INSTALLATION and QUICK START GUIDE

DMTH4

Digital Telephone Hybrid

Fill in for your records:

Serial Number:

Purchase Date:

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

Important Safety Instructions

This symbol, wherever it appears, alerts you to the presence of uninsulated dangerous voltage inside the enclosure -- voltage that may be sufficient to constitute a risk of shock.

This symbol, wherever it appears, alerts you to important operating and maintenance instructions in the accompanying literature. Please read the manual.

When using your telephone equipment, basic safety precautions should always be followed to reduce the risk of fire, electrick shock and injury to persons, including the following:

1) Read these instructions.
2) Keep these instructions.
3) Heed all warnings.
4) Follow all instructions.
5) Do not use this apparatus near water.
6) Clean only with a dry cloth.
7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and third grounding prong. The wider blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11) Only use attachments/accessories specified by the manufacturer.
12) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

13) Unplug this apparatus during lightning storms or when unused for long periods of time.
14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15) **WARNING** -- TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE.
16) The AC mains plug, or appliance coupler shall be readily available to the operator as a means of power disconnection, if applicable.
17) Unit shall be connected to a MAINS socket outlet with a protective earthing connection.
18) Do not use this product near water for example, near a bathtub, washbowl, kitchen sink or laundry tub, in a wet basement or near a swimming pool.
19) Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electric shock from lightning.
20) Do not use the telephone to report a gas leak in the vicinity of the leak.
21) Use only the power cord and batteries indicated in this manual. Do not dispose of batteries in a fire. They may explode. Check with local codes for possible special disposal instructions.
22) "CAUTION: To reduce the risk of fire, use only No. 26 AWG or larger (e.g., 24 AWG) UL Listed or CSA Certified Telecommunication Line Cord"

SAVE THESE INSTRUCTIONS

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Introduction

The purpose of this guide is to assist in the setup and operation of a typical DMTH4 system. This guide assumes familiarity with the DM Series Digital Audio Processors, its components and software menus and setup screens. To get the most out of the DMTH4 system, it is suggested to review the information presented in the DMTH4 Series Reference Manual.

A detailed Help is also available to assist in the setup and operation of a DMTH4 system using the USB interface and a Windows® XP, Vista™ or 7 operating system. In addition to assistance setting up and operating the DMTH4 system, the Help files include a complete listing of the DMTH4 Serial Commands. These commands can be used to setup and operate the DMTH4 system via external devices using either the USB or RS232 serial port.

Unpacking the unit

Compare the packing list enclosed with the unit 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.

Controls and Features

Front Panel

POWER On/Off Switch

The Power On/Off Switch is used to turn the DMTH4 on (1) or off (0).

USB Port

Standard USB connector for the setup and control of a DMTH4 from an Windows 2000 or Windows XP computer system with USB interface.

Status LED

The DMTH4 is normally configured as the end slave unit in a DM Series stack. In this configuration, the Status LED glows steadily when power is applied and a Master unit has been detected. The STATUS indicator will blink to indicate that it has not found the Master unit or some other error exists.

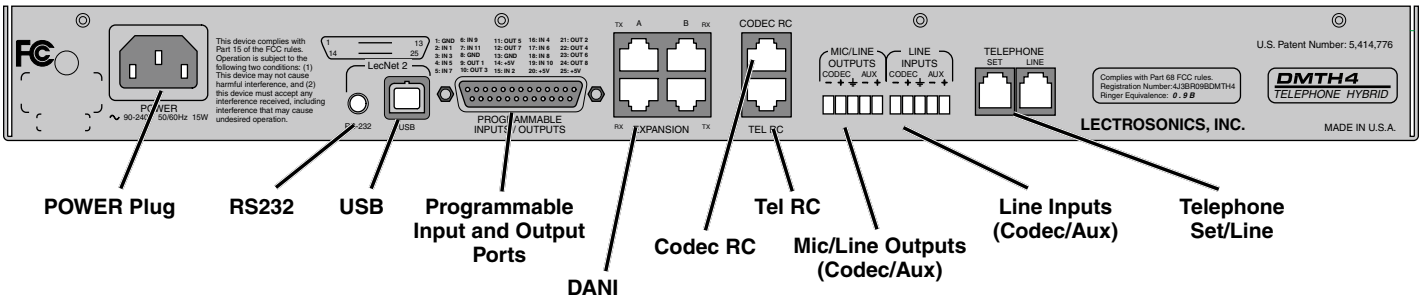
Note: The DMTH4 is shipped from the factory configured as a Master unit. In this mode, the Status indicator glows steadily when power is applied.

Mode Switch

If a unit configured to run in Slave mode doesn't detect a master unit on powerup, it will refuse to boot up and the Status LED will blink rapidly. In this case, pressing the Mode switch will force the unit to boot up temporarily in Master mode to allow settings to be examined or changed. Cycling the power returns the DMTH4 to Slave mode.

Pressing the Mode switch while powering up the DMTH4, places the unit in Software Update mode. The Status LED blinks slowly while the firmware is updated, then extinguishes when the process is complete. Cycling power exits Software Update mode.

Rear Panel



POWER Plug

Standard NEMA 5-15 three-pin power plug capable of accepting 100-240 VAC, 47-63 Hz.

RS232 Port

A serial RS232 interface provided for setup and control via computer serial port, or for connecting RS-232 serial control devices from other companies.

USB Port

Standard USB connector for the setup and control of a DMTH4 from an Windows 2000 or WIndows XP computer system with USB interface.

Programmable Input and Output Ports

Programmable inputs or outputs used to enable control over a variety of parameters or to indicate the current state of a programmable input.

DANI

DANI, or Digital Audio Network Interface, is used to route the digital audio signals passing between the master and slave units in stacked configurations.

TEL/CODEC RC

These interfaces are used to connect RCWTH4 remote control units.

Audio Inputs and Outputs

Analog audio input and output connectors for Codec and Aux ports .

Telephone Set/Line

RJ11 jacks for connecting a standard telephone line and a single-line telephone set to the DMTH4.

Hardware Installation

Installing the DM system into a rack

The DMTH4 occupies a single space. There are no special ventilation requirements. Mount with 4 rack screws using the appropriate mounting holes. It is recommended to use nylon washers to prevent damage to the front panel's finish when tightening the screws.

For North American installations, connect the Power Cable supplied with the unit between the DMTH4 and a stable power source. All DM processors have internal switching power supplies that can tolerate voltages ranging from 100 VAC to 240 VAC. Use an approved power cable for installations outside North America.

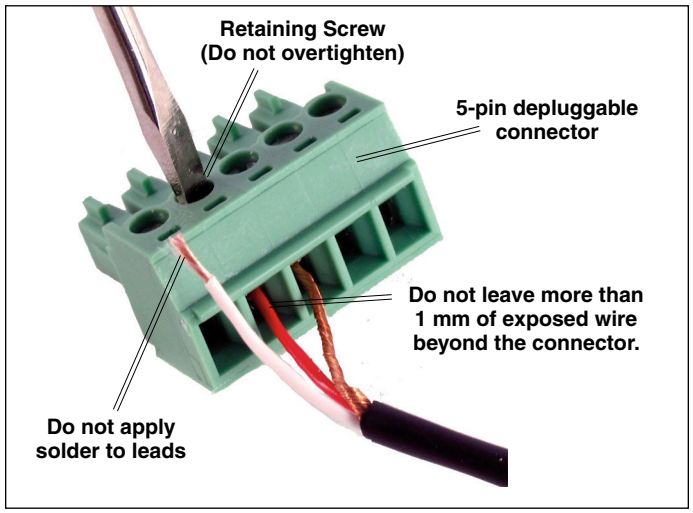
Cables

It is recommented to use lacing bars for cable strain relief when mounting in a rack. Use only professional audio cable with proper shielding - typically, two conductor plus ground/shield.

Audio Connections

The analog audio inputs and outputs are connected through 5 pin de-pluggable connectors. Strip the insulation back 1/8 to 3/16" but do not tin (apply solder to) the leads. Insert the wire into a de-pluggable connector, leaving less than 1 mm of bare wire exposed, then tighten the retaining screw.

Caution: Do not over tighten the retaining screw.



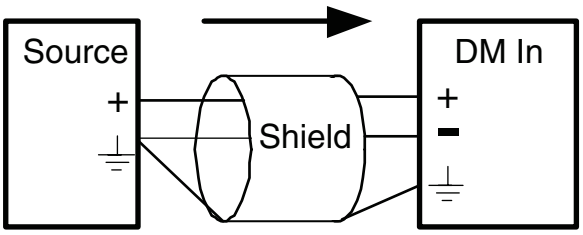
Note the labeling on the DMTH4 Chassis for the positive and negative leads. Ground is shared between two connections (the center pin).

Note: The DM Series does not have a "pin 1 problem." Inputs and outputs are true differential connections.

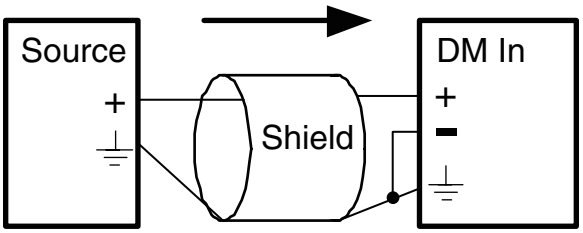
Audio Inputs (AUX and CODEC)

Unbalanced Sources

Unbalanced audio sources (positive and ground) include items such as consumer VCR's, DVD players, etc., and may use both two wire and three wire cables. In either case, the positive output from the source should be connected to the appropriate positive (+) input on the DMTH4. The shield or negative (–) output should be connected the DM's negative (–) input. Two wire cables should have a jumper between the DMTH4 negative input and ground. Three wire cables should have the shield connected to the DMTH4's ground input and the shield and negative (–) leads joined together at the unbalanced source end.



