BROADCAST tools® INC

PROBLEM SOLVED

Installation and Operation Manual

Audio Sentinel®+» Web/RJ

Web-enabled two channel stereo silence monitor/switcher

Manual update: 8/2/2021
For firmware versions equal to or greater than 0.6.
If you need a firmware upgrade, contact Broadcast Tools®

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NOTE: We recommend the use of Chrome, Firefox or Safari as your browser.

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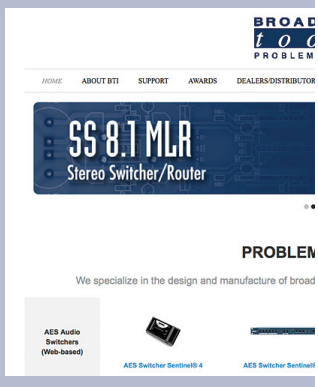

INTRODUCTION

Thank you for your purchase of a Broadcast Tools® Audio Sentinel®+» Web/RJ Web-enabled two channel stereo silence monitor/audio switcher. We are confident that this product will give you many years of dependable service. This manual is intended to give you all the information needed to install and operate the Broadcast Tools® Audio Sentinel®+» Web/RJ.

SAFETY INFORMATION

Only qualified technical personnel should install the Audio Sentinel®+» Web/RJ. Any attempt to install this device by a person who is not technically qualified could result in a hazardous condition to the installer or other personnel or damage to the Audio Sentinel®+» Web/RJ or other equipment. Please ensure that proper safety precautions have been taken before installing this device. If you are unfamiliar with this type of equipment, please contact a properly qualified engineer to handle the installation and setup of the Audio Sentinel®+» Web/RJ.

WHO TO CONTACT FOR HELP

If you have any questions regarding your product or you need assistance, please contact your distributor from whom you purchased this equipment. If you would like more information about BROADCAST TOOLS® products, you may reach us at:

Broadcast Tools, Inc.
131 State Street
Sedro-Woolley, WA 98284-1503 USA
Voice: 360.854.9559
Fax: 866.783.1742

Internet Home Page: www.broadcasttools.com
E-mail:support@broadcasttools.com

THANK YOU FOR CHOOSING
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Broadcast Tools is a Veteran Owned Business

Designed, Assembled and Supported in WA State, USA

CAUTION!

Broadcast Tools® Products, as with any electronic device, can fail without warning. Do not use this product in applications where a life-threatening condition could result due to failure.

NOTE:

This manual should be read thoroughly before installation and operation.

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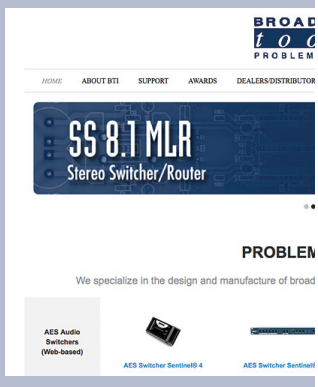

Product Overview

The Audio Sentinel®+» Web/RJ is Broadcast Tools' next-generation web-enabled two channel stereo silence and phase monitor with an integrated, transparent, 2×1 switcher. It is designed to monitor two analog audio sources, one primary, the other back-up. When silence is detected on the primary input it can automatically switch to the back-up input via mechanical latching relays. It features a browser-based HTML5 web interface and supports SSL/TLS email (Gmail, etc.), SMS-email notification, as well as SNMP. The balanced stereo audio I/O features pluggable screw terminal-block and standard RJ45 audio jacks wired in parallel for ease of wiring.

The Audio Sentinel®+» Web/RJ can be configured and monitored locally and/or remotely over any IP network, including private networks, IP-based industrial control networks, and the Internet. Users can operate this product using a desktop web browser or web-enabled (HTML5) mobile device. App Store not required. Email and SMS-email notification can be configured to alert up to eight recipients when silence or out-of-phase audio is detected. SMTP username and passwords using STARTTLS (Gmail, etc.) or Base64 authentication are supported. SNMP traps and SET/GET are built-in, allowing multiple units to be monitored and configured with SNMP management software.

Features/Benefits

- Built-in web server provides simple, web-based (HTML5) notification, monitoring, configuration, and control.
- Powered by a high-performance ARM® Cortex™ processor.
- Support for STARTTLS secure SMTP authentication (Gmail, etc.)
- Front panel, remote, and web-based switcher controls.
- Both stereo inputs feature silence sensors/phase monitors with front panel activity and alarm LED indicators.
- Silence trip level detection from -15dB to -35dB in 1 dB steps for each stereo channel.
- Precise alarm time delay from 0(OFF) to 65535 seconds (18 hours, 12 min and 15 sec's). in one-second increments for each channel.
- Alarm restore time delay from 0(OFF) to 65535 seconds (18 hours, 12 min and 15 sec's). in one-second increments for each channel.
- Internal, transparent, 2x1 switcher with mechanical latching relays.
- If power is lost, the last selected channel is passed to the output.
- Email notification may be configured to alert up to EIGHT recipients when alarms are detected.
- Email logging of system status, along with the site ID may be emailed in time spans from once an hour to once a day.
- Pluggable screw terminal block and RJ45 audio jacks for stereo inputs and output.
- Fully RFI proofed.
- Surge protected internal power supply, universal switching power supply with domestic connector supplied. International power supply optional.
- Up to two units may be mounted on the optional RA-1 rack shelf.

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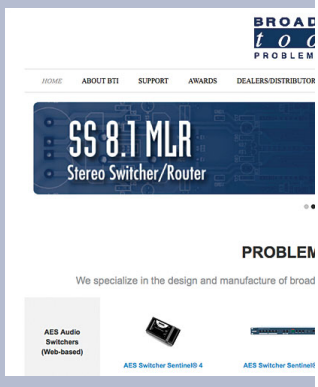

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Inspection

Please examine your Audio Sentinel®+» Web/RJ carefully for any damage that may have been sustained during shipping. If any damage is noted, please notify the shipper immediately and retain the packaging for inspection by the shipper. The package should contain the Audio Sentinel®+» Web/RJ, a 7-foot BLUE straight-through CAT 5 cable, a 7-foot GRAY crossover CAT 5 cable and a 9 VDC power supply. Manuals may be downloaded from our web site.

Installation

Surge Protection

The Audio Sentinel® has built-in resistance to voltage changes; we recommend that you use a power surge protector or line conditioner on the incoming AC line. Lightning strikes and/or other high voltage surges may damage your Audio Sentinel®+» Web/RJ and connected equipment if it is not properly protected. For lightning protection devices, check out www.polyphaser.com and www.itwlinx.com.

UPS Standby Power System

We recommend that you connect your Audio Sentinel®+» Web/RJ to a UPS system. A UPS helps minimize the risk to the Audio Sentinel®+» Web/RJ and provides AC power during a power outage.

NOTE: Signal bypass is provided by internal relays that will passively route the input one signal to the output in the event of power loss.

POWER connector

Connect the 2.1mm barrel type center positive power connector into the unit and the 9 to 12 VDC power supply with domestic connector into a 120 Vac 50-60 Hz power source.

NOTE: Never use any type of power supply other than the specified/supplied power supply.

CAUTION!

Installation of the Audio Sentinel®+» Web/RJ in high RF environments should be performed with care. The station ground should be connected to the "Chs Gnd" chassis ground screw.

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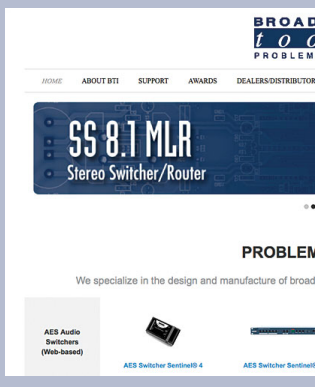

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LED Indicators

- "Pwr/HB" LED: Illuminates when power is applied and flashes to indicate microprocessor operation. (Green)
- "ON" LEDs: Lit when the Input is routed to the output. (Green)
- "ACT" LEDs: Lit when valid analog audio is present on the input. (Yellow)
- "SS/Ph" LEDs: Silence Sensor/Phase alarm indicator, lit when silent or out-of-phase audio is detected on the input. (Red)
- "Auto" LED: Lit when in Automatic backup switching mode. (Red)
- "Enable" LED: Lit when the front panel enable push button option is engaged. (Green)

Front Panel Controls

"1" and "2" pushbuttons: Used to select which input is routed to the output when in Manual mode. Each input has an "ON" LED indicator, which will illuminate when that channel is selected and routed to the output. When a channel is selected, the previous channel is deselected (interlock). Only one input can be routed to the output at a time.

"Mute" pushbutton: Used to mute the output of the internal 2x1 switcher.

"Auto" pushbutton (recessed): Used to toggle between automatic backup and manual switching modes.

"Enable" pushbutton: The enable (safety) push button requires the user to hold down the push button while selecting any of the other front panel push buttons, the enable LED is illuminated when this function is active.

SW8 Enable Configuration Switch, recessed:
IN = Front panel ENABLE push button is active and the Enable LED is illuminated.
OUT = Front panel enable switch defeated. (Factory Default)

NOTE: When SW8 is in the "IN" position the enable push button must be held closed to operate any of the other front panel push buttons and isn't associated with any of the remote-control functions

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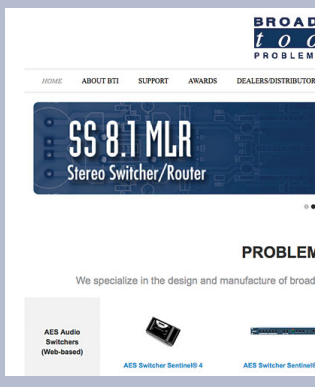

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LAN / NET Jack
RJ45 Ethernet jack for 10/100baseT LAN/WAN connection.

Chassis Ground (Chs Gnd)
#4-40 screw for connection to the station/site ground system.

Audio Connector Pinouts/Cable Preparation
The Audio Sentinel®+» Web/RJ interfaces to external equipment pluggable screw terminal blocks and RJ45 audio jacks for audio signals, and removable euro-block screw terminals for control.
The terminals blocks accommodate wire sizes from 16 - 28 AWG solid or stranded. Before installing a wire, remove the euro-block screw terminal plug and turn each capture screw fully counterclockwise. Strip each conductor to a length of 0.25" and insert the conductor fully into the terminal. Turn the capture screw fully clockwise to secure the conductor. Verify that no bare wires are exposed.

RJ45 Connectors
The input and output RJ45 jacks conform to the RJ45 audio wiring standards. Please use shielded twisted pair Cat5e or Cat6 cables and connectors (STP).

