



Touchstone TB130 DC Output UPS

User Guide

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Patent Notice

Protected under one or more of the following U.S. patents: <http://www.arris.com/legal>
Other patents pending.

Table of Contents

- 1. Product Overview 4
- 2. Installing the TB130 DC Output UPS..... 5
- 3. Wall-Mounting the TB130 6
- 4. LED Behavior 8
- 5. Testing and Troubleshooting the TB130..... 9
- 6. Safety Requirements 10
 - FCC Part 15 11
 - Innovation, Science and Economic Development Canada statement:..... 11

Product Overview

The TB130 DC Output UPS provides DC voltage to a Telephony Modem or Telephony Gateway through the use of an internal DC power supply, backed by a rechargeable lithium-ion battery. The TB130 DC Output UPS is an optional product that may be offered with designated ARRIS modem products, such as the TM3402 Telephony Modem. The battery can provide at least eight hours of on-hook backup time to the TM3402.

The TB130 provides a multicolor LED for visual status, and provides telemetry to the connected device for more detailed battery status information.

This guide covers the following TB130 models:

- TB130B

Installing the TB130 DC Output UPS

Your Touchstone device may be shipped with a standard power adapter, or it may be shipped with a TB130 DC Output UPS.

1. If your Touchstone device was shipped with a TB130 DC Output UPS, skip to step 3.
2. If your Touchstone device was shipped with a standard power adapter, disconnect the standard power adapter from the power adapter connector on the back of your Touchstone device.



Note: Disconnecting the standard power adapter immediately disconnects all active phone calls and data connections.

3. Locate the custom end of the TB130 as shown in the following photo.



4. Orient the white tab on the custom end of the TB130 with the slot next to the power connector on the back of your Touchstone device.
5. Insert the custom end of the TB130 into the power adapter connector on the back of your Touchstone device. Make sure the plug is fully inserted before continuing.
6. Double-check that the AC power cord is securely connected to the body of the battery unit.
7. Insert the AC plug into a standard power outlet.

As long as all of the connections for the TB130 are securely made, the TB130 provides power to your Touchstone device, and charges the battery. The LED on the TB130 is steady green to show AC power is functioning normally. See "LED Behavior" below for more information.

If AC power fails after the battery is fully charged, then the battery provides DC power to your Touchstone device. Once AC power is restored, the TB130 recharges the battery. The LED on the TB130 flashes green to show the Touchstone device is running on battery power. Your Touchstone device may provide further information about power status. See the User Guide for your Touchstone device for details.

Wall-Mounting the TB130

Use this procedure to wall-mount the TB130.

Requirements

- Two screws (#10 x 1.5in wood screws or equivalent) or drywall anchors
- Pencil
- Ruler
- Drill with 1/8in (3.5mm) bit (for wood screws; if using drywall anchors, see the packaging for correct drill size) and driver bit
- Level

Action

To wall-mount the TB130:

1. Determine where you want to mount the TB130.
When mounting on drywall, either use drywall anchors or drive both screws into a stud.
2. Mark two drill points 4in (102mm) apart, vertically. Use a level to make sure they are straight.
3. Drill pilot holes at the marks.
4. If using drywall anchors, set them into the wall. If using wood screws, drive the screws into the wall.
Leave a gap of about 1/8" (3 mm) between the screw head and the wall.
5. Orient the TB130 as needed (so, for example, the AC power cord side is closest to the nearest outlet).

- Align the mounting holes on the TB130 (shown below) with the screws, and slide the device onto the screws. Pull gently to ensure the TB130 is secure.



LED Behavior

The TB130 has a single LED, **Status**, for showing the charger status. The following table describes the LED patterns during normal operation:

Status LED (1)	Meaning
Solid green	Normal battery operation. AC power is present.
Slow pulsing green	Normal battery operation. Running on battery power.
Solid red	Battery or Charging fault. AC power is present.
Slow pulsing red	Battery or Charging fault. Running on battery power.
Off	No battery backup available. Possible causes: ■ The DC cord is not connected (or not fully connected) into the modem. The AC cord may or may not be connected. ■ The DC cord is properly connected, but AC power is out (or disconnected) and the battery is fully discharged. The modem has no power. ■ Both cords are properly connected, and AC power is available, but the TB130 has failed. The modem may or may not have power.

Testing and Troubleshooting the TB130

If the LED is red, there is an internal problem with the TB130. Follow these steps to test the backup system.

1. Pick a time when you do not expect phone calls or need to use the broadband Internet connection. This test may remove power to the Telephony Modem or Telephony Gateway.
2. Disconnect the DC power cable from the Telephony Modem or Telephony Gateway, then re-insert it. This removes power to the modem. If the LED turns green, the problem was transient. The modem may download new firmware to the TB130, if available.
3. Disconnect AC power and allow the device to run on battery power. The device shuts down data services to preserve the battery for phone calls. Depending on the battery condition and the connected device, it may take up to 9 hours to completely discharge the battery.
4. Watch for the TB130 **Status** LED, and the **Power** LED on the Telephony Modem or Telephony Gateway, to turn off.
5. Wait one more minute, then reconnect AC power. If the TB130 **Status** LED is still red, there is a problem with either the battery itself or the internal charging system. Replace the TB130, and recycle the old unit.



Note: The TB130 battery should last 6 to 8 years under normal operating conditions.

Safety Requirements

The ARRIS DC Output UPS complies with the applicable requirements for performance, construction, labeling, and information when used as outlined below:

**CAUTION****Risk of shock**

Mains voltages inside this unit. No user serviceable parts inside. Refer service to qualified personnel only!

**CAUTION****Risk of explosion**

Heating the TB130 above 75°C, or incinerating it, can cause product failure and a risk of fire or battery explosion. Do not dispose of in fire. Recycle or dispose of the TB130 responsibly and in accordance with local ordinances.

- Do not use product near water (i.e. wet basement, bathtub, sink or near a swimming pool, etc.), to avoid risk of electrocution.
- The product shall be cleaned using only a damp, lint-free, cloth. No solvents or cleaning agents shall be used.
- Do not use spray cleaners or aerosols on the device.
- Do not locate the equipment within 6 feet (1.9 m) of a flame or ignition source (i.e. heat registers, space heaters, fireplaces, etc.).
- Equipment should be installed near the power outlet and should be easily accessible.
- In areas of high surge events or poor grounding situations and areas prone to lightning strikes, additional surge protection may be required (i.e. PF11VNT3 from American Power Conversion).
- Ensure proper ventilation. Position the DC Output UPS so that air flows freely around it.
- Do not mount the DC Output UPS on surfaces that are sensitive to heat and/or which may be damaged by the heat generated by the device or other accessories.

Product for use only with UL Listed Model 34xx Touchstone Telephony Modems and Gateways.

FCC Part 15

This equipment has been tested and found to comply with the requirements for a Class B digital device under Part 15 of the Federal Communications Commission (FCC) rules. These requirements are intended 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 the dealer or an experienced radio/TV technician for help.



FCC Caution

Changes or modifications to this equipment not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Innovation, Science and Economic Development Canada statement:

This device complies with Innovation, Science and Economic Development Canada's licence-exempt RSSs. Operation is subject to the following two conditions:

- (1) This device may not cause interference; and
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

- 1) l'appareil ne doit pas produire de brouillage;
- 2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

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