

BROADCAST[®]
t o o l s **INC**
PROBLEM SOLVED

Installation and Operation Manual



Audio Sentinel + Streaming

Web based dual channel stereo silence monitor with streaming.

Manual update: 11/5/2020

Firmware Version 1.19 and above

If you need a firmware upgrade, contact Broadcast Tools[®]

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ALL SPECIFICATIONS AND FEATURES FOR THIS PRODUCT ARE SUBJECT TO
CHANGE WITHOUT NOTICE

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

Due to the dynamic nature of product design, the information contained in this document is subject to change without notice. Broadcast Tools, Inc., assumes no responsibility for errors and/or omissions contained in this document. Revisions of this information or new editions may be issued to incorporate such changes.

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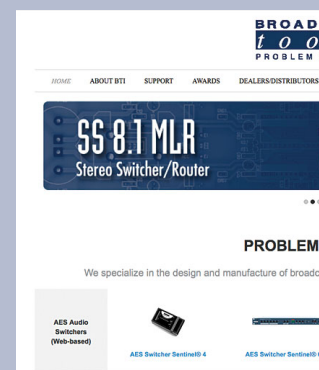
Visit www.broadcasttools.com for important product update information.

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INTRODUCTION

Thank you for your purchase of a BROADCAST TOOLS® AUDIO SENTINEL + STREAMING four channel internet radio monitor. We're 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 + STREAMING.

SAFETY INFORMATION

Only qualified technical personnel should install the AUDIO SENTINEL + STREAMING. 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 + STREAMING 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 + STREAMING. Broadcast Tools, Inc., is unable to support NON-Broadcast Tools software, hardware or NON-Broadcast Tools computer/hardware/software problems. If you experience these problems, please research your hardware/software instruction manuals or contact the manufacturers technical support department.

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
BROADCAST TOOLS® BRAND PRODUCTS!**

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.

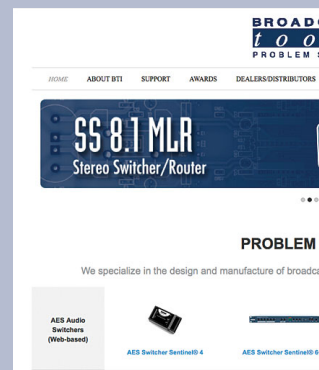


NOTE:

This manual should be read thoroughly before installation and operation.

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INTRODUCTION

Product Overview

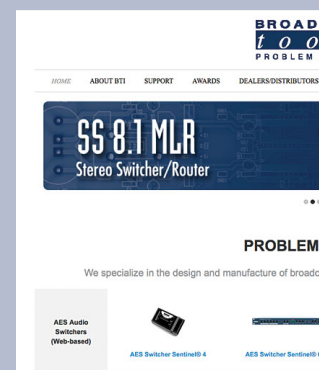
The AUDIO SENTINEL + STREAMING is a web-enabled two channel stereo silence monitor combined with a transparent, integrated stereo audio switcher, and MP3 streaming codec for confidence monitoring over the internet. AUDIO SENTINEL + STREAMING is designed to monitor two balanced or unbalanced independent stereo analog audio sources and switch to a back-up analog audio source when silence is detected on either or both input channels. The AUDIO SENTINEL + STREAMING may also be configured for independent dual-stereo non-switching applications. The AUDIO SENTINEL + STREAMING can be controlled and monitored locally and/or remotely over any IP network, including private networks, IP-based industrial control networks, and the Internet. Users can operate the product using a web browser or web-enabled mobile device. Email notifications may be configured to alert up to 8 recipients when alarms are detected. The user may also enable a sound effect to play on their PC speaker when an alarm is generated while logged in. Logging of system status, along with the site ID may be emailed in time spans from once an hour to once a day. Two SPDT relays are supplied to indicate which input channel is feeding the output, while two open collector outputs are provided to indicate input alarm status.

