

VIRTUAL DJ

 **atomix**
PRODUCTIONS
SOUND TECHNOLOGY PROVIDER

USER GUIDE

VirtualDJ Professional
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So powerful...
and yet so easy



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Welcome to VirtualDJ!

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

VirtualDJ 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 ID3 tag 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
- Linking video to audio tracks for pre-selected visual enhancement to the audio
- Sampler for recording and playing back audio clips on the fly
- ClipBank for playing back video clips on the fly
- Smart and User-Defined (IN/OUT) Looping engine
- Real-time recording of your mixes (Audio and Video)
- Real-time webcasting of your sessions

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

- Analysis of Beats Per Minute (BPM) and Key detection for Harmonic Mixing
- Automatic beat matching for quick mixing
- Computer Beat Grid for easy visual mixing
- Dynamic Hot Cue points

We developed VirtualDJ 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 VirtualDJ to be fun, intuitive and highly efficient.

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

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

We sincerely hope that you enjoy this great product!



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.

VirtualDJ 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 VirtualDJ, 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 VirtualDJ, 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 VirtualDJ 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, VirtualDJ allows you to focus on the most important part of the DJ experience — your imagination!

Welcome to ...



INSTALLATION NOTES

VirtualDJ installs files into the following locations:

Default application path on:

- Windows - C:\Program Files\VirtualDJ\
- MAC OS X - ./Applications/

All Application Configuration, Plugins, Skins, Database, Playlist, Tracklisting, Languages and Support Files are stored in:

- Windows XP - C:\Documents and Settings\{username}\My Documents\
VirtualDJ\
- Windows VISTA - C:\Users\{username}\Documents\VirtualDJ\
VirtualDJ\
- MAC OS X - ./Users/{username}/Documents/VirtualDJ/

All settings are saved in

- Windows Registry - HKEY_CURRENT_USER\Software\VirtualDJ
- MAC OS X - ./Users/{username}/Library/Preferences/com.atomixproductions.virtualdj.plist

**For Power Users who have changed the location of their My Documents from the default Microsoft setting your new/copied files are stored there in the VirtualDJ folder. To check, right-click on the My Document icon and look at the property setting for Target.*

UPGRADING to Version 5

When upgrading VirtualDJ from prior versions, the default application path stays the same and the application configuration, plug-in, skins, database files, and support files are copied to appropriate location listed above.

Also, if possible; you should have your COMPLETE gig ready setup completely connected before launching version 5 for the first time. This will give VirtualDJ the ability to build the appropriate database files using the information from the previous version database files.

What are the database files and what do they contain?

The Core VirtualDJ Database is titled - VirtualDJ Database v5.xml

The VirtualDJ 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 – VirtualDJ Local Database.xml

What is stored in the database files?

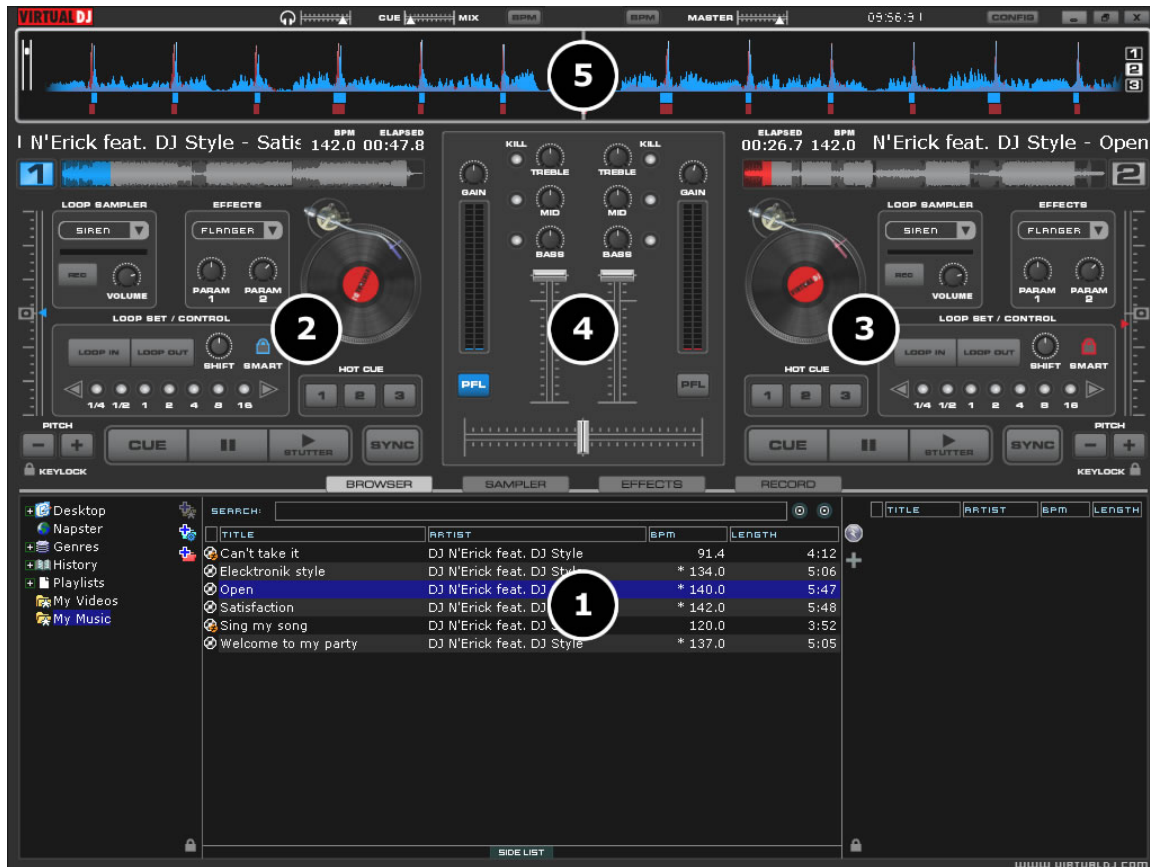
- Path to the file
- Analyzed data about the tracks
- ID3 tag Display Information
- Automix Information

Because of the 'split' database files and depending on the size of the previous database XML, the FIRST LAUNCH of VirtualDJ 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). VirtualDJ is reading the prior version database and splitting the various entries across the respective hard drives of the system.

The 'split' database files provide users of external hard drives the ability to COLD or HOT SWAP drives between single and/or multiple systems. This allows for multiple DJs of a club or venue to utilize 1 VirtualDJ installation and not have different logins in order to maintain separate databases unique to each DJ. The DJ can just walk in, plug in the external device and begin playing.

INTERFACE - ZONES

Before beginning to use VirtualDJ, 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”¹ menu 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, Transport Control

3. DECK 2 CONTROLS

Drag and drop music from the browser to this virtual deck.
Track title, beats per minute display, counters, Transport Control

4. MIXER ZONE

Crossfader, Gain, Volume PFL Controls

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.

¹ Traditionally the “Config” menu option is found in the upper right corner of the skin next to the Minimize, Maximize, and Close application buttons.

The Browser Zone is the area where to 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 VirtualDJ) 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 panels.

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

File System / Folder Structure Panel (1)

VirtualDJ provides several organizational groupings of the track collection 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 groupings that can be viewed. Each item ‘checked’ will have an associate entry on the File System / Folder Structure panel (1).

Volumes – shows the File System navigation option from the My Computer structure

Desktop – shows the File System navigation option from the Desktop structure


Genres – provides a generated tree of Genre types based on the imported ID3 tag Genre field. By selecting on the various listed genres the file browser panel (2) only shows those entries that match the tag.


History – provides access to data stored about each session use of VirtualDJ. The data is stored as .m3u playlist files and it is stored in the My Documents -> VirtualDJ\Tracklisting folder. History data is saved on the fly in order to provide running history of played tracks for each 24hr timeframe of use.

iTunes – displays iTunes playlists and use the information in the playlist for accessing files. If the files don't exist per the playlists path, an 'Error' show up in the deck's display when attempting to load the track.

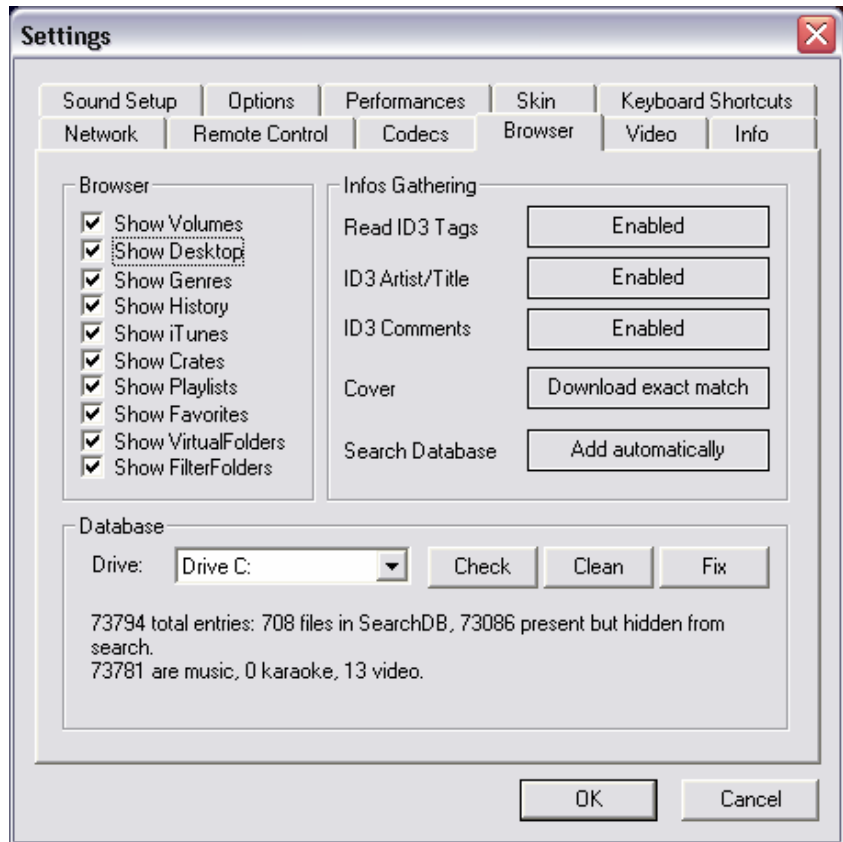
Crates – allows access to the crates structure created and utilized by the Serato ScratchLive application.

Playlists – show or hide the contents of the My Documents -> VirtualDJ\Playlist folder. This is where an Automix playlist is saved by default.

Favorites – show or hide any created folder favorites, created from a right-click 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 from clicking on the  icon found on the right divider bar

FilterFolders – show or hide any created FilterFolders created from clicking on the  icon found on the right divider bar



File / Search Results Panel (2)










VirtualDJ provides several elements of information about each track. The information is a combination of ID3 Tag and VirtualDJ 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) with additional columns, explained further in the manual (page 13). The width size for each column can be modified individually and by clicking on a column the contents are sorted. For example, clicking on the artist column sorts the browser by artist initially in ascending order. Click again for descending.

The tracks title and artist are automatically filled in, if the file is named according to two standard conventions, i.e. (artist) title.ext OR artist - title.ext OR the "Tags" option is set to "Enabled" in the "Config", "Browser" tab, Infos Gathering section. See the "ID3 tag 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 database files for later recall. And all data is stored and saved at time of discovery or data entry immediately to the database(s).

Icon key

-  This title is unknown and was never played or scanned by VirtualDJ.
-  This title is known and has been scanned by VirtualDJ.
-  This title was played during this session.
-  Indicates an audio file with a linked video.
-  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.

VirtualDJ supports v2.4 of the ID3 tag format. ID3 tag support is not the same support that other applications implement. VirtualDJ has always provided the fast information access about stored tracks in the database. Adding direct ID3 tag access to every file would have considerably SLOWED VirtualDJ's ability for browsing and search as experienced in other applications.

VirtualDJ stores identified ID3 tag fields as part of its own database and the stored data can be updated at anytime. Because tag data is not direct access, any of the information can be changed using the File Info dialog and it will not affect the core ID3 tag info of the file. Also, since video type files don't have ID3 tags, VirtualDJ is able to make these fields available for storing information about the video.

Retrieving ID3 tag Data

This can be accomplished in several methods at different points in time. The first and what will be the most common is using the Configuration Browser tab's Infos Gathering options.

TAGS

- ◆ **Enabled** – ID3 tags supporting fields (BPM, Album, Genre, etc.) are read immediately on track discovery.
- ◆ **Disabled** – ID3 tags are not read and the addition of tag information to the database must be done using the various menu options accessible via the folder/file pop-up menus

ARTIST/TITLE

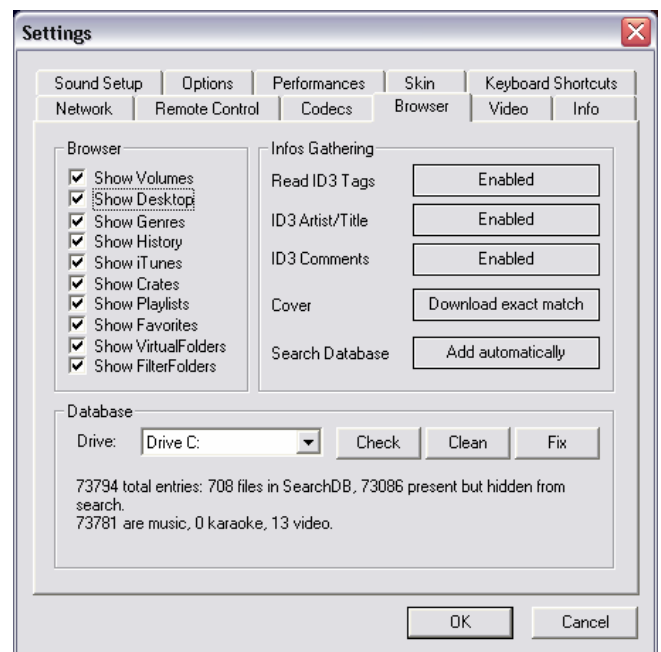
- ◆ **Enabled** – If the ID3 tag does not have data for the Title/Artist fields then the filename is parsed and used for those fields.
- ◆ **Disabled** – traditional filename parsing of the Artist – Title.ext filename

COMMENTS

- ◆ **Enabled** – Read the ID3 tag Comment field on track discovery
- ◆ **Disabled** – Never Read the ID3 tag Comment field

