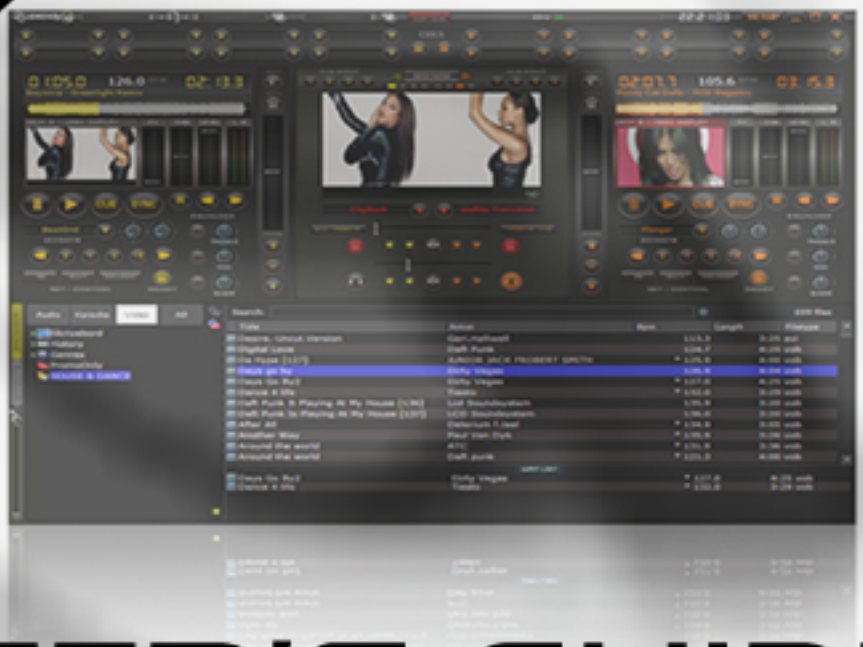


USER'S GUIDE

v5.2

Welcome to PCDJ VJ!

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

PCDJ VJ 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
- ClipBank for playing back video clips on the fly
- Smart and User-Defined (IN/OUT) Looping engine
- Easy one-touch crossfade for video transistions

Additionally, PCDJ VJ 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
- Smart Play for accurate every time on beat start to your mix
- Computer Beat Grid for easy visual mixing
- Dynamic Hot Cue points

We developed PCDJ VJ 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 PCDJ VJ to be fun, intuitive and highly efficient.

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

We sincerely hope that you enjoy this great product!

CONTENTS

INSTALLATION INSTRUCTIONS

PCDJ VJ installs files into the following locations:

Default application path –
C:\Program Files\Digital1Audio\PCDJ VJ

All Application Configuration, Plug-in, Skins, Database, and Support Files are stored in –

Windows XP:	C:\Documents and Settings\username\My Documents\PCDJ VJ
Windows VISTA:	C:\Users\%username%\Documents\PCDJ VJ

*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 PCDJ VJ folder. To check, right-click on the My Document icon and look at the property setting for Target.

The Core PCDJ VJ Database is titled - PCDJ VJ Database.xml

The PCDJ VJ 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 – PCDJ VJ 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

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 PCDJ VJ 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

Before beginning to use VJ, familiarize yourself with the controls and “zones” of the software. Let’s begin by becoming familiar with the most important features of the software.

1. **BROWSER / EFFECTS**
   Browse your music folders, Adjust effects video, and audio

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

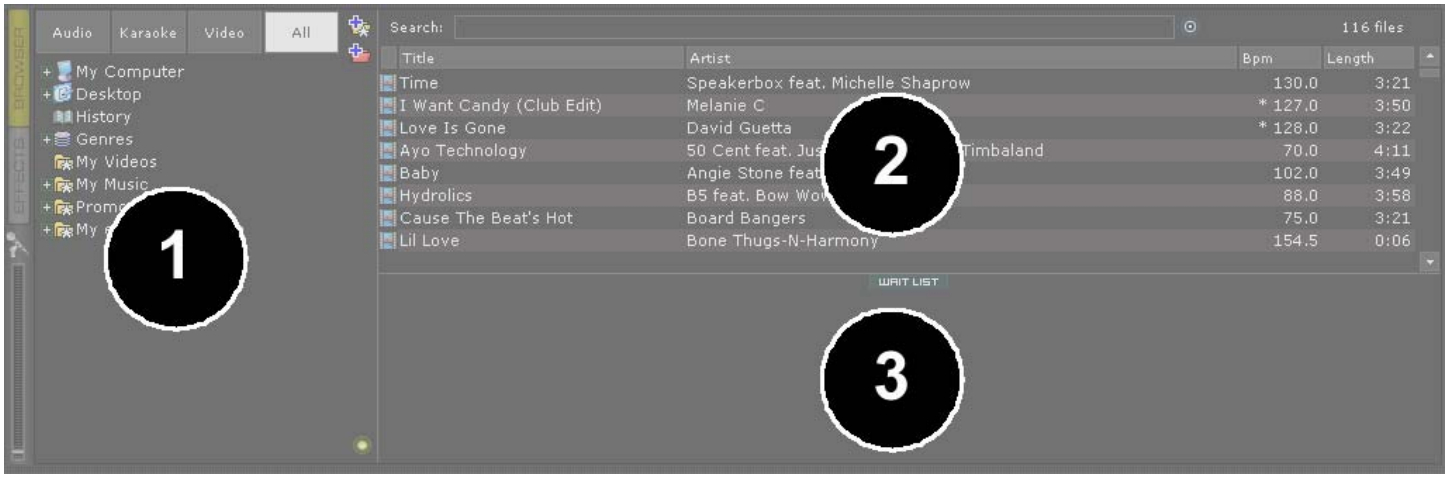
4. **MIXER ZONE**
   Crossfader, Volume PFL Controls

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.

BROWSER

The Browser Zone is 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 VJ) to access the compatible extensions list. Click the “Setup” menu then choose the “Codecs” tab. See the “Codecs” section of the manual for further details.

The Browser Zone is divided into 3 sections – Navigation, File Browser and Wait List.



Navigation

The navigation section provides the access to your music collection through several methods.

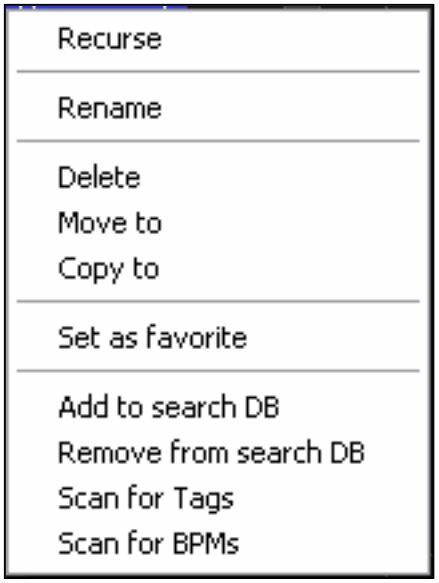
- My Computer – This is the same as using the My Computer icon on your desktop to browse through your computer’s hard drives and folders.
- Desktop – Same as if you were to browse through your computer starting from the desktop.
- History – access to the automatically generated session play lists
- Genres – navigate your collection using the track’s Genre field data stored in the database
- [Favorite Folders] – a shortcut entry to a specific folder on the hard drive
- [Virtual Folders] – a folder that is manually populated for making a specific collection of tracks

The navigation section also provides Quick Filter buttons to limit the type of music to display in the file browser.

- All Files – default, so all supported file types that exist in the navigated location or when using the search
- Audio – only show content that is of the supported audio formats
- Karaoke – only show content that is of the supported karaoke formats
- Video – only show content that is of the supported video formats

In addition to the navigation tree and quick filter buttons, you can use the Browser and Effects buttons to toggle between the Effects and File Browser navigation panels.

Navigation Panel Actions/Features



VJ can perform the following data management features from the navigation panel when you right-click on an object (not all features are available for every object).

Recurse – process that retrieves all the files from the parent folder (where the Recurse is initiated) and all sub-folders of that structure, and displays the retrieved contents in the center file browser. The Recurse option will not show if the selected folder doesn't have sub-folders.

When performing a recurse on an existing or newly added folder VJ will add database entries for new content. By default new data is immediately added to the Search DB

Rename – provides a dialog box for renaming a folder

Delete, Move to, Copy to – provides the Delete, Move to, Copy to functions for maintaining your collection

Set / Remove favorite – use to add or remove Favorite folders from the navigation panel

Add / Remove from Search DB – use to add or remove content from the Search DB

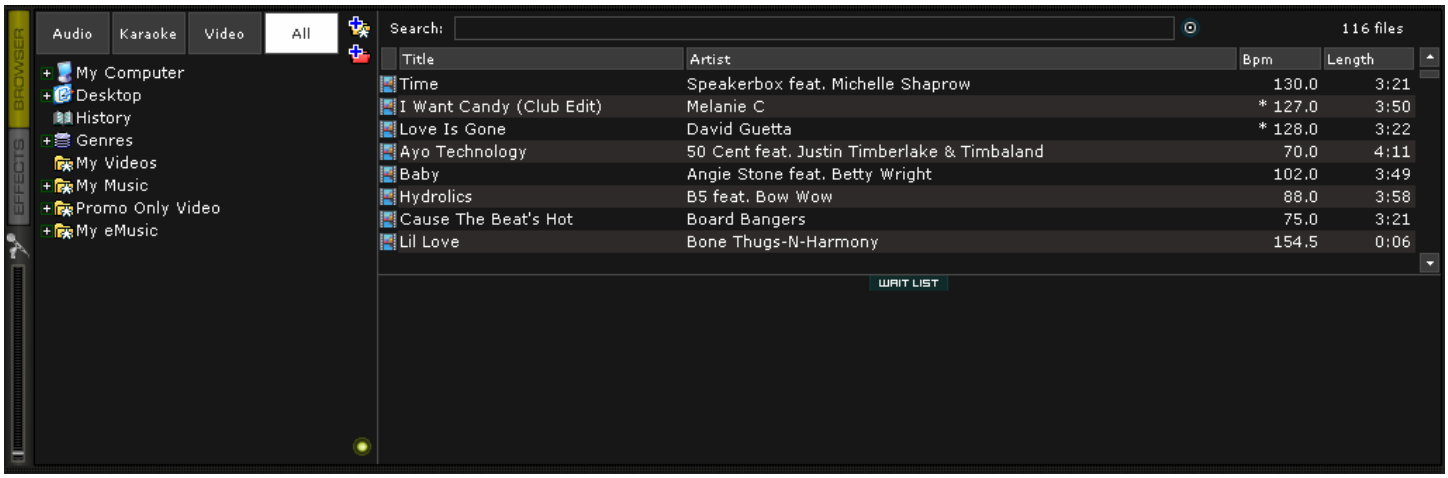
Scan for Tags – use to scan the selected item and it's substructure for MP3 ID3 tag information

Scan for BPMs – use to force the analyzing of the tracks for identifying the beats per minute (BPM) of a song.

