



SUB 'N' UP OCTAVER

Next-Generation Polyphonic Octaver Pedal with a Classic Monophonic Mode and Toneprint for Otherworldly Modulated Octave Tones

User Manual



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EN Important Safety Instructions



Terminals marked with this symbol carry electrical current of sufficient magnitude to constitute risk of electric shock.

Use only high-quality professional speaker cables with ¼" TS or twist-locking plugs pre-installed. All other installation or modification should be performed only by qualified personnel.



This symbol, wherever it appears, alerts you to the presence of uninsulated dangerous voltage inside the enclosure - voltage that may be sufficient to constitute a risk of shock.



This symbol, wherever it appears, alerts you to important operating and maintenance instructions in the accompanying literature. Please read the manual.



Caution

To reduce the risk of fire or electric shock, do not expose this appliance to rain and moisture. The apparatus shall not be exposed to dripping or splashing liquids and no objects filled with liquids, such as vases, shall be placed on the apparatus.



Caution


These service instructions are for use by qualified service personnel only. To reduce the risk of electric shock do not perform any servicing other than that contained in the operation instructions. Repairs have to be performed by qualified service personnel.

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 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. Use only attachments/accessories specified by the manufacturer.



injury from tip-over.

11. Unplug this apparatus during lightning storms or when unused for long periods of time.
 12. 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.
 13. The apparatus shall be connected to a MAINS socket outlet with a protective earthing connection.
 14. Where the MAINS plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.
- 
15. Correct disposal of this product: This symbol indicates that this product must not be disposed of with household waste, according to the WEEE Directive (2012/19/EU) and your national law. This product should be taken to a collection center licensed for the recycling of waste electrical and electronic equipment (EEE). The mishandling of this type of waste could have a possible negative impact on the environment and human health due to potentially hazardous substances that are generally associated with EEE. At the same time, your cooperation in the correct disposal of this product will contribute to the efficient use of natural resources. For more information about where you can take your waste equipment for recycling, please contact your local city office, or your household waste collection service.
 16. Do not install in a confined space, such as a book case or similar unit.
 17. Do not place naked flame sources, such as lighted candles, on the apparatus.

10. Use only with the 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

18. Please keep the environmental aspects of battery disposal in mind. Batteries must be disposed-of at a battery collection point.

19. Use this apparatus in tropical and/or moderate climates.

LEGAL DISCLAIMER

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LIMITED WARRANTY

For the applicable warranty terms and conditions and additional information regarding MUSIC Group's Limited Warranty, please see complete details online at music-group.com/warranty.

1. About this Manual

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.

This manual will help you learn understanding and operating your TC ELECTRONIC product. This manual is available as a PDF download from the TC ELECTRONIC website.

Please read this manual in full, or you may miss important information.

Please do not operate your TC device before you have made all connections to external equipment as described in the "2.3 Setting up" section. In the subsequent sections of the manual, we assume that all connections are made correctly and that you are familiar with the previous sections.

We reserve the rights to change the contents of this manual at any time.

To download the most current version of this manual, view the product warranty, and access the growing FAQ database for this product, visit the web page

tcelectronic.com/support/

2. Introduction

SUB 'N' UP OCTAVER is the new leader of the pitch-pack. Featuring our superb next generation octave-engine and individual blend controls for dry, octave-up and two sub-octaves, Sub 'N' Up is set to deliver flawless octave tones whether you're playing complex chords or groovy single-note lines and features three amazing effects modes:

- a state-of-the-art polyphonic octaving engine,
- a cool, old-school monophonic octaver
- all the endless octaving combinations you can access through TonePrint.

Sub 'N' Up features the latest in polyphonic pitch technology. This means you get lightning-fast note tracking and impeccable hi-fi octave tones when playing chords. So whether you're into shimmering octave-up tones for swells, a sweet 12-string ring or down and dirty subsonic octave riffs, SUB 'N' UP OCTAVER will deliver the goods every single time!

2.1 Unpacking

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.

2.2 True Bypass

Here at TC, we have a simple philosophy: When you are using one of our products, you should hear something great – and when it's off, 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 "5.2 Switching the pedal from True Bypass to Buffered Bypass".

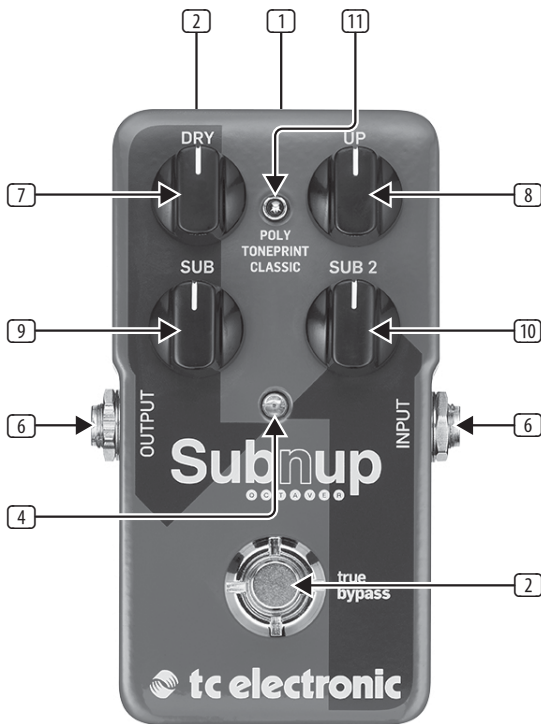
2.3 Setting up

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 "6.2 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.

