

# HIFONICS

## Operator's Guide



## **BXiPRO3.0** Digital Bass Enhancement Processor

Thank you for purchasing the HIFONICS BXiPRO3.0 Digital Bass Enhancement Processor. This unit has the ability to fine tuning bass width and sweep for increased sound performance. Please read the entire manual to ensure proper connections and application.



### CAUTION



Always consider consulting a professional audio installer before installing any audio components. Be careful and take your time. Do not let wires make contact with metal edges or hot engine components.

## Features

- Enhances and restores the bass level
- Screw in power and speaker connectors to chassis for secure connections that prevent disconnection
- Dual function bass remote
- Remote wire input, DC sense and music sense turn on
- Input and output signal clip indicators
- Mono adjustable output level (can be controlled by bass remote)
- 48v high level inputs
- Ability to use test tones to set input and output levels
- Fine tuning adjustability using bass width and sweep
- Fixed 4v full range output
- Small profile
- Tiffany style RCA connectors
- Low and high level audio inputs (speaker level inputs)
- Balanced differential inputs (for noise reduction).

## Mounting and Hardware

**Prior to mounting, connect the wires to ensure proper operation.**

### MOUNTING

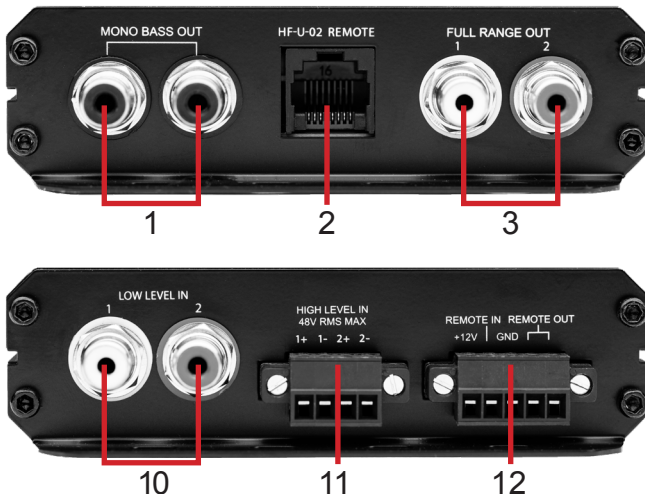
1. Select the desired mounting location that allows the unit to be mounted on a flat surface with room for connections.
2. Use the mounting brackets that are attached to the unit and use the provided hardware for mounting the unit. Make sure there is proper clearance for the mounting bracket screws when attaching to selected location. Use caution to ensure there are no wiring harnesses, mechanical or gas tanks under the location selected.
3. Route the power, ground and remote wires away from moving parts to prevent pinching or shorting the wires. Also keep in mind of anything that can create excessive heat to avoid wires from detaching.

### WIRING

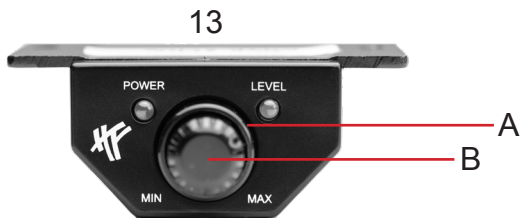
1. **Power Wire:** The power wire should connect to a constant or switched +12 volt source with a **(1 Amp) provided** in-line fuse. We recommend that you use the radio constant or switch +12 volt source.
2. **Ground Wire:** Connect the ground wire to a clean chassis ground point. Be sure to remove all paint and primer to expose clean metal. Use a ring terminal and lock or star washer to secure the ground wire.
3. **Remote Wire:** The remote wire should be connected to the source unit remote wire (amplifier turn on or accessory wire) that provides +12 volts when the source unit is "on" and 0 volts when the source unit is turned "off". (please note that some source unit's antenna connections will only show + 12 volts when AM/FM is selected and 0 volts when other sources are selected).

## Functions & Operations

- 1 Adjustable bass enhancement preamp output
- 2 Bass remote input
- 3 Preamp full range output
- 4 Adjustable bass level output
- 5 Adjustable bass width and sweep adjustments
- 6 Output level control with clip indicators
- 7 Input level control with clip indicators
- 8 Selectable input level range (RCA or speaker level)
- 9 Selectable turn on trigger (remote wire input, DC sense and signal sense)
- 10 Low level inputs (RCA level)
- 11 High level input (speaker level)
- 12 Power connector with two remote output trigger wires
- 13 Dual concentric bass knob (A. bass level, B. output level)