MICROPHONE CONTROL

Just to the left of the navigation panel is the microphone control. To use the computer's microphone with VJ, ensure that it is plugged into the computer's microphone jack and functioning correctly. With the microphone properly configured, you can control the volume level of the microphone output using the fader. (Please refer to your soundcard's documentation for setting up a microphone).

BROWSER



File Browser

VJ provides several elements of information about each track. 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), additional columns, explained further in the manual (page 12). The width size for each column can be modified by dragging the respective edges of the columns. By clicking on a column the contents of the file browser 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 . With MP3 audio files, if the ID3 Tag contains the appropriate information then it is read from the ID3 Tag and stored to the VJ database.

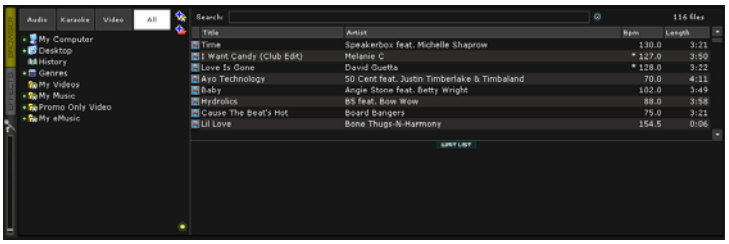
The BPM and length information is analyzed and calculated automatically when a track is loaded to either deck. To force analyze multiple tracks, click and highlight the desired tracks; then right click and select the appropriate BPM analyze option from the pop-up menu. All gathered track information is then stored inside the respective drive database files for later recall and saved at time of discovery or data entry immediately to the database(s).

Icon key

As you navigate through the various storage locations specific icons are used to identify the type and/or status of the tracks in the file browser.

- Audio Track – Has not been played and within the pitch range of current playing track
- Audio Track – Has not been played and outside the pitch range of current playing track
- Audio Track – Has not been analyzed
- Karaoke Track – Has not been played and within the pitch range of current playing track
- Video Track – Has not been played
- Played Track – Has already been played during the session
- Linked Video – Indicates file with a linked video

Wait List



The Wait List can be used to hold tracks that you will play sometime during your session. It also provides a location for VJ to move tracks that were loaded but never played because you loaded a new track to the deck. The Wait List can also be use to stage and construct VirtualFolders by drag-and-drop of tracks to the panel.

Auto-Load from Wait List

Using the AutoMix button, VJ will automatically load the first track in the Wait List and activate the AutoMix feature. When the already playing song finishes the newly loaded track will play. If you wish to have the loaded track begin playing immediately, then a custom keyboard shortcut can be created. See the Keyboard Shortcuts section (page 28) for more information.

AutoSave Unplayed

Using the setup option “AutoSave Unplayed”, tracks that are added to a deck but then never played and replaced by a new selection, the unplayed track is sent to the Wait List. The Wait List becomes a dynamic ‘request/reminder’ list of what was selected at one time to be played but then replaced by another track.

SEARCHING

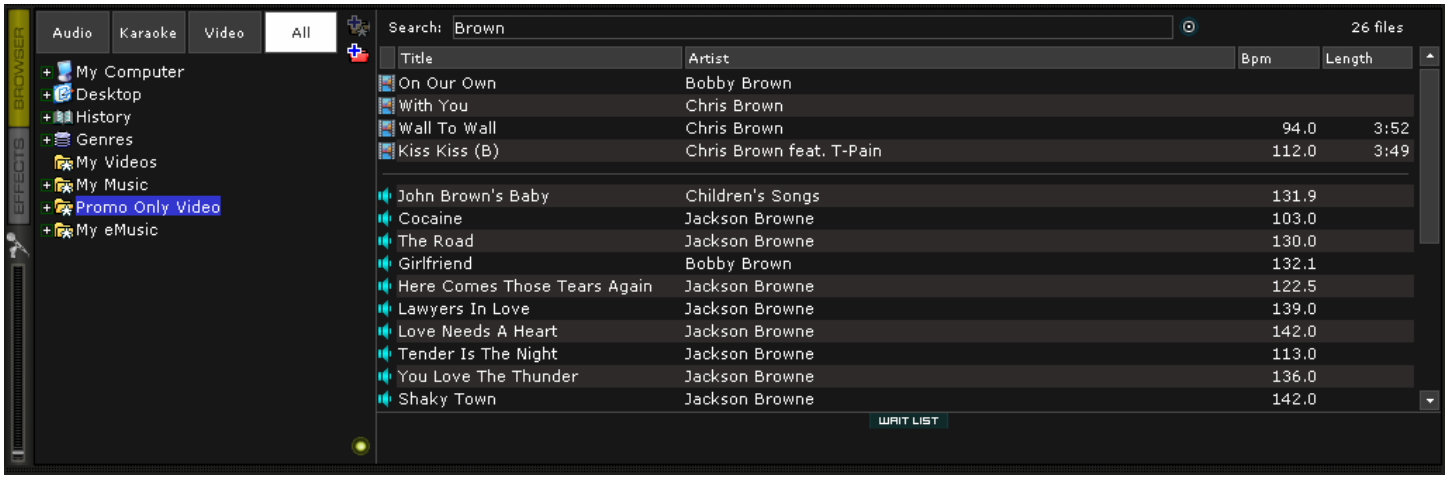
VJ provides an intuitive on the fly search capability. As tracks are discovered for the first time they are added to the database and made available to the search engine. Files are discovered and added by either browsing to the location of the new tracks, or by using the ‘Recurse’ feature in the Navigation Panel.

Another option is to manually add the files to the search. This requires using the ‘Add to Search DB’ option to be selected when right clicking on a file, selection of files, folder, or favorite folder. In either scenario, once added to the Search; the ability to find the file is always available when doing a search. The difference in the results display of the search, determines if it is in the current selected folder or elsewhere in the system.

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 appropriate file type button at the top of the Navigation Panel to only show Audio, or show Videos, or show Karaoke types.

If your search does not produce any results, you can ‘save’ the search criteria to a text file. Click on the graphic to the right of the search bar. This will save the search criteria to a file called “SearchLog.txt” and can be found in your My Documents -> PCDJ VJ folder.

In the following example, a search on ‘Brown’ 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 navigation panel. All other files below the dividing line are files that exist elsewhere in the database.



What can be searched?

Searching in VJ 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.

VJ also provides expanded search features for more creative searching.
One way of being more creative is when searching on BPM. If the BPM is checked, enter 110-120 in the Search box and the results displayed will be tracks in the range of 110 to 120 BPM.

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 remote loading) and that it may finish abruptly or there may be excessive noise in the track

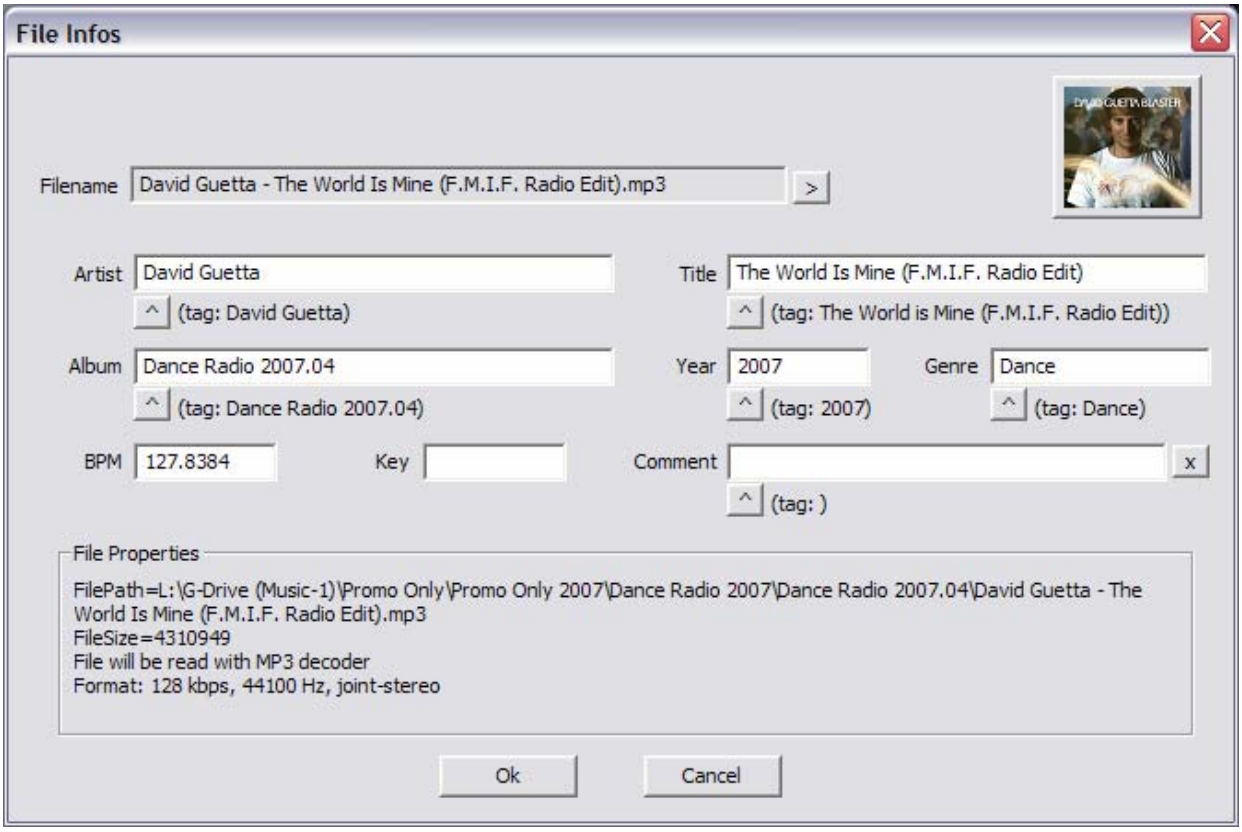
ID3 TAG SUPPORT

ID3 Tag support is not the same support that other applications implement. Adding direct ID3 Tag access to every file would have considerably SLOWED VJ's ability for browsing and search as experienced in other applications.

