



VOICETONE™ harmony G·XT PRODUCT MANUAL

ENGLISH VERSION

WARNING

To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.

CAUTION

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.



The lightning symbol within a triangle means, "Electrical caution!" It indicates the presence of information about operating voltage and potential risks of electrical shock.



The exclamation point within a triangle means, "Caution!" Please read the information next to all caution signs.

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Introduction

Welcome to VoiceTone Harmony-G XT

Harmony-G XT is designed for the singer who wants the highest quality and most interesting live vocal production possible. It puts a complete vocal production center into your hands including harmony singers that follow your singing and guitar playing.

Ease of use and convenience were of utmost importance in the design of Harmony-G XT. This allows singers to utilize all of its features quickly and easily.

Harmony-G XT presents a selection of professionally-authored patches. When out-of-the-box sounds aren't enough, Harmony-G XT provides editing controls to customize the presets to your preference.

Product information is updated regularly, so be sure to check www.tc-helicon.com for the latest news.

Features:

- o Adds one or two harmony voices directed by your guitar playing
- o Overdub-style vocal doubling feature adds richness to your lead voice
- o High quality reverb and delay effects
- o Guitar signal can be sent to your guitar amp or routed through Harmony-G XT's effects
- o Part A/B switch to allow instant selection of your two favorite sounds
- o Quick and easy tweaking and storage of presets
- o XLR mic level input and output in stereo or mono
- o Clean, studio quality mic preamp with phantom power

About TC-Helicon

At TC-Helicon we truly believe that the voice is the world's most beautiful instrument. We don't mean to degrade other beautiful instruments, but the singing voice is the anthropological source for all things melodic.

You should know there is a dedicated group of engineers, researchers and product specialists based in Victoria BC, Canada, who spend every waking moment of their working lives listening, talking, singing, and interacting with singers and those who have passion for the singing voice.

All this knowledge and experience is used to design products respecting and empowering the modern

vocalist. Our products focus on removing barriers and inspiring creativity in performance. That's why our products range from near-field personal vocal monitors to floor-based vocal multi-effects pedals.

Enjoy!

The TC-Helicon Team
a TC Group company

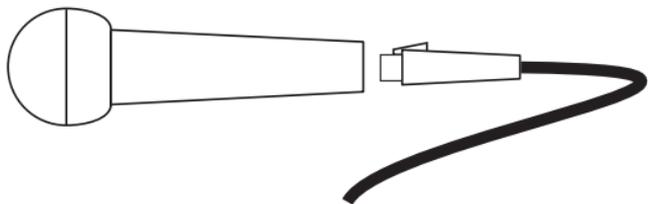
Quick Start

Step 1:

Connect your microphone to a mic cable

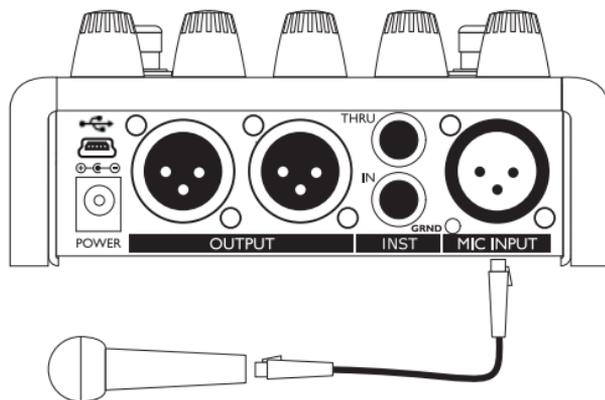
NOTE:

Make sure Harmony-G XT is not powered at this time.



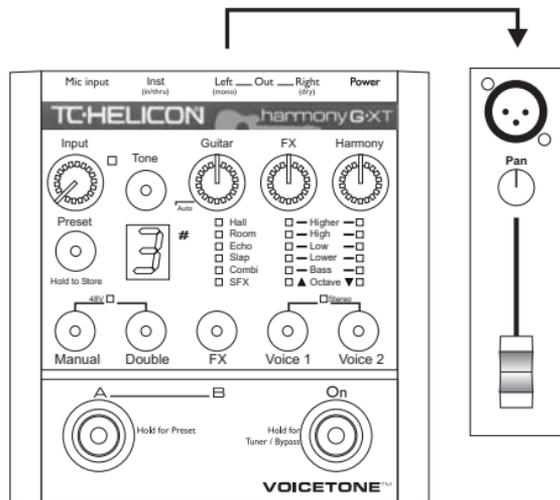
Step 2:

Connect your mic cable to the Mic Input



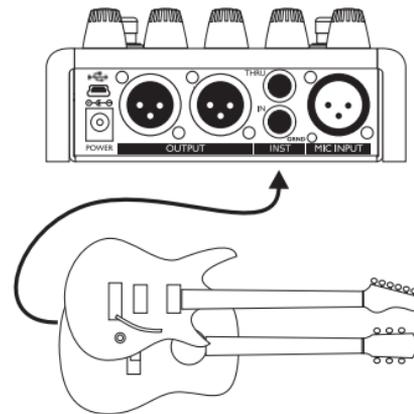
Step 3:

While you're connecting and setting up, lower the fader on your mixer channel to off. Connect a mic cable from the Left/(mono) Out to a mic input on your sound system.