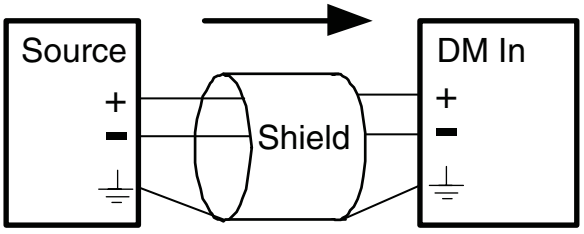
Unbalanced source to DM input
(3-Wire)



Unbalanced source to DM input
(2-Wire)

Balanced Sources

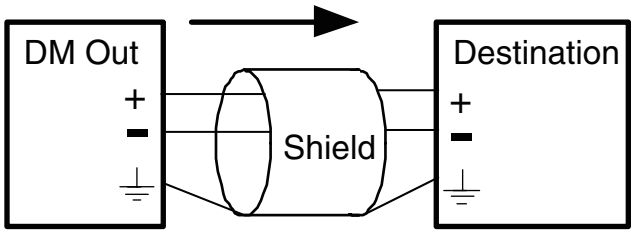
Balanced differential sources from external equipment and microphones should be wired according to **Balanced source to DM input (3-Wire)**. (See illustration.) When connecting balanced sources to the DMTH4, it is important to not connect chassis ground (shield) to either signal conductor.



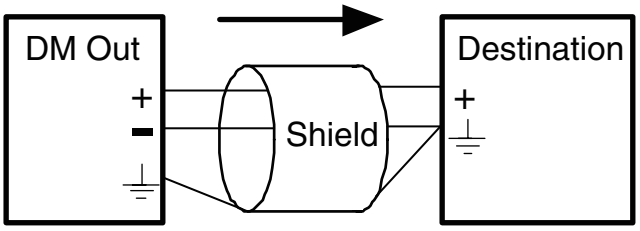
Balanced source to DM input
(3-Wire)

Audio Outputs (AUX and CODEC)

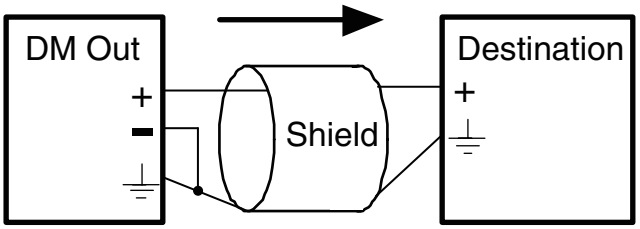
The AUX and Codec outputs are a balanced differential configuration and include an attenuator to reduce the signal to mic level. Wire these outputs as indicated in the following illustration.



DM Out to Balanced Input
(3-Wire)



DM Out to Unbalanced Input
(3-Wire)



DM Out to Unbalanced Input
(2-Wire)

Telephone Line Jack

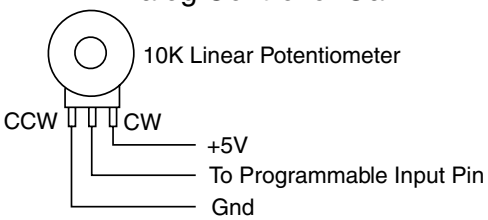
Connect a standard telephone cable with RJ11 connectors between the back panel Telephone Line Jack and the host telephone system.

Programmable Inputs

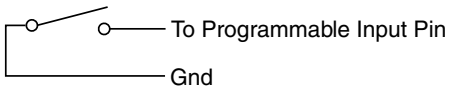
Programmable inputs are provided to enable external control over a variety of parameters. Each input can respond to a contact closure, a DC voltage source, or the variable voltage output from a potentiometer. The following illustrates common connections to the programmable input pins. (See also **Programmable Inputs and Outputs Wiring Example**.)

No external pull-up resistors are necessary because each programmable input is internally pulled up through a 100K resistor to +5V. When using a continuous voltage with one of the programmable inputs, the function of the programmable input must be set to either ***Analog***

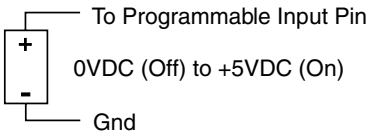
Potentiometer Connection for
Analog Control of Gain



Contact Closure as Programmable Input



DC Voltage Source as Programmable Input

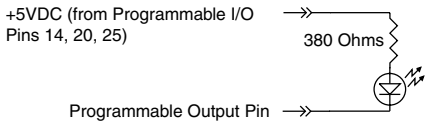


Input RP Gain Control or ***Analog Output RP Gain Control*** on the **Programmable Inputs** control tab in the Control Panel GUI. See the **Rear Panel Ctrl** tab in the Control Panel software Help for setting all programmable input parameters.

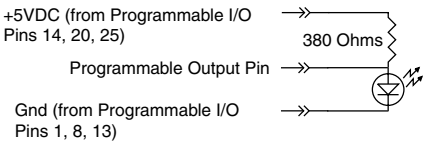
Programmable Outputs

Programmable outputs are used to indicate the current state of a programmable input, monitor activity on telephone or codec interfaces, and monitor active preset changes. Each programmable output is the electrical equivalent of a contact closure to ground. When a programmable output is "active", it conducts current to ground. When the programmable output is "inactive", no current flows to ground. The maximum usable voltage for the programmable outputs is 40 V and they will safely conduct up to 100 mA DC continuous. Following are some typical uses for the programmable outputs.

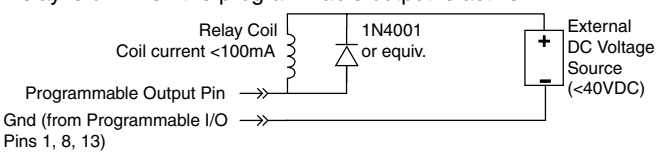
LED is on when the programmable output is active



LED is off when the programmable output is active

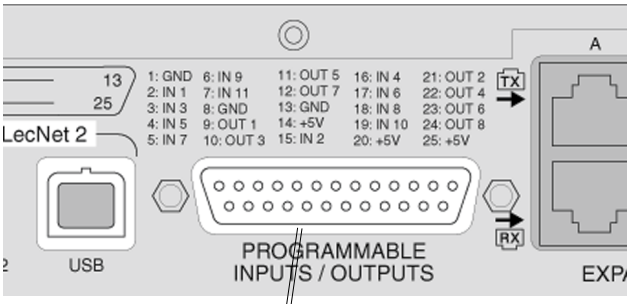


Relay is on when the programmable output is active

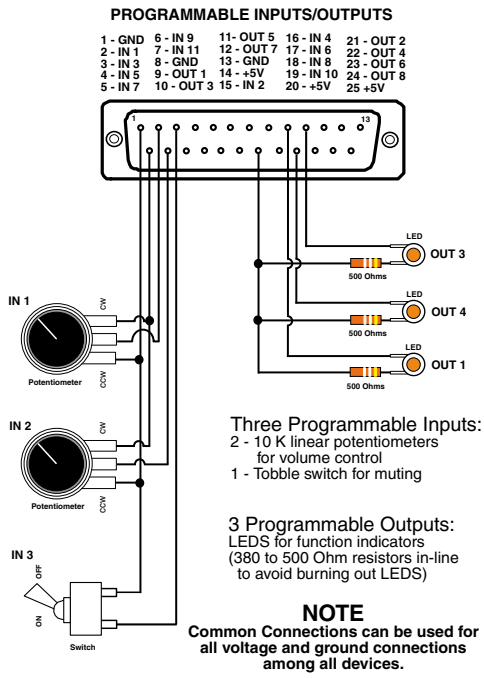


Note: The diagram shows an external DC source powering the relay coil. This is necessary whenever coil voltages exceed 5 V.

Both LEDs and 5V relay coils can be powered by the +5 V DC pins on the programmable input connector, as long as the maximum combined current for all LEDS and relay coils does not exceed 100 mA.



Programmable Inputs and Outputs Wiring Example



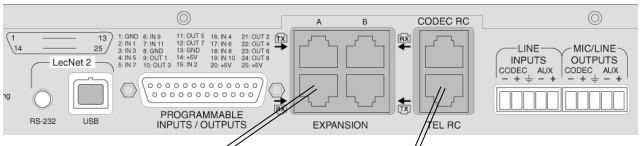
Three Programmable Inputs:
2 - 10 K linear potentiometers for volume control
1 - Tobble switch for muting

3 Programmable Outputs:
LEDS for function indicators
(380 to 500 Ohm resistors in-line to avoid burning out LEDS)

NOTE
Common Connections can be used for all voltage and ground connections among all devices.

Expansion I/O ports

The four RJ45 connectors on the rear panel are used to interconnect LecNet2™ units together. These ports are only used to transfer digital audio information via the Digital Audio Network Interface (DANI) between the units.



