# Contents for MixMaster Help

MixMaster is an audio mixing control panel that allows you to adjust input and output volume levels for different devices, set up recording sources and select various audio effects.

To learn how to use Help, press F1.

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## Audio Channel Controls

These topics explain the various audio channel controls and how to use them.

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| Volume Faders | These volume faders control the volume level of each audio channel. |
| Lock Controls | These controls "lock" or synchronize the left and right channels. |
| Mute Controls | These controls can mute the monitoring of each audio channel. |
| Mono/Stereo Controls | These controls select the input source for each channel. |
| Monitor Controls | These controls determine the output volume and mono/stereo mode. |
| Reverb Button | This button displays a reverb effects selection box. |
| Tone Button | This button displays a tone control box. |
| QSound Button | This button displays a QSound(TM) effects selection box. |

## Displaying Audio Channels

These topics explain how to add and remove the audio channels that are displayed.

Adding an Audio Channel     How to add a particular audio channel to the display.
Removing an Audio Channel How to delete a particular audio channel from the display.

# Setting the Volume

These topics explain how to set the volume control for each audio channel

## Monitoring the Output

These topics explain how to monitor or mute each audio channel that is mixed in the output.

Using the Mute Control     How to mute the output of a particular audio channel.
Mono/Stereo Monitoring    How to select the mono/stereo mode of an audio channel.

## Recording Digital Audio

These topics explain how to set up the mixer prior to recording digital audio.

Selecting a Recording Source      How to select an input channel for recording.
Mono/Stereo Selection      How to select the mono/stereo mode for recording.
Setting the Recording Volume      How to select a proper recording volume level.

## Adjusting the Effects

These topics explain how to adjust the various effects such as <u>reverb</u>, <u>tone</u> control and <u>QSound(TM)</u> effects.

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|---|---|
| <u>Setting the Reverb Controls</u> | How to select a preset reverb mode and adjust the reverb level. |
| <u>Setting the Tone Controls</u> | How to set the treble and bass tone controls. |
| <u>Selecting QSound Effects</u> | How to select QSound effects for the synthesizer output and/or digital audio playback. |

## Volume Faders

The volume faders are the vertical sliding controls that are labeled **SYNTH**, **WAVE**, **MIC**, etc. These are stereo controls where the left fader controls the left speaker output and the right fader controls the right speaker output.

Moving the fader upward increases the volume, moving the fader downward decreases the volume.

For information regarding each individual audio channel, select from the following:

Synthesizer Volume          How to adjust the music synthesizer volume.
Wave Volume                 How to adjust the digital audio wave playback volume.
Microphone Volume           How to adjust the microphone input volume.
External Volume             How to adjust the external input volume.
CD Audio Volume             How to adjust the CD-ROM audio volume.
PC Speaker Volume           How to adjust the PC speaker audio input volume.
Monitor or Master Volume    How to adjust the master output volume.
Recording Volume            How to adjust the mixed output recording volume.


To add or remove individual audio channels from the display, select from the following:

Adding an Audio Channel     How to add a particular audio channel to the display.
Removing an Audio Channel How to delete a particular audio channel from the display.

## Lock Controls

Located below each set of <u>volume faders</u> is a checkbox labeled **Lock**.   When checked, the left and right fader for the channel will be synchronized.   This means that both the left and right channel faders will move together in unison.

Please note that when selecting **Mono** input mode on those channels that provide **Mono/Stereo** switches, the **Lock** control will be enabled automatically.

## Mute Controls

Located below each set of <u>volume faders</u> is a checkbox labeled **Mute**.   When checked, the audio output for that channel will be silenced.   Recordings are **not** affected by the state of the mute control, except when recording mixed output (See **<u>Recording Controls</u>** for more information).

## Mono/Stereo Controls

Located below each set of <u>volume faders</u> are two buttons labeled **Mono** and **Stereo**.   The appropriate button should be selected to match the particular input source.

Most microphones are monophonic, so the **Mono** button should be selected.   <u>CD-ROM</u> audio input or stereophonic tape player input requires the **Stereo** button to be selected.

