




# Sentry Noise Gate

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# Important safety instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over. 
13. Unplug this apparatus during lightning storms or when unused for long periods of time.

14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

### Caution

You are cautioned that any change or modifications not expressly approved in this manual could void your authority to operate this equipment.

### Service

All service must be performed by qualified personnel.

### Warning

To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture and objects filled with liquids, such as vases, should not be placed on this apparatus.

Do not install this device in a confined space.

## EMC/EMI

Electromagnetic compatibility/  
Electromagnetic interference

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules.

These limits are designed to provide reasonable protection against harmful interference in residential installations. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- ▶ Reorient or relocate the receiving antenna.
- ▶ Increase the separation between the equipment and receiver.
- ▶ Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- ▶ Consult the dealer or an experienced radio/TV technician for help.

For customers in Canada

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

## Explanation of graphic symbols



The lightning bolt triangle is used to alert the user to the presence of uninsulated “dangerous voltages” within the unit’s chassis that may be of sufficient magnitude to constitute a risk of electric shock to humans.



The exclamation point triangle is used to alert the user to presence of important operating and service instructions in the literature accompanying the product.

# Before you begin

## About this manual

Use this manual to learn how to set up and operate your TC product.

To get the most from this manual, please read it from start to finish, or you may miss important information.

This manual is only available as a PDF download from the TC Electronic website.

Of course, you can print this manual, but we encourage you to use the PDF version, which has both internal and external hyperlinks. For example, clicking the logo in the upper left corner of each page will take you back to the table of contents.

To download the most current version of this manual, visit

[tcelectronic.com/support/manuals/](http://tcelectronic.com/support/manuals/)

## Getting support

If you still have questions about the product after reading this manual, please get in touch with TC Support:

[tcelectronic.com/support/](http://tcelectronic.com/support/)

## Enjoy your TC product!

# About this pedal



Thank you for spending your hard-earned money on this TC Electronic product! We have done our best to ensure that it will serve you for many years to come, and we hope that you will enjoy using it.

## Sentry Noise Gate

Although extremely simple to use, Sentry Noise Gate features cutting-edge multiband technology based on the same algorithms as featured in System 6000; TC's definitive studio processing powerhouse. The pedal also features a classic hard-gate mode along with a loop Send/Return for silencing noisy pedals/amps all without cutting out dynamics or feel. This can even be used for creative sidechaining, so the gate can be in precise sync with other signals.

With endless gating options available through TonePrint, including limitless customization via the TonePrint editor, Sentry Noise Gate has the finest and most flexible noise reduction engine compared to any other pedal on the market.

## True Bypass

Here at TC, we have a simple philosophy: When you are using one of our products, you should hear something great – and if you don't, you shouldn't hear it at all. This is why this pedal sports **True Bypass**. When it is bypassed, it is really off and has zero influence on your tone, resulting in optimum clarity and zero loss of high-end.

Sometimes, it is advisable to switch an effect pedal from True Bypass to Buffered Bypass mode. For more information, see [“Switching the pedal from true bypass to buffered bypass mode”](#).

# TonePrint

This TC Electronic product supports TonePrints. To learn more about TonePrints, go to [tcelectronic.com/toneprint/](http://tcelectronic.com/toneprint/)

## What are TonePrints?

When you look at your TC Electronic effect pedal, you'll only see a few knobs. Actually, for some pedals, it's just one knob. So – one knob, one function, right?

Actually, there's a lot more to it than meets the eye.

## Star-tweaked signature sounds

When TC Electronic builds an effect pedal, the relationship between its controls and many parameters “under the hood” are defined by developers, musicians and product specialists who live and breathe sound. This gives you an excellent starting point: a great-sounding pedal with well-balanced controls.

But wouldn't it be cool to have world-famous guitar players – guys like [Paul Gilbert](#), [Guthrie Govan](#), [John Petrucci](#) or [Steve Vai](#) – [virtually rewire your reverb pedal](#), defining what should happen “behind the scenes”?

