

# MONITOR STATION REMOTE



User's Manual  
Version 1.0

 **PreSonus**

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# OVERVIEW

## 1.1 INTRODUCTION

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Thank you for purchasing the PreSonus Monitor Station Remote. PreSonus Audio Electronics has designed the Monitor Station Remote utilizing high-grade components to insure optimum performance that will last a lifetime.

The Monitor Station Remote (MSR) for the FireStudio is a complete surround/stereo speaker manager, input switcher and communication system delivering a more efficient work flow. The Monitor Station Remote connects to the FireStudio via standard Cat 5 Ethernet cable to keep your work space as clean as possible. There are also two headphone outputs on the FireStudio for even further flexibility and convenience.

We suggest you use this manual to familiarize yourself with the features, applications and correct connection procedure for your Monitor Station Remote before trying to connect it to your computer. This will hopefully alleviate any unforeseen issues you may encounter during setup and use.

# OVERVIEW

## 1.2 WHAT IS IN THE BOX

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Your Monitor Station Remote package contains the following:



- Monitor Station Remote
- Monitor Station Remote User's Manual v1.0
- 20' Ethernet cable (Cat5/RJ45)
- Monitor Station Remote Installation disc
- Warranty Card

# OVERVIEW

## 1.3 SYSTEM REQUIREMENTS

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The Monitor Station Remote enhances the features of the FireStudio and its Control Console software. You will need a FireStudio and a computer meeting the minimum system requirements of the FireStudio:

### Windows

- OS: Microsoft Windows XP Home or Professional (Service Pack 1 or later).
- Computer: Windows compatible computer with FireWire 400 port (IEEE 1394a).
- CPU/Clock: Pentium/Athlon 1.6 GHz or faster.
- Memory (RAM): 512 MB (1GB+ recommended).
- Monitor / Display: 1024 x 768 pixels or greater.

### Macintosh

- OS: Mac OS X v10.4.x
- Computer: Apple Macintosh series with FireWire 400 port (IEEE 1394a).
- CPU/Clock: PowerPC G4/Dual 1GHz or faster; All Intel-based Mac models.
- Memory (RAM): 512 MB (1GB+ recommended).
- Monitor / Display: 1024 x 768 pixels or greater.

# OVERVIEW

## 1.4 INSTALLATION GUIDE

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### 1.4.1 Quick Start Guide

The *Monitor Station Remote Installation* disc included with your Monitor Station Remote is the same installation disc included with the FireStudio. (These installation files are also downloadable from our Web site at [www.PreSonus.com](http://www.PreSonus.com).)

Before connecting your Monitor Station Remote to your FireStudio, you must install the latest drivers and software for your FireStudio. It is very likely you already completed these steps during your FireStudio installation. If you meet the following conditions, you can skip to "Hardware Installation" and begin using your Monitor Station Remote:

- ✓ You have already installed your FireStudio.
- ✓ The version number of the FireStudio Installation Drivers disc used to install your FireStudio is current with or later than the version number of the Monitor Station Remote Installation disc included with your Monitor Station Remote.
- ✓ The FireStudio Control Console Hardware Settings tab includes a section labeled "MSR Settings".

### Hardware Installation

- 1) Connect one end of the supplied Ethernet cable to the *Remote Control Input* jack on your FireStudio's rear panel.
- 2) Connect the other end of the supplied Ethernet cable to the *Remote* input jack on your Monitor Station Remote's rear panel. *The lights on your Monitor Station Remote should flash during this step.*
- 3) *See "3 Sample Hookup Diagrams" for help with your speaker connections.*



# OVERVIEW

## 1.4.2 Software and Hardware Installation

***IMPORTANT:*** *If you are installing your FireStudio and Monitor Station Remote concurrently, do not use the FireStudio Installation Drivers Disc v1.0.1. Otherwise, completely uninstall the prior installation and use only the FireStudio Control Console software installed with your Monitor Station Remote Installation Disc via the steps below.*

Before connecting your Monitor Station Remote to your FireStudio, insert the Monitor Station Remote Installation Disc into your computer and follow these instructions to install updated FireStudio drivers and software:

### **Windows Software Installation**

- 1) Browse the disc and run "FireStudio\_MSR\_Installer.exe".
- 2) Run "Firmware Updater" from the Start Menu folder, *PreSonus Drivers*.

