



ForTheRecord[®]

DMX8 USB Mixer

Installation Guide

for use with

FTR Touch

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Safety Notices

Please read the following instructions and safety notices before installing this equipment.

Voltage Selection

Depending on the equipment you purchased it may be necessary to change the operating voltage for your region. The power connector on the rear panel of the equipment may have a voltage selection switch. Check the voltage setting and change if required. If no voltage selection switch is available then the power supply is auto-sensing and you do not need to select an operating voltage.



Warning This equipment is designed to operate while connected to a grounded wall outlet. Always use a power cable with a properly grounded plug such as the one provided with this equipment. To reduce the risk of electric shock, never disable this important safety feature.

Canadian Deviations clause 1.1.1

All equipment installations are required to be in accordance with the Canadian Electrical Code (CEC), Part 1, CAN/CSA C22.1

US Deviations clause 1.1.1

All equipment installations are required to be in accordance with the National Electrical Code (NEC) ANSI/NFPA 70, and, unless marked or otherwise identified, the Standard for the Protection of Electronic Computer/Data-Processing Equipment, ANSI/NFPA 75.



Warning Only qualified technical service personnel should open the case of this equipment. All user accessible connections and controls are located on the front or rear panels of the equipment. Opening the case may also void your warranty. If you need to make changes that require the case to be opened, contact your authorized FTR service center.

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DMX8 USB Mixer

This guide provides general information for the installation and configuration of the DMX8 USB Mixer when used with FTR Touch.

Product Outline

The DMX8 USB Mixer is a general purpose automatic audio mixer allowing eight microphone or line inputs to be connected and mixed to one to four digital recording outputs. The recording outputs are delivered to FTR Touch through a USB port connection. Additionally, the DMX8 USB Mixer has four monitor outputs allowing the inputs to be routed to the outputs in any combination required. A further Mono output provides a mix down of all eight inputs.

Installing the DMX8 USB Mixer

Before commencing an installation make sure you have the following:

- DMX8 USB Mixer
- DMX8 USB Mixer Installation Guide for FTR Touch (this guide)
- Hi-Speed rated USB cable to connect DMX8 USB Mixer to computer (supplied)
- Power cable suitable for your region (supplied)
- Microphones or other input sources as required
- Microphone cables wired correctly for the DMX8 XLR connectors



Note: DMX 8 drivers are pre-installed on FTR Touch. The standard installation guide and installation CD are not required when using the DMX 8 with FTR Touch.

Voltage Selection

Before connecting the equipment to mains power, be sure to select the correct operating voltage for your region.

1. Remove the power cable from the equipment.
2. Slide the voltage selector switch located under the power inlet socket to the correct setting.
3. Check that the required voltage is now visible on the voltage selector switch.
4. Re-insert the power cable.

Location

The DMX8 USB Mixer can be mounted on a tray in a 19” rack or placed on a shelf or table. All connections are from the rear panel (see *Appendix A Diagram 1*).

Ideally the DMX8 USB Mixer should be located inside the room where recording will take place however it can be located outside if due consideration is given to microphone and output cable lengths and electrical interference.

The DMX8 USB Mixer must be located close to the FTR Touch unit as the USB connection length limit is 16 feet (5 meters).

Environment

The DMX8 USB Mixer should be installed in a clean, dust free, location that will allow free air to circulate around it for cooling purposes.

Software

The DMX8 USB Mixer is supplied with an installation CD, an installation guide that supports other FTR Recorders and this guide. The installation CD is not required for FTR Touch as all drivers are pre-installed. The following pages detail the procedures for installing the hardware and configuring the pre-installed device drivers on the FTR Touch unit.

Connections

Connecting the equipment involves the placement and connection of microphones or other input devices and cables, connection to FTR Touch and any monitoring equipment and the testing of the complete system.

Microphones

Place microphones as close as practical to the users but avoid restricting their view of the room. Be aware of the need for space to place papers and books without knocking or covering the microphone.

Ensure microphones are a minimum of 3 feet (1 meter) from sources of electronic interference such as the DMX8 USB Mixer, FTR Touch, computers and lighting.

