DSQD

4 Channel Digital Receiver

D²
D-SQUARED™
DIGITAL RECEIVER

Dante™

Fill in for your records:

Serial Number:

Purchase Date:

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LECTROSONICS®
Rio Rancho, NM, USA
www.lectrosonics.com

Table of Contents

Introduction

The latest digital radio technology is employed in the DSQD receiver to set a new standard for performance and flexibility. Four discrete audio channels are packed into a single half-rack chassis, with balanced analog and Dante® digital network outputs. The receiver tunes continuously across the UHF band from 470.100 to 614.375 MHz.

The digital architecture delivers studio quality audio with ultra-low latency. The receiver includes an extended operating range rivaling the best analog and Digital Hybrid Wireless® systems with tracking filters that stay centered on the selected frequency.

DSP algorithms provide compatibility with Lectrosonics DSW and Duet digital wireless transmitters, and with Lectrosonics Digital Hybrid Wireless® transmitters.

The receiver provides a USB port for firmware updates and an IR port for fast setup. A large, high resolution, backlit LCD and large membrane switches provide an intuitive interface that is highly visible in daylight or dimly lit conditions.

Wireless Designer™ software integrates the digital and Digital Hybrid Wireless into a single control panel with site scanning and frequency coordination. The software is free and can be used while connected to equipment or offline in planning a multi-channel system.

Antenna ports on the rear panel accept input from remote antennas, with a "loop-thru" output to another mainframe using the internal multicoupler. A kit is also available to mount antenna inputs (BNC connectors) on the front panel.

General Technical Description

Encryption

When transmitting audio, there are situations where privacy is essential, such as during professional sporting events, in court rooms or private meetings. For instances where your audio transmission needs to be kept secure, without sacrificing audio quality, Lectrosonics introduces Encryption Keys. Truly entropic encryption keys are first created by the DSQD Receiver. The key is then synced with an encryption-capable transmitter, via the IR port. The audio will be encrypted and can only be listened to if both DSQD and transmitter have the matching encryption key. If you are trying to transmit an audio signal and keys do not match, all that will be heard is silence or white noise.

Digital Hybrid Wireless® Technology

All wireless links suffer from channel noise to some degree, and all wireless microphone systems seek to minimize the impact of that noise on the desired signal. Conventional analog systems use compandors for enhanced dynamic range, at the cost of subtle artifacts (known as "pumping" and "breathing"). Wholly digital systems defeat the noise by sending the audio information in digital form.

To support the installed base of Digital Hybrid Wireless systems, the DSQD receiver includes DSP algorithms for compatibility with Digital Hybrid Transmitters.

LCD Screen

Easy navigation of all setup parameters is provided by a full color, backlit, LCD screen and membrane push buttons. The high resolution display provides comprehensive monitoring of all receiver parameters.

What is Dante?

Audinate's patent pending Dante™ technology is a flexible Internet Protocol (IP) and Ethernet based digital AV network technology that eliminates the many bulky cables needed to provide point-to-point wiring for analog AV installations.

With Dante, existing infrastructure can be used for high performance audio as well as for ordinary control, monitoring or business data traffic. Digital networks utilize standard IP over Ethernet offering high bandwidth capable of transporting hundreds of high quality channels over Gigabit Ethernet.

Set-up and configuring the system is made easy as well, saving enormous installation costs and long term cost of ownership on a digital network. The physical connecting point is irrelevant: audio signals can be made available anywhere and everywhere. Patching and routing now become logical functions configured in software, not via physical wired links

Summary of Dante Benefits

- Plug-and-play technology – automatic discovery and simple signal routing
- Reduced Cost & Complexity- No special skills required to set up audio networking
- Sample accurate playback synchronization
- Add/remove/rearrange components at will
- Deterministic latency throughout the network
- Support mixed bit depths and mixed sample rates over one network
- Scalable, flexible network topology supporting a large number of senders and receivers
- Supports 1Gbps networks
- Supports a single integrated network for audio, video, control, monitoring
- Uses inexpensive, off-the-shelf computer networking equipment

