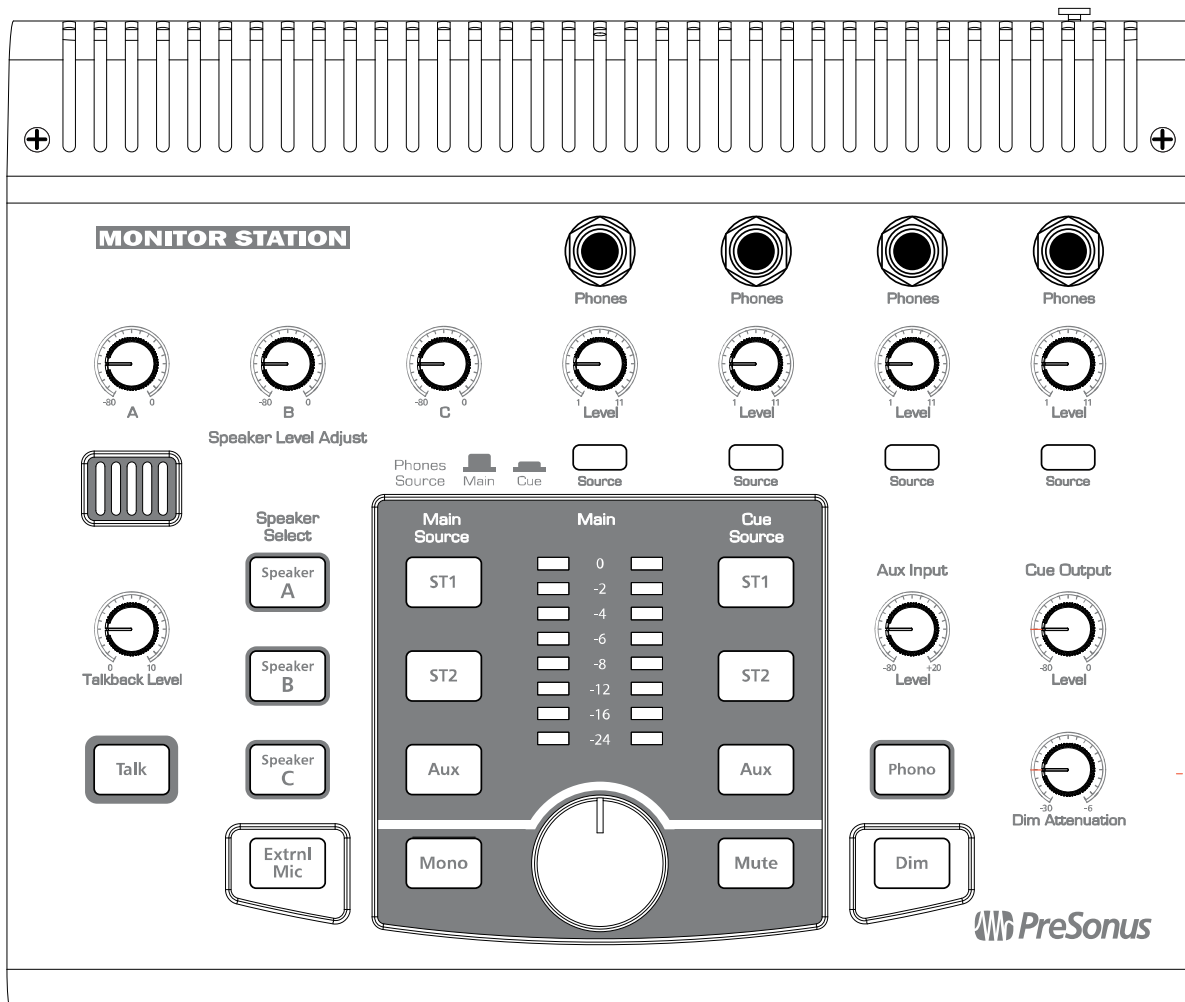


MONITOR STATION

Studio Control Center



User's Manual v1.0



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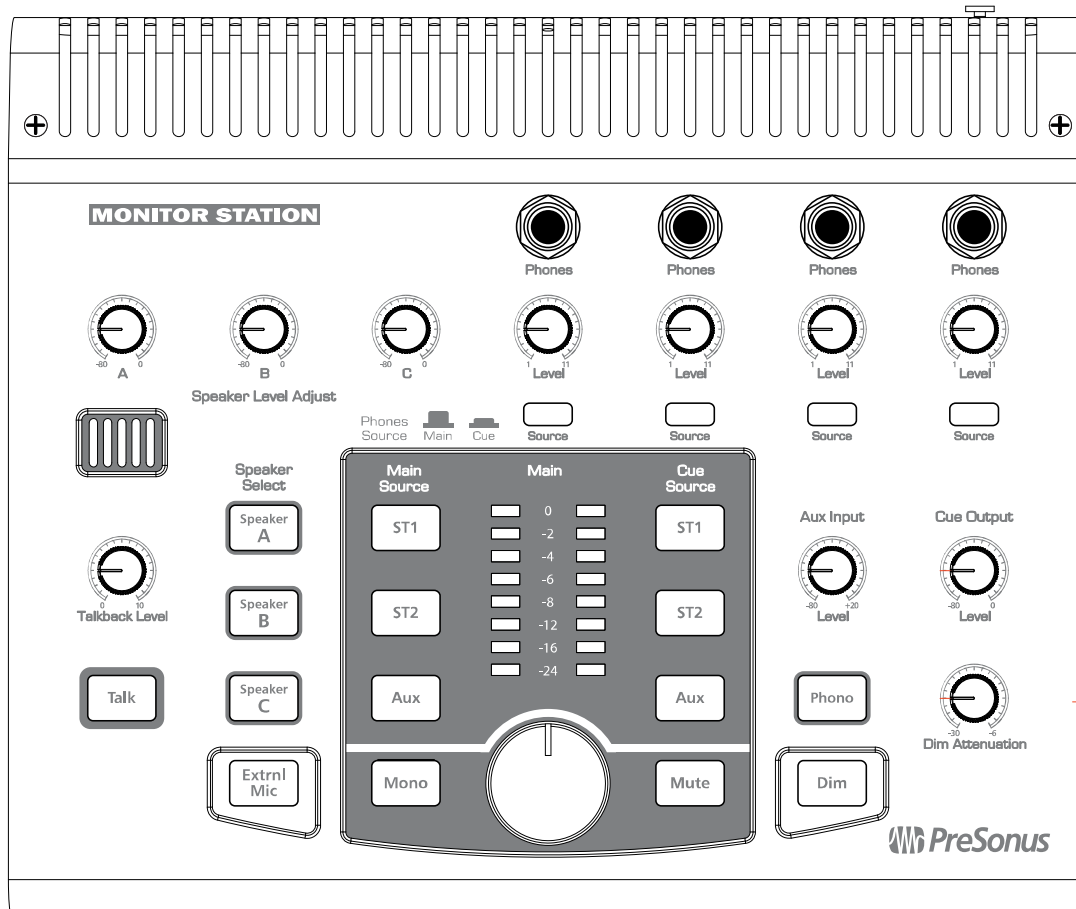
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OVERVIEW

1.1 INTRODUCTION



Thank you for purchasing the Monitor Station. PreSonus Audio Electronics designed the Monitor Station using high-grade components to ensure optimum performance that will last a lifetime. The Monitor Station is the ultimate desktop monitoring and communications system for your recording studio. Based on the award-winning Central Station, the Monitor Station provides talkback, speaker switching, input source switching and four ultra loud and clear headphone amplifiers to deliver everything you need to control your recording environment.

