Quick Start Guide

Digital Belt Pack Transmitter

DBu, DBu/E01

Digital Hybrid Wireless® US Patent 7,225,135

Follow Us On:

Fill in for your records:

Serial Number:

Purchase Date:

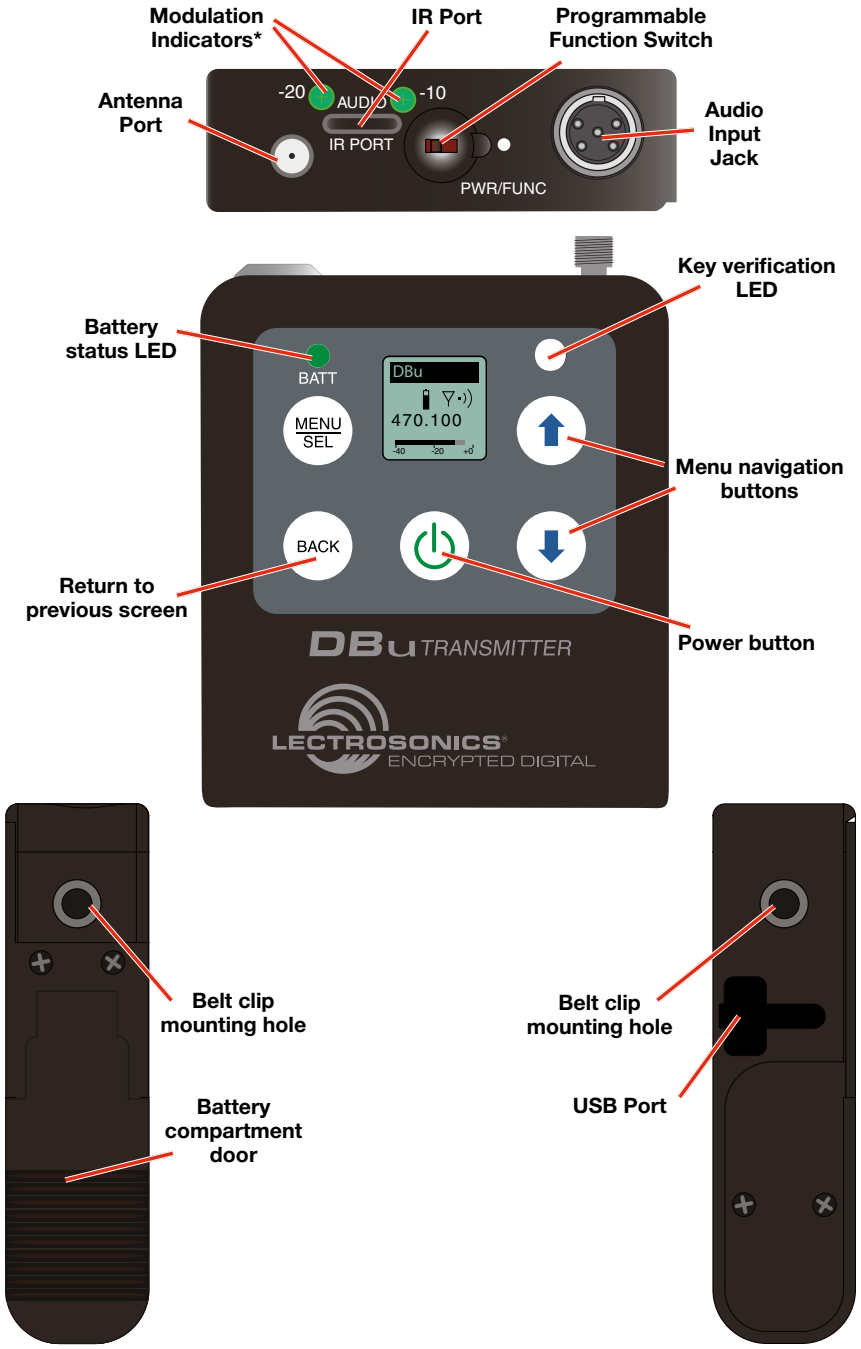
This guide is intended to assist with initial setup and operation of your Lectrosonics product.

For a detailed user manual, download the most current version at:

www.lectrosonics.com

26 September 2023

DBu, DBu/E01 Features and Functions



Programmable Switch

The transmitter can also be configured as a “one button” device by locking the ability to make changes with the keypad, and configuring the top panel switch as either power on/off or a mute function.

