13: Beat Detective II

Overview

This chapter will cover some more advanced options within beat detective as well as discuss using beat detective with melodic instruments.

Manually Mapping Bar Beat Markers

At any point in time you can manually input bar/beat markers in Pro Tools to follow the performance of a live musician. To do so simply place your cursor where desired and use the Quick Key.

Now you can input what Bar / Beat you would like to be identified at the current location.

Repeating this process for every bar / beat is an excellent way to manually map out a session that was not recorded to a metronome.

Add Bar | Beat Marker

Location: 7| 4| 323

Time signature: 4

4

Cancel   OK

Using Beat Detective to Map Bar Beat Markers

Beat Detective is excellent at detecting bar beat markers, but it needs a little help from us to get going. Before attempting to tempo map a selection try manually dropping bar beat markers every 8 bars or so in order to give beat detective a rough outline of the song.

DON'T JUMP AHEAD TOO FAST

The key to making beat detective work effectively is to make small steps. After manually marking out 8 bar sections lets try selecting a single 8 bar section and mapping out just bars markers.

Use the Detection area the exact same way we used it in the last chapter but this time instead of cutting audio, we will generate bar / beat markers instead.

8 Bar selection before and after generating Bar / Beat Markers.

After you have bars locked in and you've checked them for accuracy you can continue on to add quarter notes. Then eighth notes then sixteenth and so on if necessary. Remember to add or remove incorrect markers manually as you go.
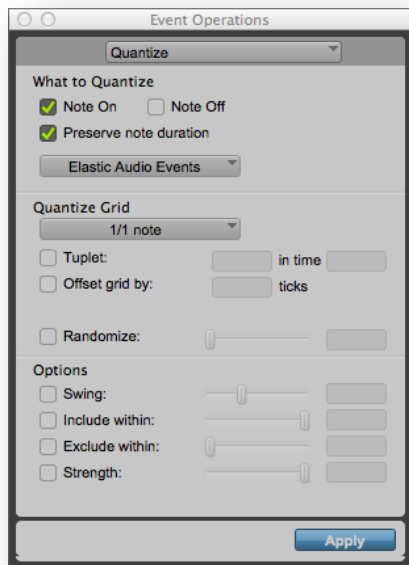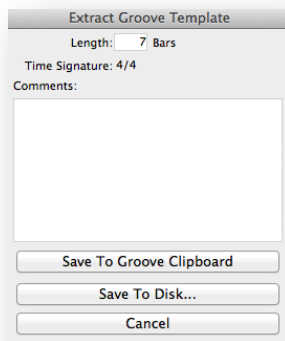
Groove Templates

Beat Detective offers us more options than just quantizing to the grid. You can also quantize to groove templates. First we have to build a groove template. Once you have a selection made and your bar / beat markers analyzed within beat detective you can choose to extract a groove template.

The Groove Template extraction menu will automatically set the length to however many bars you currently have selected. It gives you the option to save to your clipboard if you plan on using it immediately. Or you can save to disk for long term future use.

NOTE: If you have already mapped Bar/Beat Markers then the groove template will nullify itself. You need a non mapped grid in order to identify the groove against.

Once you have saved a groove template you can use it in two different places. The first is within beat detective. Instead of standard conform you can select group conform. Here you can select your saved templates and even view some preset templates Avid has provided for you.

The other place you can use groove templates is within your midi quantize window. Event > Event Operations > Quantize from the dropdown menu or you can use the quick key.

Under the quantize grid dropdown menu you will find all of your different groove templates available for you to use and apply to whatever extent pleases your ear.

Beat Detective and Melodic Instruments

Using beat detective on melodic instruments requires a little more patients and finesse but is an extremely valuable asset once mastered.

We use all the same techniques we learned on drums to quantize the audio and to fill gaps but the fading presents us a new issue. Since Melodic instruments are standing waves the types of fades we use can cause phase cancellation and therefor dropouts in the audio. The dropouts can cause noticeable bumps in the audio that are extremely unpleasant.

When quantizing melodic instruments apply the same process as we did with percussive instruments. A trained ear can listen back to a final edit and easily identify any problem areas that will need to be fixed. For the untrained ear it is highly recommended to visually check EVERY single edit before delivering to a client.

Once a problematic fade has been identified we can rectify the fade by doing what I like to call a "Loop Edit"

Loop Edit

The loop edit is a simple edit that creates a loop within the decay of a note in order to extend the length of a note without the listener noticing any loss in quality.

Here is a loop edit done step by step.

Figure 2: Un-Edited Audio

Figure 2: Clips Cut and Quantized

Figure 3: Gaps Filled and Clips Faded

Figure 4: Problematic Fade Identified

Figure 5: Fade Removed and Transient Double Identified

Figure 6: Transient cut and push later in the timeline

Figure 7: Clip Dragged out earlier in the timeline to create loop

Figure 8: Loop Point is does not have phase correlation

Figure 9: Loop Clip Dragged later in the timeline to align phase

Figure 10: Large Crossfade to check phase coherence

Figure 11: Small Fade added before the transiet to transition into the next note