



ForTheRecord[®]

DMX8 USB Mixer

Installation Guide

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FTR Pty Ltd
Suite 7
16 Brodie Hall Drive
Technology Park
Bentley
Western Australia 6102

FTR Pty Ltd
PO Box 1048
Technology Park
Bentley
Western Australia 6983

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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.

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 a computer through a Hi-Speed 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 mixdown of all eight inputs.

The simplicity of the USB connection mechanism and the excellent audio performance of the DMX8 USB Mixer ensure it is compatible with a wide variety of digital recording environments.

System Requirements

- Windows® 2000 SP4 -or-
Windows® XP Home SP1 or greater, -or-
Windows® XP Professional SP1 or greater
- Computer with Hi-Speed USB (USB 2.0) Interface



Installing the DMX8 USB Mixer

Before commencing an installation make sure you have the following:

- DMX8 USB Mixer
- DMX8 USB Mixer CD *or* Software downloaded from www.fortherecord.com
- DMX8 USB Mixer Installation Guide (this guide)
- Hi-Speed rated USB cable to connect DMX8 USB Mixer to computer (supplied)
- Power cable suitable for your region (supplied)
- Microphones
- Microphone cables wired correctly for the DMX8 XLR connectors

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 computer it is connected to. Hi-Speed USB has a connection length limit of 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. Overly hot, closely enclosed, humid, dirty or dusty environments should be avoided. Having decided on a suitable location for the DMX8 USB Mixer, read the following section when installing and connecting equipment.

Connections

Connecting the equipment involves the placement and connection of microphones or other input devices and cables, connection to a computer 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, computer 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 do not lay the cables under or over the DMX8 USB Mixer. They must lead directly away.

Recording Equipment

Connect the USB output of the DMX8 USB Mixer directly to an available Hi-Speed USB interface on your computer. Do not connect the DMX8 USB Mixer to the computer via a hub or repeater. You will require a Hi-Speed rated USB cable like the one supplied with the DMX8 USB Mixer to make this connection.

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.

After the drivers and the DMX8 Configuration are installed use the configuration program to adjust the recording and monitoring levels. See the *Configuring the DMX8 USB Mixer* section later in this guide.

Installing the DMX8 USB Mixer



Note:

When you insert the DMX8 USB Mixer CD, the Setup program will determine if your system meets the minimum software requirements for this product.

If your system does not meet these requirements, the Setup program will provide onscreen instructions advising which software or upgrades are required. Make sure to print out the instructions, as you may need to use these as a reference during the installation procedure.

Installation

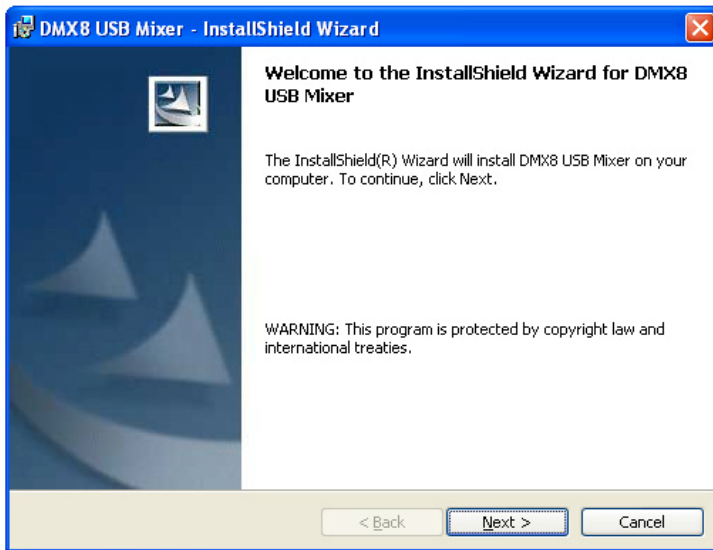
The DMX8 USB Mixer is supplied with a CD containing drivers, a configuration program, a meter program and an electronic version of this guide. The following steps detail the procedures for installing the software.