Modulation Indicator LEDs

When the transmitter is set to MUTE, the -10 Modulation Indicators LED will glow solid red. Otherwise, the -10 Modulation Indicators LED will glow solid green when transmitter is on.

Belt Clips

The wire belt clip may be removed by pulling the ends out of the holes in the sides of the case. Be sure to have a firm grip to avoid scratching the surface of the housing.

An optional spring-loaded, hinged belt clip (model number BCSLEBN) is also available. This clip is attached by removing the plastic hole cap on the back of the housing and mounting the clip with the supplied screw.

IR (infrared) Port

The IR port is available on the top of the transmitter for quick setup using a receiver with this function available. IR Sync will transfer the settings for frequency from the receiver to the transmitter.

Battery Installation

The transmitter is powered by two AA batteries. We recommend using alkaline, lithium, or rechargeable batteries for longest life.

The battery status circuitry compensates for the difference in voltage drop between alkaline and lithium batteries across their usable life, so it's important to select the correct battery type in the menu.

Because rechargeable batteries run down quite abruptly, using the Power LED to verify battery status will not be reliable. However, it is possible to track battery status using the battery timer function available in the receiver.

Push outward on the battery compartment door and lift it to open.

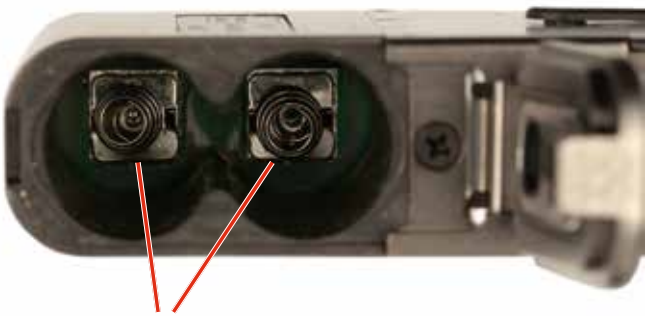
Slide door out to release catch

Lift door to open

Insert the batteries according to the markings on the back of the housing.

If the batteries are inserted incorrectly, the door will close but the unit will not operate.

The battery contacts can be cleaned with alcohol and a cotton swab, or a clean pencil eraser. Be sure not to leave any remnants of the cotton swab or eraser crumbs inside the compartment.



Contact springs

Battery Status LED Indicator

Alkaline, lithium or rechargeable batteries can be used to power the transmitter. The type of batteries in use are selectable in a menu on the LCD.

When alkaline or lithium batteries are being used, the LED labeled BATT on the keypad glows green when the batteries are good. The color changes to red when the they are nearing the end of life. When the LED begins to ***blink*** red, there will be only a few minutes remaining.

The Power/Function LED on the top panel will mirror the keypad LED unless the programmable switch is set to Mute, and the switch is turned on.

The exact point at which the LEDs turn red will vary with battery brand and condition, temperature and power consumption. The LEDs are intended to simply catch your attention, not to be an exact indicator of remaining time.

A weak battery will sometimes cause the Power LED to glow green immediately after the transmitter is turned on, but it will soon discharge to the point where it will turn red or the unit will turn off completely.

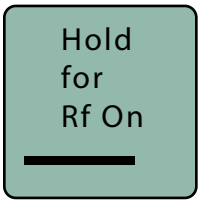
Rechargeable batteries give little or no warning when they are depleted. If you wish to use these batteries in the transmitter, the most accurate way to determine runtime status is by testing the time provided by a particular battery brand and type, then using the **BatTime** function to determine remaining runtime.

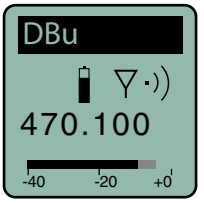
NOTE: Refer to the Main Menu and Setup Section of your manual for BatTime details.

Operating Instructions

Powering On in Operating Mode

Press and hold the Power Button ⏻ for several seconds until a moving bar on the LCD progresses.

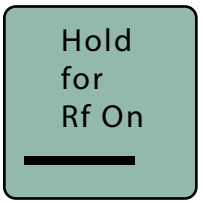




When you release the button, the unit will be operational with the RF output turned on and the Main Window displayed.