Microphone Cables

Connect the cabling between the microphones and the DMX8 USB Mixer. If possible conceal and secure the cables to prevent them from being damaged or entangled by users. Avoid placing cables near possible sources of interference such as power cables, lights, monitors and computers. When connecting microphone cables to the DMX8 USB Mixer, be sure to run them directly away from the unit.

Recording Equipment

Connect the USB output of the DMX8 USB Mixer directly to **USB 1** on the rear panel of the FTR Touch unit - using the supplied USB cable.



Monitoring Equipment

The Monitor outputs on the DMX8 USB Mixer may be used for a range of different purposes including telephone and/or video conferencing, public address via an amplifier and/or powered speakers or for an analog audio feed for backup or other archival requirements.


Testing

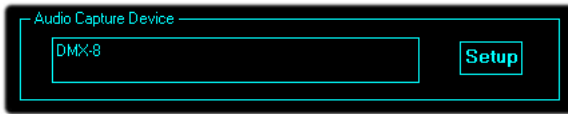
Have another person speak into each microphone at normal to loud levels. Watch the corresponding Input Level LED on the front panel of the DMX8 USB Mixer. As each microphone is tested the LED should flash green. It is acceptable for the LED to flash red occasionally with loud speech. If the microphones are placed close together the voice test should be accompanied by a “scratch” test. Before speaking, lightly scratch each microphone and observe which LED on the front panel lights. This ensures the correct microphone is being tested. If devices other than microphones are connected to the inputs of the DMX8 USB Mixer, perform a similar test on these devices.

The DMX 8 drivers are preinstalled on FTR Touch. However, the driver may need to be configured in FTR Touch settings. See the *Configuring FTR Touch Recording Settings* in the next section of this guide.

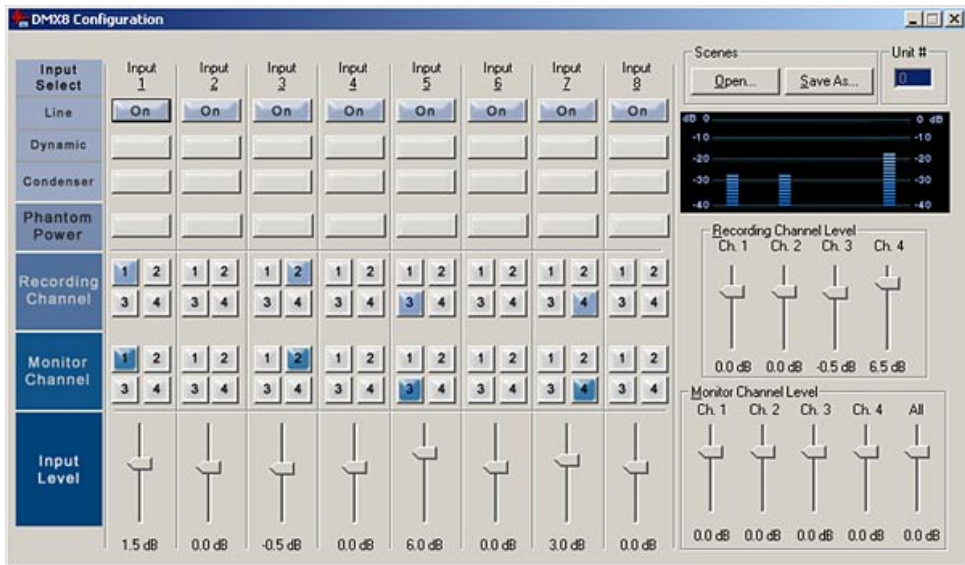
Configuring FTR Touch Recording Settings

To configure the DM8 from the FTR Touch unit:

1. From the **Mode Dial**, touch the **Settings**  icon for 5 seconds.
2. From the **Audio Capture Device** box, touch **Setup**.



3. From the **DMX8 Configuration** panel, make the required changes. See *DMX8 Configuration Panel* in the following section for details.