Panels and Features

DSQD Front Panel

Reset Button

Menu/Select

Return to previous screen

Menu navigation buttons

Antenna Bias Power LEDs

Headphone Volume Adjustment

Headphone Jack

Transmitter Function Buttons

USB Port

IR Port

Power switch

DSQD Rear Panel

Dante Ports

Power Inlet

Ethernet Port

Antenna Jacks 50 Ohm BNC

XLR Analog Output Connectors

Multi-Frame Communication

Antenna Jacks 50 Ohm BNC
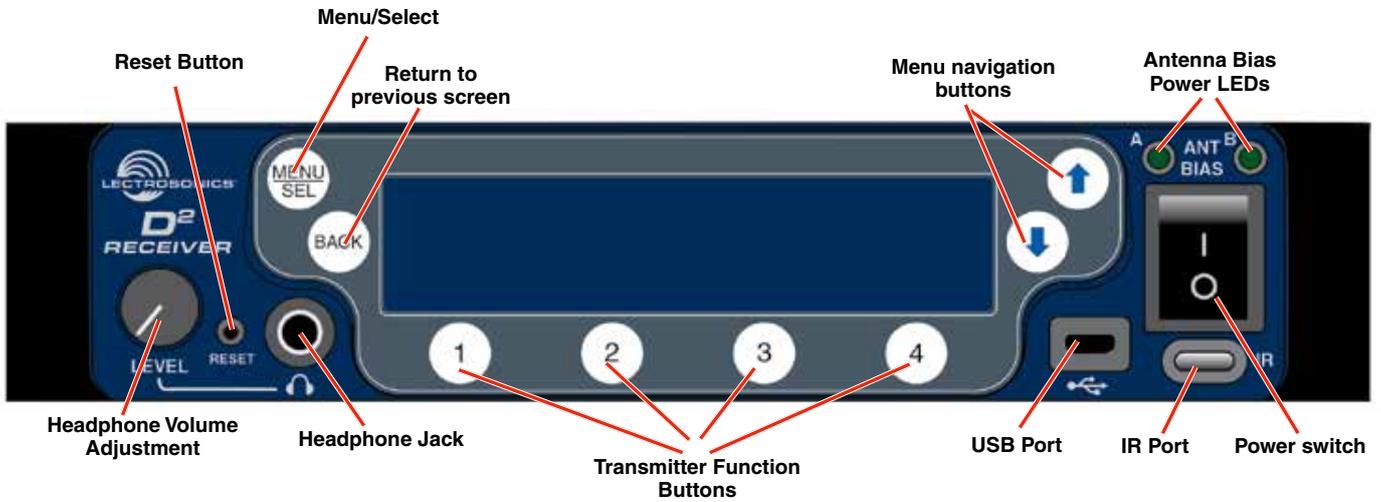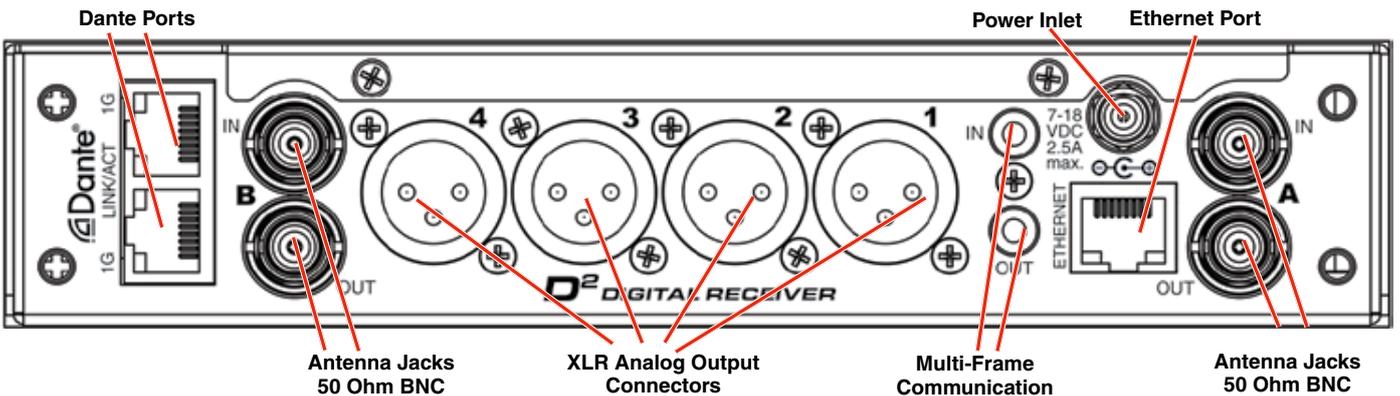
Operating Instructions

IR (infrared) Port

Frequency and settings can be transferred to and from the DSQD receiver via this port to an IR enabled transmitter to simplify setup.

USB Port

For firmware updates and connection to Wireless Designer software.

Reset Button

For MCU recovery in the event of an interrupted firmware update.

Headphone Volume Adjustment

Adjusts the monitor loudness of the output channel selected with the numbered buttons below the LCD.

Antenna Bias LEDs

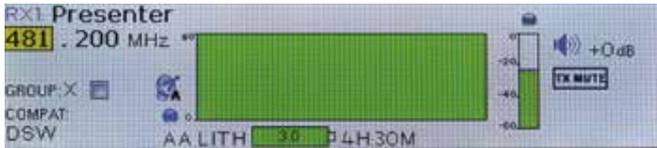Glow green with antenna bias power is turned on.

Transmitter Function Buttons

From the mainscreen, pressing a transmitter button will show a detailed transmitter screen (see **Quick Start** for more information).

From the **Sync Settings** screen, pressing a transmitter button will initiate a sync with the transmitter via the IR port.

Antenna Jacks

For multiple DSQD installations in a rack, a "loop thru" is available to feed two or three receivers from a single antenna pair. Connect coaxial cables from the multicoupler outputs on the first receiver to the antenna inputs on the next receiver in the stack.

Dante Ports (if Dante module is installed)

Connects to a Dante digital audio network.

Ethernet Port

Used for setup, monitoring and control with Wireless Designer software connected via a network.

Multi-Frame Communication

Allows offline, multi-frame communication and frequency coordination.

Power Inlet

The threaded-locking DC coaxial jack requires 7-18 VDC and draws 2.5A maximum.

Boot Screens

When powering on the DSQD, three screens appear in the following order: DSQD, Lectrosonics, Home Screen:

Navigating the Menus

All Menu setup items are arranged in a vertical list on the LCD. Press MENU/SEL to enter the menu, then navigate with the UP and DOWN arrows to highlight the desired setup item. Refer to the menu map on the following page.

NOTE: To guarantee chosen parameters are saved, exit a setup screen **BEFORE** powering down DSQD.
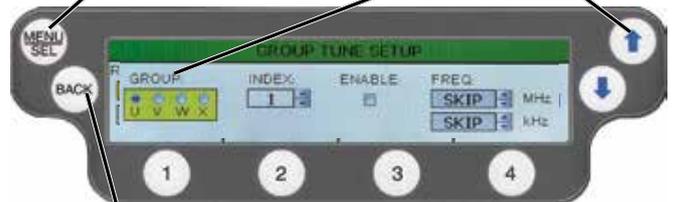
Press MENU/SEL to enter the menu