Step 4:

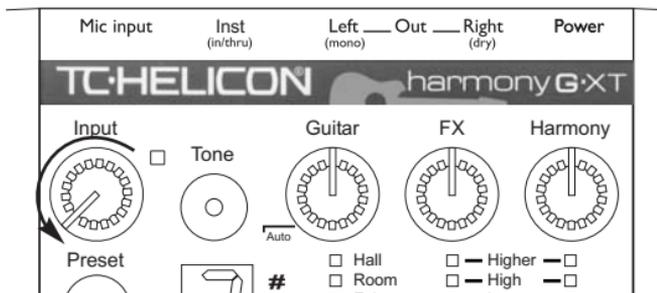
Connect a 1/4" guitar cable from your electric or acoustic guitar to the INST IN. For now, we won't use the THRU so the guitar sound will be mixed with your voice and effects. It will come out of the Left (mono) main output.



Quick Start

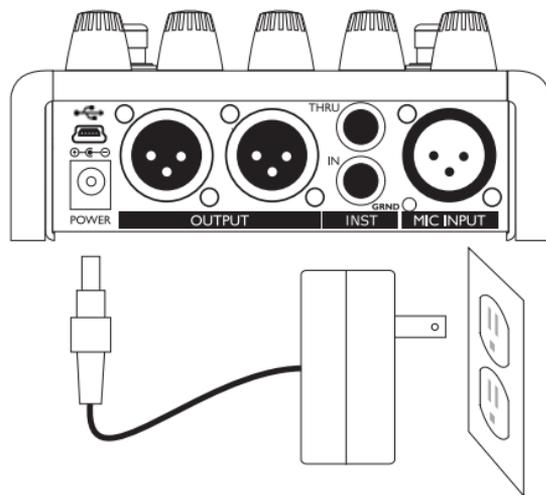
Step 5:

Set the Input Knob fully left then set the Guitar, FX and Harmony knobs to the 12 O'Clock position.



Step 6:

Connect Harmony-G XT's power adapter to main power and to the Power input on Harmony-G XT. There is no power switch so plugging it in automatically turns it on.



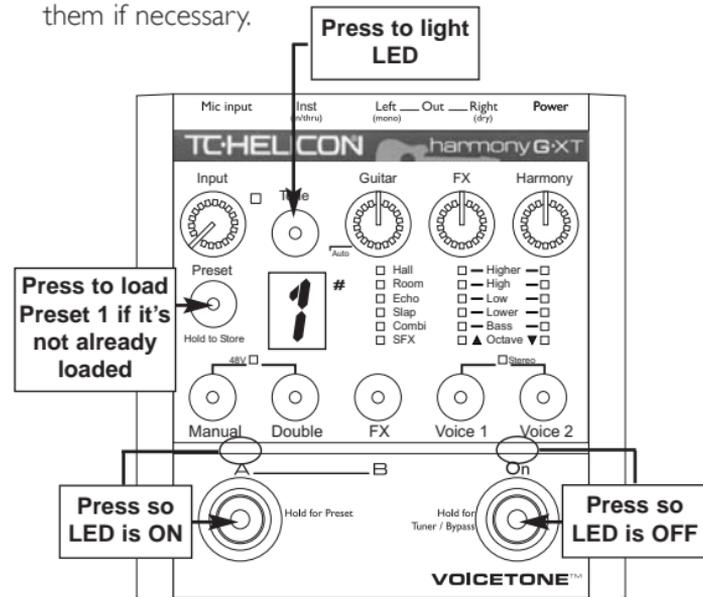
Step 7:

While singing through your microphone, raise the Input Knob until the Input Light turns green, sometimes orange on louder parts, but never red.



Step 8:

In preparation for your first listen, check that the LEDs conform to the status shown in the boxes below. You can press the button associated with the LEDs to change them if necessary.



Quick Start

Step 9:

Slowly raise the fader on your mixer channel as you sing into your mic. Once you've reached a comfortable listening level you should hear your voice clearly with some reverb effect added.

It's important to take a moment and tune your guitar before checking out the harmonies. Hold the On button to enter Harmony-G XT's Tuner/Bypass mode. Pluck a single string at a time to see its pitch. You will see which note it's closest to in the Preset display and whether the string is sharp or flat in the LED bank above the FX and Voice 1 and Voice 2 buttons. Adjust each string until they're all in tune.

