

Welcome to Virtual DJ

Virtual DJ is the hottest MP3 mixing software, ideal for all DJs from beginners to international superstars.

- **Breakthrough BeatLock engine:** your tracks will always stay in time. Create great mixes faster than ever!
- **Automatic seamless loop:** perform astounding remixes live with no preparation at all!
- **Clear song structure visualization:** You will never be surprised by a break again!
- **Vinyl controls:** scratch like on a real turntable, except you'll always stay in time!
- Up to 9 **cue points** saved per song, lots of great **effects** which are beat aware, up to 12 **samples**, recording and broadcasting options, and much more...

Step into the future of DJing with Virtual DJ!



Quick start

Here are some simple steps to help you perform your first computer mix quickly:

First, load a song on the left desk.

To achieve that, click on the small CD shaped icon in front of one of the demo songs, and without releasing the mouse button, drag the CD onto the left desk.



Now, press the "Play" button.

The music will start.

Then, click on the second demo music, and drag it onto the right desk.





Click on the "BeatLock" button.

This will activate the BeatLock feature of VirtualDJ, which will make sure that the rhythms always stay together.

Then press the "Play" button on the right desk.

Both songs will play, and VirtualDJ will keep them synchronized.



Now, try to move the crossfader to the left or to the right.

Here you are, mixing like a professional DJ in no time.

You can now continue your exploration of the software, and use your own music files.

Just click on the Desktop button (📁), and browse your hard-drive to where your MP3 (or WAV, WMA or audio CD) files are.

The art of mixing

The work of a DJ consists of two things: On the one hand, he/she must select the songs that the audience wants to hear and at the moment they want to hear it. On the other hand, he/she must be able to go from one disc to another in such a way that the rhythm stays constant all the time, so that the dancers won't be disturbed in their dancing.

The first part is a matter of taste and judgement. It is what differentiates the good DJs from the bad. Practice and experience are your best assets.

However, as far as mixing is concerned, the recent technological breakthroughs embedded in VirtualDJ will really help you out.

Whether you need 10 seconds or 2 minutes to beatmix a song, this does not make you a better DJ. As long as the discs are effectively put in tempo before being played aloud, the audience won't notice any difference. It's thus not your ability to quickly put a disc in tempo that will make you a better DJ, but rather your choices of songs and when you mix them in.

That's why using a computer, which will help you beatmatch the songs at a speed never achieved before, will not spoil your talent, but on the contrary will let you focus on the aspects of the mix that really make the difference.

Let us see more in detail what a “tempo mix” is made of.

There are four steps:

- 1) Adjust the BPM of the tracks to make them the same (bpm-matching)
- 2) Phase the discs together (beat-matching)
- 3) Adjust the gains (level-matching)
- 4) And finally, switch the volume from one to the other (crossfading)

1) Adjust the BPM of two tracks to make them the same (bpm-matching)

The two music files must have their beats at the same speed (BPM=Beat Per Minute), in order to be put at the same pace.

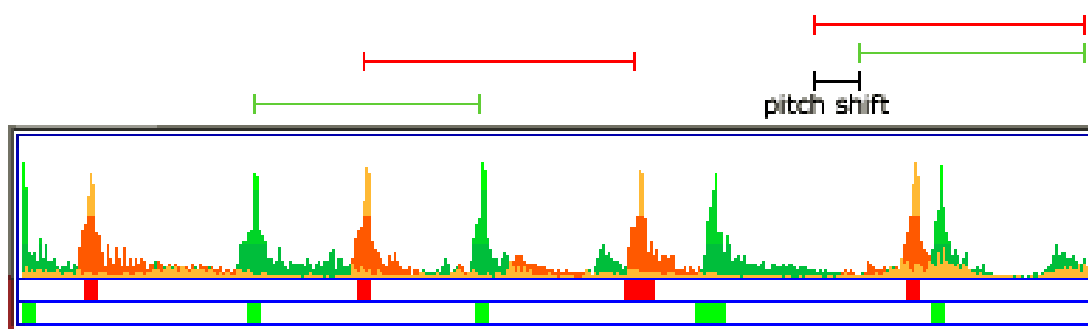
This is traditionally done by slowing down or speeding up the rotation speed of the disc.