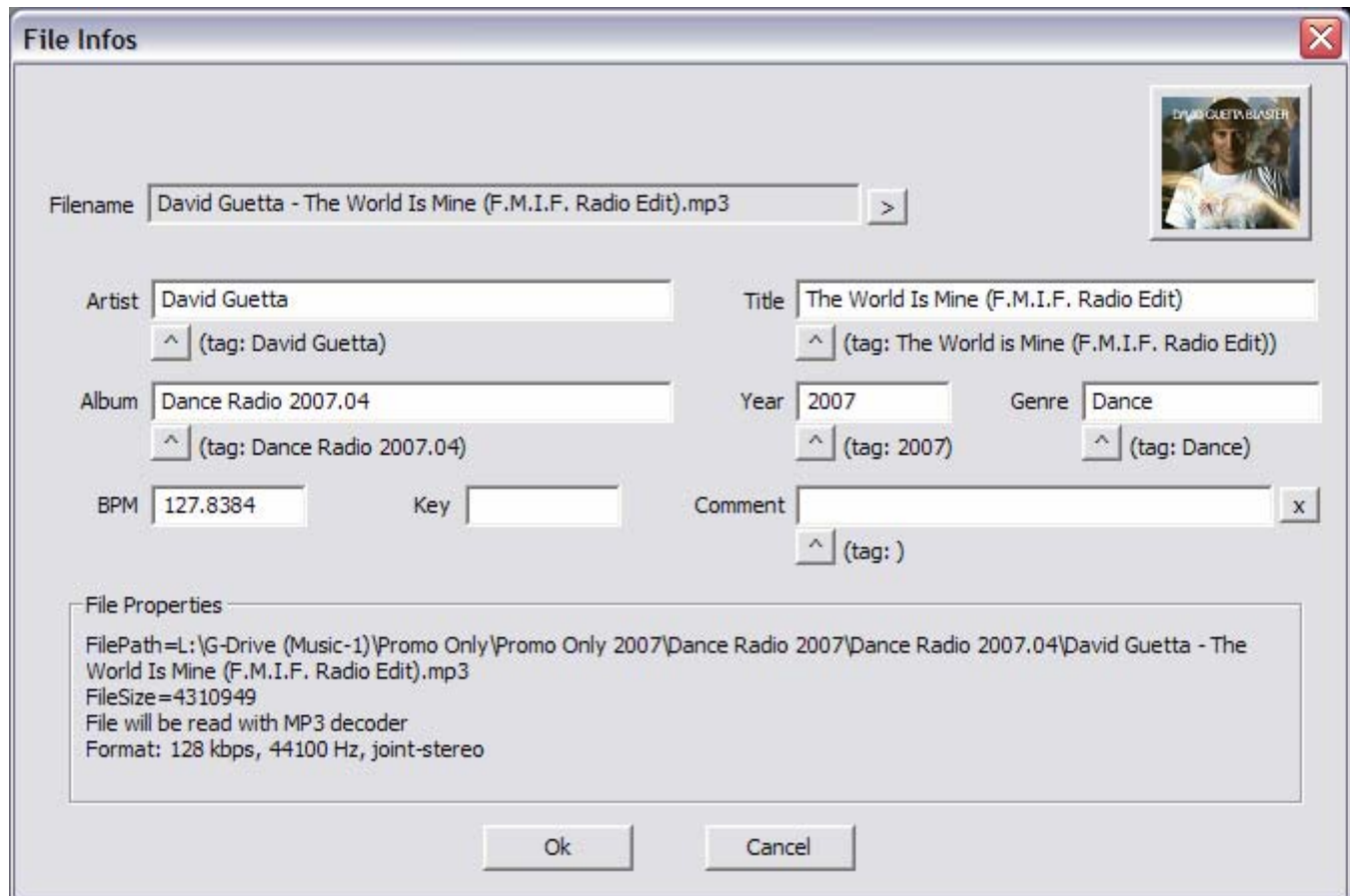
COVERS



- ◆ **Local Search Only** – for the CoverFlow viewer files already locally stored will be used (to include ID3 tag embedded)
- ◆ **Download Exact Match** – if no cover found locally, download a cover that only matches based on the song's information
- ◆ **Download No Matter What** – if no cover found locally, download anything that closely matches using the song's information
- ◆ **Don't Search** – don't ever look for covers if no cover exists



Retrieving ID3 tag Data (cont'd)

Another method of retrieving ID3 tag information is by right clicking on a file in the browser and selecting File Info. The below dialog displays the database stored information along with the ID3 tag information that is retrievable.

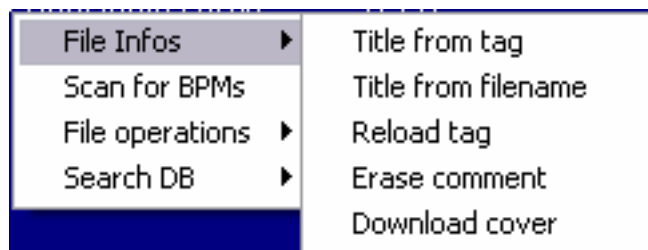


Under each field with a  button will have the read ID3 tag info next to it that can be read from the tag. Click on the button to copy that data into the VirtualDJ data field. This data will be stored and used by the VirtualDJ database. The  next to the File Name field is used to parse the file name into the Artist and Title.

Another method of retrieving ID3 tag info is through the browser directly with multiple files selected.

The options from File Infos are –

- ◆ Title from tag
- ◆ Title from filename
- ◆ Reload tag
- ◆ Erase comment
- ◆ Download cover

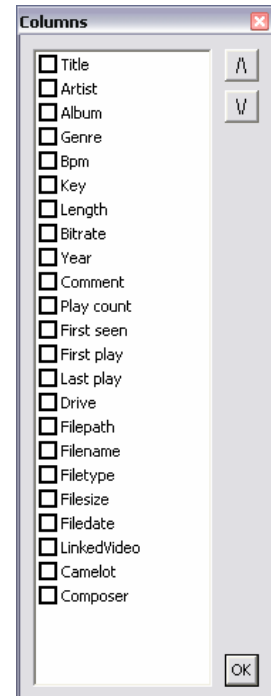


Displaying VirtualDJ data fields (ID3 tag) Columns

In the file browser (2) or playlist panels (3) right clicking on any column and choose from the pop-up list any or all of the available data fields now stored in the VirtualDJ database.

Changing the order of the columns is very easy by selecting the Order... option from the bottom of the list. Then in the presented dialog 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 chose from the Show Covers, Show Music, Show Videos, and Show Karaoke options.



Here are some screen shots of the fields being displayed in the browser -
[Typical ID3 tags + Key field]

| TITLE | ARTIST | ALBUM | GENRE | BPM | KEY | LENGTH | BITRATE | YEAR | COMMENT |
|--------------------------------|------------------|---------------------------|-------|---------|-----------|--------|---------|------|---------|
| ☉ Sugar Dumplin | John Goudy | Soul Street - Compilation | | 142.9 | 06A (Gm) | 3:43 | 192 | | |
| ☉ Something Smooth | Rick Strickland | Soul Street - Compilation | | 109.5 | 09A (Em) | 4:35 | 192 | | |
| ☉ Lovin' On Ocean Drive | Tim Cashion | Soul Street - Compilation | | 120.0 | 09A (Em) | 4:01 | 192 | | |
| ☉ Summer Sunshine | Tim Casion | Soul Street - Compilation | | 122.0 | 12A (C#m) | 4:48 | 192 | | |
| ☉ No One Loves You Better... | Rickey Godfrey | Soul Street - Compilation | | 150.3 | 10A (Bm) | 2:52 | 192 | | |
| ☉ Too Late | The Sand Band | Soul Street - Compilation | | 113.0 | 08A (Am) | 3:59 | 192 | | |
| ☉ When You're Only Lonely | Marty Ojeda | Soul Street - Compilation | | 142.7 | 03A (A#m) | 3:28 | 192 | | |
| ☉ Till The Day After | Craig Woolard | Soul Street - Compilation | | 106.0 | 12A (C#m) | 3:36 | 192 | | |
| ☉ Summer Sunday | Nicolas Bearde | Soul Street - Compilation | | 108.0 | 10A (Bm) | 4:20 | 192 | | |
| ☉ Chasin Dreams | North Tower | Soul Street - Compilation | | * 107.0 | 08A (Am) | 3:30 | 192 | | |
| ☉ Nine Times A Man | Wilson Picket | Soul Street - Compilation | | 91.5 | 08A (Am) | 4:46 | 192 | | |
| ☉ Back That Thang Up | Tyrone Davis | Soul Street - Compilation | | * 108.9 | 11A (F#m) | 3:25 | 192 | | |
| ☉ TLC | Batson & Chase | Soul Street - Compilation | | 115.0 | 06A (Gm) | 3:18 | 192 | | |
| ☉ Other Side of The Cloud | Danny Brooks | Soul Street - Compilation | | * 114.1 | 12A (C#m) | 3:44 | 192 | | |
| ☉ Your Grace Is So Good | Mac & J Thompson | Soul Street - Compilation | | 115.0 | 07A (Dm) | 3:34 | 192 | | |
| ☉ It Doesn't Get Better Tha... | Mark Roberts | Soul Street - Compilation | | * 118.0 | 05A (Cm) | 3:37 | 192 | | |

[Additional VirtualDJ 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 Picket | 1 | 2007/07/30 | 2007/08/01 | 2007/08/03 | D | \CD_Rip\Soul Street - ... | Wilson Picket - 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 VirtualDJ Data Fields

The VirtualDJ database now stores additional data about each track for additional search features and Filter folders.

Key – stores the analyzed key value of a song for use doing Harmonic Mixing.

Camelot – stores the Camelot key code based on the analyzed key value.

Play Count – stores the running play count of the track

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

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

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

Drive, Filepath, Filename, Filetype, Filesize, Filedate – shows the current known Drive, Filepath, Filename, Filetype (extension), Filesize, and Filedate for the track

LinkedVideo – shows the filename of the video file linked to the audio file

Composer – used for storing the Composer information for a track.

Key Visual Indicators displayed in the Browser

Asterisk (*) in BPM column – identifies tracks that have a pronounced beats per minute (BPM) rhythm for use with Beatlock and Tempo Automix actions

Exclamation (!) in Time column – indicates that the file is corrupted (probably following a bad copy) and that it may finish abruptly or there may be excessive noise in the track

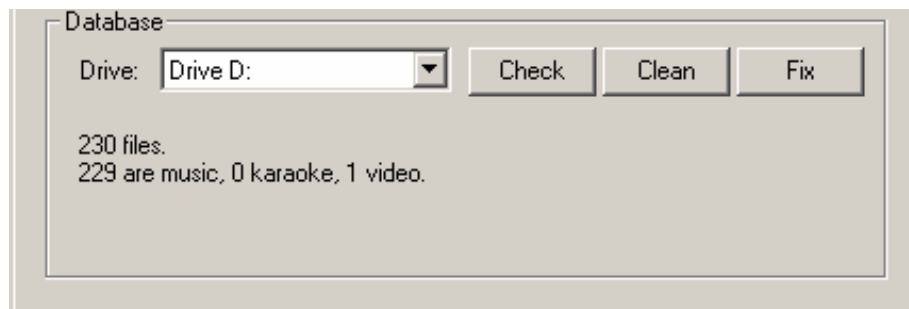
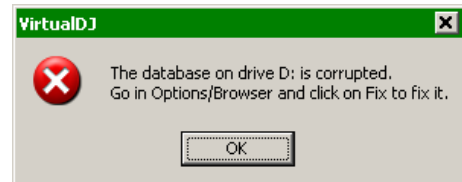
The database management system comes with additional tools as part of the VirtualDJ Configuration Browser tab.

- ◆ 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

VirtualDJ now saves the database immediately when additions or updates are required. VirtualDJ 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.

To correct the problem - here are the steps:

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 – this runs a validation of the database to ensure that all database file references are still valid and existing stored files 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.

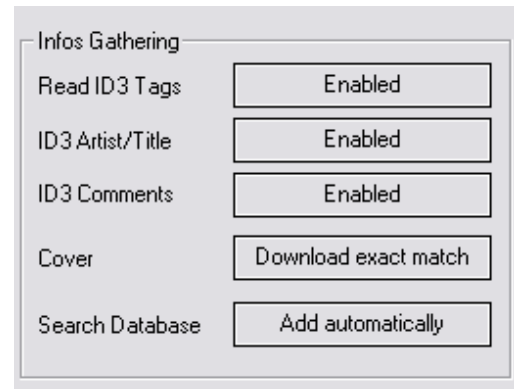
CLEAN – this process will REMOVE any database information about files that are no longer valid. This is necessary for cleaning up the Global Search capabilities.

VirtualDJ provides an intuitive on the fly search capability. Adding files to the global search can be done two (2) ways.

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

The other option is 'Add manually'. This requires using the 'Add to Search DB' option to be selected when right clicking on a file or folder in the main browser interface.

In either scenario, once added to the Global Search; the ability to find the file is always available when doing a search. The difference is in the results display of the search determines if it is in the currently selected folder or elsewhere in the system.




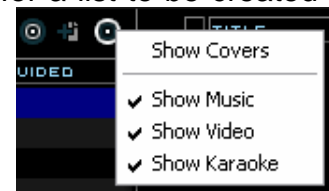
SEARCHING

The search field is located at the top of the browser panel. To search the files listed in the database, left click on the search field then type your search text.

Searching is instant and it is generally not necessary to type the text in its entirety — a few letters are enough to reduce the list to the single title.

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

If your search does not produce any results you can 'save' the search criteria to a special text file. Click on the  graphic between the 2 bull's-eyes. This allows for a list to be created that can be used as a 'need to buy' list for improving your collection. This file is called "SearchLog.txt" and can be found in your My Documents -> VirtualDJ folder.



In the following example, 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.



What can be searched?

Searching in VirtualDJ is 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 a list of 10 searchable fields is presented.

Depending on what fields are selected the search results will vary. To ensure maximum results for all searches, select all the fields and the maximum search capabilities are available all the time.

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

VirtualDJ also provides expanded search features for more creative searching. One way of being more creative is when searching on BPM. Enter 110-120 and if the BPM column is selected the results displayed will be tracks in the range of 110 to 120 BPM.

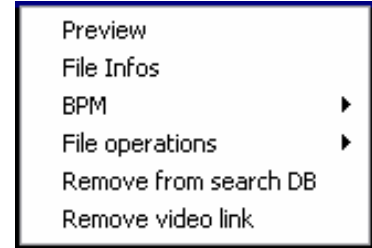
If this type of creative search is something necessary on a routine basis then VirtualDJ has a FilterFolder feature that can be used. See the “Filter Folders” section of the manual for further details.



When using the “Key” as a searchable field both the Key and Camelot fields are searched.

Right clicking on a track displays many options:

- ◆ Preview – for launching the separate track preview interface
- ◆ File Info – for launching the File Info dialog to modify data field content
- ◆ File Operations like - copy, move, and delete files
 - When selecting Delete a warning is displayed about deleting the file(s) from your system
- ◆ BPM analyze track options – Re-Analyze or Manual Edit
- ◆ Add OR Remove songs from the search database
- ◆ Remove the link to a video file for audio tracks




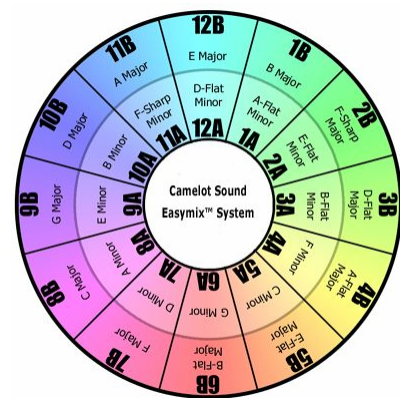
BPM ANALYSIS AND KEY DETECTION

The BPM Engine analyzes the audio to determine the tempo of the track. To analyze a track can be performed 2 ways – Load the track to a deck or right-click on the track in the Brower panel and select BPM -> Re-Analyze. To analyze a group of tracks, from the left Navigation panel right-click on a folder and select Scan for BPMs.

If the tracks have been analyzed by an external application prior to being loaded into VirtualDJ and that value is stored in the BPM ID3 Tag, then BPM Engine will use the stored value as a reference when analyzing the track. VirtualDJ will calculate a more precise value (0.05 BPM precise) not more than +/- 1 BPM away from the value of the tag. It will never try a greater difference.


Part of the BPM Engine is also a Key Detection Engine. Determining the ‘musical key’ of a track allows for the ability to harmonically mix tracks that necessarily would not typically be mixed together. However, because the two tracks harmonically blend, the mix can sound clean and be pleasing to the ear. Harmonic mixing or “Mixed in Key” is the base for modern Mash-up style tracks. The Key Detection Engine strongly favors minor keys, as most songs played by DJs are in minor key. But if the key is strongly major, it’ll still be reported as a major.

