



Mixxx User Guide

Release 1.10

The Mixxx Team

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Contents

Introduction to Mixxx

Mixxx allows you to perform live DJ mixes with your digital music collection. It helps you rock the party with MIDI controllers, vinyl turntables, or even just your keyboard.

Mixxx is used by professional DJs and bedroom DJs alike. It is designed by an international team of volunteer DJs who want to bring the joy of DJing to everyone. The project is non-profit, open-source and community driven. Together and with your help we aim to build the best DJ software ever created.

1.1 Project History

Mixxx was originally created in 2002 as part of a PhD thesis on new interfaces for DJing by Tue Haste Andersen. After releasing the project as open source, dozens of contributors began modifying and improving Mixxx.

In 2006, a new development team lead by Adam Davison and Albert Santoni began reorganizing the project to ensure smooth growth of both the codebase and the number of contributors. A renewed focus on usability and stability has helped Mixxx grow to become the most popular free DJ software in the world, receiving over 1,000,000 downloads annually. Our committed team has worked hard to create great DJ software, and this growth is a sign of our success.

As our user community grows, so does our development team - As of Mixxx 1.10.0 over 100 Developers and artists have helped create Mixxx!

1.2 What? Why?

Mixxx started as an open-source project because of demand for DJing software on Linux, and discontent with proprietary DJ software on Windows and Mac OS X. Today, Mixxx development is driven by the simple idea that together we can create a better way to DJ, and that has brought Mixxx to the cutting edge. Mixxx is the only free cross-platform vinyl control software and has the most advanced MIDI controller support via our innovative Javascript-based MIDI scripting engine. We are continuing to pursue new and exciting features that give DJs more tools to create better live mixes.

1.3 System Requirements

Mixxx is available for Windows, Mac OSX and GNU/Linux. Mixxx is designed to use very few system resources, but the Mixxx team suggests these minimum requirements for having a great experience with Mixxx:

- A 2GHz or faster CPU
- At least 1GB of RAM
- A soundcard with 2 audio outputs

Installing Mixxx

First, you need to download Mixxx. If you haven't done this already, head on over to our [downloads page](#) and grab a copy for your OS.

2.1 Windows

Windows users can install Mixxx by double-clicking on the Mixxx installer executable. Follow the step-by-step instructions in the installer. Mixxx is supported on Windows XP, Vista, and Windows 7, with native 32 and 64-bit versions. (It may also run on Windows 2000.)

Note: If you aren't sure about 32-bit versus 64-bit, pick the 32-bit version.

2.2 Mac OS X

OS X users on Snow Leopard or greater can install Mixxx from the [Mac App Store](#). Alternatively, Intel and PPC users can install Mixxx by downloading and double-clicking the Mixxx DMG archive, and then dragging-and-dropping the Mixxx bundle into their Applications folder. Mixxx requires an Intel or PPC Mac running OS 10.4 or newer.

Note: If you aren't sure about Intel vs. PPC, pick the Intel version.

2.3 GNU/Linux

Official packages of Mixxx are only offered for Ubuntu Linux. However, Mixxx can build on almost any Linux distribution.

2.3.1 Installation on Ubuntu

Installing Mixxx on Ubuntu Linux is easy because we provide a handy Personal Package Archive (ppa). Open a terminal and type the following commands:

```
sudo apt-add-repository ppa:mixxx
sudo apt-get update
sudo apt-get install libportaudio2 mixxx
```

2.3.2 Installation on Other Distributions

Your distribution may maintain a non-official build that you may use. Alternatively, you can build Mixxx from source. This should not be a terrible process, and it's certainly easiest on GNU/Linux. For more information, see the [Compiling on Linux](#) section of the [Mixxx Wiki](#).

2.4 Building Mixxx from Source

If your operating system isn't on this list, then it's likely you're going to have to build Mixxx from the source code. For more information, you should probably head over to the [Mixxx Wiki](#).

Hardware Setup

This chapter describes the most common hardware setups to serve as examples. We will go over the setup of timecode records/CDs, MIDI control and keyboard control.

3.1 Audio Output

Headphone cueing, or just cueing, is previewing the next track you would like to mix in your headphones. The audience will not hear what you are cueing in your headphones. Being able to cue is a crucial aspect of DJing.

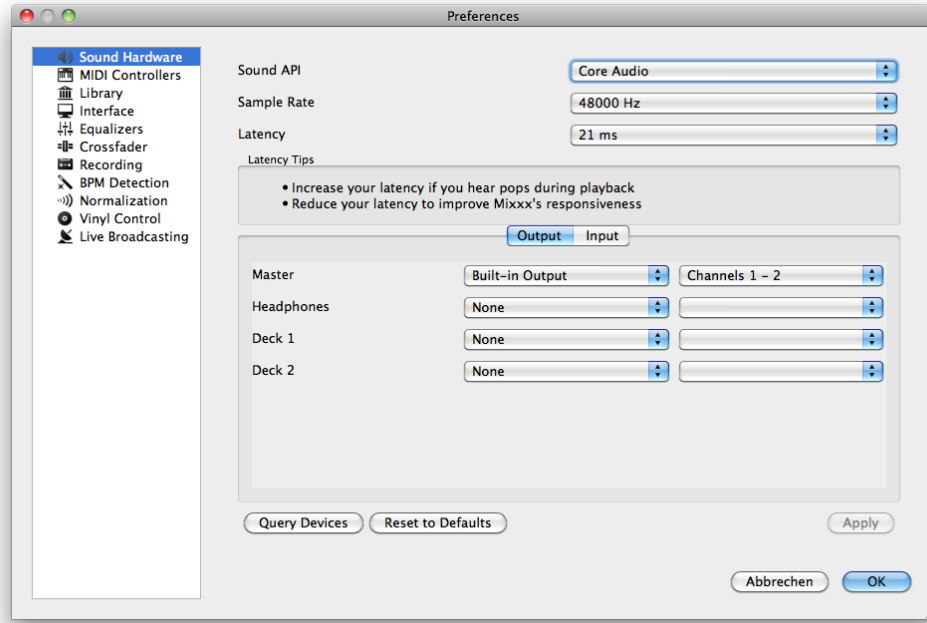
In order to cue with your computer, you will need **at least 2 separate audio outputs**. Traditionally, a headphone jack on most laptops is **not a second audio output**. Rather, plugging headphones into the jack simply redirects the laptop's main output to your headphones. **Having a headphone jack alone will not allow you to cue.**

3.2 Common Configurations

Unlike some commercial DJ systems, Mixxx can control multiple audio devices simultaneously. Depending on your budget and application area your sound setup and requirements may vary. This section provides useful information for club, hobby and radio DJs alike.

3.2.1 Laptop Only

There is absolutely no need to buy an additional, expensive sound card **if you do not require headphone cueing**. The built-in soundcard on most computers and laptops comes with a single line-out and microphone input.

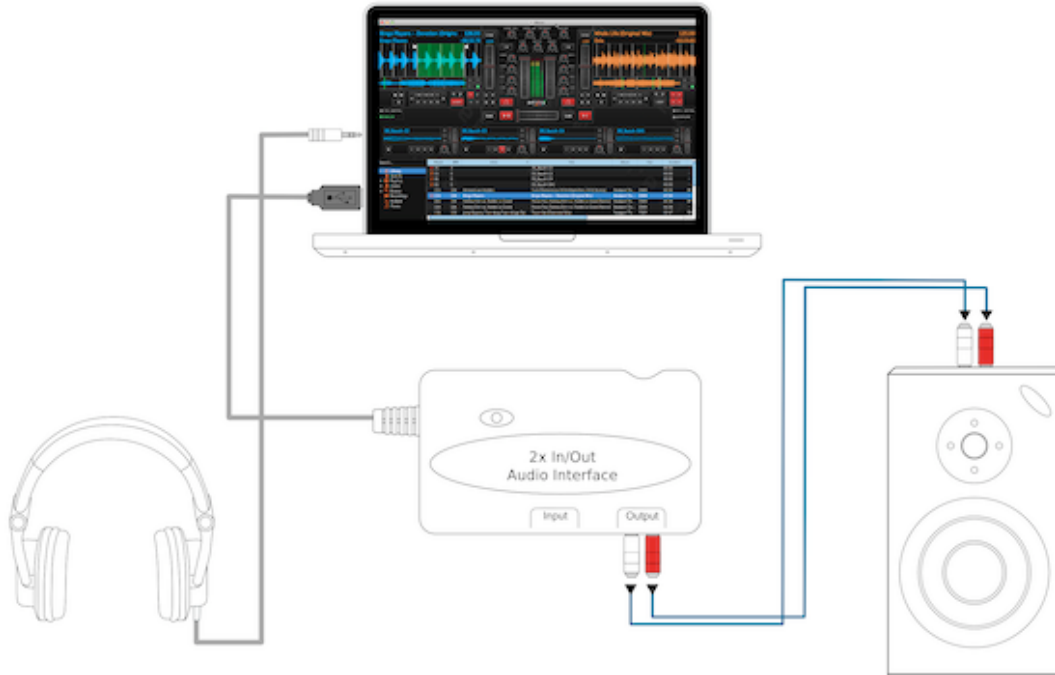


The figure above depicts how the sound configuration might look. The stereo output of your soundcard (channels 1-2) will be connected to the **master out**. Depending on your soundcard you can specify a microphone under the “Input” tab.

