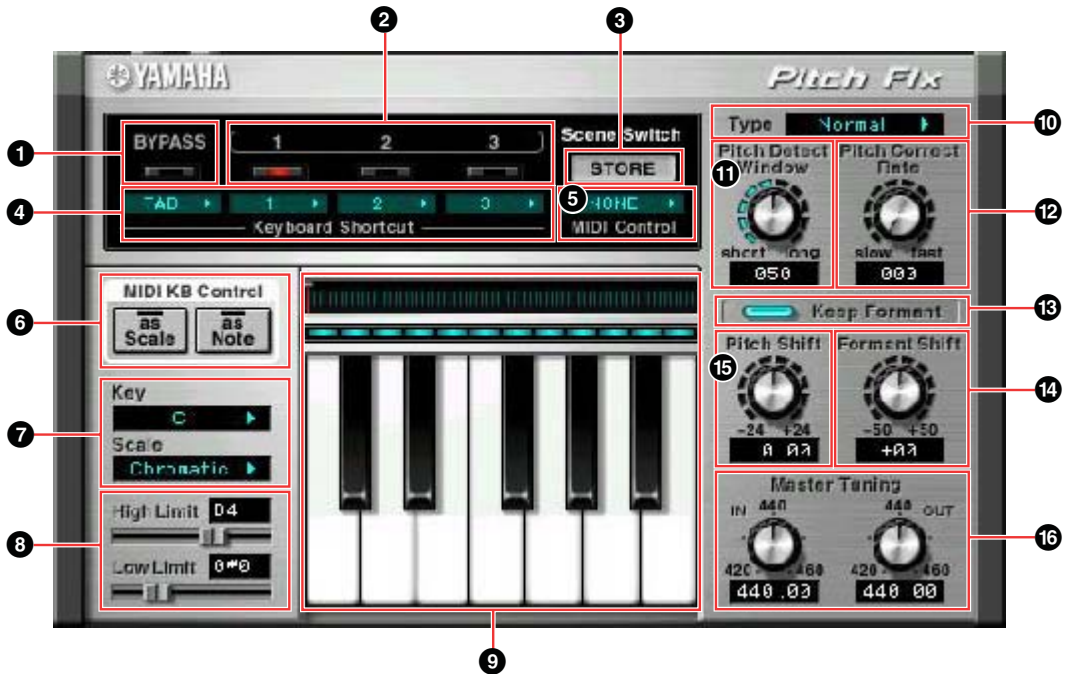


Pitch Fix

Owner's Manual



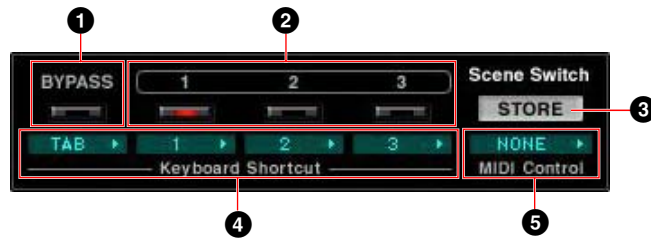
Pitch Fix is a plug-in effect that lets you change the pitch of a vocal part. You can use it to change the pitch of a vocal and create accurate harmonies of the main vocal. You can also change the vocal quality or character. Pitch Fix can only be used on solo vocals and mono audio files.



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Controls and Parameters



1 [BYPASS] button

Turn this on to hear the original, unprocessed sound.

2 Scene [1] - [3] switches

For storing preset Pitch Fix settings. Click on one of the buttons to call up the corresponding Scene (1 - 3).

3 [STORE] button

Click this button to store your custom settings to a Scene. The Scene buttons [1] - [3] flash when this is clicked; click the appropriate button to store the settings.

