

serato™



SCRATCH  
LIVE

MIW  
MAC | WIN  
USB

RANE

## Intro

Refer to the separate Quick Start guide that was included in the box. If you lost yours, a new copy (along with this manual and all other documentation) may be downloaded at [www.rane.com/scratch.html](http://www.rane.com/scratch.html). This is also the place to check for Scratch LIVE software updates.

For the questions that the Quick Start guide doesn't answer, please read through these operating instructions so you will know how to get the most from Scratch LIVE. After you have finished reading the instructions, put them away in a safe place for future reference.

## Minimum system requirements

- One DJ mixer with at least 2 channels.
- At least one turntable or CD player.
- One USB 1 port that supports High Speed mode.
- Screen resolution 1024 x 768 or higher.
- Hard drive space for storing music.
- PC
  - Windows XP
  - Pentium 3 / 700 Mhz
  - 128 MB RAM.
- Mac
  - OSX 10.2.8
  - G4 / 500 Mhz
  - 128 MB RAM.

Note: no sound card is necessary.

## Check List

These items are included in the Scratch LIVE box:

- Scratch LIVE hardware box.
- Scratch LIVE software install disc.
- 2 (two) control CDs.
- 2 (two) control records.
- USB cable.
- 4 stereo RCA cables.
- This manual.

## Reference

This manual and the quick start are saved for easy reference in the Serato folder on your hard drive during software installation. Reading it requires Adobe Acrobat™ (free download) from [www.adobe.com](http://www.adobe.com).

## Optional Power Supply

Connect an external power supply to the Scratch LIVE hardware to power the THRU channels when USB power is not present. This allows you to play vinyl (or CDs) when the laptop is not present, useful for permanent installations or using more than one laptop. The power supply is 9 volts DC, 300 mA using a P6 type barrel plug.

— (5.5 mm) —  — + (2.5 mm)

(Radio Shack carries a compatible supply. Use model 273-1770 with Adaptaplug N).

## Important Safety Instructions

For the continued safety of yourself and others we recommend that you read the following safety and installation instructions. Keep this document in a safe location for future reference. Please heed all warnings and follow all instructions.

Do **not** use this equipment in a location where it might become wet. Clean only with a damp cloth.

This equipment may be used as a table top device, although stacking of the equipment is dangerous and not recommended.

Equipment may be located directly above or below this unit, but note that some equipment (like large power amplifiers) may cause an unacceptable amount of hum or may generate too much heat and degrade the performance of this equipment.

Only use attachments and accessories specified by Rane.

Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as spilled liquid, fallen objects into an opened chassis, exposure to rain or moisture, a dropped unit, or abnormal operation.

## Copyright Notices

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WEAR PARTS: This product contains no wear parts.

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# Getting Started

## 1) Install the software

### Mac

1. Insert the Software Installation CD and double-click the installer icon.

### Windows XP

1. Insert the Software Installation CD. If Setup doesn't start automatically, browse to the CD drive and run **setup.exe**.
2. Follow the on-screen instructions. Once the installation is complete, Scratch Live appears in the Start Menu under **All Programs > Serato > Scratch Live**.

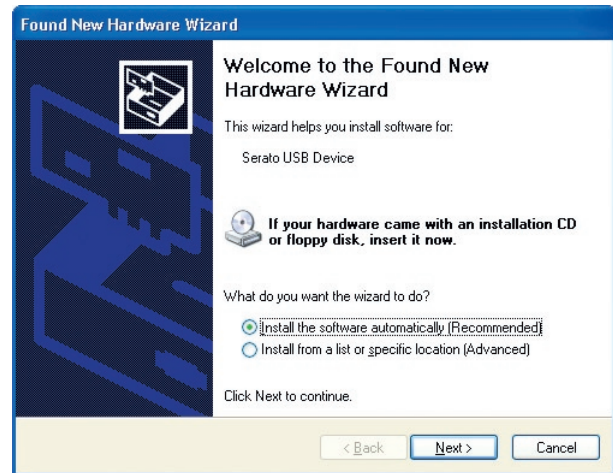
## 2) Connect and Install the Hardware

### Mac

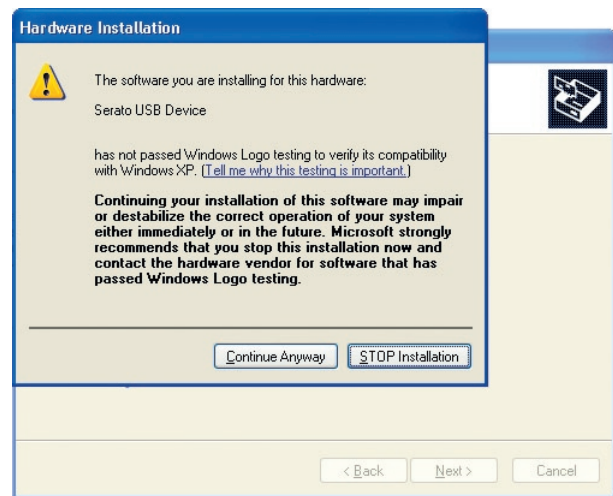
Mac users need only connect the hardware after installing the software. No extra hardware installation is required.

### Windows XP

1. Connect the Scratch LIVE Interface to your computer using the supplied USB cable.
2. The **Windows New Hardware Wizard** appears.



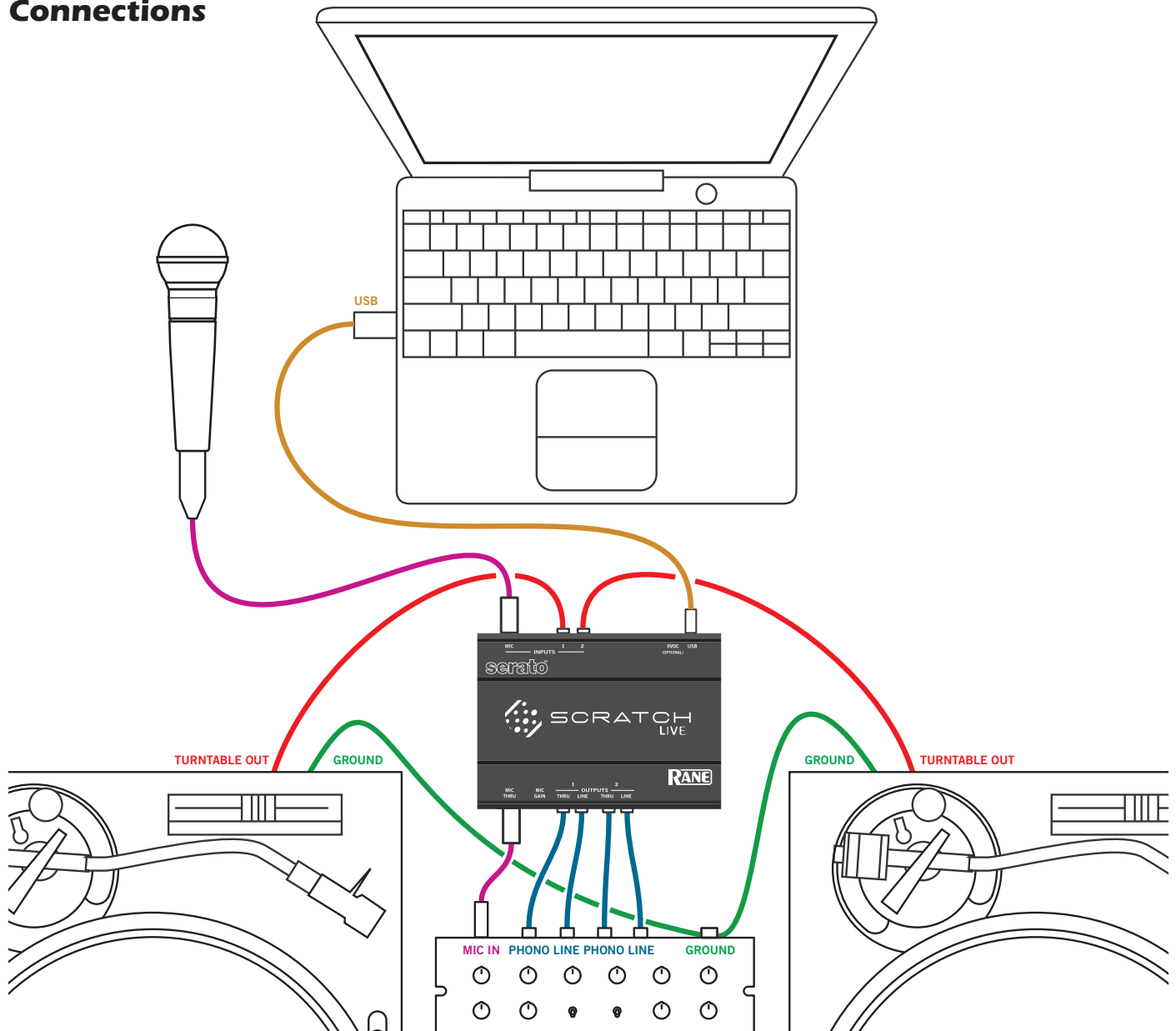
3. Insert the Software Installation CD if it's not already inserted, then press **Next**.
4. Windows may complain that the software driver is not digitally signed. Choose **Continue Anyway**.