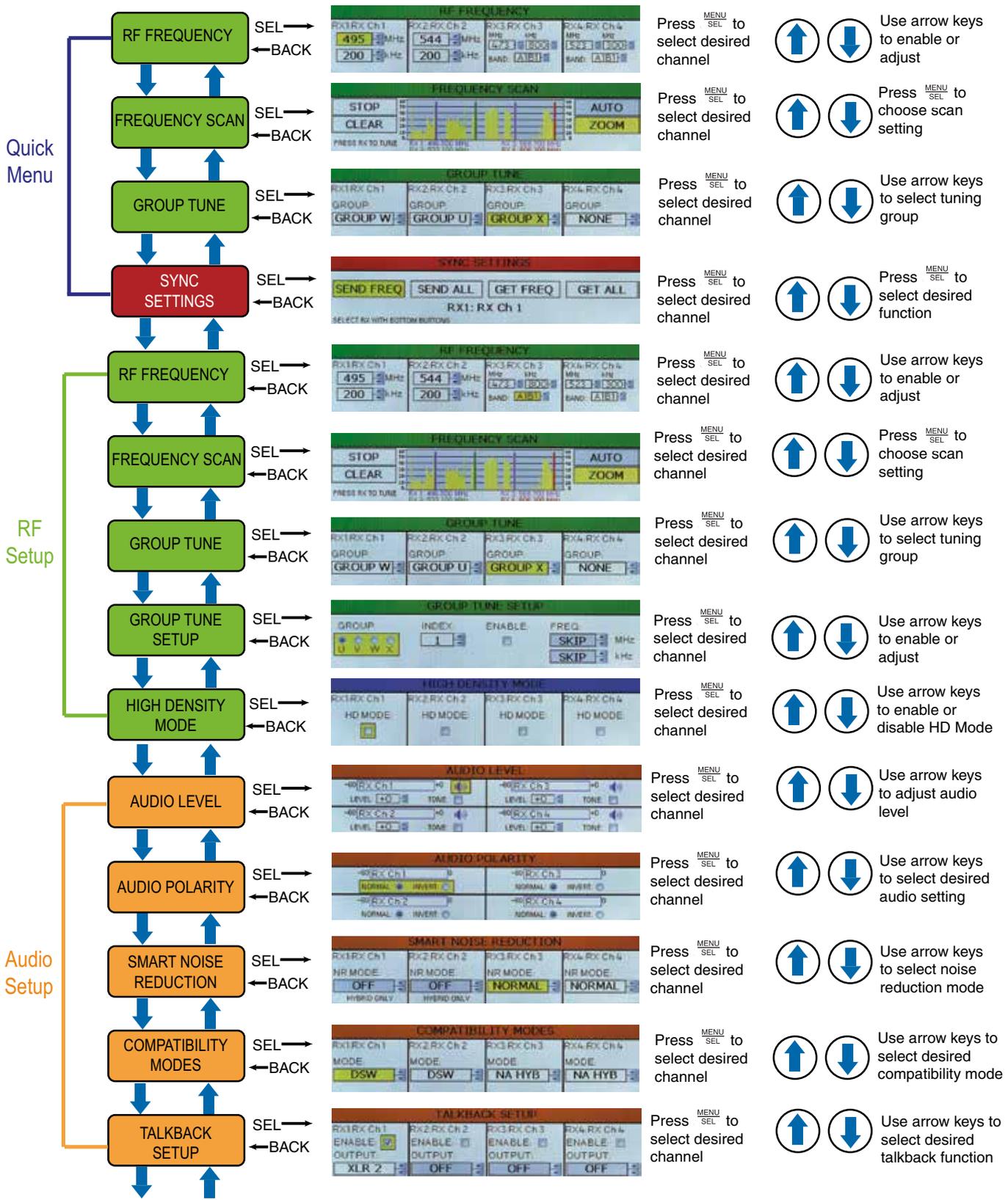Press the UP and DOWN arrows to navigate and highlight the desired menu item

Press MENU/SEL to enter the setup of the highlighted item

Press the UP and DOWN arrows to navigate and highlight the desired item

Press BACK to return to the previous screen and save selected settings

LCD Menu Map

Quick Menu

RF FREQUENCY — SEL→ / ←BACK

Press ^{MENU}/_{SEL} to select desired channel

Use arrow keys to enable or adjust

FREQUENCY SCAN — SEL→ / ←BACK

Press ^{MENU}/_{SEL} to select desired channel

Press ^{MENU}/_{SEL} to choose scan setting

GROUP TUNE — SEL→ / ←BACK

Press ^{MENU}/_{SEL} to select desired channel

Use arrow keys to select tuning group

SYNC SETTINGS — SEL→ / ←BACK

Press ^{MENU}/_{SEL} to select desired channel

Press ^{MENU}/_{SEL} to select desired function

RF Setup

RF FREQUENCY — SEL→ / ←BACK

Press ^{MENU}/_{SEL} to select desired channel

Use arrow keys to enable or adjust

FREQUENCY SCAN — SEL→ / ←BACK

Press ^{MENU}/_{SEL} to select desired channel

Press ^{MENU}/_{SEL} to choose scan setting

GROUP TUNE — SEL→ / ←BACK

Press ^{MENU}/_{SEL} to select desired channel

Use arrow keys to select tuning group

GROUP TUNE SETUP — SEL→ / ←BACK

Press ^{MENU}/_{SEL} to select desired channel

Use arrow keys to enable or adjust

HIGH DENSITY MODE — SEL→ / ←BACK

Press ^{MENU}/_{SEL} to select desired channel

Use arrow keys to enable or disable HD Mode

Audio Setup

AUDIO LEVEL — SEL→ / ←BACK

Press ^{MENU}/_{SEL} to select desired channel

Use arrow keys to adjust audio level

AUDIO POLARITY — SEL→ / ←BACK

Press ^{MENU}/_{SEL} to select desired channel

Use arrow keys to select desired audio setting

SMART NOISE REDUCTION — SEL→ / ←BACK

Press ^{MENU}/_{SEL} to select desired channel

Use arrow keys to select noise reduction mode

COMPATIBILITY MODES — SEL→ / ←BACK

Press ^{MENU}/_{SEL} to select desired channel

Use arrow keys to select desired compatibility mode

TALKBACK SETUP — SEL→ / ←BACK

Press ^{MENU}/_{SEL} to select desired channel

Use arrow keys to select desired talkback function

IR Sync & Encryption

SYNC SETTING — SEL→ ←BACK

SYNC SETTINGS
SEND FREQ SEND ALL GET FREQ GET ALL
RX1: RX Ch 1
SELECT RX WITH BOTTOM BUTTONS

Use arrow keys to highlight desired command

Press MENU/SEL to select desired function

SYNC KEY — SEL→ ←BACK

SYNC KEY
SEND KEY   GET KEY
KEY POLICY: UNIVERSAL – No Sync Available

Use arrow keys to highlight desired command

Press MENU/SEL to select desired function

ENCRYPTION KEY MANAGEMENT — SEL→ ←BACK

ENCRYPTION KEY MANAGEMENT
CREATE KEY WIPE KEY KEY POLICY
POLICY: UNIVERSAL   No encryption keys used

