

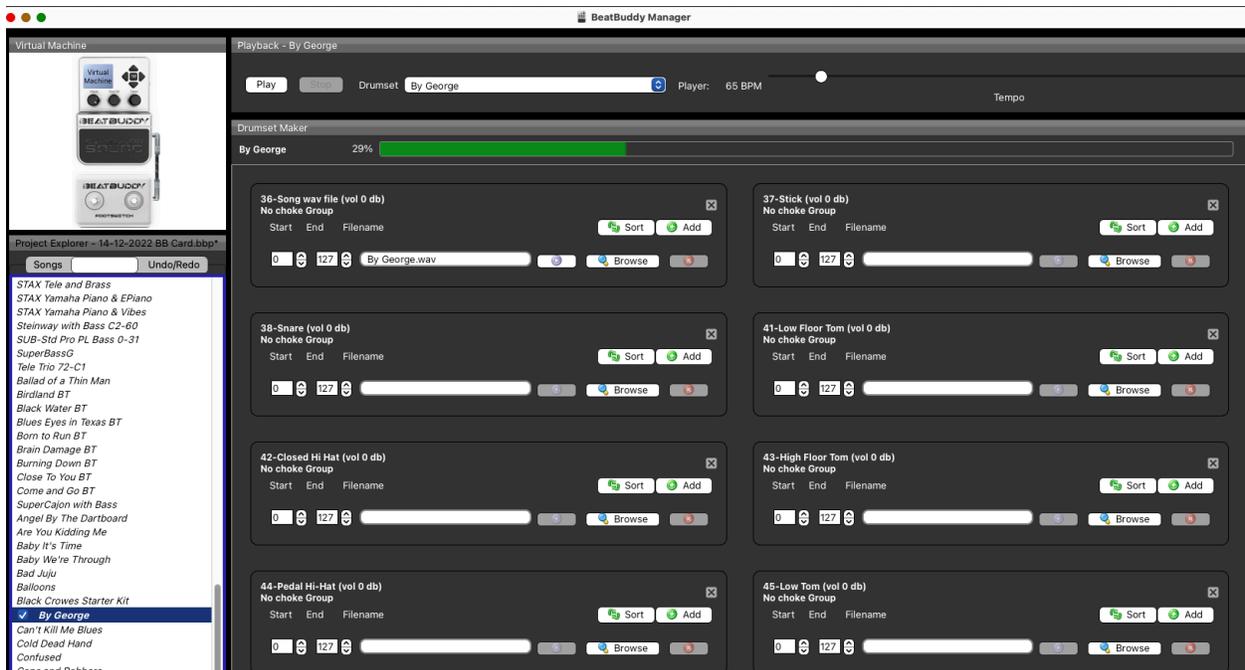
## Turning an .mp3 backing track into a Beat Buddy song - An illustrated tutorial

During my long career with the US Government, I was often tasked with creating written documents to satisfy or to explain a variety of legal requirements. My first question when given a new task was a simple one - "What should the final product look like?" This usually resulted in a smile from the requestor, followed by a stack of samples from prior years. I tell you this brief story, because that is how we will start this explanation, with a look at the end product.

A backing track BB song consists of two parts: 1) A dedicated BB "Drum Kit" containing the backing track, and 2) a BB .sng file which contains a midi file that triggers the BB drum kit.

About two years ago, I decided to get my the songs from my several albums into BB format so that I could play them live. Several use arrangements that I created in Logic Pro which could not reasonably be changed to an OPB track as they contained too many unique instruments. We are going to take a look at one of those. The song we are going to use is called By George. It is from my album "Crimes Against Humanity." I own the copyrights to all the material contained therein.

The BB Drumkit looks like this:



There is only one entry in the kit. The song backing track .wav file in slot #36.

The BB Song file looks like this:

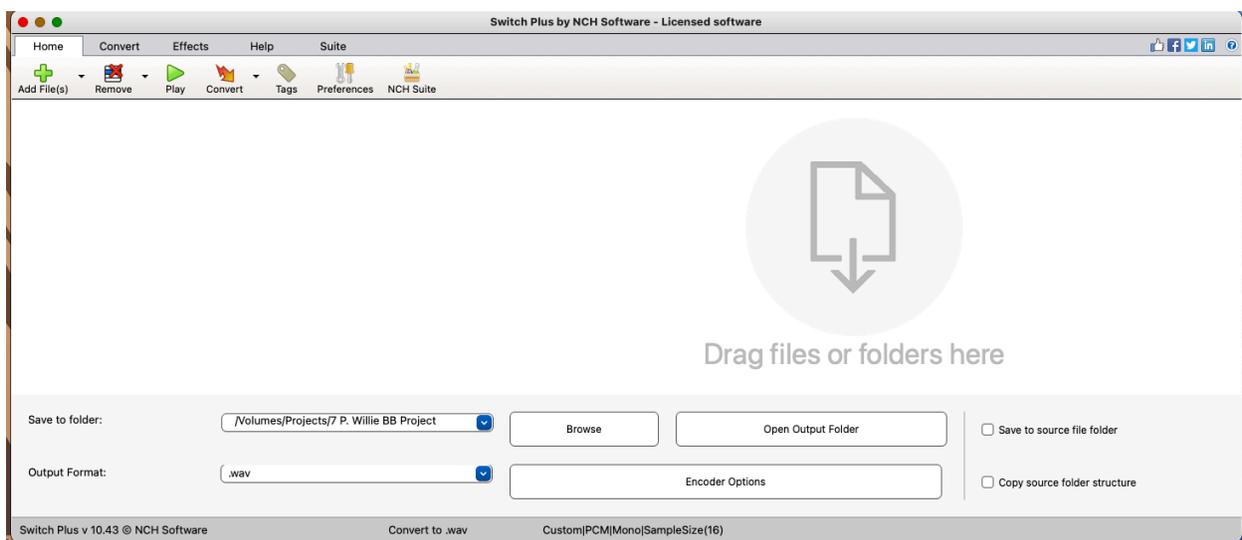


In the Intro section, I have my trigger file, and the main loop and outro are both null files. This allows me to start the song with one press of the BB pedal. It then plays through in its entirety, before reaching the main loop, a null section, which will loop continuously playing nothing, until I double tap the pedal to the play outro section which ends the song. In this case both the outro and the main loop use the same null section.

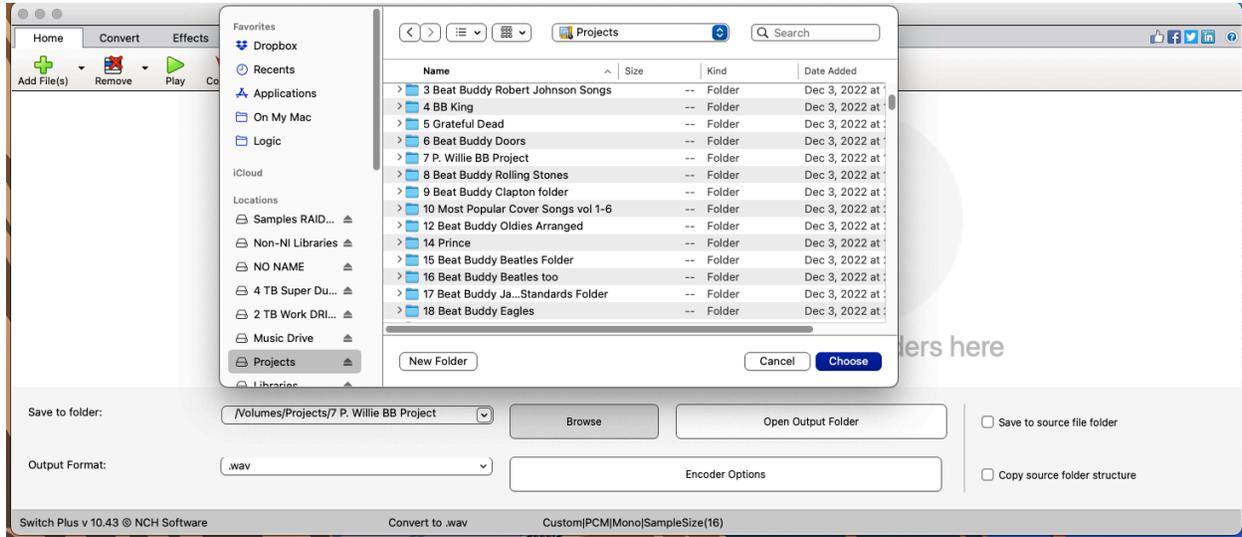
### Making the Drum kit:

I am going to make this simple. If you have a file that you are going to use as a BB backing track, you must first get it into a .wav format that BB will recognize. You can start with a commercially made .mp3 track, or most any audio format, but you need to wind up with a 44.1khz 16 bit .wav file. In order to create a file that works consistently, I use Switch, a program from the Australian firm, NCH.