5. Click **Finish** once installation is complete.



## Connections



*TIP: Whenever you are connecting input devices to your DJ mixer, turn down the master volume.*

1. Connect your turntables (or CD players) to **INPUTS 1** and **2** of the Scratch LIVE hardware.
2. Connect the **LINE OUTPUTS** of the Scratch LIVE hardware to the Line Inputs on your DJ mixer, check that those inputs are switched to line level.
3. Connect the **USB** cable from the Scratch LIVE hardware to your Mac or PC.

### Optional extra setup

- If you are using turntables, connect their ground wires to the grounding post of your DJ mixer.
- Connect the **THRU OUTPUTS** of the Scratch LIVE hardware to the mixer's phono inputs when using turntables; connect these to the mixer's line inputs when using CD players. This allows you to bypass Scratch LIVE to play normal records or CDs.
- Connect a **9VDC** external power supply (not included) to the Scratch LIVE hardware to power the THRU channels when USB power is not present. This allows you to play vinyl (or CDs) when the laptop is not present, useful for permanent installations or using more than one laptop. The power supply must be 9 volts DC, 300 mA minimum, using a P6 type barrel plug.
- Connect a dynamic microphone to the **MIC INPUT** of the Scratch LIVE hardware to scratch your own mic recordings as if they are on vinyl.
- Connect a  $\frac{1}{4}$ " to  $\frac{1}{4}$ " cable from the **MIC THRU** jack on the Scratch LIVE hardware to the microphone input on your DJ mixer to allow normal use of the microphone, independent of Scratch LIVE. (Note: power is required, either from the USB port or an external power supply.)

## Setting up your turntables and mixer

1. Set the tone arms to the specific recommendations of the cartridge used, such that the needle never leaves the record, but not heavy enough that it heats up significantly. Both produce poor tracking.
2. If the track plays backwards, you have connected the inputs from your turntables the wrong way around. Left=white, Right=red.
3. Grounding is extremely important when using Scratch LIVE. Make sure you have good connections from the ground wires of your turntables to the grounding post of your DJ mixer. All DJ mixers with turntable inputs have built in grounding points for this purpose. If you do not ground your turntables properly, the control signal will be noisy and the tracking of the record position will be erratic.

*Tip: If you experience any problems with playback, refer to setup on page Manual-14.*

## Setting up your CD players

Your CD players do not need any adjustment. Connect the output of your CD players to Inputs 1 and 2 of the Scratch LIVE hardware, and set the Input to Line Level in the Scratch LIVE **setup**.

## Starting the software

Close all other programs on your Mac or PC.

When you load Scratch LIVE for the first time, you will see the following screen:



When you first run Scratch LIVE, your library contains only the pre-installed tracks. To import your own tracks, drag files and folders directly from Windows Explorer (PC version) or Finder (Mac version) into the Scratch LIVE library.

You can also load files into Scratch LIVE by pressing the **import** button. Navigate the hard drive of your computer to locate your audio files. Click on these files (or folders containing files) and drag them onto the library icon (\* **All...**).



## Loading tracks

Click on the library (\* **All...**) to show all the tracks in the track list. Tracks must be loaded onto one of the decks before they can be played. To load a track on to one of the decks, drag the track from the track list on to either deck. You can drag the same track on to both decks to load it onto both turntables.

***TIP:** Use the keyboard shortcut **shift** ← to load the highlighted track on to the left deck, and **shift** → to load the highlighted track on to the right deck.*

## Playing your first track

To start playing a track, simply put the needle on the record and start the turntable. The track will start playing from the position dictated by the placement of the needle on the record – if you place the needle at the beginning of the record, the track will start playing from the beginning. You can skip through the track by picking up the needle and placing it further into the record, just as with regular records (This is known as needle dropping).

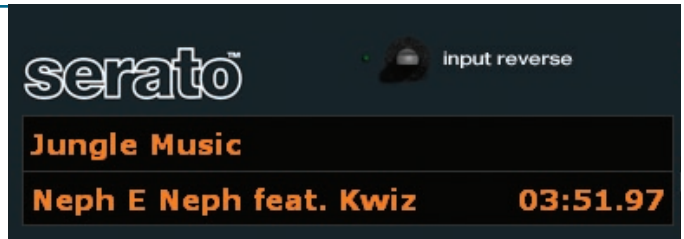
## Using Tool tips

Click on the **?** icon to enable tool tips. Tool tips provide a handy way to learn the various features of Scratch LIVE. Move the mouse over a section of the screen to bring up a context-sensitive tool tip.



## Playing tracks

When a track is loaded, the track name, artist and length are displayed in the track title bar, and the label view shows a solid black line. The track will start playing as soon as it detects the signal from the record (or CD).



### The control record

The control record has two sides. The first side is ten minutes long and contains the vinyl scroll section. The second side is 15 minutes long. Scratch LIVE can be configured to work with records playing at either 33 RPM or 45 RPM, depending on your preference.

The record has thin marks every minute, and a thicker mark every 5 minutes (when playing at 33 RPM). These marks are to assist you when using needle dropping to move through the track. These marks do not affect the playback of the track.

### Vinyl select

Vinyl select allows you to select and load tracks using only your turntables (or CD player) – no contact with the computer necessary! To use vinyl select with turntables, lift the needle of the record and drop it into the separated section at the end of the A side of the record. The record movement now controls the position within the track list – move the record to select the track you wish to play, and then move the needle back into the regular section of the record. The track you selected will be loaded onto the deck ready to play.

This feature is available to CD users. Go to track two on the control CD to access vinyl select. Find the track you want to load, and go back to track one. The track you selected will be loaded and ready to play.

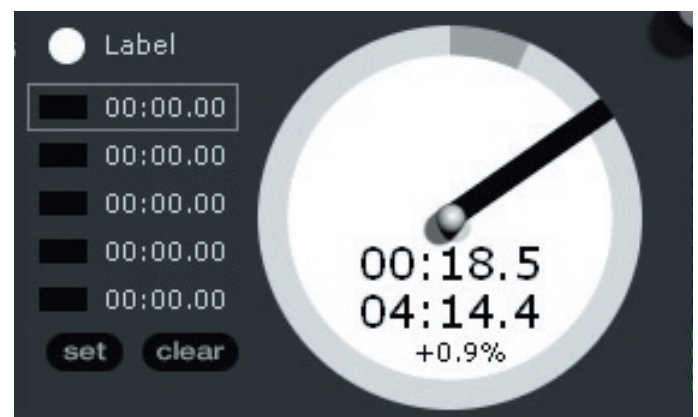
You can reverse the direction of vinyl select and set the sensitivity in the **setup** screen.

### Label view

Label view shows everything about the speed and position of a track. As the vinyl rotates, so does the line on the label. The circular progress bar around the edge is a visual representation of the position within the song, and will flash to warn you that the track is nearing its end. The time and remaining time are displayed in minutes and seconds. Actual turntable speed is also displayed as a percentage pitch shift.

You can also change the color of the record label by clicking on the **Label** button. This helps identify records of different types. The color information is stored with the file, and will be displayed every time the song is loaded. A small icon showing the label color is displayed to the left of the track information in the track list.

To set Markers for cue points, see page Manual-12.