In VirtualDJ, an algorithm called « Master Tempo » or « Time Stretch » allows the pace of the music to be changed, without altering the tone of the song.

In VirtualDJ, you can visualize this thanks to the « Active Waveform » window. The distance between two consecutive peaks (which indicate the beat) measures the pace of the beat.

When the distance between green peaks matches the distance between red peaks, your songs have the same BPM:

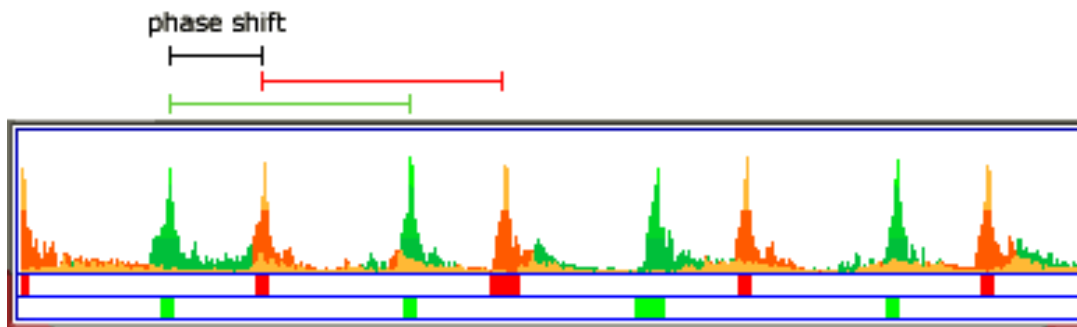


You can also use the automatic BPM display to get a numeric indication of the BPM.

2) Phase the discs together (beat-matching)

Once the discs have the same pace, they should be put in phase (which means that the rhythms should overlap).

Thanks to VirtualDJ, it becomes very easy: Just click on the Active Waveform window, and drag the mouse until the rhythms overlap.



Tip In order to create a perfect mix, you need to phase not only the beats, but also the measures. To achieve this, make sure that the larger squares in the CBG (Computed Beat Grid) are aligned. Indeed, these larger squares indicate the beginning of each measure.

3) Adjust the gains (level-matching)

You must then make sure that the two songs have been recorded at the same volume. If they have not, you will need to move the gain in order to adjust the volume of the music.

If the Automatic Gain option is activated, VirtualDJ will take care of it for you.

4) Switch the volume from one to the other (crossfading)

Lastly, you must switch the volume from one song to the other. You can use the main crossfader, or alternatively fine-tune your mix by using the three equalizer crossfaders that are provided.

User interface

The user interface of VirtualDJ has been designed to ally both power and easiness of use, while still being faithful to the visual environment DJs are used to.