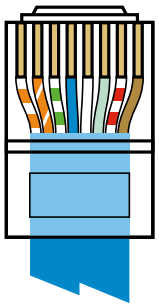
Expansion I/O Ports (DANI Bus)

CODEC and TEL Remote Control Ports

CODEC and TEL Remote Control Ports

1 GND
2 Connect Button
3 Privacy Button
4 Volume Up Button
5 Volume Down Button
6 Privacy LED
7 Connect LED
8 GND

PIN 1 → **PIN 8**

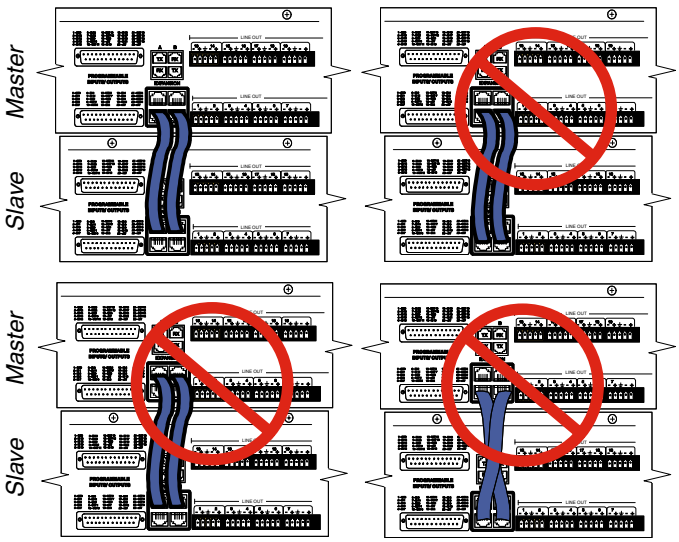


***WARNING:* The Expansion I/O connectors are *NOT* Ethernet, CobraNet or any other network based device interconnects. Connecting them to Ethernet, CobraNet or other network based device may cause damage to either unit.**

In a stacked configuration, one unit must be configured as the Master unit and the others as Slave units. The DMTH4 is normally configured as the last Slave unit in a DM Series chain.

To connect the Master/Slave units, plug one end of a 12 inch Cat5e cable (two are supplied with each with unit) to the transmit (TX) port on the Master unit, and connect the other end to the corresponding receiver (RX) port on the Slave unit immediately below the Master. Repeat this procedure with the second Cat5e cable.

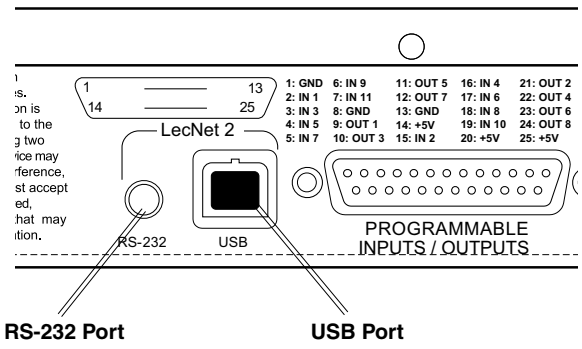
CAUTION: Do not connect these ports to each other on a single unit, and to not cross the cables between the units.



Expansion Port Digital Audio Network Interface Interconnection Diagram

Control System Interconnections

In addition to a Windows® based computer system, the DM84 can be controlled by external serial control system using the RS-232 interface, such as those from Crestron® and AMX®.



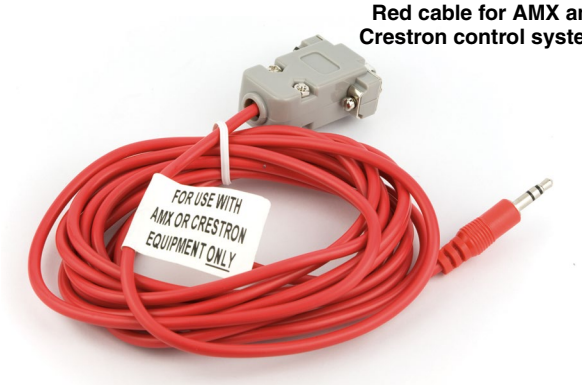
Two RS-232 serial cables are provided.

The cable with the **BLACK** TRS connector is an RS-232 cable wired for use with a laptop computer system.

Black cable for computer connection

The cable with the **RED** TRS connector is designed to be used with a control system such as those from Crestron® or AMX®.

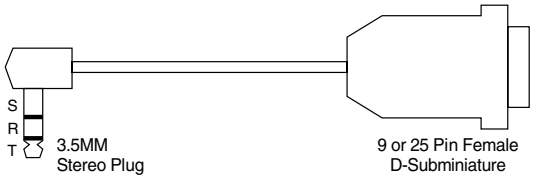
Red cable for AMX and Crestron control systems



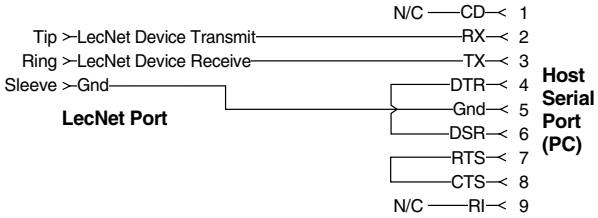
NOTE: Crestron® is a trademark of Crestron Electronics, Inc. AMX® is a registered trademark of AMX Corp.

Part# 21529-1 (Black Cable)

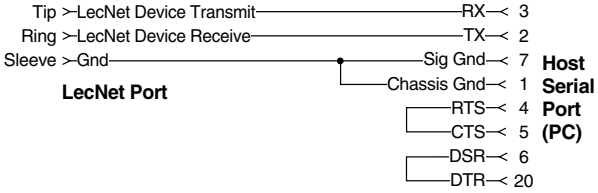
Device to PC



Wiring Diagram, 9 Pin D-Sub

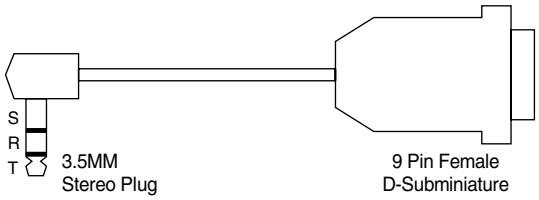


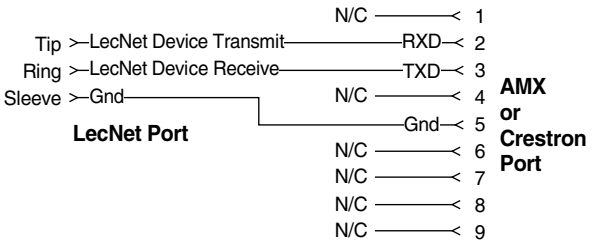
Wiring Diagram, 25 Pin D-Sub



Part# 21710-1 (Red Cable)

Device to AMX or Crestron





Installing LecNet2™ Software and USB Driver

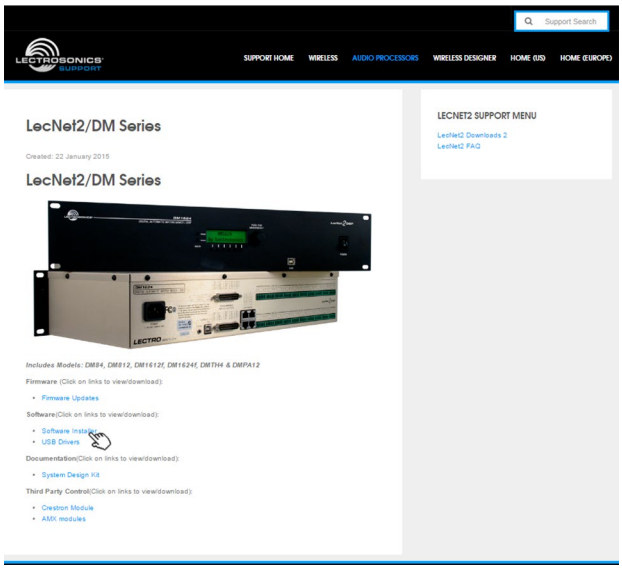
Software Installer - Windows Installation

The example shown her illustrates the installation procedure using a Windows operating system. The screens that appear at each step using another operating system will vary, but the general steps are very similar.

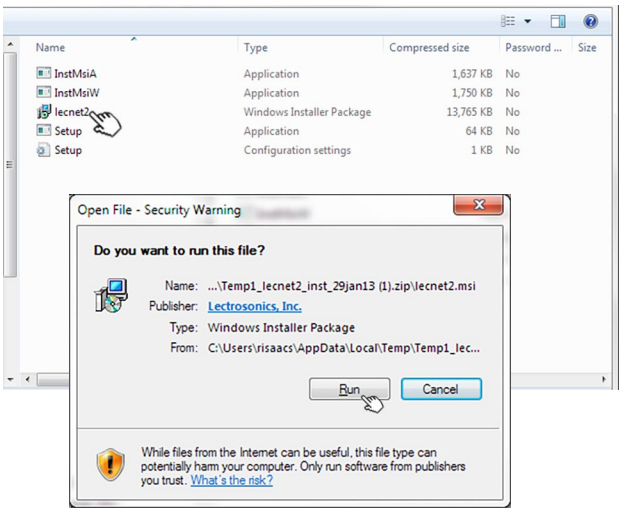
Download the LecNet2/DM Series Support software installer from the web sites under the SUPPORT tab at:

http://www.lectrosonics.com/US

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

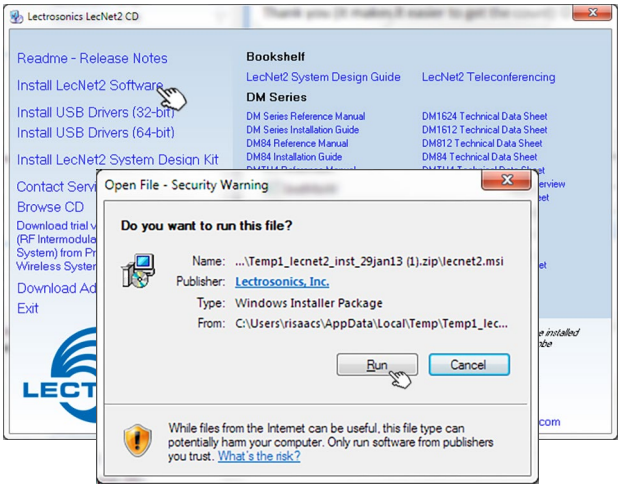


1. Launch the installer and follow the screen prompts.



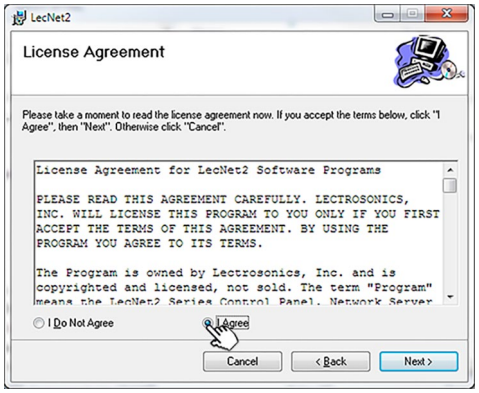
Or use the flash drive supplied with the processor.