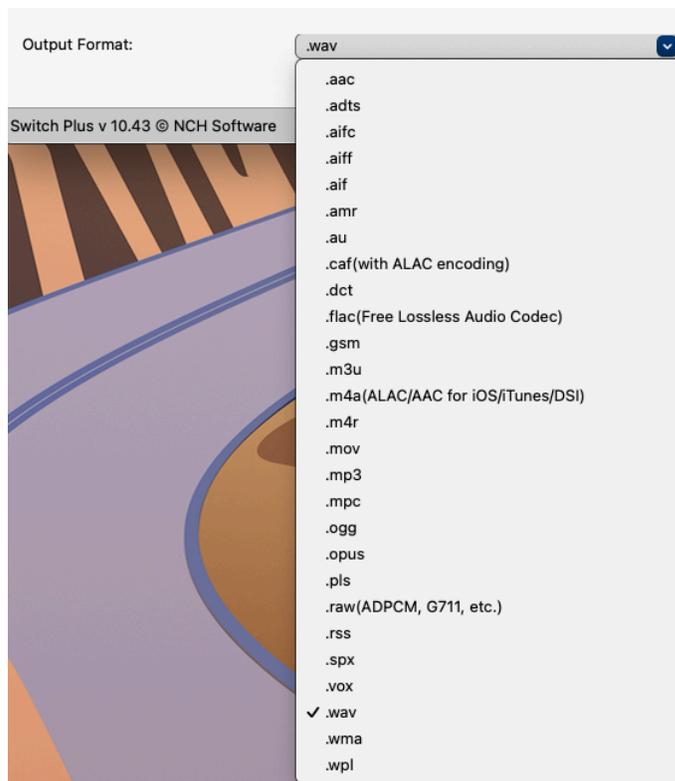
When you open Switch you get a screen that looks like this:



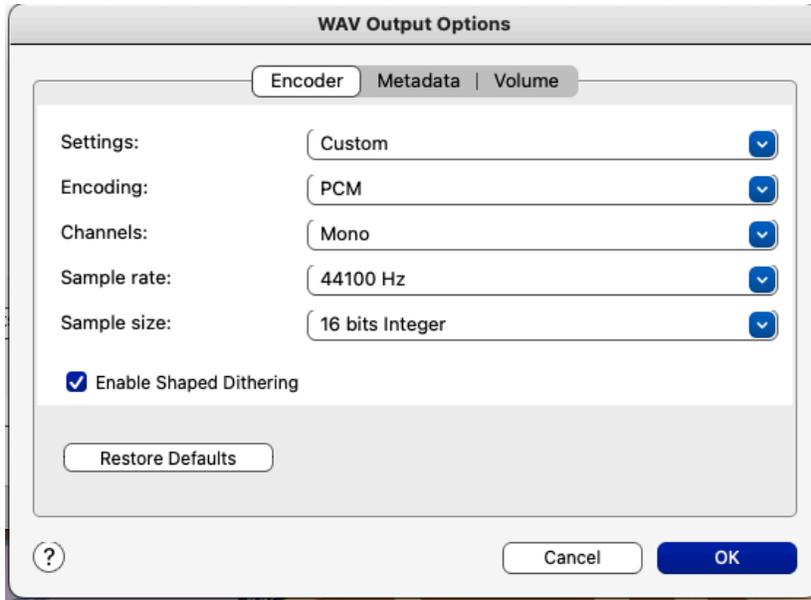
You should make some preparatory settings before proceeding. First, select the folder location into which you want the .wav file to be placed. You do that by clicking on the “Browse” button in Switch and navigating to the correct location. In my case, i am choosing a folder called 7 P.Willie Project, located on my Projects HD.



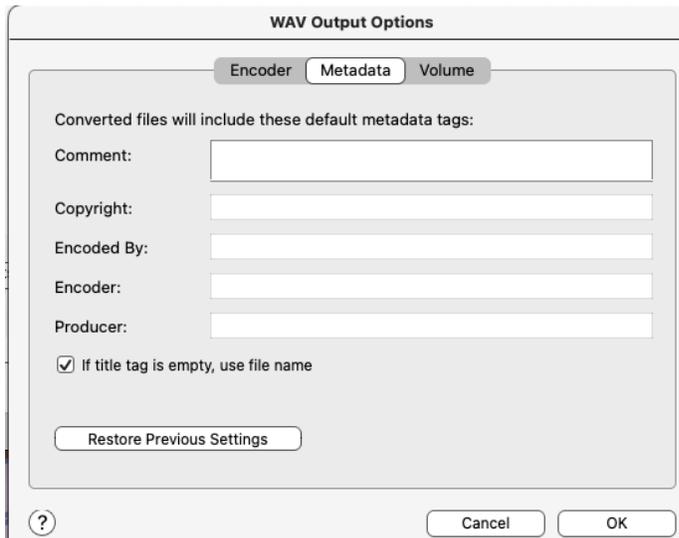
Next you select the Output format, which is the audio format that you want the file to become. Switch has many choices, but you want .wav.



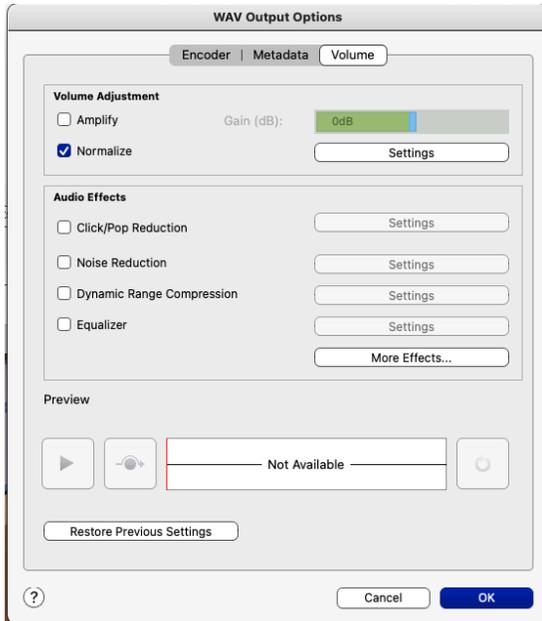
Next, set the encoder options. This is where you can select the 44.1kHz sample rate and 16 bit.



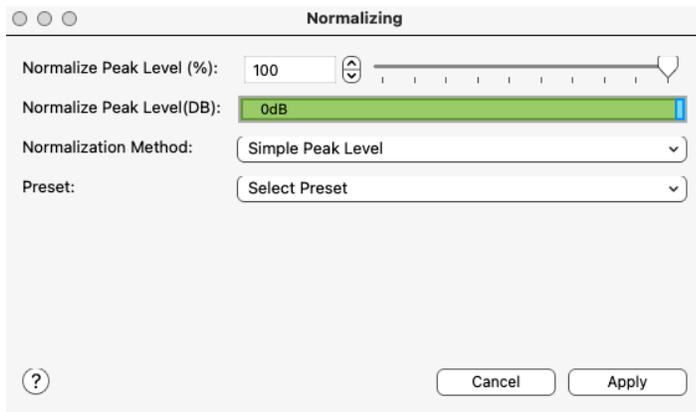
There are also options for setting the metadata and volume. I make the metadata blank. Experience has told me that some metadata can negatively effect the way that the BB processes the .wav file.



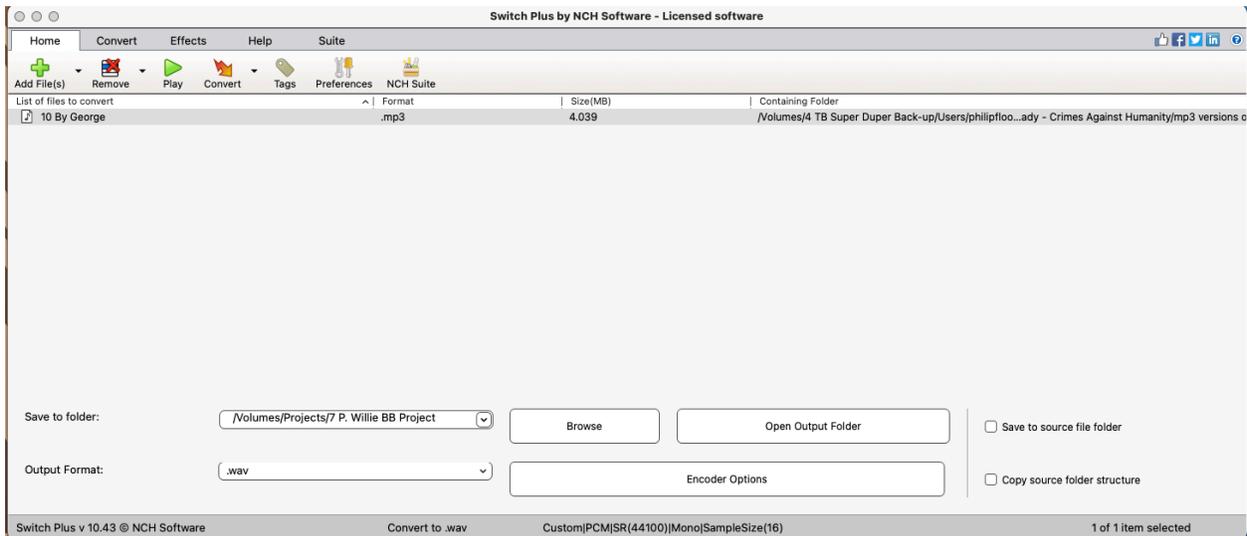
Volume can be used to adjust the overall volume of the wav file. This is useful when building drumkits as you can create different volume outputs to be tied to velocity levels. But, when converting an .mp3 to wav, you can either leave the settings blank, or select Normalize to get an .mp3 volume to a full level if it was recorded low.



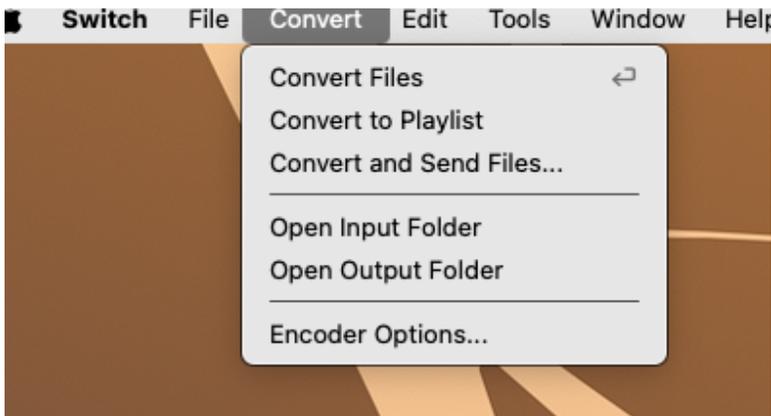
If you select Normalize, check to see that the settings are where you want them, normally 100% for a file that you are going to use as a BB backing track.



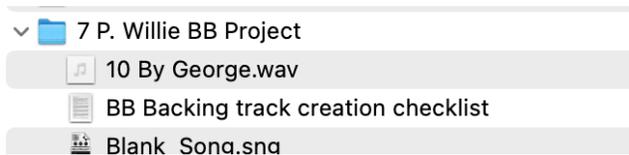
Once your settings are all complete, you can drag the .mp3 into the section labeled Drag Files or folders here.



At this point you can convert the file.

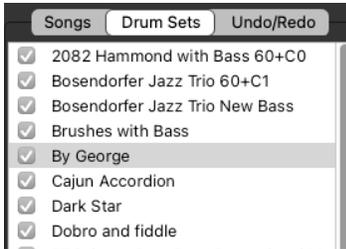


The resulting file will be placed in the location you set, above.