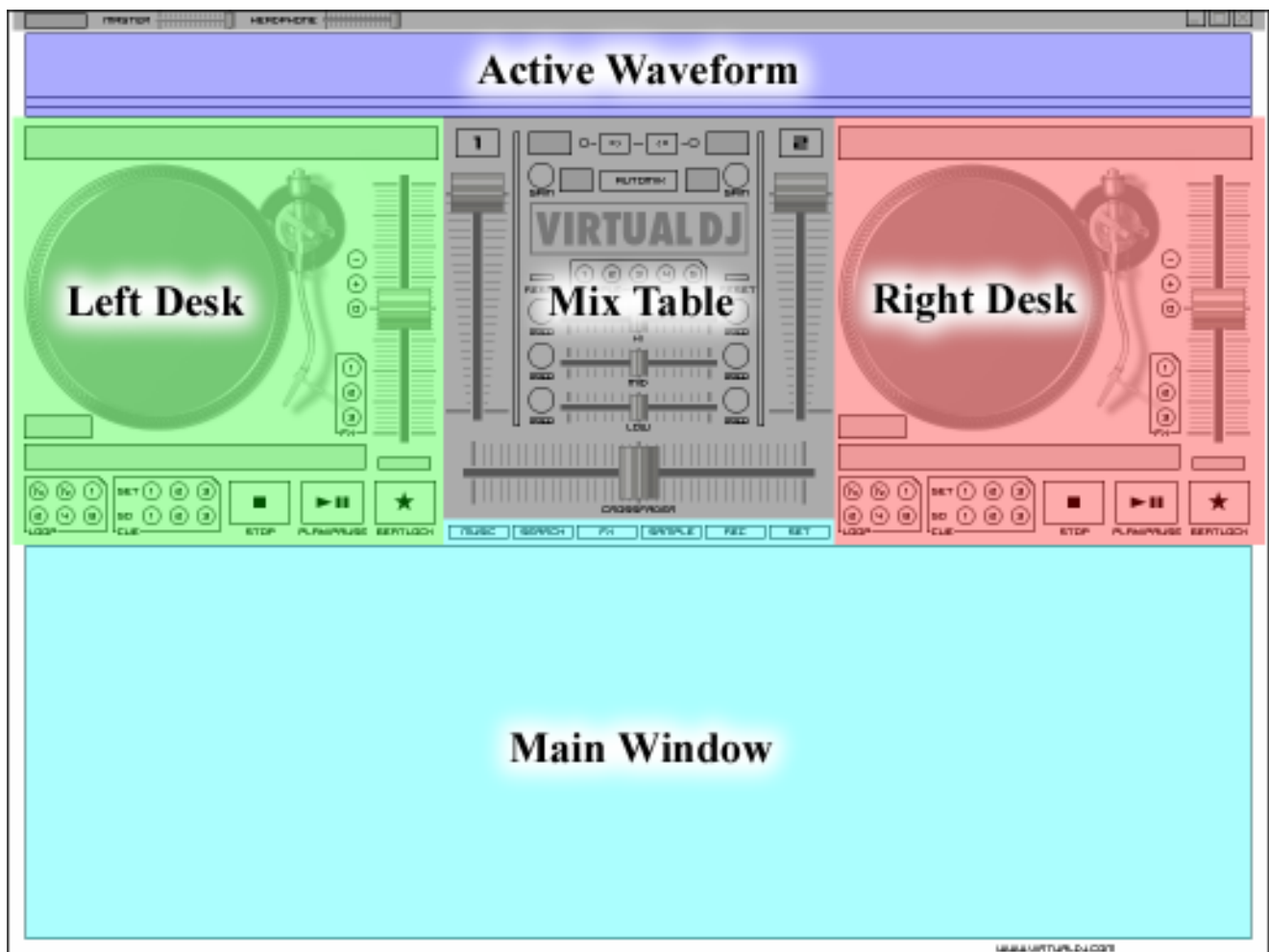
During the installation process, VirtualDJ proposes to choose between two interfaces: the simple interface, providing less features but easier to learn and use, and the advanced interface, providing more features, with a more professional look.

Still, you can design your own customized interface, or download from our website one of the many interfaces other users have created.

Check on <http://www.virtualdj.com/addons/skins.html> for more information.

From now on, we will assume that you are using the advanced default interface.

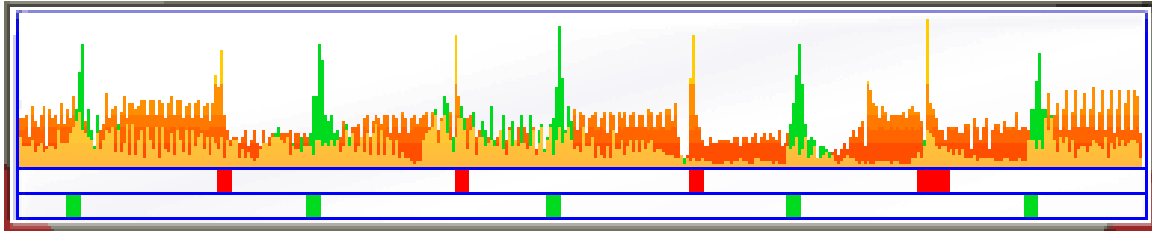
The interface is divided into four areas:



- **Active Waveform:** This window shows you the rhythm (beat) of the songs, and lets you do an easy "visual match"
- **Left Desk** and **Right Desk:** These two virtual desks let you interact with the songs.
- **Mix Table:** This virtual mix table lets you mix your music.
- **Main Window:** This window lists your MP3 files, and lets you use the advanced features.

