Mixxx User Manual

Release 1.11.0

The Mixxx Development Team

May 12, 2013

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 Mixxx Features

- **Dual Decks**: A scratchable, scrolling waveform marks beats and cue points of a track, along with a whole-song waveform overview for quick seeking.

- **Advanced Controls**: Change playback with time stretching, and loop beat segments.

- **Sampler Decks**: Perfect for dropping that vocal sample or airhorn.

- **iTunes Integration**: Use your playlists and songs from iTunes, Traktor and Rhythmbox.

- **BPM Detection and Sync**: Instantly detect and sync the tempo of your songs.

- **DJ Controller Support**: Control your DJ mixes with MIDI/HID controllers.

- **Timecode Support**: Use a real turntable or DJ-CD player as a controller.

- **Live Broadcasting**: Start a radio station and stream your mixes live over the Internet.

- **Powerful Mixing Engine**: Supports various file formats, custom EQ shelves, recording, etc.

- **Automatic Mixing**: Create a quick playlist and let Auto DJ take over.

- **Microphone Input**: Drop vocals or give shoutouts on the air.

New in version 1.11: This version adds several major new features including completely revamped Waveforms, Direct *HID controller* support, Point & Click Controller Mapping, Next Generation Beat Detection, a Library History Feature and much more.

- For a full list of features go to: http://mixxx.org/features/

- For an overview of the new features, go to: http://mixxx.org/whats-new-in-mixxx-1-11

- For a full list of new features and bugfixes, go to: https://launchpad.net/mixxx/1.11.0

1.2 System Requirements

Mixxx is available for Windows, Mac OS X and GNU/Linux. Mixxx is designed to use very few system resources, but the Mixxx Development 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 stereo audio outputs

1.3 About the Mixxx Project

Mixxx 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.

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/HID controller support via our innovative JavaScript-based scripting engine. We are continuing to pursue new and exciting features that give DJs more tools to create better live mixes.

1.3.1 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 code-base 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.

In 2011, RJ Ryan took over as Lead Developer to successfully continue the teams endeavor to make Mixxx a world-class DJ software.

As our user community grows, so does our development team - Over 150 developers, artists, and translators have helped create Mixxx!

1.4 About the Mixxx Manual

Some effort has been made to present the material in a way that is neither too technical nor too dumbed-down. Take some time to look through it and you'll find lots of hints that will enhance both your enjoyment and your productivity.

Through the manual you'll find text formatted like this:

- *Library → Add new Playlist*

  This is to simplify the business of choosing commands in menus. In this example, the instruction means "Open the *Library* menu at the top of the application window and then choose the *Add new Playlist* command".

- *Apply*

  This is used to indicate a certain area of the *GUI*, including button labels, tabs, checkboxes, field names, values in selection lists etc. .

- `STRG + G`

  This is used to mark a keystroke, or a sequence of keystrokes. In this example, you would have to hold down the *STRG* key, then to press *G*.

- http://www.wikipedia.org/

  Links to external websites are marked like this.

Important information in this manual are highlighted like this:

- ───────────────────────────────────

  Note: For anything that should receive a bit more attention.

  ───────────────────────────────────

- ───────────────────────────────────

  Hint: For supplementary information that lightens the work load.

  ───────────────────────────────────

- **See Also:**

  For references to other documents or websites if they need special attention.

- | **Warning:** For anything that needs to be done with caution. |

1.4.1 Improving the Manual

- **Send Feedback**: If you have comments, corrections or suggestions regarding the manual, write us an email.

- **Get the Source Code**: To download the source code for the Mixxx manual, go to: https://code.launchpad.net/~mixxxdevelopers/mixxx/manual

1.5 Additional Resources

Got questions? Need more information? Want to *contribute* ? There are a variety of other resources you can use to find out more.

- **Mixxx Website**: For general information and updates, as well as the latest news on Mixxx, go to: http://mixxx.org

- **Mixxx Support Websites**: To get support from the Mixxx wiki, IRC channel or Developer mailing list, go to: http://mixxx.org/support

- **Mixxx Community Forums**: To search for answers, post your question or answer other DJ's questions, go to: http://mixxx.org/forums

- **Mixxx Bug Tracker**: To report a bug or request a feature, go to: https://bugs.launchpad.net/mixxx

- **Mixxx Translations**: To translate Mixxx and promote your mother tongue, go to: https://translations.launchpad.net/mixxx

Installing Mixxx

This part of the manual provides step-by-step directions for installing Mixxx on your computer.

2.1 Installation on Windows
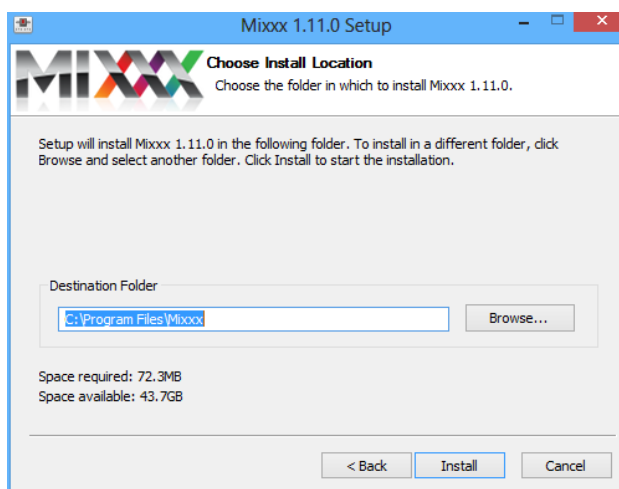
Figure 2.1: Mixxx Installation - Ready to install the application

- Download Mixxx for Windows from http://mixxx.org/download.php .

- Using `Windows Explorer` browse to the location where the Mixxx download was saved, usually the `Desktop` or `Downloads` folder.

- Double-click the Mixxx installer .EXE to open it up.

- Follow the step-by-step instructions in the installer.

- If the installation is complete, a confirmation screen will appear.

- Close the installer screen.

Mixxx is supported on Windows 8, Windows 7, Windows Vista or Windows XP, with native 32 and 64-bit versions.

Note: If you are not sure about 32-bit versus 64-bit, pick the 32-bit version when downloading the Mixxx installer.

Warning: You may encounter a warning message similar to "Security Warning - Publisher could not be verified". This is because the Mixxx installer is not digitally signed. Ignore the message and continue the installation. It does not indicate a security risk, if you can trust the source website such as www.mixxx.org .

2.2 Installation on Mac OS X

2.2.1 Method A: Direct Download
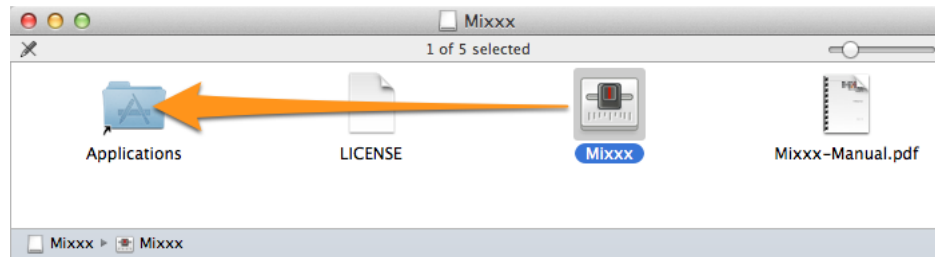
Figure 2.2: Mixxx Installation - Ready to drop the Mixxx icon to the Applications folder

- Download Mixxx for Mac OS X from http://mixxx.org/download.php .

- Using `Finder` browse to the location where the Mixxx download was saved, usually the `Desktop` or `Downloads` folder.

- Double-click the the Mixxx installer .DMG file, a new Finder window appears.

- Locate the *Mixxx* icon within this new Finder window. Drag-and-drop it into your `Applications` folder.

- Eject the Mixxx installation volume from the Finder by clicking on the icon right next to *Mixxx* volume name.

Mixxx requires an Intel Mac running Mac OS X 10.5 or newer.

2.2.2 Method B: The Mac App Store
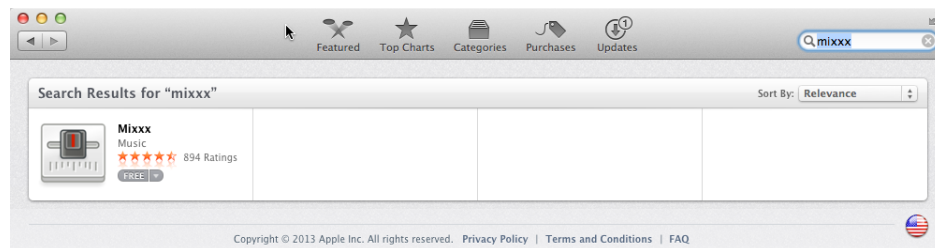
Figure 2.3: Mixxx Installation from the Mac App Store

The Mac App Store makes getting new apps easier than ever.

- Start the Mac `App Store.app` on your computer.

- Search for *mixxx* in the App Store, alternatively click this direct link .

- Select Mixxx and click the *Install* button.

- Type in your administrator password if asked.

- Mixxx will be installed to your `Applications` folder.

The App Store version of Mixxx is under some circumstances out of date, therefore using Method A: Direct Download is preferable.

Note: Due to licensing restrictions, *vinyl control* is not available in Mixxx from the Mac App Store.

2.3 Installation on 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

Method A: Personal Package Archive (ppa)

- Open a terminal and type the following commands. Type in your administrator password if asked for.

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

- Start Mixxx by simply typing `mixxx` into the terminal, then hit `Return`.

Method B: The Ubuntu Software Center

The Ubuntu Software Center provides the easiest and safest way to install software on Ubuntu.

- Start the `Ubuntu Software Center` on your computer.

- Search for *mixxx* in the Software center.

- Select Mixxx and click the *Install* button.

- Type in your administrator password if asked for.

- Mixxx will be installed and an icon is added to the frequently-used program icons on the launcher.

The Software Center version of Mixxx is under some circumstances out of date, therefore using Method A: Personal Package Archive (ppa) is preferable.

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 be a pretty straightforward process, and it's certainly easiest on GNU/Linux. For more information, go to:

- http://mixxx.org/wiki/doku.php/compiling_on_linux
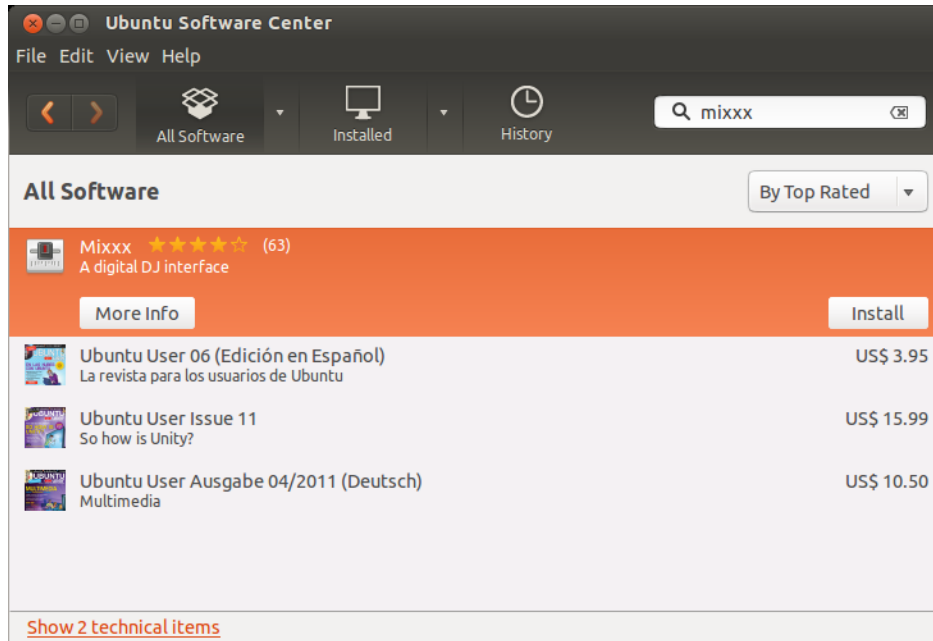
Figure 2.4: Mixxx Installation from the Ubuntu Software Center

2.4 Building Mixxx from Source

If your operating system isn't listed here, then it's likely you're going to have to build Mixxx from the source code. For more information, go to:

- http://mixxx.org/wiki/doku.php#build_mixxx

2.5 Where to go from here?

- *Set up your audio devices and controllers*
- *Open Mixxx and start importing your audio files*
- *Get familiar with the Mixxx user interface*

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**.

1. Open *Preferences → Sound Hardware*

2. Select the *Output* tab

3. From the *Master* drop-down menus, select your built-in soundcard, then *Channels 1-2*

4. Depending on your soundcard, you can specify a *microphone*

    (a) Use your built-in microphone or connect a microphone to your computer
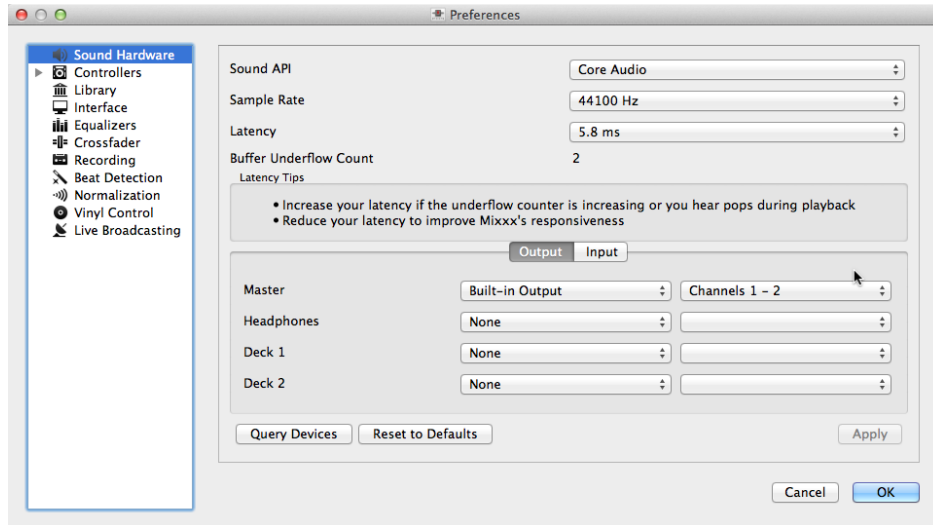
Figure 3.1: Using Mixxx with your built-in sound card

    (b) Check that your microphone is detected by your *OS*

    (c) Open the *Input* tab

    (d) From the *Microphone* drop-down menu, select the input your microphone is connected to

  5. Click *Apply* to save the changes.

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

3.2.2 Laptop and an External USB Soundcard
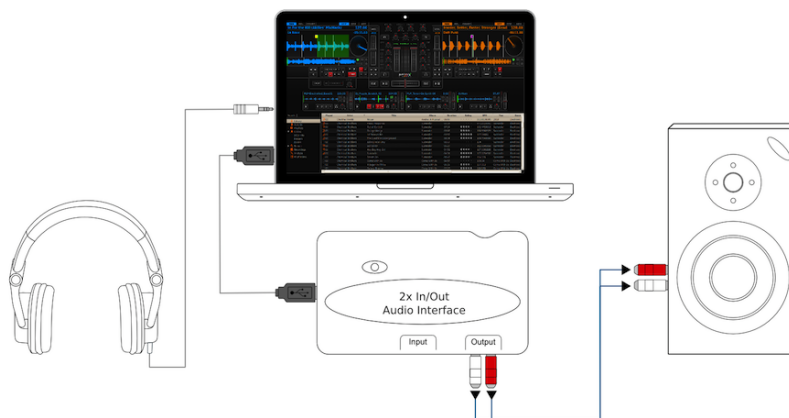
Figure 3.2: Using Mixxx together with an external soundcard

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*.

Using an external multi-channel soundcard

1. Open *Preferences → Sound Hardware*

2. Select the *Output* tab

3. From the *Master* drop-down menus, select the external soundcard, then *Channels 1-2*

4. From the *Headphones* drop-down menus, select the external soundcard, then *Channels 3-4*

5. Click *Apply* to save the changes.

Using two soundcards (built-in + external)

1. Open *Preferences → Sound Hardware*

2. Select the *Output* tab

3. From the *Master* drop-down menus, select the external soundcard, then *Channels 1-2*

4. From the *Headphones* drop-down menus, select the built-in soundcard, then *Channels 1-2*

5. Click *Apply* to save the changes.

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 MIDI/HID Controllers*.
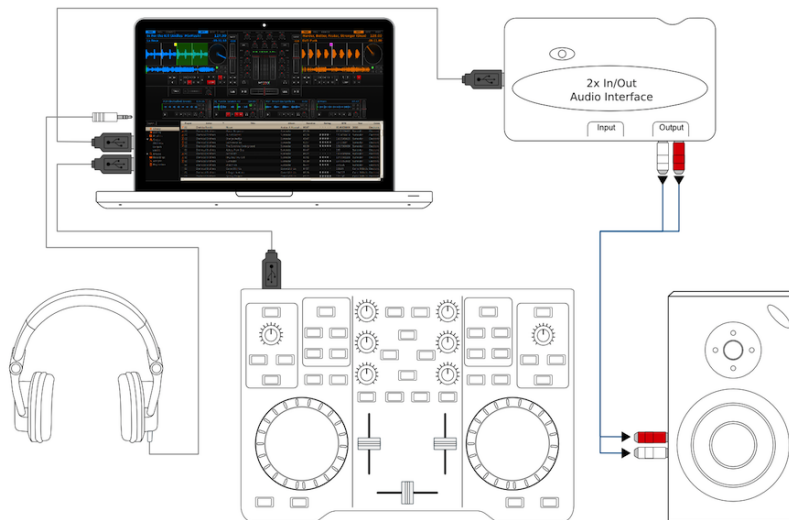
Figure 3.3: Using Mixxx together with a MIDI controller and external soundcard

Using a controller without an integrated multi-channel soundcard

1. Open *Preferences → Sound Hardware*

2. Select the *Output* tab

3. From the *Master* drop-down menus, select the external soundcard, then *Channels 1-2*

4. From the *Headphones* drop-down menus, select the built-in soundcard, then *Channels 1-2*

5. Click *Apply* to save the changes.

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:
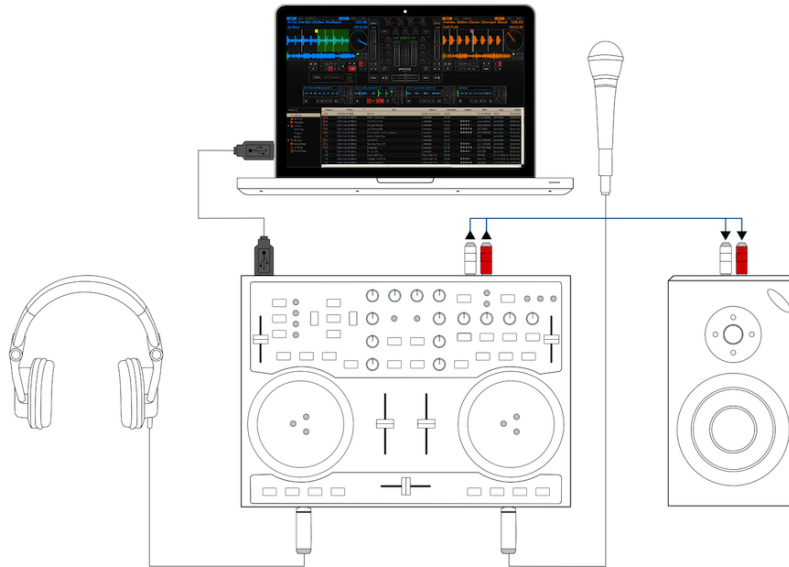
Figure 3.4: Using Mixxx together with a MIDI controller and integrated soundcard

Using a controller with an integrated multi-channel soundcard

1. Open *Preferences → Sound Hardware*

2. Select the *Output* tab

3. From the *Master* drop-down menus, select your controllers soundcard, then *Channels 1-2*

4. From the *Headphones* drop-down menus, select your controllers soundcard, then *Channels 3-4*

5. Click *Apply* to save the changes.

Note: You can connect as many MIDI controllers as you have ports on your computer. Just follow the steps in *Using MIDI/HID Controllers* 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*.

