suministro de alimentación autónomo a falta de alimentación de CA. Para efectuar esto, pulse este botón hasta oír un pitido.
- **2 Tomas de alimentación protegidas por batería/contra puntas de voltaje:** Estas tomas de alimentación proporcionan protección de la batería así como contra puntas de voltaje. Enchufe el sistema, el monitor y otro equipo crítico a estas tomas de alimentación.

Nota: No enchufe impresoras o supresores de puntas de voltaje a estas tomas de alimentación.

- **3 Tomas de alimentación protegidas contra puntas de voltaje:** Mientras las seis tomas de alimentación proporcionan protección contra puntas de voltaje y ruidos en la línea, las tres tomas de alimentación protegidas contra puntas de voltaje no proporcionan reserva de la batería. Enchufe el equipo que no necesita la reserva de la batería durante cortes de alimentación externa a estas tomas de alimentación.
- **4 Puerto de comunicaciones DB9:** Este puerto de comunicaciones DB9 se puede utilizar para conectar la UPS a cualquier PC con un puerto DB9. Utilice este Programa de utilidad de gestión de alimentación y los cables incluidos para guardar automáticamente los archivos abiertos y apagar el equipo durante un apagón. Este puerto puede enviar señales para indicar el estado de anomalía de la línea y de batería baja.

Nota: La conexión del sistema a un puerto DB9 es opcional. La UPS puede funcionar correctamente sin esta conexión.

- **5 Conectores de supresión de puntas de voltaje de módem/fax RJ11:** Estos conectores RJ11 pueden proporcionar protección contra puntas de voltaje en una única línea de teléfono. Enchufe una única línea de teléfono al conector IN de la UPS. Enchufe un teléfono, un módem del sistema o un dispositivo de fax a uno o a los dos conectores OUT de la UPS. Se incluye un conjunto de cables RJ11 de 2 m (6 pies) para este propósito. (Sólo un dispositivo conectado se puede comunicar mediante el cable de entrada cada vez.)

Nota: La conexión del equipo a los conectores RJ11 es opcional. La UPS puede funcionar correctamente sin esta conexión.

- **6 LED "Line" (Línea) verde:** Este LED está encendido continuamente cuando la UPS está encendida (ON) y recibe alimentación de CA normal, indicando que la batería se está cargando y que el equipo conectado recibe alimentación. Este LED también está encendido continuamente cuando la UPS se enciende por primera vez y una autoprueba de inicio está en progreso. Este LED parpadea cuando la UPS está en una operación de

inversor (funcionando con la batería) indicando que la batería se está descargando. Si la alarma suena continuamente y el LED Battery/Overload (Batería/Sobrecarga) rojo se enciende mientras esta luz parpadea, la UPS está casi sin alimentación: debe guardar los archivos y apagar el sistema inmediatamente.

- **7 LED Low Battery/Overload (Batería baja/Sobrecarga) rojo:** Este LED se enciende durante la autoprueba de la UPS cuando la UPS se enchufa por primera vez. También se enciende cuando la UPS está sobrecargada, y parpadea cuando las baterías de la UPS están casi agotadas. Si esta luz está encendida o parpadea después de la autoprueba de la UPS, vaya al apartado “Resolución de problemas”.
- **8 Alarma auditiva:** La UPS emite un pitido cuando se enchufa mientras realiza una autoprueba. La UPS también emitirá un pitido de manera intermitente cuando esté en operación de inversión para avisarle de que está suministrando alimentación de la batería. Cuando las baterías estén a punto de agotarse, la UPS sonará continuamente para advertirle que tiene que guardar los archivos abiertos y apagar el equipo inmediatamente.

Nota: Todas las luces de indicación están apagadas (OFF) cuando la UPS no está enchufada a una toma de alimentación de CA y no está encendida (ON).

Resolución de problemas

Para obtener información acerca de la resolución de problemas, consulte la tabla siguiente.

SÍNTOMA	PROBLEMA	CORRECCIÓN
Todas las luces de indicación están apagadas.	La UPS no está enchufada a una toma de alimentación de CA activa.	Enchufe la UPS a una toma de alimentación activa. Si no hay alimentación presente, asegúrese de que el interruptor general del edificio no se haya apagado accidentalmente.
La UPS no proporciona el tiempo de funcionamiento esperado.	La batería no está suficientemente cargada o las frecuentes interrupciones de alimentación la han descargado.	Deje que la batería se cargue durante 4-6 horas.

