Phasx S600B Operations & Technical Manual Version 1.1 August 11, 2016

1. IMPORTANT Safety Information and Instructions

Read the following safety instructions and operations manual before setting up and using your S600B speakers!

Keep this manual for future reference.

Heed all the warnings and follow the instructions.

1.1. Listening Level Warning

- **The S600B speakers are capable of producing very high SPL levels!**
- Permanent hearing damage may occur if exposed to high SPL levels for a prolonged and or multiple periods of time.
- Extended periods of high SPL listening may allow mistakes in your mixes or reduce your critical listening ability as your hearing tends to adapt and become less sensitive over time allowing the missing of important and subtle sounds or instrument layering in the mix
- Please use safe listening levels when playing back your music material.

1.2. Important Enclosure Notice / Warning

Do not remove any back cover plate screws or open any part of the S600B Speaker.

Hazardous Voltages exist inside the enclosure and a potential of severe or fatal electrical shock!

The S600B Speaker has no user serviceable parts inside. Tampered Seals Void All Warrantees.

- To reduce the risk of failure, fire, or electrical shock, do not expose the S600B Speaker to rain, moisture, high humidity, or use near water or other liquids.
- The S600B Speaker must not be exposed to dripping, splashing, or spills of liquids.

- Do not use in dusty environments as particles could enter the enclosure or collect on the speaker diaphragms.
- Refer all service to a Phasx Authorized Service Center Only

- Servicing is required when the S600B has been damaged in any way, does not operate normally that cannot be solved with technical support, has been dropped, or exposed to liquids that have entered the speaker back panel or speakers.

1.3. Mains AC Power Connection

The S600B should only be operated when connected to an appropriate AC mains power source and appropriate type of 3 pin connection that provides a protective Earth ground connection. This includes any extension cords or power distribution strips. Appropriate power cords are supplied with each S600B Speaker.

- Do not defeat the safety purpose of any 3 pin grounding type AC mains power supply plug on the S600B power cable or any power distribution connection.
- The S600B can operate on 120VAC @ 60Hz or 220/240VAC @ 50Hz.
- To completely disconnect from AC mains, disconnect the S600B Speaker AC power cord from the AC mains supply receptacle or the back of the Speaker.
- The S600B Speaker should be installed using the shortest practical wiring and disconnection of the device should be easily accessible.

Power-Cord Protection

- Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them.
- Particular attention should be given to cords at plugs, power strip receptacles, and power entry connector of the S600B Speaker.

Power Line Surges and Lightning

- As with all sensitive electronic equipment, it is suggested to use AC Main Power sources that have surge protection.
- For additional protection during a lightning storm, or when left unattended and unused for long periods of time, unplug it from the AC Mains Power source.

Mains Power Source Overloading

- Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electric shock.

1.4 General Cable Connection

- Before making connections to S600B Speaker, ensure that the power switch is off and connecting components are in mute or stand-by mode.

- Make sure all cables and connectors are of the highest quality, and fully checked. Defective cables can harm your speakers. They are a common source of noise, hum, crackling etc.

- Always be careful when making connections which may have hazardous voltages on them during operation.

- Always switch off your entire system before connecting or disconnecting any cables, or when cleaning any components.

1.5 Placement

- The S600B Speaker will get warm to the touch on its back panel and has ventilation slots that must be left clear to allow air flow for cooling. Do not place the speaker closer than 6 inches to a rear surface or wall to assure air flow.

- Do not place the S600B near high heat generating sources such as radiant heaters, radiators, open flames, candles, or other devices that generate high heat or flames.

- Do not place flammable material behind, above, or beneath the S600B.

- Never operate this product in an explosive atmosphere.

- The S600B is heavy and must be placed on a firm, level surface.

- Do not place the speaker on an unstable cart, stand, bracket, or table. The speaker may fall, causing serious injury and or serious damage.

    - When a cart or stand is used, use caution when moving both together.
    - Using Isolation dampers under the speaker to help decouple the speaker cabinet from the stand that will help dampen vibration noise and other objects which could fall.

- Do not block the woofer port at the front bottom of the speaker.

1.6 Cleaning

- Clean only with soft cotton dry cloth.
- Never use liquid cleaners, aerosol cleaners, or flammable / combustible chemicals for cleaning.
- Avoid touching the speaker diaphragms.
- Do not use a vacuum cleaner or high pressure air source on the speaker diaphragms as damage may or will occur.

2.7 Magnetic Considerations:

- S600B Speakers have 3 drivers; woofer, mid-range, and high frequency.
- Please keep magnetically sensitive items at least 0.5 m away from the speaker.

2.8 Caution

This device complies with Part 15 of the FCC Rules / Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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 a residential installation. 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.

