



AUTO-TUNE[®] HYBRID

USER GUIDE

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Introducing Auto-Tune Hybrid

What is Auto-Tune Hybrid

Auto-Tune Hybrid is the ultimate real-time tuning solution for Pro Tools and Avid DSP hardware, including Carbon interfaces, HDX systems, and VENUE | S6L live sound systems. It delivers the professional quality of Auto-Tune pitch correction and vocal effects, optimized for lightning-fast, DSP-powered performance, and also works on native Pro Tools systems.

How Does Auto-Tune Correct Pitch?

Auto-Tune works by continuously tracking the pitch of an input sound and comparing it to a user-defined scale. The scale tone closest to the input is continuously identified. If the input pitch exactly matches the scale tone, no correction is applied. If the input pitch varies from the desired scale tone, Auto-Tune will adjust the pitch toward the target scale tone.

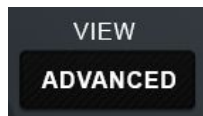
What Type of Audio is Appropriate for Auto-Tune?

Auto-Tune is intended for use with a well-isolated, monophonic sound source such as a single voice, or a single instrument playing one pitch at a time. It is not intended for multiple voices or instruments recorded onto the same track, or single instruments that are playing multiple pitches at the same time.

Noise content, or extreme breathiness in vocal performance can sometimes lead to tracking errors. However, this can often be remedied by adjusting the [Tracking](#) control.

General Controls

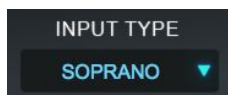
Advanced



The Advanced button toggles between Basic View, which shows only the most commonly used controls, and Advanced View, which shows all available controls, including the Edit Scale Display, and the MIDI and Create Vibrato features.

Switching back to Basic View from Advanced View will hide the advanced controls, but will not disable them. You will still hear the results of your Advanced View settings when you return to Basic View.

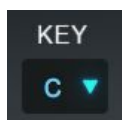
Input Type



Auto-Tune Hybrid offers a selection of algorithms optimized for different types of audio. Options include : Soprano, Alto/Tenor, Low Male, and Instrument.

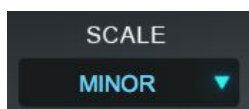
For more accurate pitch detection and correction, choose the Input Type that best describes your audio.

Key



The Key menu allows you to select the key of the track you plan to process. The Key setting is used in combination with the Scale setting to determine the set of notes that the audio will be tuned to.

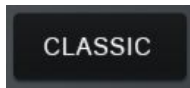
Scale



The Scale selection is used in combination with the Key selection to define the scale of the track you plan to process.

If you're not certain of the scale or key of your track, try using [Auto-Key](#). Another option is to set the Scale parameter to Chromatic, which will cause Auto-Tune Hybrid to always tune to the closest pitch in the 12-tone chromatic scale.

Classic Mode



Classic Mode is the long-awaited return of the classic “Auto-Tune 5 sound.”

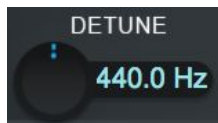
As we’ve added new features to Auto-Tune (such as Formant Correction, Throat Modeling, and Flex-Tune) the Auto-Tune algorithm has evolved, and its sonic qualities have undergone subtle changes, with each Auto-Tune version having its own slightly different character.

Over the years, the sound of Auto-Tune 5 has developed a strong following among musicians, audio engineers and producers. Due to popular demand, we’ve made the Auto-Tune 5 sound available in Auto-Tune Hybrid via the new Classic Mode.

The difference between Classic Mode and the default sound of Auto-Tune Hybrid is subtle, but if you listen carefully, you may notice a slightly brighter quality, and a more pronounced attack and transition between notes at faster Retune Speeds.

Flex-Tune is disabled when Classic Mode is on.

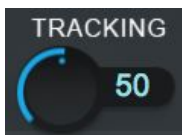
Detune



The Detune parameter allows you to change the pitch reference of Auto-Tune Hybrid from the default A = 440Hz. This is useful when working with an instrument or track that’s tuned to a different reference frequency.

Values can be displayed in Cents or Hertz (you can specify this in the Settings Menu). The range of adjustment is -100 cents to +100 cents.

Tracking



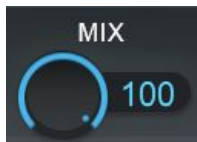
In order to accurately identify the pitch of the input, Auto-Tune Hybrid requires a periodically repeating waveform, characteristic of a solo voice or solo, non-chordal instrument.

