

# BLACK

by OPTIMAL SPEAKER DESIGN



## TREVOCE15 EQ DSP SUBWOOFER INSTALL GUIDE



Thank you for buying the latest version of our most popular subwoofer.

The additional upgrades we have made make this the best all-round sub in our history. Incorporated in the Trevoce15 EQ DSP is the new native EQ, and the IWoofers DSP engine. The native EQ has allowed us to extract the maximum bass extension possible from our design. This allows the full range of musical instruments and special effects to be reproduced. The Trevoce EQ DSP Series does this all without any increase in the size of the sub. Our Trevoce subs offer the smallest footprint you will find in triple driver designs.

### Installation Precautions:

#### Before installing

Before connecting your subwoofer, make sure all equipment is switched off and that voltage switch is set to your country's voltage. Do not connect the subwoofer power supply cable before completing all connections.

### Features:

#### World Class Digital Amplifier Technology

The TreVoce DSP Series powered subwoofer incorporates the latest digital amplifier technology to maximize performance while generating very little heat. In standby mode, the unit consumes less than 0.5 watts, making it one of the greenest solutions available.

#### Tuned System Performance

Rear mounted volume control, low pass crossover, phase control and App controlled DSP ensure optimal system integration and built-in native EQ ensures the deepest bass frequencies.

#### Cabinet

An attractive furniture quality solid cabinet with 'leather' finish, provides the foundation for high sound quality and clarity.

### Connection & Controls

#### 1. High Level Inputs

Use for Left/Right connection from speakers.

#### 2. Line Level Input

Use for Left/Right connection from subwoofer-out, or line-out, on amp/AVR.

#### 3. LFE Input

Connect to the LFE output on the Receiver/Processor.

#### 4. Balanced XLR Input

For lower noise connection if available.

#### 5. Power LED

(Red) Standby Mode - (Blue) Power Mode ON

#### 6. DSP Mode Switch

Set the DSP ( OFF or ON )

#### 7. Power Mode Switch

Set the power mode ( OFF, AUTO, or ON )

#### 8. Phase Switch

Allows you to set the phase of the woofer 0-180°

#### 9. Crossover Control

Adjusts the subwoofers frequency output output to match main speakers

#### 10. Volume Control

Adjusts subwoofer volume level.

#### 11. Voltage Switch

Select input voltage. Default: 110-120V or 220-240V

#### 12. Master Power Switch

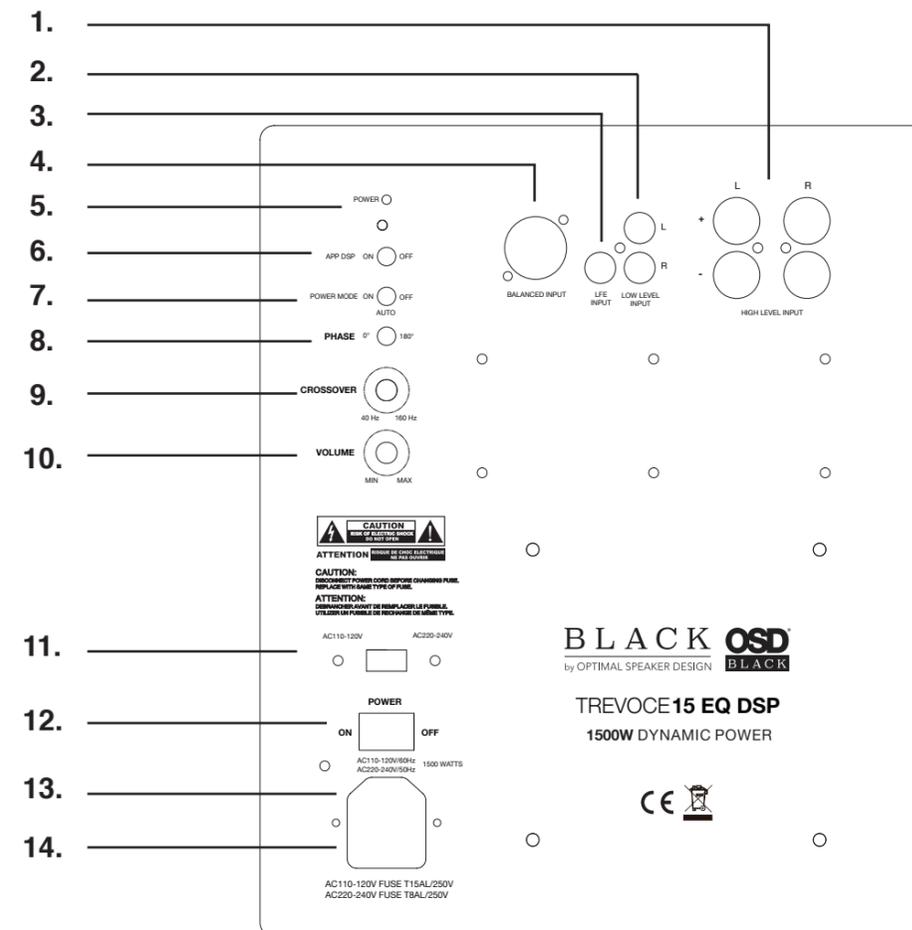
Controls the main power to the subwoofer