Please Note: It is important to turn the mixer **off** before commencing installation.

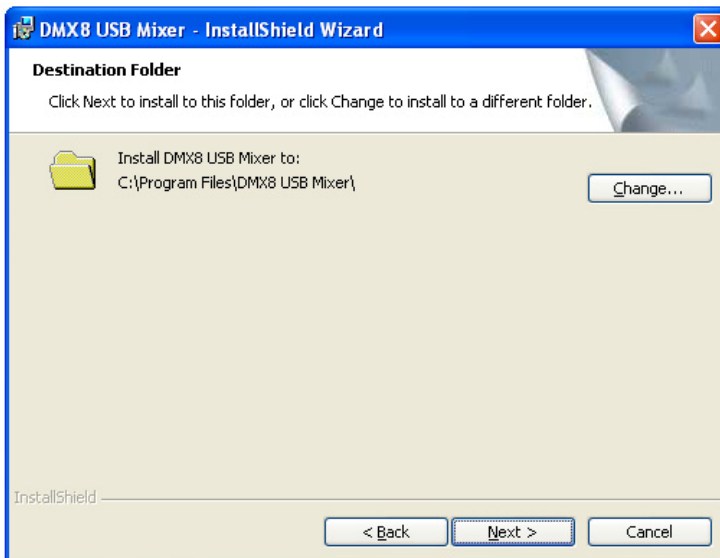
Installing the DMX8 USB Mixer software

1. Insert the installation CD into your CD-ROM drive. If the autorun does not start, double-click **DMX8Setup.exe**

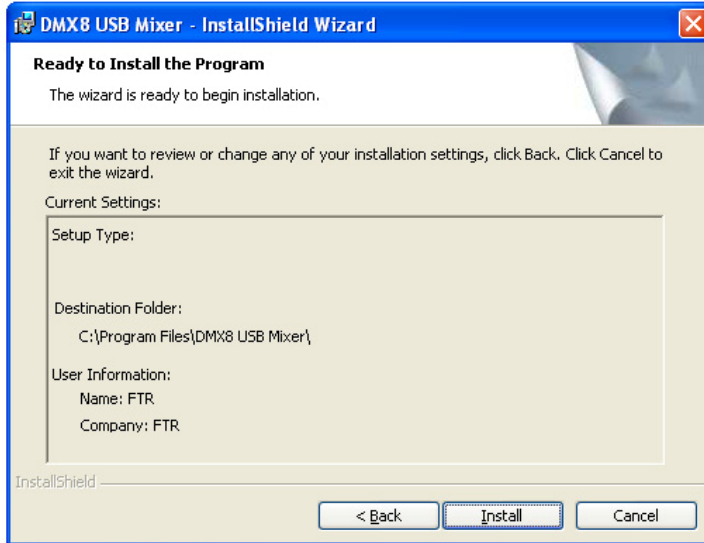
From the **Welcome to the InstallShield Wizard** dialog box click **Next**.



2. From the **Destination Folder** dialog box click **Next** to continue, or click **Change** to install to a different folder.