Features/Benefits

- Built-in web server provides simple, web based notification, monitoring, configuration, control.
- Internal silence sensor with front panel activity and alarm LED indicators.
- MP3 streaming codec for web based output audio confidence monitoring.
- Front panel, remote, and web-based switcher controls.
- Silence trip level detection from -24dB 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.
- 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.
- Support for STARTTLS secure SMTP authentication (Gmail.)
- Removable euroblock-style screw terminal connectors simplify wiring and service. Mating plugs are supplied.
- Fully RFI proofed.
- Surge protected internal power supply, PS-1515 universal switching +/-15VDC power supply with domestic connectors supplied. International AC connectors optional.
- Up to three units may be mounted on the optional RA-1 rack shelf. Desktop and wall mounting is also possible.

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OVERVIEW

Inspection

Please examine your AUDIO SENTINEL + STREAMING carefully for any damage that may have been sustained during shipping. If any damage is present, please notify the shipper immediately and retain the packaging for inspection by the shipper. The package should contain the AUDIO SENTINEL + STREAMING, and a +/- 15 VDC wall power supply with domestic connector. Manuals may be downloaded from our web site.

Installation

Surge Protection

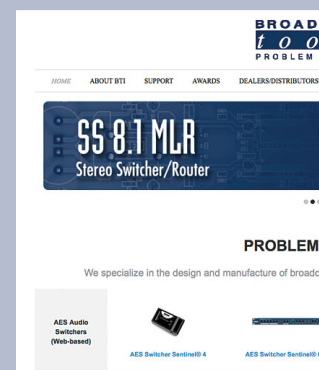
The AUDIO SENTINEL + STREAMING has built-in resistance to voltage changes; we recommend that you use a power surge protector or line conditioner on the incoming AC line. Lightning strikes and/or other high voltage surges may damage your AUDIO SENTINEL + STREAMING and connected equipment if it is not 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 + STREAMING to a UPS system. A UPS helps minimize the risk to the AUDIO SENTINEL + STREAMING and provides power during a power outage.

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LED indicators

- “Pwr/HB” LED: Illuminates when power is applied and flashes to indicate microprocessor operation. (Green)
- “EXT” LED: Lit when EXTERNAL alarm input is active. (Yellow)
- “SS1” LED: Lit when silence is detected on Input 1. (Red)
- “SS2” LED: Lit when silence is detected on Input 2. (Red)
- “Auto” LED: Lit when in automatic switching mode, in manual mode when not lit. (Green)
- “Enable” LED: Illuminates when the front panel enable push button option is enabled.
- “ON” LEDs: Lit when input is routed to output. (Green)
- “ACT” LEDs: Lit when input audio is above threshold. (Yellow)

Front Panel Controls

“1” and “2” pushbuttons: Used to select which input is routed to the output when in Manual mode. Each push button has an associated LED indicator, which will illuminate when that particular channel is selected. When a channel is selected, the previous channel is deselected (interlock).

“Auto” pushbutton: Used to toggle between automatic and manual switching modes.

“Enable” pushbutton: The enable (safety) push button can be enabled to require the user to hold down the enable push button while selecting any of the other front panel push buttons, the enable LED is illuminated when this function is enabled

Audio Input Connections

Connect your audio sources to either of the two stereo balanced channels. For unbalanced inputs, connected the high side of the source to the (+) positive input and the shield along with a jumper between the “-” input and GND terminals. Single (monaural) input sources should have their left and right inputs connected in parallel. Proper phasing must be observed.

Input 1 (Top row, TB1)				
2L-	2L+	Gnd	2R-	2R+
1L-	1L+	Gnd	1R-	1R+
Input 2 (Bottom row, TB1)				

Audio Output Connections

Connect the load to the terminals labeled “OL-/+ CM and OR-/+ CM. For unbalanced loads, use the “+” and GND terminals only. Shields should be tied to the “GND” terminals.

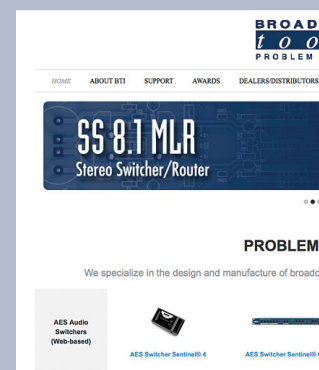
NOTE: The switching function is not required for proper operation

Output (Top row, TB3)				
OL-	OL+	Gnd	OR-	OR+

See Remote Control Input Connections
(Bottom Row, TB3)

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INSTALLATION

Remote Control Input Connections

The Audio Sentinel + Streaming has four remote control inputs that accept momentary contact closures, open collector, or TTL/CMOS input logic levels. Each input is pulled high (5-volts) through a 22K resistor and is considered active/on when pulled low to ground.