Now you're ready to hear Harmony-G XT's harmony voices. Press the On footswitch and sing a song you know while strumming the guitar chords to the song. Remember that your guitar directs the harmonies so ensure that the volume control on your guitar is turned up.

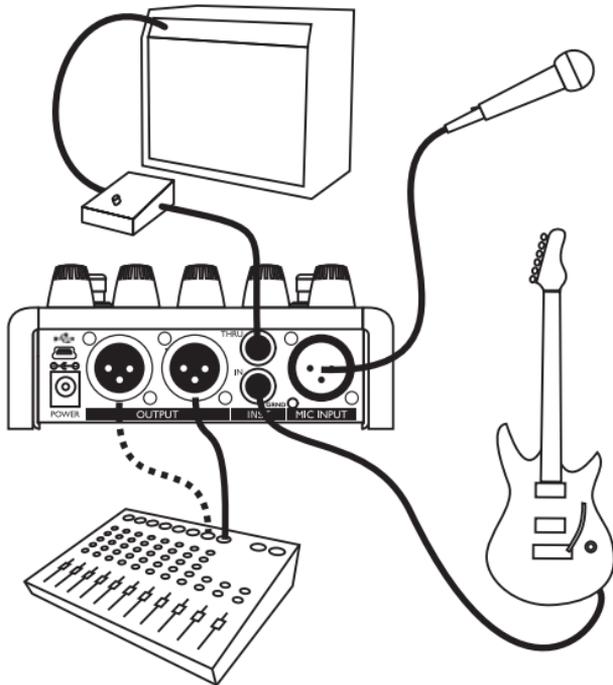
You can now experiment with all of Harmony-G XT's features starting by pressing the Preset button to load the different presets and then pressing the A/B footswitch to hear each preset's A and B settings.

Please read this short manual to ensure you get the most from Harmony-G XT!

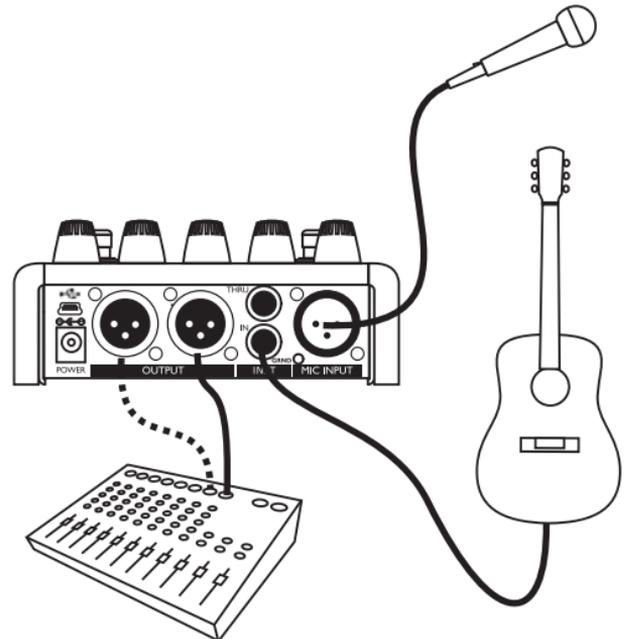
Typical Setups

Electric Guitar Setup

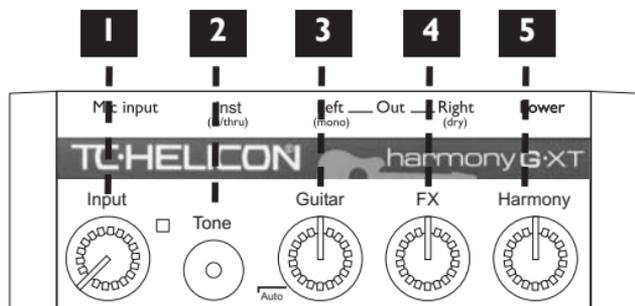
The dotted line indicates optional stereo operation



Acoustic Guitar Setup



Front Panel



1. Input Knob and LED

Adjust the Input Knob so that while you sing, the LED beside it flashes green, sometimes orange but never red.

2. Tone Button

This engages the Live Engineer Effects which automatically modifies your voice and makes it sound smoother and brighter. When engaged, this effect is always on your voice, even in Bypass.

3. Guitar Mix Knob

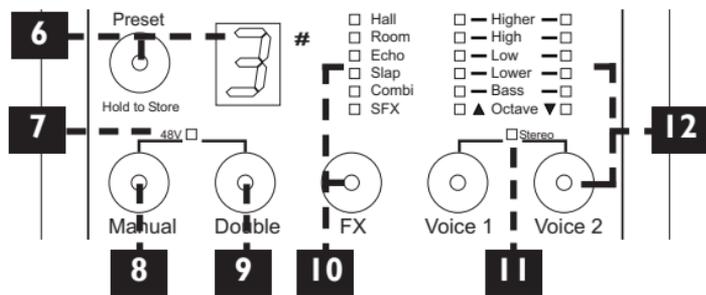
Controls your guitar volume when it's routed to the main outputs (when the Inst Thru jack is not used). The left Auto position automatically balances your guitar volume with your voice. Immediately above the Auto position is an "off band" where the guitar is muted. Proceeding clockwise from there allows manual control of guitar mix level.