And how about doing this yourself?

This is exactly what TonePrint allows you to do.

TC Electronic is working with top guitar players who explore a pedal's hidden tonal potential, re-defining the controls and creating their personal TonePrints. And we are making these custom TonePrints available to you. Uploading them to your pedal is really easy (see [“Transferring TonePrints to your pedal using the TonePrint app”](#)) – and with the amazing TonePrint Editor, you can even create your own signature pedal, tweaked specifically to your liking.

You can change the TonePrint in your pedal as often as you like, and the best part:

It's totally free.

## Transferring TonePrints to your pedal using the TonePrint app

Being able to virtually rewire your TC Electronic effect pedal wouldn't be much use if you needed a lot of extra equipment to do it. This is why we created the TonePrint app. The TonePrint app is free software for popular smartphones that allows you to “beam” new TonePrints right into your effect pedal whenever and wherever you feel like it.

## Obtaining the TonePrint app

If you own an iPhone, you can download the TonePrint app from Apple's [App Store](#).

If you own an Android phone, you will find the TonePrint app on [Google Play](#).

Once you have the app, no additional downloads or in-app purchases are required. You can access all available TonePrints from within the app, and all TonePrints are free.

## Transferring TonePrints to your pedal – step by step

- ▶ Launch the TonePrint app on your smartphone.
- ▶ Find the TonePrint you want to use. You can browse TonePrints by Artist or Product (i.e., pedal type). You will also find Featured TonePrints.
- ▶ Plug your guitar or bass into your TonePrint pedal.
- ▶ Turn your TonePrint pedal on.
- ▶ Turn up the volume on your instrument and set the pickup selector to one pickup.
- ▶ Hold the speaker of your smartphone next to the chosen pickup and touch “Beam to pedal”.

## Editing TonePrints with TonePrint Editor

The TonePrint app allows you to use TonePrints created by your favorite guitar and bass players. But this is only the start. Using TC’s TonePrint Editor, you can create your very own signature pedal sounds.

### TonePrint Editor features

- ▶ Use TonePrint Editor to build your own custom sounds.
- ▶ Enjoy complete control over all effect parameters and effect behavior – it’s your vision, your sound.
- ▶ Customize knob function and knob range to suit your needs and sounds.
- ▶ Audition your sonic creations in real-time live – make changes on the fly and listen to results immediately.
- ▶ Works with both PC and Mac.

*Last but not least...*

- ▶ TonePrint Editor is absolutely **free!**

## Obtaining TonePrint Editor

If you want to use TonePrint Editor for your Windows or OS X computer, download it from

[tcelectronic.com/toneprint-editor/](http://tcelectronic.com/toneprint-editor/)

If you want to use TonePrint Editor on your Apple iPad, download it from Apple’s [App Store](#).

Please note that version 2.0 or higher of the TonePrint Editor is required for working with TC Electronic Mini pedals. Version 2.0 has a Library function that allows you to access and use TonePrints even without an Internet connection.

## Obtaining the TonePrint Editor manual

Download the TonePrint Editor manual from

[tcelectronic.com/toneprint-editor/support/](http://tcelectronic.com/toneprint-editor/support/)

If you open the manual for TonePrint Editor in [Adobe Reader](#), you can click on interface sections to jump directly to the sections of the manual you are interested in.

# Setup

## Ready...

Your TC Electronic effect pedal box should contain the following items:

- ▶ Your TC Electronic effect pedal
- ▶ 1 USB cable (Type A to Mini-B)
- ▶ 1 TC Electronic sticker
- ▶ 1 leaflet about TC's guitar FX product range

Inspect all items for signs of transit damage. In the unlikely event of transit damage, inform the carrier and supplier.

If damage has occurred, keep all packaging, as it can be used as evidence of excessive handling force.

## Set...

- ▶ Connect a 9 V power supply with the following symbol to the DC input socket of your TC Electronic effect pedal.