Use arrow keys to select encryption key

Press MENU/SEL to confirm selection

Tools & Settings

RX ON/OFF — SEL→ ←BACK

RX ON / OFF
RX1:RX Ch 1 RX2:RX Ch 2 RX3:RX Ch 3 RX4:RX Ch 4
RX PWR: RX PWR: RX PWR: RX PWR:

Press MENU/SEL to select desired channel

Use arrow keys to select RX power on/off

TX BATTERY TYPE — SEL→ ←BACK

TX BATTERY TYPE
RX1:RX Ch 1 RX2:RX Ch 2 RX3:RX Ch 3 RX4:RX Ch 4
TYPE: TYPE: TYPE: TYPE:
AA LITH AA LITH AA LITH AA LITH

Press MENU/SEL to select desired channel

Use arrow keys to select battery type

TX BATTERY TIMER ALERT — SEL→ ←BACK

TX BATTERY TIMER ALERT
RX1:RX Ch 1 RX2:RX Ch 2 RX3:RX Ch 3 RX4:RX Ch 4
ENABLE ALERT ENABLE ALERT ENABLE ALERT ENABLE ALERT
CURRENT: 7H3M CURRENT: 2H13M CURRENT: CURRENT: 0H0M
RESET TIMER RESET TIMER RESET TIMER RESET TIMER

Press MENU/SEL to select desired channel/function

Use arrow keys to select settings

FRONT PANEL SETUP — SEL→ ←BACK

FRONT PANEL SETUP
LCD BRIGHTNESS: 100%
LCD TIMEOUT: ALWAYS ON
FRONT PANEL LOCK:

Press MENU/SEL to select desired channel

Use arrow keys to select desired setting

DANTE POWER ENABLE — SEL→ ←BACK

DANTE POWER ENABLE
POWER ENABLE:
*Disabling DANTE will reduce power consumption by 0.85W

Use arrow keys to enable or disable Dante

ANTENNA BIAS POWER — SEL→ ←BACK

ANTENNA BIAS POWER
ANTENNA A: ANTENNA B:
ENABLED ENABLED
DISABLED DISABLED

Press MENU/SEL to select choose antenna

Use arrow keys to enable or disable power

NETWORK SETTINGS — SEL→ ←BACK

NETWORK SETTINGS
DHCP Enable: Gateway: 192.16.2.1
IP Addr: 0.0.0.0   TCP Port: 4080
Net Mask: 255.255.255.0 MAC: 00-24-34-41-00-03

Press MENU/SEL to select desired function

Use arrow keys to adjust setting

EDIT NAMES — SEL→ ←BACK

EDIT NAMES
NAME: RX1
RX Ch 1
Press MENU/SEL to edit the name

Press MENU/SEL to select desired name

Use arrow keys to edit names

RESTORE DEFAULTS — SEL→ ←BACK

DEFAULT SETTINGS, ARE YOU SURE?
YES   NO

Use arrow keys to select yes or no

Press MENU/SEL to restore default settings

ABOUT — SEL→ ←BACK

ID: DSQD
Desc:
Serial Number: 6500003
Firmware Version: 1.0.03
RF Firmware Version: 1.0.2
FPGA Version: 1.02

LINKS — SEL→ ←BACK

Lectrosonics   User Manual   YouTube

Use phone to scan QR code for more information

DIAGNOSTIC METERS — SEL→ ←BACK

DIAGNOSTIC METERS
Active RX: 1   Link Err:
RHI: 160   247
Ang Err: -7   RSSI:
NZ Cnt: 5   32

Quick Start

To begin using the DSQD quickly, follow the steps below. The other settings can be adjusted as needed.

1. **Set Transmitter Frequency:** Begin by deciding which transmitter will be assigned to which **Transmitter Function Button** (1-4). From the **Quick Access Menu** or the **RF Setup Menu**, manually set frequency on the **RF Frequency** screen or scan for available frequencies and assign a frequency to each transmitter from the **Frequency Scan** screen.

2. **Set Compatibility Mode:** From the **Quick Access Menu** or the **Audio Setup Menu**, set compatibility modes for each transmitter.

3. **Set Encryption Keys:** From the **IR Sync & Encryption Menu**, set Key Policy and Create Key (if needed).

4. **Sync Settings:** From the **Quick Access Menu** or the **IR Sync & Encryption Menu**, iniatiate sync for each transmitter via the IR port. Select **SEND ALL**. Messages will appear letting you know if the sync was successful. The main screen will then show green levels when all transmissions are being received.
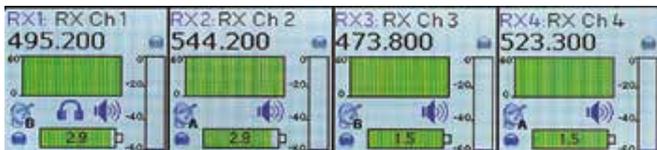
5. You can also quickly check a transmitter status by pressing a **Transmitter Function Button** from the DSQD home screen. This screen allows you to change frequecy and turn **Group Tune** on/off. In addition, you can check the status of the compatibility mode, transmitter battery life, audio level and if mute is on/off.
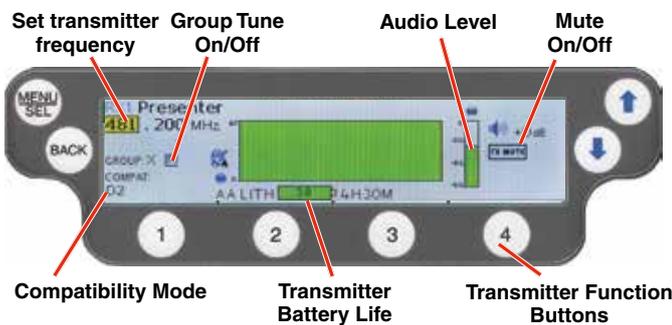
Quick Access

RF Frequency

Allows manual selection of the operating frequency for each channel.