4. FX (Effects) Level Knob

Raises or lowers the mix level of the effect selected with the FX button.

5. Harmony Level Knob

Adjusts the mix levels of the harmony and double effects.



6. Preset Select Button and Preset Display

Press to cycle through the 5 presets numbered 1 to 5 shown in the Preset display. Hold to store changes you make. The sharp sign (#) is used in the Tuner and Manual modes.

7. 48 Volt Phantom Power LED

For condenser mics, hold the Manual and Double buttons for 2 seconds to engage and disengage phantom power.

8. Manual Mode Button

Press to toggle guitar control of the harmonies. See how to use this feature in the "For Advanced Users" section.

9. Double Voice Button

Press this button to simulate the sound of you singing along with yourself for added thickness.

10. FX Button and LED Display

Pressing the FX button cycles through the effect styles and FX Off (no LEDs lit) for the current preset.

11. Stereo Select Button

Press and hold the Voice 1 and Voice 2 buttons for 2 seconds to toggle between stereo and mono output.

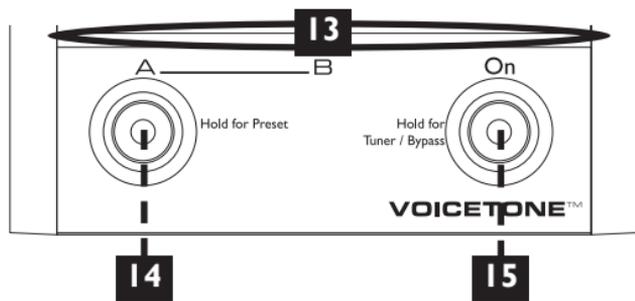
12. Voice Buttons and Display

Press either of the Voice 1 or Voice 2 buttons to:

- change the associated voice's harmony interval
- enable the harmony voice when its LED is off
- turn the voice off

The same interval for both voices adds thickness to the harmony voices.

Front Panel



13. LED Indicator Bar

This translucent bar indicates the A or B selection of each preset and status of the On footswitch.

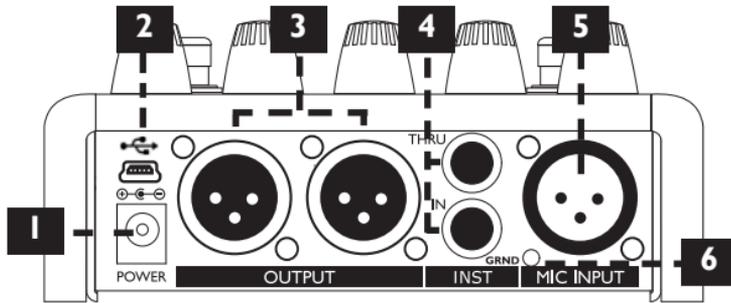
14. Preset A and B Select Footswitch

If you only need to access your two favorite sounds in performance, tapping the A/B footswitch will toggle between them quickly. If you would like to access more presets with this footswitch, hold it to enter Preset

Select mode. Now, pressing the A/B button cycles forward through the five “A” preset settings or “B” preset settings, depending on whether an A or B was loaded when you held the footswitch.

15. On Footswitch

Tapping this footswitch engages or disengages the doubling and harmony effects in the current preset. The reverb and delay FX will remain active on your voice even with the harmonies muted. Holding this footswitch enters Tuner/Bypass mode for silent guitar tuning and bypassing of all processing except for Tone.



1. Power Input

Connect the supplied DC power adaptor here. Connecting power to Harmony-G XT turns it on immediately as there is no on/off switch on the product.

2. USB Connector

Allows Harmony-G XT to communicate with a computer for backup and updates. See “Using the VoiceSupport Application” section for details.

3. Outputs

These XLR jacks supply the main output of Harmony-G

XT in stereo (default) or mono. For more information on mono operation see “External Mixing with Mono and Dry Outputs” in the “For Advanced Users” section.

4. Instrument Connections

Plug a 1/4" cable directly from your guitar into the IN jack. If you use effect pedals, they should be connected *after* Harmony-G XT. The input is high impedance. Plug a 1/4" cable from the THRU jack to your first effect pedal or to your amplifier/PA.

5. Mic Input

Balanced, low impedance input for your microphone.

6. Guitar Ground Lift

If you hear a buzz when you plug in a cable from the THRU to your amp or PA, press this button in. If the THRU jack is not used and your guitar sound is routed internally, the Ground Lift switch should be left out.

