

stingray

MT700 - DISTRIBUTED ARRAY



USER MANUAL

stingray



MT700 - DISTRIBUTED ARRAY MIXER

USER MANUAL

Please read this manual carefully before using the Phoenix Audio Technologies
MT700 - Stingray Distributed Array Mixer

For additional help and updates, refer to our website www.phnxaudio.com

To contact Phoenix Audio for support, please send a detailed e-mail to support@phnxaudio.com

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INTRODUCTION

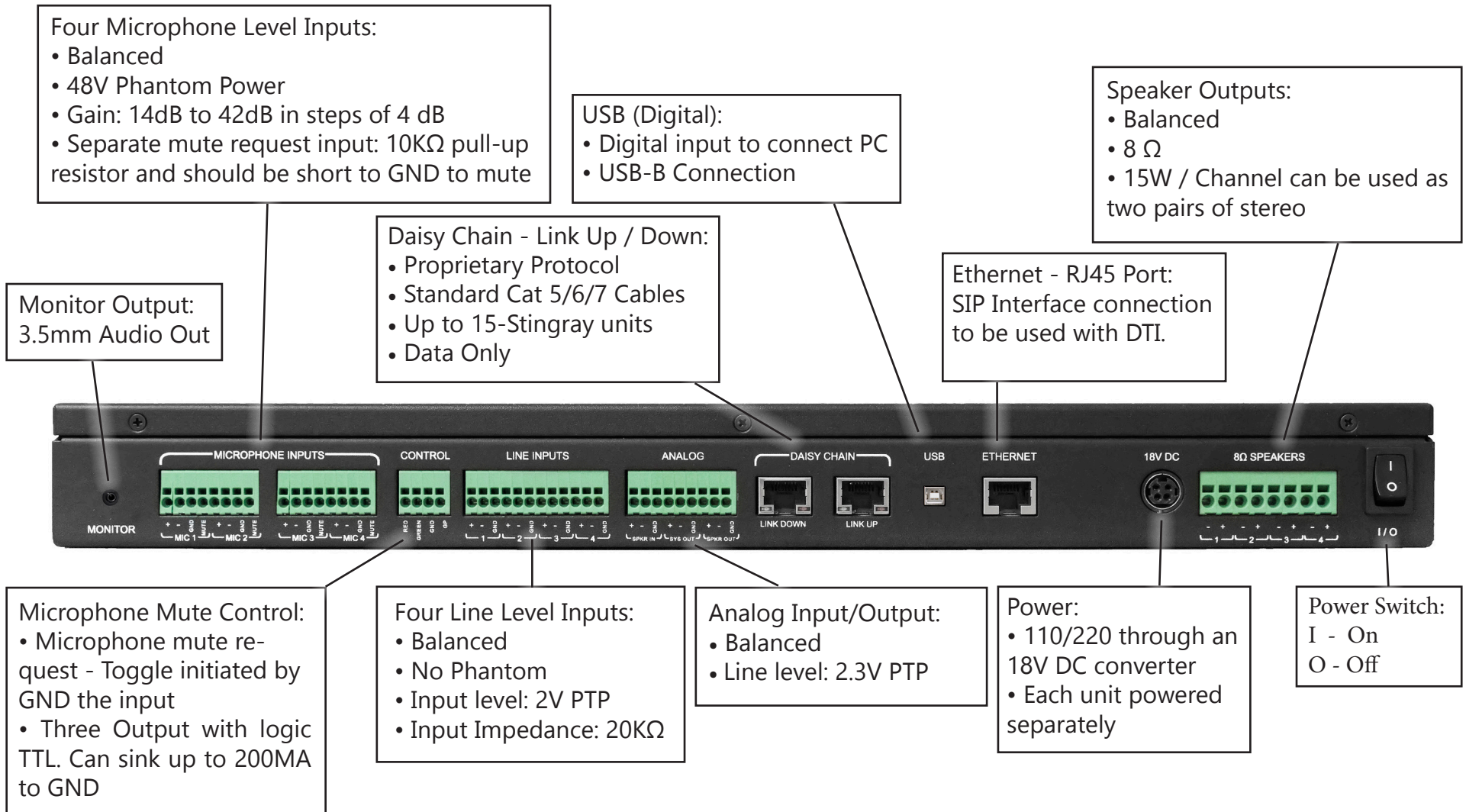
The Phoenix Audio Technologies - Stingray Distributed Array Mixer is an all-in-one smart mixer that uses proprietary distributed array technology. The Stingray was designed to be a simple solution for the complex needs of corporate and professional conferencing spaces. While focusing on this principle, we created a flexible Distributed Array Mixer that can be a solution for any conferencing room setup. Even with the evolution of variable number and size of conference rooms, the Stingray provides users with the ability to adapt to the situation to create an environment where everyone can speak freely and naturally without compromising audio quality.