(Top row, TB2)

RM1	RM2	RM3	RME	GND
(Input 1)	(Input 2)		(EXtErnal)	

Remote Control Inputs

(Bottom Row, TB2)

For example; pulsing the “RM2” input to ground would switch the Audio Sentinel + Streaming to Input 2 when in Manual switching mode.

The “RME” (external) can be configured for either toggle or sustained closure control. In toggle mode each time this input is pulled to ground, the unit toggles between channels one and two. In sustained mode the RME input will immediately trigger and switch to the back-up source. This may be used to monitor STL or satellite squelch relay, etc.

Each remote control channel is pulled high (5-volts) through a 22K resistor.

Relay and Open Collector Connections

(TB3 Top)					
K1NC	K1CM	K1NO	K3NC	K3CM	K3NO
(IN1 Tally)	(IN1 Tally)	(IN1 Tally)	(IN3 Tally)	(IN3 Tally)	(IN3 Tally)
K2NC	K2CM	K2NO	SS1 OC	SS2 OC	GND
(IN2 Tally)	(IN2 Tally)	(IN2 Tally)			

(TB3 Bottom)

The K1, K2 and K3 SPDT relays provide switch position tallies for the Audio Sentinel + Streaming. K1 is closed when Input 1 is switched to the output, K2 is closed when input 2 is switched to the output.

The Audio Sentinel + Streaming has two open collector outputs that are used to indicate input silence alarm status. The SS1 OC indicates for Input 1 and the SS2 OC indicates for Input 2. The open collector output will go low providing a return for an LED indicator, TTL/CMOS logic or relay. External pull-up resistors may be required in some installations, voltages must be limited to 6 VDC at 600 mA.

LAN / NET Jack

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

MicroSD Card Slot

MicroSD memory card slot. Used for file storage and software updates via user-supplied MicroSD card.

Chassis Ground (Chs Gnd)

Tie to station ground system.

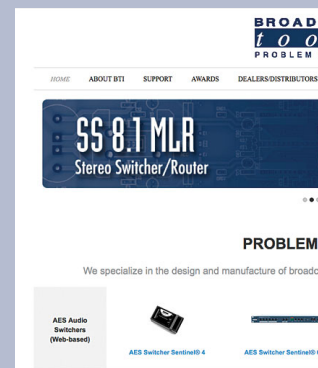
Power

Connect the supplied PS-1515 +/-15 VDC switching power supply's 3-pin AMP-style latching power connector to the unit and the power supply with domestic connector into a 120 Vac 50-60 Hz power source. International AC input power plug adapters are optional.

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

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INSTALLATION

Web Setup and Operation

Ethernet “Quick Start” guide

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 XP operating system. For setup using other operating systems, refer to the appropriate OS user’s manual.



CAUTION!

CAUTION! Never download firmware updates unless instructed to do so by Broadcast Tools®. Doing so deletes all software and voids all warranties from broadcast tools®, inc.

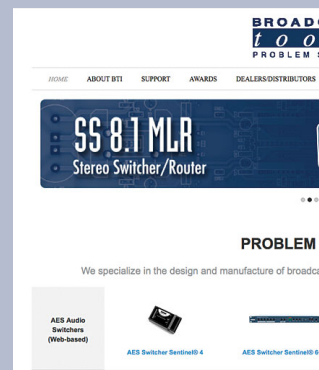


NOTE:

We recommend the use of the latest version of Firefox, Safari for Windows or Chrome as your browser.