RJ45 Pinout:

Function:	Wire Pair:	RJ45 Pins:
Left+	White/Orange	1
Left-	Orange/White	2
Right+	White/Green	3
Right -	Green/White	6
n/c	White/Blue	5
GND	Blue/White	4
n/c	White/Brown	7
n/c	Brown/White	8
GND	Shield	Shield

CAUTION!

Installation of the Audio Sentinel®+» Web/RJ in high RF environments should be performed with care. The station ground should be connected to the designated "Chs Gnd" ground terminal.

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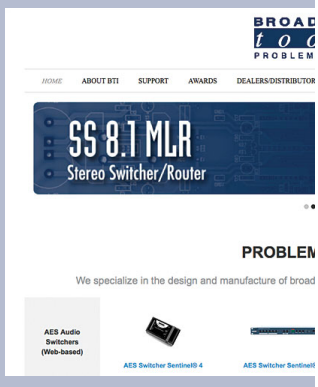

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Audio Inputs and Outputs

The Audio Sentinel®+» Web/RJ's two inputs and output have RJ45 audio jacks and 5-postion pluggable screw terminal blocks, each respective input and output jack is wired in parallel. This means either input connector can route to either output connector, providing an easy way to interface between devices with different connectors without the need for custom cables.

In 1 = Primary input (Silence Sensor 1): RJ45 and TB
In 2 = Backup input (Silence Sensor 2): RJ45 and TB
Output = Switcher Output: RJ45 and TB

Audio switching is accomplished via mechanical latching gold contact relays which means that the unit can will keep routing that signal even after losing power.

Remote Control Connections

The Audio Sentinel®+» Web/RJ has four dry-contact relay closure remote control outputs located on the two 8-position pluggable screw terminal blocks (TB2 top and bottom). The SPST Normally Open relay K6 and the SPDT relay K7 are used to represent the status of the internal 2x1 audio switcher. When input channel ONE is selected the NO (normally open) contacts is are open, while the NC (normally closed) contact is closed with respect to the CM (common) contact. When input channel TWO is selected the NO (normally open) contact is closed, while the NC (normally closed) contact is open with respect to the CM(common) contact.

The SPDT K4 and K5 relays are each available for user configurable notification. The operation of K4 & K5 is determined by the configuration assigned on the "Silence Sensor Setup" page.

(Top row, TB2)

K4NO	K4CM	K4NC	K5NO	K5CM	K5NC	K6NO	K6CM
CH1	CH2	RMT3	RMT4	DGND	K7NO	K7CM	K7NC

(Bottom Row, TB2)

The Audio Sentinel® has four remote control inputs labelled "CH1" "CH2" "RMT3" and "RMT4" located on the first four pins of the bottom 8-postion pluggable screw terminal blocks (TB2 bottom).

CH1 = Momentary closure to ground (DGND) switches Input 1 to the Output.
CH2 = Momentary closure to ground (DGND) switches Input 2 to the Output.
RMT3 = EXTernal sustained trigger or Auto/Manual toggle. Closure to ground (DGND) triggers.
RMT4 = Mute. Closure to ground (DGND) triggers.

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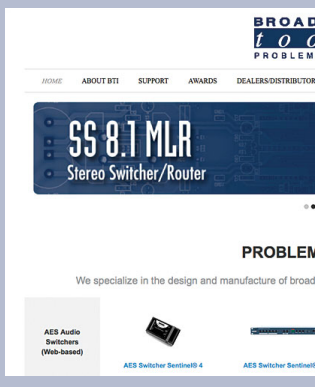

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Operation

The Audio Sentinel®+» Web/RJ can be controlled from a web browser, front panel controls, and/or remote-control connections. The slow blinking front panel "PWR/Heartbeat" LED indicates valid power and proper operation. The front panel equipped with push button controls and indicator LEDs.

The Audio Sentinel®+» Web/RJ has two primary modes of operation Automatic Mode, where silence/out of phase on the primary input will cause the unit to automatically switch the backup input to the output, and Manual Mode where switching control must be performed manually via the front panel controls, web controls, or remote-control inputs. Email and SNMP alarm notifications function in both modes. By default, in Automatic mode, when valid audio returns to Input 1 the switcher automatically will switch back (restore) to Input 1 following the delay time. This feature is called Switcher Bounce and it can be disabled from the Switcher Bounce control Monitor & Control web page.

Reset to Defaults

Factory defaults may be restored by depressing the recessed front panel "Defaults" push button for five seconds after waiting for the unit to power up. The PWR/HB led will rapidly blink two to three times when loaded.

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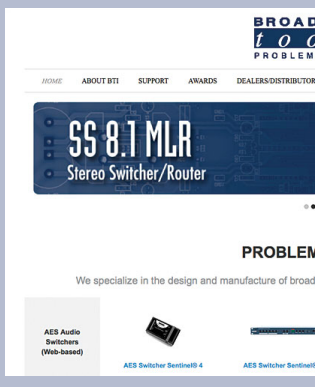

Ethernet "Quick Start" Guide

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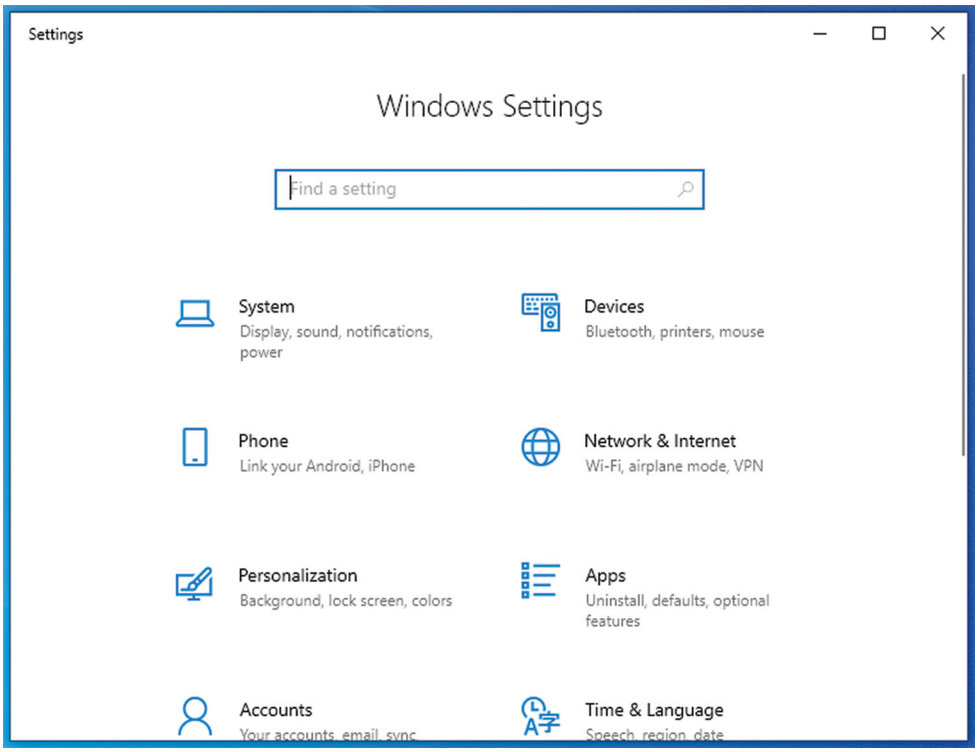
CAUTION! If you are not familiar with Ethernet enabled equipment, it may be useful to contact your IT department, network administrator or network consultant for assistance. Assigning an IP address already in use by another device may cause problems with your network!

Instructions for changing the IP address of the computer that will be used for the configuration of this product are given here. Note that these instructions are specifically for computers with the Windows 10 operating system but will also work with Windows 7. For setup using other operating systems, refer to the appropriate OS user's manual.

Step 1: Open the control panel by clicking on the Start Menu, click on Settings, then click on Network & Internet. Click on View network status and tasks under Network and Internet.



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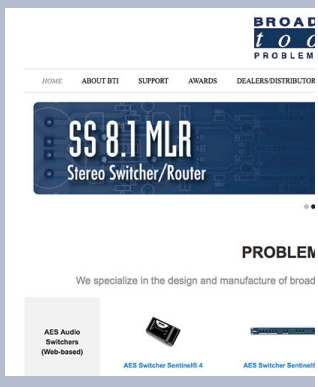

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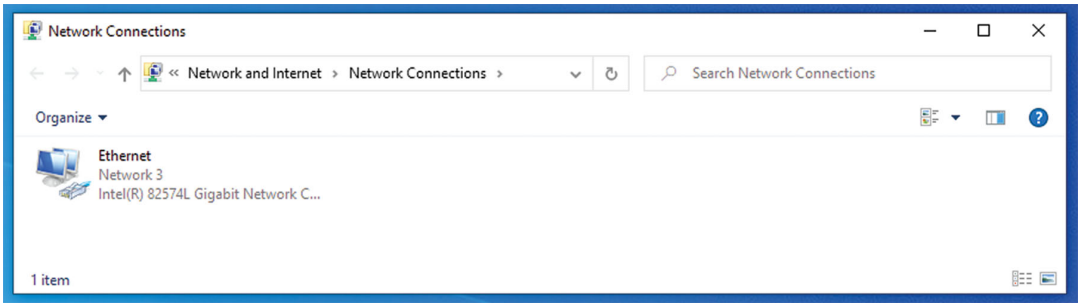
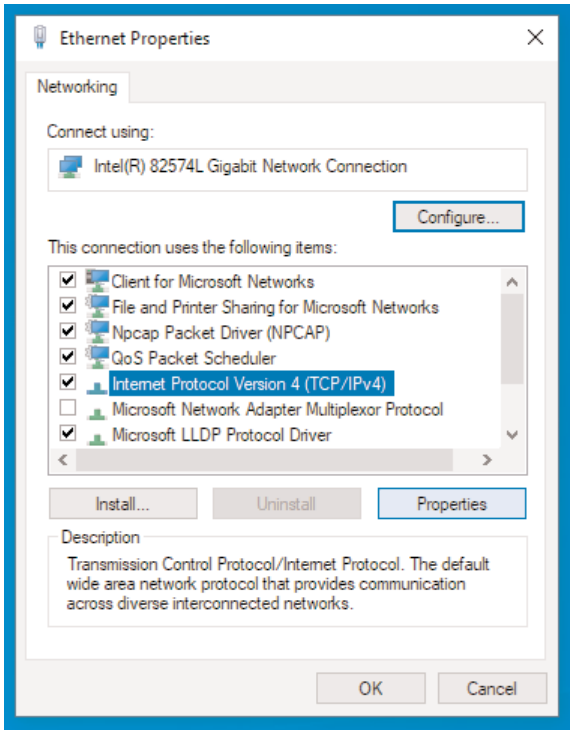
Step 2: Click on the sidebar labelled Change adapter settings. The Network Connections windows will pop up, as shown below.