To satisfy FCC / IC RF exposure requirements, a separation distance of 20 cm or more should be maintained between the antenna of this device and persons during device operation.
To ensure compliance, operations at closer than this distance is not recommended.

Les antennes installées doivent être situées de facon à ce que la population ne puisse y être exposée à une distance de moin de 20 cm. Installer les antennes de facon à ce que le personnel ne puisse approcher à 20 cm ou moins de la position centrale de l' antenne.
La FCC des éltats-unis stipule que cet appareil doit être en tout temps éloigné d'au moins 20 cm des personnes pendant son functionnement.

Table of Contents

3. Introduction

To You, our newest Partner:

Thank you for choosing the Phasx S600 Desktop Monitor System. We are very proud to have created, in our humble opinion, one of the most advanced Desktop Monitors in the

world, and prouder still that you have chosen to agree with us and give our technologies a try.

The Phasx team's mission and ambition is to create a line of Best in Class "Mastering Worthy" Audio Monitors that **Empower** Media Arts Professionals in ways never before possible, **Excel** in every benchmark of performance and of sound quality, and **Exceed** user expectations on every front.

The S600B, our first product in this new line, has taken over eight years to develop, and called on the skills, efforts, and inputs of dozens of Acoustics, DSP, and Recording Engineering Professionals.

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We hope that you will agree with us that the result was worth the wait!

Sincerely,

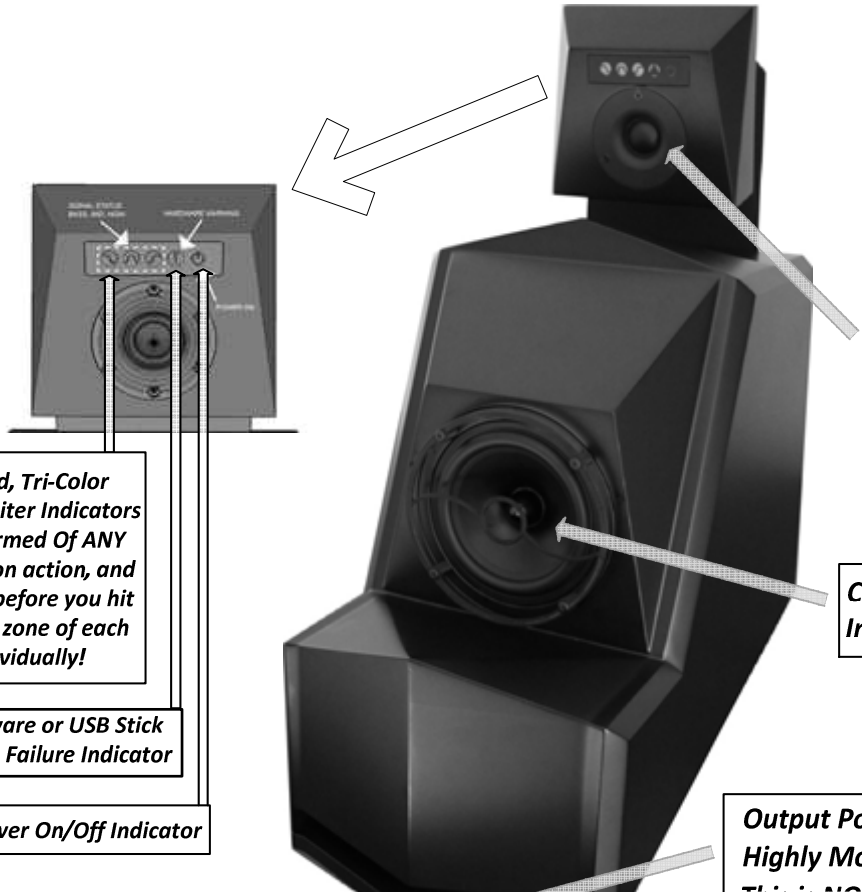
The Phasx Team

To receive important information and updates, as becomes available, please take a moment to register your S600B Monitor speakers. Go to *www.phasx.com/S600B/Register*

FEATURES OVERVIEW: 1) The Basics:

The NEW PHASX TECHNOLOGIES ***S600B Desktop/Near-Field Monitor***

It's a DSP Driven, HYPEX nCORE Powered 3-Way Professional Monitor System Covering a little over 9 Octaves From just below B0 (30.8Hz) to over 23,000Hz



Proprietary Reference Grade Tweeter In Adjustable Anti-Difraction Cabinet

Phasx 3 Band, Tri-Color compressor/limiter Indicators keep you informed Of ANY driver protection action, and warn you 3dB before you hit the protection zone of each driver individually!

