



**BLONDER
TONGUE**
LABORATORIES, INC.

One Jake Brown Road
Old Bridge, NJ 08857-1000 USA
(800) 523-6049 • (732) 679-4000 • FAX: (732) 679-4353
www.blondertongue.com

INSTRUCTION MANUAL

QTSPS

Standby Power Supply Unit
Stock No. 6239A



651210500B

The lightning flash with arrow-head symbol within an equilateral triangle is intended to alert you to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electrical shock to persons.



CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN



The exclamation point within an equilateral triangle is intended to alert you to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT REMOVE COVER FROM THIS UNIT. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE

NOTE TO CATV SYSTEM INSTALLER

This reminder is provided to call the CATV System Installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

For all pluggable equipment the socket-outlet shall be installed near the equipment and shall be easily accessible.

Never power up one RPR from the outlet of another RPR, Daisy chaining or using a multiple outlet power strip powered from the RPR could result in fire due to overloading of the AC supply circuit.

Unpacking and Installation

NOTE TO CATV SYSTEM INSTALLER

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Unpacking and Handling

Each unit is shipped with all equipment assembled, wired, factory tested, and then packaged in an appropriate shipping container.

Ensure that all accessories are removed from the container and packing material before they are discarded.

Mechanical Inspection

Inspect the front and rear of the equipment for shipping damage. Make sure the equipment is clean, and no wires, cables, or connectors are broken, damaged or loose.

Precautions

Adherence to the initial installation precautions outlined in the Table below will help prevent problems arising during the installation and future maintenance of the unit.

Damage in Shipment

Should any damage be discovered after unpacking the unit, immediately file a claim with the carrier. A full report of the damage shall be made and a copy forwarded to Blonder Tongue Laboratories Inc. The company will then advise what disposition is to be made of the equipment.

Unit Adjustments

After installing the unit, make the following adjustments:

Audio Modulation

With audio source connected, adjust Audio Modulation control for 25 kHz deviation. In lieu of an audio modulation meter, use a TV set and adjust for equal volume as compared to a known off-air broadcast. Monitor for a few minutes to assure that maximum volume does not over modulate, which can cause picture distortion.

Video Modulation

With a nominal 1 volt P-P video source connected, adjust the Video Modulation control for the correct percentage of modulation (87.5%). If test equipment is not available for such measurements, then adjust for proper picture contrast when viewed on a TV set (compare with known off-air broadcast picture quality).

Returning Product for Repair or Credit

A Return Material Authorization (RMA) Number is required on all products returned to Blonder Tongue, regardless if the product is being returned for repair or credit. Before returning product, please contact the Blonder Tongue Service Department at 1-800-523-6049, Ext. 4256 or visit our website: www.blondertongue.com for further information.

Table 1 - Installation Precautions Table

PRECAUTIONS	REQUIREMENTS
Avoid Heat Buildup	Allow (1) EIA rack space (1 ^{3/4} ") between powered headend products in the equipment racks.
Ensure easy access to rack wiring.	Allow a minimum of 18 inches behind the equipment rack(s)
Facilitate servicing and maintenance.	Allow a minimum of 36" of clearance in front of the equipment rack(s).
Avoid direct heating or air conditioning.	If unavoidable, use deflector plates.
AC power source outlets.	Locate equipment near sufficient outlets to provide power for test equipment and power tools.
Rack Support.	Make certain rack supports are sufficiently rigid to support racks.
Building leakage.	Beware of dripping water onto equipment from leaky roofs, waveguide roof entries, and cold water pipe condensations.

Safety Instructions

WARNING!

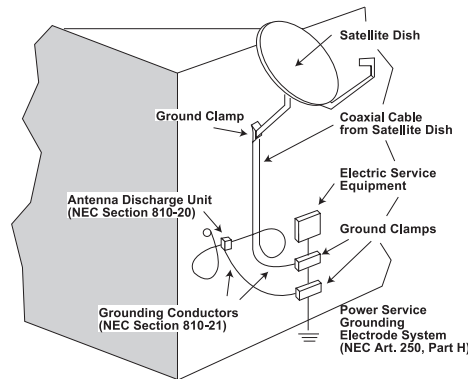


You should always follow these instructions to help ensure against injury to yourself and damage to your equipment.

