PITCH CRAFT™ EZ

PRO-QUALITY VOCAL TUNING & PITCH EFFECTS PLUG-IN
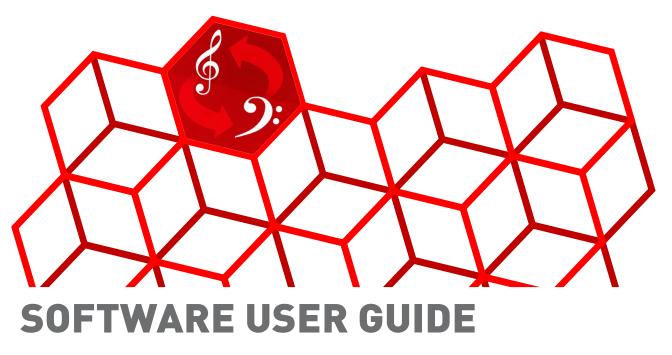
SOFTWARE USER GUIDE

PITCH CRAFT™ EZ

PRO-QUALITY VOCAL TUNING & PITCH EFFECTS PLUG-IN

SOFTWARE USER GUIDE

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Unlimited Complimentary Self Help Options

If you have questions about installing or using your BIAS products, please check the manual or user guide first, and you will find answers to most of your questions there. If you need further assistance, please

check the support section of the BIAS web site, which contains answers to frequently asked questions, troubleshooting tips, and more:

http://www.bias-inc.com/support/

Limited Complimentary Technical Assistance

Ninety days of complimentary technical support assistance for up to three incidents is available with the initial purchase of current Type 1 BIAS products (Peak Pro, Peak Pro XT, Master Perfection Suite, SoundSoap Pro).

Ninety days of complimentary technical support assistance for a single incident is available with the initial purchase of current Type 2 BIAS products (Peak Express, Peak LE, SoundSoap 2, PitchCraft EZ).

The support period begins when the product is initially registered and authorized.

Type 3 products (OEM versions) and legacy products (Deck, Deck LE) are excluded.

An additional thirty days of complimentary technical support assistance for a single incident, beginning on the expiration of the initial ninety days of complimentary support described above, is available with the purchase of paid upgrades to current Type 1 and Type 2 BIAS products.

To receive e-mail or telephone technical support, you will need a valid serial number and must be registered for a current BIAS product. Please keep your original product serial number (located on your original owner's certificate) in a safe place as it will be required for support.

Customers who prefer support by email, use the email form available on our website at:

http://www.bias-inc.com/support/contact.php

Customers who prefer support by telephone, (connect and toll charges apply), please have your computer running and close by the phone and call us at:

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Fee-based Technical Support Options

Fee-based Support is available for those customers whose support period has expired (i.e., all complimentary technical support incidents have been used, or product is no longer a current version) or for Type 3 (OEM version) customers. Please call:

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For product information, sales, and other non-technical customer service, please email or call:

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International: +1-707-782-1866

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BIAS Customer Sales and Service
121 H Street
Petaluma, CA 94952
USA

All features, prices, specifications, and offers are subject to change. Certain features such as the number of simultaneous plug-ins or tracks are dependent on specific versions of BIAS software, along with CPU, operating system requirements and capabilities.

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Credits:

PitchCraft EZ software: Eric Eizenman, Eric Johnson, Guillermo Garcia, Steve Berkley

BIAS Authorization Manager software: Ben Ventura, Dan Spirlock

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User's Guide:

Zac Wheatcroft

Special Thanks to:

Christine Berkley, Jason Davies, Paul Knowles, Dan Spirlock, Ben Ventura, Lisa Stefan, Victor Cebreros, Cory Stück, Jeremy Asuncion, Bill Preder, and our beta testers.

BIAS Product Support:

Unlimited Complimentary Self Help Options

If you have questions about installing or using your BIAS products, please check the manual or user guide first, you will find answers to most of your questions there. If you need further assistance, please check:

http://www.bias-inc.com/support/contact.php

for frequently asked questions, an extensive database of related articles, troubleshooting tips, and more.

Limited Complimentary Technical Assistance

Ninety days of technical support assistance for up to three incidents is available with the initial purchase of Type 1 BIAS products (Peak Pro, Peak Pro XT, Master Perfection Suite, SoundSoap Pro).

