



ELASTIQUE

REAL TIME PITCH SHIFTING

USER MANUAL V1.0

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- Mac: Programm → zplane → elastique pitch manual.pdf

INTRODUCTION

This is the user manual for **ELASTIQUE**, the real time pitch shifting plugin for Pro Tools. It uses the zplane élastique Pro pitch shifting engine which is used by millions of end users around the world to ensure the highest, program independent pitch shifting quality.

The plugin interface has been designed to allow quick and intuitive interaction with all parameters for maximum control.

The key features of **ELASTIQUE** are:

- **multi channel:**
support for synchronous pitching of up to **8** audio channels
- **real time:**
no offline pre-analysis required
- **program independence:**
high pitch shifting quality for all audio types (speech, monophonic instruments, complete mixes, etc.)
- **phase coherence:**
absolute phase stability between all input channels
- **MIDI input:**
for pitch control
- **formant shifting:**
shift formants independently from pitch
- **factory presets:**
for typical film pull-ups/pull-downs

This makes **ELASTIQUE** the optimal pitch shifting plugin for film and video conversion applications, for sound design and for adjusting pitch ranges in recording and rehearsal sessions.

This manual will be installed automatically (if selected) at:

- Windows: Start → Programs → zplane → elastique User Manual

INSTALLATION WINDOWS

- Insert your CD or download the Windows installation binary (*.exe)
- double-click on the binary file
- click next in the installer window
- read the license agreement and if you agree, click next
- follow the instructions of the installer

MAC OS X

- Insert your CD or download the Mac OS installation binary (*.dmg)
- double-click on the downloaded file and run the .mpkg-file which appears
- click continue in the installer window
- read the license agreement and if you agree, click next
- follow the instructions of the installer

REGISTRATION

This plugin is being protected by an iLok USB key. Please make sure you are in the possession of such an USB key before registration.

With your software, you receive a License Code. If you bought the download version, this code has been sent to you via email, if you bought the boxed version, you can find it on a label on the back of the CD jewel case.

You will need three steps to unlock your software:

- Go to ilok.com and log in to your account.

- In this account, navigate to the page “Redeem a License Code” and enter your License Code.
- After entering your License Code successfully, navigate to “Download Licenses” and follow the instructions to download the license to your iLok key.

INTERFACE



1. pitch shift (slider & text field)
2. timbre shift (slider & text field)
3. pitch & timbre Field
4. link switch (links pitch and timbre sliders)
5. input source definition for adjusting formant shifting quality
6. skin – selection of colour scheme
7. preset: factory settings for pitch factor

1. PITCH SHIFT SLIDER

Move up or down to change the pitch of the signal.

Below the slider, the current setting is displayed. The display can be switched between the pitch factor in percent (%)

and the pitch alteration in semi-tones (st) by clicking on the appropriate unit.

To adjust the pitch independently from the timbre, disable the link between pitch and timbre shift factors.

The pitch factor can also be controlled by MIDI note input or the MIDI pitch wheel controller.

2. TIMBRE SHIFT SLIDER

Move left or right to change the timbre – i.e. the formants – of the signal. Right is up (→Mickey Mouse) and left is down (→Darth Vader).

To ensure best shifting quality, select the proper fundamental frequency range with the input button.

On the right hand side of the slider, the current setting is displayed. The display can be switched between the timbre factor in percent (%) and the timbre alteration in semi-tones (st) by clicking on the appropriate unit.

To adjust the timbre independently from pitch, disable the link between pitch and timbre shift factors.

3. PITCH & TIMBRE FIELD

Move the handle (the small circle) to control pitch and formant shift at the same time.

In order to move the handle freely in the field, remember to disable the link between pitch and timbre shift factors.

4. LINK SWITCH

Pitch and timbre factors are linked by default with this switch. That means that the formants are shifted in accordance with the pitch factor. If the link button is activated when pitch and timbre have the

same values (for example when both pitch and timbre equal 100%), then the plugin output is shifted *without* preserving the formats. If the sliders have non-equal values when the button is activated, formants will always be shifted by a constant amount.

When the link is disabled, pitch and timbre can be controlled independently. To preserve the original formants, set the timbre slider to the middle position (100.00% or $\pm 0.00\text{st}$).

When automating both Pitch and Timbre via the host, the link switch automatically will be disabled.