Phoenix Audio Technologies believes that high quality audio should be easy to install and simple to use. Users shouldn't need to be audio experts to integrate or use our products. Our philosophy is that good audio solutions should be complicated on the inside, so that they can be flexible and simple solutions that everyone can use. To perfect our craft, our company specializes in audio products for conferencing, which can be used either alone or to complement video solutions. We design and manufacture products that address the fast pace changes in communication trends, conferencing environments, and connectivity technologies.



PRODUCT OVERVIEW

Specifications



PRODUCT OVERVIEW

Specifications

Power LED Screen:
• Options and setting menu
• Mixer and network information

Directional Pad:
• Four-way directional buttons
with center button.



The Stingray can be configured on the mixer using the directional pads and the menu selections or through any browser on a device connected to the local network. In the following pages, find the options and settings that can be modified to fit the needs of the conferencing space.



The LCD Screen displays the device name, the device chain location number and the local IP address the device is connected. Using the directional keys will cycle the microphone and line out levels screen and also the menu access screen. To access the menu screen, press the center "Enter" button.

MIXER SETTINGS

When accessing the menu, there will be seven selections which allow the user to configure the mixer. In order to make the selections, you can either press the center "Enter" key or the right direction on the directional pad. To go back on the screen, press the left direction to go back to the previous screen. The selections and detailed descriptions are listed below.

1. primary/secondary selection

In order to select primary or secondary mixers within a daisy chain of Stingrays, you can identify the units within this menu selection. Note that the primary mixer is the unit that is connected to the intended mode of communication (i.e. SIP, USB, or Analog) and when a specific unit is selected as a primary, all units linked above in the daisy chain will be cut off from the unit. When the mixer is set to the primary mixer, the connections to the intended mode of communications will turn on and the settings will be applied to all secondary units below. When a mixer is set as a secondary unit, its connections to communication modes will be disabled and the settings will be inherited from the primary unit. Also if attempting to make a unit not connected to a daisy chain, an error message "can't be set as secondary" will be prompted.

2. automatic mixer selection

Within this menu option, users will find either the mixed microphone input or mixed line input options. When using mixed microphone input settings, the DSP will process and beamform the microphones inputs then add the line inputs. When using the mixed line input option, the mixed microphone inputs will be disabled and the DSP processing will be dedicated to the line input.

3. microphone input setting

Users can control the microphone sensitivity within this menu as an entire group. There is a graphical representation of the sound levels the mixer detects from the microphone to better assist in adjusting the appropriate levels. Within this menu, each microphone can be isolated and you can listen to the microphone that is highlighted on the LED Panel via the monitor output or through the speaker outputs. The individual microphones can be selected with the directional pad.

MIXER SETTINGS

4. line input setting

The menu is configured with each line input channel with the option to mute, set as auxiliary or podium. The main difference between auxiliary or podium selection is that the auxiliary is used for outputs that do not pick up local sounds, which do not require echo canceling. Podium mic function also has the capability to voice lift the user onto the local speakers.

5. speakers setting

The settings allow you to control the maximum output to the speakers with the master volume. Users can also balance the volume of audio inputs from USB or SIP from this menu.

6. general setting

Users can restore to factory default settings, set the display time out duration, and the display brightness.

When selecting the "restore factory default", the user will be prompted with a message to ensure the intention of the reset.

The "display timeout" setting allows for durations of 30-second, 60-seconds (default), or 2-minutes.

For the "display brightness" setting, there are 6 levels of brightness available with the default set at the highest setting.

7. information

The information selection gives the programmed settings in one location. The menu provides information if the Stingray is the primary or secondary unit, mixed microphone or line input, current IP address, mac address, unit name, DSP version, SIP Version, serial number and unit ID.