Ninety days of technical support assistance for a single incident is available with the initial purchase of Type 2 BIAS products (Peak Express, Peak LE, SoundSoap 2, individual Master Perfection Suite plug-ins, PitchCraft EZ).

Type 3 products (OEM versions) and legacy products (Deck, Deck LE) are excluded.

Thirty days of technical support assistance for a single incident is available with the purchase of paid upgrades to Type 1 and Type 2 BIAS products. The support period begins when the product is initially registered and authorized. To receive e-mail or telephone technical support, you will need a valid serial number and must be registered for a current BIAS product. Please keep your original product serial number in a safe place as it will be required for support. For customers preferring e-mail assistance, please use the email form available on our web site at:

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Or, email:

support@bias-inc.com

For customers preferring telephone assistance, (connect and toll charges apply), please have your computer running and close by the phone and call us at:

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9AM-5PM Monday-Friday PST – excluding BIAS holidays

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US: 1-800-775-BIAS (2427)
International: +1-707-782-1866

9AM-5PM Monday-Friday PST – excluding BIAS holidays

No technical support is available at the numbers or email address above.

Contents

Chapter 1: Introducing PitchCraft EZ

Chapter 2: Installation, Registration, and Authorization

Chapter 3: Using PitchCraft EZ

CHAPTER 1:
INTRODUCING PITCH CRAFT EZ

PitchCraft EZ User Guide

Chapter 1:
<u>Introducing PitchCraft EZ</u>

1

Welcome!

Thank you for purchasing PitchCraft EZ!

This powerful and easy-to-use plug-in is a streamlined edition of BIAS' popular professional-level PitchCraft plug-in. PitchCraft EZ features the same high-quality sound and pitch modification technology, with a simplified interface.

PitchCraft EZ is the perfect tool for those wishing to quickly correct pitch on monophonic vocal and instrumental recordings, or create pitch-based vocal effects such as those used by many of today's popular artists. In addition to these uses, PitchCraft EZ can also be used for voice disguise and creative sound design.

PitchCraft EZ Features

- Powerful, professional audio processing

- Convenience – works with practically any Audio Units, RTAS/AudioSuite, or VST host on Mac and Windows

- Easy-to-use and intuitive user interface

- Formant (cavity size) Modification

- User-selectable Pitch range, Scale, Tuning, Key, and correction time.

- Keyboard display (shows Current Scale)

- Tuning Meter

- Parameter Automation (in Compatible Hosts)

Minimum System Requirements

Systems must meet the minimum requirements of the host application or platform when that is higher than the PitchCraft EZ minimum system requirements stated here.

To use the PitchCraft EZ on a Mac – you will need:

- G4, G5, or Intel-based Mac ($\geq$ 800 MHz)

- Mac OS X v.10.4 or higher

To use PitchCraft EZ on a Windows PC – you will need:

- Intel P3/P4, Athlon w/SSE Instructions ($\geq$ 2 GHz)

- Windows XP Home/Professional with Service Pack 2, or Windows Vista, or Windows 7

Both:

- Compatible Audio Units (Mac only), RTAS/ AudioSuite, or VST host

- 256 MB RAM (512 MB RAM or higher recommended)

- 20 MB available hard disk space

- Color monitor, minimum 1024 x 768 resolution

For the most up-to-date info, please visit:

http://www.bias-inc.com/products/pitchcraftez/

- Chapter 1 introduces you to PitchCraft EZ and explains some of the requirements for using it

- Chapter 2 explains how to install, register, and activate PitchCraft EZ

- Chapter 3 covers each of PitchCraft EZ's controls, and includes step-by-step directions for using it

⚠ *Look for important tips and notes whenever you see this exclamation mark.*

About Your User Guide

PitchCraft EZ is designed to be powerful, yet intuitive. Your User Guide is designed to help you set up and use PitchCraft EZ for processing as quickly and easily as possible.

This User Guide assumes that you are familiar with standard computer operating techniques, including:

- Setting up, starting, and using your computer

- Choosing commands from menus

- Clicking, double-clicking, selecting, shift-selecting, dragging with the mouse, and other common operations

- Opening, copying, saving and deleting files

- Opening, closing, scrolling, moving, re-sizing, and selecting windows

If you don't know how to perform these tasks, please refer to your computer's documentation and spend a little time learning about your computer before going any further. This will make working with PitchCraft EZ much easier and more enjoyable.