Please contact us at 225-216-7887 with any questions or comments you may have regarding your Monitor Station. PreSonus Audio Electronics is committed to constant product improvement, and we value your suggestions highly. We believe the best way to achieve our goal of constant product improvement is by listening to the real *experts*, our valued customers. We appreciate the support you have shown us through the purchase of your Monitor Station.

Please pay close attention to how you connect your Monitor Station to your system. We suggest you use this manual to familiarize yourself with the features, applications and correct connection procedure for your Monitor Station before trying to connect it to your studio equipment. This will hopefully alleviate any unforeseen issues that you may encounter during installation and set up.

Thank you, once again, for buying our product, and we hope you enjoy your Monitor Station!

OVERVIEW

1.2 FEATURES

The Monitor Station is the ultimate studio control center complete with everything needed for real-world, modern studio applications. The Monitor Station comes complete with a built-in talkback mic, three source inputs, three speaker outputs, four headphone amplifiers and control over the routing and level of every element connected to the Monitor Station – effectively giving you complete control over your entire studio environment.

Its stereo inputs are ready to accommodate virtually any input sources – such as Digital Audio Workstations (DAWs), analogue and digital mixing consoles, CD players, DJ Turntables, etc. Each of the five inputs features individual monitoring, which means you can quickly and easily toggle between them for a quick comparison or reference. The Monitor Station's three stereo outputs with individual Speaker Level Adjust knobs and Master Mute, Dim, Mono and Level controls allow you to connect three sets of reference monitors and easily compare your mix on each of them. The four headphone amplifier outputs with individual source and level controls give you the ability to feed custom headphone mixes to you or any of the artists in your studio. All this combined with the built-in talkback microphone make the Monitor Station the cleanest, most powerful piece of gear custom-tailored to bring your studio together under your complete control.

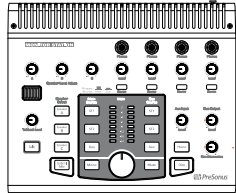
Summary of features

- Three stereo inputs (two balanced ¼" TRS; one unbalanced RCA)
- Built-in phono preamp on RCA aux input
- Main input source selector for comparing/referencing inputs
- Cue source selector for tailoring headphone and cue mixes
- Three balanced ¼" TRS stereo outputs
- Variable Speaker Level Adjustment for fine-tuned calibration of output levels
- Speaker Select for quick A/B'ing of input source between reference monitors
- Dim button with variable attenuation level
- Mono, Mute and Main Level Control
- Built-in talkback microphone with variable input gain
- External talkback microphone input (balanced XLR)
- Four built-in headphone amplifiers (stereo unbalanced ¼" TRS)
- Individual level adjust knobs for each headphone output
- Main/Cue Source selector for each headphone output

OVERVIEW

1.3 WHAT IS IN THE BOX

Your Monitor Station package contains the following:



- Monitor Station Studio Control Center



- Monitor Station Power Source



- PreSonus Warranty Card

OPERATION

2.1 QUICK START

The Monitor Station Quick Start guide was written to help get your Monitor Station connected to your system as quickly as possible. The following step-by-step instructions are based on a common studio environment. Your actual setup may change based on your needs and applications.

2.1.1 Connect the power

Before connecting any power supply to the Monitor Station, ensure the power supply meets the input voltage requirements of the region or country you are using it in. PreSonus only supports the power supply shipped along with your Monitor Station. If it does not meet your requirements or you wish to purchase an additional power supply, please contact your local dealer or distributor.

- 1) "Zero" the Main, Cue and Phones level knobs by turning them fully counterclockwise.
If you have speakers or gear connected to the Main L/R outputs, you should also Zero them.
- 2) Ensure the power switch is set to the 'OFF' position (O down = off).
- 3) Connect the included power supply to the Monitor Station's power input connector and to the appropriate wall socket.
- 4) Flip the power switch to the 'ON' position (| down = on).

2.1.2 Connect the input sources

- 1) "Zero" the Main, Cue and Phones level knobs by turning them fully counterclockwise.
- 2) Connect your primary audio source (such as a DAW or Mixer Main Outputs) to the Left and Right TRS inputs of ST1 on the back of your Monitor Station.
- 3) *[Optional]:* Connect your secondary audio source (such as a CD or mp3 player) or cue audio source (such as the auxiliary outputs of your interface or Mixer) to the Left and Right TRS inputs of ST2 on the back of your Monitor Station.
- 4) *[Optional]:* Connect another secondary or Cue audio source or a DJ turntable to the Left and Right RCA inputs of Aux/Phono.

OPERATION

2.1.3 Calibrate the LED meter

By default, the Monitor Station's LED meters are calibrated so the red 0 dBVU LED illuminates when the selected source signals reach +10 dBu. This can be changed so that 0 dBVU references +4, +10 or +18 dBu.

+4 dBu

0 dBVU should reference +4 dBu if any of your monitoring devices have a maximum input of +4 dBu or if none of your input devices have a maximum (or nominal) output level greater than +4 dBu.

- 1) Press and hold the Cue Source ST1 button while powering on your Monitor Station.

+10 dBu

0 dBVU should reference +10 dBu if any of your monitoring devices have a maximum input of +10 dBu or if none of your input devices have a maximum (or nominal) output level greater than +10 dBu.

- 1) Press and hold the Cue Source ST2 button while powering on your Monitor Station.

+18 dBu

0 dBVU should reference +18 dBu if any of your monitoring devices have a maximum input of +18 dBu or if none of your input devices have a maximum (or nominal) output level greater than +18 dBu.

- 1) Press and hold the Cue Source Aux button while powering on your Monitor Station.

2.1.4 Calibrate the input sources

- 1) "Zero" the Main, Cue and Phones level knobs by turning them fully counterclockwise.
- 2) Turn the outputs of your primary audio source (connected to ST1) to their lowest setting.
- 3) Remove all effects processors (i.e. EQs, compressors, reverbs, etc.) from the signal path and play a clean 0 dB test tone (i.e., a 1 kHz sine wave) through the outputs of your primary audio source.

Select only ST1 as the Main Source, and begin turning up the outputs of your primary audio source to their Unity Gain setting or until the Monitor Station's LED meter's red 0 dBVU LED comes on. If you are not able to reach Unity Gain (or very close to it) without the red 0 dBVU LED coming on, ensure you have properly calibrated the LED meter (*section 2.1.3*) then repeat this step.