Step 3: Right click on the icon labeled Local Area Connection or Ethernet. A menu will appear. Select the option at the bottom of the menu labeled Properties. Ethernet Properties window will appear.



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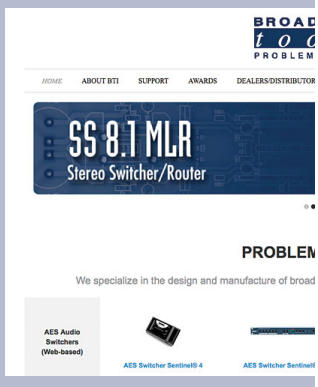

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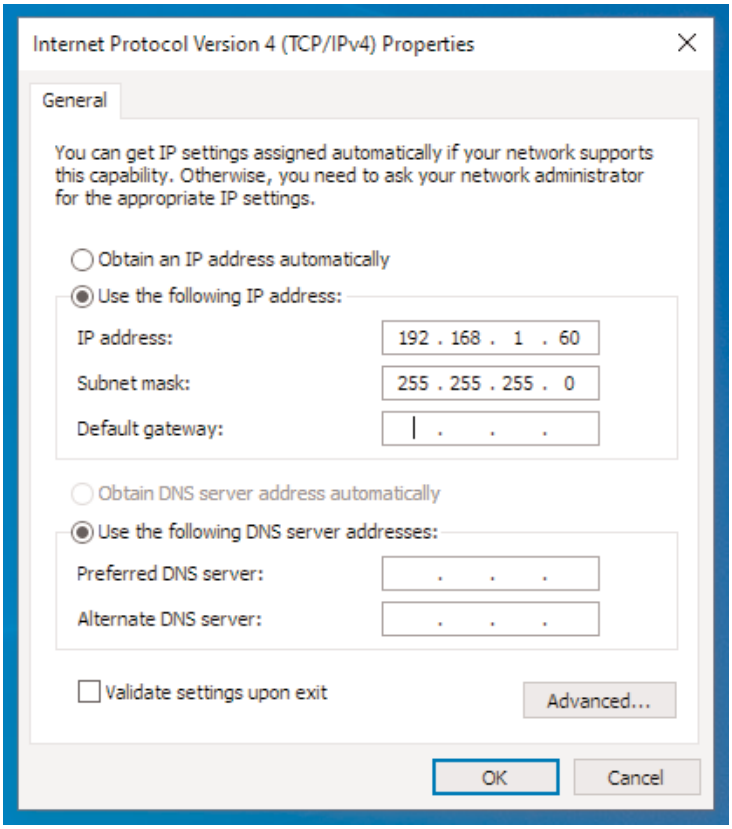
Step 4: On the Local Area Connection Properties page, double click on Internet Protocol Version 4 (TCP/IPv4) to display properties.



Step 5: Before making any changes to the network settings, write down the current settings (or screen capture the page and print) so that they can be restored once the unit is configured. Next, select the radio button labeled "Use the following IP address" and type in the IP address 192.168.1.60. Type in the subnet mask of 255.255.255.0. Leave the default gateway field blank. Click OK to apply the new settings.

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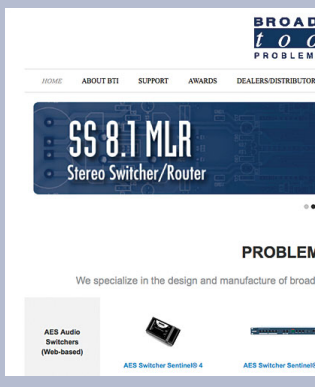

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Ethernet (NETWORK) port LED indicator functions

Link LED Left Side	
Color	Meaning
Off	No Link
Amber	10 Mbps
Green	100 Mbps

Activity LED Right Side	
Color	Meaning
Off	No Activity
Amber	Half Duplex
Green	Full Duplex

NOTE: We recommend the use of Chrome, Firefox, or Safari for as your browser.

Opening the LOGIN Web Page

1. Connect the supplied GRAY colored XOVER cable between the PC's Ethernet port and the products "NET" network RJ45's jack.

2. Connect the supplied power supply. Verify that the green PWR/Heartbeat LED is blinking and the left "LINK" LED above the "NET" Network RJ-45 is illuminated

3. Open the product's login page by typing the following URL into the browser: http://192.168.1.55 The username and password is required to change any parameter and the fields are case sensitive.

Factory "login" defaults: username: admin (lower case)
password: 1234

NOTE: You may view the password by checking the "Show Password" box.

4. Press the "Submit" button to login in. Once you are logged in, follow this manual for setup and/or operational information.

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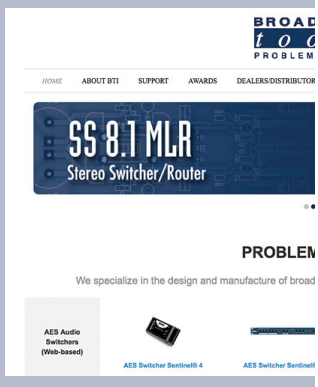

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"Login" Web Page

The Login screen displays the Username and Password entry points.

After you have successfully logged in, the Monitor/Control page will be displayed. Depending on your access level, you may or may not be able to control or modify the product's configuration.

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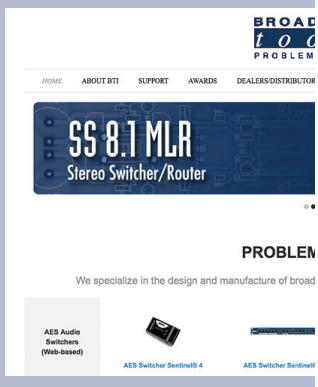

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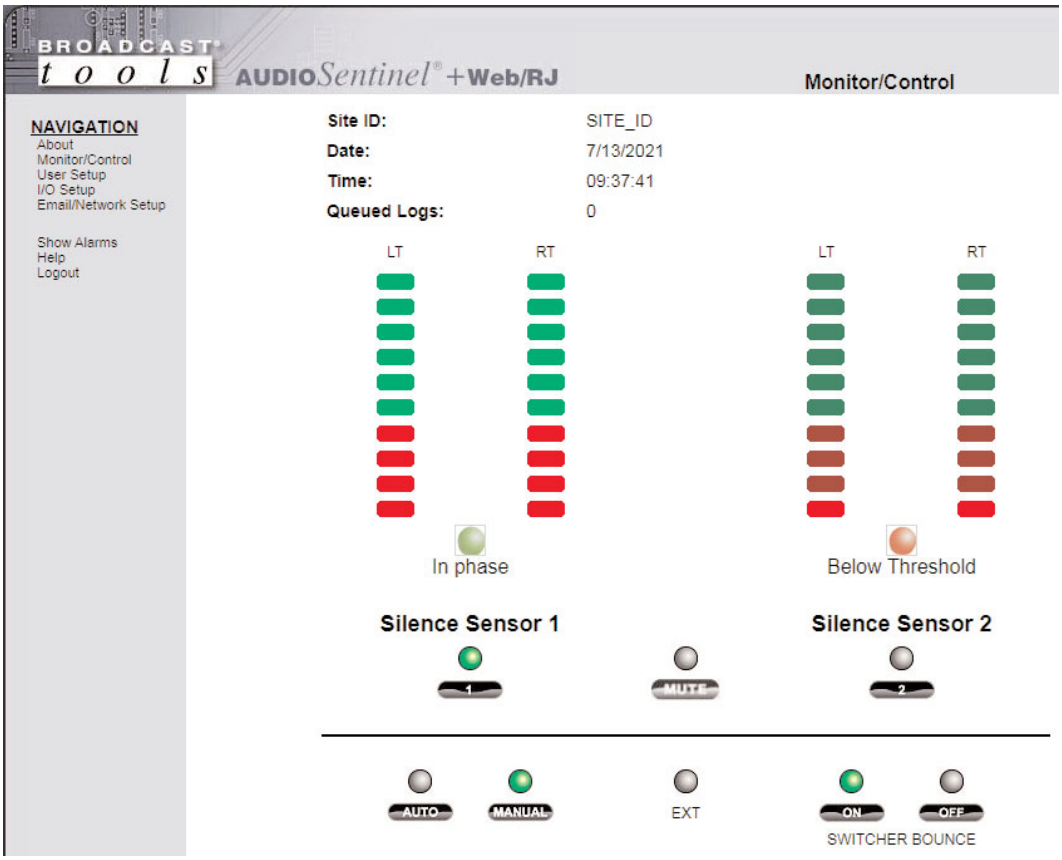
"Monitor/Control" Web Page

The Monitor/Control page allows the monitoring and or control of the Audio Sentinel. The following is an explanation of each item on this page:



User defined Site ID, Time and Date are always displayed.

Queued Logs:	Displays the number of queued logs.
Input Labels:	User defined input labels are set on the I/O Setup page
Left/Right Level Meters:	Display the left and right input levels for inputs one and two. Green is above the alarm threshold and red is below.
In Phase/Below Threshold:	Indicates if the input audio is Above Threshold/In Phase, Out of Phase, or Below Threshold (Silent).
Input/Mute buttons:	If the unit is in manual mode, the user may switch between each input or mute by placing the cursor on the label icon under each input LED and clicking. The indicator above the button will turn green when the channel is active.
EXT Indicator:	Illuminates when the "External" remote control input is triggered.

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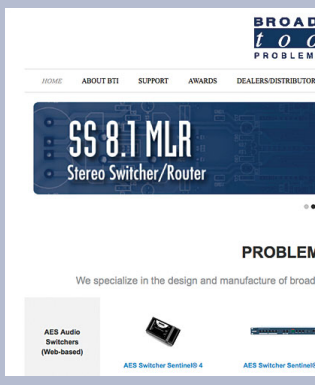

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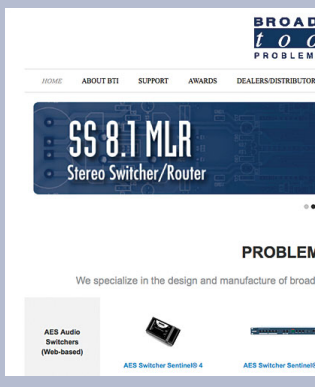
"Monitor/Control" Web Page – cont'd

AUTO: When Auto mode is selected, any time input ONE fails, the unit will switch to input TWO. Manual and remote operation of the unit is disabled except for "SUSTAINED" operation. The LED indicator is illuminated when selected.

