INSTRUCTION MANUAL

Digital IEM System

M2R
M2T/E01

This manual is for all 2.X versions of Duet Firmware.

Dante™

M2T/E01 Dante
M2T/E01 Non Dante

CE

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Serial Number:

Purchase Date:

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

System Setup Procedures

Summary of Steps

1) Install receiver batteries and connect power to transmitter.
2) Power receiver on with On/Off and Volume knob.
3) Scan for an available frequency on the receiver.
4) Power on the transmitter and sync with receiver.
5) Enable RF in transmitter.
6) Send audio.

1 and 2) Install Receiver Batteries & Connect Transmitter Power

Connect power to the M2T/E01 transmitter (page 16). Install the receiver batteries (lithium recommended, page 8) according to the diagram marked on the back of the housing. Power on the M2R and select the battery type in the menu (page 13). Check the BATT LED on the control panel to verify adequate power is present - the LED should glow green (page 6).

3) Scan For An Available Frequency

Navigate to Scan in the LCD menu (page 11). The first scan should be allowed to run completely. Once a full cycle has been completed, press MENU/SELECT again to pause the scan. Use the UP and DOWN arrows to roughly tune the receiver by moving the cursor to an open spot. Press MENU/SELECT to zoom in for fine tuning. When an open frequency has been selected, press the BACK button for the option to keep your newly selected frequency or to revert to where it was set before the scan (page 9).

4) Sync With A Transmitter

Use transmitter “get settings” menu to transfer frequency or other information from the receiver to the transmitter (page 20).

5) Enable RF in Transmitter

From the transmitter menu, enable RF and select appropriate RF power level (page 20). The blue “link” LED on the top of the receiver should light up, indicating an RF link.

6) Send Audio

Send an audio signal to the transmitter and adjust the send level from your mixer until the audio meters on the transmitter show good level. The peaks should be close to the top of the scale (but not over) and the average should be above the -20 mark. The receiver audio meters should also respond to the audio. Plug in headphones or earphones. (Be sure to start with the receiver volume knob at minimum!)

WARNING: Increasing the gain in the Limiter menu on the receiver can make headphone volume excessively loud. Use caution! Hearing loss is permanent.

NOTE: 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, my cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. 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.

Table of Contents

Duet System Overview

The M2 Duet digital IEM system is designed and developed with the professional touring, installation, theater and broadcast customers in mind. Conventional in-ear wireless monitor systems rely on decades-old technology: FM transmission with multiplexed, companded audio. The M2 System employs unique digital technology to provide ruler-flat frequency response from 20 Hz to 15 kHz, wide dynamic range with no compression, and maximum channel separation for rock-solid stereo imaging or reliable mono operation with no crosstalk. In addition, the digital audio eliminates a compandor and the associated artifacts. The result is crystal clear sound and extremely low distortion of <0.15% with extremely low latency. The transmitter and receiver housings are all-metal for maximum durability.

The system tunes across six standard frequency blocks, or from UHF frequencies from 470.100 to 607.000 MHz (up to 614.375 for the EU version). This allows a wide selection of operating frequencies for larger systems, and helps avoid interference, even in crowded RF environments.

The M2T/E01 Digital Half-Rack Transmitter can accept up to four analog or digital Dante™ (optional) network audio inputs to deliver two stereo or four mono audio feeds over two independent RF carriers. A 2-way IR port enables quick, trouble-free setup while a large, high resolution, backlit LCD and large membrane switches provide an intuitive interface that is highly visible in daylight or dimly lit conditions.

The input connectors are full size XLR/TRS combo types for balanced line level analog signals. Input preamp circuits use a special balanced amplifier with very high common mode rejection to minimize hum and noise. Analog signals are converted to an internal 24-bit digital format which is then encoded, organized into packets, and passed to an RF modulator. The modulated RF signal is filtered before and after amplification to suppress out-of-band noise and spurious signals.

The M2R Digital IEM Receiver is a compact, rugged body-worn unit providing studio-grade sound quality for performers or any professionals needing to monitor detailed audio wirelessly. The M2R employs advanced antenna diversity switching during digital packet headers for seamless audio. The headphone jack is fed from a high-quality stereo amplifier with 250 mW available to drive even inefficient headphones or earphones to sufficient levels for stage performance or other noisy environments. The receiver can select from stereo, mono from left or right channels only, or mono from both channels, giving the unit flexibility in terms of application as an IEM or IFB receiver. An intuitive interface and high resolution, color LCD on the unit provide performing artists and audio professionals alike with a comfortable and confident user experience.

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

FlexList™

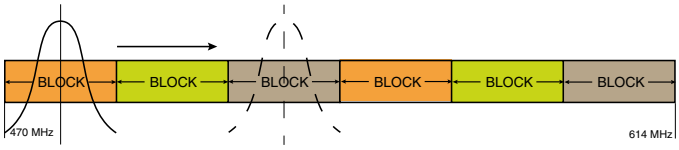
Additionally, the M2R includes a FlexList™ mode, where up to 16 mixes can be accessed by name. This feature enables a monitor engineer to quickly find and listen to any of the performer's mixes on the stage.

A FlexList mix is a profile of a performer's personal transmitter. The mix includes the performer's name (or whatever name the user chooses for that unit), frequency, mixer settings and limiter settings. The mix is easily shared via the M2R IR port, added to the list of 16 mixes and stored until cleared by the user. The M2R allows the user to toggle between the mixes, making troubleshooting issues easy and efficient.

RF Front-End with Tracking Filter

A wide tuning range is helpful in finding clear frequencies for operation, however, it also allows a greater range of interfering frequencies to enter the receiver. The UHF frequency band, where almost all wireless microphone systems operate, is heavily populated by high power TV transmissions. The TV signals are immensely more powerful than a wireless microphone or IEM transmitter signal and will enter the receiver even when they are on significantly different frequencies than the wireless system. This powerful energy appears as noise to the receiver, and has the same effect as the noise that occurs with extreme operating range of the wireless system (noise bursts and dropouts). To alleviate this interference, front-end filters are needed in the receiver to suppress RF energy below and above the operating frequency.