- ◆ Read all safety and operating instructions before you operate the unit.
- ◆ Retain all safety and operating instructions for future reference.
- ◆ Heed all warnings on the unit and in the safety and operating instructions.
- ◆ Follow all installation, operating, and use instructions.
- ◆ Unplug the unit from the AC power outlet before cleaning. Use only a damp cloth for cleaning the exterior of the unit.
- ◆ Do not use accessories or attachments not recommended by Blonder Tongue, as they may cause hazards, and will void the warranty.
- ◆ Do not operate the unit in high-humidity areas, or expose it to water or moisture.
- ◆ Do not place the unit on an unstable cart, stand, tripod, bracket, or table. The unit may fall, causing serious personal injury and damage to the unit. Install the unit only in a mounting rack designed for 19" rack-mounted equipment.
- ◆ Do not block or cover slots and openings in the unit. These are provided for ventilation and protection from overheating. Never place the unit near or over a radiator or heat register. Do not place the unit in an enclosure such as a cabinet without proper ventilation. Do not mount equipment in the rack space directly above or below the unit.

Safety Instructions - continued

- ▶ Operate the unit using only the type of power source indicated on the marking label. Unplug the unit power cord by gripping the plug, not the cord.
- ▶ The unit is equipped with a three-wire ground-type plug. This plug will fit only into a ground-type power outlet. If you are unable to insert the plug into the outlet, contact an electrician to replace the outlet. Do not defeat the safety purpose of the ground-type plug.
- ▶ Route power supply cords so that they are not likely to be walked on or pinched by items placed upon or against them. Pay particular attention to cords at plugs, convenience receptacles, and the point where they exit from the unit.
- ▶ Be sure that the outdoor components of the antenna system are grounded in accordance with local, federal, and National Electrical Code (NEC) requirements. Pay special attention to NEC Sections 810 and 820. See the example shown in the following diagram:



- ▶ We strongly recommend using an outlet that contains surge suppression or ground fault protection. For added protection during a lightning storm, or when the unit is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the lines between the unit and other equipment. This will prevent damage caused by lightning or power line surges.
- ▶ Do not locate the antenna near overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an antenna, take extreme care to avoid touching such power lines or circuits, as contact with them can be fatal.
- ▶ Do not overload wall outlets or extension cords, as this can result in a risk of fire or electrical shock.
- ▶ Never insert objects of any kind into the unit through openings, as the objects may touch dangerous voltage points or short out parts. This could cause fire or electrical shock.
- ▶ Do not attempt to service the unit yourself, as opening or removing covers may expose you to dangerous voltage and will void the warranty. Refer all servicing to authorized service personnel.
- ▶ Unplug the unit from the wall outlet and refer servicing to authorized service personnel whenever the following occurs:
 - The power supply cord or plug is damaged;
 - Liquid has been spilled, or objects have fallen into the unit;
 - The unit has been exposed to rain or water;
 - The unit has been dropped or the chassis has been damaged;
 - The unit exhibits a distinct change in performance.
- ▶ When replacement parts are required, ensure that the service technician uses replacement parts specified by Blonder Tongue. Unauthorized substitutions may damage the unit or cause electrical shock or fire, and will void the warranty.
- ▶ Upon completion of any service or repair to the unit, ask the service technician to perform safety checks to ensure that the unit is in proper operating condition.

