

Quick Start Guide



DCHT

Digital Transmitter

DCHT, DCHT/01



U.S. Patent 7,225,135

Fill in for your records:

Serial Number:

Purchase Date:

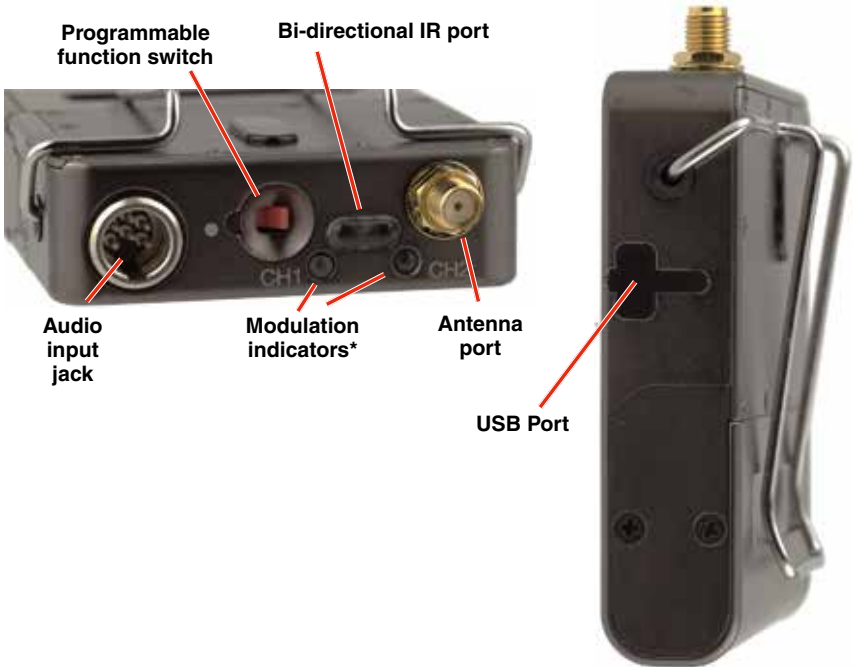
This guide is intended to assist with initial setup and operation of your Lectrosonics product.

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

www.lectrosonics.com

10 July 2019

Features and Functions



Battery Status LED Indicator

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.

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 at a mid-point of the runtime. When the LED begins to *blink* red, there will be only a few minutes of operation remaining.

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 for **BatTime** details.

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.

Status LED

Blue LED indicates ready status.

Battery Installation

The transmitter is powered by two AA batteries. Lithium batteries are recommended 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 outward, then lift up 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.

Spring contacts




Optional Battery Eliminator

The transmitter can be powered by external DC using the optional LTBATELIM power supply adapter.

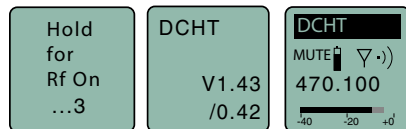


Powering On/Off


Powering On in Operating Mode

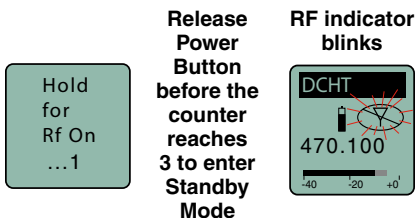
Press and hold the Power Button  for several seconds until a counter on the LCD progresses from 1 through 3.

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



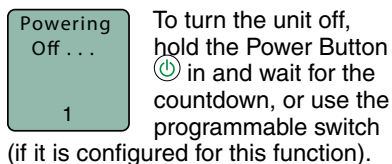
Powering On in Standby Mode

A brief press of the power button , and releasing it before the counter has reached 3, 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.



After settings and adjustments are made, press the power button again to turn the unit off.

Powering Off







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

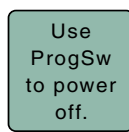
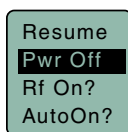
NOTE: If the programmable switch is in the OFF position, power can still be turned on with the power button.