Frequency Scan

Scan for available frequency. First allow the scan to run through completely. Then press a transmitter button to set the frequency for that transmitter (TUNING will begin to flash). Use the UP and DOWN Arrows to scroll to the desired frequency. Either select the BACK Button or another transmitter button to finalize the new frequency.
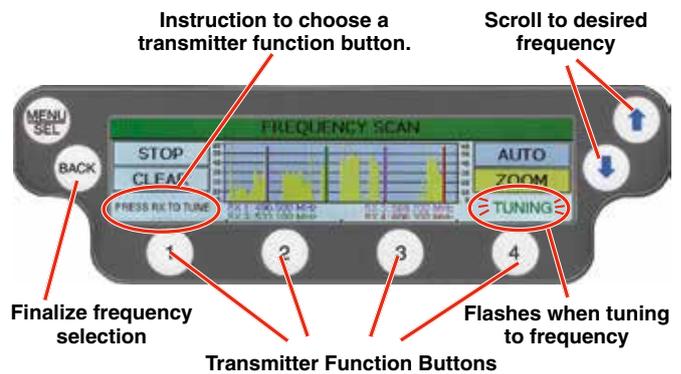
Group Tune
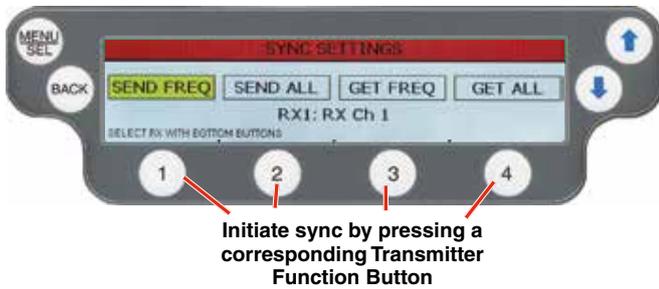
Assign a tuning group to a transmitter.
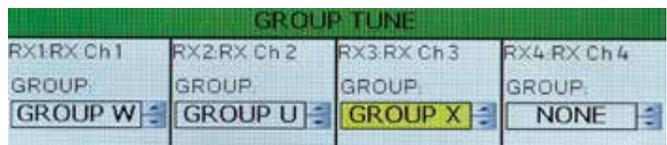
NOTE: Also see **Group Tune Setup** on next page for more information.

Sync Settings

Allows sending or retrieving setup data via the IR port.

Sync options: Choose to sync frequency, sync all settings, retrieve (get) frequency from a transmitter or retrieve (get) all settings from a transmitter using the **UP** and **DOWN** arrows.

Choose Transmitter: Choose one of four Rx channels by using the **Transmitter Function Buttons**, 1, 2, 3 or 4.
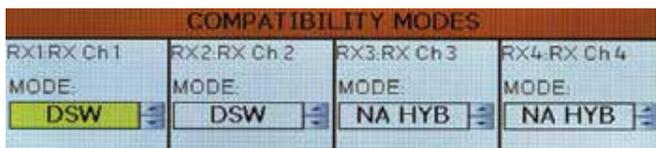

Initiate sync by pressing a corresponding Transmitter Function Button

Compatibility Modes

Nine compatibility modes are available to match various transmitter types.

The following modes are available:

- D2
- JA HYB
- NU HYB
- EU HYB
- NA HYB
- DUET CH2
- DUET CH1

RF Setup Menu

RF Frequency

Allows manual selection of the operating frequency for each channel.

NOTE: Display varies with compatibility mode selection.

Frequency Scan

Scan for available frequency.
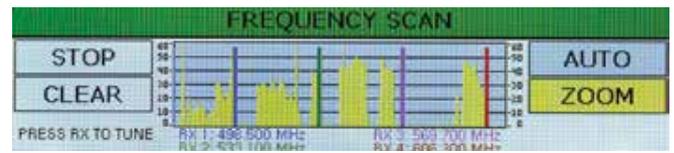
Group Tune

Assign a tuning group to a transmitter channel.
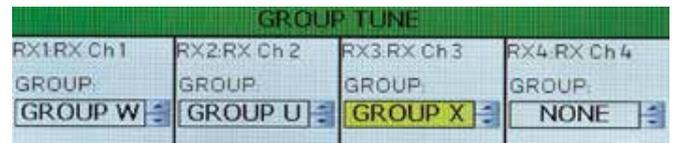
Group Tune Setup

Tuning groups allow the user to set up a list of profiles, by name, allowing for easy tracking of frequency tuning in the transmitters. Four tuning groups are available. For each group, choose channel and frequency, and choose to enable or disable the group. Use MENU/SEL to set and move cursor and the UP and DOWN arrows to change values.
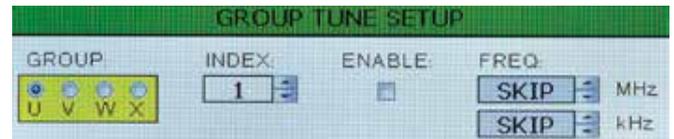
High Density Mode

Enable/Disable High Density Mode.
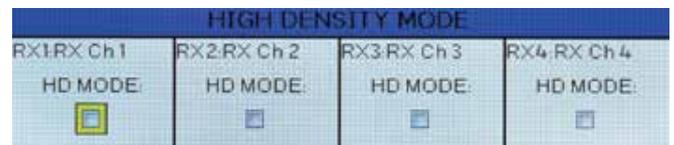
Audio Setup Menu

Audio Level

Set audio outputs at correct levels, including Mute On/Off, Level adjustment and Tone.
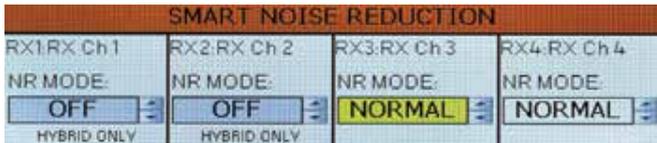
Audio Polarity

Select normal or inverted polarity for each audio channel.

Smart Noise Reduction

Three levels of noise reduction are available: High, Normal and Off.
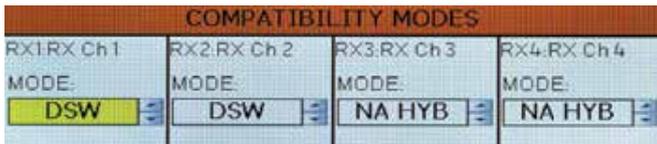

Compatibility Modes

Nine compatibility modes are available to match various transmitter types.