4 Keyboard Shortcut

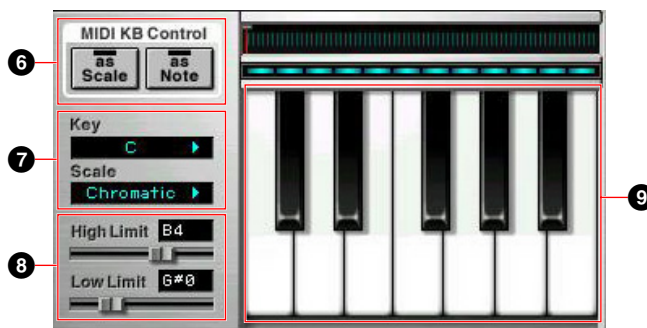
This allows you to assign keyboard shortcuts to the [BYPASS] button and Scene switches. Click on the button below the appropriate switch, then select the desired key for the shortcut from the popup menu.

5 MIDI Control

This allows you to operate the [BYPASS] button and Scene switches by MIDI control change messages. Click this, then select the desired control change number to use for the corresponding function from the popup menu. The available control change numbers for switching each function on/off are shown in the chart at right.

Control change number	Scene
1 - 31	BYPASS
32 - 63	Scene 1
64 - 95	Scene 2
96 - 127	Scene 3

NOTE Create a separate MIDI track in your song data, assign it to the Pitch Fix plug-in and record only control change messages in the track.



6 Control Mode selection button

Select the method of pitch correction/shift from the three ways below.

• Scale Mode

Turn on the [as Scale] button. Specify the scale via received MIDI notes to adjust the pitch. For example, if you play a chord on a connected MIDI keyboard, the pitch is shifted by the notes included in the chord. Or you can have the pitch change according to a scale of notes recorded to a MIDI track assigned to Pitch Fix.

• Note Mode

Turn on the [as Note] button. The pitch is changed according to the received MIDI note. Or you can have the pitch change according to notes recorded to a MIDI track assigned to Pitch Fix.

• Panel Mode

Make sure both the [as Scale] and [as Note] buttons are off. This lets you adjust the pitch by specifying a scale (with the Key and Scale parameters) or from the keyboard on the panel.

7 Key/Scale

This is effective only when the Panel Mode is active. The pitch is changed according to the key and scale set here.

8 High/Low Limit

These parameters let you determine the range of the pitch change (to avoid unnatural or undesirable changes).

9 Keyboard

When the Panel Mode is active, click on the desired note for pitch change. The keys on the keyboard light to indicate the adjusted pitches during playback. You can check how much the pitch has been changed by the bar meter above the keyboard.

10 Type

Set this to an appropriate value to maximize the accuracy of the pitch change of the original signal. Generally, this should be set to Normal; however, for low vocals, set this to Male, and for high vocals, set it to Female.

11 Pitch Detect Window dial

This determines the time resolution for pitch change. The shorter the setting, the more quickly the pitch change is recognized. The longer the setting, the more slowly pitch changes are made, resulting in more abrupt, step-like pitch changes.

12 Pitch Correct Rate dial

This determines the speed resolution for pitch change. The faster the setting, the more quickly the pitch is changed, increasing the apparent effectiveness of the pitch change function. When this is set to "000," there is no pitch change.

13 [Keep Formant] button

When this is turned on, the vocal quality (character) is maintained even when pitch is changed. When it is set to off, the vocal quality becomes higher when the pitch is raised, and becomes lower when the pitch is lowered.

14 Formant Shift dial

This determines the vocal quality (character) of the pitch-adjusted signal. Positive (+) values result in a higher voice quality and negative (-) values result in a lower voice quality.

NOTE With regard to the Formant parameters, vocal "quality" refers to the character of the vocal signal, and has no relation to whether the voice sounds good or poor in a subjective or aesthetic sense.