The M2R receiver employs a selective frequency tracking filter in the front-end section (the first circuit stage following the antenna). As the operating frequency is changed, the filters re-tune into six different "zones" depending on the selected carrier frequency.



In the front-end circuitry, a tuned filter is followed by an amplifier and then another filter to provide the selectivity needed to suppress interference, yet provide a wide tuning range and retain the sensitivity needed for extended operating range.

Smart Tuning (SmartTune™)

A major problem facing wireless users is finding clear operating frequencies, especially in RF saturated environments. SmartTune™ overcomes this problem by automatically scaning all the frequencies available in the receiver's frequency block and tuning the receiver to the frequency with the lowest RF interference, significantly reducing setup time.

M2R Receiver Operation

Battery Status LED

When the battery status LED on the keypad glows green the batteries are good. The color changes to red at a midpoint during the runtime. When the LED begins to ***blink*** red, only a few minutes remain.

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

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

RF Link LED

When a valid RF signal from a transmitter is received, this LED will light up blue.

On/Off and Volume Knob

Turns unit on or off and controls headphone audio level.

IR (infrared) Port

Settings, including frequency, name, limiter, mix mode, etc. can be transferred between transmitter and receiver. FlexList profiles can be gathered by the receiver. Frequency scan information can be sent from the receiver to the transmitter and on to Wireless Designer software for coordination purposes.

Headphone Output

A recessed, high duty cycle 3.5 mm stereo jack is provided for standard headpohnes and earphones.

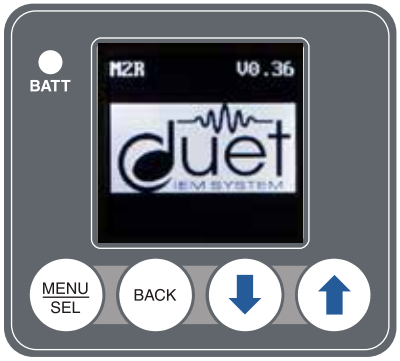
USB Port

Firmware updates via Wireless Designer are made easy with the USB port on the side panel.

Battery Compartment

Two AA batteries are installed as marked on the rear panel of the receiver. The battery door is hinged and remains attached to the housing.

Keypad and LCD Interface



MENU/SEL Button

Pressing this button enters the menu and selects menu items to enter the setup screens.

BACK Button

Pressing this button returns to the previous menu or screen.

Arrow Buttons

Used to navigate the menus. When on Main Screen, UP Button will turn LEDs on and DOWN Button will turn LEDs off.

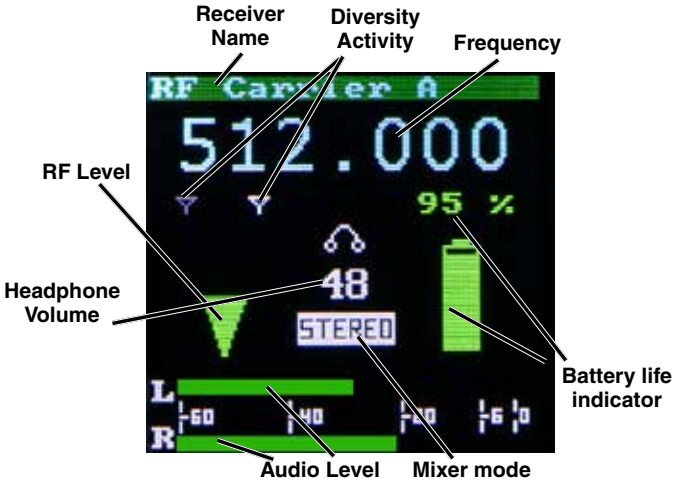
Installing Batteries

Power is provided by two AA batteries. The batteries are connected in series by a plate in the battery door.

Slide the battery door outward to open it

Polarity is marked on the rear panel.

LCD Main Window



RF level

The triangle graphic corresponds to the scale on the left side of the display. The scale indicates the incoming signal strength in microvolts, from 1 uV at the bottom to 1,000 uV (1 millivolt) at the top.

Diversity activity

The two antenna icons will alternately light up depending on which one is receiving the stronger signal.

Battery life indicator

The battery life icon is an approximate indicator of the remaining battery life. For the most accurate indication, the user should select “Battery Type” in the menu and select Alkaline or Lithium.

Audio level

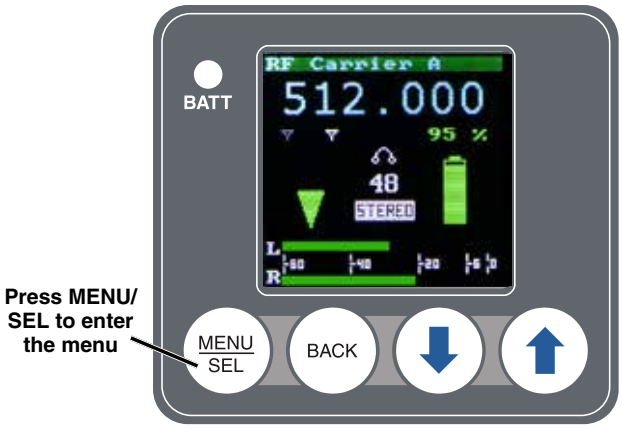
This bar graph indicates the level of the audio entering the transmitter. The **“0”** refers to the level reference, as chosen in the transmitter, i.e. either +4 dBu or -10 dBV.

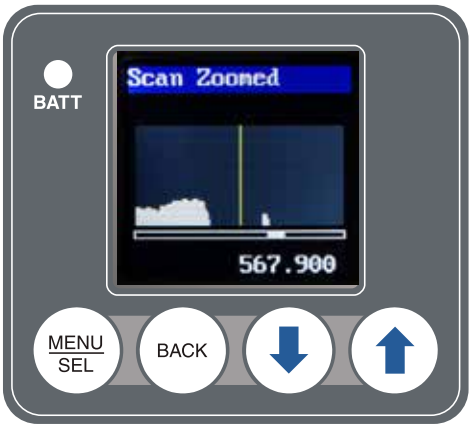
Mixer mode

Indicates which mixer mode has been selected for the receiver. (See page 12.)

