



Numark

VIRTUALVINYL ^{5.0}

REFERENCE MANUAL

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INTRODUCTION

Welcome to VirtualVinyl!

VirtualVinyl is a revolutionary software which allows you to mix audio and video right from your computer. We have designed VirtualVinyl to be simple and intuitive to use but do not be fooled — there are many advanced features to explore and customize.

VirtualVinyl features everything you need for imaginative performance and mixing:

- Two virtual decks for loading audio and video tracks, short clips and karaoke
- Extensive browsing functions utilizing ID3Tag and custom information fields
- Comprehensive mixer with all the features that you would expect from a traditional mixer (EQ, gain, crossfader)
- Audio and video effects processors
- Sampler for recording and playing back audio clips on the fly
- ClipBank for playing back video clips on the fly
- Looping engine
- Real-time recording of your mixes
- Real-time webcasting of your sessions

Additionally, VirtualVinyl includes many innovative features to help you spend less time with the tedious, time-consuming aspects of DJing and mixing:

- Automatic beat matching for quick mixing
- Computer Beat Grid for easy visual mixing
- Dynamic Hot cue points

We developed VirtualVinyl to be the most complete and extensive DJ software on the market today. We have provided an exhaustive set of features for you to take advantage of and create great mixes. Whether you are a beginner or a professional DJ, you will find working inside VirtualVinyl to be fun, intuitive and highly efficient.

If you are new to DJing, we recommend that you read the “Introduction to DJing” section of this manual — it contains basic information on the art of DJing, which you might find useful before diving into the software.

We highly recommend reading this manual in its entirety once you begin using VirtualVinyl — it will help you learn and understand all of its many features so you can get the most out of your VirtualVinyl.

We sincerely hope that you enjoy this great product!

INTRODUCTION TO DJING

The work of a disc jockey can be divided into three tasks:

1. Choosing the music (programming)
2. Mixing the music
3. Modifying the music (remixing)

The first task consists of choosing the appropriate music, which obviously depends on the type of evening and your style. Generally a good rule of thumb is to avoid playing all the hits” from the very start of the evening and to keep some in reserve to generate new interest when the audience starts to become tired.

Numark VirtualVinyl allows instant access to all your titles, playlists, and a list of suggestions. It’s ultimately up to you to decide what makes your audience move. The software cannot replace your talent.

The second task consists of “mixing” the tracks. DJs are accustomed to connecting their tracks in a fluid way by keeping a constant flow of music in order to give the impression that the music is seamless. This mostly applies only to a certain category of music, where the rhythm is very pronounced, such as house, hip hop, or r&b.

Traditionally, the DJ mixes a track in two phases:

Initially, a DJ will modify the speed of the track he wants to mix in, in order to equal the speed of the current track. This stage is necessary to prevent the songs from clashing and give synchronized beats. The speed of the music is measured in BPM (Beats per Minute) — this measures the number of beats over one minute in time. A song with 160 BPM is very fast, whereas a song with 60 BPM is very slow.

The traditional DJ uses the “pitch” adjustment on the turntables to accelerate or slow down the number of revolutions of a record and thus changing its BPM. In Numark VirtualVinyl, the BPM is calculated automatically as soon as you load a track to either player and the pitch can be adjusted automatically to match that of the song already playing. Once BPM on both songs are the same, it’s necessary to sync or line up the beats so the two tracks sound as one.

Traditionally, the DJ will put their headphones on only one ear and listen to the track that they want to introduce (known as cueing). With the other ear, the DJ listens to the mix that the public hears. The DJ will then speed up or slow down the incoming track with their hand and using the pitch control, in order to synchronize the beats. In Numark VirtualVinyl, the rhythm window indicates the position of the beats of each song, allowing you to easily see whether the songs are matched and synced. Then, when the two tracks are beat-matched and synced, the DJ will begin using the crossfader, volume faders and equalizer to bring the new track into the mix. This is called a transition.

The third task of a DJ is to modify the music with various effects or by mixing various tracks or samples, in order to create an impression of a “remix” and to give a more personal and artistic feel to a mix.

The effects traditionally used are scratch, loops, and samples:

A scratch consists of creating an entirely new sound by playing a small portion of music repeatedly. This is achieved by moving that same portion of music back and forth at different velocities while using the crossfader to sharply cut the sound in and out of the mix.

A loop consists of isolating a passage from a title and playing it repeatedly in a looping fashion. As the loop ends it will fluidly go back to the beginning and play again, prolonging the duration of the passage.

A sample consists of a recorded passage which can be played at key moments in the mix to build up interest or anticipate a track that is being mixed in.

There are many creative ways that scratches, samples and loops can be used and Numark VirtualVinyl provides some great, easy-to-use tools for you to utilize all these techniques in your mix. By simplifying and streamlining the technical aspects of DJing, Numark VirtualVinyl allows you to focus on the most important part of the DJ experience — your imagination!

INSTALLATION / UPGRADE NOTES

If installing VirtualVinyl 5.0 as a fresh, clean install please make the following notes:

Default application path provided during the install is **C:\Program Files\VirtualVinyl 5.0**
All Application Configuration, Plug-in, Skins and Support Files are stored in **C:\MyDocuments\VirtualVinyl 5.0**

****VERY IMPORTANT – EXTERNAL DRIVE USERS****

You should have your COMPLETE gig ready computer setup connected before launching VirtualVinyl 5.0 for the first time.

When upgrading to VirtualVinyl 5.0 the default application path stays the same and the new application configuration, plug-in, skins, and support files are copied to C:\MyDocuments\VirtualVinyl 5.0. Since VISTA does not like applications writing data to the Program Files folders, the Development Team moved these entries to a more accessible location so they wouldn't be placed in the Microsoft managed hidden folders profile environment.

For Power Users who have changed the location of their MyDocuments from the default Microsoft setting (C:\MyDocuments), your new/copied files are stored there in the VirtualVinyl 5.0 folder.

The NEW core VirtualVinyl 5.0 Database is now titled **VirtualVinyl 5.0 Database.xml** and is stored in the following locations:

Windows XP:	C:\MyDocuments\VirtualVinyl 5.0
Windows VISTA	C:_UserName\Documents\VirtualVinyl 5.0

The NEW VirtualVinyl 5.0 Database system segments the database to each drive attached to the system. Each additional database file will be found on the ROOT of that drive and is titled **VirtualVinyl 5.0 Local Database.xml**.

Upgrade note: Because of the 'split' database files and depending on the size of the v4.x database XML, the FIRST LAUNCH of VirtualVinyl 5.0 after upgrading may act like it has stopped at the applications splash screen. Please be patient and look for activity on the hard drive(s). VirtualVinyl 5.0 is reading the v4.x database and splitting the various entries across the respective hard drives of the system.

What is stored in the NEW Database files?

- Path to the file
- Analyzed data about the tracks
- ID3Tag Display Information
- Automix Information

Example of a database entry:

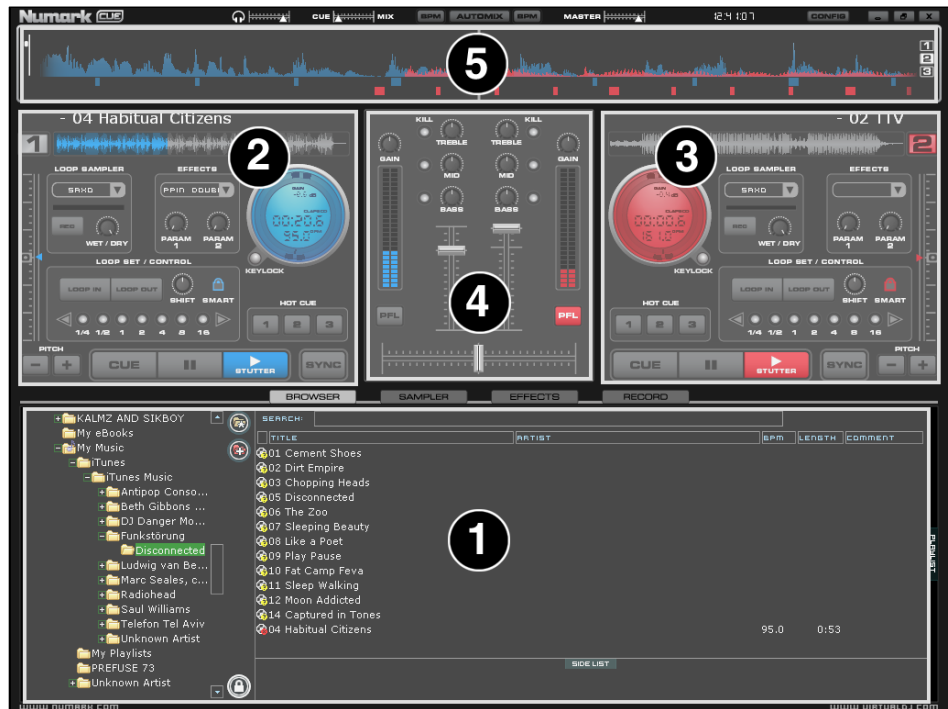
```
<Song FilePath="D:\CD_Rip\Soul Street - Compilation\Batson & Chase - TLC.mp3" FileSize="4766328">
<Display Author="Batson & Chase" Title="TLC" Album="Soul Street - Compilation" Color="16695026" Cover="2050" Flag="7" />
<Infos SongLength="8756352" FirstSeen="707300830" FirstPlay="708020745" LastPlay="708020745" Bitrate="192" />
<BPM Bpm="23003" Phase="805" />
<FAME IsScanned="1" Volume="6743" />
<Automix FadeStart="75776" FadeEnd="8516096" RealStart="0" RealEnd="8755712" />
</Song>
```

**(not representative of all information stored)*

The 'split' database files provide users of external hard drives the ability to COLD or HOT SWAP drives between single or multiple systems. This allows for multiple DJs of a club or venue to utilize 1 VirtualVinyl 5.0 installation and not have different OS logins in order to maintain separate databases unique to each DJ. Now, the DJ just walks in plugs in the external device and begins playing.

THE INTERFACE - ZONES

Before beginning to use Numark VirtualVinyl, familiarize yourself with the controls and “zones” of the software. Upon opening the application, an interface menu is displayed. Interfaces called “skins” feature different configurations, layouts and functionalities of the software. Let’s begin by selecting “Internal mixer interface” to become familiar with the most important features of the software. To change to a different skin while the software is running, click on the “Config” button (located at the top right corner of the interface) and select the “Skins” tab.



1. **BROWSER / SAMPLER / EFFECTS / RECORD**

Browse your music folders, create, edit and save your playlists
Adjust effects video, and audio, Record and save mixes

2. **DECK 1 CONTROLS**

Drag and drop music from the browser to this virtual deck.
Track title, beats per minute display, counters and transport control for the deck are located in this zone.

3. **DECK 2 CONTROLS**

Drag and drop music from the browser to this virtual deck.
Track title, beats per minute display, counters and transport control for the deck are located in this zone.

4. **MIXER ZONE**

Crossfader, gain, volume and PFL controls are located in this zone.

5. **RHYTHM WINDOW**

This window tracks the waveform of each song loaded or playing on a deck. This area also features a Computer Beat Grid (CBG) used for visual mixing and beat-matching.

BROWSER ZONE

The Browser Zone is where you can navigate and organize files stored on a local, external, or network hard disk. The browser contains the compatible file types (i.e. whose extensions are associated with the decoders in Numark VirtualVinyl) to access the compatible extensions list. Click the “Config” menu then choose the “Codecs” tab. See the “Codecs” section of the manual for further details.



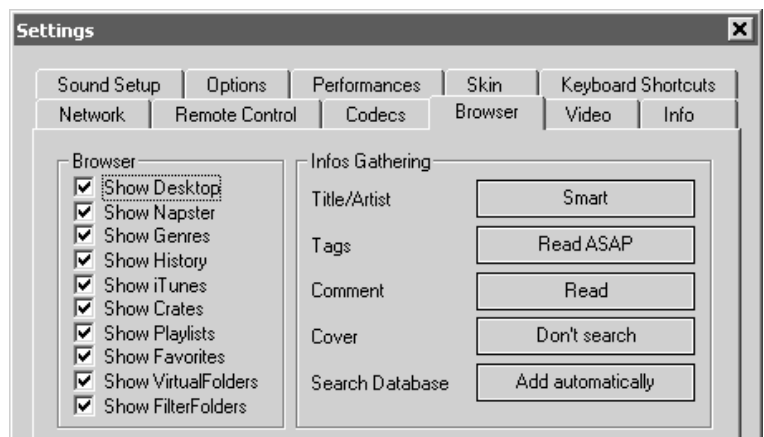
The Browser zone is divided into 4 key panels:

1. **File System / Folder Structure**
2. **File / Search Results**
3. **Automix Playlist**
4. **Sidelist**

FILE SYSTEM / FOLDER STRUCTURE PANEL (1)

VirtualVinyl provides several application-managed organizational groupings and a few third-party interfaces by default. Also provided is the ability to create additional navigation aid capabilities. To better understand the managed groups and interfaces, click the “Config” button and view the “Browser” tab.

The “Browser” tab allows the selection of the various managed groupings that can be viewed. Each ‘checked’ item will have an associate entry on the File System / Folder Structure panel (1).



Desktop – shows the File System navigation option.

Napster – shows the integrated Napster search. Using this feature requires a Napster login. Login information can be provided by a right-click on the Napster Globe in the “Browser” panel interface and choosing “Login...”

Genres – provides a generated tree of Genre types based on the imported ID3Tag Genre field. By selecting on the various listed genres, the file browser panel (2) only shows those entries which match the tag.

***POWER USERS – Typically only one genre is stored in the ID3Tag; however, since VirtualVinyl imports and stores this data in it’s own database, multiple genres can be assigned to a single file by separating each genre with a semi-colon ‘;’. This action is performed in the File Info dialog the Genre field for the file.**


History – provides access to data stored about each previous session of VirtualVinyl. The data is stored as .m3u playlist files in the MyDocuments\VirtualVinyl\TrackHistory folder. History data is saved on the fly in order to provide running history of played tracks for each 24hr timeframe of use.


***POWER USERS – By default VirtualVinyl will separate the history playlists at 9AM. This is based on a registry entry titled TrackCutHour – change this value to have your history playlists split at a different time. Time is based on a 24-hour clock, so 9PM would be 21. Please note that altering registry entries incorrectly can damage the software or your computer!**


iTunes – displays iTunes playlists and uses the information stored in the playlist to access the associated files. If the files don’t exist per the playlists path, an ‘Error’ may show up in the deck’s display when attempting to load the track.

Crates – allows access to the crates structure created and utilized by the Serato ScratchLive application. Same as the iTunes option, if the reference to a file is incorrect an ‘Error’ message will be displayed in the desk’s display when attempting to load the track.

Playlists – show or hide the contents of the MyDocuments\VirtualVinyl\Playlist folder where Automix playlists are stored.

Favorites – show or hide any folder favorites. Favorite folders are created by right-clicking on a folder in the Desktop navigation structure and selecting “Set as favorite” from the menu or by using the  icon on the panel’s right divider bar.

VirtualFolders – show or hide any created VirtualFolders, created by clicking on the  icon found on the right divider bar.

FilterFolders – show or hide any created FilterFolders, created by clicking on the  icon found on the right divider bar.

FILE / SEARCH RESULTS PANEL (2)



VirtualVinyl provides several elements of information about each track. The information is a combination of ID3 Tag and VirtualVinyl defined data fields. By default, the title of the song and artist are listed for each file along with columns for beats per minute (BPM) and duration (Length). The width size for each column can be modified individually and you can sort the column contents clicking on the column. For example, clicking on the artist column sorts the browser entries by artist, initially in ascending alphabetical order. Click again to view in descending alphabetical order.

The track's title and artist are automatically filled in, as long file is named according to two standard conventions: **(artist) title.ext** OR **artist - title.ext** OR the "Tags" option is set to "Read ASAP" in the "Config", "Browser" tab, Infos Gathering section. See the "ID3Tag Support" section of the manual for further details.

The BPM and length information are calculated automatically when a track is loaded to either deck. All track information is then stored inside the respective drive's database files for later recall. All data is stored and saved at time of discovery or data entry directly to the database(s).

ICON DESCRIPTIONS



This title is unknown and was never played or scanned by Numark VirtualVinyl.



This title is known and has been scanned by Numark VirtualVinyl.



This title was played during this session.



Indicates a video file.



Indicates a karaoke file.

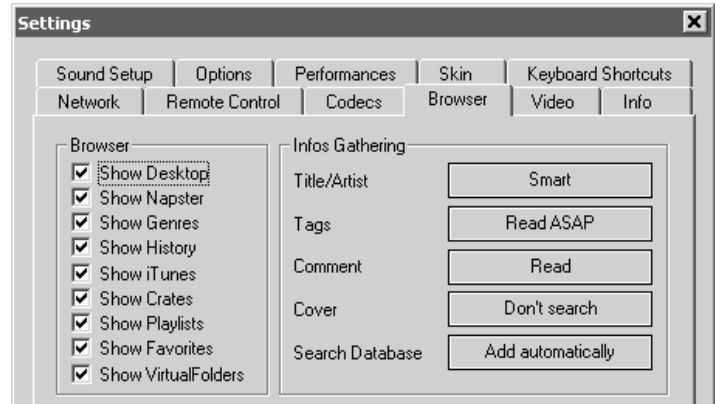


Indicates that the BPM difference between the analyzed song and current playing song is too great. This is a track that you might wish to avoid playing next.

ID3TAG SUPPORT

VirtualVinyl features extensive ID3 Tag support. However, it is not the same support that many other applications implement. VirtualVinyl has always provided the fastest access to information about the tracks in the database. Adding direct ID3Tag access to every file would have considerably slowed VirtualVinyl 5.0's ability to browse and search, as can sometimes be experienced with other applications.