Power Button Menu

Entering the Power Menu

When the unit is turned on and the Main Window is displayed, press the power button  to open a menu with various setting and functions. Use the  and  arrow buttons to highlight menu items. Then press MENU/SEL to execute the item or enter a setup screen. The following options are available:

- **Resume** - returns to the previous mode and screen
- **Pwr Off** - turns the unit off irrevocably. Press either the power button  or MENU/SEL to turn the unit off. If the Programmable Switch has been set to control the power, a message will be displayed prompting you to use the switch to turn the power off.

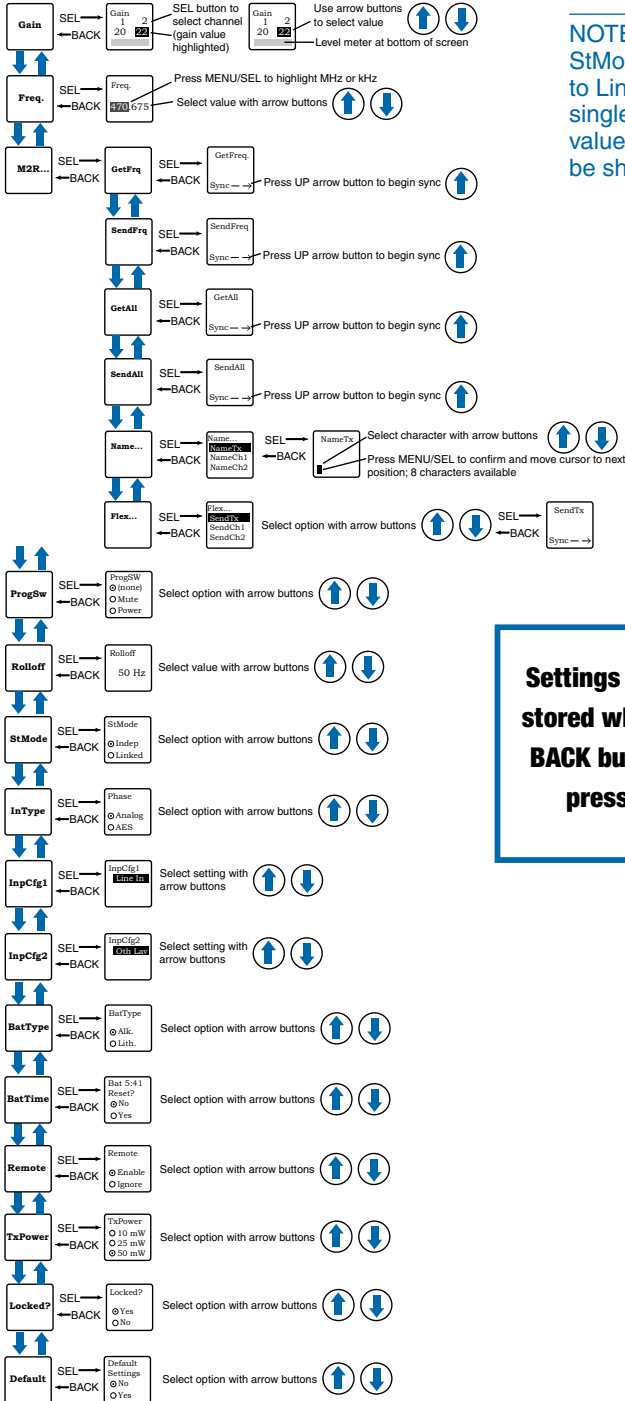


Message appears if ProgSw is set to control power

Refer to the **ProgSw** settings on the following pages to configure the programmable switch

- **Rf On?** - enters a screen to enable the operating or standby modes
- **AutoOn?** - If external power or batteries fail while the unit is transmitting, the unit will automatically turn back on after power is restored or fresh batteries are installed (does not work in **Standby** mode).
- **Backlit** - adjusts the duration of the LCD back light to 30 seconds, 5 minutes or to remain on
- **LED Off** - enters a screen with options to turn the control panel LEDs on or off
- **About** - displays model number and firmware version

LCD Menu Map





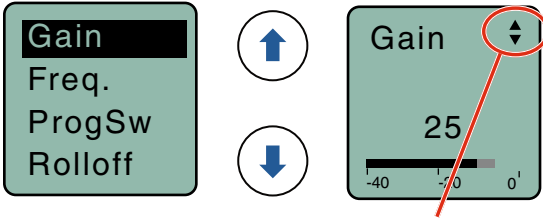
NOTE: When StMode is set to Linked, a single gain value field will be shown

Settings will be stored when the BACK button is pressed.