The rhythm window

The rhythm window (Active Waveform) is the core of VirtualDJ. It displays the rhythm of both songs.



The songs are not mixed

This window is split in two parts:

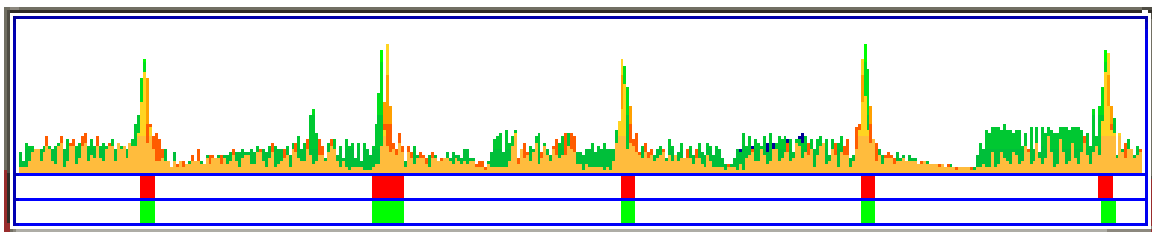
- The top part shows the dynamic of the music. Each peak of the curve represents a beat (like a drum hit).
- The bottom part is a grid computed by the computer showing the theoretical localization of the beats (CBG : Computed Beat Grid). The CBG is very useful in helping to synchronize a song while in a break or an intro, where there's no audible rhythm.

The curve displayed in green represents the desk we call the « active desk ». This is usually the desk where you have loaded the last song, and the song you want to play next.

The curve displayed in red represents the other desk, which is usually the one that the audience is already listening to.



The active desk is also the one you hear in the headphone if you have one plugged.



The songs are mixed

The green bar in the middle of the Active Waveform represents the present time. Everything located on the left has already been played, and everything located on the right has not been played yet.



You can change the scale of the Active Waveform by moving the mouse cursor over it and using the mouse wheel. You can thus have a very accurate view of the rhythm to place a cue point, or on the contrary have an overview of the whole song in order to detect the next break.

By clicking on the Active Waveform and moving the mouse, you can shift the track (of the active desk with a left click, or of the other desk with a right click).

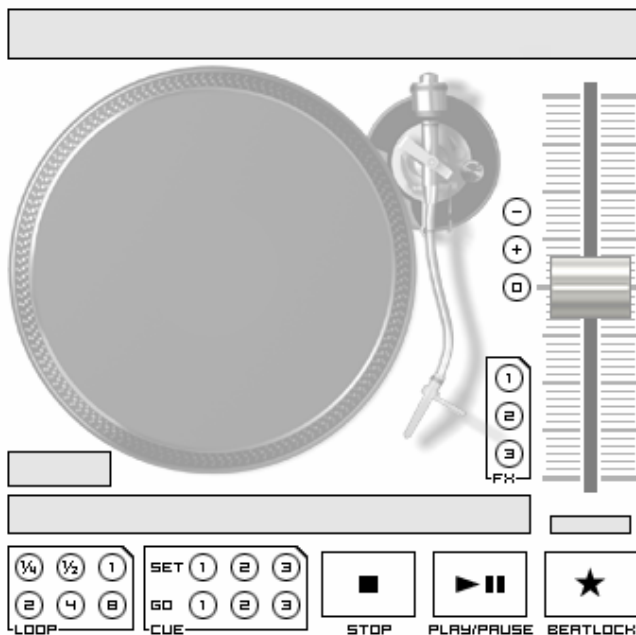
This can be used to start the music from a specific place, or to rephase the two tracks together while playing.



If the mouse cursor reaches an end of the window while moving, it will reappear on the other side. Thus, you can apply a continuous motion without worrying about the screen limits.

Controls buttons

VirtualDJ has the traditional controls of a CD player, plus a few functions specific to the software.