DASHBOARD INTERFACE

The dashboard interface can be accessed from any browser on a device connected to the local network, using the IP address displayed on the Stingray. It is recommended to use static IP addresses for Stingray units so it does not change. The dashboard gives the user remote access and control to the Stingray and allows for more setting options than directly on the device.

The screenshot shows the 'STINGRAY CONFIGURATION' dashboard. At the top, there is a gear icon on the left and a hamburger menu icon on the right. Below the header, the word 'DASHBOARD' is centered, followed by the instruction 'Please select from one of the options below'. Two large buttons are presented: 'DEVICE SETUP' on the left and 'SIP CLIENT SETUP' on the right. Each button has a unique icon and is connected to a callout box. The 'DEVICE SETUP' callout explains that it allows editing settings for individual units or a daisy chain. The 'SIP CLIENT SETUP' callout explains that it provides access to configuration, management, status, and diagnostics tabs. A third callout box at the bottom left points to the Phoenix Audio Technologies logo and provides a quick link to their website.

Menu:
Access Device/Chain Setup or SIP Client Setup via drop down menu.

Device Setup:
Allows editing of the settings of an individual Stingray unit or any number of units in daisy chain.

SIP Client Setup:
Access controls to configuration, management, status and diagnostics tabs for Stingray units.

Quick Link to Phoenix Audio Technologies website.
www.phnxaudio.com

DASHBOARD INTERFACE

STINGRAY CONFIGURATION

EDIT DEVICES

Please select from one of the devices below

PRIMARY

Device Name

PHOENIX Audio Technologies

EDIT DEVICE

Unit #1

Device Name

Primary Set as Secondary [Edit Primary Parameters](#)

On the "Device Setup" menu screen, users will find all Stingray mixers connected to the primary IP address. You can select each individual device and modify the name of the device, adjust primary and second settings and edit the "Primary Parameters".

Within the "Primary Parameters" selections, users can adjust microphone sensitivity, speaker Master Volume, input balance levels, set individual line input volume balance and set them as podium or auxiliary.

MIC MIXER UTILITY

The main interface is titled "STINGRAY CONFIGURATION" and prompts the user to "Please select from one of the devices below". It features two primary selection buttons: "MIC MIXER" (labeled "Enabled") and "LINE MIXER" (labeled "Disabled"). Below these are icons for "MICROPHONE" and "SPEAKER". At the bottom, there are four "LINE" inputs (LINE 1 to LINE 4), each with a microphone icon.

Three callout windows provide detailed settings:

- EDIT MICROPHONE SENSITIVITY:** Shows a volume slider set to 22 dB and a bar graph with four bars of varying heights.
- EDIT SPEAKER SENSITIVITY:** Shows a master volume slider set to -4 dB and three balance sliders for "USB 0 dB", "SIP 0 dB", and "Analog 0 dB".
- EDIT LINE SENSITIVITY:** Shows selection buttons for "PODIUM", "AUXILIARY", and "NOT SET", along with a "Balance" label.

The Phoenix Audio Technologies logo is visible in the bottom left corner of the main interface.

MIC MIXER UTILITY

Mic Mixer Settings:

When using Mic Mixer selection, this allows the use of a total of four microphone inputs and four line inputs. The four microphone inputs will have beam forming, noise cancellation, echo cancellation, and automatic gain control applied and combined into a single audio output. For this to function properly, all microphones being used must be the same model. In the browser based dashboard interface, there are a number of different settings that can be adjusted.

Microphone Tab - Adjust microphone sensitivity for all microphones attached to the Stingray unit. Adjustments will apply the sensitivity to all microphones as there is no individual sensitivity settings.

Speaker Tab - Adjust speaker output volume using the master volume slider tool which increases overall volume. Users can adjust the balance of the speaker output of the USB, SIP, and Analog inputs to create level sound. This is useful if multiple devices are bridged with different volume input levels.

Line Tabs - There are individual settings for each line input and users can set either "Podium" or "Auxiliary" for the inputs. If "Not Set" is selected, the line will not function. Hardware attached to the line inputs will not have beam forming capabilities, but all other DSP processing will be applied.

The Podium setting input allows the users to make the input a priority speaker by allowing voice lift which also broadcasts the user through the connected speakers. Users can also adjust the balance of the local speakers, secondary levels, and the send out level. Noise Cancellation, echo cancellation, and automatic gain control will be applied to this input.

