


**BH250**



**USER'S MANUAL**



# 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 dry cloth.
- 7 Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8 Do not install near 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 are 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 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 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.

## Warning!

- To reduce the risk of fire or electrical shock, do not expose this equipment to dripping or splashing and ensure that no objects filled with liquids, such as vases, are placed on the equipment.
- This apparatus must be earthed.
- Use a three wire grounding type line cord like the one supplied with the product.
- Be advised that different operating voltages require the use of different types of line cord and attachment plugs.
- Check the voltage in your area and use the correct type. Please refer to the following table:

| Voltage  | Line plug according to standard   |
|----------|---|
| 110-125V | UL817 and CSA C22.2 no 42.  |
| 220-230V | CEE 7 page VII, SR section 107-2-D1/IEC 83 page C4.   |
| 240V     | BS 1363 of 1984.<br>Specification for 13A fused plugs and switched and unswitched socket outlets. |

- This equipment should be installed near the socket outlet and disconnection of the device should be easily accessible.
- To completely disconnect from AC mains, disconnect the power supply cord from the AC receptacle.
- The mains plug of the power supply shall remain readily operable.
- Do not install in a confined space.
- Do not open the unit – risk of electric shock inside.

## Caution:

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

## Service

- There are no user-serviceable parts inside.
- All service must be performed by qualified personnel.

# 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 ICES-003.

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

# TABLE OF CONTENTS

---

|  |    |
|--|----|
| <i>Important Safety Instructions</i> .....       | a  |
| <i>EMC/EMI</i> .....                             | b  |
| <i>Table Of Contents</i> .....                   | 3  |
| <i>Introduction</i> .....                        | 4  |
| <i>Quick Setup Guide</i> .....                   | 5  |
| <i>Operation – Front Panel</i> .....             | 6  |
| <i>Operation – Rear Panel</i> .....              | 8  |
| <i>Appendix – Protections Modes</i> .....        | 10 |
| <i>Appendix – Technical Specifications</i> ..... | 11 |



# INTRODUCTION

---

## **Congratulations on the purchase of your new BH250 bass head**

Powerful, check! Rich on features, check! Lightweight, check! What else do you need? Combine this amp with one or more speaker cabinets, and you have a flexible bass rig featuring extraordinary and super-inspiring technology.

Simple to use, but not simple at all. It just looks and feels simple and is easy to use every time you plug in. Use the Bass, Middle and Treble as you would on every other amp, but know that great attention and effort was put in the actual behavior of these controls. Different frequency areas are affected when boosting and cutting to make it feel 'just right'.

Tuner for 4-6 string basses, Balanced Out with Pre/Post EQ switch, Headphones Out and Rehearsal Input for a stereo source such as an iPod is most likely more than you would expect, but why not expect more?

TonePrints® for your bass amp. What is it?

BH250 is born with a Chorus effect under the hood, and with the TonePrint knob you can add just the amount you want. But Chorus is just the default effect! From TC Electronic's website you can download and try out a Flanger, Vibrato, Drive or Compressor. Of course, all effects are specially tuned for bass. But that's not all...! We had some of the best bass players in the world tailor their own personal effect tones for you to grab.

TonePrints are uploaded to the amplifier using either a USB cable and a computer or via the amazing TonePrint App for most smart phones.

Now, plug in and enjoy the BH250. We know you will!

---

Please note: We reserve the rights to change the contents of this manual at any time. The latest manual revision can always be downloaded from [www.tcelectronic.com](http://www.tcelectronic.com). If you need additional information and support, be sure to visit TC Support Interactive – this service can also be accessed via [www.tcelectronic.com](http://www.tcelectronic.com).



## If you just can't wait...

Here are a few quick steps to get you playing within minutes.

### Unpacking

- Unpack your BH250 amp.
- The box should contain the following items:
  - BH250 amplifier
  - Power Cable
  - Mini jack to mini jack cable
  - USB cable
  - Manual
- Inspect all items for signs of transit damage. In the unlikely event of this having occurred, inform the carrier and supplier.
- Keep all the packaging if damage has occurred, as this will show evidence of excessive handling force.
- It is also a good idea to keep the packaging for future transportation.

