

antares® 

Auto-Tune®efx 2

Real-Time Auto-Tune Vocal Effect,
Pitch Correction and Auto-Motion™
Vocal Pattern Generation

Owner's Manual

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Whew! Now that that's over, let's get on to the good stuff.

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Welcome!



On behalf of everyone at Antares Audio Technologies, we'd like to offer both our thanks and congratulations on your decision to purchase Auto-Tune EFX 2, the quickest, easiest tool for real-time pitch correction, creating the Auto-Tune Vocal Effect and our new Auto-Motion™ Vocal Pattern Generation.

Before you proceed any farther, we'd like to strongly encourage you to register and authorize your copy of Auto-Tune EFX 2. (You can skip ahead to the Authorization and Installation instructions on page 3. We'll wait.) If you're planning on discarding that lovely Auto-Tune EFX 2 box, it's probably a good idea to write down the serial number that appears on the bottom of the box for future reference. (The inside cover of this manual would be a good place.) Also, your Registration Code (on the yellow card, if you bought a boxed copy, or in your confirmation email if you purchased via download) should be stored in a safe place for future reference.

At Antares, we are committed to excellence in quality, customer service, and technological innovation. With your purchase of Auto-Tune EFX 2, you have created a relationship with Antares which we hope will be long and gratifying. Let us know what you think. You can count on us to listen.

Again, thanks.

The Whole Antares Crew

Chapter 1: Getting Started



Installing Auto-Tune EFX 2

Auto-Tune EFX 2 is designed to work with a wide variety of digital audio applications. Please refer to your host application's user manual for more information on installing and using plug-ins. (Although in most cases, simply double-clicking the Auto-Tune EFX 2 installer and following the resulting directions will be all you need to do.)

Authorizing Auto-Tune EFX 2

Authorization is the process by which Auto-Tune EFX 2 is allowed to permanently run on your computer. Detailed instructions covering the available authorization options will be found in the file "Authorization Read Me" which is included on your installation DVD ROM or with your software download.



Auto-Tune EFX 2 authorization requires an iLok USB smart key. If you already own other audio plug-ins, you probably already have one. If not, they can be purchased from many

local music stores as well as most online music technology retailers.



NOTE: You will need to authorize Auto-Tune EFX 2 before you can run it in your host. If you plan to follow along with the manual (a good idea), go do it now.

Technical Support

In the unlikely event that you experience a problem using Auto-Tune EFX 2, try the following:

1. Make sure you have the latest version of the plug-in. You can download and install the latest version of Auto-Tune EFX 2 from the following web page:
<http://www.antarestech.com/download/update.shtml>
2. If you are having problems authorizing your software, be sure that you have the latest version of the PACE Interlok drivers. You

can download and install the latest version for your operating system from:

<http://www.paceap.com>



IMPORTANT! Windows users: After downloading and installing the PACE drivers, you must reboot your computer before running your software.

If your problem is not resolved after taking the above actions, try the following:

1. Consult our searchable knowledgebase at:
<http://www.antarestech.com/support/index.html>
2. Check our web page for tips, techniques, or any late-breaking information:
<http://www.antarestech.com>
3. Submit a question directly to our Customer Support department at:
<http://www.antarestech.com/contact>
4. Join the Antares online Community. The Antares Online Community is a place where Antares product users can gather to exchange information, compare notes, and get to know other Antares users from around the world. Check it out at:
<http://www.antarestech.net>
5. For the quickest access to new developments, follow us on Twitter and "Like" our Facebook pages:
<http://twitter.com/AntaresAudio>
<http://www.facebook.com/pages/Antares-Audio-Technologies/68524457680>
<http://www.facebook.com/pages/Auto-Tune/81891651280>



Chapter 2: How It Works



Some background

In 1997, Antares first introduced the ground-breaking Auto-Tune Pitch Correcting Plug-In and Recording Magazine called Auto-Tune a “holy grail of recording.” In the intervening years, Auto-Tune has established itself as the worldwide standard in professional pitch correction. Today, it’s used daily by tens of thousands of audio professionals to save studio and editing time, ease the frustration of endless retakes, or save that otherwise once-in-a-lifetime performance.