"Unity Gain" is the level or setting which does not boost or attenuate the signal level and is usually marked by a "0" on the audio device's level fader or knob. In many digital interfaces and digital devices, its maximum level is often also its Unity Gain setting. Please consult your audio device's user's manual or manufacturer's Website for more information on its levels and adjustments.

[Aux/Phono only]: Do not adjust the output level of your audio device if it is set at its optimum or maximum level. Instead, engage the Phono preamp (if necessary) and increase the Aux Input Level knob starting from -80 until the red 0 dBVU LED meter just comes on (and no higher).

- 4) Repeat steps 1 through 3 for the secondary / cue audio sources connected to ST1 and Aux/Phono.

OPERATION

2.1.5 Connect the speakers

- 1) “Zero” the Main level knob by turning it fully counterclockwise.
- 2) Connect your primary monitoring system (such as a pair of nearfield reference monitors) to the Left and Right outputs of Speaker A.
- 3) *[Optional]*: Connect your secondary monitoring system (such as a pair of reference monitors of a different make or model) to the Left and Right outputs of Speaker B.
- 4) *[Optional]*: Connect another secondary monitoring system (such as a pair of large studio monitors or subwoofer) to the Left and Right outputs of Speaker C.

2.1.6 Calibrate your speaker levels

The essential purpose of speaker calibration is to ensure a specific metered audio level (typically 0 dBVU) equals a certain acoustic level (measured in dB SPL) in your studio environment. Depending upon the method and reference levels used during calibration, proper calibration can help reduce unwanted noise, minimize the risk of damage to your speaker cones and to your ears, maximize the reference capabilities of different speaker types and ensure you and/or your listeners are hearing the audio as the engineer intended.

There are many different methods for calibrating studio monitors. The methods discussed here should not be misconstrued as the *only* method or even the *best* method, because different studio environments with different gear, clientele and audio mixes may ultimately benefit more from one of the many other methods available. PreSonus does not suggest the calibration methods provided here are in any way the best or only recommended methods of calibration when using the Monitor Station. If you wish to calibrate your studio monitors using a different method, we encourage you to do so.

Every calibration method has something in common, though: test tones. The most commonly used test tones are 100 Hz, 1 kHz and 10 kHz sine waves, 40-80 Hz and 500 Hz -2.5 kHz bandwidth-limited pink noise and 20 Hz - 20 kHz pink noise and white noise. Test tone CDs can be purchased from your local electronics or entertainment retailer or downloaded off the Internet from a variety of free Websites for use in many calibration and testing procedures. As a less technical, more subjective and not otherwise ideal alternative, the chorus of a modern commercial Rock song can be substituted for full-bandwidth pink noise.

When calibrating reference monitors in a studio, the acoustic level or sound pressure level (SPL) should be measured from the mix position at seated ear height. The SPL meter should be held at arms' length with the microphone pointed at the center point between the left and right speakers, angled at 45 degrees to ensure an accurate reading. You should also calibrate the left and right monitors independently; pan the test tone hard left, calibrate the left monitor, then repeat for the right channel.

When monitoring systems are calibrated using the same method, each system should generate the same acoustic level when given the same input source. This is especially important when referencing your mix on different monitoring systems (such as toggling between Speaker A and Speaker B for comparison), because in an incorrectly calibrated studio, the acoustic level will “jump” when toggling the different systems.

(For example, when calibrated properly, playing an audio through Speaker A then turning Speaker A 'OFF' and Speaker B 'ON' should not cause a change in level – though it may result in a slight tonal variance due to the different acoustic properties of the monitoring systems.)

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Maximum Loudness Reference

This method references a 0 dBVU meter reading to the loudest level you or your studio can handle or desire. This is the least technical, most subjective method and is good for environments where there is such a thing as "too loud" (i.e. an apartment, school, OSHA-regulated venue, etc.) or when a certain level of "louder" needs to be attainable (i.e. for entertaining guests at parties, clubs, live venues, etc.).

- 1) "Zero" the Speaker, Main, Cue and Phones levels by turning them fully counterclockwise.
- 2) Select only the ST1 Main Source and Speaker A selections.
- 3) Turn your primary monitoring system (connected to ST1) input level to its lowest setting. On many powered monitors, this is the "Input Sensitivity". Consult your monitor system's user's manuals or manufacturers' Websites for more information about adjusting the input or amplification level.
- 4) Remove all effects processors (i.e. EQs, compressors, reverbs, etc.) from the signal path and play 500 Hz – 2.5 kHz bandwidth-limited pink noise at 0 dB through your primary audio source outputs. *If you are calibrating a subwoofer, use 40 Hz – 80 Hz bandwidth-limited pink noise.*

You should not hear the test tone. If you do, repeat step 1 and turn down the speakers playing it.

- 5) If you are using an SPL meter, pan the test tone so it only plays in the left speaker (hard left).
NOTE: When both speakers play simultaneously, the overall SPL will increase by about +3 dB. To account for this, subtract -3 dB when calibrating the left and right channels. (For example, if your overall acoustic level cannot exceed 90 dB SPL, calibrate each speaker to reach only 87 dB SPL.)
- 6) Turn the Main level knob to Unity Gain by turning it fully clockwise.
- 7) Begin turning the Speaker Level Adjust A knob to Unity Gain by turning it fully clockwise. You should begin hearing the test tone playing through your primary speakers. If the acoustic level reaches your desired maximum level (as measured by your ears or an SPL meter), stop increasing the Speaker Level and skip step 8. *In most cases, you should not reach your maximum level yet.*
- 8) Begin slowly increasing the input sensitivity (volume) of your primary monitoring system's left speaker until the acoustic level of the test tone playing reaches the desired maximum SPL.
- 9) Repeat steps 4, 5, 6 and 8 for the right channel.
- 10) If you are calibrating a monitoring system with independent subwoofer level control (such as a 2.1 or 2-way speaker system), repeat steps 4, 5, 6 and 8 for the subwoofer level.
- 11) Repeat steps 1 through 9 for the monitoring systems connected to ST2 and Aux/Phono.
- 12) *[Test]:* Play audio through Speaker A only. *Without adjusting any of the Monitor Station's levels,* toggle Speaker A 'OFF' and Speaker B 'ON'. You may hear a slight tonal variance due to the different acoustic properties of the monitoring systems, but the loudness should remain the same.

If the loudness varies drastically, you may wish to repeat this calibration procedure from step 1.