Main Menu and Setup Screen Details

Entering the Main Menu

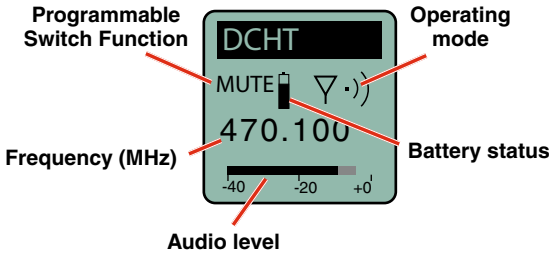
The LCD and keypad interface makes it easy to browse the menus and make the selections for the setup you need. When the unit is powered up in either the operating or the standby mode, press MENU/SEL on the keypad to enter a menu structure on the LCD. Use the  and  arrow buttons to select the menu item.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



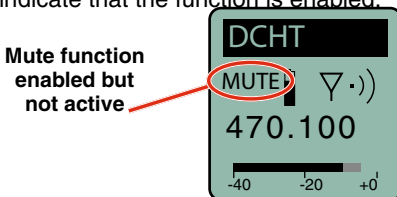
The prompt in the upper right corner may display one or both arrows, depending upon what adjustment can be made. If the changes are locked, a small padlock symbol will appear.

Main Window Indicators

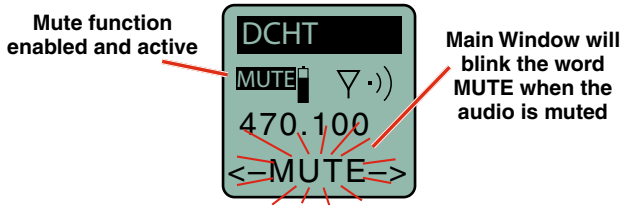
The Main Window displays the current settings, status, audio level and battery status.



If the programmable switch function is set for **MUTE**, the Main Window will indicate that the function is enabled.



When the switch is turned on, the mute icon appearance will change and the word MUTE will blink at the bottom of the display. The -10 LED on the top panel will also glow solid red.



Connecting the Signal Source

Microphones, line level audio sources and instruments can be used with the transmitter. Refer to the section entitled **Input Connections** for details on the correct wiring for line level sources and microphones to take full advantage of the Servo Bias circuitry.

Adjusting the Input Gain for Analog Inputs

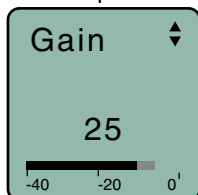
For analog gain adjustment, two multi-color LEDs on the top panel, one for each channel, provide a visual indication of the audio signal level entering the transmitter. The LEDs will glow either red or green to indicate modulation levels as shown in the following table.

Signal Level	CH1	CH2
Less than -20 dB	● Off	● Off
-20 dB to +0 dB	● Green	● Green
+0 dB and greater	● Red	● Green

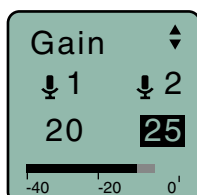
NOTE: This procedure is used for analog inputs only. AES digital input is factory set at the industry standard level. The LEDs on the top panel will glow blue when the audio level reaches about -40 FS.

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.



Setup screen in
Linked mode





Setup screen in
Independent mode

- 3) 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 audio device to the maximum level that will be used.
- 4) Use the  and  arrow buttons to adjust the gain until the LED glows green most or all of the time, and flicker red during the loudest peaks.
- 5) Turn the recorder or sound system gain down before setting the transmitter to the normal operating mode and enabling the audio output.
- 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.

