HEADRUSH[®] AUTOTUNE[®] VX5

User Guide

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(1.0) Introduction

(1.1) Box Contents

AutoTune VX5 USB Cable Power Cable Quickstart Guide Safety & Warranty Manual

(1.2) Support

For the latest information about this product (documentation, technical specifications, system requirements, compatibility information, etc.) and product registration, visit **headrushfx.com**.

For additional product support, visit support.headrushfx.com.

(2.0) Setup

Note: For best results, use AutoTune on only one singer.

- 1. Press the **Preset button**. Rotate the encoder and then push the encoder to select a preset that closely matches your incoming source audio.
- 2. Press the **Key button** and turn the **Preset/Edit encoder** to set the Key, Scale, and Range for the singer.
- 3. Press the **AutoTune button** to turn on the AutoTune feature.
- 4. Adjust the **Speed knob**. A slower setting gives a more natural sounding pitch correction while a faster setting gives a more noticeable effect.
- 5. Adjust the **Humanize knob** to add more or less natural sounding pitch correction on sustained notes.
- 6. Press the Harmony button to turn the effect on, indicated by the button back light. Press the Harmony or FX button to turn on the respective feature. Then press and hold the respective button again to enter the menu. You can also select the "Inst." setting to use the guitar input to determine the key and scale.
- 7. Press the **FX button** to turn the effect on, indicated by the button's back light. Press and hold the **FX button**, then turn the **Preset/Edit encoder** to adjust parameters to create your own signature sound.

When you are finished using AutoTune VX5 and ready to shut it down, power off your connected output devices first, and then power off AutoTune VX5.



(2.1) Connection Diagram

Items not listed under (1.1) Introduction > Box Contents are sold separately.





(3.0) Features

(3.1) Top Panel



A. Display

Use this 1.8" color screen to view menus and edit parameters. Press the **Key** button to enter the menu on the display. Press and hold the **Harmony** or **FX** buttons to enter these menus on the display.

B. Volume

Adjusts the level of the Main and Phones Outputs.

C. Preset/Edit

Turn this encoder to adjust parameters, press to enter/exit menus, and hold to save a preset. The last selected preset will be retained when the power is cycled off and on.





D. Speed

Turn this knob to adjust how rapidly pitch correction is applied to incoming audio. For a more noticeable effect, set this towards the "Fast" side. For a more natural sounding pitch correction, set this towards the "Slow" side. See the *(4.3) Speed* section for more details.

E. Humanize

Turn this knob to the right to add realism to sustained notes by preserving subtle variations in pitch. Turn the knob to the left to minimize the natural sounding pitch correction, enabling settings that resemble the classic "robotic" AutoTune effect. See the *(4.4) Humanize* section for more details.

F. Preset Down / A/B Mode

Press to switch to the previous preset. Press and hold for two seconds to enter A/B mode to use the left and right footswitches to turn the selected effect on or off within a preset. Press and hold this footswitch to exit A/B mode. See the *(4.9) Footswitch Menu* section for more details.

G. Preset Up / Talk Mode

Press to switch to the next preset. Press and hold for two seconds to activate Talk mode and bypass the AutoTune, Harmony, and FX features without any effects applied to your vocals. Press either footswitch to exit Talk mode. See the *(4.9) Footswitch Menu* section for more details.





H. Peak LED

This LED will flash red if the XLR input signal is clipping. If this occurs, reduce the microphone level using the **Input Gain** knob.

I. Preset

Press to go to the Preset screen to see the current preset or to select another one. See the **(4.2)** *Preset/Edit Menu* section for more details.

J. Key

Press to go to the Key screen and select the key, scale, and vocal range for the preset. See the *(4.5) Key Menu* section for more details.

K. AutoTune

Press to turn the AutoTune feature on or off for the current preset. See the *(4.6) Autotune* section for more details.

L. Harmony

Press once to turn the Harmony feature on or off for the current preset. The backlight will illuminate when it is on. Press and hold to enter the parameter edit screen. See the (4.7) *Harmony* section for more details.

M. FX

Press once to turn the FX feature on or off for the current preset. The backlight will illuminate when it is on. Press and hold to enter the parameter edit screen. See the *(4.8) FX Menu* section for more details.

(3.2) Rear Panel



- A. Guitar Input (right-side panel, 1/4" [6.35 mm] TS, Mono) Connect your guitar here.
- B. Guitar Thru (left-side panel, 1/4" [6.35 mm] TS, Mono)

Connect this output to an amp or powered speaker.