SÍNTOMA	PROBLEMA	CORRECCIÓN
La alarma de la UPS emite un pitido. El tiempo de funcionamiento ha disminuido. UPS 500: El LED Low Battery/Overload (Batería baja/Sobrecarga) se enciende y permanece encendido (ON). USB 675 USB: El LED Overload (Sobrecarga) se enciende.	Las tomas de alimentación protegidas por batería/contra puntas de voltaje están sobrecargadas.	Elimine algo de carga de los receptáculos. A continuación, ejecute la autoprueba de la UPS pulsando el botón Mute/Test (Silenciar/Prueba) (sólo en UPS 675 USB) o reiniciando la UPS.
La alarma de la UPS emite un pitido. El tiempo de funcionamiento ha disminuido. UPS 500: El LED Low Battery/Overload (Batería baja/Sobrecarga) parpadea en ON y OFF. UPS 675 USB: El LED Battery (Batería) se enciende.	Es posible que necesite sustituir las baterías de la UPS.	Deje que la batería se cargue durante 12 horas. A continuación, ejecute una autoprueba de la UPS pulsando el botón Mute/Test (Silenciar/Prueba) (sólo en UPS 675 USB) o reiniciando la USB. Si la condición persiste, póngase en contacto con IBM para realizar la sustitución de la batería.

Mantenimiento de la opción

Esta UPS contiene piezas a las que el usuario no puede proporcionar servicio técnico.

Appendix A. Product specifications

This section contains the product specifications for the UPS 500 and UPS 675 USB options.

	UPS 500 Option	UPS 675 USB Option
Output capacity (VA/watts)	500/300	675/400
Nominal output (voltage, frequency)	120V, 60Hz	120V, 60Hz
Nominal input (voltage, frequency)	120V, 60Hz	120V, 60Hz
Typical backup time	4-15 minutes	4-15 minutes
Battery recharge rate (to 90% charge)	4-6 hours	4-6 hours
Transfer time, typical	2-4 milliseconds	2-4 milliseconds
AC outlets (NEMA 5-15R)	6 (3 UPS/surge and 3 surge-only)	6 (3 UPS/surge and 3 surge-only)
Dimensions (H by W by D, m)	3.275 x 11.180 x 5.75	10.81 x 5.5 x 8.4

Surge and line noise protection:

Suppresses up to 6,000 volt spikes at current levels up to 19,500 amps. Spike suppression starts at voltages just above nominal peak line values. Handles up to 240 joules. Clamping response time: less than one nanosecond. Spike protection in all three modes: Hot to Neutral, Hot to Ground, and Neutral to Ground. Full-time EMI/RFI noise suppression.

Fax/Modem protection:

UPS 675 USB: Single-line modem/fax protection covers center two wires (1 pair) on RJ45.

UPS 500: Single-line modem/fax protection covers center two wires (1 pair) on RJ11.

Agency approvals:

The UPS 500 and UPS 675 USB options are UL-1778 listed (UPS system). It meets Canadian National Standards as certified by UL, FCC Class B and Part 68, as well as Industry Canada specifications.

Appendix B. Help and service information

This section contains information on how to obtain warranty information on the World Wide Web and online and telephone technical support.

Warranty information on the World Wide Web

The IBM Machine Warranties Web site at http://www.ibm.com/servers/support/machine_warranties/ contains a worldwide overview of the IBM Limited Warranty for IBM Machines, a glossary of terms used in the Statement of Limited Warranty, Frequently Asked Questions (FAQ), and links to Product Support Web pages. The IBM Statement of Limited Warranty is available from this Web site in 29 languages in Portable Document Format (PDF).

Online technical support

Online technical support is available during the life of your product. Online assistance can be obtained through the Personal Computing Support Web site.

<i>Online technical support</i>	
IBM Personal Computing Support Web site	http://www.ibm.com/pc/support

During the warranty period, assistance for replacement or exchange of defective components is available. In addition, if your IBM option is installed in an IBM computer, you might be entitled to service at your location. Your technical support representative can help you determine the best alternative.

Telephone technical support

Installation and configuration support through the HelpCenter will be withdrawn or made available for a fee, at IBM's discretion, 90 days after the option has been withdrawn from marketing. Additional support offerings, including step-by-step installation assistance, are available for a nominal fee.