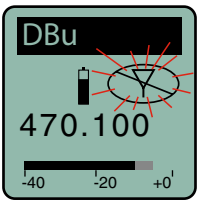
Powering On in Standby Mode

A brief press of the Power Button ⏻, and releasing it before the moving bar progresses, will turn the unit on with the RF output turned off. In this Standby Mode the menus can be browsed to make settings and adjustments without the risk of interfering with other wireless systems nearby.



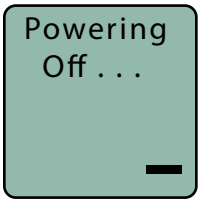
Release Power Button before the moving bar progresses to enter standby mode

RF indicator blinks



After settings and adjustments are made, press the power button again to turn the unit off, or turn on the Transmit function by entering the main menu, selecting Xmit, then RF On?

Powering Off

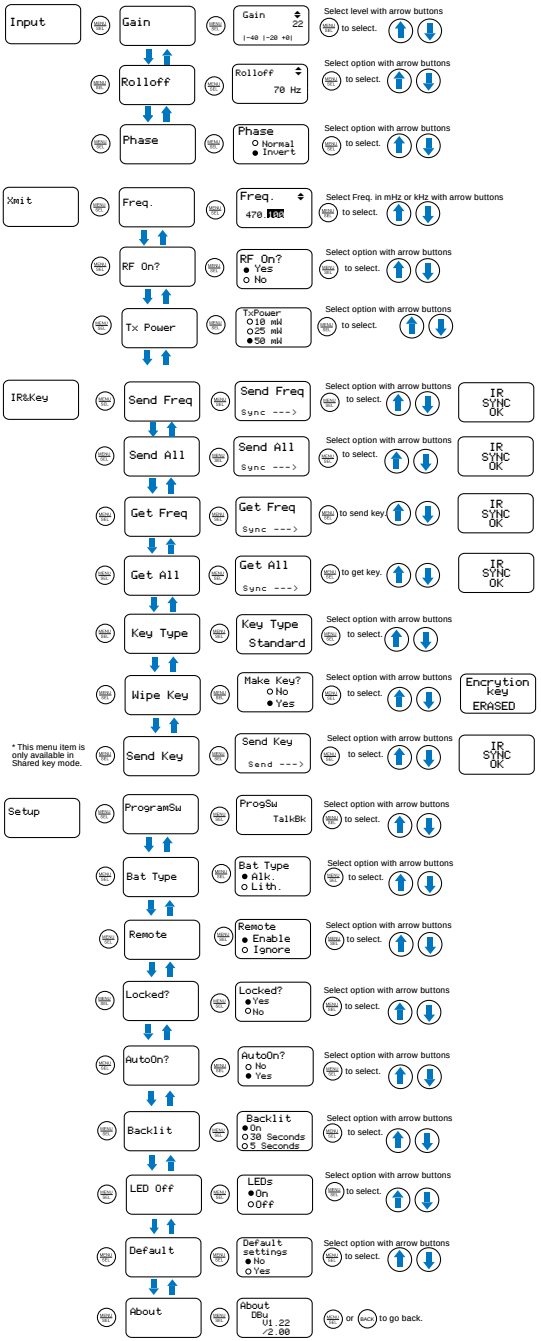


From any screen, power can be turned off by selecting Pwr Off in the power menu, holding the Power Button ⏻ in and waiting for the moving bar to progress, or with the programmable switch (if it is configured for this function).

If the power button is released, or the top panel switch is turned back on again before the moving bar progresses, the unit will remain turned on and the LCD will return to the same screen or menu that was displayed previously.

NOTE: If the programmable switch is in the OFF position, power can still be turned on with the power button. If the programmable switch is then turned on, a brief message will appear on the LCD.

LCD Menu Map

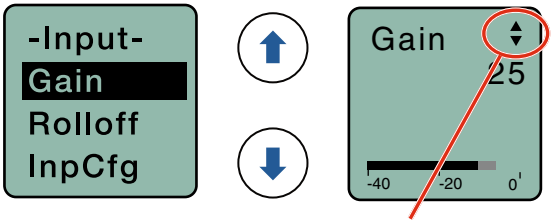


NOTE: The settings will be stored when the BACK button is pressed.