The Auxiliary setting input allows the users to use the line for audio that does not require noise cancellation, echo cancellation, or automatic gain control. This is typically used for media like music, presentations with sound, or movie clips which allows the audio to be transmitted and output to the local speakers.

LINE MIXER UTILITY

STINGRAY CONFIGURATION

EDIT PRIMARY PARAMETERS

Please select from one of the devices below

MIC MIXER

LINE MIXER

Disabled

Enabled



SPEAKER



LINE 1



LINE 2



LINE 3



LINE 4

EDIT SPEAKER SENSITIVITY

Master Volume -4 dB



Balance



USB -4 dB



SIP -6 dB



Analog 8 dB

EDIT LINE 4 SENSITIVITY

PODIUM

AUXILIARY

MIXER

NOT SET

Balance

LINE MIXER UTILITY

Line Mixer Settings:

When using Line Mixer selection, this disables the microphone inputs, reducing the number of inputs to four. The Line Mixer settings will still receive noise cancellation, echo cancellation, and automatic gain control applied to the audio. Like the Mic Mixer Setting, many of the adjustable field are the same.

Speaker Tab - Adjust speaker output volume using the master volume slider tool which increases overall volume. Users can adjust the balance of the speaker output of the USB, SIP, and Analog inputs to create level sound.

Line Tabs - There are individual settings for each line input and users can set either "Podium", "Auxiliary" and "Mixer" for the inputs. If "Not Set" is selected, the line will not function. Hardware attached to the line inputs will not have beam forming capabilities unless using the Mixer setting.

The Podium setting input allows the users to make the input a priority speaker by allowing voice lift which also broadcasts the speaker through the connected speakers. Users can also adjust the balance of the local speakers, secondary levels, and the send out level. Noise Cancellation, echo cancellation, and automatic gain control will be applied to this input.

The Auxiliary setting input allows the users to use the line for audio that does not require noise cancellation, echo cancellation, or automatic gain control. This is typically used for media like music, presentations with sound, or movie clips which allows the audio to be transmitted and output to the local speakers.

The Mixer setting allows users to beam form using the line input. In order for beam forming to work properly, more than one line must be used and microphones must be the same model.

SIP CLIENT SETUP

When selecting "SIP Client Setup", users will be prompted with a screen with Configuration, Management, and Status & Diagnostics tabs. You will find the following settings under each menu.

Configuration:

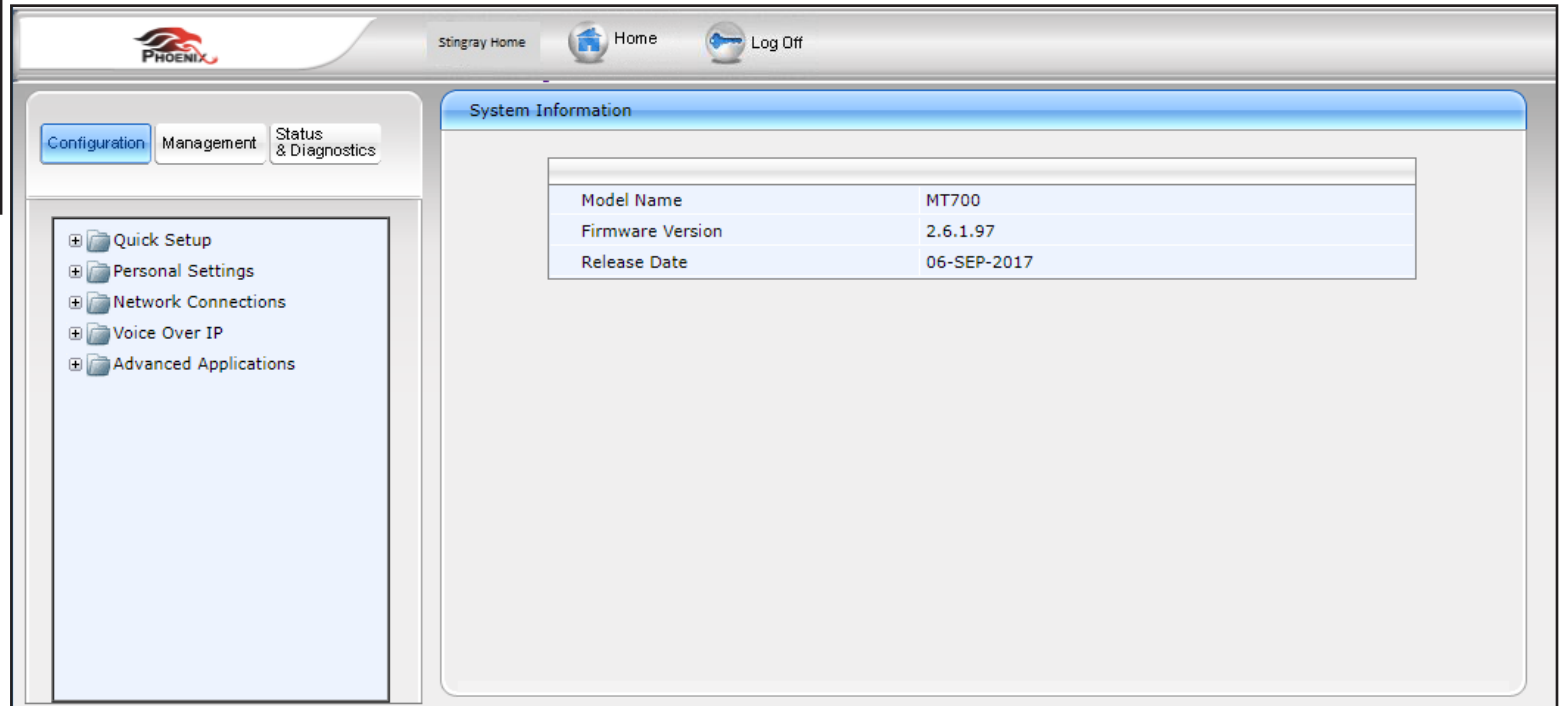
- Quick Step
- Personal Settings
 - Directory
 - Speed Dial
 - Tones
- Network Connections
 - LAN Settings
- Voice Over IP
 - Signaling Protocols
 - Dialing
 - Media Streaming
 - Voice
- Line Settings
- Services
- Volume Settings
- Advanced Applications
 - Date and Time

Management:

- Automatic Update
- Manual Update
 - Configuration File
 - Firmware Upgrade
- Administration
 - Users
 - Remote Control
 - Restore Defaults
 - Restart System
 - Telnet

Status and Diagnostics:

- System Status
 - Network Status
- History
 - Call History
- System Information
 - Versions
- Diagnostics
 - Logging
 - Recording