Custom Built Low Distortion Midrange In Acoustically Isolated Sealed Cabinet

Hardware or USB Stick Update Failure Indicator

Power On/Off Indicator

Output Port of Custom Internal 6.5" Woofer in Highly Modified 4th Order Bandpass Enclosure

2) THE ShadoCaster™ ACOUSTIC Cabinet Construction:

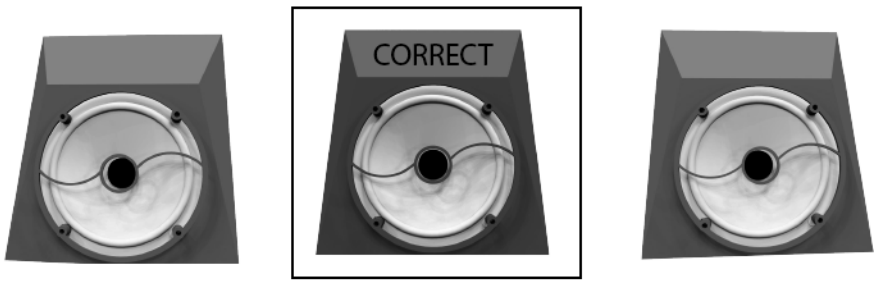
The Patented **ShadoCaster™** system allows the small space over a desktop (or similar size area) to behave as if it were a part of an acoustically corrected soffit-mount speaker control room playback system, even though it is operating in a more or less standard domestic room.

The effect is to deliver astonishing sound staging and even accurate elevation effect reproduction, something that is nearly impossible in an acoustically untreated room.

You have to hear it to believe it --- and now you are about to!

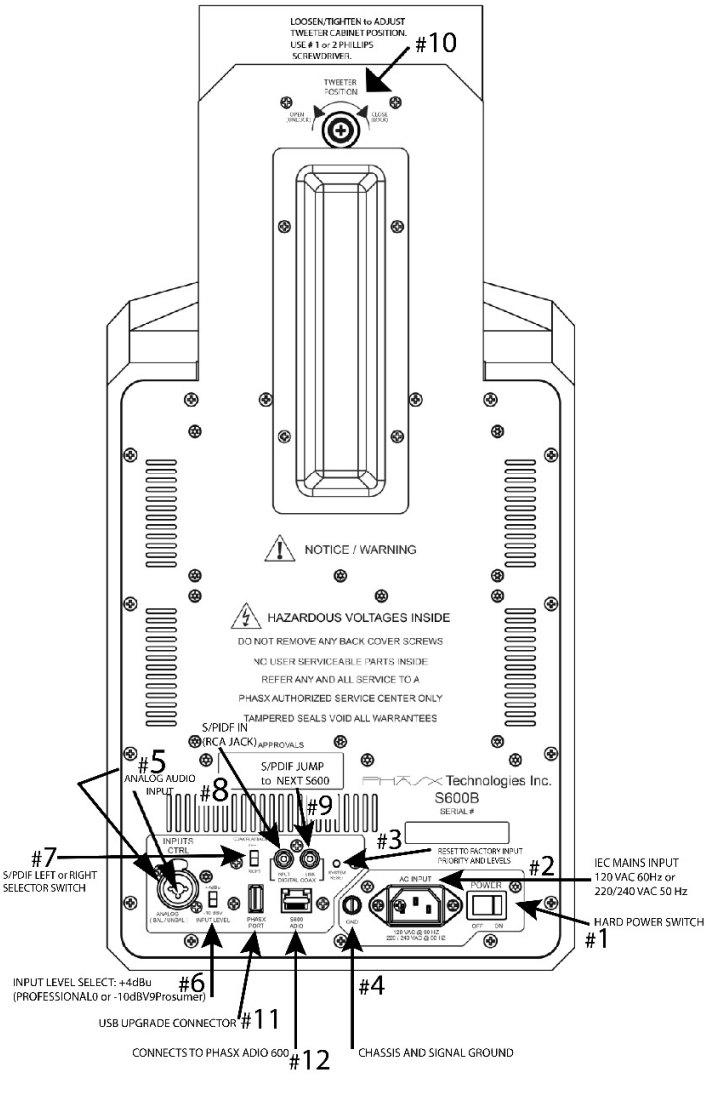
3) THE PHASX *ACOUSTIC PINPOINT™*

(Possibly the Simplest Speaker Positioning System Ever Patented)



Panned too far Right **OK!** **Panned too far Left**

4) Rear Panel Inputs and Switches:



5. Connecting the Speakers

There are three ways of connecting an audio input to the S600B.

1. **Analog Input XLR connector Wired Balanced or Unbalanced**
2. **Analog Input 7mm T.R.S plug Wired Balanced or Unbalanced**
3. **S/PDIF digital input at any standard bit rate/depth up to 192kHz/24 Bit**

- **Use the Level selection switch to match analog input level to the sending device.**
- **Use the L/R S/PDIF switch to assign the S600 to one or the other channel**
- **Note: Both Left and Right S/PDIF signals are available at either S600B, so this must be done with care!**

Rear Panel Identifiers:

#1 Power: This is a "hard" switch; In the OFF position, the connection to the Mains Power is physically disconnected except for the Ground (Safety) wire.