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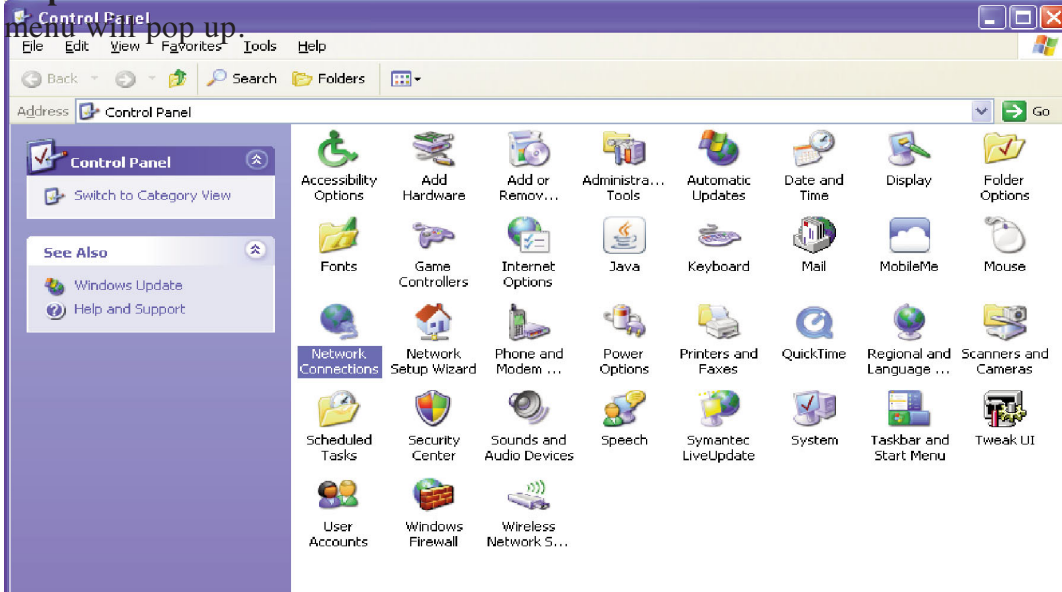
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Ethernet “Quick Start” guide (cont).

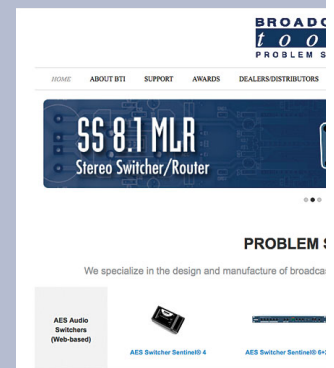
Step 1: Open the control panel by clicking on the start menu, click on settings, then click on Control Panel. (Note that the control panel shown is in “Classic View”. If control panel is in “Category View” select the “Classic View” option before proceeding.)

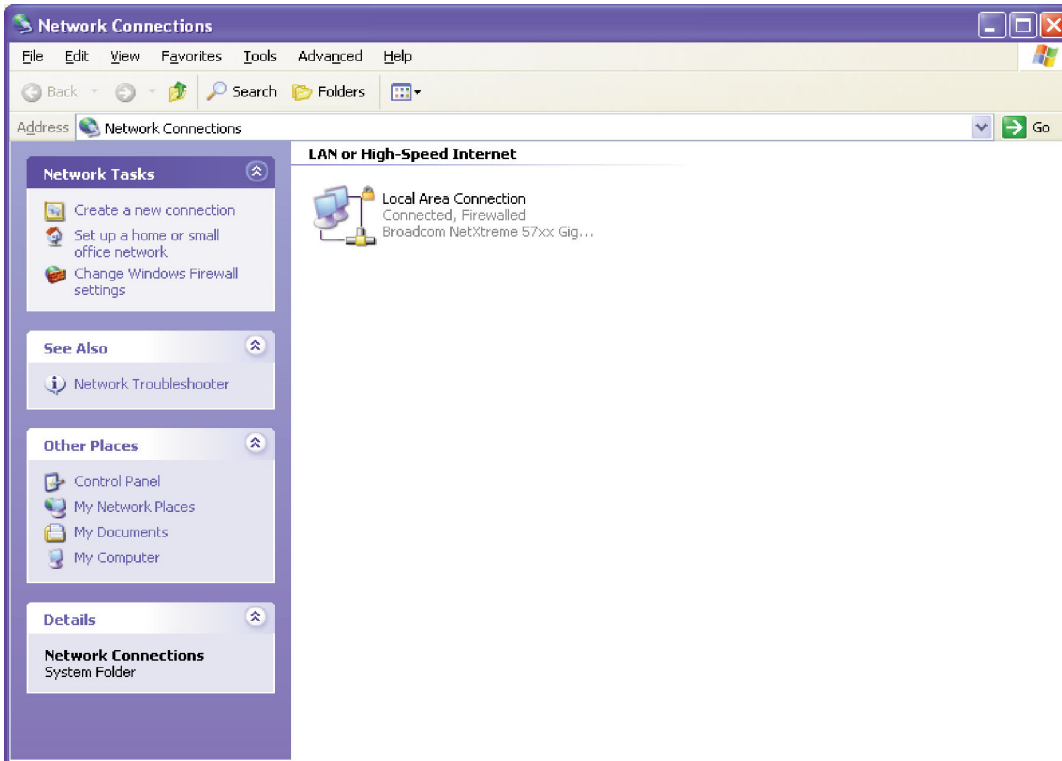
Step 2: Double click on the icon labeled Network Connections. The following menu will pop up.