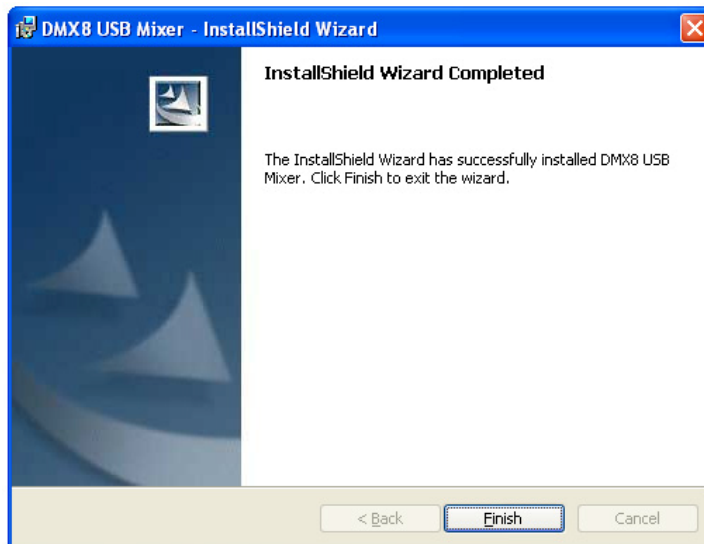


3. From the **Ready to Install the Program** dialog box click **Install**.

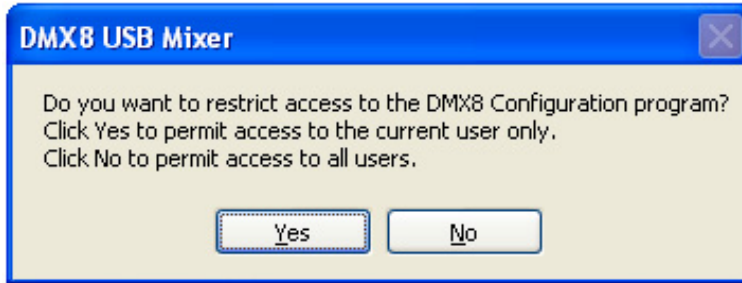


Note: An installation progress box will appear briefly.

4. From the **InstallShield Wizard Completed** dialog box click **Finish**.



5. From the **DMX8 Configuration Access** dialog box select **Yes** to permit access to the current user only or **No** to permit access to all users.



6. To continue with the installation of the DMX8 USB Mixer:
 - a. Ensure the DMX8 is switched off at the power outlet.
 - b. Click **OK** when the power is off.



7. To complete the installation of the DMX8 USB Mixer:
 - a. Ensure the DMX8 is connected to the computer via a USB cable.
 - b. Power up the DMX8 by switching it on at the power outlet.
 - c. Click **OK** when the power is on.



Note: The installation is not complete. Wait for the **Found New Hardware Wizard** dialog box for the Antex Electronics USB FTR Mixer Device and other hardware to be displayed.

8. Windows XP detects the Antex Electronics USB FTR Mixer Device and other hardware.



9. From the **System Settings Change** dialog box click **Yes** to restart your computer.



IT IS IMPORTANT TO RESTART YOUR COMPUTER NOW, EVEN IF YOU ARE NOT PROMPTED TO DO SO.

Configuring Windows® Multimedia Settings

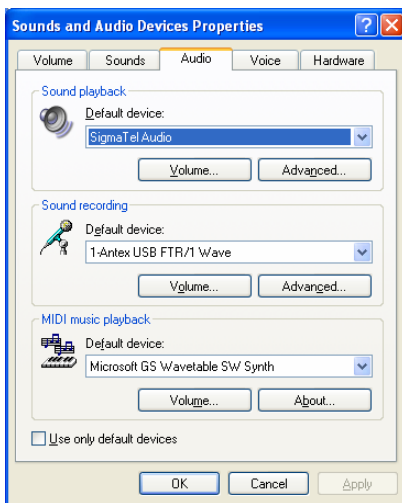
During the installation of the DMX8 USB Mixer, Windows multimedia settings may be configured in a way that is unsuitable for use with FTR Reporter or TheRecord Recorder. It is good practice to check the multimedia settings and make adjustments as required.

These settings need to be checked for each user account that is to use FTR Reporter or TheRecord Recorder.

Ensure that your stereo sound card and drivers for playback are installed and functioning properly. Refer to the vendor documentation for installation instructions.

To check and adjust Windows multimedia settings:

1. Click **Start** then click **Control Panel**.
2. Click **Sounds, Speech and Audio Devices**.
3. Click **Sounds and Audio Devices** and select the **Audio** tab.