MANUAL: Manual mode allows the user to select either input one or two as well as remote control operation. The manual LED indicator is illuminated when selected.

SWITCHER BOUNCE: Allows the switcher to automatically restore from Input 2 to Input 1 when audio returns while in AUTO mode. Enabled by default.

WEBSITE:
Visit our web site for product updates and additional information.



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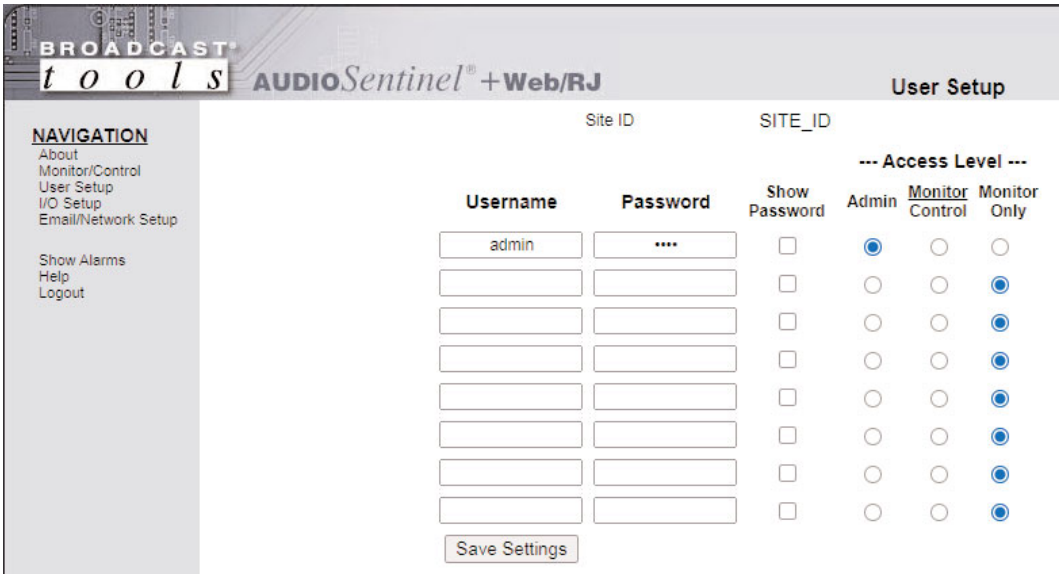
"User Setup" Web Page



NOTE: You may view a password by checking the "Show Password" box.

Eight Usernames and Passwords may be configured for one of three access levels:

1. "Admin" allows complete configuration access and control.

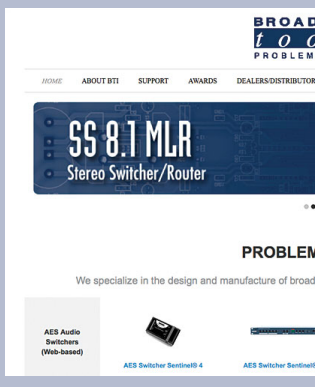
2. "Monitor/Control" allows the following access:
   About, Monitor/Control, Show log, Help, and Logout.

3. "Monitor Only" allows the following access:
   About, Monitor only, Help, and Logout.

Only users with "admin" access can make changes to this page.
The site ID is displayed and can be changed on the Email/Network Setup page.

NOTE: After any item has been changed, you MUST press the "Save Settings" button for your changes to be saved.

WEBSITE:
Visit our web site for product updates and additional information.



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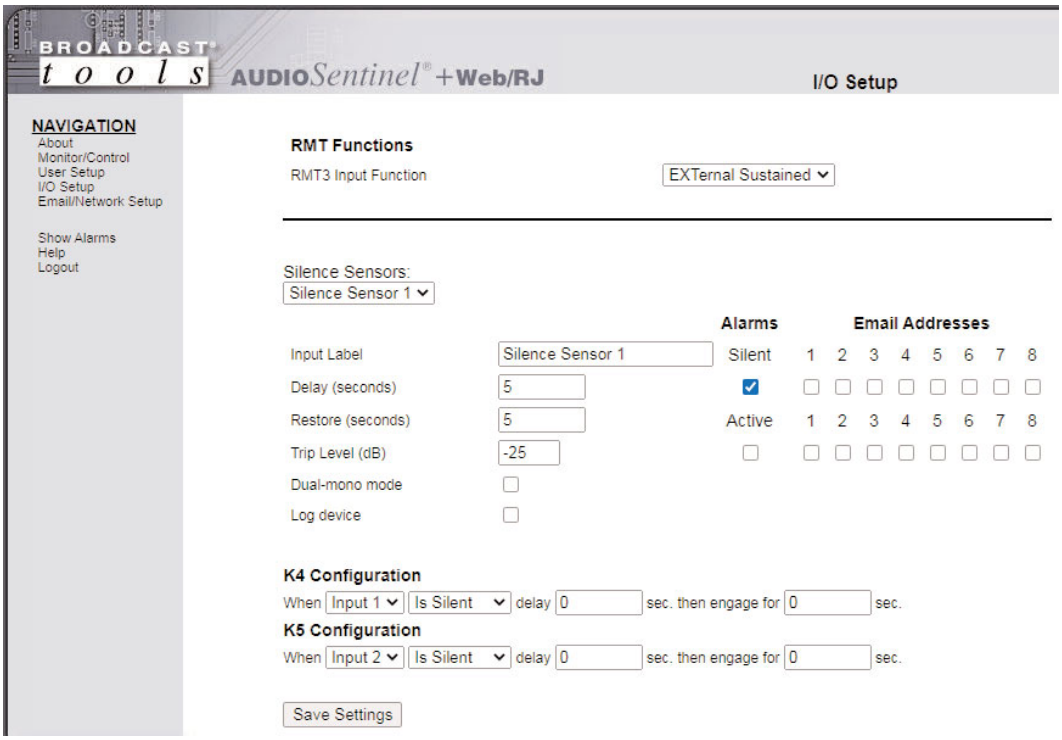
"I/O Setup" Web Page

The I/O setup page allows you to label and configure both inputs/silence sensors, as well as configure the relay output and remote-control inputs.



WEBSITE:
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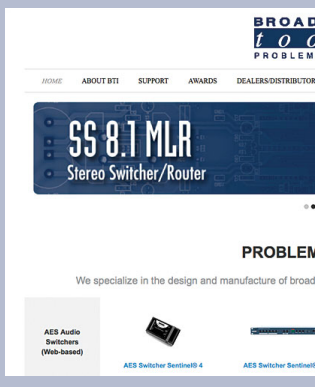

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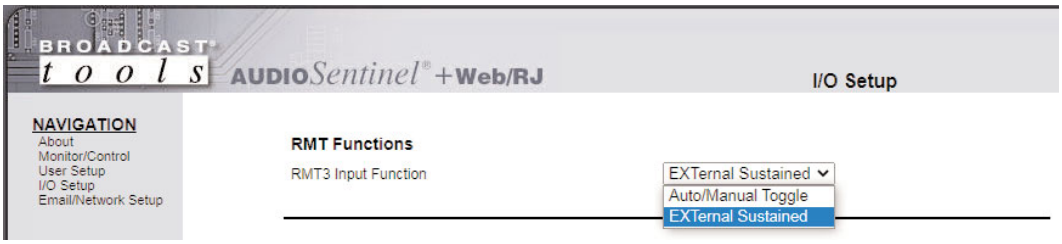
"I/O Setup" Web Page (cont.)

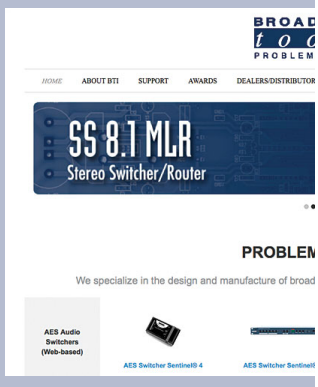


RMT3 Input Function: Auto/Manual Toggle: Pulsing the RMT3 input toggles unit between Auto and Manual mode.

EXTernal Sustained: Holding the RMT3 input low switches the unit to the backup input, releasing returns to the primary input.

NOTE: Press the "Save Settings" button to save your changes.

WEBSITE:
Visit our web site for product updates and additional information.



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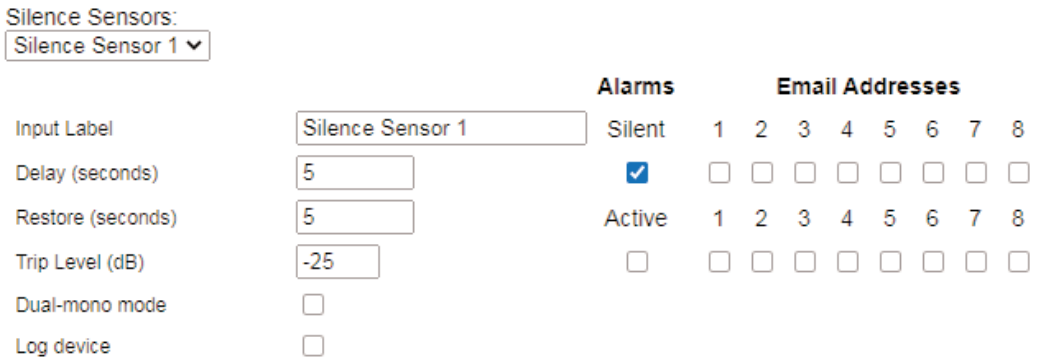
"I/O Setup" Web Page (cont.)



Input Label: Up to 20 characters may be entered to describe the input.

Delay (Sec): When the input goes silent or out of phase the delay timer starts, if the input remains in this state for the duration of the delay then an alarm is generated and, if in automatic mode, switches from input ONE to input TWO.

Restore Delay (Sec): This is the time required for not-silent audio to return and remain present before the unit clears the alarm and, if in automatic (bounce) mode, switches back to input ONE from input TWO.

Trip Level (dB): The input audio level below which input audio is considered silent/below threshold. (-15 to -35 dB)

Alarms: When checked, the unit logs an alarm when the silence sensor enters or exits an alarm condition.

Email addresses: The boxes labeled 1-8 allow the user to assign up to eight different email addresses for alarm notification.

Dual-mono mode: When enabled, both the left and right inputs must be below the trip level before the input is considered silent.