OPERATION

85 dB SPL "Standard" Reference

This method references a specific "standard" meter reading to a certain acoustic level. This method is the most technical, least subjective method and is good for studios where a specific type of audio is produced or where an industry standard audio level exists (such as for film or broadcast). One of the most common calibration standards (and the one presented here) is -20 dBFS referenced to 85 dB SPL.

dBFS means "decibels full scale" and is associated with decibel amplitude levels in digital systems where there is a finite maximum available level (such as in standard PCM encoding). The maximum level possible is referred to as "0 dBFS". In digital systems with analogue outputs (such as digital interfaces), its analogue-to-digital and digital-to-analogue converters (ADCs & DACs) are referenced so 0 dBFS equals a certain amount of analogue voltage. (For example, a 0 dBFS tone playing at Unity Gain from a FireBox measures +18 dBu, while a 0 dBFS from a FireStudio Project at Unity Gain measures +10 dBu.) It is important to know your digital devices' 0 dBFS reference to prevent clipping and to aid in proper calibration.

- 1) "Zero" the Speaker, Main, Cue and Phones levels by turning them fully counterclockwise.
- 2) Select only the ST1 Main Source and Speaker A selections.
- 3) Turn your primary monitoring system (connected to ST1) input level to its lowest setting. On many powered monitors, this is the "Input Sensitivity". Consult your monitor system's user's manuals or manufacturers' Websites for more information about adjusting the input or amplification level.
- 4) Remove all effects processors (i.e. EQs, compressors, reverbs, etc.) from the signal path and play 500 Hz – 2.5 kHz bandwidth-limited pink noise at -20 dBFS through your primary audio source outputs. *If you are calibrating a subwoofer, use 40 Hz – 80 Hz bandwidth-limited pink noise.*

You should not hear the test tone. If you do, repeat step 1 and turn down the speakers playing it.

- 5) Pan the test tone so it only plays in the left speaker (hard left).
- 6) Turn the Main level knob to Unity Gain by turning it fully clockwise.
- 7) Begin turning the Speaker Level Adjust A knob to Unity Gain by turning it fully clockwise. You should begin hearing the test tone playing through your primary speakers. Increase the level until the SPL meter reads 85 dB. *In most cases, you should not reach 85 dB SPL yet.*
- 8) Begin slowly increasing the input sensitivity (volume) of your primary monitoring system's left speaker until the acoustic level of the test tone playing reaches 85 dB SPL.
- 9) Repeat steps 4, 5, 6 and 8 for the right channel.
- 10) If you are calibrating a monitoring system with independent subwoofer level control (such as a 2.1 or 2-way speaker system), repeat steps 4, 5, 6, 8 and 9 for the subwoofer level.
- 11) Repeat steps 1 through 10 for the monitoring systems connected to ST2 and Aux/Phono.
- 12) *[Test]:* Play audio through Speaker A only. *Without adjusting any of the Monitor Station's levels, toggle Speaker A 'OFF' and Speaker B 'ON'. You may hear a slight tonal variance due to the different acoustic properties of the monitoring systems, but the loudness should remain the same. If the loudness varies drastically, you may wish to repeat this calibration procedure from step 1.*

OPERATION

2.1.7 Calibrate the talkback microphone

- 1) “Zero” the Main, Talkback, Cue, Phones and Dim knobs by turning them fully counterclockwise.
- 2) *[Optional]*: Connect a dynamic microphone to the external mic XLR input connection.
- 3) Connect headphones to any one of the headphones connections and select ‘CUE’ as its source.
- 4) Play audio common to your studio’s productions (such as a commercial CD or existing project) and set that audio source as the only input to the Cue bus (*section 3.1.4*).
- 5) Wear the headphones connected in step 3 and turn them up to a comfortable listening level.
- 6) Engage the talkback microphone by pressing the Talk button.

The headphones level should dim. If the amount of level decrease is more than you feel is comfortable, slowly increase the Dim Attenuation knob until the diminished level is acceptable.

- 7) Begin speaking into the talkback microphone and slowly turn up the Talkback Level knob until you can adequately hear yourself speaking through the headphones.

2.1.8 Connect the Cue and Main outputs

Cue outputs

The Cue L/R outputs are typically used for connecting additional headphone amplifiers. Their source is set by the Cue bus Source (*section 3.1.4*), and their level is determined by the Cue Output level (*section 3.1.3*).

- 1) “Zero” the Main and Cue level knobs by turning them fully counterclockwise.
- 2) Connect the inputs of the additional cue device to the Cue L/R outputs.
- 3) Calibrate the device’s audio levels. *Please consult the device’s user’s manual or manufacturer’s Website for more information on its recommended calibration process.*

If the device does not have a recommended calibration process, increase the Cue Output level to Unity Gain by turning the Cue Output level knob fully clockwise.

Main outputs

The Main L/R outputs are essentially a “thru” which copies the input sources directly. They are typically used for devices needing a constant full-strength input signal (such as tape machines or CD recorders). Their source is set by the Main bus Source (*section 3.1.4*), and their output level is equal to the input source level.

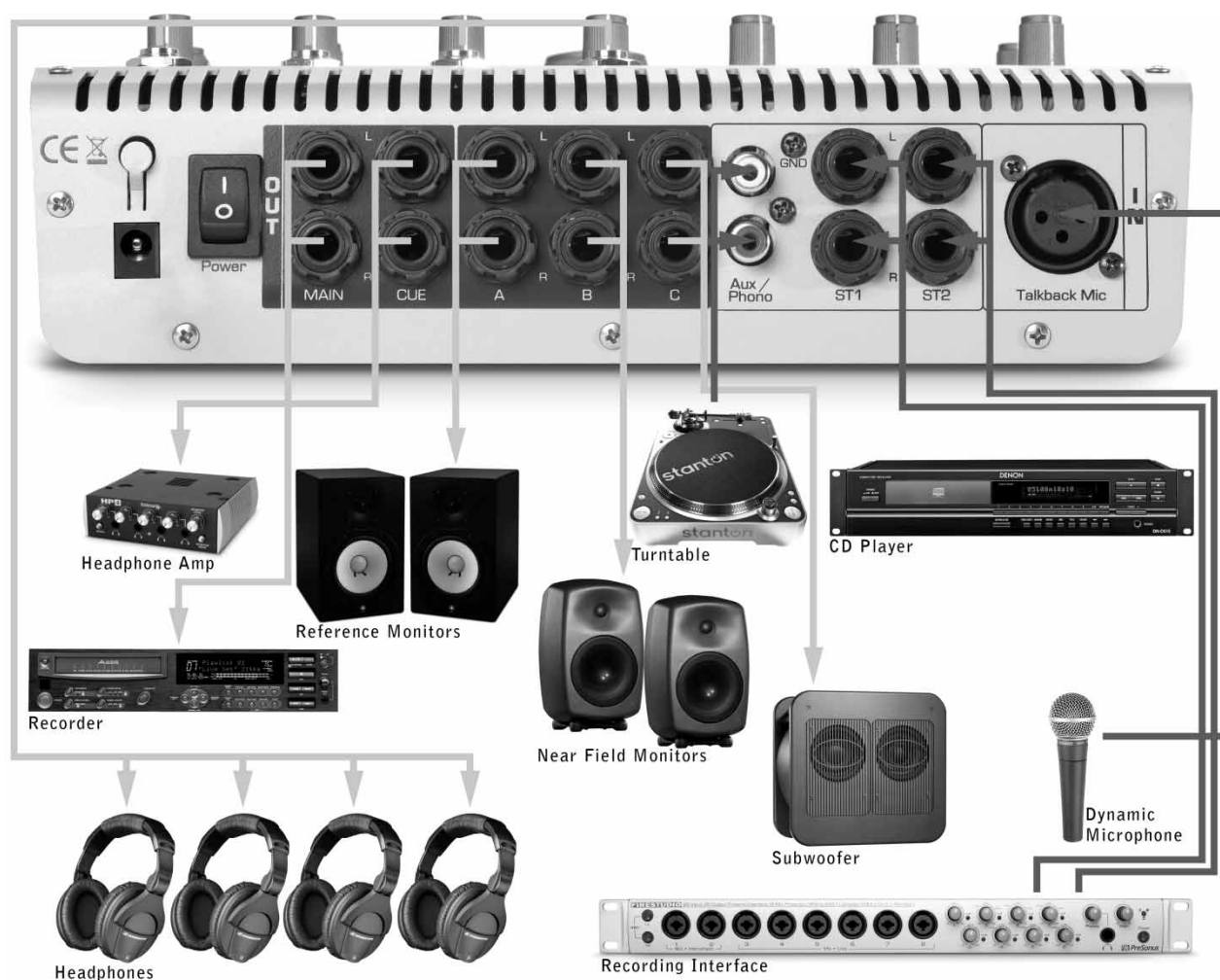
- 1) “Zero” the input of the device to be connected by turning down its input and output levels.
- 2) Connect the inputs of the Main device to the Main L/R outputs.
- 3) Calibrate the device’s audio levels. *Please consult the device’s user’s manual or manufacturer’s Website for more information on its recommended calibration process.*