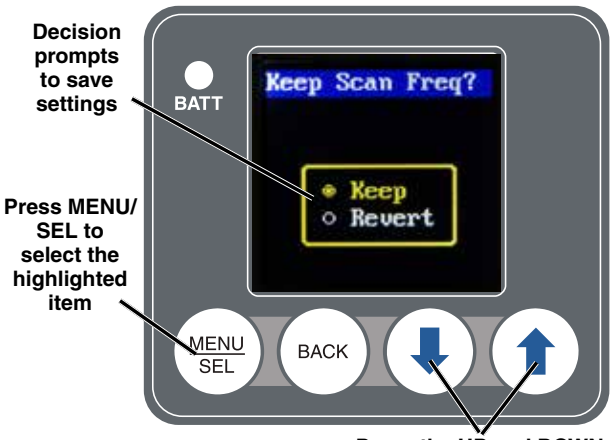
Navigating the Menus

From the Main Window, press MENU/SEL to enter the menu, then navigate with the UP and DOWN arrows to highlight the desired setup item. Press MENU/SEL to enter the setup screen for that item. Refer to the menu map on the following page.



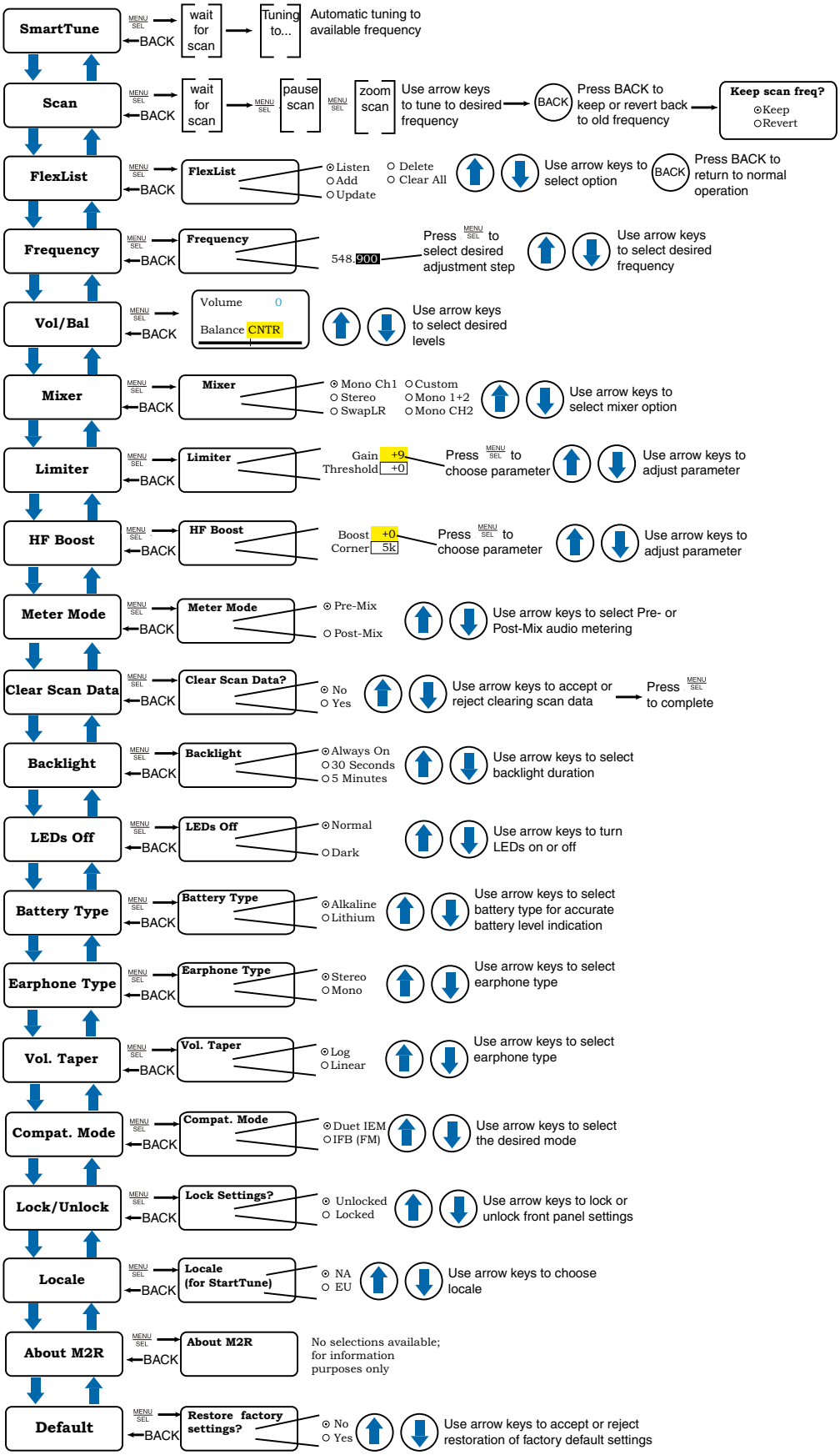


Submenus and screens for the selected item



M2R LCD Menu Map

The menus presented on the LCD are arranged in a straightforward manner, with those that are likely to be used more often located at the top of the tree.



Menu Item Descriptions

SmartTune

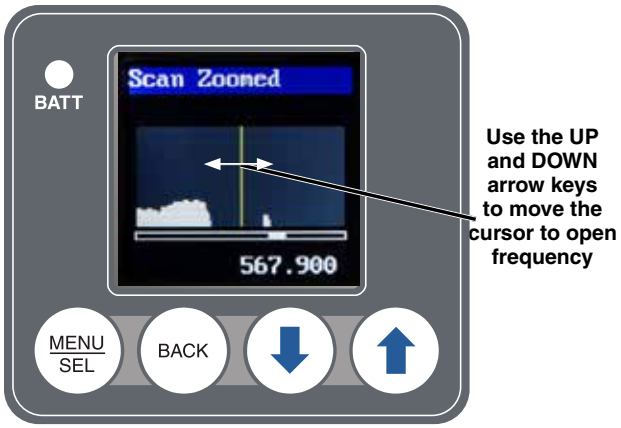
SmartTune™ automates the discovery of a clear operating frequency. It does this by scanning all the available operating frequencies within the system's frequency block range (in 100 kHz increments) and then selecting the frequency with the least amount of RF interference. When SmartTune™ is complete, it returns to the Main Window displaying the selected operating frequency.