See Also:

Go to the chapter *Vinyl Control* for detailed information.

Configuring Mixxx

4.1 Sound Hardware Preferences
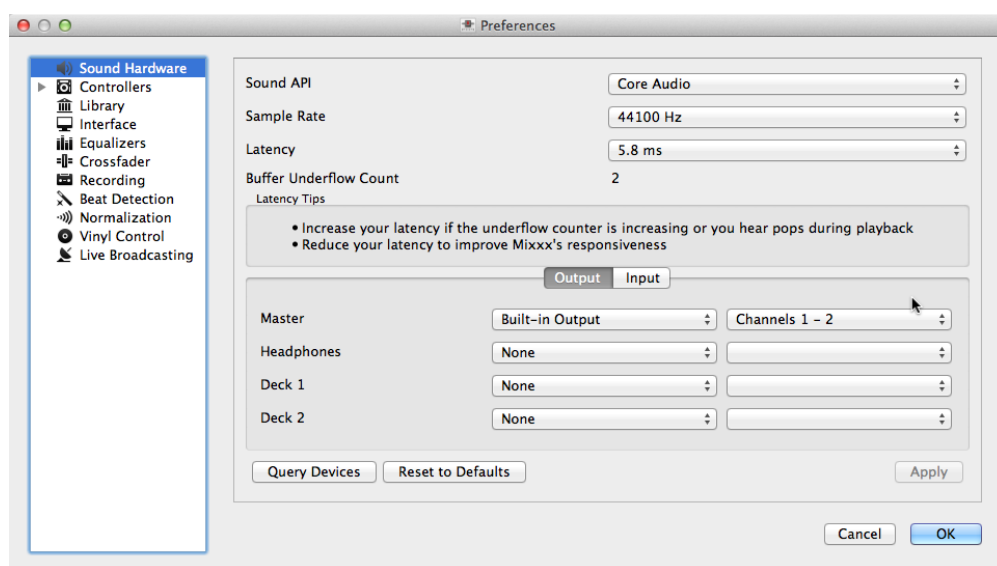
Figure 4.1: Mixxx Sound Hardware Preferences

Preferences → Sound Hardware allows you to select the audio in- and outputs to be used.

- **Sound API**: Depending your *Operating System*, select the *API* that Mixxx uses to deliver audio to your audio device. Your choice can drastically affect how smooth Mixxx performs on your computer.

- **Sample Rate**: Allows you to manually select the sample rate for the audio input. The sample rate value should be set to the sample rate of your audio interface. By default, Mixxx tries the system default first, which is most likely 44.1 kHz. Otherwise, Mixxx will pick a different default.

- **Latency**: Latency is the lag time in milliseconds that it takes for Mixxx to process your input. Lower latency means Mixxx will be more responsive but on slower computers it might cause glitches.

- **Buffer Underflow Count**: Underflows (no data is available when needed) indicate that some of the subsystems in Mixxx can't keep up with real-time deadlines. This is useful to tune the latency settings. If the counter

increases, then increase your latency setting, decrease the sample rate setting or change the sound API setting if available.

4.2 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. To enable internal mixer mode assign a valid audio output to the *Master* output in *Preferences → Sound Hardware → Output*.

Internal mode is used in the following configurations:

- *Laptop Only*
- *Laptop and an External USB Soundcard*
- *Laptop, MIDI Controller, and External USB Soundcard*

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. Similarly, to enable external mixer mode, simply select a valid audio output for the *Deck* outputs in *Preferences → Sound Hardware → Output*.

External mode is used in the following configuration:

- *Laptop, External Hardware Mixer and Vinyl Control*

4.2.1 Headphone Output

In both internal and external mixer mode, you can choose a headphone output for *pre-fader listening* or *headphone cueing* in *Preferences → Sound Hardware → Output → Microphone*. This allows you to listen and synchronize the track you will play next in your headphones before your audience hears the track. See also *PFL/Headphone Button*.

4.3 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.

4.3.1 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 milliseconds 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).

4.3.2 Sample Rate

New in version 1.11: Mixxx automatically selects a default sample rate for your soundcard, most likely 44100 Hz 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.

4.3.3 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
Mac OS X / CoreAudio	Good
GNU Linux / OSS	OK
GNU Linux / ALSA	Good
GNU Linux / JACK (Advanced)	Good

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.

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.

> **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.

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.

Figure 5.1: The Mixxx interface - Deere skin

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.

Figure 5.2: A deck with a track loaded

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 Display

Figure 5.3: The track information section of the deck

Track Title The title of the track that was loaded into a deck is displayed on top. This is the same as the title listed under the *Title* column heading in the Mixxx library. This information is initially loaded from the tracks *metadata*.

Track Artist The title of the track is listed below. It is the same as listed under the *Artist* column heading in the Mixxx library.

BPM (Tempo) 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.

Hint: Click directly on the BPM display and tap with the beat to set the BPM to the speed you are tapping. You can also use a keyboard shortcut, go to *Using a Keyboard* for more information.

Time Elapsed/Remaining By default it displays the total elapsed time in the track up to the millisecond. Clicking on the display switches to the *Time Remaining* view, which indicates how much time is left before the track reaches the end. You can change the default in *Preferences → Interface → Position Display*.

5.1.2 Waveform Displays

The waveform section of a deck allows you to visualize the audio changes that occur throughout the track, you can basically "see" your music.
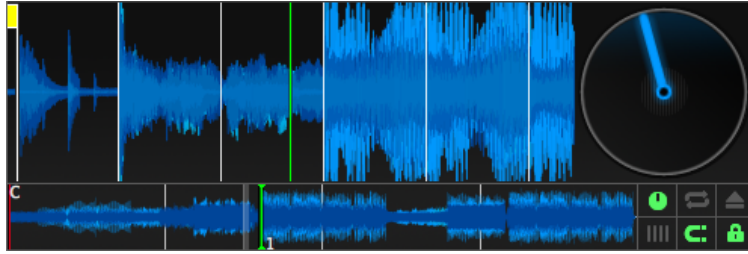

Figure 5.4: The waveform summary and waveform overview of the deck

Waveform summary The big waveform summary shows the waveform envelope of the track near the current playback position and is updated in realtime. The mouse can be used on the waveform to pause, scratch, spin-back or throw the tracks. Right-clicking on the waveforms allows you to drag with the mouse to make temporary pitch adjustments.

> **Hint:** You can select from different types of displays for the waveform, which differ primarily in the level of detail shown in the waveform, in *Preferences → Interface → Waveform Display → Display type*.

Waveform overview The smaller, zoomed-out version of the waveform shows the various markers within the track as well as the waveform envelope of the entire track. This is useful because they allow DJs to see breakdowns far in advance. Clicking somewhere on the waveform allows you to jump to an arbitrary position in the track.

Vinyl Widget The line on the vinyl widget rotates if the track moves. It is similar to the position marker found on scratch records. Use the mouse on the vinyl widget to pause, scratch, spin-back or throw tracks - just like a real record. When performing *Loop rolls* or right-clicking on the vinyl during playback, a "ghost" marker hints where the playback will continue. The Vinyl Widget is hidden by default and can be enabled in the *Deck Options Button Grid*.

If *Vinyl control* is enabled, it can optionally display the time-coded vinyl signal quality. Activate the option in *Preferences → Vinyl Control → Show Signal Quality in Skin*.

Waveform Zoom Using the mouse-wheel everywhere in the waveform summary will zoom the waveform in or out. You can choose whether or not to synchronize the zoom level between the decks in *Preferences → Interface → Waveform Display → Synchronize*.

Waveform Marker While mixing, various additional markers can appear on the waveforms:

- **Position marker**: The static vertical line in the center of the waveform summary indicates the playback point of the deck.

- **Beat marker**: The regular white lines on the waveform summary indicate the locations of beats in the audio, also called the *beatgrid*.

- **Cue marker**: Indicates the position of the *cue point*.

- **Hotcue marker**: Indicate the position and number of a *hotcue* point if set.

- **Loop-in/Out marker**: Indicate the beginning and the end of a loop.

- **Loop overlay**: Is drawn between the Loop-in/Out markers and changes color depending on whether a loop is activated or not.

- **Track ending notification**: If the waveform overview flashes red, only 30 seconds are left before the track reaches the end.

See Also:

To learn how to get most out of the waveforms while mixing, go to the chapter *Waveform displays*.

> **Warning:** If you have a slower computer and notice performance issues with Mixxx, try to lower the frame rate or change the level of detail shown in the waveform in in *Preferences → Interface → Waveform Display*.

5.1.3 Deck Options Button Grid

Figure 5.5: The Options Button Grid of the deck

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

Show/Hide Vinyl Widget Toggles the visibility of the Vinyl Widget in the *Waveform Displays*.

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

Eject Track Button Clicking this button ejects the track from the deck. Alternatively you can use a keyboard shortcut, go to the chapter *Using a Keyboard* for more information.

Beat-grid Adjust Button 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. For more information, go to the chapter *BPM and Beat Detection*.

Quantize Mode Toggle If enabled, all cues, hotcues, loops, and beatloops will be automatically *quantized* so that they begin on a beat.

Keylock Toggle *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" effect that speeding up vocals has.

5.1.4 Vinyl Control Mode and Cueing controls

Figure 5.6: The Vinyl Control Mode and Cueing controls of a deck

The control above the waveforms relate to the *vinyl control* feature in Mixxx and is **hidden** in the default *Mixxx user interface*. Click the *VINYL section expansion button* in the mixer section, or use the specific *Application shortcuts* to show or hide the section.

Abs/Rel/Const button

- **Absolute mode**: The track position equals needle position and speed.

- **Relative mode**: The track speed equals needle speed regardless of needle position.

- **Constant mode**: The track speed equals last known-steady speed regardless of needle input.

Off/One/Hot button

This button determines how *cue points* are treated in vinyl control relative mode:

- **Off**: Cue points are ignored.

- **One Cue**: If the needle is dropped after the cue point, the track will seek to that cue point.

- **Hot Cue**: The track will seek to nearest previous *hotcue* point.

See Also:

For more information on how to use Vinyl control in your setup, go to the chapter *Vinyl Control*.

5.1.5 Sync and 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. You can control rate changes also from your computer's keyboard, see the chapter *Using a Keyboard* for more information.

SYNC button

- **Left-Click**: Changes the *rate* of the track so that the *BPM* and *phase* of the track matches the other deck.

- **Right-Click**: Only changes the *rate* of the track to match the other deck but does not adjusts the *phase*.

Changed in version 1.11: Changed Sync mode (Ghetto Sync™) Decks and samplers now pick which sync target to sync to on the fly. Decks can't sync to samplers and samplers can only sync to decks. The sync target is:

- The first (in numerical order) deck that is playing (rate > 0) a track that has a detected beatgrid.

- The first (in numerical order) deck that has a track loaded with a detected beatgrid (could be stopped).

  So basically, if you sync a sampler and both deck 1 and deck 2 are playing a track with a beatgrid then deck 1 will win since numerically it is first. This will change again in the future once Mixxx gets a proper master sync feature.

Pitch/Rate slider The slider allows you to change the speed of the song, by default up to 10% from the tracks original tempos. The speed will increase as you move the slider up, opposite to the behavior found on DJ turntables and *CDJ*. Right-clicking on the slider will reset the tempo to its original value.

Pitch Rate Display The percent that the track's rate is sped up or slowed down is noted here. Is the Pitch/Rate slider positioned at the center, the pitch rate display is at +0.0%, which indicates no change.

Pitch/Rate buttons The plus and minus buttons increase or decrease the tempo in steps at which a song is played, same as pulling the pitch slider slightly. By right-clicking the buttons you get even finer adjustments.

Temporary Pitch/Rate buttons (Nudge) Pushing the the left and right arrow buttons is like nudging the metal edge of a turntable, or the outer edge of a CD player. It will give the track a push or pull forwards or backwards. If the buttons are released the previous tempo is restored. The buttons can act as either a fixed *pitch bend* or a *ramping pitch bend*.

See Also:

To customize the amount by which the buttons alter the pitch of the track, the slider range as well as the direction, go to *Preferences → Interface*.

Figure 5.7: Rate controls

Hint: If the tempo of a track changes, you'll notice that the tone changes based on the pitch used (e.g. playing at faster pitch gives a chipmunk sound). You can enable the *Keylock* feature to maintain a constant tone.

5.1.6 Transport Controls
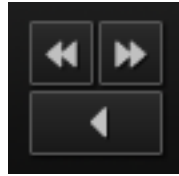
Figure 5.8: The transport controls of the deck

Fast-Rewind button As long as the button is pressed, the track will play in reverse with increased speed. Right-clicking on the button will seek the play position to the beginning of the track.

Fast-Forward button As long as the button is pressed, the track will play with increased speed. Right-clicking on the button will seek the play position to the end of the track.

Reverse button As the name suggests, this button plays a track backwards.

5.1.7 Loop Controls

Figure 5.9: The beatloop and looping controls of the deck

In this section of the Mixxx interface you can control (beat-)loops and set the loop points of a track.

Beatlooping Buttons

- **Instant loop**: The numbered buttons represents a different *bar* length. Clicking on any of that buttons will set a loop of the defined number of beats from the beat immediately following the current playback position. If a loop is set, a loop overlay will be drawn on the *waveforms*.

- **Loop roll**: New in version 1.11. Right-click on any of the numbered loop buttons to temporarily setup a rolling loop over the defined number of beats. Playback will resume where the track would have been if it had not entered the loop.

- **Double loop**: Clicking on the plus button will double the current loop's length up to 64 bars. The length of the loop overlay in the waveform will increase accordingly.

- **Halve loop**: Clicking on the minus button will halve the current loop's length down to 1/32 bars. The length of the loop overlay in the waveform will decrease accordingly.

Loop Buttons

- **Loop-In**: This button allow you to manually set the start point of a loop. A loop-in marker is placed on the waveform indicating the position. If clicked when a loop was already set, it moves the start point of a loop to a new position.

- **Loop-Out**: This button allow you to manually set the end point of a loop. A loop-out marker is placed on the waveform indicating the position. If clicked when a loop was already set, it moves the end point of a loop to a new position.

- **Loop**: Also dubbed Reloop, this button toggles whether the loop is active or not. This works for manually placed loops as well as automatic loops set by the beatlooping buttons. Depending on the current status of the loop, the loop overlay on the waveforms changes color.

Hint: If you are playing inside a loop and want to move the end point beyond its current position in the track, click on the *Loop* button first and when the play position reaches the desired position, click on the Loop-Out button.

See Also:

If the *Quantize* mode is enabled, the loops will automatically snap to the nearest beat. This is disabled by default, click on the *Quantize Mode Toggle* to enable it.

5.1.8 Hotcue Controls

Figure 5.10: The hotcue controls of the deck

To jump in between different parts of a track, you can use these numbered buttons. You can also use keyboard shortcuts, go to *Using a Keyboard* for more information.

Setting Hotcues

Clicking on a numbered button will set a *hotcue* at the current play position on the track. A marker with the corresponding number will appear in the waveform and the button will lit up to indicate that the hotcue is set.

Playing Hotcues

- **While playing**: Tap a hotcue button to cause the track to instantly jump to the location of the hotcue and continue playing. If you are playing inside a loop and tap a hotcue whose position is outside of the loop, then the track still instantly jumps to the hotcue but the loop will be deactivated.

- **While stopped**: Tap a hotcue button to cause the track to instantly jump to the location of the hotcue and start playing as long as the button is pressed. Press the *Play* keyboard shortcut while the hotcue button is pressed to continue playback, then release the hotcue button.

Deleting Hotcues

To delete a hotcue, right-click on the numbered button. The marker in the waveform will be deleted as well.

Note: Mixxx supports up to 36 hotcues per deck. By default, only some of them are visible in the user interface. You can customize your *keyboard* or *controller* mappings to use all of them.

See Also:

Just as with the loops (see above), if the *quantize* mode is enabled, the hotcues will automatically snap to the nearest beat. This is disabled by default, click on the *Quantize Mode Toggle* to enable it.

5.2 The Mixer Section

Figure 5.11: The mixer section

The mixer section of the *Mixxx user interface* allows you to control how the different decks and samplers are mixed together.

5.2.1 Channel Faders and VU Meters

VU meters In the center of the mixer section 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 light at the top of the VU meter indicates when the audio in the selected channel is clipping. If this light goes on, reduce the gain or EQs for this deck to eliminate distortion.

Line faders The two large faders on either side of the VU meters are the deck volume faders, also known as Channel- or Line-faders. Adjusting these controls the volume of each deck.

Hint: Some DJ's prefer to use the line faders over the crossfader for fading between tracks. Try it, you may like it.

5.2.2 Section Expansion Buttons

Figure 5.12: The section expansion buttons

Above the VU meters in the mixer 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 Section*
- *The Sampler Section*
- *Vinyl Control Mode and Cueing controls*

New in version 1.11: You can also use the specific *Application shortcuts*.

5.2.3 Headphone and Master Mix Controls

Figure 5.13: The headphone and master mix knobs

Head-Mix Knob Allows you to customize how much of the master output you hear in your headphones. It works like a crossfader between the stereo Master and stereo Cueing signal. If the knob is set to the left, you only hear the cueing signal which can be useful for prelistening tracks.

Note: Don't forget to activate the *PFL* button on the deck you want to listen to in your headphones.

Head volume Knob This button adjusts your headphone volume. You can adjust the volume of a single deck's signal you are listening to in the headphones with the *Gain* knob.

Balance Knob This knob allows you to adjust the *balance* (left/right orientation) of the master output.

Volume Knob The Volume Knob controls the overall volume of of the master output. Adjust this knob so that the *Master VU meters* are just at the peak.

Hint: If the Peak indicator on top of the Master VU meter flashes, the master output signal is clipping (too loud). Lower the volume with using the volume knob.

5.2.4 PFL/Headphone Button

Figure 5.14: The headphone buttons of both decks in the mixer

The headphone button is also known as the *pre-fader listen or PFL* button. Pressing this button allows you to listen and synchronize the track you will play next in your headphones before your audience hears the track (headphone cueing). You can select more than one PFL button simultaneously.

See Also:

Headphone cueing is only available if you have configured a Headphone Output in *Preferences → Sound Hardware*.

5.2.5 Equalizers and Gain Knobs

New in version 1.11: Latch mode for Kill Switches

Gain Knob 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.

EQ 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.

Kill Switches The small boxes next to each EQ knob are called *kills*. Hold these buttons to fully remove that frequency range. Short click on the buttons for latching. When in Latch mode, click again to restore the frequency range. If the Kill switches do not work as expected, check the high/low shelf EQ settings in the preferences.

