

# Beatnik User Guide

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Beatnik is a combination beat/peak detector and time remapping tool that generates and synchronizes markers from one layer (the Master Layer) to markers from a second layer (the Reference Layer). The process can be done in the one-click automatic mode, or the more versatile manual mode.

## NOTE ABOUT THE TRIAL VERSION:

This User Guide describes the features of the full version of Beatnik. The trial version only has access to a limited subset of features. Specifically, the TOOLBOX, the Markers Only and Sync Only functionality, the Audio Keyframes and BPM modes, and most of the Ease modes are not available in the trial version.

## PROCESS OVERVIEW

Using the default automatic mode doesn't require you to do much other than set the Beatnik UI, select 1 audio and 1 video layer and click DO IT. But understanding the steps of the process might be helpful for when manual builds are required.

You can use any kind of audio layer as long as it has its video switch turned off. That's how *Beatnik* knows to use this as the Reference Layer in automatic mode.

The video layer can have its audio switch on or off. It will be ignored and deactivated anyway. This will become the *Master Layer*, or the layer you want to retime.

- 1) Set your work area to the end of the audio layer and Click DO IT.
- 2) Beatnik will first pre-comp the Master Video Layer, place the pre-comp into a folder in the project window, and set the label of the pre-comp layer within your comp to orange.
- 3) If Beatnik's Mode is set to *Beat Detect*, it will convert the audio on the Reference layer to *Keyframes*, analyze it using the selected beat detection algorithm (Waveform in the UI), apply markers to the original audio layer within the work area, then change its label color to yellow (this becomes the *Reference Layer*). It will then go back and delete the audio keyframes layer. Note that technically, Beatnik's algorithms are peak detectors, but if your audio has a strong beat, Beatnik can generally zero in on it.

- 4) Beatnik then counts the markers on the Reference Layer and creates the same number of evenly-spaced markers on the Master Layer within the work area.
- 5) Finally, Beatnik syncs the Master and Reference together, creating a Time Remap expression that links each Master marker to its corresponding Reference marker. The Master's markers don't physically move, but the Time Remap expression makes them virtually line up with the References markers. This retimes the Master. You can adjust the timing by adding, deleting or moving the markers.

## **THE MAIN UI**

### **MARKERS**

In Auto mode, markers can be created using the built-in Beat Detector, Audio Keyframe (for use with Trapcode Soundkeys) or BPM Modes.

***Beat Detector*** and ***Audio Keyframes*** both work the same way. They each rely on the choice between two audio analysis algorithms, represented by waveform icons that match the type of track that they're best suited for.

The default algorithm works best with audio tracks where the audio has a dynamic average amplitude with the beats occurring as transients above the average. You would typically see this on tracks that employ a lot of compression. The other algorithm is for tracks with a relatively static average level (generally close to zero) and strongly defined peaks relative to the average. Select the one best suited for your audio track. You may need to experiment.

***Threshold*** slider will raise or lower the level the beat detector uses in order to identify a peak.

***Sensitivity*** slider is active only on the default algorithm and is a secondary control for dynamically adjusting for the movement of the audio's average value. Use this control to zero in on how fast the average value is decaying after a burst of activity.

***Audio Keyframes*** is designed for situations where you already have keyframes representing the frame-by-frame levels of your audio, such as those generated by *Trapcode SoundKeys*. If you're working with audio tracks a lot, we highly recommend it for its ability to isolate specific parts of the audio spectrum.

**BPM Mode** ignores the audio itself and creates equally-spaced markers on the audio track. Selecting this mode disables the sliders and activates a number entry box where the BPM is entered. If you don't know the BPM of your track, check the info section (the question mark button on the bottom left of the UI) for online resources for more help.

*Note: To use BPM, make sure to set the start of your work area to the first beat which will be the location of the first marker.*

**Include Numbers** is useful for building manually, when you have to keep track of how many markers are generated on the Reference or Master layers. In the manual mode, making sure those two layers have the same number of makers in the work area will avoid unexpected results, like not completing the Master's entire duration (too many markers on the Master), or freezes at the end (too few markers).

## SYNC

The other half of the Main UI is Sync, which mainly affects the *Time Remap* expression applied to the Master layer. It controls the strength, timing and sequence of the time remapping.