OPERATION

2.2 SAMPLE HOOK UP DIAGRAM

With the Monitor Station, you can simultaneously record and play back up to 10 channels. Since it is loaded with eight preamplifiers, you can plug in eight microphones to the Monitor Station along with S/PDIF digital input to record a full band. This makes recording extremely easy. All you need are a few microphones, some cables to connect them, a musician (or two or three or more) and the creative energy to bring it all together.

This is a typical rock band setup. Your needs may vary depending upon the number and variety of sources you are recording. Feel free to adapt the sample setup below to your precise needs.






OPERATION

2.3 ADVANCED MODES



To enhance the Monitor Station's functionality, the behavior of the input LED meter and Speaker Select, Main Source and Cue Source buttons can be changed to best suit your studio environment.

Enter the following modes by pressing and holding the specified buttons while powering on the Monitor Station. Only one mode can be set at a time. The Monitor Station remains in the selected modes until another is selected.

2.3.1 Speaker Select Modes

<ul style="list-style-type: none"><u>Combo</u>		<p>The default Speaker Select mode.</p> <p>In Combo mode, all Speaker Select buttons can be active simultaneously.</p>
<ul style="list-style-type: none"><u>Toggle</u>		<p>Restricts Speaker selection.</p> <p>In Toggle mode, only one Speaker Select button can be active.</p> <p>This mode is primarily used when referencing your audio source across different sets of studio monitors.</p>
<ul style="list-style-type: none"><u>Toggle A/B</u>		<p>Restricts Speaker A & Speaker B selection.</p> <p>In Toggle A/B mode, Speaker A and Speaker B cannot be active simultaneously. Speaker C can remain active at all times.</p> <p>This mode is primarily used if Speaker C is a subwoofer.</p>

2.3.2 Main and Cue Source Modes

<ul style="list-style-type: none"><u>Input Sum</u>		<p>The default Source mode.</p> <p>In Input Sum mode, all Main and Cue Source buttons can be active simultaneously.</p>
<ul style="list-style-type: none"><u>Input Toggle</u>		<p>Restricts Source selection.</p> <p>In Input Toggle mode, only one Main Source and one Cue Source button can be active.</p> <p>This mode is primarily used when comparing the Monitor Station's audio sources to each other (such as when A/B'ing your mix against a commercial CD).</p>

OPERATION

2.3.3 Input LED Meter Modes

<ul style="list-style-type: none">• <u>+4 dBu</u>	<div>Cue Source</div> <div>ST1</div>	<p>References 0 dBVU to +4 dBu.</p> <p>0 dBVU should reference +4 dBu if any of your monitoring devices have a maximum input of +4 dBu or if none of your input devices have a maximum (or nominal) output level greater than +4 dBu.</p>
<ul style="list-style-type: none">• <u>+10 dBu</u>	<div>Cue Source</div> <div>ST2</div>	<p>The default LED meter reference level: 0 dBVU = +10 dBu.</p> <p>0 dBVU should reference +10 dBu if any of your monitoring devices have a maximum input of +10 dBu or if none of your input devices have a maximum (or nominal) output level greater than +10 dBu.</p>
<ul style="list-style-type: none">• <u>+18 dBu</u>	<div>Cue Source</div> <div>Aux</div>	<p>References 0 dBVU to +4 dBu.</p> <p>0 dBVU should reference +18 dBu if any of your monitoring devices have a maximum input of +18 dBu or if none of your input devices have a maximum (or nominal) output level greater than +18 dBu.</p>

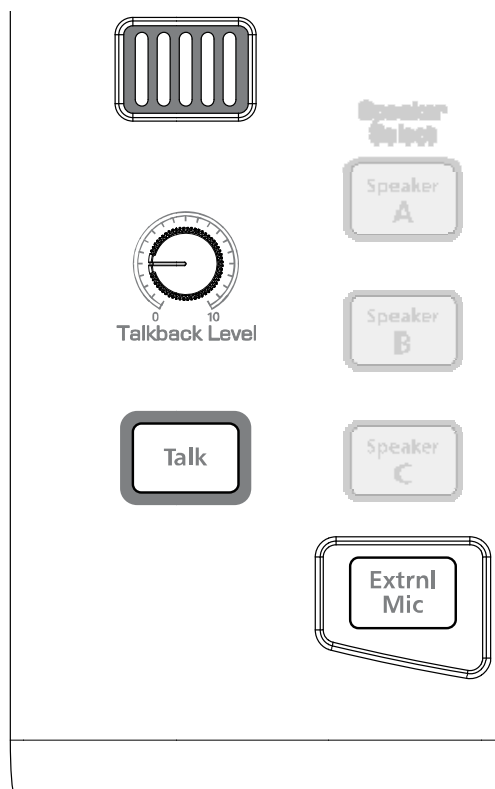
2.3.4 Reset All Modes to Factory Default

<ul style="list-style-type: none">• <u>Factory Reset</u>	<div>Mono</div>	<p>References 0 dBVU to +4 dBu.</p> <p>0 dBVU should reference +4 dBu if any of your monitoring devices have a maximum input of +4 dBu or if none of your input devices have a maximum (or nominal) output level greater than +4 dBu.</p>
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CONTROLS & CONNECTION