See Also:

You can customize the EQ settings in *Preferences → Equalizer*.

Figure 5.15: EQ Controls

5.2.6 Crossfader
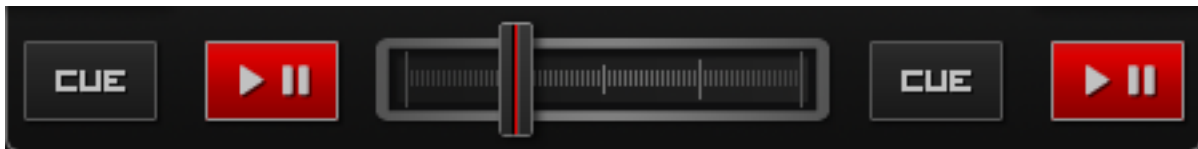
Figure 5.16: The crossfader section of the mixer with Play/Pause and Cue buttons

New in version 1.11: Reverse crossfader (Hamster style) The *crossfader* determines the actual volume of each deck when moving the slider from left to right. If both decks are playing and the crossfader is in its default center position, then you will hear both decks. Right-clicking on the crossfader will reset the slider to its default position.

You can reverse the configuration of the crossfader, so that the right deck is on the left end of the crossfader and vice versa. This is also known as *Hamster Style*. To adjust the crossfader to your style of mixing, go to *Preferences → Crossfader*.

Hint: Using the *AutoDJ* feature in Mixxx, you can automate the crossfade between the decks.

5.2.7 Play/Pause Button

Clicking the Play/Pause button starts and pauses the playback. A right-click on the button during playback places a *Cue point* on the track, see *Cue Button*.

Hint: To return to the beginning of the track, right-click on the deck's *Fast-Rewind Button*.

5.2.8 Cue Button

If the button is pressed, the play position jumps to an existing *Cue point* on the track or sets a new one, depending on whether a track is playing or not. If you have not set any custom cues yet, the default point is at the track's beginning.

Setting Cue points

- **While playing**: The Cue point is set via *Play/Pause Button*. A right-click on the button places a Cue point at the current play position on the track, and a *Cue marker* appears on the waveforms.

- **While stopped**: Clicking on the Cue button places a Cue point at the current play position on the track, and a Cue marker appears on the waveforms. The existing cue point will be replaced.

Every track has a Cue point, by default on its beginning. Unlike with *Hotcues*, you can't delete, but only move Cue points.

Using Cue Modes

You can switch between the CUE modes in *Preferences → Interface*.

CDJ cue mode (default)

- **While playing**: Tapping the Cue button causes the track to instantly jump to the location of the cue point where it stops the playback.

- **While stopped**: Holding down the Cue button jumps to the cue point and starts playback as long as the button is pressed. If the button is released, the play position marker jumps to the cue point and the playback is paused. Clicking the Play button while the Cue button is down continues the playback.

Simple mode

- **While playing**: Similar to the *Hotcues*, clicking the Cue button jumps to the cue point and continues playback.

- **While stopped**: No action is performed.

Hint: Use the *Hotcue Controls* to place more reference points on a track.

See Also:

You can also use keyboard shortcuts for Cueing. Go to *Using a Keyboard* for more information.

5.2.9 Effects Controls

Figure 5.17: The effect control section of the mixer

Currently, the only available internal effect in Mixxx is a *flanger*. This effect applies a "sweeping" sound to the channel and can add extra depth to a mix when used tactfully.

FX Button The FX ("Effects") button enables a built-in flanger effect on the selected channel.

Delay/Depth/LFO Knobs Adjusts the phase delay, intensity and the the wavelength of the flange effect.

Hint: For the most noticeable effect, enable the FX button and turn the Depth knob completely to the right.

See Also:

As an advanced user, you can route your audio signal to external software and then apply additional effects. Go to *Additional Effects via external Mixer Mode* for more information.

5.3 The Sampler Section

Figure 5.18: A sample deck

Samplers are miniature decks. They allow you to play short samples and jingles but also additional tracks in your mix. They come with a small overview waveform and a limited number of controls. All controls work just like on the regular decks, see *The Deck Sections*.

The Sampler section is **hidden** in the default *Mixxx user interface*. Click the *SAMPLER* button in the mixer section, or use the specific *Application shortcuts* to show or hide the section.

5.3.1 Waveform Display

Waveform overview The waveform shows the various markers within the track as well as the waveform envelope of the entire track. Clicking somewhere on the waveform allows you to jump to an arbitrary position in the track.

Waveform Marker While mixing, some additional markers can appear on the waveforms:

  • **Position marker**: A vertical line indicates the playback point of the sample deck.

  • **Hotcue marker**: Indicate the position and number of a *hotcue* point if set.

5.3.2 Track Information Display

Track Artist/Title The artist and title of the track that was loaded into a sampler deck is displayed here.

BPM (Tempo) The number at the top right is the effective *BPM* of the track. Tap the BPM to set the BPM to the speed you are tapping.

5.3.3 Deck Options Button Grid

The buttons grid next to the waveform overview allow you to configure the sampler deck. Starting from the top-left and moving counterclockwise the buttons are as follows:

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

Eject Track Button Clicking this button ejects the track from the deck.

Mix Orientation Toggle This control determines the microphone input's mix orientation.

Keylock Toggle *Keylock* locks the track's pitch so that adjustments to its tempo via the rate slider do not affect its pitch.

5.3.4 Sample Deck Controls

New in version 1.11: Samplers can sync to decks.

Play/Pause button Clicking the button starts and stops playback. Right-clicking on the button will seek the play position to the beginning of the sample.

Sync Button Syncs the Sampler deck to a regular deck, as described in *Sync and Rate Controls*.

- **Left-Click**: Changes the *rate* of the track so that the *BPM* and *phase* of the track matches the sync target.
- **Right-Click**: Only changes the *rate* of the track to match the sync target but does not adjusts the *phase*.

Hotcue Controls To jump in between different parts of a sample, you can use these numbered hotcue buttons.

PFL/Headphone Button If active, the *pre-fader listen or PFL* button allows you to listen to the track in your headphones.

Gain Knob Allows you to adjust the volume of the track.

VU Meter Shows the level of the signal and can be adjusted with the Gain knob.

Pitch/Rate slider The slider allows you to change the speed of the sample. Right-clicking on the slider will reset the tempo to its original value.

5.4 The Microphone Section

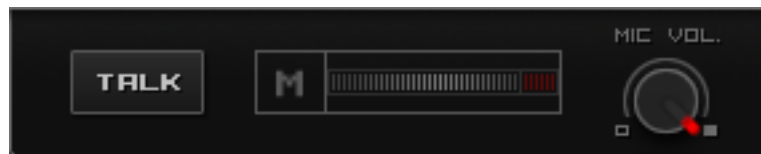Figure 5.19: The Microphone section

The microphone section is **hidden** in the default *Mixxx user interface*. Click the *MIC* button in the mixer section, or use the specific *Application shortcuts* to show or hide the section.

Setup the microphone

- Most computers have built-in microphones, while some are connected through USB. These work adequately, but don't expect them to be high-quality.

- The best solution is to connect a good external microphone to the "Mic" or "Line" input on your audio device. If available, use the "Gain" knob on the device to adjust the input signal.

- Select the microphone input in *Preference → Sound Hardware → Input → Microphone* and click *Apply*.

5.4.1 Microphone Controls

Talk Button

Changed in version 1.11: Latch mode added. Hold this button and talk to mix the microphone input into the Mixxx master output. Short click on the button for latching. This is handy for talking for an extended period, for example when *streaming* a radio show. When in Latch mode, click again to mute the microphone input.

Mix Orientation Toggle This control determines the microphone input's mix orientation. Either to the left side of crossfader, to the right side or to the center (default). Clicking cycles through all the options.

Microphone Volume Meter This displays the microphone volume input signal strength.

Microphone Gain Knob Use this knob to adjust the gain of the microphone output. Try to keep the volume at a reasonable level to avoid signal clipping.

5.5 Preview Deck Section

Figure 5.20: The Preview Deck with a track loaded

New in version 1.11. The Preview Deck is a special deck that allows you to pre-listen to tracks in the headphones before using them in your mix. Pre-listening a track does not change the tracks's *Played* state as well as the play counter and is not logged in the *History*. Press CTRL + 4 (Windows/Linux) or CMD + 4 (Mac) to display the Preview Deck.

The features in detail:

- **Track Artist/Title**: The artist and title of the track is displayed here. This is the same listed under the *Track* and *Title* column in the Mixxx library. This information is initially loaded from the track's *metadata*.

- **Eject Track**: Clicking this button ejects the track from the deck.

- **Waveform overview**: Shows the various markers (Cues, Hotcues) within the track as well as the waveform envelope of the entire track. Clicking somewhere on the waveform allows you to jump to an arbitrary position in the track.

- **Gain**: Move the slider to adjust the gain of the track.

- **VU-Meter**: Shows the current volume of the track. If it's too loud and distorted, a peak indicator flashes red.

See Also:

For more information, go to the chapter *Previewing Tracks*.

The Mixxx Library

6.1 Overview of the Library features

Figure 6.1: The Mixxx Library

The library manages all of your music files. This is where you can find the tracks you want to play and load them into a *deck* or *sampler*; see *Loading Tracks*. Mixxx imports your music library automatically when it is run for the first time, and automatically detects newly added tracks on each subsequent run, see *Importing your audio files*.

The sidebar on the left contains different collections of music. The track list view on the right displays the tracks in those collections.

Sidebar:

- **Search**: Search for tracks in your Mixxx library.

- **Library**: View and edit your whole collection.

- **Auto DJ**: Automatically load and crossfade tracks for unattended mixing.

- **Playlists**: Organize your tracks in sortable lists.

- **Crates**: Manage your files in unordered track collections.

- **Browse**: Browse and load tracks from your filesystem and connected devices.

- **Recordings**: Record your mix and view previous recordings.

- **History**: Browse lists of tracks you played in past mixing sessions.

- **Analyze**: Prepare your tracks for optimal mixing experience.

- **External Libraries**: Access your existing iTunes, Traktor and Rhythmbox libraries.

Track List:

- **Sort**: Display and sort track collections by different criteria.
- **Load**: Drag tracks you want to play to the waveform display.
- **Edit**: Rate tracks and edit track properties.

6.2 Search - Find your tracks

Figure 6.2: The Search box - Has focus and a search term entered

The Search box above the sidebar filters the current library view for tracks that match your search query. The library search include some nice search features; go to the chapter *Finding Tracks (Search)* for details.

6.3 Library - View and edit your whole collection

The Library displays a sortable list of all the tracks in your music library.

Customizing the view Move columns by clicking in a column header and dragging it to another position. Right-click on a column header to show and hide particular columns. Adjust the column width to fit the contents of the rows by double-clicking on the separator between two column headers.

Sorting Tracks Tracks are automatically sorted by the active column. Click on the active column header to reverse the sort order. Click on another column header to change the active column.

Rating tracks Make sure the *Rating* column is not hidden. Rate tracks by hovering over the rating field and clicking the stars.

Track Inline editing Mixxx reads *metadata* from the tracks to fill the columns of the library. To edit this data, double-click on a field. If the field is editable it will become an editable text box. When you are done, hit `Enter`. The data will be saved to the Mixxx library, but **not** to the track's metadata itself.

Loading tracks To load a track into a *deck*, you can either drag it to the waveform display or use the context menu. Go to the chapter *Loading Tracks* for detailed information.

Importing tracks Mixxx imports your music library automatically when it is run for the first time, and automatically detects newly added tracks on each subsequent run. Go to the chapter *Importing your audio files* for detailed information.

Previewing Tracks To pre-listen to tracks in your headphones without loading them to a regular deck, click the icon in the *Preview* column. Go to the chapter *Previewing Tracks* for detailed information.

Rescan Library 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 on top of the application window. You can prompt an automatic rescan in *Preferences → Library → Rescan on startup*.

6.3.1 Track list context menu

Right-clicking on selected tracks in the track list reveals the context menu:

- **Add to Auto DJ**: Adds the content of the session to the *Auto DJ* playlist for automatic mixing.

- **Load to Deck/Sampler**: Loads a selected file to a *deck*, *sampler* or *previewdeck*. Alternatively simply drag it to the *Waveform Displays*. Note that you can't load multiple files at ones.

- **Add to playlist/crate**: Add selected tracks to the playlists or crates that you have created before. Alternatively, drag the selection to the playlist or crate in the sidebar.

- **Lock/Unlock BPM**: Locks/Unlocks the *BPM* of selected tracks so you can't edit them in the track properties. If a BPM is locked, a "lock" icon appears next to the track's BPM.

- **Clear BPM and Beatgrid**: Removes *BPM* and *beatgrid* data of selected tracks from the Mixxx libary. After doing this we recommended you *analyze* the tracks again.

- **Reload Track Metadata**: If the track's metadata changes, e.g. if you used iTunes to edit them, this option lets you load the new values to the Mixxx library.

- **Hide from Library**: Temporarily hides selected tracks from the track list. Hidden tracks are listed in the *Hidden Tracks* menu item which is explained below.

- **Reset Play Count**: Marks selected tracks as not played in the current session and set their play counter to zero. The icon in the *Played* column changes.

- **Open in File Browser**: Browse for the selected files in your file manager.

- **Properties**: Similar to inline editing explained above, the properties dialog allows you to view and edit metadata such as title, artist, album, and view the full file name and path. Note that you can not edit multiple files at once.

Note: Most of the context menu items are available in file lists of other views like Auto DJ, Playlists, and Crates as well.

6.3.2 Missing Tracks

New in version 1.11. The Missing Tracks view is accessible by expanding the Library tree item in the sidebar. Any tracks 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 tracks so that extra metadata Mixxx might have (such as hotcues and the beatgrids) will not be lost if the file is replaced.

The features in detail:

- **Select All button**: Selects all tracks in the current view.

- **Purge button**: Purges the selected tracks from the Mixxx library, but does not remove them from your computer. This will delete all *metadata* Mixxx has for a track.

6.3.3 Hidden Tracks

New in version 1.11. The Hidden Tracks view is also accessible by expanding the Library tree item in the sidebar. Any tracks that were previously loaded into your library, but were later set to be hidden from the library, will appear here. Use the *Hide from Library* context menu item in the *library* view to temporarily hide selected tracks.

The features in detail:

- **Select All button**: Selects all tracks in the current view.

- **Purge Button**: Purges the selected tracks from the Mixxx library, but does not remove them from your computer. This will delete all *metadata* Mixxx has for a track.

- **Unhide Button**: Removes the selected tracks from the *Hidden Tracks* view and makes them available in the regular track list again. The tracks appears again in every playlist or crate they were listed before they were hidden.

6.4 Auto DJ - Automate your mix

The Auto DJ queue is a special playlist that contains extra controls for automatic mixing. This is useful for taking a break from live mixing or for using Mixxx as media player. New in version 1.11: Shuffle, Skip track, Fade now, Transition time, and Auto DJ Requeue. The Auto DJ features in detail:

- **Shuffle button**: Shuffles the content of the Auto DJ playlist.

- **Skip track button**: Skips the next track in the Auto DJ playlist.

- **Fade now button**: Triggers the transition to the next track.

- **Transition time spin-box**: Determines the duration of the transition.

- **Enable Auto DJ button**: Toggles the Auto DJ mode on or off.

The *Skip track* and *Fade now* buttons are only accessible if the Auto DJ mode is enabled. The Search field in the upper left corner is disabled in Auto DJ. By default, Auto DJ removes tracks after playing them but you have the choice of telling it not to by activating the *Auto DJ Requeue* option in *Preferences → Interface*.

Hint: Put a pause between tracks that are automatically mixed by using a negative value in the *Transition time* spin-box.

See Also:

For more information, go to the chapter *Using Auto DJ for automatic mixing*.

6.5 Playlists - Organizing your tracks

Playlists are ordered lists of tracks that allow you to plan your DJ sets. Some DJs construct playlists before they perform live, but others prefer to build them on-the-fly.

Playlists are not directly loadable into the decks as Mixxx is primarily intended for live, attended performance use. However, you can use the *Auto DJ* explained below.

- **Create a playlist**: Right-click on the *Playlists* sidebar item and select *New playlist*. Name the playlist and click *OK*.

- **Add Tracks**: Add tracks to a previously created playlist by dragging-and-dropping a selection of tracks from the library or playlists onto the name of a playlist in the sidebar. Alternately, use the right-click context menu in the library's *track list*.

Right-click on an existing playlist's name to access the different features in the context menu:

- **Add to Auto DJ**: Adds the content of the playlist to the *Auto DJ* queue for automatic mixing.

- **Rename**: To rename a playlist, just put in a new playlist name and click *OK*.

- **Duplicate**: Sometimes you want to build a playlist based on an existing one. Select the playlist you would like to duplicate, choose *Duplicate Playlist*, name the new playlist and click *OK*.

- **Lock**: ![lock icon] This icon indicates a locked playlist. If a playlist is locked, you cannot add tracks, rename or delete the playlist. Choose *Unlock* from the context menu to unlock the playlist.

- **Remove**: Removes an unlocked playlist. Tracks in the playlist are still available in the library for later use.

- **Import playlist**: Import tracks from external playlists to a playlist in various file formats. For more information, go to *iTunes, Traktor, Rhythmbox - Using external libraries*.

- **Export playlist**: Export a playlist in various file formats, such as `m3u`, `pls`, or `csv`. Ideal for processing the data in other applications.

6.6 Crates - Working with track collections

![crate icon] Crates are unordered collections of tracks, and are similar to playlists. Think of it like a DJ case to organize your favorite vinyls into.

- **Create a crate**: Right-click on the *Crates* sidebar item and select *New Crate*. Name the crate and click *OK*.

- **Add Tracks**: Add tracks to a previously created crate by drag-and-dropping a selection of tracks from the library or playlists onto the name of a crate in the sidebar. Alternatively use the context menu in the library's *track list*.

Right-click on an existing crate's name to access the different features in the context menu:

- **Rename**: To rename a crate, enter the new crate name and click *OK*.

- **Duplicate**: Just like playlists you can duplicate an existing crate. Select the crate you would like to duplicate, choose *Duplicate Crate*, name the new crate and click *OK*.

- **Lock**: ![lock icon] This icon indicates a locked crate. If a crate is locked, you cannot add tracks, rename or delete the crate. Choose *Unlock* from the context menu to unlock the crate.

- **Remove**: Removes an unlocked crate. Tracks in the crate are still available in the library for later use.

- **Import crate**: Import tracks from an external playlist to a crate in various file formats.

- **Export crate**: Export a crate in various file formats, such as `m3u`, `pls`, or `csv`. Ideal for processing the data in other applications.

6.6.1 Crates vs. Playlists

Crates are unordered collections of tracks. Unlike playlists, they cannot contain duplicate entries and do not support drack-and-drop within them.

Playlists serve a limited purpose of keeping an ordered list of tracks. You can right-click a playlist to queue it to *Auto DJ*, so in a sense you can "play" it.

Often DJs keep a playlist of favorites or plan a list of tracks they want to play at a party. In these cases they rarely care about the order since they will likely choose the order at the party based on the dance floor and mood and they certainly don't want duplicates. This is where crates come in. You can think of them like labels in GMail or Web 2.0 tags for your music.

On the other hand, if you want to specifically plan out a set and practice the transitions you might want to keep an ordering of tracks or repeat them (if you plan to mix a track back in later on) so in that situation you could use a playlist.