Scan

Use the scan function to identify a usable frequency. The area in red has not been scanned. Allow the scan to continue until the entire band has been scanned.

Once a full cycle has been completed, press MENU/SELECT again to pause the scan.

Use the UP and DOWN arrows to roughly tune the receiver by moving the cursor to an open spot. Press MENU/SELECT to zoom in for fine tuning.



When a usable frequency has been selected, press the BACK button for the option to keep your newly selected frequency or to revert to where it was set before the scan.

To capture this scan info in the transmitter and thus make it available to wireless designer, use the SYNC SCAN menu funtion in the M2T/E01 Transmitter.

Flex List

FlexList allows the user to set up a list of profiles, by name, to quickly and easily listen to any of the mixes on site individually.

Listen - choose a mix from the list and hear what is transmitting

Add - add a mix to the available Flex List (action performed via the IR port)

Update - Update settings in a mix (frequency, etc.). Action performed via the IR port.

Delete - Remove a mix from the Flex List

Clear All - Remove all mixes from the Flex List

Frequency

Allows manual selection of the operating frequency in MHz and KHz, tunable in 25 kHz steps.

Vol/Bal

Displays the volume, from 0 to 100, Locks or Unlocks the volume control (lock shown on main screen) and adjusts the balance to left, right or center.

Volume locked display on main screen

Mixer Mode

This screen allows you to choose a stereo mix, mono mix from either audio channel 1, channel 2 or both, or custom, allowing for varied width of the signal and how much level from each channel.

The available modes are:

- Stereo
- SwapLR
- Custom
- Mono 1&2
- Mono Ch 2

Limiter

Limiter function allows the user to set volume and dynamic range for headphone use.

Gain - The default setting (0) is linear, but if volume adjustments are needed, use the UP and DOWN arrows to adjust the audio by up to +18 dB and down to -6 dB in 3dB steps.

WARNING: Increasing the Gain can make headphone volume excessively loud. Use caution when setting and using.

Threshold - Use the UP and DOWN arrows to adjust the threshold for limiter engagement in 3dB increments.

NOTE: A common setup to play loud and bring softer dynamics up a bit is to set the pregain at +6 or +9 dB and set the threshold for -3 or -6dB.

HF Boost

Adjusts loudness of higher frequencies in the audio output as preferred by the listener. Corner frequencies of 5 KHz or 7 KHz can be selected and boosted.

Meter Mode

Changes the appearance of the audio level indicator on the main window; can show either pre- or post mix audio levels.

Clear Scan Data

Erases scan results from memory.

Backlight

Selects the length of time the backlight on the LCD remains turned on: Always on, 30 seconds, and 5 minutes.

LEDs Off

Select Normal to turn LEDs on or Dark to turn them off.

Battery Type

Selects the type of battery being used: Alkaline or Lithium so the remaining battery meter on the home screen is as accurate as possible.

Earphone Type

Selects the type of earphone being used: Stereo (default) or Mono. When Mono is selected, no audio is fed to the right channel (ring), allowing a mono headphone plug to be used without shortened battery life.

Vol. Taper

Choose between Log or Linear taper volume control.

Compat. Mode

Compatibility mode is available to allow the reciever to operate with IFB (FM). Icon on main screen is shown when IFB (FM) Mode is active.

Lock/Unlock

The front panel controls can be locked to prevent unwanted changes.

Locale

When EU is selected, SmartTune will include frequencies 608-614 MHz in the available selection. T

About M2R

Displays general information about the M2R, including serial number and the versions for both FPGA and main firmware running in the receiver.

Default

Returns all settings to the factory defaults as shown in the table below.

Menu Item	Setting
Flexlist	Cleared
Vol/Bal	Centered
Mixer Mode	Stereo
Limiter	Pregain 0
HF Boost	0
Meter Mode	Post-Mix
Backlight	Always On
Battery Type	Lithium
Earphone Type	Stereo
Settings	Unlock
Receiver Name	M2R IEM Receiver
Frequency	542.200