VJ 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, VJ is able to make these fields available for storing information about the video.

Retrieving ID3 Tag Data

The way 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.

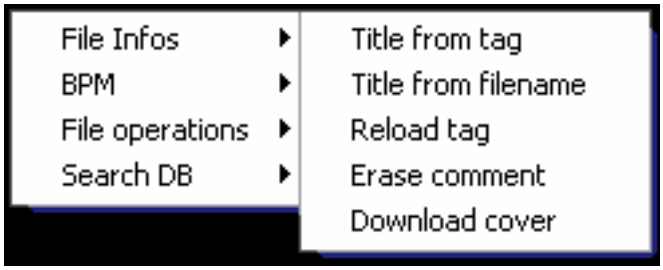


Each field with a ^ button underneath will have the read ID3 Tag info next to it. Click on the button to copy that data into the PCDJ VJ data field. This data will be stored and used by the PCDJ VJ database. The > next to the Filename field is used to parse the file name into the Artist and Title.

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 PCDJ VJ data fields (ID3 Tag) Columns

In the file browser, right click on any column and choose from the pop-up list any or all of the available data fields. 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.

Non-Traditional ID3 Tag Data Field Explanations

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 the track was last played

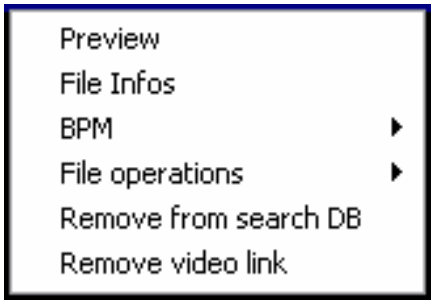
Drive, Filepath, Filename, Filetype, Filesize, Filedate – stores the system data about the track

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

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

TRACK OPTIONS

Right click on a track displays many options:



- Preview – open a mini audio player for previewing a song without adding to a deck.
- File Operations – copy, move, and delete files (a warning is displayed on deleting a file)
- File Info – open the File Info dialog
- BPM – manually force the analyzing of a track
- Remove from Search DB – removing songs from the search database.
- Remove video link – remove the link to a video file

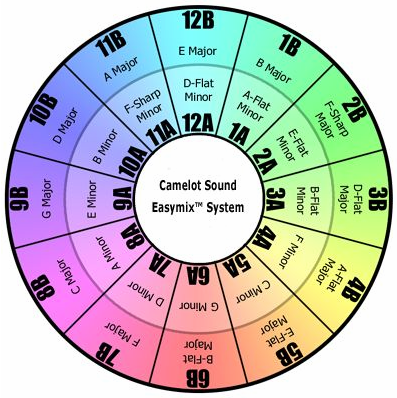
BPM ANALYSIS AND KEY DETECTION

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 VJ 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. VJ 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 VJ 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.

FAVORITE AND VIRTUAL FOLDERS

In order to simplify browsing and provide better and robust file management capability, VJ provides two methods to organize your collection. From the navigation panel's border are two (2) folder options:

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

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

Right clicking on either 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. Virtual folders have a Rename option. All folders have options for moving the order of the folders up and down in the tree and for removing or deleting the folder.

FAVORITE FOLDERS

A DJ may want to define a collection of directories which are most frequently used – for example, "Hits of 2006" or "My Music." The best solution is using the Favorite Folders. Think of Favorite Folders as Shortcuts to a folder in the operating system.

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

Virtual Folders aid in quick access to tracks. A virtual folder holds a collection of shortcuts to tracks like a playlist does in some of the common media players.

Create a virtual folder by clicking on the red Virtual Folder icon  and giving the new folder a title. Now browse the database or run various searches looking for tracks that are being grouped together. Drag and drop the tracks into the new Virtual Folder 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. And, to remove a virtual folder, right-click on it and select "Delete."

DECK CONTROLS

There are two virtual “decks” on the screen. Drag and drop track into each of the decks to load your selection. The two decks are equipped with the following controls and displays:

1. Track Information – Time Remaining (Left side), Time Elapsed (Right side), BPM (to 3 decimal postions), Pitch, Gain, and Key (Standard and Camelot notations) (Center) can be viewed by clicking on the skin area and it will rotate through the items, Artist and Track Title.

2. Track Wave Form - 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, 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. Visual Display – First and foremost VJ is a Video DJ application, so each deck is equipped with a display to view the video portion of the track.

4. Transport Controls

Cue – Used to set the first cue position in a track. While the track is being played, selecting the "Cue" button will return and pause the track to the first cue position. To set a cue position, play and then pause or seek the track to a desired position (for example by clicking on wave form and move to desired point), then click on "Cue". Additionally during the playing of a track, a right-click on the "Cue" button will set the first cue position at the desired location without pausing the track. When at the first cue position, pressing and holding down "Cue" allows for temporary play of this point. To delete a cue position, right-click on the position marker on the waveform display, and select "Delete". You can also give a cue position an alternative name by right-clicking the position marker and selecting the 'Rename' option.

Stutter/Play with Smart 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.

With Smart Play activated (circle to the bottom right of the play button) the track with snap to an on beat position with the currently playing track.

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.

5. 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.

6. 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. 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, repeat the process at the new In point.

Smart Lock button - Allows the loop buttons to work together to create loops synchronized to BPM.

Loop Length Arrows – Navigate through the displayed 2,4,8, and 16 beat measure quick loops, to include 5 hidden loop settings (1/8, 1/4, 1/2, 1, and 32).

Quick Loop Buttons – there are 4 quick loop buttons for 2, 4, 8, and 16 beat measures.

7. Channel Gain

The slider sets the gain level for the corresponding channel (deck).

Left click – moves the gain to the desired position, or used to drag the slider to a specific position.

Double Left click – moves the gain to the analyzed level (usually 0db)

Right click – moves the gain to the desired position in a momentary mode. Once the mouse button is released the slider goes back to it's previous position

8. Channel Level

Adjust the audio signal level of the desired channel.

Left click – moves the level to the desired position, or used to drag the slider to a specific position.

Double Left click – moves the level to the zero (0)

Right click – moves the level to the desired position in a momentary mode. Once the mouse button is released the slider goes back to it's previous position

9. Play Modifiers

Sync – When clicking "Sync", VJ 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).

Reverse Play – use to send the track in a 'reverse' play mode

Left/Right Jump – use to jump into or back through the track at 4 beat measures.

10. Equalizers (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.

11. TAP and Edit BPM

By left clicking on the BPM button to the beat of the track, VJ will count and process the taps to determine the tracks BPM. Right click on the button opens BPM Edit window. For more information see the BPM Correction.

KeyLock

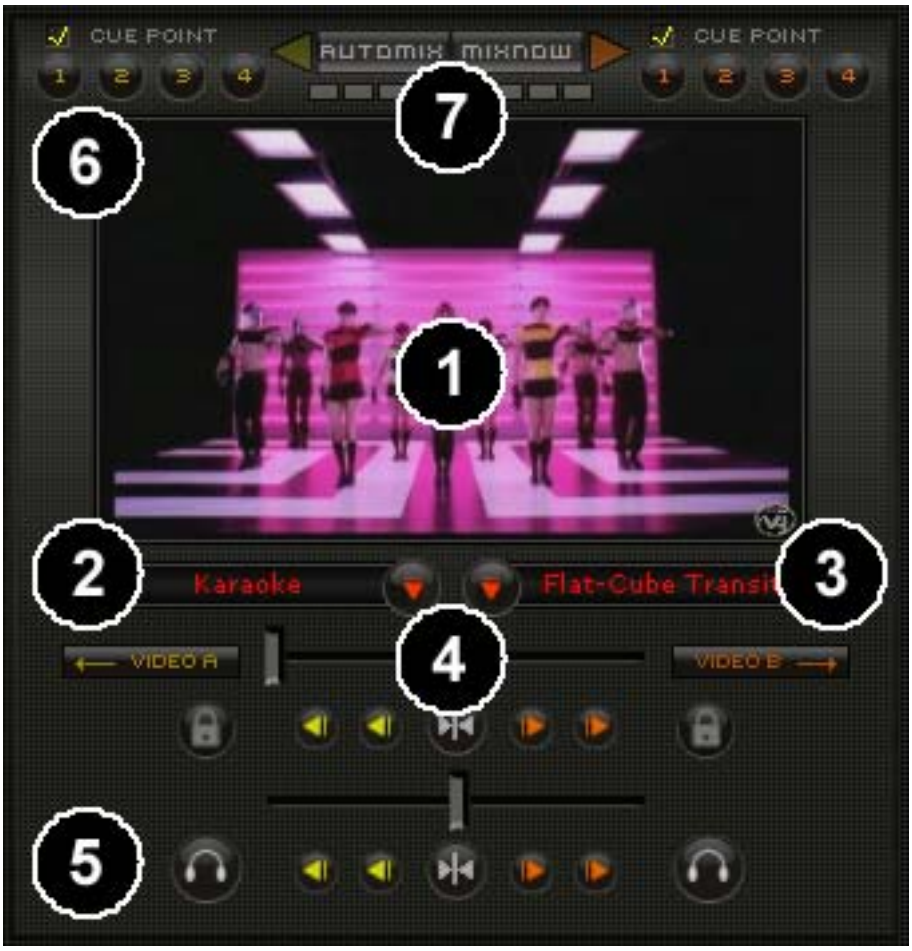
When activated the changing of the pitch (speed) of the song keeps the vocals of the track in key. Great for mixing between songs that otherwise would be too fast or slow to mix. Keylock can be enabled at any point along the pitch range to maintain the desired key at that pitch, while still being able to further adjust the pitch of the song. When disabled, the key of the vocals will change based on the pitch used – slower pitch = slower deeper tone, faster pitch – faster higher (chipmunk) tone.