6.7 Browse - Loading remote tracks

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

Click the *Browse* sidebar item to navigate the computer and find your music. Depending on your *operating system*, the music will usually be found in the "My Music" or "Music" folder. Drag the files you want to import to the

Library icon or directly to the *Waveform Displays*.

Note: Currently you can drag only files but not folders to the Mixxx library.

6.7.1 Quick Links - Bookmark your favorite folders

New in version 1.11. Using the *Quick Links* sub-menu you can bookmark folders for direct access. Click the *Browse* sidebar item and navigate to the folder you would like to bookmark. Right-click and choose *Add to Quick Links*. The folder is now pinned below the *Quick Links*. To un-pin that folder, right-click and choose *Remove from Quick Links*.

6.8 Recordings

In this section of the library you can start and stop recordings well as view previous recordings and the dates they were made.

See Also:

For more information, go to *Recording your Mix*.

6.9 History - Keep track of your last sessions

New in version 1.11. The history section automatically keeps a list of tracks you play in your DJ sets. This is handy for remembering what worked in your DJ sets, posting set-lists, or reporting your plays to licensing organizations. Every time you start Mixxx, a new history section is created. If you don't play a track during the current session, it will be discarded.

This icon indicates the current session.

Click on the *History* icon in the sidebar to switch to the *History* view, then right-click on a sessions name to access the different features:

- **Add to Auto DJ**: Adds the content of the session to the *Auto DJ* queue for automatic mixing.

- **Rename**: Rename a session, default is the calendar date (YYYY-MM-DD).

- **Remove**: Remove a previous session, but not the locked sessions or even the current session.

- **Lock**: Protect a previous session against accidental merge and deletion. An icon indicates a locked session.

- **Join with previous**: Join the current history session with a previous one.

- **Export playlist**: Export a session in various file formats, ideal for processing the data in other applications.

6.10 Analyze - Preparing your tracks

Mixxx automatically analyzes tracks the first time you load them in a deck, nevertheless it is recommended that you analyze them before playing live with them to ensure the beatgrids are correct. Furthermore, track analysis takes considerable CPU power and might cause skips in the audio — things you surely don't need while performing.

The Analyze view allows you to run *BPM* and *beatgrid* detection on tracks in advance. Waveforms are generated as part of the analysis as well. Changed in version 1.11: Shows the progress in percentage and total queue length while analyzing. The Analyze features in detail:

- **All / New**: Allows you to view a list of either all tracks in the library or tracks added to the library within the last 7 days.

- **Select All**: Selects all tracks in the current view.

- **Analyze**: Starts the detection on the selected tracks.

See Also:

For more information, go to *BPM and Beat Detection*.

6.11 iTunes, Traktor, Rhythmbox - Using external libraries

The iTunes (Windows/Mac OS X), Traktor (Windows/Mac OS X), and Rhythmbox (GNU/Linux) views allow you to use the music libraries you have created in these applications. You can access music and playlists. If available, Mixxx automatically loads the external libraries from their default locations on your hard drive.

Right-click on the iTunes icon in the Library tree and select *Choose Library* to load the `iTunes Music Library.xml` from a different location. Select *Use Default Library* to reset. New in version 1.11.

- Right-click on a iTunes/Rhythmbox/Traktor playlist and choose *Import Playlist* to import it to be a regular Mixxx playlist.

- If you have an iTunes configuration file (`*.xml`) from a Windows or Mac partition mounted in Linux, you can load it and use your iTunes tracks and playlists.

See Also:

You can disable external libraries in *Prefences → Library*.

Controlling Mixxx

Mixxx can be controlled with a keyboard, a mouse, *MIDI*/*HID* 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 Mouse and Trackpad

Use your mouse to interact with the controls in the *Mixxx User Interface* on your computer screen. You can perform actions by pointing and clicking with your mouse.

- **Single Left Click**: Performing a left mouse click on buttons triggers the default action for that control. Moreover if you click on a value in the track list of the Mixxx *library*, you can change the value. For example the year of a track.

- **Single Right Click**: On most buttons, performing a right click triggers a different action than a left click. You can return any knob or fader to its default value by right-clicking that control.

- **Mouse Drag**: Click on a knob or fader, hold the left mouse button and move your cursor to change the value of the control. Use mouse drag to drop tracks from the file list to the decks, crates, playlists, etc.

- **Mouse Wheel**: Just like Mouse Drag, you can change knob and fader values by placing the cursor over the control and moving the mouse wheel.

Hint: If you hover with the mouse over a control (e.g the crossfader) in the Mixxx user interface, the tooltip lists the left- and right-click action respectively.

Hint: On a Macbook or a computer with a touchpad that lacks mouse buttons, a two-finger click gesture is often treated as a right click.

See Also:

Using the Mouse drag/wheel on the waveforms you can adjust zoom and playback rate of the tracks. For more information, go to *Waveform Displays*.
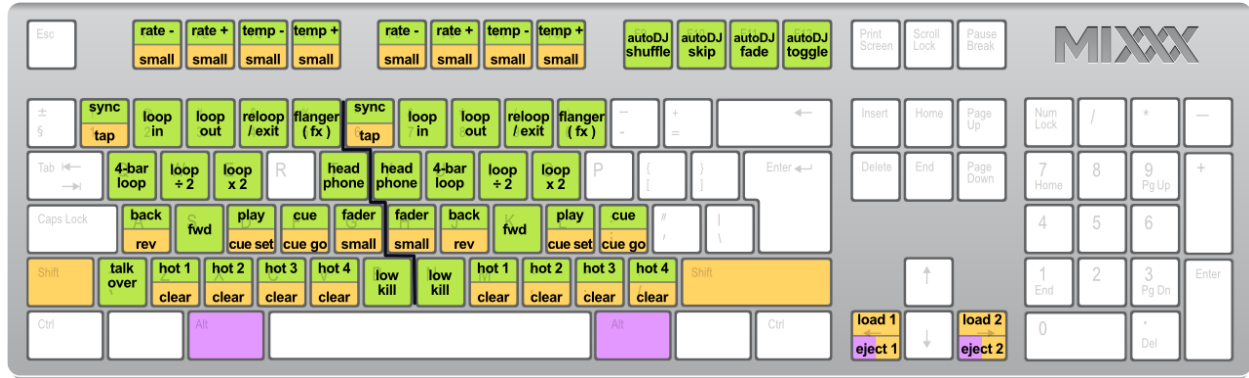
Figure 7.1: Mixxx Keyboard shortcuts (for en-us keyboard layout)

`Download the image`

7.2 Using a Keyboard

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 above. It is 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.

For some user groups, like those using *MIDI*/*HID* controllers or vinyl control, it might be useful to enable/disable the keyboard mappings at runtime. You can do so by clicking *Options → Enable Keyboard Shortcuts*.

Hint: If you hover with the mouse over a control (e.g. the crossfader) in the Mixxx user interface, the tooltip lists the keyboard shortcuts of the control among a description of the control.

See Also:

For a list of default shortcuts, go to *Keyboard mapping table*.

7.2.1 Customizing the keyboard mapping

Mixxx allows you to customize the keyboard control. For more information, go to:

- *Making a Custom Keyboard Mapping*

7.3 Using MIDI/HID Controllers

Mixxx supports *MIDI* and *HID* controller which are external hardware devices used to control audio applications. Many DJs prefer the hands-on feel of a controller with Mixxx because it can feel similar to using a real mixer and turntables or *CDJ*.

7.3.1 Loading a controller preset

Without loading the correct preset, your controller does not work with Mixxx.

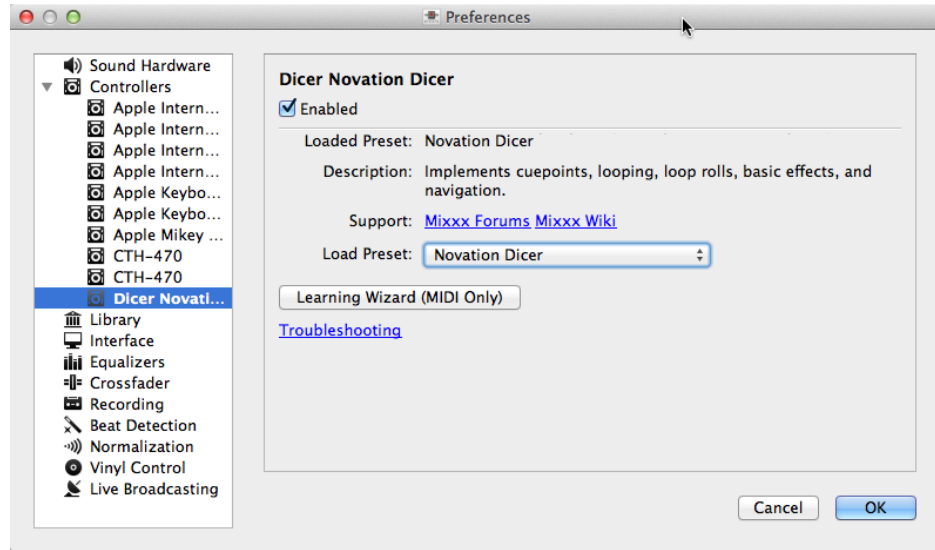1. Connect your controller(s) to your computer

---

Figure 7.2: Mixxx Preferences - Loading a controller preset

2. Start Mixxx

3. Go to *Preferences* → *Controllers*

4. Select your device from the list of available devices on the left, and the right pane will change

5. Activate the *Enabled* checkbox

6. Select the mapping for your controller from the *Presets* drop-down menu

7. Click *OK* and Mixxx can now be controlled by your controller(s).

8. Repeat step 4-7 for any of the controllers you want to use

---

Hint: If you do not find a connected device in the list, make sure to install any necessary drivers for that device.

7.3.2 Supported controllers

Mixxx can use any *MIDI*/*HID* controller that is recognized by your *OS* (some may require drivers), as long as there is a MIDI/HID mapping file to tell Mixxx how to understand it. Mixxx comes bundled with a number of mappings for various devices. There are two levels of controller mappings:

- **Mixxx Certified Mappings**: These mappings are verified by the Mixxx Development Team.
- **Community Supported Mappings**: These mappings are provided and have been verified as working by the Mixxx community, but the Mixxx Development Team is unable to verify their quality because we don't have the devices ourselves. They might have bugs or rough edges.

If you run into issues with any of these mappings, please file a *bug report* on our Bug Tracker or tell us about it on our mailing list, forums, or *IRC* channel. Device support varies for each supported *OS*, so make sure to consult the documentation of the device.

Hint: Additional mappings are available in the Controller presets forum.

See Also:

Before purchasing a controller to use with Mixxx, 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.

7.3.3 Map your own your controller

There is no mapping available for your controller or you want to change an existing mapping? You can map your controller by using the Controller Wizard or take full control with the MIDI Scripting support in Mixxx.

See Also:

Go to *Adding support for your MIDI/HID Controller* for detailed information.

7.4 Using Timecode Vinyl Records and CDs

Vinyl control allows a user to manipulate the playback of a track in Mixxx using a turntable or *CDJ* as an interface. 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.

See Also:

Go to *Vinyl Control* for detailed information.

Vinyl Control

Vinyl control allows a user to manipulate the playback of a track 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.

8.1 How does it work?

Vinyl control uses special *timecode* records or CD's which are placed on real turntables or *CDJ*. 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.

8.2 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-level output), and two stereo sound inputs.

> Your sound card inputs must match the turntable outputs. Older turntables only have phono-level outputs, and you should find a sound card that has a phono pre-amplifier built in. Some turntables have line-level output, and these can be used with any sound card.

> 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.

> 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: 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.
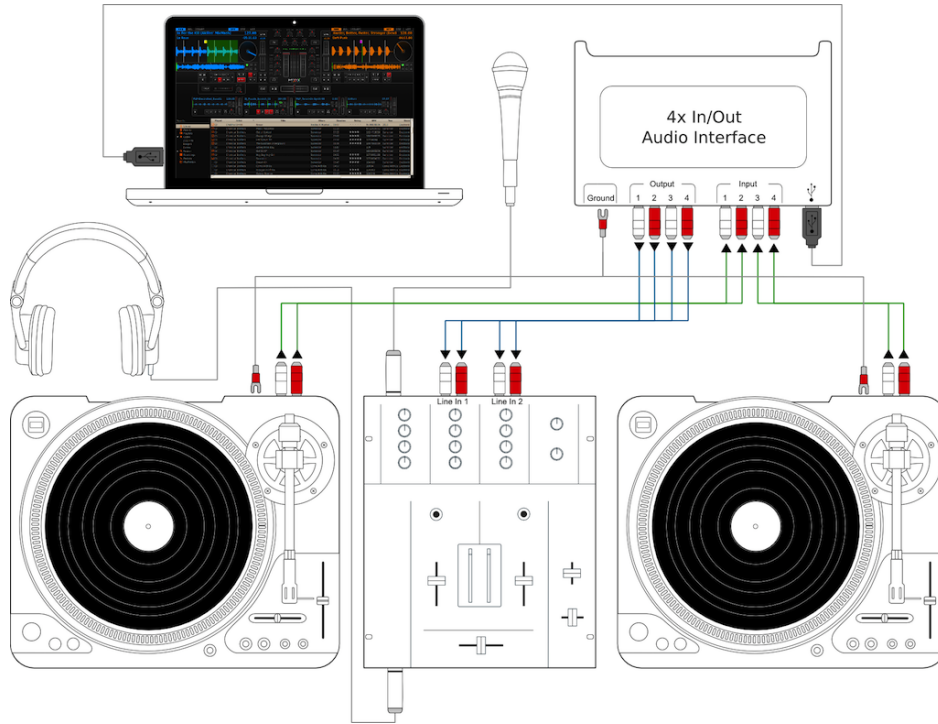
Setup 2: CDJ

Figure 8.1: Using Mixxx together with turntables and external mixer

Two timecode CDs, two CD decks, and two stereo sound inputs.

Setting up CDJs for use with timecode 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*.

Sound inputs

- It is recommended to use a proper DJ sound card that has **multiple** stereo line inputs on it.
- Alternatively you can use two sound cards, each with a single stereo line in, but this is strongly discouraged.

Mixxx supports vinyl control input through a single soundcard with at least 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.

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.

Note: For best scratch performance with vinyl control, we recommend using a system capable of *latencies* of 10ms. With higher latencies the scratch sound will start to become distorted.

8.2.1 Supported Timecode media

Changed in version 1.11: Added MixVibes DVS V2 Vinyl support You can use any of the timecode media supported by Mixxx:
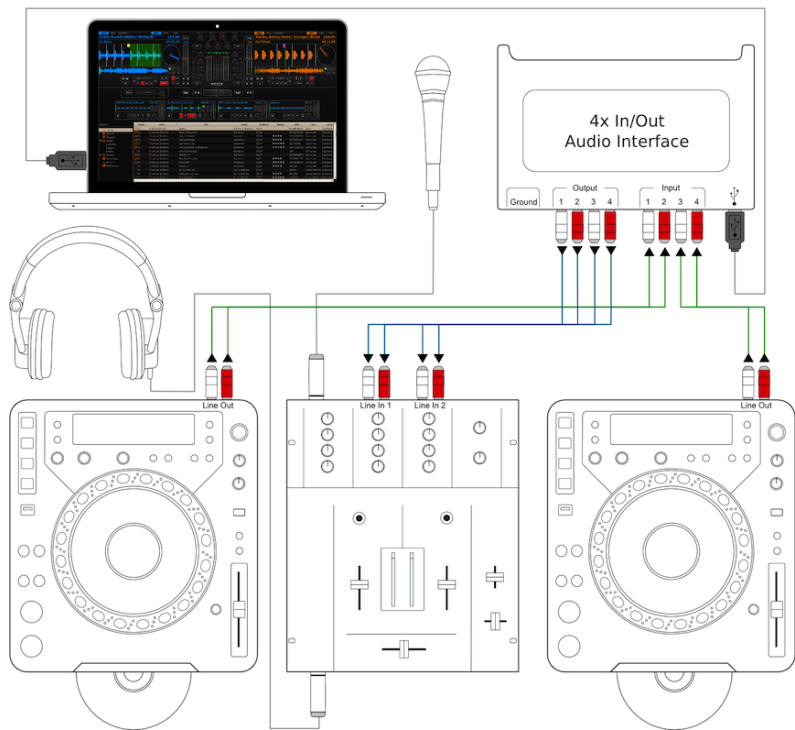
Figure 8.2: Using Mixxx together with CDJs and external mixer

Type	Responsiveness
Serato CV02 Vinyl	Very high
Serato CV02 CD	Very high
Traktor Scratch MK1 Vinyl	Very high
Traktor Scratch MK2 Vinyl	Not supported
MixVibes DVS V2 Vinyl	Very high

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 for personal use from Serato.

8.3 Configuring Input and Output devices

Mixxx can be controlled by up to 2 decks with either timecoded vinyl or timecoded CDs.

1. Open *Preferences → Sound Hardware*

2. Select the *Input* tab

3. From the *Vinyl Control 1* and *Vinyl Control 2* drop-down menus, select the soundcard(s) which your decks are plugged into

4. 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, typically *Channels 1-2* and *Channels 3-4*

5. Click *Apply* to save the changes.

6. Select the *Output* tab

7. Specified *Deck 1* and *Deck 2* to route Mixxx's output directly to the external mixer
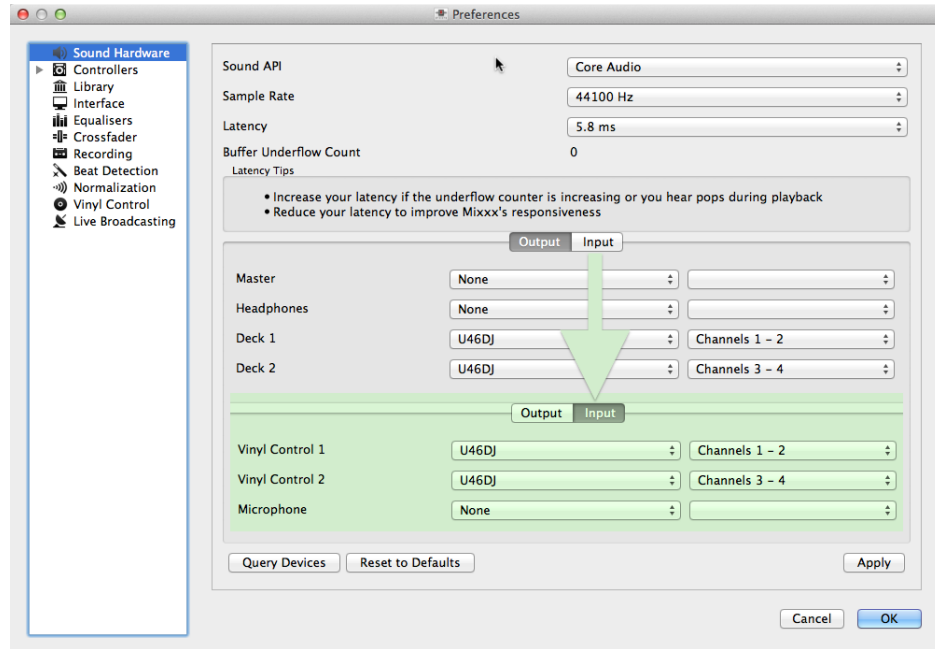
Figure 8.3: Mixxx preferences - Setting up Input and Output devices for Vinyl Control

8. Click *Apply* to save the changes.

8.4 Configuring Vinyl Control

You can configure vinyl control in *Preferences → Vinyl Control*.