The Tracking control determines how much variation is allowed in the waveform for Auto-Tune Hybrid to still consider it periodic.

In most cases, the Tracking should be left at its default value of 50. A noisier signal or a vocal performance that is unusually breathy may require a more 'relaxed' setting (higher Tracking value).

If you're hearing artifacts such as clicks or pops, try setting the Tracking to a 'choosier' setting (lower Tracking value).

Mix



The Mix control allows you to mix in the “dry” unprocessed audio of your track with the processed output Auto-Tune Hybrid. When mix is set to 100%, only the processed signal is present in the output.

Basic View Controls



Auto-Tune Hybrid features two different interface views: Basic View, which shows you only the most commonly used controls, and the more in-depth Advanced View, which includes all of the available controls.

This chapter will cover the controls that are visible in Basic view.

Retune Speed



Retune Speed controls how rapidly the pitch correction is applied to the incoming audio. The units are milliseconds. A zero setting will cause immediate changes from one pitch to another, and will completely suppress any vibrato or deviations in pitch.

For the Auto-Tune Effect, set the Retune Speed to zero. A setting between 10 and 50 is typical for more natural sounding pitch

correction. Larger values allow through more vibrato and other interpretive pitch gestures, but slow down how rapidly corrections are made.

Flex-Tune



The Flex-Tune control allows you to preserve a singer's expressive vocal gestures, while still applying the corrective tuning that Auto-Tune is famous for.

When Flex-Tune is set to zero, Auto-Tune Hybrid is always pulling every note toward a target scale note. When Flex-Tune is engaged, it only applies correction as the performer approaches the target note.

As you move the control toward higher values, the correction area around the scale note gets smaller, and more expressive pitch variation is allowed through.

Humanize



The Humanize control allows you to add realism to sustained notes when using fast retune speeds.

One situation that can be problematic for pitch correction is a performance that includes both short and long sustained notes. In order to get the short notes in tune, you would need to set a fast Retune Speed, but this can cause sustained notes to sound unnaturally static.

Humanize applies a slower Retune Speed only during the sustained portion of longer notes, making the overall performance sound both in tune and natural.

Start by setting Humanize to zero, and adjust the Retune Speed until the shortest problem notes in the performance are in tune. If sustained notes sound unnaturally static, increase the Humanize setting until they sound more natural.

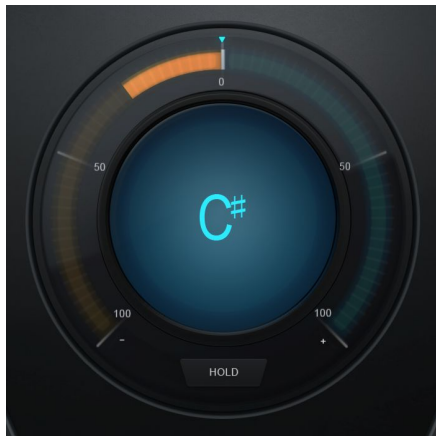


Natural Vibrato

The Natural Vibrato control allows you to either increase or diminish the range of vibrato that is already present in your audio

If you want to create new vibrato where it doesn't already exist, use the [Create Vibrato](#) controls in Advanced View.

Pitch Display and Pitch Change Meter



Pitch Display

The Pitch Display shows you the letter name of the pitch that Auto-Tune Hybrid is currently outputting (e.g. C# or Bb).

This may be different than the pitch that it is detecting, if the detected pitch is not part of the current scale.

To see the pitch that is currently being detected in the incoming audio, look at the blue highlighted note in the Keyboard.

Pitch Change Meter

The Pitch Change Meter (which wraps around the Pitch Display) shows you how much the pitch is being changed, measured in cents.

For example, if the blue indicator bar has moved to the left to -50, it indicates that the input pitch is 50 cents too sharp and Auto-Tune is lowering the pitch by 50 cents to bring the input back to the desired pitch.

Hold

Clicking and holding the word "Hold" while Auto-Tune is processing audio will freeze both the Pitch Display and the blue detected pitch indication on the keyboard for as long as you hold down the mouse button.

The Keyboard



The Keyboard displays the currently detected pitch in real time, and also allows you to specify the target-note behavior for each note in specific octaves.