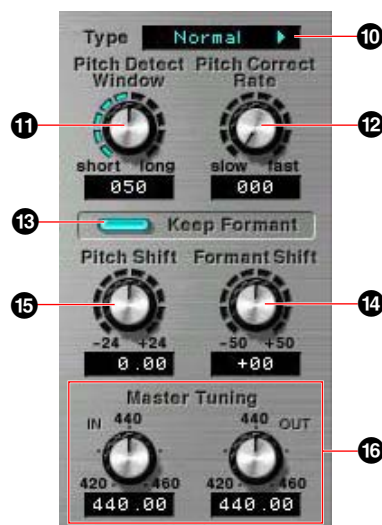
15 Pitch Shift dial

This determines the octave setting of the pitch-adjusted signal. The range is from -2 to 2 octaves. For coarse changes (in semitones or halfsteps), drag the dial. For fine changes, hold SHIFT on the computer keyboard and drag. To enter values directly, double-click on the value box, input the value, and press ENTER.

16 Master Tuning IN/OUT dials

These determine the basic pitch (expressed as a frequency) of the sound before (IN) and after (OUT) pitch processing. For coarse changes, drag the dial. For fine changes, hold SHIFT on the computer keyboard and drag. To enter values directly, double-click on the value box, input the value, and press ENTER.

NOTE The Master Tuning OUT setting is unaffected by the Bypass function.



Pitch Fix — Operation

- 1 Select Pitch Fix as an effect for the vocal track, and call up the Pitch Fix window. For details on selecting effects, refer to the documentation of your particular sequencer or host application.
- 2 Increase the amount of pitch correction by turning the Pitch Correct Rate dial clockwise. This lets you auto-correct the vocal to the pitch of the nearest note.

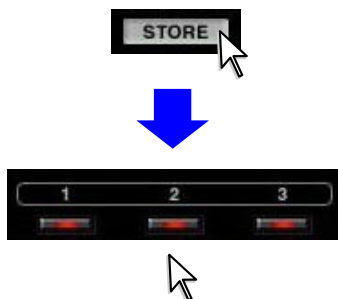


NOTE If you know which notes are not part of the vocal recording, set these unused notes to off by clicking the appropriate keys in the panel keyboard or changing the Control Mode setting. (For details on the Control Mode, see page 2.)

- 3 Make Tuning and Formant settings while playing back the vocal. (Refer to the Controls and Parameters section for details.)
 - If you want to temporarily check how pitch change would sound for a certain key, click the key while holding [Alt] in Windows ([option] on the Macintosh) during playback.
 - If you want to keep the pitch at a certain key (or if you want to clear the current settings and start setting from scratch), click the desired key while holding [Ctrl].

Use the [BYPASS] button while changing settings to compare the unprocessed sound with the pitch-adjusted sound. This also lets you see the setting changes on the panel.

- 4 Adjust the amount of pitch correction with the Pitch Detect Window and Pitch Correct Rate dials. Generally, setting these dials to the right will result in clear pitch changes—ideal for when you want to make definite pitch changes in a specific section of a vocal. Setting these dials to the left results in more smooth and less obvious pitch correction—ideal for subtly adjusting the pitch of an entire performance.
- 5 Save the settings if desired. Click the [STORE] button, then click the appropriate Scene button [1] - [3].



NOTE To recall a saved Scene, simply click the appropriate button [1] - [3].

Host application settings when controlling Pitch Fix via MIDI

Pitch Fix can be controlled by MIDI data recorded to tracks in the host application. This data can be used to change the pitch of vocal parts and select specific scenes within Pitch Fix.

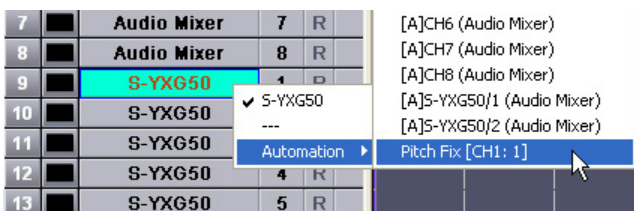
The actual methods for controlling Pitch Fix via MIDI differ depending on the particular host application. Here, we'll describe the settings for the major host applications, SQ01, Cubase and Logic.

SQ01 (version 2 or higher)

- 1 Open the Audio Mixer window.
- 2 From the effect panel of the channel you wish to process with Pitch Fix, select [VST] → [YAMAHA] → [Pitch Fix].
Pitch Fix is automatically set as an insertion effect.