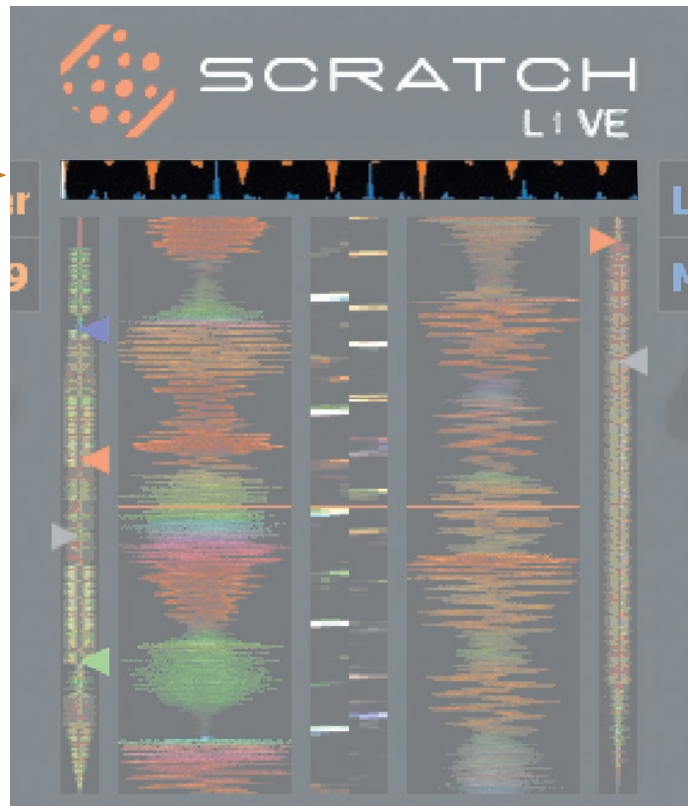
## Visual aids

When the track is playing several waveforms are displayed. Each shows a different aspect of the track being played.

### Tempo matching display

The Tempo Matching Display area provides a helpful tool for beat matching. Scratch LIVE detects the beats within the track, and places a row of orange peaks (for the track on the left side) above a row of blue peaks (for the track on the right side) in the Tempo Matching display area. When the two tracks are matched to the same tempo, the peaks will line up.

Note that the tempo display is aligned with the beginning of the bar, so the peaks keep their relative position as the track plays. This display does not show the relative timing of the beats, only the tempos of the tracks. The peaks will still line up when the tracks are playing at the same tempo, but are out of sync.



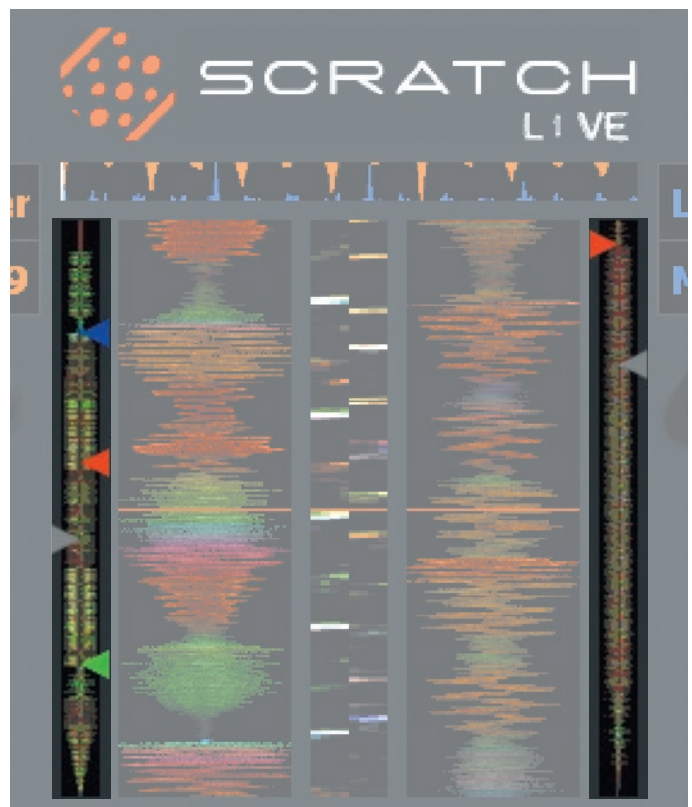
### Track overview display

This view provides a complete overview of the waveform of the track, and includes a marker to show the current position within the track.

This view is useful for finding transitions within the track. The waveform is colored according to the spectrum of the sound – red representing low frequency bass sounds, green representing mid frequency sounds and blue representing high frequency treble sounds.

You can jump to different positions within the track by clicking on the track overview display (Disabled in Absolute mode). See also: **Markers** on page Manual-12

**Absolute mode** on page Manual-9



Track overview display

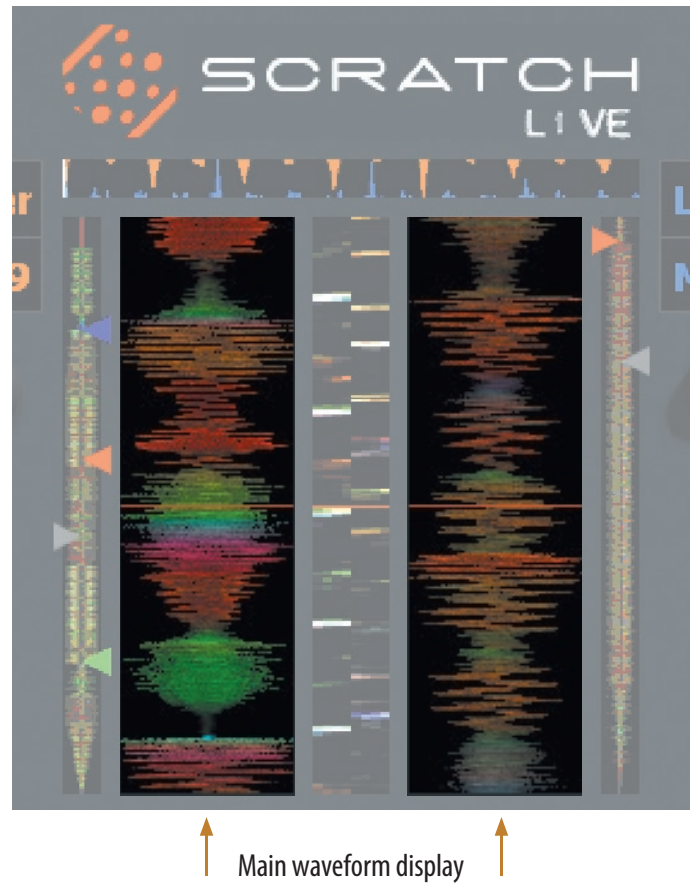
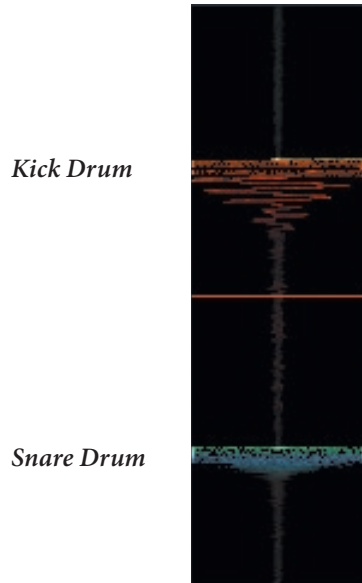
## Main waveform display

This view provides a close-up view of the track, including color-coding to show the frequency of the sound; red representing low-frequency bass sounds, green representing mid-frequency sounds and blue representing high-frequency treble sounds.

You can also switch to a three-band spectrum view by clicking on the wave form.

The Main Waveform is zoomed around the current position in the track.

**TIP:** Use the + and – keys to zoom in and out.



In the example above, the red part of the wave represents a kick drum, while the purple part represents a snare drum

## Beat matching Display

This view shows the position of beats within the track. When beat matching, this view helps align the downbeats of the two tracks. The markers are matched up when the two tracks are beat matched.

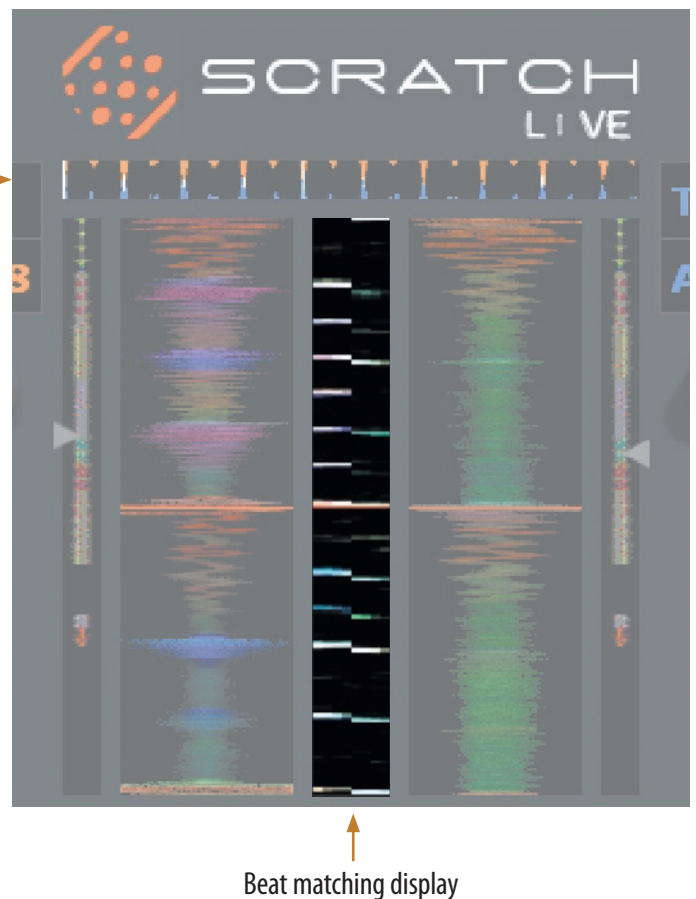
### Example

The following is a demonstration of using the visual aids to help beat match. In this example, the track that is playing is on the left deck, and the track to be mixed in is on the right deck.