The chapters in your PitchCraft EZ User Guide are arranged in the order listed below, and will familiarize you with each plug-in's interface, controls, and parameters - and will give basic getting started tips for using them:

Getting Help with PitchCraft EZ

This User Guide will answer many common questions about each of the plug-in's controls. For additional help on usage and techniques, you may wish to access tutorials, technical support, and FAQs, all available via the BIAS website:
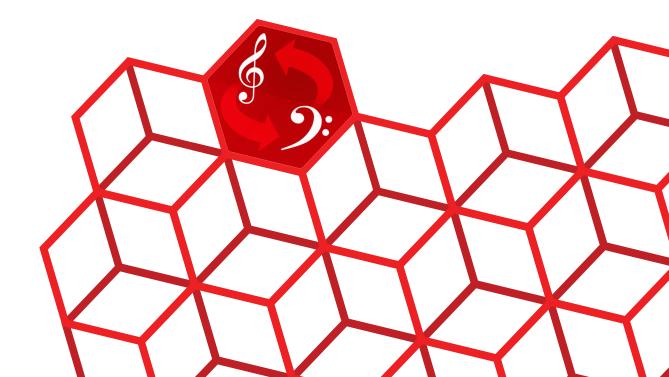
http://www.bias-inc.com

BIAS recommends using these resources before contacting Technical Support. The answers to most common technical questions can be found online. Best of all, using online help resources is free, easy, and available 24 hours a day, 7 days a week, 365 days a year. If you do need to contact Technical Support, please see the BIAS Technical Support Policy on page 5 of this user guide.

Conclusion

Now that you know a little about PitchCraft EZ, proceed to the next chapter to learn how to install your software and get started using it.

CHAPTER 2:
INSTALLATION, REGISTRATION, AND AUTHORIZATION

Chapter 2:
Installation, Registration, and Authorization

2

Installing PitchCraft EZ

PitchCraft EZ's auto-installer software makes installation very easy. The steps below will guide you through the process.

Your complete PitchCraft EZ system consists of:

• CD-ROM installer

• Serial number

• Authorization File

> ⚠ *Before you install PitchCraft EZ, please check the Minimum System Requirements on Page 15.*

To install PitchCraft EZ on a Mac:

1. If you are using any virus protection software, turn it off or temporarily remove it, and restart your Mac.

2. Insert the PitchCraft EZ installer CD-ROM into your CD-ROM drive – when its icon appears on your computer's desktop, double-click the Install PitchCraft EZ icon.

3. When prompted about the Installer package running a program to determine if it can be installed, click the Continue button.

4. When the Installer dialog appears, click the Continue button.

5. Read the Software License Agreement – then click the Continue button to proceed.

6. Click the Agree button if you agree to the terms of the Software License Agreement.

7. Select the hard drive/volume on which you wish to install PitchCraft EZ, and click the Continue button.

8. Click the Install/Upgrade button (depending on the configuration of your user account, you may need to enter your account password. If prompted for your password, enter it and click the OK button. If you do not know your account password, please contact your system administrator for assistance).

9. When the installation is complete, a message will appear indicating that the installation was successful. Click the Close button to quit the Installer. (Don't forget to turn back on any virus-protection software that you may be using the next time you restart the computer).

What PitchCraft EZ installs on Mac systems:

The PitchCraft EZ installer places several files on your computer. The files and install location are described below:

Audio Units Hosts: (Peak, Logic, Digital Performer, etc.)

PitchCraft EZ automatically installs the Audio Units format plug-in into the following directory:

/Mac HD/Library/Audio/Plug-Ins/Components/

RTAS/AudioSuite Hosts (Pro Tools):

PitchCraft EZ automatically installs the RTAS/AudioSuite format plug-in into the following directory:

/Mac HD/Library/Application Support/
Digidesign/Plug-Ins/

VST Hosts: (Peak, Cubase, Nuendo, etc.)

PitchCraft EZ automatically installs the VST format plug-in into the following directory:

/Mac HD/Library/Audio/Plug-Ins/VST/

Documentation

An electronic (PDF format) version of the PitchCraft EZ User's Guide, and a Read Me file with late-breaking information are both installed into:

/Mac HD/Library/Documentation/BIAS/PitchCraft EZ/

> ⚠️ *Check the documentation included with your host application for more information on where it expects plug-ins to reside in order to function properly.*

To install PitchCraft EZ on a Windows PC:

1. If you are using any virus-protection software, turn it off or temporarily remove it, and restart your computer.

2. Insert the PitchCraft EZ Installer CD-ROM in your CD-ROM drive. If the PitchCraft EZ Setup program does not automatically launch, double-click the Install PitchCraft EZ icon.