WDDISK

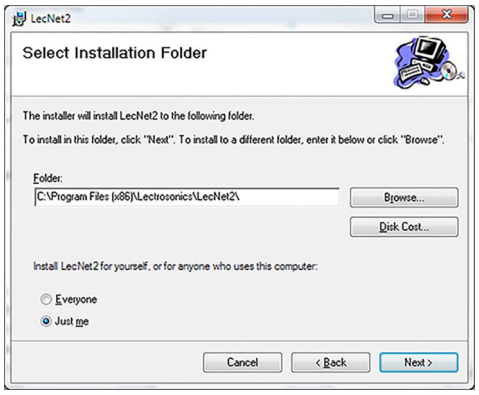


2. Follow the prompts to run the LecNet2 Setup Wizard.

3. The End User License Agreement screen appears. Click on **I Agree** to continue.

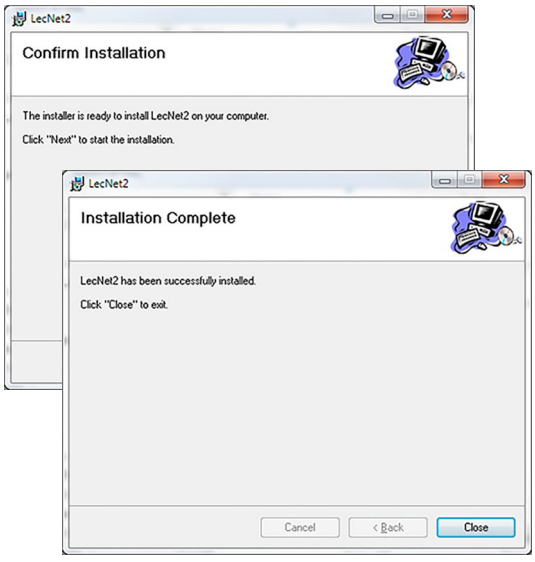


4. The installer will automatically download to a folder on your PC, or you can choose which folder it should be stored in.



5. Click on **Next** to complete the installation.

When the installation is complete, the confirmation screen will appear.



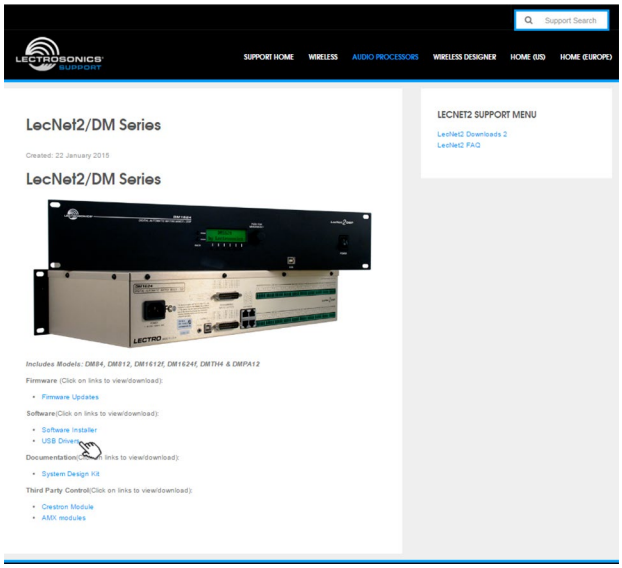
USB Driver Installer - Windows Installation

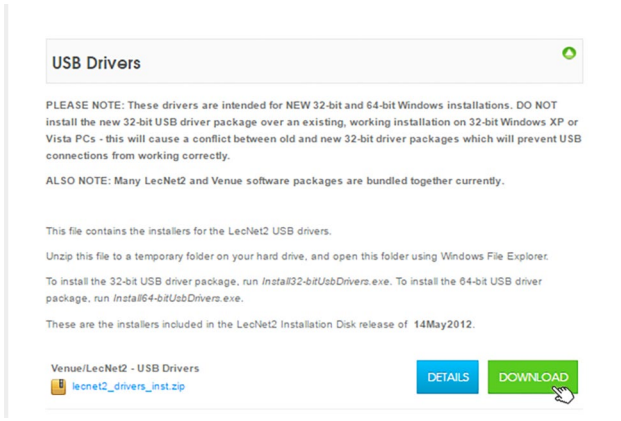
The example shown her illustrates the installation procedure using a Windows operating system. The screens that appear at each step using another operating system will vary, but the general steps are very similar.

Download the LecNet2/DM Series USB drivers from the web sites under the SUPPORT tab at:

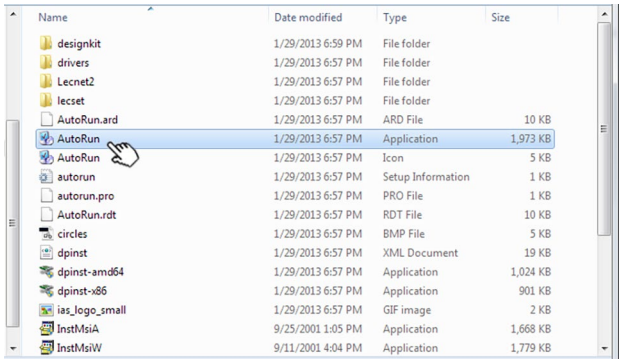
http://www.lectrosonics.com/US

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





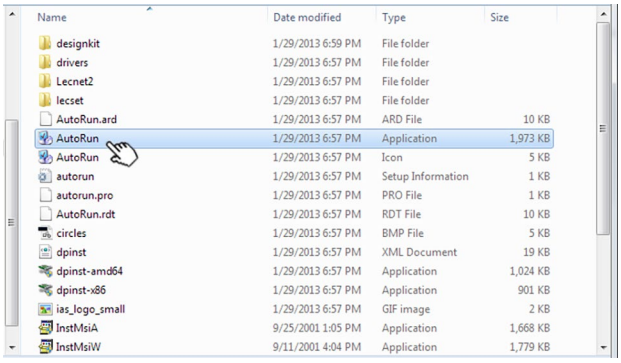
1. Launch the installer and follow the screen



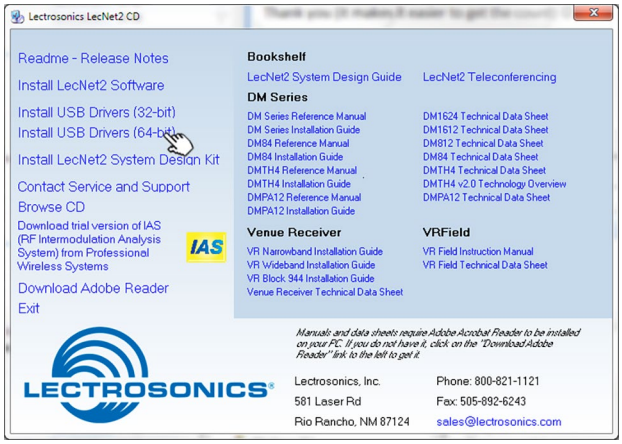
WDDISK

Or use the flash drive supplied with the processor.

Navigate to the USB folder and click on AutoRun.

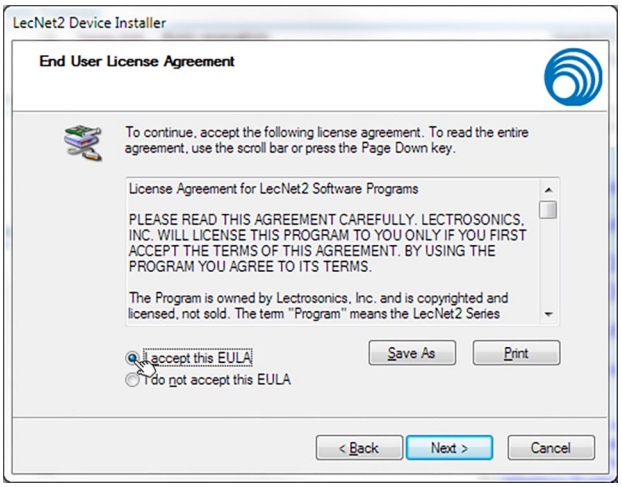


2. Click on Install USB Drivers (The installer will alert you if you choose the wrong bit size.)



3. Follow the prompts to run the installer.

4. The End User License Agreement screen appears. Click on **I Agree** to continue.



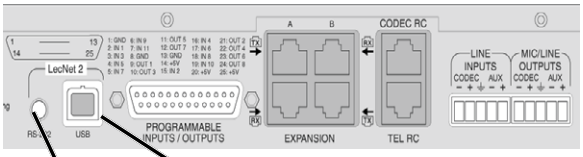
5. The installer will walk you through installation. When complete, the final screen will appear. Click on Finish to close the installation.