Getting to Know Harmony-G XT

Loading Presets

Press the Preset button to load the next preset and change the sound. If you need to access your two favorite sounds while standing, tapping the A/B footswitch will toggle between them quickly.

If you would like to access more presets while standing, hold the A/B footswitch to enter Preset select mode. Now, pressing the A/B button cycles through the five “A” preset settings or “B” preset settings, depending on whether an A or B was loaded when you held the footswitch.

Making Harmonies

Play a song on your guitar and sing. Press the On footswitch to hear the harmony voices in the preset you have loaded. Press the On footswitch again to mute the harmony voices so you can sing with no harmony.

Using the Tone Button

When you activate the Tone button, your voice will

sound smoother and brighter. There are three high quality studio effects that accomplish this: adaptive “Shape” EQ, adaptive compression and de-essing. A gate also reduces harmony level for cleaner sound when you’re not singing.

Mixing

The three control knobs: Guitar, FX and Harmony, adjust how much guitar, vocal harmony and FX are added to your lead voice. The balance you create will be the same for all presets. The factory-set levels at the center position have been programmed for optimum sound.

Adjusting the Harmony Level

Turn the Harmony control to raise or lower the amount of harmony added to your voice. If the Double button is on, the extra voice it adds will be adjusted as well.

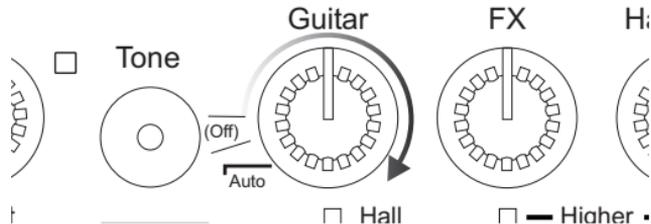
Changing the FX Volume

Turn the FX control knob to raise or lower the mix level of the effect style selected with the FX button.

Getting to Know Harmony-G XT

Adjusting Your Guitar Volume

If your guitar is sent to the main outputs (Guitar Thru jack is not used), the Guitar control adjusts how much guitar sound is added to the mix. Setting the control to the minimum position engages the Automix feature which slowly (around 20 seconds) adjusts your guitar volume while you play and sing so that your voice is never lost in the mix. Just above the Auto position is an “off band” which you can use to mute the guitar temporarily for an a cappella vocal. Turning the control clockwise past the off band position returns Guitar mix control to manual.



Thicken Your Voice with the Double Button

Activating this button will simulate the effect of you singing along with yourself to make your lead voice sound thicker. It can be stored on or off in each preset.

Editing Presets

You can change the settings of the Double, FX, Voice 1 and Voice 2 features to your liking by pressing their associated buttons. Pressing the Preset button will cancel your edits and load the next preset. The Manual button is an advanced feature detailed in the “For Advanced Users” section.

What Do the Voice 1&2 Buttons Do?

Pressing either of these buttons can be used to select harmony “voicings” for that voice or to turn the voice off. Voicing is the term describing a pitch-shifted version of your voice at a musically determined pitch.

Getting to Know Harmony-G XT

What Does Higher, Lower etc. Mean?

These names define the harmony arrangement in the current preset. Careful arrangement of harmony voices is an effective way of emulating a favorite band's vocal style. The following describe the typical intervals produced by Harmony-G XT.

- o Higher - Generally a 5th interval or 7 semitones above your voice
- o High - Generally a minor or major 3rd interval or 3-4 semitones above your voice
- o Low - Generally a minor or major 3rd interval or 3-4 semitones below your voice
- o Lower - Generally a 6th interval or 8 semitones below your voice
- o Bass - This deep voice follows the root note of your current guitar chord
- o Octave Up and Down - Follows your voice exactly 12 semitones above or below regardless of the guitar chord you play.

Storing Edited Presets

You can store a changed preset for the next time you need it. Press and hold the Preset button to store both the A and B settings for that preset number. If you save your two favorite A and B settings at preset 1, they will be ready when you power up without you having to load them each time. Note that the positions of the Input, Tone, Guitar, FX, and Harmony controls are not saved, as they are global.

Changing the FX

Press the FX button to change the reverb and delay style in the preset you are currently on. If you prefer this setting, it can be stored with the preset.

Using the Tuner

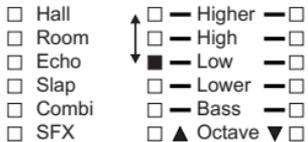
Hold the On footswitch to enter Tuner/Bypass mode. The On led will flash. Pluck the single open string you want to tune and you'll see the note it's closest to in the Preset display. As well, a pattern of LEDs in the FX styles and Voice 1&2 indicator areas will show whether the

Getting to Know Harmony-G XT

string is sharp or flat. As you raise or lower the pitch of the string, the FX and Voice 1/Voice 2 indicator LEDs will light as shown.