But in addition to its use in pitch correction (and now, with Auto-Tune 7, time correction as well), Auto-Tune has also gained renown as the tool of choice for what has become one of the signature vocal sounds of our time.

First heard on Cher’s 1998 mega-hit “Believe,” variations of the Auto-Tune Vocal Effect have gone on to appear on songs from a huge variety of artists in almost every music genre. This has generated intense interest in the effect and introduced the magic of Auto-Tune to an even larger community of musicians and producers.

As a result, we have created Auto-Tune EFX 2, an affordable, easy-to-use tool for basic real-time pitch correction, creating the Auto-Tune Vocal Effect and, now in version 2, our new Auto-Motion™ Vocal Pattern Generation.

What’s it do?

Auto-Tune EFX 2 lets you choose between two different flavors of the Auto-Tune Vocal Effect and real-time pitch correction. Additionally, Auto-Motion Vocal Pattern Generation lets you add a variety of intricate musical patterns to your track for an entirely new (and sonically dramatic) vocal effect.

Pitch Correction

Auto-Tune EFX 2 pitch correction works by continuously tracking the pitch of your vocal and comparing it to the notes in the (user-customizable) scale of your song. The scale note closest to the input pitch is identified

as the target note. If the vocal’s pitch exactly matches the target note, no correction is applied. If the vocal’s pitch varies from the target note, either sharp or flat, the output pitch is smoothly corrected to the target note.

Auto-Tune Vocal Effect

The Auto-Tune Vocal Effect is what is technically known as “pitch quantization.” That is, instead of allowing all of the small variations in pitch and the gradual transitions between notes that are a normal part of singing (and speaking, for that matter), the Auto-Tune Vocal Effect limits each note to an exact pitch, stripping out any variation, as well as forcing instantaneous transitions between notes.

The process of choosing the pitches to quantize to is the same as described above for pitch correction. The difference is that for pitch correction, the correction is done smoothly in order to make the process as transparent as possible. For the Auto-Tune Vocal Effect, the correction is instantaneous.

Auto-Motion Vocal Pattern Generation

Auto-Motion Vocal Pattern Generation is a new effect that takes advantage of Auto-Tune’s superb pitch-shifting ability to add intricate musical patterns to a vocal performance. Patterns are selected from a built-in (and expandable) library in a variety of styles and can be synced to your host’s tempo at various beat divisions. At any point in your vocal track, simply click the Auto-Motion Trigger button to send your vocal on a melodic adventure.

How to do it

Auto-Tune EFX 2 has been designed to make almost everything automatic. Simply follow the steps below:

Pitch Correction or Auto-Tune Vocal Effect

1. Select an effect type

Auto-Tune EFX 2 provides two alternative versions of the Auto-Tune Vocal Effect as well as real-time pitch correction.



Hard EFX: This is the classic Auto-Tune Vocal Effect. Sung notes will be restricted to the exact scale pitches and transitions between notes will be instantaneous.



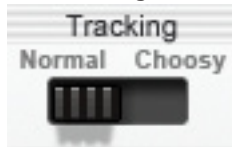
Soft EFX: This version of the Auto-Tune Vocal Effect allows slight pitch variations and slightly less instant note transitions.



Pitch Correct: This setting provides high-quality, real-time pitch correction of your vocal, while preserving all of the expressive nuance of the original performance.

To select an effect, either click and hold on the Effect Type switch and move it to the desired setting or simply click on the desired setting to move the switch to that position. Your choice.

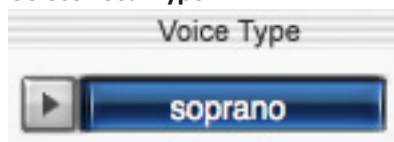
2. Set Tracking



In most cases, simply leaving the Tracking switch at its default setting of "Normal" will ensure accurate

pitch detection and tracking. In the rare event that you encounter a problem (e.g., a vocal playing back at the wrong octave), moving the switch to "Choosy" should make everything right.