The following modes are available:

- D2
- JA HYB
- NU HYB
- EU HYB
- NA HYB
- DUET CH2
- DUET CH1

Talkback Setup

Talkback is a special function that re-directs the audio output of the transmitter in use to a different receiver output when talkback is selected on the transmitter. The normal use is to provide a "com" channel so the person using the transmitter can have a direct line to the crew or production staff. When selected, the audio will appear at the designated talkback channel rather than the channel used for program audio.
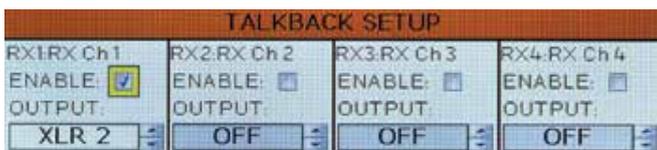
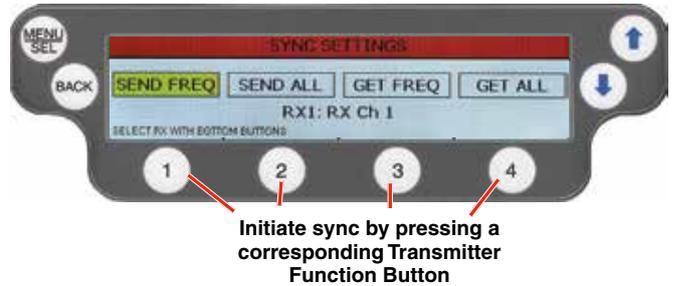NOTE: Also see Encryption Key Management.

IR Sync & Encryption Menu

Sync Setting

Allows sending or retrieving setup data via the IR port.

Sync options: Choose to sync frequency, sync all settings, retrieve (get) frequency from a transmitter or retrieve (get) all settings from a transmitter.

Choose Transmitter: Choose one of four Rx channels by using the **Transmitter Function Buttons**, 1, 2, 3 or 4.

Initiate sync by pressing a corresponding Transmitter Function Button

Sync Key

Send or retrieve (get) encryption keys.
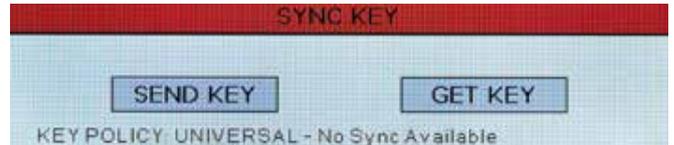
NOTE: Also see Encryption Key Management.

Encryption Key Management

The DSQD generates truly entropic encryption keys to sync with encryption-capable transmitters. Begin by selecting a key policy. The DSQD will then prompt that there is NO KEY! CREATE KEY will generate a new key. Set the matching KEY TYPE in the transmitter, then transfer the key from the DSQD (SYNC KEY) to the transmitter via the IR ports. A confirmation message will display once the transfer is successful. The transmitted audio will then be encrypted and can only be listened to if the transmitter has the matching encryption key.

The DSQD has three options for encryption keys:

- **Standard:** This is the highest level of security. The encryption keys are unique to the DSQD and there are only 256 key instances available to be transferred to a transmitter. The receiver tracks the number of keys generated and the number of times each key is transferred. Once a Standard key has been transferred 256 times, you will be alerted that a new key must be created.

- **Shared:** There are an unlimited number of shared keys available. Once generated by the DSQD and transferred to a transmitter, the encryption key is available to be shared (synced) by the transmitter with other transmitters/receivers via the IR port.

• **Universal:** This is the most convenient en-cryption option available. All encryption-capable Lectrosonics transmitters and receivers contain the Universal Key. The key does not have to be generated by the DSQD. Simply set a Lectroson-ics encryption-capable transmitter and the DSQD to Universal, and the encryption is in place. This allows for convenient encryption amongst multiple transmitters and receivers, but not as secure as creating a unique key.
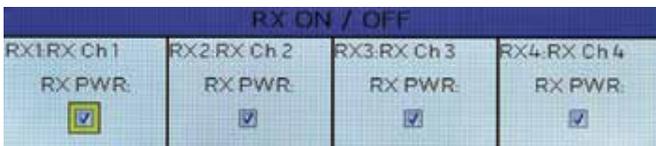

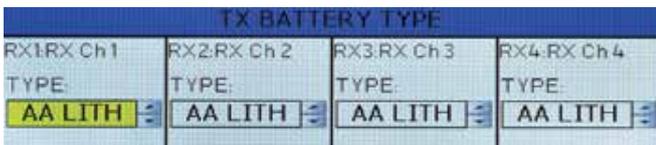NOTE: See Sync Key to send/receive encryption keys.

Tools and Settings Menu

RX On/Off

Use **UP** and **DOWN** arrows to toggle power on and off.

TX Battery Type

Set battery type, alkaline or lithium, for each channel. Use MENU/SEL to set and move cursor and the UP and DOWN arrows to change values.


TX Battery Timer Alert

Set transmitter battery timer alerts for each channel. Choose to enable/disable alert, set time in hour and minutes and reset timer. Use MENU/SEL to set and move the cursor and the UP and DOWN arrows to change values.


Front Panel Setup

Front panel settings may be customized as follows:

• LCD brightness: Use **UP** and **DOWN** arrows to choose from 100%, 75%, 50% or 25%

• LCD Timeout: Use **UP** and **DOWN** arrows to choose from Always On, 30 seconds, or 5 minutes

• Front Panel Lock: Use **UP** and **DOWN** arrows to turn lock on/off. When locked, menus can still be viewed, but if the **UP** and **DOWN** arrows are pressed to change settings, a "FRONT PANEL LOCKED" message will appear.
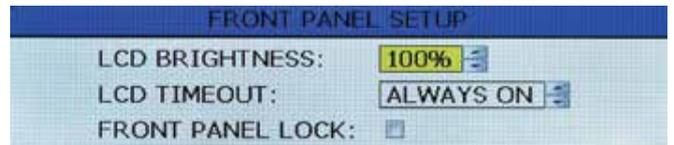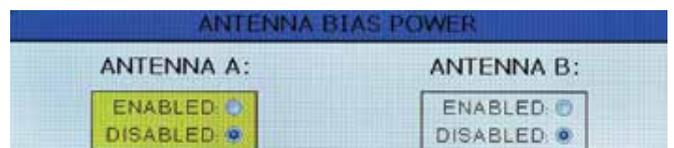

Dante Power Enable

Enable or disable Dante as needed.
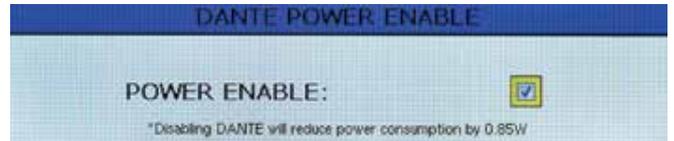
Antenna Bias Power

DSQD BNC connectors are provided for use with right-angle whip antennas, cables from remote antennas, or cables from another DSQD receiver. DC bias voltage can be supplied on these connectors from an internal source to power remote RF amplifiers.