Basic System Setup

Control System Interconnections

In addition to a Windows® 2000 or XP based computer system, DMTH4s can be controlled by external serial control system using the RS-232 interface, such as those from Crestron® and AMX®.

Two RS-232 cables are provided. They are identified by the color of the cable. The black cable is used to connect a computer system to the DMTH4 and the red cable is used to connect a serial control system such as those from Crestron® or AMX®.



RS-232Port *USB Port*

Warning: Do not use the black cable for Crestron® or AMX® connections. It is strictly for use with a WIndows® 2000 or XP computer system.

Note: Crestron® is a trademark of Crestron Electronics, Inc. AMX® is a registered tradename of AMX Coporation.

Initial Setup

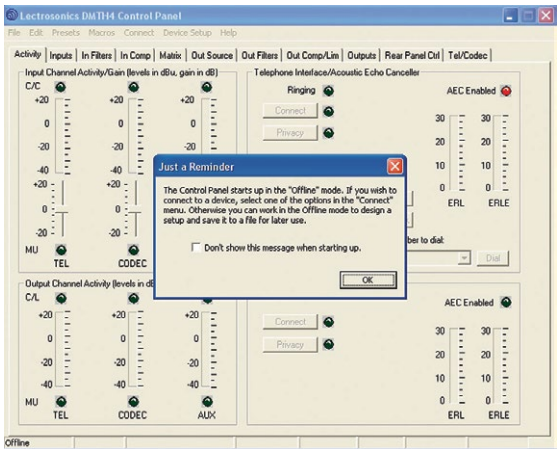
The initial setup of a DMTH4 system is a relatively simple three step process: connect the unit to the computer, turn on the computer and start the appropriate control panel, preset the input, matrix and output source. This process assumes that LecNet2™ and, if necessary, the USB driver have been previously installed. If they have not been installed, please refer to **Installing LecNet2™ Software and USB Driver**.

1) Connect the computer system to the DMTH4 unit using either the BLACK DB9 to stereo mini (TRS 1/8") cable for RS-232 communications or the USB cable for USB control. (Both cables are included with the unit.)

Note: Only one DMTH4 unit at a time can be connected to the computer system using a single RS-232 cable. Multiple units may be connected using multiple RS-232 cables, each attached to a separate COM port on the computer system. Multiple units may be connected using multiple USB cables and multiple USB ports on the computer system, or a USB hub attached to the computer system.

2) Turn the computer system on. After the boot sequence is complete, turn on the DMTH4. When the DMTH4 STATUS LED glows steadily, click **Start**, then **All Programs** on the computer system

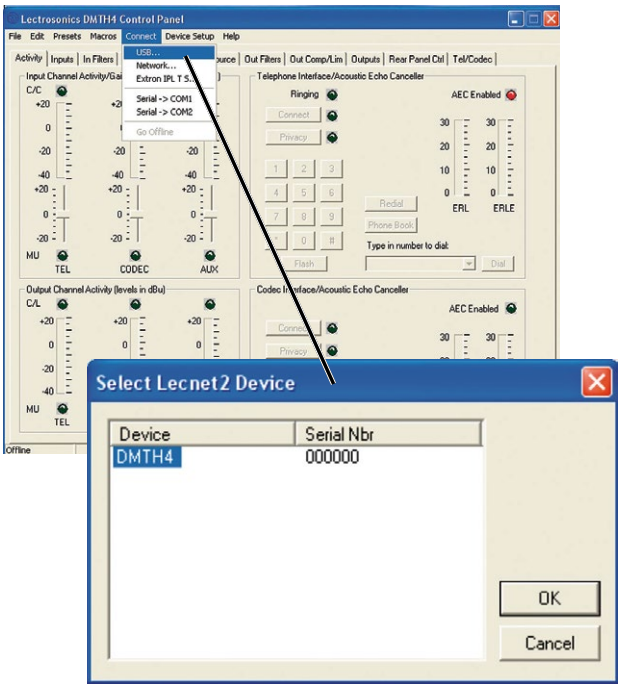
3) Select **LecNet2**, then select the control panel from the list for the DMTH4 unit being set up.



4) If the **"Just a Reminder"** dialog appears, click **OK** to continue.

5) Click **Connection** on the Main Menu bar, then select the type of connection between the computer system or external control system and the DMTH4 unit. The choices are:

USB - used when the computer is connected to the DMTH4 unit via the front or rear panel USB port.



Connecting to DMTH4 through USB

Network - One or more DMTH4 devices may be made available for network connections by connecting them to a **gateway** computer system. A gateway PC, or **gateway server** acts as a middleman, receiving commands for a DMTH4 over a network connection, and forwarding them to the DMTH4, which is connected to it via USB. To work as a gateway server the PC must be a member of some local area network (LAN) or the internet, by means of an **Ethernet** connection, and be running the Lecnet2 "Net Server" program.

Extron IPL T S - One or more DMTH4 devices may be made available for network connections by connecting them to an **Extron IPL T S** ethernet control interface. The IPL T S interface acts as a middleman, receiving commands for a DMTH4 over a network connection, and forwarding them to the DMTH4, which is connected to it via an RS232 port. To work as a gateway server the IPL T S interface must be a member of some local area network (LAN) or the Internet, by means of an **Ethernet** connection.

Serial->COM1 - An serial port for RS-232 communications between the DMTH4 and the computer.

Note: The control panel will list any COM ports available on the computer system.

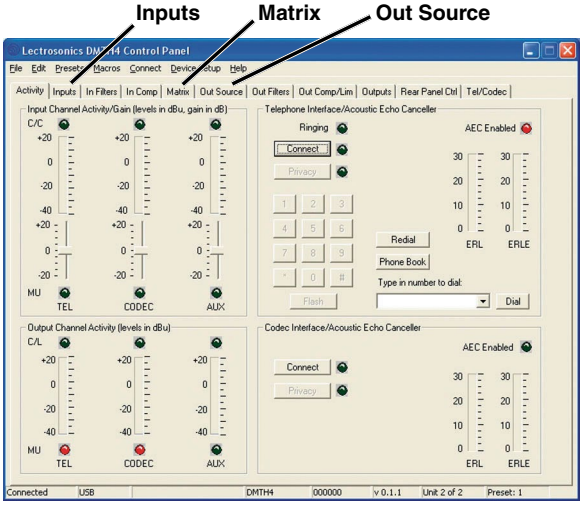
Serial->COM2 - Same as above.

Go Offline - No Connection Made, this mode can be used to configure the DMTH4 off line and is the default mode.

The DMTH4 can be configured on site or a configuration file can be created in advance, then downloaded into the unit in the installation. The minimum required setup to pass audio includes: Inputs, Matrix and Out Source. Input and output filters and compressors are used to tailor the system for specific audio situations.

Master/Slave Configuration

When stacking multiple DM Series units, one unit is always set as the Master and all subsequent units are set as Slaves. The DMTH4 is normally configured as a Slave unit and placed at the end of the DM Series chain.

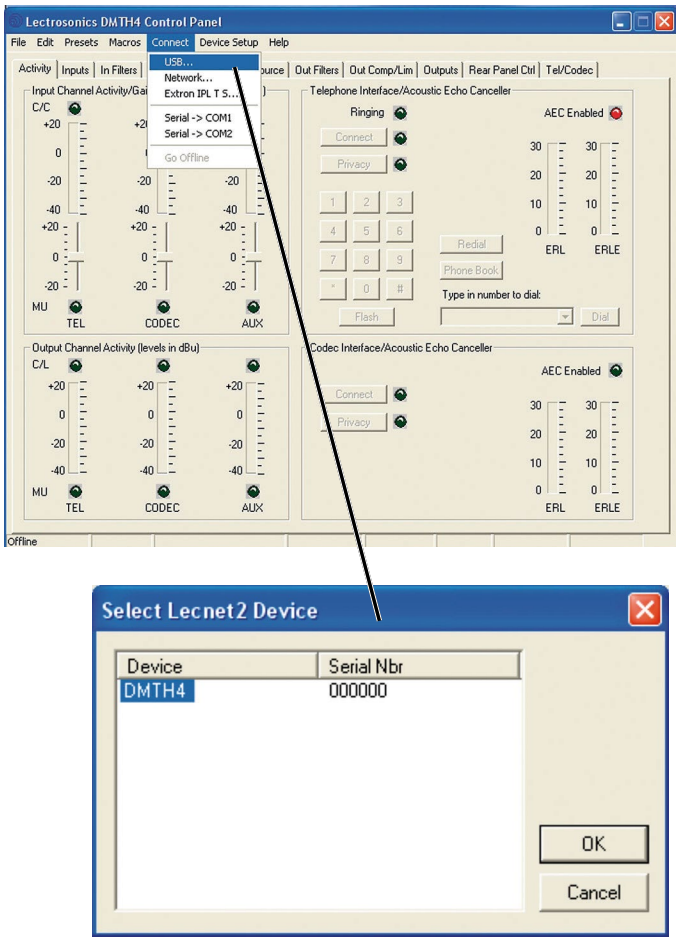


The DMTH4 leaves the factory configured as a Master unit to facilitate initial setup. If the unit has been configured as a slave, it can be temporarily set to Master mode via the front panel MODE button. If the front panel MODE button is used, the unit will return to Slave Mode the next time the DMTH4 power is cycled.