This product does not come with a power supply. We recommend using TC Electronic's [PowerPlug 9](#) (sold separately).

If no power supply is available, you can run this product using a battery. For more information on changing batteries, see ["Changing the battery"](#).

- ▶ Plug the power supply into a power outlet.
- ▶ Connect your instrument to the in jack on the right side of the pedal using a ¼" jack cable.
- ▶ Connect the out jack on the left side of the pedal to your amplifier using a ¼" jack cable.
- ▶ You may want to place noisy effect pedals (such as distortion pedals) in Sentry Noise Gate's Send/Return loop. For more information, see ["Send and Return jacks"](#).

## Play!

# Inputs, outputs and controls



Sentry Noise Gate

## Power / Switching the effect on and off

### Power input

To power up your pedal, connect a power supply to its power input socket.

The power input socket of your TC Electronic effect pedal is a standard 5.5/2.1 mm DC plug (centre = negative).

Your TC Electronic effect pedal requires a 9 V power supply providing 100 mA or more (not supplied). TC Electronic recommends using the [PowerPlug 9](#).

To minimize hum, use a power supply with isolated outputs.

If no power supply is available, you can run this product using a battery. For more information on changing batteries, see [“Changing the battery”](#).

### Footswitch

- ▶ To turn the effect on, tap the footswitch.
- ▶ To turn the effect off, tap the footswitch again.

## Audio in and out

### Audio input (mono)

The audio input on the *right* side of this pedal is a standard ¼” jack (mono/TS).

- ▶ Connect your guitar to the audio input on the *right* side of your pedal using a regular ¼” mono cable.

### Audio output (mono)

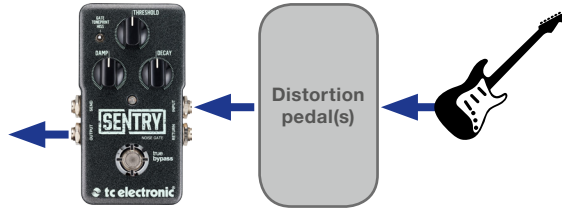
The audio output on the *left* side of this pedal is a standard ¼” jack (mono/TS).

- ▶ Connect the audio output of your pedal to the next device in the signal chain using a regular ¼” mono cable.



### Send and Return jacks

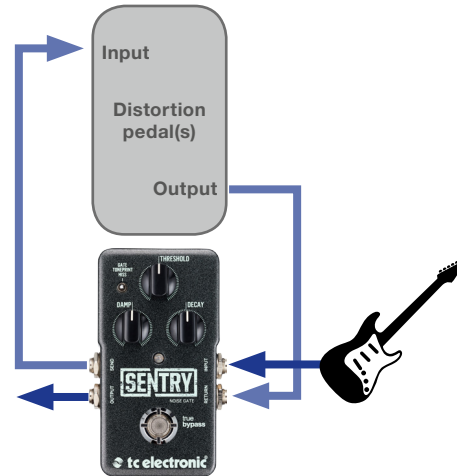
Typically, you would place a noise gate in the signal path after your distortion pedal(s).



*Daisy-chaining noisy effect pedals and Sentry Noise Gate*

However, noise from a distortion pedal may be so loud that it prevents your guitar from ringing out naturally before the gate closes, which kills playing dynamics. With Sentry Gate's Send/Return loop, you can plug your guitar directly into the pedal's input while placing your noisy effects in the loop.

If you do not get the desired results when daisy-chaining your pedals, consider using the Send and Return jacks as shown here.