To assist the technical support representative, have available as much of the following information as possible:

- Option name
- Option number
- Proof of purchase

- Computer manufacturer, model, serial number (if IBM), and manual
- Exact wording of the error message (if any)
- Description of the problem
- Hardware and software configuration information for your system

If possible, be at your computer. Your technical support representative might want to walk you through the problem during the call.

For the support telephone number and support hours by country, refer to the following table. If the number is not provided, contact your IBM reseller or IBM marketing representative. Response time may vary depending on the number and nature of the calls received.

<i>Support 24 hours a day, 7 days a week</i>	
Canada (Toronto only)	416-383-3344
Canada (all other)	1-800-565-3344
U.S.A. and Puerto Rico	1-800-772-2227
All other countries	Go to http://www.ibm.com/pc/support/ , and click Support Phone List .

Appendix C. Product warranty and notices

This section contains product warranty and notices information.

Warranty Statement

This section contains the warranty period for your product and the IBM Statement of Limited Warranty.

Machine - UPS 675 USB and 500 VA Options **Warranty period*** - Three years

** Contact your place of purchase for warranty service information. Some IBM Machines are eligible for on-site warranty service depending on the country where service is performed.*

IBM Statement of Limited Warranty

Z125-4753-06 8/2000

Part 1 - General Terms

This Statement of Limited Warranty includes Part 1 - General Terms and Part 2 - Country-unique Terms. The terms of Part 2 replace or modify those of Part 1. The warranties provided by IBM in this Statement of Limited Warranty apply only to Machines you purchase for your use, and not for resale, from IBM or your reseller. The term "Machine" means an IBM machine, its features, conversions, upgrades, elements, or accessories, or any combination of them. The term "Machine" does not include any software programs, whether pre-loaded with the Machine, installed subsequently or otherwise. Unless IBM specifies otherwise, the following warranties apply only in the country where you acquire the Machine. Nothing in this Statement of Limited Warranty affects any statutory rights of consumers that cannot be waived or limited by contract. If you have any questions, contact IBM or your reseller.

The IBM Warranty for Machines

IBM warrants that each Machine 1) is free from defects in materials and workmanship and 2) conforms to IBM's Official Published Specifications ("Specifications"). The warranty period for a Machine is a specified, fixed period commencing on its Date of Installation. The date on your sales receipt is the Date of Installation unless IBM or your reseller informs you otherwise.

If a Machine does not function as warranted during the warranty period, and IBM or your reseller are unable to either 1) make it do so or 2) replace it with one that is at least functionally equivalent, you may return it to your place of purchase and your money will be refunded.

Extent of Warranty

The warranty does not cover the repair or exchange of a Machine resulting from misuse, accident, modification, unsuitable physical or operating environment, improper maintenance by you, or failure caused by a product for which IBM is not responsible. The warranty is voided by removal or alteration of Machine or parts identification labels.

THESE WARRANTIES ARE YOUR EXCLUSIVE WARRANTIES AND REPLACE ALL OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THESE WARRANTIES GIVE YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM JURISDICTION TO JURISDICTION. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF EXPRESS OR IMPLIED WARRANTIES, SO THE ABOVE EXCLUSION OR LIMITATION MAY NOT APPLY TO YOU. IN THAT EVENT, SUCH WARRANTIES ARE LIMITED IN DURATION TO THE WARRANTY PERIOD. NO WARRANTIES APPLY AFTER THAT PERIOD.

Items Not Covered by Warranty

IBM does not warrant uninterrupted or error-free operation of a Machine.

Any technical or other support provided for a Machine under warranty, such as assistance via telephone with “how-to” questions and those regarding Machine set-up and installation, will be provided **WITHOUT WARRANTIES OF ANY KIND.**

Warranty Service

To obtain warranty service for a Machine, contact IBM or your reseller. If you do not register your Machine with IBM, you may be required to present proof of purchase.

During the warranty period, IBM or your reseller, if approved by IBM to provide warranty service, provides without charge certain types of repair and exchange service to keep Machines in, or restore them to, conformance with their Specifications. IBM or your reseller will inform you of the available types of service for a Machine based on its country of installation. At its discretion, IBM or your reseller will 1) either repair or exchange the failing Machine and 2) provide the service either at your location or a service center. IBM or your reseller will also manage and install selected engineering changes that apply to the Machine.