3.1 FRONT PANEL LAYOUT

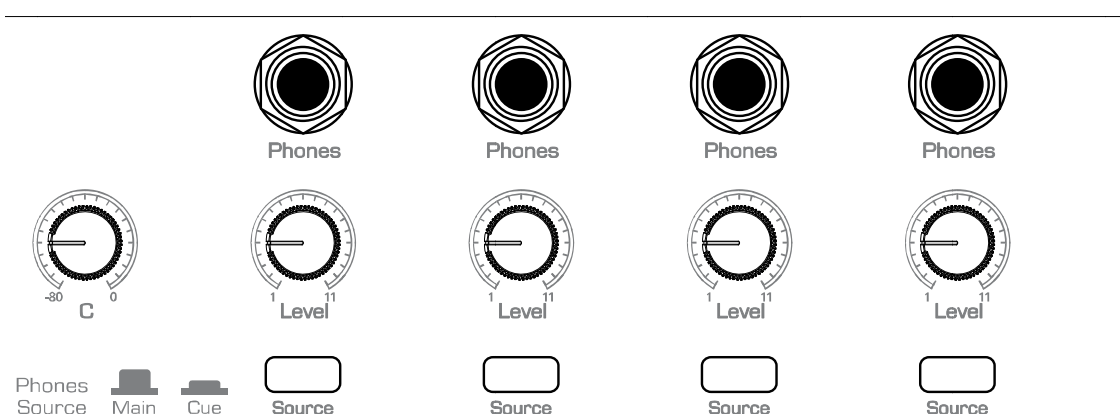
3.1.1 Talkback



- **Talkback microphone.** The built-in talkback microphone is an electret condenser microphone and is positioned just above the Talkback Level knob.
- **Talkback Level.** Adjusts the gain level of the talkback microphone preamplifier +15 to +55 dB.
- **Talk.** Engages and disengages the talkback microphone preamplifier. The talkback microphone routes to the Cue bus only. Engaging the talkback microphone automatically engages the Dim feature for both the Main and Cue buses (*see 3.1.6 for more details on the Dim feature*).
- **External Mic.** Disables the built-in talkback microphone and engages the XLR microphone input.

CONTROLS & CONNECTION

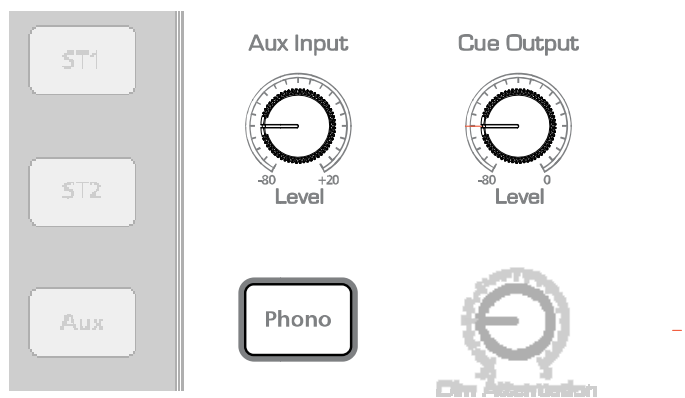
3.1.2 Headphones



- **Phones.** Connects headphones to the Monitor Station's four headphone amplifiers.
- **Level.** Adjusts the output level of the associated headphone amplifier.
- **Source.** Changes the input source of the associated headphone amplifier. A headphone amplifier will use the selected Main source when the associated Phones Source button is in the up position and the Cue source when the associated Phones Source button is in the down position.

Only the headphones with a source of 'Cue' will hear the talkback microphone.

3.1.3 Aux/Cue Control

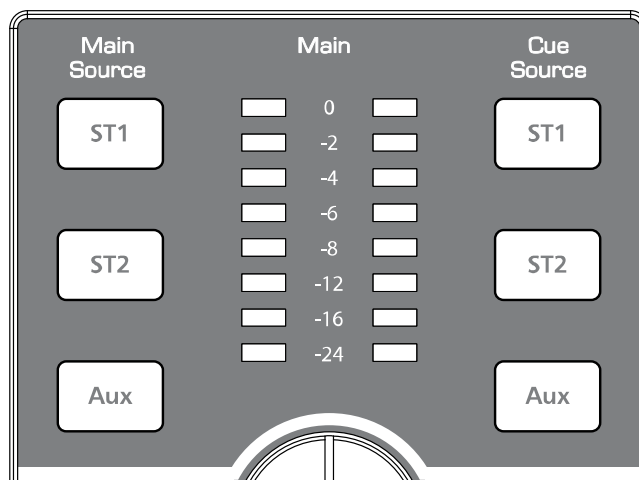


- **Aux Input.** Adjusts the input level of the Auxiliary (RCA) input.
- **Cue Output.** Adjusts the level of the Cue L/R outputs.
- **Phono.** Engages and disengages the Monitor Station's built-in phono preamplifier. Press and hold the Phono button to engage the Phono preamp. The phono preamplifier is typically only necessary when the source of the Aux input is a vinyl record player, such as a DJ turntable. .

*Turn the Aux Input level knob **down** before engaging the phono preamp: **it adds +32 dB gain!***

CONTROLS & CONNECTION

3.1.4 Source Control



- **Main Source.** Sets the Main bus' input sources. The Main bus is the source for the Speaker outputs, Main L/R outputs and any headphone amplifiers whose source is set to 'Main'.

By default, the Main and Cue Source buttons are in Input Sum mode and can all be selected simultaneously. For more information on changing the Source Control mode, please refer to section 2.3 of this User's Manual.

- **Cue Source.** Sets the Cue bus' input sources. The Cue bus is the source for the Cue L/R outputs and any headphone amplifiers whose source is set to 'Cue'.

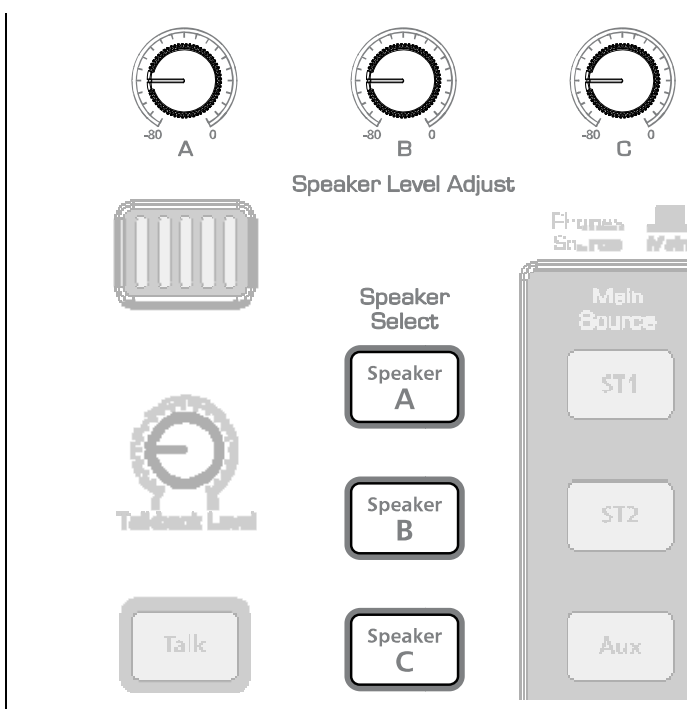
By default, the Main and Cue Source buttons are in Input Sum mode and can all be selected simultaneously. For more information on changing the Source Control mode, please refer to section 2.3 of this User's Manual.