3. When the InstallShield Wizard for BIAS PitchCraft EZ appears, click the Next button.

4. Read the Software License Agreement, and then click the "I accept the terms in the license agreement" radio button to continue with installation.

5. To install PitchCraft EZ into the default directory (recommended), click the Next button (Vista & Windows 7 users – skip this step).

6. In the Setup Type dialog, choose the Typical option (Vista & Windows 7 users – choose the Complete option), and click the Next button.

7. In the Select Program Folder dialog, click the Next button to continue with installation.

8. In the Ready to Install dialog, click the Next button to continue with installation.

9. When you are finished installing, click Finish to exit the installer.

> ⚠️ *At the end of installation, the Installer program will instruct you to authorize the plug-in – this is described later in this chapter.*

What PitchCraft EZ Installs on Windows Systems:

The PitchCraft EZ installer places several files on your computer. The files and install location are described below:

RTAS/AudioSuite Hosts (Pro Tools):

PitchCraft EZ automatically installs the RTAS/AudioSuite format plug-in into:

\Program Files\Common\Digidesign\DAE\Plug-Ins\

VST Hosts: (Cubase, Nuendo, Sound Forge, Vegas, Sonar, etc.)

PitchCraft EZ installs the VST format plug-in into the VstPlugIns folder of your VST host program.

Documentation

An electronic (PDF format) version of the PitchCraft EZ User Guide, and a Read Me file with late-breaking information are both installed into:

\Program Files\BIAS\BIAS PitchCraft EZ\

If you would like to register and authorize PitchCraft EZ at this point, launch the host program you will use (which is installed into your Applications folder by default), and have your Owner's Certificate handy, and follow the directions in the next section.

! *You must register with BIAS in order to authorize your computer – PitchCraft EZ will not launch unless your computer is authorized to run it.*

The registration/authorization process provides the following services:

- Registers your software with BIAS – making you eligible for technical support and product updates.

- Authorizes your computer so it can run PitchCraft EZ. You may authorize up to two computers for use with PitchCraft EZ – for example, a studio or office computer, and a laptop for home or mobile use.

! *Keep in mind that for each license of PitchCraft EZ – the software may only be used by one user, on one computer system at a time. If you have used both of your authorizations, and need to authorize a new computer, you will need to first de-authorize one of the authorized computers before you are issued a new authorization for the new computer.*

Registration & Authorization

PitchCraft EZ must be authorized to work on your computer. You must register PitchCraft EZ with BIAS in order to authorize it. The registration and authorization process is outlined below.

Serial Number-Based Authorization System

PitchCraft EZ's standard authorization system consists of the following components:

- **BIAS Authorization Manager –** A simple application for managing BIAS software licenses.

- **Serial Number –** Located on Owner's Certificate.

- **Registration Account –** Your registration and authorization information on the BIAS Server.

- **Authorization Request File –** A file transferred from your computer to the BIAS server, that adds the computer you are authorizing to your BIAS Registration Account.

- **Authorization File –** A file transferred from the BIAS server to your computer, which authorizes it to run PitchCraft EZ.

About Registration, Authorization, and Trial Modes:

The first time you attempt to use PitchCraft EZ, you will be prompted to either authorize it or run it in trial mode.

! *If you are not familiar with using plug-ins in your host program, please refer to its documentation.*

For full functionality, authorize it with the included serial number.

Requirements for Registration & Authorization:

1. PitchCraft EZ must be installed.

2. Your serial number must be available. Depending on how you obtained PitchCraft EZ, the serial number will be provided in various ways:

- In New Retail or Upgrade Packages – On the Owner's Certificate

- In Downloaded Purchases – In an email receipt from BIAS

3. A computer with internet access must be available.

Your serial number appears on the Owner's Certificate, included in the PitchCraft EZ package, or on the electronic receipt from a downloadable purchase (not shown here).

To Register & Authorize PitchCraft EZ on a computer with internet access:

1. The first time you attempt to use PitchCraft EZ in your host program, you will be prompted to authorize it or run it in Trial mode. Click the "Authorize" button to continue to the BIAS Authorization Manager – you will need to enter an administrator password to proceed.