This minimal configuration may be suitable for **radio DJs** that do not need headphone cueing.

3.2.2 Laptop and an External USB Soundcard

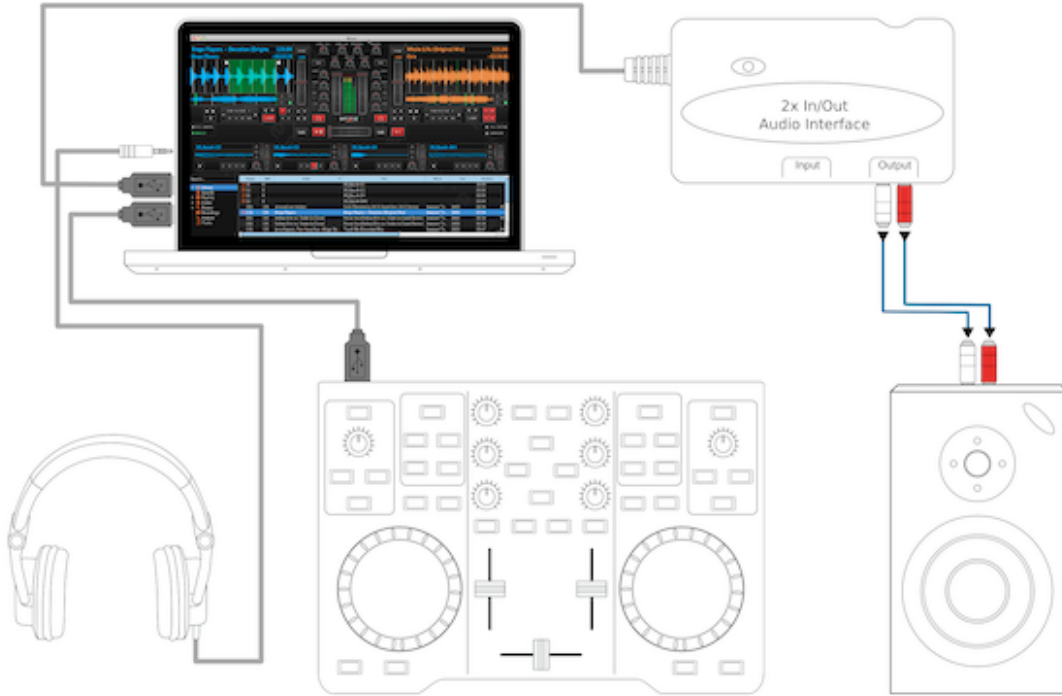
The most common setup for DJing is a laptop and a soundcard with 2 stereo outputs (4 channels). The first stereo output (channels 1-2) is used as the **Master out** and supplies the main mix to the room. With the 2nd stereo output (channels 3-4) you can cue and preview the next track in your headphones. If your soundcard does not have 2 stereo outputs, you can use multiple soundcards to achieve the same setup.



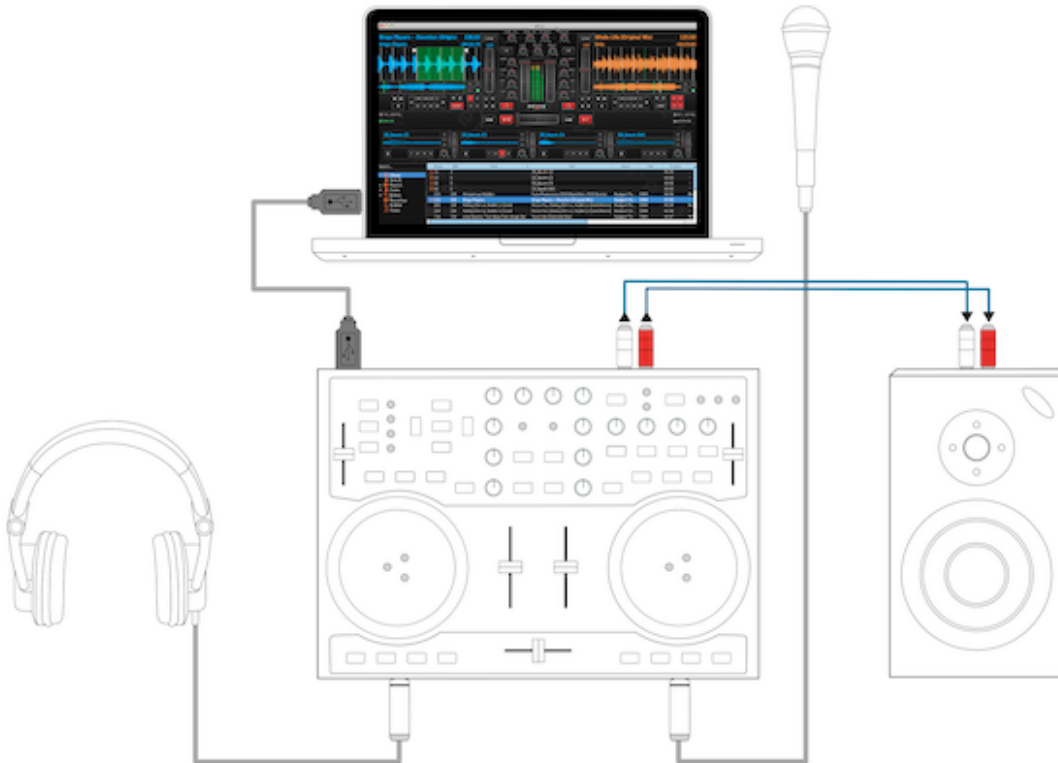
The depicted configuration above uses two soundcards. This setup is the bare minimum for serious DJing. Without any extra gear, the DJ can control Mixxx via mouse and keyboard. For more information see [Controlling Mixxx](#).

3.2.3 Laptop, MIDI Controller, and External USB Soundcard

Mixxx can work with any MIDI controller that has drivers for your OS, as long as there is a MIDI mapping file to tell Mixxx how to understand it. Mixxx comes bundled with a number of MIDI mapping presets. To see the full list, see [Using a MIDI Controller](#).



Your MIDI controller may have an integrated *multi-channel* soundcard. If yours does not, your sound setup may look like the figure above. Otherwise, an alternative sound setup may look like the figure below:



Note: You can connect as many MIDI controllers as you have ports on your computer. Just follow the steps in *Using a MIDI Controller* for each controller you want to use.

3.2.4 Laptop, External Hardware Mixer and Vinyl Control

This setup is usually preferred by DJs who work in clubs. Instead of carrying large and heavy CD bags or a MIDI controller, all you need to have is a professional soundcard together with a pair of timecode records and headphones.

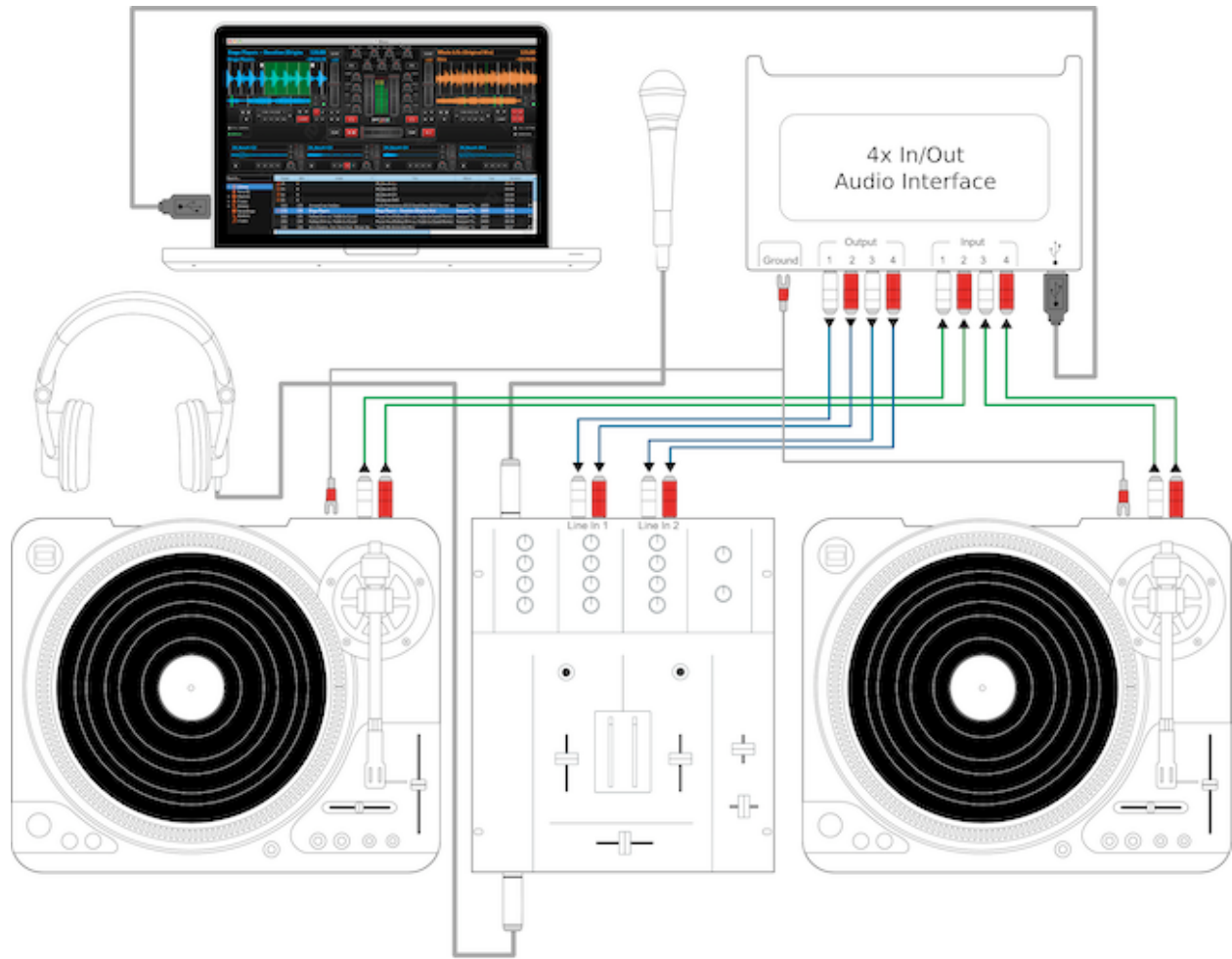
For best results, when using this setup you should ensure your system is capable of latencies under 10ms. Otherwise scratching may sound distorted. For more information about latency and how to improve it, see *Latency*.