4. In the **Sound playback** section select the standard stereo sound card of your computer as the playback device from the **Default device** list. Do not select any of the Antex USB FTR Wave devices for this playback setting.
5. Click **OK**.
6. Proceed to the *Completing the Installation* section of this guide.
7. Repeat these steps for each user account that is to use FTR Reporter or TheRecord Recorder.

Completing the Installation

To complete the installation follow the instructions relevant to your recording software, FTR Reporter or TheRecord Recorder.

TheRecord Recorder

To complete the installation of the DMX8 USB Mixer:

1. Ensure that the DMX8 USB Mixer is connected to the computer using the supplied Hi-Speed USB cable.
2. Install the TheRecord Recorder software. Start TheRecord Recorder, and from the **Tools** menu click **Options**. Click the **Multimedia** tab and select from the following settings:
 - a. For 1 or 2 channel recording select 1-Antex USB FTR/1 Wave.
 - b. For 4 channel recording select DMX8 USB Mixer.

Note: See the *TheRecord Recorder User's Guide* for further details.

FTR Reporter

To complete the installation of the DMX8 USB Mixer:

1. Ensure that the DMX8 USB Mixer is connected to the computer using the supplied Hi-Speed USB cable.
2. Install the FTR Reporter software and run the Settings Wizard. See the *FTR Reporter User's Guide*, and the *Running the FTR Reporter Settings Wizard* section below, for details.

Running the FTR Reporter Settings Wizard

Run the Settings Wizard to configure FTR Reporter to record with the DMX8 USB Mixer.

To run the Settings Wizard:

1. Click **Start**, point to **Programs**, then **FTR Gold** then click **Settings Wizard**.
2. Follow the prompts and the *FTR Reporter User's Guide* instructions for running the Settings Wizard. After selecting the **Number of Recording Channels** and **Format**, the following message is displayed.



3. Click **OK** and complete the Settings Wizard.

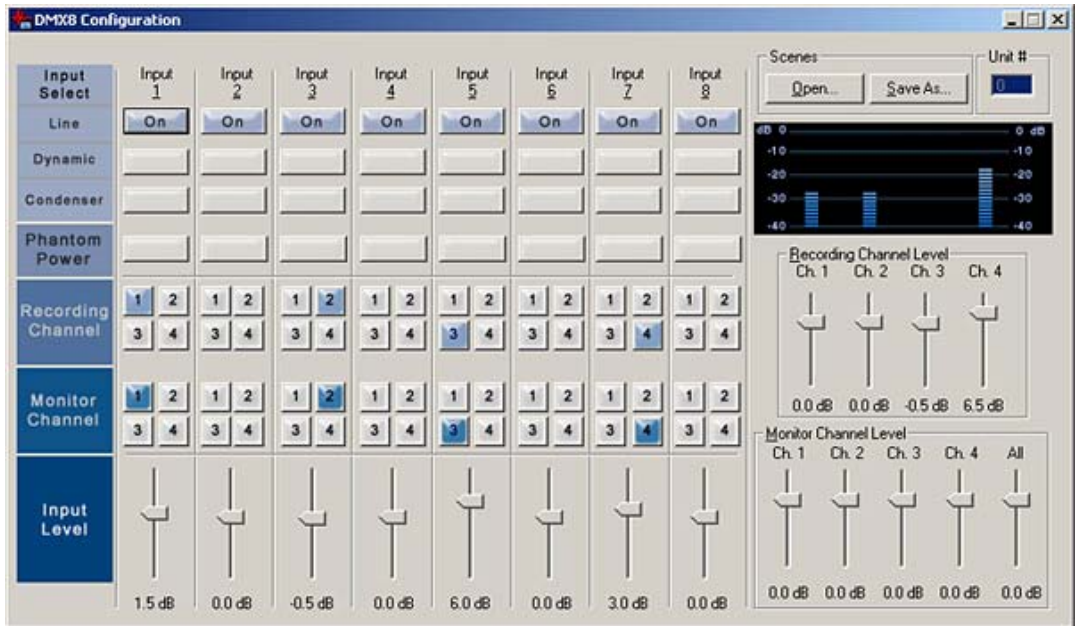
Configuring the DMX8 USB Mixer

To open the DMX8 Configuration:

- Click Start, point to All Programs, navigate to the DMX8 USB Mixer folder and click DMX8 Configuration.