4. When all required changes are made, touch the close button in the top right corner of the configuration panel.



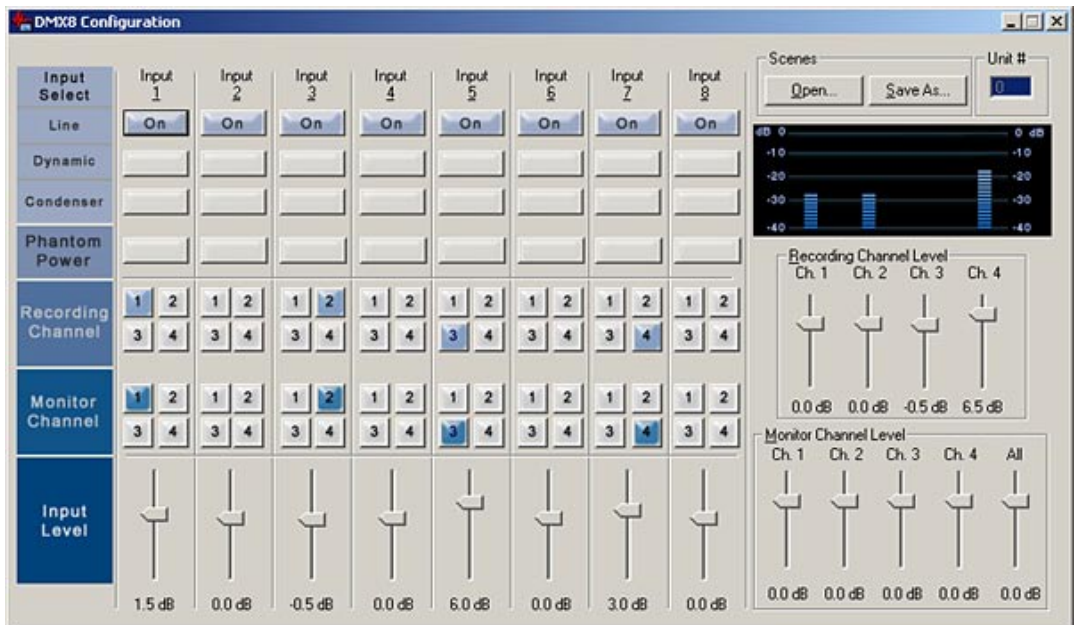
Note: Scene controls are not available from FTR Touch. If you touch the scene controls your current settings are saved and the configuration panel is closed.

5. If all other settings are satisfactory, touch **Exit**.

DMX8 Configuration Panel

When configuring the DMX8 for use with FTR Touch you can:

- Choose an input type for each device connected to an input
- Switch phantom power on or off as required
- Set input levels to suit the connected input device
- Assign the eight inputs to any combination of four recording channels which are captured by FTR Touch
- Set recording channel levels
- Assign the eight inputs to any combination of 4 monitoring channels which are accessed from the rear panel of the DMX8.
- Set monitor output levels



Settings

Input Select

For each input select the type of input device. The options available are:

- Line - for equipment that works at nominal line level
- Dynamic - for dynamic microphones
- Condenser - for condenser microphones

Phantom Power

Can be selected if a condenser microphone is connected to the input.

Recording Channel

For 2 channel recording switch inputs to Recording Channel 1 or 2 as required.

For 4 channel recording switch inputs to Recording Channels 1-4 as required.

Monitor Channel

Select the Monitor channels that the inputs will be mixed to.

Input Level

Adjust the level of each input.

Recording Channel Level

Adjust the level of each Recording channel using the level meter as a guide.

Monitor Channel Level

Adjust the level of each Monitor channel.

Scenes

Scenes are not supported with FTR Touch. Any attempt to open or save scenes will close the DMX8 Configuration Panel (any changes you make to channel assignments or levels are saved as default settings)

Adjusting Levels

Use the following steps to adjust the input and recording levels. The input levels must be adjusted before adjusting the recording channel levels or the monitor channel levels.

Adjusting Input Levels (before recording channel levels are adjusted):

1. Connect microphones or line sources to the DMX8 USB Mixer inputs.
2. For each input select the appropriate input type (**Line**, **Dynamic**, or **Condenser**) using the **Input Select** buttons. If **Condenser** is selected and phantom power is required by the microphone click the **Phantom Power** button for the input to turn phantom power on.
3. Start with all the Input Level sliders set to 0dB.
4. For each microphone input talk loudly into the microphone at a distance of 12 inches, or for each line input provide a line level signal of nominal level. View the front panel indicator LED for the appropriate input, and adjust the **Input Level** slider such that the LED lights green constantly and occasionally turns red. If you are unable to achieve this condition then check you have the correct input selection for the input type being used.