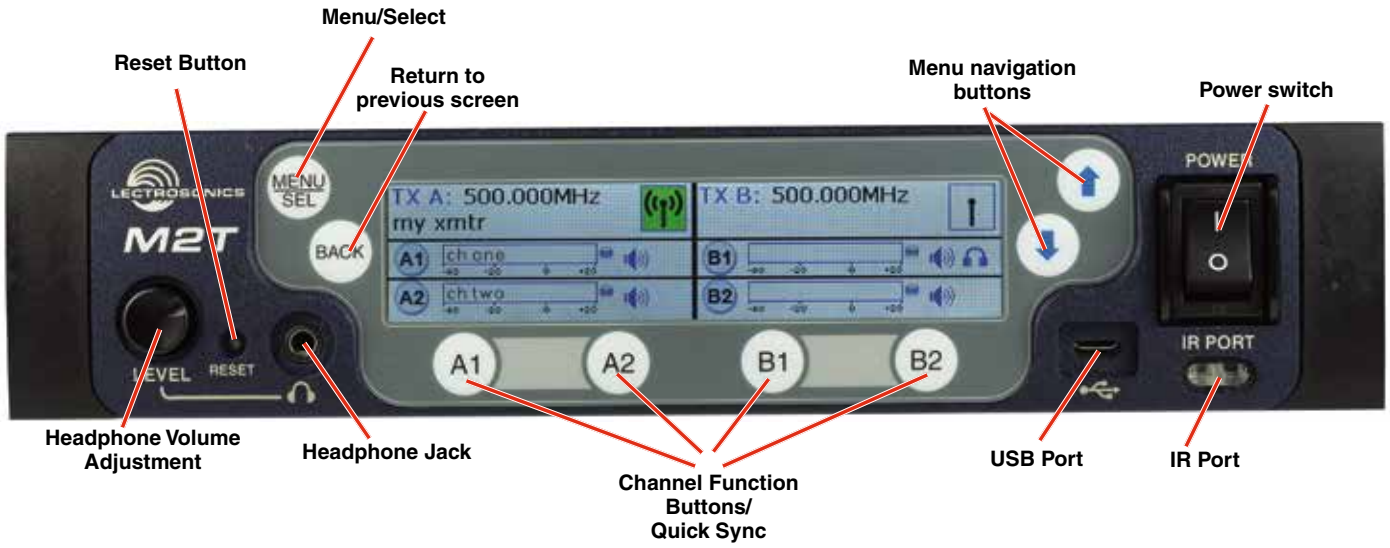
M2R Accessories

26895
Wire belt clip.

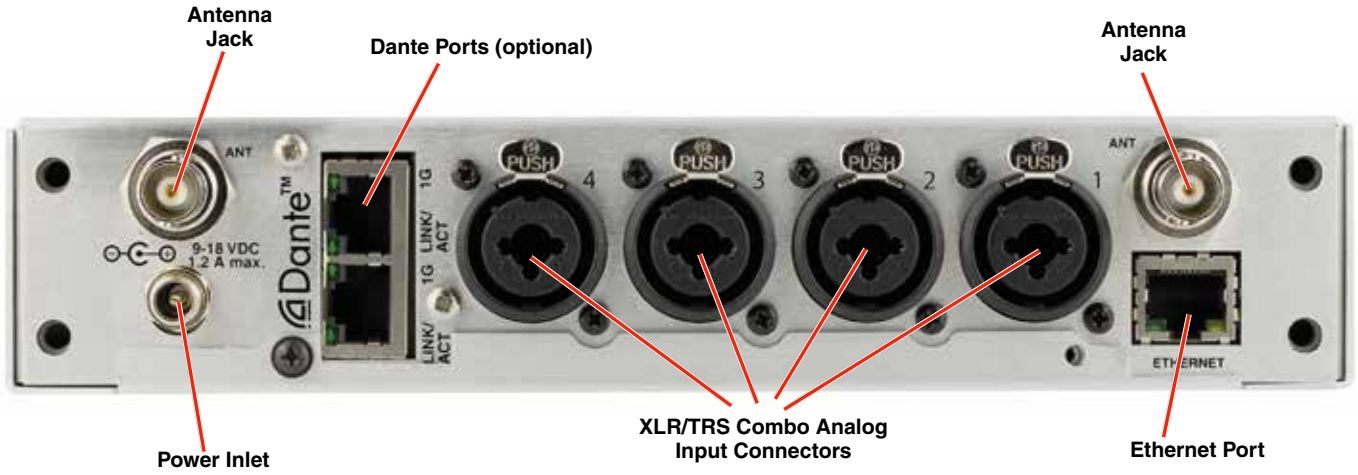
21926
USB cable for firmware updates

M2T/E01 Transmitter Operation

M2T/E01 Front Panel



M2T/E01 Back Panel



Operating Instructions

IR (infrared) Port

Settings, including frequency, name, limiter, mix mode, etc. can be transferred to and from the M2T/E01 transmitter via this port to an IR enabled receiver 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

Adjust the headphone volume, and select source with A1, A2, B1, B2 buttons.

Antenna Output Jacks

Two standard 50 ohm BNC connectors can be used with whip antennas or coaxial cable connected to remote antennas.

Dante Ports (optional)

A Dante Digital Audio Network Interface.

Ethernet Port

Used for setup, monitoring and control with Wireless Designer Software.

Power Inlet

The threaded-locking DC coaxial jack accepts 9-18 VDC and draws 1.2A maximum.

Quick Sync

Sync an M2R rapidly by utilizing the Channel Function Buttons. A long (1 second) press of one of the buttons (A1, A2, B1, or B2) on the front panel initiates Quick Sync. Two options are available, “SYNC ALL” or “SPLIT MONO”. The mode is selected prior to sync in the Front Panel Setup menu item.

NOTE: See Front Panel Setup for more instruction on the Quick Sync function.

Power Screens

When powering on the M2T/E01, there are three screens that appear in the following order, Duet, Lectrosonics, RF On/Off.:

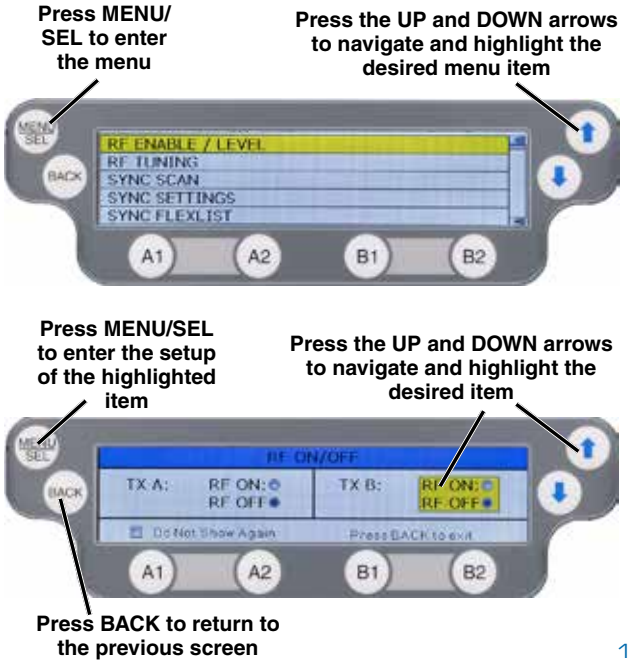
Simultaneous long press of A1/A2 (TX A) or B1/B2 (TX B) will also enable or disable RF.

WARNING: If RF ON is selected and the user chooses to “Do Not Show Again” RF transmissions will be on when M2T/E01 is powered on and may interfere with frequencies already in use. This can be reset in the FRONT PANEL menu.