2. Select the product you wish to authorize, and enter your serial number and email address.

⚠️ *If you use more than one email address, be sure to make a note of which one you registered with – this will make managing your BIAS Registration Account faster and simpler in the future.*

3. Click the "Authorize" button. PitchCraft EZ is now authorized – click the "Done" button to exit the BIAS Authorization Manager.

⚠️ *If the computer on which you plan to run PitchCraft EZ does not have internet access, you may use another computer to aid in the authorization process – see the following section for directions on how to do so.*

To Register & Authorize PitchCraft EZ on a computer without internet access:

1. The first time you attempt to use PitchCraft EZ in your host program, you will be prompted to authorize it or run it in trial mode. Click the "Authorize" button to continue to the BIAS Authorization Manager – you will need to enter an administrator password to proceed.

2. Select the product you wish to authorize, and enter your serial number and email address.

3. Click the "Alternate Authorization" button.

4. In the Alternate Authorization dialog, click the "Generate Alternate Authorization" button to generate an Authorization Request File.

5. Transfer the Authorization Request File that is generated to a computer with internet access (via LAN, CD-ROM, flash drive, iPod, etc.).

6. After transferring the Authorization Request File to the internet-equipped computer, double-click the Authorization Request File – doing so will automatically open your web browser, transmit the Authorization Request File to the BIAS server, and download your Authorization File to the computer's default download directory.

7. Locate the downloaded folder containing the Authorization File (called "X_BIAS PitchCraft EZ"), and transfer it back to the host computer on which it will be used.

8. In the BIAS Authorization Manager's Alternate Authorization dialog, go directly to the "To Finalize the Alternate Authorization Process" section and click the "Open Authorization File" button.

9. Locate the Authorization File that was transferred back to the host computer in Step 7, and click the "Open" button. PitchCraft EZ is now authorized – click the "Done" button to exit the BIAS Authorization Manager.

If you do not have internet access on any computer, please contact BIAS for assistance at:

US Toll-Free: 1-800-775-2427
International: +1-707-782-1866

The BIAS Authorization Manager can be found in the following location, should you later need to deauthorize or reauthorize PitchCraft EZ:

⚠ **Mac Systems –** *Mac HD/Applications/BIAS Authorization Manager*

Windows Systems – *C:\Program Files\BIAS\BIAS Authorization Manager\BIAS Authorization Manager.exe*

Deauthorizing a Computer

If you need to de-authorize a particular computer that will no longer be used to run PitchCraft EZ, you can do so by following the steps below.
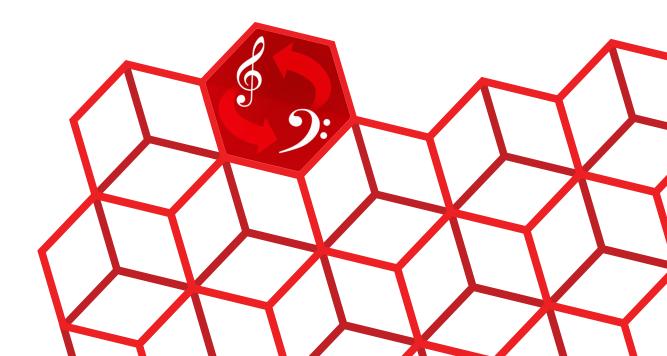

⚠ *The computer running PitchCraft EZ must be connected to the internet in order to deauthorize it.*

To De-Authorize a Computer:

1. Launch the BIAS Authorization Manager from your hard drive (or launch the BIAS Authorization Manager program from your installer CD-ROM).

2. In the BIAS Authorization Manager, select PitchCraft EZ as the product you wish to de-authorize – the serial number and email address used to authorize that product will be automatically recalled and will appear in the Serial Number and Email Address fields.

3. Click the Deauthorize button – a confirmation dialog appears (with a second Deauthorize button).

4. Click the second Deauthorize button to confirm the deauthorization process – the Deauthorization Successful dialog appears.

5. Click the OK button – then click the Done button in the BIAS Authorization Manager.

2

Conclusion

Now that you have installed, registered, and authorized PitchCraft EZ, please proceed to the next chapter to learn about using PitchCraft EZ.