C. Microphone Input (XLR, Mono, Balanced)

Connect a dynamic or condenser microphone here.

D. Microphone Input Gain Knob

Adjust the input gain for the **Microphone Input**. If the **Peak LED** flashes, reduce the gain knob.

E. +48V Phantom Power Switch

Use this switch to enable +48V phantom power for condenser microphones connected to the **Microphone Input**.

F. Main Output (XLR, Balanced)

Connect to an amplifier system or speakers.

G. Ground Lift Switch

Engage this switch to reduce hum or noise.

H. Phones Output (Stereo 1/8" [3.5 mm])

Connect your headphones (not included) here.





I. USB-B Port

Connect this USB port to a computer to send a stereo audio signal to your computer, receive a stereo audio signal from your computer, send MIDI program change messages (for preset recall, A/B mode, and Talk mode), and access the web interface for software updates. See the *(4.12) MIDI Control* section for more details.

J. Power Input (DC 9V, 1A, center negative)

Connect the included power cable here to power the unit.

K. Power Button

Press to power on/off.

(4.0) Operation

This chapter describes how to use AutoTune VX5

(4.1) Main Screen Overview

To access the main screen (the default screen when powering on), press the **Preset button** from any menu. Turn the **Preset/Edit encoder** to scroll through the available presets, and then press it again to select and load the preset.

To cancel loading a preset, press the **Preset button** to return to the main screen or wait five seconds to automatically return to the main screen.



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(4.2) Preset/Edit Menu

Loading/Saving a Preset

- 1. From the main screen, turn the **Preset/Edit encoder** to select a preset. Push the encoder again to load the selected preset.
- 2. Adjust the Humanize, Speed, Key, Harmony, or FX parameters for the preset.
- 3. Press and hold the **Preset/Edit encoder to select from these options:**
 - Select Save to overwrite the existing preset
 - Select Save and Rename to save to a new preset
 - Select Copy to copy over another preset
- 4. Turn the Preset/Edit encoder to scroll to a character, then push the encoder again to highlight that character. Scroll with the encoder through the character list. Once one is found, push the encoder to select. Press the Key button on a highlighted character space to delete that character. Once the preset is named, press the Preset button to save the preset.

Renaming a Preset

- 1. Turn the Preset/Edit encoder to select a preset.
- Press and hold the Preset/Edit encoder and turn the encoder to select Save & Rename before scrolling through the alpha numeric characters. Up to nine characters can be used for a name. Push the encoder to select a character and advance to the next position to continue naming the preset.
- 3. To save the preset name, press the **Preset button**.

Copying a Preset

Note: Saving over a Preset slot will erase that preset. Save to an **<Empty>** slot to avoid this.

- 1. Press and hold the Preset/Edit encoder.
- 2. Turn the Preset/Edit encoder to select Copy.

Note: Make sure to always rename your preset before copying them to avoid naming confusion.

3. In the **Save to Preset** menu, select a Preset slot and save a copy of the loaded preset to that slot by pressing the **Preset/Edit encoder**.









PRESET









PRESET/EDIT









(4.3) Speed

Turn the **Speed knob** to adjust how rapidly pitch correction is applied to incoming audio (0 - 400 ms). For a more noticeable effect, turn the Speed knob to adjust the Retune setting towards the "Fast" side. For a more natural sounding pitch correction, turn this towards the "Slow" side.

(4.4) Humanize

Turn the **Humanize knob** to the right to add realism to sustained notes by preserving subtle variations in pitch (0 - 100%). Turn the knob to the left to minimize the natural sounding pitch correction, enabling settings that resemble the classic "robotic" AutoTune effect.

(4.5) Key Menu

Press the **Key button** to select the key, scale, and vocal range for the preset.

Key Range:	C, D ^b , D, E ^b , E, F, F#/G ^b , G, A ^b , A, B ^b , B
Scale:	Chromatic, Major, Minor, Melodic Minor, Harmonic Minor, Dorian, Phrygian, Lydian, Mixolydian, Locrian
Range:	Very Low, Low, Mid, High, Very High





Retune Human



(4.6) AutoTune Menu

Press the **AutoTune button** to turn the autotune function on or off for the loaded preset. You may wish to have this turned off if you just want to use the Harmony or FX parts of the preset without autotuning the input signal.