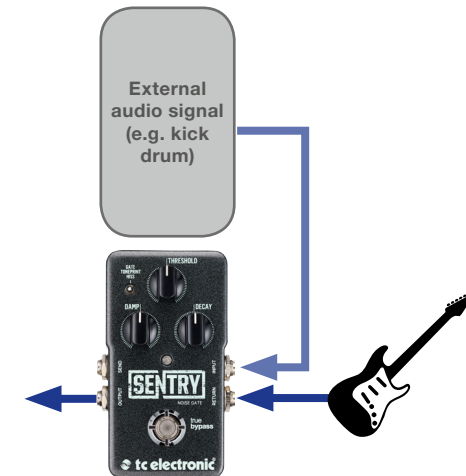


*Placing noisy effect pedals in Sentry Noise Gate's Send/Return path*

With this setup, the gate is opened and closed by the direct guitar signal and will operate regardless of the noisy pedal's output – ensuring the most natural and unobtrusive gating possible.

### Using sidechaining creatively

With the two scenarios described so far (daisy-chaining or placing noise guitar effect pedals in the Send/Return path), the signal coming from your guitar will determine when the gate opens and closes. But there is also a third option that opens up new creative possibilities: Use another audio signal to control the gate. For example, you could feed a kick drum into Sentry Noise Gate's *input*, and this percussive signal will open and close the gate, thereby attenuating the signal from your guitar (connected to the *Return* jack) independently of its own level. While this kind of gating is very popular in electronic dance music, it can also be used to great effect in other genres.



*Using a separate audio signal to control the gate*

## USB port

Use the standard Mini-B USB port on your TC Electronic effect pedal to connect your pedal to a computer. This will allow you to load TonePrints into the pedal or create your own TonePrint using TC's TonePrint Editor. For more information, see ["TonePrint"](#).

If there should be firmware updates for this pedal, they can also be installed using the USB port – see ["Updating the firmware"](#).

## Effect controls

Please note that the knob assignments on your TC Electronic effect pedal are the *default* assignments. Using the [TonePrint Editor](#), you can rewire all knobs so they control one or several parameters of your choice. For more information, see the [TonePrint Editor manual](#).

The three Sentry Noise Gate knobs control the "When?", "How much?" and "How quickly?" of noise elimination.

## Threshold knob – noise gate threshold

Use the Threshold knob to determine the signal level at which the gate should start attenuating the signal.

This is the "sensitivity" of the noise gate: When the input signal falls under the level set with this knob, the gate closes, and the signal level at the output is reduced (or muted completely). This means that the *higher* the Threshold, the more aggressive and noticeable the noise gate will act. Use *lower* Threshold settings for a more subtle/"forgiving" noise gate.

- ▶ Turn the Threshold knob to the left for a high Threshold setting (more noise will be eliminated).
  - ▶ Turn the Threshold knob to the right for a low Threshold setting (more signal and possibly noise will pass through).
- ! If you turn the Threshold to maximum position and you are dealing with noise pedals, the gate may not close at all. As long as the Gate status LED is green, the gate is open. For more information, see ["Gate status LED"](#).

### Damp – signal attenuation control

Use the Damp knob to control how strongly Sentry Noise Gate should attenuate the output signal when the input signal falls below the set Threshold.

- ▶ Set the Damp knob to maximum position to have the gate close *completely* (i.e., mute the signal at the output) when the gate has been triggered.
- ▶ Set the Damp knob to a lower position to only *attenuate* the signal at the output when the gate is triggered. Lower settings will lead to more organic, natural sounding results.

Now you might think that a noise gate should always have a maximum effect when triggered. After all, you want to remove unwanted noise! But consider that the transition between the “open” stage and the “gated/attenuated” stage should usually be imperceptible. The stronger the attenuation, the more obvious the effect of the noise gate will be. Experiment to achieve the right balance between “effective” and “subtle”.

### Decay – gate decay control

Use the Decay knob to control how quickly Sentry Noise Gate should attenuate the output signal when the input signal falls below the set Threshold.

- ▶ Turn the Decay knob to the right for a long decay.
- ▶ Turn the Decay knob to the left for a short decay.

A shorter decay will eliminate noise more effectively, but also be more noticeable. Again, you should experiment to find the right balance.

### Gate type selector

Use the Gate type selector to select the desired noise gate type.

#### Gate setting

To operate Sentry Noise Gate as a traditional single band gate, set the Gate type selector to “Gate”.