Log device: Enables email snapshot logging for input.

NOTE: The delay and restore timing range for both channels is 0 (OFF) to 65535 seconds (18 hours, 12 minutes and 15 seconds).

NOTE: Press the "Save Settings" button to save your changes.

WEBSITE:
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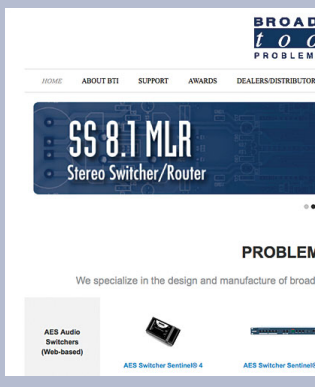

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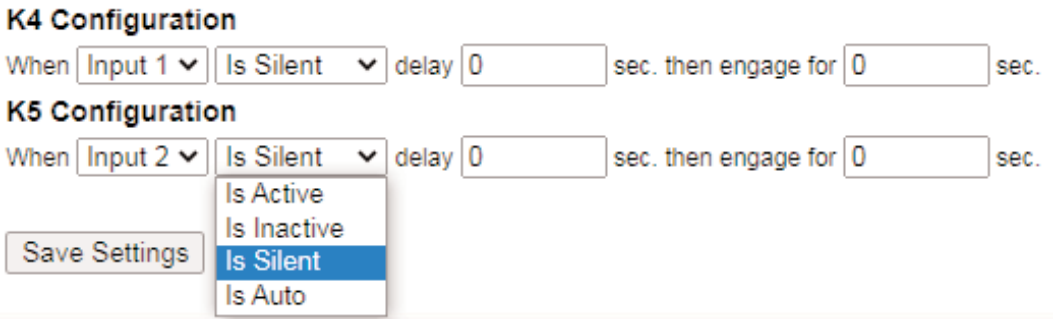
"I/O Setup" Web Page (cont.)



K4 and K5 Configuration: Each relay, labelled K4 and K5, respectively, may be programmed to operate when an input is silent, active (switched to), inactive (not switched to), or in auto mode. The logic for each relay is as follows:

When [input 1 or input 2] [Is Active, Inactive, Silent, or Auto] delay [X] seconds then [Engage] for [X] seconds.

NOTE: Delay timing = 0 (OFF) to 65535 seconds (18 hours, 12 min and 15 sec's).

NOTE: To enable relay latch/sustained type operation, the [Engaged] delay should be set to 0.

NOTE: Press the "Save Settings" button to save your changes.

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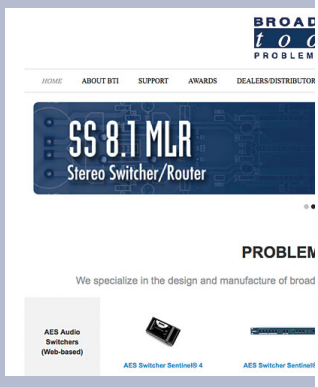
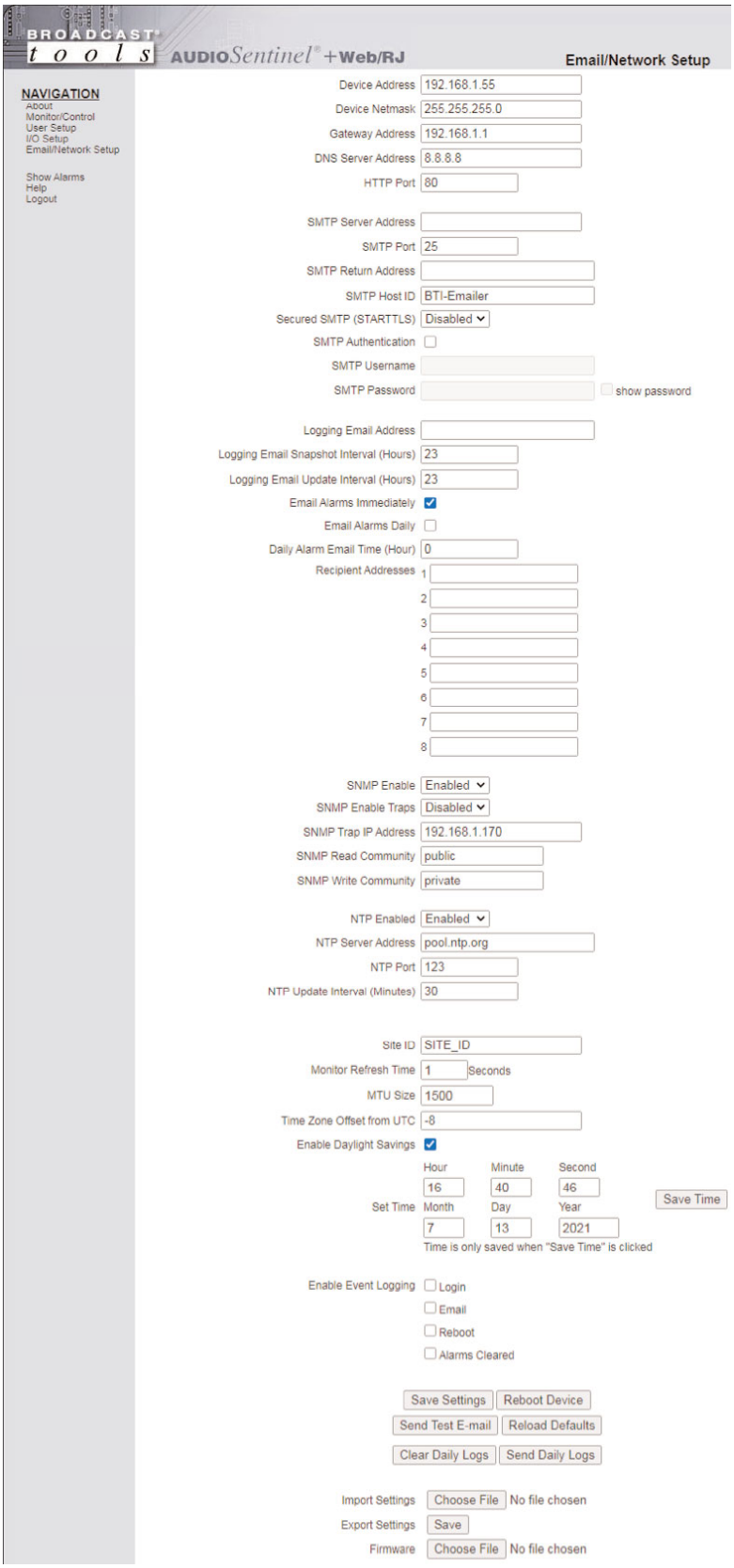


"Email/Network Setup" Web Page



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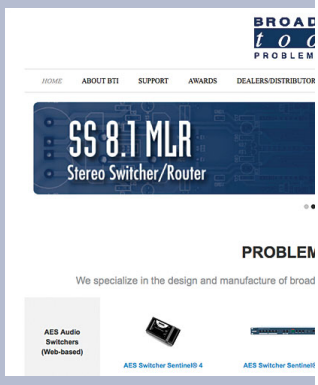

"Email/Network Setup" Web Page – Device Network Settings

Device Address:	Enter a static IP address here.	Default: 192.168.1.55
Device Netmask:	Enter the Netmask here:	Default: 255.255.255.0
Gateway Address:	Enter the Gateway IP here:	Default: 192.168.1.1
DNS Server IP Address:	Enter your DNS address here.	Default: 8.8.8.8
HTTP Port:	Normally Port 80	Default: 80

"Email/Network Setup" Web Page – SMTP Settings

SMTP Server Address:	SMTP (Simple Mail Transfer Protocol) server address. Used to send emails.
SMTP Port:	Normally Port 25, 587 or 2525. Default: 25
SMTP Return Address:	Enter your return email address here. Emails from the Audio Sentinel will indicate they are from this address. If an email cannot be delivered, a message stating why will be sent to this address.
SMTP Host ID:	Enter string here to identify the device. No spaces or special characters allowed.
Secured SMTP:	STARTTLS secure authentication is supported by most providers. This must be enabled for many SMTP servers, like Gmail. Leave disabled for standard Base64 authentication.
SMTP Authentication:	When checked SMTP authentication (username/password) is used. Most SMTP servers require authentication.
SMTP Username:	Enter SMTP server username here.
SMTP Password:	Enter SMTP server password here.

NOTE: Required for successful email: SMTP Server Address, SMTP Port, SMTP Return Address, SMTP Host ID. If the SMTP server requires authentication: SMTP username and SMTP password must be supplied, and authentication turned on. A valid email address must be entered into Recipient Address field #1.

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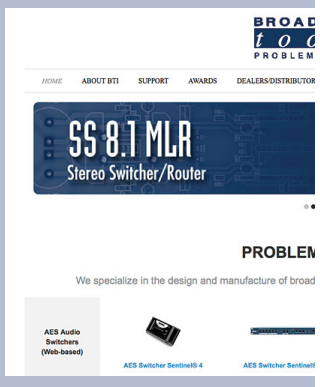

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"Email/Network Setup" Web Page – Email Logging Settings

Logging Email Address: Email address for the "Logging" email recipient (may be different from the 8 "Alarm" Recipient Addresses. Logging emails and Daily emails are sent to this address only.

Logging Email Snapshot Interval: The period in hours that a snapshot is taken of the system. The logging email is not sent on this interval.

Logging Email Update Interval: The period in hours that snapshots are emailed. This email may contain multiple snapshots if the Snapshot Interval is less than the Update Interval. Each snapshot will be identified by the date and time.

"Email/Network Setup" Web Page – Email Alarm Settings

Email Alarms: Choose Immediate and/or Daily. If Immediate is selected, then an email will be sent out as soon as an alarm is generated. If Daily is selected, then each alarm is queued and emailed as a digest every 24 hours. Both can be used at the same time. The number of queued alarms is displayed on the Monitor/Control page.

Daily Alarm Email Time: The hour of the day that queued alarms are sent. Queued alarms are sent to the Logging Email Address only.

"Alarm" Recipient Address: Email addresses for up to 8 addresses. These addresses correlate to the 8 email addresses selectable on the I/O Setup page.