#2 AC Mains Input: This is an IEC type connector, which may be used with any standard power cable for either 110V/120V 60Hz or 220V/220V 50Hz Mains Power

#3 System Reset Button: This is used to restore the S600B to factory defaults except for *Room Correction EQ* which is retained if present. It's primarily used when no smartphone is available to control inputs. See *Default System Settings*.

#4 Chassis and Signal Ground: This is a standard binder post which gives access to a low impedance path to system and audio ground, should it be needed. It is not normally necessary to connect anything to this terminal.

#5 Analog Audio Input: This is a dual-type professional audio input connector which is compatible with either XLR type connectors in Balanced or Unbalanced mode, or 7mm T-R-S type connectors in Balanced or Unbalanced Mode. This works in conjunction with the Input Level Select Switch.

#6 Analog Input Level Select Switch: This is a two position switch which sets the Analog Input Gain to either the Professional standard of +4dBu, or to the Consumer/Prosumer standard of -10dBV.

#7 S/PDIF Left or Right Selector Switch: **Because both channels come in on the S/PDIF input jack, the user needs to decide which channel will be played by this S600. This switch can be overridden by either the Bluetooth APP or by the ADIO600 Connector.**

#8 S/PDIF Input Jack: **This is the Input for digital audio in the S/PDIF form. Any bit rate/bit depth from 8bit 32 kHz to 24bit/192kHz is compatible, but 24bit 96kHz is generally recommended. Use 75 Ohm video-type Cable.**

#9 S/PDIF "Jump" Jack: **Use this to jump to the S/PDIF INPUT of the next S600B. Use only high quality 75 Ohm video-type RCA to RCA cable.**

#10 Tweeter Cabinet Position Adjustment: **Use a #1 or #2 Philips Screwdriver to loosen the clutch that holds the Tweeter Cabinet in place. Reposition the Cabinet and re-tighten the clutch. Hand Tightness Only! This is best done with 2 people, one in the "driver's seat" and the other adjusting Tweeter Position.**

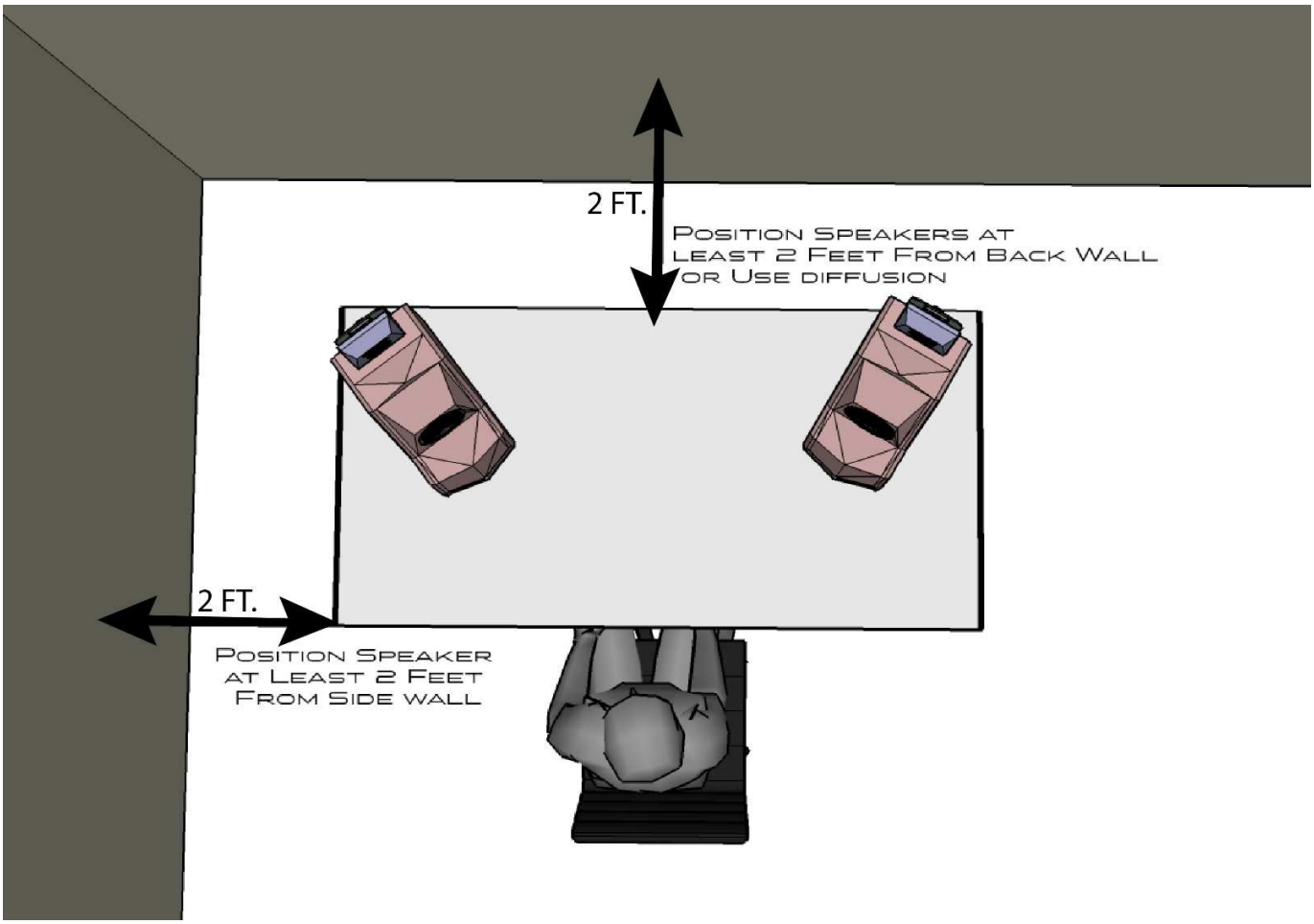
#11 USB Upgrade and Diagnostics Connector: **This connector mates with any standard USB memory stick to provide an easy way to load in software updates obtained from our website or by email from our Customer Service Team.**