**Retime** has four options:

1. *On* is as you'd expect. It squeezes and stretches the time so that the video will speed up or slow down based on the marker location.
2. *Stretch Only* will stretch the time, but not speed it up. It will just cut out of one and into the next, which is what happens at markers that would normally require the segments to be sped up.
3. *Squeeze Only* is the opposite, only allowing for speed-ups. The thing about this one --and the upcoming one *Off*-- is that you'll get freezes when a segment needs to be stretched. However, it won't cut between sequences that require speeding up.
4. *Off* maintains the original speed of the video throughout the clip and does not allow for either slowing down or speeding up. You'll get lots of cuts and freezes, which actually looks pretty cool, especially combined with *Linear*.

It's worth emphasizing again that with the two choices below the separating line (*Squeeze Only* and *Off*) in the *Retime* dropdown list, you might have unexpected results, such as freezes.

**Ease** controls the strength of the effect. It also has some whacky mixes and a stop motion effect at the bottom of the list. There are examples of this in the FAQ.

It's important to understand the difference between *Stop Eases* and *Go Eases*.

A Stop Ease is a regular ease in and out, the curve flattens out at the beginning and at the end. This results in video that pauses at each marker or beat.

The opposite is a Go Ease. Here, the video pauses between markers and moves on the beat. We used that as the default for Beatnik.

**Montage** is a great feature that randomly reorganizes the sequence of the segments. This works well if you need to do a quick edit, especially if your Master has many cuts strung together. Montage also work well with single clips.

## **THE TOOLBOX**

The Toolbox is a collection of utilities we included as a second tab to help you create, adjust and manage your Beatnik builds.

### **TOOLS**

**UnSync** deletes expressions while keeping the markers from a selected Master and unlinks it from its Reference. You can apply it by selecting either of the layers. Once applied, the layers will turn grey, indicating it is ready for Re-Syncing using the Sync section of the Main UI (deactivate the Markers section).

**Clean Markers** is very similar to UnSync. The main difference is that it will delete markers on the selected layer and unlink the Reference from the Master as well.

**Keep Every...** cleans up a selected marker layer by keeping every x marker and deleting the rest. This was originally designed to work with BPM, allowing the user to have Beatnik to skip a certain number of beats.

**Simplify Markers** also cleans up a selected marker layer by deleting every marker that falls within x frames from the previous one. This was primarily implemented to work with Beat Detect or Audio Keyframes when those are applied to active audio tracks.

**Marker Count** will count and renumber the markers on a layer. This is helpful when trying to match the same marker count on both the Master and Reference and working in Manual Mode. If using Simplify or Keep Every, Recount is useful to renumber the remaining markers.

**Precomp for Edit** is a very easy way to create an automatic edit to an audio track. It will place all the selected layers into a pre-comp, sequence them, and equally distribute them within the work area. It will then place markers at the start of each clip. Once that's done, it can be used as a Master layer in a manual build.

*Note: If the total duration of the layers is shorter than the work area, it will take the duration from the shortest layer and apply it to all the layers. Once Sync is applied, the last layer will freeze at the end.*

**Move Multiple Markers** combines all the unlocked markers in a timeline onto one selected layer.

*Note: This is a good way to handle tracks that have distinct sections, like an intro, verse, chorus and bridge where audio levels are vastly different.*

*Simply split up the track, and using a manual marker build, select each section and customize the UI settings accordingly. Once those have been built, create a null, select it and use this feature to move all the markers onto that one layer, to be used as a Reference in a manual build. You can then delete the original markers (keeping an audio track in the comp for playback).*

**Shift Markers** moves markers x frames from their current time on selected layer. This can come in handy if the time remap doesn't appear to hit on a beat – which is usually the result of the Ease type being used. By shifting the markers either back (by entering a negative number of frames) or forth in time you should be able to get better results.

**Marker Generator** provides an additional way of placing markers onto a layer, independent of the audio. The default is Automatic, which equally spaces the number of markers designated in the Marker Count box across the work area. Also included are Constant, Random and different ramp options. Simply select the layer you wish to apply markers to, set the Min/Max settings and apply. If no layer is selected, it will create a null for you.

## NOTES ABOUT WORKING IN MANUAL MODE

By selecting Sync or Makers at the top of the Main UI, you can isolate each of those functions and customize your builds for more versatility.

A few things to keep in mind:

- In Marker Mode, you can only select 1 layer at a time

- In Sync Mode, you have to select 2 layers, both with markers applied. If one has audio and one video, then Beatnik will know to use the audio as the Reference and the video as the Master. But if both have their video switches active, the order of selection will dictate which is the Master (1<sup>st</sup> selected) and which is the Reference (2<sup>nd</sup> selected). The simple way to remember is “sync this to that”.

Please check the aescrpts for tutorials, as well as the FAQs, a link to which you'll find at the bottom of the product page...and once again – thanks for the support!

-Dan & Orrin