8.4.1 Turntable Input Preamp

Many turntables provide unamplified "phono level" output which must be boosted to a "line level" signal. Normally, a mixer or soundcard provides this amplification, but if you're plugging a turntable's phono output directly into a soundcard that doesn't support phono input, Mixxx can do the amplification. The *Turntable Input Preamp* slider allows you to adjust the level of preamplification applied to your decks' signal. However it is always preferable to use a proper phono preamplifier if you have one.

8.4.2 Vinyl Configuration

- **Vinyl Type**: Several different types of timecoded media can be used to control Mixxx. Configure the drop-down menus to match what type of timecoded media you are using on your decks.

- **Deck Vinyl Tempo**: Change this if you prefer to scratch with your turntable or CDJ set at 45 RPM, default is 33 RPM.

- **Lead-in Time**: 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 track 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
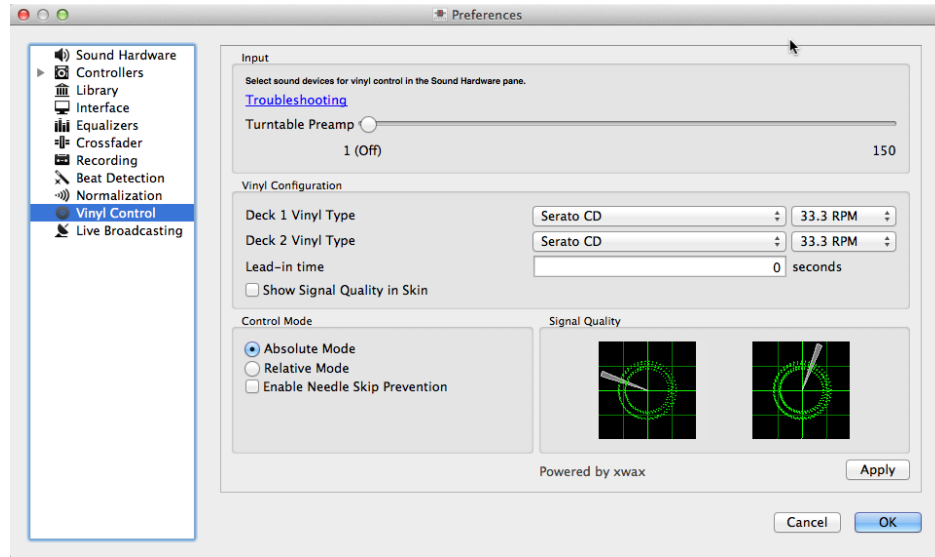
Figure 8.4: Mixxx preferences - Setting up vinyl control

works reliably: you simply set the lead-in so that the start of the tracks begin in good groove area. You can keep doing this until you run out of groove area, thereby decreasing your record replacement frequency.

- **Show Signal Quality in Skins**: If enabled, a circular representation of the incoming timecode signal is displayed in real-time on the *Vinyl Widget* in the Mixxx Interface.

Hint: Although not recommended, you can use different kinds of timecode media per deck.

8.4.3 Control Mode

Mixxx has three control modes regardless of which control records you use.

- **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, with one exception. If you drop the needle in the "Lead-in Time" area (see Vinyl Configuration), Mixxx will seek back to the beginning of the track. Once a track is playing in Relative Mode, Mixxx will not allow you to select Absolute mode. Otherwise, the track would suddenly jump to a new position. Make sure the record is stopped and then you're free to select Absolute mode.

- **Constant Mode**: This special mode is usually only activated when Mixxx needs to keep playing a track even if the vinyl control signal isn't present. Constant mode is automatically enabled when the needle reaches the end of a vinyl control record, or if "Needle-skip Prevention" is enabled and a needle skip is detected.

8.4.4 Cueing Modes

Mixxx has two optional cueing modes for vinyl control which **only** apply to **Relative Mode**. These modes are useful for quickly seeking to specific positions in a track without touching the laptop. Turntablists often need to find a break or a vocal sample, and cueing modes make these easy to find.

- **Cue**: In this mode, when you drop the needle on the record *after* the Cue point, Mixxx will seek to that cue point.

- **Hot Cue**: When the needle is dropped Mixxx will seek to the nearest hotcue point, working backwards. So if you have a hotcue at the one-minute mark, and another at the two-minute mark, you can drop the needle anywhere between one and two minutes and Mixxx will seek to the one-minute hotcue.

Hint: You can change the Control and Cueing Modes directly in the Mixxx user interface while mixing, go to *Vinyl Control Mode and Cueing controls*.

8.4.5 Needle-skip Prevention

Allows Mixxx to detect and ignore small changes in needle position, such as when you've accidentally bumped your turntable. When Mixxx detects a needle skip, it will engage Constant mode and the vinyl indicator (normally a green rectangle) will become red. Needle-skip prevention can be advantageous in a live performance environment but the downside is that it can be accidentally enabled during scratching, causing your track to play forward regardless of the turntable's pitch. Consequently, **disabling** needle-skip prevention is recommended for **scratch performances**.

8.4.6 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.

Mixxx represents your timecode signal quality as a circular representation of the vinyl control audio signal itself. The two graphs correspond to your *Deck 1* and *Deck 2* input devices.

If your vinyl signal is working, you should see a round, green circle drawn with two lines. This vinyl "doughnut" should be as circular as possible, and the lines should be clear with a minimum amount of fuzz.

Hint: You can display the signal quality in the Mixxx user interface while mixing, see *Configuring Input and Output devices* .

8.5 Enabling Vinyl Control

For each deck, select *Options → Vinyl Control → Enable Vinyl Control* or use the *Application shortcuts*.

8.5.1 Vinyl Control Status Display

A rectangle provides visual feedback with regards to vinyl control status of a deck.

- **Off**: Vinyl control disabled on the deck.

- **Green**: Vinyl control is enabled on the deck.

- **Yellow**: The needle has reached End-Of-Record.

- **Red**: A needle skip was detected.

Figure 8.5: The vinyl control status, and signal quality display of the deck

8.6 Single Deck Control

If you only have one turntable, you can still use Mixxx to play your sets. In the *Preferences → Sound Hardware → Input* tab, use the same audio input for both *Vinyl Control* decks.

When mixing, you'll have one track playing automatically while the other is controlled by the turntable. Start by enabling vinyl control on the first deck, and start mixing. When you're ready to cue up the next record, just disable vinyl control on the first deck and enable it on the second deck. Playback will continue on the first deck without interruption. Cue up the second track and mix it in. When you're ready to cue the first deck again, just toggle the second deck off and the first deck on again.

You can bind a key to the `[VinylControl],Toggle` control to automatically swap from one deck to the other.

- In the *Controller Wizard*, select *Vinyl → Single Deck mode* to assign the control to a key on your MIDI device.

- To assign the control to a keyboard shortcut like Shift + T , you just need to add the following lines on top of your *custom keyboard mapping* file.

```
[VinylControl]
Toggle Shift+T
```

8.7 End-Of-Record Mode

Sometimes the track you are playing is longer than the timecode area on your record. If the needle reaches the end of the vinyl timecode, Mixxx will enter a special *End-Of-Record Mode*. When this happens, the vinyl indicator (usually a green rectangle) will blink yellow as a warning. At the same time, Mixxx will automatically enable *Constant Mode* and will ignore the turntable's pitch. At this point the track will simply continue playing until the end. When you load a new track, *End-Of-Record Mode* will be automatically disabled and *Constant Mode* turned off.

When you're in *End-Of-Record Mode* and you want to still use the turntable for pitch control, simply lift the needle and place it anywhere in the main timecode area. It's OK, the track won't stop playing. As soon as Mixxx detects that the needle has settled, it will automatically switch to *Relative Mode*.

8.8 Control Track

Some vinyl control records have a special portion of grooves near the center of the record for selecting and loading tracks in the user interface. You can see these grooves because there is a gap between the main timecode area and the

inner circle. Some control records have not been tested with Mixxx, and their control areas are not supported. Serato CV02 Vinyl and Traktor Vinyl MK1 are known to work. Serato CV02 CDs are known not to work.

Just drop the needle in the control area and let the record play forward or backward. The highlighted row in the library should move up or down. Simply lift the needle and drop it anywhere in the main timecode area to load the track.

8.9 Troubleshooting

Configuration

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

- specified *Deck 1* and *Deck 2* in *Preferences → Sound Hardware* to route Mixxx's output directly to the external mixer

- specified *Vinyl Control 1* and *Vinyl Control 2* under *Preferences → Sound Hardware → Input*

- selected the correct control type under *Preferences → Vinyl Control → Vinyl type* 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*.

Signal Quality

The graph is displayed in *Preferences → Vinyl Control*, see *Signal Quality*.

Signal	Meaning	Troubleshooting
	Vinyl control input channels not correctly set up. Vinyl control will not work.	Open Preferences/ Sound Hardware and set up the devices you want to use, see Configuring Input and Output devices
	Vinyl control input channels set up correctly. Waiting for timecode input signal.	Start your turntable or CDJ with the selected timecode vinyl or CD.
	Nearly perfect green doughnut about about half the width of the graph. Rotating radar sweeps in the direction your record on the turntable is spinning .	Everything is OK, nothing to do. Go spin some beats.
	Incorrect choice of vinyl control source. Doughnut looks good but has a solid red color.	Select the correct vinyl type in the preferences. E.g. maybe you selected side B of the Serato Vinyl but your record is on side A.
	Input signal is bad. As the vinyl signal gets worse, you'll see the color of the doughnut change from green over orange to red.	Check the wiring / grounding on your turntable / CDJ. You timecode record / CD might be worn out or the needle on your turntable is dirty.
	Wrong direction. The green doughnut looks good but the radar sweeps in the opposite direction of the record on your turntable / CDJ.	You probably have a wiring problem. Try reversing the left and right inputs on your turntable. You may also have to rewire the headshell.
	Input signal is no timecode signal. Mixxx receives a normal audio signal while it expects a timecode signal.	Start your turntable or CDJ with the selected timecode vinyl or CD. You may want to check if the inputs devices are set up correctly in the preferences.
	Left or right channel is missing. Mixxx recives only a mono signal but needs a stereo timecode signal to operate.	Check the wiring on your turntable / CDJ and also the headshell and needle on your turntable.
	Timecode signal too loud. Mixxx receives a signal which has too much amplification.	Lower the amplification, either on your external Mixer, soundcard or with the Turntable Input Preamp
	Timecode signal too quiet. Mixxx receives a signal which has not enough amplification.	Boost the amplification, either on your external Mixer, soundcard or with the Turntable Input Preamp

Live Broadcasting - Start your own Internet radio

Live Broadcasting in Mixxx allow you to stream your mix over the Internet to listeners around the world.

9.1 Streaming Servers

Remote streaming server Mixxx allows you to feed your audio stream directly to *Shoutcast* and *Icecast* streaming servers. Depending on the number of listeners, streaming audio requires a significant amount of bandwidth. Streaming servers provide the required bandwidth and broadcast the stream to your listeners. A popular free streaming service is Caster.fm. A review of several free and paid stream hosts is available at broadcasting-world.net.

Figure 9.1: Mixxx as client-side streaming source broadcasting to an remote streaming server
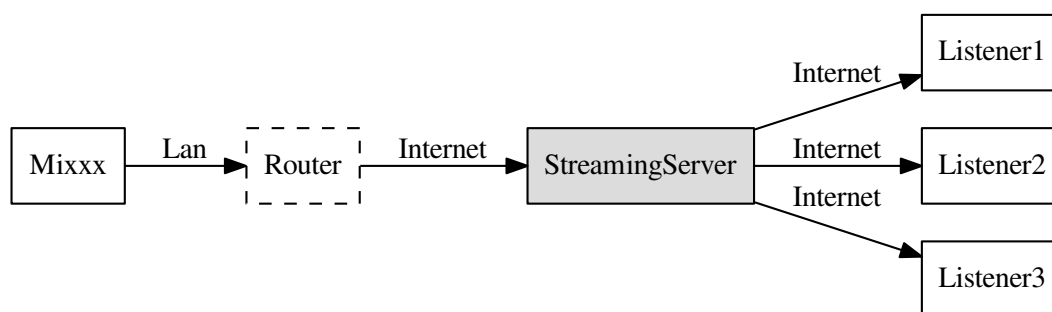
Local streaming server For experienced users, it may be interesting to set up your own local streaming server. This turns your personal computer into a radio station and listeners connect directly to your server. Mixxx as a streaming source does not need to run on the same computer as your streaming server. However, professional

stations often run the streaming source on the same computer as the streaming server for stability and reliability reasons. Keep in mind that if want to stream audio to a significant number of listeners, you'll need enough bandwidth. Read the Shoutcast documentation or Icecast documentation for server setup instructions.

Figure 9.2: Mixxx as client-side streaming source broadcasting to an local streaming server
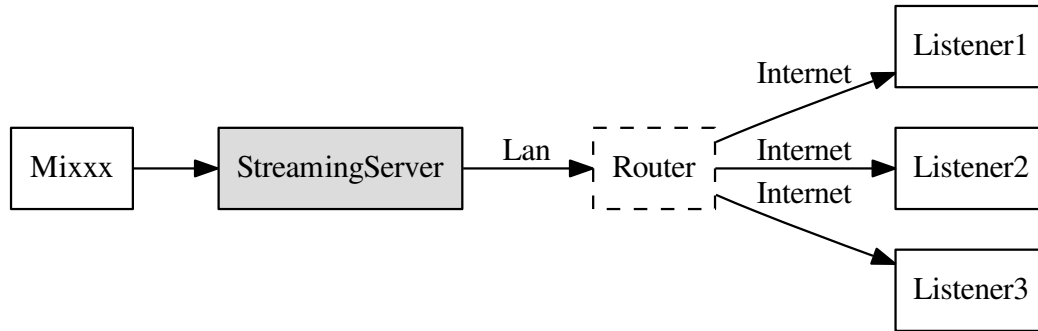

9.2 Configuring Mixxx

Start by supplying Mixxx with all information needed to establish a connection to the streaming server:

- Open *Preferences → Live Broadcasting*.
- Insert the settings following the descriptions in the *Live Broadcasting Preferences*
- Click *OK*
- Go to *Options → Enable Live Broadcasting* or use the *Application shortcuts* to start broadcasting.

9.3 Live Broadcasting Preferences

Server Connection

- **Type**: Select the type of streaming server you want to connect with.
- **Host**: You can enter the host as either a host name or an IP address.
- **Login**: As provided by your streaming server provider. Without this, you will not connect successfully to the server. The default password for *Icecast* is `source` while the default password for Shoutcast is `admin`.
- **Mount**: A mount point is a unique name identifying a particular stream. For *Shoutcast* it is not necessary to specify a mount point. The setting must not be blank if you are using *Icecast*. Try the default `/mount` or `/live`. If you haven't been given a specific mount point you can usually make one up. It always begins with a / (slash) followed by a text without any special characters in it.
- **Port**: As provided by your streaming server provider. Most servers use the default port 8000.
- **Password**: As provided by your streaming server provider, unless you run your own radio server. It is required to establish the connection to the server and to start the broadcast.
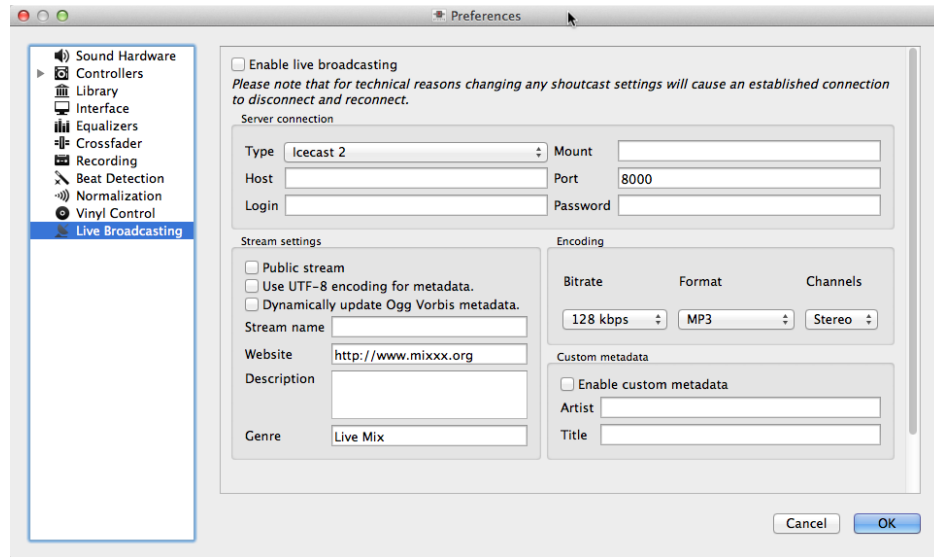
Figure 9.3: Mixxx preferences - Setting up live broadcasting

> **Warning:** Do not enter a *URL* as the host! `http://example.com:8000` does not work. Use `example.com` in the *Host* field and `8000` in the *Port* field instead.

Stream Setting

- **Public stream**: If enabled, this option adds your radio station to the Shoutcast/Icecast directory.

- **Enable UTF-8 metadata**: If enabled, this option fixes broken accented and foreign language symbols in *metadata*, assuming the streaming provider has configured the server to support UTF-8 metadata.

- **Stream name**: So, what's the name of your show?

- **Website**: The website you would like your listeners to visit.

- **Description**: Enter your DJ name and a short tagline.

- **Genre**: List the main genres you play. This attracts search hits on stream directories. Genre must not be blank.

Encoding

- **Bitrate**: Selecting a *bitrate* of 128 or 160 *kbps* is common and provides sufficient quality to your listeners. Higher bitrates will use a larger chunk in your Internet connection bandwidth to stream and for your listeners to receive the stream.

- **Format**: Mixxx supports streaming to Icecast servers either in *MP3* or *Ogg Vorbis* format, streaming to Shoutcast servers is supported in *MP3* format.

Custom metadata

By default, Mixxx broadcasts artist and title information of the files that you play to your listeners. You can disable this feature and use your own custom metadata. For technical reasons, broadcasting artist and title information is not supported for OGG streams.

- **Enable custom metadata**: Toggles custom metadata on and off.

- **Artist**: Insert your custom artist metadata here, your DJ name for example.

- **Title**: Insert your custom title metadata here.

Note: Due to licensing restrictions, MP3 streaming is not enabled by default. For information on how to enable MP3 streaming, go to the chapter *Activate MP3 streaming support*.

9.3.1 Icecast vs. Shoutcast

Both essentially serve the same purpose. An Icecast server can stream either *MP3* or *Ogg Vorbis*. However, although Ogg is more efficient and effective (you get higher-fidelity sound than MP3 at lower data rates) not all players can play Ogg streams. As a result MP3 is probably a safe choice unless you know your listeners can hear an Ogg stream successfully.

9.3.2 Broadcast directories

Generally your streaming server host adds your radio station to the Shoutcast/Icecast directory, if you enable the *Public Stream* option in *Preferences → Live Broadcasting → Stream Settings*.