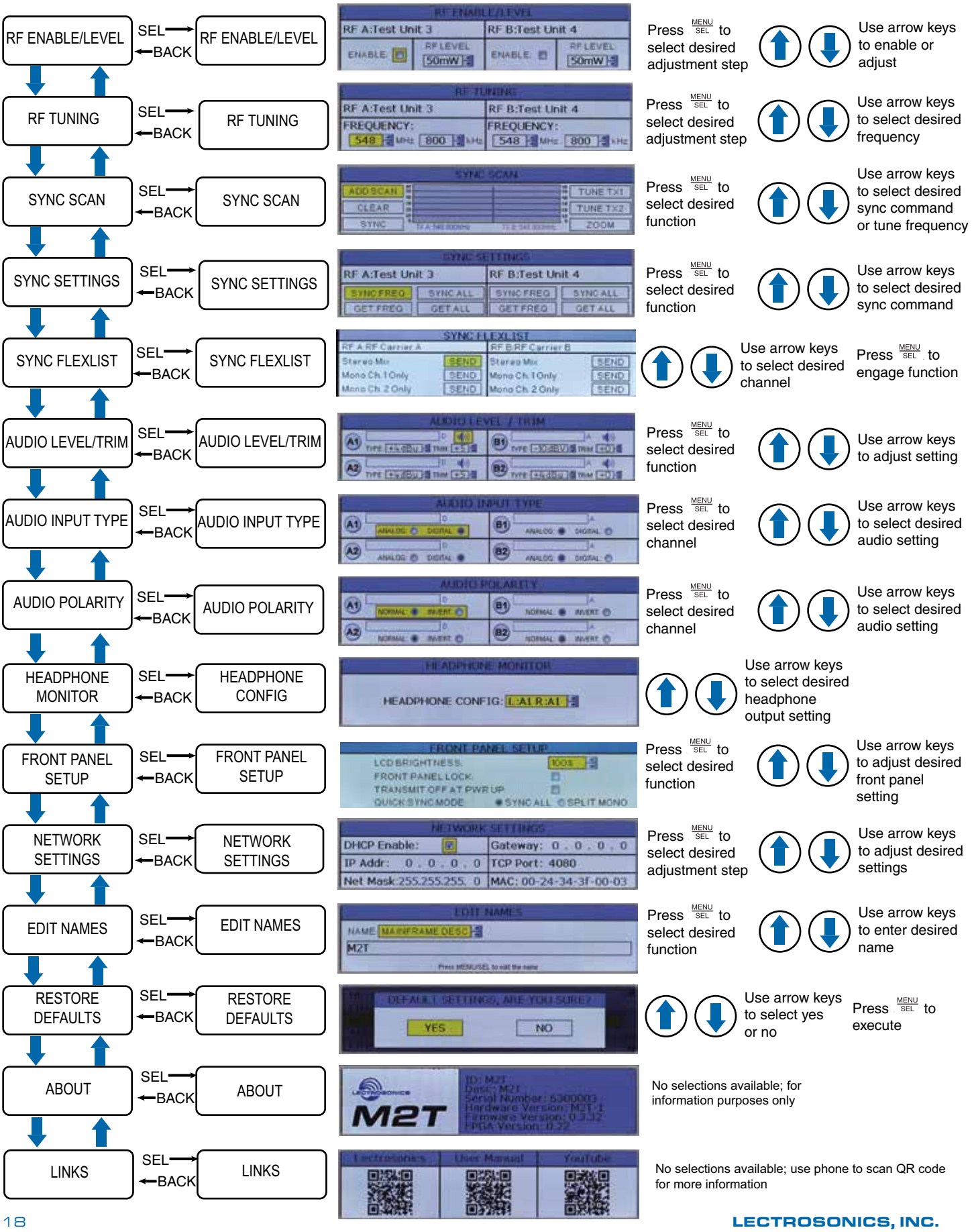
Navigating the Menus

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 M2T.



M2T/E01 LCD Menu Map



Menu Item Descriptions

RF Enable/Level

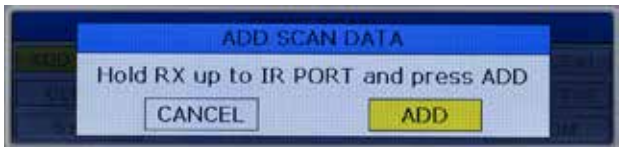
Allows RF transmission to be turned on and off and set RF levels at 10, 25 or 50 mW.

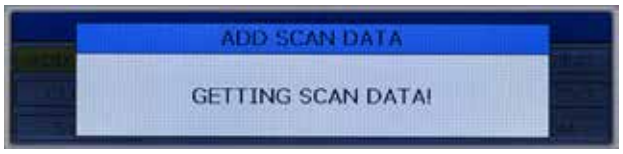
RF Tuning

Allows manual selection of the operating frequency.

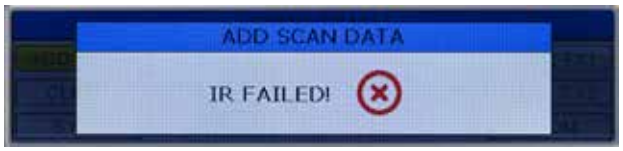
Sync Scan

Receive frequency scan via IR port or tune transmitters manually.



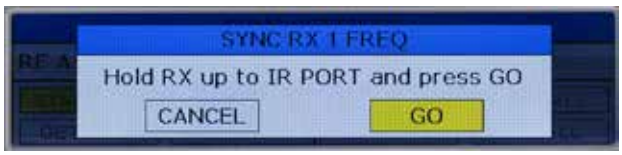


Screen will alert user if scan is unsuccessful.



Sync Settings

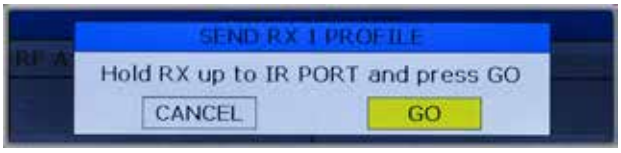
Allows sending or retrieving setup data via IR port.

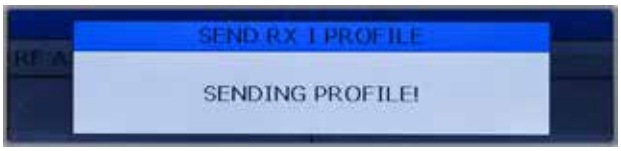


Sync FlexList™

FlexList allows the user to set up a list of profiles, by name, in the receiver. This allows quick and easily access to listen to any of the mixes on site.