1. Start the track playing on the right deck. After a few seconds, blue peaks appear in the **Tempo Matching** display.
2. Adjust the pitch of the right turntable until the blue peaks sit under the orange peaks in the **Tempo Matching** display. Once they are aligned, the two tracks have the same tempo.
3. Next align the markers in the **Beat Matching** display. Watch the color of the items passing by in the **Main Waveform** display. Remember that a kick or bass drum will be red in color, and a snare drum will be green or blue.

This technique will by no means guarantee perfect mixes, but may help to speed up the process of beat matching.

Tempo matching display →





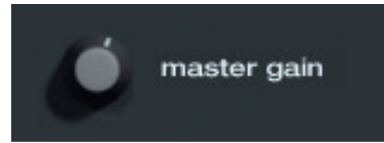
### Gain adjustment

Use the gain adjustment to balance the volume of the tracks in your library. Any adjustment made to the gain of a track is saved with the file, and will be reapplied to the entire track when it is loaded again.

### Playing files direct from audio CD

You can play tracks direct from an audio CD in your CD-ROM drive. When you insert the CD into your computer, it will appear under your Scratch LIVE library. Click on the CD and the tracks will be displayed in the track list.

*TIP: You should disable any third party CD auto-play functions before inserting the CD, as they may interfere with Scratch LIVE.*

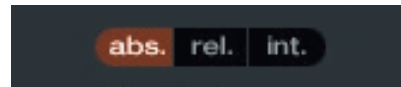


### Master Gain

The master output of Scratch LIVE can be controlled using the master gain control. This adjusts the output volume of all tracks played.

## Scratch LIVE modes

Scratch LIVE has three different modes of operation. You can switch between these modes by clicking the mode buttons near the label view.



### Absolute mode

Absolute mode is the default mode, and most closely resembles the properties of normal vinyl. The beginning of the track is mapped to the start of the record, and by picking up the tone arm and moving the needle to another part of the record (needle dropping) you can move to a different position within the track.

Absolute mode faithfully reproduces the movement of vinyl control records, including stops, starts, scratching, needle dropping, rubbing and other turntablist techniques.

When you reach the end of the record, Scratch LIVE automatically switches to Internal mode. This prevents very long tracks from stopping when you run out of record.

**Note: Be careful when scratching near the end of the record not to accidentally go past this point and into Internal mode – the track will no longer respond to record movement!**

### Relative mode

Relative mode observes the relative forward and backward movement of the record, but does not take into account the position within the record. Relative mode disables needle dropping, but allows skip free scratching.

### Internal mode

Internal mode allows you to play tracks without external vinyl (or CD player) control. Internal mode has a start / stop function and virtual pitch slider. Holding down the **shift** key moves the pitch slider slowly. Holding the **ctrl** key and clicking on the pitch slider resets it to 33 rpm or 45 rpm, depending on which you are closest to at the time.

Scratch LIVE automatically switches to Internal mode when the end of the controller record is reached.

If you switch from Absolute or Relative mode into Internal mode, Scratch LIVE automatically adjusts the pitch to maintain the playback speed as set by the turntable.

Note : If you play a track in Internal mode, and then switch to Absolute or Relative mode, the pitch adjustment will be dictated by the turntable, so there will be a jump in pitch unless they are perfectly matched.

### Repeat

The repeat button (circular arrow) does what you think — it repeats the song as soon as it is finished.



## Organizing your music

Scratch LIVE can support an unlimited number of tracks – the only limitation is the size of the hard drive of your computer. A number of features are included to help you to keep your music organized and find songs quickly and easily.

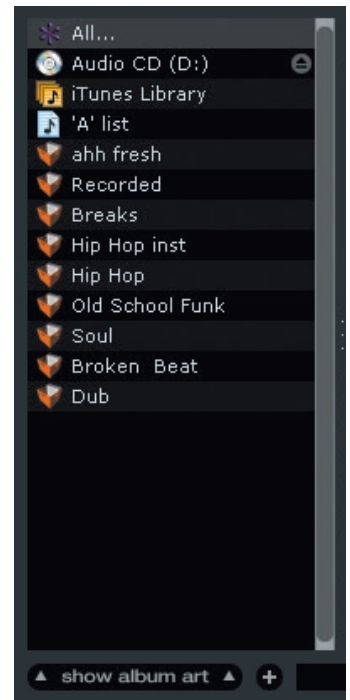
### Grouping tracks into crates

Scratch LIVE supports several ways of organizing and sorting your file library. iTunes™ users will notice that Scratch LIVE automatically incorporates your existing iTunes library and playlists.

Scratch LIVE uses digital “crates” for quick access to your favorite collections. There is no limit to the number of crates you can create, and any given track can be placed in multiple crates. For example, you could organize your files into the following crates, where any one track would be filed in more than one crate:

- Hip Hop
- UK Hip Hop
- French Hip Hop
- Instrumental Hip Hop
- Old School Hip Hop
- Hip Hop LPs

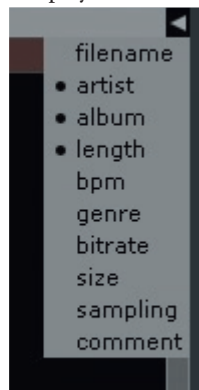
To make a new crate, click the **+** button. To rename a crate, double click the crate name. You can change the order of tracks within a crate by dragging them up or down.



### Sorting your files

The track information display area can be customized to display the columns listed below:

- Filename
- Artist
- Album
- Length
- BPM
- Genre
- Bitrate
- Size
- Sampling Rate
- Comment



Click on the column button ◀ and the names to select which columns you want to display.

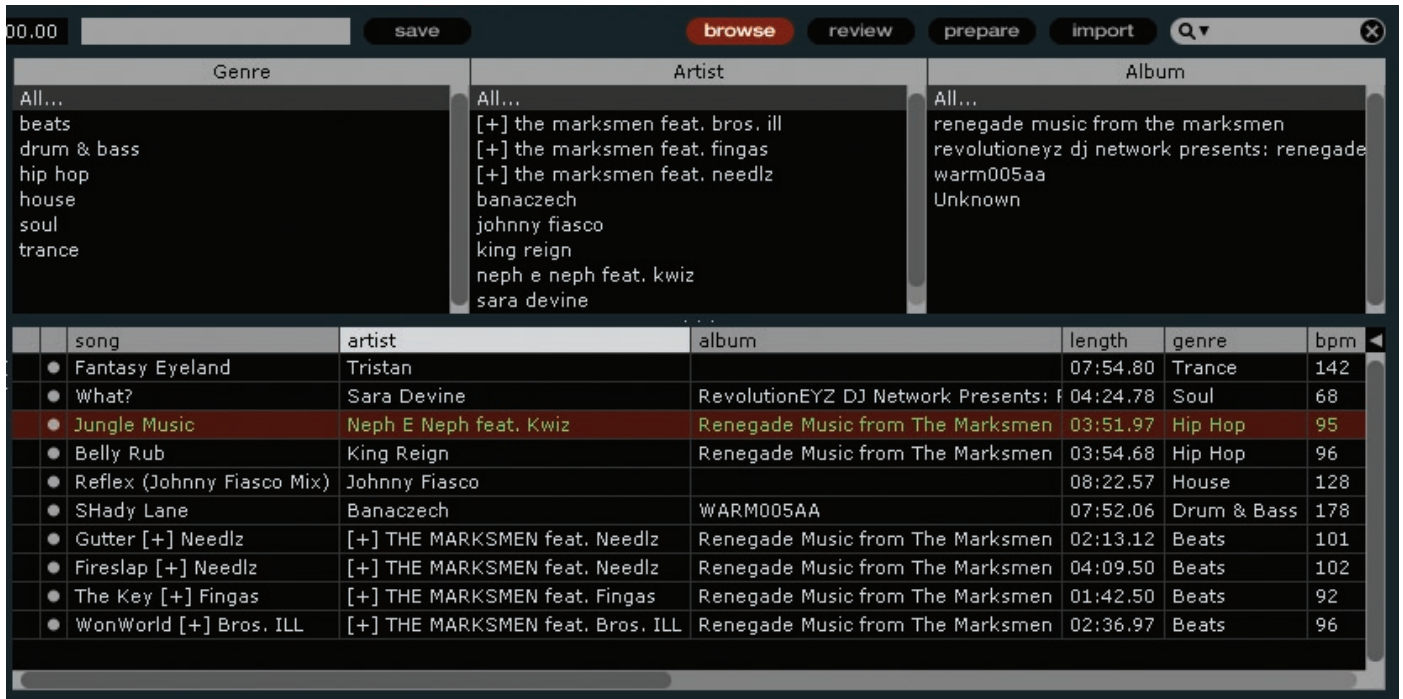
To sort your library by a column, click the column header so it highlights. For example, clicking on the album column header will sort your library alphabetically by album title. To move a column, drag the header to the left or right. To resize a column, click on the column boundary and drag it to the left or right.