- 3 Click the [Port] column of the appropriate MIDI track (the one containing the data for controlling Pitch Fix). Select [Automation] → [Pitch Fix] from the pop-up menu.



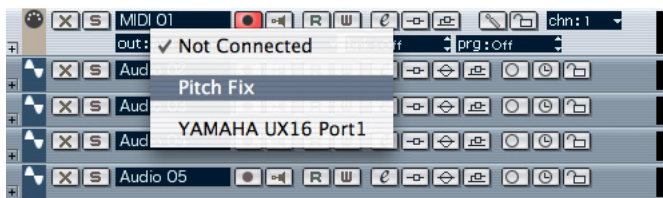
This allows the specified MIDI track to control the Pitch Fix effect.

Cubase

- 1 Open the Mixer window.
- 2 Open the VST Channel window for the audio channel to which Pitch Fix is to be applied, then select [YAMAHA] → [Pitch Fix] in the Insert Effect section.



- 3 Click on the [out] box for the appropriate MIDI track (the one containing the data for controlling Pitch Fix). Select [Pitch Fix] from the pop-up menu.



This allows the specified MIDI track to control the Pitch Fix effect.

Logic Gold/Platinum (version 5.5 or higher)

- 1 Start the Audio mixer.
- 2 For the audio instrument channel, select [I/O] → [Mono] → [VST] → [YAMAHA] → [Pitch Fix]. If you are using Mac OS X, select [I/O] → [MONO] → [Audio Units] → [YAMAHA] → [Pitch Fix].

The Pitch Fix window is shown.



For Mac OS X.



- 3 Click [Side Chain] in the Pitch Fix window. Select the appropriate audio track (the one you wish to process with Pitch Fix) from the pop-up menu that appears.



This applies the Pitch Fix effect to the audio track selected for the Side Chain. If both the processed signal and the original, unprocessed signal sound together, turn down the fader in the audio mixer so that only the Pitch Fix processed sound is heard.

- NOTE** Pitch Fix cannot be controlled via MIDI when it is selected from the Insert slot of an audio channel not included in the audio instrument channels (in Step 2 above).
- NOTE** When selecting Pitch Fix (in Step 2 above) from the Insert slot of an audio instrument channel, Pitch Fix cannot be controlled via MIDI nor can the Side Chain be used.

Troubleshooting

I can't hear any pitch change.

- Make sure that Pitch Correct Rate is NOT set to "000."
- Make sure that the [BYPASS] button is off.

The input sound is not recognized.

- When the input voice is high, set the Type to Female; when it is low, set Type to Male.
- You can increase the accuracy of the recognition by using the Master Tuning IN dial. Turn it to the right for relatively high vocals and turn it to the left for low vocals.

Pitch correction doesn't sound right.

- Specify a shorter section to be pitch-corrected and save the settings to one of the Scene switches. When playing back the song, enable the relevant Scene switch(es) when the appropriate section of the vocal plays.
- In some cases, pitch correction may sound unnatural—especially for parts sung with vibrato. To make the pitch-corrected vocal sound more natural and subtle, set Pitch Detect Window to a relatively short value and set Pitch Correct Rate to a relatively slow value.

How can I change the vocal quality after pitch correction?

- Use the [Keep Formant] button and the Formant Shift dial. (See page 3.)

The sound routed through Pitch Fix is delayed.

- Check any settings related to delay correction (such as offset, latency, etc.) in the VST-related settings of the host application. Refer to the documentation of your particular software.

I want to use Pitch Fix on stereo material.

- Pitch Fix can only be used on mono audio. If you use it on a stereo signal, only the left channel is processed. First, use an audio editor to convert the stereo file you intend to use into mono, then apply Pitch Fix to the file.

I want to use pitch bend with the audio.

- You can apply pitch bend to the audio, either with pitch bend data from an external MIDI device, or by inputting pitch bend data in a MIDI track assigned to Pitch Fix. The pitch bend range is fixed at 2 and cannot be changed. It also is effective regardless of the Control mode.