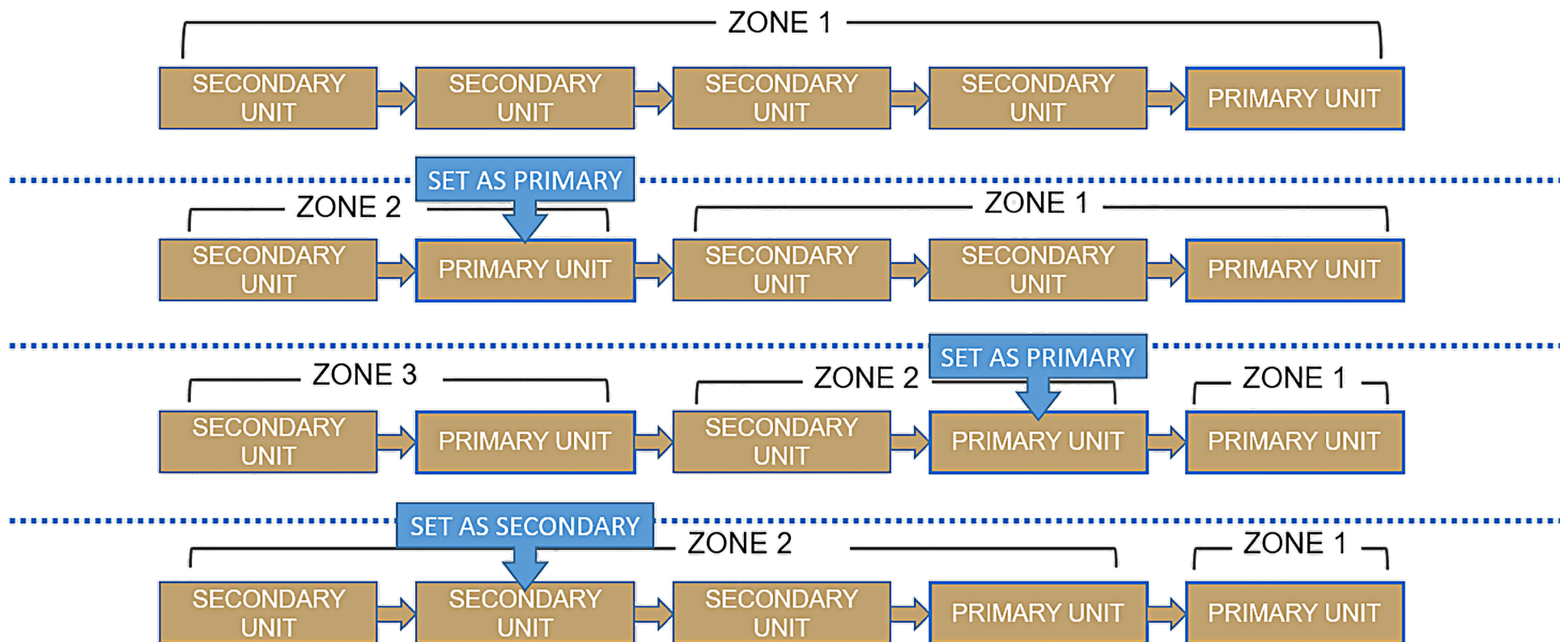


The screenshot displays the web interface for the SIP Client Setup. At the top, there is a navigation bar with the Phoenix logo, a "Stingray Home" link, a "Home" button, and a "Log Off" button. Below the navigation bar, there are three tabs: "Configuration", "Management", and "Status & Diagnostics". The "Configuration" tab is selected and highlighted. The main content area is divided into two sections. On the left, there is a sidebar menu with expandable folders: "Quick Setup", "Personal Settings", "Network Connections", "Voice Over IP", and "Advanced Applications". On the right, there is a "System Information" section with a table showing the following details:

System Information	
Model Name	MT700
Firmware Version	2.6.1.97
Release Date	06-SEP-2017

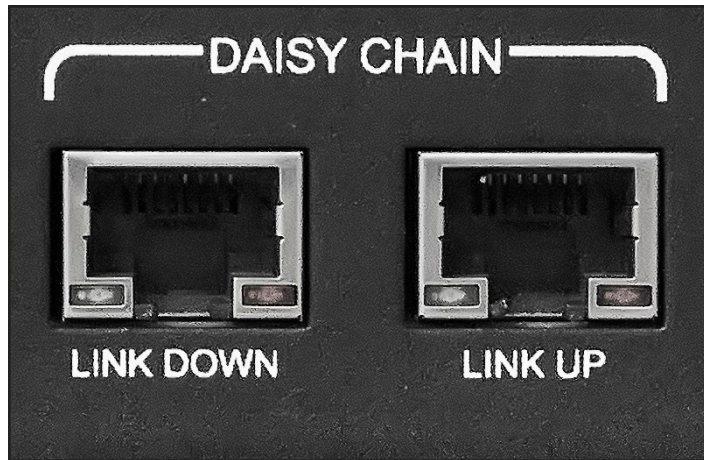
DAISY CHAIN AND ZONING CONCEPT

The Stingray ability to adapt to variable conference room sizes through daisy chaining gives users the capability to create multiple zones or combine the zones together to use all the hardware assets to cover a large space. It is recommended all Stingray units are connected to a mode of communication which allows the unit to become a primary unit. Illustrated below is the zoning concept which shows that with five units, you can either have five separate zones to one single large zone or any number inbetween there with just a simple selection on our unit or any mechanical switch. This allows users to easily convert their conference room sizes without the need to have an engineer rewire or reconfigure the equipment that are already in place. This provides a solution that quickly and easily solves the changing spaces.



DAISY CHAIN AND ZONING CONCEPT

In order to daisy chain Stingray units together, on the back panel will be two RJ45 ports marked "Link Up" and "Link Down" under the daisy chain bracket. The "Link Down" port is used to connect a primary unit to a secondary or a secondary to another secondary down the chain. The "Link Up" port is used to connect to units above by connecting "Link Down" from the unit above to the secondary "Link Up".



Connecting a secondary unit to the primary, the RJ45 cable will leave the primary unit connected to "Link Down" and will connect into the secondary "Link Up" slot.