Shows string is in tune



Shows string is sharp



Shows string is flat

Tap the On footswitch to exit Tuner/Bypass mode.

For Advanced Users

Advanced FX Style Select

Each effect style (Hall, Room etc.) has additional selections. To browse additional Hall sounds, for example, first cycle the FX button to the Hall style, then hold the FX button. Tap the FX button to sample the options that are numbered in the preset display. Once you've found one you like, press and hold the FX button to exit. Hold the Preset button to store if desired. Note that cycling through the FX styles again with the FX button will return your edit to the default style (#1) in each style bank.

Changing the Number of Presets

The default configuration of Harmony-G XT is to offer five presets each having an A and B setting. This allows you to cycle through them with a reasonable amount of footswitch or Preset button pushes. If you need access to more presets and are willing to step through them with the footswitch or Preset button, or you would like to reduce the number so you can cycle through three favorites for example, there is a way to set this in Harmony-G XT.

To set the accessible number of presets, power up holding the Preset button. After a moment, the number "5" will show the default number of presets. Tap the Preset button to extend the limit to up to ten (shown as "0") or back down to three (1 and 2 are not options). Hold the Preset button to store this setting and exit to normal operation.

How to use the Manual Button

There may be times when you want to disengage guitar control of your harmonies and use a fixed key (e.g. E Minor) instead. Using Manual mode does this. It could be that you aren't playing your guitar in a particular song, that you're not playing a guitar at all, or that you've used fixed-key harmony in other TC-Helicon products and found it works better and sounds unique in certain songs. If you're not sure what the key of your song is, it's often the same as the first or last chord of the song.

To set key in Manual Mode with a guitar:

1. Play a major or minor chord whose root is the key

For Advanced Users

of your song. This can be set before or during performance of your song.

2. Press both footswitches simultaneously while the chord sustains. The LED display will show the key (described below) and will automatically exit after a moment. The Manual LED will light indicating the guitar no longer controls harmony. To modify the key and scale, see step #2 below.

To set key in Manual Mode without a guitar:

1. Press both footswitches simultaneously to temporarily enter key setting mode. If no footswitch input is received after a few seconds, the mode will exit.
2. Tap the left footswitch to cycle through the key options and the right footswitch to cycle through the 6 available scales. After a moment, the mode will automatically exit.

Understanding the Manual key display:

The key in Harmony-G XT is shown in 3 sequential flashes. For example, an E might flash, then a dash "-", and then a number 3 indicating E minor 3. The number corresponds to one of three major and three minor modified scales. Choosing an alternate scale may help you find a fixed-key harmony that works best for your song.

Once your key is set and you're happy with it, it can be stored with the current preset by holding the Preset button.

How to Choose Alternate Tone Settings

The factory default for the Tone button accommodates a wide range of singers but there are options to further customize this feature.

To access the Alternate Tone settings, hold the Tone button until you see the Preset number display flash. You can tap the Tone button to cycle through the numbered choices shown following:

For Advanced Users

- d. Default setting. Best for most situations.
1. Best if you have a very bright sounding PA. Reduces brightness a little.
2. Adds “warmth” to the default setting for a slight Bass boost.
3. Default plus increased compression. Caution: this increases the likelihood of feedback.
4. Default with harmony gate turned off
5. Option 1 with gate off
6. Option 2 with gate off
7. Option 3 with gate off

Guitar Reverb and Detune

When mixing the guitar input internally, reverb will be automatically added to your guitar. The guitar reverb style depends on the currently loaded FX style. The guitar reverb and voice FX level are controlled by the FX knob.

You're able to add a separate detune effect to your guitar when you enter the Advanced FX Select mode

(Hold the FX button) and then press the Double button so its LED lights. After you've exited Advanced FX Select mode, you can still add or remove the vocal doubling effect with the Double button without changing your guitar's detune sound. As with the other FX, the guitar detune effect can be stored on or off in different presets.

Choosing Alternate Double Settings

Hold the Double button until you see the Preset number display flash. You can tap it to cycle through the numbered choices. Hold again to exit and store to the preset if desired.

External Mixing with Mono and Dry Outputs

If you prefer, you can leave the level balancing between your dry voice (Tone active only) and a mono signal of the Harmony, Double and FX to your sound engineer. Ensure the Stereo LED is not lit and that the Harmony knob is set to full right. Connect the outputs to two channels of your audio mixer: The Left (Mono) output

For Advanced Users

will send the “wet” effects and the Right (Dry) output will send your dry voice. These can be adjusted by your sound engineer.

Performing a Factory Reset

A reset will delete all of your edited presets and return all settings to the factory defaults. To reset the unit, insert the power connector while holding the Manual and Voice 2 buttons.