Tip: You can create a shortcut on your desktop to open the DMX8 Configuration.

Controls



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 1 channel recording switch all inputs to Recording Channel 1.

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 channel that the input will be mixed to.

Input Level

Adjust the level of each input.

Recording Channel Level

Adjust the level of each Recording channel.

Monitor Channel Level

Adjust the level of each Monitor channel.

Adjusting Levels

It is important to adjust the DMX8 USB Mixer inputs and outputs to achieve optimum audio recording levels. The steps below describe the process that should be used for all inputs and outputs to achieve this. The Input Levels must be adjusted before adjusting the Recording Channel Levels or the Monitor Channel Levels.

Adjusting Input Levels:

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:

The recording channel level is the signal level being converted to digital format and is recorded by the computer.

Note: Recording Channel Levels must be adjusted after the Input Levels 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. If you are recording 1 or 2 channels only, select recording channel 1 and/or 2 as appropriate for each input.
2. For each recording channel adjust the **Recording Channel Level** slider. It is important to adjust these sliders so that an adequate signal level well above any background noise but below the clipping threshold is obtained. To adjust the recording channel levels:
 - a. Use your recording software to start a recording.
 - b. Start with all the **Recording Channel Level** sliders set to 0dB.

- c. 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:

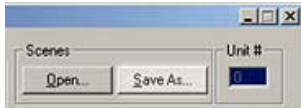
1. Use the **Monitor Channel Buttons** to select the monitor outputs for each input. Each input can be mixed to any of the 4 monitor channel outputs. The configuration of the Monitor Channel output may differ from the configuration of the Recording Channels if required. This is useful in cases where teleconferencing is required or where a public address system is in place and feedback needs to be avoided.
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.

Scenes

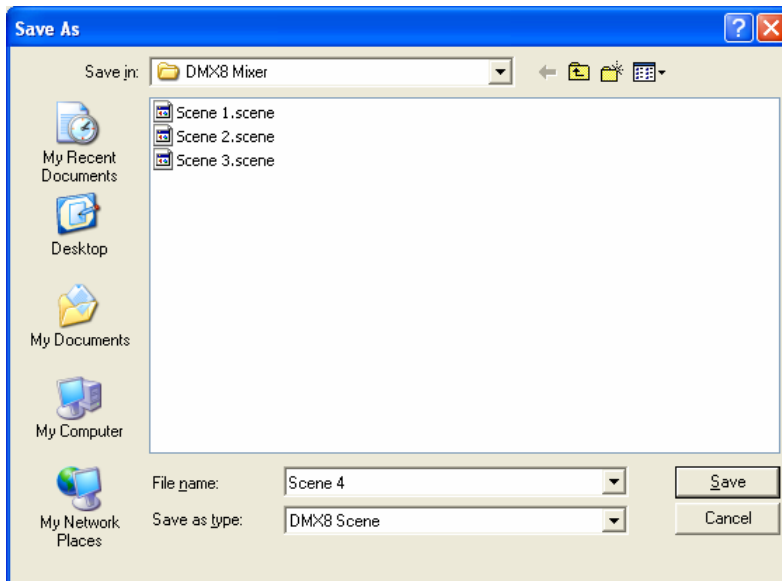
With the DMX8 Configuration you can save and open different configuration ‘scenes’, making the DMX8 USB Mixer quick to configure for different situations.

Saving a scene:

1. Click the **Save As...** button on the DMX8 Configuration.



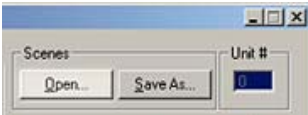
2. From the **Save As...** dialog box select a save location from the **Save in:** list and enter a **File name** for the scene. Click **Save**.