In order to load a song in one of the desks, drag it from the file window. After you have done so, here are the available functions:

Play/Pause/Stop:



: Play the song if it was stopped, or stop it if it was playing.



A click with the right mouse button performs an « insert ».



: Stop the playback, and rewind to the beginning of the song.



A second click brings you to the CUE 1 point if it has been set. A right click brings you to the first beat in the song.

BeatLock:



: The BeatLock feature is the heart of VirtualDJ. Indeed, once activated, VirtualDJ will perform on your behalf all the necessary actions and always keep the songs in tempo. It will automatically change the pitch to match the BPMs, and speed up or slow down the discs in order to catch the rhythm back and put both songs in phase. When you scratch on one of the vinyl desks, the BeatLock feature makes sure that the discs come back in tempo at the end of your scratch. Press the button again to deactivate the BeatLock.



The BeatLock uses the CBG to beatmatch the songs. If by any chance the CBG does not fit the song very well, the beatmatching will not be perfect. Use the “Edit BPM by hand” section to correct that.



If the BeatLock is not perfectly in phase, you can shift it by using the Active Waveform.

The BeatLock can work in *Rigid* mode (the default mode) or in *Elastic* mode. See « Advanced Configuration » section for more details.

Song position:



played

loaded

**not yet
loaded**

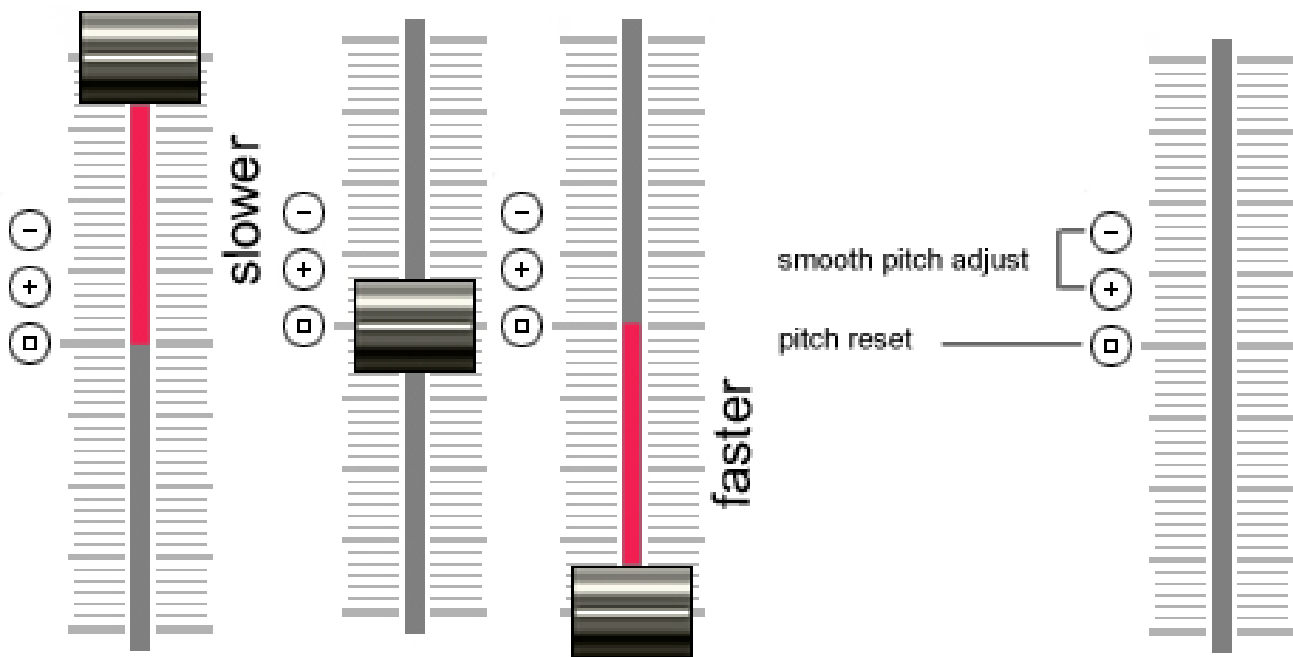
This window lets you control the position of the playback. By clicking on any place, you can quickly move inside the song.