NOTE: See Panels and Features for more information on antennas/connectors.

Network Settings

Allows the user to set IP address or other network set-tings when needed.
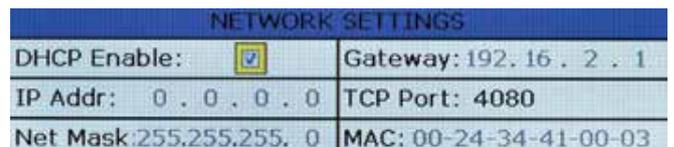
NOTE: New network settings require the unit to reboot to take effect. Making a change and pressing the BACK key will prompt the user to Reboot Now, Save and Exit, or Discard and Exit.

Edit Names

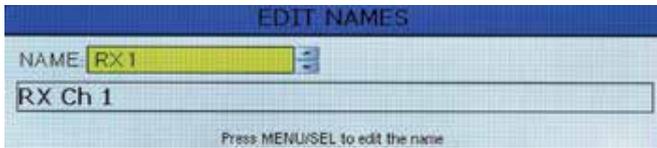Edit names to match talent for easy location or easily identify multiple DSQD receivers in a rack. Use UP and DOWN Arrows to select letters and bottom buttons to set and move cursor. Press MENU/SEL when finished to save.

Restore Defaults

Returns all settings to the factory defaults. If YES is chosen, message will appear and DSQD will reboot.

About

Displays general information about the DSQD, including serial number and hardware, firmware and FPGA versions.

Links

QR codes with links to the Lectrosonics website, the DSQD User Manual online and YouTube video tutorials.

Diagnostic Meters

Specifications and Features

Operating Spectrum:	470.100 - 614.375 MHz
Frequency Adjustment Range:	25 kHz steps
Sampling Size and Rate:	24-bit, 48 kHz
Digital Modulation:	8PSK with Forward Error Correction
Data Encoding:	Proprietary ADPCM
Encryption:	AES 256-CTR (per FIPS 197 and FIPS 140-2)
Latency:	
Digital Source:	1.0 ms plus Dante network
Analog Source:	<1.4 ms
Audio Performance:	
Frequency Response:	20 Hz - 20 KHz, +\-1 dB
THD+N:	0.05% (1 KHz @ -10 dBFS)
Dynamic Range:	108 dB A-wtd, NR=NORMAL
Adjacent Channel Isolation:	>85 dB
Diversity Technique:	Noiseless antenna switching
Sensitivity:	-98 dBm for 10-5 BER
Antenna Inputs/Outputs:	Dual BNC female, 50 ohm impedance
Audio Outputs:	
XLR:	Balanced, -35 to +8 dBu
Headphone:	1/4 inch phone jack
Dante:	RJ45
External DC Power:	7 to 18 VDC; 2.5A (max)
Weight:	2.04 lbs.; 926 grams
Dimensions:	8.375 x 1.75 x 7.375 in. 213 x 44.5 x 187 mm.

Specifications subject to change without notice.

Wireless Designer Software and USB Driver

Windows Installation

Download the Wireless Designer software installer from the web sites under the SUPPORT tab at:

http://www.lectrosonics.com/US

http://www.lectrosonics.com/europe/

or use the flash drive supplied with the receiver.

These instructions are useful for the first time the software is being installed. Once the software is installed, updates are available by simply clicking on an item in the Help Menu. Refer to the help menu for details.

Launch the installer and follow the screen prompts.

I Agree on the EULA (end user license agreement) must be checked to continue the installation.

The installer includes USB drivers, which only need to be installed once. By default, the boxes are unchecked in the installer, because they are not required except for the very first time the software is installed on the computer being used.

If it is the first time the software is being installed, check the appropriate box to install the USB driver for the receiver model you are connecting.

If the USB driver is installed, the software will communicate with whichever model is connected.
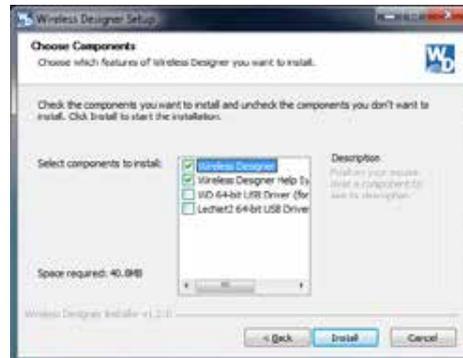
When the installation is complete, the confirmation screen will appear. Click on **Finish** to complete the installation.

Software for Mac® OS X Operating Systems Installation

Using only the Firefox web browser, open Wireless Designer. If the Firefox Silverlight plugin has not been used before you will be prompted to "Activate Silverlight" before Wireless Designer loads.

Note: The Apple Safari web browser no longer suppors installation of Silverlight applications like Wireless Designer. Existing installations will continue to work normally, but new installations must be made using the **Mozilla Firefox Browser**.

After Wireless Designer loads, right-click on the page and choose "Install Wireless Designer onto this computer..." from the pop-up menu. A dialog box will open to confirm, click "Install" to proceed.

A dialog box will open to announce that Wireless Designer has been added to your downloads folder. Click the "Open Downloads Folder" button and drag Wireless Designer onto the Dock or into your Applications folder.

Double-click Wireless Designer to launch it. The first time you launch it you may receive a "Wireless Designer can't be opened..." warning. If so, click "OK" to dismiss the warning and perform the following steps immediately:

Open the Apple "System Preferences" application and double-click the "Security & Privacy" icon.

Near the bottom of the "Security & Privacy" pane you should see the message "Wireless Designer was blocked from opening because it is not from an identified developer."

Click "Open Anyway". Another warning dialog box opens, click "Open" to launch Wireless Designer. This only needs to be done once, Wireless Designer will launch normally thereafter.