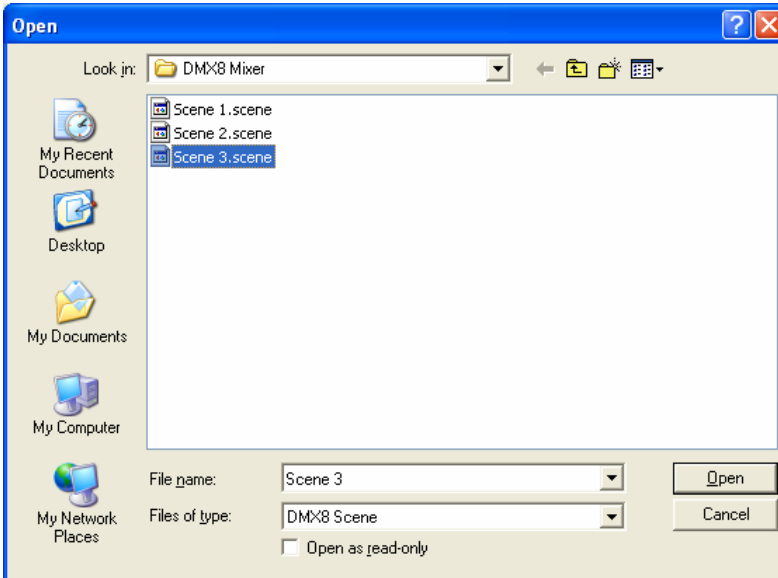
Note: The file is saved with a file extension *.scene*.

Opening a scene:

1. Click the **Open** button on the DMX8 Configuration.



2. From the **Open** dialog box use the **Look in:** list to navigate to the scenes save location and click the required scene. Click **Open**.



About DMX8 Configuration

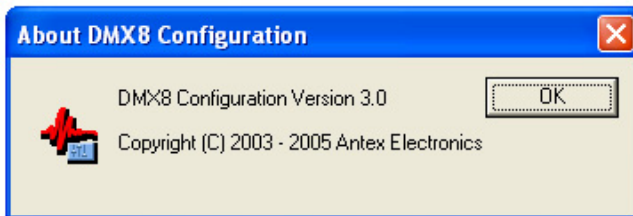
If you need to contact your vendor about a problem operating the DMX8 USB Mixer, you may be asked to supply the version number.

To locate the version number from DMX8 Configuration:

3. Click the **ForTheRecord** icon in the title bar to show the system menu and click **About DMX8 Configuration...**



4. From the **About DMX8 Configuration** dialog box note the version information and then click **OK** to close the dialog box.

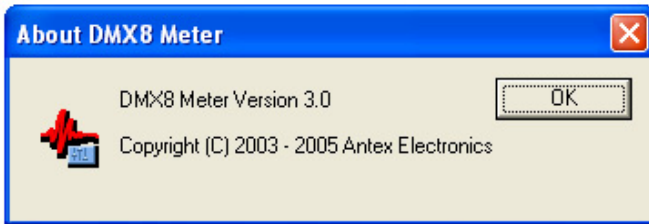


To locate the version number from DMX8 Meter:

1. Click the **ForTheRecord** icon in the title bar to show the system menu and click **About DMX8 Meter...**

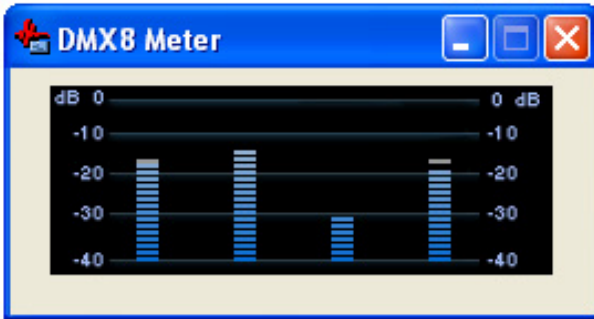


2. From the **About DMX8 Meter** dialog box note the version information and then click **OK** to close the dialog box.



DMX8 Meter

The DMX8 Meter displays the recording input level while recording is in progress using FTR Reporter or TheRecord Recorder.