Using the DMTH4 Control Panel to Change Master/Slave Mode

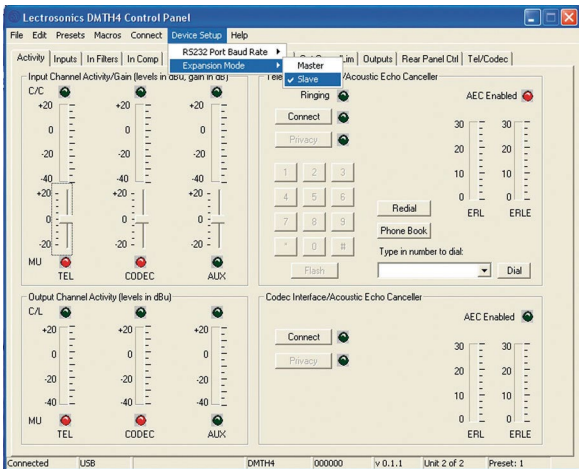
Changing the Master/Slave Mode can be easily accomplished through the DMTH4 Control Panel.

To do this, select Connect on the DMTH4 Control Panel Menu Bar, then click "Connect >USB" to open the "Select Lecnet2 Device" dialogue. Highlight the DMTH4 and click "OK."



Connecting to DMTH4 through USB

WIth the DMTH4 connection configured, it is now possible to set the Master/Slave operating mode. This is done by selecting “Device Setup” from the Control Panel Menu Bar. Select “Expansion Mode” from the drop down menu and select “Slave.”



Setting Master/Slave Mode

Initial Setup Hints

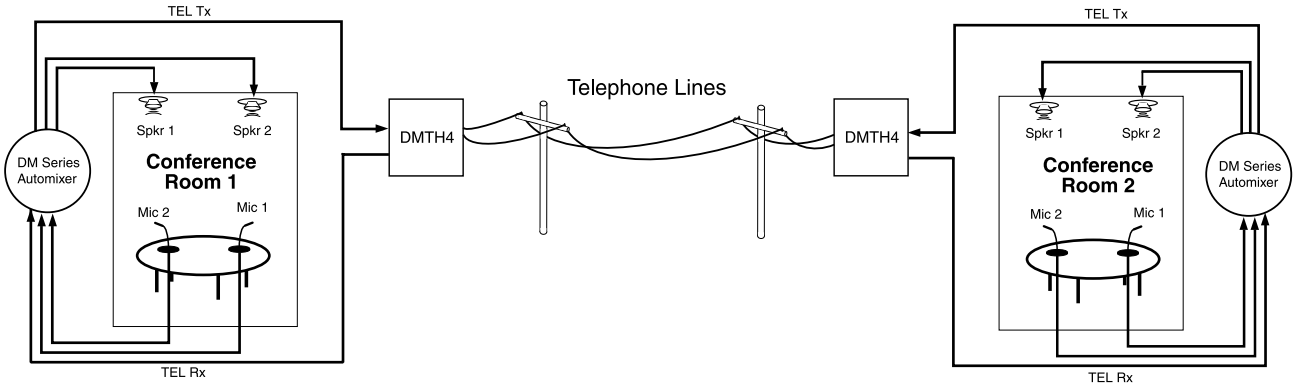
1) Right clicking the mouse is powerful in this interface. You can activate quick access to a number of setup functions (for example - right click in any input box in the INPUTS tab). It also allows some powerful cut and paste capabilities - especially in the matrix setup and the filter (both input and output).
2) Store startup settings in a startup default preset. (See **Storing and Recalling Presets** in the online HELP.)
3) Presets will take about 4 seconds to switch due to the many parameters in the unit - audio will switch off temporarily during a preset switch to avoid feedback. If you need quicker response with no interruption to the audio, use macros instead - try using the macro recorder for making any changes. The only changes that cannot be made in a macro are filter adjustments.
4) Store presets after changes are made and not before they are made.
5) Help is always available by clicking **Help** on the Main Menu Bar. This Help is a comprehensive resource and includes the latest revisions to the software and firmware.

IMPORTANT: Any changes made during setup must be saved in the unit via the preset menu.

For direct support from the factory, call (800) 821-1121

Ask for anyone in the SALES department. They will be able to answer your setup and/or technical questions or will get the correct person who can help on the phone.

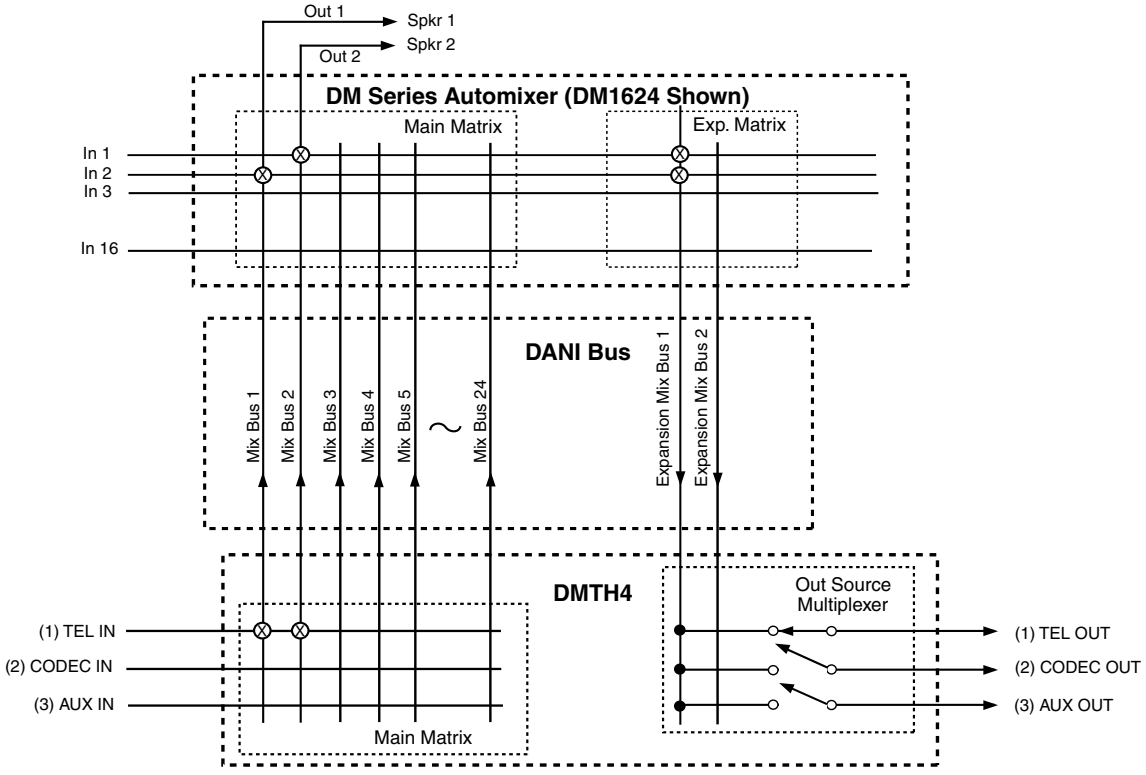
Example Teleconferencing Setup



Link Conference Rooms with a DMTH4 Example Setup

The following information describes setting up a DMTH4 to connect two locations for a conference. The DMTH4 is designed to be part of a DM Series chain. In this example, the DMTH4 is a slave unit to a DM1624 Series Automixer. This example also assumes that the hardware has been installed and is operating properly. Conceptually, the setup has two conference rooms, each with two microphones and two ceiling mounted speakers connected to a DM1624 in a Mix-Minus configuration with a DMTH4 linking the rooms together via a telephone connection. (See *Link Conference Rooms with a DMTH4, Example Setup*.)

The actual process to create the signal path so all members of both conference rooms have the ability to hear and be heard all other members in the conference rooms requires four simple steps: setting up the DMTH4 Main Matrix, setting up the DM1624 Main Matrix, setting up the DM1624 Expansion Matrix and setting up the DMTH4 Output Source Multiplexer. This is illustrated in *Conference Room Signal Flow Diagram*.



Conference Room Signal Flow Diagram

The following are assumed:

- A POTS line has already been connected to the DMTH4 rear panel Telephone Line jack
- The DMTH4 has been connected to the DM1624 via the DANI bus
- The microphones and overhead speakers are already connected to the DM1624 in a Mix-Minus configuration.

The result will be that when a person talks into Mic 1 in Conference Room 1, they will be heard both in Conference Room 1 and in Conference Room 2. Likewise, if a person in Conference Room 2 talks into one of the microphones in that room, they will be heard both Conference Room 2 and Conference Room 1.

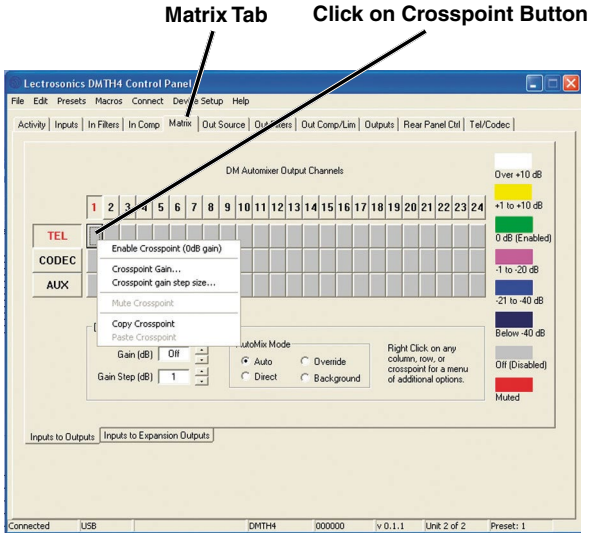
The following discusses setting up a DM Series consisting of a DM1624 Digital Automixer and a DMTH4 Digital Telephone Hybrid on near end of the telephone connection. The same process is used to set up the DM Series at the other far end of the telephone connection.