You can now create a new Drumkit to hold this file.

First, make sure that you have the Drum Sets section active:



Of course, you won't have a By George kit name yet, as that is what we are creating.

In BB Manager, from the upper menu select Drumsets>New Drumset



You will usually get a warning from BB Manager telling you that there is a modification in the current drumset, asking if you wish to save it. If you did not modify the current drumset, select Don't Save.

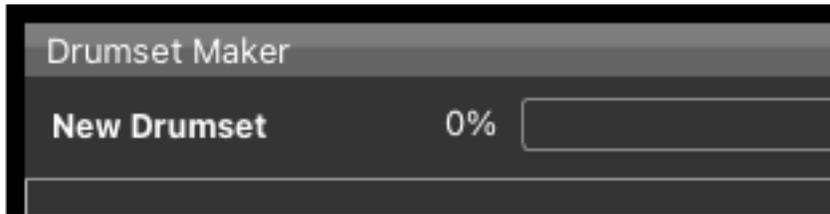


You don't want to risk messing up a Drumset that you are not trying to edit.

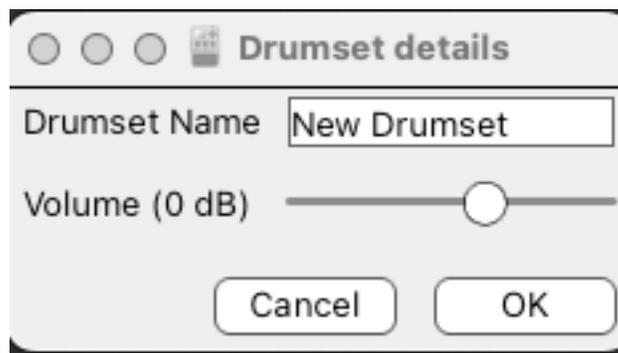
The Drumset Maker window will appear with "New Drumset" as its default name:



We need to name the kit. Click on the piece of text that says New Drumset.



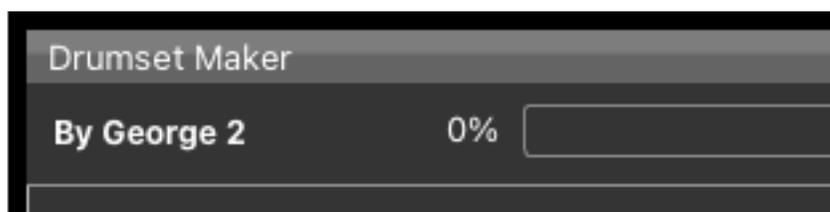
This will bring up a Drumset details window:



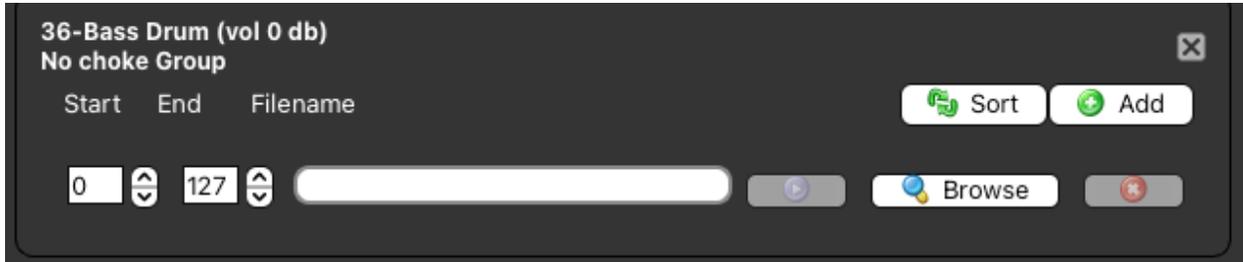
The box that says New Drumset is a text box. Type the name of your new kit in the box. Since I already have a By George kit, I'll call this one By George 2.



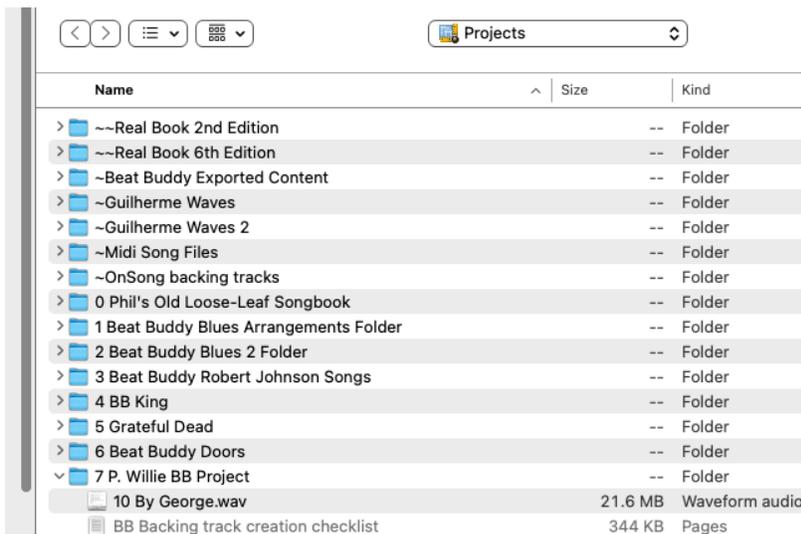
The new kit name now appears in the Drumset Maker.



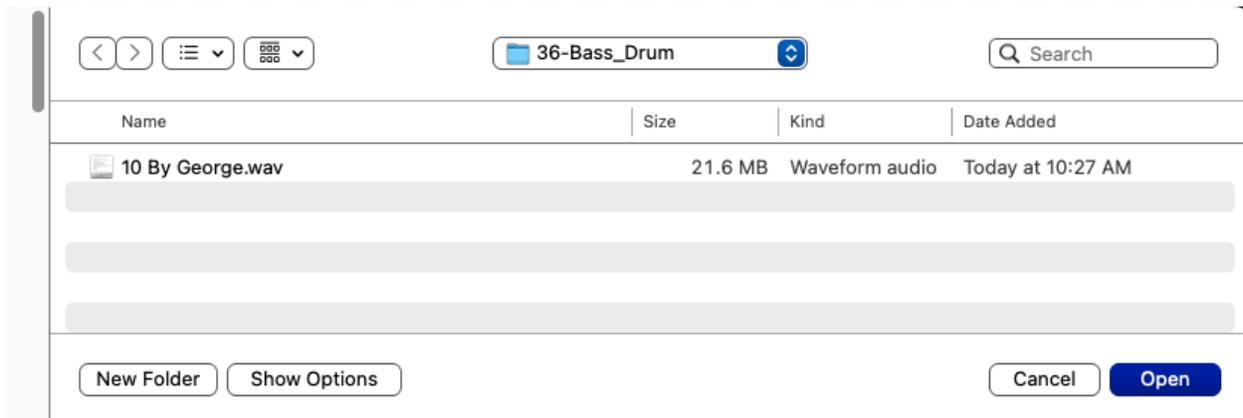
To finish building the kit, click on the Browse button in for 36-Bass Drum.



Navigate to the locating of the .wav file we created earlier and select it.

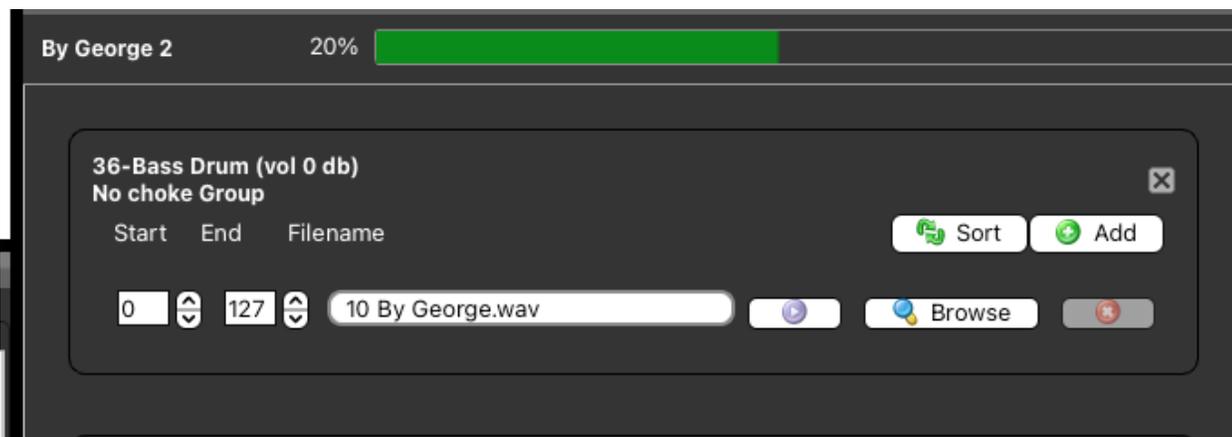
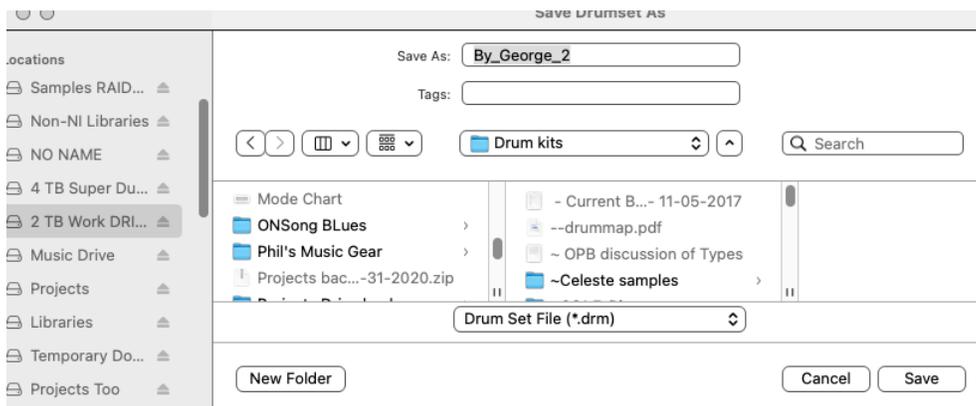
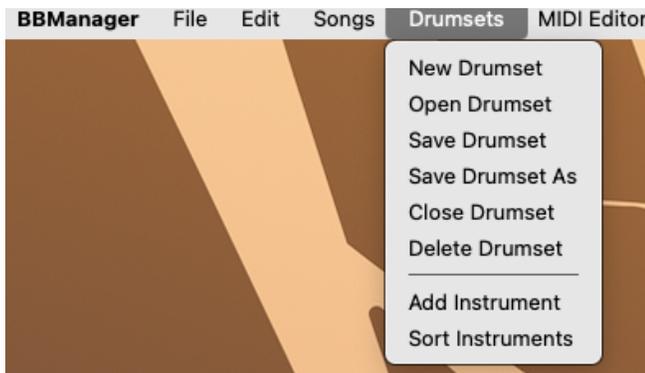


It will play through in its entirety. You just have to let it go. Do not click on it again, as it will play multiple instances. Just click the OPEN button This will place it into the Drum Set.