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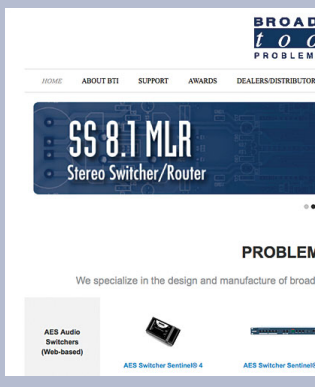

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"Email/Network Setup" Web Page – SNMP Manager Settings

SNMP Enable:	Enables or disables SNMP functionality, enabled by default.
SNMP Enable Traps:	When enabled, SNMP trap messages will be sent. When disabled, no trap messages will be sent to the manager IP.
SNMP Trap IP Address:	This is the IP address of the SNMP manager. The system will send traps to UDP port 162 at this IP address.
SNMP Read Community:	This is the community name used for Read-Only access.
SNMP Write Community:	This is the community name used for Read-Write access.

NOTE: A cold-start trap will be sent when the unit boots up if the SNMP Enable Traps are enabled and trap messages will be sent when a device enters or exits an alarm condition, depending on whether or not alarms are enabled.

"Email/Network Setup" Web Page – NTP Settings

NTP Enabled:	Enable for NTP network time sync. Default: Enabled
NTP (Time) Server Address:	Enter the NTP address here. Default: pool.ntp.org
NTP Port:	Port used to connect to NTP server. Default: 123
NTP Update Interval (Min):	Interval between time updates. Default: 30

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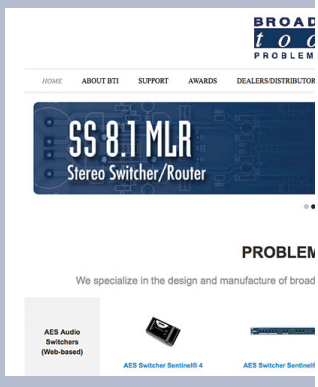

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"Email/Network Setup" Web Page – Other Settings

Site ID:	This is the Site Identifier that is displayed on the web and in email.
Monitor Refresh Time (Sec):	Interval at which the Monitor page refreshes. Shorter times may increase network traffic. Default: 1
MTU Size:	Sets the network interface's Maximum Transmittable Unit. 1500 by default. If a VPN is being used this may need to be reduced to 1296 to account for added overhead.
Time Zone Offset from UTC:	Sets the time zone used for the internal clock. Default: -8
Enable Daylight Savings:	Adjusts the clock for daylight savings time.
Set Time:	The hour, minute, second, month, day and year boxes can be used to set the time of the real time clock. The time is only updated if you click "Save Time" and not when you "Save Settings".
Enable Event Logging:	Event logging will generate an alarm, but it will not send an email. If the system is configured for Daily Alarm emails, then that Daily Alarm email will contain the event logging alarms as well as the alarms configured on the I/O Setup page.
Login:	When someone logs into the unit, the username and date/time will be logged in the alarm log.
Email:	When an email is sent, the type of email and date/time will be logged in the alarm log.
Reboot:	When the device boots the date/time will be logged in the alarm log.
Alarms Cleared:	When the Daily Logs or Normal Alarms are cleared, the type of log cleared and date/time will be stored. When Daily Logs are sent, the Daily Logs are also cleared; this will cause an event log as well.

WEBSITE:
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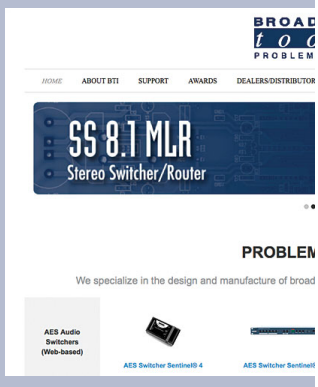

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"Email/Network Setup" Web Page – Controls

Save Settings: After pressing the "Save Settings" button, the device will reboot (If you changed the IP address, you must navigate your web browser to the new IP address (if the HTTP port was changed from port 80, be sure to add the new port number after the IP: xxx.xxx.xxx.xxx:port #). If you didn't change the IP address, then you will be returned to the login screen after the device reboots.

Reboot Device: When you press the "Reboot Device" button, the internal web server restarts.

Send Test Email: Press this button to send a test email to recipient address 1.

NOTE: After you are done making changes to the Email/Network Setup page, you MUST press the "Save Settings" button to save your changes.

Reload Defaults: When you press the "Reload Defaults" button, the device resets to factory default settings.

Clear Daily Logs: When you press the "Clear Daily Logs" button, the daily logs stored in memory will be cleared. Keep in mind that if the Alarms Cleared Event is enabled, this event will post after the logs are cleared.

Send Daily Logs: When you press the "Send Daily Logs" button, the system will send the daily logs email and clear the log queue.

Import Settings: Browse to locate and import a previously saved .ncs settings file.

Export Settings: Clicking save will allow you to download a backup copy of the settings entered into the unit as a .ncs file.

Firmware: Browse to locate and apply a firmware updated file saved on your computer.

WEBSITE:
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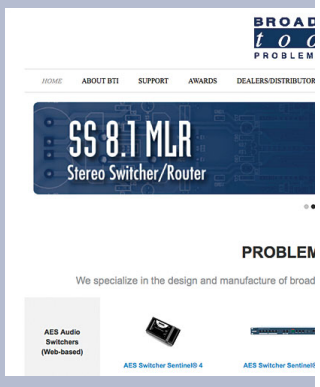
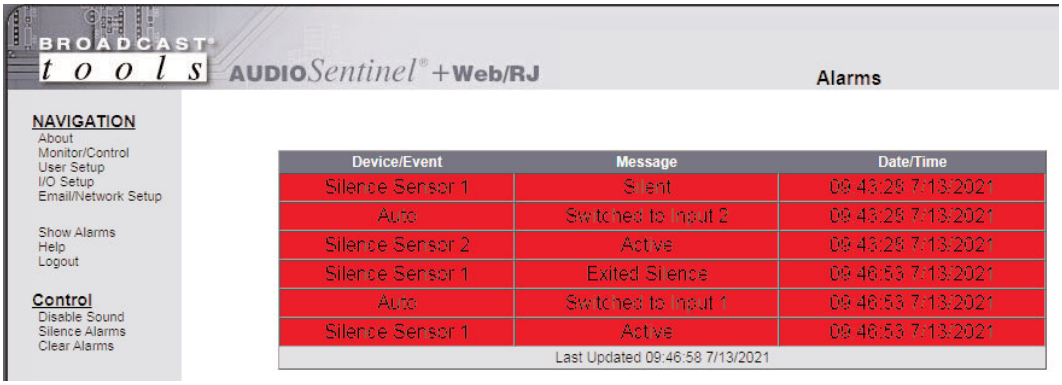


"Show Log" Web Page



This page displays current alarms.

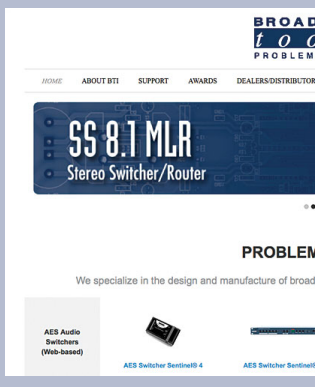
Alarm Messages

Active:	Input switched to output.
Silent:	Audio below silence alarm threshold.
Exited Silence:	Audio above silence alarm threshold.
In Phase:	Stereo audio exited out of phase alarm.
Out of Phase:	Stereo audio entered out of phase alarm.

Controls

Disable Sound:	Mutes the alarms sound.
Silence Alarms:	Makes active alarms as acknowledged.
Clear Alarms:	Empties the Alarm Log.

WEBSITE:
Visit our web site for product updates and additional information.



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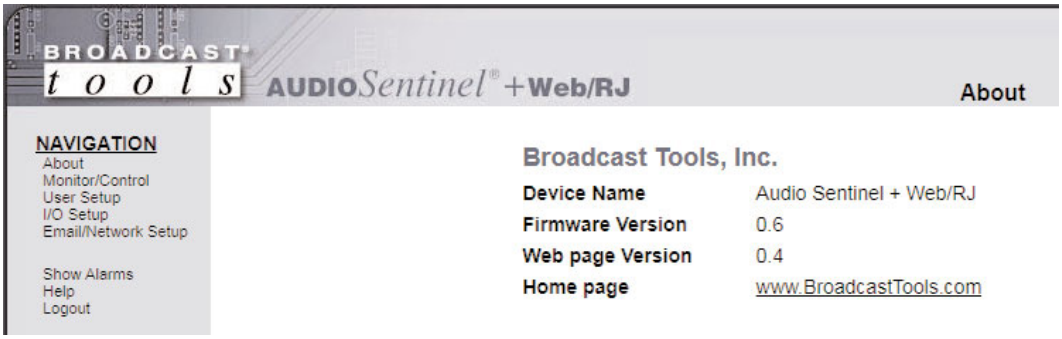
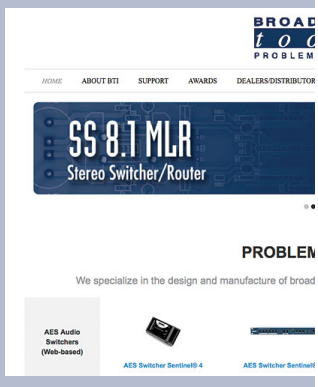
"About" Web Page



The "About" web page displays the product name, firmware version numbers, and Broadcast Tools® web site link. For firmware updates please contact Broadcast Tools® Technical Support: http://broadcasttools.com/support/

WEBSITE:
Visit our web site for product updates and additional information.



Specifications

Ethernet Interface:	RJ-45, 10base-T or 100base-TX, auto sensing with link & activity LED indicators - Full/half duplex.
Protocols:	TCP/IP, UDP/IP, ARP, ICMP, SNMP, DHCP, HTTP, SMTP, ESMTP w/TLS (Gmail etc.)
2x1 Program Switcher:	Zero latency, transparent signal path. Mechanical latching sealed relays utilizing 2-form-C bifurcated – crossbar silver alloy with gold overlay contacts.
Silence Sense Level:	-15 to -35 dB below normal level, in 1dB steps.
Alarm Delay, Restore Delay Time:	0 to 65535 seconds (18 hours, 12 minutes and 15 seconds).
Remote Control Inputs:	Closure to ground (Sustained or momentary depending on mode). Internally pulled up to 5 VDC.
Relays (K4, K5, K6):	K4, K5 = SPDT, K6 = SPDT + 1 N.O. Dry contacts, 30 VDC @ 1 Amp maximum rating.

CAUTION! For safety, never connect 120 Vac circuits to the above relays!