To Change the Tuning Reference

By default, Harmony-G XT is tuned to A=440 Hz and the harmony voices will sound in tune when you sing with a guitar tuned to A=440. If you will be playing guitar and singing with an instrument tuned to a different reference e.g. a piano that has dropped in overall pitch, you can change Harmony-G XT's reference with the following procedure.

Press and hold the Manual, Double and FX buttons simultaneously as you plug in the power adapter. Then

place your microphone near the instrument you want to tune to and play any single note from it. Press any button to exit to normal function.

You can now tune your guitar to the new reference. Your guitar and the harmony voice's pitch will match the reference instrument.

Note that the tuning reference is reset to A440 the next time power is removed from Harmony-G XT.

Using the VoiceSupport Application

Overview

Harmony-G XT ships complete with a CD containing the VoiceSupport application. Once installed on your Windows or Mac computer, this applet will allow you to:

- o Backup and restore any presets you've created
- o Stay up-to-date on news items regarding tips and tricks, version updates and video tutorials.
- o Register your product quickly and easily
- o Perform version updates if and when they become available.

Requirements

- o Mac with version 10.x or newer OS
- o PC with XP
- o Internet connection.

Installing VoiceSupport

1. Place the CD that came with your product into the CD drive of your computer. If you do not have the CD go to www.tc-helicon.com/voicesupport.asp

to download the latest version.

2. The CD will run the setup program automatically. If it doesn't, browse the CD and run Setup.exe.
3. Follow the prompts to install VoiceSupport
4. Connect Harmony-G XT to the computer with the supplied USB cable, apply power to Harmony-G XT.
5. Click on the VoiceSupport icon on your desktop to run VoiceSupport

First Impressions

VoiceSupport will connect with Harmony-G XT and show an icon indicating connection is successful (If it is not successful after several attempts see the FAQ section of this manual). After that, VoiceSupport will check with the TC-Helicon website and see what the latest news items specific to Harmony-G XT are. Clicking on news items will open them. Make sure to scroll down in the HOME window to see if there is more content there. The "New" icon will disappear once

Using the VoiceSupport Application

you've read an item. As of this writing, news items are permanently displayed in VoiceSupport.

Once you've browsed the news items, please take a moment to register your product by clicking on the REGISTER button on the top menu and filling out the online form.

The DOWNLOAD Tab

From time to time, a new firmware version aka "update" of Harmony-G XT may be available. Updates usually contain users' feature suggestions, improvements and bug fixes.

The DOWNLOAD tab is only used when an update is available for your product. Depending on whether an update is available, this may show only the "Load a sysex file..." item or, above it, an item describing an update. If there are several, the top item is the newest. Be sure to read any details on update items before installing onto your product.

The BACKUP Tab

If you have edited the presets on your Harmony-G XT, you may want to back them up on your computer for safekeeping. You can also use this tab to transfer your presets to another Harmony-G XT.

There are two windows: Backup and Restore. Backup loads your presets and/or setup parameters (48V on/off, Stereo/mono etc) into a user-specified folder on your computer and Restore sends this same data from the computer to your Harmony-G XT.

Check Back!

The news items that VoiceSupport downloads can benefit you and increase enjoyment and knowledge about your product. Make sure to run the app now and then (even without Harmony-G XT connected) to see what's new.

FAQ and Troubleshooting

My guitar doesn't change the harmonies. What's wrong?

- o Turn up the volume control on your guitar.
- o Confirm your guitar cable is good by connecting your guitar directly to your amp.
- o Remove any guitar effect pedals between your guitar and Harmony-G XT's input.
- o Ensure that you are playing guitar chords made up of at least a root note and a major or minor third.
- o Ensure the Manual button is off

My guitar volume is changing when I sing, can I adjust it manually?

- o Adjust the Guitar level control so that it is in the range above the Auto position.

My guitar is connected to my amp but I can't hear it. What's wrong?

- o Press the On footswitch to exit Bypass/Tuner mode

My FX level is up but the sound is still dry

- o You're likely set to the Off FX style. Press the FX button to activate and cycle through the FX styles.

I want to talk to the audience with no FX on, how do I do that?

- o Hold the On footswitch to enter Bypass/Tuner mode.

Where can I find support for this product?

- o Point your browser to www.tc-helicon.com. On our webpage, you'll find links to our support site and support contact information.

Can I turn the harmonies off in a preset?

Yes, press either the Voice 1 or Voice 2 buttons so that the LEDs above them are not lit.

Guitar Performance Tips

To ensure that the harmony voices follow your guitar playing closely, it's best to play as cleanly as you can. Also,

FAQ and Troubleshooting

at the beginning of your song, it's important to play a chord if you want to sing right at the beginning.

Your guitar should be well-tuned to the onboard tuner or an external one set to A=440 Hz. If the song section you want vocal harmony on has fast chord changes, single note runs or very slow arpeggios, you can use Manual mode to produce harmony.