### **Macintosh Software Installation**

- 1) Browse the disc and run "FireStudio Installer.pkg".
- 2) Run "FireStudio Firmware Updater" from the *Applications* folder.

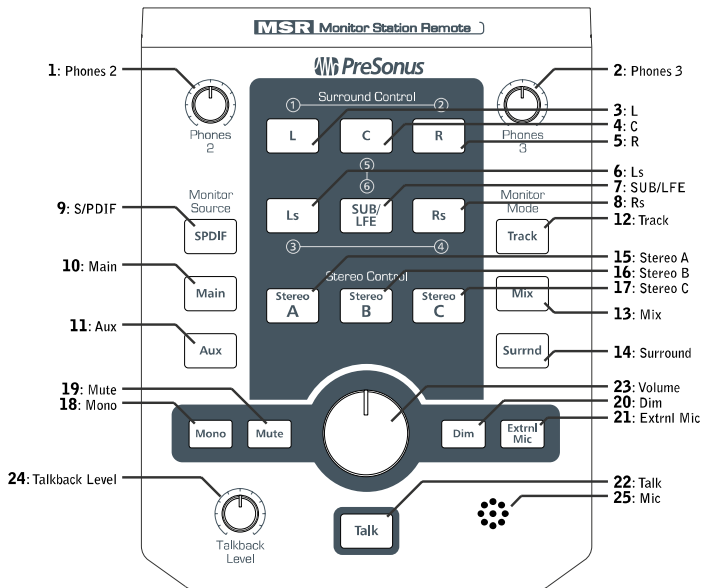
### **Hardware Installation**

- 3) Connect one end of the supplied Ethernet cable to the *Remote Control Input* connection on your FireStudio's rear panel.
- 4) Connect the other end of the supplied Ethernet cable to the *Remote* input connection on your Monitor Station Remote's rear panel. *The lights on the Monitor Station Remote should flash during this step.*
- 5) See "3 Sample Hookup Diagrams" for help with speaker connections.

# OVERVIEW

## 1.5 PANEL LAYOUT AND OPERATION

### 1.5.1 Top Panel



# OVERVIEW

## Headphone Control Knobs

1. **Phones 2** Controls headphone 2 output volume.
2. **Phones 3** Controls headphone 3 output volume.

## Surround Control Buttons (*Surround mode only*)

*Pressing an active Surround Control button will deactivate it.*

3. **[L] (De)** Activates Left front speaker (output 1).
4. **[C] (De)** Activates Center front speaker (output 5).
5. **[R] (De)** Activates Right front speaker (output 2).
6. **[Ls] (De)** Activates Left surround speaker (output 3).
7. **[SUB/LFE] (De)** Activates Subwoofer/Low Frequency Effects speaker (output 6).
8. **[Rs] (De)** Activates Right surround speaker (output 4).

## Monitor Source Selection Buttons (*Track & Mix modes*)

9. **[SPDIF]** Routes the S/PDIF input to active Speaker outputs on the FireStudio.
10. **[Main]** Gives the FireStudio Control Console control of the active Speakers' source.
11. **[Aux]** Routes DAW Aux input to active Speaker outputs on the FireStudio.

# OVERVIEW

## Monitor Mode Selection Buttons

12. **[Track]** Puts the FireStudio in Track mode.

The FireStudio outputs are controlled by the FireStudio Control Console, allowing up to nine stereo mixes out of the FireStudio's outputs.

13. **[Mix]** Puts the FireStudio in Mix mode.

General purpose outputs 5-8 and Main Outs L/R are reserved for Stereo Speaker Sets A, B & C and are disabled in the FireStudio Control Console. All other outputs are controlled by the FireStudio Control Console as in Track mode.

14. **[Surrnd]** Puts the FireStudio in Surround mode.

General purpose outputs 1-6 and Main Outs L/R (*see 1.5.3*) are reserved for Surround Speaker Control and are disabled in the FireStudio Control Console. All other outputs are controlled by the FireStudio Control Console as in Track mode.

## Stereo Control Assignment Buttons (Mix mode only)

15. **[Stereo A]** Activates speaker set A (Main Outs L/R) and deactivates Speaker set B.
16. **[Stereo B]** Activates speaker set B (outputs 7/8) and deactivates Speaker set A.
17. **[Stereo C] (De)** Activates speaker set C (outputs 5/6).