CHAPTER 3:
PITCH CRAFT EZ USER INTERFACE & CONTROLS

PitchCraft EZ User Guide

Chapter 3:
PitchCraft EZ User
Interface & Controls

Introduction

This chapter introduces PitchCraft EZ's user interface and includes step-by-step instructions on how to use it for a variety of pitch processing tasks.

User Interface & Controls

The PitchCraft EZ plug-in is designed to be intuitive and easy to use. This section discusses the graphical user interface and will familiarize you with each of the various controls. The user interface is divided into a number of sections; each with dedicated controls used for pitch transposition and correction.

Global Controls

PitchCraft EZ includes controls for specific tasks along with "global" controls that affect the entire plug-in. Below is a brief description of these "global" tools and how they operate.

Pitch Range Menu

This menu allows you to choose the desired pitch range to use. Using the appropriate pitch range optimizes PitchCraft EZ for certain source types. The plug-in will not detect pitch values outside the bounds specified for a given source. If you hear artifacts in the audio being processed, try a different setting; artifacts may be occur when the source pitch is outside the range selected from the Pitch Range menu.
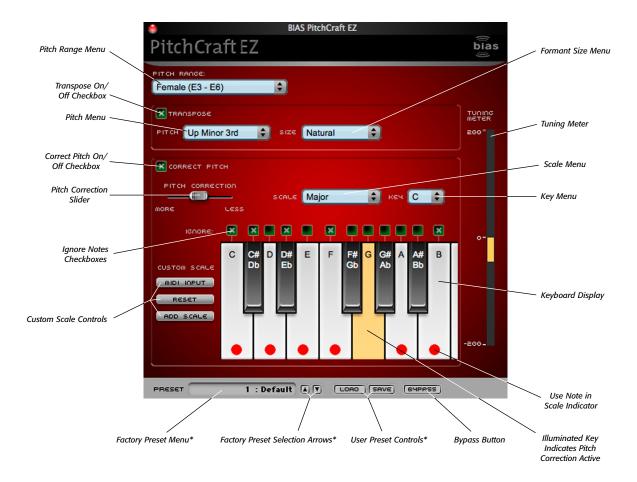
PITCH RANGE:
Female (E3 - E6)

Pitch range options include:

- Normal – D2 (73 Hz) to E6 (1318 Hz)

- Female – E3 (165 Hz) to E6 (1318 Hz)

- Male – D2 (73 Hz) to B4 (494 Hz)

- Lower Register – E0 (20 Hz) to E4 (330 Hz)

- Upper Register – E4 (330 Hz) to D#7 (2500 Hz)

Overview of PitchCraft EZ User Interface

Pitch Range Menu

Transpose On/
Off Checkbox

Pitch Menu

Correct Pitch On/
Off Checkbox

Pitch Correction
Slider

Ignore Notes
Checkboxes

Custom Scale Controls

Formant Size Menu

Tuning Meter

Scale Menu

Key Menu

Keyboard Display

Use Note in
Scale Indicator

Factory Preset Menu*

Factory Preset Selection Arrows*

User Preset Controls*

Bypass Button

Illuminated Key
Indicates Pitch
Correction Active

*Appearance of preset/bypass controls will vary depending on the platform, host, and plug-in format used

Factory Preset Menu

This menu displays the current factory preset. Clicking this menu shows a list of all available factory presets. A factory preset may be selected by choosing it from this menu.

Factory Preset Selection Arrows

These arrows are used to navigate through factory presets. Clicking the down arrow moves to the next available factory preset, and clicking the up arrow moves to the previous factory preset.

> ⚠️ *Appearance of preset/bypass controls will vary depending on the platform, host, and plug-in format used.*

User Preset Save Button

Saves a user preset, which includes the state of all PitchCraft EZ parameters.

User Preset Load Button

Recalls a user preset, includes the state of all PitchCraft EZ parameters. User presets do not appear in the Factory Preset menu; remember the directory used when saving them for easy recall later.

Bypass Button

The Bypass button is used to temporarily disable the plug-in. When the plug-in is bypassed, audio playback is not affected by the plug-in.

Transposition Controls

These parameters control pitch transposition and format modification; independently or in conjunction with pitch correction.

Transpose Checkbox

This checkbox controls whether or not the Transposition controls are active or not. A check indicates Transposition is active.

Pitch Menu

This control allows raising or lowering the pitch value (in cents).

> ⚠️ *When working with vocal sources this control is the equivalent to modifying the length of the vocal cords.*

Formant Size Menu

The Formant Size controls are used to modify vocal characteristics by virtually changing the size of the vocal cavity.