Adjusting Recording Channel Levels (after inputs are adjusted):

1. Use the **Recording Channel** buttons to select the recording channels that each input will be mixed to. Each input can be mixed to any of the 4 recording channels.
2. For each recording channel adjust the **Recording Channel Level** slider. It is important to adjust these sliders so that an adequate signal well above any background noise but below the clipping threshold is obtained. To adjust the recording channel levels:
3. Start with all the **Recording Channel Level** sliders set to 0dB.
4. Adjust these sliders so that when talking loudly into a microphone at a distance of 12 inches or providing a line level signal of peak amplitude, the meters light all bars including the occasional red bar at the top of the scale. It is important to get this setting as high as possible with only occasional indications of the red bar lighting.

Adjusting Monitor Channel Levels (after inputs are adjusted):

1. Use the **Monitor Channel** buttons to select the monitor outputs for each input. Each input can be mixed to any of the 4 monitor channel outputs.
2. For each monitoring channel adjust the **Monitor Channel Level** slider. Care should be taken not to overdrive external equipment with these signals. Start by setting these sliders 10dB lower than the average **Recording Channel Level** setting, and connect to external equipment such as speakers, teleconferencing system, or other devices. Adjust these sliders for each output to provide appropriate volume levels at the external equipment.

Troubleshooting

The following information is a guide to solving simple problems that you may encounter during the installation, testing and normal operation of the DMX8 USB Mixer and associated equipment. If you cannot solve the problem using this information contact your vendor.

Issue	Steps to Correct
The power LED on the front panel is not lit.	Check the power cable is firmly plugged into the power socket. Check the cable is plugged into the power outlet and that power is switched on.
Input Level LED does not illuminate when a microphone is tested.	Check that the relevant microphones and cables are correctly plugged in. Ensure the cables are wired to correct standards. Check the input level settings on the DMX8 Configuration are set to the correct values (Dynamic/Condenser and Phantom Power). If the problem persists swap the microphone for a known good one. If the problem persists swap the cable for a known good one. If the problem persists contact your vendor.
Sound is distorted in your FTR Touch.	Check and adjust the input and recording channel levels using the DMX8 Configuration. Distortion is usually caused when the input or recording level is set too high. Ensure the input type is correct for the type of microphone you are using.
Hum or buzz in the recording.	Usually caused by electrical interference to the microphones or cables. Ensure all cables and microphones are moved away from possible sources of interference such as computers, monitors, mixers and lighting. If the problem persists disconnect all microphone cables. Re-connect each microphone cable until the buzz returns. Replace the cable and/or microphone that introduces the buzz.
Low recording level on one channel.	Check and adjust the input and recording levels using the DMX8 Configuration. Check microphone placement. Swap for a known good microphone. If the problem persists swap for a known good cable. If the problem persists contact your vendor.
Low recording level on all channels.	Check and adjust the input and recording levels using the DMX8 Configuration.
Recording stops and the record time display on FTR Touch no longer increments.	Check the USB cable is connected securely. If it has become disconnected, FTR Touch will need to be restarted.

Specifications

Analog Inputs

Quantity	8
Connector	XLR-F
Input Levels	-60 to +10 dBu (0.775mv to 2.5VRMS)
Input Impedance	1k ohms
Phantom Power	Software enabled by channel, +12V
THD+N	0.025% condition: -30dBu input (25mV RMS)
CMRR	80dB
Frequency Response	20 to 20kHz \pm 3dB
DR Compression	Available
Noise Gating	Available
Trim Control	Software controllable, >90dB range, 0.5dB steps

Mixer

Recording Device Source Selection	Any combination of the 8 inputs for each of 4 Recording outputs to USB
Monitor Source Selection (1 to 4)	Any combination of the 8 inputs for each of the Monitor outputs 1 to 4
Monitor Source Selection (All)	All 8 inputs mixed down to 1 output

A/D and D/A Conversion

Conversion	16 bits
Sample Rates	8,11.025,12,16,22.05,24,32,44.1,48 KHz
Physical Recording Devices	4