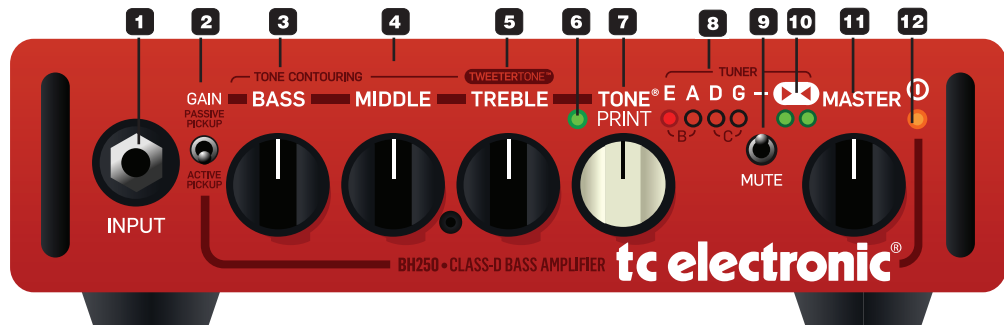
### Setting up

- Connect a cabinet or combination of cabinets with a minimum impedance of 4 Ohms.
- Connect the power cable to an outlet with correct voltage. This amplifier accepts from 100 to 240 VAC.
- Connect your bass to the input jack on the front panel.
- Select Active or Passive pickup type using the GAIN selector.
- Adjust the output volume using the MASTER knob.
- **Play!**

Be sure to check [www.tcelectronic.com](http://www.tcelectronic.com) for latest news about BH250 and other TC products.

## OPERATION – FRONT PANEL

---



### 1 – INPUT

You can connect an active or passive bass to this 1/4" input jack. The BH250 input stage is designed to adapt to any type of pickup.

### 2 – GAIN Selector

Select position according to the bass pick-ups you are using. Active pickups typically have a higher output than passive pick-ups and you should set the GAIN switch accordingly.



If your bass pick-ups requires a 9V battery, your pickups are active – if not, they are passive.

### 3/4/5 – TONE Contour

The BH250 Bass, Middle and Treble controls are not your standard Bass amp EQ. Standard tone controls boost or cut the same frequency area when you turn the controls clockwise or counter-clockwise. BH250's tone controls intelligently address several different frequencies when you turn them. In essence, integrating not only tone control but also contouring as well as the unique TweeterTone technology.

By adapting one or more target frequencies and bandwidths at the turn of a single knob, BH250's contouring tone controls combine optimal tone shaping abilities with ease of use.



## TonePrint

TonePrints for your bass amp. What is it?

BH250 is born with a Chorus effect under the hood and with the TonePrint knob you can add just the amount you want. But Chorus is just the default effect! From TC Electronic's website, you can download and try out a Flanger, Vibrato, Drive or Compressor. All effects specially tuned for bass, of course.

But that's not all...! We had some of the best bass players in the world tailor their own personal effect tones for you to grab.

TonePrints are uploaded to the amplifier using either an USB cable and a computer or via the amazing TonePrint application available for most smartphones.

### 6 – TONEPRINT LED

Indicates that TonePrint is active. TonePrint is deactivated either by turning the knob fully counter-clockwise or by using a footswitch connected to PEDAL on the rear panel.

### 7 – TONEPRINT

This knob mixes the amount of TonePrint. For Chorus, Flanger and Vibrato this is a wet/dry mix. For Compression and Drive it is an Amount control. Featured TonePrint artists may have other definitions for this knob. All TonePrints are accompanied with a description at [www.tcelectronic.com](http://www.tcelectronic.com)

### 8/10 – THE TUNER

The BH250 tuner allows you to easily tune a 4, 5 or 6 string bass. E, A, D and G LEDs (8) indicate which of the four standard strings you are tuning.

E+A indicates "B" string. D+G indicates "C" string.

The string is in perfect tune when both of the two green LEDs (10) are lit.

### 9 – The MUTE button

To tune silently, activate the MUTE switch. All outputs; speaker, headphones and balanced outputs are muted. This way you can tune up with no sound going to your own rig or to the PA.



To be able to mute/un-mute for silent tuning via a switch connected to the Pedal input this switch must be set in "un-mute" position (up).

### 11 – MASTER

Use the MASTER knob to set the overall output level of the amp. The master level also controls the level of the headphone output.

## OPERATION – REAR PANEL



### MAINS IN – Power Input & POWER Switch

The switch-mode power supply accepts voltage from 100V to 240V



The ground pin of the power supply unit must be connected in order to avoid voltage differences between e.g. the PA and the BH250 Head.

### SPEAKER OUT

Use the SPEAKER OUT connector for connecting speaker cabinets. The type of plug is Speakon and you MUST use speaker cables. Do NOT use instrument cables!

**Use a cabinet configuration with a minimum load of 4 Ohm.**

Examples:

2 x 8 Ohm (in parallel)

1 x 4 Ohm

### PEDAL input

Connect a TC Electronic SWITCH 3 (optional) and activate/deactivate TonePrint and Tuner mute.

### SWITCH-3



Switch 1 - Mute

Switch 2 - TonePrint on/off

Switch 3 - TonePrint A/B (alternate between two TonePrints)

### USB

Connection for computer for TonePrint upload and software updates.

### AUX IN

The AUX IN is a stereo auxiliary input. Any signal present on the AUX IN phone jacks is played back through all outputs. This allows you to play along with a rehearsal track when checking out new stuff or when practicing to the beat of a metronome click.