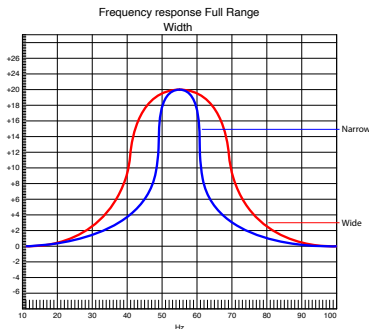
# Functions & Operations



# Adjust input and output level controls with test tone

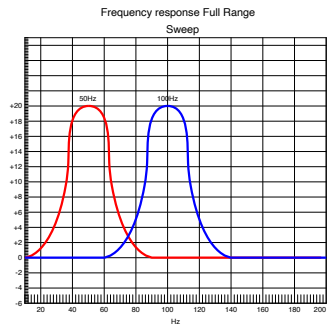
There are two test tones 1kHz for high level and 100Hz for low level

- A** After all connections have been made to unit and powered on and working turn volume of source unit up to 3/4.
- B** Disconnect output RCA's (1 and 3). *Reference Pg. 4&5*
- C** Adjust input level range switch (8) to the appropriate setting based on input (RCA lower position, speaker level in upper position).  
*Reference Pg. 4&5*
- D** Play test tone provided.
- E** Turn input level control clockwise until Clip Indicator LED (above) illuminates and then turn down(counterclockwise) until LED turns off.
- F** Do same as above for the Output Level control Turn input level control clockwise until Clip Indicator LED (above) illuminates and then turn down(counterclockwise) until LED turns off.
- G** Once E and F have been done you can stop the test tone track and re connect your RCA outputs (1 and 3). *Reference Pg. 4&5*
- H** While playing music you can then adjust and fine tune the Bass level (4) Width and Sweep (5). *Reference Pg. 4&5*



## Width Control

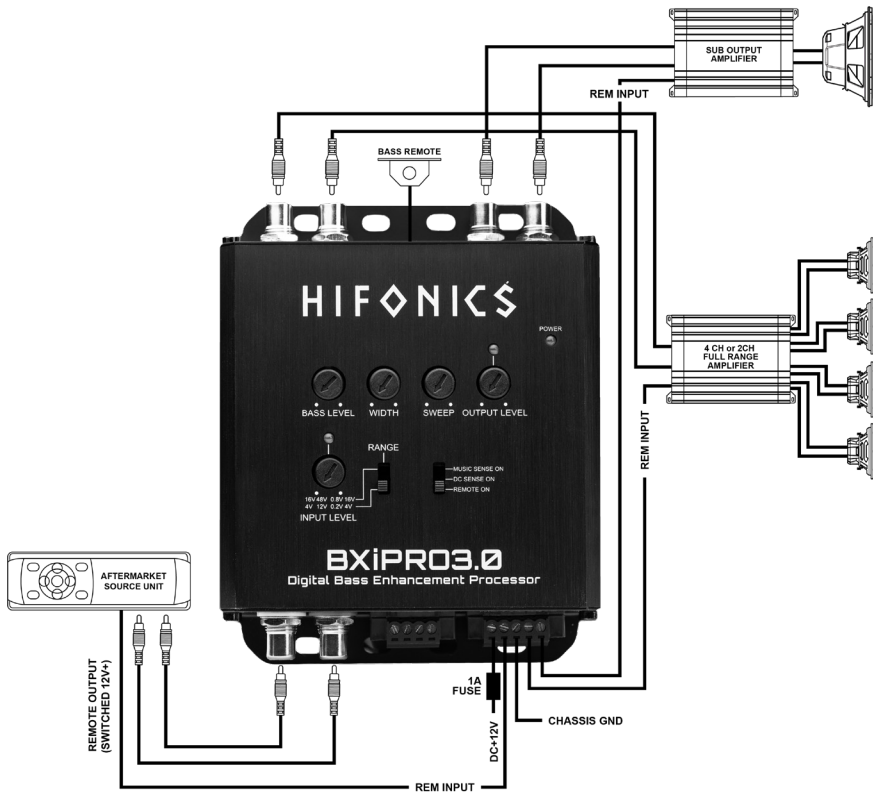
Controls how wide the frequency range that is centered on the sweep frequency



