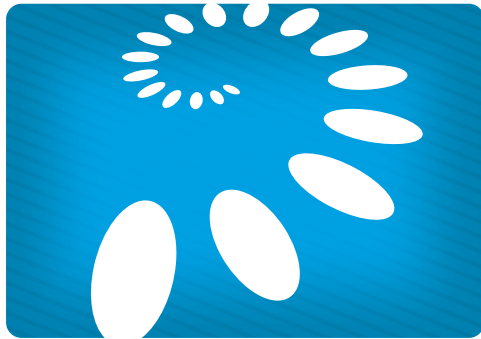


The Serato logo is displayed in white lowercase letters on a blue square background with a subtle diagonal line pattern.

Pitch 'n TimeTM 

User Manual

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Introduction

Thank you for purchasing Pitch 'n Time LE, a professional quality time stretching and pitch shifting plug-in designed for use with Digidesign Pro Tools or Apple Logic Pro.

We trust you will find this manual useful in setting up and getting the best from your Serato product. If you require any assistance beyond the scope of this manual, including up-to-date information on troubleshooting, frequently asked questions, and tips & tricks for Pitch 'n Time LE, please visit our website at serato.com.

Many thanks - the team at Serato Audio Research.

What's Inside?

Your Pitch 'n Time LE box should contain the following items. If anything is missing please contact your dealer immediately.

- 1x Serato plug-ins Installation CD
- 1x Pitch 'n Time LE User Manual
- 1x Installation Guide + Serial Number

System Requirements

The following are the minimum system requirements for Pitch 'n Time LE.

- Digidesign Pro Tools 6 or Logic Pro 7.2
- Digidesign Pro Tools 7.2 required to use Pitch 'n Time LE with the time trimmer tool
- Mac OSX 10.3.9 or Windows XP
- iLok key required for authorization

Using Pitch 'n Time LE with Pro Tools

The Pitch 'n Time LE Interface



- 1 Input BPM Calculator** Assists calculating the input BPM of the selection.
- 2 Tempo Controls** Set output BPM, express as a percentage, or directly manipulate the tempo slider.
- 3 Output Length** Constrain the output length in time or samples.
- 4 Pitch Controls** Pitch shift by semitones & cents, express as a percentage, or manipulate the pitch slider.
- 5 Key Shift** Assists transposing between keys.
- 6 Varispeed Mode** Links output pitch and tempo for a traditional resampler.
- 7 Attenuation Control** Clipping indicator with output attenuation control.
- 8 Pro Tools Controls** The standard Pro Tools AudioSuite controls, used to preview and process the audio, etc.

Using Pitch 'n Time LE with Pro Tools

Input BPM Calculator

Pitch 'n Time LE for Pro Tools provides control over the input parameters via the input BPM calculator. The fields default to the session variables and selection length.



Commonly known as time signature, the **Meter** denotes how many beats in a bar and what note value, or duration, is one beat. In the example shown, 4 quarter notes (or crotchets) make one bar. This is also referred to as “four four” or “common time”. This field assists the plug-in to calculate the bars and beats from the BPM or vice versa.

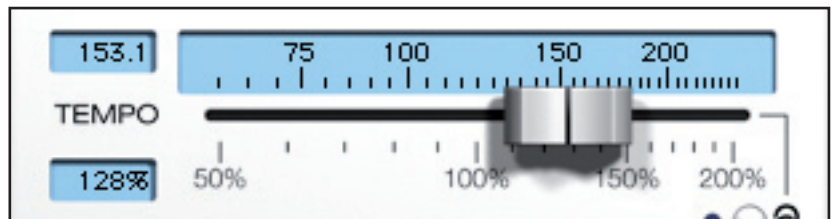
By entering the length of the current selection in terms of bars and beats, **Bars:Beats**, Pitch 'n Time LE will calculate the BPM for you.

The **Minutes** field displays the length of the current selection in minutes and seconds.

Beats per minute, or **BPM**, defaults to your session settings. By entering the BPM of the current selection Pitch 'n Time LE will calculate the bars and beats for you.

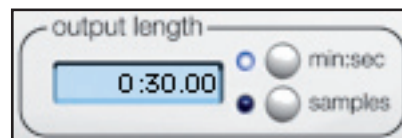
Tempo Controls

The amount of time compression or expansion is displayed to the left of the tempo slider in terms of output BPM (in relation to the input BPM), and as a percentage of the original tempo. Moving the tempo slider updates these fields, likewise entering values into the fields updates the slider.



Output Length

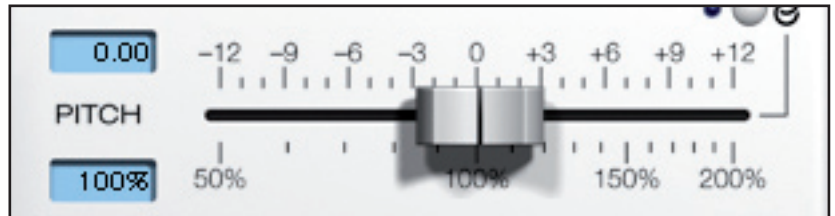
The length of the output region determined by the tempo controls will be displayed in the output length panel. If you have a specific length to conform to, enter the value here in either minutes and seconds or samples and the tempo controls will update with their corresponding values.



