



# Vortex Flanger

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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

This manual will help you learn understanding and operating 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.

## Vortex Flanger

An endless list of immortal artists have used a flange effect to create magic. From The Beatles and Pink Floyd to Van Halen, Metallica and the Red Hot Chili Peppers: With Vortex Flanger, all those sounds are yours for the rocking.

### From subtle “woosh” to 747 landing

Vortex Flanger offers two modes:

- A classic pedal flanger sound capable of giving you everything from subtle chorus tones to classic Van Halen jet flanger swoosh and
- tape mode, which gives you the psychedelic sound of the original flange tones of Jimi Hendrix and Led Zeppelin. And it does fantastic “through zero” sounds, too!

### Famous flange flavors

Vortex takes the great pioneers of the Sixties and Seventies and adds a set of deep controls, allowing you to sculpt and time your flange sounds with great precision. Essential for quickly dialing through the rich history of flange pioneers such as Hendrix and Van Halen and sculpting your own twisted sounds.

### The I/O you know

Vortex Flanger has stereo inputs and outputs, which is really cool for dual amp set-ups or a “double combo attack” where ultra-wide flange sounds are needed. Awesome – but not for the faint of heart!

## 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.

You will also be delighted to hear (*literally*) that this TC Electronic effect pedal will let your dry, unprocessed sound pass without ever converting it to digital – keeping your original tone pure and without any latency. This feature is called **analog dry-through**.

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
- 2 rubber feet for “non-velcro” pedalboard mounting
- 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.

- 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.

## Play!

# Inputs, outputs and controls



Vortex Flanger

## 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).

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

### Footswitch

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

## Audio in and out

### Audio inputs (stereo)

The audio inputs on the *right* side of this pedal are standard 1/4" jacks (mono/TS).

- If your signal source is mono, connect it to the MONO in jack of the pedal.
- If your signal source is stereo, connect the cable carrying the left signal component to the MONO IN jack and the cable carrying the right signal component to the STEREO IN jack.

### Audio outputs (stereo)

The audio outputs on the *left* side of this pedal are standard 1/4" jacks (mono/TS).

- If the next device in the signal chain has a mono input (e.g. your amp), connect the MONO OUT jack of TC Electronic effect pedal to the other device's input.
- If the next device in the signal chain has stereo inputs (e.g. another stereo effect pedal), connect the MONO OUT jack of your TC Electronic effect pedal to the left input and the STEREO OUT jack to the right input of the other device.

## 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](#).

### SPEED knob – Flanger speed control

Use the SPEED knob to control the speed of the flanger effect – from slow smooth “Hi-Fi” to much more significant “Leslie” types at high speeds.

### DEPTH knob – Depth control

Use the DEPTH knob to set the intensity of the modulation effect. The more you turn the knob clock-wise, the more “out of tune” the modulated part of the signal will be.

### FEEDBACK knob – Feedback control

Use the FEEDBACK knob to control the amount of feedback of the short modulated delay that generates the flanging effect.

- Turn the knob clockwise to get positive feedback. This is a more traditional, studio-type feedback.
- Turn the knob counter-clockwise to get negative feedback. Setting the knob to a negative value gives more extreme and “tube-like” sounds.

- The middle position is neutral, generating no feedback.

Please note that very high settings might introduce internal feedback, resulting in a squealing noise that in most cases is unwanted in flanging effects.

### DELAY TIME knob – Flanger delay time

Use the TONE control to set how “warm” you flanger should sound. When using high settings on both speed and depth for that “leslie-type” sound, you might want to emphasize the lower frequencies over the higher ones. Try turning TONE counter-clockwise.

Typical delay values for flanging effects are around 1 to 2 milliseconds, whereas Chorus effects occur with delay times around 10 milliseconds.

Short delay times give very intense, “jet engine”-type sounds with plenty high-end frequencies. Longer delay times result in slightly darker, “tube”-type sounds.

### Flanger type selector

Use the flanger type selector to choose the type of flanger you want to work with.

### FLANGER setting

This is the standard flanger inspired by the legendary TC Stereo Chorus Flanger.

**TONEPRINT – TonePrint setting**

Set the Flanger type selector to TONEPRINT to use TonePrints. Using and editing TonePrints is explained in the [“TonePrint”](#) section.

**TAPE setting**

The Tri-Flanger is a variation of the regular Flanger that uses three stereo Flangers with various offsets for both depth, speed, phase, and flanger delay time to produce a unique, very broad and lush flanger sound.

# 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.

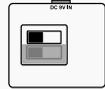
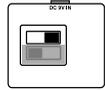
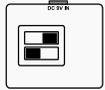
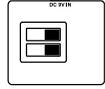
### Kill-dry on/off

When you activate Kill-dry, the direct signal is removed from the pedal's output. Use this mode when you place your TC Electronic effect pedal in a parallel effects loop.

To set Kill-dry 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 lower DIP switch (the one further away from the power in jack), switches between Kill-dry on and Kill-dry off mode.

You can only remove the dry signal from the signal path if you have selected Buffered Bypass mode using the upper DIP switch – see [“Switching the pedal from true bypass to buffered bypass mode”](#). Kill-dry is not available in True Bypass mode.

True bypass	
Buffered bypass	
Kill-dry off	
Kill-dry on	

# 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 “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:**  
[facebook.com/tcelectronic](https://facebook.com/tcelectronic)
- **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)
Signal circuitry	Analog dry-through
Dimensions (width x depth x height)	72 x 122 x 50 mm – 2.8 x 4.8 x 2.0"
Input connector	2 Standard ¼" jacks – mono/TS with automatic mono/stereo sensing
Output connector	2 Standard ¼" jacks – mono/TS with automatic mono/stereo sensing
Power input	Standard 9 V DC, centre negative >100 mA (power supply not included)
Battery option	Standard 9 V (battery not included)
Input impedance	1 M $\Omega$
Output impedance	100 $\Omega$
USB port	Mini USB connector for uploading and editing custom TonePrints and for software updates