VirtualVinyl 5.0 stores identified ID3Tag fields as part of its own database. This stored data can be updated at anytime. And because it is not direct access, any of the information can be changed using the File Info dialog and will not affect the core ID3Tag info of the file. Also, since video type files don't have ID3Tags, VirtualVinyl 5.0 is able to make these fields available for storing information about the video.



RETRIEVING ID3TAG DATA

This can be accomplished in several methods at different points in time. **The first and what will be the most common way of retrieving ID3 tag info** is using the **Configuration ► Browser** tab's Infos Gathering options.

TITLE/ARTIST

- **Smart** – allows VirtualVinyl 5.0 to determine what it should retrieve. If a field is missing from the traditional parsing of the filename and data resides in the ID3Tag, then VirtualVinyl 5.0 retrieves the data
- **Only from Filename** – traditional parsing of the filename data
- **Only from Tag** – only use the data stored in the ID3Tag

TAGS

- **Never Read** – disables reading ID3Tags
- **Read on Load** – read the tags once a file is loaded to a deck
- **Read ASAP** – read the ID3Tags immediately on seeing the file in the browser



COMMENT

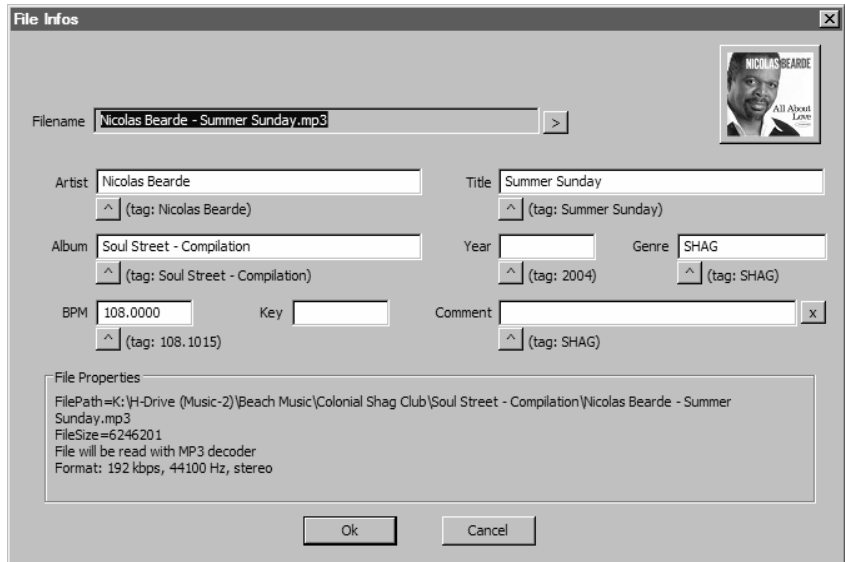
- **Read** – read the ID3Tag Comment field based on the TAGS setting
- **Never Read** – never read the ID3Tag Comment field

COVERS

- **Local Search Only** – for the CoverFlow viewer files already locally stored will be used (to include ID3Tag embedded)
- **Download Exact Match** – if no cover is found locally, VirtualVinyl will download a cover that only matches based on the song's information
- **Download No Matter What** – if no cover found locally, VirtualVinyl will download anything that closely matches using the song's information
- **Don't Search** – tells VirtualVinyl not to look for covers if no cover exists

Next possible way of retrieving ID3Tag information is by right clicking on a file in the browser and selecting File Info. The dialog shown on the right displays the information stored in the database, along with the ID3Tag information that is retrievable.

Under each field with a  button, you will see the ID3Tag info. Click on the button to copy that data into the VirtualVinyl 5.0 data field. This data will then be stored and used by the VirtualVinyl 5.0 database. The  next to the FileName field is used to parse the file name into the Artist and Title.



Another method of retrieving ID3Tag info is directly through the browser, with multiple files selected.

The options from File Infos are –

- Title from tag
- Title from filename
- Genre/year/etc from tag
- Comment from tag
- Erase comment
- Download cover



DISPLAYING VirtualVinyl 5.0 DATA FIELDS (ID3TAG) COLUMNS

In the browser or playlist panels, you can right-click on any column and choose from the pop-up list any or all of the available data fields now stored in the VirtualVinyl 5.0 database.



Changing the order of the columns is very easy by selecting the **Order...** option from the bottom of the list.

Here you can choose the order by highlighting the field and using the up and down arrows. Also add or remove fields from the display by selecting the check box for the field.

You can also select what you want displayed in the browser by clicking on the second bull's eye circle to the right of the search box and choosing to Show Covers, Show Music, Show Videos, and Show Karaoke.



Below is a screen shot of the fields being displayed in the browser.



[Typical ID3Tags + Key field]

ADDITIONAL VirtualVinyl 5.0 DATA FIELDS

TITLE	ARTIST	PLAY COUNT	FIRST SEEN	FIRST PLAY	LAST PLAY	DRIVE	FILEPATH	FILENAME
I Slipped, Tripped, Fell In Love	Roy Roberts	1	2007/07/30	2007/08/02	2007/08/03	D	\CD_Rip\Soul Street - ...	Roy Roberts - I Slipped...
Nine Times A Man	Wilson Pickett	1	2007/07/30	2007/08/01	2007/08/03	D	\CD_Rip\Soul Street - ...	Wilson Pickett - Nine Ti...
TLC	Batson & Chase	0	2007/07/30	2007/08/02	2007/08/02	D	\CD_Rip\Soul Street - ...	Batson & Chase - TLC...
Back That Thang Up	Tyrone Davis	0	2007/07/30	2007/08/02	2007/08/02	D	\CD_Rip\Soul Street - ...	Tyrone Davis - Back T...
No One Loves You Better Than Me	Rickey Godfrey	0	2007/07/30	2007/08/02	2007/08/02	D	\CD_Rip\Soul Street - ...	Rickey Godfrey - No O...
Too Late	The Sand Band	0	2007/07/30	2007/08/02	2007/08/02	D	\CD_Rip\Soul Street - ...	The Sand Band - Too L...
Other Side of The Cloud	Danny Brooks	0	2007/07/30	2007/08/02	2007/08/02	D	\CD_Rip\Soul Street - ...	Danny Brooks - Other ...
Whatever It Takes	Rickey Godfrey	0	2007/07/30	2007/07/30	2007/08/02	D	\CD_Rip\Soul Street - ...	Rickey Godfrey - What...
Till The Day After	Craig Woolard	0	2007/07/30	2007/08/02	2007/08/02	D	\CD_Rip\Soul Street - ...	Craig Woolard - Till Th...
Summer Sunshine	Tim Casion	0	2007/07/30	2007/08/01	2007/08/01	D	\CD_Rip\Soul Street - ...	Tim Casion - Summer ...
Your Grace Is So Good	Mac & J Thompson	0	2007/07/30	2007/08/01	2007/08/01	D	\CD_Rip\Soul Street - ...	Mac & J Thompson - Yo...
Sugar Dumplin	John Goudy	0	2007/07/30	2007/08/01	2007/08/01	D	\CD_Rip\Soul Street - ...	John Goudy - Sugar Du...
Lovin' On Ocean Drive	Tim Cashion	0	2007/07/30	2007/08/01	2007/08/01	D	\CD_Rip\Soul Street - ...	Tim Cashion - Lovin' O...
Something Smooth	Rick Strickland	0	2007/07/30	2007/08/01	2007/08/01	D	\CD_Rip\Soul Street - ...	Rick Strickland - Some...
One Step	Casey York	0	2007/07/30	2007/08/01	2007/08/01	D	\CD_Rip\Soul Street - ...	Casey York - One Step...
Chasin Dreams	North Tower	0	2007/07/30	2007/08/01	2007/08/01	D	\CD_Rip\Soul Street - ...	North Tower - Chasin ...

[Additional VirtualVinyl 5.0 Fields]

The VirtualVinyl 5.0 database now stores additional data about each track for additional search features and the NEW Filter Folders.

Key – stores the key value of a song for use doing Harmonic Mixing.
*** note that VirtualVinyl 5.0 does not analyze and populate this field. Manual entry using the File Info.*

Play Count – stores the running play count of the track

First Seen – stores the date when the track was first added to the database

First Play – stores the date when track was first ever played

Last Play – stores the date when the track was last played

Drive, Filepath, Filename, Filetype – stores the current known Drive, Filepath, Filename, and Filetype for the track




AUTOMIX PLAYLIST (3)

The Automix feature allows VirtualVinyl to automatically beat-match and transition between tracks stored in the Automix Playlist on the right side of the Browser. Note that Automix will mix the tracks in the playlist on a single deck, which allows you to use the opposite deck for staging the first song to be used once you decide to stop the Automix process. By default it is Deck 1. However, if Deck 2 is selected as the active deck prior to starting Automix, then Deck 2 is used.



The Automix feature will pull tracks loaded in the Playlist. Playlists are groups of tracks prearranged in a desired order of play. To access the playlist, move your mouse or drag songs over the “Playlist” panel (3) on the right side of the browser. The window automatically expands to show the working area and current list if populated.

PLAYLIST CONTROLS

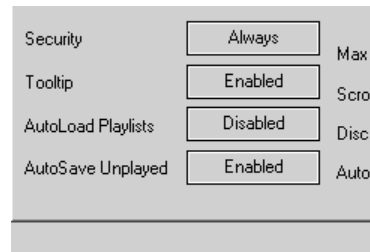
-  Activate / deactivate Automix
-  Access the Playlist management menu
-  Lock the Playlist panel to a set width and block the auto-shut of the panel. You can also lock it and reduce its size to zero if you do not wish for it open automatically.

PLAYLIST SETUP


Tracks to be auto-mixed can be placed into the Playlist panel from the File Browser panel (2) by dragging and dropping the track titles into the Playlist window (3). Predefined playlists may also be used and auto loaded.

In the **Configuration ► Options** tab there is an option for “AutoLoad Playlists”. The available values are Disabled, Smart, and Always.

- **Disabled** – contents of the playlist are displayed in the center browser panel only.
- **Always** – when a playlist is selected in the browser the contents are automatically loaded to the playlist.
- **Smart** – doesn't change the playlist when you click on a playlist folder, if the actual playlist has been manually edited

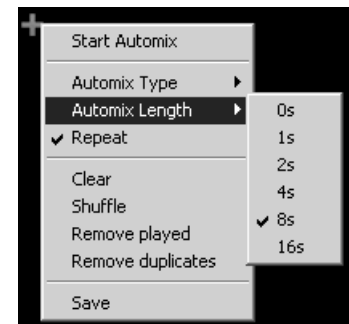
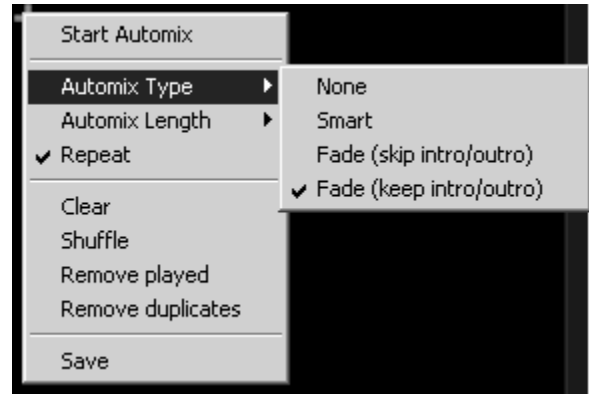


PLAYLIST & AUTOMIX MANAGEMENT

You can use the Playlist management menu (click on the  icon) to specify different Automix functions, as well as how tracks are loaded in the playlist.

Automix Type – 4 modes

- **NONE** – this is a simple CUT mix that plays the entire file from start to finish, including any gaps at the beginning or end
- **SMART** – VirtualVinyl attempts to determine the optimal mix point based on the outro of the current track and intro of the upcoming track – mix time varies from ~4 to ~8 secs depending on the tracks
- **FADE (skip intro/outro)** – attempts to remove the dead air intro or outro segments and creates a crossfade point based on the settings of the Automix Length
- **FADE (keep intro/outro)** – keeps the entire track from beginning to end and creates a crossfade point based on the settings of the Automix Length



Automix Length – Length used for the Automix FADE types. Lengths are 0 seconds (CUT), 1, 2, 4, 8, or 16 seconds fades using the FULL crossfade.

Repeat – Two different ‘Repeat’ options are available:

When clicking on the options button (‘+’), the ‘Repeat’ option lets you repeat the whole Automix Playlist. Once all tracks have been played, the Automix will start over again with the first track in the list.

Prior to or during the Automix, right-click on a song and select ‘Repeat’ to have the selected song repeat continuously until ‘Repeat’ is deselected.

Clear – clears the entire playlist

Shuffle – shuffles the contents of the playlist

Remove played – removes already played tracks from the playlist

Remove duplicates – removes possible duplicates from the playlist

Save – saves the playlist for future use

Sequential Order Play Display – The playlist navigation during automix play of what is playing and what is next is sequential from top to bottom (like most media players). The track which is currently playing is always highlighted. If the Repeat option is on, the playlist will repeat from the beginning once the final track has played out.

Add, Move or Remove Track – Reordering tracks by adding more, moving their order, or removing can be done at any time.

Jump and MIX NOW – While Automix is active, double-click on any track in the Playlist and VirtualVinyl will use the assigned crossfade Automix settings and mix that track immediately. The playlist will then pickup from that point forward.

Keyboard Shortcut Actions for use with Playlists:

“Put in Sidelist / Get from Sidelist” – a keyboard shortcut action “switch_sidelist_playlist” provides the function for moving track lists between the two panels.

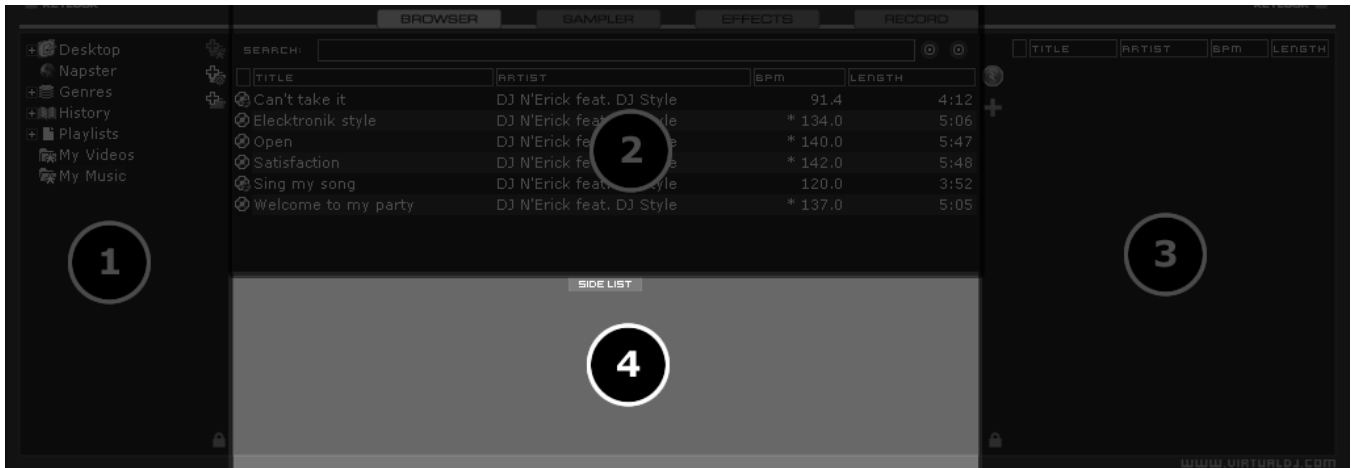
“Make Virtual Folder” – a keyboard shortcut action “vfolder_fromplaylist” provides the function for creating a VirtualFolder from the current playlist contents.

See “Keyboard Shortcuts” section on page 35 for more details.

SIDELIST (4)

VirtualVinyl incorporates its own version of a waitlist called the Sidelist. The Sidelist panel (4) can be used to hold tracks that the DJ knows they will play sometime during their session. It also provides a location for VirtualVinyl to move tracks that were loaded but never played because a new track was loaded to the deck. The Sidelist can also be used to stage and construct Playlists and VirtualFolders by drag-and-dropping tracks into the Sidelist panel.

Security	<input type="button" value="Always"/>	Max
Tooltip	<input type="button" value="Enabled"/>	Scro
AutoLoad Playlists	<input type="button" value="Disabled"/>	Disc
AutoSave Unplayed	<input type="button" value="Enabled"/>	Auto



AutoSave Unplayed

When the option “AutoSave Unplayed” is enabled in the **Configuration ► Options** tab, all tracks added to a deck but then never played are added to the Sidelist when a track replaces it on a deck.

Keyboard Shortcuts `load_fromsidelist` and `free_sidelist` provide easy access to tracks for loading to a deck or clearing the entire list, respectively.

See “Keyboard Shortcuts” section on page 35 for more details.

FILE SYSTEM / FOLDER STRUCTURE ORGANIZATION

In order to simplify browsing and provide better file management, VirtualVinyl provides three methods for organizing the database.

On the left panel border there are three folder options:



Create Favorite Folder – pick a folder from the drive to always display in the browser



Create Virtual Folder – create a folder for manually populating with specific files



Create Filter Folder – create a folder based on a filter string that is run every time the folder is selected

Right clicking on any of these folders provides access to various operations:

- For Favorite folders options include Add or Remove contents of folder to Search DB, and BPM Analyze options.
- Filter folders contain an option for accessing the filter dialog for changing the filter string.
- Virtual folders have a Rename option.
- All folders have options for moving the order of the folders up and down in the tree and for removing or deleting the folder.

FAVORITE FOLDERS

A DJ may want to define a collection of directories which are most frequently used – for example, “Hits of 2006” or “My Music.” The best solution is using the Favorite Folders. Think of Favorite Folders as Shortcuts to a folder located on your hard drive.