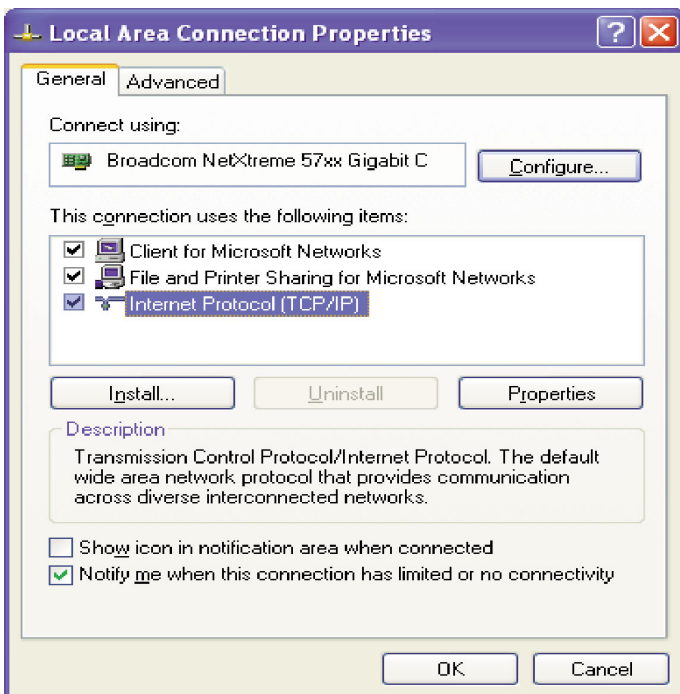
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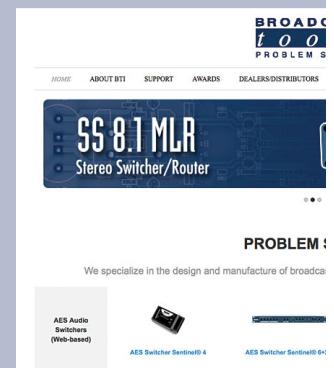
Step 3: Right click on the icon labeled Local Area Connection. Another menu will appear. Select the option at the bottom of the menu labeled Properties. The Local Area Connection Properties window will appear.