12. Pitch slider / Pitch buttons

Controls the speed/pitch of the music. By moving the slider downward the speed of the music speeds up. When moved upward the speed slows down. The “R” (Reset) 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 “-“.

PRODUCTION (MIXER) CONTROLS



Being first and foremost a Video DJ application, the center panel is the video production (mixer) area. Here you control fades, effects and other aspects of producing your video show.

1. Master Output Video – shows what is currently being sent to the Master Output of your system.

2. Video Effects – select the desired effect using the pull-down menu and then click on the box to activate it.

FX Parameter modifier – (found next to the preview windows in the deck controls) – used to modify the primary parameter of the effect for creating more dynamic and beat responsive effects.

3. Transition Effects – select the desired transition for the video crossfader by using the pull-down menu and then click on the box to activate it.

4. Video Crossfader

Crossfader – slide the fader left or right to crossfade between the two decks' video output

Smooth Fade buttons – left click on the buttons to begin an automatic smooth crossfade of the video output. Right click on the buttons to activate a momentary cut effect, when released the fader goes back to it's last position

Cut, Step and Center buttons – use the Cut (outer set) to perform a Full Cut transition. Using the Step buttons (either side of center button) to perform a stepped transition. There are 5 step positions Full Left, 1/2 left, Center, 1/2 Right, and Full Right. Use the Center button to position the fader in the center position.

Link Fader Lock – use to lock the video fader with the audio fader. Using any of the video crossfader options will not affect the video fader, but ALL audio fader options will force the video fader to perform the same actions.

5. Audio Crossfader

Crossfader – slide the fader left or right to crossfade between the two decks' audio output

Cut, Step and Center buttons – use the Cut (outer set) to perform a Full Cut transition. Using the Step buttons (either side of center button) to perform a stepped transition. There are 5 step positions Full Left, 1/2 left, Center, 1/2 Right, and Full Right. Use the Center button to position the fader in the center position.

Headphone PFL – use to activate which deck is to be previewed via the headphones. ***NOTE*** *- this only works when using the sound configuration of Headphones. Any other configuration this option does not affect audio output.*

6. Hot CUE Points and Smart Cue

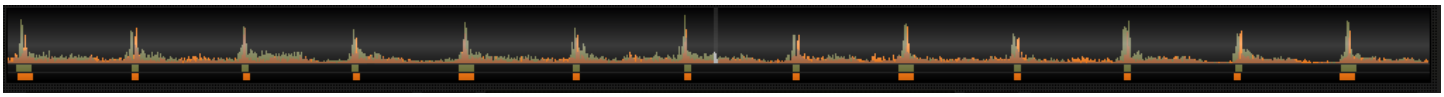
Use the four (4) buttons to set or start play from a cue point. The first time that a left-click on one of these buttons, a cue point will be set. After the cue point is set, at any time a left click is performed on the corresponding button; the track jumps back to the set cue point and starts playing the track. 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 position indicator in the waveform display, and select "delete".

With Smart Cue activated (checked) every play of a hot cue will snap the start on beat. Deactivated and the hot cue will start exactly at the location in the mix where played.

7. Automix / MixNow – use to activate / deactivate the Automix or MixNow features. See the Automix / MixNow section for more information about configuring and using these features.

RHYTHM WINDOW

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

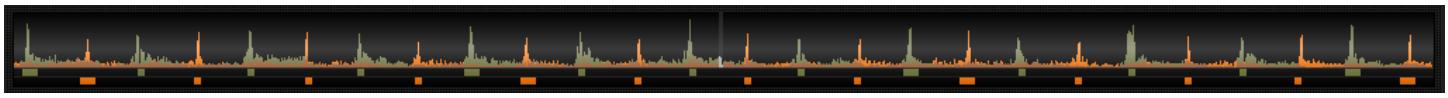


You can zoom in or zoom out the display using the slider on the left, or the three preset buttons (1, 2, 3) found on the top toolbar.

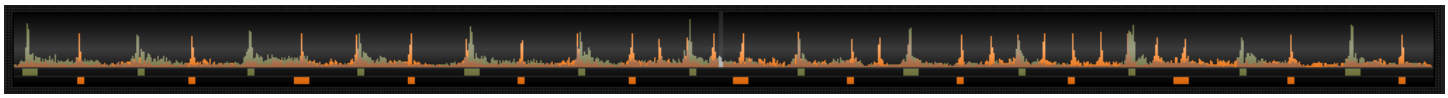
Below the curves there are small squares, named CBG (Computed Beat Grid), which represent the position of measures. The large squares represent the beginning of a measure 4:4 time. The CBG is particularly useful, for example, when mixing a track at the time of an intro where the beat is not yet present.

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.

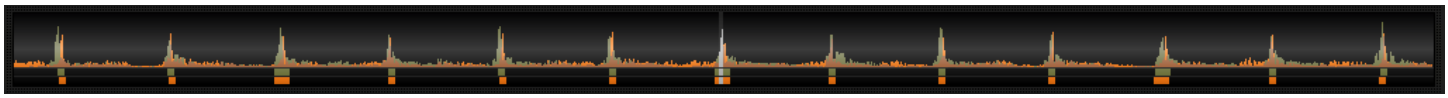
However, with the help of the CBG, it becomes much easier to synchronize the two tracks:



NOT BEAT MATCHED – CBG NOT ALIGNED



BEAT MATCHED – CBG NOT ALIGNED



BEAT MATCHED – CBG ALIGNED

TOP TOOLBAR CONTROLS

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. Master Volume
Controls main output of program

4. Rhythm panel modifiers

5. CPU Meter

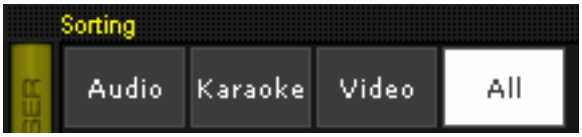
6. Clock
Displays time, and when clicked with mouse can act as a counter.

7. SETUP and Window controls
Provide access to the Setup dialog. See “Setup Settings” section of this manual for more information. Windows controls provide the Minimize, Maximize, and Close application options.

STATUS MESAGES

VJ can now inform you of what might be happening in the background when you see those high CPU levels, see the Hard Drive being accessed, or in the unfortunate event that something fails to function correctly.

The location of the status message is just above the Audio, Karaoke, and Video buttons of the left navigation panel. Here are a couple of status messages you may see.



Sorting a large list of tracks.

After performing a Recurse on a structure where new files are found, you would see a countdown of the number of ID3 tags being read for adding the information to VJ’s database.

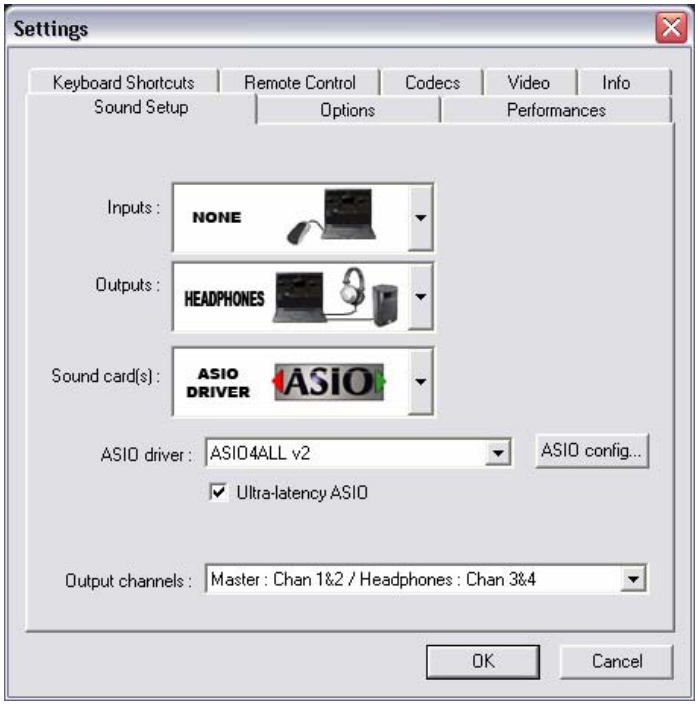
CONFIGURATION SETTINGS

VJ is designed to be very simple and easy to use but it is adaptable to match your preferred system performance.

To make changes to VJ's configuration, click on the SETUP button in from the top bar. 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.

SOUND SETUP

The "Sound Setup" tab is where the sound card (or device) configuration is set for functioning with VJ.



Inputs – If using timecoded vinyl or CDs to control VJ, 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 VJ 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 VJ software.

Sound card (not shown)– Select the sound card in this pulldown list.

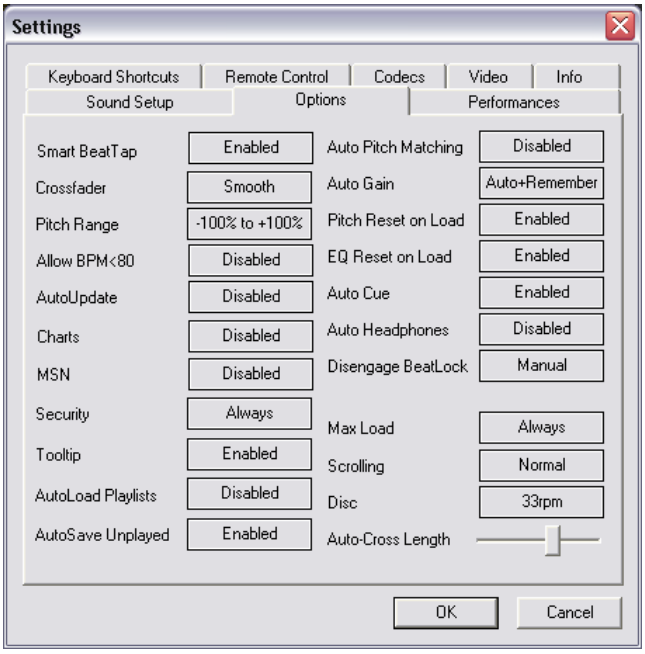
ASIO Driver – Select the ASIO driver to use.