To set a Favorite Folder, browse the “Desktop” folder and navigate to the desired folder location. Click to highlight the desired folder, then click the yellow favorite folder icon




The selected folder will be added to the end of the list, on the same level as the “Desktop” folder. To remove a favorite folder reference, select it and click the icon again.

You may also accomplish this by right-clicking on a folder and choosing “Set as favorite” from the menu. To remove a Favorite Folder, simply right-click on it and choose “Remove from favorite”.

VIRTUAL FOLDERS

Similarly to Favorite Folders, Virtual Folders aid you in quickly accessing music stored on your hard drives. A Virtual Folder, however, holds a collection of shortcuts to tracks instead of shortcuts to folders.

You can create a virtual folder by clicking on the red Virtual Folder icon  and giving the new folder a title.

Now browse the database or run various searches to find tracks which you would like to group together in the Virtual Folder. Drag and drop the tracks into the new Virtual Folder and next time you want to play these tracks, simply select this Virtual Folder.

Please note that dragging tracks into a virtual folder will not physically move the files into that folder — it will only create a shortcut to where the files are located.

To remove a Virtual Folder, right-click on it and select “delete.”

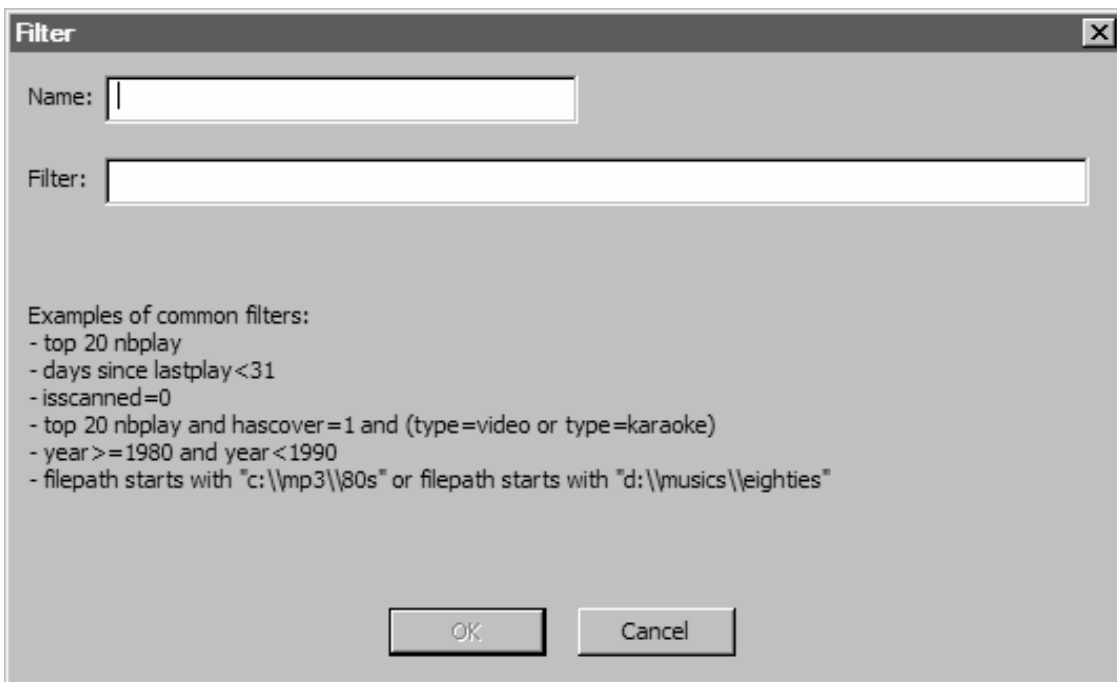
FILTER FOLDERS

A highly dynamic and creative way to organize a collection of tracks is to apply conditions which automatically filter (search) the database for tracks that match the outlined criteria. VirtualVinyl calls these types of folder Filter Folders.

Create a Filter Folder

Click on the blue Filter Folder icon  and a Filter creation dialog is displayed.

Give the NEW filter folder a name. For example - **Top 100 Played**



The screenshot shows a dialog box titled "Filter" with a close button (X) in the top right corner. It contains two text input fields: "Name:" and "Filter:". Below these fields, there is a section titled "Examples of common filters:" followed by a list of filter examples:

- top 20 nbplay
- days since lastplay<31
- isscanned=0
- top 20 nbplay and hascover=1 and (type=video or type=karaoke)
- year >=1980 and year <1990
- filepath starts with "c:\mp3\80s" or filepath starts with "d:\musics\eighties"

At the bottom of the dialog box, there are two buttons: "OK" and "Cancel".

Now enter the Filter to be used for filtering out the results. This is where it can be complicated or simple. This example is simple, using the keyword 'top' with the number '100' and the element 'nbplay'. 'nbplay' looks at the Play Count data field. As the filter statement is entered, VirtualVinyl evaluates that the statement is properly created. The OK button will remain 'grayed' out if the statement is not well-formed.

So the entire filter statement would look like 'top 100 nbplay'. What VirtualVinyl will do each time this folder is selected, is to sort the entire database according to the Play Count field in descending order and then display the first 100 entries, or the Top 100.

The filter dialog provides some good examples but to get its real power you will need to know the appropriate elements, operators, and a few keywords.

Elements - "title", "author", "artist", "album", "genre", "year", "bpm", "key", "bitrate", "songlen", "filesize", "filepath", "filename", "extension", "hascover", "isscanned", "alreadyplayed", "lastplay", "firstplay", "firstseen", "nbplay", "type", "days since firstseen", "days since firstplay", "days since lastplay"

Operators - "=", ">=", "<=", "!=", "<>", ">", "<", "is not", "is", "equals", "equal", "contains", "contain", "doesnt contain", "doesn't contain", "don't contain", "starts with", "start with", "ends with", "end with", "and", "or", "&&", "||", "&", "|"

Keywords - "top", "[inverted]"

FILTER	Expected Result
isscanned=0 or isscanned=1	Local Database
top 100 nbplay	top 100 list
top 100 firstseen	recently added
top 100 lastplay	recently played
bpm>120 and bpm<130	bpm range from 120 to 130
year>=1980 and year<1990	80s music
days since lastplay<7	songs played last week
days since lastplay<31	songs played last month
days since lastplay<365	songs played last year
lastplay=0	never played songs
isscanned=0	files not scanned
type=video	video group
type=audio	audio group
type=karaoke	karaoke group
hascover=1	has cover picture
hascover=0	doesn't have cover picture
top 20 nbplay and hascover=1 and (type=video or type=karaoke)	Top 20 most played that have a cover and are Video or Karaoke files
filepath start with "c:\mp3\80s" or filepath start with "d:\music\80s"	Show all 80s files stored on two separate drives in a folder titled 80s
extension is "mp3" and title doesn't contain "madona"	Any mp3 file that does not contain "madona" in the title

DATABASE MANAGEMENT

The Database Management system comes with additional tools as part of the VirtualVinyl 5.0 **Configuration ►Browser** tab.

- Save 'On the Fly' during each session use
- Automatic check of database integrity at launch
- Manually check the database integrity
- Fix database error(s)
- Clean out database entries for missing/moved files

VirtualVinyl 5.0 now saves the database immediately when additions or updates are required. VirtualVinyl 5.0 also validates the integrity of all database files at the launch of the application. If a problem is detected a message box will be displayed identifying which database has the problem and what to do to correct the problem.



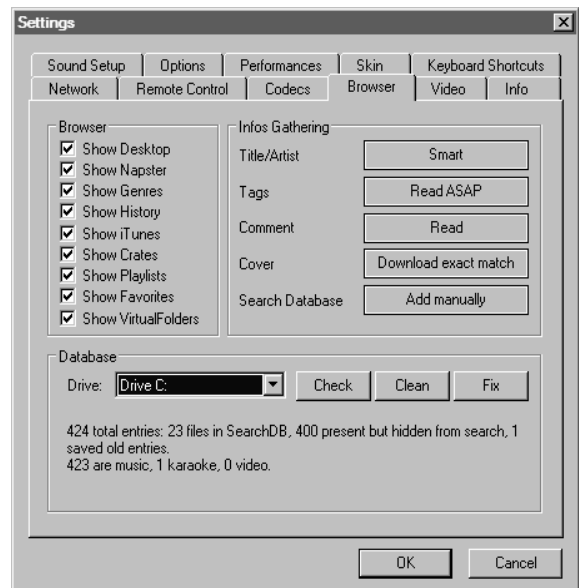
If you experience a problem with your databases, you can follow the steps below to fix it:

1. Open the configuration dialog
2. Go to the Browser tab
3. Select the Drive from the drop-down
4. Click the '**FIX**' button

The other options for managing the databases are:

CHECK – runs a validation of the database to ensure the entries are still relevant to files stored on that drive. The process simply re-labels the FilePath entry for the file if it can not be found. Data about that file is not lost.

CLEAN – this process will REMOVE any database information about files that are no longer valid. This is necessary for cleaning up the Global Search capabilities.

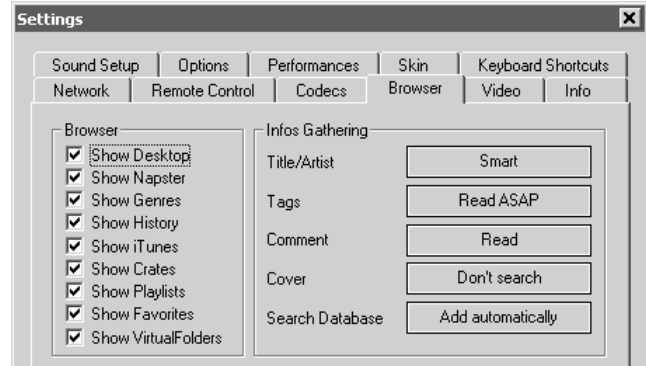


GLOBAL SEARCH DATABASE

VirtualVinyl 5.0 now provides an intuitive on-the-fly search capability. Adding files for use with the global search database can be done in two ways:

First is by setting the 'Search Database' property in the **Configuration ► Browser** tab to 'Add automatically'. This will add all files encountered while browsing folder structures to the search.

The other option is 'Add manually'. You will have to right-click on a file or folder in the main browser interface and select 'Add to Search DB' to add the file or folder to the search database.



In either scenario, once a file has been added to the global search database it will always be available when searching. When searching, the search display will let you know whether the results are located in the currently selected folder or elsewhere on the system.

In the example below, a search on 'ba' is entered into the search box. The center file browser panel displays the results of the search. The file(s) listed above the dividing line represent the file(s) found in the folder that is currently highlighted in the left folder browser panel. All other files below the dividing line are files that exist elsewhere in the database.



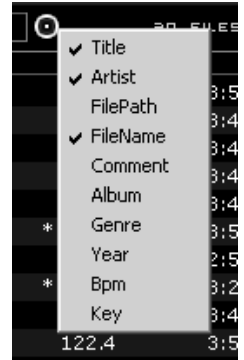
If you want to limit the results to specific types of files, click on the second bull's eye circle to the right of the search box and choose to Show Covers, Show Music, Show Videos, and Show Karaoke options.

VARIABLE SEARCHING

What can be searched? Searching in VirtualVinyl 5.0 is now versatile and variable. What is meant by that? Just to the right of the search box there is a “search fields” selection button. Click on the bull’s eye circle and you are presented with a list of 10 searchable fields.

Depending on which fields are selected, your search results will vary. If you want to ensure maximum results for all your searches, select all the fields.

To browse the entire database just enter an asterisk - * - as the search string and now the entire database is displayed.



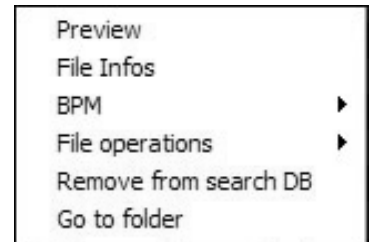
The expanded search capabilities let you access your music faster and more effectively than ever before, allowing you to assemble your sets with maximum creativity. For example, you can search for tracks with similar BPM. You can now enter 110-120 and if the BPM column is selected the search results will display tracks in the range of 110 to 120 BPM.

OTHER TRACK OPTIONS

Right-clicking on a track displays different track options:

File Operations like - copy, move, and delete files (a warning is displayed on deleting a file)...

File Info for modifying data field content, BPM analyze track options, add and removing songs from the search database...



Along with several other options that are presented and explained throughout this manual.

DECK CONTROLS

There are two virtual “decks” on the screen. Drag and drop files into each of the decks to load music tracks or video clips.

Each of the two decks is equipped with the following controls and displays:

1. Title of track
2. Waveform display

This view shows the waveform of the entire track, allowing you to see the remaining duration of the track, as well as what has already been played. The highlighted blue or red area of the waveform indicates what has been played and the current position of the audio. The grey area of the waveform shows the remaining part of the track. Inside the waveform itself, the lighter part indicates the presence of beats whereas the darker part indicates the presence of vocals.



3. Control Dome

Track Time (default elapsed)

Chooses the time mode you wish to view. Click to toggle between the elapsed and remaining time.

BPM/Pitch% view

Click to toggle between viewing the pitch or BPM of the track loaded on the deck.

Gain Level

Adjusts the deck’s audio level pre-fader and pre-EQ.

Outer Ring Control

The outer ring of the control dome can be used to cue and scratch the loaded track. Clicking on the outer ring allows you to rotate the ring to a new position.

Keylock

Locks and holds the key of the music at the current pitch, allowing you to change the tempo of the track but not affect the current key of the music.

4. Loop Sampler

Sample Selection Dropdown Arrow

This menu lets you choose which sample you wish to use. There are 12 slots which are available for you to record, load and play samples.

Sample Selection Window

Click to play the sample listed in the selection window.

REC button

When initiated, this function records the loop to the selected sample slot. If no loop is currently set on this deck, a 4 bar loop will be recorded by default.

Wet/Dry knob

Controls the level of gain applied to the loop sample.

5. Loop Set/Control

Loop In/Out

A loop is any area of a track that you choose to repeat seamlessly. Press “Loop In” at the point where you wish the loop to start. Press “Loop Out” when you reach the desired point to mark the end point of the loop and the audio between the two points will begin to loop continuously. To release the loop and continue playing the track, press “Loop Out” again and the audio will continue from the end point of the loop. If you wish to set a new loop, just press “Loop In” again while the loop is disengaged, and then press “Loop Out” to begin the new loop.

Shift Knob

Adjusts the loop length by half length or double length increments.

Smart Lock button

Allows the Beatkeeper and loop buttons to work together to create loops synchronized to the beat.

Loop Length

This indicates the length of the loop according to beat measures. You may increase or decrease the length of the loop from $\frac{1}{4}$ to 16 measures.

6. Effects

Effect Selection Dropdown Arrow

Lets you select which effect you would like to apply.

Effect Selection Dropdown Window

Click to apply the selected effect.

Param 1 & 2 knobs

These two knobs adjust parameters of the effect selected in the dropdown window, although not all effects require use of these knobs. If the selected effect does not have adjustable parameters, the knobs will not be able to be moved.

7. Transport

VirtualVinyl

Returns and pauses the music at the default Cue Point. To set a Cue Point, pause the song, seek to the desired position (for example by rotating the control dome indicators), and then click on “VirtualVinyl”. Alternatively you can also right-click on the “VirtualVinyl” button to set a Cue Point while playing. Once you’re on the Cue Point, pressing and holding down “VirtualVinyl” allows for temporary play of this point. If you want to delete a Cue Point, right-click on its icon on the Waveform display, and select “delete”.

Stutter / Play

Starts the music.

If you press “Stutter/Play” while the song is already playing, it will restart the music from the last position you pressed “Play” from, creating a “stutter” effect.

Pause

Stops the audio where it is currently playing.

Subsequent clicks will cycle through the beginning of the song and all the Cue Points.

Right-clicking will automatically go to the first beat in the song.

8. Sync

When you click “Sync”, VirtualVinyl will sync the tempo of the deck to the opposite deck’s tempo.

If you press “Sync” while the song is paused, only the pitch will be adjusted.

If you press “Sync” while the song is playing, the beats will be smoothly aligned too.

If you right-click on “Sync”, the song will start already aligned on the next beat.

***Note:** the right-click sync doesn’t use the Computed Beat Grid but instead aligns the next audible beat. This behavior lets you purposely start on half or quarter notes for special effects, but the downside is that it won’t work during a break or when there is no audible beats).*

9. Pitch Slider

Controls the speed/pitch of the music. By moving the slider downward, the speed of the music speeds up. By moving upward, the speed slows down. The “Zero” button lets you smoothly bring the pitch back to 100%. Double click on it to bring it back instantly.

10. Pitch Buttons

These two buttons are used to temporarily change the speed of the track playing on the deck. This is useful when you want to make a quick adjustment to a track if the beat of the track is not exactly matching up with the beat of the track playing on the other deck. The speed will be affected for as long as you are pressing “+” or “-”.

11. Hot VirtualVinyl

You can use these three buttons to set additional cue points. The first time that you left-click on one of these buttons, a cue point will be set. Left-click on the corresponding button at any time to jump back to that cue point. To set a new cue point for the hot cue, right-click the corresponding hot cue button. If you want to delete a cue point, right-click on its icon in the waveform display, and select “delete”.

INTERNAL MIXER CONTROLS

VirtualVinyl features an internal mixer section as part of the InternalMixer skin. The mixer can be accessed by selecting “VirtualVinyl:InternalMixer” in the Configuration Skin section.

It can be used just like a regular DJ mixer.

The controls on the mixer include:

1. Channel Gain

This knob sets the gain level for the corresponding channel (deck). (Right-clicking will bring it to the value that matches the other deck level. Double-clicking brings it back to 0)

2. Channel Faders

These vertical faders allow you to adjust the audio level on the corresponding deck.