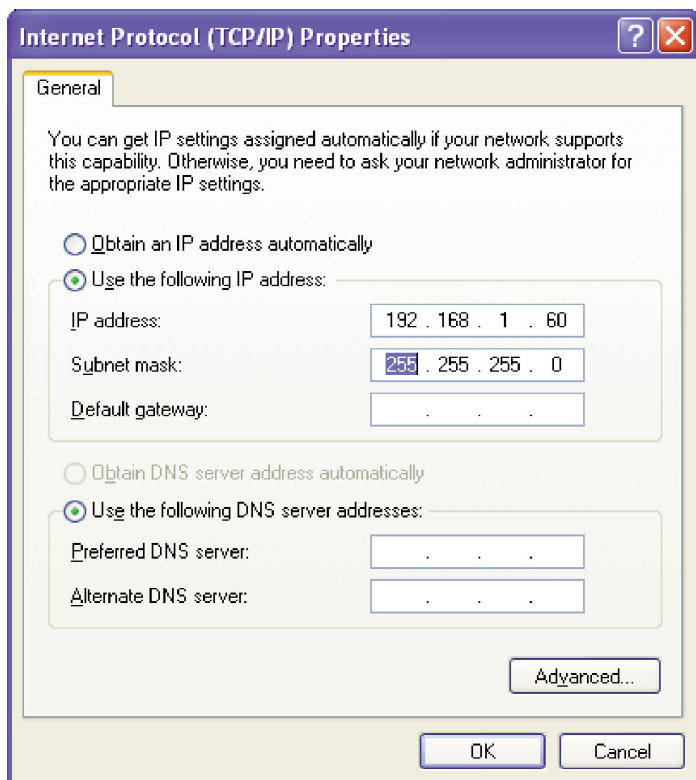


Step 4: On the Local Area Connection Properties page, double click on Internet Protocol (TCP/IP) to display properties.

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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.



CAUTION!

Broadcast Tools
products, as any electronic device, can fail ...



NOTE:

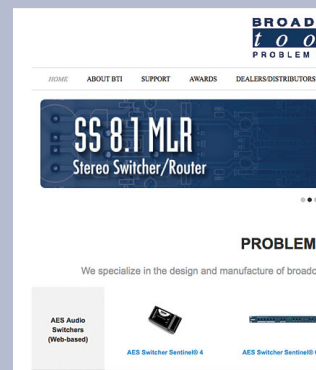
*For safety, **DO NOT** connect ...*

! TIP

Helpful tips area.

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Opening the LOGIN Web Page

1. Connect the supplied GRAY colored XOVER cable between the PC's Ethernet port and the products "LAN/NET" network RJ45 jack.
2. Connect the supplied power supply to the product's power jack. Verify that the front panel green POWER LED is ON and the left "LINK" LED above the "NET" Network RJ-45 connector is illuminated

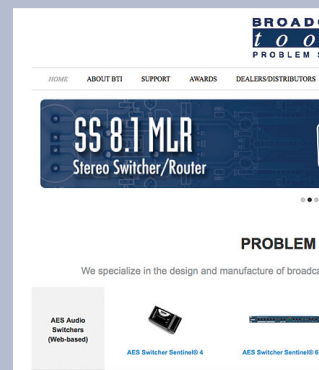
Open the product's login page by typing the following URL into the browser: <http://192.168.1.55> a username and password is required to change any parameter and are case sensitive.

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

3. Once you are logged in, follow this manual for setup and/or operational information.

WEBSITE:

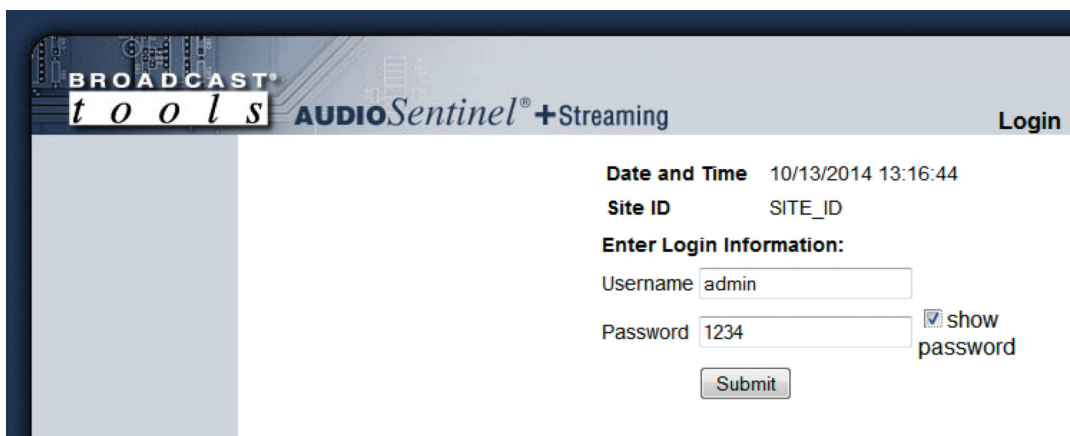
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“Login” Web Page

The Login screen displays the Username and Password entry points as well as the date, time, and site ID.