Ultra-latency ASIO – There are two ASIO engines available for VJ 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).

OPTIONS

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

Crossfader – 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, 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 VJ (internet connection required).

Charts **–** *Not Currently implemented in PCDJ VJ.*

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", VJ will prompt you to verify that you, indeed, want to load a track while the deck is playing. If you select "Always", VJ 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 – *Not currently implemented in PCDJ VJ.*

OPTIONS

AutoSave Unplayed – See page 9 – "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 VJ. 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.

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 VJ 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).

Auto-Cross Length – Use this slider to specify the duration of the fade transition time used during automatic mixing.

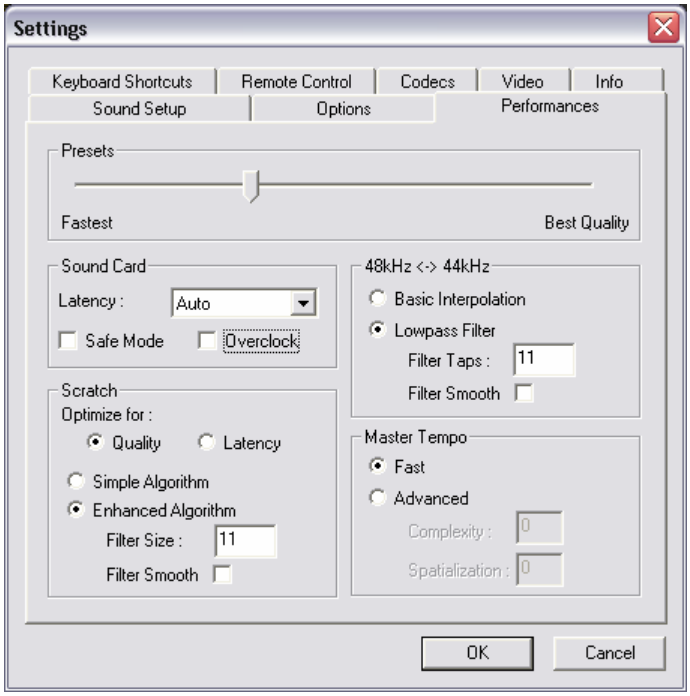
PERFORMANCE SETTINGS

VJ 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 VJ 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 timecode 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), VJ 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 VJ reacts to scratch motions

Optimize for:

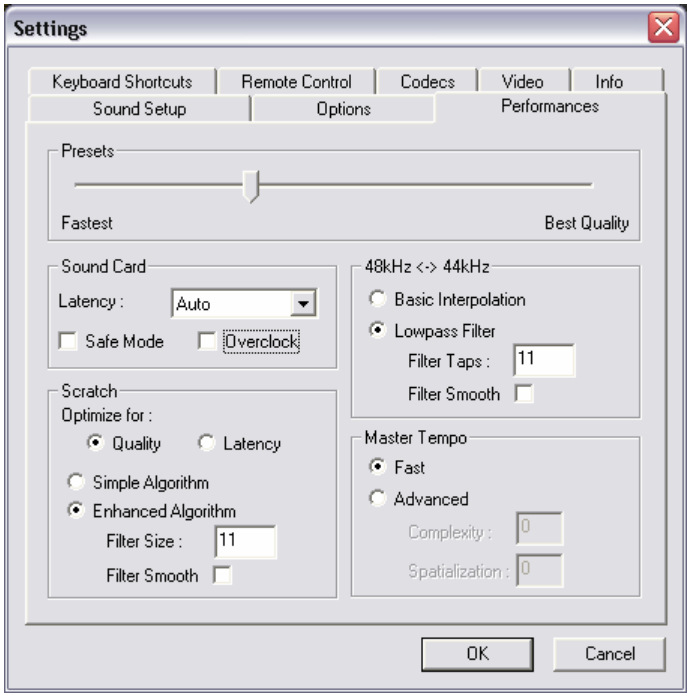
Quality – VJ will more accurately represent how a scratch sounds when moving the virtual record back and forth

Latency – VJ 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.



48 kHz <-> 44 kHz

Describes how VJ will interpolate between the 48 kHz and 44.1 kHz 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 44.1 kHz (including MP3s) so it is a good idea to set your soundcard’s output to 44.1 kHz. 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 44.1 kHz setting should be default for your soundcard)

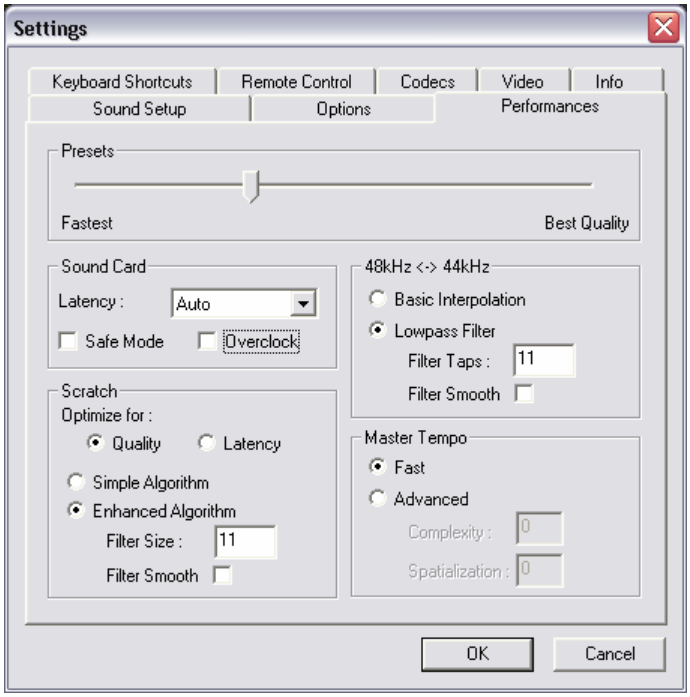
PERFORMANCE SETTINGS

Master Tempo

The master tempo algorithm controls how VJ changes the pitch of the song without changing its tone ("Key Lock 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



KEYBOARD SHORTCUTS

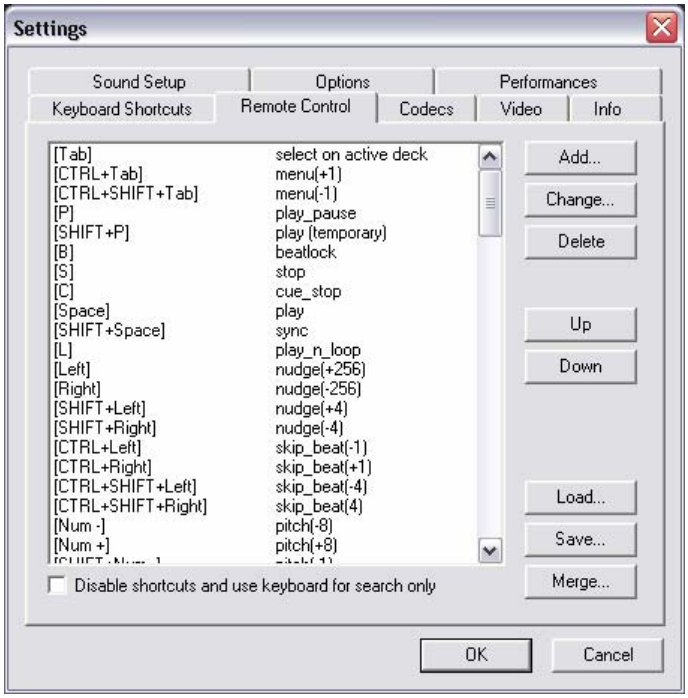
VJ provides a quick access capability to all of its parameters through assigning keyboard shortcuts to a wide assortment of the VJ actions.

From the “Keyboard Shortcuts” tab, VJ 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.



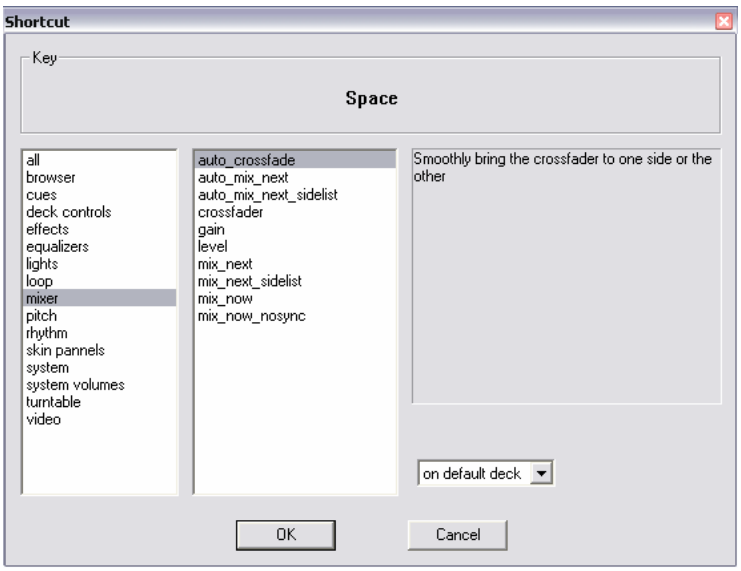
Shortcut Macros

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 SETUP dialog and select the Keyboard Shortcuts tab.

Here is an example of how you can recreate the ‘Mix Now’ capability using a multi-action macro.