Some parts of IBM Machines are designated as Customer Replaceable Units (called "CRUs"), e.g., keyboards, memory, or hard disk drives. IBM ships CRUs to you for replacement by you. You must return all defective CRUs to IBM within 30 days of your receipt of the replacement CRU. You are responsible for downloading designated Machine Code and Licensed Internal Code updates from an IBM Internet Web site or from other electronic media, and following the instructions that IBM provides.

When warranty service involves the exchange of a Machine or part, the item IBM or your reseller replaces becomes its property and the replacement becomes yours. You represent that all removed items are genuine and unaltered. The replacement may not be new, but will be in good working order and at least functionally equivalent to the item replaced. The replacement assumes the warranty service status of the replaced item. Many features, conversions, or upgrades involve the removal of parts and their return to IBM. A part that replaces a removed part will assume the warranty service status of the removed part.

Before IBM or your reseller exchanges a Machine or part, you agree to remove all features, parts, options, alterations, and attachments not under warranty service.

You also agree to

1. ensure that the Machine is free of any legal obligations or restrictions that prevent its exchange;
2. obtain authorization from the owner to have IBM or your reseller service a Machine that you do not own; and
3. where applicable, before service is provided:
 - a. follow the problem determination, problem analysis, and service request procedures that IBM or your reseller provides;
 - b. secure all programs, data, and funds contained in a Machine;
 - c. provide IBM or your reseller with sufficient, free, and safe access to your facilities to permit them to fulfill their obligations; and
 - d. inform IBM or your reseller of changes in a Machine's location.

IBM is responsible for loss of, or damage to, your Machine while it is 1) in IBM's possession or 2) in transit in those cases where IBM is responsible for the transportation charges.

Neither IBM nor your reseller is responsible for any of your confidential, proprietary or personal information contained in a Machine which you return to IBM or your reseller for any reason. You should remove all such information from the Machine prior to its return.

Limitation of Liability

Circumstances may arise where, because of a default on IBM's part or other liability, you are entitled to recover damages from IBM. In each such instance, regardless of the basis on which you are entitled to claim damages from IBM (including fundamental breach, negligence, misrepresentation, or other contract or tort claim), except for any liability that cannot be waived or limited by applicable laws, IBM is liable for no more than

1. damages for bodily injury (including death) and damage to real property and tangible personal property; and
2. the amount of any other actual direct damages, up to the charges (if recurring, 12 months' charges apply) for the Machine that is subject of the claim. For purposes of this item, the term "Machine" includes Machine Code and Licensed Internal Code.

This limit also applies to IBM's suppliers and your reseller. It is the maximum for which IBM, its suppliers, and your reseller are collectively responsible.

UNDER NO CIRCUMSTANCES IS IBM LIABLE FOR ANY OF THE FOLLOWING: 1) THIRD-PARTY CLAIMS AGAINST YOU FOR DAMAGES (OTHER THAN THOSE UNDER THE FIRST ITEM LISTED ABOVE); 2) LOSS OF, OR DAMAGE TO, YOUR RECORDS OR DATA; OR 3) SPECIAL, INCIDENTAL, OR INDIRECT DAMAGES OR FOR ANY ECONOMIC CONSEQUENTIAL DAMAGES, LOST PROFITS OR LOST SAVINGS, EVEN IF IBM, ITS SUPPLIERS OR YOUR RESELLER IS INFORMED OF THEIR POSSIBILITY. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

Governing Law

Both you and IBM consent to the application of the laws of the country in which you acquired the Machine to govern, interpret, and enforce all of your and IBM's rights, duties, and obligations arising from, or relating in any manner to, the subject matter of this Agreement, without regard to conflict of law principles.

Part 2 - Country-unique Terms

AMERICAS

BRAZIL

Governing Law: *The following is added after the first sentence:* Any litigation arising from this Agreement will be settled exclusively by the court of Rio de Janeiro.

NORTH AMERICA

Warranty Service: *The following is added to this Section:* To obtain warranty service from IBM in Canada or the United States, call 1-800-IBM-SERV (426-7378).

CANADA

Governing Law: *The following replaces “laws of the country in which you acquired the Machine” in the first sentence:* laws in the Province of Ontario.

UNITED STATES

Governing Law: *The following replaces “laws of the country in which you acquired the Machine” in the first sentence:* laws of the State of New York.