Audio Monitor Outputs

Monitor (All)	Balanced +20dBu nominal full scale output level, ¼” TRS
Monitor 1	Unbalanced RCA, 2VRMS nominal full scale output level
Monitor 2	Unbalanced RCA, 2VRMS nominal full scale output level
Monitor 3	Unbalanced RCA, 2VRMS nominal full scale output level
Monitor 4	Unbalanced RCA, 2VRMS nominal full scale output level
Trim Control	Software controllable, >90dB range, 0.5dB steps

Indicator LEDs

Power	Green LED indicator for power “on”
One LED per input channel	Green indicates audio activity Red indicates compression threshold is reached

Computer Interface

Operating System Support	Windows XP Home SP1, Windows XP Professional SP1
USB	Hi-Speed USB (USB 2.0) required for full functionality
Audio Wave Devices	2 or 4 mono recording devices (1 or 2 stereo)
Mixer Control	Full function software control running on host computer

General

Power	85-240VAC, 50-60Hz switchable
AC Input	Removable IEC plug
Certifications	cUL 1409 or equiv., CE/FCC Part 15 Class A
Size	15” x 11” x 1.5” (395 mm x 270 mm x 65 mm)
Weight	approx 5 lbs (2.3 kg)
Operating Environment	0-40C, 0-95% RH non-condensing

Appendix A

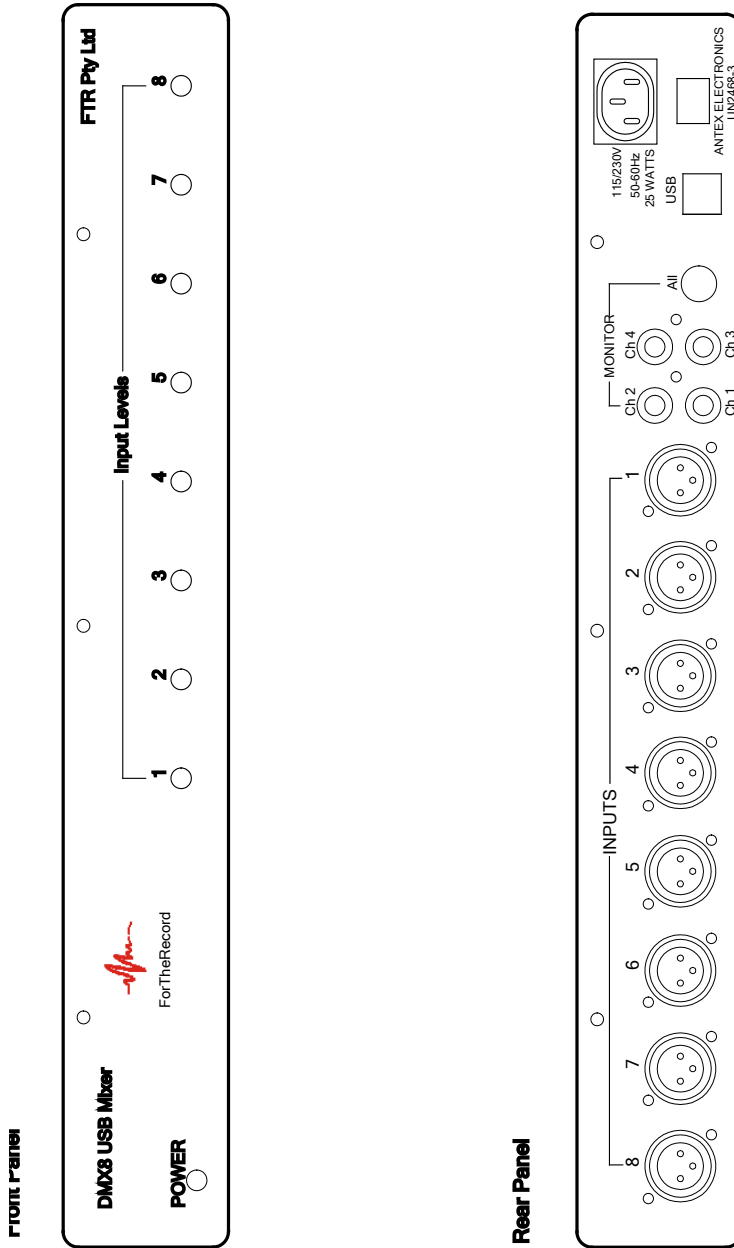


Diagram 1 – DMX8 Front and Rear Panels

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