#### TonePrint setting

To use TonePrint-based noise gate configurations, set the Gate type selector to “TonePrint”. For more information, see [“TonePrint”](#).

#### Hiss setting

To operate Sentry Noise Gate in hard gate mode, set the Gate type selector to “Hiss”. This is a multiband gate mode that is especially suited (you guessed it) for eliminating hissing.

#### *Why use multiband gating?*

Splitting an audio signal into several frequency bands before running it through a noise gate allows the gate to work more effectively. Think of a multiband noise gate as multiple units targeting and processing low, mid and high frequency ranges independently and efficiently.

## Gate status LED

Watch the LED of your Sentry Noise Gate as you play your instrument and adjust gate settings. When a signal is detected at the input, the gate will open, and the LED will turn green. When the gate has closed (i.e., when it has attenuated the signal as defined with the Damp knob), the LED will turn red.

# Maintenance

## Updating the firmware

TC may provide updates for the built-in software of your pedal, the firmware. Updating your TC pedal's firmware requires...

- ▶ a computer running Microsoft Windows or OS X with a standard USB interface
- ▶ the specified DC power supply for your pedal.

## Preparing the firmware update

- ▶ Download the newest firmware from the “Support” page for your TC pedal. There are updaters
  - for Microsoft Windows (these are ZIP archives containing the firmware installer) and
  - for OS X (these are disk image files containing the firmware installer).
- ▶ Unplug all cables (including the power supply) from your TC pedal.
- ▶ Connect the pedal to your computer using a USB cable.
- ▶ Press and hold the footswitch on your TC pedal. If your TC pedal has more than one footswitch, press and hold the leftmost footswitch.
- ▶ Insert the DC power supply plug.
- ▶ The LED on your pedal should turn green. If your TC pedal has more than one LED, the leftmost LED should turn green. This indicates that the pedal is ready to receive the software update.
- ▶ Release the footswitch.
- ▶ Your TC pedal will now be recognized as an updatable device.

## Applying the firmware update

- ▶ Quit all MIDI-related applications (e.g. your DAW) on your computer and launch the firmware updater you have downloaded in step 1.
- ▶ In the firmware updater app, select your TC pedal from the drop-down list under the “STEP 1” heading.
- ▶ When the “Update” button under the “STEP 2” heading turns green, click it.

The updated firmware will now be transferred to your TC pedal. Wait for the progress bar to reach 100%. When the update procedure is complete, the pedal will automatically restart.

## Changing the battery

If you need to change the battery of your TC Electronic effect pedal, proceed as follows:

- ▶ Unscrew the thumb-screw on the back of the pedal and detach the back-plate.
- ▶ Unmount the old battery and attach the new battery to the battery clip making sure the polarity is correct.
- ▶ Remount the back-plate.

## Notes regarding batteries

- ▶ Batteries must never be heated, taken apart or thrown into fire or water.
- ▶ Only rechargeable batteries can be recharged.
- ▶ Remove the battery when the pedal is not being used for a longer period of time to save battery life.
- ▶ Always dispose batteries according to local laws and regulations.

## Switching the pedal from true bypass to buffered bypass mode

### True Bypass and Buffered Bypass explained

True Bypass mode is a hard-wire bypass that gives absolutely no coloration of tone when the pedal is bypassed. This is the default mode for your effect pedal.

Using True Bypass on all pedals is a perfect choice in setups with a few pedals and relatively short cables before and after the pedals.

If...

- ▶ you use a long cable between your guitar and the first pedal or
- ▶ if you use many pedals on your board or
- ▶ if you use a long cable from your board to the amp,

...then the best solution will most likely be to set the *first* and the *last* pedal in the signal chain to

**Buffered Bypass** mode.

Can you hear the difference between a pedal in True Bypass or Buffered Bypass mode?