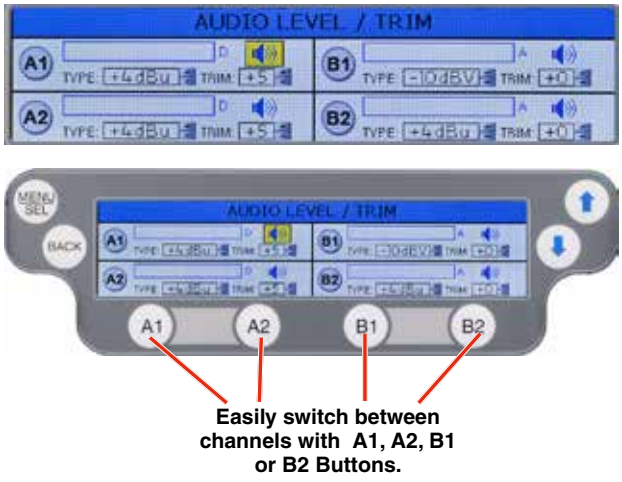
After putting the receiver into Sync Flex mode, choose the function (add, update) and then use the transmitter to send the profile over IR.





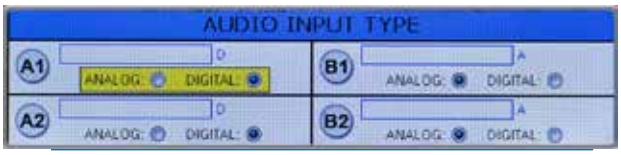
Audio Level/Trim

Set audio inputs at correct levels.



Audio Input Type

Set independent channels to analog or digital (Dante) if available.



NOTE: When selecting a Dante input, user must be familiar with the Dante Controller from Audinate.

Audio Polarity

Select normal or inverted polarity for each audio channel.

Headphone Monitor

The headphone source can be selected here or on the front panel, using the A1, A2, B1 or B2 Buttons.

Front Panel Setup

Front panel settings may be customized as follows:

- LCD brightness
- Front panel lock
- Startup RF state
- Quick Sync Mode

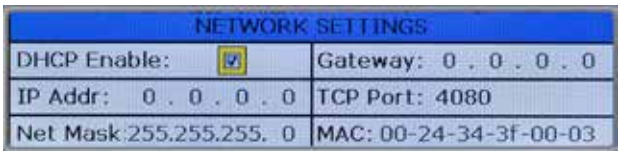
  Sync All: A long (1 second) press of either the A1, A2, B1 or B2 buttons sends all RX1 settings.

  Split Mono: A long press of the A1or B1 buttons sends all RX1 settings with the mix mode forced to Mono Ch. 1. A long press of the A2 or B2 buttons sends all RX1 settings with the mix mode forced to Mono Ch. 2.

Network Settings

Allows the user to set IP address or other network settings 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 in the FlexList or easily identify multiple M2T/E01 transmitters in a rack.

- Use UP and DOWN Arrows to select letters and MENU/SEL to set and move cursor.

Restore Defaults

Returns all settings to the factory defaults.

About

Displays general information about the M2T/E01, including serial number, and the hardware, FPGA and microcontroller firmware versions.

Links

QR codes with links to the Lectrosonics website, the M2T/E01 User Manual online and YouTube video tutorials.

Hardware Installation

DCR15/4AU DC power supply

Unpacking the Unit

Compare the packing list enclosed with the M2T/E01 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
- (DCR15/4AU) 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

Installing two M2Ts into a Single Rack Space

The M2T transmitter occupies a half rack space, and comes with hardware to mount two transmitters into a single rack space.

1. Remove the Trim Cap (Part #P1330) from both sides of the front panel on both transmitters.

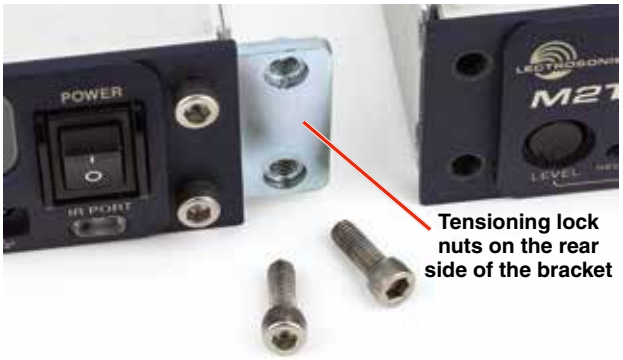
2. Remove the breakaway tabs on both sides of the chassis side panels. Use a flat blade screwdriver to pry the tabs outward and snap them off of the chassis.

3. Insert the flange bracket (Part #27076) into the open slot in the side of the chassis cover panel.

4. Insert two (2) cap screws (Part #28885) through the rack handle (Part #27082) holes and install the rack handle onto the flange bracket through the holes in the unit's front panel. Firmly tighten the cap screws using the hex key (Allen wrench) as shown.

5. If antennas will NOT be mounted on the front panel of the transmitters, install the hole cap (Part #35959) by aligning the flat on the cap with the flat on the opening.

NOTE: The retaining nuts on the panel and tie brackets are "tensioning lock nut" types designed to prevent the screws from coming loose due to vibration. You will usually feel resistance as you tighten the screws - this is normal.



6. Install one side of the front tie bracket (Part #25991) into the side panel opening in one of the receivers. Insert the screws, but do not tighten them completely at this point.

Slide the other receiver over the tie bracket and insert the screws, but do not tighten them completely until the rear tie bracket is installed.

7. Remove the four cap screws from the adjacent rear panels, and them use them to attach the rear tie bracket. Do not tighten the screws completely.

8. After front and rear tie brackets are installed, place the receivers on a flat surface so the that the front panels are even with each other. Hold the receivers in place and tighten all cap screws on the front and rear brackets.

NOTE: If the supplied rubber feet are installed on under side of M2T, it will not fit in a rack unless there is an empty space below it.