If the conference room setup requires to daisy chain more than 2 units, the third unit will connect to the secondary unit in the chain with the RJ45 cable leaving the "Link Down" and connecting to the "Link Up" on the third unit.

Connecting additional units will follow the same procedures with a maximum of 15 Stingray units connected together (1 primary unit chained to 14 secondary units).

When changing one of the secondary units to a primary unit, the secondary units linked below the new primary will now receive the settings from the new primary and the chain will separate from the units above the new primary unit. In order for a Stingray mixer to become a primary unit, it must have connection to a mode of communication, either through USB, SIP or Analog connection.

To configure a Stingray mixer to a primary or secondary unit, it can be completed either directly on the device (refer pg. 6), through the browser device dashboard (refer pg. 9) or a mechanical switch can be configured to be used with the control port on the Stingray back panel.

***Recommend to use minimum CAT5 shielded cables with improved audio quality with CAT6 & CAT7 shielded cables.**

DAISY CHAIN AND ZONING CONCEPT

Zoning Notes

Unit set to Primary:

- Any unit can be configured to be a primary unit if it has a connection to a mode of communication
- Mode of communications will be turned on (USB, SIP, and Analog)
- Primary unit will dictate parameters to all secondary units below in the chain
- Daisy chain will be cut off at the next primary unit down the chain
- Podium and Auxiliary line channel features are enabled

Unit set to Secondary:

- Assume the settings of the primary unit
- Mode of communication connections are disabled
- Podium and Auxiliary line channel features are disabled, but ordinary line inputs function normally

*Note - A unit can have primary settings programmed, but when switched to a secondary unit, the settings will be changed to the connected primary settings. The unit can switch to the primary unit at any time and the unit will revert back to the programmed primary settings as configuring a unit to secondary unit does not remove the primary settings of the unit.

LIMITED MANUFACTURER'S WARRANTY

In order to obtain warranty coverage: (1) you must have proof of your properly-obtained limited warranty pursuant to Section 1 of this limited warranty; (2) an excluded event must not have occurred with respect to the mechanical, electrical, or software defect, malfunction, or other failure in the product and/or its part(s); and (3) you must obtain a return authorization number and other return shipping information from us to allow you to ship the product and/or part of the product back to us.

As part of these limited warranty services, we will offer (a) phone and e-mail support (see contact information in Section No. 6 below); (b) free software upgrades for the purchased product, if applicable; and (c) no costs for any of the replacement parts or labor needed to make the product function as warranted. No other services or repair work are included in this limited warranty other than the repairs and services expressly described in this Section No. 4.

5. WHAT IS THE PERIOD OF COVERAGE?

This limited warranty begins on the date of your purchase of the product and lasts for two (2) years, subject to the requirements described in Section No. 1, subsections (a) through (c) of this limited warranty (the "Warranty Period"). The Warranty Period is not extended if we repair or replace the product. We may change the availability of this limited warranty at our discretion, but any changes will not cover periods before the change went into effect.

6. HOW DO YOU OBTAIN LIMITED WARRANTY SERVICE?

To obtain limited warranty service, you must call (818) 937-4774 or email our Customer Service Department at support@phnxaudio.com during the Warranty Period. No limited warranty service will be provided without satisfying the requirements described in Section No. 1, subsections (a) through (c) of this limited warranty.

7. LIMITATION OF LIABILITY

EXCEPT FOR THE EXPRESS WARRANTIES CONTAINED IN THIS LIMITED WARRANTY STATEMENT, NO OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR USE, APPLIES TO THE PRODUCT. THE REMEDIES DESCRIBED ABOVE ARE YOUR SOLE AND EXCLUSIVE REMEDIES AND OUR ENTIRE LIABILITY FOR ANY BREACH OF THIS LIMITED WARRANTY. OUR LIABILITY SHALL UNDER NO CIRCUMSTANCES EXCEED THE ACTUAL AMOUNT PAID BY YOU FOR THE DEFECTIVE PRODUCT, NOR SHALL WE UNDER ANY CIRCUMSTANCES BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL OR PUNITIVE DAMAGES OR LOSSES, WHETHER DIRECT OR INDIRECT. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