The included “mini jack to mini jack cable” allows you to use an iPod®, iPhone® or any other consumer playback device as a source for rehearsing.

### PHONES (MUTING)

This is a 1/8” connector for headphones. With a mild speaker filter applied to the bass sound, our studio quality headphone amp caters for a great headphone sound.

The headphone output also plays back any signal connected to the AUX IN input jack.

This feature allows you to play along with e.g. an MP3 player (e.g. an iPod®), a signal from a computer sound-card or any other audio source playing background tracks – this is excellent for rehearsing or checking out new tracks without disturbing the neighbors.

### BALANCED OUT

Use the BALANCED OUT XLR to connect the BH250 to the PA when you play on stage, or to connect your amp to a recording device when you are in the studio.

To determine where in the signal chain the signal for the balanced output should be tapped, use the PRE/POST switch located right beside the BALANCED OUT jack.

PRE – the signal is tapped before the EQ and TONEPRINT effect

POST – the signal is tapped after EQ and TONEPRINT effect.



The BH250 MUTE button mutes the balanced output as well as the speaker and headphones outputs allowing you to tune up with no sound in your own rig or in the PA – provided, of course, that you use the BH250 Head's balanced output instead of a conventional line-driver.

## APPENDIX – PROTECTIONS MODES

---

This amplifier is equipped with an advanced protection system for both the amplifiers and your own safety. These protection features should only kick in if you operate the amp under extreme conditions.

### Ventilation

#### ***Be sure not to cover the BH250 cooling grid!***

Insufficient ventilation may cause the amplifier's temperature to increase to critical values.

### Protection Modes

The BH250 is equipped with an intelligent protection system, ensuring that the amp does not suffer or malfunction if operated wrongly or in extreme environments.

When the amplifier switches to Protection mode the speaker output is muted and the TUNER LEDs start flashing in pairs of two.

#### **Protection mode is invoked when:**

- if a short circuit situation occurs (on speaker outputs)
- if the amplifier is used in an environment that is too hot
- if proper ventilation is not ensured

In Protection mode, the speaker outputs are shut off to prevent speaker damage. However, the balanced output still passes audio.

#### **How to proceed if you experience Protection mode**

- If the amplifier does not automatically recover from Protection mode and feels hot, try turning off the amplifier for a minute to let it cool. Ensure sufficient ventilation.
- Ensure that your speaker cable is not defect, thereby causing a short-circuit.
- Turn on the amplifier again.

If these steps doesn't solve the problem and the Tuners LED's continue to flash, you will have to send the BH250 to a qualified service center for inspection.

## APPENDIX – TECHNICAL SPECIFICATIONS

|                                     |  |                                 |   |
|-------------------------------------|--|---------------------------------|---|
| <b>Input</b>                        |  | Bal. Out Optimal Load Impedance | 600 Ohm   |
| Input connector                     | 1/4" jack  | Rehearsal input                 | 1/8" jack input, fits to iPod ®                             |
| Input impedance                     | 500 kOhm / 100pF   | Humidity                        | Max. 90 % non-condensing                                    |
| Gain range                          | -96 to 36dB  | Dimensions                      | 220 x 63 x 231 mm / 8.7" x 2.5" x 9.1"                      |
| <b>Tone control</b>                 |  | Weight                          | 1.8kg / 4 pounds  |
| Bass                                | 80Hz @ Gain: -24 to 0dB; 100Hz @ Gain 0 to +15dB                     | Finish                          | Brushed and anodized aluminum front plate/<br>Metal chassis |
| Mid                                 | 500Hz @ Gain: -24 to 0dB;<br>800Hz @ Gain 0 to +15dB & 0 to -12 dB   |                                 |   |
| Treble / Tweeter Tone               | Center Freq.: 1800Hz @ Gain: -24 to 0dB;<br>3150Hz @ Gain 0 to +15dB |                                 |   |
| Tone Print                          | 0 to 10 embedded parameters for TonePrints                           |                                 |   |
| Tuner                               | Bass Tuner, always on  |                                 |   |
| Tuning range                        | B0 (30.87Hz) to G4 (392.00Hz)  |                                 |   |
| Mute                                | Mutes speaker out, Phones out and Balanced out                       |                                 |   |
| Master Level /<br>Headphones Output | Studio quality headphone amp   |                                 |   |
| HP Out Impedance                    | 40 to 600Ohm   |                                 |   |
| Mains supply                        | 100 - 240V~ 50/60Hz (70W @ 1/8 of Max. Output)                       |                                 |   |
| Power module rating                 | 250w (500w instantaneous Peak @ min. Load)                           |                                 |   |
| Speaker output                      | Neutrik Speakon™   |                                 |   |
| Balanced output                     | Balanced XLR, Pre/Post Pre-amp                                       |                                 |   |
| Bal. Out Max.                       | +2dBu  |                                 |   |

**Due to continuous development, these specifications are subject to change without notice.**

**tc electronic®**