3. Operation – Inputs, Outputs and Controls



3.1 Power / Computer connection

- ❶ **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 "6.2 Changing the battery".

- ❷ **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 "4. Operation – TonePrint".

If there should be firmware updates for this pedal, they can also be installed using the USB port – see "6.1 Updating the firmware".

3.2 Switching

- ❸ **FOOTSWITCH** To turn the effect on, tap the footswitch. To turn the effect off, tap the footswitch again.
- ❹ **INDICATOR LED** The LED lights up when the effect is switched on.

3.3 Audio in and out

- ❺ **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.
- ❻ **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.

3.4 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 "4.3 Editing TonePrints with TonePrint Editor".

An octaver adds one or more additional voices one or more octaves above or below the original signal. Sub'n'Up features three extra voices: one octave up and one and two octaves below.

Use SUB 'N' UP OCTAVER's controls to adjust how much of each of three octave's you want applied to your guitar signal.

- ❷ **DRY knob** Use the DRY knob to set the level dry signal. Crank this knob if you want the same amount of dry signal as when SUB 'N' UP OCTAVER is bypassed.
- ❸ **UP knob** The UP knob allows you to blend in an extra voice an octave above the original signal. Try cranking this knob in classic mode to get some cool ol' school Hendrix-type tones.
- ❹ **SUB knob** The SUB knob adds an extra voice one octave below the original dry signal. This can be used to fatten up riffs or getting fake bass sounds when backing down the dry signal completely.
- ❺ **SUB 2 knob** The SUB2 knob adds an extra voice an earth-shattering two octaves below the original signal. Experimental bass players like to crank this knob with all the other controls at zero for a cool synth-like effect when playing above the 12th fret... or go down low to potentially bring down the P.A.!
- ❻ **MODE selector** The MODE switch alters the circuit operation to suit different situations:
- **Poly (Polyphonic)** Set the MODE selector to "Poly" to get the latest in polyphonic octaving. In this mode SUB 'N' UP OCTAVER will handle even the most complex jazz chords and give all sorts of cool sounds from fake 12-string guitar to organ-like tones.
 - **TonePrint** To use TonePrint-based Octave configurations, set the MODE selector to "TonePrint". For more information, see "4. Operation – TonePrint".
 - **Classic** Set the MODE selector to "Classic" to jump straight into those old-school octave tones of yesteryear. With this setting, you get all the warm, organic imperfections associated with classic analog stompbox octaving. Playing chords in this mode will lead to weird and beautiful glitches.

4. Operation – TonePrint

This TC ELECTRONIC product supports TonePrints.

4.1 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, redefining 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 “4.2 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!

4.2 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 smart-phone.
- 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”.

4.3 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/

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/

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.

4.4 Frequently Asked Questions about TonePrint pedals

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/

4.5 TonePrint resources

- TonePrint: tcelectronic.com/toneprint/
- TonePrint products: tcelectronic.com/toneprint/toneprint-products/
- TonePrint app: tcelectronic.com/toneprint-app/
- TonePrint Editor: tcelectronic.com/toneprint-editor/
- TonePrint Editor manual: tcelectronic.com/toneprint-editor/support/

5. Operation – Bypass Mode

5.1 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 vs. passive pick-ups, single-coil vs. 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!

5.2 Switching between True Bypass and Buffered Bypass

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.

6. Maintenance

6.1 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.

6.2 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 backplate.
- 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.

7. Links

Support resources

- TC ELECTRONIC Support: tcelectronic.com/support/
- TC ELECTRONIC – product software: tcelectronic.com/support/software/
- TC ELECTRONIC – all product manuals: tcelectronic.com/support/manuals/
- TC ELECTRONIC user forum: forum.tcelectronic.com/

TC ELECTRONIC on...

- the Web: tcelectronic.com/
- Facebook: facebook.com/tcelectronic
- Google Plus: plus.google.com/+tcelectronic/
- Twitter: twitter.com/tcelectronic
- YouTube: youtube.com/user/tcelectronic

8. Technical Specifications

Bypass mode	True Bypass (Buffered Bypass optional)
Input connector	1 x ¼" TS, unbalanced, mono
Input impedance	1 MΩ
Output connector	1 x ¼" TS, unbalanced, mono
Output impedance	100 Ω
Power input	Standard 9 V DC, centre negative, >300 mA (power supply included)
Battery option	—
USB port	Mini USB connector for uploading/ editing custom TonePrints and for software updates
Dimensions (H x W x D)	93 x 48 x 48 mm (3.7 x 1.9 x 1.9")

FEDERAL COMMUNICATIONS COMMISSION COMPLIANCE INFORMATION



Responsible Party Name: **Music Group Services NV Inc.**

Address: **5270 Procyon Street
Las Vegas, NV 89118
USA**

Phone Number: **+1 702 800 8290**

SUB 'N' UP OCTAVER

EMC/EMI 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 CAN ICES-3B.