You may view the password by checking the “Show Password” box.

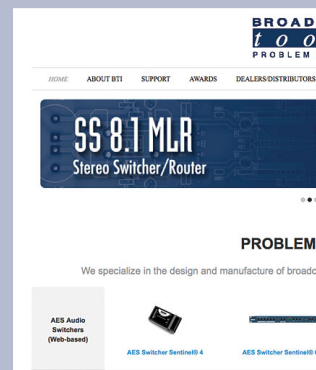


The screenshot shows the login interface for Broadcast Tools Audio Sentinel. The header includes the 'BROADCAST tools' logo and the text 'AUDIO Sentinel® + Streaming'. On the right, there is a 'Login' button. The main content area displays the current date and time as '10/13/2014 13:16:44' and the site ID as 'SITE_ID'. Below this, a section titled 'Enter Login Information:' contains a 'Username' field with 'admin' entered, a 'Password' field with '1234' entered, and a checkbox labeled 'show password' which is checked. A 'Submit' button is located below the password field.

After you have successfully logged in, the Monitor/Control page will be displayed.

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“Monitor/Control” Web Page

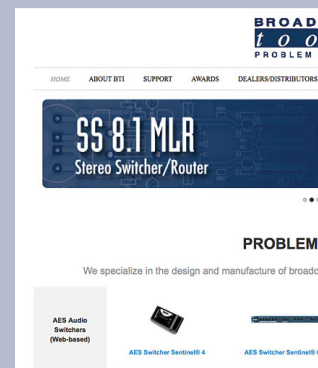


The Monitor/Control page allows the monitor and/or control of the Audio Sentinel + Streaming. The following is an explanation of each item on this page:

- Site ID: Displays user assigned site ID/device name.
- Date/Time: Displays date and time from system clock.
- Queued Logs: Displays the number of queued log entries scheduled to be emailed.
- Monitor Output: MP3 monitoring stream control. Click “Start Stream” to monitor output audio. Also available at: <http://192.168.1.55/audio/output.mp3>
- Left and Right Level LED’s: Display the left and right input levels for inputs one and two. Green is above the alarm threshold and red is below.
- Input Labels: User defined in the Silence Sensor setup page.

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Input Selection buttons: If the unit is in manual mode, the user may switch between each input by placing the cursor under each input LED, then click. The desired input is selected as denoted by the LED being illuminated.

EXT LED: Illuminates when the “SELECT/EXT” input is selected.

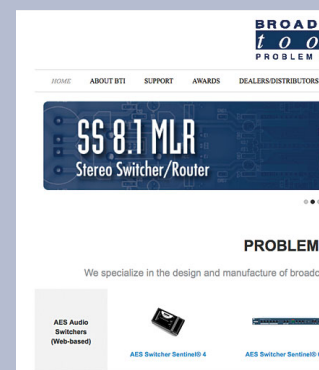
AUTO: When this mode is selected, any time input ONE fails, the unit will switch to input TWO. Manual and remote operation of the unit is disabled except for “SUSTAINED” operation. The LED is illuminated when selected.

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

SWITCHER BOUNCE: Allows the switcher to automatically switch between inputs when in AUTO mode and valid audio and time delays have expired.

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“User Setup” Web Page

Site ID	SITE_ID	Username	Password	Show Password	Access Level
					Admin Monitor Control Monitor Only
		admin	<input type="checkbox"/>	<input checked="" type="radio"/> <input type="radio"/> <input type="radio"/>
				<input type="checkbox"/>	<input type="radio"/> <input checked="" type="radio"/> <input type="radio"/>
				<input type="checkbox"/>	<input type="radio"/> <input type="radio"/> <input checked="" type="radio"/>
				<input type="checkbox"/>	<input type="radio"/> <input type="radio"/> <input checked="" type="radio"/>
				<input type="checkbox"/>	<input type="radio"/> <input type="radio"/> <input checked="" type="radio"/>
				<input type="checkbox"/>	<input type="radio"/> <input type="radio"/> <input checked="" type="radio"/>
				<input type="checkbox"/>	<input type="radio"/> <input type="radio"/> <input checked="" type="radio"/>
				<input type="checkbox"/>	<input type="radio"/> <input type="radio"/> <input checked="" type="radio"/>

Save Settings

Eight Usernames and Passwords may be configured for up to 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.