#12 Phasx ADIO600 Connector: **This RJ45 (Data Network) Type connector is used with the Phasx ADIO600 USB-2 based Monitor and Routing System for DAW's.**

6. Speaker Placement

The S600B is designed to be mounted primarily on a desktop at about 28"-30" above the floor (Standard Desk Height) and at about 3 feet from the user. Alternatively, Desk height stands can be used to increase the stereo image spread, and experience has shown that this is generally a good idea.

The S600B should be positioned a minimum of 2' from the nearest wall whether the wall be to the rear or to the side. Walls any nearer than 2 feet will need to have diffusion panels strategically placed to manage wall reflections.
This is particularly true in the case of rooms which have hard ceilings at a height of 10 feet or lower, or soft (suspended) ceilings at less than 8 feet above the floor.



7. Controlling the S600B

The S600B can be used without a smartphone or iPad, but it is generally NOT Recommended except in case of an emergency. If no Smartphone or iPad is available, here are the steps to take:

1) **Switch Power On. If the S600B is new, go to step 4.**
2) **After power has come on and the Tweeter Mounted LED's have cycled through their boot pattern, press the System Reset Button until the LED's Cycle ONCE to leave last saved Room EQ in place or TWICE to erase Room EQ.**
3) **Now Switch the Power OFF**

4) **Connect a known good <u>active</u> S/PDIF input <u>OR</u> a known good Balanced Analog input running at the +4dBu level standard. <u>Connect ONLY ONE OF THESE, NOT BOTH.</u>**
5) **Switch the S600B back on. The unit will be playing the signal from the input you connected**

Hopefully a smartphone or iPad will be available to host the Phasx S600 Bluetooth APP. Instructions for its use begin on the next page.

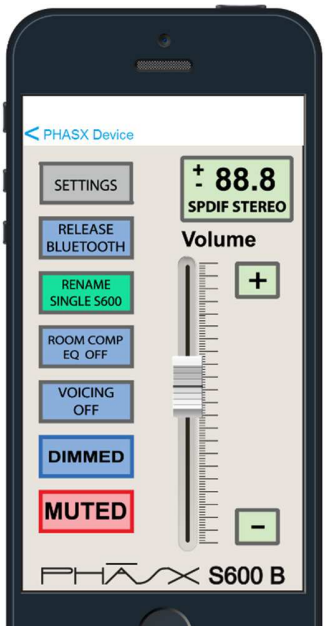
<u>Phasx S600B Bluetooth APP:</u>

To Link your iPhone to the Phasx S600 Bluetooth APP, Perform these steps:

1. **Select the Phasx S600 App from the main screen: You will see this screen first.**

2. **Hit the "Scan" button on the upper right, and something like this screen will appear assuming that power is on and boot has completed on <u>Both</u> S600Bs. NOTE: These two S600B's have already been renamed with an easy to remember "local" name instead of the Bluetooth Unit broadcast number that the units ship with.**

3. **Touch the first S600 listed (in this case it's "Studio 1 Right"). That S600B will be linked via Bluetooth, and the Main Volume and Navigation Screen will appear. NOTE: So far, you have only linked ONE of the two S600B's.**