During playback, the detected pitch will be highlighted in blue on the Keyboard. You can also use the Keyboard to set individual notes to On, Bypass, or Remove.

The Keyboard is only enabled when using scales that have exactly 12 notes. If you want to use the Keyboard with the Major or Minor scale, choose the Chromatic scale and then click Set Major or Set Minor (in Advanced View).

On



When a note on the Keyboard is on, it will appear white or black (depending on which note it is), and input pitches that are closest to that note will be tuned to it.

Bypass



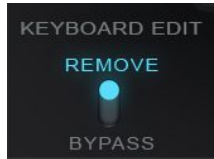
When a note on the Keyboard is set to Bypass it will appear orange, and input pitches that are closest to that note will be passed through with no correction.

Remove



When a note on the Keyboard is set to Remove, it will appear grey, and any incoming pitches that are closest to that note will be tuned to the next closest scale note instead.

Keyboard Edit



When the Keyboard Edit switch is set to Remove, clicking on a key in the Keyboard will toggle it between Remove and On. When it's set to Bypass, clicking on a key will toggle it between Bypass and On.

Keyboard Mode



When the Keyboard Mode switch is set to Latch, clicking on a key in the Keyboard will change its state, and it will retain the new state.

When Keyboard Mode is set to Momentary, clicking on a key will change its state only for as long as the mouse button is held down. This is useful, for example, if you want to perform a melody on the Keyboard in real time.

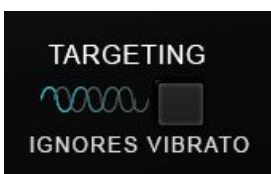
Advanced View Controls



Auto-Tune Hybrid features two different interface views: Basic View, which shows you only the most commonly used controls, and Advanced View, which includes all of the available controls.

This chapter will cover the controls that are only visible in Advanced view.

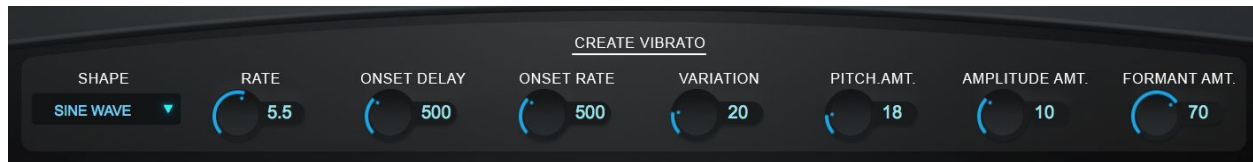
Targeting Ignores Vibrato



The Targeting Ignores Vibrato function is designed to help Auto-Tune identify pitches correctly when a performance includes vibrato so wide that it approaches adjacent notes.

If you hear a rapid alternation between two notes when you want to be hearing a single note with a wide vibrato, try turning this on.

Create Vibrato Controls



The Create Vibrato controls allow you to add a custom synthesized vibrato to your audio. Use them sparingly to add a touch of natural-sounding expression to a performance or more aggressively for dramatic special effects.

Shape



The Shape menu allows you to choose the shape of the pitch modulation for your vibrato.

The choices are:

No Vibrato

Leave the Shape menu set to No Vibrato if you don't want to create any vibrato.

Sine Wave

A sine wave changes smoothly from minimum to maximum and back again. This is the best choice for natural-sounding vibrato.

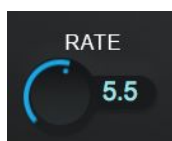
Square

Jumps to maximum where it spends half of the cycle and then jumps to minimum for the remaining half of the cycle.

Sawtooth

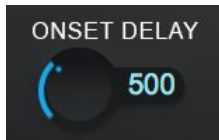
Gradually rises from minimum to maximum and then drops instantaneously to minimum to start the cycle again.

Rate



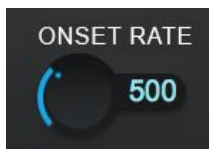
The Rate control sets the speed of the vibrato in Hz.

Onset Delay



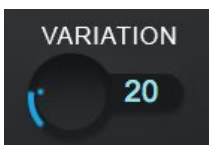
Onset Delay sets the amount of time (in milliseconds) between the beginning of a note and the onset of vibrato.