ASIA PACIFIC

AUSTRALIA

The IBM Warranty for Machines: *The following paragraph is added to this Section:* The warranties specified in this Section are in addition to any rights you may have under the Trade Practices Act 1974 or other similar legislation and are only limited to the extent permitted by the applicable legislation.

Limitation of Liability: *The following is added to this Section:* Where IBM is in breach of a condition or warranty implied by the Trade Practices Act 1974 or other similar legislation, IBM’s liability is limited to the repair or replacement of the goods or the supply of equivalent goods. Where that condition or warranty relates to right to sell, quiet possession or clear title, or the goods are of a kind ordinarily acquired for personal, domestic or household use or consumption, then none of the limitations in this paragraph apply.

Governing Law: *The following replaces “laws of the country in which you acquired the Machine” in the first sentence:* laws of the State or Territory.

CAMBODIA, LAOS, AND VIETNAM

Governing Law: *The following replaces “laws of the country in which you acquired the Machine” in the first sentence:* laws of the State of New York.

The following is added to this Section: Disputes and differences arising out of or in connection with this Agreement shall be finally settled by arbitration which shall be held in Singapore in accordance with the rules of the International Chamber of Commerce (ICC). The arbitrator or arbitrators designated in conformity with those rules shall have the power to rule on their own

competence and on the validity of the Agreement to submit to arbitration. The arbitration award shall be final and binding for the parties without appeal and the arbitral award shall be in writing and set forth the findings of fact and the conclusions of law.

All proceedings shall be conducted, including all documents presented in such proceedings, in the English language. The number of arbitrators shall be three, with each side to the dispute being entitled to appoint one arbitrator.

The two arbitrators appointed by the parties shall appoint a third arbitrator before proceeding upon the reference. The third arbitrator shall act as chairman of the proceedings. Vacancies in the post of chairman shall be filled by the president of the ICC. Other vacancies shall be filled by the respective nominating party. Proceedings shall continue from the stage they were at when the vacancy occurred.

If one of the parties refuses or otherwise fails to appoint an arbitrator within 30 days of the date the other party appoints its, the first appointed arbitrator shall be the sole arbitrator, provided that the arbitrator was validly and properly appointed.

The English language version of this Agreement prevails over any other language version.

HONG KONG AND MACAU

Governing Law: *The following replaces "laws of the country in which you acquired the Machine" in the first sentence: laws of Hong Kong Special Administrative Region.*

INDIA

Limitation of Liability: *The following replaces items 1 and 2 of this Section:*

1. liability for bodily injury (including death) or damage to real property and tangible personal property will be limited to that caused by IBM's negligence;
2. as to any other actual damage arising in any situation involving nonperformance by IBM pursuant to, or in any way related to the subject of this Statement of Limited Warranty, IBM's liability will be limited to the charge paid by you for the individual Machine that is the subject of the claim.

JAPAN

Governing Law: *The following sentence is added to this Section:* Any doubts concerning this Agreement will be initially resolved between us in good faith and in accordance with the principle of mutual trust.

NEW ZEALAND

The IBM Warranty for Machines: *The following paragraph is added to this Section:* The warranties specified in this Section are in addition to any rights you may have under the Consumer Guarantees Act 1993 or other legislation which cannot be excluded or limited. The Consumer Guarantees Act 1993 will not apply in respect of any goods which IBM provides, if you require the goods for the purposes of a business as defined in that Act.

Limitation of Liability: *The following is added to this Section:* Where Machines are not acquired for the purposes of a business as defined in the Consumer Guarantees Act 1993, the limitations in this Section are subject to the limitations in that Act.

PEOPLE'S REPUBLIC OF CHINA (PRC)

Governing Law: *The following replaces this Section:* Both you and IBM consent to the application of the laws of the State of New York (except when local law requires otherwise) to govern, interpret, and enforce all your and IBM's rights, duties, and obligations arising from, or relating in any manner to, the subject matter of this Agreement, without regard to conflict of law principles.

Any disputes arising from or in connection with this Agreement will first be resolved by friendly negotiations, failing which either of us has the right to submit the dispute to the China International Economic and Trade Arbitration Commission in Beijing, the PRC, for arbitration in accordance with its arbitration rules in force at the time. The arbitration tribunal will consist of three arbitrators. The language to be used therein will be English and Chinese. An arbitral award will be final and binding on all the parties, and will be enforceable under the Convention on the Recognition and Enforcement of Foreign Arbitral Awards (1958).