8. WHAT CAN YOU DO IN CASE OF A DISPUTE WITH US?

Any controversy or claim arising out of or relating in any way to this purchase or attempted purchase of this limited warranty directly from us shall be brought on an individual, and not on a class action basis, shall be exclusively subject to binding arbitration, which shall be administered by the American Arbitration Association, and decided by one (1) arbitrator, and judgment upon the award rendered by the arbitrator may be entered in any court having jurisdiction thereof. By purchasing this limited warranty, you further agree that the arbitrator, and not any federal, state, or local court or agency shall have exclusive authority to resolve any controversies, claims, or other disputes arising out of or relating to the interpretation, applicability, enforceability or formation of this limited warranty. By purchasing this limited warranty, you understand and agree that you are waiving and hereby waive your rights to maintain other available resolution processes, such as a court action or administrative proceeding, to settle any disputes between you and us.

LIMITED MANUFACTURER'S WARRANTY

THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER RIGHTS, WHICH VARY FROM STATE TO STATE. THE LIMITED WARRANTY CAN ALSO BE FOUND ONLINE AT <http://www.phnxaudio.com/warranty/limitedwarranty.pdf> OR IN THE DOCUMENTATION WE PROVIDE WITH THE PRODUCT. WE WARRANT THAT DURING THE WARRANTY PERIOD, THE PRODUCT WILL BE FREE FROM MECHANICAL, ELECTRICAL, AND SOFTWARE DEFECTS IN MATERIALS AND WORKMANSHIP. WE LIMIT THE DURATION AND REMEDIES OF ALL IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE TO THE DURATION OF THIS EXPRESS LIMITED WARRANTY. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THIS LIMITATION MAY NOT APPLY TO YOU. OUR RESPONSIBILITY FOR THE DEFECTIVE PRODUCT IS LIMITED AS DESCRIBED BELOW IN THIS LIMITED WARRANTY STATEMENT.

1. WHO MAY USE THIS LIMITED WARRANTY?

Phoenix Audio Technologies, located at address 16 Goodyear Suite 120, Irvine, California 92618 ("we", "us", "our", or its derivations) extends this two (2) year limited product warranty (this "limited warranty") only to the consumer who originally purchased the product to which this limited warranty applies ("you", "your"). It does not extend to any subsequent owner or other transferee of the product. It does not cover anyone not located in the United States at the time coverage is sought under this limited warranty. To obtain coverage under this limited warranty, you must (a) purchase the product which this limited warranty covers (and provide us with a sales receipt or other evidence acceptable to us showing your purchase); (b) provide us with the serial number of the product for which you purchased the warranty; and (c) provide us with information about you, if we request it. This limited warranty is expressly conditioned upon and valid only upon the satisfaction of the foregoing requirements of (a) through (c), and our receipt of any and all required payments in connection with the foregoing requirements of (a) through (c).

2. WHAT DOES THIS LIMITED WARRANTY COVER?

This limited warranty covers mechanical, electrical, or software defects in materials and workmanship of the product purchased by you from us (the "product") for the Warranty Period as defined below, and this limited warranty is specific to the product for which you purchased this limited warranty.

3. WHAT DOES THIS LIMITED WARRANTY NOT COVER?

This limited warranty does not cover any damage ("excluded events") due to: (a) incidental events (e.g., coffee spills, water damage, damage resulting from dropping the product, or fire damage); (b) transportation; (c) storage; (d) improper use; (e) failure to follow the product instructions or to perform any preventive maintenance; (f) modifications; (g) unauthorized repair; (h) normal wear and tear; (i) misuse; (j) external causes such as accidents, abuse, or other actions or events beyond our reasonable control; or (k) damages or repairs that, in our opinion, result from similar events. This limited warranty does not cover incidentals, general customer dissatisfaction (such as in the case of "buyer's remorse"), lost peripherals (e.g., misplaced cables or power supplies needed to use the product), or any damage not caused by a mechanical, electrical, or software defect.

4. WHAT WILL WE DO UNDER THIS LIMITED WARRANTY/WHAT ARE YOUR REMEDIES?

In the event of a mechanical, electrical, or software defect, malfunction, or other failure of the product not, in our opinion, the result of excluded events, we will remedy the failure or defect without charge to you. We can choose to:

- Repair the product or defective, malfunctioning, otherwise failing parts in the product within a reasonable time as solely determined by us; OR
- Replace the product or defective, malfunctioning, otherwise failing parts in the product within a reasonable time as solely determined by us.