|   | song                       | artist                           | album                                | length   | genre       | bpm |
|---|----------------------------|----------------------------------|--------------------------------------|----------|-------------|-----|
| • | Fantasy Eyeland            | Tristan                          |                                      | 07:54.80 | Trance      | 142 |
| • | What?                      | Sara Devine                      | RevolutionEYZ DJ Network Presents: F | 04:24.78 | Soul        | 68  |
| • | Jungle Music               | Neph E Neph feat. Kwiz           | Renegade Music from The Marksmen     | 03:51.97 | Hip Hop     | 95  |
| • | Belly Rub                  | King Reign                       | Renegade Music from The Marksmen     | 03:54.68 | Hip Hop     | 96  |
| • | Reflex (Johnny Fiasco Mix) | Johnny Fiasco                    |                                      | 08:22.57 | House       | 128 |
| • | SHady Lane                 | Banaczech                        | WARM005AA                            | 07:52.06 | Drum & Bass | 178 |
| • | Gutter [+] Needlz          | [+] THE MARKSMEN feat. Needlz    | Renegade Music from The Marksmen     | 02:13.12 | Beats       | 101 |
| • | Fireslap [+] Needlz        | [+] THE MARKSMEN feat. Needlz    | Renegade Music from The Marksmen     | 04:09.50 | Beats       | 102 |
| • | The Key [+] Fingas         | [+] THE MARKSMEN feat. Fingas    | Renegade Music from The Marksmen     | 01:42.50 | Beats       | 92  |
| • | WonWorld [+] Bros. ILL     | [+] THE MARKSMEN feat. Bros. ILL | Renegade Music from The Marksmen     | 02:36.97 | Beats       | 96  |



## Using the song browser

The song browser allows you to filter your song list by genre, artist and album. To turn the song browser on or off, click the **browse** button. The browsing feature is available for the library and playlists.



| Genre       | Artist                           | Album                                       |
|-------------|----------------------------------|---|
| All...      | All...                           | All...                                      |
| beats       | [+] the marksmen feat. bros. ill | renegade music from the marksmen            |
| drum & bass | [+] the marksmen feat. fingas    | revolutioneyz dj network presents: renegade |
| hip hop     | [+] the marksmen feat. needlz    | warm005aa                                   |
| house       | banaczech                        | Unknown                                     |
| soul        | johnny fiasco                    |   |
| trance      | king reign                       |   |
|             | neph e neph feat. kwiz           |   |
|             | sara devine                      |   |

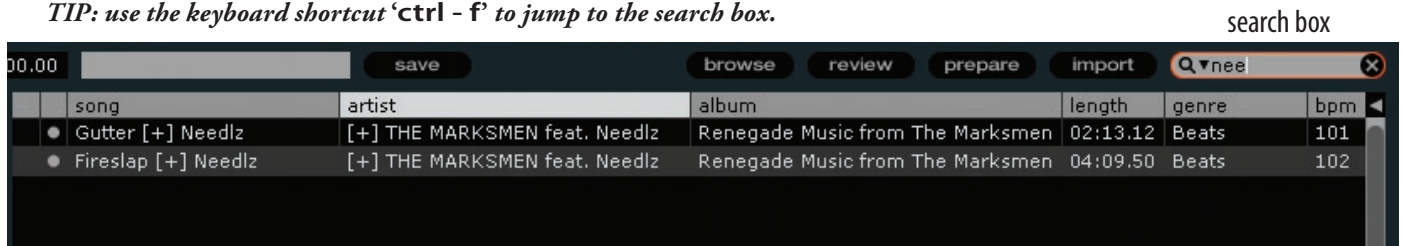
  

| song                         | artist                           | album                                   | length          | genre          | bpm       |
|------------------------------|----------------------------------|---|-----------------|----------------|-----------|
| ● Fantasy Eyeland            | Tristan                          |   | 07:54.80        | Trance         | 142       |
| ● What?                      | Sara Devine                      | RevolutionEYZ DJ Network Presents: F    | 04:24.78        | Soul           | 68        |
| ● <b>Jungle Music</b>        | <b>Neph E Neph feat. Kwiz</b>    | <b>Renegade Music from The Marksmen</b> | <b>03:51.97</b> | <b>Hip Hop</b> | <b>95</b> |
| ● Belly Rub                  | King Reign                       | Renegade Music from The Marksmen        | 03:54.68        | Hip Hop        | 96        |
| ● Reflex (Johnny Fiasco Mix) | Johnny Fiasco                    |   | 08:22.57        | House          | 128       |
| ● SHady Lane                 | Banaczech                        | WARM005AA                               | 07:52.06        | Drum & Bass    | 178       |
| ● Gutter [+] Needlz          | [+] THE MARKSMEN feat. Needlz    | Renegade Music from The Marksmen        | 02:13.12        | Beats          | 101       |
| ● Fireslap [+] Needlz        | [+] THE MARKSMEN feat. Needlz    | Renegade Music from The Marksmen        | 04:09.50        | Beats          | 102       |
| ● The Key [+] Fingas         | [+] THE MARKSMEN feat. Fingas    | Renegade Music from The Marksmen        | 01:42.50        | Beats          | 92        |
| ● WonWorld [+] Bros. ILL     | [+] THE MARKSMEN feat. Bros. ILL | Renegade Music from The Marksmen        | 02:36.97        | Beats          | 96        |

## Searching

Scratch LIVE includes a search function to help you find files quickly and easily. Enter text into the search box and Scratch LIVE will automatically find as you type.

*TIP: use the keyboard shortcut 'ctrl - f' to jump to the search box.*

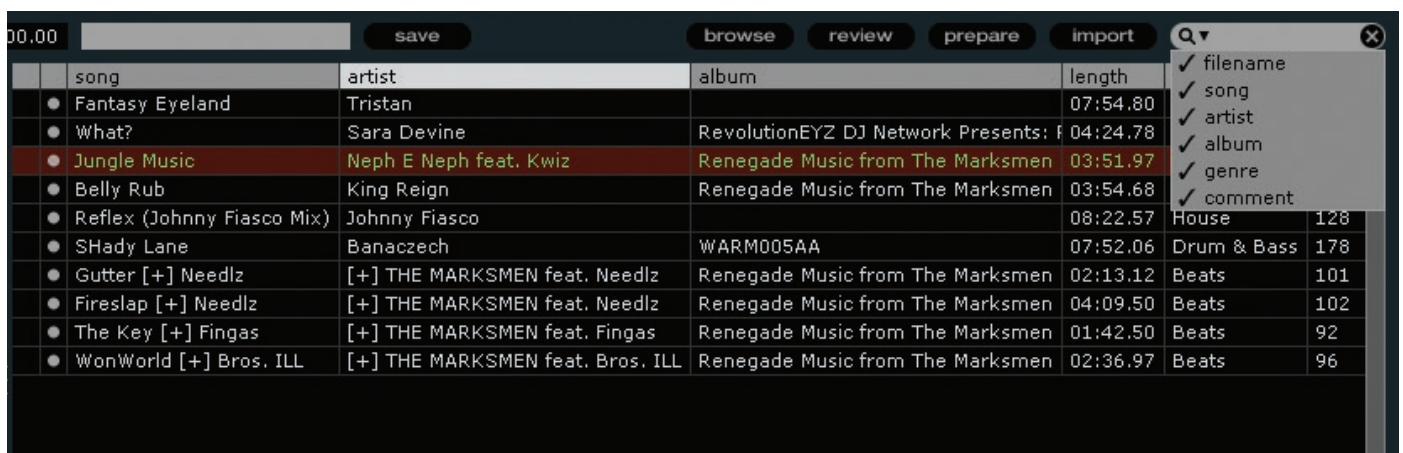


search box

| song                  | artist                        | album                            | length   | genre | bpm |
|-----------------------|-------------------------------|----------------------------------|----------|-------|-----|
| ● Gutter [+] Needlz   | [+] THE MARKSMEN feat. Needlz | Renegade Music from The Marksmen | 02:13.12 | Beats | 101 |
| ● Fireslap [+] Needlz | [+] THE MARKSMEN feat. Needlz | Renegade Music from The Marksmen | 04:09.50 | Beats | 102 |

To select which fields the search function will look through, click on the left hand side of the search box. The drop down menu shows which fields are currently being used.