- **Shoutcast radio directory**: www.shoutcast.com
- **Icecast radio directory**: dir.xiph.org

Often streaming hosts will run their own directories. Check your host's FAQ to find out. If you want to promote your streaming radio station even more, register at services like streamfinder.com. An overview of different internet radio directories is available at shoutcheap.com

9.4 Troubleshooting

- If you have trouble connecting to your streaming server, check the configuration in the *Live Broadcasting Preferences*.
- You may need the *LAME* libraries to stream in MP3. See *Activate MP3 streaming support*.
- You may have selected the *Ogg Vorbis* format that is unsupported by Shoutcast servers.
- You may need to check your firewall settings. Both Icecast and Shoutcast use two ports. If you are streaming on a port (for example, port 8000) then you need to open up the next port (port 8001) as well.
- You may need to configure port forwarding if you are behind a router or your router will block requests to your streaming port (for example, port 8000)

9.5 Activate MP3 streaming support

Due to licensing restrictions, *MP3* streaming is not enabled by default. In order to enable MP3 streaming you must install the *LAME* MP3 *codec* yourself. The following section explains how you can do that.

Hint: If you have activated MP3 streaming support, you'll be also able to record your mixes in MP3 format. Go to the chapter *Recording your Mix* for more information.

9.5.1 Activate MP3 streaming support on Windows

To activate MP3 streaming on Windows, follow these steps:

1. Download LAME 3.98.4 *binaries* from http://lame.bakerweb.biz/. The download includes versions for 32-bit and 64-bit Windows

2. Unpack the downloaded archive. You need a utility for manipulating archives like the free 7zip.

3. If you have the 32-bit version of Mixxx, copy the file `libmp3lame.dll` from the `x86` folder to the location you have installed Mixxx, for example `C:\Program Files\Mixxx\`

4. Alternatively, if you have the 64-bit version of Mixxx, copy the file `libmp3lame.dll` from the `x64` folder to the location you have installed Mixxx

5. Rename `libmp3lame.dll` to `lame_enc.dll` in the folder where you have installed Mixxx

6. Restart Mixxx

Hint: A common mistake when going through the process is not copying only `libmp3lame.dll` from the LAME zip file and then renaming that file to `lame_enc.dll`. It's deceiving but there is a file named `lame_enc.dll` in the LAME zip file. You don't want that file! Also, make sure the version of LAME you use (x86=32-bit vs. x64=64-bit) matches the version of Mixxx you use. Select *Help → About* to find out whether you have installed the 32-bit or 64-bit version of Mixxx.

Warning: Some websites like Audacity provide lame *binaries* too. Do not use these versions or Mixxx will show an error when activating live broadcasting and your stream will fail.

9.5.2 Activate MP3 streaming support on Mac OS X

Method A: Download

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

1. Download LAME 3.98.4 Intel (Mac OS X 10.5+ 32-bit & 64-bit)

2. Double-click on the downloaded zip file to unpack the file and you'll get an installer package file

3. Double-click on the installer package file and follow the step-by-step instructions in the installer

4. Restart Mixxx

Method B: Macports

Another easy way to activate 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.

1. Open a terminal and type the following commands:

```
sudo port install lame
```

2. Restart Mixxx

9.5.3 Activate MP3 streaming support on 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`.

1. Open a terminal and type the following commands:

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

2. Restart Mixxx

DJing With Mixxx

Mixxx was designed to be easy to learn for both novice and experienced DJs.

This part of the manual provides you with directions for importing and managing you music collection and playing your tracks.

10.1 Opening Mixxx

Once you've *installed Mixxx*, start by opening Mixxx and import your music to the Mixxx library.

Windows Double-click the Mixxx icon on the Desktop. Alternatively, browse your Windows start menu and click the Mixxx icon, or perform a search for `Mixxx.exe`.

Mac OSX Double-click the Mixxx icon in the `Applications` folder. Alternatively, drag the Mixxx icon to the dock and double-click it there, or perform a search for `Mixxx.app`.

GNU/Linux Simply type **mixxx** into the terminal, then hit `Return`. With some distributions like Ubuntu you can also double-click the Mixxx icon in the launcher. Alternatively, perform a search for `mixxx`.

10.2 Importing your audio files

Setup the music library The first time you run Mixxx, you are asked to select a directory where your music is stored. By default, the dialog points to a location where music files are typically held.

Click *Select Folder* and Mixxx will scan your music library. Depending on the size of your library this could take some time. All of the supported music files Mixxx detects will be listed in the *Library - View and edit your whole collection*.

Mixxx automatically detects newly added tracks 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. If you want to rescan at every launch, select *Preferences → Library → Rescan on startup*.
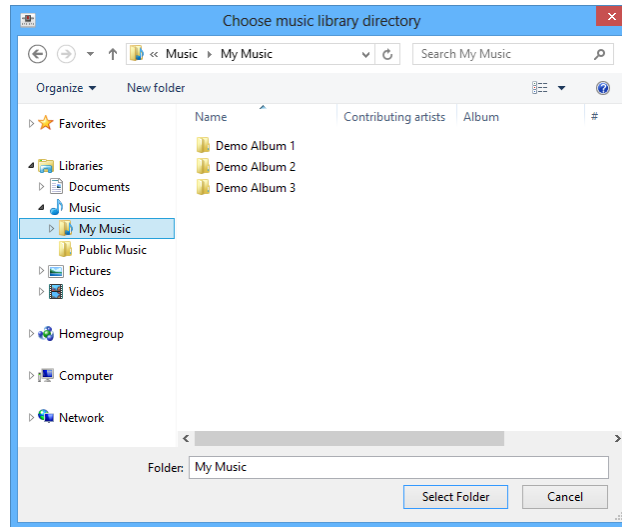
Figure 10.1: Mixxx running on Windows 8 - Choose music library directory dialog

> **Warning:** On Windows 7 and 8 the import dialog points to your Windows "Music" Library, a special-purpose virtual folder. You can **not** use these virtual folders. Select a regular folder instead, usually "My Music", like pictured above.

Compatible files Mixxx supports a variety of file formats: *Wave* (wav), *Aiff* (aiff, aif), *MP3* (mp3), *Ogg vorbis* (ogg), *FLAC* (flac), and *AAC* (aac, m4a) if supported by your *OS*. *DRM* protected files, such as m4p files purchased in the iTunes Store, are not supported.

AAC (M4A) is supported on Windows Vista and Mac OSX 10.5 onwards. On Linux, Mixxx does not have AAC (M4A) playback support enabled by default due to licensing restrictions.

See Also:

To enable playback of AAC (M4A) files, you can build Mixxx from source. http://www.mixxx.org/wiki/doku.php/compiling_on_linux#build_with_m4a_file_support

Changing the music directory The Mixxx music directory can always be changed at a later time in *Preferences → Library*. You might want to run a library rescan afterwards, select *Library → Rescan Library* in the menu.

Import external libraries If you have iTunes, Traktor or Rhythmbox installed, Mixxx allows you to access your tracks and playlists in the Mixxx library, see *iTunes, Traktor, Rhythmbox - Using external libraries*.

Import remote files To import audio files which are not in your music library directory, drag them directly from an external *file manager* or from the *Browse section* to the track list.

> **Note:** You can not drag complete folders to the library because currently Mixxx can not recursively scan folders for compatible music files.

Import music from CDs Mixxx can not play music from Audio CDs. Convert the content to compatible files in good quality and add them to them Mixxx library. See https://en.wikipedia.org/wiki/Ripping

10.3 Loading Tracks

Tracks can be loaded into a deck in several ways:

- Right-click the *library track table*: Right-clicking on a track in the table will present the options *Load in Deck 1* and *Load in Deck 2*, among others. Making either selection will load a track into a deck.

- By *Using a Keyboard* to load the selected track from library track table.

- Drag-and-drop from library track table: Dragging-and-dropping a track from the track table onto a waveform display will load a track into a deck.

- Drag-and-drop from external file browser: Dragging-and-dropping a track from an external file browser directly onto a waveform display in Mixxx will load that track. This function also works with some other applications. For example, on Mac OS X, dragging-and-dropping a track from iTunes onto one of Mixxx's waveform displays will load that track into a deck.

10.4 Finding Tracks (Search)

The *search function* searches for a match only in the current selected list (e.g. a playlist, a crate or even the whole library).

- Activate the search input field by pressing `CTRL` + `F` (Windows/Linux) or `CMD` + `F` (Mac). Alternatively click into the *search box*.

- Type your search term. Mixxx filters the tracks and retains only the ones that match the search term. Search terms can include an artist's name, a song title, BPM, etc.

- To clear the search string hit `ESC` or click the clear button right next to the input field.

- Hit `TAB` to cycle between the search and the list of results in the library. Use the `ARROW UP` and `ARROW DOWN` keys to scroll in the list of results.

Note: If the search input field has focus, the Mixxx keyboard shortcuts are disabled, see *Using a Keyboard*.

10.4.1 Using search operators

New in version 1.11. Search operators allow you to form more complex search queries. They allow you to limit certain search terms to particular properties of your tracks.

Mixxx supports the following filters:

- **Text filtering**: For artist, album, genre, title, composer, comment, key
- **Numeric filtering**: For year, track, bpm, duration, played, rating, bitrate

You can combine operators but there's no way to do an "OR" search right now. The following example list all tracks by "Danger" that are rated 4 or 5:

```
artist:Danger rating:>=4
```

Examples for text filtering	Examples for numeric filtering
artist: "com truise"	bpm:140
album:Danger	bpm: >140
genre: Trance	year: <2010
title: foo	bpm: >=140
composer: foo	rating: <=4
comment: foo	bpm: 140-150
	played: >10
Note it doesn't matter if you have space between the colon and the argument or not. Quotes must be used for multi-word text arguments.	Note that you can put a space between the colon but currently there must be no space between the operator and the number.

10.5 Previewing Tracks

New in version 1.11. To pre-listen to a track, activate the *Preview* column in a library view. Clicking the 🎧▶ icon in the library's *Preview* column loads the selected track in a special *Preview Deck* that will only output sound in the *headphones* channel. Click the 🎧⏸ icon to stop the playback.

Alternatively, select a track from the track list of the Mixxx library, drag the track to the waveform view of the *Preview Deck* and click the *Play* button next to the waveform.

To display the Preview deck, press CTRL + 4 (Windows/Linux) or CMD + 4 (Mac).

10.6 Waveform displays

There are two main waveform displays in Mixxx that are used to display the waveform of the tracks you are mixing. These are useful because they allow you to see features in a track (like a breakdown) before you hear them.

Depending on the skin Mixxx displays either separate waveforms (default) or parallel waveforms. Select your preferred appearance in *Preferences → Interface → Skin*.

Figure 10.2: Mixxx default skin (Deere) - Separate waveforms

With some skins the waveform displays are aligned parallel to each other in order to make *beatmatching* easier, as it is possible to beatmatch visually by aligning the beats that appear in each waveform.

The mouse can be used on the waveforms to scratch, spin-back or throw the tracks. Right-clicking and dragging on the waveforms allows you to nudge the track and make temporary pitch adjustments. Using the mouse-wheel on the waveform zooms the waveform in or out. You can choose whether or not to synchronize the zoom level between the decks in *Preferences → Interface → Waveform Display → Synchronize*. The waveform display is updated in realtime upon seeking.

Figure 10.3: Mixxx alternative skin (Latenight) - Parallel waveforms

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

10.7 Beatmatching and Mixing

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

Mixxx can match the tempo and align the beats for you but this requires an accurately detected BPM value and a correct beat grid for both tracks. To enable this feature, hit the *SYNC* button. To beatmatch manually, the tempo of the two tracks must be synchronized by adjusting the playback rate sliders. You can adjust the phase of the beats by right-clicking and dragging on either waveform display to temporarily speed up or slow down one of the tracks 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 track forwards or backwards, so they can be aligned with another track. See the chapter *Sync and Rate Controls*.

Two tracks are beatmatched once their tempos are matched and their beats beats are aligned. A "perfect" beatmatch is nearly impossible - there will always be a 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.

10.8 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 on the main speakers. Headphone cueing is useful because it allows a DJ to beatmatch the next track in their headphones before bringing it into their mix by sliding the crossfader.

Mixxx allows a DJ to route audio from either deck to their headphones by toggling either of the *Headphone* buttons in the mixer section of Mixxx's interface. See the chapter *The Mixer Section*.

10.9 BPM and Beat Detection

Previous versions of Mixxx were able to detect BPM values but unable to determine where the beats are. Consequently, the beat grids often looked unaligned. The DJ had to adjust the beat grid manually in oder to make use of auto-beatmatching via *SYNC* button. Changed in version 1.11: Mixxx comes with a new ultra-precise BPM and beat detector. The beat grid is adjusted after track analysis is finished. Manual adjustments are redundant in many cases because Mixxx knows where the beats are.

10.9.1 Analyser Settings

BPM and beat detection is a complex operation. Depending on your computer and the track's bitrate and duration this may take some time. By default Mixxx analyzes the complete track. To accelerate beat detection on slower computers, a "Fast Analysis" option is available. If enabled, the BPM is computed by analyzing the first minute of the track. In most cases this does not affect the beat detection negatively because most of today's dance music is written in a 4/4 signature with a fixed tempo.
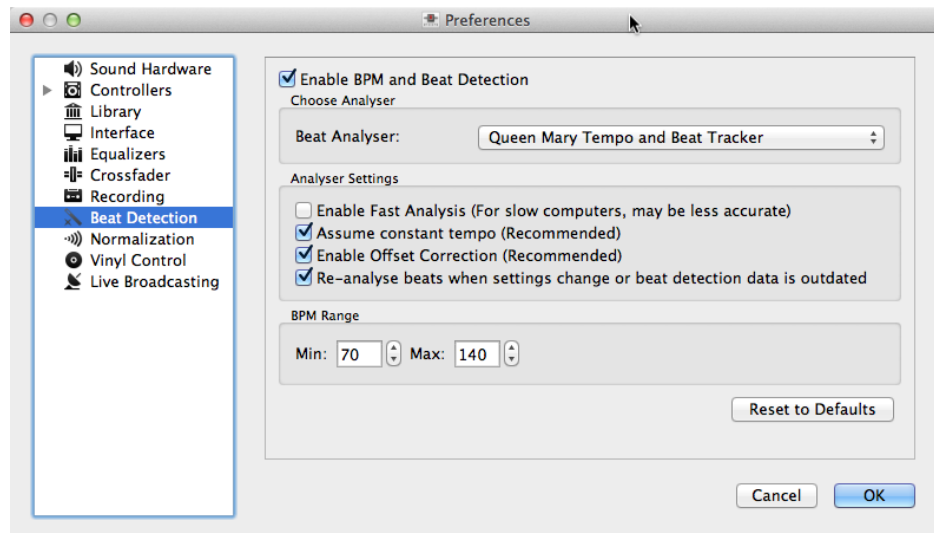
Figure 10.4: Mixxx preferences - BPM settings

The table below summarizes the beat detection settings:

Option	Description
Enable Fast Analysis	If enabled, BPM detection results from the first minute of audio.
Assume constant tempo	If enabled, Mixxx assumes that the distances between the beats are constant. If disabled, the raw beat grid obtained by the analyzer is presented. The latter is appropriate for tracks with variable tempo.
Enable Offset Correction	Prevents beat markers from being placed incorrectly.
Re-analyze beats when settings change or beat detection data is outdated	If enabled, Mixxx over-writes old beat grids from Mixxx before v1.11. Moreover, it will re-analyze the BPM if your beat detection preferences change or BPM data from 3rd party programs are present.

10.9.2 Correcting Beat Grids

There may be situations where BPM and beat detection do not result in a proper beat grid.

Typically, the detected BPM is correct but the analyzer has failed to detect the location of the first beat. Consequently, the beat markers are shifted, i.e. the beat markers are always a fixed distance from the true beat. To adjust the beat grid, cue the track before a real beat and click the *Beat-grid Adjust* button in the *Deck Options Button Grid*.

If the detected BPM is not accurate, the corresponding beat grid will also be inaccurate. A deviation of 0.02 BPM units from the correct BPM will cause beatgrid alignment issues on long tracks (e.g. a club mix). If this happens, your beatgrid may look aligned for the few minutes but you will notice a slight drift as the song goes on. Finding the correct BPM is easy in many cases - just follow the note below.

Note: If the detected BPM value is not sufficiently accurate but very close to an integer value, try to set the BPM value manually to the integer.

10.10 Recording your Mix

With the integrated recording feature you can record your mix as an audio file and listen to it later, distribute it as *Podcast* or burn it to CD. Mixxx records the master output - the audio you hear from the speakers including the microphone. New in version 1.11: Allows to specify a custom recordings directory Mixxx can record your mix
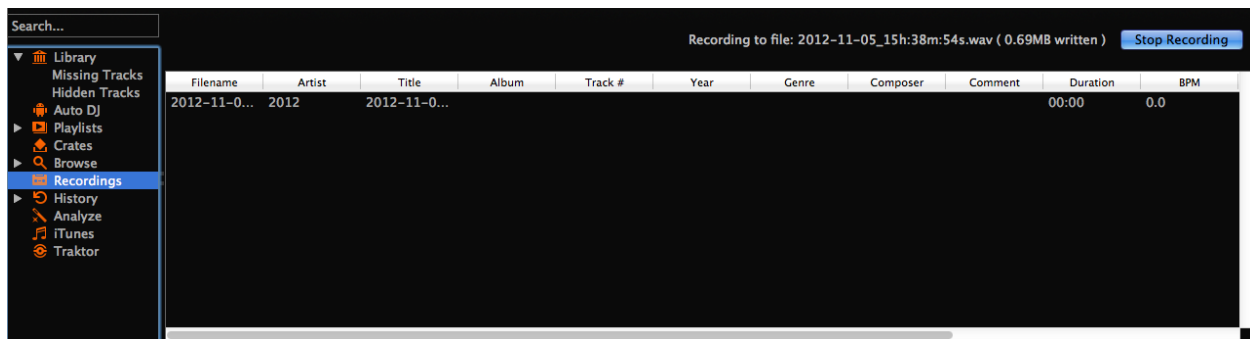

Figure 10.5: Mixxx library - Recordings view

in various audio formats and quality settings. You can split your recordings, generate *cue files*, choose a custom recording directory and even set your own *metadata*. By default, Mixxx saves your recordings as lossless *wav* files to a `Mixxx/Recordings` sub-folder in the Mixxx music directory. Before you start recording, we recommend that you adjust the settings in *Preferences → Recording*.

If you click on the *Recordings* icon in the sidebar of the Mixxx library, the track table to the right displays the content of your recordings directory. New recordings are automatically saved to this directory as well as CUE files if you choose to create them in the preferences.

10.10.1 Record your mix to disk

- Click on the *Recordings* icon in the sidebar to switch to the *Recordings* view
- Click the *Start Recording* button or click *Options → Record Mix* in the menu on top of the Mixxx application window.
- The display above the track table shows how much data has already been recorded.
- Perform your mix
- Click the *Stop Recording* button to stop the recording when the mix has finished.

Hint: You can instantly play your recording as track in Mixxx. Simply drag-and-drop the track to a deck.

10.10.2 Burn your recorded mix to a CD/DVD

- Select your recording in the *Recordings* view

- Right-click and select *Open in File Browser* to locate the file on your disk

- Now burn the recording to a CD/DVD using a 3rd-party program, for example CDBurnerXP for Windows or Burn for Mac OS X.

Note: Due to licensing restrictions, *MP3* recording is not enabled per default. In order to enable MP3 streaming you must install the *LAME* MP3 *codec* yourself. Go to the chapter *Activate MP3 streaming support* for more information.