The actions to be used are auto_crossfade, play, and select and they are 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

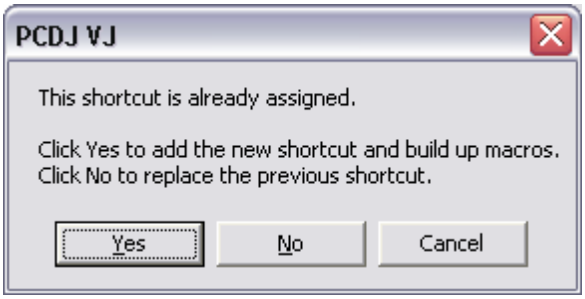


KEYBOARD SHORTCUTS

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, VJ 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 SETUP 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.

REMOTE CONTROL

VJ can be controlled using a wide array of external controllers. The "Remote Control" section of the Settings menu provides the setup to 'enable' VJ to work with the external controller. Once the controller is connected, start VJ, select the "Setup" and select the "Remote Control" tab and enable the controller by clicking on the corresponding graphic for the controller. Then select 'Activate' from the pop-up menu. If the controller is properly set up and connected the graphic is highlighted green. If the controller is improperly connected or disconnected and selected to be 'Activated', the graphic will appear with a red highlight around it. If the controller does not seem to function correctly try deactivating and activating the controller again to reset the connection.

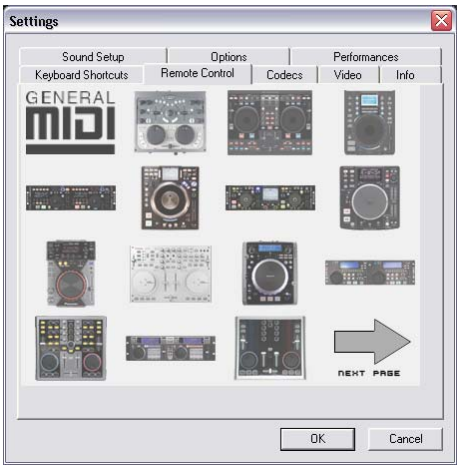
Most controllers are supported via 2 methods – Native support or MIDI support.

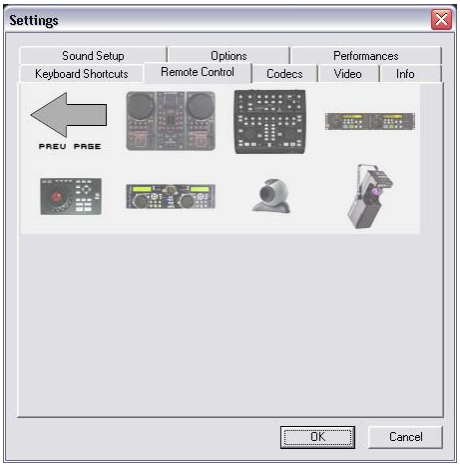
Native Support – a native supported controller can be connected to the computer and then by selecting the appropriate controller option in the Remote Control tab begin to function without any additional configuration being set. Native support of a controller ***does not*** imply that all of the controller's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

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

Native Supported Controllers –

PCDJ DAC-2, DAC-3
Denon HC4500, HS5500, HD2500, S1200
Pioneer CDJ-400 CD/MIDI Controller
Vestax VCI-100
Numark iCDX, DMC2, DMC1 (v2), Total Control
Hercules DJ Consoles (DJC MK1,MK2, Rmx, mobile)
Audiophony Virtuality Mix and Virtuality Play
M-Audio Xponent
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 VJ. 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. VJ will automatically detect the controller number and map it to the parameter.

CODECS

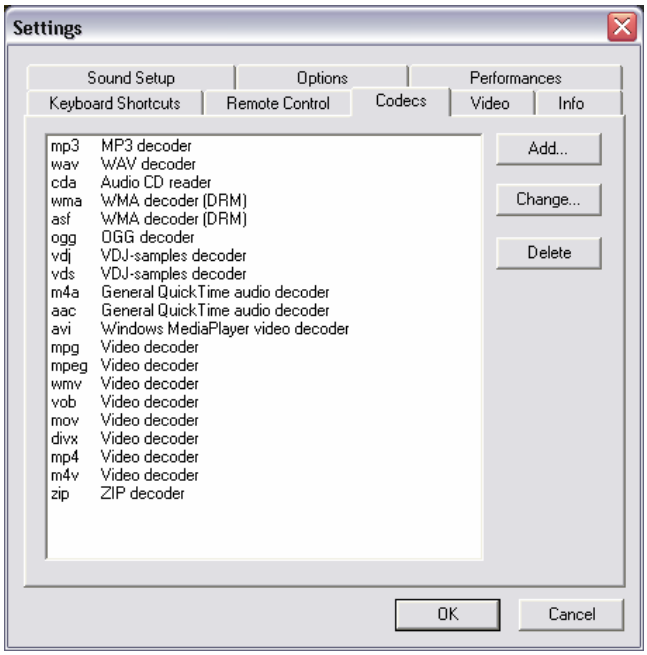
VJ is able to decode several formats natively with its audio and video decoders. The Codec tab identifies what file types (by extension) use what specific decoder for play in VJ.

At install, VJ includes the some of the common sound and video file extensions. If, VJ 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 VJ is able to use as a decoding engine.

Determining Appropriate Selection for a Unique codec

If VJ's MP3 or Video decoder is unable to 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 VJ Decoder drop-down. Then assigned that file extension type to that decoder.



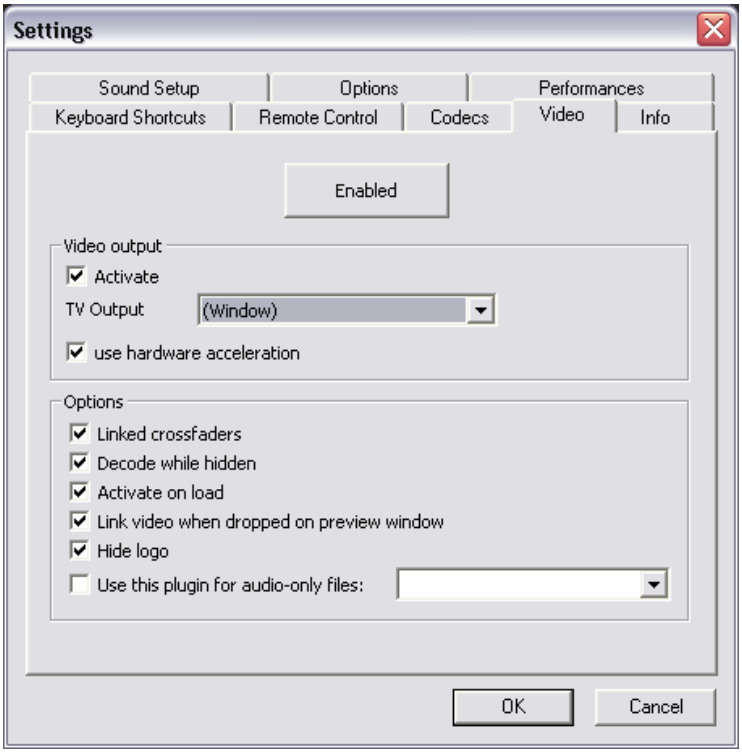
VIDEO

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.

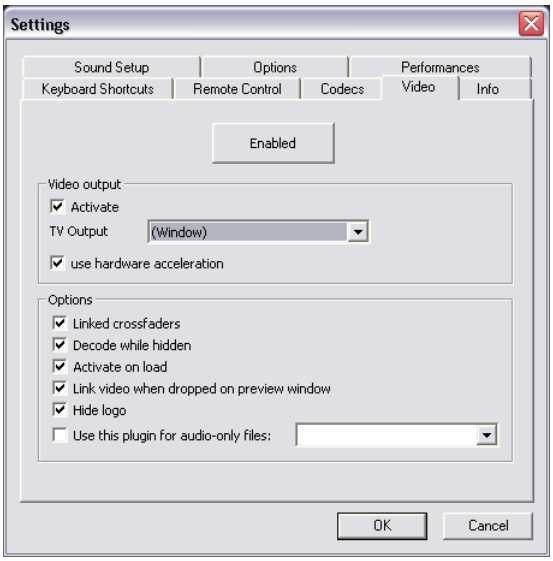
> NOTE: Only Monitors which are part of the windows desktop can be selected. If the monitor is not in the list, Open Windows' display settings and activate the 'Extend desktop on this monitor' for the desired monitor.



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 VJ 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, VJ 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 –
Activates the video engine automatically if a video file is loaded on either deck. 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.

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

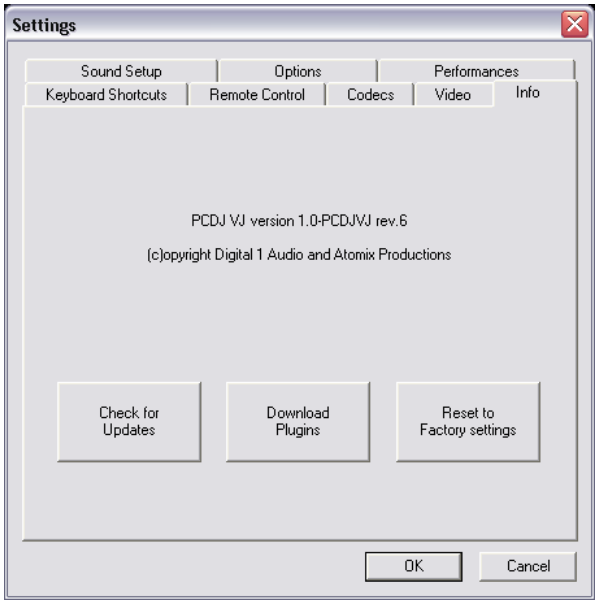
INFO

The VJ 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 VJ Download Center and checks to see if any updates are available. [Internet Connection required]