This control raises or lowers the formant value through a tilt of the spectral envelope, stretching the spectrum at the high end, and compressing it at the low end. The formant slider acts as a filter, while the Pitch control performs the usual pitch transposition on the instrument.

> *When working with vocal sources this control is equivalent to modifying the volume of the vocal cavity.*

When the Formant slider is set to "Natural", formants are preserved independently of pitch transposition (known as "formant-corrected pitch transposition").

Pitch Correction Controls

This group of controls is used for correcting problems with the pitch of the reference source being fed into PitchCraft EZ.

Correct Pitch Checkbox

This checkbox controls whether or not the Pitch Correction controls are active or not. A check indicates Pitch Correction is active.

Scale Menu

This menu allows you to choose the desired scale to be used in the pitch correction process. When a scale is chosen in the menu, PitchCraft EZ's keyboard will highlight the notes used in that scale.

The following scales are available:

- Chromatic
- Major
- Minor
- Blues

Key Menu

This menu allows you to choose the root note of the scale selected in the Scale menu.

Options include:

- A
- A#/Bb
- B
- C
- C#/Db
- D
- D#/Eb
- E
- F
- F#/Gb
- G
- G#/Ab

Pitch Correction Time Slider

This control allows you to adjust how much pitch correction is applied – moving the slider toward the "More" position applies more pitch correction, and moving it toward the "Less" position applies less.

Keyboard Controls

The Keyboard controls are used for defining custom notes and scales to be used in the pitch correction process. These controls are described below.
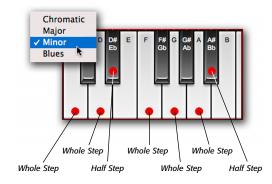
Ignore Note Checkboxes

These checkboxes allow certain notes to be ignored in the pitch correction process, even when they are present in the scale being used. The presence of a check in an Ignore checkbox means that the note represented by the key that appears directly below it in the interface will be ignored. The absence of a check means the note will be used in the pitch correction process.

Keyboard Display

The virtual keyboard is used to display the active notes being used in the pitch correction process, and can also be used to define a custom scale for pitch correction.

Use Note in Scale Indicators

The Use Note in Scale indicators appear as red dots superimposed over keys in the Keyboard display. Scales can be created or modified using any MIDI device, such as Peak's MIDI keyboard window, or an external hardware MIDI controller/keyboard. Any MIDI "Note On" message from a controller or sequence is added to the current scale, if the note is already part of the current scale, the "Note On" message will remove it from the current scale.

When a Use Note in Scale indicator appears over a key, that key's note is detected and its pitch is corrected. When an indicator does not appear over a key, that note is not part of the current scale. When a key illuminates

in yellow, it indicates that pitch correction is being applied to that note.

Custom Scale Controls

These controls allow the creation of a custom scale to be used for pitch correction. Custom scales are automatically saved into the Scale menu.

> ⚠️ *Saving a custom scale as a preset allows using it in a future session. Custom scales saved into the Scale menu are available only during the current instantiation.*

MIDI Input Button

Clicking the MIDI Input button allows PitchCraft EZ to receive MIDI input for defining scales.

Reset Button

Clicking the Reset button clears current custom scale information, and resets the scale to that selected in the Key menu.

Add Scale Button

Clicking the Add Scale button adds the currently defined custom scale to the Scale menu.

Current Scale Display

The current scale is displayed by appropriately placed Use Note in Scale indicators over the keys/notes in the active scale.

Tuning Meter

The Tuning meter appears vertically along the right side of the interface, and displays the current amount of tuning taking place. The divisions along the Tuning meter's scale is marked at 200-cent intervals, with the maximum tuning amount of 200 cents at the top of the scale, zero cents in the middle, and -200 cents at the bottom.

⚠️ *100 cents equals 1 half-step (e.g. C-C#), 200 equals a whole step (e.g. C-D)*

Parameter Automation

PitchCraft EZ's various controls may be automated (i.e. applied dynamically) within hosts that support parameter automation. For more information, please consult your host's documentation on how to automate parameters.

Using PitchCraft EZ

This section includes step-by-step direction for accomplishing common pitch modification tasks.

To Define a Scale:

• Choose the desired Scale Preset from the Scale menu.