Main Menu and Setup Screen Details

Entering the Main Menu

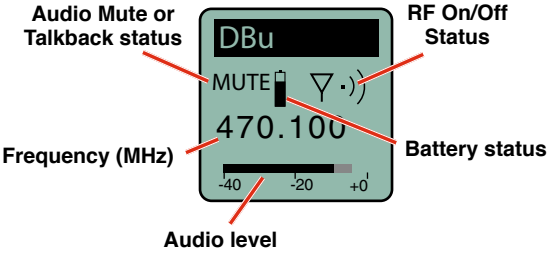
The LCD and keypad interface makes it easy to browse the menus and make the selections for the setup you need. When the unit is powered up in either the operating or the standby mode, press MENU/SEL on the keypad to enter a menu structure on the LCD. Use the ⬆ and ⬇ arrow buttons to select the menu item. Then press the MENU/SEL button to enter the setup screen.



The prompt in the upper right corner may display one or both arrows, depending upon what adjustment can be made. If the changes are locked, a small padlock symbol will appear.

Main Window Indicators

The Main Window displays on/off status, talkback or audio mute status, standby or operating mode, operating frequency, audio level and battery status.



If the programmable switch function is set for Mute or Talkback, the Main Window will indicate that the function is enabled.

Menu Item Descriptions

Input

Gain

Gain can be set, from -7 to +44, by using the ⇧ and ⇩ arrow buttons.

Adjusting the Input Gain

The two bicolor Modulation LEDs on the top panel provide a visual indication of the audio signal level entering the transmitter. The LEDs will glow either red or green to indicate modulation levels as shown in the following table.

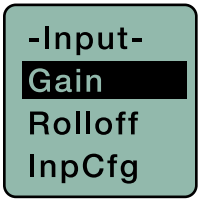
Signal Level	-20 LED	-10 LED
Less than -20 dB	Off	Off
-20 dB to -10 dB	Green	Off
-10 dB to +0 dB	Green	Green
+0 dB to +10 dB	Red	Green
Greater than +10 dB	Red	Red

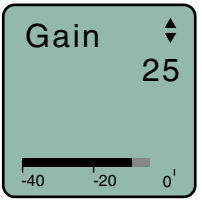
NOTE: Full modulation is achieved at 0 dB, when the "-20" LED first turns red. The limiter can cleanly handle peaks up to 30 dB above this point.

It is best to go through the following procedure with the transmitter in the standby mode so that no audio will enter the sound system or recorder during adjustment.

1) With fresh batteries in the transmitter, power the unit on in the standby mode (see previous section ***Powering On in Standby Mode***).

2) Navigate to the Gain setup screen.





3) Prepare the signal source. Position a microphone the way it will be used in actual operation and have the user speak or sing at the loudest level that occur during use, or set the output level of the instrument or audio device to the maximum level that will be used.

4) Use the ⇧ and ⇩ arrow buttons to adjust the gain until the **–10 dB** glows green and the **–20 dB** LED starts to flicker red during the loudest peaks in the audio.

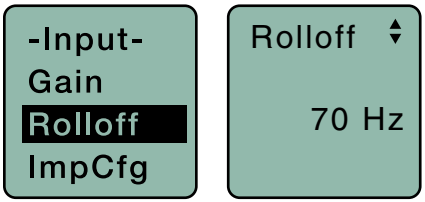
5) Once the audio gain has been set, the signal can be sent through the sound system for overall level adjustments, monitor settings, etc.

6) If the audio output level of the receiver is too high or low, use only the controls on the receiver to make adjustments. Always leave the transmitter gain adjustment set according to these instructions, and do not change it to adjust the audio output level of the receiver.

Rolloff (Low Frequency Roll-off)

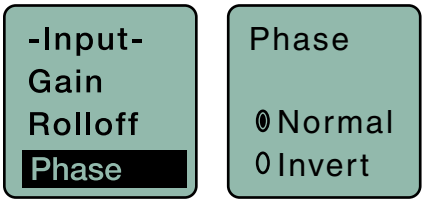
The low frequency audio roll-off is adjustable to optimize performance for ambient noise conditions or personal preference.

Low frequency audio content may be desirable or distracting, so the point at which the roll-off takes place can be set to 20, 35, 50, 70, 100, 120 or 150 Hz.



Phase (Selecting Audio Polarity)

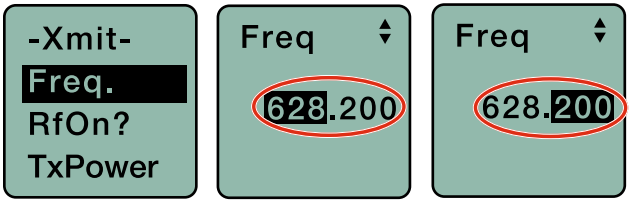
This setting allows for configuration for use with certain microphones, or for setting custom parameters.