Note: It is strongly recommended to use a soundcard that comes with native low latency drivers such as ASIO (Windows) or CoreAudio (Mac). Linux users depend on the quality of the corresponding open source driver.

Turntables

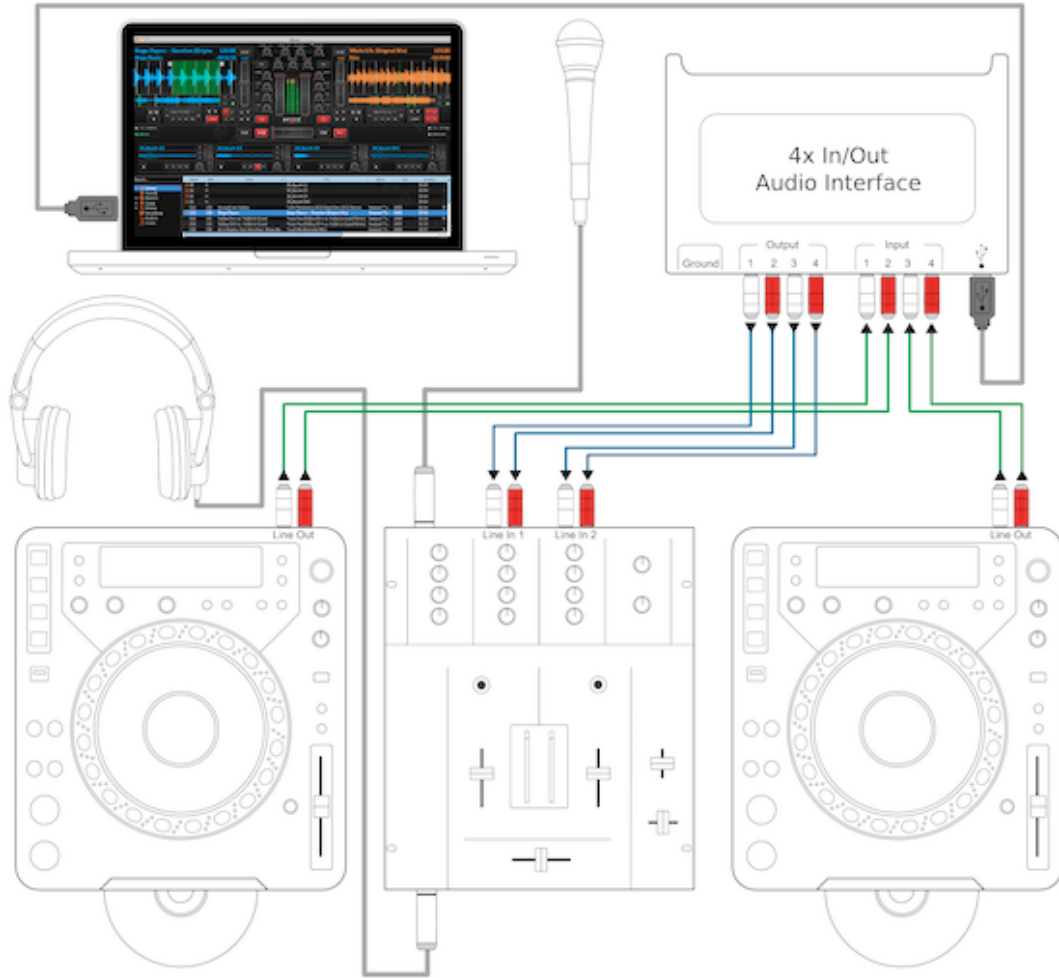
For turntables a typical setup is depicted in the figure below. First, connect the RCA cables from the turntables to the inputs on your sound card. Second, connect the outputs of your sound card to the inputs on your mixer.

Note: You must set the input mode of your sound card to *phono* if you have standard turntables. Many modern turntables have a *Line/Phono* select switch. If yours does, make sure it matches the input or switch setting on your sound card.



CDJs

Setting up CDJs for use with time-code CDs is similar to setting up turntables. The figure below outlines a typical configuration. First, connect the RCA cables of the CDJs to an inputs of your sound card. Second, connect the inputs of your mixer to the outputs of your sound card. Make sure the input mode of your sound card is set to *Line*.



3.3 Configuring Mixxx

To complete your setup you must configure Mixxx properly. Make sure you have:

- specified “Deck 1” and “Deck 2” in the preferences under “Sound Hardware” to route Mixxx’s output directly to the external mixer,
- specified “Vinyl Control 1” and “Vinyl Control 2” under the “Input” tab in the preferences under “Sound Hardware”,
- selected the right vinyl type under “Vinyl Control” in the preferences (see *Using Timecode Vinyl Records and CDs* for the list of supported control records/CDs,)
- enabled vinyl control via the menu under “Options -> Vinyl Control -> Enable Vinyl Control”.

For more details, see the *Configuring Mixxx* section.

Configuring Mixxx

4.1 Audio Outputs

Mixxx’s mixing engine can be used two ways:

- **Internal Mixer Mode:** In this mode, Mixxx performs the mixing of the decks, microphone, and samplers in software and outputs them to a single output.
- **External Mixer Mode:** In this mode, Mixxx outputs the audio from each deck to a separate soundcard output. This allows you to route the deck outputs through a hardware mixer.

To enable external mixer mode, simply select a valid audio output for the “deck” outputs in the Sound Hardware section of the Mixxx preferences. Similarly, to enable internal mixer mode assign a valid audio output to the “Master” output.

4.1.1 Headphone Output

In both internal and external mixer mode, you can choose a headphone output for *pre-fader listening* or *headphone cueing*. This allows you to listen and synchronize the track you will play next in your headphones before your audience hears the track.

4.2 Latency, Sample Rate, and Audio API

To achieve the best performance with Mixxx it is essential to configure your latency, samplerate, and audio API. These three factors largely determine Mixxx’s responsiveness and audio quality and the optimal settings will vary based on your computer and hardware quality.

4.2.1 Latency

Latency is the lag time in milliseconds that it takes for Mixxx to process your input (turning knobs, sliding the crossfader, etc.). For example, a latency of 36 ms indicates that it will take approximately 36 ms for Mixxx to stop the audio after you toggle the play button. Additionally, latency determines how quickly your *Operating System* expects Mixxx to react. Lower latency means Mixxx will be more responsive. On the other hand, setting your latency too low may be too much for your computer to handle. In this situation, Mixxx playback will be choppy and very clearly distorted as your computer will not be able to keep up with how frequently Mixxx is processing audio.

A latency between 36-64 ms is acceptable if you are using Mixxx with a keyboard/mouse or a MIDI controller. A latency below 10 ms is recommended when vinyl control is used because Mixxx will feel unresponsive otherwise.

Keep in mind that *lower latencies require better soundcards and faster CPUs* and that *zero latency DJ software is a myth* (although Mixxx is capable of sub-1ms operation).

4.2.2 Sample Rate

The sample rate setting in Mixxx determines how many samples per second are produced by Mixxx. In general, a higher sample rate means that Mixxx produces more audio data for your soundcard. This takes more CPU time, but in theory produces higher audio quality. On high-wattage club sound systems, it may become apparent if your audio sample rate is too low.

