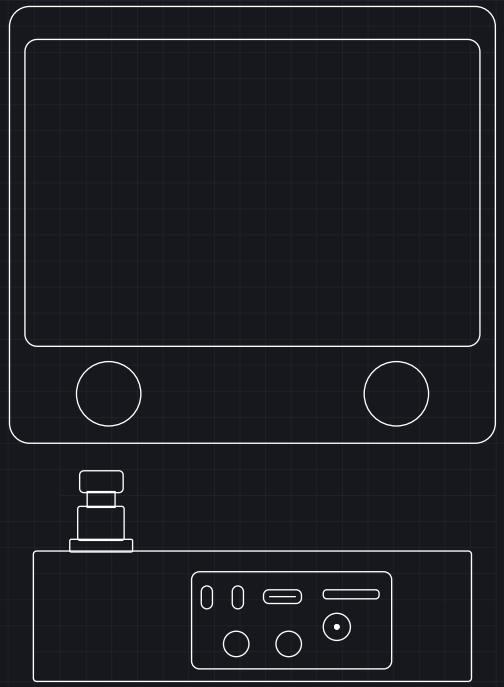
{Pirate MIDI} + {Builty}

POLAR MAX

Wireless
ToneX One
MIDI Controller



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Introduction

Thanks for purchasing a Polar Max! This smart little box is designed to connect a ToneX One into a MIDI control system - whether that's using an app on your phone, a foot controller, a DAW, or a keyboard.

Based on the ESP32 hardware platform, and using the open source firmware and software built by Greg Smith (Builty), this controller allows you to switch presets, toggle effects, change parameters, and more - onboard or with MIDI control.

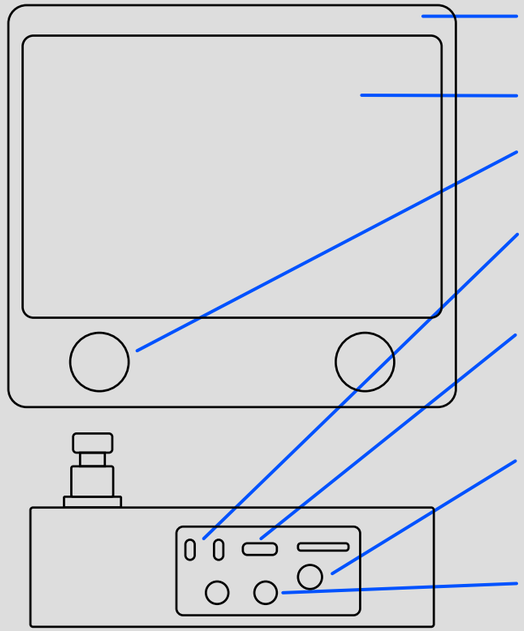
This is enabled by translating incoming MIDI commands into the USB serial messages that the ToneX One is expecting. This is a "hack" and not something that IK Multimedia will provide customer support for.

Contacting Support

For functional enquiries like software problems, questions about features or ideas for changes, you can join our Discord server, or contribute to the discussions page of the Github repository for the open source project.

For all support enquiries regarding the physical hardware, damage, repair, or returns please contact Pirate MIDI

Extra overview content for this project can be found on Greg's YouTube channel here.



Can be opened over and over with metal threaded inserts.

4.3" Touchscreen LCD screen

Pro-grade momentary footswitches

Easy access to onboard buttons: Left = **Reset**, Right = **Bootloader**

USB Type C - Connect your ToneX One pedal to this jack and it will receive full power as well as communication for changing presets and parameters.

9V DC 2.1mm centre negative barrel jack for power. Compatible with regular guitar pedal power supplies.

3.5mm TRS Type A MIDI input (right) and output (left). Can be adapted to DIN5 or 6.35mm, or other TRS Type with adapters. Complies with MIDI.org specification. MIDI output not active in current firmware *(as at 14/07/2025)*

What You Need

USB Type C cable. The cable that comes with the ToneX One is perfect for this.

9V DC power. Pedalboard power supplies are great. Needs at least 300mA.

MIDI controller. This can be an app, a DAW, a MIDI controller pedal or desktop device - anything that can send MIDI messages.

Computer or Phone. Use the browser on your computer or phone to access the configuration web page for the Polar controllers.