Connectors:	Audio = 5-positon TB and 8P8C RJ45. All I/O other: removable euro-block screw terminals. Mating plugs supplied.
Required power supply:	9 to 12 VDC @ >500 mA power supply with IEC AC inlet supplied. US AC power cable included.
Size:	8.50” x 7.10” x 1.576” (WDH)
Weight:	3.0 lb.
Options:	* RA-1, 1-RU rack shelf. Accommodates 2 units.

WEBSITE:
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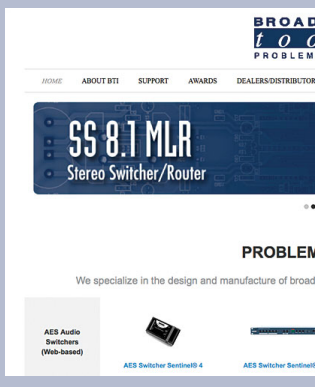

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LIMITED WARRANTY

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Broadcast Tools warrants to each Buyer of any item manufactured by Broadcast Tools that the item will be free from defects in materials and workmanship at the time it is shipped by Broadcast Tools if the item is properly installed, used and maintained.

EXCLUSIVE REMEDIES

If Broadcast Tools is notified, in writing, of a failure of any item manufactured by Broadcast Tools to conform to the foregoing Limited Warranty within one (1) year following the date of the Buyer's acquisition of the item, and if the item is returned to Broadcast Tools in accordance with Broadcast Tools' instructions for confirmation by inspection of the defect (which at Broadcast Tools' election may include, without limitation, a requirement that the Buyer first obtain a Return Authorization number from Broadcast Tools, that the Buyer furnish proof of purchase in the form of an invoice and/or receipt, and that the Buyer prepay all freight charges associated with any return of the item to Broadcast Tools using such freight service as Broadcast Tools reasonably may specify), Broadcast Tools will repair or replace the defective item, or will refund the purchase price paid by the Buyer for the item. Broadcast Tools shall have the exclusive right to choose between these alternative remedies.

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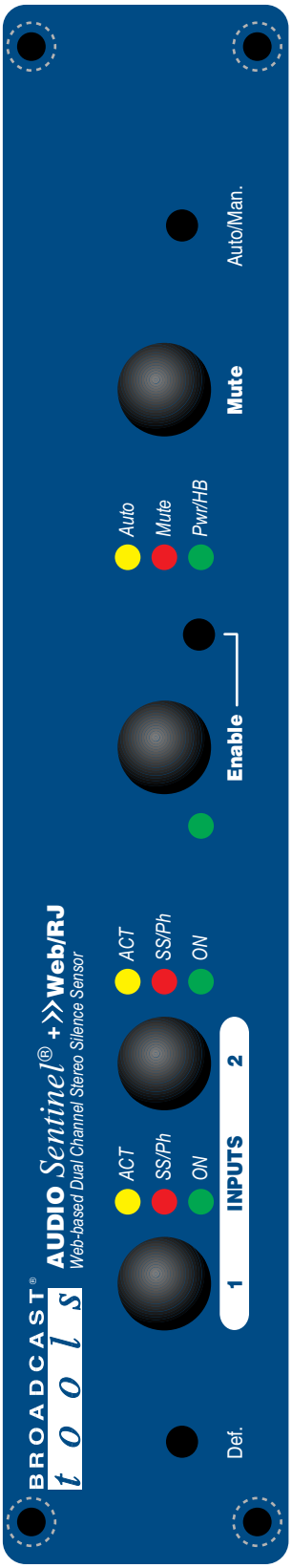
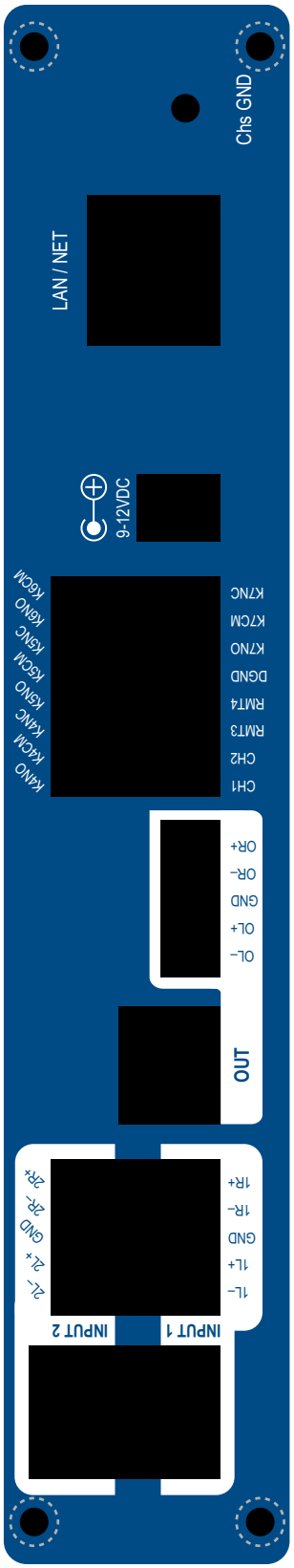
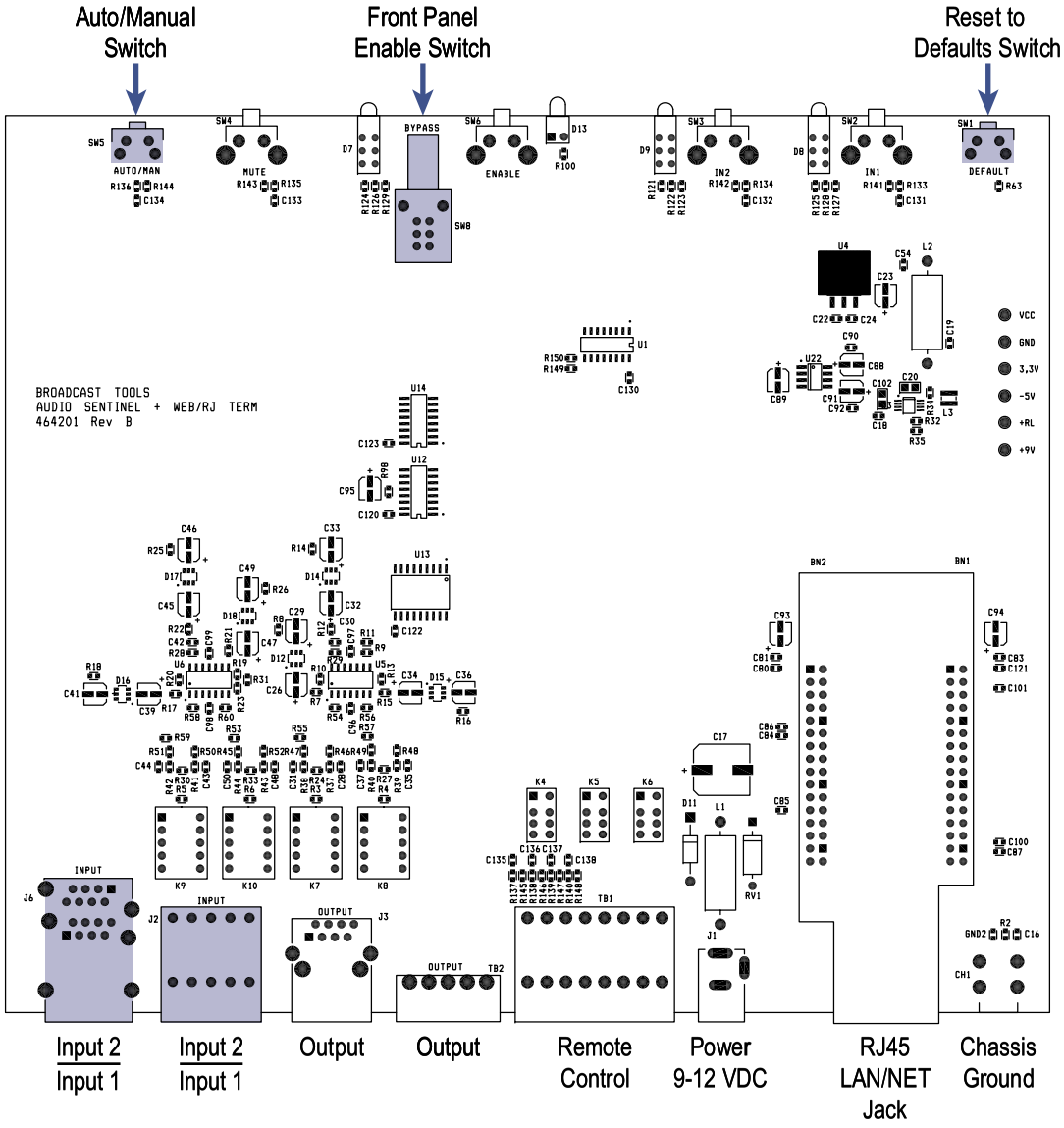

BROADCAST tools
AUDIO Sentinel® +»Web/RJ
Web-based Dual Channel Stereo Silence Sensor
ACT
SS/Ph
ON
INPUTS
1
2
Def.
Auto
Mute
Pwr/HB
Enable
Mute
Auto/Man.


Chs GND
LAN / NET
9-12VDC
CH1
CH2
RMT3
RMT4
DGND
K7NO
K7CM
K7NC
K4NO
K4CM
K4NC
K5NO
K5CM
K5NC
K6NO
K6CM
OUT
OL–
OL+
GND
OR–
OR+
INPUT 1
INPUT 2
1L–
1L+
GND
1R–
1R+
2L–
2L+
GND
2R–
2R+