Warning: A sample rate of 96kHz takes Mixxx over twice as long to compute. Keep in mind that increasing the samplerate will increase CPU usage and likely raise the minimum latency you can achieve.

4.2.3 Audio API

The Audio API that Mixxx uses is the method by which Mixxx talks to your *Operating System* in order to deliver audio to your soundcard. Your choice of Audio API can drastically affect Mixxx's performance on your computer. *Therefore it is important to take care to choose the best Audio API available to you.* Refer to the following table of Audio APIs to see what the best choice is for your operating system.

OS / Audio API	Quality
Windows / WMME	Poor
Windows / DirectSound	Poor
Windows / WASAPI	Good
Windows / ASIO	Good
Windows / WDDKMS	Good
OSX / CoreAudio	Good
GNU Linux / OSS	OK
GNU Linux / ALSA	Good
GNU Linux / JACK (Advanced)	Good

Note: On Windows, if an ASIO driver is not available for your operating system, you can try installing [ASIO4ALL](#), a low-latency audio driver for WDM audio devices.

Warning: On GNU/Linux do *not* use the 'pulse' device with the ALSA Audio API. This is an emulation layer for ALSA provided by PulseAudio and results in very poor performance. Make sure to run Mixxx using the `pasuspender` tool on GNU/Linux distributions that use PulseAudio.

Note: On GNU/Linux using JACK, make sure to start your JACK daemon *before* running Mixxx. Otherwise JACK will not appear as a Sound API in the preferences.

An Overview of the Mixxx Interface

Welcome to the Mixxx interface. This is where the magic happens. You are going to want to get very familiar with this interface because it is the main way to use Mixxx. In this chapter, we present the default interface of Mixxx and describe its elements, knobs and faders.



This is the Deere skin. It is the default skin supplied with Mixxx. There are a variety of others skins included with Mixxx. You should explore them all to figure out which one you prefer. This section will focus on Deere only.

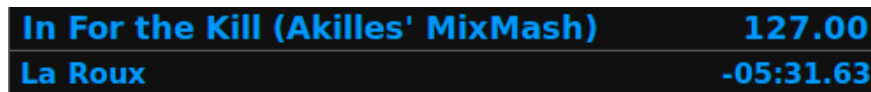
5.1 The Deck Sections

The *deck* section allows you to control everything relating to a virtual turntable deck. We are going to break this down into sections.



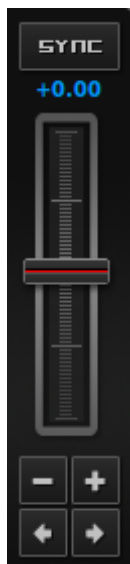
5.1.1 Track Information

The name of the loaded track is shown on top of each deck and the artist is listed below. The number at the top right is the effective *BPM* of the track. This is the detected *BPM* of the track, adjusted for the playback rate of the track. For example, if the track is normally 100 BPM, and it is playing at +5%, then the effective BPM will read 105 BPM. The number in the bottom right is the total elapsed time in the track or the total remaining time in the track. You can customize this in the Mixxx Preferences Interface section.



Hint: Tap the BPM to set the BPM to the speed you are tapping.

5.1.2 Rate Controls



The rate controls allow you to change the rate at which tracks are played. This is very useful for *beatmatching* two tracks together in a mix. The slider adjusts the rate of the track. The percent that the track's rate is sped up or slowed

down is noted above the slider. At the center, it is +0.0%, which indicates no change. The range of this slider is customizable in the Mixxx Preferences Interface section.

The *Sync* button changes the *rate* of the track so that the *BPM* of the track matches that of the other deck. It also adjusts the *phase* of the track so that the two tracks' beats are aligned.

The plus and minus buttons increase and decrease the rate, respectively. If right-clicked, they adjust the pitch in smaller steps. Similarly, the left and right arrow buttons are *pitch bend* buttons, and these adjust the pitch temporarily. These can act as either a fixed *pitch bend* or a *ramping pitch bend*. You can configure their functionality in the Mixxx Preferences Interface section.

5.1.3 Loop Controls and Hotcues



In this section, you can control loops, beatloops, hotcues and the playback speed. On the far left, you can *fast-rewind*, *fast-forward*, or *reverse* the deck, respectively.

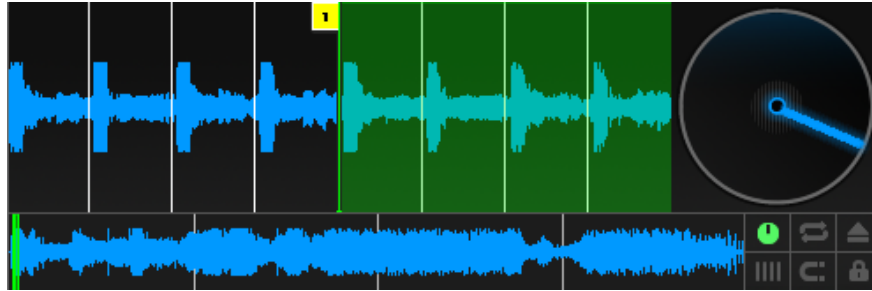
The eight numbered buttons to the right of these buttons are the beatlooping controls. Clicking on any numbered button in this section will set a loop of that number of beats from the beat immediately following the current playback position. Clicking on the minus or plus button will either halve or double the length of the loop. Tapping the *loop* button toggles whether the loop is active or not.

Above the *loop* button are the *in* and *out* buttons, which allow you to manually set the loop-in and loop-out point. If the *quantize* mode is enabled (see *The Waveform* section), then the loop points will automatically snap to the nearest beat.

The hotcue section, the 4 numbers on the far right, are used to set and clear hotcues. Clicking on a numbered button will set a hotcue. A marker with the corresponding number will appear in the waveform with the same number as the button and the button will turn red to indicate that the hotcue is set. If the deck is playing, you can simply tap a hotcue to cause the deck to instantly jump back to the location of the hotcue. To clear a hotcue, right-click on the numbered button. If the *quantize* mode is enabled (see *The Waveform* section), then the hotcues will automatically snap to the nearest beat.

5.1.4 The Waveform

The waveform section of a deck allows you to visualize the audio changes that occur throughout the track. The larger, zoomed-in waveform is called the *waveform overview*, while the smaller, zoomed-out version of the waveform is called the *waveform summary*. The white lines on the waveform overview are called *beat markers*, and they indicate the locations of beats in the audio. The vertical line in the center of the waveform overview indicates the playback point of the deck. Clicking on either the waveform or the spinning vinyl widget allows you to scratch the track as if you were using vinyl or a MIDI controller.



The six buttons at the bottom right allow you to configure the deck. Starting from the top-left and moving counter-clockwise the buttons are as follows:

- Show/Hide Vinyl Widget
- Toggle Repeat Mode
- Eject Track
- Beat-grid Adjust
- Toggle Quantize Mode
- Toggle Keylock

Repeat Mode

If enabled, repeat mode will jump back to the beginning and continue playing when the track finishes.

Eject Track

Clicking this button ejects the track from the deck.

Beat-grid Adjust

Clicking this button adjusts the track beat-grid so that the current position is marked as a beat. This is useful if Mixxx was able to accurately detect the track's *BPM* but failed to align the beat markers on the beats.

Toggle Quantize Mode

In this mode, all cues, hotcues, loops, and beatloops will be automatically adjusted (*quantized*) so that they begin on a beat.

Toggle Keylock

Keylock locks the track's pitch so that adjustments to its tempo via the rate slider do not affect its pitch. This is useful if you would like to speed up or slow down a track and avoid the “chipmunk” affect that speeding up vocals has.

5.2 The Mixer Section

The mixer section allows you to control how the different decks and samplers are mixed together.



5.2.1 VU Meters and Channel Faders

In the center above the Mixxx logo are 4 *VU meters*. The two outer-most VU meters are for each deck, while the 2 inner-most VU meters are the left and right VU meters for the master output. The two large faders on either side of the VU meters are the deck volume faders. Adjusting these controls the volume of each deck.

Above the VU meters are the optional section expansion buttons. If you click on either “MIC”, “SAMPLER”, or “VINYL” then you will enable control sections for interacting with the microphone, samplers, and vinyl control respectively.

5.2.2 Headphone and Master Mix Controls

The top row of buttons control the headphones and master output. The head-mix knob allows you to customize how much of the master output you hear in your headphones. The head volume button adjusts your headphone volume. The *balance* knob allows you to adjust the balance (left / right orientation) of the master output. Finally, the volume knob adjusts the volume of the master output.

5.2.3 Equalizers and Gain Knobs

The low, mid, and high knobs allow you to change the filters of the audio. This allows you to selectively reduce or boost certain frequency ranges of the audio. The small boxes next to each knob are called *kills* and allow you to fully

remove that frequency range.

Above these knobs, the gain knob allows you to adjust the gain of the deck. In general, you should adjust this knob so that at full-volume the deck's audio is just at the peak of the center VU meters. This is so you can achieve the widest dynamic range for your track.