First Time Setup

The device is pre-configured to work as soon as you power it up with all the hardware features activated. Simply plug in the ToneX One pedal, plug a MIDI device into the 3.5mm TRS jack, and you can select presets using Program Change (PC) messages, or change parameters, scroll presets, and toggle effects using the MIDI messages listed at the end of this manual.

Connecting to Web Configuration

For the first time, you need to connect to the controller in Access Point (AP) mode. Once this has been done, the WiFi mode can be changed if desired.

Follow these steps:

- Reboot the controller
- Within 60 seconds, use a phone or PC to connect to the WiFi device **TonexConfig**
- Enter the password for the network: **12345678**
- The controller will automatically supply a network address for your device *(DHCP is supported)*

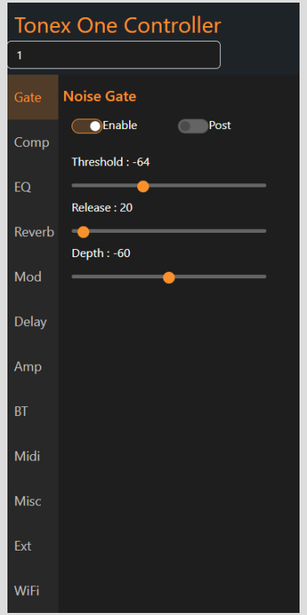
> *Note: some phones may attempt to use this network for Internet access, which will not be be available.*
> *Watch out for any messages asking you to confirm the connection*

- Open a web browser on your phone, tablet, or computer
- In the address bar of the web browser, enter **tonex.local** This should load the web config screen
- Once you have saved the settings (or if you don't want to change anything) you can close the web browser. The settings will be already changed on the Polar controller.

Setting Changed in Web Configuration

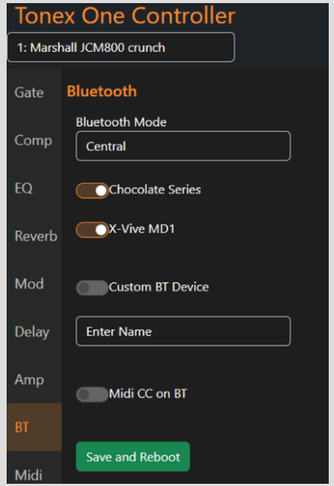
The following settings can be found on the web configuration page.
More detailed descriptions for each setting can be found on the GitHub page.

- Select & Name Presets
- Change & Save Effects Parameters
- Bluetooth Settings: Mode, Device Type, Custom BT Device Name,
- Change MIDI Channel
- Deactivate Wired MIDI Input
- Disable Preset Reset if Same Preset Is Sent Multiple Times
- Save and Reboot Polar to Activate New Settings
- Change Settings for External Switches (would require extra modification. See GitHub repo for more details)
- Change WiFi Mode, WiFi Power, Network Name (SSID), and Password



Bluetooth Settings

The "BT" category on the left menu of the Web Configuration page allows viewing and changing of the Bluetooth options.



Bluetooth Mode

Disabled: Bluetooth is totally disabled and non-functional

Central (default): allows the controller to locate and connect to other peripherals, like the M-Vave Chocolate

Peripheral: allows the controller to be discovered and connected to by other Central devices (like a Phone or a PC.)

Device Enable Toggles

- Enable support for the M-Vave Chocolate and Chocolate Plus Bluetooth footswitch controllers *(default: on)*
- Enable support for the X-Vive MD1 MIDI bridge device *(default: on)*
- Enable support for some other Bluetooth MIDI peripheral. Enter its device name, and check the checkbox to enable it *(default: off)*

Bluetooth MIDI CC

This toggle enables support for Control Change (CC) commands over Bluetooth. These can control effects parameters and other device settings remotely using MIDI apps or controllers. *A full list of MIDI messages is available at the end of this manual.*

This toggle is disabled by default, because the M-Vave Chocolate pedal, when changing banks, sends a conflicting change that modifies the ToneX parameters.

<u>This setting should not be enabled with a Chocolate controller that has the default configuration loaded.</u>

Preset Twice Toggle

If this setting is disabled *(default)*, then setting the same preset index multiple times will not have any effect.