At this point, the Drumset is complete. Save it to a location on your hard drive. This will give you a backup copy of the kit. Use Drumsets>Save Drumset As.

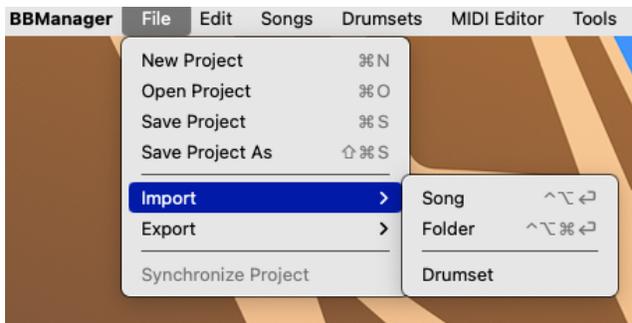
I keep a folder of all my Drumsets on a separate Work Drive.



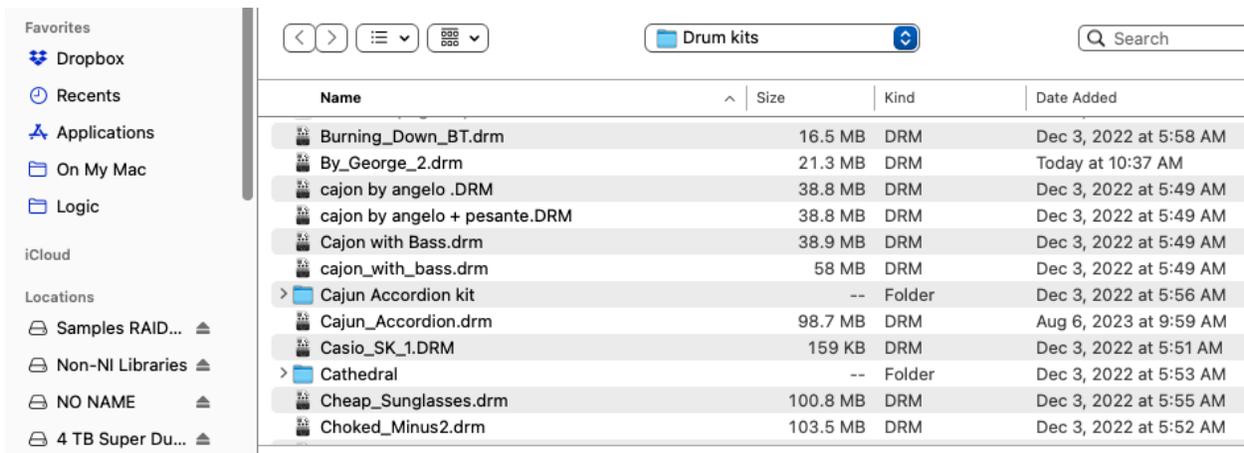
That process saved the Drumset to your hard drive, but you must also add it to your BB Workspace. This process works for me. Quit BB Manager. Restart BB Manager. If you look at your Drum Sets list, your new kit is not there.

You need to import the kit. You'll do this from your Saved location on your hard drive.

Select File>Import>Drumset from the upper BB Manager menubar



Navigate to the folder:

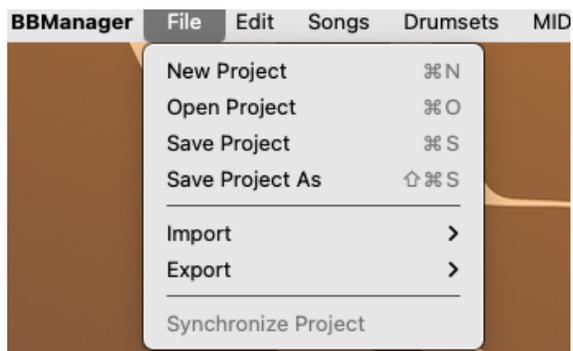


Select the drumset. It will now be added to bottom of your Drum Sets list in BB Manager.



Click the check box in front of its name. This makes the kit active in BB Manager.

Save the Project.



The kit will now be in your BB Project in your BB Workspace.

This completes the Drumset creation and activation process.

### **BB Song creation process for Backing Track player.**

At the beginning of this tutorial, we show the song in BB Manager, consisting of a Song trigger section, and 2 null file sections. I will create both types of files in Logic Pro, below.

In a BB Song, what we see in BB Manager as song sections are, in actuality, pointers to midi files. The exception to this is in the Accent hit section, which is a pointer to a short wav file. The .sng file format combines these elements in a proprietary format package used by the BB pedal. BB Manager allow us to create files in this format.

To create the midi trigger file, we need to know the length of the .wav file that we are going to trigger. There are at least two ways to get the length of the .wav file. 1 )Look it up, and 2) place the .wav file in a project to see how long it is.

**Method 1** - My song By George is in my Apple Music library it is 4 minutes and 1 second long, according to Apple Music.



You'll also want to know the Beats Per Minute or BPM. For commercial songs, you can just Google the song name and bpm. When I don't know the BPM, I use a program on my iPad called Live BPM. It listens to a song being played and give a visual feedback of the BPM. Of course, some songs have a variable BPM, so you are really just looking for something that gets you close.

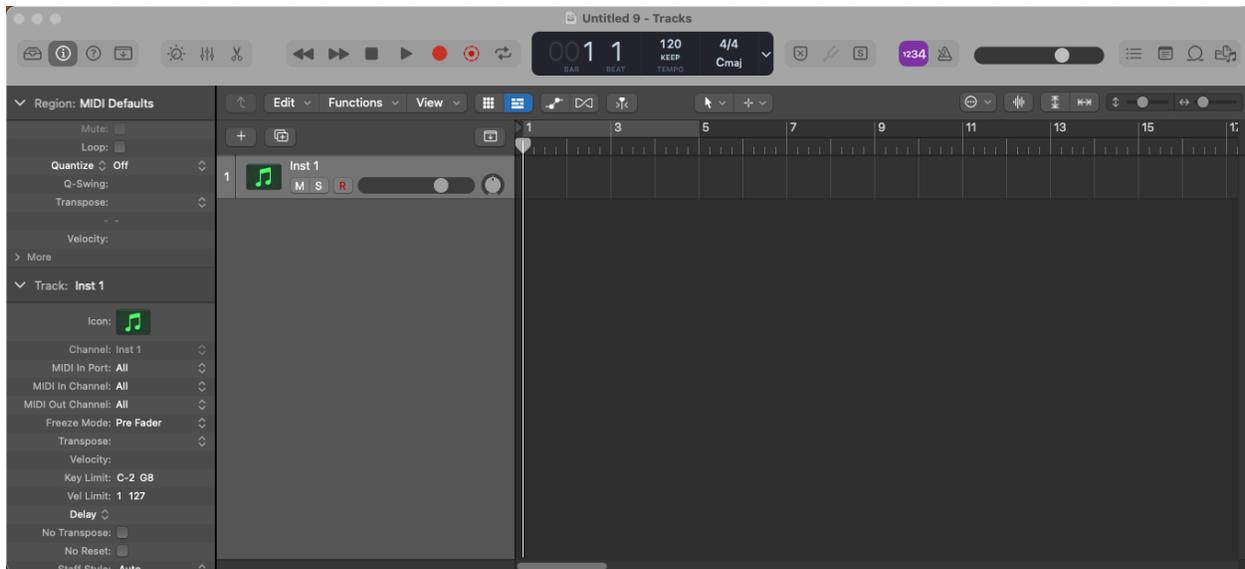
When I created By George, I did it at 65 BPM.

**Method 2** - You'll still need to get the BPM, but if you don't know the song's length, you can derive it from Logic.

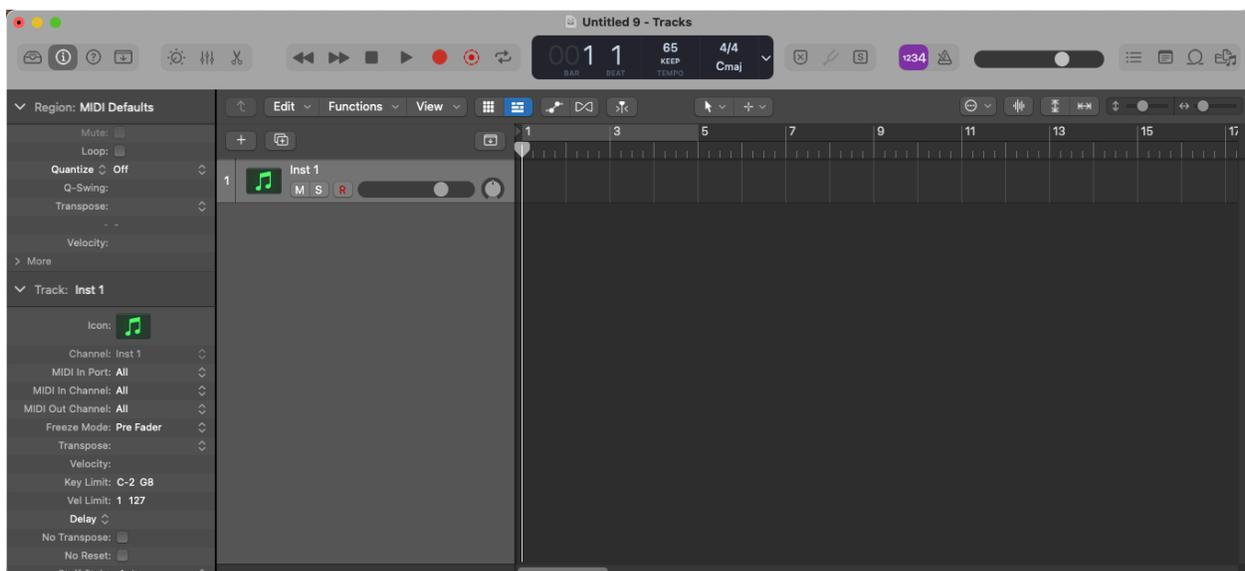
Either way, we should wind up with very similar results.