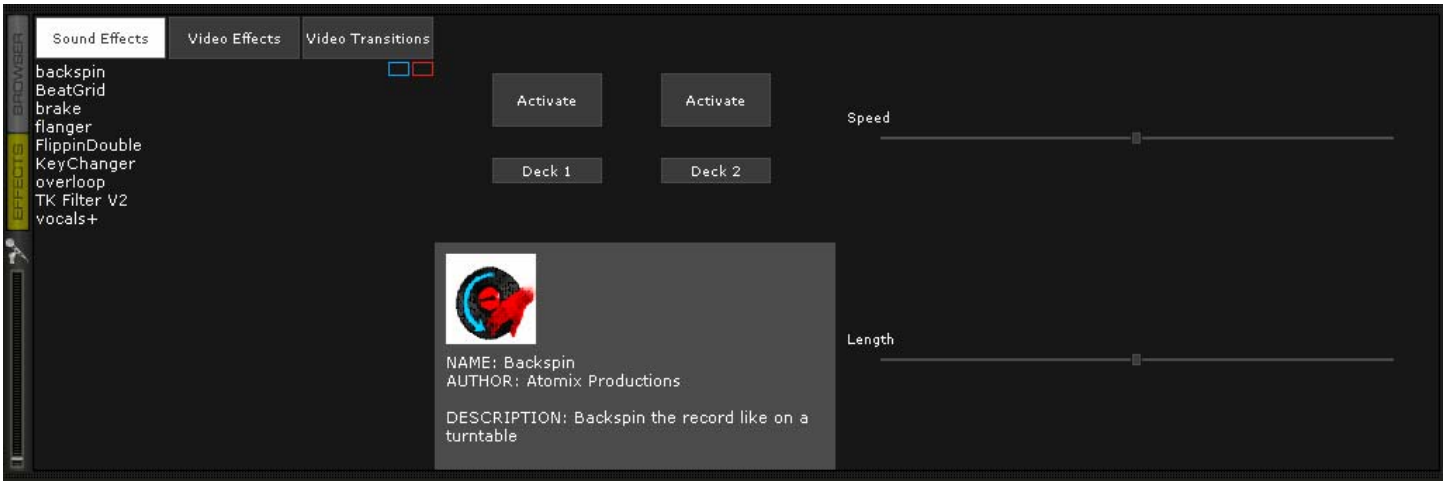
Download Plug-ins: Launches the browser associated with http request an directs the browser to the ‘Add-ons’ section of the website.

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



EFFECTS

VJ features a comprehensive set of audio effects, video effects, and transitions which can be accessed by clicking the “Effects” tab. 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 simultaneously.



To use an effect, select the effect in the left panel and activate it for the appropriate deck in the center panel. This is done by clicking on one of the two “Activate” buttons. 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 section for 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

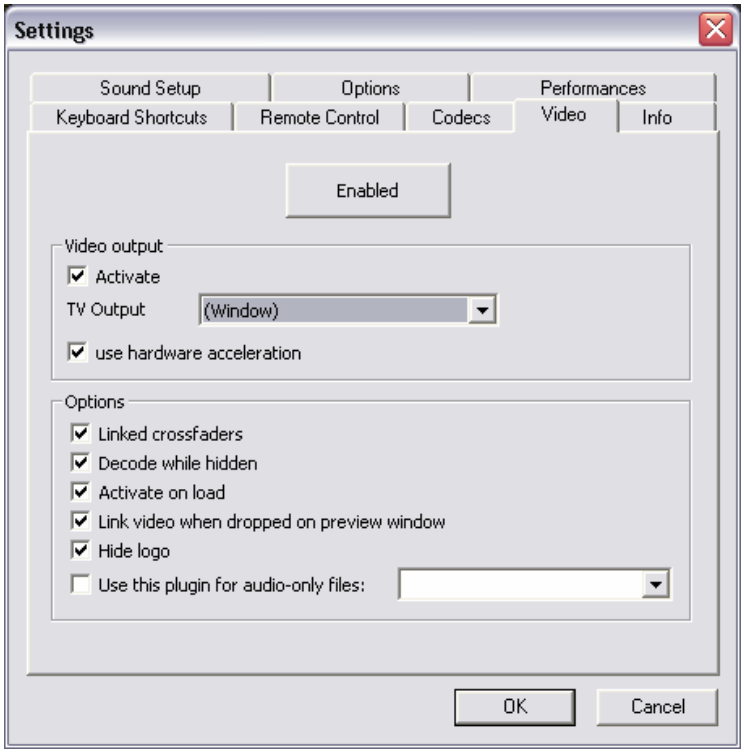
In addition to mixing traditional audio, VJ makes it possible to mix video content with the ease and familiarity of a DJ interface. VJ's interface provides all the same features to mix, scratch, effect, and transition video content, just as with audio content. Video files are distinguished in the Browser with a small movie film graphic icon .

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.

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 Settings 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.

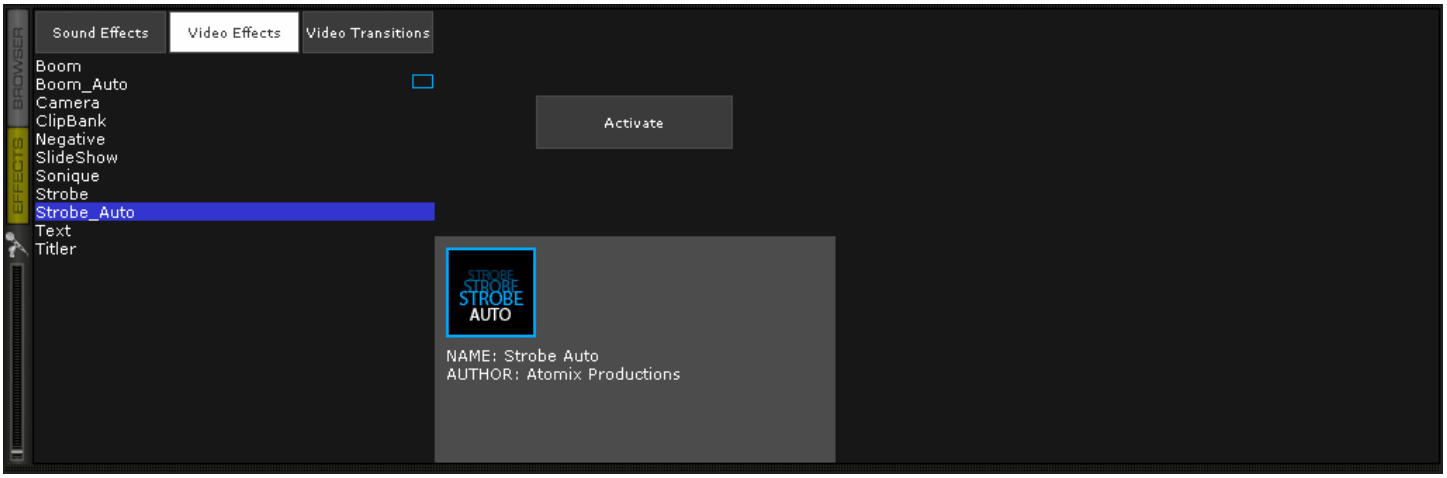
***NOTE* -** When using an 2nd video output, ensure that the device is connected and powered on, before starting the computer and PCDJ VJ.



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.



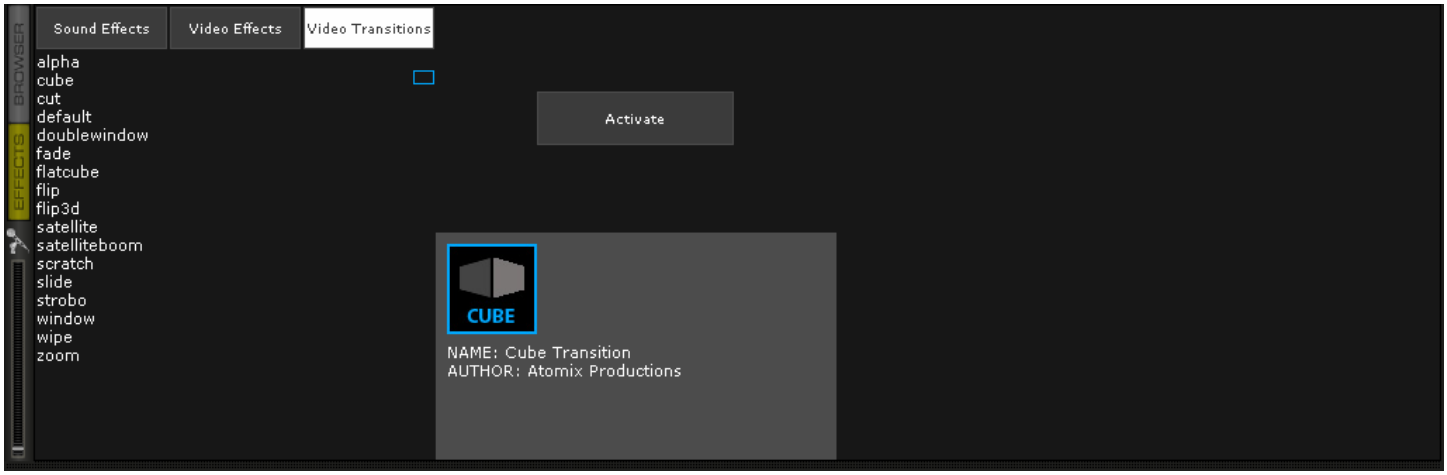
Or, select and activate the video effect from the Production Controls underneath the Master Out video window in the skin.

Select the desired effect using the pull-down menu and then click on the box to activate it. Also, like the audio effects, only one (1) effect can be activated at a time from this control. For multiple effects to be activated simultaneously, use the ‘Effects’ panel area.

Transition Effects

VJ features many different transitions effects for enhancing the mix from one video clip to another.

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



From the VJ User Interface, the transition can be selected and activated from the ‘Transition’ button found just below the Master Output video window.

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 buttons on either side of the crossfader for a smooth transition to that deck. And, if the “Link the Video crossfader” is checked in the Video configuration tab, the skin’s audio crossfader will crossfader the video when it is move from one deck to the other.

Alternatively, VJ 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 by clicking on "Activate" in the "Effects" page, or by clicking on the transition title on the user interface.

KARAOKE

In addition to being able to play music and other video content, VJ provides support for playing and mixing karaoke files. VJ is compatible with MP3+G, WAV+G, WMA+G, OGG+G, and supports the binding of the CDG files with its MP3 counter parts as one single .ZIP file.