M2T/E01 Accessories

DCR15/A4U

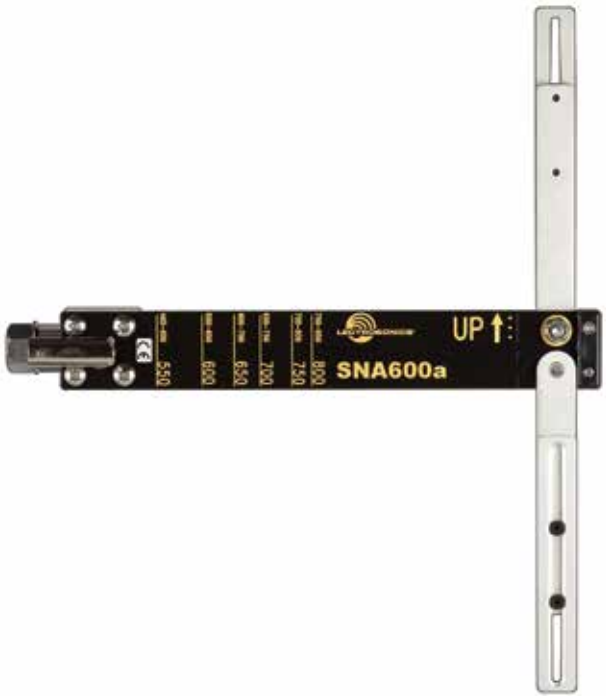
Front Mount Antenna Kit FMAKM27

27080 Dante Port Cover
(included with Non-Dante Model)

Dante 4X4-TM Dante Card Kit
(Included in Dante Model)

RMPM2T-1
Rack kit for mounting one M2T/E01 into a single rack space

SNA600a Antenna



SNA600a Accessories:

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.

Specifications

M2R Receiver

Operating Spectrum:	470.100 - 614.375 MHz
Modulation Type:	8PSK with Forward Error CorrectionOccupied
Latency: (overall system)	
Digital Source:	1.0 ms plus Dante network (on Dante M2T/E01)
Analog Source:	<1.4 ms
Audio Performance:	
Frequency Response:	20Hz - 10.5 KHz, ± 1dB
THD+N:	0.15% (1kHz @ -10 dBFS)
Dynamic Range:	>95 dB weighted
Adjacent Channel Isolation	>85dB
Diversity Type:	Switched antenna phase, during packet headers
Audio Output:	3.5 mm stereo jack
Power requirements:	2 x AA batteries (3.0V)
Battery life:	7 hours; (2) Lithium AA
Power consumption:	1 W
Dimensions:	Height: 3.0 in. / 120 mm. (with knob)
	Width: 2.375 in. / 60.325 mm.
	Depth: .625 in. / 15.875 mm.
Weight:	9.14 ounces / 259 grams (with batteries)

M2T/E01 Transmitter

RF Power Output:

- Two carriers; two audio channels each
- Power adjustable on each carrier to 10, 25 or 50 mW

Antenna Output:	2 x BNC sockets
Operating Frequencies:	470.100 – 614.375 MHz
Frequency Selection Steps:	25 kHz
Frequency Stability:	± 0.002%
Modulation:	8 PSK
Emission Designator:	200KG7E
Spurious Radiation:	Compliant with ETSI EN 300 422-1
Equivalent input Noise:	–128 dBV
Audio Frequency Response:	
	20Hz - 10.5 KHz, ± 1dB
Audio Input:	-10 dBV or +4 dBu settings w/ ±5 dB trim
Audio Input Jack:	4 x combo XLR/TRS connectors
Input impedance:	Line: 2k Ohm
Dante Connection:	2 x RJ45, 4 audio RX channels, internally routable
Ethernet Connection:	RJ45
USB Connection:	Micro USB on front panel for firmware updates
IRDA:	IR transceiver for sync of receivers
Headphone jack	3.5 mm stereo jack
Power Requirements:	9-18 VDC
Power Consumption:	5 Watts
Weight:	2.2 lbs (997.903 grams)
Dimensions:	Height: 1.750 in. / 44.45 mm
	Width: 8.375 in. / 212.7 mm
	Depth: 7.750 in. / 196.8 m

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

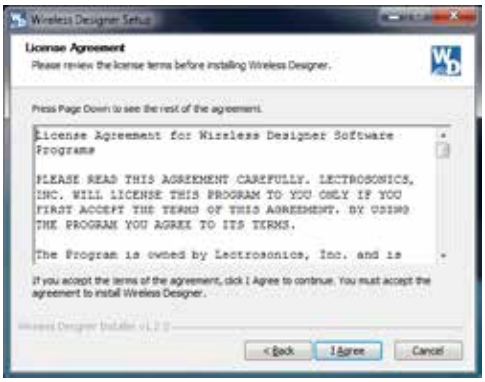
http://www.lectrosonics.com/europe/

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.

WARNING: Please note that V2.0 must be installed on both M2T transmitters and M2R receivers. V2.0 is not compatible with any 1.X versions.

Once the update has been performed, Wireless Designer must also be updated to V1.3.13 or higher to communicate with the M2T.

Wireless Designer Software and USB Driver

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.

WARNING: Please note that V2.0 must be installed on both M2T transmitters and M2R receivers. V2.0 is not compatible with any 1.X versions.

Once the update has been performed, Wireless Designer must also be updated to V1.3.13 or higher to communicate with the M2T.

Software Installer

Installation Software supplied on USB 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.

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.

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.

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 e-mail 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 or FEDEX 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:
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:
+1 (505) 892-4501
(800) 821-1121 Toll-free US and Canada
Fax +1 (505) 892-6243

Web:
www.lectrosonics.com

E-mail:
service.repair@lectrosonics.com
sales@lectrosonics.com

Lectrosonics Canada:

Mailing Address:
720 Spadina Avenue,
Suite 600
Toronto, Ontario M5S 2T9

Telephone:
+1 (416) 596-2202
(877) 753-2876 Toll-free Canada
(877) 7LECTRO
Fax (416) 596-6648

E-mail:
Sales: colinb@lectrosonics.com
Service: 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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28 November 2018