If this setting is enabled, then setting the same preset a second time will set the ToneX pedal to bypass mode. Setting it a third time will exit bypass mode. This setting is most suited to use with pedal models, where it could for example enable/disable an overdrive pedal.

Footswitch (onboard) Mode

This setting controls how directly wired (onboard) footswitches will function. Note this has nothing to do with Bluetooth footswitch pedals, or the externally connected footswitches.

Polar controllers should always be set to:

Dual Next/Previous: 2 footswitches that select preset next and previous.

In the future there may be more applicable options added, but in the current firmware, the other options are only suitable for device with more footswitches hardwired in.

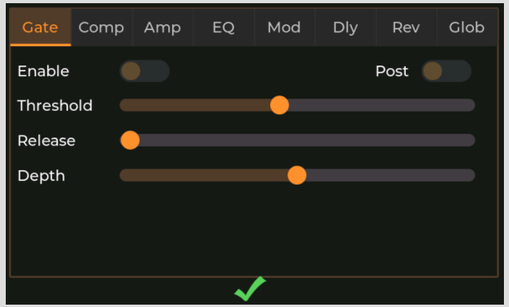
Save and Reboot

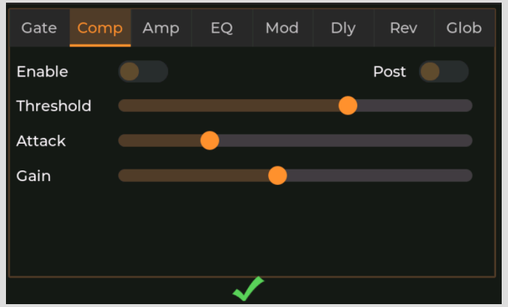
The Save and Reboot buttons on each configuration page will save all settings and reboot the controller. Then your new settings will take effect.

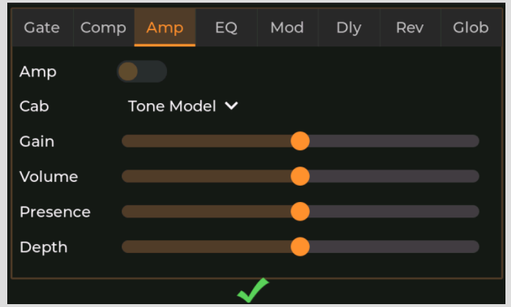
5. Onboard Menus & Controls

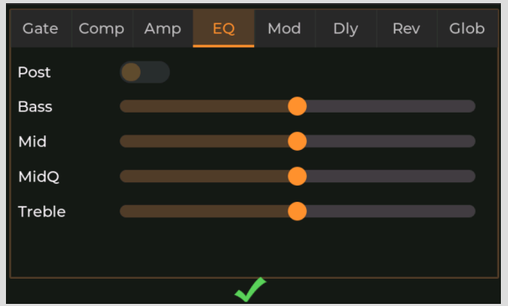
Here is a samples of the onboard screens that are used to directly control parameters on the Polar Max. The controls encompass the effects and global parameter editing. The home screen shows amplifier images as well as a visual representation of connection status (Bluetooth, WiFi, USB), and the signal chain of effects.

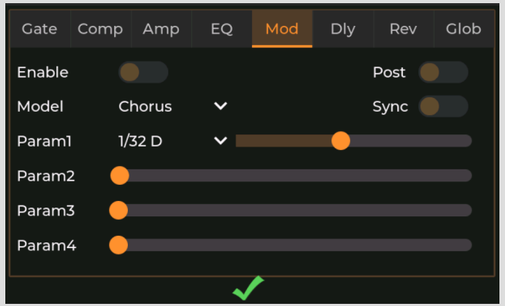
Change presets by pressing the arrows left and right at the bottom of the screen.