Xmit

Setting Frequency

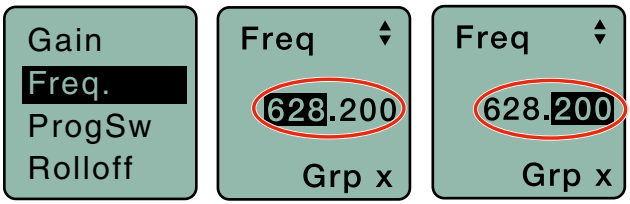
Frequency (mHz and kHz) in can be set by using the MENU/SEL button to choose mHz or kHz and the ⇧ and ⇩ arrows to adjust frequency.



Tuning Groups

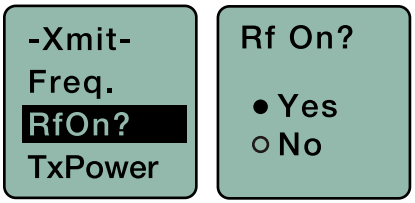
Tuning groups can be received via IR (Infared) port sync from a receiver. The group frequencies are set by the receiver. The group names will be displayed at the bottom of the screen as Grp x, Grp w, Grp v, or Grp u.

Use the MENU/SEL button to toggle between options and the ⇧ and ⇩ arrow buttons to adjust.



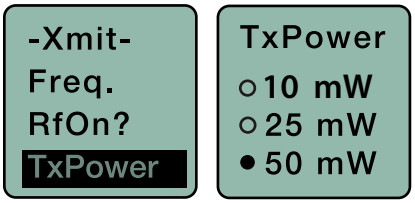
RF On?

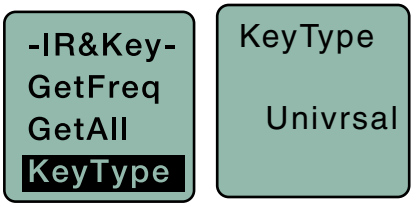
Turn Rf off to preserve battery power while setting other transmitter functions. Turn it back on to begin transmitting.. Use the ⇧ and ⇩ arrow buttons to toggle and MENU/SEL to save.



TxPower

Allows the transmitter output power to be set as 25 or 50 mW. Use the ⇧ and ⇩ arrow buttons to scroll and MENU/SEL to save.

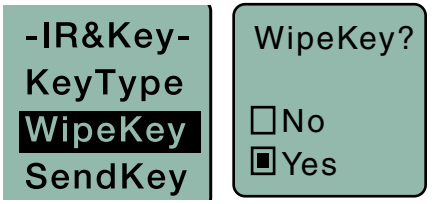




Note: If there is a key mismatch, the key verification LED will blink.

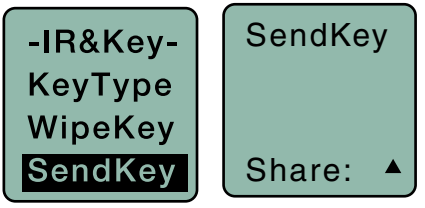
WipeKey

This menu item is only available if Key Type is set to Standard, Shared or Volatile. Select Yes to wipe the current key and enable the DBu to receive a new key.



SendKey

This menu item is only available if Key Type is set to Shared. Press MENU/SEL to sync the Encryption key to another transmitter or receiver via the IR port.



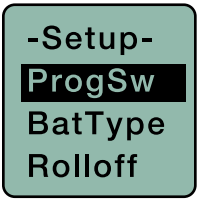
Setup

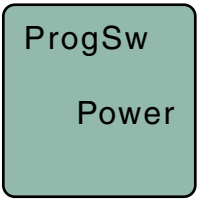
ProgSw (Programmable Switch Functions)

The programmable switch on the top panel can be configured using the menu to provide several functions:

- **(none) -** disables the switch
- **Mute** - mutes the audio when switched on; LCD will display a blinking “MUTE” and the -10 LED will glow solid red.

- **Power** - turns the power on and off
- **TalkBk** - switches the audio output on the receiver to a different channel for communication with the production crew. Requires a receiver with this function enabled.