For information regarding the monitor control modes for **Mono/Stereo** selection, please refer to **<u>Monitor Controls</u>**.

## Recording Controls

Located at the bottom of each audio channel is a button labeled **REC**.   When a button is selected, the audio signal from that channel will be recorded when using a digital audio recording application such as Windows Sound Recorder.

Before starting a recording, the channel <u>fader</u> from which you are recording must be set to an adequate recording level and the correct **Mono/Stereo** input mode must be selected. Please refer to **Recording Digital Audio** and **Monitor Controls** for more information.

The **SYNTH** and **WAVE** channels share a common recording button.   This allows you to make a recording of both the synthesizer music and the digital audio playback simultaneously.   Please note that these types of recordings may only be at a <u>sampling rate</u> of 22 KHz or 11 KHz.

The **REC MIX** button, located under the **MONITOR** or **MASTER** channel, will select the mixed output for recording.   This allows you to record all input signals simultaneously.   In this case, the **Mute** checkboxes for each input channel will effect your recording.   Be sure to mute any channels that you do not wish to record.   Another fader control labeled **RECORD** will appear when making an output mix recording.   This fader will allow you to set the overall recording volume for all inputs.

## Monitor Controls

Below the **MONITOR** or **MASTER** <u>volume faders</u> are controls for setting the output monitor mode.   These buttons are labeled **Mono** and **Stereo**.   They determine whether the output to the speakers is mixed as monophonic or stereophonic sound.

Some versions of the sound board do not provide a monitor mode control.   For these boards, the output will always be monitored in stereo.

## Reverb Button

Located below the **SYNTH** and **WAVE** volume faders is a button labeled **Reverb**.   When this button is pushed, a window will be displayed that allows you to select a reverb mode.

For more information regarding reverb modes, please refer to **Setting the Reverb Controls**.

Please note that some versions of the sound board do not support reverb effects.

## Tone Button

Located below the **SYNTH** and **WAVE** <u>volume faders</u> is a button labeled **Tone**.   When this button is pushed, a window will be displayed that allows you to adjust the treble and bass <u>tone</u> controls.

For more information regarding the tone controls, please refer to **<u>Setting the Tone Controls</u>**.

Please note that some versions of the sound board do not support tone control.

## QSound Button

Located below the **SYNTH** and **WAVE** volume faders is a button labeled **QSound(TM)**. When this button is pushed, a window will be displayed that allows you to select the sources for QSound effects.

For more information regarding QSound, please refer to **Selecting QSound Effects**.

Please note that some versions of the sound board do not support QSound effects.

## Adding an Audio Channel

To add a supported audio channel to the main display window, choose **Display** from the MixMaster menu bar.   A menu of the available audio channels will be shown.   A checkmark will appear in the menu next to each of the currently displayed channels.   Select the channel that you wish to be displayed.

The last display configuration is saved when you exit MixMaster and restored automatically when you restart the application.

Some versions of the sound board do not support all of the audio channels listed in the menu.   The unsupported channels will not be available for selection.

## Removing an Audio Channel

To remove an audio channel from the main display window, choose **Display** from the MixMaster menu bar.   A menu of the available audio channels will be shown.   A checkmark will appear in the menu next to each of the currently displayed channels.   Select the channel that you wish to be removed.

The last display configuration is saved when you exit MixMaster and restored automatically when you restart the application.

Some versions of the sound board do not support all of the audio channels listed in the menu.   The unsupported channels will not be available for selection.

## Volume Control

Volume is controlled by adjusting the volume faders.   The volume faders are the vertical scrollbars labeled **SYNTH**, **WAVE**, **MIC**, etc.   These are stereo controls where the left fader controls the left speaker output and the right fader controls the right speaker output.

Moving the fader upward increases the volume, moving the fader downward decreases the volume.

## Volume Locking Control

Located below each set of <u>volume faders</u> is a checkbox labeled **Lock**.   When checked, the left and right volume fader for the channel will be synchronized.   This means that both the left and right channel faders will move together in unison.

Please note that when selecting **Mono** input mode on those channels that provide **Mono/Stereo** switches, the **Lock** control will be enabled automatically.