3. EQ

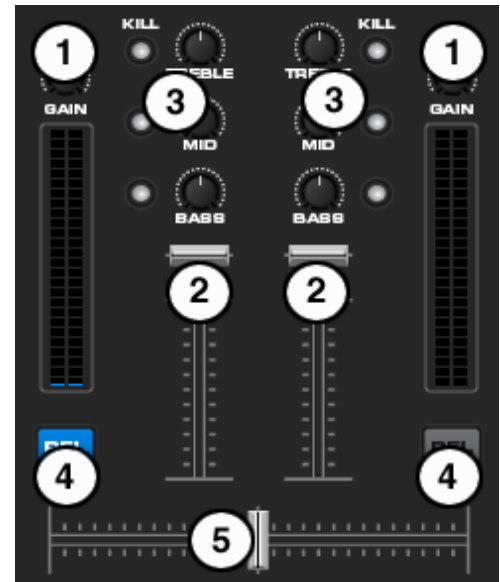
These knobs allow you to adjust the low, mid, and high frequencies of the audio playing on the corresponding deck. Each frequency range can also be cut out by pressing the corresponding “Kill” button.

4. PFL

Sends the pre-fader level of the audio to the cue section for headphone monitoring.

5. Crossfader

The crossfader blends audio or video between the two decks. By sliding this fader from channel to channel you can isolate the left and right deck or blend them together.



TOP TOOLBAR CONTROLS

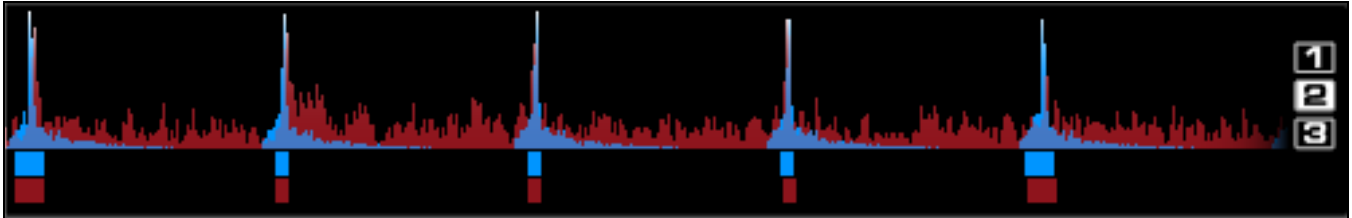


Please note that not all skin interfaces provide this set of controls. However, there are some elements common in all the skins (those are annotated with an asterisk *).

1. **Headphone level**
 Volume control for headphone level.
2. **VirtualVinyl/Mix blend**
 Fade to hear just the cue, cue/mix, or mix signal only in the headphones.
3. **BPM button ***
 Opens BPM edit window. Each button respective to it positioned deck.
4. **Master Volume ***
 Controls main output of program
5. **Clock ***
 Displays the time. Click to start the counter.
6. **Config and Window controls ***
 Provides access to the configuration settings dialog. See “Configuration Settings” section of this manual for more information.

THE RHYTHM WINDOW

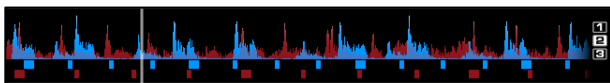
Above the players, a window posts curves corresponding to the two rates/rhythms of the music. These curves are represented in a waveform, allowing you to see your music. The peaks in the curve represent beats. In order to synchronize the music, these peaks should coincide. The present is represented by the line in the middle of the screen. All on the left was already played, while what is on the right represents the next seconds of the track.



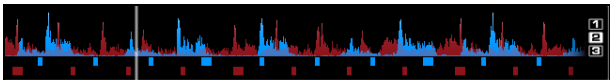
You can zoom in or zoom out, using the slider on the left or the three preset buttons (1, 2, 3) on the right side of the rhythm window.

Below the curves there are small squares called CBG (Computed Beat Grid), which represent the position of measures. The large squares represent the beginning of a measure, 4:4 time. The CBG is particularly useful, for example, when mixing a track at the time of an intro where the beat is not yet present.

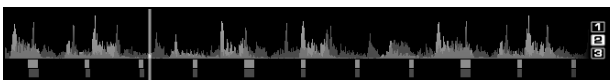
In the picture above, you can see that the beats are completely synchronized – it is easy to see that the peaks (beats) of the music are lined up. However, some music does not have the very obvious, evenly-spaced beat peaks which characterize most house and techno music. This is when the CBG is very useful. If you look at the following graphics, it is not exactly clear where the beats should sync up by just observing the waveform visually. However, with the help of the CBG, it becomes much easier to synchronize the two tracks:



➔ Not beat-matched



➔ Beat-matched but not aligned



➔ Beat-matched and aligned

MANUAL BPM CORRECTION

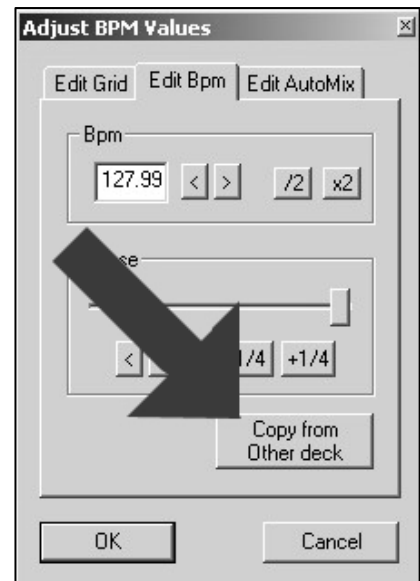
The CBG is calculated automatically when a track is loaded for the first time in VirtualVinyl. VirtualVinyl uses powerful algorithms to calculate the BPM and the CBG of music (you can choose between fast but effective algorithm which works well for techno and house, and a slower algorithm which is effective on any type of music).

However, in some rare cases, the CBG is not correctly positioned on the beats of the song. In this case, you can easily carry out a manual correction.

Click on the  button.

There are several methods to correct the BPM and the CBG:

The simplest method is to beat-match the track with unknown BPM with a track whose BPM is already known, then click on "copy from other deck". This will copy the BPM information to the unknown track.



Alternatively, you can use the method of the anchors.

Click on "beat tap" button in time with the beat, in order to approximate the BPM.

Then, pause the track, advance the track to the downbeat (first beat), and click on "First anchor". Then advance to the upbeat (second beat), and click on "Second anchor". Check that the number of beats displayed corresponds to the number of beats between the two anchors.

Then go further in the music, and repeat the "second anchor" operation if you notice that the beats and the CBG shift. Normally two or three anchors should be enough to obtain an accurate CBG.



CONFIGURATION SETTINGS

VirtualVinyl is designed to be very simple and easy to use but it is also fully customizable to match your preferred system performance.

To make changes to VirtualVinyl's configuration, click on the **CONFIG** button. This will bring you to the "Settings" dialog. The options in the "Settings" dialog can be viewed and edited by clicking on the corresponding tab on top of the "Settings" window and include:

SOUND SETUP

The "Sound Setup" tab is where your sound card (or device) configuration.

Inputs – If using timecoded vinyl or CDs to control VirtualVinyl, select the appropriate input configuration from this pull-down list. Choices are "NONE", "Single Timcode" for Single control, and "Timecodes" for Dual control. Setting up VirtualVinyl for Timecode use is covered in detail in the "Timecode" section of this guide.

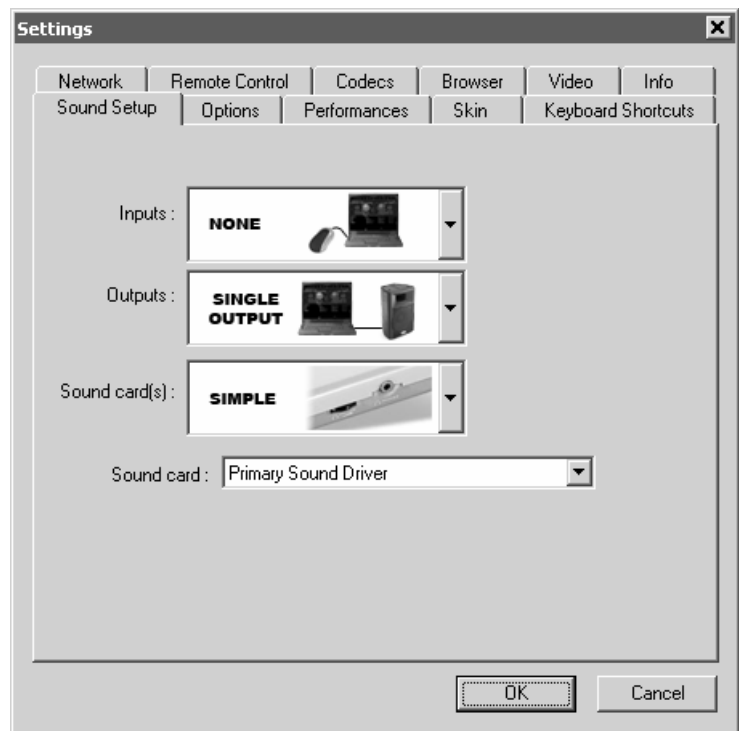
Outputs – Select the preferred output configuration from this pull-down list. Please note that, depending on your sound card, some output options may not be available for use. Choices are "Single Output", "Headphones", "External Mixer" (2 channel output), or "3-Lines Mixer" (3 channel output).

Sound card(s) – Select the sound card driver which you would like to use with the VirtualVinyl software.

Sound card – Select the sound card in this pulldown list.

Output Channels (not shown) – Select the routing of outputs on soundcard when the Outputs dropdown is set to one of the following choices - "Headphones", "External Mixer" (2 channel output), or "3-Lines Mixer" (3 channel output).

For further explanation of "Sound Setup" variations see the "Advance Sound Setup" section of this guide.



OPTIONS

The Options settings allow you to customize how VirtualVinyl performs.

BPM Engine – Allows you to choose between the two different algorithms available for the analysis of BPM. The first algorithm, “techno/house,” bases itself on the detection of the beats in the music, and should be used with music that has a very pronounced beat. The second, “any music”, should be used with music which does not have a distinct, pronounced beat. This algorithm uses melody as the basis of analysis and requires more computer resources than “techno/house”.

Crossfader – This option allows you to select the crossfader curve. There are four different options: Full, Cut, Scratch, and Smooth. (other curves can be set through plug-ins).

Pitch Range – Allows you to change the pitch range of the pitch slider. Reducing the range of pitch can increase the precision with which you are able to control the pitch (speed) of the music.

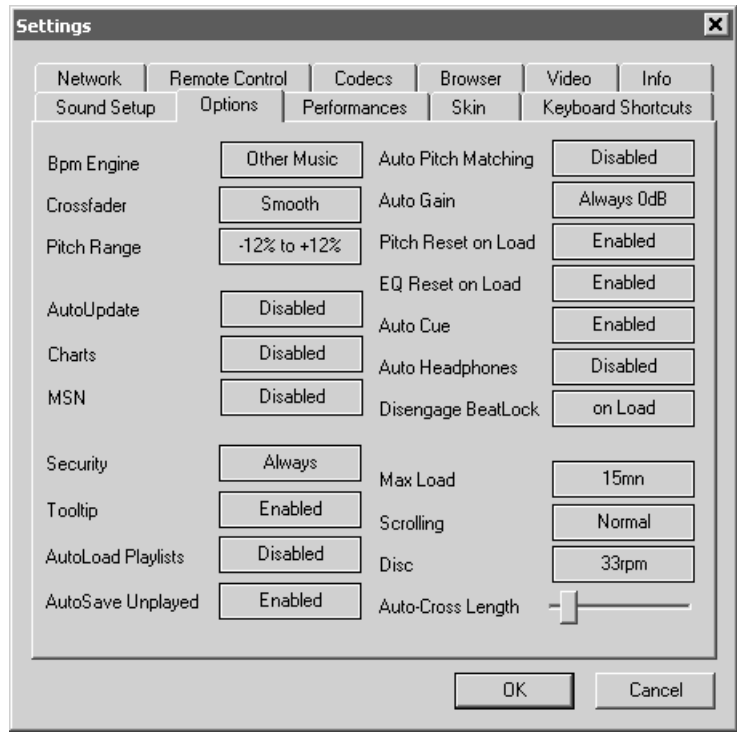
AutoUpdate – Automatically checks for new versions of VirtualVinyl (internet connection required).

Charts - Authorizes VirtualVinyl to send anonymous statistics about your sessions, compile charts of the most played tracks all over the world. No personal information will be collected.

MSN – When activated, this option allows MSN Messenger to show the music you are playing. To take advantage of this feature, you need to make sure that the “what I am listening to” option is enabled in your MSN Messenger.

Security – This setting prevents you from loading a track to a deck while it is playing. If you select “Ask”, VirtualVinyl will prompt you to verify that you indeed want to load a track while the deck is playing. If you select “Always”, VirtualVinyl will not allow you to load a track to a deck that is already playing. If you select “None”, the security feature will be disabled.

Tool Tip – Enable or disable the tool tip window. These tips appear when you hover your mouse cursor over the buttons of the software.



AutoLoad Playlists – See “Playlist Setup” section (page 13)

AutoSave Unplayed – See “AutoSave Unplayed” (page 16)

Auto Pitch Matching – When loading a song, automatically adjusts the pitch so that the BPM matches the BPM of the song currently playing.

Auto Gain – This is the gain adjustment setting for VirtualVinyl. If you Select “always 0db,” VirtualVinyl will automatically modify the level of the tracks to obtain a level of 0dB (the loudest level without clipping the signal). If you select “always match”, the volume on both decks will always be the same. Selecting “disable” will disable all automatic gain correction.

Pitch Reset on Load – If you enable this option, the pitch slider will be reset to 0% every time you load a track.

EQ Reset on Load – If enabled, this option will reset the equalizer on the deck when you load a new track onto it.

Auto VirtualVinyl – If enabled, will advance track position to the first cue point if one exists (or to the first beat of the song if no cue exists and if “always” is selected) when loading a track.

Auto Headphones – This option allows for automatic switching of headphone cues. If you select “on load”, the headphone cue will switch the headphone cue when you load a new track. If you select “always” the headphone cue will switch when you load a new track or scratch a track that is already playing.

Disengage Beatlock – When engaged, the Beatlock feature will keep the deck locked to the beat on the other deck, no matter if you are scratching or changing the pitch on the other deck. Selecting “on load” or “on switch” will automatically disengage the beatlock feature when the deck is loaded/switched.

Auto-Cross Length – Use this slider to specify the duration of the fade during automatic mixing. If this is set to 0 (left side), the tracks will play from start to finish.

Max Load – Specifies the duration maximum beyond which the track will not be loaded in memory. Loading tracks which are too long may put a strain on your system performance and cause VirtualVinyl to not function properly. Adjusting this setting makes it possible to play long tracks without overloading the memory of your computer.

Scrolling – Allows you to reverse the direction of the scrolling rhythm window.

Disc – Allows you to select the spinning rate of the virtual turntables (default: 33 1/3 turns).

PERFORMANCES

VirtualVinyl provides a simple, yet complex interface for optimizing performance to the capabilities of your computer. Depending on the system's resources, some settings will work better than others. **We recommended that you take time to experiment with these settings prior to using VirtualVinyl in a live performance in order to achieve the best performance.**

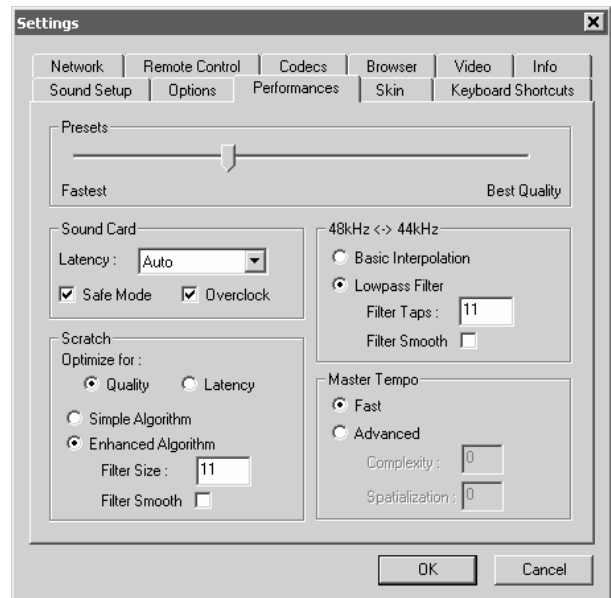
NOTE: When new components (controllers, soundcards, external drive, and software) are added to the system, you may need to readjust the performance settings.

PRESETS

Use this slider to select different preset configurations for the parameters below. Shift the "Presets" slider to the right for "Best Quality" of sound, or shift the slider to the left for "Fastest" performance.

NOTE: Not all systems are able to handle the "Best Quality" setting. It is highly recommended to start at the "Fastest" preset and work towards "Best Quality" in order to determine the optimal setting for your computer.

NOTE: After making changes to the settings, close and re-start the application before testing the new settings.



SOUNDCARD

Latency – describes the amount of time it takes for a device to respond to a command. Latency makes a significant difference when using timecoded vinyl, CDs, MIDI or external control devices. The lower the latency setting, the more instantly the software will respond, but the more likely you may hear glitches and pops if your computer is not fast enough to process the audio.

NOTE: In ASIO mode, some soundcard drivers don't work well with a latency forced by the software. In such case, use the "Auto" value, and set the latency in the soundcard's control panel.

Safe Mode – When using a DirectX mode setting (like Simple, Dual, Mono or 4.1), VirtualVinyl is less likely to produce glitches and pops if your CPU is momentarily busy. The performance trade off is that scratching and pitch adjustments will use more CPU, especially with advanced algorithms. If using the advanced Master Tempo setting, Safe Mode will probably need to be disabled, unless you are running on a really fast computer.