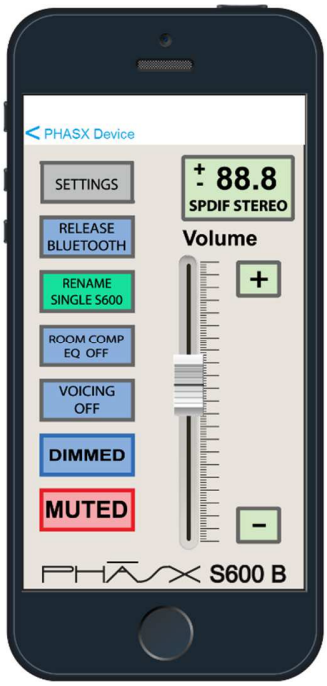


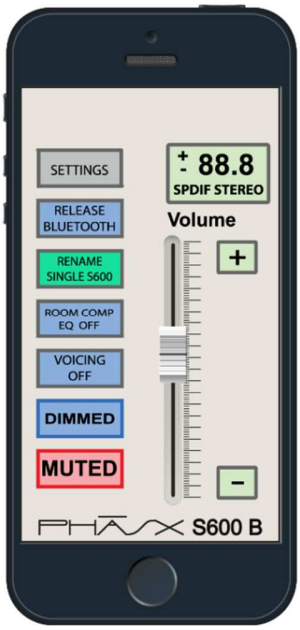
4. **You can go back to get a link to the other one by touching "PHASX Device" Up at the top of the screen in the iPad operating area. You will be returned to the Link screen, but this time, the S600B that you already linked to will be missing, with only the unlinked one listed.**

5. **Now touch the remaining Unit, in this case Studio 1 Left, and it will immediately be linked and the system will return you to the Home Screen. NOTE: you can always use the "PHASX Device" button to return to the link page if you need to check on link integrity.**

6. **If you want to change the link to another device, or just pass on the control to someone else, use the "Release Bluetooth" Button**

Home: Ma





From the Home Volume & Navigation Screen you can perform the Following Functions: (in rough order of importance)

1) **Control Volume of the S600B Monitor Pair with the Volume Slider Widget.**

2) **Increment or Decrement Volume in 0.5dB increments with the + and – keys.**

3) **Mute the Speakers (all three Indicator LED will light RED)**
4) **Dim the Speakers to an attenuation less than a full Mute as set in the Initial Volume Settings screen.**

5) **Turn The Room Compensation EQ either ON or OFF**

6) **Turn The Custom Voicing Feature On or OFF**

7) **Release the Bluetooth Connection(s) – useful for room handoffs and individual Speaker operations such as Bluetooth Name Changing**

8) **Rename a given Speaker's Bluetooth Broadcast Name so that it is easier to handle situations in which more than one S600B Pair is running in the same vicinity. This MUST be done one S600B at a time.**
9) **Navigate to the Settings Screen**

Settings Screen:

From the Settings Screen, you can navigate to the four areas of adjustment:

1) **Set Initial Levels, Dim Depth, Balance, Etc.**

2) **Select the current input, including a built in Pink Noise Source.**

3) **Load or Modify the Current Room Correction EQ Settings.**

4) **Load or Replace the Current Custom Voicing Profile.**

Initial Level Setting Screen

The Level Settings Screen allows you to set:

1) **The initial Volume Level that the Master Volume control of both S600B's in the pair will be set to on next boot-up. In order to**

2) facilitate the level setting, a built in Pink Noise Generator set to the equivalent of +4dBu or -18dBFS can be turned on and off from this screen. The Up and Down Arrows next to the Initial Level Indicator Window let you increment and decrement the value in 0.5dB increments.

3) The "depth" of the Dim Level, from -5dB to -40dB by using the Up and Down Arrows which allow a change in 0.5dB increments

4) The Balance between the two S600B Speakers. Note that this is one of the settings which will not be saved from session to session, as it is potentially too dangerous in terms of production confusion. The balance is accomplished in 0.2dB increments, but is actually a process of subtracting 0.1dB from one side and adding 0.1dB to the other side at the same time so as to preserve net level settings precisely. Again, the balance change is actuated using the two pads to the left and right of the Balance indicator. The indicator shows the Unit and amount of + gain, that is the channel towards which the pan is moving and the amount of the pan gain.