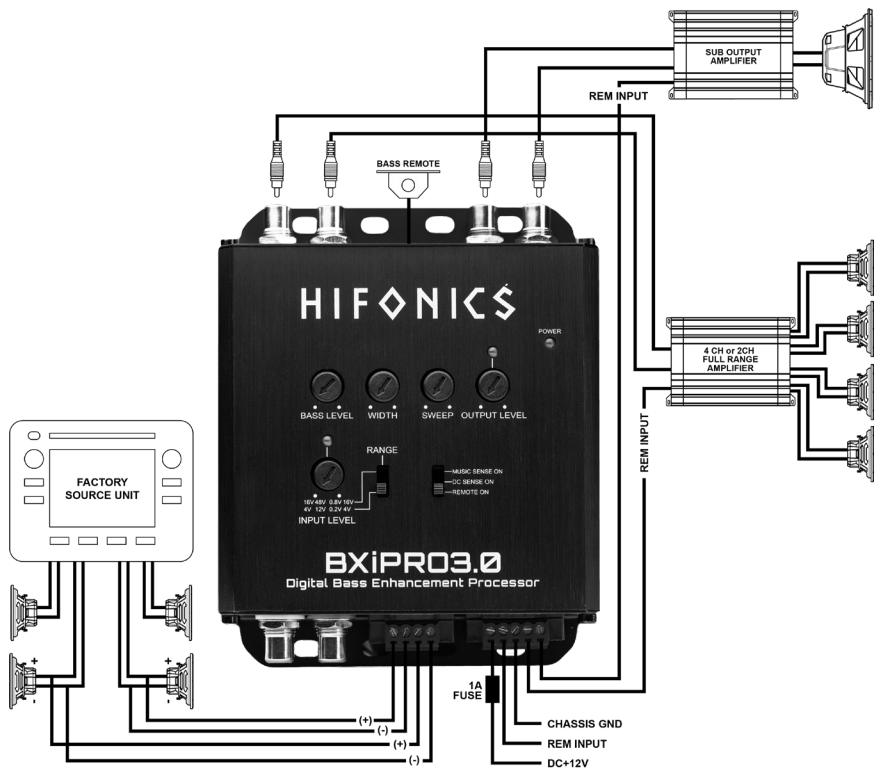
## Sweep Control

Allows you to select the center frequency the BXiPRO3.0 outputs

# Unit Setup with Aftermarket Source Unit



# Unit Setup with Factory Source Unit





## Diagnostics & Trouble Shooting

The key to finding the problem in a troubled sound system is to isolate parts of that system in a logical fashion to track down the fault and correct the issue.

The diagnostic system will not shut down the crossover or the amplifier(s), although the amplifier(s) own protection circuitry may shut the amplifier(s) down, should a fault status occur. You will need to consult the owners manual for that particular amplifier.

### *Low Output Power*

- 1) Check that level controls have been set up properly.
- 2) Make sure that the battery voltage, as measured at the amplifier(s) and crossover +12 volt and ground terminals, is 11 volts or more.
- 3) Check all +12 volt and ground connections.

### *Hiss, or White Noise*

- 1) High levels of white noise usually occur when level controls are turned up too high – reduce the levels until the noise is no longer present.
- 2) Another problem that can cause excessive hiss, is a noisy head unit – unplug the crossover input RCA's, and if the hiss level reduces, the source unit is at fault.

### *Electrical Interference*

The inside of an automobile is a very hostile electrical environment. The multitude of electrical systems, such as the ignition system, alternator, fuel pumps, and air conditioners, create radiated electrical fields, as well as noise on the +12 volt supply and ground. To try and eliminate this noise, run a wire from the radio ground wire to the ground input on the equalizer.

### *Ticking or Whine that changes with engine RPM*

- 1) This problem could be caused by radiation pickup of RCA cables that are too close to a fuel pump or a distributor.
- 2) Check that the head unit ground is connected straight to the vehicle chassis and does not use factory wiring for ground.
- 3) Try to supply the head unit with a clean +12 volt supply directly from the battery +, instead of using a supply from the in-dash wiring/fusebox.

### *Constant Whine*

This type of noise can be more difficult to pinpoint, but is usually caused by some kind of instability, causing oscillations in the system.

- 1) Check all connections, (especially for good grounds).
- 2) Make sure that no speaker leads are shorting to exposed metal on the vehicle chassis.
- 3) RCA cable are notorious for their problematic nature, so check that these are good, especially the shield connections.

## Specifications

Size	109W x 134L x 30.5H
Fuse value	1A mini ATC
Voltage range	9.5V -15V
Bass remote type	HF-U-02
Fixed voltage output full range	4V
Adjustible subwoofer output voltage	0V -9V
Maximally Flat Frequency Response Main (-3dB)	10Hz to >50kHz
Input Impedance Low level inputs	20k Ohms
Input Impedance High level inputs	20k Ohms
Maximum high level Input Voltage on any input before clipping	>48V
Maximum Output voltage at 1.0% THD+N (subwoofer output)	9.0V
Signal to Noise Ratio (ref to 2Vrms out, unity gain)	-84.0dBA
EQ boost	Variable to+8.1dB
Unit turn on options	30mV High Level Audio, 59mV RCA Audio, 2.2V DC Offset
Current Draw	0.32A
Turn on Delay Time	0.1 seconds
Setup test tone track	100 Hz & 1000Hz