10.11 Using Auto DJ for automatic mixing
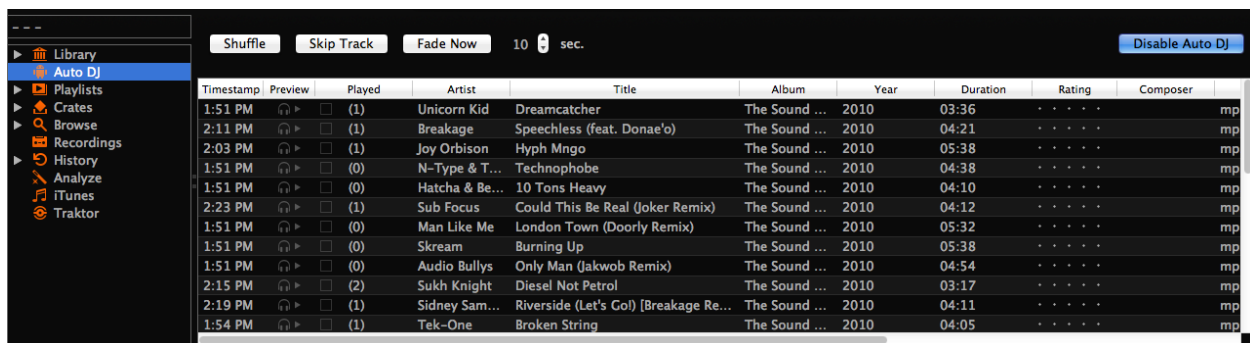
Figure 10.6: Mixxx library - Auto DJ view

Auto DJ allows you to automatically load tracks from the Auto DJ playlist when the current track is nearly finished, and crossfade into it. See *Auto DJ - Automate your mix*.

10.11.1 Loading tracks into Auto DJ

To play tracks automatically, they must first be loaded into the Auto DJ playlist. The Auto DJ playlist is empty by default.

There are several ways to load tracks into the Auto DJ playlist:

- Select single or multiple tracks from the library, a regular playlist or crate and drag them to the Auto DJ icon on the left.

- Select a regular playlist or crate, right-click with the mouse and select *Add to Auto DJ* from the mouse menu. This adds all tracks to Auto DJ.

- While in the Auto DJ view of the library, drag tracks from external file managers to the Auto DJ icon in the sidebar or to the Auto DJ track table on the right.
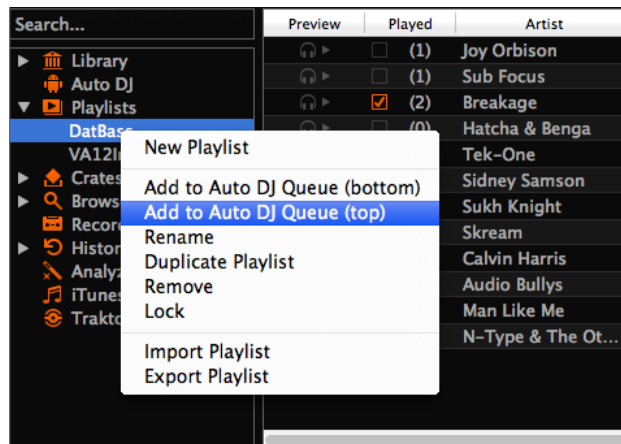
Figure 10.7: Mixxx library - Adding a playlist to Auto DJ

10.11.2 Playing tracks in Auto DJ

Now that you have loaded tracks into the Auto DJ playlist, you can activate Auto DJ as follows:

- Click on the *Auto DJ* icon in the sidebar to switch to the *Auto DJ* view of the library.
- Click the *Enable Auto DJ* button.
- The first tracks from your list are loaded into the decks and the playback starts.
- Mixxx will continue to automatically mix until the Auto DJ playlist is empty.
- Click the *Disable Auto DJ* button to stop the automatic mixing

Advanced Topics

11.1 Adding support for your MIDI/HID Controller

11.1.1 MIDI Scripting

In order to support the advanced features of many *MIDI* / *HID* controllers, Mixxx offers what we call MIDI Scripting.

It enables MIDI controls to be mapped to QtScript (aka Javascript/EMCAScript) functions stored in function library files, freeing Mixxx from a one-to-one MIDI mapping ideology. These user-created functions can then do anything desired with the MIDI event info such as have a single controller button simultaneously affect two or more Mixxx properties ("controls",) adjust incoming control values to work better with Mixxx (scratching,) display a complex LED sequence, or even send messages to text displays on the controller.

For more information, go to http://mixxx.org/wiki/doku.php/midi_scripting .

11.1.2 Controller Wizard

Todo

Add intro and proofread

1. Connect your controller(s) to your computer

2. Start Mixxx

3. Go to *Preferences → Controllers*

4. Select your device from the list of available devices on the left, and the right pane will change

5. Activate the *Enabled* checkbox

6. Click on *Learning Wizard* to open the selection dialog

7. Click any control in the Mixxx *GUI*

8. Alternatively, click the *Choose Control* button and choose one from the selection list

9. Move a control on your controller to map it. Repeat this as many times as you wish.

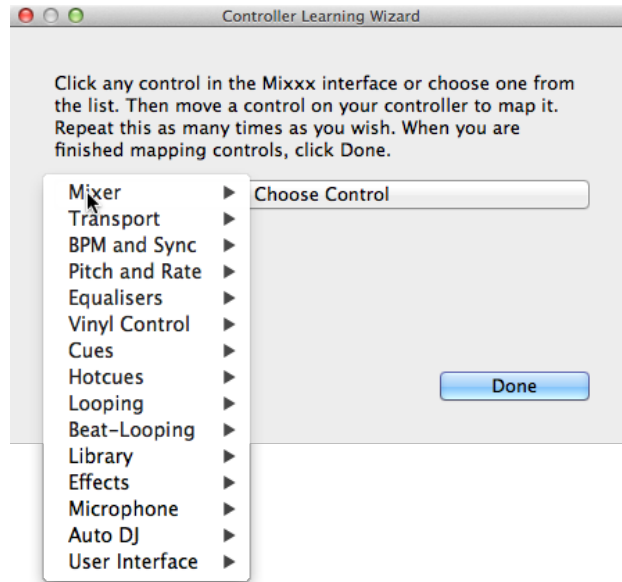10. When you are finished mapping controls, click *Done*

Figure 11.1: Mixxx Controller Wizard - Mapping a control

The Controller Wizard works only for *MIDI* devices. Currently you can't map modifier (shift) keys and platter rotations. Use *MIDI Scripting* instead.

11.2 Making a Custom Keyboard Mapping

The *default keyboard mappings* are defined in a text file which can be found at the following location:

- Linux: `/usr/local/share/mixxx/keyboard/en_US.kbd.cfg`
- Mac OS X: `/Applications/Mixxx.app/Contents/Resources/keyboard/en_US.kbd.cfg`
- Windows: `<Mixxx installation directory>\keyboard\en_US.kbd.cfg`

Depending on your systems language settings, Mixxx might use a different file as default, e.g. `de_DE.kbd.cfg` for German or `es_ES.kbd.cfg` for Spanish.

There are two ways to customize the default Mixxx keyboard mapping:

1. Edit your system's default mapping file directly, e.g. `en_US.kbd.cfg`.

2. Copy the default mapping file to the following location:

- Linux: `~/.mixxx/Custom.kbd.cfg`
- Mac OS X: `~/Library/ApplicationSupport/Mixxx/Custom.kbd.cfg`
- Windows: `%USERPROFILE%\Local Settings\Application Data\Mixxx\Custom.kbd.cfg`

Then edit this file and save the changes. On the next startup, Mixxx will check if `Custom.kbd.cfg` is present and load that file instead of the default mapping file. This has the advantage, that you can always revert back to the default mapping, just by deleting `Custom.kbd.cfg`.

For a list of controls that can be used in a keyboard mapping, see http://www.mixxx.org/wiki/doku.php/mixxxcontrols.

You can download and share custom keyboard mappings in the Mixxx User customizations forums.

11.3 Additional Effects via external Mixer Mode

Mixxx does not have an effects engine yet (work on one is in progress). To hold you over you can use some external tools. Using the *external mixer mode* you route each deck directly to 3rd party effect hosts.

The following examples are only intended to encourage experimentation, they are no definitive guidance.

11.3.1 Effects via AU Lab on Mac OS X
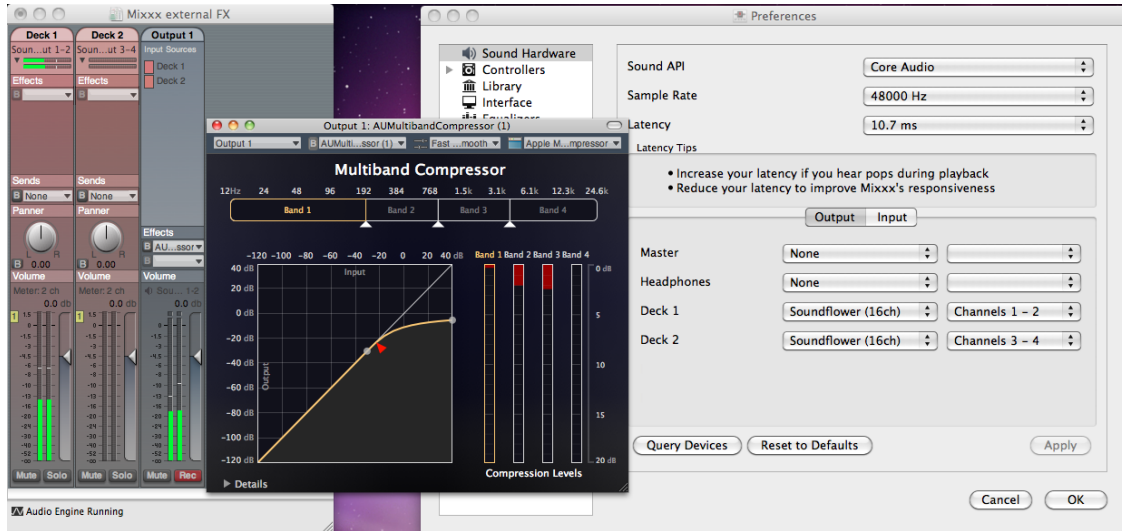
Figure 11.2: The Au Lab routing for external effects on Mac OS X

On Mac OS X there is a pretty simple and free way to give Mixxx access to the collection of AU/VST/MAS plugins that are installed on your system.

- Install the free Soundflower, a system extension for inter-application audio routing.
- Download AU Lab.app standalone from Apple (you will need an free Apple Developer Login though), go to the Downloads for Developers page and search for "AU Lab" to get it.

In Mixxx

- Go to *Preferences → Sound Hardware→ Output*
- Select for *Deck 1* the *Soundflower 16* device with *Channel 1-2*
- Select for *Deck 2* the *Soundflower 16* device with *Channel 3-4*
- Click the *Apply* button

In AU Lab

- Click on the + button to create a new configuration
- Add 2 stereo inputs tracks in the *Audio Input Tab*
- Add 2 stereo output tracks in the *Audio Output Tab*
- Click *OK*
- Change the audio input device to *Soundflower 16*
- Changethe audio output device for example to *Built-in Output*

- Click *Create document*
- In the *Output 1* channel, select an effect from the drop-down menu, for example *Apple > AUCompressor*

The effect should now react if you play a track in Mixxx.

11.3.2 Effects via JACK Rack on GNU/Linux
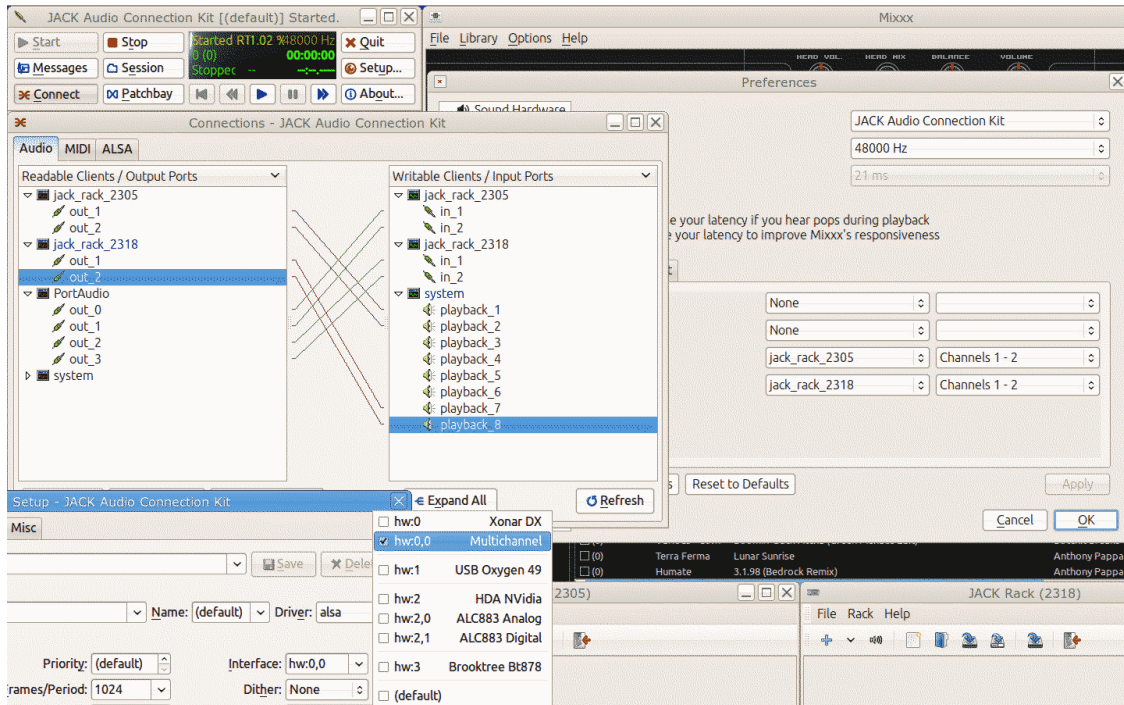
Figure 11.3: The Jack routing for external effects on GNU/Linux

Use 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.

Make sure the correct multichannel sound card has been selected in Jack (Jack settings visible bottom left). Note that Mixxx possibly labels its Jack ports as "Portaudio".

11.4 Deleting Your Library

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

Windows The Mixxx library is stored in the `%USERPROFILE%\Local Settings\Application Data\Mixxx\` folder. To delete your library on Windows, delete the `mixxxdb.sqlite` file in this folder.

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
```

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
```

> **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.

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 Wiki 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 Development 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:

1. Pick a bug off of the Easy Bug List

2. Talk to us on IRC for help on how to fix it.

3. Fix it! *Done!* Your name will now be on the Mixxx contributor list.

Appendix

13.1 Keyboard mapping table

Shortcuts let you work more efficiently. This table lists the default keyboard shortcuts for accessing Mixxx with an English keyboard layout. Depending on your language settings the defaults may be different. New in version 1.11: Auto DJ and Preview Deck shortcuts

Function	Deck 1	Deck 2	Master
Mixer			
Crossfade Left			G
Crossfade Right			H
Small Crossfade Left			Shift + G
Small Crossfade Right			Shift + H
Activate/Disable Effects Unit	5	0	
Headphone Cue (Pre-fader listen)	T	Y	
Bass Kill	B	N	
Playback			
Load selected track to deck	Shift + left	Shift + right	
Unload track from deck	Alt + Shift + left	Alt + Shift + right	
Playback	D	L	
Seek Backwards	A	J	
Reverse Playback	Shift + A	Shift + J	
Seek Forwards	S	K	
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 + ^	
Cue and Loop			
Set Cuepoint	Shift + D	Shift + L	
		Continued on next page	

Table 13.1 – continued from previous page

Function	Deck 1	Deck 2	Master
Cue	F	;	
Cue Go-to-and-stop	Shift + F	Shift + :	
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	
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 + ?	
Microphone			
Microphone Talkover			'
Auto DJ			
Shuffle Auto DJ playlist			F9
Skip next track in Auto DJ			F10
Fade to next track in Auto DJ			F11
Toggle Auto DJ on/Off			F12
Preview Deck			
Load Selected Track And Play			Alt+Return
Start/Stop			Return
Seek Backwards			Alt + Left
Seek Forwards			Alt + Right

See Also:

Mixxx allows you to customize the keyboard shortcuts. For more information, and to download a keyboard mapping image, go to *Using a Keyboard*.

13.2 Application shortcuts

Use these shortcuts to access features available in the menu on top of the application window.

Function	Key
File menu	
Load Track to Deck 1	Ctrl + O
Load Track to Deck 2	Ctrl + Shift + O
Library menu	
Add new Playlist	Ctrl + N
Add new Crate	Ctrl + Shift + N
View menu	
Show Samplers	Ctrl + 1
Show Microphone Section	Ctrl + 2
Show Vinyl Control Section	Ctrl + 3
Show Preview Deck	Ctrl + 4
Full Screen (Windows & Linux)	F11
Full Screen (Mac OS X)	Ctrl + Shift + F
Options menu	
Enable Vinyl Control 1	Ctrl + Y
Enable Vinyl Control 2	Ctrl + Z
Enable Live Broadcasting	Ctrl + L
Record Mix	Ctrl + R
Enable Keyboard Shortcuts	Ctrl + '
Exit Mixxx	Ctrl + Q
Developer menu	
Reload skin	Ctrl + Shift + R

Hint: The `Ctrl` key on Windows & Linux is equivalent to the `Command` key on Mac OS X. The `Alt` key on Windows & Linux is equivalent to the `Option` key on Mac OS X. Application shortcuts are not customizable.

Note: The Developer menu is available if Mixxx is started using the *Command line options*.

13.3 Command line options

Mixxx is designed to be as user-friendly as possible. As such, its command line options are only useful for development or debugging, as they make these tasks easier. Comment line options are case-sensitive.

Option	Description
[FILE]	Load the specified music file(s) at start-up. Each file you specify will be loaded into the next virtual deck. Supported file types: mp3, ogg, aiff, aif, wav, flac, and optional unprotected aac (m4a)
–resourcePath PATH	Top-level directory where Mixxx should look for its resource files such as MIDI mappings, overriding the default installation location.
–pluginPath PATH	Top-level directory where Mixxx should look for sound source plugins in addition to default locations.
–settingsPath PATH	Top-level directory where Mixxx should look for user settings files such as the library database and preferences config file.
–controllerDebug	Causes Mixxx to display/log all of the controller data it receives and script functions it loads
–developer	Enables developer-mode. Includes extra log info, stats on performance, and a Developer tools menu.
–locale LOCALE	Use a custom locale for loading translations (e.g 'fr')
-f, –fullScreen	Starts Mixxx in full-screen mode
-h, –help	Display this help message and exit

Example: To start Mixxx in Developer mode from a custom resource directory with *MIDI* and *HID* logging enabled, type the following line into the terminal and hit return:

```
./mixxx --controllerDebug --developer --resourcePath res
```

Glossary of Terms

AAC   Advanced Audio Coding (AAC) is a patented audio compression algorithm which uses a form of *lossy* data compression. Designed to be the successor to *MP3*, AAC generally achieves better sound quality at similar bit rates. While the .AAC extension is sometimes used for AAC-encoded files, they are typically saved with an .M4A file extension.