Setting up the DMTH4 Main Matrix

The TEL Input needs to be configured so that it is connected to DANI Bus Mix Busses 1 and 2. (See Conference Room Signal Flow Diagram.)

1.) Select the Matrix Tab in the DMTH4 Control Panel, then select the “Main Matrix” sub tab. Right click the TEL input to Mix Bus 1 crosspoint and select “Enable Crosspoint” from the popup menu

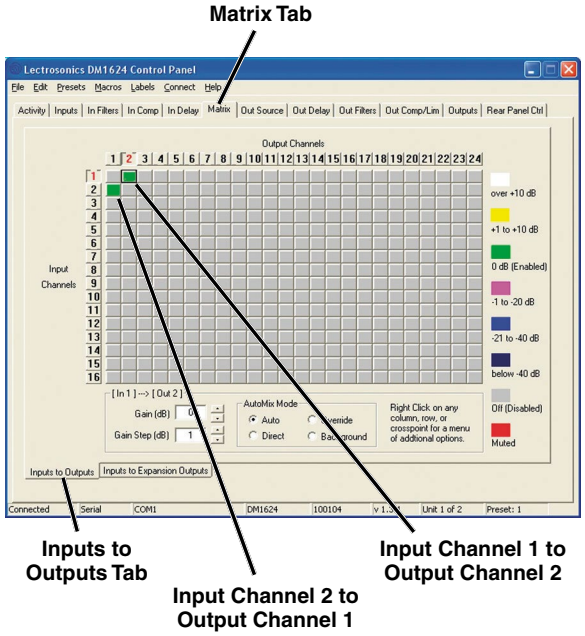
2.) Repeat Step 1 for Mix Bus 2.



Setting up DMTH4 Main Matrix

Setting up the DM1624 Main Matrix

The DM1624 Main Matrix needs to be configured so the microphone inputs are connected to the output channels used to drive the local sound reinforcement speakers. These inputs will be mixed together with the audio received from the DMTH4 TEL Input. Both local audio and audio from Conference Room 2 are heard on the speakers in Conference Room 1. (See Conference Room Signal Flow Diagram.)



1.) Select the Matrix Tab on the DM1624 Control Panel, then select the “Inputs to Outputs” sub tab.

2.) Right click the Input Channel 1 to Output Channel 2 crosspoint and select “Enable Crosspoint” from the popup menu.

3.) Right click the Input Channel 2 to Output Channel 1 crosspoint and select “Enable Crosspoint” from the list.

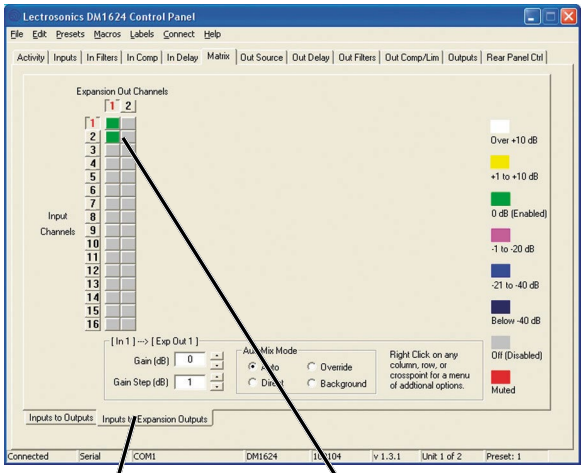
Setting up the DM1624 Expansion Matrix

Once the DM1624 Main Matrix has been set up, the DM1624 Expansion Bus Matrix needs to be configured so the local audio is sent back to the DMTH4 for distribution to the remote Conference Room (Conference Room 2 in this example). (See Link Conference Rooms with a DMTH4, Example Setup and Conference Room Signal Flow Diagram.)

1.) Select the Inputs to Expansion Outputs Tab in the DM1624 Matrix Tab.

2.) Right click the Input Channel 1 to Expansion Out Channel 1 crosspoint and select “Enable Crosspoint” from the popup menu.

3.) Right click the Input Channel 2 to Expansion Out Channel 1 crosspoint and select “Enable Cros-



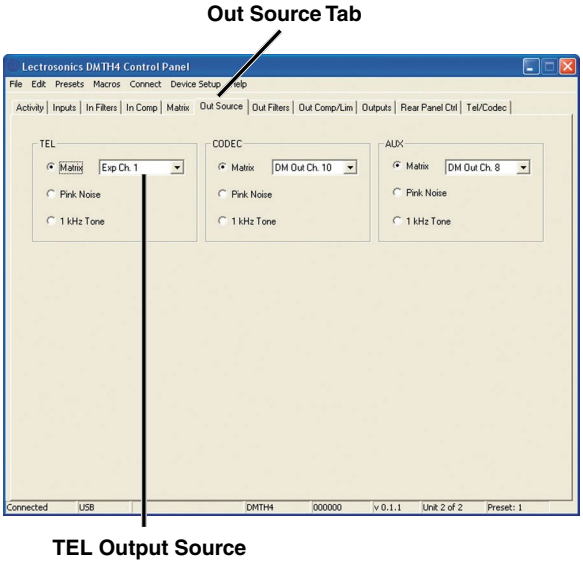
spoint" from the popup menu.

Setting up the DMTH4 Output Source Multiplexer

The TEL output needs to be configured so that Expansion Final Mix 1 is sent over the telephone line for use at the remote Conference Room.

1.) Select the Out Source Tab in the DMTH4 Control Panel.

2.) Click the down arrow on the TEL Output Source selection list and select Exp Final Mix 1 from the list.



Basic System Operation

The following procedures are designed to aquaint the user of the basic steps required to set up a DMTH4 and provide a foundation for developing more complex operations.

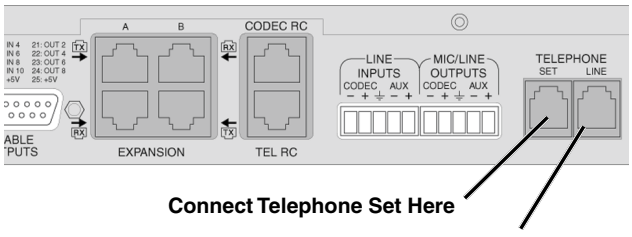
It is assumed that the LecNet2™ software and drivers have been previously installed, a Windows-based computer system is connected to the USB or RS-232 ports and the DMTH4 Control Panel is open on the computer screen.

Making a Phone Call

Telephone calls can be initiated from a wired remote control, from a Window's based computer system connected to the DMTH4's USB or RS-232 port, or from a standard single-line telephone system attached to the DMTH4 Telephone Set Jack.

Make a Telephone Call Using a Telephone Set

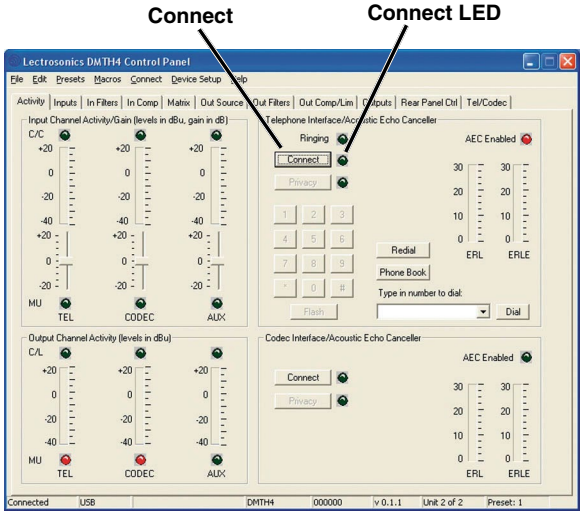
1.) Connect a telephone set to the rear panel Telephone Set connector and a cable between the telephone line and the rear panel Telephone Line input connector.



2.) Click the DMTH4 Control Panel's Activity tab.

3.) Use the telephone set to dial the desired number, then click "Connect". The LED will light, indicating that DMTH4 telephone interface is connected and the "Connect" button will change to "Disconnect."

4.) Placing the telephone handset back on the cradle automatically transfers all control to the DMTH4.



5.) To terminate the telephone call, click the “Disconnect” button on the Activity tab.

Make a Telephone Call Using the Activity Tab

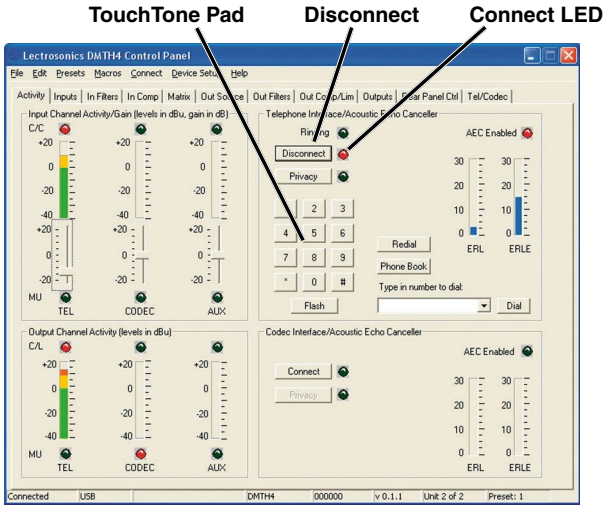
There are three ways to make a telephone call using the Activity tab: the Touch Tone Pad, the “Type in the Number to Dial” box or the Phone Book.

Using the Touch Tone Pad

1.) Click “Connect” on the Activity Tab. The Connect LED will light and the “Connect” button will change to “Disconnect.”