Another NEW addition to the BPM detection is the inclusion of the Beat Tap action. By left-clicking on the BPM button  for the corresponding track one can tap out the beat of the track from the skin. Also the keyboard shortcut action - beat_tap - can be assigned to a keyboard key. The beat_tap action can also be added to a controller’s mapper for tap capabilities straight from the controller.




Camelot Sound Easymix System
<http://www.harmonic-mixing.com/overview/easymix.mv>

If the BPM (or the Key) is manually entered using the File Info dialog, then VirtualDJ will remember this and will not analyze the BPM or Key unless forced by selecting the BPM -> Re-Analyze function. So a song analyzed by prior versions will be reanalyzed. But a song where the BPM was manually changed in prior versions will not be automatically reanalyzed.

Part of VirtualDJ's BPM Engine is to calculate the Computer Beat Grid (CBG) of the track. However, in rare cases, when the BPM and the CBG is not correctly calculated, you can easily correct both manually by right-clicking on the appropriate BPM button  for corresponding track.

There are several methods for correcting the BPM and the CBG:

Using the "Copy from other deck" button on the Edit BPM tab is the simplest method. Using a track where the BPM is already known click on the button to copy that BPM to the track which has the unknown BPM.

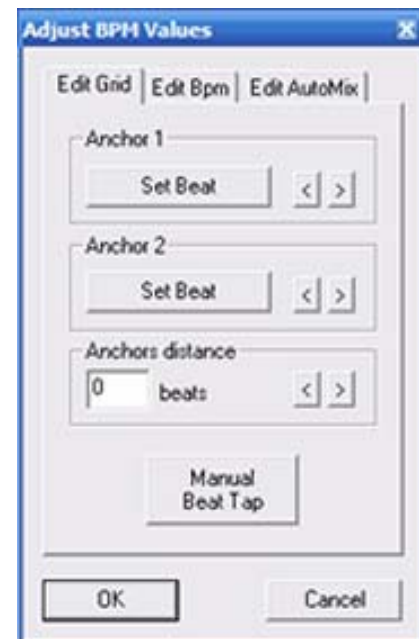
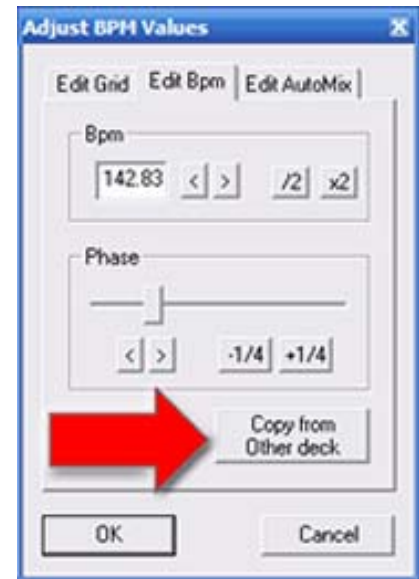
And as previously covered, using a keyboard shortcut for the "beat_tap" action or left-clicking on the BPM button  for the corresponding track, you can manually tap out the beat of the track and the CBG will adjust accordingly. However, you may need to adjust the CBG by using the Phase slider or +/- 1/4 buttons.

Alternatively, an anchor method can be used. From the Edit Grid tab, Click on "beat tap" button while the track playing, in order to approximate the BPM.

Then, pause the track and advance the track to the first 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 well to the number of beats between the two anchors.

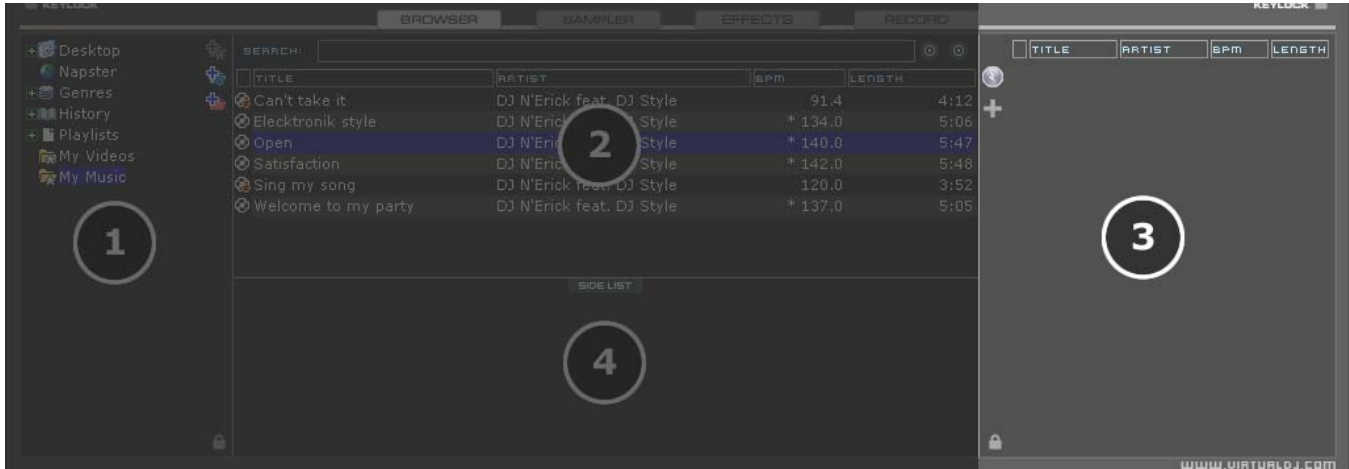
Then go further in the music, and repeat the "second anchor" operation if you notice that the beats and the CBG shift. Normally two or three anchors should be enough to obtain an accurate CBG.

*** For more information on how the CBG is used for beat matching see the section about the Rhythm Window later in the manual.*



The Automix feature works from a single deck. By default it is Deck 1; however, prior to starting the Automix if Deck 2 is selected as the active deck then Deck 2 is used. By utilizing 1 deck this frees the opposite deck for staging the first song to be used once you decide to stop the Automix process.

In addition to drag and drop, playlists can be created. 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 the Automix mode



Access the Playlist management menu



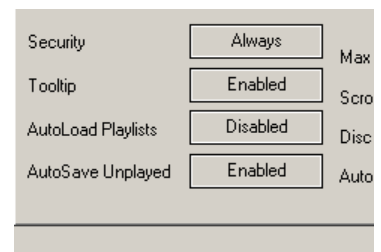
Lock the Playlist panel to a set width and block the auto-shut of the panel. You can also lock it and reduce its size to zero if you do not wish for it open automatically.

Playlist Setup


Tracks to be auto-mixed can be placed into the Playlist panel from the File Browser panel (2) by using a drag and drop method. Also, predefined playlists can 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** – a contents of the play list are displayed in the center File Browser panel only
- ◆ **Always** – when a play list is selected in the browser the contents are immediately 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

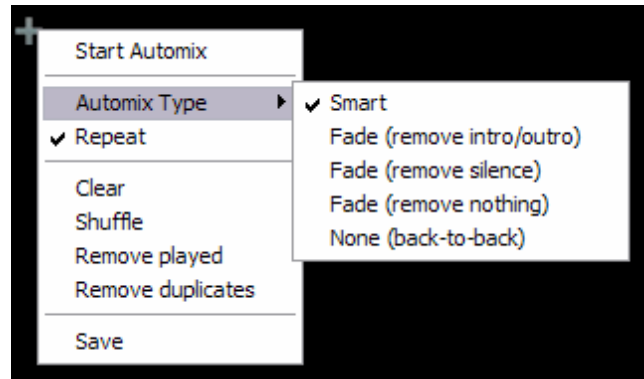


Playlist & Automix Management

Using the Playlist management menu by clicking on the  icon choose from the options how the automix functions and tracks are managed in the playlist.

Automix Types – 5 modes

- ◆ **SMART** – VirtualDJ 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 (remove 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 (remove silence)** – keeps the entire track from beginning to end while removing any ‘dead air’ or ‘silence’ that may be present in the track and creates a crossfade point based on the settings of the Automix Length
- ◆ **FADE (remove nothing)** – keeps the entire track from beginning to end and creates a crossfade point based on the settings of the Automix Length
- ◆ **NONE (back-to-back)** – this is a simple CUT mix that plays the files from complete from start to finish including any air gaps at the beginning or end



Automix Length

Length used for the Automix FADE types. Lengths are 0 seconds (CUT), or 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 that song continuously repeat until the ‘Repeat’ is deselected.

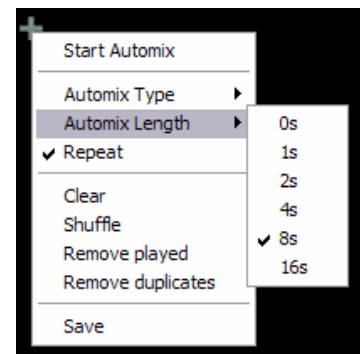
Clear – clears the entire playlist of all tracks

Shuffle – shuffles the contents of the playlist for play

Remove played – removes any already played tracks from the playlist

Remove duplicates – a removes any possible duplicates from the playlist

Save – provides function to save the playlist for future use



Deck Waveform Display – Mix Point Markers

When automix is active, the deck being used for automix play will show both the current track (top) playing and the next track (bottom) to be played. The currently playing track will display an EXIT mix point marker. The track to be played next will show an ENTRANCE mix point marker. Based on the Automix Type settings the markers can be moved within the tolerance of the type and time selections made. To change a mix point marker's position, left click on the marker and slide it along the waveform to the desired position.



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 currently playing track is always highlighted. With the repeat option on for the entire playlist the navigation will return to the top after the last track is played in the list.

Add, Move or Remove Track

Reordering tracks by adding more, moving their order, or removing can be done at any time. To include adding a new track as next, moving a track into the next play, or removing the next track with the following track now becoming the new next track.

Jump and MIX NOW


While in the Automix ACTIVE mode, double-click on any track in the Playlist and VirtualDJ will use the assigned crossfade automix settings and mix that track immediately. Also the playlist will pickup from that point forward. It does not return to the left order location.

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.

Even with the mix point markers available for on-the-fly adjusts, the mix points for a track can be set prior to using that track as part of a automix playlist. The adjusted mix points are only utilized when using the SMART automix type.

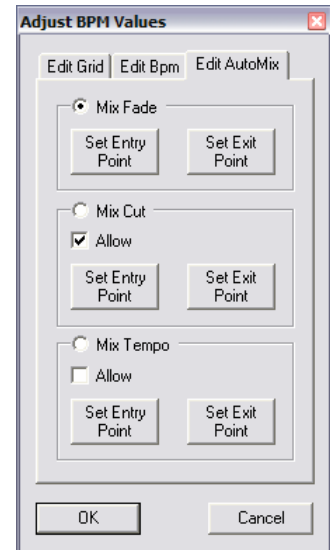
To edit a tracks Automix mix points, load a track to a deck, then select the respective BPM button  for that deck. In the 'Edit BPM' dialog select the 'Edit Automix' tab.

Then select which kind of mix point to edit (Mix Fade, Mix Cut, Mix Tempo). Move the track to the position to use as the entry point, and click on the button "Set Entry", then bring it to the position of exit point, then click "Set Exit".

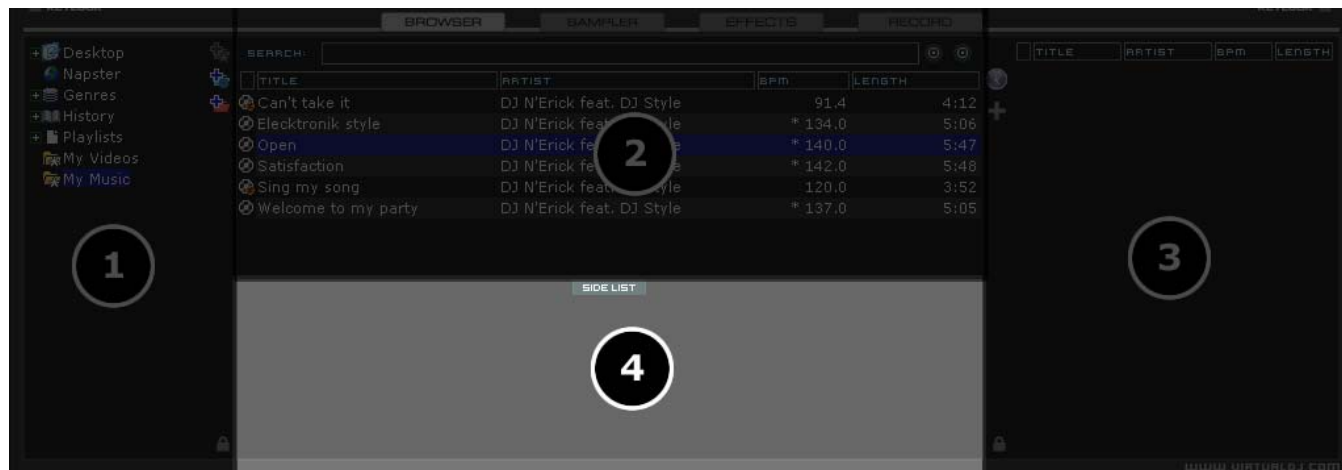
Repeat for Mix Cut and Mix Tempo if wanting to set those entry points. To give VirtualDJ the option of using the Mix Cut and Mix Tempo mix points place a check in the 'Allow' box for each mix type.

If the 'Allow' for Mix Tempo is checked on both songs the Mix Tempo points are used by the SMART automix when it determines if the two songs can be beat mixed. A song with Mix Tempo allowed has a asterisk (*) next to its BPM value in the browser.

If the 'Allow' for Mix Temp is not checked, the SMART automix will then check if both 'Allow' for Mix Cut are checked. If yes it will do a cut mix (using the cut entry/exit points), otherwise the SMART automix mode will do a standard fade using the Mix Fade entry/exit points.

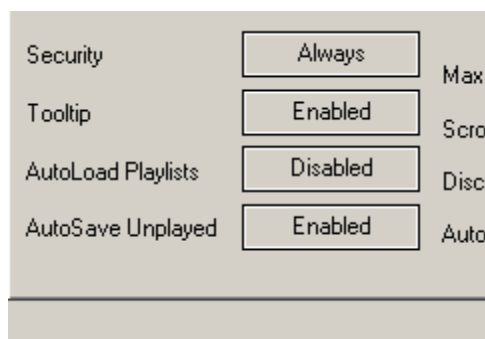


VirtualDJ incorporates its own version of a waitlist called the Sidelist. The Sidelist panel (4) can be used to hold tracks that the DJ knows they will play sometime during their session. It also provides a location for VirtualDJ to moved tracks that were loaded but never played because the DJ loaded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



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.

In order to simplify browsing and provide better and robust file management capability, VirtualDJ provides three (3) methods for the user to organize the database.

On the left panel's border are three (3) folder options



Create Favorite Folder (monitored folder)

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



Create Virtual Folder (unmonitored folders)

– create a folder for manually populating with specific files




Create Filter Folder (monitored 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 favorite 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.

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 in the operating system.

FAVORITE FOLDERS

To setup a Favorite Folder, browse the Desktop navigation item from the File System/Folder Structure panel to the desired folder location. Click and highlight the desired folder, then click the yellow favorite folder icon .

The directory selected 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.

The same actions can be taken by right-clicking on the desired folder and choosing “Set as favorite” from the menu. And, to remove a favorite folder simply right-click on the favorite and choose “Remove from favorite”.

Virtual folders also aid in quick access to tracks. A virtual folder holds a collection of shortcuts to tracks.