#### 13. AC Power Cord

Connect the included AC power cord.

#### 14. Fuse Holder

Master Power Fuse. Includes spare fuse inside holder.



### Settings & Controls

#### Setting the Power Mode

##### ON Mode:

If the subwoofer is set to ON mode, it will always be ready to play. However, undesired noise from interference or connections changing may be heard. Use the standard ON mode only if needed, set the power switch to OFF when not in use.

##### AUTO Mode:

Setting the switch to AUTO enables AUTO Sense. The subwoofer turns ON and OFF automatically in response to signal input. The subwoofer will enter standby mode if no signal is sensed for longer than 15 minutes.

**Set the MODE switch to the ON position for setup.**

**After making all the connections, setup your subwoofer using the following steps:**

1. Plug the subwoofer into an electrical outlet using the included power cord. The status LED will illuminate solid blue when power is present and the subwoofer is ON.

2. Set the controls and switches to their initial setup positions:

VOLUME set the dial to 50% or 12 o'clock

CROSSOVER adjust the upper frequency limit. The purpose is to control the overlap the upper frequencies of the subwoofer and the main speakers lower frequencies. Check your main speakers specs to determine their low-end limit.

PHASE set to 0°

3. Play a movie scene or soundtrack and set the system volume to an average level. Listen to the bass level from your favorite listening position and adjust the volume accordingly.

4. Continue listening to your favorite source track and experiment with the phase control until you find the best setting for you. Depending on the location of the subwoofer the bass may sound louder and deeper when the phase has been optimized. In some cases adjusting the phase will have no audible difference.

5. Initial setup is now complete.

Trevoce Subwoofers are equipped with pre-programmed built-in EQ for optimal sound and great performance. You may also use the (optional) iWoofers app to access and custom tune the DSP to suit listening preferences or room correction for example. There is also a Pro version of the iWoofers App (IOS Only) that adds additional functions available for a small fee.

### iWoofers Setup

1. If you intend to use the custom DSP functions you must first download the iWoofers app from the App Store or Google Play.
2. Continue reading to setup iWoofers app to access and setup the custom DSP features of the TreVoce.



### DSP Features Set

X-Over Control	Auto-On Threshold Settings
Gain Control	Preset Manager
SHS Control	Preset Import/Export Features (Pro-only)
Delay Control	Room Correction (Pro-only) A Group of functions For
Phase Control	Frequency Impulse Response Correction
Dynamic Bass Base Control	SPL Meter (Pro-only)
Dynamic Bass Detailed Control	Limiter-Compressor Bass Control (Pro-only)
Remote Hardware Control	Limiter-Compressor Detailed Control (Pro-only)

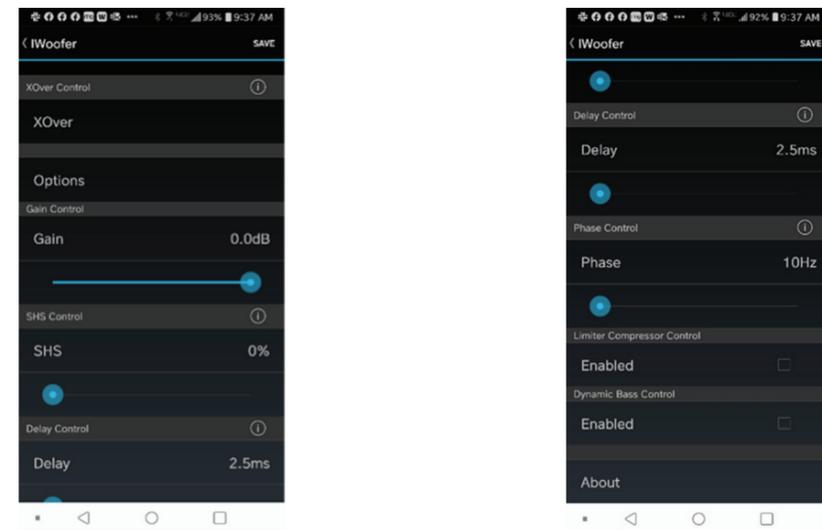
### iWoofers App: DSP Discovery & Connect

From your listening position, using the Android or Apple App iWoofers App you can make any adjustment needed to get the maximum out of your system.