- **Input LED Meter.** Shows the input level of the Main bus.

By default, the Input LED Meter has a reference level of 0 dB = +10 dBu. For more information on changing the Input LED Meter's reference level, please refer to section 2.3.

CONTROLS & CONNECTION

3.1.5 Speaker Control

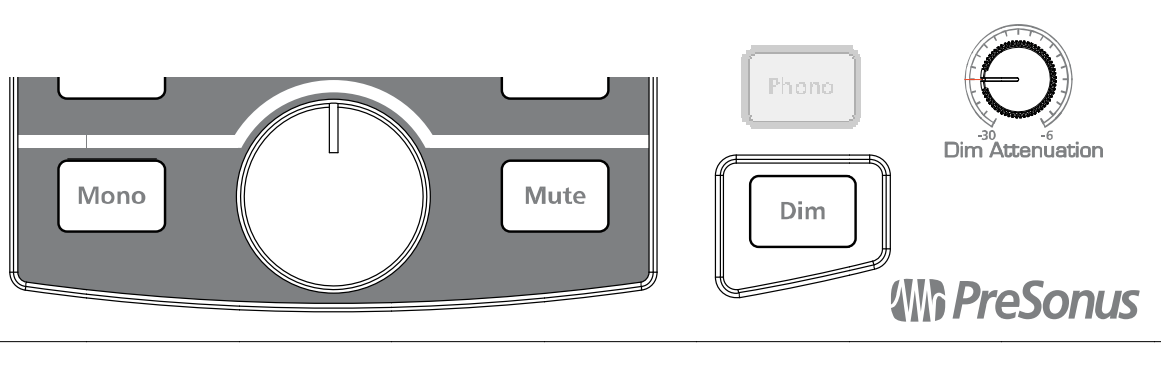


- **Speaker Level Adjust.** Fine tunes the output level of each stereo output pair. The optimum level of these knobs fully clockwise (Unity Gain). Ideally, these should only be adjusted below Unity to attenuate your speaker outputs during the calibration process.
- **Speaker Select.** Activates the Speaker Outputs A, B and C. The Speaker Select buttons are typically used to quickly compare your mix on different sets of reference monitors. Since each speaker pair is likely to have different output characteristics and quality, you will often hear nuances in the mix you might not have noticed otherwise.

By default, the Speaker Select buttons are in Combo mode and can all be selected simultaneously. For more information on changing the Speaker Select mode, please refer to section 2.3 of this User's Manual.

CONTROLS & CONNECTION

3.1.6 Main Level Control

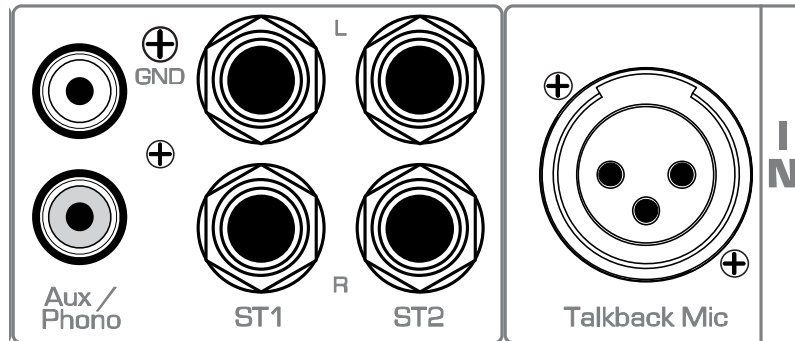


- **Main Level.** Adjusts the output level of the active Speaker sets (A, B and C).
- **Mono.** Converts the stereo Main bus source to a mono signal (does not affect the Main L/R outputs). The mono summing bus is only active when the Mono button is lit. The mono summing bus is helpful when mixing in stereo to determine if your mix has any phasing issues between the left and right channels. This is especially useful when your stereo mix is also intended for mono applications (such as a cell phone ringtone, telephone message system, certain Internet broadcast applications, etc.).
- **Mute.** Mutes the Main bus (does not affect the Main L/R outputs).
- **Dim.** Attenuates the Main bus by the amount set by the Dim Attenuation knob.
- **Dim Attenuation.** Adjusts the amount of attenuation applied by the Dim feature.

CONTROLS & CONNECTION

3.2 BACK PANEL LAYOUT

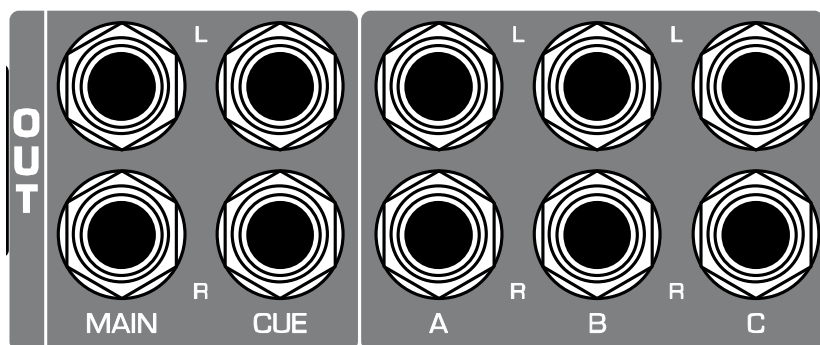
3.2.1 Inputs



- **Talkback Mic.** Connects a dynamic microphone to the built-in talkback microphone preamplifier.
- **ST1.** Connects a stereo source to the Stereo 1 input bus.
- **ST2.** Connects a stereo source to the Stereo 2 input bus.
- **Aux / Phono.** Connects an unbalanced stereo source to the Auxiliary input bus.

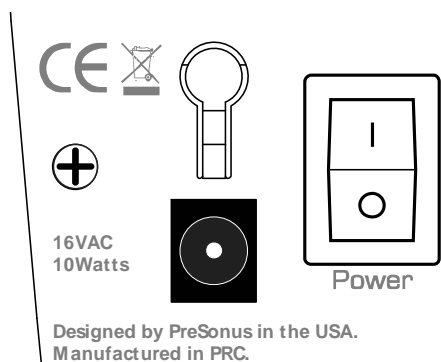
CONTROLS & CONNECTION

3.2.2 Outputs



- **Main.** Connects the Main bus to a stereo device. The Main L/R outputs derive their signal directly from the Main Source selection and are not affected by any of the Main bus level controls.
- **Cue.** Connects the Cue bus to a stereo device. The Cue L/R outputs derive their signal directly from the Cue Source selection and are only affected by the Cue Input Level control knob.
- **A.** Connects the Main-Speaker A bus to a stereo device. The Speaker A L/R outputs are only active when the Speaker A button is active.
- **B.** Connects the Main-Speaker B bus to a stereo device. The Speaker B L/R outputs are only active when the Speaker B button is active.
- **C.** Connects the Main-Speaker C bus to a stereo device. The Speaker C L/R outputs are only active when the Speaker C button is active.