Create a virtual folder by clicking on the red  VirtualFolder icon and giving the new folder a title.

Now browse the database or run various searches looking for tracks that are being grouped together. Drag and drop the tracks into the new VirtualFolder and next time you want to play these tracks refer to the 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 “remove.”

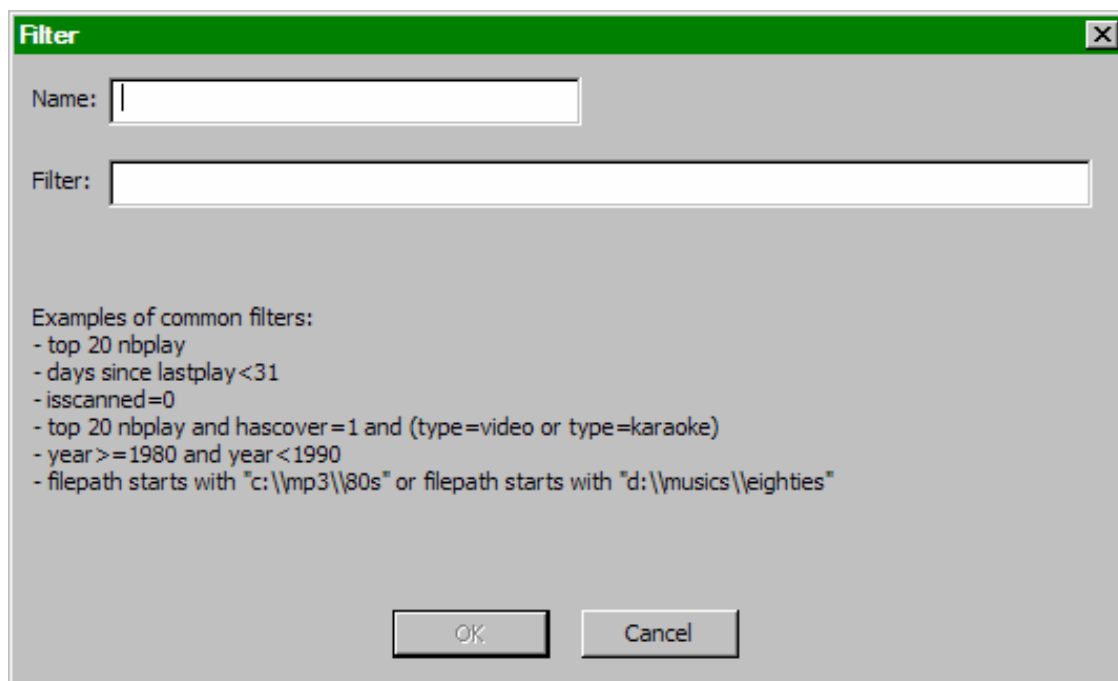
FILTER FOLDERS

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

Create a Filter Folder

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

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



Now enter the Filter to be used for creating the results desired. This is where it can be complicated or simple. This example is simple, use 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 VirtualDJ 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 VirtualDJ will do each time this folder is selected with sort the entire database on the Play Count field in Descending order and then display the first 100 entries or the Top 100.

The filter dialog provides some great examples but to get it's real power need to now what are the appropriate elements, operators, and a few keywords that are used.

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", "LinkedVideo", "HasLinkedVideo"

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

Keywords – "top", "[inverted]"

Filter Folder Examples

| 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 |

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



The two decks are equipped with the following controls and displays:

- 1. Title of track currently loaded**
- 2. Waveform display for currently** - This view shows the visual waveform of the entire track, allows for viewing the remaining duration of the audio, as well as what has already been played. When highlighted in blue or red (Using the default skins), that area of the waveform indicates what has been played and the current position of the audio. The remaining grey area of the waveform shows the length of the audio remaining. Inside the waveform itself, the lighter part indicates the presence of beats whereas the darker part indicates the presence of vocals
- 3. Virtual Turntable** - Use the mouse to scratch, back cue, and pause. Also note the virtual turntable arm moves relative to the track position giving a visual of how much time is left on the playing track.

4. Loop Sampler -

Sample Selection Drop-down arrow - Choose which sample to use. There are 12 slots which are available to record, load and play samples.

Sample Selection window - When clicked this will play the sample listed in the selection window.

REC button - When initiated, this function records the loop to the sample slot selected. 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 repeats seamlessly. Press “Loop In” at the point where the loop is to start. Press “Loop Out” when the desired point to mark the end point of the loop. The audio between the two points will begin to loop continuously. To release the loop and continue play of the track press “Loop Out” again and the audio will continue from the end point of the loop. 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 loop buttons to work together to create loops synchronized to BPM.

Loop Length - This indicates the length of the loop according to beat measures. Increase or decrease the length of the loop from 1/4 to 16 measures.

6. Effects

Effects Selection Dropdown arrow - Select which effect to apply.

Effects Selection Dropdown window - When clicked this will apply the effect selected.

Parameter 1 & 2 knobs - These two knobs adjust parameters of the effect selected in the dropdown window, although not all effects require or make use of these knobs.

7. Transport

Cue - 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 virtual turntable), and then click on “Cue”. Also, a right-click on the “Cue” button will set a Cue Point while the track is playing. Once on the Cue Point, pressing and holding down “Cue” allows for temporary play of this point. To delete a Cue Point, right-click on its icon on the Waveform display, and select “delete”.

Stutter/Play - Starts the music. Pressing “Stutter/Play” while the song is already playing, 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 while stopped cycles through the beginning of the song and all the Cue Points. Right-clicking while stopped automatically goes to the first detected beat in the song.

8. Sync

When clicking “Sync”, VirtualDJ will sync the tempo of the deck to the opposite deck’s tempo.

Press “Sync” while the song is paused, only the pitch will be adjusted.

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

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

(Attention: the right-click sync doesn’t use the Computed Beat Grid (CBG) but instead aligns the next audible beat. This behavior lets you purposely start on half or a 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 / Pitch buttons

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.

The two Pitch buttons are used to temporarily change the speed of the track playing. 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 as long as you are pressing down “+” or “-”.

10. KeyLock

When enabled changing the pitch of the song does not change the tone of the track. Keylock can be enabled at any point along the pitch range to maintain the desired tone at that pitch while still being able to further adjust the pitch. When disabled tone changes based on the pitch used – slower pitch = slower deeper tone, faster pitch – faster higher (chipmunk) sounding tone.

11. Hot Cue

Use the three (3) buttons to set cue points. The first time that a left-click on one of these buttons, a cue point will be set. At any time left-clicking on the corresponding button and the track jumps back to that cue point. To set a new cue point for the hot cue, right-click the corresponding hot cue button. If wanting to delete a cue point, right-click on its icon in the waveform display, and select “delete”.

VirtualDJ features an internal mixer section as part of the InternalMixer skin. The mixer can be accessed by selecting the “VirtualDJ: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 signal of the desired channel.

3. EQ

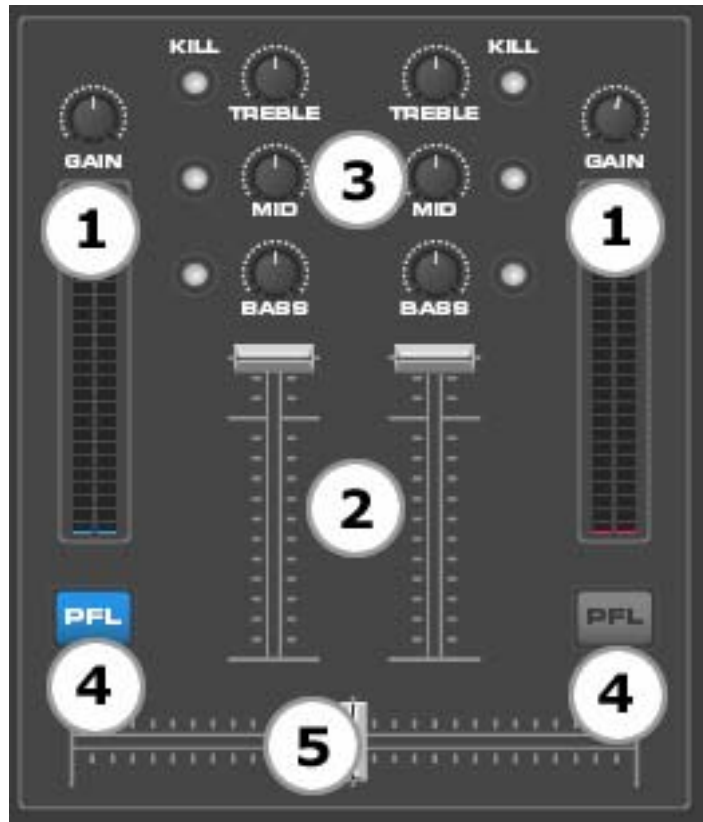
These knobs allow you to adjust the low, mid, and high frequencies of the audio playing on the desired channel of the mixer. Each frequency range can also be cut by pressing the corresponding “Kill” button.

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.



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. Cue/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.



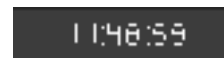
4. Master Volume *

Controls main output of program



5. Clock *

Displays time, and when clicked with mouse can act as a counter.

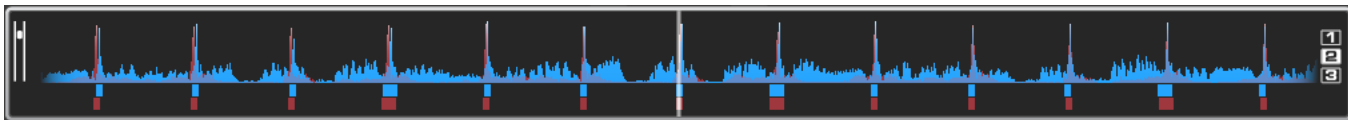


6. Config and Window controls *

Provides access to the configuration settings dialog. See “Configuration Settings” section of this manual for more information. Windows controls provide the Minimize, Maximize, and Close application options.



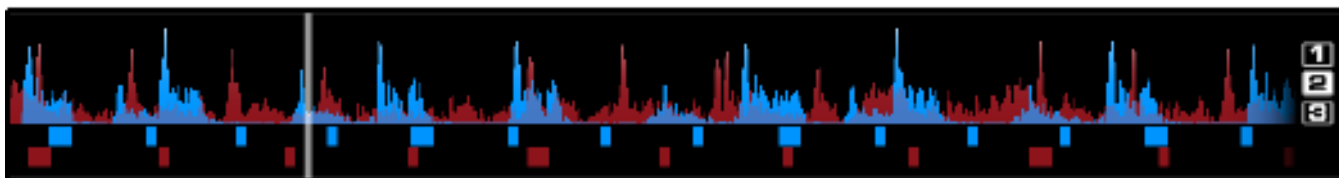
Above the players, a window posts curves corresponding to the two rates/rhythms of the music. These curves are represented in a waveform, allowing you to see your music. The peaks in the curve represent beats. In order to synchronize the music, these peaks should occur at the same time. The present is represented by the feature 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.



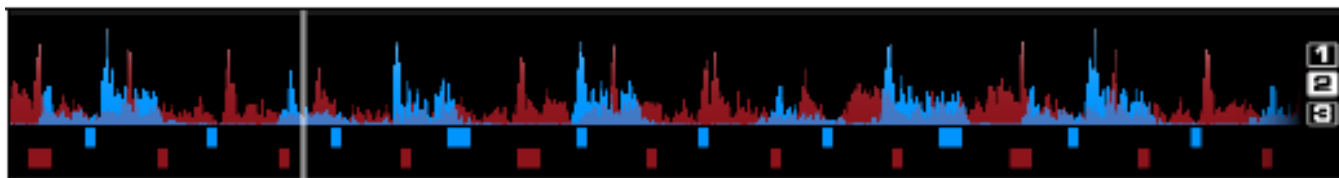
You can zoom in or zoom out the display using the slider on the left, or the three preset buttons (1, 2, 3) on the right side of the rhythm window.

Below the curves there are small squares, named 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.

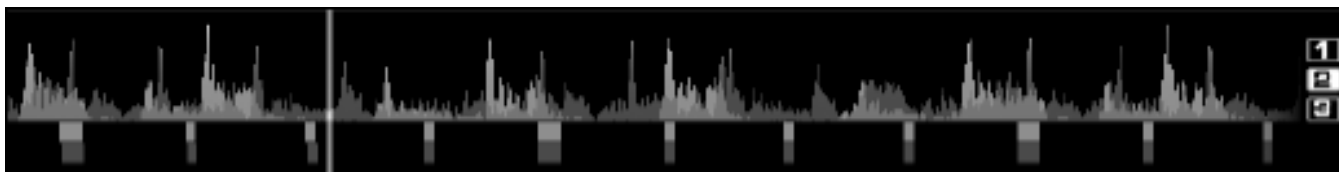
In the picture above, you can see that the beats are completely synchronized – it is easy to see that the peaks (beats) of the music are lined up. However, some music does not have the very obvious single beat peaks that most house and techno music has. This is when the CBG is very useful. If you look 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 – CBG NOT ALIGNED



BEAT MATCHED – CBG NOT ALIGNED



BEAT MATCHED – CBG ALIGNED

VirtualDJ 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 VirtualDJ'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 the sound card (or device) configuration is set for functioning with VirtualDJ.

Inputs – If using timecoded vinyl or CDs to control VirtualDJ, 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 VirtualDJ 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).

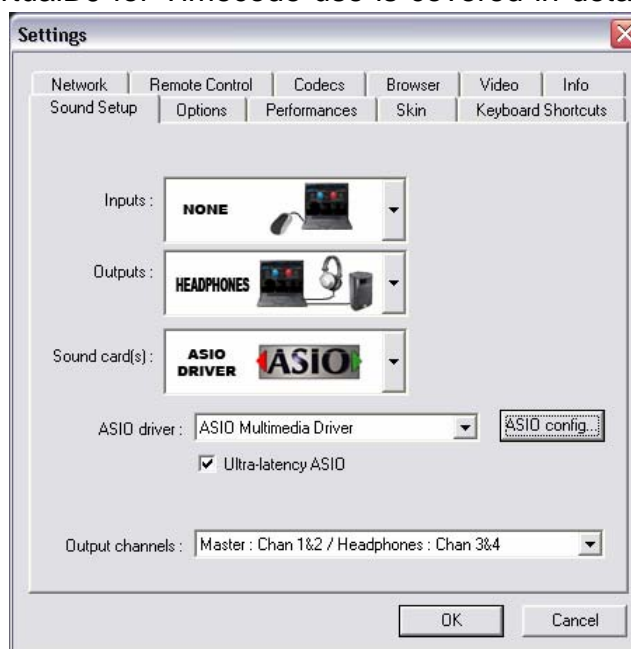
Sound card(s) – Select the sound card driver which you would like to use with the VirtualDJ software.

Sound card (not shown)– Select the sound card in this pull-down list.

ASIO Driver – Select the ASIO driver to use.

Ultra-latency ASIO – There is two ASIO engines available for VirtualDJ to provide better latency support. Checked is the original ASIO engine that is optimized for very low latency (renamed ultra-latency) and is still considered the default engine. Some computers have problems with this optimization. Unchecked is the NEW 'safer' performance level ASIO engine which has less optimization for environments that have difficulty with the Ultra-Latency engine.

Output Channels – 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).



The Options settings control the multiple features and actions to accommodate the DJ's style for using the VirtualDJ application.