# OVERVIEW

## Master Controls

18. **[Mono]** Switches Main Outs from stereo to a mono sum (*Track & Mix modes*).
19. **[Mute]** Mutes all active speakers.
20. **[Dim]** Attenuates (reduces) the volume of all active speakers by -20dB.
21. **[Extrnl Mic]** (De)Activates the external microphone XLR input on the Monitor Station Remote and deactivates the internal talkback level knob & microphone.
22. **[Talk]** (De)Activates talkback microphone.

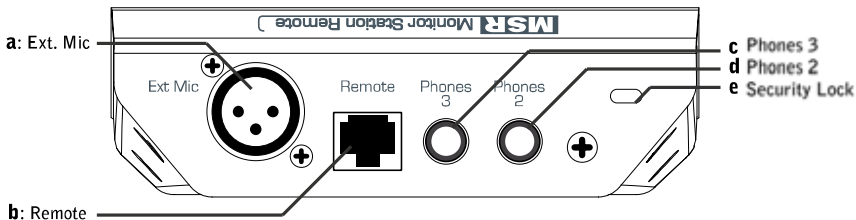
*Momentary talkback activation* - Pressing and holding the Talk button will activate the talkback microphone only while the Talk button is depressed.

*Latching the talkback mic* - Pressing the Talk button and immediately releasing it will activate the talkback microphone until the Talk button is pressed again.

23. **Main Volume** Controls the volume of active speaker set. *The Monitor Station Remote Main Volume control overrides the FireStudio's Main Level knob.*
24. **Talkback Level** Controls the volume level of the active talkback microphone.
25. **Microphone** Internal talkback microphone.

# OVERVIEW

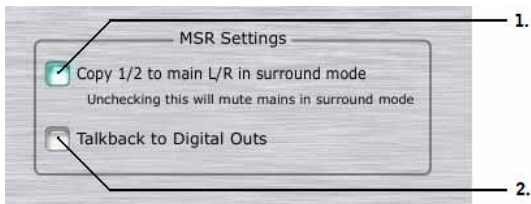
## 1.5.2 Rear Panel



- a. **Ext Mic** Connects a dynamic microphone for use as an external talkback mic.
- b. **Remote** Connects your Monitor Station Remote and FireStudio via the included standard Ethernet cable (Cat5/RJ45).
- c. **Phones 3** Stereo 1/4" output for headphone 3.
- d. **Phones 2** Stereo 1/4" output for headphone 2.
- e. **Security Lock** Connects a lock system to your Monitor Station Remote.

# OVERVIEW

## 1.5.3 FireStudio Control Console\*



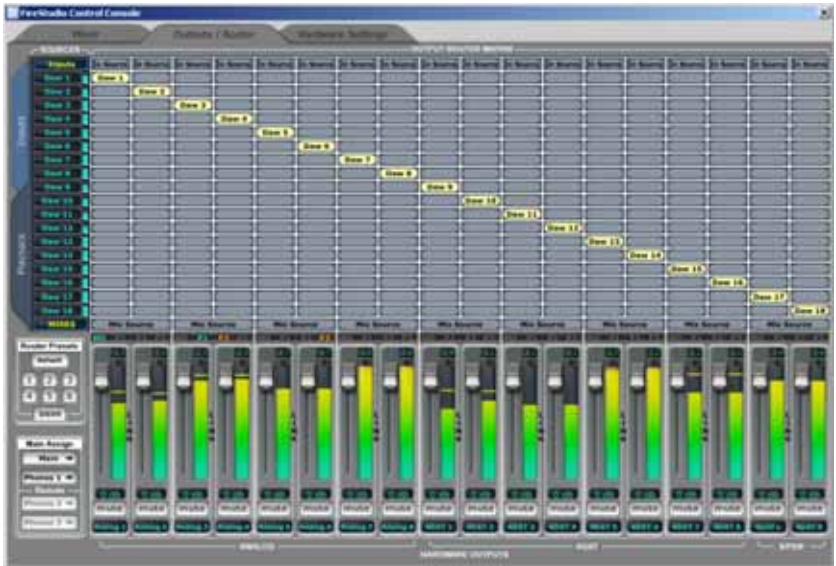
1. **Copy 1/2 to main L/R in surround mode** Copies Daw 1 & Daw 2 output streams to Main Out L/R when in Surround mode. Disabling this option will mute the Main L/R outputs in surround mode. *This enables you to use your surround speaker setup's Left front and Right front speakers for stereo mixing in Track or Mix mode.*
2. **Talkback to Digital Outs** Sends the talkback microphone to ADAT 1-8 and S/PDIF L/R outputs in addition to Analogue 1-8 and Phones 1-3.