5.2.4 The PFL Button

The headphone button below the EQ knobs is called the *pre-fader listen or PFL* button. Selecting this button allows you to listen to the deck in your headphones.

5.2.5 Crossfader and Channel Volume



This section allows you control the playback of each deck and the fraction of each deck that is mixed into the master output. The play/pause buttons play or pause each deck. The *cue* button sets or jumps to a cue point. The large fader in the center is the *crossfader*. This allows you to adjust the proportion of the master mix which is made up by the decks and samplers on the left side and the decks and samplers on the right side. With the crossfader all the way to the left, you will only hear decks and samplers oriented towards the left. Similarly, with the crossfader all the way to the right you will only hear decks and samplers oriented towards the right.

5.3 The Sampler Section



Samplers are miniature decks. They allow you to play short samples and jingles in your mix. They come with a small overview waveform and a limited number of controls. The title of the track and its BPM are displayed along the top row.

The numbered buttons are hotcues and work just like deck hotcues as described in *Loop Controls and Hotcues*. The headphone button is a *PFL* button and the knob to the right of it is a *volume* knob for the sampler. The fader on the far right controls the playback rate of the sampler, and the *VU meter* to the left of it visualizes the audio intensity of the sampler, allowing you to adjust it as necessary.

The 4 configure buttons (in clockwise order from the top left) are:

- Repeat: Enable repeat for the sample.
- Eject: Eject the track from this deck.
- Mix Orientation: M for Middle, L for Left, R for Right. Clicking cycles through all the options.

- Keylock: Enable or disable keylock for the sampler.

The Library

Played	Artist	Title	Album	Duration	Rating	BPM	Year	Genre
<input checked="" type="checkbox"/> (1)	Cheikha Rimitti	Nouar	Arabia: A Musical ...	06:07	• • • • •	95.98838806	2010	Electronic
<input checked="" type="checkbox"/> (1)	Chemical Brothers	Music-Response	Surrender	05:20	• • • • •	87.22026062	Surrender	Electronic
<input checked="" type="checkbox"/> (1)	Chemical Brothers	Out of Control	Surrender	07:20	★ ★ ★ ★ •	132.4718018	Surrender	Electronic
<input checked="" type="checkbox"/> (2)	Chemical Brothers	Orange Wedge	Surrender	03:07	★ ★ ★ ★ •	118.5969925	Surrender	Electronic
<input checked="" type="checkbox"/> (1)	Chemical Brothers	Let Forever Be	Surrender	03:57	★ ★ ★ ★ •	127.06884	Surrender	Electronic
<input checked="" type="checkbox"/> (2)	Chemical Brothers	The Sunshine Underground	Surrender	08:39	★ ★ ★ ★ •	139.7060089	Surrender	Electronic
<input type="checkbox"/> (1)	Chemical Brothers	Asleep From Day	Surrender	04:47	• • • • •	139	Surrender	Electronic
<input checked="" type="checkbox"/> (1)	Chemical Brothers	Got Glint?	Surrender	05:27	• • • • •	112.6005859	Surrender	Electronic
<input checked="" type="checkbox"/> (1)	Chemical Brothers	Hey Boy Hey Girl	Surrender	04:51	★ ★ ★ ★ •	127.0061188	Surrender	Electronic
<input checked="" type="checkbox"/> (1)	Chemical Brothers	Surrender	Surrender	04:30	★ ★ ★ ★ •	127.0054932	Surrender	Electronic
<input type="checkbox"/> (1)	Chemical Brothers	Dream On	Surrender	06:47	★ ★ ★ ★ •	104.026	Surrender	Electronic
<input type="checkbox"/> (1)	Chemical Brothers	Come With Us	Come With Us	04:57	• • • • •	109.94	Come With Us	Electronic
<input type="checkbox"/> (1)	Chemical Brothers	It Began In Afrika	Come With Us	06:16	★ ★ ★ ★ •	134.003	Come With Us	Electronic
<input type="checkbox"/> (2)	Chemical Brothers	Galaxy Bounce	Come With Us	03:27	★ ★ ★ ★ •	120.149	Come With Us	Electronic

The library manages all your music files. This is where you can find the tracks you want to play and load them into a channel. Alternatively, you can also use your external filemanager and drop files onto the waveform display. The sidebar on the left contains different collections of music. The view on the right displays the songs in those collections.

The Search box in the top-left the current view for songs that match your query.

The Library is displays a sortable list of all the songs in your music library. Mixxx imports your music library automatically when it is run for the first time, and automatically detects newly added songs on each subsequent run. If you want to manually refresh your library without exiting (for example because you added or moved files) you can do this with Library→Rescan Library in the menu.

To load a track into a deck, you can either simply drag it to the waveform display or use the context menu (right-click on a track). The right-click context menu also allows you to add a track to the Auto DJ queue, playlists, or crates.

6.1 Missing Tracks

The Missing Songs view is accessible by expanding Library tree item in the sidebar. Any songs that were previously loaded into your library, but were later detected to be missing from your hard disk by Mixxx will appear here. Mixxx does not automatically delete records of missing songs so that extra metadata Mixxx might have (such as hot cues and the BPM) will not be lost if the file is replaced.

6.2 Auto DJ

The Auto DJ queue is a special playlist that contains extra controls for enabling automatic mixing. Toggling the “Enable Auto DJ” button within this view will tell Mixxx to automatically load the next song from this playlist when

the current song is nearly finished, and crossfade into it. Mixxx will continue to automatically mix until the Auto DJ playlist is empty.

6.3 Playlists

Playlists can be created by right-clicking on the “Playlists” sidebar item, and selecting “New Playlist”. Songs can be added to a playlist by finding them in the Library, and drag-and-dropping them onto the name of a playlist in the sidebar, or by selecting a song in the library and right-clicking on it. Playlists are not directly loadable into Mixxx’s players as Mixxx is primarily intended for live, attended performance use. However, you can add the contents of a playlist to the Auto DJ queue, and use automatic mixing.

6.4 Crates

Crates are unordered collections of songs, and are similar to playlists. A crate can be created by right-clicking on “Crates” in the sidebar, and selecting “New Crate”.

6.5 Browse

Browse mode works like a file-manager and allows you to load songs that are not necessarily already in your Mixxx library.

6.6 Analyze

The Analyze view allows you to see a list of recently added tracks, and to run BPM detection on them in advance.

6.7 iTunes, Traktor, and Rhythmbox Libraries

The iTunes (Windows and Mac OS X only), Traktor (Windows and Mac OS X only), and Rhythmbox (Linux only) views allow you to view the music libraries you have created in 3rd party applications.

Controlling Mixxx

Mixxx can be controlled with a keyboard, a mouse, MIDI controllers, time-code records/CDs, or a combination of these. The choice usually depends on your budget or style of DJing.

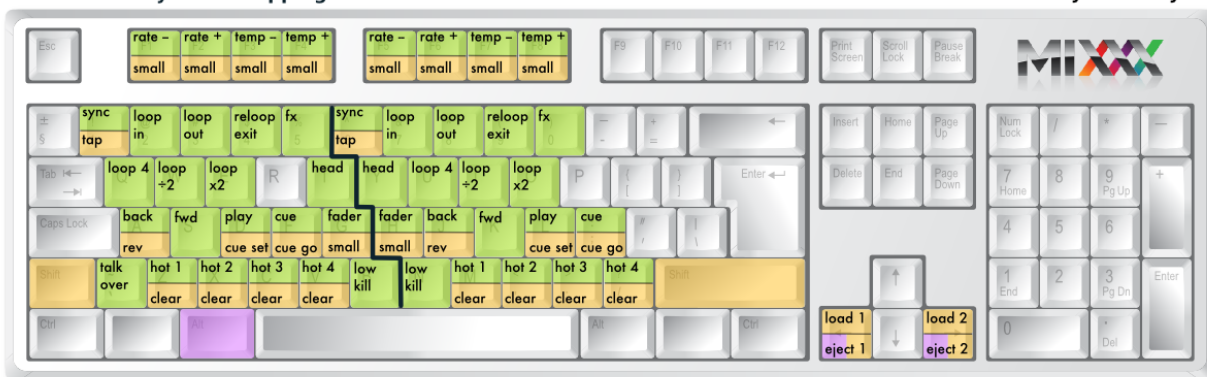
7.1 Using a Keyboard

If you cannot afford a MIDI controller, controlling Mixxx with a keyboard is handy. Unlike mouse control, the keyboard allows you to manage things simultaneously. For example, you can start playing a track on deck 1 whilst stopping deck 2 at the same time.

The default mapping for English keyboards is depicted in the figure below. It's divided into a left-hand side for deck 1 and right-hand side for deck 2. Please note that you can also access the functions through Mixxx's interface.