The arbitration fee will be borne by the losing party unless otherwise determined by the arbitral award.

During the course of arbitration, this Agreement will continue to be performed except for the part which the parties are disputing and which is undergoing arbitration.

EUROPE, MIDDLE EAST, AFRICA (EMEA)

THE FOLLOWING TERMS APPLY TO ALL EMEA COUNTRIES: The terms of this Statement of Limited Warranty apply to Machines purchased from IBM or an IBM reseller.

Warranty Service:

If you purchase an IBM Machine in Austria, Belgium, Denmark, Estonia, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland or United Kingdom, you may obtain warranty service for that Machine in any of those countries from either (1) an IBM reseller approved to perform warranty service or (2) from IBM. If you purchase an IBM Personal Computer Machine in Albania, Armenia, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Georgia, Hungary, Kazakhstan, Kirghizia, Federal Republic of Yugoslavia, Former Yugoslav Republic of Macedonia (FYROM), Moldova, Poland, Romania, Russia, Slovak Republic, Slovenia, or Ukraine, you may obtain warranty service for that Machine in any of those countries from either (1) an IBM reseller approved to perform warranty service or (2) from IBM.

If you purchase an IBM Machine in a Middle Eastern or African country, you may obtain warranty service for that Machine from the IBM entity within the country of purchase, if that IBM entity provides warranty service in that country, or from an IBM reseller, approved by IBM to perform warranty service on that Machine in that country. Warranty service in Africa is available within 50 kilometers of an IBM authorized service provider. You are responsible for transportation costs for Machines located outside 50 kilometers of an IBM authorized service provider.

Governing Law:

The applicable laws that govern, interpret and enforce rights, duties, and obligations of each of us arising from, or relating in any manner to, the subject matter of this Statement, without regard to conflict of laws principles, as well as Country-unique terms and competent court for this Statement are those of the country in which the warranty service is being provided, except that in 1) Albania, Bosnia-Herzegovina, Bulgaria, Croatia, Hungary, Former Yugoslav Republic of Macedonia, Romania, Slovakia, Slovenia, Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan, the laws of Austria apply; 2) Estonia, Latvia, and Lithuania, the laws of Finland apply; 3) Algeria, Benin, Burkina Faso, Cameroon, Cape Verde, Central African Republic, Chad, Congo, Djibouti, Democratic Republic of Congo, Equatorial Guinea, France, Gabon, Gambia, Guinea, Guinea-Bissau, Ivory Coast, Lebanon, Mali, Mauritania, Morocco, Niger, Senegal, Togo, and Tunisia, this Agreement will be construed and the legal relations between the parties will be determined in accordance with the French laws and all disputes arising out of this Agreement or related to its

violation or execution, including summary proceedings, will be settled exclusively by the Commercial Court of Paris; 4) Angola, Bahrain, Botswana, Burundi, Egypt, Eritrea, Ethiopia, Ghana, Jordan, Kenya, Kuwait, Liberia, Malawi, Malta, Mozambique, Nigeria, Oman, Pakistan, Qatar, Rwanda, Sao Tome, Saudi Arabia, Sierra Leone, Somalia, Tanzania, Uganda, United Arab Emirates, United Kingdom, West Bank/Gaza, Yemen, Zambia, and Zimbabwe, this Agreement will be governed by English Law and disputes relating to it will be submitted to the exclusive jurisdiction of the English courts; and 5) in Greece, Israel, Italy, Portugal, and Spain any legal claim arising out of this Statement will be brought before, and finally settled by, the competent court of Athens, Tel Aviv, Milan, Lisbon, and Madrid, respectively.

THE FOLLOWING TERMS APPLY TO THE COUNTRY SPECIFIED:

AUSTRIA AND GERMANY

The IBM Warranty for Machines: *The following replaces the first sentence of the first paragraph of this Section:* The warranty for an IBM Machine covers the functionality of the Machine for its normal use and the Machine's conformity to its Specifications.

The following paragraphs are added to this Section:

The minimum warranty period for Machines is six months. In case IBM or your reseller is unable to repair an IBM Machine, you can alternatively ask for a partial refund as far as justified by the reduced value of the unrepaired Machine or ask for a cancellation of the respective agreement for such Machine and get your money refunded.