NOTE: This option has no effect on ASIO or Low-Latency modes

Overclock – This setting can make your computer run faster (especially on laptops) and allow for lower latencies.

SCRATCH

(Allows for adjustment to how VirtualVinyl reacts to scratch motions)

Optimize for:

Quality – VirtualVinyl will more accurately represent how a scratch sounds when moving the virtual record back and forth

Latency – VirtualVinyl reacts as quickly as possible but might result in a somewhat more metallic sound.

Scratch algorithm:

Simple Algorithm – adds no computational overhead and will use a simple interpolation algorithm to compute the scratch sound

Enhanced Algorithm – uses an advanced algorithm that mimics the movement of the needle on the grooves, to obtain the best scratch sound possible. A filter size of 11 gives the best quality/CPU ratio, producing good quality while keeping a low computational overhead.

48kHz <-> 44kHz

Describes how VirtualVinyl will interpolate between 48kHz and 44.1kHz sample rates. Choosing “Basic Interpolation” will save some system resources and could improve performance. For better quality interpolation, choose “Lowpass Filter”. 11 taps is the best quality/CPU ratio.

NOTE: *Most commercially available music is recorded at 44.1kHz (including MP3s) so it is a good idea to set your soundcard's output to 44.1kHz. This will prevent your soundcard from having to interpolate to different sample rates and will improve performance. Unless you have worked with different sample rates before, the 44.1kHz setting should be default for your soundcard.*

MASTER TEMPO

The master tempo setting describes how VirtualVinyl changes the pitch of the song without changing its tone (“KeyLock feature”).

The default “Fast” algorithm uses only a small percentage of CPU power and produces good results at pitches in the range of -10% to +10%. For extreme pitching, the fast algorithm can produce some choppiness. If your computer is fast enough, this can be corrected by using the Advanced algorithm option. With the Advanced option, raising the complexity or spatialization of the algorithm can quickly overflow the system's CPU capabilities.

NOTE: *Disable Safe Mode for better performance with the Advanced algorithm.*

SKIN

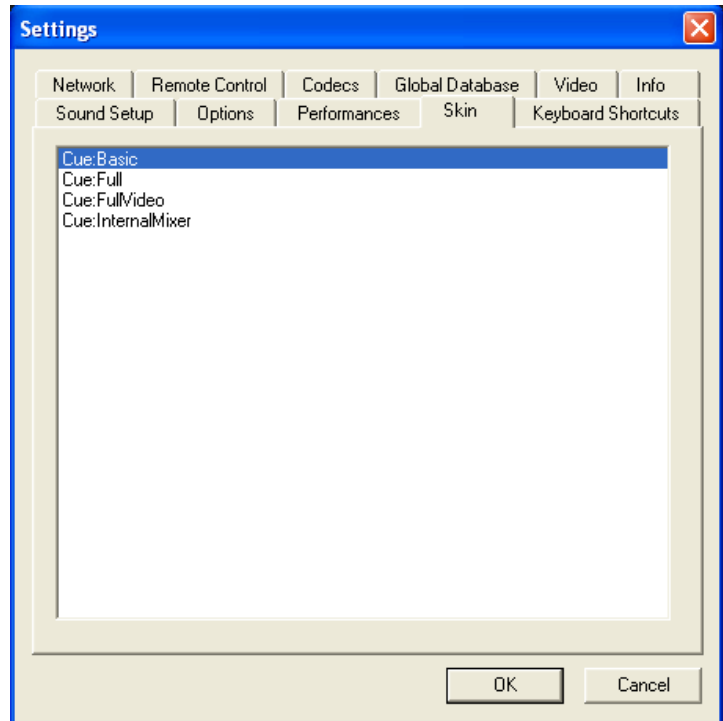
VirtualVinyl allows you to choose between several different “skins”.

VirtualVinyl:Basic – a simple, basic skin.

VirtualVinyl:Full – a skin which features full VirtualVinyl controls.

VirtualVinyl:FullVideo – a skin featuring full VirtualVinyl controls plus a video section in the middle.

VirtualVinyl:InternalMixer – a skin featuring full VirtualVinyl controls plus an audio mixer in the middle.



KEYBOARD SHORTCUTS

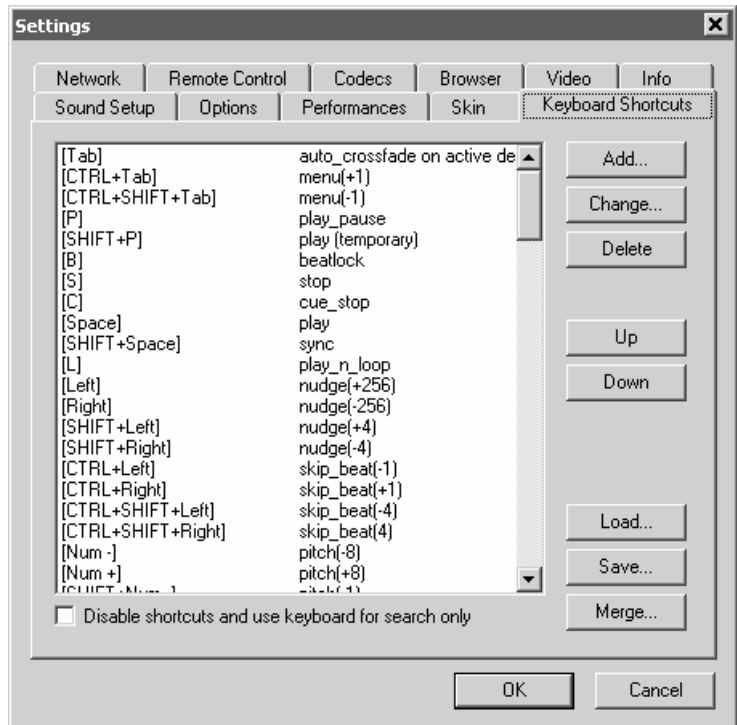
VirtualVinyl provides quick access to all of its parameters through assigning keyboard shortcuts to a wide assortment of VirtualVinyl actions.

From the “Keyboard Shortcuts” tab, VirtualVinyl provides a ‘default’ preset collection of shortcuts assigned to the keyboard.

Shortcuts can be added, changed, or deleted using the respective buttons. Changes to the ‘default’ presets can be saved as a new preset collection by using the “Save” option.

Custom preset collections can be loaded for use by selecting “Load”.

“Merge” provides the ability to merge multiple preset collections together.

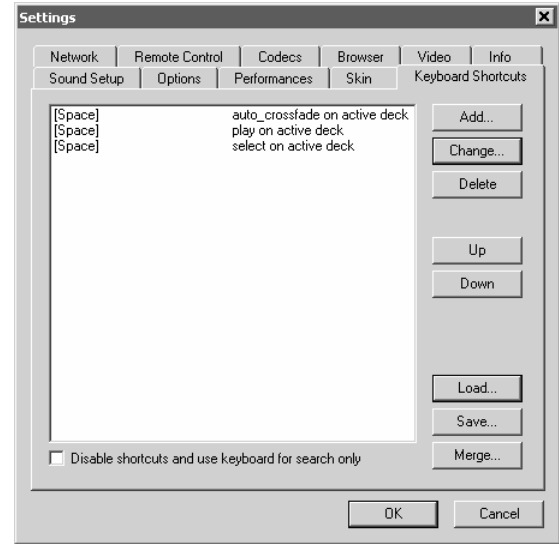


SHORTCUT MACROS

A shortcut macro is the process of assigning multiple actions to the same key or key combination. The power of the macro comes from the order they are listed. Open the Configuration dialog and select the Keyboard Shortcuts tab.

Here is an example of a macro which provides a ‘Mix Now’ capability.

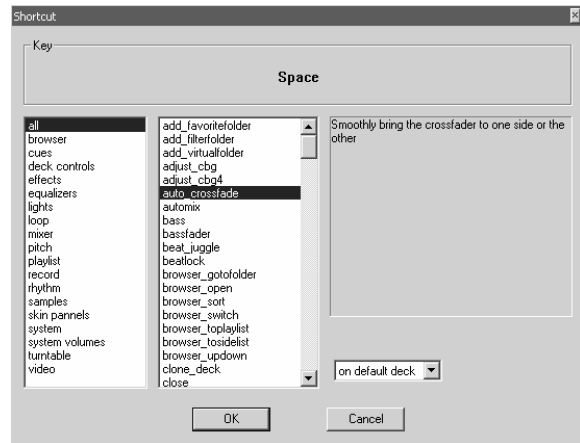
The actions to be used are `auto_crossfade`, `play`, and `select` – in this example, all three actions will be activated consecutively by pressing the Space bar once.



- auto_crossfade** – moves the crossfader
- play** – activates the play of the track
- select** – changes which deck is now the active deck

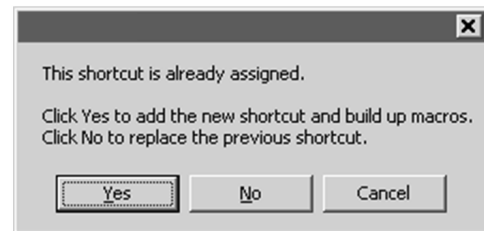
To build the macro, add the `auto_crossfade` action first. Select the Add button to get the action dialog. Hit the Space bar to add that to the Key section. Choose ‘all’ in the left list, then ‘`auto_crossfade`’ from the middle list. Use the drop-down and select ‘on active deck’. Then click OK.

Repeat this process for ‘play’ and ‘select’ and be sure to choose ‘on active deck’ from the drop-down option. The ‘play’ and ‘select’ options can be found in the ‘deck controls’ option of the left list.



When you click ‘OK’ to add these actions, VirtualVinyl will provide a dialog that states ‘This shortcut is already assigned. Click Yes to add the new shortcut and build up macros. Click No to replace the previous shortcut.’

Click ‘Yes’ to build up the macro.



Once each item is added, click ‘OK’ at the bottom of the Configuration dialog and test the shortcut.

In this example, the Space bar was used and is not the required key in order to make it work. Any key or key combination can be used as long as all actions are assigned to that key. Also, remember the power is in the order of the actions. If this macro is configured in a different order the results will be different.

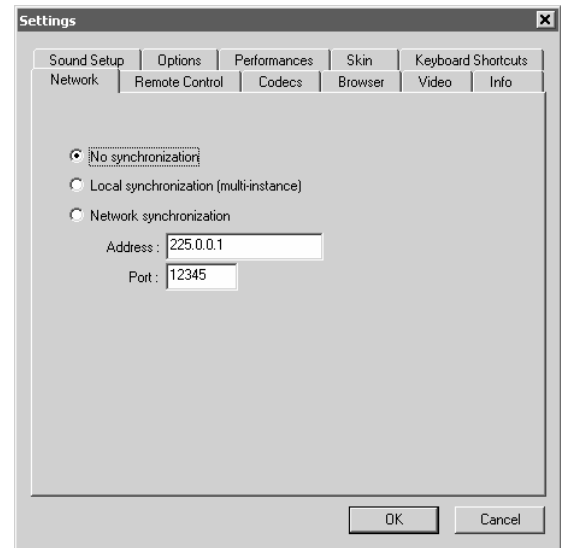
NETWORK

VirtualVinyl can be synchronized between multiple instances and/or synchronize multiple computers running VirtualVinyl.

No synchronization – turns synchronization off.

Local synchronization – allows multiple instances of VirtualVinyl to run and synchronize together on the same computer.

Network synchronization – allows several computers running VirtualVinyl to synchronize over a network.



REMOTE CONTROL

VirtualVinyl can be controlled using a wide array of external controllers. Once the controller is connected, start VirtualVinyl, select the **Config ► Remote Control** tab and enable your controller by checking the corresponding “Enable” box. If the controller is properly set up and connected, a green dot appears next to it. If the controller is improperly connected, a red dot will appear next to it. If the controller does not seem to function, try to un-check and re-check the “Enable” box. This will reset the connection between VirtualVinyl and the controller.

Controllers are support via 2 methods – Native support or MIDI support.

Native Support – once connected and activated, a native controller can be used immediately, without any additional configuration required. Native support of a controller **does not** imply that all of the controller’s features or functionality will control the corresponding actions in VirtualVinyl. Most controllers can be enhanced or expanded to support additional functions through the use of custom coded mappers.

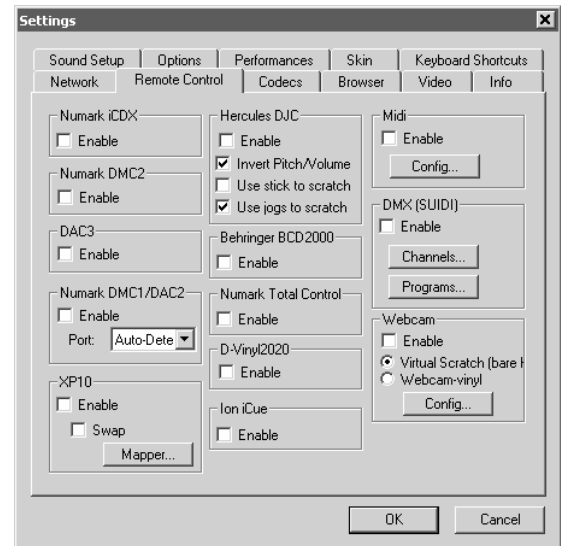
NOTE: Some controllers may require supporting drivers to be loaded before the system recognizes them, so consult the User Manual for the controller before install.

Native Supported Controllers:

- Numark iCDX, DMC2, DMC1 (v2), Total Control
- PCDJ DAC-2, DAC-3
- Hercules DJ Console (DJC)
- Behringer BCD2000
- D-Vinyl 2020
- XP-10
- ION iVirtualVinyl

MIDI Support –

If using a MIDI controller which is not supported natively, then use the MIDI controller option. Click the **MIDI ► Config** button to access the MIDI mapping interface.



In this menu options for creating, loading, saving, merging, and modifying MIDI mappings is available. If you would like to add mappings by hand, click on “Add”. Select the parameter to map from the menu on the left, as well as which deck the mapping will apply to. Then move the control (on the MIDI controller – knob, slider, etc.) to map to the parameter. VirtualVinyl will automatically detect the controller number and map it to the selected parameter.

CODECS

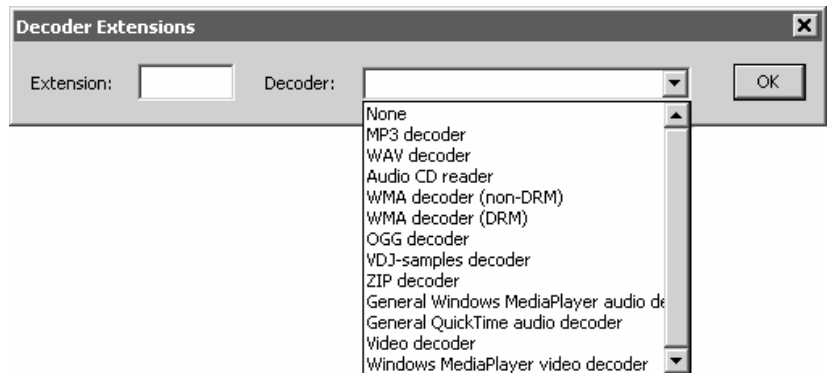
This is a list of the codecs which Cue will use to interpret and decode sound and video files. These include the most common sound and video file extensions.

VirtualVinyl does not natively pick up on all available codecs for decoding audio and video.

Specific to video decoding, there is a small collection that VirtualVinyl's Video Decoder is coded to handle. The Windows Media Player Video Decoder is available if a codec not natively supported by VirtualVinyl is needed for decoding. Example: The DivX codec needs to use the Windows Media Player Video Decoder in order to play video encoded by this codec.

There are several available decoder engines that can be assigned to file extensions. This will allow VirtualVinyl to use the appropriate decoding engine when attempting to play these files.

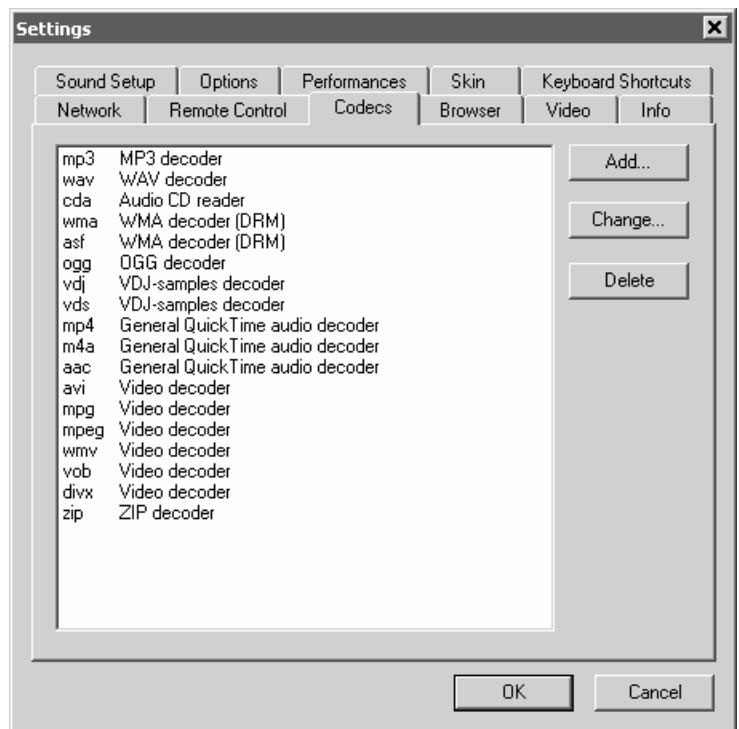
At install, VirtualVinyl includes some of the common sound and video file extensions. However, if there are files which require different codecs, the codecs are able to be used by one of the listed decoder engines then the extension can be added to the list – this will enable you to open up those files.