Selecting Frequency

The setup screen for frequency selection offers two ways to browse the available frequencies.



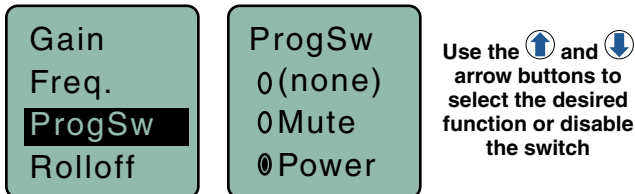
Press the MENU/SEL button to select each field. Use the  and  arrow buttons to adjust the frequency. Each field will step through the available frequencies in a different increment.

NOTE: When the frequency is highlighted, hold down the MENU/SEL button to increase or decrease frequency in higher increments.

Selecting 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 blink a message and -10 LED will glow solid red.
- **Power** - turns the power on and off

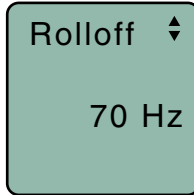


NOTE: The programmable switch will continue to operate whether or not keypad changes are locked.

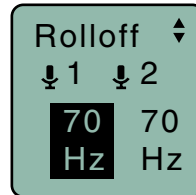
Selecting the Low Frequency Roll-off

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 at 20, 35, 50, 70, 100, 120 and 150 Hz.



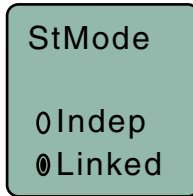
Setup screen in
Linked mode



Setup screen in
Independent mode

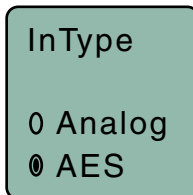
Selecting StMode (stereo mode)

The two channels can be set to **Indep** (independent) or **Linked**. Indep allows the gain to be adjusted separately on each channel. Linked employs the gain adjustment to both channels.





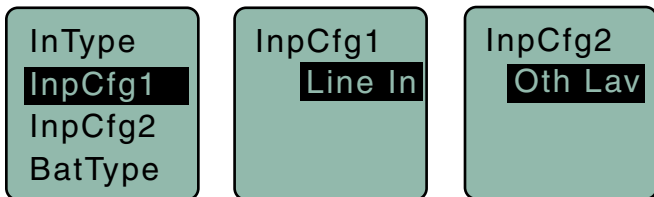
Selecting Input Type

AES digital or analog audio input is selected with the **InType** menu item. With the AES selected, there are no additional settings needed for the input. Analog input configuration is set with the **InpCfg1** and **InpCfg2** menu items.





Selecting Input Configuration

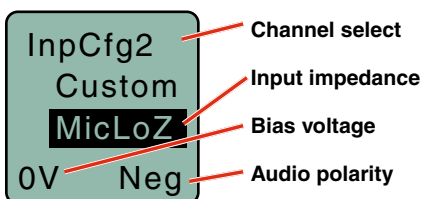
When the input type is set to Analog, **InpCfg1** and **InpCfg2** menus are used to configure the audio input for the respective channels. Use the  and  arrow buttons to select the input type.



TYPE	DESC, BIAS, IMPEDANCE, POLARITY
Line In	Line level signals up to +24 dBu
Dynamic	Low-Z dynamic microphones
DPA	DPA lavalier; 4V, Mid-Z, (+)
B6	Countryman B6; 2V, Low-Z, (+)
COS-11	Sanken COS-11; 4V, Low-Z, (-)
MKE 2*	Sennheiser MKE 2; 4V, Low-Z, (+)
M152*	Lectrosonics M152; 4V, Low-Z, (+)
Oth Lav*	Other lavalier; 4V, Low-Z, (+)
Custom	Manually configurable microphone level

* Separate listings for these microphones are included for convenience, however, they are all the same configuration.

The **Custom** option opens a setup screen that provides a variety of settings. Press SEL to select the custom setup item, then press the  and  arrow buttons to adjust the setting.



Available settings:

- Input impedance (Z): LOW, MID, HIGH
- Bias voltage: 0V, 2V, 4V
- Audio polarity: + (pos.), - (neg.)

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 liability 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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