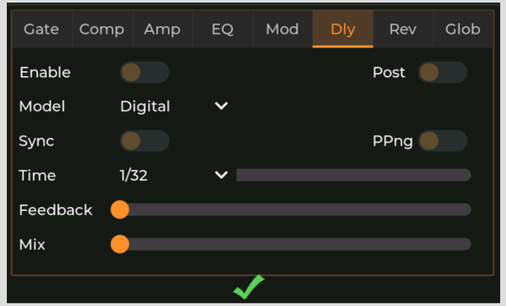


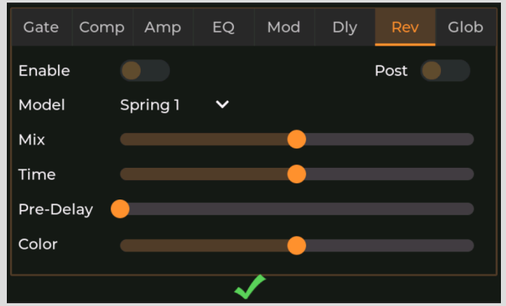


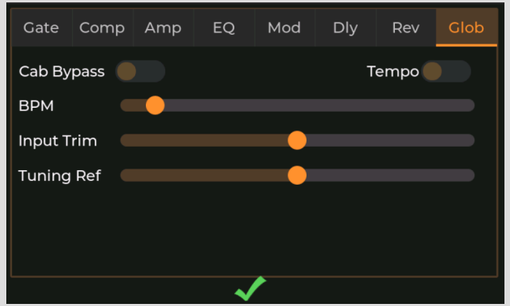












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Polar & ToneX One Update Instructions

Because IK Multimedia does not support MIDI, and this open source project is not in their consideration, there is a careful flow of reasoning for firmware updates both for the Polar and the ToneX One pedal itself.

Firstly, do not update your ToneX One firmware (if there is a new release available), until the GitHub repo has a new release to go along with it. You can check the Releases page here.

If you update your ToneX One, your Polar may not work until a new firmware update has been released for it.

Secondly, if there is a new release available on the GitHub Releases page, and there is no new firmware update for the ToneX One, you can update safely, knowing that you can simply roll back to the previous firmware if there are changes or bugs that are unacceptable for your rig.

Lastly, please remember that if you do a factory reset on your Polar, or do a clean install of new firmware, you will need to go into the MIDI settings and enable the "Wired MIDI" setting for the 3.5mm TRS MIDI input jack to work.

Detailed instructions for installing the firmware can be found here.

Via Purchase

Your purchase has already funded the open source project by Greg Smith. 10% of all Polar controller revenue is sent to Greg as a thank you for creating and maintaining the software and firmware.

Via Discussion

If you have ideas or you've fund a bug, you can lodge an issue (with as much detail as possible please), or you can discuss feature ideas - both on the GitHub repo.

Via Code

If you're a programmer by day and a guitarist by night, you can fork the repo, submit pull requests, and contribute to this open source project yourself!

Via Word of Mouth

This project is gaining popularity, and you can spread the word! More customers means more potential contributors and fast feature additions and bug fixes.

8. MIDI Implementation

Name	MIDI CC#	Value
Delay Position	1	Pre Amp: 0, Post Amp: 127
Delay: Power	2	On: 127, Off: 0
Delay Type	3	Digital: 0, Tape: 1
Digital Delay: Sync	4	On: 127, Off: 0
Digital Delay: Time	5	0-127
Digital Delay: Feedback	6	0-127
Digital Delay: Mode	7	Normal: 0, Ping-Pong: 64
Digital Delay: Mix	8	0-127
~~Tuner~~	~~9~~	~~Big ToneX~~
Tap Tempo	10	0-127
~~Expression Pedal~~	~~11~~	~~Big ToneX~~
~~Preset On~~	~~12~~	~~Big ToneX~~
Gate Position	13	First: 0, Post Amp: 127
Gate Power	14	On: 127, Off: 0
Gate Threshold	15	0-127

Name	MIDI CC#	Value
Gate Release	16	0-127
Gate Depth	17	0-127
Compressor Power	18	On: 127, Off: 0
Compressor Threshold	19	0-127
Compressor Gain	20	0-127
Compressor Attack	21	0-127
Compressor Position	22	0-127
Bass EQ	23	0-127
Bass Hz	24	0-127
Mid EQ	25	0-127
Mid Q	26	0-127
Mid Hz	27	0-127
Treble EQ	28	0-127
Treble Hz	29	0-127
EQ Position	30	0-127