\* *More detailed information concerning the FireStudio Control Console and its use can be found in your FireStudio User's Manual. The FireStudio User's Manual is downloadable from our Web site at [www.PreSonus.com](http://www.PreSonus.com).*

# MONITOR MODES

## 2.1 TRACK MODE

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*Track mode is typically used during the tracking / recording stage of your project – especially when the FireStudio Control Console is being used for creating mixes or for i/o routing.*



# MONITOR MODES

Track mode allows the FireStudio Control Console to maintain full control over the FireStudio's input and output routing.

The FireStudio Control Console Mixer\* enables you to create and route up to nine zero-latency mixes; its Output Router Matrix enables you to route the FireStudio's inputs directly to its outputs in virtually any configuration to suit a variety of applications.

Additional features to the FireStudio Control Console when set to Track mode include the Monitor Source, Master Controls and headphone outputs 2 & 3.

## **Monitor Source**

Press the Monitor Source buttons on the Monitor Station Remote to change the source of the Main Outs when in Mix Mode.

Track mode offers three different source options:

- **S/PDIF** Routes only the FireStudio's S/PDIF input to the Active Outputs.
- **Main** The FireStudio Control Console determines the source of the Active Outputs.
- **Auxiliary** Routes only the FireStudio's Auxiliary RCA inputs to the Active Outputs.

\* *More detailed information concerning the FireStudio Control Console and its use can be found in your FireStudio User's Manual. The FireStudio User's Manual is downloadable from our Web site at [www.PreSonus.com](http://www.PreSonus.com)*

# MONITOR MODES

## 2.2 MIX MODE

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*As its name implies, Mix mode is typically used during the Mixing stage of your project – especially when you have multiple sets of monitors to reference your mix on (i.e., Nearfields & Mains).*

Mix mode enables the [Stereo A], [Stereo B] & [Stereo C] Stereo Control buttons on the Monitor Station Remote and puts the FireStudio in Mix mode – allowing you to toggle your output between different speaker sets.

General purpose outputs 5-8 are reserved for Stereo Control and are disabled in the FireStudio Control Console *as shown in the screenshot image at left.*

The Main Level control knob on the Monitor Station Remote controls the volume level of all active Speaker sets equally when the FireStudio is in Mix mode.

Outputs 1-4, Main L/R, ADAT, S/PDIF & Phones 1-3 function as in Track mode.



# MONITOR MODES

## Monitor Source

Press the Monitor Source buttons on the Monitor Station Remote to change the source of the active stereo Speaker sets when in Mix Mode.

Mix mode offers three different source options:

- **S/PDIF** Routes only the FireStudio's S/PDIF input to the Active Outputs.
- **Main** The FireStudio Control Console determines the source of the Active Outputs.
- **Auxiliary** Routes only the FireStudio's Auxiliary RCA inputs to the Active Outputs.

## Stereo Control

Press the Stereo Control buttons on the Monitor Station Remote to toggle the active Stereo outputs between three sets of stereo outputs:

- **[Stereo A]** Corresponds to the FireStudio's Main Outs L/R.
- **[Stereo B]** Corresponds to the FireStudio's general purpose outputs 7/8.
- **[Stereo C]** Corresponds to the FireStudio's general purpose outputs 5/6.

*Stereo A and B cannot be on simultaneously. Stereo C can be on at all times in Mix mode. Typical use for Stereo A and B is nearfield reference monitors on Stereo A and larger studio monitors on Stereo B. Typical use for Stereo C is a subwoofer.*

# MONITOR MODES

## 2.3 SURROUND MODE

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*As its name implies, Surround mode is typically used for Surround Sound Mixing sessions.*

Surround mode enables the [L], [C], [R], [Ls], [SUB/LFE] & [Rs] Surround Control buttons on the Monitor Station Remote and puts the FireStudio in Surround mode.

General purpose outputs 1-6 and Main L/R are reserved for Surround Control and are disabled in the FireStudio Control Console *as shown in the screenshot image at left* – output streams Daw 1 through Daw 6 route directly to general purpose outputs 1-6 & Main L/R.