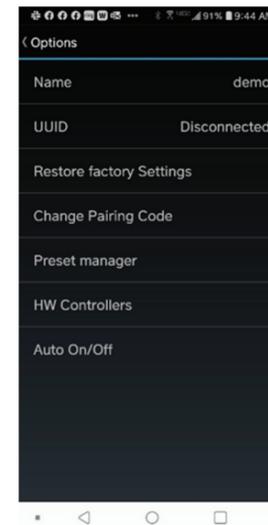
Open the iWoofers App: Turn On Bluetooth to allow iWoofers to connect to accessories. You may tap Ok, and the app will go into Demo Mode. Otherwise tap Settings, and turn ON Bluetooth, next tap to Home button, and open iWoofers again. Bluetooth range is (30-65ft) the app will find any number of subwoofers equipped iWoofers Hardware, all of them will appear under "Devices Found:" Choose the UDID or MAC address that show up for your iWoofers equipped sub.

### Main Menu

Ok, we have seen the UDID and tapping it we get the main control menu.



The app has a renaming function in Options/Name menu, and UDID number could be replaced for any name whatever you like.



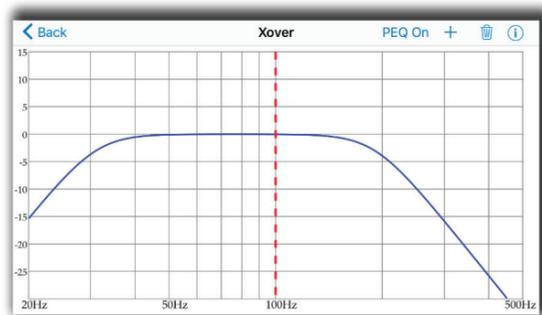
## X-Over Menu

From here you will be able to fine-tune your subwoofer, carefully matching the main speakers to the sub, using variable slopes and role offs. Whether you have ported main speakers, needing 24 or even 48dB per octave filtering, or sealed acoustic suspension speakers needing 12dB per octave filtering, we have you covered. The infinitely variable phase correction and choice of cross-over points also provide for much better integration with the main speakers. X-Over - control of Low Pass and High Pass Filters (LPF/HPF), double tap (or tap & hold on > 1S) on the slope to select one, slide left/right to control a frequency (20:500Hz), and up/down to control an "Slope" order (2:4:8 or 12/24/48 dB/oct Butterworth). Use this to match your main speakers with the subwoofer

The LPF/HPF frequencies limit the frequency range for Room Correction (Pro App only).

The Xover menu also controls up to 25 bands of fully Parametric Equalization

The built-in 25-band digital parametric equalization allows you to correct for frequency response dips and peaks caused by positioning and room reflections. You can do this by ear, or use a free frequency response app, or upgrade to the Pro-App (IOS only) and simply use your phones microphone to measure the frequency response and then start making up to 25 different equalization adjustments until the response curve has been corrected. For iPhone users you can run auto-room equalization/correction, allowing the Pro App to create the EQ filters needed to deal with Room Acoustics issues.



X-Over menu.



Xover menu. Add new PEQ..

Equalizer (PEQ), to add a new PEQ tap to "+" icon, to delete select "Trash" icon. Slide curve right/left to set a frequency, up/down to set a gain (db), zoom in/zoom out to control a Q factor (PEQ bandwidth), double tap (or tap&hold on > 1S) on PEQ line to select it.

## Options Menu

**Name:** By default the Name field filled with UDID, you may rename it there. UDID shows the MAC address of the connected iWoofers Hardware.

**Restore Factory Setting:** In case you want to reset all parameters to defaults. Be aware that this defaults is not exactly the same as was preset by the manufacturer of your subwoofer. As mentioned before, the very first connected iWoofers hardware will offer app to import preset from DSP, this one is the manufacturer's default preset.