Maybe, maybe not – many factors apply: active/passive pick-ups, single coil/humbucker, cable quality, amp impedance and more. We cannot give a single ultimate answer. Use your ears and find the best solution for your setup!

To set the bypass mode, proceed as follows:

- ▶ Disconnect the pedal and turn it on its back.
- ▶ Unscrew the back plate of the pedal and look for the two small dip-switches in the upper left corner.
- ▶ The upper DIP switch (the one closer to the power in jack), switches between True Bypass mode (default) and Buffered Bypass mode.
- ▶ Set the DIP switch to the desired position.
- ▶ Remount the back-plate.

# Frequently asked questions



## Frequently asked questions about TonePrint pedals

“Are TonePrint pedals analog or digital?”

The dry signal of your guitar passes straight through this effect pedal and is in no way digitized. The processed, “wet” signal is just added.

“Do the TonePrint pedals have balanced or unbalanced inputs/outputs?”

TonePrint pedals have unbalanced inputs and outputs. Use cables with TS jacks (i.e., standard instrument cables).

“Is it possible to run this TonePrint pedal in the effects loop of a tube amp?”

Yes. All TonePrint pedals have a very wide gain range and are designed to run at both instrument and line level. There are a few amps which are capable of running much hotter than regular +4 dBu line-level signals because of the way their effect loops are designed. With these amps, it might be possible to get the input to clip. But for 99 % of all amps, the TonePrint pedals will work just fine.

For additional information about your TC Electronic TonePrint effect pedal, please go to TC Electronic Support:

[tcelectronic.com/support/](http://tcelectronic.com/support/)

# Links

## TonePrint resources

- ▶ **TonePrint:**  
[tcelectronic.com/toneprint/](http://tcelectronic.com/toneprint/)
- ▶ **TonePrint products:**  
[tcelectronic.com/toneprint/toneprint-products/](http://tcelectronic.com/toneprint/toneprint-products/)
- ▶ **TonePrint app:**  
[tcelectronic.com/toneprint-app/](http://tcelectronic.com/toneprint-app/)
- ▶ **TonePrint Editor:**  
[tcelectronic.com/toneprint-editor/](http://tcelectronic.com/toneprint-editor/)
- ▶ **TonePrint Editor manual:**  
[tcelectronic.com/toneprint-editor/support/](http://tcelectronic.com/toneprint-editor/support/)

## Support resources

- ▶ **TC Electronic Support:**  
[tcelectronic.com/support/](http://tcelectronic.com/support/)
- ▶ **TC Electronic – product software:**  
[tcelectronic.com/support/software/](http://tcelectronic.com/support/software/)
- ▶ **TC Electronic – all product manuals:**  
[tcelectronic.com/support/manuals/](http://tcelectronic.com/support/manuals/)
- ▶ **TC Electronic user forum:**  
[forum.tcelectronic.com/](http://forum.tcelectronic.com/)

## TC Electronic on...

- ▶ **the web:**  
[tcelectronic.com/](http://tcelectronic.com/)
- ▶ **Facebook:**  
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- ▶ **Google Plus:**  
[plus.google.com/+tcelectronic/](https://plus.google.com/+tcelectronic/)
- ▶ **Twitter:**  
[twitter.com/tcelectronic](https://twitter.com/tcelectronic)
- ▶ **YouTube:**  
[youtube.com/user/tcelectronic](https://youtube.com/user/tcelectronic)

# Technical specifications

Please note that due to continuous development, the following specifications are subject to change without further notice.

Bypass mode	True Bypass (Buffered Bypass optional)
Dimensions (width x depth x height)	48 x 48 x 93 mm – 1.9 x 1.9 x 3.7"
Input connector	Standard ¼" jack – mono/TS + Return jack
Output connector	Standard ¼" jack – mono/TS + Send jack
Power input	Standard 9 V DC, centre negative >100 mA (power supply not included)
Battery option	-
Input impedance	1 MΩ
Output impedance	100 Ω
USB port	Mini USB connector for uploading and editing custom TonePrints and for software updates