## Synthesizer Volume

The music synthesizer volume level is controlled by the <u>volume faders</u> labeled **SYNTH**.   The left channel output level can be adjusted by using the left-hand fader control and the right channel output level can be adjusted by using the right-hand fader control.

The synthesizer volume level is also effected by the **MONITOR** volume fader.   Both the **SYNTH** and **MONITOR** volume faders must be adjusted properly in order to hear the synthesizer output.

## Wave Volume

The digital audio playback volume level is controlled by the volume faders labeled **WAVE**. The left channel output level can be adjusted by using the left-hand fader control and the right channel output level can be adjusted by using the right-hand fader control.

The digital audio playback level is also effected by the **MONITOR** volume fader.   Both the **WAVE** and **MONITOR** volume faders must be adjusted properly in order to hear the digital audio output.

## Microphone Volume

Microphone input volume level is controlled by the <u>volume faders</u> labeled **MIC**.   The left channel level can be adjusted by using the left-hand fader control and the right channel level can be adjusted by using the right-hand fader control.

Most microphones are monophonic, so the audio channel mode should be selected as **Mono**. The **Mute** checkbox determines whether or not the microphone input is audible in the output.

When making a microphone recording, be sure to properly adjust the input level.   Please refer to **<u>Recording Digital Audio</u>** for more information.

For some versions of the sound board, the microphone input level is also effected by the **MASTER** volume fader.   In this case, both the **MIC** and **MASTER** volume faders must be adjusted properly in order to record microphone input.   These systems also require that the proper input level be selected from the MixMaster **Input** menu -- either **Microphone Level** or **Line Level** may be chosen for this input channel.

## External Volume

External input volume level is controlled by the <u>volume faders</u> labeled **EXT**.   The left channel level can be adjusted by using the left-hand fader control and the right channel level can be adjusted by using the right-hand fader control.

Most line level external sources (such as tape players) are stereophonic, so the audio channel mode should be selected as **Stereo**.   The **Mute** checkbox determines whether or not the external input is audible in the output.

When making an external recording, be sure to properly adjust the input level.   Please refer to **<u>Recording Digital Audio</u>** for more information.

Some versions of the sound board, do not provide a separate external input source.   For these systems, line level recordings can be made by choosing the **Line Level** selection from the MixMaster **Input** menu.

## CD Audio Volume

CD-ROM audio volume level is controlled by the volume faders labeled **CD AUDIO**.   The left channel level can be adjusted by using the left-hand fader control and the right channel level can be adjusted by using the right-hand fader control.

Almost all CD-ROM audio sources are stereophonic, so the audio channel mode should be selected as **Stereo**.   The **Mute** checkbox determines whether or not the CD audio input is audible in the output.

When making a CD audio recording, be sure to properly adjust the input level.   Please refer to **Recording Digital Audio** for more information.

## Recording Volume

When the **REC MIX** button is selected, a new <u>volume fader</u> labeled **RECORD** will be displayed.   This fader controls the recording level when making a recording of the mixed output (all input channels simultaneously).   The left channel recording level can be adjusted by using the left-hand fader control and the right channel recording level can be adjusted by using the right-hand fader control.

Please refer to **<u>Recording Digital Audio</u>** or **<u>Recording Controls</u>**for more information.

Please note that some versions of the sound board do not support the **REC MIX** option or the **RECORD** fader controls.

## PC Speaker Volume

PC speaker input volume level is controlled by the <u>volume fader</u> labeled **PC SPKR**.   PC speaker input is always monophonic, so a **Mono/Stereo** mode switch is not provided.   The **Mute** checkbox determines whether or not the PC speaker input is audible.   This channel may also be used for other monophonic input sources such as telephone audio.

When making a recording from this channel, be sure to properly adjust the input level. Please refer to **<u>Recording Digital Audio</u>** for more information.

Please note that some versions of the sound board do not support a PC speaker input channel.

## Monitor or Master Volume

The master volume level is controlled by the <u>volume faders</u> labeled **MONITOR** (or on some systems, **MASTER**).   The left channel level can be adjusted by using the left-hand fader control and the right channel level can be adjusted by using the right-hand fader control.