Source Selection and Trim Controller Screen

The Source Selection Screen works for both S600B speakers in a stereo pair and allows:

1) The Selection of Input:
   a) S/PDIF
   b) Analog

c) **Internal Pink Noise Generator set to -18dBu equivalent at the input.** ***Note that this is <u>Uncorrelated</u> Pink Noise, meaning that there is a separate and independent PN generator in each S600B. The two noise generators are precisely matched in level, but they do not, and cannot, have any "Mono" or "Center" Content, so the two channels add acoustically at 3dB, NOT 6dB as would be expected from a Common or Mono Pink Noise Signal.***

2) <u>S/PDIF Stereo Format Selection</u>

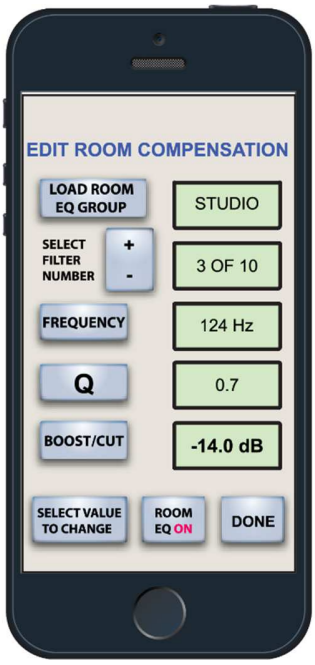
a) Stereo
b) Stereo Reverse
c) Mono

NOTE THAT THESE SETTINGS APPLY ONLY TO S/PDIF; The Other two inputs (Analog and Pink Noise) are wired to only one of the two S600B's and so cannot be reversed or added.

3) <u>Analog Input Trim:</u> This allows input Gain Trim for the analog input channel of +or- 10.0dB in 0.5dB Increments

4) LED Brightness: This allows Brightness trim for the 3 Warning LEDs on the Tweeter Cabinet. Zero Brightness is possible, but will not be stored as a preferred brightness for the next boot.

<u>Room Compensation EQ</u>



The S600B is aimed at Media Professionals that are often challenged by the room size, more or less cube room shape, and lack of acoustic treatment.

Of course, the fundamental purpose of the Shadocaster shape is to create a small "first-reflection free" zone for the mixing/tracking/mastering engineer. That "Zone" reduces or eliminates the need for a lot of what might otherwise have to be done to a room to make it usable for professional audio content creation.

The Room Compensation EQ allows the application of up to 10 Parametric EQ sections with enough flexibility to tame the low frequency "Room Boom" in nearly any "domestic" type room. Basically, if a room is good for intelligible conversation among three to five people, it can generally be made to behave a lot better by this feature.

Note that all EQ values are applied equally to both speakers in a pair of S600B's. This is true (in part) because this sort of Room Acoustics "Band-Aid" only works well into the roughly 250Hz area at the highest, and is most effective in the 40Hz to 120Hz region. Luckily, that is also where this sort of room correction is most often needed.

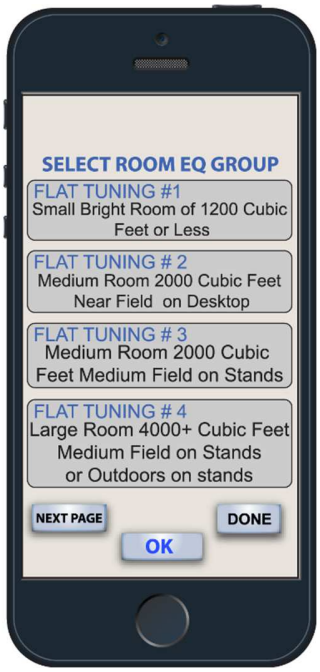
Unlike most offerings of this kind in professional audio, we give the user complete control over the number of EQ sections and the parameters of each one. The freely available room correction program R.E.W. offers a user settable output text field that lists all the needed Parametric EQ's in the same terms that this page accepts: Frequency, Q, and Boost/Cut. Download the application for Windows or MAC at http://www.roomeqwizard.com.

Read the step by step instructions on the REW website. Then view a few of the many tutorials that have been made for REW. This will make anyone (with sufficient motivation) a Room Acoustics Specialist, and the S600B makes it easy to cure (at least partially) your Room Boom problems without a whole lot of acoustic treatment.

How to Enter a New Room Compensation EQ Profile:

1. **Load a previously stored profile (if available) which might require only minimal changes to work in the current room:**

b) Touch "Load Room EQ" You will be taken to a listing of currently available room EQ Profiles (if any have been stored previously) such as in this example:



c) Select the most appropriate save group and hit OK ("Done" exits with no selection)

d) Now by using the =/- keys @ "Select Filter Number" you can scroll through each of the 10 filters saved in each group and modify them according to the current room's needs. You can "shut off" any unneeded filters by simply setting the Boost/Cut to 0.0dB

2. If you needed to build a new Room Comp Filter Group from scratch, here are the steps:
    a. Scroll through the filters on the screen to be sure that none are active, and if any are, set the boost/cut value to zero
    b. Select a Filter number. You don't have to start with #1, but it is highly advisable.
    c. Enter the Parameters for the first filter; Frequency, Q, and Boost/Cut Value in +/- N.N form (the dB part is understood)
    d. When the parameters are entered for the first filter, touch "Apply Single Filter Change"
    e. You can now TEST the single filter by touching "Engage EQ" at the bottom of the screen. The EQ will switch in and the button will change to "Bypass EQ" You can now use the

button to "A-B" the EQ and then fine tune the filter you are working on. NOTE: As you build a complete EQ group, the entire group will be A/B'd on and off with the switch, not just the particular filter you are working on.