Press the **x** button on the right of the search box to clear the search. The search function is available for the library and playlists.



| song                         | artist                           | album                                   | length          | genre       | bpm |
|------------------------------|----------------------------------|---|-----------------|-------------|-----|
| ● Fantasy Eyeland            | Tristan                          |   | 07:54.80        |             |     |
| ● What?                      | Sara Devine                      | RevolutionEYZ DJ Network Presents: F    | 04:24.78        |             |     |
| ● <b>Jungle Music</b>        | <b>Neph E Neph feat. Kwiz</b>    | <b>Renegade Music from The Marksmen</b> | <b>03:51.97</b> |             |     |
| ● Belly Rub                  | King Reign                       | Renegade Music from The Marksmen        | 03:54.68        |             |     |
| ● Reflex (Johnny Fiasco Mix) | Johnny Fiasco                    |   | 08:22.57        | House       | 128 |
| ● SHady Lane                 | Banaczech                        | WARM005AA                               | 07:52.06        | Drum & Bass | 178 |
| ● Gutter [+] Needlz          | [+] THE MARKSMEN feat. Needlz    | Renegade Music from The Marksmen        | 02:13.12        | Beats       | 101 |
| ● Fireslap [+] Needlz        | [+] THE MARKSMEN feat. Needlz    | Renegade Music from The Marksmen        | 04:09.50        | Beats       | 102 |
| ● The Key [+] Fingas         | [+] THE MARKSMEN feat. Fingas    | Renegade Music from The Marksmen        | 01:42.50        | Beats       | 92  |
| ● WonWorld [+] Bros. ILL     | [+] THE MARKSMEN feat. Bros. ILL | Renegade Music from The Marksmen        | 02:36.97        | Beats       | 96  |

## The prepare window

The prepare window is a holding area for tracks, much like preparing a set by lifting records part way out of your record bag. You can drag tracks from the main track list into the prepare window. These tracks will be removed from the prepare window once they have been played. All tracks in the prepare window will be discarded when you exit Scratch LIVE.

## The review window

The review window shows the tracks you have recently played in the order in which they were played. Press the clear button to reset the list of recently played tracks.

## Editing file information

Much of the information associated with each file can be edited from within Scratch LIVE. Double click on the attribute within the main library to edit the attribute. Filename, length, size, bit rate and sampling cannot be edited. This information is saved in the file itself.

## Supported file types

Scratch LIVE supports fixed and variable bit rate .MP3, .AIFF, and .WAV file types. You can also play audio direct from CD. iTunes™ library and iTunes™ playlists can be automatically imported in the **setup** screen by clicking **read iTunes library**.

## Display album art

MP3 files can contain album art information. To display this album art in Scratch LIVE, click the **show album art** button.

## Markers

You can set up to five visual markers within each track to help you to find important cue points.

Use the **set** button to place a marker.

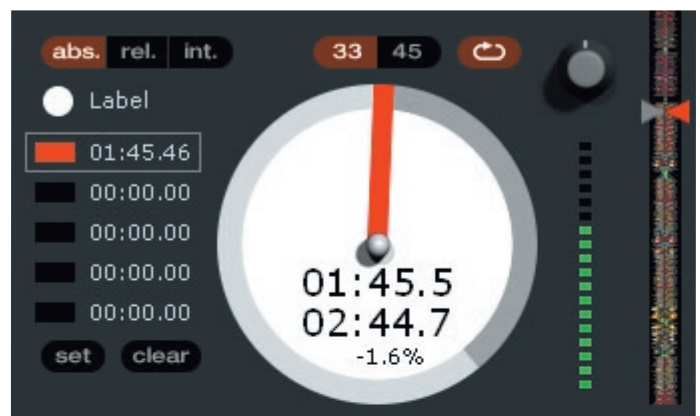
You will notice that the stripe on the label view jumps to the 12 o'clock position and changes color when you set a marker – you are at the marked point when the stripe is one solid color and at the 12 o'clock position.

As the record plays on beyond the position of the marker, the colored bar will shorten by a fifth for each rotation. Likewise, as you approach the marker, the color will grow by a fifth each rotation. For example, the picture below right shows the record just before the end of the 5th rotation before the marker.

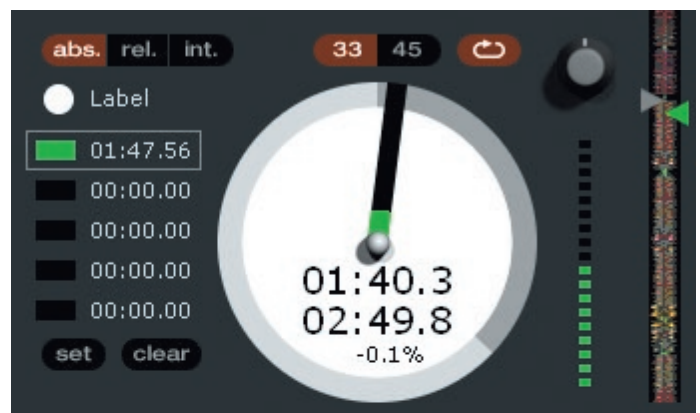
Each marker can have a different color. To change the color of a marker, click on the colored square and choose a new color from the drop down menu.

If you click the **set** button while an existing marker is selected, the marker will be replaced. Use the **clear** button to remove a selected marker.

Markers are automatically ordered by their position within the track. If you load the same track on to both decks, you will be able to add or modify markers from either deck.



*The stripe is a solid color at the marker point*



*The stripe grows a fifth by each rotation closer to the marker point*



## Keyboard shortcuts

The following actions can be accessed directly from the computer keyboard.

| Key  | Action  |
|--|---|
| <b>ctrl</b> - ← or <b>shift</b> - ←  | Load the highlighted song to the left deck.   |
| <b>ctrl</b> - → or <b>shift</b> - →  | Load the highlighted song to the right deck.  |
| <b>ctrl</b> - /  | Swap the two currently playing tracks from one deck to the other.   |
| <b>ctrl</b> - L  | Locate the current track. This will highlight the track you most recently loaded. Pressing ctrl - L again will alternate between the tracks recently loaded on both decks.  |
| <b>ctrl</b> - r  | Reveal - the highlighted song is opened in a file browser.  |
| <b>ctrl</b> - f  | Find - moves the cursor to the search box.  |
| <b>Tab</b>   | Switch focus to the song list.  |
| <b>ctrl</b> - a  | Select all.   |
| <b>ctrl</b> - c  | Copy text in edit mode.   |
| <b>ctrl</b> - e  | Edit text.  |
| <b>ctrl</b> - v  | Paste text in edit mode.  |
| <b>ctrl</b> - x  | Cut text in edit mode.  |
| <b>ctrl</b> - <b>shift</b> - ←   | Load the track currently on the right deck onto the left deck as well.  |
| <b>ctrl</b> - <b>shift</b> - →   | Load the track currently on the left deck onto the right deck as well.  |
| <b>shift/ctrl</b> - ↑<br><b>shift/ctrl</b> - ↓   | Move focus up / down through the library or crates. Note that if you have a song highlighted in the song view, and use shift/ctrl – up / down you will move up or down through the library / crates. When you release the shift or ctrl key, the focus will go back to the song view so that you can move up and down through songs using the up and down arrow keys. |
| - or +   | Zoom the main waveform display.   |
| <b>ctrl</b> - <b>shift</b> - <b>del</b> and<br><b>ctrl</b> - <b>shift</b> - <b>backspace</b> | Delete the file from your library and send to the recycle bin. (note to iTunes users: files in your iTunes library cannot be deleted this way).   |
| <b>esc</b>   | Exit Scratch LIVE.  |

## Recording from a Microphone

Scratch LIVE allows you to record from the Mic Input and scratch it immediately as if it were on vinyl. Use the mic input level indicator on the screen and the MIC GAIN control on the Scratch LIVE hardware to adjust the mic recording level. Click the **mic rec** button to start recording, and click the **mic rec** button again to stop recording.