To Define a Custom Scale:

1a. Click the desired keys in PitchCraft EZ's virtual keyboard – clicking a key toggles the Use Note in Scale indicators into the On or Off position.

Or:

1b. Click the MIDI Input button, and press the keys of a MIDI input device (such as BIAS Peak's virtual MIDI keyboard, or a connected MIDI keyboard) – the MIDI Note On messages toggle the Use Note in Scale indicators into the On or Off position.

2. When you have finished defining your custom scale, click the Add Scale button, and enter a preset name – the custom scale is added to the Scale menu as a preset, and becomes active.

⚠️ *Note that custom scales that are added to the Scale menu are available only during the current instantiation of PitchCraft EZ. In order to use the same custom scale in a future session, be sure to save a PitchCraft EZ preset.*

To Correct Pitch:

1. Select the appropriate pitch range for the reference source, using the Pitch Range menu.

2. Enable the Correct Pitch section, by checking the Correct Pitch checkbox.

3. Define a scale or set of notes using the Scale, Key, and Keyboard controls.

4. Play the audio source. As audio is fed into the plug-in and is analyzed, PitchCraft EZ determines which note in the current scale is "incorrect" and applies the appropriate amount of pitch correction to the input source, to match the note in the scale.

The Transpose and Correct Pitch sections may be enabled simultaneously, with transposition and formant modification being performed in parallel with pitch correction.

PitchCraft EZ is designed for monophonic, harmonic sources and it will not work on polyphonic material – such as drums, cymbals, or mixes consisting of several instruments/voices. Please keep in mind that material with excessive reverb or background noise is not considered monophonic. It is advised that you clean up the audio signal as much as possible before processing it.

PitchCraft EZ may produce interesting creative effects when used with polyphonic audio material, but keep in mind this is an algorithm carefully designed for transparent processing of monophonic sounds. For best results, the narrowest pitch range should be selected to match the input source's pitch range.

To Transpose Pitch and/or Formant:

1. Select the appropriate pitch range for the reference source, using the Pitch Range menu.

2. Enable the Transpose section of the interface, by checking the Transpose checkbox.

3. Choose settings from the Pitch and/or Formant menus until the desired effect is achieved.

Voice Modification Using the Pitch & Formant Controls

The Pitch and Formant controls can produce very interesting special effects, especially when the source is a recording of a human voice. When using these controls for modifying a human voice, the following guidelines may be useful:

- Transposing pitch upward is the equivalent of shortening vocal cords

- Transposing pitch downward is the equivalent of lengthening vocal cords

- Shifting formants upward is the equivalent of reducing the size of the vocal cavity

- Shifting formants downward is the equivalent of enlarging the size of the vocal cavity

Some examples of voice modification possibilities are listed below:

To Transform a Female Voice into a Male Voice:

1. Using the Pitch menu, transpose pitch downward substantially.

2. Select a value from the Formant menu until a natural sound is achieved, (which usually occurs when the Formant value is slightly smaller than the Pitch value).

To Transform a Male Voice into a Female Voice:

1. Using the Pitch menu, transpose pitch upward.

2. Select a value from the Formant menu until a natural sound is achieved, (which usually occurs when the Formant value is slightly smaller than the Pitch value).

To Transform an Adult's Voice into a Child's Voice:

- Raise the Formant value – notice how "age" decreases as the formant value increases.

To Transform a Child's Voice into an Adult's Voice:

- Lower the Formant value – notice how "age" increases as the formant value decreases.

To Transform a Human Voice into an "Alien" Voice:

1. Raise the Pitch value all the way (i.e., by choosing "Up Octave" from the Pitch Menu).

2. Lower the Formant value all the way (i.e., by choosing "Down Octave" from the Pitch Menu).

To Disguise a Human Voice:

1. Lower the Formant value slightly.

2. Adjust Pitch value to suit level of voice disguise.

To Create Special Vocal Effects Used by Many of Today's Popular Artists:

1. Set the Speed pitch correction all the way towards the "More" position for maximum effect.

2. Set the scale and the pitch range properly for best results (i.e. the selected scale should match the intended scale of the melody).

⚠️ *Note that longer phrases with sustained notes that rise and fall to a specific pitch work best to create this effect – short phrases with many syllables may also work to a limited degree.*

Conclusion

You should now be familiar with PitchCraft EZ's various controls, and its basic workflow. We hope you enjoy using PitchCraft EZ for many audio projects!