Extent of Warranty: *The second paragraph does not apply.*

Warranty Service: *The following is added to this Section:* During the warranty period, transportation for delivery of the failing Machine to IBM will be at IBM's expense.

Limitation of Liability: *The following paragraph is added to this Section:* The limitations and exclusions specified in the Statement of Limited Warranty will not apply to damages caused by IBM with fraud or gross negligence and for express warranty.

The following sentence is added to the end of item 2: IBM's liability under this item is limited to the violation of essential contractual terms in cases of ordinary negligence.

EGYPT

Limitation of Liability: *The following replaces item 2 in this Section:* as to any other actual direct damages, IBM's liability will be limited to the total amount you paid for the Machine that is the subject of the claim. For purposes of this item, the term "Machine" includes Machine Code and Licensed Internal Code.

Applicability of suppliers and resellers (unchanged).

FRANCE

Limitation of Liability: *The following replaces the second sentence of the first paragraph of this Section:*In such instances, regardless of the basis on which you are entitled to claim damages from IBM, IBM is liable for no more than: (items 1 and 2 unchanged).

IRELAND

Extent of Warranty: *The following is added to this Section:* Except as expressly provided in these terms and conditions, all statutory conditions, including all warranties implied, but without prejudice to the generality of the foregoing all warranties implied by the Sale of Goods Act 1893 or the Sale of Goods and Supply of Services Act 1980 are hereby excluded.

Limitation of Liability: *The following replaces items one and two of the first paragraph of this Section:*1. death or personal injury or physical damage to your real property solely caused by IBM's negligence; and 2. the amount of any other actual direct damages, up to 125 percent of the charges (if recurring, the 12 months' charges apply) for the Machine that is the subject of the claim or which otherwise gives rise to the claim.

Applicability of suppliers and resellers (unchanged).

The following paragraph is added at the end of this Section: IBM's entire liability and your sole remedy, whether in contract or in tort, in respect of any default shall be limited to damages.

ITALY

Limitation of Liability: *The following replaces the second sentence in the first paragraph:*In each such instance unless otherwise provided by mandatory law, IBM is liable for no more than: 1. (unchanged) 2. as to any other actual damage arising in all situations involving nonperformance by IBM pursuant to, or in any way related to the subject matter of this Statement of Warranty, IBM's liability, will be limited to the total amount you paid for the Machine that is the subject of the claim. *Applicability of suppliers and resellers (unchanged).*

The following replaces the third paragraph of this Section: Unless otherwise provided by mandatory law, IBM and your reseller are not liable for any of the following: (items 1 and 2 unchanged) 3) indirect damages, even if IBM or your reseller is informed of their possibility.

SOUTH AFRICA, NAMIBIA, BOTSWANA, LESOTHO AND SWAZILAND

Limitation of Liability: *The following is added to this Section: IBM's entire liability to you for actual damages arising in all situations involving nonperformance by IBM in respect of the subject matter of this Statement of Warranty will be limited to the charge paid by you for the individual Machine that is the subject of your claim from IBM.*

UNITED KINGDOM

Limitation of Liability: *The following replaces items 1 and 2 of the first paragraph of this Section:*

1. death or personal injury or physical damage to your real property solely caused by IBM's negligence;
2. the amount of any other actual direct damages or loss, up to 125 percent of the charges (if recurring, the 12 months' charges apply) for the Machine that is the subject of the claim or which otherwise gives rise to the claim;

The following item is added to this paragraph: 3. breach of IBM's obligations implied by Section 12 of the Sale of Goods Act 1979 or Section 2 of the Supply of Goods and Services Act 1982.

Applicability of suppliers and resellers (unchanged).

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Electronic Emissions Notices

UPS 675 USB and 500 VA Options Quick Start Guide

Federal Communications Commission (FCC) statement

Note: 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 measures:

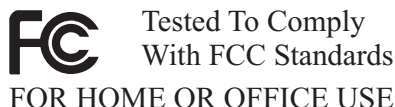
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult an IBM authorized dealer or service representative for help.

Properly shielded and grounded cables and connectors must be used in order to meet FCC emission limits. Proper cables and connectors are available from IBM authorized dealers. IBM is not responsible for any radio or television interference caused by using other than recommended cables and connectors or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Responsible party:

International Business Machines Corporation
New Orchard Road
Armonk, NY 10504
Telephone: 1-919-543-2193



Industry Canada Class B emission compliance statement

This Class B digital apparatus complies with Canadian ICES-003.