The master volume determines the overall volume level of output to speakers or headphones.

Some versions of the sound board provide a monitor mode selection.   This **Mono/Stereo** mode selection determines whether the output is monophonic or stereophonic, respectively. Please refer to **<u>Monitor Controls</u>** for more information.

## Reverb

Reverberation and echo effects are produced by sound waves reflecting from various surfaces within an enclosed or partially enclosed environment.   Different reverb effects can be created using digital signal processing.

## Tone

The relative amount of high and low frequencies.   Sliding controls for treble (high frequencies) and bass (low frequencies) are provided.

## CD-ROM

Compact Disk Read Only Memory.   This computer disk format can contain over 600 Megabytes of data and audio information.

## Sample Rate

The rate at which digital audio data samples are input or output by the audio hardware.   The standard rates for Windows multimedia audio are 11,025 Hertz (samples per second), 22,050 Hz and 44,100 Hz.   The higher the sample rate, the better the recording quality, but also the higher the data storage requirements.

## QSound(TM)

QSound Virtual Audio is a 3-dimensional effect that expands and enhances an audio signal beyond the normally perceived stereo field.   Normal stereo sound is limited to the space between the placement of two audio speakers. QSound expands that range, allowing sounds to be perceived from a much wider area.

QSound is a trademark of Archer Communications.

## Volume Fader

A volume fader is used to control audio input or output signal levels.   MixMaster provides volume faders in the form of vertical scroll bars.   Moving the fader up or down will increase or decrease the volume level logarithmically.

## Setting the Recording Volume

Once a recording source has been selected using the **REC** or **REC MIX** buttons and the **Mono/Stereo** input mode switch has been set, the recording volume level must be adjusted prior to starting a digital audio recording.

Use the appropriate input channel <u>volume fader</u> to select a recording volume.   Moving the fader upwards will increase the recorded volume, moving the fader downwards will decrease the recorded volume.   It is a good idea to create a test recording in order to determine the best input volume setting.

If you are making a recording of the mixed output (by selecting the **REC MIX** button), you must also set the overall recording volume using the <u>**RECORD**</u> channel volume faders.   Only those input channels that do **not** have **Mute** selected will be recorded when in this mode.

Please note that on some versions of the sound board, the **MASTER** volume fader will also effect the recording level.

## Setting the Reverb Controls

To set the <u>reverb</u> controls, first activate the reverb control window by pushing the button labeled **Reverb**.

Several preset modes of reverb are available such as **ROOM**, **HALL** and **DELAY**.   Select the desired reverb mode and then adjust the overall amount of reverb effect using the vertical scrollbar.   Reverb will be applied to both the synthesizer output and digital audio playback. If a synthesizer MIDI file contains reverb control information, it will automatically alter the individual reverb level for each musical instrument.

All reverb settings are saved when exiting Windows and restored automatically when restarting Windows.

Please note that some versions of the sound board do not support reverb effects.

## Setting the Tone Controls

To set the <u>tone</u> controls, first activate the tone control window by pushing the button labeled **Tone**.

Treble and bass frequencies may be cut or boosted using the vertical scrollbars.   Individual control for left and right speaker channels are provided.   All tone adjustments will be applied to the entire mixed output.   However, digital audio recordings made directly from input channels will **not** be effected by the tone control settings.   Recordings made from the mixed output (using **REC MIX**), will be effected by the tone control settings.

All tone settings are saved when exiting Windows and restored automatically when restarting Windows.

Please note that some versions of the sound board do not support tone control.

## Selecting QSound Effects

To select QSound(TM) 3-D audio effects, first activate the QSound control window by pushing the button labeled **QSound(TM)**.

The QSound effect may be applied to either the synthesizer output or the digital audio playback or both.   Use the provided checkboxes to activate and deactivate the effect.

QSound settings are saved when exiting Windows and restored automatically when restarting Windows.

Please note that some versions of the sound board do not support QSound effects.   Also, QSound effects during monophonic digital audio playback will not be audible unless an application sets the stereo pan control of the digital audio channel.   Similarly, the MIDI files played by the music synthesizer must have been created using pan control on each instrument in order for the QSound effect to be realized.