To play the recording, type in a name for the recording and click the **save** button. The recording is automatically placed in a crate named **Recorded**. If that crate does not already exist, it will be created. To start a new recording without saving, simply re-click the **mic rec** button.

Recordings can be loaded onto the decks, renamed and managed like other files. Recordings are saved in 'My Documents\My Music\ScratchLIVE\Recordings' on a PC, and ~/Music/ScratchLIVE/Recording/ on a Mac. Recordings are saved in AIFF format.

**TIP:** To quickly load a recording on to a deck without saving it first, click the **mic rec** button to start the recording, and then use the short cut keys **shift** - ← or **shift** - → to load the track. If you load the recording in this way, you will not be able to then save it as a stand-alone file.

## Advanced Setup and Preferences

### Calibrating Serato Scratch LIVE

The Scratch LIVE hardware interprets the signal on record and communicates with the software. The signal needs to be clear for Scratch LIVE to perform well. This section describes how to optimize the signal coming from the turntable.

For best results, you should re-calibrate Scratch LIVE each time you move or make changes to your DJ equipment.

### Signal Threshold

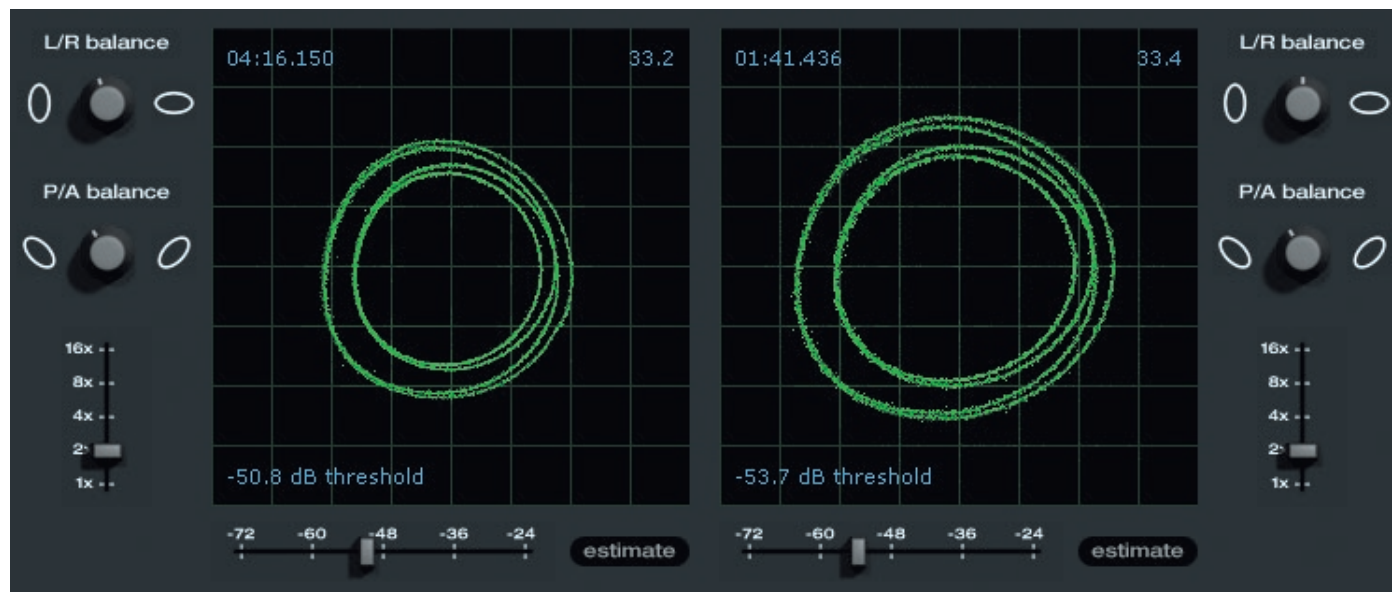
The first step is to set signal threshold. There is always a certain amount of background noise, particularly when using turntables in a club environment. With a normal turntable setup, this background noise is transmitted through the body of the turntable and platter to the stylus, and can cause stylus feedback. In Scratch LIVE, this can cause the errors on the reading of the position and velocity of the control record.

Place the needle on the record with the record stopped. Click the **estimate** button to measure the background noise and estimate the appropriate threshold. Moving the threshold slider to the left will make Scratch LIVE more sensitive to slow record movement, but also more sensitive to background noise.

Note: threshold only applies to vinyl, if you are using CD players, threshold can be set to the far left.

### Scope view

Once you have set the threshold, start both turntables. You will see green rings appear in the scope view, as shown below.

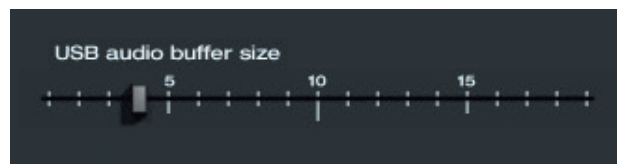


For optimal performance these rings should be as close to circular as possible. Use the scope zoom slider (**1x** to **16x**) to zoom in or out as necessary. Use the scope **L/R balance** and **P/A balance** controls to adjust the shape of the rings.

*Tip: if you trouble getting the rings circular, you probably need to change your needles. If the image appears as a line, then one of the channels of the turntable is not working.*

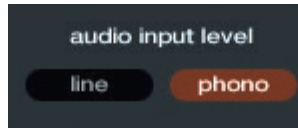
### USB Audio Buffer Size

Scratch LIVE processes audio in small chunks. When smaller chunks are used, the movement of the record is translated into audio more often which results in a lower overall system latency. However, this requires more processing and therefore a higher CPU load, so lower buffer size settings require a more powerful computer to produce uninterrupted audio. If you want tighter control, you should try decreasing this setting, on the other hand, if you experience audio dropouts, you need to increase this setting (or use a more powerful computer).



## Input level

By default Scratch LIVE is set to accept phono level inputs. If you wish to use CD players, switch to **line** level input. This preference is stored when you exit Scratch LIVE.



## Read iTunes™ library

Existing iTunes™ users will recognize many features from iTunes™. Scratch LIVE can read the iTunes library format, and will automatically import the iTunes™ library and iTunes™ playlists. iTunes™ is available for Mac and PC, for more information about iTunes™, visit [www.apple.com](http://www.apple.com). Click **read iTunes library** to activate.

Note: it may take some time to read your iTunes™ library if it contains a lot of tracks. If you edit the file information of tracks from your iTunes™ library, the changes will not appear in iTunes™ until after you play the track.

## Track end warning

Enable track end warning to flash the label view as you approach the end of the track. The label will start flashing 20 seconds from the end of the record. The track end warning does not apply to any tracks under 1 minute long.

## Play from start

Enable restart on load to start play all tracks from the beginning when loaded in Internal or Relative mode.

## Reverse vinyl scroll

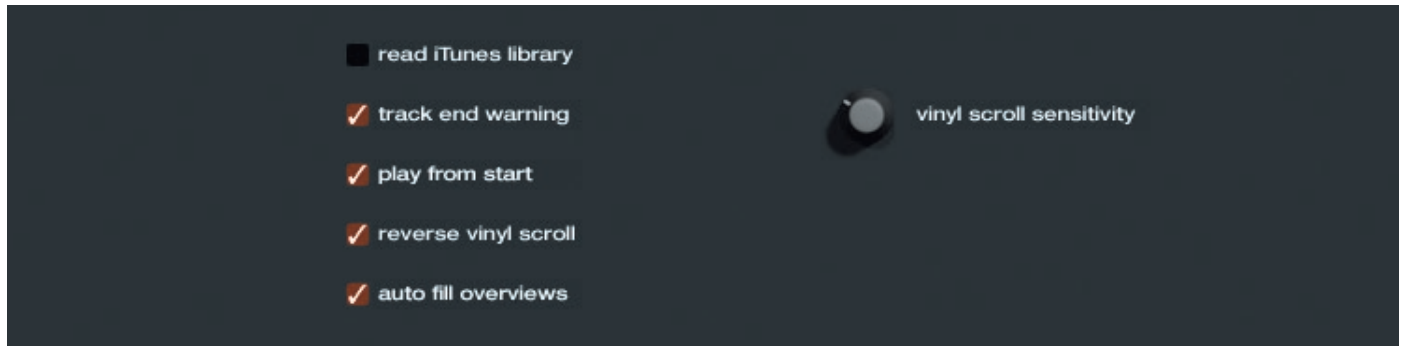
Use this control to reverse the direction of the vinyl scroll wheel.