(4.7) Harmony Menu

Editing a Harmony



- 1. Press and release the **Harmony button** to toggle this on/off. Press and hold the button again to enter its options menu.
- 2. Turn the **Preset/Edit encoder** to select the Harmony Range, Source, or Level, and push the encoder to see its options.



- 3. Turn the **Preset/Edit encoder** to browse parameters. Push the encoder to select a parameter and turn the encoder to adjust that parameter.
- 4. Push the **Preset/Edit encoder** button again to select the parameter and return to the options menu.

Harmony Range: (Source set to Instrument)	Highest, Higher, High, Unison, Low, Lower, Lowest
Harmony Range: (Source set to Off)	3 rd High, 5 th High, Oct High, 3 rd Low, 5 th Low, Oct Low, 3 rd Low + 3 rd High, 5 th Low + 3 rd High, 5 th Low + 5 th High, 3 rd High + 5 th High, Oct Low + Oct High
Source:	Off, Instrument
Level:	0 – 100%

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(4.8) FX Menu

Selecting an Effect

- 1. Press the **FX button** to toggle this on/off. Then press and hold the button again to enter the menu.
- 2. Rotate the **Preset/Edit encoder** and then push to select Compressor, Flavor, Chorus, Reverb, Delay.
- 3. Push the **Preset/Edit encoder** to select a parameter and rotate the encoder to browse effects presets or adjust parameters. Press the **Preset button** to go back to the main preset page.
- 4. Push the **Preset/Edit encoder** to confirm the parameter selections or to toggle the effect's on/off switches.



Compressor:



Compressor Type:	Soft, Mild, Hard, Crunch	
Mix:	0 – 100%	

Flavor:



Flavor Type:	Sizzle, Megaphone, Radio, Soft LoFi, Tube, Phone Vox, Zinger	
Mix:	0 – 100%	

Chorus:



Chorus Type:	Basic, Smooth, Deep Chorus, Heavy Slow, Robot Voice	
Mix:	0 – 100%	

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Reverb:

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Reverb Type:	Hall, Big Room, Chamber, Ambient, Church	
Mix:	0 – 100%	

Delay:



Delay Type:	Short Echo, Long Echo, Slapback, Ping Pong, Rhythmic Tail, Dub Delay, DM Resonator	
Time:	1ms – 4.00s	
Mix:	0 – 100%	

(4.9) Footswitch Menu

Press the **Preset Down / -A/B** footswitch to switch to the previous preset. Press and hold the footswitch for two seconds to enter A/B mode. Then use the left and right footswitches to turn a selected effect on or off within a preset. Press and hold the footswitch to exit A/B mode.

Press the **Preset Up / Talk Mode** footswitch to switch to the next preset. Press and hold the footswitch for two seconds to activate Talk mode to bypass the AutoTune, Harmony, and FX features without any effects applied to your vocals. Press either footswitch to exit Talk mode.

(4.10) Factory Reset

Hold the **Key** and **Preset** buttons while powering on VX5 to confirm or cancel a reset to factory default settings. This will clear all user presets and restore the factory presets.

(4.11) Web Interface

Connect AutoTune VX5 to your computer and go to **vx5.local** in a web browser to access the web interface (Windows 11 and macOS 13 - 15 are supported) when any firmware updates are made available. Follow the instructions included with the firmware update file to update AutoTune VX5.

(4.12) MIDI Control

External MIDI Control

When external MIDI control is enabled, you can use a MIDI device to remotely control some functions of AutoTune VX5. The chart below lists the parameters that can be controlled by sending the listed incoming MIDI messages from your external MIDI hardware:

MIDI Program Message	Action
CC32 set to 0 = Bank 1	Program change selects Presets 1 - 128
CC32 set to $1 = \text{Bank } 2$	Program change selects Presets 129 - 250
MIDI CC 16, Program Change 0	Disables Footswitch A/B Mode
MIDI CC 16, Program Change 1	Selects Footswitch A Mode
MIDI CC 16, Program Change 2	Selects Footswitch B Mode
MIDI CC 17, Program Change 0 - 63	Disables Talk Mode
MIDI CC 17, Program Change 64 - 128	Enables Talk Mode