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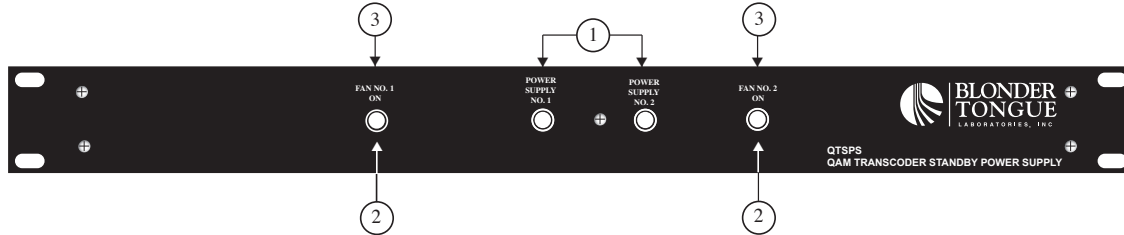
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Description

Standby or redundant power support is provided by the QTSPS Standby Power unit. It is intended to be used with Blonder Tongue digital products such as the QT Series. The Standby Power unit consists of two independent standby power supply units. These secondary standby supply units are all housed in a 1.75" single rack height chassis unit. The unit features an independent connector on the rear panel for each of the power supply units. Only one standby power module unit is required to offer redundant support for up to 16 transcoded transponders or upconverter channels (2 QT Series units). This unit is optional and may be added to a system at any time.

The Unit

Front Panel



- 2 LED Lights** - The lights are powered by the respective power supply built into the unit and will illuminate when power is present.
- 2 Fan LED Lights** - A green LED illuminates when the fan is in operation. The LED will blink if the fan stops operating for any reason, such as being clogged or a malfunction.
- Air Circulation Fan** - Fan powering (top of unit) is determined by the number of power supply units.

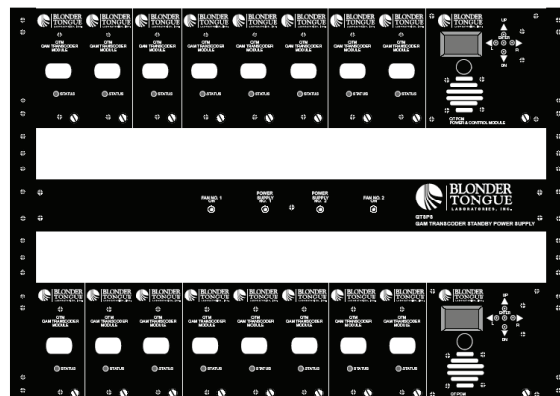
Rear Panel



- 2, 12-Pin Power Supply Connector Ports** - When a particular LED is illuminated, the corresponding 12-pin connector port on the rear of the unit is ready for standby power use.
- Power Cord Socket & Fuse Holder**

Mounting

It is recommended to mount one (1) Standby Power unit between two (2) QT Series rack chassis units. The fans draw airflow up for circulation. Optimum performance is achieved when a full rack space is used between the QTRA and the QTSPS. This needs to occur when used in conjunction with the optional RF combiner and splitter system.



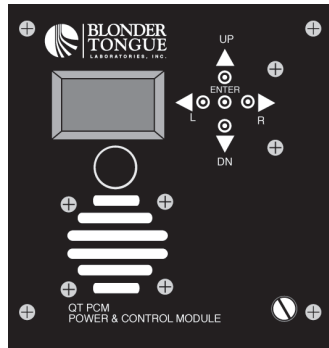
QT Series Rack Chassis Units with QT Standby Power

Operation

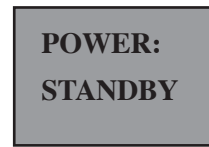
The Standby Power unit is intended to automatically provide power in the event of a loss of power, temporary or permanent, to the primary power supply. During this condition, when power is lost to the primary supply but not lost by the standby unit, the unit will automatically switch to standby power. The unit is programmed to verify that primary power is lost by checking the status to ensure it is not a temporary condition. The unit firmware was designed with a built-in small delay, approximately 6-8 seconds, to eliminate the potential for uncertainty or chatter regarding power loss. After this delay, the unit will automatically switch to the standby power unit. If power is restored to the primary power supply, the unit will verify the condition and automatically return to primary power.