## Vinyl scroll sensitivity

Use this control to adjust the sensitivity of the vinyl scroll wheel.

## Auto fill overviews

Enable this setting to automatically generate the track overview as soon as a track is loaded. If this setting is not enabled, the track overview will be generated as the track plays. Automatically generating the track overview uses more of the computer's CPU power, and should be disabled on slower computers.



## Advanced Techniques

Scratch LIVE contains features that allow some advanced techniques. These techniques will require practice to perfect, but will allow you to perform feats not possible with normal DJ equipment.

### Mixing with only one turntable

The single turntable technique allows you to mix as if you had two turntables, using just one. If one of your turntables is not performing properly, or if you only have one available, you will be able to continue to mix the way you are used to.

The following is a step-by-step description of mixing using a standard 2-channel mixer, with one turntable set up on the right hand side of the mixer. In this example, all mixing is done with the mixer crossfader.

1. Load a track onto the right deck in Scratch LIVE and play it in Absolute Mode. The crossfader is set to the right hand side.
2. Put the left hand deck into Internal Mode and load a track.
3. Flick the **reverse input control** switch. The physical record now controls the left hand deck in Scratch LIVE, and the right hand channel of Scratch LIVE plays on in Internal mode.
4. Cue the record and mix in the track. Note that you will be using what feels like the wrong channel of your DJ mixer to do this – the crossfader will be moving away from the turntable.
5. Having completed the first mix, flick the **reverse input control** switch. The track you just mixed in will play on in Internal Mode, and the physical record is now back to controlling the right hand deck in Scratch LIVE.
6. Load a track on to the right deck in Scratch LIVE, and mix as normal.
7. Flick the **reverse input control** switch.
8. Load a track on the left deck, and mix - moving the cross fader the wrong way.
9. Flick the **reverse input control** switch, and repeat.

### Swapping the turntables in the middle of a mix

This technique is intended for scratch DJs who favor one hand over the other. For example, say you are a right handed DJ (meaning that you like to use the crossfader with your left hand, and move the record with your right hand), occasionally you will be playing a record on the right turntable, and wish that it was on the left turntable so that you could scratch over it on the right. This technique will allow you to swap the turntables.

The following is a step-by-step description of scratching using a 2-channel mixer fitted with a crossfader reverse switch (also known as a “hamster” switch). In this example, the user wants to have the crossfader in the left hand, and record on the right.

1. The track is playing on the right hand turntable. The scratch sample is loaded on the left side. These need to be swapped.
2. Set the left deck in Scratch LIVE to Internal mode and close the left hand vertical fader on the DJ mixer. (Alternatively, you could set the left deck to Relative mode and start the turntable, but you would have to match the tempo with the other turntable).
3. Flick the **reverse input control** switch.
4. Move the crossfader to the center position.
5. Activate the reverse hamster switch.
6. Move the crossfader to the left.
7. You can now scratch as normal – but remember, the vertical faders, EQ and gain are reversed!
8. To get back to how you started, close the left vertical fader.
9. Move the cross fader to the middle.
10. Deactivate the hamster switch.
11. Move the crossfader to the right.
12. Flick the **reverse input control** switch.

## Troubleshooting

### *Scratch LIVE hardware is not recognized*

It takes 5 seconds for Scratch LIVE to detect the hardware. The hardware can be unplugged at any time; you do not need to exit Scratch LIVE before disconnecting the hardware. Use the supplied USB cable, longer lengths are not recommended.

On some Windows machines, each USB port is treated separately. If Scratch LIVE cannot detect the hardware, connect it to the USB port you used when Scratch LIVE was first installed.

### *The tracks are playing backwards!*

The inputs (from the turntables or CD players) are the wrong way around.

### *The Scope View shows a line instead of a circle*

Scratch LIVE is only receiving signal from one channel. Check the connections between your cartridges and the tone-arm of your turntable. Check the condition of your needles. Check the cables and connections from the turntables to the Scratch LIVE hardware.

### *The Scope View shows fuzzy green lines*

Try cleaning the record and / or the needles. You may need to replace your needles, or order replacement control records from your local distributor. You may also order these in the online store at [www.rane.com](http://www.rane.com) if you are in the USA.

### *Scratch LIVE makes a strange “digital” noise, even when no track is playing*

Scratch LIVE is interpreting background noise as record movement. Increase the threshold.

### *The audio playback is clipping / popping*

Adjust the threshold and USB audio buffer size. Use the **P/A balance** and **L/R balance** controls beside the scope view to make the image as round as possible. For best performance, avoid running other applications at the same time as Scratch LIVE, and run Scratch LIVE in full screen mode.

### *Needle dropping is not working in Absolute mode*

Calibration problem. Use the **P/A balance** and **L/R balance** controls beside the scope view to make the image as round as possible.

### *The track is not starting playing from the beginning in Absolute mode, even when I move the needle to the beginning of the record*

Calibration problem. Use the **P/A balance** and **L/R balance** controls beside the scope view to make the image as round as possible.

### *The first time I play a new track, it takes a while to load*

Scratch LIVE has to read the entire file and create a file index the first time it is loaded. This may take a few seconds for longer files.

### *When I loaded Serato Scratch LIVE, my library was empty / incomplete*

Scratch LIVE creates a folder called .ScratchLIVE which contains your library and crate information. If your library spans multiple drives, each drive will have a .ScratchLIVE folder. This allows you to add and remove drives without corrupting your library. If you accidentally remove this folder, all or part of your library (and crates) will also be removed.

### *Scratch LIVE thinks the record is moving, even when it is stopped*

Ensure your turntables are properly grounded to your mixer. Try increasing the threshold in the **setup** screen.

| <b>SERATO SCRATCH LIVE SPECIFICATIONS</b> |   | <i>(all specs typical)</i> |
|---|---|----------------------------|
| <i>USB Power</i>                          | <i>300mA, 5.0 Volts</i>                 |                            |
| <i>Optional External Power Pack</i>       | <i>300mA, 9.0 Volts</i>                 |                            |
| <i>CODEC</i>                              | <i>16-bit / 44.1 kHz sample rate</i>    |                            |
| <i>LINE OUTPUT:</i>                       | <i>Unbalanced RCA</i>                   |                            |
| <i>.....THD+N</i>                         | <i>-88 dB (1 kHz, 0 dBu, 20 kHz BW)</i> |                            |
| <i>.....Maximum Output</i>                | <i>+5 dBu, +3 dBV</i>                   |                            |
| <i>.....Dynamic Range</i>                 | <i>94 dB A-weighted</i>                 |                            |
| <i>Input to THRU</i>                      | <i>Unbalanced RCA</i>                   |                            |
| <i>.....Gain</i>                          | <i>Unity</i>                            |                            |
| <i>.....Maximum Input / Output</i>        | <i>2 Vrms</i>                           |                            |
| <i>.....Dynamic Range</i>                 | <i>110 dB A-weighted</i>                |                            |
| <i>Phono Input</i>                        | <i>Unbalanced RCA</i>                   |                            |
| <i>.....Maximum Input</i>                 | <i>35 mVrms</i>                         |                            |
| <i>Line Input</i>                         | <i>Unbalanced RCA</i>                   |                            |
| <i>.....Maximum Input</i>                 | <i>2 Vrms</i>                           |                            |
| <i>Mic Input to ADC</i>                   | <i>Unbalanced 1/4" Tip-Sleeve</i>       |                            |
| <i>.....Maximum / Minimum Gain</i>        | <i>49 dB / 9 dB</i>                     |                            |
| <i>.....Maximum Input</i>                 | <i>150 mVrms</i>                        |                            |
| <i>Mic THRU</i>                           | <i>Unbalanced 1/4" Tip-Sleeve</i>       |                            |
| <i>.....Gain</i>                          | <i>+6 dB</i>                            |                            |
| <i>.....Maximum Output</i>                | <i>300 mVrms</i>                        |                            |
| <i>.....Noise</i>                         | <i>3.5 uVrms A-weighted</i>             |                            |