Start Logic Pro and create a new project.

Here is the opening look of a new Logic Project.

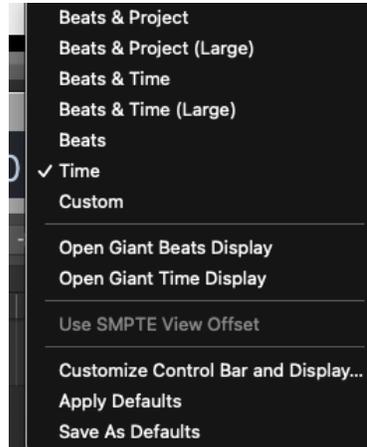


Set the BPM to the correct amount. Default is 120. We want 65.

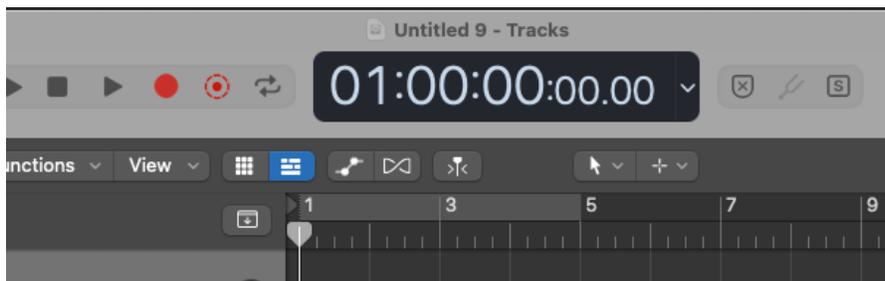


You can just click on the 120 and drag it down to 65. There are likely other ways to access the BPM setting, but clicking on the number and dragging works easiest for me.

If we are going to create the trigger file using method 1, set the display to Time. To do this, click on the down arrow right by the time signature and key, and select time.



The new display looks like this:

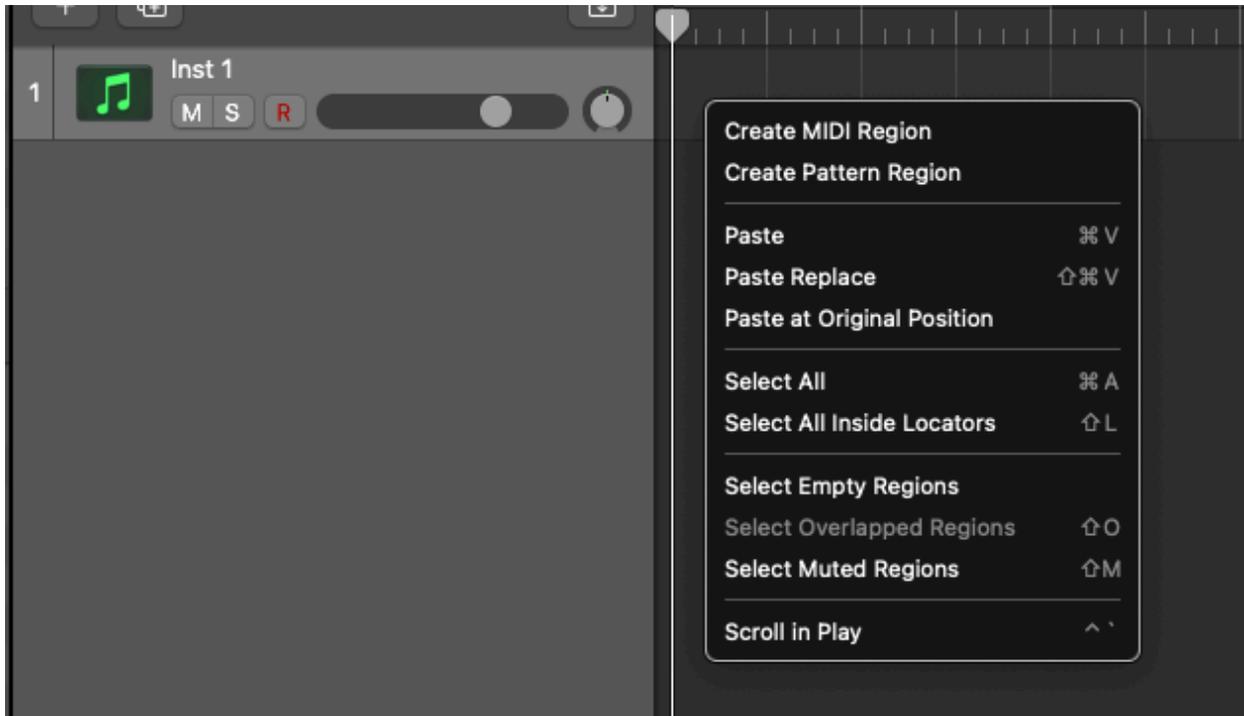


We started Logic with a software instrument track as the track type. Software instruments are midi instruments, so that works for us. Otherwise, we could simply create a new software instrument track.

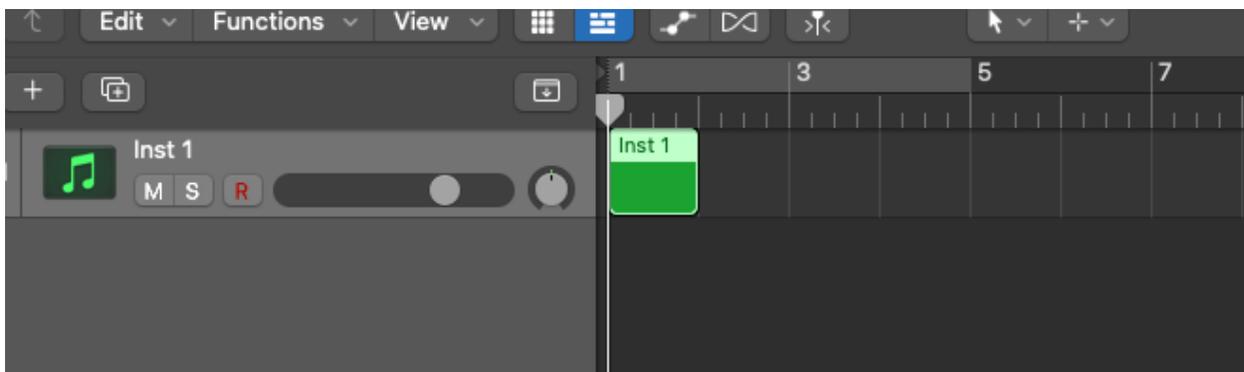


In the Software instrument track, create a midi region.

In the track, right click (or control click), and select Create Midi Region.

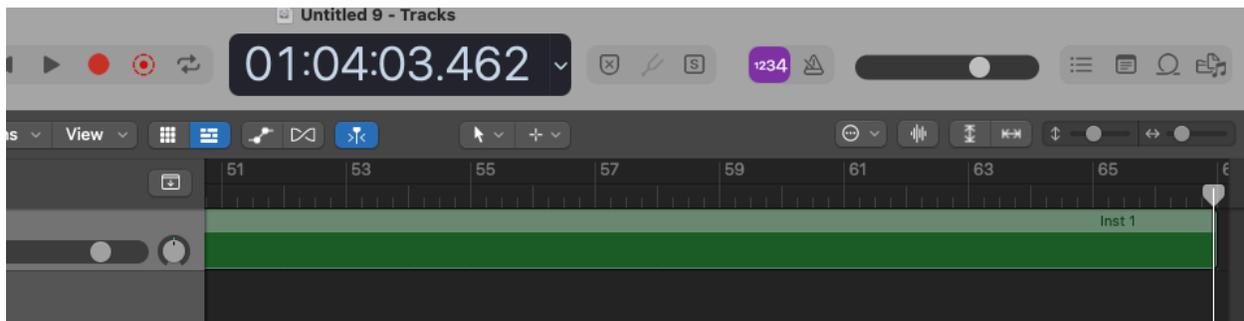


Make sure that the left edge of the region is aligned with 1 on the measure count bar



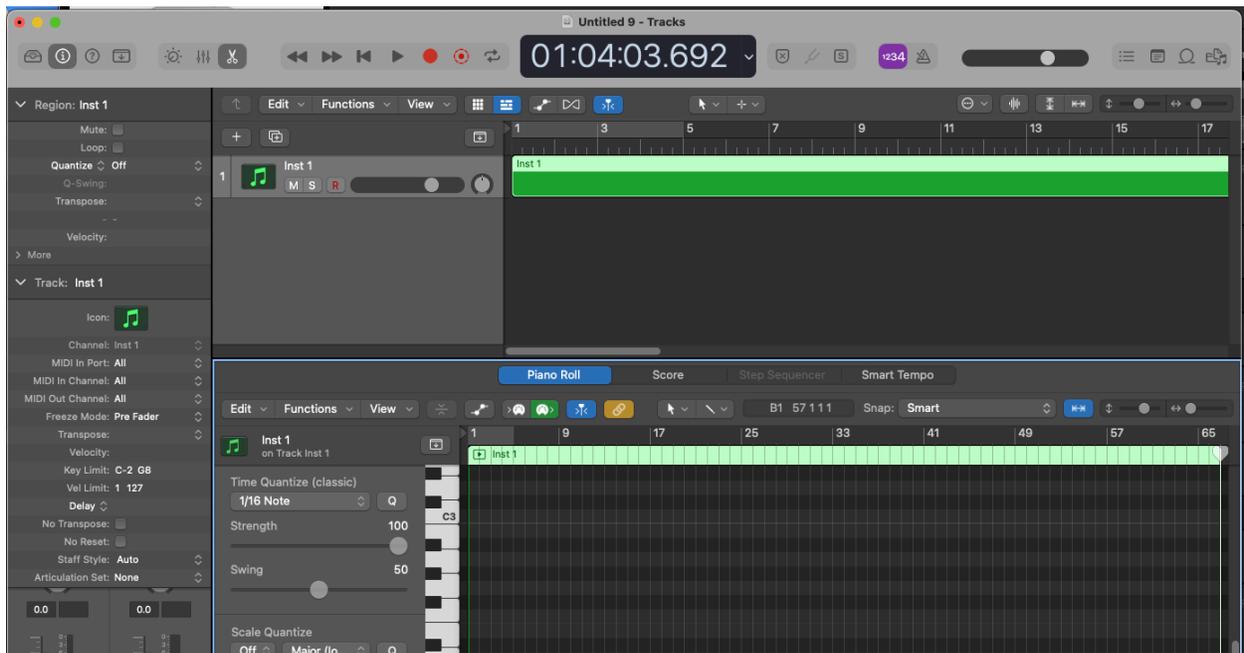
Drag the right side of the region until it is past 4:01. The time counter will read 1:04:01. By default the time counter always displays 1 hour in the display. Somewhere there is a setting to change that, but it does not affect my work, so I just leave it.