This window also gives you an insight on the song's structure. As with vinyl disc's tracks, the song position window appears lighter where there is a higher volume, and darker where there is a lower volume (like in breaks, etc...).

This window also lets you manage and visualize the first 10 CUE points. If they are set, the CUE points appear as red marks. By clicking on it, you will bring the play at the precise position of the CUE.

If you click with the right mouse button on one of the marks, a context menu will let you choose between renaming the CUE point (the names are saved for each song), or deleting it.

Pitch:



The pitch control lets you modify the speed at which the song is played.

This allows you to modify its BPM (Beat Per Minutes), which is a necessary step if you intend to beat mix two songs together.

By moving the control toward the top, you slow the music down, and by moving it toward the bottom, you speed the song up.

For greater precision, you can also use the + and - buttons, and adjust the pitch by small increments.

A Reset button lets you bring the pitch back to its median value of 100% (normal playback speed). A first click on the button will smoothly bring the pitch back to 100%, slowly. A second click brings it back to 100% instantly.



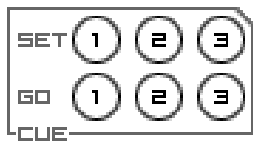
As for most of the controls in VirtualDJ, a right-click lets you go back to the original position when the control is released.

By default, the pitch range from -33% to +33%, which is enough to mix any two different BPM'S together (a song with its pitch at +33% has exactly twice the BPM as the same song with its pitch at -33%).

Still, the advanced options let you reduce the range of the pitch to +/- 12 % or +/- 8%.

Finally, by default VirtualDJ uses an algorithm called « Time Stretch » in order to change the BPM of the music without changing its tone. You can deactivate this algorithm in the advanced options, and get the same sound as with a real vinyl turntable.

Cues:



The CUE points are exact instants in the song that you want to memorize.

You can thus mark the start of the vocals in a song, a place where you like to do an insert, the beginning of a break, and so on...

By clicking on the *SET* button, you save the actual reading position in the CUE point.

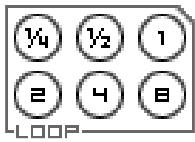
By clicking on the *GO* button, you take the playback back to the saved CUE point.

You can erase or rename CUE points in the *Song Position* window.



You can associate as many CUE points as you want for each title. Still, only 3 will be accessible from the default interface, and only 10 will be visible on the *Song Position* window. You can manage the other CUE points through the keyboard shortcuts.

Loops:



Loops allow you to perform remixes live.

The idea of a loop is to take a portion of the music and have it loop over itself, in such a way that the transition between the beginning and the end of the loop is not noticeable.

VirtualDJ lets you perform these loops in a much easier way than with traditional DJ equipment. Instead of trying to set the ideal exit point that will perfectly match the entry point of the loop, you just need to define the loop length, given as a number of beat, and VirtualDJ will compute the right exit point for you.

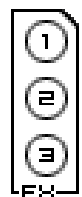
You can even change the loop length while the loop is active, without loosing the synchronisation, and thus perform astounding remix effects.

Click again on the active loop button to deactivate a loop



The default interface only proposes a few loop lengths, and does not let you shift the entry point or set a manual loop. If you want to use all the power of the loop engine, create new keyboard shortcuts, or use a more complex skin.

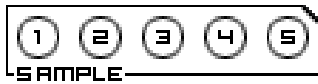
Effects:



The effect buttons let you activate and deactivate the effects from the main screen.

For more information about the effects, read the "Effects Window" section.

Samples:



The sample buttons let you play small samples or jingles.

Only 5 samples are accessible from the main screen.

If you want to use the 12 available sample slots, or load a new sample from an audio file, use the "Samples Window".

Info windows:

The upper window displays the title and the author of the loaded song.

The window located left above the Song Position window displays information about the time remaining before the end of the song and the time spent from the start.



If you click on this window, you can switch to a display showing the time remaining before the last beat in the song, and the time spent from the first beat.