Determining Appropriate Selection for Video

If VirtualVinyl cannot process a certain file then that unique encoded format (codec) is probably not natively supported with the VirtualVinyl Video Decoder. The only option is to ensure the appropriate CODEC for that video type is installed and playable in Windows Media Player. You can then assign that file extension type to Windows Media Player Video Decoder.

If there is a single file extension type that requires two different codecs and one is not supported natively by VirtualVinyl's video decoder then set the extension to Windows Media Player Video Decoder. Alternatively, the files could be renamed so each codec can be assigned to the preferred decoding engines.



VIDEO

Activate – Turn the video engine on or off.

TV Output – Select the monitor which will display the video master output.

NOTE: Only Monitors which are part of the windows desktop can be selected. If the monitor is not in the list, open Windows' display settings and activate the 'Extend desktop on this monitor' for the desired monitor.

Use Hardware Acceleration – Uses DirectX to compute and display the video.

NOTE: Unless you are using a video card that is fairly old, you shouldn't turn this off.

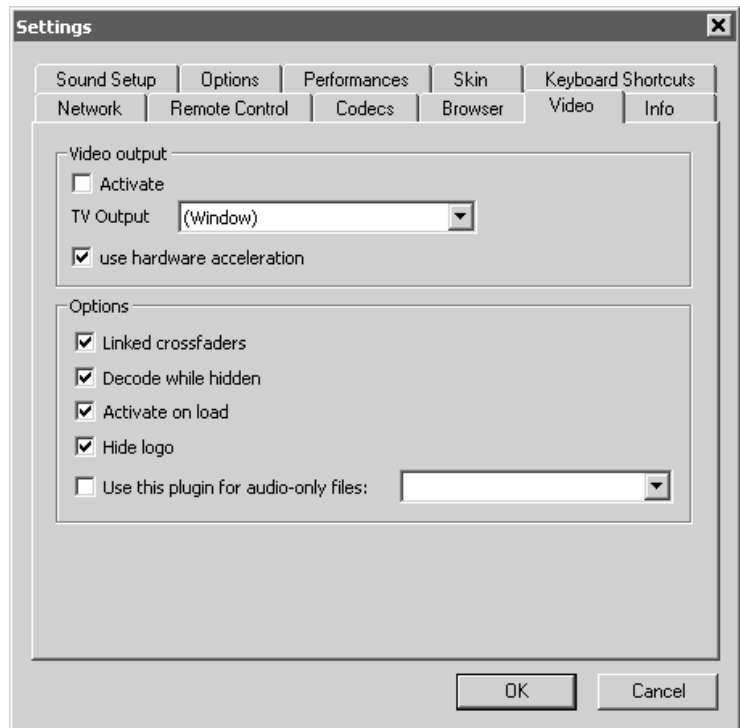
Linked crossfaders – This option allows VirtualVinyl to link to the audio crossfader for controlling video crossfades. If unlinked (unchecked) the video crossfade can be controlled using the video crossfader knob labeled "Cross" underneath the video screen in FullVideo skin.

Decode while hidden – Provided with a strong performance computer, VirtualVinyl can decode video content even when it is hidden. This may prevent some jolts which may occur when video content is brought into the mix with the crossfader.

Activate on load – Automatically activates the video engine if a video file is loaded to either deck. If you want to play just the audio track of a video, uncheck this feature so the video engine will not be activated.

Hide logo – Checking this option will hide the VirtualVinyl logo from the video mix window.

Audio Only Plug-in – Check this option and select the desired plug-in from the drop-down box. When playing audio-only files, this option will activate the plug-in to act as a visual. Example plug-in selection is the Sonique visuals.



INFO

The VirtualVinyl Info tab provides the version number along with copyright information about application. In addition, there are three buttons:

Check for Updates: makes an internet query to the VirtualVinyl Download Center and checks to see if any updates are available.

NOTE: *An Internet Connection is required for update checks and plug-in download.*

Download Plug-ins: Logs onto the VirtualVinyl website to display available plug-ins.

Reset to Factory settings: Reset VirtualVinyl's settings back to the recommended defaults. All configuration tabs will be affected.



TIMECODE CONTROL

When you open the Timecode Configuration window, you can choose to view the window in Simple or Advanced view. For the most part, you might never have to go into the Advanced View – the Simple View shows the most essential timecode configuration that you will probably need.

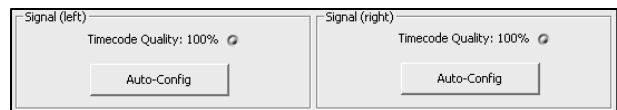
You will notice that there is an Auto-Config button for each virtual deck. This button can be used to automatically detect the required timecode settings for the software to function properly.



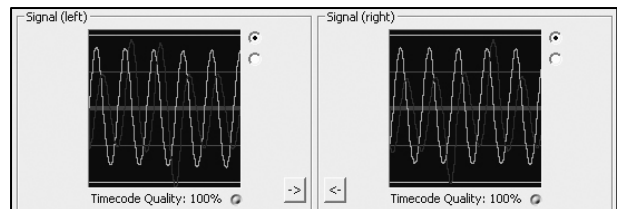
To use the Auto-config feature:

1. Play both timecode input sources (i.e. play both timecode CDs or play both timecode records).
2. In the software, press each deck's Auto-Config button to automatically configure the timecode settings.

If the timecode signal is configured properly, you will see a green dot next to Timecode Quality (as shown on the right in Simple View)...



Or you should see a nice Sine wave pattern (as shown on the right in Advanced View).



Please refer to the following descriptions of the timecode configuration parameters (shown with Advanced View on the right):

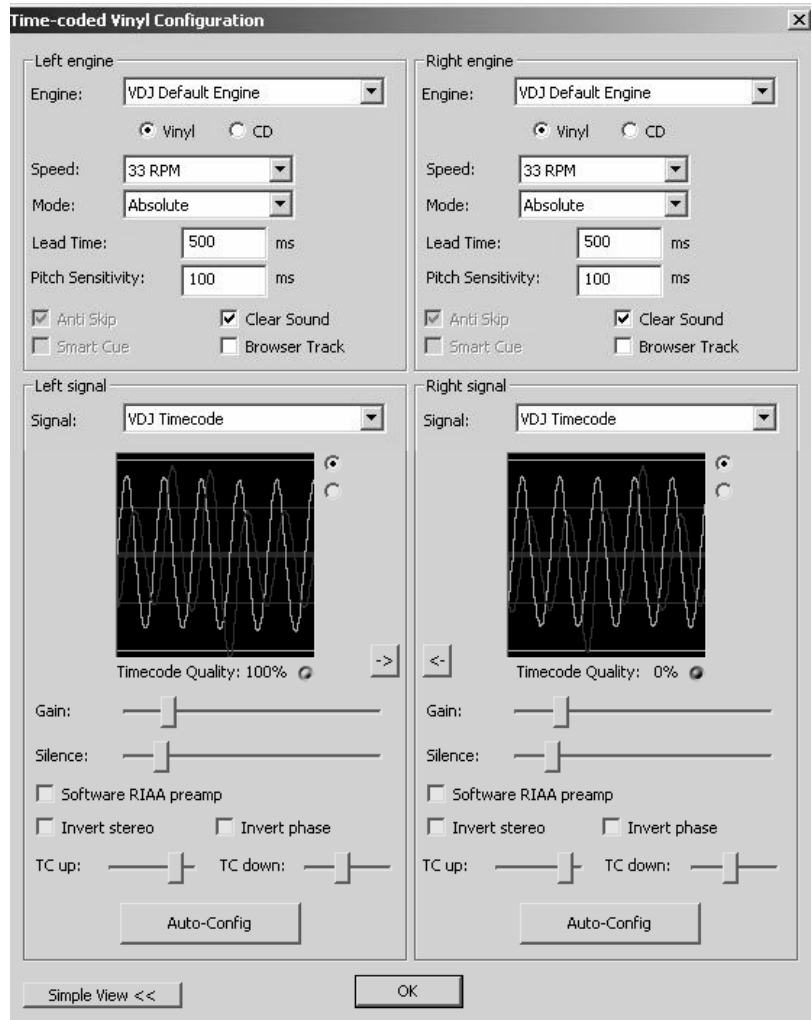
1. **Vinyl** – Choose this option if you are using timecoded vinyl.
2. **CD** – Choose this option if you are using timecoded CDs.
3. **Mode** – You can choose between 3 different timecode tracking modes. These modes will influence how the timecode is controlling playback position on the corresponding deck:

Absolute – This mode is similar to how music is normally played on vinyl. The beginning of the record corresponds to the beginning of the track and picking up the needle and moving it to another location on the vinyl, also known as needle dropping, will move playback to that location in the track. Please note that in Absolute mode you will not be able to use some of the software features, such as looping and cue points.

Relative – In this mode, the software will track the relative movement of the record (forward, backward) but will not track the position of the within the control timecode. So, for example, you will not be able to seek to another location of the song by picking up the needle and dropping it on another part of the record. This mode is perfect for scratch DJs since it allows you to scratch without worrying about the needle skipping around on the record – the software will compensate for any skip that might occur. In this mode, you are also allowed to use some additional software features, such as looping and cue points.

Smart (default) – This is the default timecode tracking mode and is the mode that we recommend most users use. In Smart mode, you have the ability to do needle drops but can also use the additional features of the software, such as pitch, loops and cue points.

4. **Lead Time** – Specifies when the time-code signal begins playing the song, by moving the point at which the track begins to a position further into the vinyl. For example, this is useful if your records have cue burn in the beginning. Simply set the lead time to another bumper.



5. **Pitch Sensitivity** – This is the time that it takes for the waveform display to become adjusted after you alter the pitch of the timecode signal. Too small of a value will attempt to redraw the waveform when you scratch the timecode, which is not recommended. Setting too high of a value will take longer to redraw the waveform, which may be visually confusing. Please experiment with a few different values to find the one best suited for your style.
6. **Anti Skip** – If enabled, anti skip will prevent playback from skipping if the needle happens to jump to another groove. Please note that anti-skip is only available under Smart or Relative modes.
7. **Smart Cue** – If enabled, moving the needle far to a different location on the timecode record (over more than one groove segment away) will cause the software to automatically jump to the next set cue point (forward or backward), instead of jumping to the absolute location where you drop the needle.
8. **Master Tempo** – If enabled, the software will time-stretch, instead of pitch shift, the music playing on the deck when you change the pitch of the timecode signal. In other words, the Master Tempo features as a Keylock, allowing you to change the tempo of the music without altering its pitch.
9. **Browser Track** – If enabled, Browser Track allows you to use the timecode signal to browse through your music in the software. With Browser Track feature enabled, the last three groove segments become dedicated to browsing, so when you drop the needle onto one of these segments, you can scroll through your music titles by moving the record forward and backward.
10. **Arrows** – Pressing one of the arrows will copy the timecode preferences to the other deck.

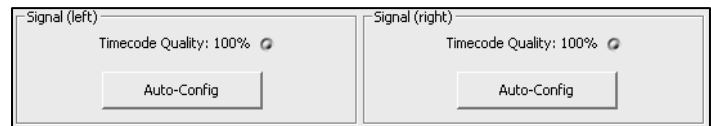
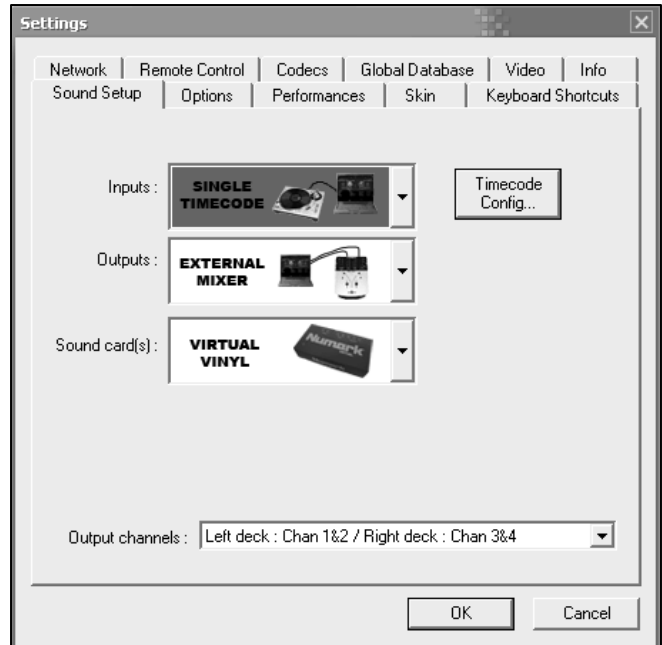
The following settings (11-17) will be set by the Auto-Config feature so you do not have to worry about understanding them. The software will automatically configure them for you:

11. **Gain** – The gain compensation for the timecode signal.
12. **Silence** – Compensates for background/ambient noise by lowering/raising the noise floor threshold.
13. **Software RIAA Preamp** – If enabled, allows you to plug a phono-level turntable directly into a line-level input on the VirtualVinyl box.
14. **Invert Stereo** – Virtually switches the left and right inputs and effectively reverses playback.
15. **Invert Phase** – Software adjustment if your needle is wired incorrectly.
16. **TC Up** – Level of “1” value in the binary signal of the timecode
17. **TC Down** – Level of “0” value in the binary signal of the timecode.

DJING WITH ONE TURNTABLE

VirtualVinyl's flexible time-code control allows you to easily mix with only one turntable. Please see below for instructions on how to DJ using only one turntable.

1. Press the CONFIG button at the top right corner of the screen to access VirtualVinyl's preferences.
2. Select **Single Timecode** under the **Inputs** pull-down menu.
3. Click on **Timecode Config...** to access the timecode configuration and calibration options.
4. In the Timecode Config... menu, please run the automatic configuration by clicking on the **Auto-Config** button. Remember that the timecode needs to be playing while you run the automatic configuration.
5. Once you have configured the timecode options, please exit the Config menu.



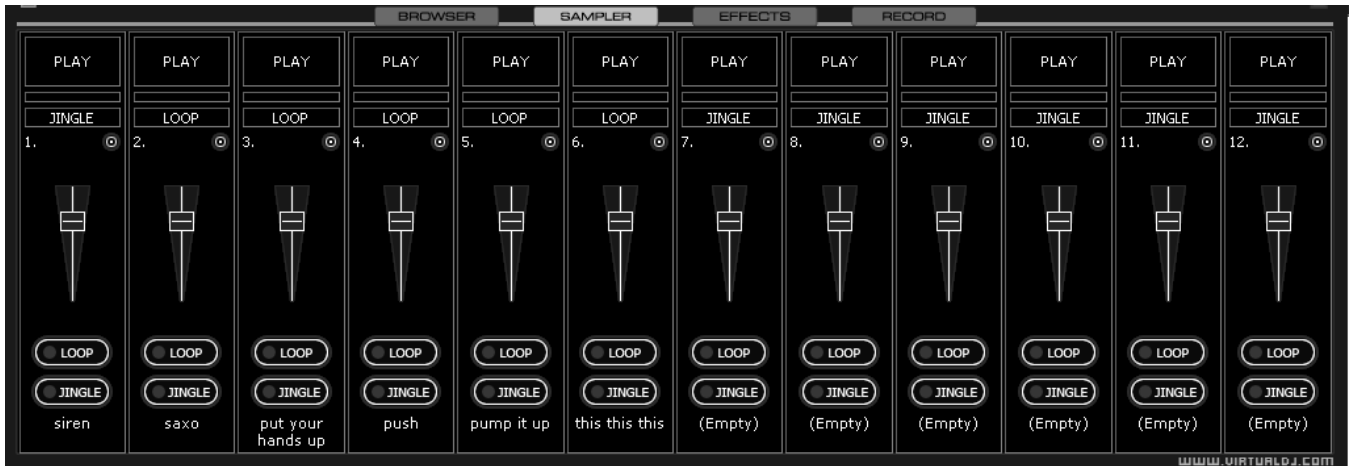
You will notice to the side and under each virtual deck there is a button labeled **TIMECODE** (shown on right). You can choose between which of the two decks you are controlling with the timecode signal by pressing the deck's Timecode button. The button will illuminate to let you know which deck is being controlled by the timecode.



1. On deck A, begin playing a track with your timecoded vinyl or CD.
2. While the track is playing, click deck A's **TIMECODE** button to disable the deck's timecode control. You can now pause your turntable or CD player – the music will continue playing.
3. Now load a track to deck B and click deck B's **TIMECODE** button to enable timecode control on deck B.
4. Using your timecode vinyl or CD, you can now cue and mix the track on deck B with the music playing on deck A.
5. Once you have finished the transition to deck B, you can disable deck B's timecode control – the music will continue playing.
6. Click deck A's **PAUSE** button to stop the music playing on deck A.
7. Now load a track to deck A and click deck A's **TIMECODE** button to enable timecode control on deck A.
8. Using your timecode vinyl or CD, you can now cue and mix the track on deck A with the music playing on deck B.
9. Once you have finished the transition to deck A, you can pause the music on deck B.
10. Repeat the procedure starting from #2 above to continue mixing.

THE SAMPLER

VirtualVinyl features a powerful sampler, which provides the ability to record, load, save and play samples on the fly. The sampler can be accessed by clicking on the “Sampler” tab in the lower window and features 12 slots for samples which are available to use at any given point in time.



There are two types of samples that are supported – linear (one shot), and circular (looping) samples.

Linear samples are samples which are played beginning to end. Typically, linear samples do not have an intrinsic rhythm, and are often sound effects (applause, sirens, etc).

Circular samples are played in a looping fashion. Most often, these samples have an intrinsic rhythm, which can be repeated forever.

However, there is no rule about how to use samples – it is all up to you whether you will use a sample in a linear or circular fashion.