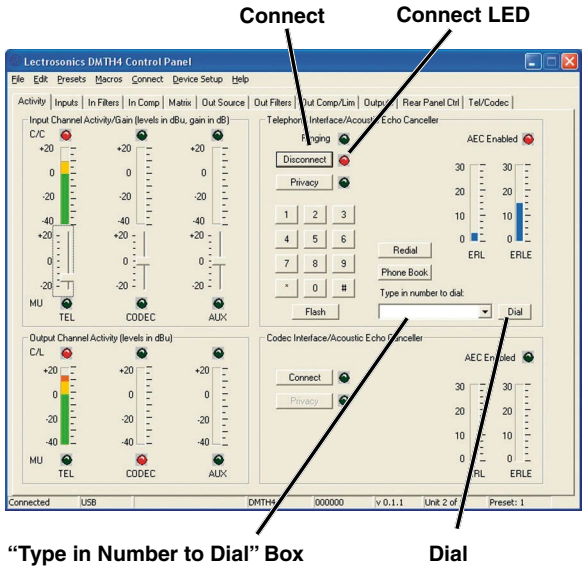
2.) Use the mouse to dial the desired telephone number.

3.) To terminate the telephone call, click the “Disconnect” button on the Activity tab.



Use the “Type the number to dial” box

1.) Click the “Type the number to dial” box, then use the computer keyboard to enter the telephone number. When finished, click “Dial” to connect the telephone interface and dial the number.



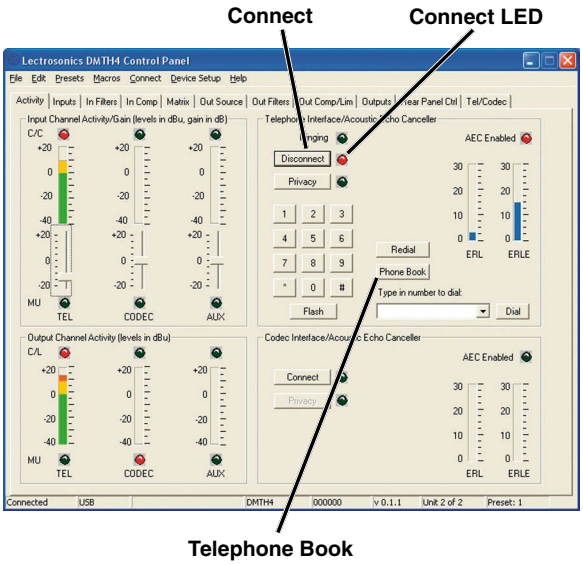
2.) To terminate the telephone call, click the “Disconnect” button on the Activities tab.

Use the Phone Book

This procedure assumes that valid telephone numbers have been entered into the DMTH4’s Telephone Book. (The Tel/Codec tab is used to add or remove numbers from the Telephone Book.)

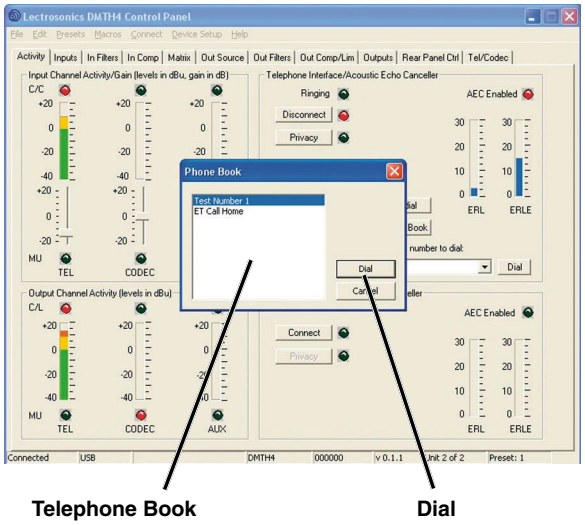
1.) Click “Telephone Book” in the Activities tab.

2.) Select the desired telephone number from the list



and click “Dial” to connect the telephone interface and dial the number.

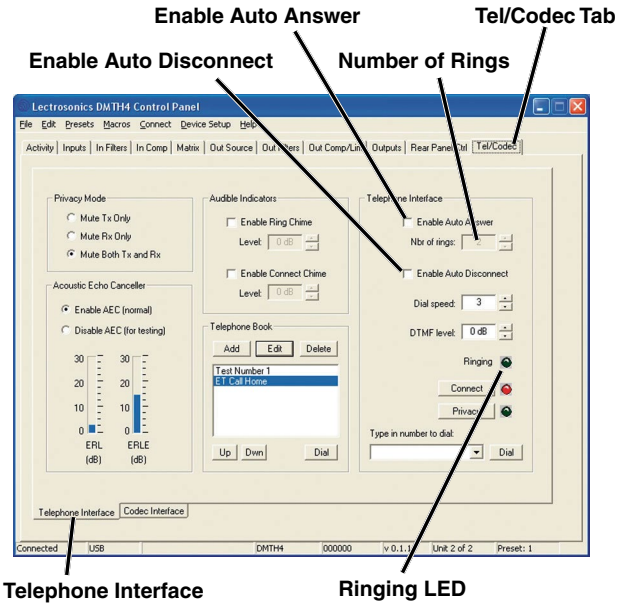
3.) To terminate the telephone call, click the “Disconnect” button on the Activities tab.



Setting Up Automatic Telephone Answer and Automatic Disconnect

The DMTH4 can be configured to automatically answer incoming telephone calls and disconnect the telephone interface when it senses the call has been terminated by the calling party.

1.) Click the Tel/Codec tab and select the Telephone Interface tab.



2.) Click “Enable Auto Answer.”

3.) Set the desired number of rings before the DMTH4 answers the incoming call. This can be done by either entering a value from “1” (default) to “5”, or by using the up or down arrow buttons to increment or decrement the value in the “Nbr of rings” box.

When an incoming call is received the Ringing LED (on both the Tel/Codec Tab and the Activities Tab) will blink until the number of rings has been achieved, then extinguish to indicate that the Telephone Interface has connected.

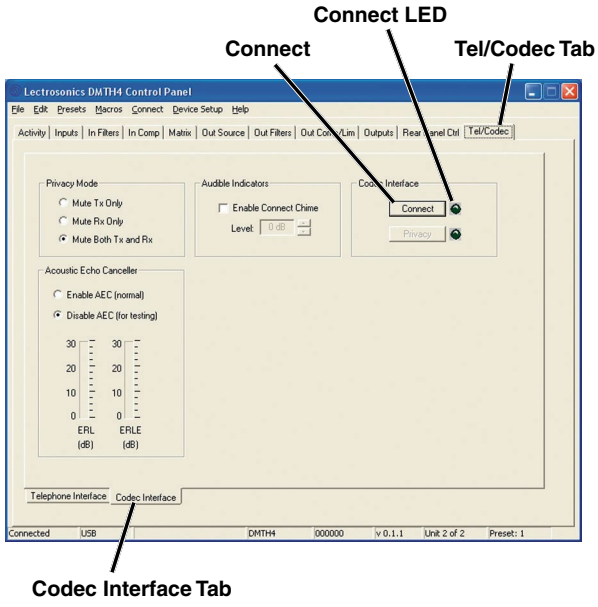
4.) Click “Enable Auto Disconnect” to configure the DMTH4 so that the telephone interface automatically disconnects when it senses that the call has be terminated by the calling party.

Connecting to the CODEC Interface using the Activity Tab

It is assumed that the DMTH4 CODEC input and output signals on the rear panel have been connected to the video codec and that gain for each has been adjusted as needed.

1.) Click the “Connect” button to enable the connection to the codec interface. The LED will light and the “Connect” button will change to “Disconnect.”

2.) To terminate the connection, click the “Disconnect” button.



FCC Part 68 Compliance

This equipment complies with Part 68 of the FCC rules. On the rear panel of this equipment is a label that contains, among other information, the FCC registration number and ringer equivalence number (REN) for this equipment. If requested, this information must be provided to the telephone company.

This equipment uses the following USOC jacks: RJ11C.

The REN is used to determine the quantity of devices which may be connected to the telephone line. Excessive REN on the telephone line may result in the devices not ringing in response to an incoming call. In most, but not all areas, the sum of the RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to the line, as determined by the total REN, contact the telephone company to determine the maximum REN for the calling area.

If this equipment causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. If advance notice isn't practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your rights to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the operation of the equipment. If this happens, the telephone company will provide advance notice in order for you to make the necessary modifications in order to maintain uninterrupted service.

If trouble is experienced with this equipment, please contact Lectrosonics, Inc. at (800) 821-1121 for repair and/or warranty information. If the trouble is causing harm to the telephone network, the telephone company may request you remove the equipment from the network until the problem is resolved.

The following repairs can be done by the customer: No user serviceable parts inside.

This equipment cannot be used on telephone company-provided coin service.

Connection to Party Line Service is subject to state tariffs.

FCC Part 15 Compliance

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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 letter 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.

Mailing address:
Lectrosonics, Inc.
PO Box 15900
Rio Rancho, NM 87174
USA

Shipping address:
Lectrosonics, Inc.
561 Laser Rd., Suite 102
Rio Rancho, NM 87124
USA

Telephone:
(505) 892-4501
(800) 821-1121 Toll-free
(505) 892-6243 Fax

Web:
www.lectrosonics.com

E-mail (general):
sales@lectrosonics.com

E-mail (service):
service.repair@lectrosonics.com

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Toronto, Ontario, M5S 2T9

Telephone:
(877) 753-2876
(416) 596-2202
(416) 596-6648 Fax

E-mail (service):
colinb@lectrosonics.com
joeb@lectrosonics.com

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.

LECTROSONICS®

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