(5.0) Appendix

(5.1) Presets

Preset #	Category	Preset Name	Preset #	Category	Preset Name
1	AUTOTUNE	Hard Tune	30	AT + FX [Delay]	MildTail
2	AUTOTUNE	Warm Tune	31	AT + HARM + FX [Comp + Flavor]	Oct Vox
3	AUTOTUNE	Soft Tune	32	AT + FX [Comp + Flavor]	WarmSizzl
4	AUTOTUNE	Mild Tune	33	AT + HARM + FX [Comp + Flavor]	Oct LoFi
5	HARM + FX [Comp + Chorus]	Octaves	34	AT + FX [Comp + Flavor]	WarmZing
6	HARM + FX [Comp + Chorus]	Fifths	35	AT + HARM + FX [Comp + Flavor]	Oct Radio
7	AT + FX [Verb]	HardVerb1	36	AT + HARM + FX [Chorus + Verb]	HardJuice
8	AT + FX [Verb]	HardVerb2	37	AT + HARM + FX [Chorus + Verb + Delay]	WarmJuice
9	AT + FX [Verb]	HardVerb3	38	AT + HARM + FX [Flavor + Chorus + Verb]	SoftJuice
10	AT + FX [Verb]	WarmVerb1	39	AT + HARM + FX [Chorus + Verb]	MildJuice
11	AT + FX [Verb]	WarmVerb2	40	AT + HARM + FX [Flavor + Chorus + Delay]	HardWow
12	AT + FX [Verb]	WarmVerb3	41	AT + HARM + FX [Chorus + Verb + Delay]	WarmWow
13	AT + FX [Verb]	SoftVerb1	42	AT + HARM + FX [Chorus + Verb + Delay]	SoftWow
14	AT + FX [Verb]	SoftVerb2	43	AT + HARM + FX [Chorus + Delay]	MildWow
15	AT + FX [Verb]	SoftVerb3	44	FX [Verb]	Hall
16	AT + FX [Verb]	MildVerb1	45	FX [Verb]	Room
17	AT + FX [Verb]	MildVerb2	46	FX [Verb]	Chamber
18	AT + FX [Verb]	MildVerb3	47	FX [Verb]	Ambient
19	AT + FX [Delay]	HardSlap	48	FX [Verb]	Church
20	AT + FX [Delay]	HardEcho	49	FX [Delay]	SlapBack
21	AT + FX [Delay]	HardPong	50	FX [Delay]	ShortEcho
22	AT + FX [Delay]	WarmSlap	51	FX [Delay]	LongEcho
23	AT + FX [Delay]	WarmEcho	52	FX [Delay]	PingPong
24	AT + FX [Delay]	WarmDub	53	FX [Delay]	DubDelay
25	AT + FX [Delay]	SoftSlap	54	FX [Delay]	Rhythmic
26	AT + FX [Delay]	SoftEcho	55	FX [Delay]	Resonator
27	AT + FX [Delay]	SoftPong	56	FX [Chorus]	Chorus
28	AT + FX [Delay]	MildSlap	57	FX [Chorus]	Smooth C
29	AT + FX [Delay]	MildEcho	58	FX [Chorus]	Deep C

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Preset #	Category	Preset Name	Preset #	Category	Preset Name
59	FX [Chorus]	Heavy C	80	FX [Flavor]	Zinger
60	FX [Chorus]	Robot C	81	AT + FX [Comp + Flavor]	HardZing
61	AT + HARM + FX [Comp + Chorus + Verb]	3HiVerbMj	82	HARM + FX [Comp + Flavor + Chorus]	HarmZing
62	AT + HARM + FX [Comp + Chorus + Verb]	3HiVerbMn	83	FX [Flavor]	Radio
63	HARM + FX [Comp + Chorus + Verb]	5HiVerb	84	AT + FX [Comp + Flavor]	HardRadio
64	HARM + FX [Comp + Chorus + Verb]	OctHiVerb	85	HARM + FX [Comp + Flavor + Chorus]	HarmRadio
65	AT + HARM + FX [Comp + Chorus + Verb]	3LoVerbMj	86	FX [Flavor]	Mega
66	AT + HARM + FX [Comp + Chorus + Verb]	3LoVerbMn	87	AT + FX [Comp + Flavor]	HardMega
67	HARM + FX [Comp + Chorus + Verb]	5LoVerb	88	HARM + FX [Comp + Flavor + Chorus]	HarmMega
68	HARM + FX [Comp + Chorus + Verb]	OctLoVerb	89	FX [Flavor]	Phone
69	HARM + FX [Comp + Chorus + Verb]	DblOctVrb	90	AT + FX [Comp + Flavor]	HardPhone
70	HARM + FX [Comp + Chorus + Verb]	5ths Verb	91	HARM + FX [Comp + Flavor + Chorus]	HarmPhone
71	FX [Flavor]	Sizzle	92	AT + HARM + FX [Flavor + Chorus + Delay]	Crazinger
72	AT + FX [Comp + Flavor]	HardSiz	93	AT + HARM + FX [Flavor + Chorus + Delay]	Flosizzle
73	HARM + FX [Comp + Flavor + Chorus]	HarmSiz	94	AT + HARM + FX [Comp + Flavor + Chorus + Verb]	MinorLoFi
74	FX [Flavor]	LoFi	95	AT + HARM + FX [Comp + Flavor + Chorus + Verb]	MajorLoFi
75	AT + FX [Comp + Flavor]	HardLoFi	96	AT + HARM + FX [Comp + Flavor + Chorus + Delay]	RadioGaGa
76	HARM + FX [Comp + Flavor + Chorus]	HarmLoFi	97	AT + HARM + FX [Flavor + Chorus + Delay]	Tubular
77	FX [Flavor]	Tube	98	AT + HARM + FX [Comp + Flavor + Chorus + Verb + Delay]	SpookyHrm
78	AT + FX [Comp + Flavor]	HardTube	99	AT + HARM + FX [Comp + Flavor + Chorus + Verb + Delay]	MeloMinor
79	HARM + FX [Comp + Flavor + Chorus]	HarmTube			