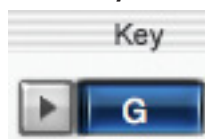
3. Select Vocal Type



In order to do its magic, Auto-Tune EFX 2 needs to figure out exactly what pitches are being sung. It will do its best job of pitch detection if it knows the general range of the vocal part. You can help it out by clicking on the Vocal Type popup menu and selecting your track's vocal type. The choices are:

- Soprano Voice
- Alto/Tenor Voice
- Baritone/Bass Voice
- Instrument (anything that isn't actually a voice)

4. Select Key and Scale



Use the Key and Scale popup menus to set the Key and Scale of your track.



The appropriate Note buttons will light blue to indicate that they are in the scale and that the input vocal can be corrected or forced to those notes.



A TIP: If you don't know the key of your track, trial-and-error works pretty well. Start by setting Major or Minor and then just trying one Key after another until one sounds good.

5. Play your track

Auto-Tune EFX 2 will process your input vocal and, depending on your choice of Effect Type, will either correct or quantize it to the target scale notes. Mr. Hand will continuously indicate the current target note.

If you like the result, you're done. If not, continue with the next step.

6. Customize the Scale

Depending on the specific vocal line, adding or removing scale notes can give you distinctly different results. Try any combination of the following:

- Click on a lit blue Note button to remove it from the scale and prevent Auto-Tune EFX 2 from correcting or quantizing the output to that note.
- Click on an unlit Note button to add it to the scale and allow Auto-Tune EFX 2 to correct or quantize the output to that note.

Click and play and click and play until you get exactly the result you want.

Auto-Motion Vocal Pattern Generation

1. Select a Pattern

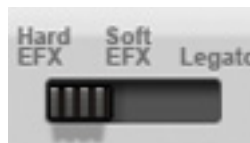


Auto-Tune EFX 2 comes with a varied selection of melodic patterns (but see Chapter 4 for info on expanding the selection and creating your own). Click the Select Pattern menu to pick one.

While we've tried to name each pattern in a way to suggest its style, the easiest way to become familiar with them is just to try them out.

2. Select a Pattern Style

The Auto-Motion Pattern Style switch lets you select the speed of the transition between the notes of the pattern. The choices are similar to those of the Effect Type switch:



Hard EFX:

The classic Auto-Tune Vocal Effect. Transitions between notes

of the pattern will be instantaneous.



Soft EFX: Transitions between notes of the pattern will be slightly less instantaneous.



Legato: The notes of the pattern will glide smoothly from one to the next.



IMPORTANT NOTE: *Despite the similarities, the Pattern Style selection is completely independent of the Effect Style selection. For example, if you select Hard EFX for the Effect Type and Legato for the Pattern Style, you will get classic Auto-Tune Vocal Effect on the vocal when a pattern is not being triggered, but when a pattern is being triggered, there will be smooth transitions between the notes. Conversely, if you select Pitch Correct for the Effect Type and Hard EFX for the Pattern Style, your vocal track will be smoothly pitch-corrected while Auto-Motion patterns will exhibit the Auto-Tune Vocal Effect.*

3. Set Pattern Tempo

Auto-Tune EFX 2 provides two ways to set the tempo of your selected pattern:



Sync to Host: Sync to Host mode ensures that your Auto-Motion patterns will be perfectly synced to the tempo of your track (assuming, of course, that you recorded your track to a click track or other time reference). Selectable beat multipliers or subdivisions allow for a wide variety of complex rhythmic possibilities.

Click the Sync to Host button (it'll turn blue) to sync the pattern tempo to your DAW's clock. The Receiving Clock "LED" will light to confirm that it is getting a valid clock from your host. (If the LED does not light, check to see that your host does in fact route its clock to plug-ins. Most do, but there may still be a few out there that don't.)

In Sync to Host mode, the Tempo knob lets you select what division or multiplier of the beat will define the length and position of each note of your pattern.