The Meter allows users who are not permitted access to the DMX8 Configuration to monitor recording levels.

The DMX8 Meter can be started by double-clicking the DMX8 Meter icon on your desktop.

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 recording computer.	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.

Issue	Steps to Correct
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 clock display no longer increments.	Check the USB cable is connected securely. If it has become disconnected, the recording program will need to be restarted.
Running FTR Reporter starts the Settings Wizard unexpectedly	FTR Reporter has detected a change in the recording settings. This is most likely due to not having the DMX8 USB Mixer powered up before turning on the computer. Exit the Settings Wizard, power up the DMX8 USB Mixer then reboot the computer.

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

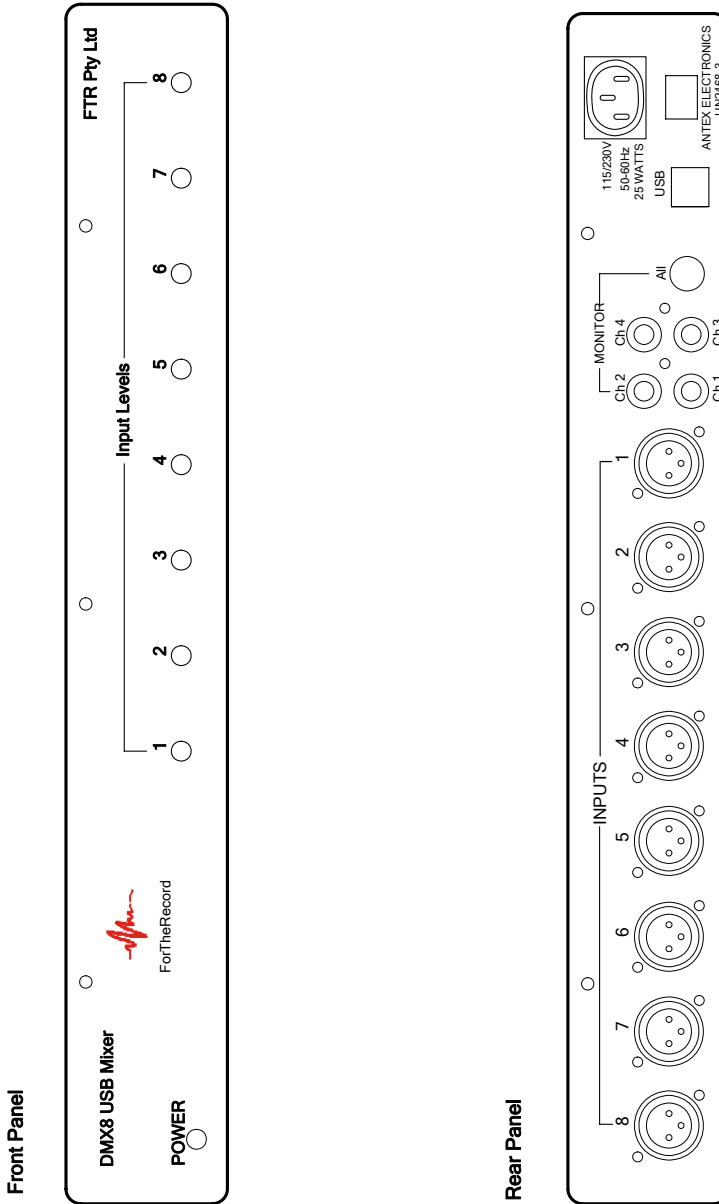


Diagram 1 – DMX8 Front and Rear Panels

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