Note: If Wireless Designer is already installed, you must uninstall it before attempting to install a new copy. Drag the Wireless Designer Dock icon to the desktop to remove it.

Software Installer

Installation software supplied on flash drive. Can also be downloaded from the web site.

WDDISK

Firmware Update Instructions

Firmware updates are made with a file downloaded from the web site and a USB connection to the receiver.

Refer to **Help** in Wireless Designer software for the procedure.

Supplied Hardware

DCR15/1A6U
DC power supply

21926
Cable USB

35800 Hex L
key wrench

25991 Bracket
front tie

25990 Bracket
rear tie

27076 Rack
flange bracket

27082 Rack handle

(4) 28885 SCR10
cap screw

35959 Hole Plug

(4) 35664 Rubber
foot large

(2) A500RA20
Antenna

Unpacking the Unit

Compare the packing list enclosed with the DSQD with the original order. Inspect all items for damage. Immediately call 1-800-821-1121 to report any items that are missing or damaged. The sooner we get notified, the sooner we can get any needed replacement items shipped to your location.

Items Included in the Box:

- Instruction manual
- (DCR15/1A6AU) Power supply cable
- (21926) USB cable
- (35800) Hex L key wrench
- (25990) Bracket rear tie
- (25991) Bracket front tie
- (27076) Rack flange bracket
- (27082) Rack handle
- (28885) (4) SCR10 cap screw
- (35664) (4) Rubber foot large
- (35959) Hole plug
- (A500RA20) (2) Antenna

Optional Accessories

DCR15/1A66U

27080 Dante Port Cover

SNA600a Antenna

Adjustable elements tune center frequency from 550 to 800 MHz; 3/8" x 16 threaded socket and stud with mounting strap included

ALP690 Antenna

Broad bandwidth for multi-channel systems; directional pattern with 4 dBd RF gain; built-in RF amplifier; versatile mounting options

Coaxial Antenna Cable:

ARG 15

A 15 foot antenna cable of standard RG-58 coax cable with BNC connectors at each end.

ARG 25; ARG 50; ARG 100

Antenna cable of Belden 9913F low-loss coax cable with BNC connectors at each end. Number specifies length in feet.

Service and Repair

If your system malfunctions, you should attempt to correct or isolate the trouble before concluding that the equipment needs repair. Make sure you have followed the setup procedure and operating instructions. Check the interconnecting cables and then go through the **Troubleshooting** section in this manual.

We strongly recommend that you **do not** try to repair the equipment yourself and **do not** have the local repair shop attempt anything other than the simplest repair. If the repair is more complicated than a broken wire or loose connection, send the unit to the factory for repair and service. Don't attempt to adjust any controls inside the units. Once set at the factory, the various controls and trimmers do not drift with age or vibration and never require readjustment. **There are no adjustments inside that will make a malfunctioning unit start working**.

LECTROSONICS' Service Department is equipped and staffed to quickly repair your equipment. In warranty repairs are made at no charge in accordance with the terms of the warranty. Out-of-warranty repairs are charged at a modest flat rate plus parts and shipping. Since it takes almost as much time and effort to determine what is wrong as it does to make the repair, there is a charge for an exact quotation. We will be happy to quote approximate charges by phone for out-of-warranty repairs.

Returning Units for Repair

For timely service, please follow the steps below:

A. DO NOT return equipment to the factory for repair without first contacting us by email or by phone. We need to know the nature of the problem, the model number and the serial number of the equipment. We also need a phone number where you can be reached 8 A.M. to 4 P.M. (U.S. Mountain Standard Time).

B. After receiving your request, we will issue you a return authorization number (R.A.). This number will help speed your repair through our receiving and repair departments. The return authorization number must be clearly shown on the **outside** of the shipping container.

C. Pack the equipment carefully and ship to us, shipping costs prepaid. If necessary, we can provide you with the proper packing materials. UPS is usually the best way to ship the units. Heavy units should be "double-boxed" for safe transport.

D. We also strongly recommend that you insure the equipment, since we cannot be responsible for loss of or damage to equipment that you ship. Of course, we insure the equipment when we ship it back to you.

Lectrosonics USA:

Mailing address:	**Shipping address:**	**Telephone:**
Lectrosonics, Inc.	Lectrosonics, Inc.	(505) 892-4501
PO Box 15900	561 Laser Rd. NE, Suite 102	(800) 821-1121 Toll-free
Rio Rancho, NM 87174	Rio Rancho, NM 87124	(505) 892-6243 Fax
USA	USA	

Web:	**E-mail:**
www.lectrosonics.com	sales@lectrosonics.com
	service.repair@lectrosonics.com

Lectrosonics Canada:

Mailing Address:	**Telephone:**	**E-mail:**
720 Spadina Avenue,	(416) 596-2202	Sales: colinb@lectrosonics.com
Suite 600	(877) 753-2876 Toll-free	Service: joeb@lectrosonics.com
Toronto, Ontario M5S 2T9	(877-7LECTRO)	
	(416) 596-6648 Fax	

ISEDC Notices:

Per RSS-210

This device operates on a no-protection no-interference basis. Should the user seek to obtain protection from other radio services operating in the same TV bands, a radio licence is required. Please consult Industry Canada's document CPC-2-1-28, Optional Licensing for Low-Power Radio Apparatus in the TV Bands, for details.

Ce dispositif fonctionne selon un régime de non-brouillage et de non-protection. Si l'utilisateur devait chercher à obtenir une certaine protection contre d'autres services radio fonctionnant dans les mêmes bandes de télévision, une licence radio serait requise. Pour en savoir plus, veuillez consulter le document CPC-2-1-28 d'Industrie Canada intitulé, Délivrance de licences sur une base volontaire pour les appareils radio de faible puissance exempts de licence et exploités dans les bandes de télévision.

Per RSS-Gen

This device complies with Industry Canada's license-exempt RSSs. Operation is subject to the following two conditions:

1) This device may not cause interference

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'Industrie Canada applicables aux appareils radio ex¬empts de licence. L'exploitation est autorisée aux deux conditions suivantes :

1) l'appareil ne doit pas produire de brouillage;

2) l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est suscep tible d'en compromettre le fonctionnement.

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.