Using Pitch 'n Time LE with Pro Tools

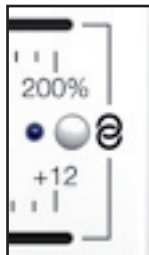
Pitch Controls

The pitch controls work similarly to the tempo controls. The pitch shift you require is displayed in terms of semitones and cents, and as a percentage. Moving the pitch slider updates these values, likewise entering values into the fields updates the slider.



Key Shift

To transpose between keys, you can enter the initial and target keys into the key shift panel. The corresponding pitch controls will update to reflect this key shift.



Varispeed Mode

To recreate a classic varispeed effect, use the link toggle switch to force the tempo and pitch sliders to follow each other. This feature is used commonly in sound design and to create an accurate tape stop.



Attenuation Control

Changing a signal in the frequency domain often affects the relative energy level. If the red overload indicator lights during preview, attenuate to avoid a clipped output region.

Using Pitch 'n Time LE with Pro Tools

Pro Tools Controls

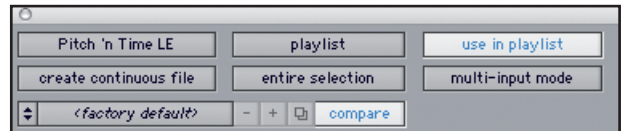
To process an audio selection using Pitch 'n Time LE, use the standard Pro Tools AudioSuite buttons at the bottom of the plug-in window.



Clicking **Preview** will loop the selected audio independent of the session. The Pitch 'n Time interface remains active while previewing, with control changes affecting the output immediately. While previewing, clicking **Bypass** plays the dry selection unchanged.

The **Process** button applies your current settings to the selection, and generates a new region which either appears in-place, or in the region list, as per the use in playlist toggle in the top section of AudioSuite controls.

The top section of the AudioSuite window has options for the behaviour of Pitch 'n Time LE within Pro Tools, as well as managing user presets for the plug-in itself.



Clicking **Playlist** toggles the input between selected audio in the playlist (timeline) and selected regions in the **Region list**.

When **Use in playlist** is enabled, the output region from Pitch 'n Time LE will replace the input selection on the timeline. When disabled, the output region will only be added to the region list. If the input selection is set to region list, and use in playlist is enabled, the output regions will replace all instances of the selected input regions throughout the session.

When the input selection spans multiple regions, **Create continuous file** toggles between outputting a single consolidated region and creating individual files for each region when **Create individual files** is selected.

Entire selection and **Region by region** are linked to the previous settings of Create continuous file and Create individual files, respectively.

Multi-input mode enforces strict phase coherency between two tracks of a multi-track selection. Use this mode only when phase coherency is absolutely needed, as it can be detrimental to sound quality when applied incorrectly. **Mono mode** does not enforce phase coherency.

When you first run Pitch 'n Time LE, the **Factory default** preset will be selected, with all controls zeroed. You can use the AudioSuite settings menu and librarian to save custom presets of the plug-in controls. For details about the AudioSuite presets, see the DigiRack Plug-ins guide in the Pro Tools help menu, or download it from digidesign.com.

Using Pitch 'n Time LE with Pro Tools

The Time Trimmer Tool

Pitch 'n Time LE can process changes made using the Pro Tools Time Trimmer tool. From the Pro Tools setup menu, select Preferences/Processing, and set the TC/E (time compression/expansion) Plug-In to **Serato Pitch 'n Time LE**.



To use the Time Trimmer, click+hold on the trim tool button and select the TCE trim tool.



You can now use Pitch 'n Time LE to change the length of a region from within the Pro Tools edit window.

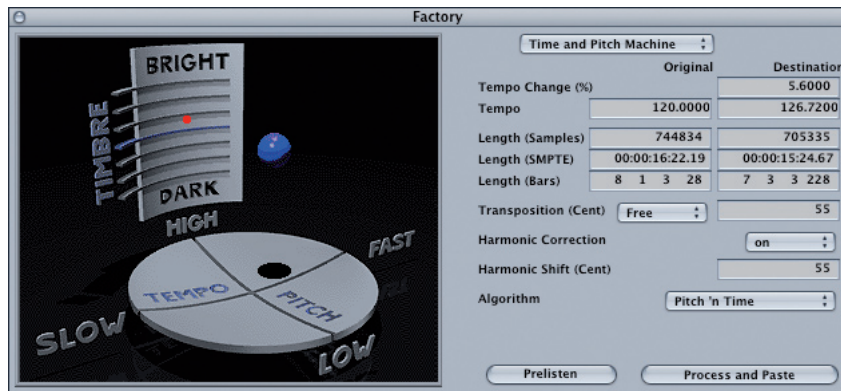


Note: The amount of Time Compression/Expansion available is limited to between 50% and 200% of the original length.

Note: Pro Tools 7.2 is required to use Pitch 'n Time LE with the Time Trimmer Tool.