Onset Rate



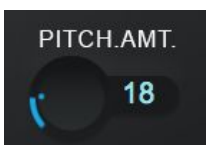
Onset Rate sets the amount of time (in milliseconds) between the onset of vibrato and the point at which the vibrato reaches the full amounts set in the Pitch, Amplitude and Formant Amount settings.

Variation



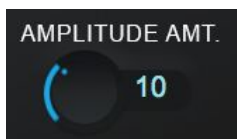
Variation sets the amount of random variation that will be applied to the Rate and Amount parameters on a note to note basis. This is useful for humanizing the vibrato by adding random deviation.

Pitch Amount



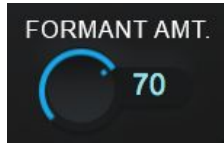
Pitch Amount sets the width of the vibrato in cents.

Amplitude Amount



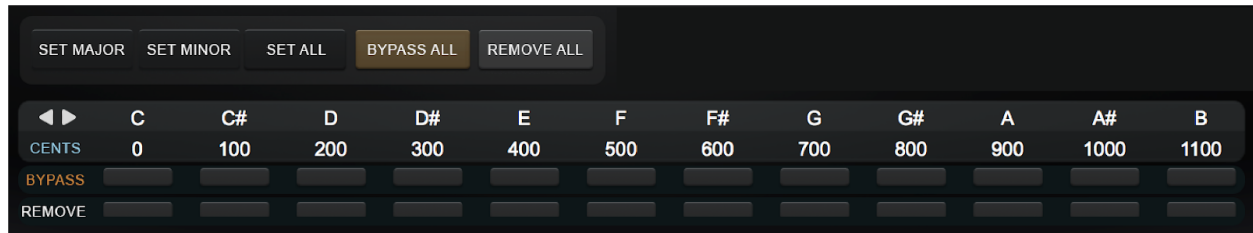
Amplitude Amount sets the amount that the loudness changes. For more realistic vibrato, the amount of amplitude change should usually be substantially less than pitch change.

Formant Amount



Formant Amount sets the amount of formant variation in the vibrato. A sound's formants are the resonant frequencies that result from the physical structure of whatever is producing the sound (e.g. the human mouth and vocal tract).

The Edit Scale Display

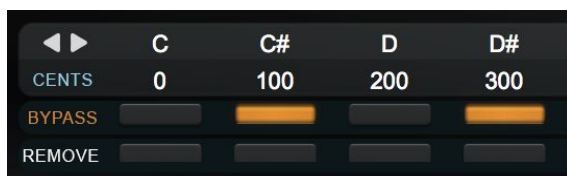


The Edit Scale Display is used to create custom scales or to modify any of the preset scales selected in the Scale menu. It shows each of the notes of the currently selected scale, along with a Bypass and Remove button for each note (explained below).

Each scale retains its own edits independent of the other scales. For example, if you select C Major in the Key and Scale menus and Remove or Bypass certain notes, and then change to C Minor and make other edits, when you return to C Major your previous edits associated with C Major will be restored.

Changes made in the Edit Scale Display affect all octaves of each note in the scale, and will also be displayed on the Keyboard (in 12-note scales only). Changes made on the Keyboard only affect that specific octave, and will not be reflected in the Edit Scale Display.

Bypass



If a note is bypassed, input pitches that are closest to that note will be passed through with no correction.

You might use Bypass if a performance has only one or two out-of-tune notes, and you want to only apply correction on those notes, or if it includes some expressive pitch gestures around one or more specific notes that you want to preserve with no modification.

Remove



If the Remove button is lit, then the note is removed from the current scale, and any incoming pitches that are closest to that note will be tuned to the next closest scale note instead.

Remove can be used to create your own custom scales from the built-in scales. For example, you can create a pentatonic (5-note) scale by removing a couple notes from the major scale. This is especially useful if you're going for the Auto-Tune Effect, and want to create a sharp transition between notes that are relatively far apart.

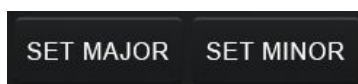
Remove is also useful in cases where a singer might be singing a pitch that is so far from the intended note that it's actually closer to another scale note. For example, if the intended note is an F and the performer is actually singing something closer to an E, you may want to remove E from the scale, so that the singer will be tuned to F instead.

Cents

	C	C#	D	D#	E	F	F#	G	G#	A	A#	B
CENTS	0	100	200	300	400	500	600	700	800	900	1000	1100

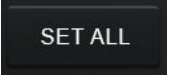
The number under each note in the Cents row is that note's interval, in cents, from the root note of the scale.