At the beginning of measure 67, you will be at 4:03 plus.

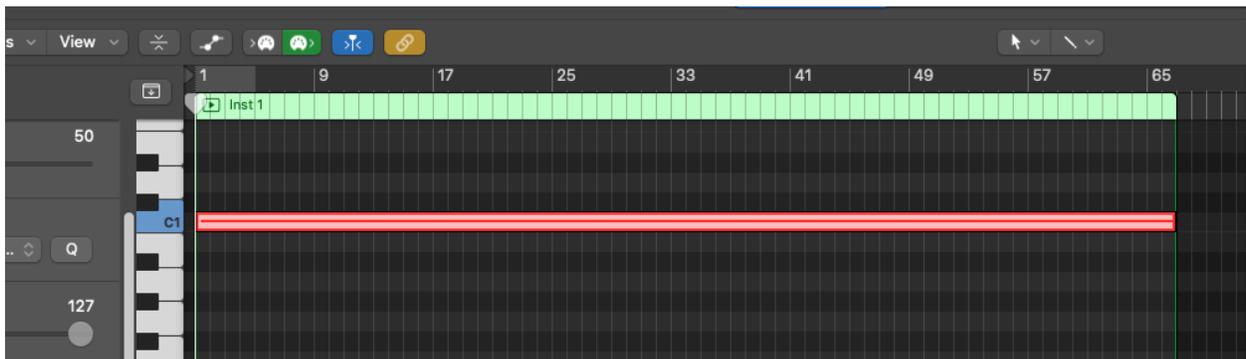


Now, we are going to create a note at midi location #36, that is as long as this region. Recall that midi 36 is where the kick drum would normally be, but it is where we placed the .wav file.

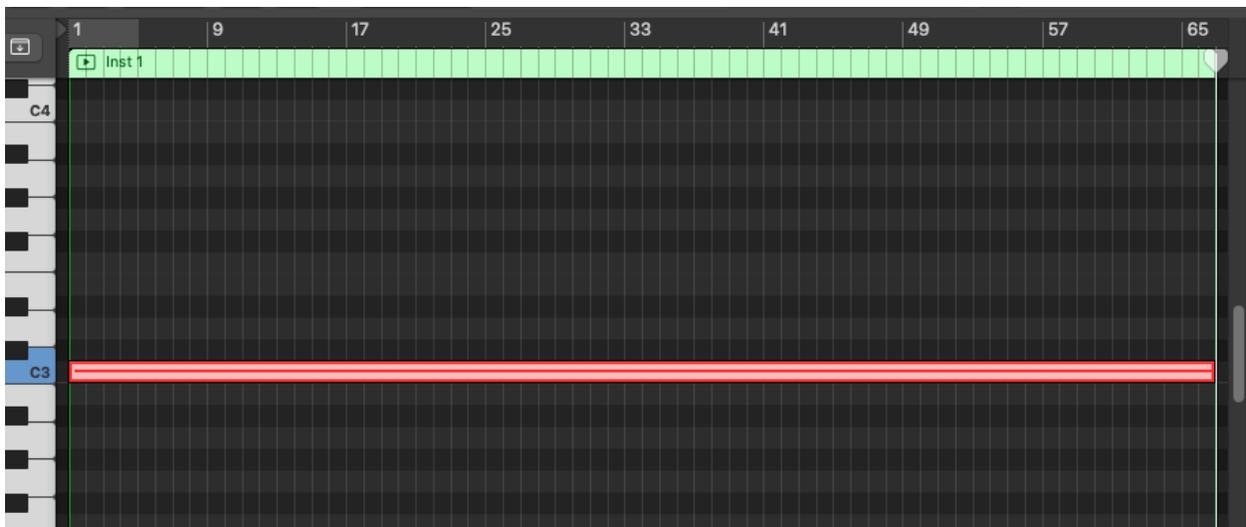
Double click within the Region to bring up the piano roll editor, in the lower half of the Logic window.



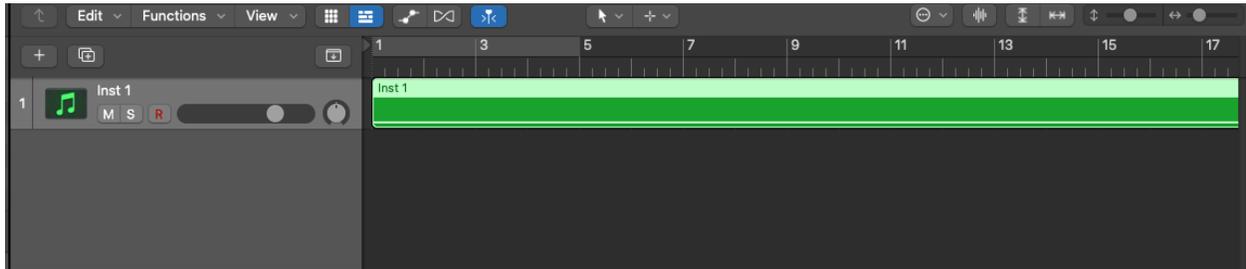
Right click in the piano roll editor at C1 (C1 = midi 36) to create a note.



Hold and drag that note out to the end of bar 67.

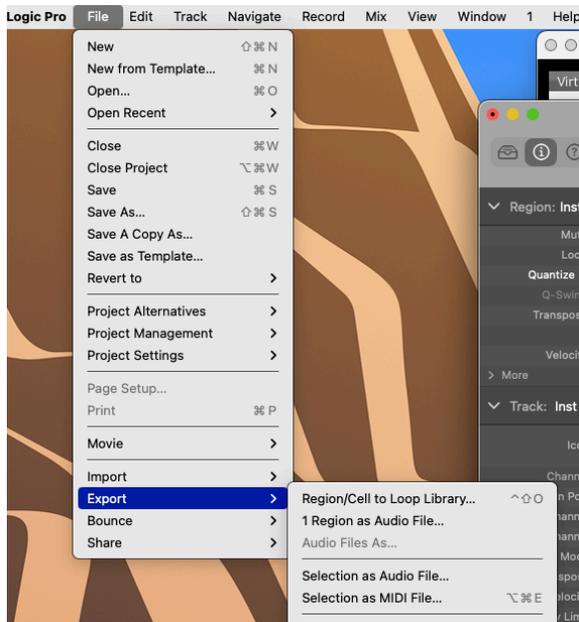


In the Software Instrument track, there is now appears a line representing that note.



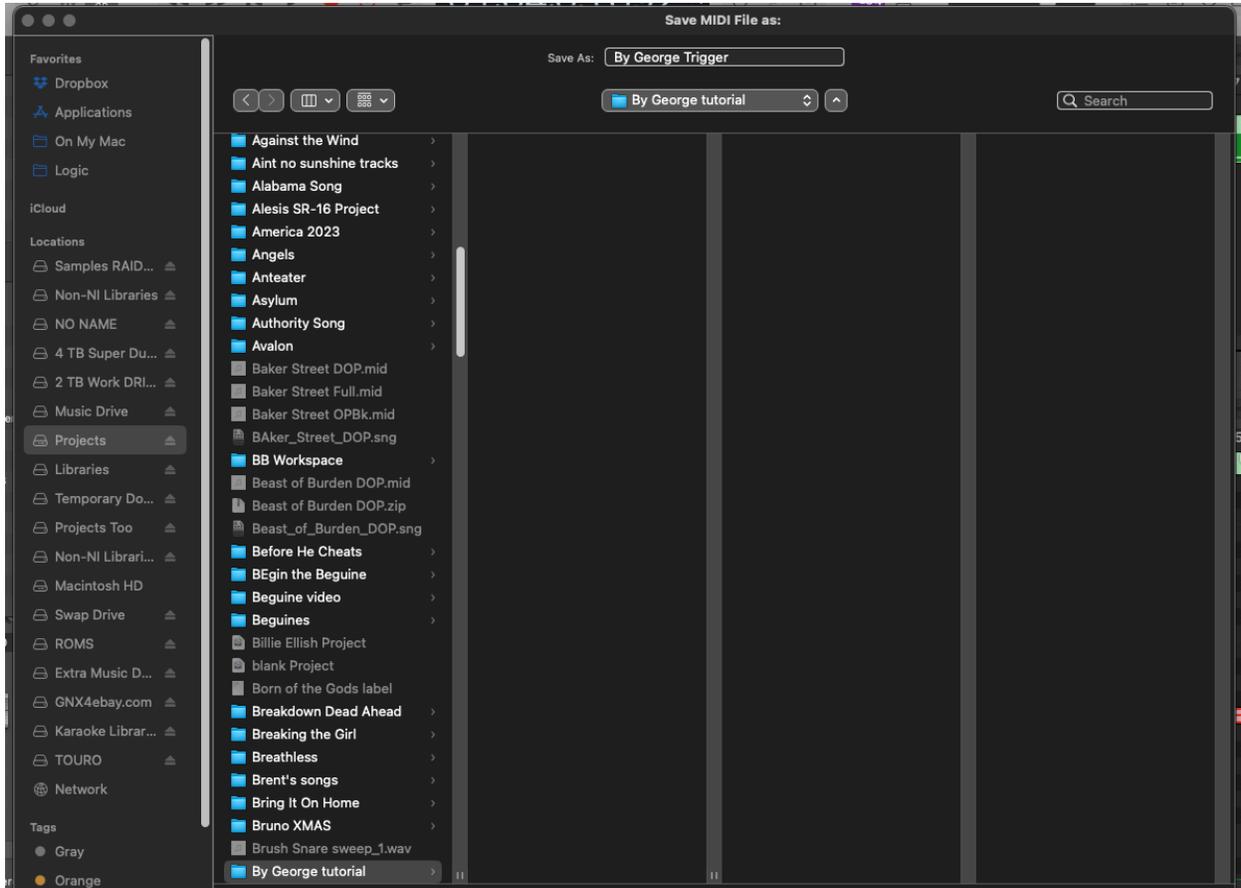
This track will become the midi trigger file.