Smart BeatTap – When enabled and using the `beat_tap` action, it will automatically "snap" to the nearest plausible BPM and phase. This allows for very accurate BPM by just tapping 3 or 4 beats, the first tap will set the phase only, snapping to the nearest beat (you can tap only once to change the phase or the 4:4 strong beat, for example). One tap will not change the bpm. Subsequent taps will not change the phase, but change the bpm to the nearest plausible bpm value.

Cross Fader – This option allows you to select the cross fader curve. There are four different options including: 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 records. Available ranges are 6,8,10,12,15,20,25,33,50, and 100% pitch control.

Allow BPM <80 – Allows adjustment to the BPM Engine's value range. Disabled the range is set between 80 and 240. A setting of Smart sets the range for values between 60 and 240.

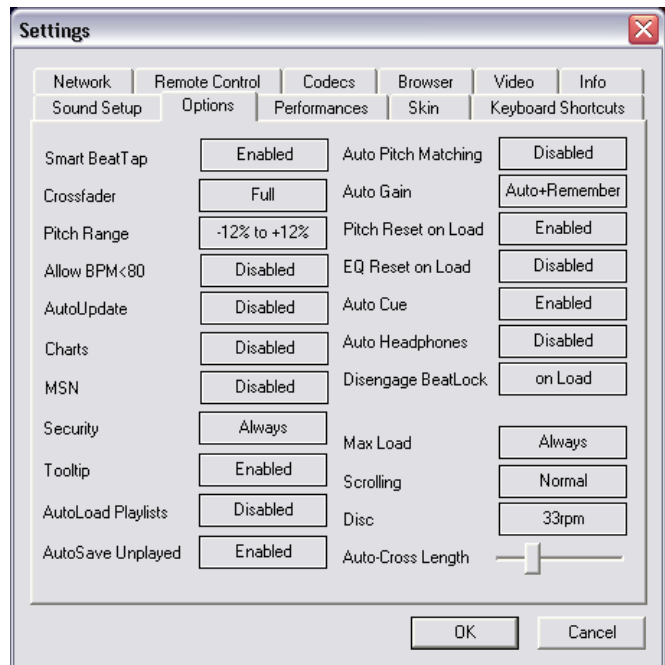
AutoUpdate – Automatically checks for new versions of VirtualDJ (internet connection required).

Charts - Authorizes VirtualDJ to send anonymous statistics about your sessions, compile charts of the most played tracks all over the world. These statistics are available on www.virtualdj.com/charts.html. No personal information will be collected.

MSN – When activated, this option will allow your 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" option is on in your MSN Messenger.

Security – This setting prevents you from loading a track on a deck while it is playing. If you select "Ask", VirtualDJ will prompt you to verify that you, indeed, want to load a track while the deck is playing. If you select "Always", VirtualDJ 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 the mouse cursor over the buttons of the software.



AutoLoad Playlists – See page 18 – “Playlist Setup”

AutoSave Unplayed – See page 21 – “AutoSave Unplayed”

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 auto gain adjustment setting for VirtualDJ. The values are :

- ◆ Disabled – Use the raw db level of the track as it was recorded, ripped, or normalized
- ◆ Auto – normalize the track to a 0db level for play
- ◆ Auto+Remember – normalize the track to a 0db level for play if loaded for first time, then remember the last db gain adjust for next loading of the track.
- ◆ Remember – loads the track the first time using the Disabled setting, then remember the last db gain adjust for next loading of the track

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 Cue – If enabled, will advance track position to the first cue point if one exists (or with 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 – Once 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. Disengage “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 in memory may put a strain on your system performance and cause VirtualDJ to not function properly. This function makes it possible to play long tracks without overloading the memory of your computer.

Scrolling – Allows reversing the direction of the scrolling rhythm window.

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

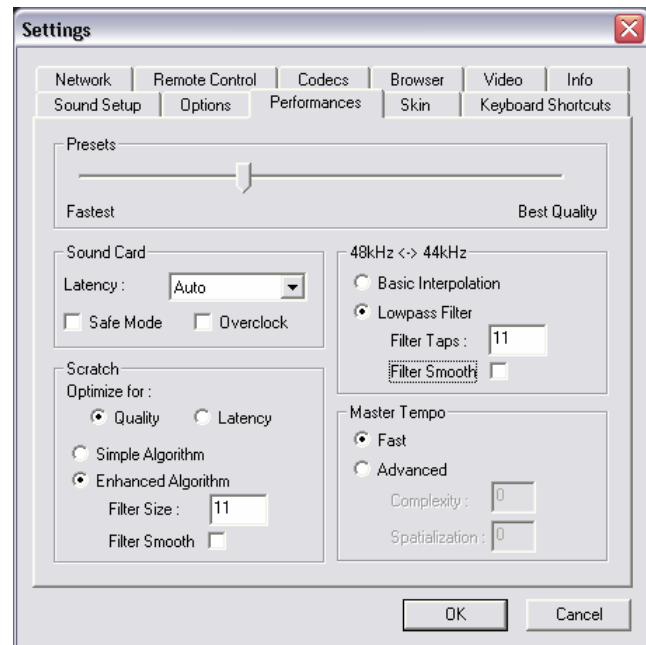
VirtualDJ provides a simple, yet complex; interface for optimizing performance to the capabilities of the computer based on its specifications. Depending on the system's resources, some settings will work better than others. ***It is recommended that the DJ take time to experiment with the settings in order to achieve the best performance of their system prior to using VirtualDJ in a live performance.***

NOTE: When new components (controllers, soundcards, external drive, and software) are added to the system, performance options may require changing to achieve a new best possible performance based on the additions or changes to the system.

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 HIGHEST setting for "Best Quality". It is highly recommended to start at the "Fastest" preset and work towards the "Best Quality" setting testing each setting.



Soundcard

Latency – 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 the DJ will 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), VirtualDJ is less likely to produce glitches and pops if your CPU is momentarily busy. The performance trade off is scratching and pitch adjustments will use more CPU, especially with advanced algorithms. So, if using advanced Master Tempo this will probably need to be disabled, unless the computer is very fast.

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 therefore be compatible with lower latencies.

Scratch – Allows for adjustment to how VirtualDJ reacts to scratch motions

Optimize for:

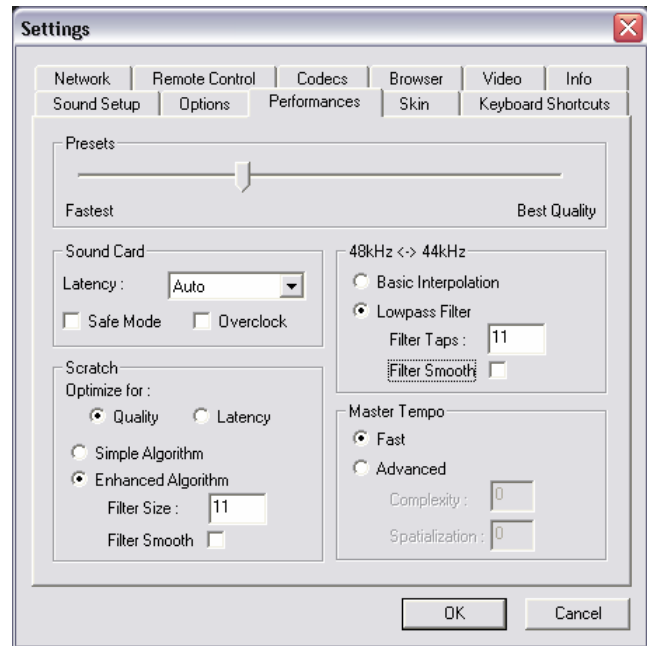
Quality – VirtualDJ will more accurately represent how a scratch sounds when moving the virtual record back and forth

Latency – VirtualDJ 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 a very good quality while keeping a low computational overhead.



48kHz <-> 44kHz

Describes how VirtualDJ will interpolate between the 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.

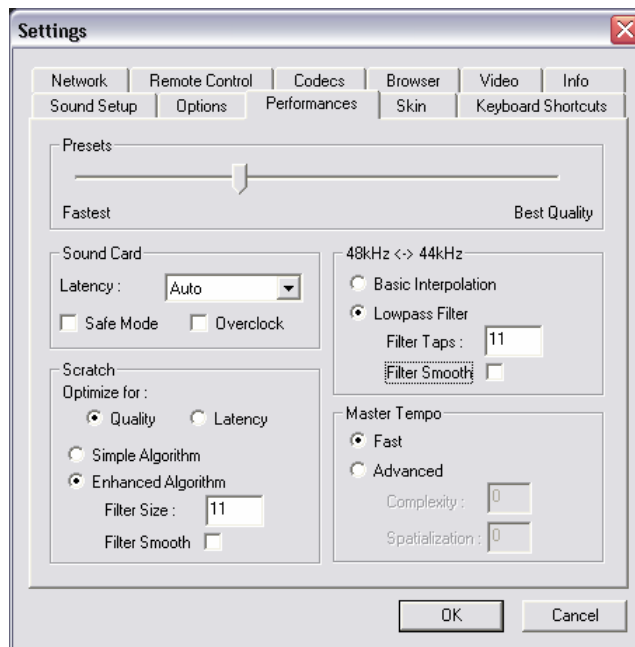
NOTE: Most commercially available music is recorded at 44.1kHz (including MP3s) so it is a good idea to set your soundcard’s output to 44.1kHz. This will prevent your soundcard from having to interpolate to different sample rates and will improve performance. Unless you have worked with different sample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

Master Tempo

The master tempo is the algorithm controls how VirtualDJ changes the pitch of the song without changing its tone (“KeyLock feature”).

The default “Fast” algorithm takes only a small percentage of the 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 Advance option, raising the complexity or spatialization of the algorithm can quickly overflow the systems CPU’s capabilities.

NOTE: Disable safe-mode for better performance with the Advance algorithm



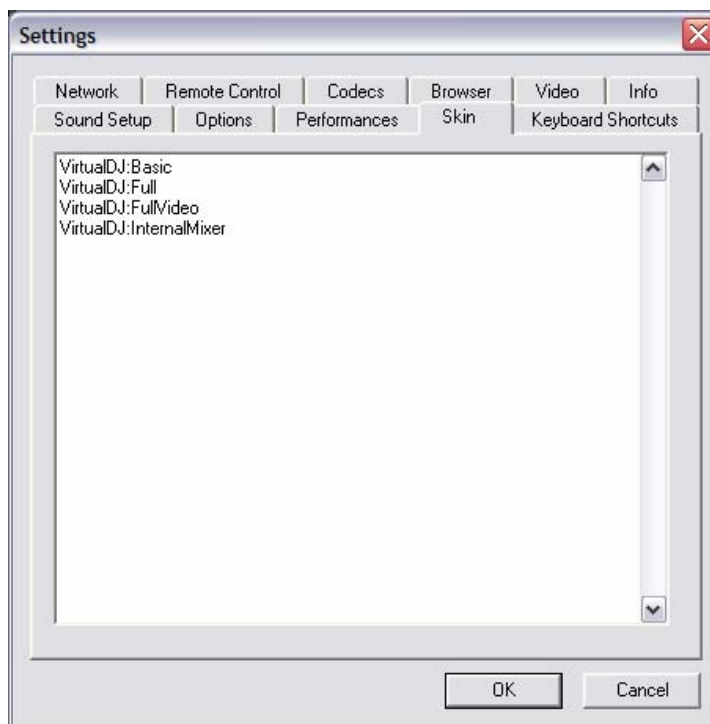
VirtualDJ allows you to choose between several different “skins”.

VirtualDJ:Basic – a basic, simple skin.

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

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

VirtualDJ:InternalMixer – a skin featuring full VirtualDJ controls plus a full-features audio mixer in the middle.



KEYBOARD SHORTCUTS

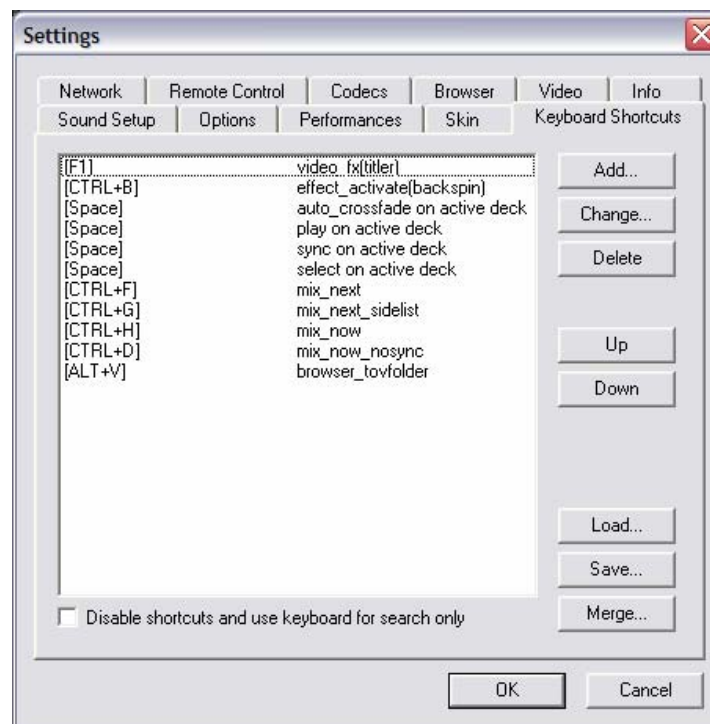
VirtualDJ provides a quick access capability to all of its parameters through assigning keyboard shortcuts to a wide assortment of the VirtualDJ actions.

From the “Keyboard Shortcuts” tab, VirtualDJ 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”.

Using the “Load”, custom preset collections can be loaded for use.

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



Shortcut Macros

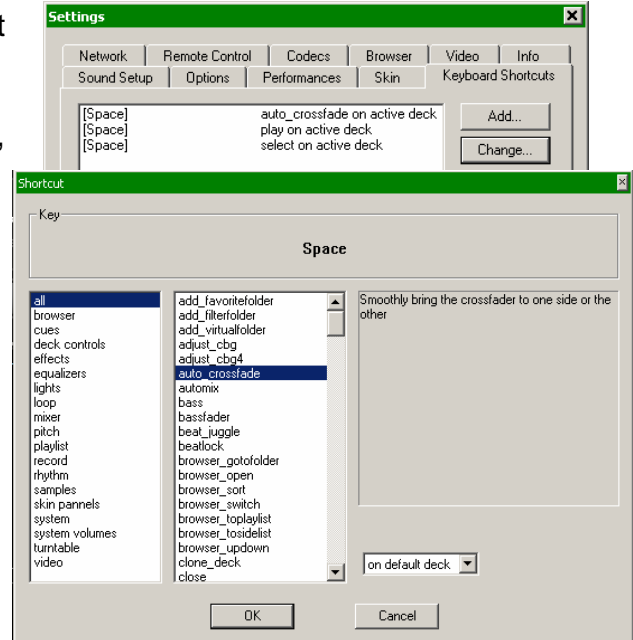
A shortcut macro is the process of assigning multiple actions to the same key or key combination. The power of the macro comes from the order they are listed. So open the Configuration dialog and select the Keyboard Shortcuts tab.

Here is an example of a highly request macro that provides a 'Mix Now' capability.

The actions to be used are `auto_crossfade`, `play`, and `select` and assigned to the Space bar for activation.

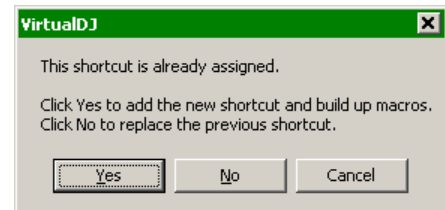
- auto_crossfade** – moves the crossfader
- play** – activates the play of the track
- select** – changes which deck is now the active deck

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 the '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 the '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.