5. INPUT SOURCE DEFINITION

To ensure best timbre shifting quality for different types of input signals, adjust the dominant frequency region of the input signal with this control.

This setting has no impact on the pitch shifting quality, only the formant shifting quality.

6. PRESET

There are applications that require a specific constant pitch factor, for example when the original material has been played back too fast or too slow in the conversion process between different frame rates.

The factory presets cover a typical set of such conversion settings.

HOW TO...?

LOAD THE PLUGIN

Locate elastique under multichannel or mono plug-in → Pitch Shift → elastique pitch plugin and click on it.

CONTROL PITCH BY MIDI INPUT

Route the MIDI input from a keyboard or controller to elastique and play using the following options:

The pitch factor 100.00% ($\pm 0.00\text{st}$) corresponds to a MIDI pitch of 60 (C3). MIDI pitches in the octave below will shift down, higher MIDI pitches will shift up. The shift factor is calculated by the semi-tone distance from pitch C3.

Additionally, you can use the Pitch Wheel controller to smoothly change the pitch factor in a range of ± 2 semi-tones.

RESET SLIDER TO DEFAULT

Alt-Click (Mac) on the control or double-click (Win) on the slider handle.

RESIZE THE INTERFACE

Drag the lower right corner to change the size of the interface. To keep the proportions fixed, hold down the following key while dragging:

Win: CTRL

Mac: CMD

STANDARD TIMBRE SETTINGS

- **No Formant Preservation:**
Activate the link switch when both pitch and timbre have the same value, e.g. 100% (default position). Pitch and timbre factors will now equal each other.
- **Formant Preservation:**
Deactivate the link switch and reset the timbre factor to 100.00% or $\pm 0.00\text{st}$.
- **Formant Shifting:**
Activate the link switch when both pitch and timbre do not have the same

value. Formants will now be shifted by a constant amount.

PITCH SHIFT IN SEMI-TONES

Click on the Percent Unit in the pitch (or timbre) display to show the shift in semi-tones. The decimals represent the pitch shift in cents.

COMPENSATE LATENCY

First, you have to find out the latency introduced by the plugin. To do so, determine the exact latency in samples by Ctrl-Click (PC) or CMD-Click (Mac) on the Vol/Peak/Delay view below the track fader of your elastique track.

Add the *Time Adjuster* plugin to all the other tracks and adjust their delay to fit the pitch shifting latency.

Digidesign gives some detailed instructions on how to do that in [this document](#)¹.

On Pro Tools HD systems, you can also use the automatic delay compensation. In this case make sure that the plugin latency is not higher than the maximum delay that Pro Tools is able to compensate. If it is, increase your hardware buffer size and/or use *Time Adjuster* as described above to compensate for the remaining amount of samples.

Should the required delay be higher than the maximum latency, please insert another instance of time adjuster and set the delay that the sum of the delays in both instances equals the intended delay.

TECHNICAL SPECIFICATIONS

audio formats	1-8 channels (I/O) 32-192kHz sample rate
plugin format	RTAS
parameter ranges	pitch: ± 12 semi-tones = 50-200% timbre: ± 12 semi-tones = 50-200%
plugin latency	150ms @48kHz
min. system	CPU: 2GHz min. OS: Mac OS X >10.4 Windows 2000/XP, Vista Host: Pro Tools >7.4 Dongle: iLok USB Key

FEEDBACK & SUPPORT

Our website www.zplane.de always provides the latest information and news about our products. You can also post in our forum to discuss your impressions, tips and tricks, questions, and feature requests with other users and the zplane team.

Any issues you encounter may either be reported in the forum, or directly to us via post or email. Before contacting us directly, please ensure you are using the latest version of the plugin. Please also make sure that your issue is not covered in the manual, the forum, the faq or elsewhere on our website.

¹http://akmedia.digidesign.com/support/docs/Delay_Comp_PT_Host_Systems_33000.pdf

In your email or letter, please provide the following details to enable us to help you as fast as possible

- your registration information
- your system specifications (hardware, operating system, host software)
- the exact version number of the plugin (see the about dialogue by clicking on ELASTIQUE PITCH (located at the bottom of the plugin interface).
- a detailed description of your problem, including a step-by-step description of what led up to it so we can try to reproduce the issue

Please use the following contact information:

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