Mixxx 1.10 keyboard mapping

* for en-us keyboard layout



Function	Deck 1	Deck 2	Master
Microphone Talkover			,
Crossfade Left			G
Crossfade Right			H
Small Crossfade Left			Shift + G
Small Crossfade Right			Shift + H
Playback		D	L
Set Cuepoint		Shift + D	Shift + L

Continued on next page

Table 7.1 – continued from previous page

Function	Deck 1	Deck 2	Master
Cue		F	;
Cue Go-to-and-stop		Shift + F	Shift + :
Seek Backwards		A	J
Reverse Playback		Shift + A	Shift + J
Seek Forwards		S	K
Bass Kill		B	N
Activate 4 Beat Loop		Q	U
Halve Beat Loop Size		W	I
Double Beat Loop Size		E	O
Set Loop In Point		2	7
Set Loop Out Point (Activates Loop)		3	8
Toggle Loop On/Off		4	9
Activate/Disable Effects Unit		5	0
Headphone Cue (Pre-fader listen)	T		Y
Tempo Adjust Down	F1		F5
Tempo Adjust Up	F2		F6
Small Tempo Adjust Down	Shift + F1		Shift + F5
Small Tempo Adjust Up	Shift + F2		Shift + F6
Temporary Tempo Adjust Down	F3		F7
Temporary Tempo Adjust Up	F4		F8
Small Temporary Tempo Adjust Down	Shift + F3		Shift + F7
Small Temporary Tempo Adjust Up	Shift + F4		Shift + F8
Tempo (BPM) Sync	1		6
BPM Tap Tempo Adjust	Shift + !		Shift + ^
Set Hot cue 1	Z		M
Set Hot cue 2	X		,
Set Hot cue 3	C		.
Set Hot cue 4	V		/
Clear Hot cue 1	Shift + Z		Shift + M
Clear Hot cue 2	Shift + X		Shift + <
Clear Hot cue 3	Shift + C		Shift + >
Clear Hot cue 4	Shift + V		Shift + ?
Load selected track to deck	Shift + left arrow		Shift + right arrow
Unload track from deck	Alt + Shift + left		Alt + Shift + right

7.1.1 Customizing

You can also customize the keyboard mapping. The shortcuts are defined in a text file, and can be changed.

- Linux: /usr/share/mixxx/keyboard/Standard.kbd.cfg
- MacOS X: <Mixxx bundle>/keyboard/Standard.kbd.cfg
- Windows: <Mixxx dir>\keyboard\Standard.kbd.cfg

You can share custom keyboard mappings in the [Mixxx User customizations forum](#).

7.2 Using a MIDI Controller

MIDI controllers are external hardware devices used that can be used to control audio applications. Many DJs prefer the hands-on feel of a MIDI controller with Mixxx because it can feel similar to using a real mixer and turntables.

Here are the steps for using one:

1. Connect your controller(s) to your computer
2. Open Preferences and click *MIDI Controllers*
3. Select your controller on the left and the right pane will change
4. Click *Enable* and choose the appropriate mapping from the *presets* combobox
5. Click OK and Mixxx can now be controlled by your controller(s).

Mixxx can use any MIDI controller that is recognized by your OS (some may require drivers,) as long as there is a MIDI mapping file to tell Mixxx how to understand it. Mixxx comes bundled with a number of mappings for the devices listed below.

Often times these mappings are contributed by users and the Mixxx team has no way of judging the quality of the mappings because we do not own the devices ourselves. There are two different levels of support for controllers in Mixxx: Mixxx Certified Support and Community Support. Mixxx Certified mappings are verified by the Mixxx Team. Community Supported mappings are mappings provided by the Mixxx Community, but the Mixxx team is unable to verify their quality.

7.2.1 Mixxx Certified Mappings

- American Audio VMS4
- DJ TechTools MIDIFighter
- Hercules DJ Console RMX
- Hercules DJ Console MK2
- Hercules DJ Control MP3 e2
- M-Audio X-Session Pro
- Reelock Digital Jockey 2 (Interface/Controller)
- Stanton SCS.3d
- Stanton SCS.3m
- Stanton SCS.1m
- Stanton SCS.1d

7.2.2 Community Supported Mappings

These mappings have been verified as working by the Mixxx community. However, they might have bugs or rough edges. If you run into issues with these mappings, please file a bug on our [bug tracker](#) or tell us about it on our mailing list, forums, or *IRC* channel.

- Akai MPD24
- Behringer BCD3000
- Ecler NUO4

- Evolution X-Session
- FaderFox DJ2
- Hercules DJ Console Mac Edition
- Hercules DJ Console Mk4
- Hercules DJ Console MP3
- Hercules DJ Control Steel
- Ion Discover
- M-Audio Xponent
- Mixman DM2
- Numark MixTrack
- Numark NS7
- Numark Total Control
- Pioneer CDJ-350
- Pioneer CDJ-850
- Pioneer CDJ-2000
- Tascam US-428
- Vestax Spin
- Vestax Typhoon
- Vestax VCI-100
- Wireless DJ App (iOS)

Before purchasing a controller to use with Mixxx, please consult our [Hardware Compatibility wiki page](#). It contains the most up-to-date information about which controllers work with Mixxx and the details of each. Device support varies for each supported OS, so please make sure to consult the documentation.

7.3 Using Timecode Vinyl Records and CDs

Vinyl control allows a user to manipulate the playback of a track in Mixxx using a turntable or DJ CD player as an interface. In effect, it simulates the sound and feel of having your music collection on vinyl.

7.3.1 How does it work?

Vinyl control uses special timecode records which are placed on real turntables. The audio output of the turntables is plugged into a computer on which Mixxx is running. When a record is played on one of the attached turntables, Mixxx reads the timecode from the record and uses the information to manipulate whatever track is loaded.

7.3.2 What do I need to use it?

It is possible to use Mixxx's vinyl control with several hardware setups, but the basic ones are:

Setup 1: Vinyl DJ Two timecode vinyls, two turntables with phono pre-amplifiers (or line-out), and two sound inputs. You can try skipping the phono pre-amps if you use the software pre-amp in Mixxx on the Vinyl Control preferences pane. *This may not work for everyone - line-level signals are preferred and recommended.*

Setup 2: CDJ Two timecode CDs, two CD decks, and two sound inputs.

For the sound inputs, you have two options: You can either use a proper DJ sound card that has multiple stereo line inputs on it, or can use two sound cards (each with a single stereo line in). A single multi-channel sound card is recommended.

For timecode records or CDs, you can use any of the records supported by Mixxx:

7.3.3 Timecode Support

Vinyl	Responsiveness
Serato CV02	Very high
Serato CD	Very high
Traktor Scratch	Very high
FinalScratch (Standard)	Not supported
FinalScratch (Scratch)	Not supported
MixVibes DVS CD	Not supported
MixVibes DVS Vinyl	Not supported

At the present time, Serato records are recommended if you are looking to buy vinyl. If you want to use CDs, you can download a free copy from [Rane](#).

Vinyl Control

Vinyl control allows a user to manipulate the playback of a song in Mixxx using a real turntable as a controller. In effect, it simulates the sound and feel of having your digital music collection on vinyl. Many DJs prefer the tactile feel of vinyl, and vinyl control allows that feel to be preserved while retaining the benefits of using digital audio.

You can configure vinyl control through the Vinyl Control pane in the preferences. More information about Mixxx's vinyl control and supported hardware configurations is available on the [vinyl control wiki page](#).

8.1 Input Device Selection

Mixxx can be controlled by up to 2 decks with either timecoded vinyl or timecoded CDs. In the Sound Hardware Input tab in the Mixxx Preferences, select the soundcard(s) which your decks are plugged into for Vinyl Control 1 and 2. In the channel selection drop-down menu, select the channel pairs corresponding to the plug on your soundcard that your deck(s) are plugged into.

Mixxx supports vinyl control input through a single soundcard with 4-channels of input (two stereo line-in jacks), or through two separate soundcards which each have 2-channels of input (a single stereo line-in jack). Vinyl control requires the use of stereo line-in jacks - Mono or microphone inputs will not work.

8.2 Turntable Input Preamp

Many turntables provide unamplified “phono level” output, which must be boosted to a “line level” signal. Normally, a mixer provides this amplification, but if you're plugging a turntable's phono output directly into your soundcard, Mixxx can do the amplification. The “Turntable Input Preamp” slider allows you to adjust the level of preamplification applied to your decks' signal.

8.3 Vinyl Configuration

Several different types of timecoded media can be used to control Mixxx. Configure the “Vinyl Type” drop-down menu to match what type of timecoded vinyl or CD you are using on your decks.

The “Lead-in Time” setting allows you to set a dead-zone at the start of your vinyl or CD, where the time code will be ignored. This is useful in situations where the time code begins very close to the edge of a vinyl, which can make back-cueing over the first beat in a song tricky to do without your turntable's needle falling off the vinyl. Setting a

lead-in time of 20 seconds or more helps alleviate this by giving you more room on the vinyl to cue with. It's also useful when you've worn the grooves at the edge of a control record to the point that it no longer works reliably: you simply set the lead-in so that the start of the songs begin in good groove area. You can keep doing this until you run out of groove area, thereby decreasing your record replacement frequency.