Now once OK is click for adding each of those actions, VirtualDJ 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.



And once each item is added, click 'OK' at the bottom of the Configuration dialog and test shortcut.

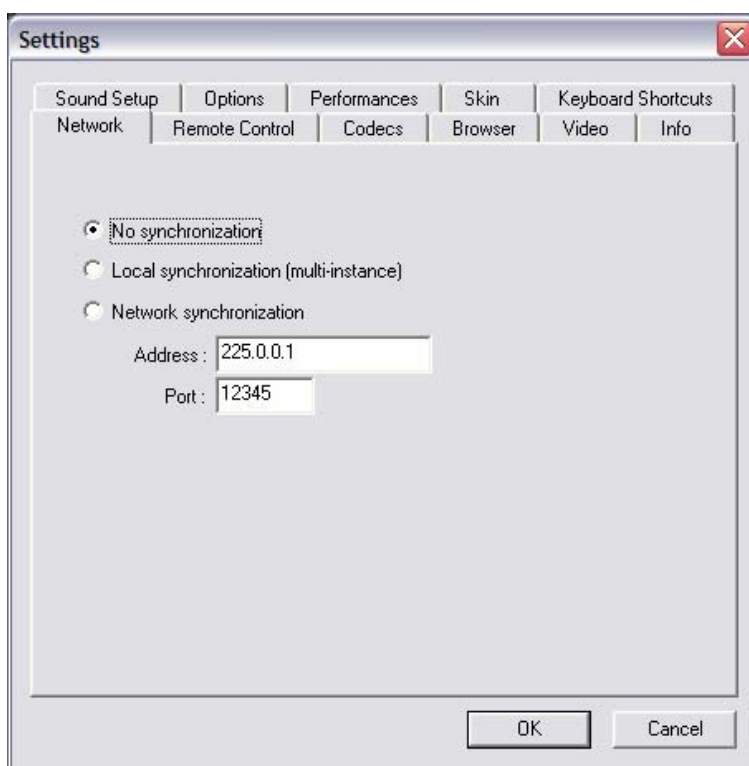
In this example the 'Space' bar was used and is not the required key in order to make it work. Any key or key combination can be used as long as all actions are assigned to that key. Also, remember the power is in the order of the actions. If this macro is configured in a different order the results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

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

No synchronization – turns synchronization off.

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

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



VirtualDJ can be controlled using a wide array of external controllers. The “Remote Control” section of the Settings menu provides the setup to ‘enable’ VirtualDJ to work with the external controller. With the controller connected, start VirtualDJ, select “Config” and then select the “Remote Control” tab. Enable the controller by clicking on the graphic for the controller. From the pop-up menu, select ‘Activate’. If the controller is properly connected the graphic is highlighted green. If the controller is not properly connected or setup, the graphic will appear with a red highlight around it. After activating the controller and it does not function correctly, try deactivating and activating the controller again to reset the connection.

Native Support – a native supported controller can be connected to the computer and then by selecting the appropriate controller option in the Remote Control tab begin to function without any additional configuration being set. Native support of a controller **does not** imply that all of the controller’s features or functionality will control the corresponding actions in VirtualDJ. Most controllers can be enhanced or expanded to support additional functions through the use of custom coded mappers available for download.

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 –

- Hercules DJ Consoles (DJC MK1, MK2, Rmx, mobile)
- Denon HC4500
- Pioneer CDJ-400
- Vestax VCI-100
- Numark iCDX, DMC2, DMC1 (v2), Total Control
- PCDJ DAC-2, DAC-3
- Behringer BCD2000, BCD3000
- D-Vinyl 2020
- XP-10
- ION iCUE

General MIDI Support –

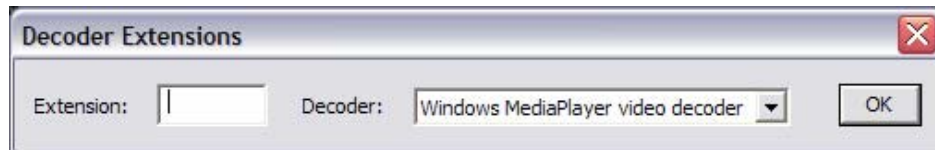
If using a MIDI controller that is not natively supported, then use the General MIDI controller option. Like the Keyboard Shortcuts, MIDI mappings for each parameter can be configured to control VirtualDJ. Click the “Config” button for access MIDI mapping interface.

You will see the “MIDI Config” appear. In this menu options for creating, loading, saving, merging, and modifying the 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. VirtualDJ will automatically detect the controller number and map it to the parameter.



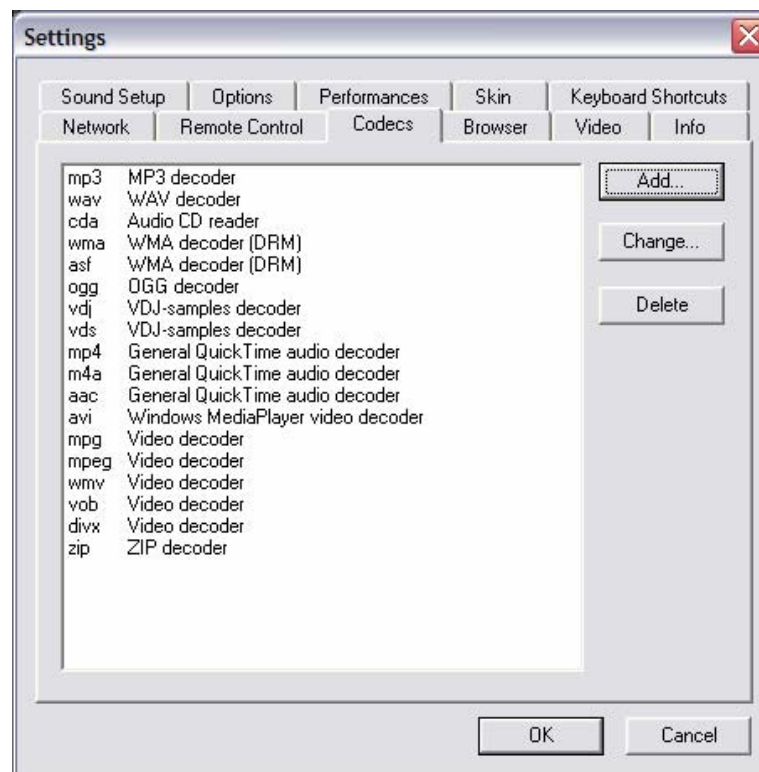
VirtualDJ is able to decode several formats natively with its audio and video decoders. The Codec tab identifies what file types (by extension) use what specific decoder for play in VirtualDJ.

At install, VirtualDJ includes the some of the common sound and video file extensions. If, VirtualDJ is not already associated with a specific extension for an audio or video codec then select the 'Add' button. Enter the extension and then select from the several available decoder engines that VirtualDJ is able to use as a decoding engine.



Determining Appropriate Selection for a Unique codec

If the VirtualDJ MP3 or Video decoder is unable process a certain file then that unique encoded format (codec) can be assigned to one of the other supported decoders. Ensure the appropriate CODEC for that audio or video type is installed to the operating system and the file is playable in one of the supported decoder applications listed in the VirtualDJ Decoder drop-down. Then assigned that file extension type to that decoder.



ENABLE / DISABLE – Provides the ability to have the application’s video engine enabled or disabled. By disabling the video engine ALL video features of the application are not usable and may increase performance for DJ’s using only the AUDIO features of the application.

Activate – Turn the video engine on or off.

TV Output – Select the monitor that 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 – Use 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 VirtualDJ 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, VirtualDJ can decode video content even when it is hidden. This will prevent some jolts that may occur when video content is brought into the mix with the crossfader.

Activate on load –

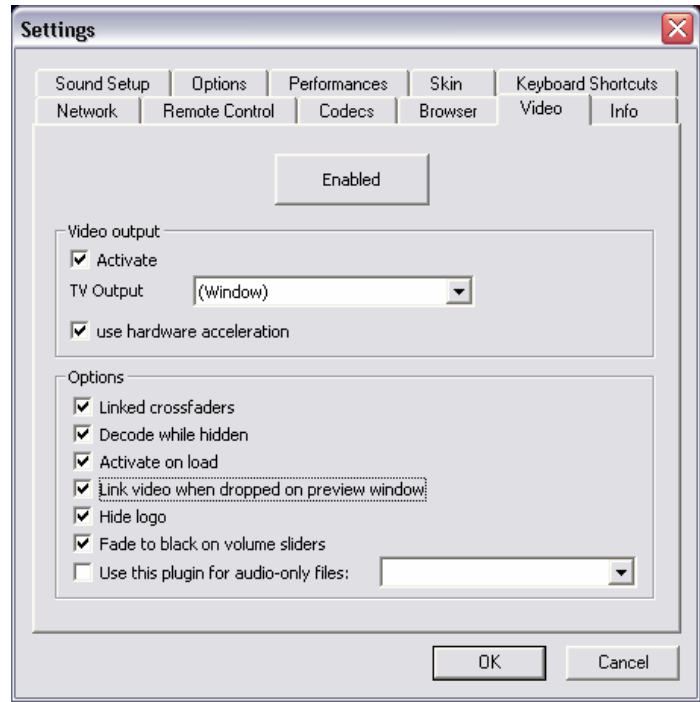
If a video file is loaded on either deck the video engine is automatically activated. If wanting to play just the audio track of a video, uncheck this feature so the video engine will not be activated.

Link video when dropped on Preview Window – Checking this option will utilize the deck’s video preview window for linking a video to an audio track.

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

Fade to black on volume sliders – Deck will FADE to BLACK when the volume fader is moved to 0. And will fade up in intensity as the fader is moved towards FULL level.

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.

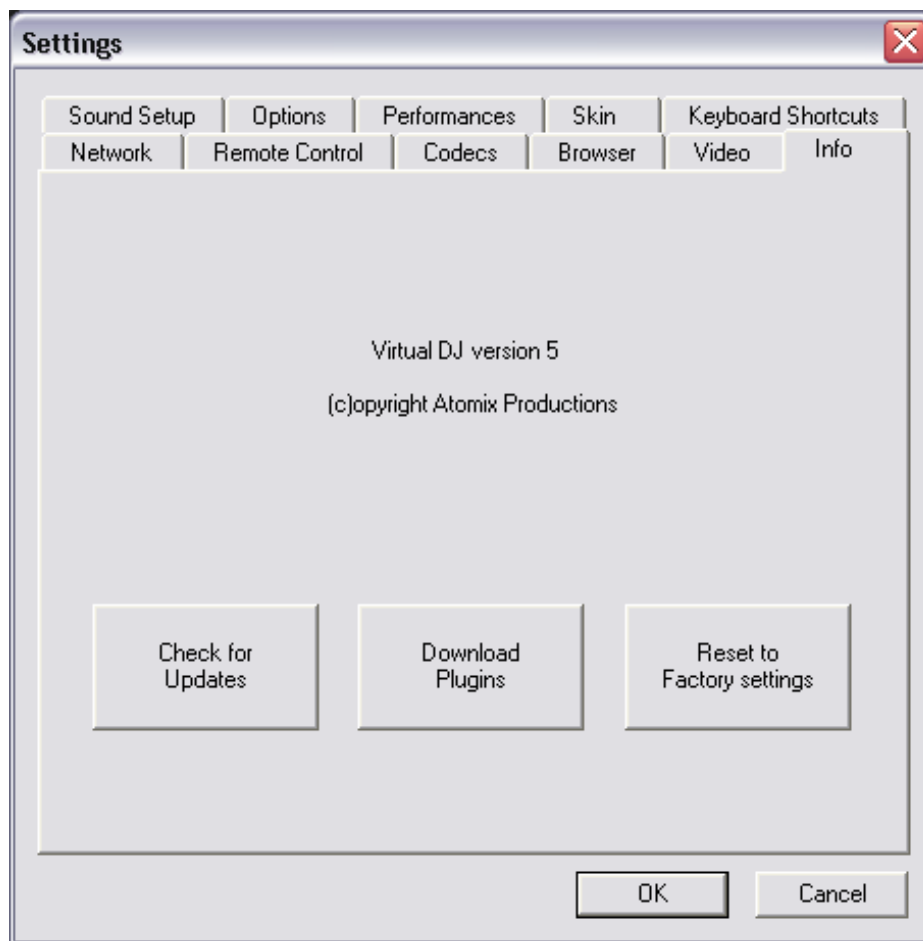


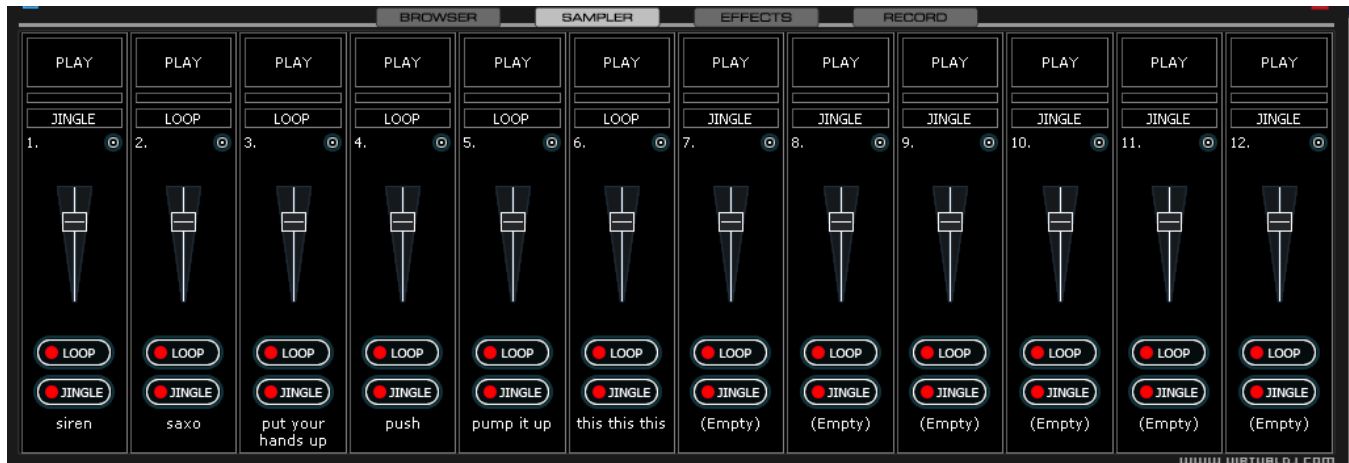
The VirtualDJ Info tab provides the version number along with copyright statement for the application. There are three useful buttons:

Check for Updates: makes and internet query to the VirtualDJ Download Center and checks to see if any updates are available. [Internet Connection required]

Download Plug-ins: Launches the browser associated with http request an directs the browser to the 'Add-ons' section of the website.

Reset to Factory settings: Reset VirtualDJ's settings back to the recommended defaults. All configuration tabs are affected by the change.





VirtualDJ 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 when played. 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 found as part of the controls for each deck. Simply select the sample from the pull-down menu, and then click on the sample title to begin play. 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 play volume of the sample can also be controlled using the Volume knob.



Recording Samples

VirtualDJ can easily record samples which are then instantly ready to play.