Name	MIDI CC#	Value
Mod Position	31	Pre Amp: 0, Post Amp: 127
Mod Power	32	On: 127, Off: 0
Mod Type	33	Chorus: 0, Tremolo: 1, Phaser: 2, Flanger: 3, Rotary: 4
Chorus Sync	34	On: 127, Off: 0
Chorus Rate	35	0-127
Chorus Depth	36	0-127
Chorus Level	37	0-127
Tremolo Sync	38	On: 127, Off: 0
Tremolo Rate	39	0-127
Tremolo Shape	40	0-127
Tremolo Spread	41	0-127
Tremolo Level	42	0-127
Phaser Sync	43	On: 127, Off: 0
Phaser Rate	44	0-127
Phaser Depth	45	0-127

Name	MIDI CC#	Value
Phaser Level	46	0-127
Flanger Sync	47	On: 127, Off: 0
Flanger Rate	48	0-127
Flanger Depth	49	0-127
Flanger Feedback	50	0-127
Flanger Level	51	0-127
Rotary Sync	52	On: 127, Off: 0
Rotary Speed	53	0-127
Rotary Radius	54	0-127
Rotary Spread	55	0-127
Rotary Level	56	0-127
Spring Reverb 1 Time	59	0-127
Spring Reverb 1 Predelay	60	0-127
Spring Reverb 1 Color	61	0-127
Spring Reverb 1 Mix	62	0-127

Name	MIDI CC#	Value
Spring Reverb 2 Time	63	0-127
Spring Reverb 2 Predelay	64	0-127
Spring Reverb 2 Color	65	0-127
Spring Reverb 2 Mix	66	0-127
Spring Reverb 3 Time	67	0-127
Spring Reverb 3 Predelay	68	0-127
Spring Reverb 3 Color	69	0-127
Spring Reverb 3 Mix	70	0-127
Room Reverb Time	71	0-127
Room Reverb Predelay	72	0-127
Room Reverb Color	73	0-127
Room Reverb Mix	74	0-127
Plate Reverb Time	76	0-127
Plate Reverb Predelay	77	0-127
Plate Reverb Color	78	0-127

Name	MIDI CC#	Value
Plate Reverb Mix	79	0-127
Reverb Power	75	On: 127, Off: 0
Spring Reverb 4 Time	80	0-127
Spring Reverb 4 Predelay	81	0-127
Spring Reverb 4 Color	82	0-127
Spring Reverb 4 Mix	83	0-127
Reverb Type	85	Spring 1-4: 0-3, Room: 4, Plate: 5
Reverb Position	84	Post Amp: 0, Last: 127
Preset Down	86	0-127
Preset Up	87	0-127
BPM	88	0-127
~~Bank Up~~	~~89~~	~~Big ToneX~~
~~Bank Down~~	~~90~~	~~Big ToneX~~
Tape Delay Sync	91	On: 127, Off: 0
Tape Delay Time	92	0-127

Name	MIDI CC#	Value
Tape Delay Feedback	93	0-127
Tape Delay Mode	94	Normal: 0, Ping Pong: 64
Tape Delay Mix	95	0-127
Global BPM	99, 100	0-127
Amp Model Gain	102	0-127
Amp Model Volume	103	0-127
Amp Model Mix	104	0-127
Presence	106	0-127
Depth	107	0-127
VIR Resonance	108	0-127
VIR Mic 1	109	Condenser: 0, Dynamic: 1, Ribbon: 2
VIR Mic 1 X	110	0-127
VIR Mic 1 Z	111	0-127
VIR Mic 2	112	Condenser: 0, Dynamic: 1, Ribbon: 2
VIR Mic 2 X	113	0-127

Name	MIDI CC#	Value
VIR Mic 2 Z	114	0-127
VIR Blend	115	0-127
Input Trim	116	0-127
Cab Sim Bypass	117	On: 127, Off: 0
Global Tempo Source	118	0-127
Global Tuning Reference	119	0-127
Select Preset	127	0-19
Select Preset (PC)	PC 0-19	-

9. Warranty

Manufacturing defects are covered by our warranty. Please contact us if your device is defective.

Australian domestic customers are covered by Australian Consumer Law which requires repair or replacement for devices that do not fulfil their advertised purpose.

International (Non-Australian) customers are covered by our own workmanship guarantee. We aim to create a satisfactory outcome for every single customer. Please contact us if you have an issue with your device.

Customer-caused damage may be repairable for a fee. We offer repair services for most components that receive damage. Contact us for details.

MADE IN AUSTRALIA

PIRATE MIDI