Set Major/Set Minor



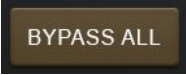
The Set Major and Set Minor buttons allow you to quickly generate a major or minor scale from any scale with more than 7 notes, by automatically removing the notes that don't belong to the major or (natural) minor scale.

Set All

A dark rectangular button with the text "SET ALL" in white, uppercase letters.

The Set All button sets all of the notes of the current scale to On, in both the Edit Scale Display and the Keyboard. This is a quick way to return the scale to its default setting.

Bypass All

A dark rectangular button with the text "BYPASS ALL" in white, uppercase letters.

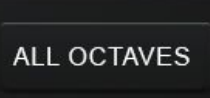
Bypass All sets all notes in the current scale to Bypass.

Remove All

A dark rectangular button with the text "REMOVE ALL" in white, uppercase letters.

Remove All sets all notes in the current scale to Remove.

MIDI Controls

A dark rectangular button with the text "MIDI" in white, uppercase letters.A dark rectangular button with the text "TARGET NOTES" in white, uppercase letters.A dark rectangular button with the text "LEARN SCALE" in white, uppercase letters.A dark rectangular button with the text "ALL OCTAVES" in white, uppercase letters.

Auto-Tune Hybrid has two different functions for handling incoming MIDI note data: Target

Notes and Learn Scale. You can also use a MIDI controller to control many of the Auto-Tune Hybrid parameters. See the Settings and Preferences section for how to assign control of parameters to your MIDI controller,

Use the **Target Notes** function if you want to use MIDI to control the specific pitch that your audio is being tuned to in real time.

Use the **Learn Scale** function if you want to use MIDI instead of the Edit Scale Display and onscreen Keyboard to define the scale that your audio will be tuned to.

In order to make use of the Auto-Tune Hybrid MIDI capabilities, you will need to route a MIDI source to it. This could be an external controller, such as a MIDI keyboard, or it could be a MIDI track within your host application (DAW). The procedure for routing

MIDI to an audio plugin will vary depending on what DAW you are using, so please see your DAW's manual or help pages for more information.

Target Notes

TARGET NOTES

With MIDI: Target Notes, you can perform a melody in real time on a MIDI keyboard, or play it from a MIDI track, and Auto-Tune Hybrid will tune your audio to whatever MIDI notes are on at any given time.

If you're using a MIDI keyboard, this means that your audio will be tuned to the notes corresponding to whatever keys you are currently holding down.

If no MIDI notes are on, the audio will pass through without being tuned.

Learn Scale

LEARN SCALE

The MIDI: Learn Scale function allows you to play a melody or chords from a MIDI keyboard or MIDI track and have Auto-Tune construct a custom scale for you containing only those notes.

Clicking the Learn Scale button will remove all notes from the current scale. Individual notes are then turned back on based on incoming MIDI data. The new scale settings will be displayed in both the Keyboard and Edit Scale Display.