The Main Level control knob on the Monitor Station Remote controls the volume level of all active Surround outputs equally when the FireStudio is in Surround mode.

Outputs 7/8, ADAT, S/PDIF & Phones 1-3 function as in Track mode.



# MONITOR MODES

## Surround Control

Press the Surround Control buttons on the Monitor Station Remote to activate or deactivate the corresponding Surround speaker output when in Surround Mode:

- **[L]** (Left front) Daw 1 output stream.  
Corresponds to general purpose output 1 and Main Out L (1.4.3)
- **[C]** (Center front) Daw 5 output stream.  
**Corresponds to** general purpose output 5.
- **[R]** (Right front) Daw 2 output stream  
Corresponds to general purpose output 2 and Main Out R (1.4.3).
- **[Ls]** (Left surround) Daw 3 output stream.  
**Corresponds to** general purpose output 3
- **[SUB/LFE]** (Subwoofer/Low Frequency Effects) Daw 6 output stream.  
Corresponds to general purpose output 6.
- **[Rs]** (Right surround) Daw 4 output stream.  
Corresponds to general purpose output 4.

*The Main Level control knob on the Monitor Station Remote controls the volume level of all active Surround outputs equally when the FireStudio is in Surround mode.*

# SAMPLE HOOKUP DIAGRAMS

## 3.1 STEREO RECORDING & MIXING ENVIRONMENT\*\*

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*This setup is for studios mixing and tracking exclusively in stereo.*

Connect nearfield reference monitors to Main Outs L/R (Speaker A). Connect larger studio mains (or another set of reference monitors) to general purpose outputs 7/8 (Speaker B). Connect a subwoofer to general purpose outputs 5/6 (Speaker C).

Connect external stereo devices such as a CD/Cassette deck or Stereo to the FireStudio S/PDIF input. Connect devices such as a portable mp3 player to the Auxiliary RCA input.

Connect headphone distribution amplifiers, such as the HP4, to general purpose outputs 1/2 & 3/4 for use with the FireStudio Control Console Mixer.

If you need more dedicated headphone outputs for monitor mixes, you can:

1. Use Phones 1 on the front of the FireStudio.
2. Use Phones 2 & 3 on the Monitor Station Remote.
3. Connect a DigiMax FS via ADAT for more routing options. (*see 3.3*)

*\*\* Your speaker configuration is not limited to the sample hookup diagrams presented here. The hookup diagrams in this manual are meant to assist you – not to restrict you. For example, if you have speakers with S/PDIF input or a 2.1 stereo speaker setup with internal crossovers and subwoofer level, then your setup will vary accordingly.*

Please consult your hardware user's manuals for more information in cases such as this.

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# SAMPLE HOOKUP DIAGRAMS



# SAMPLE HOOKUP DIAGRAMS

## **3.2 STEREO AND SURROUND MIXING ENVIRONMENT**

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*This setup is for studios dedicated to stereo and surround mixing. Any possible tracking sessions use Phones 1, 2 or 3 or do not require dedicated headphone monitor mixes.*

Connect Surround L/R Front monitors doubling as stereo nearfield reference monitors to FireStudio Main Outs L/R (Speaker A). Connect dedicated Surround L/R Front monitors to general purpose outputs 1/2 and dedicated nearfield reference monitors to Main Outs L/R. Connect larger studio mains (or another set of reference monitors) to general purpose outputs 7/8 (Speaker B).

***Be sure to uncheck "Copy 1/2 to main L/R in surround mode" in the FireStudio Control Console MSR Settings (see 1.5.3) when using dedicated Surround & Stereo L/R monitors.***

Connect Surround Ls/Rs monitors to general purpose outputs 3/4. Connect the Surround Center monitor to general purpose output 5. Connect the Surround Subwoofer/Low Frequency Effects speaker to general purpose output 6.

Connect external stereo devices such as a CD/Cassette deck or Stereo to the FireStudio S/PDIF input. Connect devices such as a portable mp3 player to the Auxiliary RCA input.