Click on the track to give it focus (i.e., make it active.) Select File>Export>Selection as midi file.



A “Save Midi File as:” window appears. Select or create a location for your file to be saved. Give it a meaningful name such as “By George Trigger.”

Here I am saving it in a folder I created called By George tutorial.



That now creates and saves the trigger file using method one, where we knew the time and bpm.



If you don't know the song's length, use method 2.

**Method 2 (preferred)** - Here the song length is unknown.

Again, start Logic selecting Software instrument as your default track.

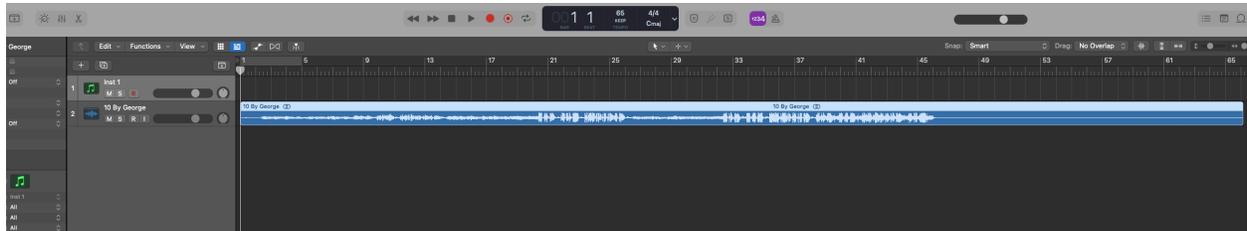
Set the BPM as described above to 65.

This time, we are going to add the By George mp3 (or wav) to the Logic Project.

Find the .mp3 or .wav and drag it into the project, into blank area below the software instrument track.

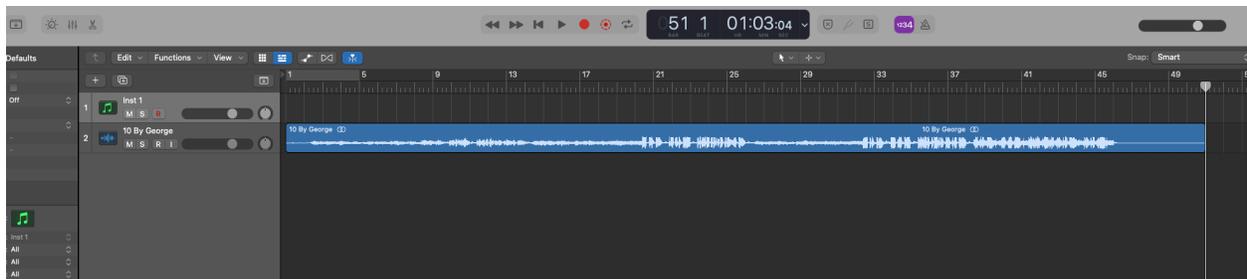
Here I have dragged the By George mp3 into the project.

You can then actually audition the song in the Logic Project. Looking at this song in this project with the BPM set at 65, the waveform only appears to be little over 46 bars long.



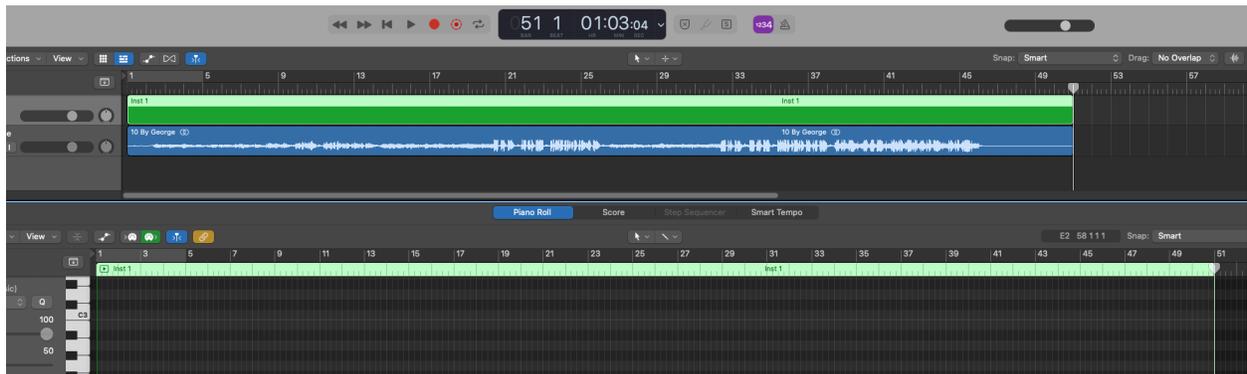
If you click on the timeline near the end of the waveform, you can audition the song. Listening to it, the reverb tail is completely gone by measure 51. This equates to 3 minutes and 4 seconds, which seems about right. The 4:01 seemed to be long. (It's the last song on the album, so I probably was not worried about the playout time. Oops!)

Here, I have cut the end of the playout blank space back to measure 51.

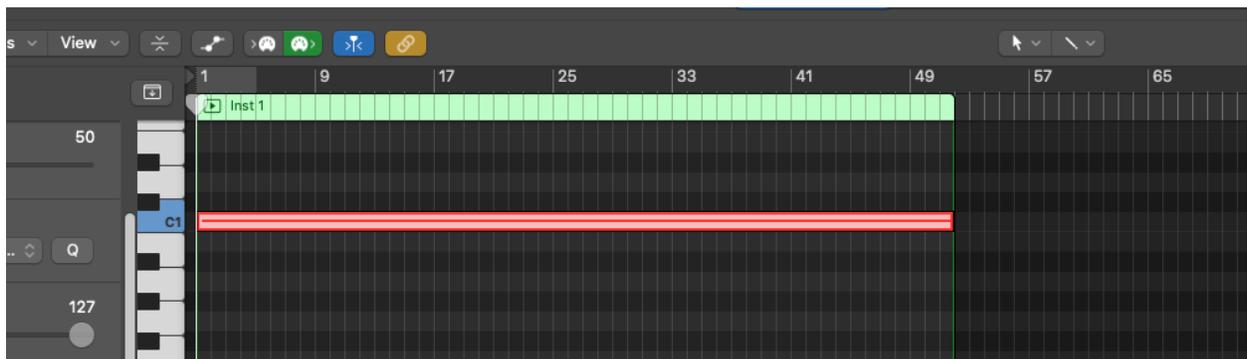


From here, the process is the same as Method 1.

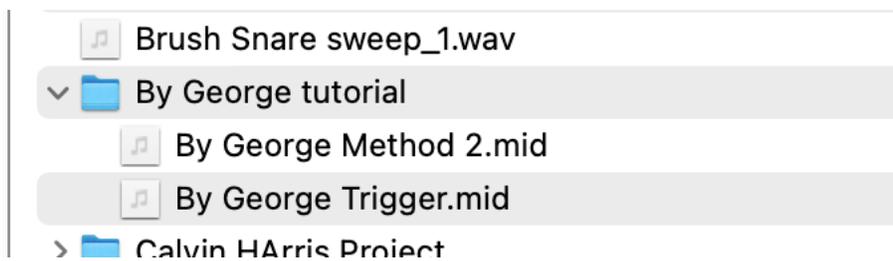
Create a midi region in the software instrument track. This time, drag it out to the end of edited audio wave form plus tail. That would be at measure 51. Double click on the software instrument track to display the piano roll editor.



Create a note a C1 and drag it to the edit of the region.



Select the region, as then File>Export>Selection as Midi File. I named this one By George Method 2.



Since we know it is the correct length, I'll use it for the rest of the tutorial.

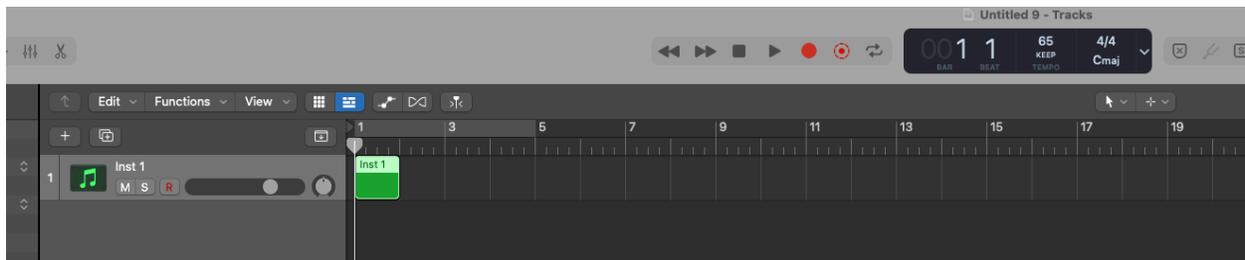
## Creating a Null file.

In simplest terms, a null file is a midi file which will play back nothing.

How to make one? Remember our drum kit? It only has a sound assigned to midi 36. Everything else is a blank, unassigned note.

Start a new Logic Project, and, again, set the BPM to 65.

Create a midi region, and leave it at the Default 1 bar long.



Double click the midi region to activate the piano roll view.