Using Pitch 'n Time LE with Logic Pro

The Time and Pitch Machine



Pitch 'n Time LE is integrated into Logic Pro via the existing Time and Pitch machine.

To open the Time and Pitch machine, first double click on a region in the Arrange window to bring up the Sample Editor. When the Sample Editor is displayed the entire region is selected by default; if necessary select a smaller length of audio to process. From the Factory menu, select Time and Pitch machine, and then in the Algorithm drop down menu, select **Pitch 'n Time**.

You're now ready to use Pitch 'n Time LE to process your audio.

Changes in tempo can be expressed as either a percentage, **Tempo Change (%)**, or by entering the original and destination BPMs into the relevant **Tempo** fields. The relative change in region length will be reflected in the Destination Length fields below.

The Original and Destination **Lengths** of the region are expressed as; **Samples**, **SMPTE** timecode, and **Bars** and beats.

The Original values reflect the current selection length in the sample editor, and update on the fly as the selection changes, however the fields do not accept values directly.

The Destination Length values default to match the Original length and will track changes made to the selection length, scaled by the values in the Tempo section. Likewise when the Destination Length is changed, the Destination Tempo will be updated.

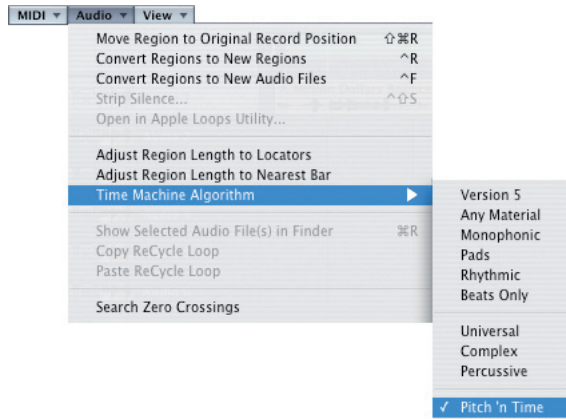
Pitch shifting is accessed using the **Transpose** field, in 1/100 semitone (or **Cent**) units. While the **Harmonic Shift** value will update if **Harmonic Correction** is enabled, Pitch 'n Time LE does not support this feature of the Time and Pitch Machine, and the harmonic makeup of the output will remain unchanged.

To link Pitch and Time parameters (i.e. varispeed mode) select **Classic** rather than **Free** in the transposition drop down menu.

When your parameters are set as required click on **Process and Paste** to produce your output audio.

Using Pitch 'n Time LE with Logic Pro

The Arrange Window



To use Pitch 'n Time LE in the arrange window, bring up the Audio menu and select Pitch 'n Time as the Time Machine Algorithm.

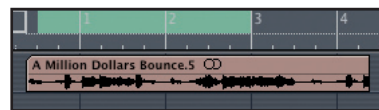
You can now use Pitch 'n Time LE with some existing Logic Pro features.

Note: The amount of time compression/expansion available is limited to between 12% and 800% of the original length.

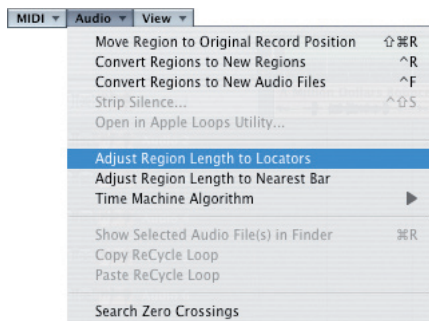
Adjust Region Length to Locators

Pitch 'n Time LE can be used in the arrange window when fitting a region to some locator points.

To do this first set your locators to the desired length, either by typing directly into the locator transport section at the bottom of the screen, or selecting a range on the timeline.

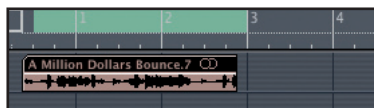


Using Pitch 'n Time LE with Logic Pro



To process the region, select Adjust Region Length to Locators in the Audio menu. Your audio will then be time compressed/expanded to the selected length.

Note: The locators don't have to exactly line up with the region, the length between the locators is the key parameter.



Adjust Region Length to Nearest Bar

Also in the Audio menu, as seen above, this function adjusts the current region's length to the nearest whole bar using time compression/expansion. This is most useful for processing regions that are precisely trimmed to one or many bars but are at a different tempo to the current session.

Appendix A - Pro Tools Shortcuts

Mac Shortcut	Windows Shortcut (if different)	Action
Option-clicking a slider or knob	Alt-clicking a slider or knob	Resets the control to its default value.
Command-dragging a slider or knob	Control-dragging a slider or knob	Moves the control in 'fine' increments.
Pressing tab or shift-tab		When a control value editor is selected, tab will advance from one text entry field to the next, and shift tab moves backwards through the text fields. If the contents of the field have been altered the new value will be accepted by the plug-in.
Pressing return in a text field		Enters the new value into the plug-in and deselects the editor.
Pressing enter in a text field		Enters the new value into the plug-in and leaves the editor active to allow continued editing from the keyboard.