8.4 Control Mode

Mixxx supports three control types on all of the timecodes we support. “Absolute Mode” provides Mixxx with both pitch and position information from the timecode, and allows you to seek by needle dropping on your vinyl or seeking on your CDJ. “Relative Mode” takes the position to be relative to your deck's starting point, and only controls the pitch in Mixxx. It is not possible to seek using your deck in relative mode. “Scratch Mode” is an enhanced version of relative mode, and only applies to FinalScratch vinyl. Scratch mode improves performance slightly while scratching, but is not necessary for better performing timecodes like Serato. Finally, “Needle-skip Prevention” allows Mixxx to detect and ignore small changes in needle position, such as when you've accidentally bumped your turntable. This can be advantageous in a live performance environment, but the downside is that it reduces responsiveness during scratching. Consequently, disabling needle-skip prevention is recommended for scratch performances.

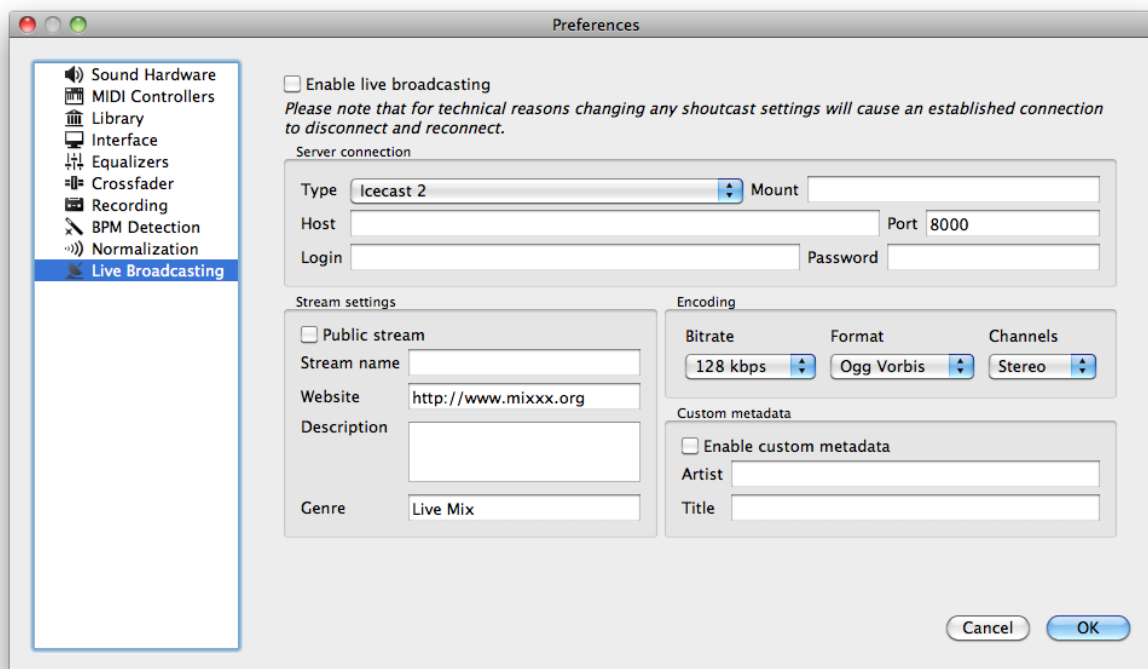
8.5 Signal Quality

A successful vinyl control setup hinges on good signal quality. Many factors can affect signal quality, but the most important one is ensuring the volume level of your timecode signal is moderate. A signal that is too loud or too quiet will cause adverse performance, often characterized by a loss of position data causing absolute mode to behave like relative mode. For more information on improving signal quality and troubleshooting, please see the vinyl control wiki page.

Mixxx represents your timecode signal quality as a pair of real-time bar graphs. The two graphs correspond to your “Deck 1” and “Deck 2” input devices. The left-most column in each graph represents the overall status of the timecode signal. A full bar with an “OK!” indicates everything is working well. The latter two columns in the graph represent the raw, unprocessed stereo signal coming from your decks. A good signal will appear as a pair of fluctuating green bars, each of which will be out of phase. Red bars indicate the volume is too low or too high, and the “Turntable Input Preamp” setting can be adjusted to boost the volume.

Live Broadcasting

Starting with version 1.9.0, Mixxx directly supports live broadcasting. This allows you to connect directly to Shoutcast and Icecast servers. Using the preferences dialogue, you can simply supply Mixxx with all information needed to establish a server connection. To enable live broadcasting you can either use the options menu or the checkbox within the preference dialogue.



By default, Mixxx broadcasts artist and title information to your listeners. You can disable this behavior by selecting “enable custom metadata”.

Note: For technical reasons, broadcasting artist and title information is not supported for OGG streams.

9.1 Icecast

For an Icecast server, you'll need to provide the mount point (of the form `"/mount"`). You can enter the host name either as an IP address or an URL. In the "login" field, the default is to enter "source" – without this, you will not connect successfully to the server. The password will be provided by your streaming server provider, unless you run your own radio server.

An Icecast server can stream either MP3 or Ogg. However, although Ogg is more efficient and effective - you get a better sound than mp3 at a lower data rate - not all players can play Ogg streams, so as a result MP3 is probably a better choice unless you know your listeners can hear an Ogg stream successfully. You may need the LAME libraries to stream in MP3. See *MP3 streaming* for more details.

9.2 Shoutcast

If you connect to an Shoutcast server the default login name is "admin". It is not necessary to specify a mount point. The password will be provided by your streaming server provider.

9.3 MP3 streaming

MP3 streaming is not supported out of the box in Mixxx since we do not license the MP3 encoding patents. In order to enable MP3 streaming you must install the LAME MP3 encoding tool yourself. For information about this, see the [Mixxx Wiki page](#) on the topic.

9.3.1 Linux

On Ubuntu and GNU/Linux-based operating systems MP3 streams can be activated by installing the package `libmp3lame`. Dependent on your Linux distribution the package might be slightly named different such as `lame`.

```
sudo apt-get install libmp3lame0
```

9.3.2 Windows

To activate MP3 streaming on Windows, follow these steps:

1. Download LAME 3.98.4 binaries from <http://lame.bakerweb.biz/>. The ZIP file includes x86 and x64 DLLs
2. Unpack the archive
3. If you have the 32-bit version of Mixxx, copy `libmp3lame.dll` from the x86 folder to the location you have installed Mixxx.
4. If you have the 64-bit version of Mixxx, copy `libmp3lame.dll` from the x64 folder to the location you have installed Mixxx.
5. Rename the DLL to `lame_enc.dll`

Please note that Audacity and other web sites provide lame binaries too. **DO NOT USE THESE VERSIONS.** If you do, Mixxx will show an error when activating live broadcasting.

9.3.3 Mac OS X

To activate MP3 streaming on Mac OS X, follow these steps:

1. Download [LAME 3.98.4 Intel](#) (OS X 10.5+ 32-bit & 64-bit) or [LAME 3.98.4 PowerPC](#) (OS X 10.5 32-bit) 2. Unpack and install the archive.

Another easy way to achieve MP3 streaming is to use [MacPorts](#) which is a repository manager (like apt on Debian/Ubuntu) for Open Source software. Having installed this piece of software, installing MP3 support is rather simple.

```
sudo port install lame
```

DJing With Mixxx

Mixxx was designed to be easy to learn for both novice and experienced DJs. The user interface mimics a hardware DJ mixer, but also includes several extra elements to give DJs a better user experience, such as the parallel waveform displays.

10.1 Loading Tracks

Songs can be loaded into a player in several ways:

- Right-click the library track table: Right-clicking on a track in the table will present the options “Load in Player 1” and “Load in Player 2”, among others. Making either selection will load a track into a player.
- Drag-and-drop from library track table: Dragging-and-dropping a song from the track table onto a waveform display will load a track into a player.
- Drag-and-drop from external file browser: Dragging-and-dropping a song from an external file browser directly onto a waveform display in Mixxx will load that song. This function is also known to work on some platforms with other applications. For example, on OS X, dragging-and-dropping a track from iTunes onto one of Mixxx’s waveform displays will load that song into a player.

10.2 Waveform displays

There are two main waveform displays in Mixxx that are used to display the waveform of the songs you are mixing. These are useful because they allow you to see features in a song (like a breakdown) before you hear them. The waveform displays are aligned parallel to each other in order to make beat matching easier, as it is possible to beatmatch visually by aligning the beats that appear in each waveform.

Clicking and dragging on a waveform allows you to seek through a song in both directions. The waveform display is updated in realtime upon seeking. There are two smaller waveform summary displays located adjacent to the main waveform displays. These smaller displays show the waveform envelope of the entire song, and are useful because they allow DJs to see breakdowns far in advance. Vinyl DJs will find this familiar because quiet sections of songs can be visually distinguished when looking at a vinyl record, and this is a useful tool when planning your mixes on-the-fly.