The choices are:

- 4/4 (whole note, 4 beats)
- 3/4 (dotted half note, 3 beats)
- 2/4 (half note, 2 beats)
- 1/4. (dotted quarter note)
- 1/4 (quarter note, one beat)
- 1/4T (quarter note triplet)
- 1/8. (dotted 8th note)
- 1/8 (8th note)
- 1/8T (8th note triplet)
- 1/16. (dotted 16th note)
- 1/16 (16th note)
- 1/16T (16th note triplet)
- 1/32. (dotted 32nd note)
- 1/32 (32nd note)
- 1/32T (32nd note triplet)

For example, if you select 4/4, each note of your pattern will last for four beats, while selecting 1/16 will result in one pattern note per sixteenth note.



Absolute BPM: When Sync to Host is not selected, the Tempo knob lets you set the tempo in beats per minute. The available range is 20 BPM to 260 BPM.

4. Trigger the Pattern



Play your track. At any point, click and hold the Trigger button to play the selected pattern. Continuing to hold down the Trigger button will cause the pattern to repeat for as long as you hold it down. Release the Trigger button to stop the pattern. Repeat as desired.



IMPORTANT NOTE: *Since the Auto-Motion patterns are being generated from your vocal track, they will only play as long as there is actually vocal present on the track. If you continue to hold down the Trigger button in a portion of the track where there is no vocal, the pattern will cease sounding. However, the pattern will continue to cycle through the silence and will again sound at the point that the vocal once again enters.*



ANOTHER NOTE: *The overall pitch of the pattern is determined by the note being sung at the moment you click the Trigger button. If you continue to hold down the button, the pattern will continue to repeat at the same pitch, regardless of the pitch of subsequently sung notes. However, if you briefly release and then re-click the button during a different note, the pattern will be transposed to reflect the pitch of the new note.*

Auto-Motion Pattern Generation offers enormous possibilities for striking effects. As always, experimentation is the order of the day

Some useful tips

Pitch Correction and Auto-Tune Vocal Effect

1. If you're not getting the result you want, even though you're sure you've set the correct Key and Scale, try some other keys and/or scales. Sometimes a melody might actually give a more interesting effect in other than its "correct" scale.
2. Use your host's automation facility to change the Key or Scale, or toggle the state of various Note buttons, in real time. This is particularly useful for songs with complex chord progressions or modulations.
3. Try the chromatic scale. If you are doing pitch correction and the singer is never more than 49 cents off (i.e., just less than half a semi-tone — actually a pretty huge error), everything should work just fine, regardless of key changes or modulations.

Although our experience shows that if you're going for the classic Auto-Tune Vocal Effect, chromatic rarely provides it, for a specific song, it might be just what you want.

4. Create a custom scale for a particular vocal track. Start by selecting any chromatic scale and remove selected notes until you're left with a combination that sounds good.
5. Try re-pitching the vocal line. Watch Mr. Hand and note which notes appear in the melody. Remove one or more of those notes from the scale and try adding various adjacent notes. You might end up with something interesting (but then again, you might not).
6. Don't forget your host's Bypass function. Limiting the Auto-Tune Vocal Effect to specific phrases can provide sonic contrast in your song.

Auto-Motion Vocal Pattern Generation

1. Auto-Motion depends on the same Voice Type, Tracking, Key, and Scale settings as pitch correction and the Auto-Tune Vocal Effect. Even if you aren't doing pitch correction or using the Auto-Tune Vocal Effect, be sure to correctly set those controls.
2. Try using different patterns in different parts of your track by using your host's automation capability to switch patterns at the appropriate points in the track.
3. Try triggering a pattern on different beats or beat subdivisions of your track. Starting a pattern on an offbeat or beat subdivision can have a very different rhythmic effect than starting it on a downbeat.
4. Experiment with triplet or (especially) dotted-note subdivisions for interesting polyrhythmic or syncopated results. As in #3 above, try triggering them on offbeats or beat subdivisions for even more rhythmic interest.
5. Set a pattern to a very fast tempo or small note subdivision (if using Sync to Host) and repeatedly retrigger the pattern for an unusual rhythmic stuttering effect.
6. Have fun!