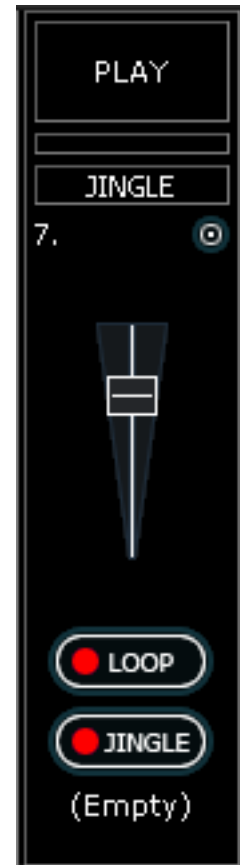
To record a linear (one shot) sample, click the “Jingle” button on the bottom of the sample cell to begin recording. Click on “Jingle” once again to stop recording. The sample is recorded from the deck that is currently in use (the Active Deck).

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

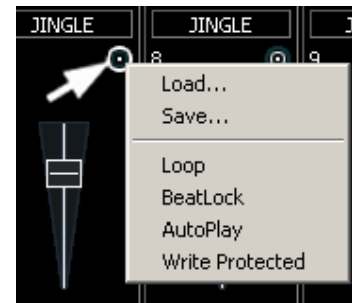
Recorded samples **are not** saved for use in subsequent sessions. To save the sample, use the “Sample Options” menu and select the “Save...” option.

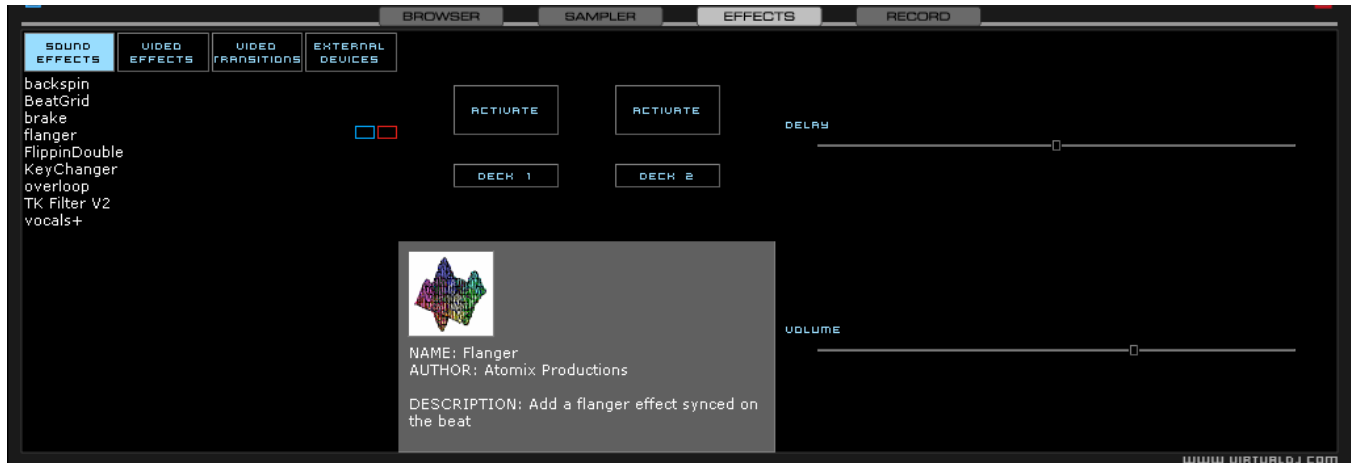


Sample Options

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 prevent a looping sample 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.



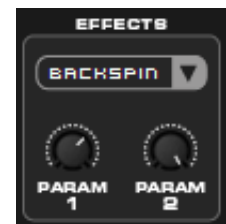


VirtualDJ features a comprehensive set of audio and video effects and transitions which can be accessed by clicking the “Effects” tab on the lower window. The effects list is displayed on the left side of the window and each of these effects can be activated for both decks. Multiple effects, both audio and video; can be applied.

To use an effect, select the effect and activate it on whichever deck the effect should be applied. This is done by clicking on one of the two “Activate” buttons in the middle panel of the window. The button will light up showing activated. 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 used 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

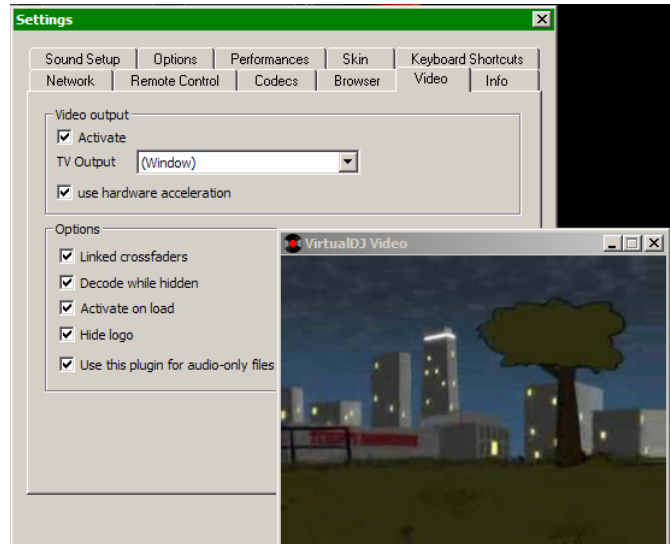
In addition to mixing traditional audio, VirtualDJ makes it possible to mix video content with the ease and familiarity of a DJ interface. Instead of audio files (.mp3, .wma, .m4a, etc.), video files (.avi, .mpg, .wmv, .vob, etc.) can be played. VirtualDJ’s interface provides all the same features to mix, scratch, effect, and transition video content, just as with audio content.

Also, you can link video files to audio files to produce a video enhanced audio combination. Using either the drag-n-drop preview windows, keyboard shortcut action, or a skin provided link object any type of supported video file can now be linked with an audio track.

Video files are distinguished in the Browser with a small, blue “V” on their icon . And, audio files with linked videos are distinguished in the Browser with a small, blue “L” on their icon . When playing a video/linked audio file, a video window will open in VirtualDJ.

If the installed video card has a TV output or a second output screen, the secondary output can be specified as the output for full-screen display, instead of the windowed output. The desired output is specified by using settings in the Configuration dialog on the Video tab.

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

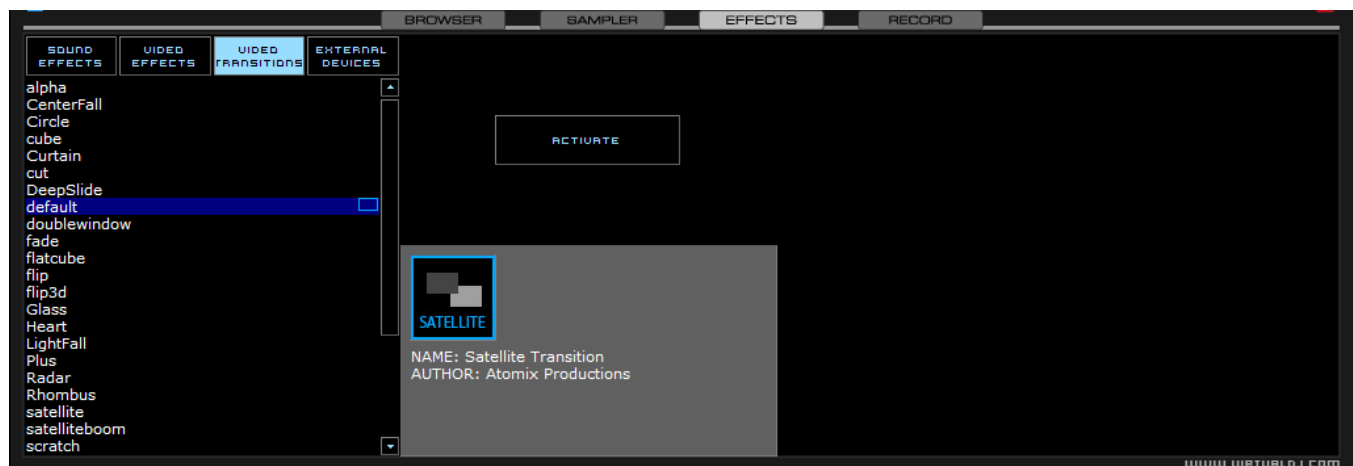


VirtualDJ provides an installed Rip DVD utility for ripping the video files from a DVD to the computer’s hard disk in a high-quality .VOB format.

Transition Effects

VirtualDJ features many different transitions effects for transitioning the mix from one video clip to another.

From the Effects panel, select the “Video Transitions” section, the select the desired transition. Click on the “Activate” button to have VirtualDJ to perform automatically the selected transition when the mix from one deck to the other occurs.

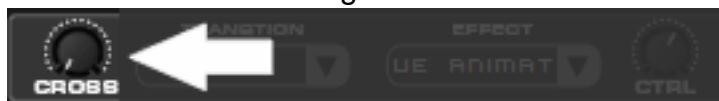


If using the VirtualDJ:FullVideo skin, the desired transition effect can be selected and activated from the 'Transition' button found in the "Effects" zone just below the video preview windows.

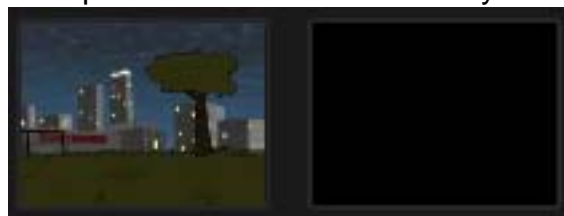


There are two ways to mix video clips: automatically or manually.

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



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



And, if the "Link the Video crossfader" is checked in the Video configuration tab, the skin's audio crossfader will crossfade the video when it is move from one deck to the other.

Alternatively, VirtualDJ will 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 VirtualDJ: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 preview video windows in VirtualDJ: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 VirtualDJ 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, VirtualDJ 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, VirtualDJ will only decompress the video which is visible. If both video files are shown in the mix window, then VirtualDJ 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.

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

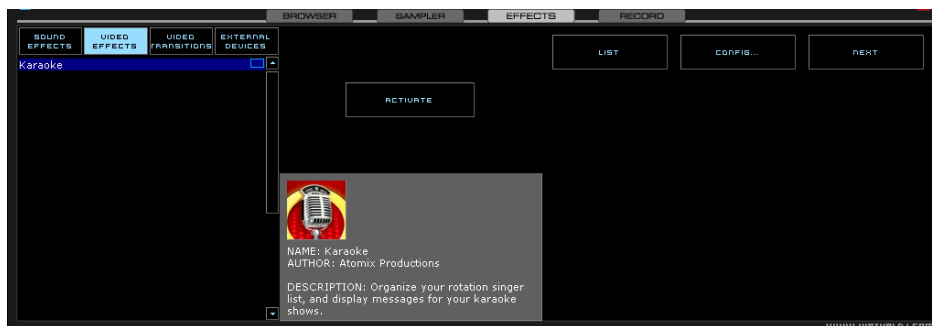
VirtualDJ is compatible with MP3+G, WAV+G, WMA+G, OGG+G, and .ZIP files.

The tracks will appear with a “K” in its icon . When loaded on the deck, VirtualDJ will load the audio track on the deck and display the CDG file in the video mixer.

VirtualDJ supports the binding of the CDG files with its MP3 counter parts as one single .ZIP file.

Karaoke Rotation Plug-in

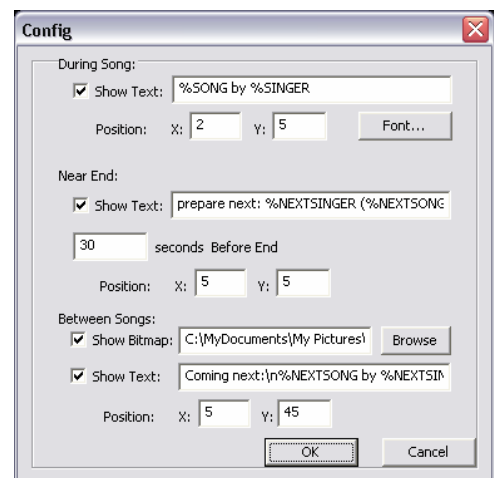
VirtualDJ can assist in managing a Karaoke event and post messages to the video output with it's Karaoke Rotation Plug-in found in the Video Effects section. The plug-in uses Deck 1 as the Karaoke Deck. Deck 2 can be used for between song fillers, if necessary.



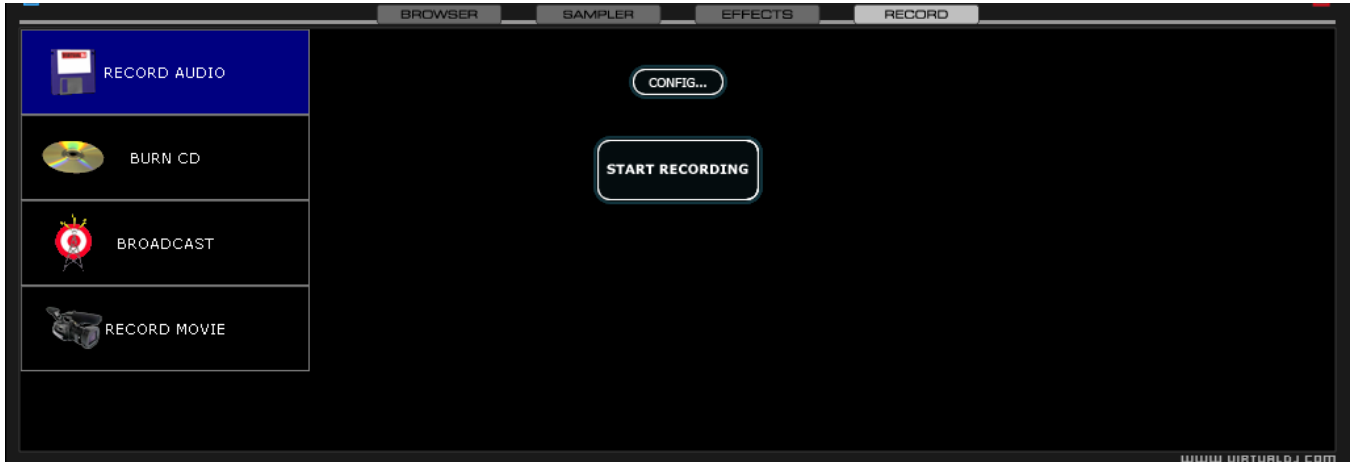
To activate the plug-in, highlight and select the ACTIVATE button. This will launch the rotation list and send the designated Bitmap image to the main video output. The LIST button will display the rotation list if it is closed. The CONFIG button displays the configuration dialog. And, the NEXT button is used for starting the next song/singer selection.

Plug-in Configuration

- **During Song: Show Text** – designate the text to be displayed during the song by placing a check in the box and desired text in the text box. Set the screen positioning of the text by supplying an X and Y coordinate. Set the font to use by selecting the Font button.
- **Near End: Show Text** – same as the During Song: Show Text. Set a timeframe that VirtualDJ will use to begin showing the designated text before the current song ends. Again, an X and Y coordinate for displaying the text on the screen can be entered.



VirtualDJ provides an additional ability to record or broadcast the output. To access the recording and broadcasting features click on the “Record” tab. The following interface is displayed.



The following methods are available:

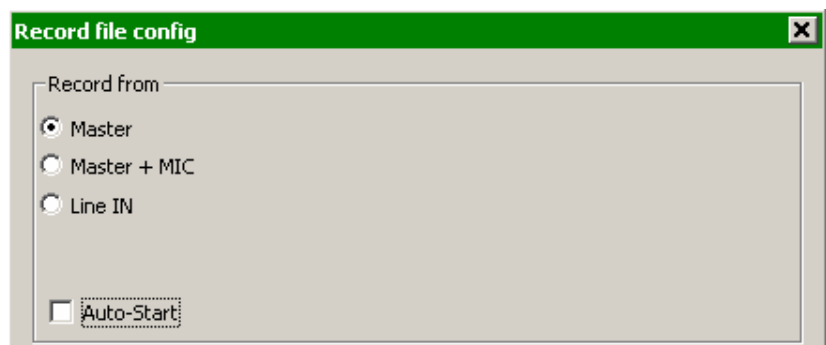
- Record Audio
- Burn CD
- Broadcast
- Record Movie

To access the recording settings click on the “Config” button at the top center of the interface.