All Octaves

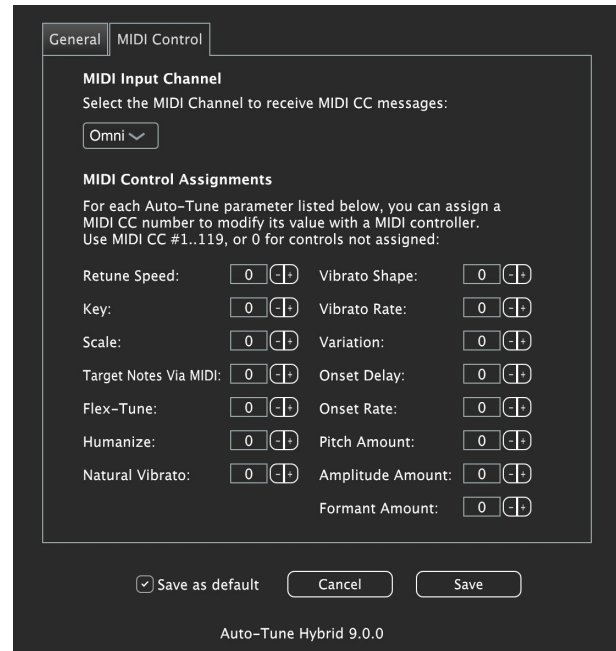
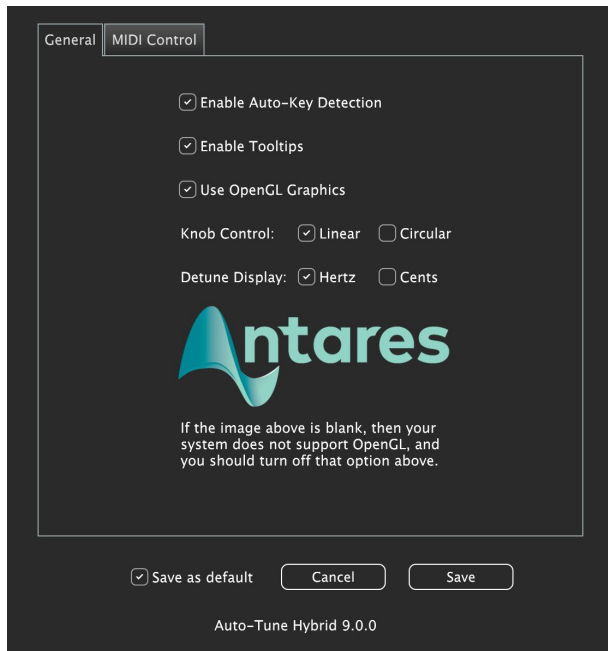
ALL OCTAVES

If All Octaves is on, any incoming MIDI notes will affect all octaves of each note. Otherwise, they will only affect the notes in the specific octaves in which they are played. The All Octaves button applies to both the Target Notes and Learn Scale functions.

MIDI Parameter Control

Many of the Auto-Tune Hybrid parameters can be controlled in real time with a MIDI controller. MIDI Parameter Control is configured in the Preferences window. See the MIDI Control Assignments section below for information about how to configure this.

Settings and Preferences



Enable Auto-Key Detection

This setting enables Auto-Tune Hybrid to receive key and scale information from [Auto-Key](#)

Enable Tooltips

Tooltips are helpful hints that pop up when you hover over one of the controls in Auto-Tune Hybrid. If you don't want to see them, you can turn them off here.

Use OpenGL Graphics

Auto-Tune Hybrid uses OpenGL for improved graphics on computers with compatible graphics card hardware. Most modern computers support OpenGL, so we recommend leaving this enabled for best performance.

However, if the Antares logo does not appear in the Preferences window, that indicates that your system does not support OpenGL, and you should uncheck this box.

Knob Control

Knob Control lets you select how you want to control the knobs in the Auto-Tune Hybrid interface. Options include Linear, Circular, and Follow Host.

Linear

Click on the knob and drag up or to the right to turn it clockwise, down or left to turn it counterclockwise.

Circular

Click on the knob and drag in a circle to rotate the knob.

Follow Host

If this option is chosen, Auto-Tune Hybrid will attempt to follow the knob control behavior of the host application (DAW). If the host application does not provide that information to plugins, the behavior will default to Linear.

Detune Display

The **Detune** control is used to tune to a reference frequency other than the standard A = 440 Hz. Select Detune Display lets you choose whether it will display the offset in cents or Hertz.

MIDI Input Channel

Selects the MIDI channel for Auto-Tune Hybrid to receive MIDI CC messages. The Omni setting will allow Auto-Tune Hybrid to respond to messages on any channel.

MIDI Control Assignments

Many of the Auto-Tune the Hybrid parameters can be controlled in real time with any MIDI controller that sends MIDI CC (continuous controller) messages.

To assign an Auto-Tune Hybrid parameter to one of the controls on your MIDI device, enter the MIDI CC value that your MIDI controller sends from that control.

Check your MIDI controller's documentation for information about what MIDI CC value is sent by each control. You can also use a utility application such as [MIDI Monitor](#) to see what CC messages are being sent by your controller.

You will also need to route the MIDI to Auto-Tune Hybrid within your host application (DAW). The procedure for routing MIDI to an audio plugin will vary depending on what DAW you are using, so please see your DAW's manual or help pages for more information about how to do this.

Save as default

When the Save as Default box is checked, any changes to Preferences that you save will become the default settings for future instances of Auto-Tune Hybrid.

If you want to make a temporary change to the preferences just for this instance, without overwriting your default preferences, uncheck this box before clicking "Save".