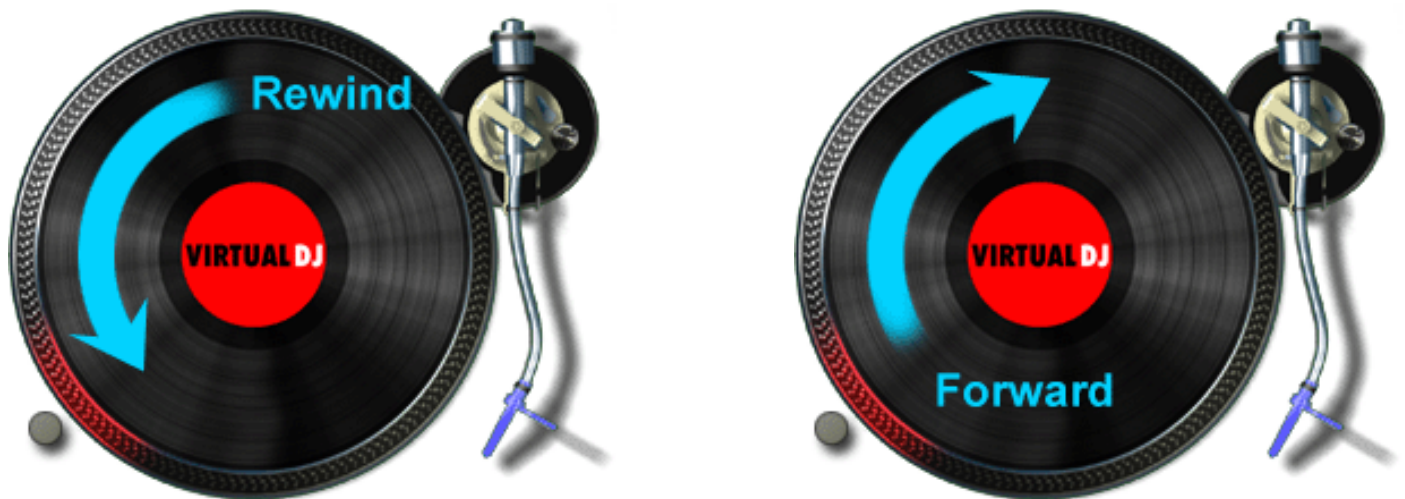


The times are real times, taking the speed changes due to the pitch in count.

Virtual desk

On both VirtualDJ's desk, you can find a virtual plate that will let you perform all the action you can usually do with a real vinyl disc.

You can use this virtual disc to scratch, catch back and resync the beat, move into the song, and so on...



Scratch:

If you click with the left mouse button on the virtual disc, you can stop the disc as if you had put your hand on a real vinyl disc. By moving your mouse, you will have the same sound as if you were "scratching" on the vinyl, and when you release the mouse button, the disc will start back as if you had released the vinyl.



If the BeatLock is active, the disc will resync itself automatically on the beat after a scratch.



You can also use the mouse's scrolling wheel to perform a scratch.



If you own a webcam, you can also use it to scratch, which is more convenient than using a mouse. See "Virtual Scratch" and "Vinyl Control" sections for more information.

Pitch-Bend:

If you click with the right mouse button instead of with the left button, you can also use the virtual disc to catch back and resync the beat of both songs.

In the same way that a DJ would slow down or speed up a disc by touching the disc's side with his finger, moving the mouse with the right button down will give impulses to the disc, without "holding" it.