LCD Functional Interface

Blonder Tongue digital products use an LCD display panel to provide the operator with as much information as needed regarding the condition and status of the particular modules. This includes status information pertaining to standby power.



QTPCM - LCD & Front Panel Controls



LCD Power Indication

The front panel of the PCM will display Standby Power when it is being used.

- ☛ *Note: It is not recommended to run the unit in standby power for extended periods of time. If a primary failure is not due to A/C powering loss, it is recommended to have the PCM serviced.*

Manual Standby Power Interaction

The unit menu system provides the ability to manually move to standby or back to primary power. This is extremely valuable in a testing condition but not encouraged during normal operation.

- The power status can be displayed by depressing the DOWN ▼ arrow key on the front of the control module.
(This will be the first variable displayed after depressing the down arrow after initial power up. Scroll up UP ▲ or DOWN ▼ through the variables to reach "Power Status" if the up or down arrow buttons have already been depressed).
- To protect the integrity of the programming information, a user must first remove the unit from the Auto Mode and place it into the Manual Mode. This ensures some measure of protection from erroneous changes to the advanced functions of the unit.
 1. Press the UP ▲ arrow key to reach the 'MODE' variable.
 2. Press and hold the ENTER key to activate the cursor (approximately 1 second).
 3. Press the UP ▲ or DOWN ▼ arrow key to change the entry.
 4. Press the ENTER key to accept the entry.
 5. Once changed to the 'MANUAL MODE' the power status may be manually toggled via the power variable status screen.
 6. Proceed to the Power variable screen.
 7. Press and hold the Enter key until the blinking cursor is displayed.
 8. Press the UP ▲ or DOWN ▼ arrow key to change the entry.
 9. Press the Enter key to accept the entry.

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Blonder Tongue Laboratories, Inc. (BT) will at its sole option, either repair or replace (with a new or factory reconditioned product, as BT may determine) any product manufactured by BT which proves to be defective in materials or workmanship or fails to meet the specifications which are in effect on the date of shipment or such other specifications as may have been expressly agreed upon in writing (i) for a period of one (1) year from the date of original purchase (or such shorter period of time as may be set forth in the license agreement specific to the particular software being licensed), with respect to iCentral™ (hardware and software) and all other software products (including embedded software) licensed from BT, (ii) for a period of one (1) year from the date of original purchase, with respect to all MegaPort, IPTV products and fiber optics receivers, transmitters, couplers and integrated receivers/distribution amplifiers (including TRAILBLAZER™, RETRO-LINX™ and TWIN STAR™ products) as well as for VideoCipher® & DigiCipher® satellite receivers, and (iii) for a period of three (3) years from the date of original purchase, with respect to all other BT products. Notwithstanding the foregoing, in some cases, the warranty on certain proprietary sub-assembly modules manufactured by third party vendors and contained in BT products and on certain private-label products manufactured by third parties for resale by BT are of shorter duration or otherwise more limited than the standard BT limited warranty. In such cases, BT's warranty with respect to such third party proprietary sub-assembly modules and private-label products will be limited to the duration and other terms of such third party vendor's warranty. In addition, certain products, that are not manufactured but are resold by BT, carry the original OEM warranty for that product. The limited warranty set forth in this paragraph does not apply to any product sold by BT, which at the time of sale constituted a Closeout Product.

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To obtain service under this warranty, the defective product, together with a copy of the sales receipt or other satisfactory proof of purchase and a brief description of the defect, must be shipped freight prepaid to: Blonder Tongue Laboratories, Inc., One Jake Brown Road, Old Bridge, New Jersey 08857.

This warranty does not cover damage resulting from (i) use or installation other than in strict accordance with manufacturer's written instructions, (ii) disassembly or repair by someone other than the manufacturer or a manufacturer-authorized repair center, (iii) misuse, misapplication or abuse, (iv) alteration, (v) lack of reasonable care or (vi) wind, ice, snow, rain, lightning, or any other weather conditions or acts of God.

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