PLAYING SAMPLES

To play a sample you can simply click on the “Play” button associated with the sample cell.

If the sample is a linear (one shot) sample, the sample cell will display **JINGLE**. The sample is played alongside the mix until the end of the sample.

If the sample is circular (looping) sample, the sample cell will display **LOOP**. The sample is played alongside the mix and will continue to loop until the play of the sample is stopped when “Play” is pressed a second time.

The speed of the sample is modified in order to synchronize with the active deck at the nearest possible aligned beat. This ensures that the rhythm of the sample will be beat-matched and aligned with the active deck, resulting in a smooth, natural sample playback.

Samples can be played from the loop sampler menu on each deck. Simply select the sample from the pull-down menu, and then click on the sample title to play it. The frame around the title will light up during playback. If the sample is a loop, then click the sample title again to stop the loop. Linear samples will stop when the end is reached. The volume of the sample can be controlled using the Volume knob.



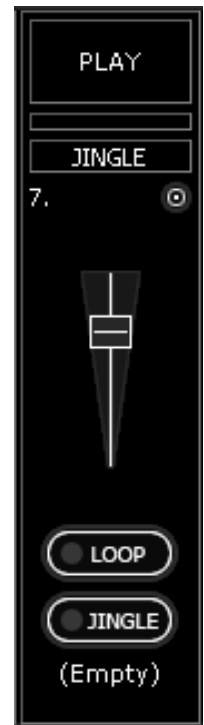
RECORDING SAMPLES

VirtualVinyl can easily record samples available for instant playback.

To record a linear (one shot) sample, click the “Jingle” button on the bottom of the sample cell to begin recording. Click on “Jingle” once again to stop recording. The sample is recorded from the deck that is currently in use (the Active Deck).

To record a circular (looping) sample, use the deck’s loop control to set the loop then click the “Loop” button on the bottom of the sample cell. The loop is automatically recorded to that sample cell and ready for immediate use.

If the “Loop” button is clicked without defining a loop using the deck controls, a 4 beat loop is automatically recorded.



CAUTION !!!

*Recorded samples **are not** saved for use in subsequent sessions. To save the sample, use the “Sample Options” menu and select the “Save...” option.*

SAMPLE OPTIONS

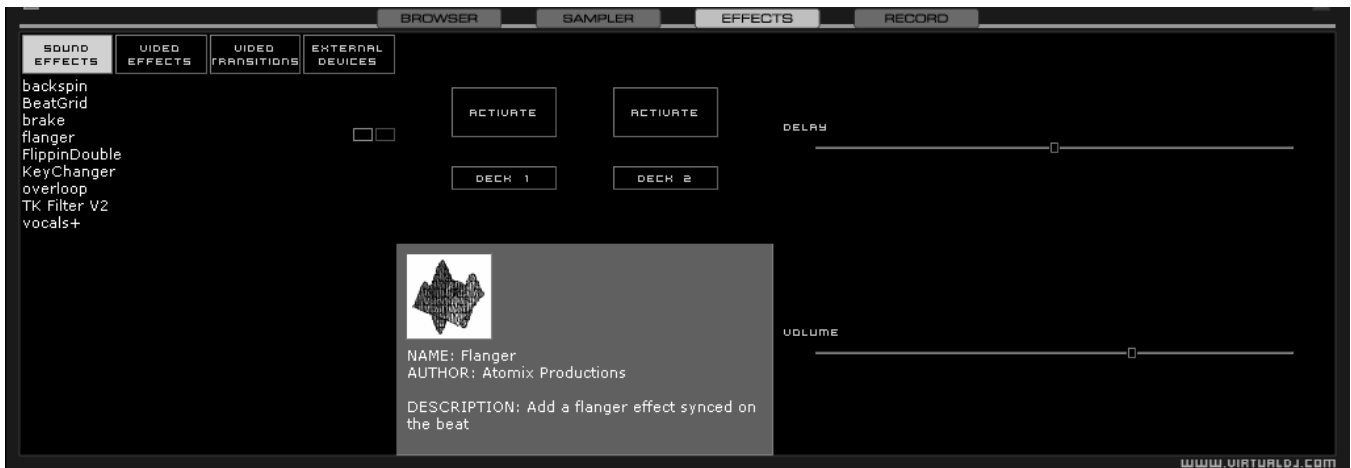
For each sample cell, there is a sample options menu available by clicking on the small button in the top right of the sample cell.

- **Load** – loads a sample from the hard drive.
- **Save** – saves the sample to the hard drive.
- **Beatlock** – turns beatlocking on and off. This way a linear sample is able to be synchronized with the active deck, or a looping sample can be prevented from synchronizing to the active deck.
- **AutoPlay** – when checked, begins playing the sample as soon as the volume is adjusted.
- **Write Protected** – write-protect the sample cell so it cannot be recorded over.



EFFECTS

VirtualVinyl features a comprehensive set of audio and video effects and transitions which can be accessed by clicking the “Effects” tab on the lower window. The effects list is displayed on the left side of the window. Multiple effects, both audio and video, can be applied to either or both decks.



To use an effect, select the effect and activate it by clicking on one of the two “Activate” buttons in the middle panel of the window. Deactivate the effect by clicking on the “Activate” button again.


The parameters for the selected effect are displayed on the right panel of the window. The parameters will change depending on which effect is selected. Adjust the parameters by moving the faders of the associated parameters.

Effects can also be accessed from the effects panel on the deck controls. Different effects can be selected using the pop-up menu. Enable and disable effects by clicking on the displayed effect title. If using the effects panel on the deck control, multiple effects can not be activated for that deck – this panel only allows activation of one effect at a time.

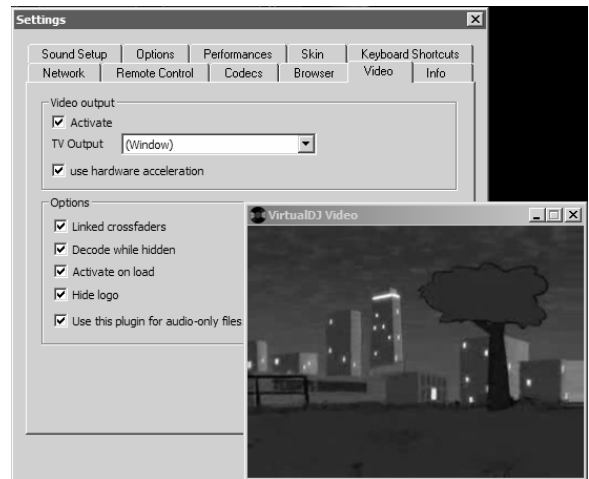


VIDEO

In addition to mixing traditional audio, VirtualVinyl makes it possible to mix video content with the ease and familiarity of a DJ interface. Instead of audio files (.mp3, .wma, .m4a, etc.), video files (.avi, .mpg, .wmv, .vob, etc.) can be played.

Video files are distinguished in the Browser with a small, blue “V” on their icon  and can be loaded to either deck. When playing a video file, a video window will open in VirtualVinyl.

If the installed video card has a TV output or capable of outputting to a second display, the secondary output can be specified as the output for full-screen display, instead of the windowed output. You can specify the output configuration in **Configuration ▶Video**.



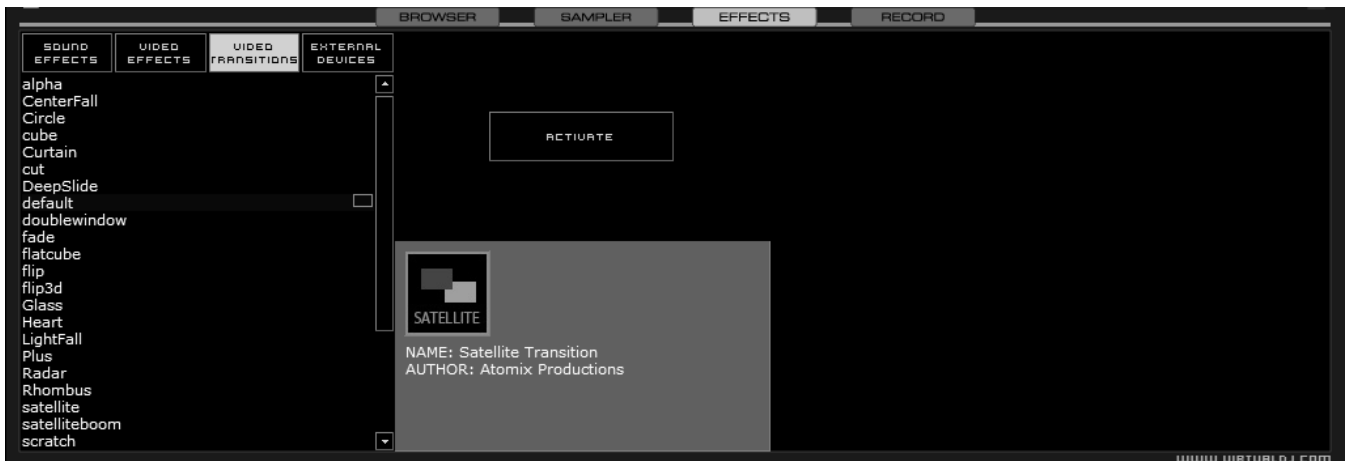
If full-screen output does not appear, check that the output is recognized in Windows display properties, and that Windows is in dual monitor mode (not clone). For more information, see the video card manufacturer’s instruction manual.

VirtualVinyl also provides a Rip DVD utility for ripping video files from a DVD to the computer’s hard disk in a high-quality .VOB format.

TRANSITION EFFECTS

VirtualVinyl features many different transition effects for transitioning between video clips.

From the Effects panel, select the “Video Transitions” section, then select the desired transition. Click on the “Activate” button perform the transition.

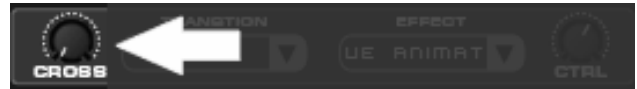


If using the VirtualVinyl:FullVideo skin, the desired transition effect can be selected and activated from the ‘Transition’ button found in the “Effects” zone just below the video preview windows.



There are two ways to mix video clips: automatically or manually.

To mix manually, use the video crossfader to transition from one video to another.



Or, just click on one of the video preview windows to smoothly crossfade to that deck.



If the “Link the Video crossfader” is checked in the Video configuration tab, the skin’s audio crossfader will crossfader the video when it is moved from one deck to the other.

Alternatively, VirtualVinyl can do the video mixing automatically.

Most transition effects feature a powerful “intelligent” algorithm that will process the transition of the video by analyzing what is being done with the sound (cueing, scratching, crossfading, etc).

In order to use the automatic behavior “Activate” the video transition effect. Do this either by clicking on “Activate” in the “Effects” page, or by clicking on the transition title on the VirtualVinyl:FullVideo skin.

VIDEO EFFECTS

Similarly to audio effects, video effects are used to transform the video on either deck.

Use the “Video Effects” in the “Effects” panel and activate the desired effect on the specific deck. Or, select and activate the video effect from the video controls underneath the video preview window in VirtualVinyl:FullVideo skin.



Select the desired effect using the pull-down menu under “Effect” and then click on the box to activate it.

OPTIMIZATION

In general, video mixing is much heavier in computer resources than audio mixing so certain optimization may help performance, especially when dealing with full frame rate video (such as DVD in high definition).

There are several parameters which determine the speed with which VirtualVinyl decompresses and displays video content – the size of memory present on your video card, the speed of the graphics processor (GPU), the speed of the main central processor (CPU), and the access speed of the hard disk.

Another parameter which largely influences performance is the type of file. An MPEG1 format file is much faster to decompress than a VOB format file. In a similar way, a file with a 320x240 resolution is much faster to decompress than a file with a 720x576 resolution.

By default, VirtualVinyl decompresses only the content which is visible in the video mix window. This means that if there are two clips which are playing but only one is visible, VirtualVinyl will only decompress the video which is visible. If both video files are shown in the mix window, then VirtualVinyl will decompress both. This makes the software perform quicker and also allows it to perform better on slower machines. However, this may result in small jolts at the time of transitions. If the computer configuration is sufficiently powerful, we recommend checking the “Decode while hidden” box in the “Video” settings in the “Config” menu to obtain more fluid transitions.

Also, if using a full-screen output to display the video mix, it is more effective to use a graphics card which has two outputs, than using two separate cards.



And finally, we recommend the use of an output resolution no greater than the resolution of the video files. If using higher resolutions, low-resolution content will not look any better but will be using more computer resources. A resolution of 800x600 should be sufficient if using high-quality DVD video.

KARAOKE

In addition to being able to play music and other video content, VirtualVinyl allows provides support to play and mix karaoke files.

VirtualVinyl is compatible with MP3+G, WAV+G, WMA+G, OGG+G, as well as karaoke DVD and .ZIP files.

When using CDG files, the songs will have two files that appear in VirtualVinyl's browser:

- The first is a file with a "K" in its icon  – this is the video karaoke file. When loaded on the deck, VirtualVinyl will automatically load the audio track on the deck and display the words in the video mixer.
- The second, with the standard audio icon  is the audio file only. This file can be loaded onto a deck to only play the audio for the songs, without displaying the words in the video mixer.

VirtualVinyl supports the binding of CDG files with their audio counterparts into one single .ZIP file. In this case, only the karaoke video file will appear in VirtualVinyl's browser.

In order to avoid indexing all of the .ZIP files on your computer, VirtualVinyl does not consider .ZIP files to be karaoke files by default. To change this, add the .ZIP file extension to the list of extensions under "Codecs" in the "Config" menu and associate it with the karaoke decoder from the list.

BROADCASTING AND RECORDING

VirtualVinyl also allows you to record or broadcast your mix. To access the recording and broadcasting features, click on the “Record” tab. The following interface is displayed.



The following methods are available:

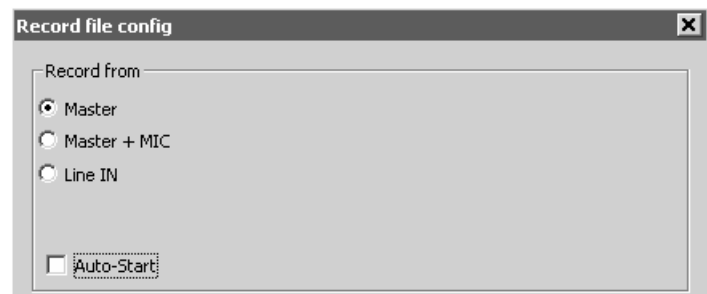
- Record File
- Burn CD
- Broadcast

To access the recording settings click on the “Config” button in the center.

RECORD FROM

In the “Config” dialog, three different sources for recording are available. These options are available for all three methods.

- **Master** – record the mix from the session
- **Master + MIC** – record the mix and another audio source (such as a microphone).
- **Line IN** – record only from the Line input of the soundcard or I/O interface. For example, if using an external mixer to mix the output of the mixer can be connected to the Line input of the soundcard or I/O device. The recording will feature all of the manipulations and cross fading performed on the external mixer.



There are additional configuration adjustments associated with each of the methods.

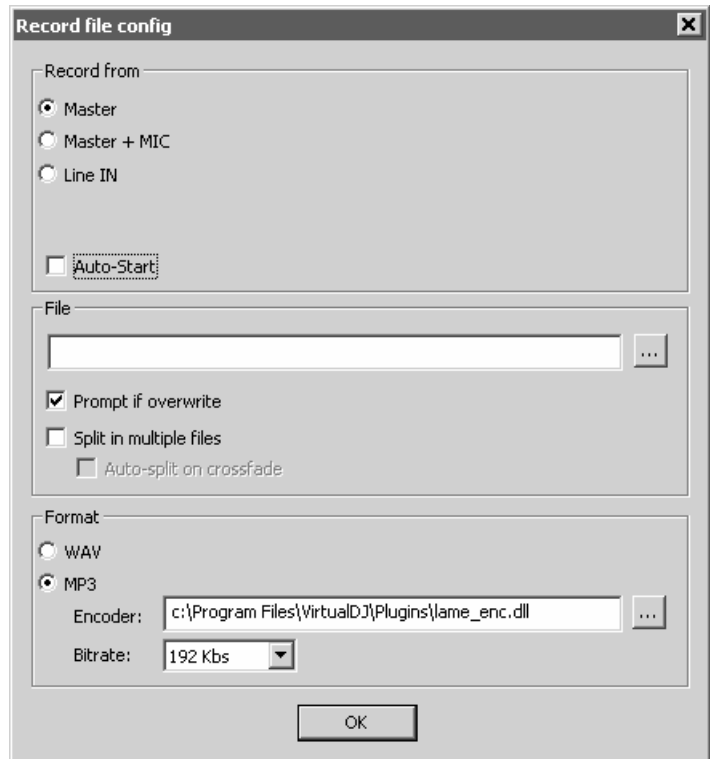
RECORDING TO A FILE (“RECORD FILE”)

“Record File” provides recording a mix session to a .WAV or .MP3 file direct to the system’s hard drive. When the recording is completed, it can then be listened to in VirtualVinyl, edited with an audio editing application, or written to a CD using a CD burning software.

To setup the “Record File”, click on “Config” to access the configuration settings for recording a file.

Record From –

- chooses the recording source
- **Auto-Start** – checking this box will automatically begin the recording when the first track begins playing. If not checked, then you will need to manually start the recording by pressing the “Start Recording” button.



File –

- **Path** – provide the path and name of the file where the recording will be saved.
- **Prompt if overwrite** – if checked, will prompt to overwrite when trying to record to a file that already exists.
- **Split in multiple files** – if checked, will split the session as separate tracks, instead of one large audio file. When splitting to separate tracks, a “Cut” button appears next to the “Start Recording” button – you can use this button to demarcate tracks. The “Auto-split on crossfade” option will automatically demarcate tracks when the crossfader in VirtualVinyl interface begins to move to the deck being mixed in.