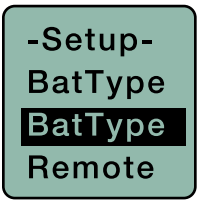


Use the ▲ and ▼ arrow buttons to select the desired function or disable the switch

NOTE: The programmable switch will continue to operate whether or not settings are locked.

Selecting Battery Type

The voltage drop over the life of batteries varies by type and brand. Be sure to set the correct battery type for accurate indications and warnings. The menu offers alkaline or lithium types.



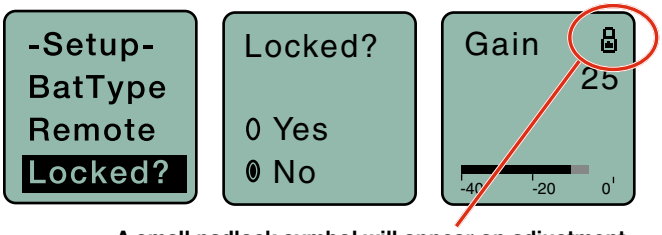
If you are using rechargeable batteries, it is better to use the timer function on the receiver to monitor the battery life rather than the indicators on the transmitter. Rechargeable batteries maintain a fairly constant voltage across the operating time on each charge and stop working abruptly, so you will have little or no warning as they reach the end of operation.

Remote

Remote control “dweedle” tones from a smart phone can be used to control the transmitter. This setting Enables or Disables it.

Locked?

The settings can be locked to prevent inadvertent changes being made.



A small padlock symbol will appear on adjustment screens when changes have been locked.

When settings are locked, several controls and actions can still be used:

- Settings can still be unlocked
- Menus can still be browsed
- Programmable switch still works (Mute, Talkback and On/Off)
- Power can be turned off by using the programable switch if in Power mode or by removing the batteries.

Backlit

Sets the screen backlight to be always on, on for 30 seconds or on for 5 seconds.

LED Off

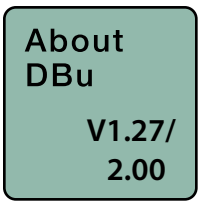
Turns all LEDs on or off.

Restoring Default Settings

This is used to restore the factory settings.

About

This shows version and firmware information.



Whip Antennas

Because the transmitter tunes across such a broad frequency range, it is best to use the appropriate antenna for maximum operation. Two antennas are included with the transmitter, and are shipped from the factory pre-cut and fully assembled. Each antenna covers three blocks. Use the chart below to determine which antenna best fits your needs.

Band	Block	Frequency Range MHz	Cap Color	Antenna
A1	470	470.100 - 495.600	Black	AMM19
	19	486.400 - 511.900	Black	AMM19
	20	512.000 - 537.500	Black	AMM19
B1	21	537.600 - 563.100	Red	AMM22
	22	563.200 - 588.700	Red	AMM22
	23	588.800 - 607.950	Red	AMM22

LIMITED ONE YEAR WARRANTY

The equipment is warranted for one year from date of purchase against defects in materials or workmanship provided it was purchased from an authorized dealer. This warranty does not cover equipment which has been abused or damaged by careless handling or shipping. This warranty does not apply to used or demonstrator equipment.

Should any defect develop, Lectrosonics, Inc. will, at our option, repair or replace any defective parts without charge for either parts or labor. If Lectrosonics, Inc. cannot correct the defect in your equipment, it will be replaced at no charge with a similar new item. Lectrosonics, Inc. will pay for the cost of returning your equipment to you.

This warranty applies only to items returned to Lectrosonics, Inc. or an authorized dealer, shipping costs prepaid, within one year from the date of purchase.

This Limited Warranty is governed by the laws of the State of New Mexico. It states the entire liablility of Lectrosonics Inc. and the entire remedy of the purchaser for any breach of warranty as outlined above. NEITHER LECTROSONICS, INC. NOR ANYONE INVOLVED IN THE PRODUCTION OR DELIVERY OF THE EQUIPMENT SHALL BE LIABLE FOR ANY INDIRECT, SPECIAL, PUNITIVE, CONSEQUENTIAL, OR INCIDENTAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THIS EQUIPMENT EVEN IF LECTROSONICS, INC. HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT SHALL THE LIABILITY OF LECTROSONICS, INC. EXCEED THE PURCHASE PRICE OF ANY DEFECTIVE EQUIPMENT.

This warranty gives you specific legal rights. You may have additional legal rights which vary from state to state.

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