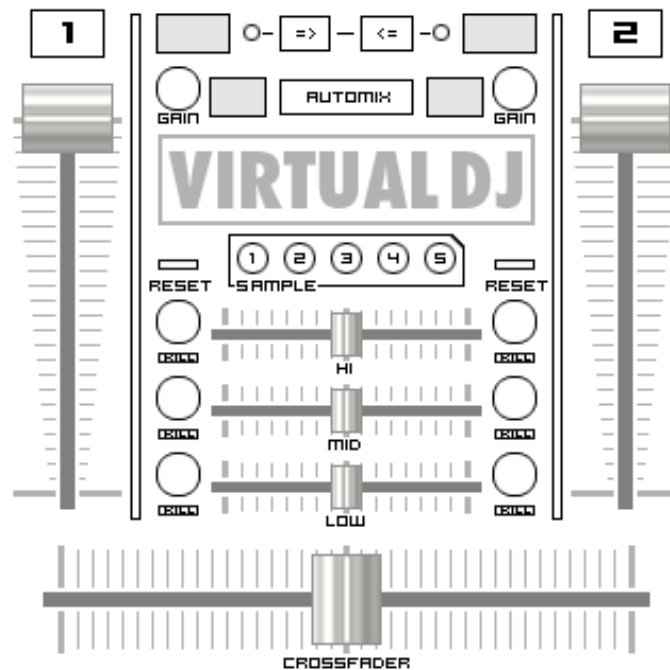
It's in fact the same action as when you move the curve of the Active Waveform.

Seek:

Lastly, you can just use the virtual disc to move into the song, and position yourself at an exact point (in order to save a CUE point for example).

Mix table

The central part of VirtualDJ performs the functions of a mix table.



Crossfader:

The crossfader lets you change the volume of both desks at once in a single action. By moving the crossfader from left to right, you will smoothly lower the volume of desk 1, and raise the volume of desk 2.



The behaviour of the crossfader can be changed in the advanced options.

Volumes:

The volume sliders can, along with the crossfader, bring a song in or out from the mix.

Gains:

The gain control can adjust the decibel level of a song. Thus, if a title has been recorded too loud or too low, the gain can correct the output level so as not to saturate the soundcard, and maintain the transition between both desks without the sound level changing.

If the "Automatic Gain" option is active, the gain will automatically adjust itself to match the output level of the other desk.



If it is the first time VirtualDJ loads this title ever, the adjustment will be performed as soon as the song is fully loaded in memory. Otherwise, it will be done as soon as the song is dropped on the desk.

For easiness of use, the global level of the song is displayed in the small window beside the gain button.



The 0dB displayed means 0dB in the soundcard. If you go above 0dB and if the automatic limiter deactivated, the sound will be saturated.



If you click on the gain control with the right mouse button, the gain will take the right value that will match the output levels of both desks. Also, as with most controls in VirtualDJ, a double click will bring it back to its default value.

Equalizers:

The three equalizers let you raise or lower the treble, medium or bass of the music.

The treble controls the volume of high hat and other high drums.

The medium controls the volume of voices and melody.

The bass controls the volume of the rhythm.

Below each equalizer control there is a KILL button that lets you remove that frequency band. Click on the KILL button again to hear it back.

Eq-faders:

The Eq-faders are to the equalizers what the crossfader is to the volume sliders: they let you change the equalizers of both desks at once, by lowering one while raising the other.

Bpm:

Above the gain controls, you can find two windows displaying the BPM (Beat Per Minute) of each song.

Beside, two LEDs blink in rhythm with the music, and let you check that both songs are in phase.

Lastly, the  and  buttons let you rephrase the songs together in just one click.



Unlike the BeatLock, which uses data from the CBG, the synchronisation buttons use the actual beat of the Active Waveform to perform the beat matching.

AutoMix:

Between both level windows, the AutoMix button lets you perform a completely automatic mix in just one click.

Depending on the music type, VirtualDJ will decide if it must mix the titles in tempo or by doing a quick fading.

It will also decide on its own where to start the new song from.

During the actual mix, VirtualDJ will move the pitches, the Active Waveform and the crossfader, in order to perform a perfect mix.



In automatic playlist mode, the AutoMix button is half lit. This means that it's ready to mix the next song automatically when the current song will reach its end.

Pre listen:

If you have configured your sound card for that, you can use a headphone to pre listen one of the desk.

Click on  or  to select which desk you want to listen to.

The desk selected in green is the active desk.

You can also adjust the volume of the headphone with the headphone volume slider located at the top of the screen.



On some skins, or by using keyboard shortcuts, you can also choose which amount of the other desk you want to hear in the headphone.

Time:

At the top left part of the screen, a window display the actual time.

By clicking on it, you can start a chronometer.