Format – select the audio file format to be used when recording.

- **WAV** – will record a .WAV audio file
- **MP3** – will record an .MP3 audio file
- **Encoder** – this is the path to the MP3 encoder. If the encoder is in a different folder than the VirtualVinyl folder, use the browse button (...) to navigate and select the encoder’s location.
- **Bitrate** – select the MP3 bitrate. A bitrate of 192Kbps is recommended for CD-quality recording.

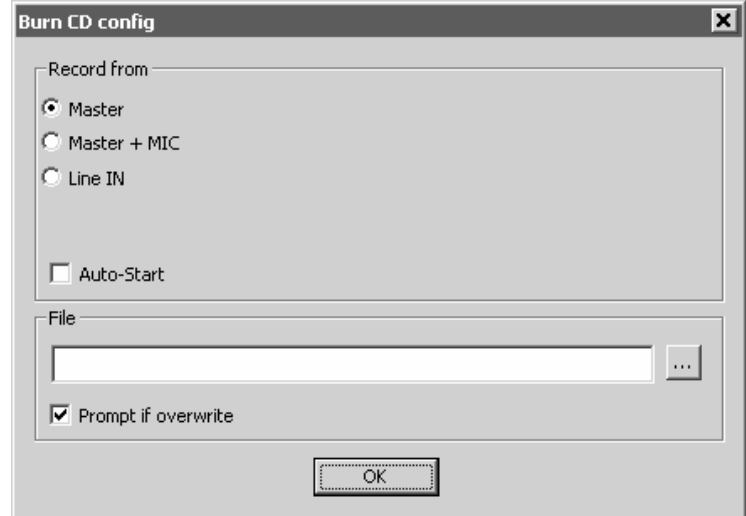
Once the choices are set, click “OK” and then “Start Recording” when ready. Press “Stop Recording” when finished with the session.

BURN CD

VirtualVinyl can record the session in a CD image format.

Select “Burn CD” for VirtualVinyl to record the session as a .BIN/.VirtualVinyl file type which contains all the necessary information for burning software which supports .BIN/.VirtualVinyl image types.

Click on “Config” to access the configuration settings for CD recording.



Record From –

- chooses the recording source
- **Auto-Start** – checking this box will automatically begin the recording when the first track begins playing. If not checked, then you will need to manually start the recording by pressing the “Start Recording” button.

File –

- **Path** – provide the path and name of the file where the recording is going to be saved.
- **Prompt if overwrite** – checked will prompt to overwrite when trying to record to a file that already exists.

Once the choices are set, click “OK” and then “Start Recording” when ready. Press “Stop Recording” when finished with the session. To demarcate tracks, use the “Cut” button found next to the “Start Recording” button.

When you have finished recording, you will have a .BIN/.VirtualVinyl file which you can burn with your favorite CD-burning application. For more information about burning .BIN/.VirtualVinyl files, consult the documentation of your burning software.

BROADCASTING TO THE INTERNET (“BROADCAST”)

VirtualVinyl also allows you to broadcast your session in realtime as a “webcast” on the Internet. This way, people around the world can listen to your mix session.

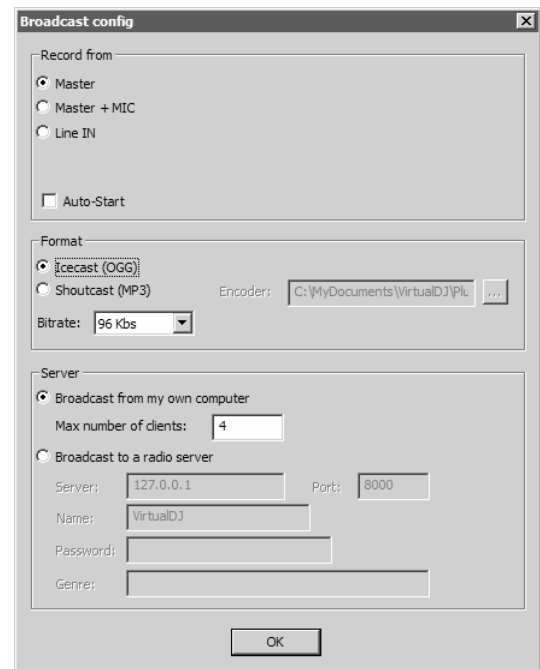
Click on “Config” to access the configuration settings for recording a file.

Record From –

- chooses the recording source
- **Auto-Start** – checking this box will automatically begin the recording when the first track begins playing. If not checked, then you will need to manually start the recording by pressing the “Start Recording” button.

Format –

- Icecast – OGG format streaming
- Shoutcast – MP3 format streaming Shoutcast will also need to know which MP3 Encoder will be used.
- Encoder – Use the browse button (...) to navigate the computer folder structure and select the encoder file to use.
- Bitrate - Select the desired bitrate for the encoding. **NOTE:** Higher bitrates will consume a large bandwidth in the internet connection to stream and listen to MP3 audio.



Server – There are two ways to broadcast the mix session. Broadcast using a dedicated radio server, or broadcast direct from your computer.

1. Broadcast from my own computer – this option turns the computer into a webcast station. This way once the “Start Recording” but is click the webcast will begin.

Max number of clients – this is the maximum listeners that the webcast may have.

NOTE: Please remember that the bandwidth of the Internet connection needs to be able to accommodate the number of listeners. Decreasing the quality of the audio signal (the bitrate) makes it possible to accommodate a greater number of listeners.

When ready to broadcast click on “Start Recording”. VirtualVinyl will indicate the address of the webcast (for example <http://123.45.67.89/Virtual.ogg>). The address then can be sent to the intended listeners so they can connect and listen to the webcast using their favorite Internet audio players.

Caution:

If using a floating Internet connection, the address of the webcast could change from session to session. In this case, the broadcasting address should be communicated each time to the listeners.

Caution:

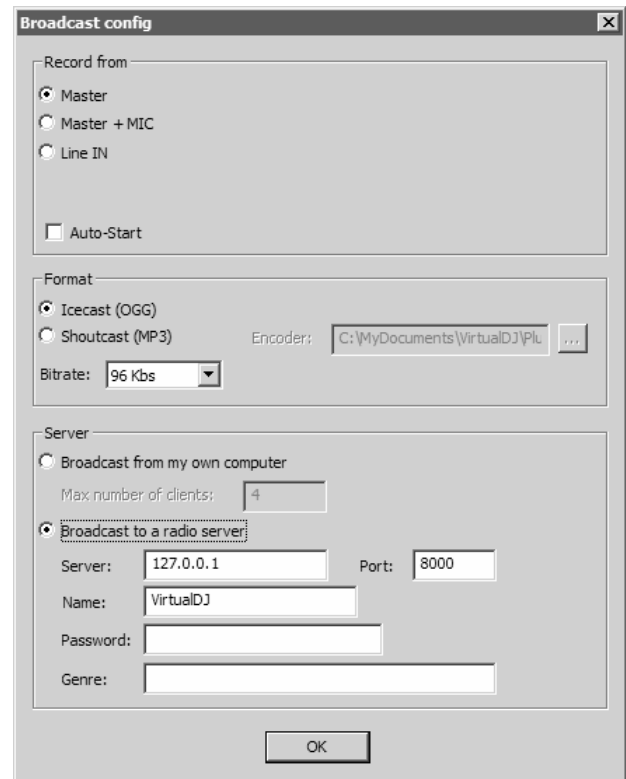
To listen to the mix, the software used by the listeners must be able to communicate with the broadcasting computer via the webcast server. This means that the broadcasting computer may need additional configurations and/or any software firewalls protecting the broadcasting Internet connection be set to authorize incoming and outgoing connections to and from the broadcasting computer.

NOTE:

If using a router, port forwarding maybe required for connection to the webcast server on the broadcasting computer.

2. Broadcast to a radio server – this option allows setup of broadcasting the mix session to an existing web radio server.

Enter the address of the web radio server, login, and password, and VirtualVinyl will automatically broadcast the mix to the server using the format in set in the Format section.



REMOTE CONTROL WITH THE iCDX

VirtualVinyl is programmed to work extremely well with the Numark iCDX. This provides a great way to control the most important parameters and controls of the virtual decks without ever having to touch the keyboard.

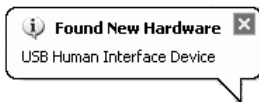
In addition, you only need one iCDX to control both virtual decks. The iCDX will control whichever deck is currently “active” in VirtualVinyl. You can make a deck “active” by switching between the decks with the Eject button on the iCDX. This provides an incredibly efficient and effective way of controlling the software.



CONNECTING AND INITIALIZING THE iCDX

1. Turn on the iCDX.
2. Connect a USB cable from the “Slave” output on the iCDX to an available USB port on your computer.

You will see the following two pop-ups appear consecutively on the screen:



3. On the iCDX, press the “Src” button and then rotate the “Parameters” knob until you see “USB-HID” displayed on the iCDX screen. This will put the iCDX in “Human Interface Device” mode and allow it to control VirtualVinyl.
4. In VirtualVinyl, click on “Config” button and select the “Remote Control” tag.
5. You will see a box for the Numark iCDX. Check the “Enable” box. Now you are ready to control VirtualVinyl with the iCDX.

Note: If you disconnect your iCDX and connect it again, you will need to uncheck and then check the “Enable” box in VirtualVinyl again. This will re-initialize the iCDX.

Once you have properly connected and initialized your iCDX, you can use the iCDX to load songs, scratch and cue, set loop points, add effects and more – without ever having to touch the keyboard of your computer.

iCDX CONTROLLER MAPPINGS

Please note: The iCDX will always address the deck which is currently “active”. A deck is “active” when the deck number is illuminated. You can always activate a deck by switching between them with the “Eject” button on the iCDX.

1. VirtualVinyl

This button returns and pauses the track at the current cue point. Press and hold the VirtualVinyl button for temporary play from the cue point. You can use the wheel to jog to a different location in the track and press VirtualVinyl again to set a new cue point. Once the track is playing, you can return to this cue point by pressing VirtualVinyl or Play.

2. Pause

This button pauses the track and sets the cue point at that location. Once you resume playing the track, you can go back to this cue point by pressing VirtualVinyl.

3. Play

This button plays the track loaded on the deck. While a track is playing, you can press the Play button to jump to the last set cue point and resume playback from there. Pressing the Play button repeatedly allows for a stutter-like effect from the cue point.

4. Scratch wheel

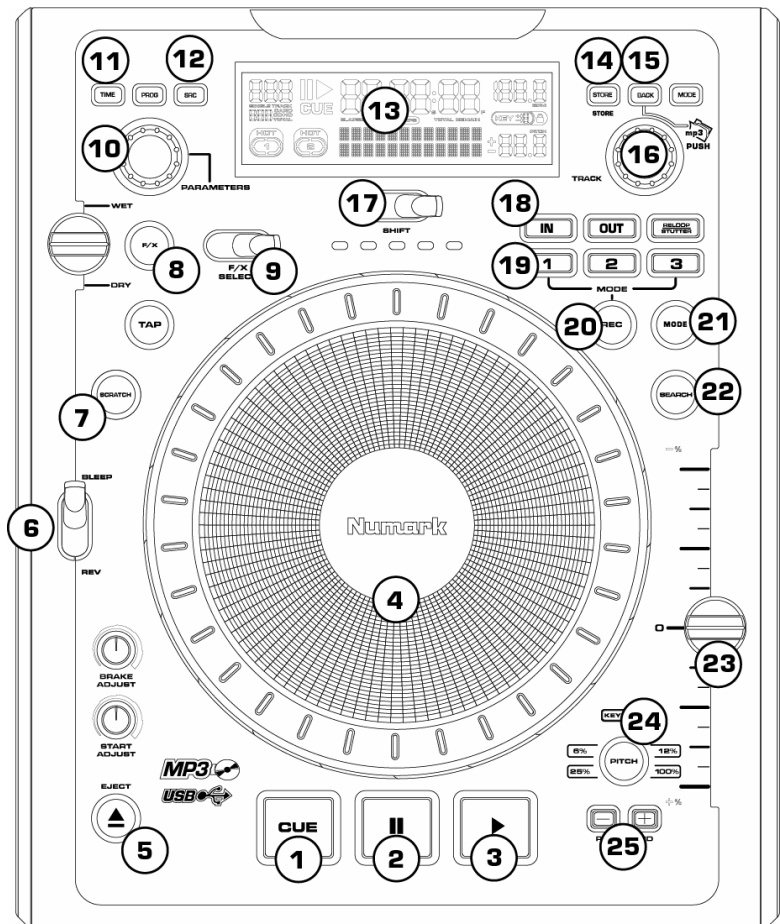
The outer rim of the wheel is used as a pitch bend for mixing, allowing you to make quick adjustments to the speed of the music. When pressed down, the center black part of the wheel can be used for scratching.

5. Eject button

Press this button to switch between the two decks. If you are controlling the left deck, press this button to be able to control the right deck, and vice versa. Using the Eject button, you can mix with only one iCDX.

6. Bleep / Reverse

Bleep temporarily reverses the music for as long as Bleep is engaged. When Bleep is released, the unit resumes play from the point where play would have occurred otherwise. Reverse changes the direction of playback until Reverse is disengaged.



7. **Scratch Button**

This button activates the wheel for scratching. If you would like to use the platter on the iCDX to scratch, cue and adjust the track that is playing on the active deck, you need to make sure that the iCDX is in Scratch Mode. If the Scratch button on the iCDX is not lit, press it to turn on Scratch Mode. This will enable iCDX's platter to control VirtualVinyl.

8. **FX button**

This button will turn on the effect currently selected in VirtualVinyl.

Please note: The first parameter of the effect selected in VirtualVinyl can be manipulated with the Wet/Dry fader on the iCDX.

9. **FX select**

This switch allows you to toggle through the different effects in VirtualVinyl.

10. **Parameters knob**

You can use the Parameters knob to crossfade audio and video between the two decks in VirtualVinyl.

11. **Time button**

This button toggles through time elapsed, time remaining and total time for the track playing on the deck. The time will be displayed on the screen of the iCDX.

12. **SRC button**

This button allows you to switch between regular operation of the iCDX and USB-HID mode. To control VirtualVinyl, please make sure that you have selected USB-HID mode. If USB-HID mode is not selected, press the SRC button until you see "USB-HID" displayed on the screen. Then press the Parameters knob down to switch to that mode.

13. **Display**

The display shows you the title, BPM, pitch, and current playback state of the track being played in VirtualVinyl.

14. **Recall button**

When browsing, press the Recall button to toggle between viewing the last or current folder in VirtualVinyl.

15. **Back button**

When browsing, press the Back button to expand the selected folder. This allows you to view any sub-folders, if available.

16. **Track knob**

Use the Track knob to scroll through folders and select tracks in VirtualVinyl. Turn the knob to scroll through your folders and push the knob down to enter the selected folder. While in the folder, you can rotate the Track knob to select a track. When you have selected the track, press the Track knob down another time to load the track onto the active deck.

17. **Shift switch**

Depending on the direction it is toggled, this switch will increment or decrement the loop length by a factor of 2.

18. Loop section

Press the Loop In button to set the beginning point of a loop. Press the Loop Out button to set the end point of a loop. Pressing Loop In again will set a new loop in point. Pressing Loop Out again will set a new loop out point. The Reloop/Stutter button will exit and release the loop, allowing the track to continue playing. You can press the Reloop/Stutter button again to enter the loop.

19. 1, 2, 3 buttons

Depending on what mode is set for the three buttons, the 1, 2, and 3 buttons will have different functionality, as described below. You can switch between the three modes – Loop, Samples, and VirtualVinyls – by pressing the Mode button underneath the 1,2, 3 buttons.

○ In LOOP mode:

The three buttons are used to create 1, 2 or 4 bar loops.

Pressing 1 will create a 1 bar loop and begin looping until you press 1 again – this will exit the loop.

Pressing 2 will create a 2 bar loop and begin looping until you press 2 again – this will exit the loop.

Pressing 3 will create a 4 bar loop and begin looping until you press 3 again – this will exit the loop.

○ In SAMPLES mode:

The three buttons can be used to play and record samples in the first three sample slots in VirtualVinyl.

To play a sample, simply press one of the three buttons. Depending on what kind of sample is assigned to that slot (one-shot, or looping), the sample will either play once or continue looping over the music until you press its corresponding button a second time to turn it off.

To record a sample, press the Rec button on the iCDX and then press one of the three buttons, 1, 2, 3, depending on which slot you would like to record the sample to. The sample will record until you press the button again, and will begin looping automatically.

○ In VirtualVinylS mode:

The three buttons function to set and recall cue points.

When you press one of the three buttons, a cue point will be set at the current track location. You can always go back to a cue by pressing its corresponding button. If you would like to set a new location for that cue point, simply press Rec on the iCDX and then press the corresponding button. This will move the cue point to the new location.

20. Rec button

In SAMPLES mode (see above), the Rec button will arm buttons 1, 2, 3 for recording samples in VirtualVinyl. In VirtualVinylS mode (see above), the Rec button will arm buttons 1, 2, 3 for setting cue points.

21. Mode button

This button toggles through LOOP, SAMPLES and VirtualVinylS mode for the 1, 2, 3 buttons.

22. Search button

While this button is held down with the Scratch button active, you can quickly search through the selected track.

23. Pitch slider

You can use the Pitch slider to alter the playback speed of the track currently playing in VirtualVinyl.

24. Pitch button

This button allows you to change between +/- 33% or +/- 12% pitch range for the Pitch slider.

25. Pitch Bend + & - buttons

These buttons allow you to quickly adjust the playback speed of the track for precise beat matching. Press - to temporarily slow down the track, as long as the button is held down. Press + to temporarily speed up the track for as long as the button is held down.