**Change Pairing Code:** let you to set a password to you subwoofer/app. In case if the password is forgotten, please press and hold the Pair button on the rear panel of your subwoofer during 3Sec. The subwoofer password will be reset to zero. Preset Manager allow you to save/load and export presets. Please note that only after saving a preset the subwoofer will memorize a new parameters. Without saving a preset, subwoofer loses a new parameters after turn Off. Export presets carried out thru the IOS email account, but the import could work by hyperlink on website.

**Preset Manager:** allows you to save/load and export presets. Please note that only after saving a preset the subwoofer will memorize a new parameter. Without saving a preset, the subwoofer loses the new parameters after turn-off. Exporting presets is carried out thru the IOS email account, but the import could work by hyperlink.

### HW Controllers (not recommended)

Hardware controller options lets you to adjust or deactivate up to four knobs or switches on the rear panel of your subwoofer. For a full control by app please switch off all controllers, otherwise turning Off/On of the subwoofer will return the control to the rear panel knobs.

**Auto On/Off** allows you to adjust auto On threshold in mVRMS units, and hold On time in minutes. 10mVRMS and 2 minutes are default values.

## Gain Slider

The volume slider with Input Level indication (gray/green/red means, signal is less/more than Auto On Threshold, or input clipped).

## SHS

The ability to restore sub harmonics that have lost or not been included in early recordings. All musical notes consist of the original note and a series of harmonics or fundamentals of that frequency, combined, they produce the note you hear. Sub Harmonic Synthesizing (SHS) restores those lost harmonics. Sub Harmonic Synthesizer (old tracks bass restoration, a good example is Jackson Sisters - I Believe In Miracles or Diana Krall - Temptation). Ideal for sealed subwoofers.

## Delay Controls

2.5:65mS or 5:67.5mS for the FIR room correction mode (latency 2.5/5mS). Sometimes needed to match the delay with full range speakers (if delayed).

## Phase

The 1st order all pass filter F 10:10000Hz. Sometimes needed to match the phase of the main speakers in the cross-over region.

For Pro-App features and explanations download the full digital manual from [osdaudio.com](http://osdaudio.com)

## Specifications

Spec	TreVoce15 EQ DSP
Power	1500W Dynamic
Active Woofer	15"
Passive Woofer	Dual 15"
Frequency	16 -160 Hz
Phase	0-180°
Voltage	100-120V AC / 220-240V AC
Inputs	Hi Level / Low Level / LFE
Dimensions	(WxHxD) 19.3 x 19.3 x 19.3 in

## Warranty Information

All Optimal Speaker Design powered subwoofer products have a 2 Year Limited Warranty against defects in materials and workmanship. Proof of purchase must accompany all claims. During the warranty period Optimal Speaker Design will replace any defective part and correct any defect in workmanship without charge for either parts or labor. Optimal Speaker Design may replace returned speakers with a product of equal value and performance. In such cases, some modification to the mounting may be necessary and are not Optimal Speaker Design's responsibility.

For this warranty to apply, the unit must be installed and used according to its written instructions. If necessary, repairs must be performed by Optimal Speaker Design. The unit must be returned to Optimal Speaker Design at the owner's expense and with prior written permission. Accidental damage and shipping damage are not considered defects, nor is damage resulting from abuse or from servicing performed by an agency or person not specifically authorized in writing by Optimal Speaker Design.

Optimal Speaker Design sells products only through authorized dealers and distributors to ensure that customers obtain proper support and service. Any Optimal Speaker Design product purchased from an unauthorized dealer or other source, including retailers, mail order dealers and on-line sellers will not be honored or serviced under existing Optimal Speaker Design warranty policy. Any sale of product by an unauthorized source or other manner not authorized by Optimal Speaker Design shall void the warranty on the applicable product.

Damage to or destruction of components due to application of excessive power voids the warranty on those parts. In these cases, repairs will be made on the basis of the retail value of the parts and labor. To return for repairs, you must email customer service at [RMA@audiogeargroup.com](mailto:RMA@audiogeargroup.com) for a Returned Merchandise Authorization (RMA) number# then the unit must be shipped to Optimal Speaker Design at the owner's expense, along with a note explaining the nature of service required. Be sure to pack the speaker(s) in a corrugated container with at least 3 inches of resilient material to protect the unit from damage in transit.

This Warranty Does Not Cover: Damage caused by abuse, accident, misuse, negligence, or improper operation (installation) • Any products that have been altered or modified • Any product whose identifying number of decal, serial #, etc. has been altered, defaced or removed • Normal wear and maintenance.