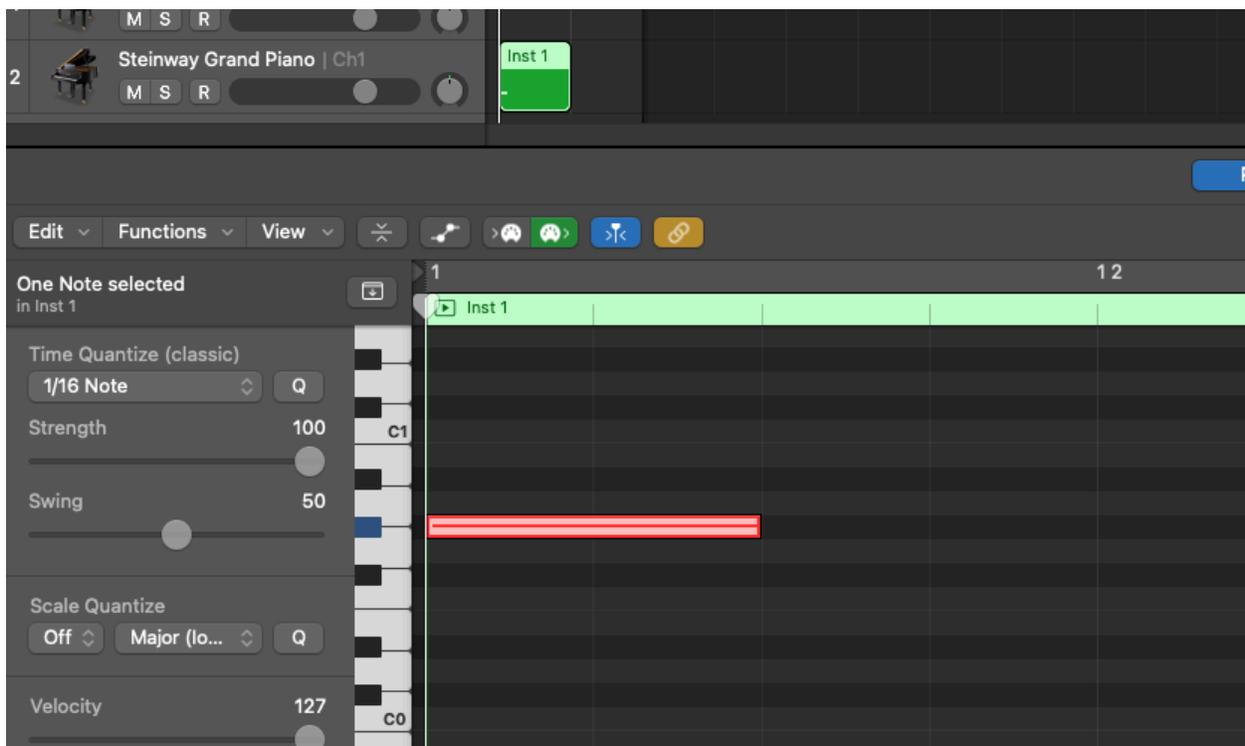
We are going to create a note that will not play. In reality, for this kit, anywhere other than midi 36 is fine, but to maintain some consistency, it helps to have a standard process. When I leave a note unused in a drum kit, it will usually be at 32, 33, or 34. Why is this? My bass range for OPB kits is normally 0-31, the equates to a dropped C on a 4 string bass, up to the G on the 12th fret of that same bass. I usually put a 2nd kick drum at 35, to follow midi standard. So, if anything is open it will be at 32,33 or 34.

The default BB metronome location is 33, so let's not use that. That leaves 32 or 34.

Let's use 32. Since C1 is 36, 32 is G#0.

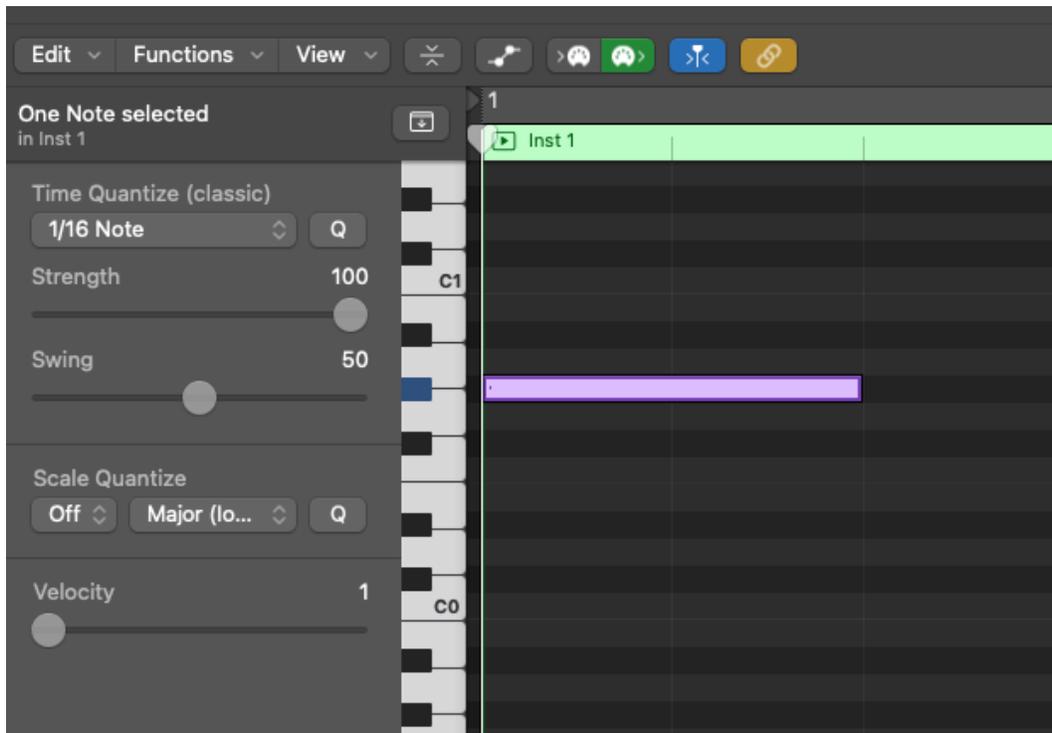
It doesn't need to be any particular length, but short is good, just in case there happens to be an instrument assigned to 32.

Here I have made a 1/2 beat long note at 32.



## But, **AND THIS IS VERY IMPORTANT,**

the note should be set to Velocity 1. Why? because if something is assigned to the note, you want it to play as softly as possible.



From here, the Export process is the same. Select the track, and the File>Export>Selection as Midi File. Name the exported file Null or Blank.

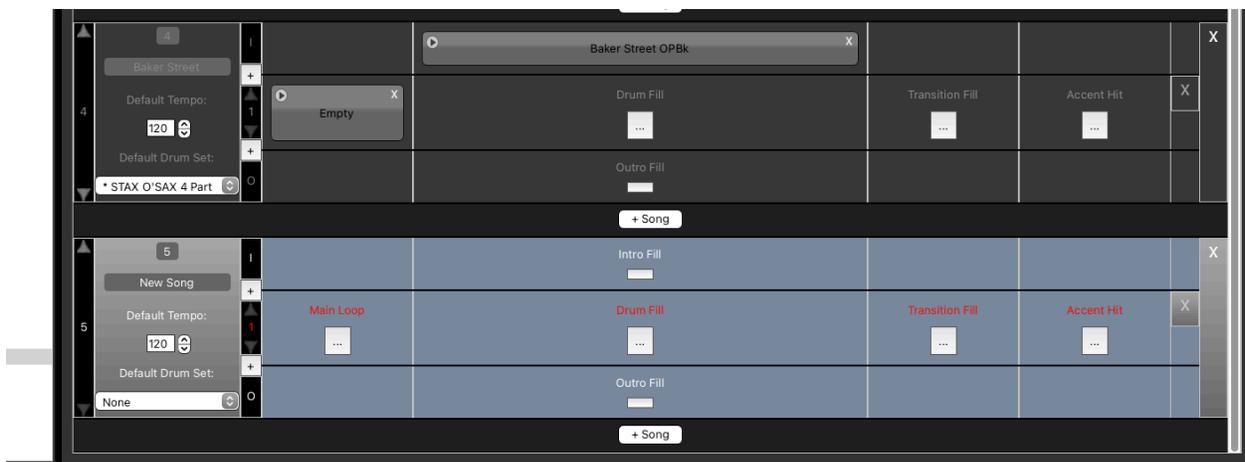
### **Finishing the Song:**

Now that the parts are made, the final step is to create the song in BB Manager. I have a BB Folder for Forum Requests in my Project, so I will use that folder. You pick any folder that is not full. The limit was 99 songs, but I have been told it is now 128.

Find the last song in the folder you are using, and click on +Song below that song.



The new blank song appears.



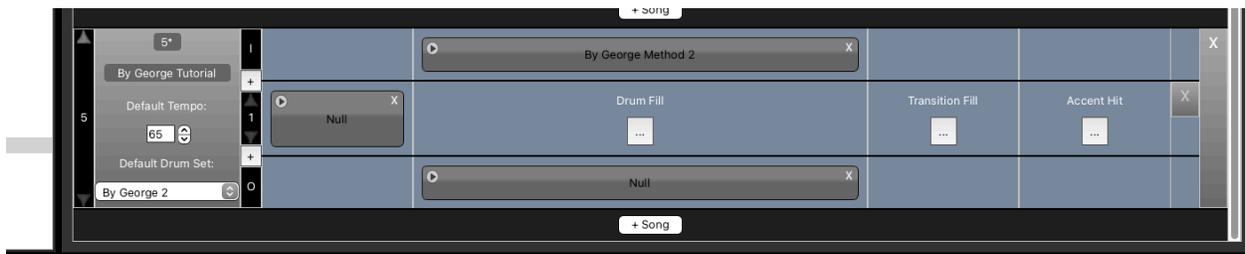
Enter the Song Title and BPM in the boxes. Select the newly created drumset, By George 2 in this case.



Click on Intro Fill and navigate to and select the By George method 2.mid file.

Click on Main Loop and select the Null file. Click on Outro Fill and select the Null file.

The song should look like this:



Good luck with this process!