Chapter 3: Auto-Tune EFX 2 Tutorials



This chapter introduces you to how Auto-Tune EFX 2 works by guiding you through three brief tutorials. The tutorials require a number of audio files. They can be found on the Auto-Tune EFX 2 DVD, or you can download them from:

<http://www.antarestech.com/download/update.shtml>

Then just follow these steps:

Tutorial 1: Auto-Tune Vocal Effect

1. Create a new project in your host and import the tutorial files "hidin_vocal.wav" and "hidin_accomp.wav" onto two tracks of the project.
2. Play the tracks and adjust their relative levels to your taste.
3. Instantiate Auto-Tune EFX 2 on the vocal track. Set Effect Type to "Hard EFX."
4. Set Vocal Type to "alto/tenor." Set Key to "A flat" and set Scale to "minor."
5. Play your project. Voilà! Instant Auto-Tune Vocal Effect.
6. Change the Effect Type to "Soft EFX" and play again to hear the difference.
7. Switch back to Hard EFX and click the A#/Bb button to remove that note from the scale.
8. Play the project again and note that you've subtly changed the melody. The syllable "-ther" of "together" and the word "on" at the end of the second phrase are now forced to "B" instead of their original Bb.

Tutorial 2: Pitch Correction

1. Mute or discard the tracks from Tutorial 1 from your project.
2. Import the tutorial files "dont_give_up_vocal.wav" and "dont_give_up_accomp.wav" onto two tracks of your project.
3. Play the tracks and adjust their relative levels to your taste. Note the various pitch problems in the vocal.*
4. Instantiate Auto-Tune EFX 2 on the vocal track. Set Effect Type to "Pitch Correct."
5. Set Vocal Type to "soprano." Set Key to "D" and set Scale to "major."
6. Play your project. Voilà! Instant pitch correction.

* *Our very talented singer made us promise to tell you that she did this on purpose at our request.*

Tutorial 3: Auto-Motion Vocal Pattern Generation

The best way to become familiar with Auto-Motion is simply to play around with it. To get started:

1. Load the “hidin” files from Tutorial 1 and set the controls as instructed in that tutorial.
2. Set your host’s tempo to 132 BPM and set the Auto-Motion tempo to “Sync to Host” and “1/16.”
3. Set the Auto-Motion Pattern Style to Hard EFX.
4. Select the pattern “Half Steps.”
5. Start playing the project. Click and hold the Trigger button at the beginning of the words “falling apart” at the end of the second phrase. Hold the button through these words and then release it.
6. Click and hold the Trigger button again at the beginning of measure 10 (in the middle of the phrase “you’re in the dark”). Release it at the end of the phrase.
7. Repeat again at the beginning of measure 16 (at the beginning of the phrase “nothing at all”).
8. Finally, repeat again at the beginning of measure 20 (at the beginning of the phrase “set up to fall”).
9. Repeat all of the above using a different pattern (e.g., try “Circular Slur” for a bit more dramatic effect or “Down 4 Up 1” for some serious wackiness).

Continue to experiment with different patterns, different note divisions, and different combinations of Effect Type and Pattern Type settings.

Most of all, have fun.

Chapter 4: Creating, Editing and Updating Auto-Motion Patterns



For the adventuresome among you, Auto-Tune EFX 2's patterns are stored in a dedicated file in the standard MusicXML format. Besides making it easy for us to release updated and expanded pattern collections without having to release completely new versions of the plug-in, it also allows anyone with an application that can open and edit MusicXML files (and there are free open source apps that can do this) to edit existing patterns and create entirely new patterns of their own devising.

If this interests you, please refer to the "Updating, Editing and Creating Pattern Files" PDF document included on your installation DVD or downloadable from:

<http://www.antarestech.com/download/update.shtml>