Avis de conformité a la réglementation d'Industrie Canada

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Deutsche EMV-Direktive (electromagnetische Verträglichkeit)

Zulassungsbcheinigung laut dem Deutschen Gesetz über die elektromagnetische Verträglichkeit von Geräten (EMVG) vom 30. August 1995 (bzw. der EMC EG Richtlinie 89/336):

Dieses Gerät ist berechtigt in Übereinstimmung mit dem Deutschen EMVG das EG-Konformitätszeichen - CE - zu führen. Verantwortlich für die Konformitätserklärung nach Paragraph 5 des EMVG ist die:

IBM Deutschland Informationssysteme GmbH, 70548 Stuttgart.

Informationen in Hinsicht EMVG Paragraph 3 Abs. (2) 2:

Das Gerät erfüllt die Schutzanforderungen nach EN 50082-1 und EN 55022 Klasse B.
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EN 50082-1 Hinweis:

“Wird dieses Gerät in einer industriellen Umgebung betrieben (wie in EN 50082-2 festgelegt), dann kann es dabei eventuell gestört werden. In solch einem FA11 ist der Abstand bzw. die Abschirmung zu der industriellen Stromquelle zu vergrößern.”

Anmerkung:

Um die Einhaltung des EMVG sicherzustellen sind die Geräte, wie in den IBM Handbüchern angegeben, zu installieren und zu betreiben.

European Union - emission directive

This product is in conformity with the protection requirements of EU Council Directive 89/366/ECC on the approximation of the laws of the Member States relating to electromagnetic compatibility.

IBM can not accept responsibility for any failure to satisfy the protection requirements resulting from a non-recommended modification of the product, including the fitting of non-IBM option cards.

This product has been tested and found to comply with the limits for Class B Information Technology Equipment according to European Standard EN 55022. The limits for Class B equipment were derived for typical residential environments to provide reasonable protection against interference with licensed communication devices.

Union Européenne - Directive Conformité électromagnétique

Ce produit est conforme aux exigences de protection de la Directive 89/336/EEC du Conseil de l'UE sur le rapprochement des lois des États membres en matière de compatibilité électromagnétique.

IBM ne peut accepter aucune responsabilité pour le manquement aux exigences de protection résultant d'une modification non recommandée du produit, y compris l'installation de cartes autres que les cartes IBM.

Ce produit a été testé et il satisfait les conditions de l'équipement informatique de Classe B en vertu de Standard européen EN 55022. Les conditions pour l'équipement de Classe B ont été définies en fonction d'un contexte résidentiel

ordinaire afin de fournir une protection raisonnable contre l'interférence d'appareils de communication autorisés.

Unione Europea - Direttiva EMC (Conformidad electromagnética)

Este producto satisface los requisitos de protección del Consejo de la UE, Directiva 89/336/CEE en lo que a la legislación de los Estados Miembros sobre compatibilidad electromagnética se refiere.

IBM no puede aceptar responsabilidad alguna si este producto deja de satisfacer dichos requisitos de protección como resultado de una modificación no recomendada del producto, incluyendo el ajuste de tarjetas de opción que no sean IBM.

Este producto ha sido probado y satisface los límites para Equipos Informáticos Clase B de conformidad con el Estándar Europeo EN 55022. Los límites para los equipos de Clase B se han establecido para entornos residenciales típicos a fin de proporcionar una protección razonable contra las interferencias con dispositivos de comunicación licenciados.

Union Europea - Normativa EMC

Questo prodotto è conforme alle normative di protezione ai sensi della Direttiva del Consiglio dell'Unione Europea 89/336/CEE sull'armonizzazione legislativa degli stati membri in materia di compatibilità elettromagnetica.

IBM non accetta responsabilità alcuna per la mancata conformità alle normative di protezione dovuta a modifiche non consigliate al prodotto, compresa l'installazione di schede e componenti di marca diversa da IBM.

Le prove effettuate sul presente prodotto hanno accertato che esso rientra nei limiti stabiliti per le apparecchiature di informatica Classe B ai sensi della Norma Europea EN 55022. I limiti delle apparecchiature della Classe B sono stati stabiliti al fine di fornire ragionevole protezione da interferenze mediante dispositivi di comunicazione in concessione in ambienti residenziali tipici.

이 기기는 가정용으로 전자파 적합등록을 기기로서

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