

(You are aligning the metronome to your song, not the other way around)

Melodyne 4 new features such as "Tempo Editing" are extensive . This is only a basic set of procedures to get you started tempo mapping.

Setup in Studio One:

1. Pick a track not recorded to the metronome or drag in a song not recorded to the metronome.
2. **TIP:** It is actually fun to tempo map the old mp3 library you have. Once you tempo mapped a recording you can use all the other features of Studio One to do remixes of you favorite songs.
3. Open the inspector and set the track with song to Tempo: **Don't Follow** to lock it in place for now.
4. Visually align the first down beat of the song as tempo mapping start from the point in time.
 - a. (Optionally) Tap the Studio One tempo to get the host close to the track tempo (this helps the pre file beats to be somewhat close to the song)
5. Select the track and apply Melodyne 4 (Ctrl+ M).

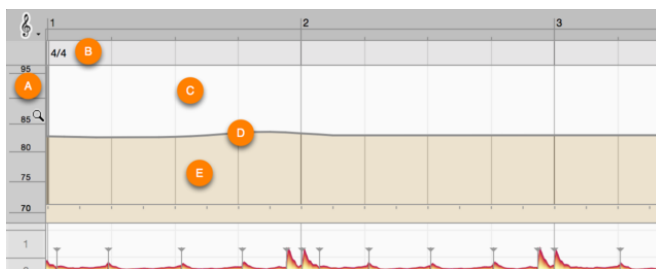
Tempo Assign Mode:

Opening the Tempo Editor:



1. Click the Wrench to open note assignment mode.
2. Click the Tempo link to open the Tempo Editor.

Basic navigation:



A: The Tempo (BPM) Scale. This is made up of three zones:

1. Click in the central third of the scale and then drag the mouse upwards or downwards, the display is scrolled.
2. Click in either the upper or lower third and repeat the same procedure to zoom the display. If you double-click in the center, the display is zoomed in such a way as to ensure that the entire tempo range is visible.

3. In the Tempo Editor itself, you can scroll horizontally with the hand tool (Ctrl + Shift) or mouse wheel and vertically with the magnifying glass (Ctrl + Alt).

B: The area for editing time signature changes. See time signature procedure.

C: The area above the tempo curve. By clicking here and dragging the mouse pointer horizontally, you select the segment of the curve you wish to edit. (they will turn darker as you drag to select)

D: The tempo curve. This can be reshaped with the help of a context-sensitive tool. The contexts in question being three zones:

- A single shallow strip just above the tempo line is for adjust the selected regions tempo up or down.

E:* The area beneath the tempo line. This is divided into two distinct layers;

1. In the upper layer the tool is used for the quantized movement of segments of the curve
2. The lower layer it is used to freeform reshape the curve within a beat selection.

TIP: You can Zoom the timeline by using the same drag up/down action that you use in Studio One.

Tempo Regions:

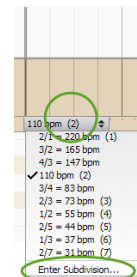
When MELODYNE finds a reasonably consistent tempo it create a tempo region for it. If there is a large change in tempo or time signature change it create another region. The region will display what it thinks is the average tempo for that region. It may have gotten it off by a mathematical amount such as 2X or 1/2X.

- If so just click the drop down and select the proper one from the list.
- You may have to do this with each Tempo Region it estimated.

Tempo Regions (sub-beats):

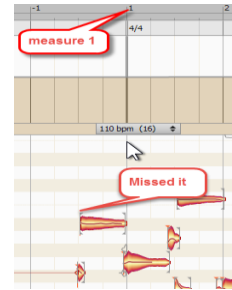
Melodyne will find a sub-beats that it used to determine the beat. Typically it will be as an example 2 or 4 for a 4/4 song. This sub-beat sets the quantized movement of the measures and beats

- To change it to a smaller subdivision click the drop down and select Subdivision.
- Enter 8 or 16 as the subdivision as this works well for refining.



Validating the first beat:

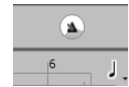
1. Scroll to the start (left).
2. Drag the measure line to the proper beat one. It will jump in subdivision increments.
3. **TIP:** if it does not align you have to go to a smaller sub-division like 16.

**Validate the Time signature:**

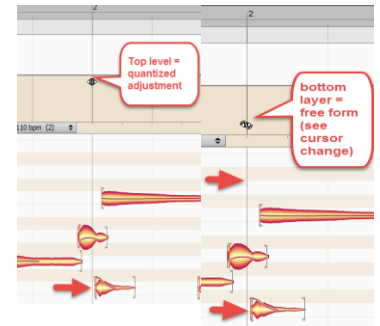
Normally it will find 4/4 time signatures, but it might miss a 3/4 or 6/8. You can click the time signature and change it to the proper setting if you know it.