3.2.3 Power



- **AC Power Input.** Connects the Monitor Station's included 16 VAC power supply.
- **Power.** Turns the Monitor Station On or Off. The Monitor Station is on when the Power switch is in the up position (I depressed) and off when this switch is in the down position (O depressed).

TECHNICAL INFORMATION

4.1 FREQUENTLY ASKED QUESTIONS

Why can't I hear the talkback microphone?

- *Remember, only headphones with a Phones Source of 'CUE' can hear the talkback microphone.*
- Connect and/or calibrate your talkback microphone according to section 2.1.7.
- Verify your external mic does not require phantom power.
- If you are not using an external microphone, disconnect anything connected to the XLR input.

Why do I see levels on the LED meter but not hear anything through the speakers?

- *The LED meter only measures the Monitor Station's input, so seeing level is only half the battle.*
- Connect and calibrate your speakers according to sections 2.1.5 and 2.1.6.
- Ensure the correct Speaker Select button is lit and its Speaker Level Adjust knob is turned up.
- Disengage the Talk, Mono, Mute and Dim buttons. Then slowly turn up the Main Level knob.
- Move your speakers to a different output to verify the outputs are functioning properly.
- Connect the input source directly to your speakers to verify the speakers are functioning properly.

I have everything turned all the way up, but my speakers still aren't loud enough ... what gives?

- *The Monitor Station is not an amplifier, so please do not try to use it as one.*
- The only inputs with any preamp gain are the Aux/Phono and external microphone inputs.
- The only outputs with any gain are the headphone amplifiers.

Why doesn't the Main Level knob control the Main Outs?

- *Because the Monitor Station was not designed to function that way.*
- The Main Outs should be used for devices needing an unaffected signal, such as a CD recorder.

Why won't the Monitor Station change modes for me?

- *Remember, you can only set one mode per power up, so do not try to hold two buttons down.*
- You must be holding down the mode-changing button the instant the power switch is flipped on.
- Set the mode according to section 2.3.

TECHNICAL INFORMATION

4.2 TROUBLESHOOTING

Please note that many technical issues can arise when connecting different components in a studio environment. PreSonus can only provide support for issues directly related to the Monitor Station Studio Control Center. It may be necessary to contact the manufacturer(s) of your other studio equipment to obtain additional technical support. PreSonus does not provide support for issues in regards to non-PreSonus hardware or software.

Please check our website, www.PreSonus.com, regularly for information, updates and technical support.

If you experience any difficulty with your Monitor Station, please try the following before Contacting PreSonus Customer Support:

- 1) Check our Web site at www.PreSonus.com for answers to frequently asked questions and for troubleshooting techniques specific to the Monitor Station.
- 2) Power cycle and disconnect / reconnect your Monitor Station power cable.
- 3) Check your connection cables and audio source(s).
- 4) Check your headphones and speakers.
- 5) Isolate the problem to your Monitor Station by disconnecting your input sources and monitor systems and testing them independently to ensure they are functioning properly.

For technical assistance, visit our Web site at www.PreSonus.com, call us at 225.216.7887 between 9am and 6pm CST (GMT -06:00) or e-mail us at techSupport@PreSonus.com.

When contacting technical support, please have the following information at hand:

- A brief description of what equipment and connections are being made to your Monitor Station.
- The desired application of your Monitor Station in your studio environment.
- Your Monitor Station serial number (*located on the bottom of your unit*).

TECHNICAL INFORMATION

4.3 SPECIFICATIONS

Audio Inputs

Talkback Microphone

Gain Range +15 to +55 dB

Internal Microphone

Type electret condenser
Sensitivity -42 dB

External Input

Type XLR Female Balanced
Input Impedance (Balanced) 1200 Ω
Maximum Gain 50 dB
Maximum Input Level -10 dBu
Frequency Response 10 Hz to 40 kHz, ± 1 dB

Stereo 1 and Stereo 2 Inputs

Type $\frac{1}{4}$ " TRS Active Balanced
Input Impedance (Balanced) 10 k Ω
S/N Ratio (1 kHz @ 0 dBu, Unity Gain) >110 dB
THD+N (unwtd, 1 kHz @ 0 dBu Output, Unity Gain) <0.0075%
Frequency Response (± 0.5 dB) 10 Hz to 65 kHz
Noise Floor (20 Hz to 20 kHz, 150 Ω input termination) -96 dBu
Maximum Input Level (Minimum Gain, 1 kHz @ 0.5% THD+N) +22 dBu

Auxiliary Inputs

Type RCA Active Unbalanced
Input Impedance 47 k Ω
S/N Ratio (1 kHz @ 0 dBu, Unity Gain) >115 dB
THD+N (unwtd, 1 kHz @ 0 dBu Output, Unity Gain) <0.01%
Frequency Response (± 0.5 dB) 10 Hz to 50 kHz
Gain Range -80 dB to +10 dB
Phono Mode Gain 32 dB @ 1 kHz
Phono Mode THD+N <0.05%
Phono Mode Noise Floor (40 dB gain, inputs shorted) -72 dBu

Input Meters (ST1, ST2 & Aux only)

Type Dual 8-segment LED w/ peak hold
Sensitivity Range -24 dB to 0 dB

TECHNICAL INFORMATION

Audio Outputs

Type ¼" TRS Active Balanced
Output Impedance (Balanced) 51 Ω
THD+N (unwtd, 1 kHz @ 0 dBu, Unity Gain) <0.003%
Frequency Response (± 0.5 dB) 10 Hz to 50 kHz

Speaker A, B and C

Trim Range -80 dB to 0 dB
Main Level Range -80 dB to 0 dB
Dim Attenuation Range -30 dB to -6 dB

Cue

Main Level Range -80 dB to 0 dB
Dim Attenuation (Talkback activated) -20 dB

Headphones

Type ¼" TRS Active Stereo
Maximum Output (60 Ω load) 150 mW / channel
Frequency Response (± 1.0 dB) 10 Hz to 50 kHz

Power

Power Supply Type External AC Transformer / Internal Line
Input Connector Type Barrel, 5.5 mm outside diameter, 2.1 mm inside diameter
Monitor Station Input Voltage Range 16 VAC
Power Requirements (Continuous) 10W

As a commitment to constant improvement, PreSonus Audio Electronics, Inc. reserves the right to change any specification stated herein at any time without notification.

TECHNICAL INFORMATION

4.4 BLOCK DIAGRAM