Component Layout



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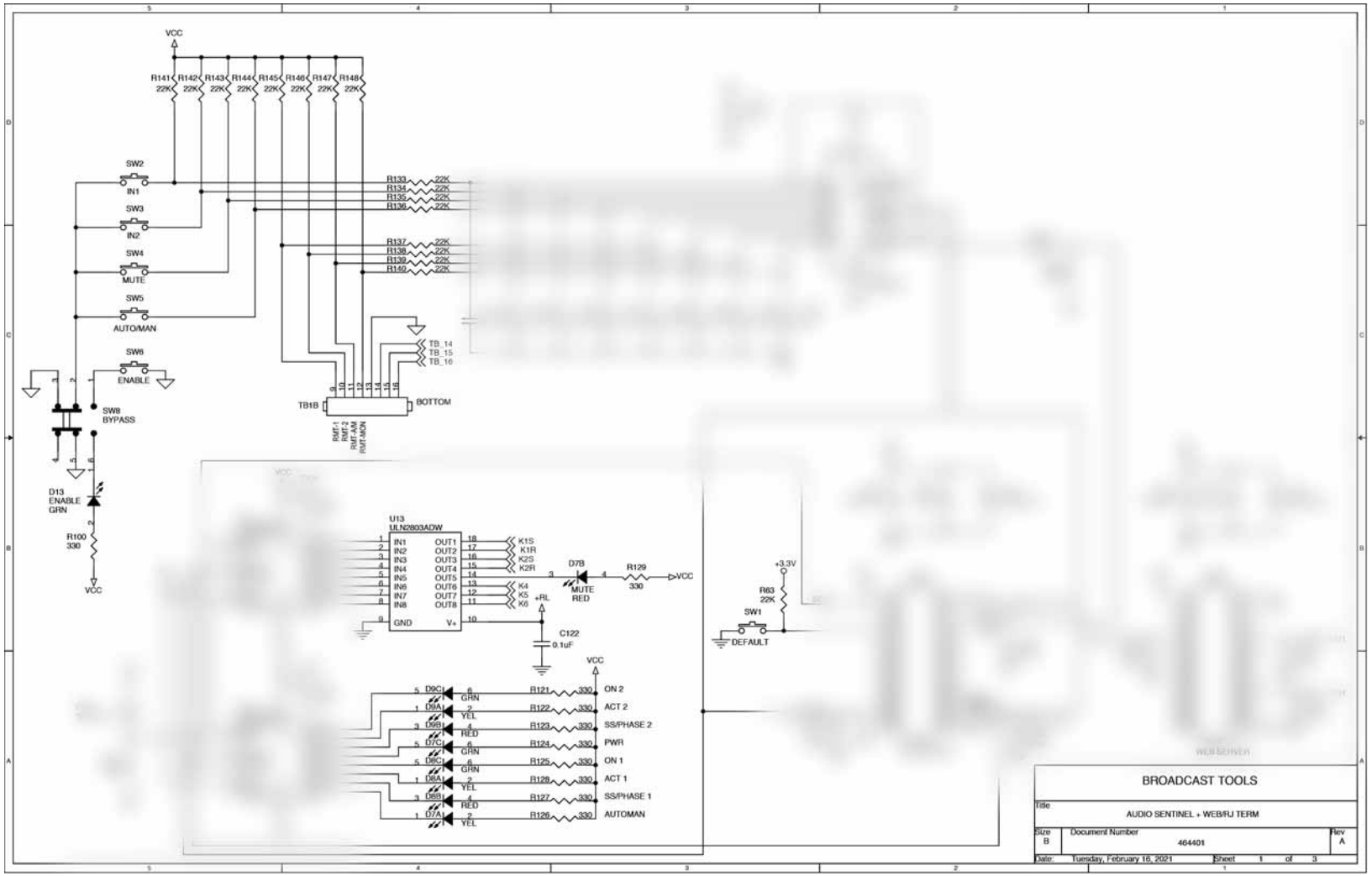
Fractional Schematic



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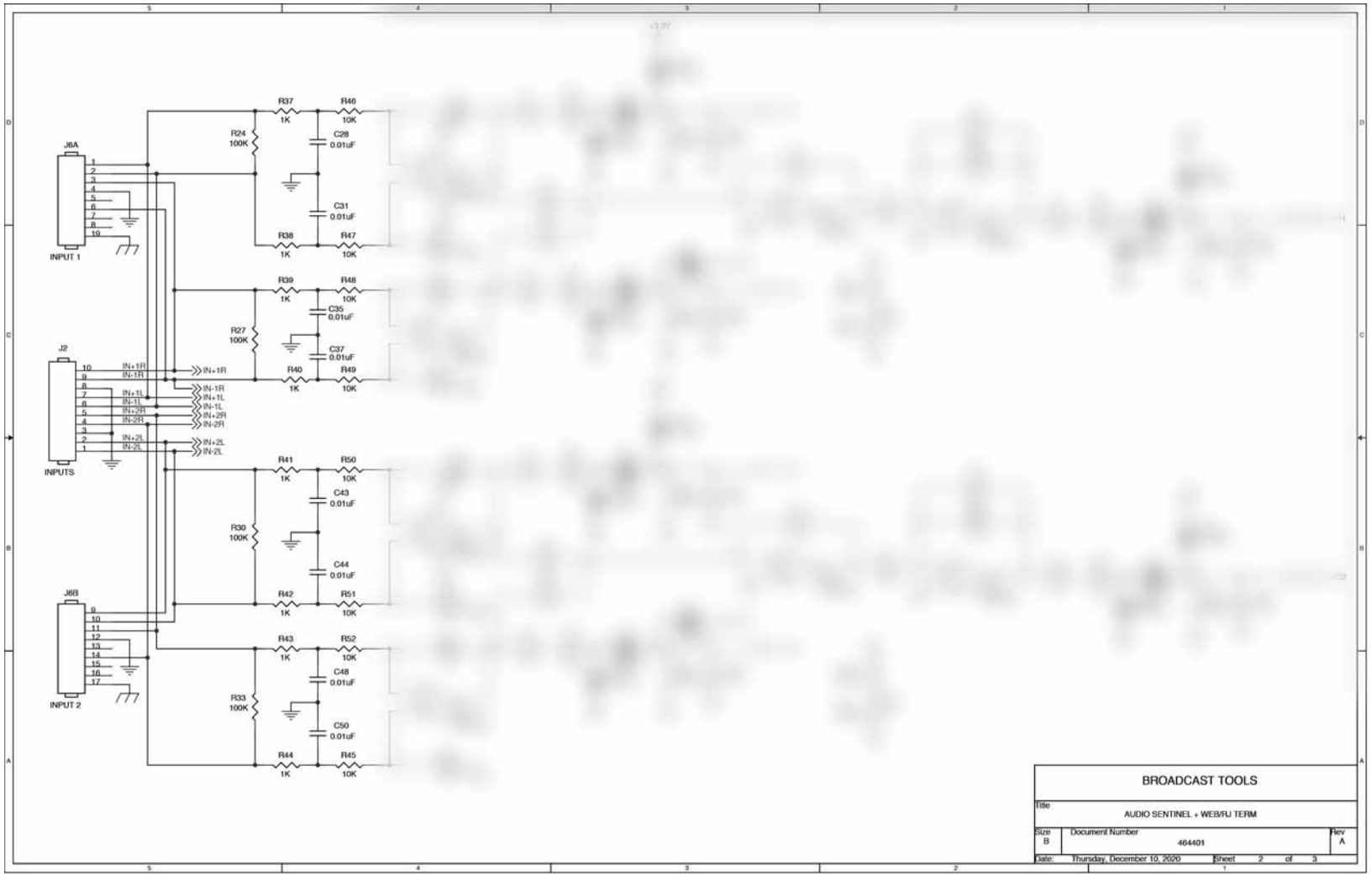

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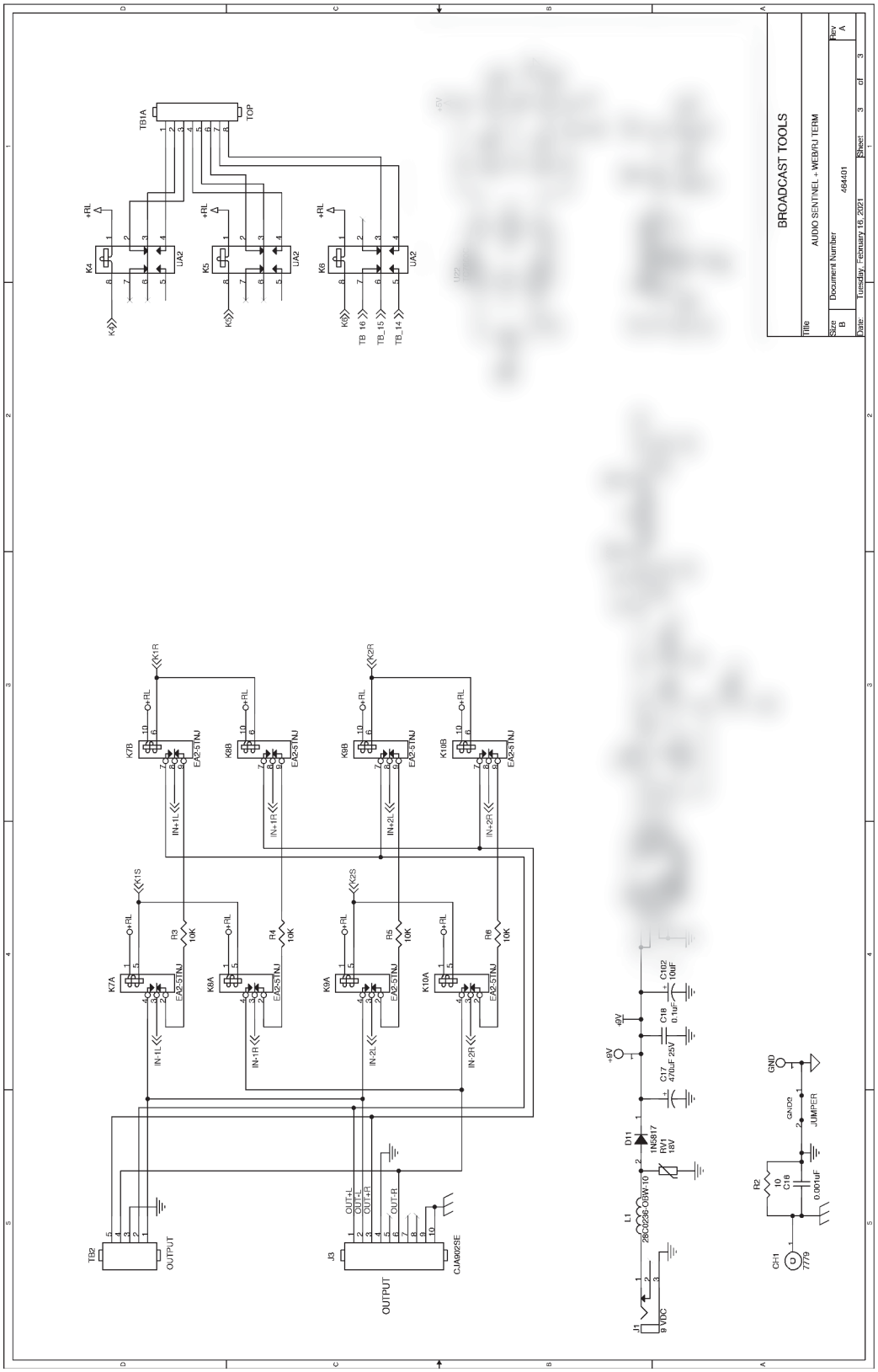

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