AIFF   Short for Audio Interchange File Format. High-quality digital audio file format, similar to .wav files. Contains CD-quality audio stored in a non-compressed, *lossless* format. AIFF files generally end with a .AIFF or .AIF extension.

balance   A balance control on a mixer allows you to adjust the balance between the left and right channel. The balance refers to the relative volume of the corresponding channel in a stereo audio signal.

bar   In musical notation, a bar (or measure) is a segment of time defined by a given number of beats. Typically, a piece consists of several bars of the same length.

beatgrid   A series of markers that point to the location of beats within the track. Beatgrids are used for advanced mixing functions such as track *sync*, precise effects synchronization, looping and accurate *BPM* representation.

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

binaries   Files that contain compiled computer code, which was compiled from source code. Source code, which is usually a bunch of text files, is processed with a program called a compiler. The compiler then generates a binary, which is something like an an .exe or a .dll file. By using binaries you are relieved of the task of having to compile the code by yourself.

bitrate   Describe the quality of an audio or video file. For audio data the bitrate is commonly measured in *Kbps*. For example, an MP3 audio file that is compressed at 192 Kbps will have a greater dynamic range and may sound slightly more clear than the same audio file compressed at 128 Kbps.

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.

bug report   Every software has bugs. When you come across a bug in this software, you should submit a report about it to the developers. They can use this to identify, replicate and fix the issue.

CDJ   CDJ is a term originally used to describe a line of CD players from Pioneer Electronics. Today CDJ generally refers to DJ CD players that work like a record player. They allow analog control of music using CDs, usually using a touch sensitive emulated vinyl control surface.

codec   Short for compressor/decompressor, a codec is any technology for compressing and decompressing audio and video data. Some popular codecs for computer audio include *MP3* and *Ogg Vorbis*.

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

cue A Cue or Cue point is a reference point in the track usually placed on the position the DJ wants the track to start at by default. This is useful to instantly jump to that point without seeking through the track.

cue sheet A cue sheet (or CUE file, CUE sheet, etc.) is a formatted plain text file which is used to provide index information for a large audio file. For example, it can be used to tell software extra details about the layout of a CD to burn.

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.

db Short for decibels. A Decibel is a logarithmic measurement of sound level. Whispering is around 25 dB while unbearable sound such as a jet engine is around 160 db. Rule of thumb: A volume increase of 10 dB is perceived as twice as loud.

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.

DRM Digital Rights Management (DRM) technologies attempt to control what you can and can't do with the media and hardware you've purchased. Typically, a DRM system either encrypts the data so that it can only be accessed in a way authorized by copyright holders or marks content with a digital watermark or similar method so that the content can not be freely distributed. For information about how you can get involved in activism against DRM, see Defective by Design.

fast-forward To cause something to advance at quicker than normal speed. In terms of audio software that means if you press the fast-forward button the audio will play with increased speed as long as the button is pressed. This is useful to seek through a track.

fast-rewind The opposite of *fast-forward*. If you press the fast-rewind button the audio will play in reverse with increased speed as long as the button is pressed.

file manager A computer program that organizes data files into groups and shows you where they are when you need to find them again. Popular file managers for the *operating systems* Mixxx supports are Explorer on Windows, Finder on Mac OS X and Nautilus on GNU/Linux.

FLAC Free Lossless Audio Compression (FLAC), a patent-free audio compression similar to *MP3* but *lossless* (i.e. there is no loss in audio quality when used). FLAC files generally end with a .FLAC extension.

flanger A flanger is an effect that mixes the input signal with a delayed copy of itself which leads to interferences in the signal and creates a comb-filter effect. By routing the output of the effect back into the input (feedback), the effect is enhanced.

GUI Short for "Graphical User Interface" and is pronounced "gooey". It refers to a user interface based on graphics (icons, pictures and menus) instead of text. In Mixxx, it uses a mouse, keyboard, or *MIDI* / *HID* controllers as input devices.

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.

HID Short for for Human Interface Device, a part of the USB specification. It specifies a device class (a type of computer hardware) for human interface devices such as keyboards, mice and game controllers.

HID controller An external hardware device that generates and transmits *HID* data to HID-enabled hardware or software (e.g. Mixxx). Connected to your computer via USB, HID controllers allow you to control audio appli-

cations among others. Many DJs prefer to control DJ software using physical knobs, faders, and wheels instead of using a computer keyboard. Besides the known DJ controllers also keyboards, mice and game controllers are some of the most popular HID devices. Compared to *MIDI* it also allows use of advanced features such as those found on modern *CDJs*, e.g. display screens and high-resolution jogwheels.

hotcue   Similar to the main *cue* point, a hotcue is a reference point in the track. DJs usually place hotcues at distinctive positions within a track such as drops, breaks or kicks and snares. Mixxx supports up to 36 hotcues.

HSV   HSV stands for hue, saturation, and value, and is also often called HSB (B for brightness). The HSV Color Model represents color in a way more suited to the human perception of color. For example, the relationships "stronger than", "darker than", and "the opposite of" are easily expressed in HSV. In contrast, the representation of the hardware-oriented *RGB* model is close to what most monitors show.

icecast   Icecast is free and *open-source* software that allows digital audio content to be broadcast to and from media player software, enabling the creation of Internet radio stations. Unlike *Shoutcast*, the software provides the ability to stream in free file formats like *Ogg Vorbis* and run your own directory server.

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

kbps   Short for kilobits per second. Here used to measure the quality of audio data. See *bitrate*

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.

kill switch   A button to turn on and off individual frequency ranges within a channel, i.e. treble, mid and bass. Useful for effects where the DJ drops a track out for a period or creates room for a transition.

LAME   LAME is a free software *codec* used to encode/compress audio into the *lossy MP3* file format.

latency   Latency refers to a short period of delay (usually measured in milliseconds) between when an audio signal enters and when it emerges from a system. Being able to lower the latency as much as possible makes a huge difference in responsiveness.

lossless   Used when describing audio compression algorithms, a lossless algorithm is one which results in no loss in audio quality when used.

lossy   Used when describing audio compression algorithms, a lossy algorithm is one which results in a loss in audio quality when used.

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

metadata   In general, any piece of information about a music file that Mixxx uses (e.g. title, artist, album, hotcue locations, loops, etc.). Various file metadata formats allow information such as the title, artist, album, and track number to be stored in the audio file itself, see https://en.wikipedia.org/wiki/ID3 . Mixxx stores additional metadata about music files in its database, like *beatgrid*, waveform data, *hotcues*, playlists, crates, number of plays, etc.

MIDI   Short for for Musical Instrument Digital Interface. A digital communications language and hardware specification enabling compatible electronic instruments, sequencers, computers, etc., to communicate with each other in a network.

MIDI controller   An external hardware device that generates and transmits *MIDI* data to MIDI-enabled hardware or software (e.g. Mixxx). Usually connected to your computer via USB, MIDI controllers allow you to control audio applications among others. Many DJs prefer to control DJ software using physical knobs, faders, and wheels instead of using a computer keyboard.

MP3   A patented audio compression algorithm which uses a form of *lossy* data compression. It is de-facto standard of digital audio compression for music. MP3 files generally end with a .MP3 extension.

Ogg Vorbis A patent-free audio compression algorithm which uses a form of lossy data compression. It is designed to provide for efficient streaming and manipulation of high quality digital audio. Ogg Vorbis files generally end with a .OGG or .OGA extension.

open-source Generically, open-source refers to a program for which the source code is available to the public for use and/or modification from its original design free of charge. Open source code is typically created as a collaborative effort in which programmers improve upon the code and share the changes within the community. Open source sprouted in the technological community as a response to proprietary software owned by corporations. For more information, see Wikipedia.

OpenGL An *operating system* feature used to draw hardware-accelerated graphics. Mixxx uses OpenGL to draw the waveform displays and spinning vinyl widgets.

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.

podcast A podcast is a feed of audio or video files made available for free or for purchase over the Internet. Podcast clients such as iTunes allow listeners to subscribe to the feed and automatically download content to their portable audio players as it becomes available.

quantization Quantization is the process of aligning notes and other events like loops or cuepoints so that they start or finish exactly on beats or fractions of beats.

ramping pitch bend Basically identical to the regular *pitch bend* with the difference that the pitch changes gradually, instead of all at once. Often uses for temporary pitch changes. It simulates the effect of touching a turntable to temporarily slow down or speed up a record.

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.

ReplayGain ReplayGain normalizes audio data in a non-destructive way, so the tracks in your music library don't all play at different volumes. Audio files are scanned by a psychoacoustic algorithm to determine the loudness of the audio data. ReplayGain information is stored as *metadata* in a digital audio file in order for the sound to be correctly played at the right level of loudness.

reverse Reverse plays a track backwards.

RGB The RGB color model is an additive color model in which red, green, and blue light are added together in various ways to reproduce a broad array of colors. The name of the model comes from the initials of the three additive primary colors, red, green, and blue.

shoutcast Shoutcast is proprietary software that allows digital audio content to be broadcast to and from media player software, enabling the creation of Internet radio stations.

soundcard Also known as an audio card, it is an internal computer expansion card or external expansion device that facilitates the input and output of audio signals to and from a computer. Today DJ-soundcards are usually connected via USB and have at least 2 stereo audio outputs to support *cueing*.

sync Sync allows you to automatically adjust a track's *tempo* and *phase* to be in sync with another deck that is playing.

tempo   The speed of a track measured in *bpm*.

timecode   Used here in conjunction with *vinyl control*. A special audio signal on a control vinyl or control CD (timecode media) that a computer can listen to in order to determine speed, direction and position of the playback.

track   A track is another word for a song.

url   Uniform Resource Locator. The address that defines the route to a file on an Internet server. URLs are typed into a Web browser to access Web pages and files, and URLs are embedded within the pages themselves as hypertext links. One example of a URL is http://www.mixxx.org .

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

volume   A term that refers to the degree of sound intensity or audibility; loudness. A volume control is used to adjust the output gain setting.

vu meter   The volume unit (VU) meter is used to show the relative levels of audio signals and is subdivided across channels. Basically it represents how 'loud' a sound from a channel is.

WAV   Standard digital audio file format used for storing waveform data; allows audio recordings to be saved with different sampling rates and bitrates; often saved in a 44.1 KHz, 16-bit, stereo format, which is the standard format used for CD audio. Wave files are not compressed, and are therefore *lossless*. Wave files generally end with a .WAV extension.

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 postition.

Automatically generated TODO list

The following list is automatically generated from `..   TODO::` directives in the text.

15.1 TODO items

Todo

Add intro and proofread

(The *original entry* is located in /home/sboswell/Src/mixxx-manual-bzr/source/chapters/advanced_topics.rst, line 46.)

Todo

Example of a todo

(The *original entry* is located in /home/sboswell/Src/mixxx-manual-bzr/source/chapters/quickstart.rst, line 14.)

Todo

Release Checklist:

- Disable the *For documentation writers* toctree from TOC in `/index.rst`
- Temp delete this todo in `/index.rst`
- Update the release and version tags in `/conf.py`
- Run **make html** to produce html output for http://mixxx.org/manual/
- Run **make latexpdf** to produce pdf output for distribution
- Run **make latexpdf** twice, or the TOC is missing from the resulting pdf

(The *original entry* is located in /home/sboswell/Src/mixxx-manual-bzr/source/index.rst, line 9.)

Guidelines for Mixxx Manual writers

16.1 What is the intended outcome of the manual?

A user who doesn't know Mixxx yet should be able to mix two tracks from its music library in the shortest possible time. Assuming he will be more motivated to explore the software and get creative.

(Future) characteristics of the Mixxx manual:

User-friendly Easy to use when, where, and how you need it. Examine, how someone else is using the application. Watch someone else use the manual (preferably someone who has never seen it before). Be consistent with the instructional design so users can follow a set pattern. Don't use the terms you use as a developer, try to find the terminology of the user.

Based on sound learning principles For example users should actually learn from it, not just refer to it. Use the KISS principle; keep it sweet and simple. Too much information can be overwhelming, so present one concept at a time. Explain simple features in a matrix.

Motivational Keeps users willing to push forward to higher levels. Present general concepts first to provide a frame of reference. Then move to more complex topics.

Group problems the user might hit in a particular task right there with the instruction for that task. Do not force a user to go to a separate "Troubleshooting" section. We can have such separate sections, but as a author you should duplicate pitfalls and problems and include a solution in the task.

16.2 Technical conventions

16.2.1 Line Widths

Please configure your editor to have a max column-width of 80-columns. While it is not a strict requirement, 80-column cleanliness makes it easy to tile multiple buffers of code across a laptop screen, which provides significant efficiency gains to developers.

16.2.2 Screenshots

Use english language settings when creating screen-shots of the Mixxx interface. This might change if we ever have true i18n. The preferred file format is PNG. **Don't add shadows** to application window screen-shots as they are added

automatically to the document with style-sheets.

Always include descriptive alt text and a figure description. The latter will be numbered in the PDF export. That sets them apart from the text below. Place screen-shots above the context you are going to explain.

Screenshots should only show the necessary area and not the entire screen where not necessary. Use annotation on the screenshot if necessary to emphasize elements, use color `#FF1F90` if possible for consistency.

`.. figure::`
    Use this directive to place images like Screen-shots. Example markup:

```
.. figure:: /_static/icons/mixxx-icon.png
   :width: 64px
   :align: center
   :height: 64px
   :alt: Alternate text on mouse over
   :figclass: pretty-figures

   Insert descriptive caption here
```

Nice screenshot tools with build-in editor for annotations:

- MacOSX: Skitch
- Linux: Shutter
- Windows: PickPic or Screenshotcaptor

Alternatively, import your screenshots into Inkscape, add annotations and export as .png to `/static`. Then save the original work as .svg to `/static` as well, so any future contributor can work on your annotations at a later time.

16.2.3 File naming

As the manual grows over the time with new versions of Mixxx and new screenshots, it is important to have files named consistently. Save files to the `/static` folder or create a sub-folder in there.

```
Mixxx-<major><minor>-<where>-<what>.png
```

This scheme makes it easy to know which version a screenshot was taken from and where it belongs and if it must replaced, like e.g. `Mixxx-111-Preferences-Recording.png`

> **Warning:** Do not include any dot in the file names of your screenshots your file name or you wont be able to generate PDF with LaTeX.

16.2.4 Double quotes

Use curly double quotes (" "). Avoid typewriter double quotes (" ") produced by the convenient quotation mark button on your keyboard. For details and key combinations, see Wikipedia and maxeroni.com .

16.2.5 Admonitions

The following admonitions are in use:

`.. note::`
    For anything that should receive a bit more attention. Example markup:

```
.. note::
   a note
```

.. hint::
>   For supplementary information that lightens the work load. Example markup:

```
.. hint::
   a helpful hint
```

.. seealso::
>   For references to other documents or websites if they need special attention. References to other documents can also be included in the text inline. Example markup:

```
.. seealso::
   a reference and inline link `Google <https://google.com>`_
```

.. warning::
>   Recommended over note for anything that needs to be done with caution. Example markup:

```
.. warning::
   a warning
```

.. todo::
>   Allow inserting todo items into documents and to keep a *automatically generated TODO list* Example markup:

```
.. todo::
   some task
```

16.2.6 Substitution

Replacement images or text can be included in the text. They are added through a substitution (aka alias). This may be appropriate when the replacement image or text is repeated many times throughout one or more documents, especially if it may need to change later.

All replacements are kept in the file shortcuts.rstext which is included at the beginning of each file in which a substitution is used.

To use an alias for the Mixxx logo, simply put the definition into shortcuts.rstext.

```
.. |logo| image:: /_static/icons/mixxx-icon.png
```


Using this image alias, you can insert it easily in the text with |logo|, like this:

For a text replacement the code looks similar:

```
.. |longtext| replace:: Loooooooong text is loooooooong
```

Using this text alias, you can insert it easily with |longtext|, like this: Loooooooong text is loooooooong .

See Also:

The substitute section in the docs. Here and also here

16.2.7 Headings

Normally, there are no heading levels assigned to certain characters as the structure is determined from the succession of headings. However, for the Python documentation, this convention is used which you may follow:

> \# with overline, for parts
>
> * with overline, for chapters
>
> = for sections
>
> – for subsections
>
> ^ for subsubsections
>
> " for paragraphs

Of course, you are free to use your own marker characters (see the reST documentation), and use a deeper nesting level, but keep in mind that most target formats (HTML, LaTeX) have a limited supported nesting depth.

16.2.8 Paragraph-level markup

These directives create short paragraphs and can be used inside information units as well as normal text:

`.. versionadded::` `version`
    This directive documents the version of the project which added the described feature. Example markup:

    ```
    .. versionadded:: 2.5 Add feature description.
    ```

`.. versionchanged::` `version`
    Similar to `versionadded`, but describes when and what changed in the named feature in some way (new parameters, changed side effects, etc.).

16.2.9 Other semantic markup

The following roles don't do anything special except formatting the text in a different style. Nonetheless, use them:

`:guilabel:`
    Any label used in the interface should be marked with this role, including button labels, window titles, field names, menu and menu selection names, and even values in selection lists. An accelerator key for the GUI label can be included using an ampersand; this will be stripped and displayed underlined in the output. To include a literal ampersand, double it. Example markup: *Cancel*

    ```
    :guilabel:`&Cancel`
    ```

`:kbd:`
    Mark a sequence of keystrokes. Example markup: STRG + G

    ```
    :kbd:`STRG` + :kbd:`G`
    ```

`:menuselection:`
    This is used to mark a complete sequence of menu selections, including selecting submenus and choosing a specific operation. Example markup: *Options → Enable Live Broadcasting*

    ```
    :menuselection:`Options --> Enable Live Broadcasting`
    ```

`:file:`
    The name of a file or directory. Example markup: Mixxx/Recordings

    ```
    :file:`Mixxx/Recordings`
    ```

16.2.10 Meta-information markup

.. sectionauthor:: name <email>
    Identifies the author of the current section and helps to keep track of contributions. By default, this markup isn't reflected in the output in any way. Example markup:

```
.. sectionauthor:: Jon Doe <name@domain.tld>
```

16.3 Resources

The user manual for Mixxx is written in reStructuredText (reST) format using Sphinx.

The Mixxx user manual repostitory contains the Sphinx source to generate the manual as found at http://mixxx.org/manual/latest/.

Sphinx and RST syntax guides:

- http://sphinx-doc.org/rest.html

- http://docutils.sourceforge.net/docs/ref/rst/restructuredtext.html

- http://www.siafoo.net/help/reST

- http://thomas-cokelaer.info/tutorials/sphinx/rest_syntax.html

Steps for use:

1. Install Sphinx (`python-sphinx` package in Debian/Ubuntu) and GNU make

2. Install Graphviz, needed to draw some diagrams (`graphviz` and `libgraphviz4` package in Debian/Ubuntu, `graphviz` on OSX macports, http://graphviz.org/Download_windows.php on Windows. There is no need to install python-graphviz)

3. Download Mixxx manual source from launchpad.net

4. Edit .rst files in `source/`

5. Run `make html`

6. Open the file `build/html/index.html` in your Web browser to view the results

Hint: Run `make linkcheck` in the terminal. Sphinx will validate all internal and external links in the document, and let you know if any links are malformed, or point to dead URLs.

Editors with Restructured Text (reST) syntax highlighting:

- Mac OSX: Sublime

- Linux: Kate or Retext

- Windows: Sublime or Ìntype

Still not enough? Even more resources: http://stackoverflow.com/questions/2746692/restructuredtext-tool-support

Index

O

P

Q

R

S

T

U

V

W