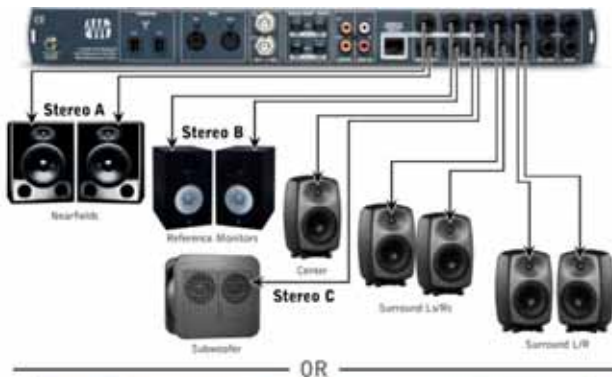
Connect headphone distribution amplifiers, such as the HP4, to general purpose outputs 1/2 & 3/4 for use with the FireStudio Control Console Mixer.

If you need more dedicated headphone outputs for monitor mixes, you can:

1. Use Phones 1 on the front of the FireStudio.
2. Use Phones 2 & 3 on the Monitor Station Remote.
3. Connect a DigiMax FS via ADAT for more routing options. (*see 3.3*)



# SAMPLE HOOKUP DIAGRAMS



# SAMPLE HOOKUP DIAGRAMS

## **3.3 EXPANDED 2.1 AND 5.1 RECORDING & MIXING ENVIRONMENT W/ DIGIMAX FS**

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*This setup is for studios tackling stereo and surround mixing sessions as well as frequent tracking sessions requiring dedicated headphone monitor mixes in the studio.*

Connect your control room monitors as described in 3.2.

Connect the ADAT inputs of your DigiMax FS\*\*\* to the FireStudio's ADAT outputs. Connect headphone distribution amplifiers, such as the HP4, to the DigiMax FS DAC outputs 1-8 for use with the FireStudio Control Console Mixer.

*Be sure to check "Talkback to Digital Outs" in the FireStudio Control Console MSR Settings (see 1.5.3) when using the FireStudio's ADAT outputs for headphone mixes.*

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\*\*\* For more information on the DigiMax FS or the FireStudio's ADAT capabilities, please consult the User's Manual or visit our Web site at [www.PreSonus.com](http://www.PreSonus.com).

# SAMPLE HOOKUP DIAGRAMS



# TECHNICAL INFORMATION

## 4.1 SPECIFICATIONS

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### Physical

Package Type ..... PVC and Steel Chassis  
Dimensions..... 7" x 5.25" x 1.75" (18cm x 13cm x 4cm)  
Weight..... Approximately 1 lb.

### Dynamic Microphone Input

Type ..... XLR Female Balanced  
Input Impedance ..... 1200 $\Omega$

### Internal Microphone

Type..... Electret Condenser  
Sensitivity ..... -45 dB

### Headphone Audio Outputs

Type..... ¼" TRS Active Stereo  
Maximum Output ..... 150mW/channel @ 75 $\Omega$  Load  
THD+N.....  $\leq 0.04\%$  (150mW/channel @ 75 $\Omega$  Load)  
Frequency Response ..... 10Hz – 10kHz,  $\pm 1$ dB

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

# TECHNICAL INFORMATION

## 4.2 TROUBLESHOOTING

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PreSonus will only provide support for issues directly related to your Monitor Station Remote. PreSonus does not provide support for issues regarding operating systems or additional hardware & software. It may be necessary to contact the computer, operating system and/or software manufacturer to obtain additional technical support.

For technical assistance, visit our Web site at [www.PreSonus.com](http://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](mailto:techSupport@PreSonus.com).

Before contacting technical support for your Monitor Station Remote, please try the following:

- 1) Check our Web site at [www.PreSonus.com](http://www.PreSonus.com) for possible updates to your FireStudio, Monitor Station Remote and FireStudio Control Console software.
- 2) Disconnect and reconnect your Monitor Station Remote.
- 3) Check your Ethernet cable and/or try a different Ethernet cable.

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

- What Operating System and version (ex: Mac OS X 10.4.7) you are running.
- The Firmware, FPGA and Software Version number of your FireStudio and FireStudio Control Console (*from the FireStudio Control Console Hardware Settings*).
- Your Monitor Station Remote serial number (*located on the bottom of your unit*).

### 4.2.1 Software and Firmware Updates

PreSonus may periodically release updates to enhance your Monitor Station Remote and FireStudio functionality. Please check our Web site, [www.PreSonus.com](http://www.PreSonus.com), regularly for software, firmware & information updates and for technical support.



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