10.3 Beatmatching and Mixing

Beatmatching is the process of adjusting the playback rate of a song so that it matches the tempo of another song. Beatmatching also involves adjusting the phase of the beats in a song so that they are aligned with the beats in the other song. Matching the tempo and aligning the beats are the two things a DJ must do to beatmatch.

In Mixxx, you can match the tempo of two songs by adjusting the playback rate sliders on left and right side of the user interface. You can adjust the phase of the beats by clicking-and-dragging on either waveform display to temporarily slow down one of the songs until the beats are aligned. The temporary pitch bend buttons can also be used to momentarily adjust the playback rate, allowing you to “shuffle” the beats in a song forwards or backwards, so they can be aligned with another song.

Once the tempos are matched and the beats aligned between two songs, they are said to be beatmatched. A “perfect” beatmatch is near impossible - there will always be some tiny difference in the playback rates. A keen DJ will keep his or her ears open and listen for the beats drifting out of alignment. This has a distinct “double bass kick” sound which is often preceded by the kick weakening in intensity (as the two kicks drift out of phase). When this happens, the beats can be realigned by simply tapping one of the temporary pitch bend buttons a few times in the appropriate direction. Now get out there and make Tiesto jealous!

10.4 Headphone Cueing

Headphone cueing is a technique DJs use to listen to the next track they want to play in their headphones before playing it out the main speakers. Mixxx allows a DJ to route audio from either player to their headphones by toggling either of the “HEADPHONE” buttons located on the far left/right sides of Mixxx’s interface. Headphone cueing is useful because it allows a DJ to beatmatch the next song in their headphones before bringing it into their mix by sliding the crossfader.

10.5 Recording your Mix

You can record Mixxx’s master output in WAV, AIFF, OGG, or MP3 by doing the following:

1. On the menu bar, click “Options”
2. Click “Record Mix”
3. Choose where to save it and what to call it then click OK

Mixxx will then wait until you start playing some music before it begins recording. The recording will begin about two seconds after that. (If you want it to get your first sounds, just press Play then Cue (or Pause) to start it, then begin mixing two seconds later. You can remove the initial silence with an audio editing program like Audacity after you finish mixing.)

Advanced Topics

11.1 Adding support for your MIDI Controller

So your shiny *MIDI controller* isn't supported in Mixxx? If you know some basic Javascript, then adding support for your controller is not hard at all!

Mixxx has an advanced scripting system that allows you to add support for MIDI controllers by writing some simple Javascript. For more information, see the [MIDI Scripting](#) topic on the Mixxx Wiki.

11.2 Making a Custom Keyboard Mapping

Editing the keyboard shortcuts is very easy. For more information, see the [Mixxx Wiki](#).

11.3 Effects via JACK Rack

Mixxx does not have an effects engine yet (work on one is in progress). To hold you over, on GNU/Linux you can use a tool called JACK Rack. External mixer mode can be used with [Jack](#) to route each deck directly through [JACK Rack](#) effect racks, or for more control you can use Ardour (or other DAW) using sends for effects. This gives Mixxx access to the extensive collection of LADSPA plugins. For more informatoin, see the [Mixxx Wiki](#).

11.4 Deleting Your Library

<p>Warning: Deleting your library will lose all of your metadata. This includes saved hotcues, loops, comments, ratings, and other library related metadata. Only delete your library if you are fine with losing these.</p>
--

The library file is stored in the following places depending on your *operating system*.

11.4.1 Windows

The Mixxx library is stored in the `C:\Users\%USER%\Application Data\Mixxx\` folder. To delete your library on Windows, delete the `mixxxdb.sqlite` file in this folder.

11.4.2 Mac OS X

The Mixxx library is stored in the `Library/Application Support/Mixxx` folder in your home directory. To delete your library on Mac OS X type the following command into a terminal:

```
rm ~/Library/Application\ Support/Mixxx/mixxxdb.sqlite
```

11.4.3 GNU/Linux

The Mixxx library is stored in the `.mixxx` folder in your home directory. To delete your library on GNU/Linux type the following command into a terminal:

```
rm ~/.mixxx/mixxxdb.sqlite
```

Contributing to the Project

Mixxx is a community-driven project involving many DJs worldwide. Without the contributions from these DJs, Mixxx would not exist, and we're constantly looking for more contributors.

We want to make it as easy as possible for people to get involved in Mixxx development. First off, to be clear **you don't have to be a programmer to contribute**.

12.1 As a non-developer

- [Donate](#) to Mixxx using Paypal to help support and enhance development.
- [Make skins](#)
- [Make MIDI mappings](#) for your controller
- [Report bugs](#)
- [Update our iki](#) to make sure the information on it is up to date.
- [Translate Mixxx](#) using [Launchpad Translations](#)
- [Answer questions](#) on the [Troubleshooting Forum](#) and the [Launchpad Answers page](#)
- [Help promote Mixxx](#): If you've got a blog, write an article about Mixxx. Blog about our new releases when they come out. Any exposure on the web and in print helps our project grow, and is much appreciated.
- [Send us some photos](#) of you using Mixxx at a gig!

12.2 As a software developer

- You don't have to know C++. There are developers who got into Mixxx development while learning C++ along the way.
- Join our mailing list: [mixxx-devel](#)
- Join our [IRC](#) channel, [#mixxx](#) on [Freenode](#)
- Tell us your ideas! Email us, talk on IRC, file wishlist bugs, or post on the forums.

- Register an account on our development platform [Launchpad](#) and make a branch of our code. See [Launchpad Tutorial](#)
- Join the [Mixxx team](#) on Launchpad.
- Get familiar with the code. Pick a bug off of the [Easy Bug List](#)
- Get help fixing the bug on IRC, talk to us about the best way to do it.

Contributing to Mixxx in 3 Easy Steps:

- Pick a bug off of the [Easy Bug List](#)
- Talk to us on IRC for help on how to fix it.
- Fix it! *Done!* Your name will now be on the [Mixxx contributor list](#).

Glossary of Terms

beatmatching A mixing technique used to establish a similar tempo with two or more tracks, making them sound like just one track.

BPM Beats per minute (BPM) is used as a measure of tempo in music. If you tap your foot to music you are following the “beat”. If you count how many taps you do in a minute you have calculated the BPM.

crossfader The crossfader is a slider that determines how much each deck of audio contributes to the *master output*.

cueing Headphone cueing, or just cueing, is listening to the next track you would like to mix in in your headphones. The audience will not hear what you are cueing in your headphones. Being able to cue is a crucial aspect to DJing.

deck A deck is like a virtual vinyl turntable. You can load a *track* into it and play the track, just like you would put a record on turntable and play it.

head/mix button The head/mix button is used to control how much you mix the *master output* into your *headphone output*. This can be very useful when *cueing* a track, because you can test out how it sounds when mixed with the main mix in your headphones, before letting the audience hear the track.

headphone button The headphone button is used to indicate whether or not you are pre-listening to a deck or sampler in your headphones.

headphone output The headphone output is what you hear in your headphones. You can play tracks to

IRC Internet Relay Chat (IRC) is an online chat network. The Mixxx IRC channel can be found on the [FreeNode IRC Network](#) in the #mixxx channel.

key lock With key lock enabled, the tempo of the track will change but the pitch remains consistent. When unlocked, the pitch slider will speed up (or slow down) the track and the pitch will increase (or decrease) along with it.

master output The master output is the main audio output. It’s what your audience hears.

MIDI Controller An external hardware device, usually connected to your computer via USB, that allows you to control audio applications. Many DJs prefer to control DJ software using physical knobs, faders, and wheels instead of using a keyboard.

operating system Your operating system (OS) is the computing environment on your computer. For example, Windows, Mac OS X, or GNU/Linux are the three operating systems that Mixxx supports.

PFL PFL or “pre-fader listen” is a fancy word for whether or not you are “pre-listening” to a deck in your headphones. See also: *headphone button*.

phase The phase of a track is its position relative to another track. If two tracks are sync'd to the same tempo and in-phase then they should be playing so that their beats are aligned.

pitch bend A technique used by DJs that temporarily *bends* the rate of a track up or down, usually while a button is held. This technique is usually used to make micro-adjustments to the synchronization of tracks while beat-matching. Before digital DJing, this was accomplished by dragging one's finger alongside the turntable to slow it down or by twisting the record spindle to speed it up.

rate The speed at which a track is played back, usually expressed in terms of a percentage of the speed relative to the tracks normal rate. Often while mixing, DJs adjust the rates of tracks so that they can play at the same tempo as other tracks. This allows DJs to beatmix, and is an essential part of DJing.

sync Sync allows you to automatically adjust the sync'd track to be in sync with another deck that is playing.

track A track is another word for a song.

vinyl control A method of controlling DJ applications which simulates the traditional DJing paradigm of two turntables. Using special vinyl records called "timecode records", the DJ application analyzes the timecode signal and simulates the sound and feel of having your music collection on vinyl.

waveform overview The waveform overview shows the waveform envelope of the entire track, and is useful because they allow DJs to see breakdowns far in advance.

waveform summary The waveform summary shows the waveform envelope of the track near the current playback position.