(5.2) Technical Specifications

XLR Input (Balanced XLR)	
Frequency Response	20 Hz – 20 kHz (<u>+</u> 0.2 dB)
Dynamic Range	111 dB (A-weighted)
Signal-to-Noise Ratio	110 dB (1 kHz, +4 dBu, A-weighted)
THD+N	0.003% (1 kHz, +4 dBu, -1 dBFS)
Preamp EIN	-133 dBu (max gain, 40 Ω source, A-weighted)
	-127 dBu (max gain, 150 Ω source, unweighted)
Max Input Level	+10 dBu
Sensitivity	-46 dBu
Gain Range	59 dB
+48V Phantom Power	Switchable on/off

Guitar Input (Balanced 1/4" / 6.35 mm TRS or unbalanced 1/4" TS)		
Frequency Response	20 Hz – 20 kHz (<u>+</u> 0.2 dB)	
Dynamic Range	111 dB (A-weighted)	
Signal-to-Noise Ratio	110 dB (1 kHz, +4 dBu, A-weighted)	
THD+N	0.003% (1 kHz, +4 dBu, -1 dBFS)	
Max Input Level	+13 dBu	
Input Impedance	1 ΜΩ	
Sensitivity	-46 dBu	

Guitar Thru (Balanced 1/4" / 6.35 mm TRS or unbalanced 1/4" TS)		
Output Impedance	540/270 $Ω$ (unbalanced/balanced)	
Buffered	Yes	

Main XLR Output (Balanced XLR)	
Frequency Response	20 Hz – 20 kHz (<u>+</u> 0.2 dB)
Dynamic Range	113 dB (A-weighted)
THD+N	0.001% (1 kHz, -1 dBFS)
Maximum Output Level	+20 dBu
Output Impedance	100 Ω
Ground Lift	Switchable on/off

Headphone Output (1/8" / 3.5 mm TRS)		
Frequency Response	20 Hz – 20 kHz (+0.2 dB)	
Dynamic Range	112 dB (A-weighted)	
THD+N	0.008% (1 kHz, 10mW per channel into 32 Ω)	
Maximum Output Level	+20 dBu (unloaded)	
Power Output	100 mW RMS (per channel into 32 Ω)	
Output Impedance	32 Ω	

General	
Footswitches	(2) Footswitches
Knobs	Preset/Edit encoder, Volume knob, Speed knob, Humanize knob
Display	1.8" (45.7 mm) full-color LCD
Connectors	Guitar Input (1/4" TS, Mono), Guitar Thru (1/4" TS, Mono), Mic Input (XLR female), Main Output (XLR male), Phones Output (1/4"), USB-B
USB	Bit rate: 24 bit Sample Rate: 48 kHz
Power	9V DC, 1A center-negative; 2.5 mm barrel power adapter
Dimensions (width x depth x height)	6.6" x 6.0" x 2.8" / 16.7 x 15.2 x 7.1 cm
Weight	2.5 lbs / 1.1 kg

Specifications are subject to change without notice.

(5.3) Trademarks & Licenses

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