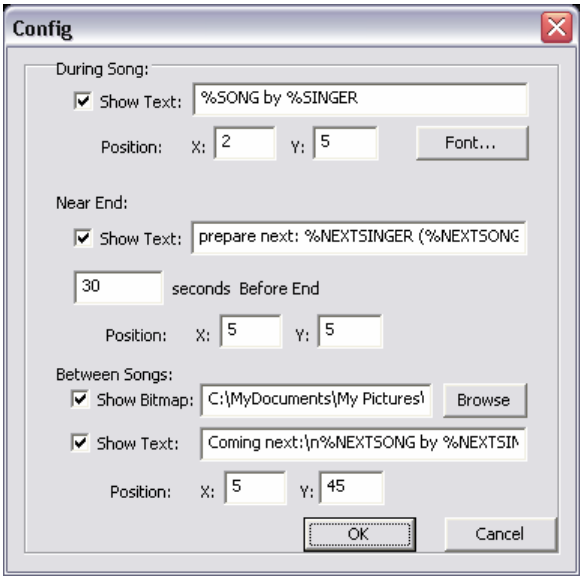
When loaded on the deck, VJ will load the audio track on the deck and display the CDG file in the video windows. Video effects and transitions can be used with the karaoke tracks as well.

Karaoke Rotation Plug-in

VJ 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 the plug-in and then 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



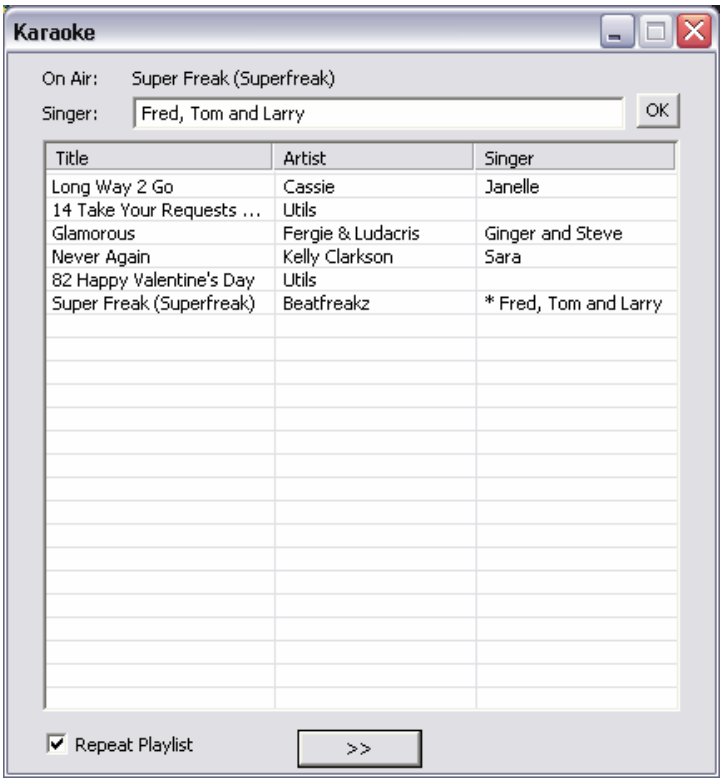
- During Song: Show Text – designate the text to be displayed during the song by placing a check in the box and desired text in the text box. Set the screen positioning of the text by supplying an X and Y coordinate. Set the font to use by selecting the Font button.

- Near End: Show Text – same as the During Song: Show Text. Set a timeframe that VJ 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.

- Between Songs
  - Show Bitmap – a Bitmap can be used to display a background in between each song played
  - Show Text – use to show information about specials or next song/singer between the songs. Use the X and Y coordinates for where to display the text.

The available variables to be used with the displayed text are %SONG, %SINGER, %NEXTSONG, and %NEXTSINGER.

Rotation List Manager



To use the rotation list manager, simply drag and drop the karaoke track from the VJ Browser onto the list. The plug-in will ask for a Singer's name each time a song is added to the list. If a singer's name needs to be changed or added, then update the Singer text box and pressing OK to update the Singer information on the video output.

The songs are displayed by Title, Artist, and Singer. You can change the order of the list at any time by drag-n-drop of the track to a new location in the list. Songs already sung by the singer are indicated with an asterisk (*) by their name. And an asterisk is added for each time that song has gone through the rotation.

At the bottom of the list is a check box for activating the Repeat Playlist option. This allows for the list manager to keep as a 'rotation' list or unchecked the list items will disappear once added to the deck. The [>>] button will send the selected (highlighted) track to the deck and immediately begin playing the track.

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 VJ 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, VJ 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, VJ will only decompress the video which is visible. If both video files are shown in the mix window, then VJ 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.

AUTOMIX / MIXNOW

Using the automix capabilities with VJ can be performed in 3 different scenarios and depending on the method various elements of the interface, setup settings, and system actions are used.

For all scenarios, we need to look at the amount of time VJ will use to make the transition during the mixing process. VJ uses a single global setting to control the amount of transition time and this can be set in the Setup -> Options tab using the Crossfader slider – see page 23. Acceptable values are 0.2 to 16 secs.

Scenario 1 – MIX NOW *Situation is Deck 1 is playing a track while Deck 2 sits in wait to be played.*

To have VJ mix the two songs at a specific moment, click on the MIXNOW button to activate the mix_now action. VJ will start Deck 2 and utilize the preset transition time (from the Setup -> Options tab) to perform the mix. Deck 1 will continue to play until it completes or is stopped by selecting the Pause/Stop button. The Mix Now action will attempt to use synchronize the mix on beat if both songs have enough identifiable beat within the prescribed transition time.

Scenario 2 – Mix Next from WaitList *Situation is Deck 1 is playing a track and VJ needs to load and play Deck 2 with the next track in the Wait List.*

Like the MIX NOW scenario, VJ will mix the two songs at a specific moment when the action is initiated and transition the mix for the predetermined crossfade time setting. This scenario requires a keyboard shortcut to be created for activating the mix_next_sidelist action – see page 28 for creating a keyboard shortcut. Use the assigned shortcut to activate the mix_next_sidelist action. If the opposite non-playing deck has a song loaded and it has not been played the action performed is similar to the mix_now action. If the opposite non-playing deck has a played song loaded, the VJ will load the next song in the Wait List and perform the mix in the predetermined crossfade time setting.

Scenario 3 – Auto Mix using tracks from the Wait List *Use the Wait List like a jukebox and automatically play the contents in the Wait List from top to bottom.*

Load the Wait List with a collection of tracks. And click on the AutoMix button from the VJ user interface – see page 19/20. VJ loads each deck with the first 2 track listed in the Wait List and begins playing Deck 1. Using the predetermined crossfade time, VJ will begin playing Deck 2 and transition the crossfader from Deck 1 to Deck 2 in the prescribed time. Then Deck 1 is loaded with the next track from the Wait List. This process continues from Deck to Deck until all the songs in the Wait List are played (empty list) or the AutoMix action is turned off by clicking on the interface button.

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In all of these scenarios, VJ simply transitions the crossfader in the pre-determined amount of time and does not syncronize the bpms of the tracks for a smooth ‘beat on beat’ mix. If this is the desired type of mix, then it must be performed manually.

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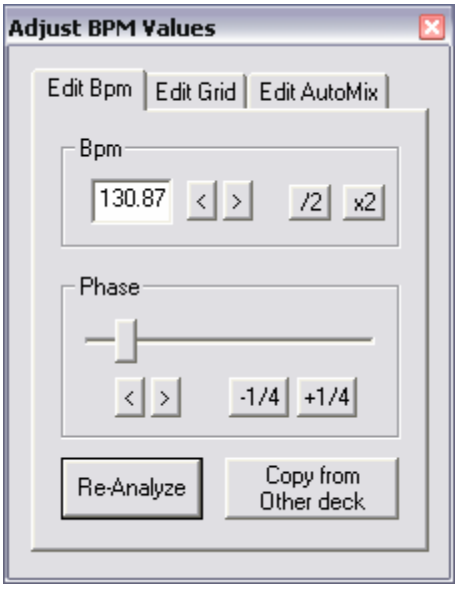
MANUAL BPM CORRECTION

The Computer Beat Grid (CBG) is calculated automatically when a track is loaded for the first time. VJ uses powerful algorithms to calculate the BPM and the CBG of music (1 of 2 algorithms can be chosen - a fast but effective algorithm which works well for techno and house, and a slower algorithm which is effective on any type of music).

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



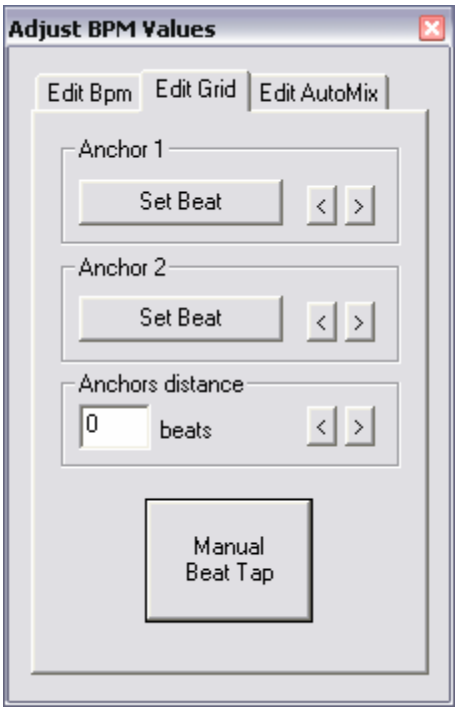
Click on the respective deck's BPM button – see page 15 [18].

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

The simplest method is to beat-match the track with unknown BPM with a track whose BPM is already known, select the Edit BPM tab, and then click on "copy from other deck". Alternatively, the BPM can be typed in the BPM field.

You can also force the re-analyzing of the track using VJ's BPM analyzer by clicking on the Re-Analyze button.

From the Edit Grid tab, the traditional method of manually counting out the beats is also provided using a Tap button. Click on "Manual Beat Tap" button while the track is playing, in order to approximate the BPM.



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

LEGAL INFORMATION

http://www.atomixproductions.com
http://www.PCDJ.com

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