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.

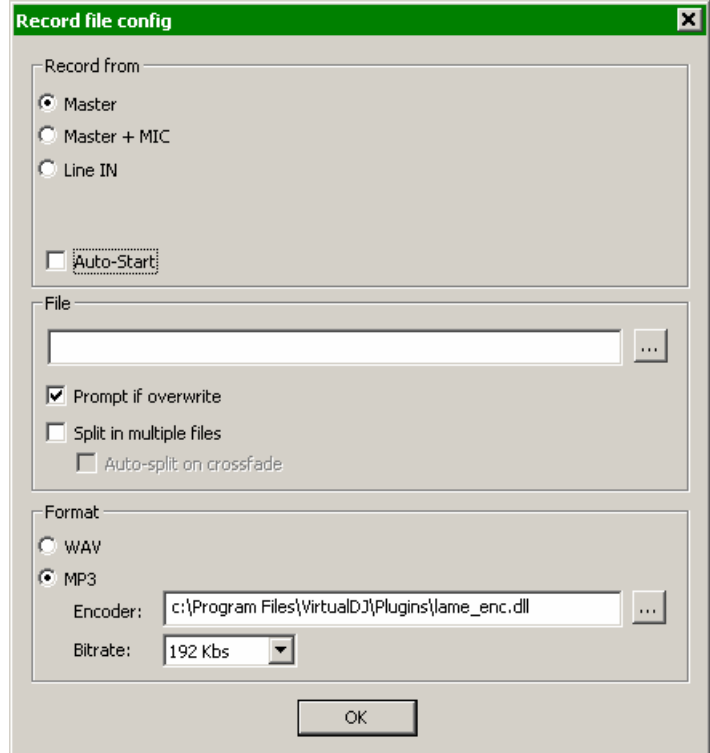
Record Audio

“Record Audio” 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 VirtualDJ, edited with an audio editing application, or written to a CD using a CD burning software.

To setup the “Record Audio”, 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 manual activation of the recording will need to be activated using 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.
- **Split in multiple files** – 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 to demarcate tracks. The “Auto-split on crossfade” option will automatically demarcate tracks when the crossfader in the VirtualDJ 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 for use in recording the MP3. If the encoder to use is in a different folder than the VirtualDJ folder, use the browse button (, , ,) to navigate and select the encoder’s location
- **Bitrate** – select the bitrate to use in recording the MP3. 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

VirtualDJ can record the session in a CD image format for quick burning of a session to CD.

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

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

Record From –

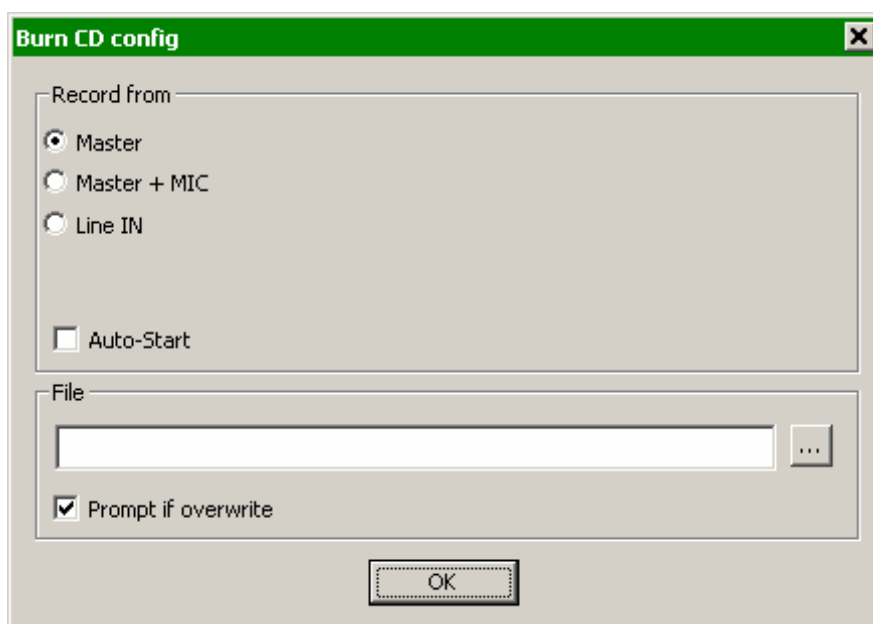
- chooses the recording source
- **Auto-Start** – checking this box will automatically begin the recording when the first track begins playing. If not checked then manual activation of the recording will need to be activated using the “Start Recording” button

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. And, to demarcate tracks use the “Cut” button found next to the “Start Recording” button.

When finished recording the .BIN/.CUE file specified in the File Path field can be burned with a .BIN/.CUE supported CD-burning application. For more information about burning .BIN/.CUE files, consult the documentation of provided by the CD burning software.



Broadcasting to the Internet (“Broadcast”)

VirtualDJ provides a method for broadcasting the session in realtime on the Internet as a “webcast.”. This way people around the world can listen to the mix session.

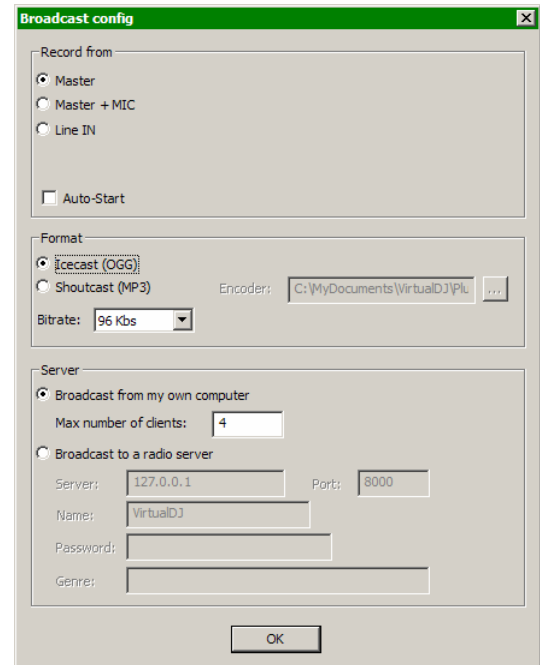
Click on “Config” to access the configuration settings for recording a file.

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 manual activation of the recording will need to be activated using 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 the computer.

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”. VirtualDJ 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:

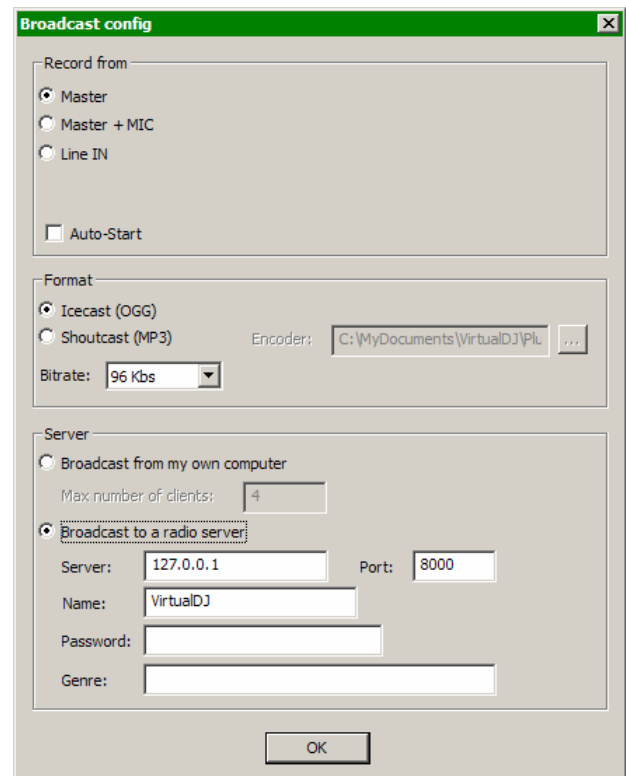
To listen to the mix, the software used by the listeners must be able to communicate with the broadcasting computer via the webcast server. This means that the broadcasting computer may need additional configurations and/or any software firewalls protecting the broadcasting Internet connection be set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

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 VirtualDJ will automatically broadcast the mix to the server using the format in set in the Format section.



Record Movie

VirtualDJ can record the session using the Microsoft MPEG4 codec installed on the computer as part of the Windows Media Player install. The Microsoft MPEG4 codec is used by default because it's the best codec to be used in live scenarios. For example, with the Divx codec a video can not record if the size is greater than 320x320 whereas Microsoft MPEG4 codec can record at least at 1024x768 and more.

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

Record From –

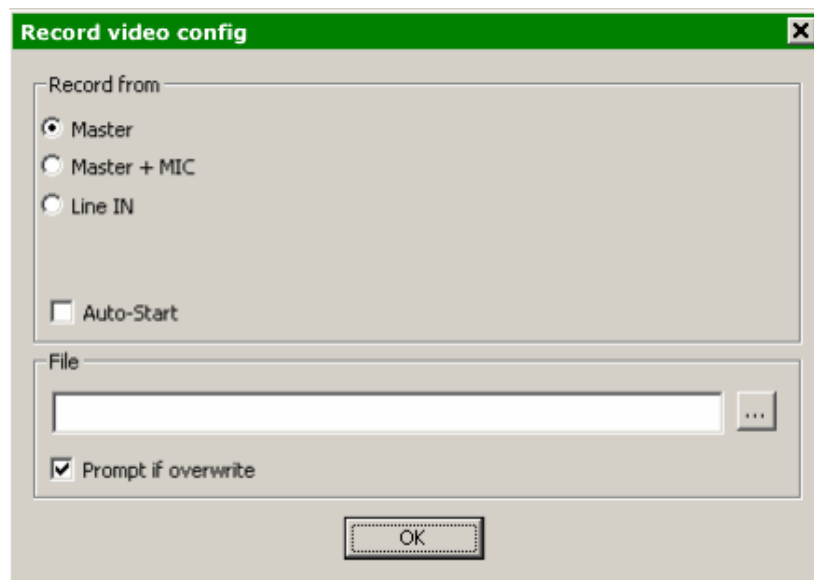
- selects the recording source for the audio layer, video layer is always the Master Output of VirtualDJ’s video engine.
- **Auto-Start** – checking this box will automatically begin the recording when the first track begins playing. If not checked then manual activation of the recording will need to be activated using 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.

When finished recording the file specified in the File Path field can now be burned to a CD/DVD or immediately used as a track in VirtualDJ..



Prior to using your system or understanding how to configure for timecode control, here are some very important tips you should know about --

- ◆ If you are going to use Timecode Vinyl - Verify that your turntable is well grounded
- ◆ If you are going to use Timecode CDs - Never activate the Master Tempo on your CD player because it will destroy the timecode signal
- ◆ If you hear the timecode sound in your speakers, you have to mute the pre-listen of Lines In (monitor)
- ◆ A quality Input signal from the Turntables and/or CD Player is important to having quality timecode control. Be sure that the input gain is correctly adjusted in your sound card. To LOW or HIGH of a signal will not be able to be read and will lead to poor control.

Configuring Timecodes

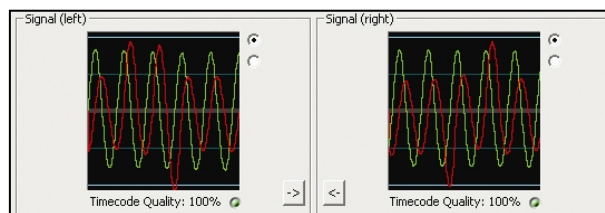
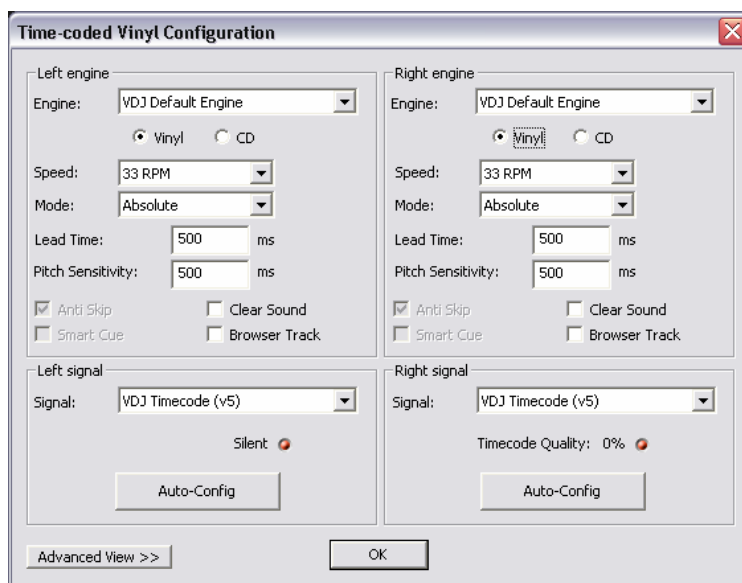
When you open the Timecode Configuration window, you can choose to view the window in Simple or Advanced view. For the most part, you might never have to go into the Advanced View – the Simple View shows the most essential timecode configuration that you will probably need.

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. 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 Or as shown to the right in Advanced View, you should see a nice Sine wave pattern.



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 number.



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. **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.
9. **Signal** – Select the appropriate time code signal to be used based on your Timecode of choice.
10. **Arrows** – Pressing one of the arrows will copy the timecode preferences to the other deck.
11. **Software RIAA Preamp** – If enabled, allows you to plug a phono-level turntable directly into a line-level input on the sound card.

The following settings (12-17) 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:

12. **Gain** – The gain compensation for the timecode signal.
13. **Silence** – Compensates for background/ambient noise by lowering/raising the noise floor threshold.
14. **Stereo** – Used to set the balance of input between left and right signals. Ideal position would be where in View 2 the signals are equal in strength and form.
15. **Invert Stereo** – Virtually switches the left and right inputs and effectively reverses playback.
16. **Invert Phase** – Software adjustment if your needle is wired incorrectly.
17. **TC Up** – Level of “1” value in the binary signal of the timecode
18. **TC Down** – Level of “0” value in the binary signal of the timecode.

| SYMPTOM | RESOLUTION | |
|---|---|--|
| Speakers produce a HUMM noise | Some laptops power supply has problems with ground. One consequence of this problem is a horrible noise in the background. In this case, remove the ground or buy an isolator | |
| Freeze or Pause in playing Audio/Video when loading a track | Some computers can have some problems with USB ports: if there is not enough USB bandwidth, for example, if an external sound card and external HD are used at the same time. One consequence of this problem is a freeze of the video or the software when you load a song from the external HD or if you encounter some clicks or dropout with your external sound card | |
| Integrated video card doesn't seem to run videos | Integrated video card on laptops are not enough powerful for the use of the video in VirtualDJ. We advise you a dedicated video card (ATI or NVIDIA) with dedicated video RAM (not shared with the main RAM) | |

****POWER USERS – typically only one genre is stored in the ID3 tag; however, since VirtualDJ 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.***

****POWER USERS – by default VirtualDJ 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.***

<http://www.atomixproductions.com>

<http://www.virtualdj.com>

Atomix Productions
PO Box 324
Warren, PA 16365
USA

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VIRTUAL DJ

VIRTUAL DJ