Metronome:

Melodyne has its own metronome now. This is not to be confused with the Host (Studio One) metronome. This greatly helps to validate your time signature and the overall accuracy of the beats:



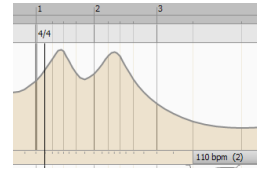
1. Adjust the metronome on the upper right to 0.0 db by dragging it
2. Put your cursor in the upper grey time line and double click it. This will cause Melodyne to play in solo mode (Not Studio One's transport).
3. **TIP:** this is the only way you can hear the Melodyne metronome. You will not hear it if you use the space bar in the host to play. The metronome volume is also reset to off whenever you get out of the Tempo Edit mode so you will have to readjust it upon returning to the Tempo Editor. It is a good idea to listen to 10-20 bars to make sure the tempo is right using this process. The Editor is somewhat intelligent in that after make a few minor adjustment, it will be fairly accurate for the rest of the tempo segment.
4. **TIP:** Remember to double click the Melodyne timeline not hit the space bar with your other hand. (It can be a hard habit to break)

**Fine-tuning the beat detection:**

This is only an overview of the many tools and methods to refine the tempo map, however it should cover the basics.

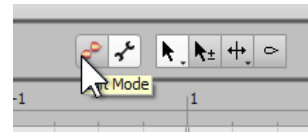
- Manually adjust the down beats of 5-10 measures by dragging the tempo lines.
 1. Use the top portion of the area below the curve to snap to a subdivision.
 2. **TIP:** This works good for reasonably even tempos or if it skipped a beat due to an extra syncopation. It will start to affect the adjacent beats, so keep an eye on that so you don't get one beat right and skew many others.
 3. The bottom portion of the tempo editing area will free form adjust the beats.

4. **TIP:** This mode works good for very small finetuning or if there are obvious shifts in tempo. If you start to get a tempo curve that looks like the one on the left, you have picked the wrong downbeat of the measure. Go back, listen and re-confirm that you do have the right beat one and time signature. In general musicians play a uniform beat that varies only by things such as the singers phrasing, drum fills, licks, solos, chorus/verse or the overall drive/climax of the song.
5. Melodyne will start to align to the down beat on its own after a few manual adjustment.



Transferring Melodyne Tempo map to Studio One:

1. When the down beats are fairly close on the first 10-20 measures click the Edit mode icon to exit the "Tempo Edit" mode and send the map to the host.
2. Check the Tempo for the Event on the track in Studio One's inspector.
3. Display the tempo track in Studio One and drag the tempo map from the Melodyne track to the tempo track.
4. At this point the Host (Studio One) downbeat measures should correctly align with the songs tempo.

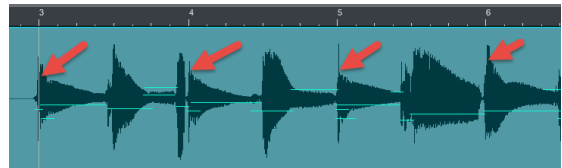


Bass	
Event FX	Render
Start	00001.01.01.00
End	00103.01.01.04
File Tempo	Map
Speedup	1.00

Did You Get It Right?:

There are three ways you can confirm that you did a good job of adjusting or fine tuning a tempo map and transferring it to Studio One Tempo track.

1. Turn Studio One's Metronome on and listen to the song to see if the down beat are in sync with the flow of the music.
2. Look at the downbeats in Melodyne in normal operation mode (not Tempo edit mode). You will see the measures line up perfectly with certain blobs. These line are a transfer from the host to Melodyne and represent what Melodyne would follow if Studio One's Time Stretch was turned back on. They also mean quantization will work in Melodyne and in the host because the beats are aligned to the grid.
3. You can also (optionally) try turning Time Stretch ON for the mapping track and it will not jump or adjust to a new position. This is because the Studio One tempo line is stretching it exactly equal to the tempo map in Melodyne :-)



I highly recommend you take this new skill and apply it to as many genres as you can. As mentioned in my introduction video it becomes a new hybrid workflow that give your music all the advantages of musical feel and expression while gaining computer accurate timing for live musicians, pre-recorded loops and even sheet music. Pop music for example can't just follow a rigid computer time grid but now can breathe with the lead vocalist performance.