f. When you are done (or when you reach a stopping point) perform steps g, h, and I below:

g. After you touch "Apply Single Filter Change" the Legend will change to "Filter Change Applied" and at the top of the screen, The "Load Room EQ Group"" legend has changed to "Save as New Room EQ Group"

h. Touch "Save as New Room EQ Group"

i. A "Input New EQ Group Name" Window will come up along with a keyboard. Enter a new name and hit "OK"

8. Troubleshooting

No Sound

Using the "Source Selection and Trim Controller Screen" (page 19) select "Pink Noise" and adjust the level to make certain that both S600B's are passing PN signal. If not, contact Phasx Service at 1 800 823 2383 toll free in the US and Canada or +1 321 325 6104 from anywhere else in the World.

If the PN sounds OK, it will be necessary to track down the input signal wiring. The Pink Noise is generated near the very first input stage of the electronics that drive the speaker. It is extremely unlikely that the PN will

work while the Analog and Digital input section has failed, but in the event that no other explanation is possible, call Phasx Service at 1-800 823 2383.

Distorted signal

The S600B is made to accept Analog signals up to a maximum level of approximately +19dBu. Anything more will certainly cause distortion but is not indicative of any failure.

It is important to note that the S600B is meant to decode ONLY standard S/PDIF digital signals. (commonly called PCM audio).
NO other sort of Digital Audio Signal can be decoded by the S600B. Be sure you are wiring a known good S/PDIF signal to the S600B. While not very likely, incorrect signals could even cause damage and might create crackling noise and the like.
If you know the signal you are using is standard S/PDIF, double check it by connecting it to another independent decoder, also known good.
If the independent decoder sounds OK, please take note of the Bit Rate and Bit Depth and call Phasx Service at 1 800 823 2383.

Register Your Product

- To register your product, go to phasx.com/s600/register

Limited Warranty

PHASX LIMITED WARRANTY

PHASX TECHNOLOGIES Inc. warrants that this product is free from defective material and workmanship. PHASX further warrants that if product fails to operate properly within the specified warranty period and the failure is due to improper workmanship or defective material, PHASX will repair or replace the product at its option. All warranty repairs must be performed by a PHASX authorized service center. The name and address of the location nearest you can be obtained by calling toll free: 1-800 823 2383 or on line at WWW.Phasx.com/support.

Transportation to and from the service center is the customer's responsibility but Phasx will pay one way for warranty repair. The original dated sales receipt must be retained by the customer and is the only acceptable proof of purchase. It must be presented to the authorized service center.

WHAT IS NOT COVERED

This warranty does not cover damage due to accident, fire, flood and/or other acts of God; misuse, incorrect line voltage, improper installation, improper or unauthorized repairs, commercial use, or damage that occurs in shipping.

Exterior and interior finish, LEDs, and cables are not covered under this warranty.

Customer adjustments, which are explained in the instruction manual, are not covered under the terms of this warranty. This warranty will automatically be voided for any unit found with a missing or altered serial number. Some States do not allow the exclusions or limitations of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights, which vary from State to State.

CONTACTING PHASX

To obtain warranty service for your product, please choose one of the following:

Call PHASX Service at: **1- 800 823 2383**

or

Fill out our convenient, **online service request form at www.Phasx.com/S600/Support**

Technical Data Specifications

- **True 3-Way Operation with Separately Amplified Woofer, Midrange, and Tweeter**
- **28Hz to 23kHz +/- 1.5dB in Free Air Without a Subwoofer**
- **100dBSPLContinuous & 120dBSPL Peaks at 1 Meter (pair)**
- **In Genius^{tm} Balanced Analog Input for 90dB CMRR and**
- **S/PDIF input with Asynchronous Rate Conversion for any rate to 192Khz, depth to 24bit**

- **Bluetooth Controlled Internal 32bit Master Volume means NO Extra D-A or A-D Conversions**
- **Elite Class Hypex N'CORE™ Amps Throughout: Woofer @ 200W, Mid @ 100W, Tweeter @ 100W**
- **Patented Acoustic Pinpoint™ system minimizes Multi-User and Continuity issues.**
- **Proprietary Zero-Attack Time Peak detectors protect drivers and warn the user of Compression**
- **Three-Band, Three Level indicator system provides confidence and impending compression warning**
- **Flexible Room Correction Filter set provides 10 Bands of EQ to surgically remove Room Boom**
- **Live Switchable Custom Voicing settings for both Mastering Style and Room optimization.**