Singing Performance Tips

The more in-tune you sing, the better the harmonies will sound. There is a slight amount of pitch correction on the harmony voices but it's mostly up to you! Try to ensure that your amp or monitor is not facing directly into your mic as this can confuse Harmony-G XT.

Can I Use Alternate Tunings On My Guitar?

Alternate tunings e.g. drop D, DADGAD, etc. are okay. The most important notes of your chord, as far as Harmony-G XT is concerned, are the chord root and the third, so make sure these notes are clearly voiced.

Your guitar can be tuned to alternate tunings as long as you are in tune with the onboard tuner.

Why isn't VoiceSupport connecting to Harmony-G XT?

If you have the USB cable connected correctly and VoiceSupport is not connecting, try the following:

1. Restart the computer, turn on Harmony-G XT and then run VoiceSupport.
2. Disconnect any MIDI I/O devices connected to your computer and rerun VoiceSupport.
3. Install VoiceSupport on another computer and connect to that.

FX and Doubling Alternates Listing

FX

Hall

1. Broadway Hall 2.6s decay
2. Smooth Plate 4.7s decay
3. Arena 6.0s decay

Room

1. Bouncy Room 910ms decay
2. Music Club 1.6s decay
3. Stretched Room 440ms decay

Echo

1. 300 ms delay w/feedback
2. 400 ms delay into Bright Chamber reverb
3. 350 ms right, 515 ms left w/feedback

Slap

1. 140 ms w/feedback
2. 140 ms feeding Thin Spring reverb
3. 165 ms right, 150 ms left

Combi

1. Detune > 360 ms delay > Bright Chamber reverb
2. Chorus > 110 ms delay > Broadway Hall
3. Detune > 690 ms delay > Broadway Hall

SFX

1. St. Joseph Church 4.2s decay, extra wet
2. Multitap delay, 515 ms right, 815 ms left w/feedback
3. Heavy flanger; high feedback

Note: when the guitar is routed through the outputs of Harmony-G XT, it will share the vocal reverb settings shown in the previous table. In settings where reverb is not added to the voice such as in the Echo bank, then the guitar reverb style defaults to Soft Hall 3.6 ms decay.

Doubling

- d. (default) Tight 1 voice - same as original Harmony G.
1. Natural 1 voice - looser humanization and scooping
2. Tight 2 voice - two doubled voices with tightest humanization settings
3. Natural 2 voice - More humanization and scoop added to the two doubling voices.

Specifications

Analog Inputs

- ◆ Mic Connector: Balanced XLR, Input Impedance 1kOhm
- ◆ Mic Input Sensitivity @ 0dBFS: -44dBu to +2dBu
- ◆ Mic Input Sensitivity @ 12dB headroom: -56dBu to -10dBu
- ◆ Guitar In Connector: Unbalanced 1/4", Input Impedance 1MOhm
- ◆ Guitar In Sensitivity: +15dBu @ 0dBFS
- ◆ EIN: -126dBu @ max. mic amp gain, $R_g = 150 \text{ Ohm}$

Analog Outputs

- ◆ Main Output Connectors: Balanced XLR
- ◆ Output Impedance: 40 Ohm
- ◆ Output Level: +2dBu @ 0dBFS
- ◆ Guitar Thru Connector: Unbalanced 1/4" Phone Jack
- ◆ Guitar Thru Output Impedance: 270 Ohm

Input to Output Analog Audio Performance

- ◆ Dynamic Range, Mic. @ Min gain: >108dB, 20 Hz - 20kHz *A-weighted
- ◆ Dynamic Range, Mic. @ -18dBu sensitivity: > 104dB, 20Hz - 20kHz*
- ◆ THD+ Noise, Mic. @ Min gain: <-90dB
- ◆ Frequency Response, max gain: -1.5dB @ 40 Hz, +0/-0.3 dB (200Hz to 20 kHz)
- ◆ Guitar In to Thru Dynamic Range: >119dB
- ◆ Tuning Mute Attenuation: >100dB

Conversion Characteristics

- ◆ Sample Rate: 48 kHz, Converter AKM AK4620B
- ◆ AD / DA Conversion: 24 bit, 128x oversampling bitstream

EMC & Safety

- ◆ Complies with EN 55103-1 and EN 55103-2 FCC part 15, Class B, CISPR 22, Class B
- ◆ Certified to IEC 65, EN 60065, UL6500 and CSA E60065 CSA FILE #LR108093

Environment

- ◆ Operating Temperature: 32° F to 122° F (0° C to 50° C)
- ◆ Storage Temperature: -22° F to 167° F (-30° C to 70° C)
- ◆ Humidity: Max. 90 % non-condensing

Supplementary

- ◆ Dimensions: 130mm x 132mm x 41mm (5" x 5.25" x 1.5")
- ◆ Weight: 1.5 lb. (0.72 kg)
- ◆ Warranty Parts and labor: 1 year

All specifications and features subject to change without notice.