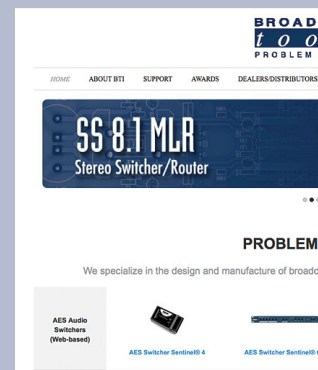


NOTE:

*After any item has been changed, you **MUST** press the “Save Settings” button for your changes to be saved.*

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“I/O” Setup Page

BROADCAST tools AUDIO Sentinel® + Streaming I/O Setup

NAVIGATION
About
Monitor/Control
User Setup
I/O Setup
Email/Network Setup

Show Alarms
Help
Logout

RMT Functions
RMT-EXT Input Function: Toggle
RMT-1,2,3 As Status Inputs: Disabled

Streaming Settings
MP3 Encoding Quality: 160kbps, 48khz, stereo
Digital Gain Type: Auto ☐ Manual ☒
Manual Gain: 1X

RMT Functions

RMT-EXT Input Function: This sets the behavior of the EXTERNAL (RME) remote control input. See Remote Control Inputs for more information.

RMT-1,2,3 as Status Inputs: Allows Remote Control inputs 1-3 to be used as status alarm inputs.

Streaming Settings

MP3 Encoding Quality: Sets bit rate, sample rate, and channels of streaming audio.

Digital Gain Type: MP3 encoder can be set to manual (fixed) gain or to automatic gain control based on input levels.

Manual Gain/Auto-Gain Range: In Manual mode this sets the MP3 encoder input gain, the default settings is unity (1X). In Auto mode this sets the automatic gain control range.



CAUTION!

Broadcast Tools products, as any electronic device, can fail ...



NOTE:

For safety, **DO NOT** connect ...

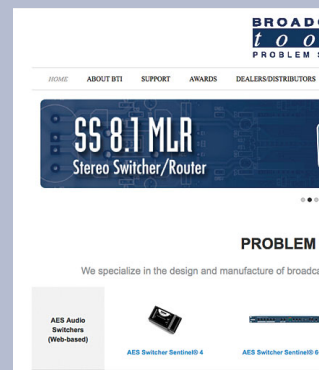


TIP

Helpful tips area.

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Silence Sensors

Silence Sensors:

Silence Sensor 1

Silence Sensor 1

Silence Sensor 2

Input Label: Silence Sensor 1

Delay (seconds): 60

Restore (seconds): 10

Trip Level (dB): -25

Dual-mono mode: ☐

Log device: ☐

Save Settings

Alarms

Silent

Active

Email Addresses

1 2 3 4 5 6 7 8

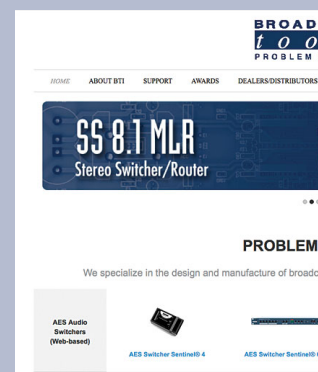
- Silence Sensors:** Use this drop down menu to choose a silence sensor to configure.
- Alarms Silent:** This option enables the generation of an alarm message when silence is detected/restored.
- Alarms Active:** This option enables the generation of an alarm when a channel is made active via front panel/web controls, automatic switching, or remote control.
- Email Addresses:** This allows you to assign up to 8 email addresses to send alarm emails to whenever the input enters or exits an alarm state.
- Input Label:** Text label describing the input source. This is used on the Monitor/Control page and in alarm log and email messages.
- Delay (seconds):** Specifies the delay time from when the input value is below the silence trip level and an alarm is generated.
- Restore (seconds):** Specifies the delay time from when the input value is returns to a level above the silence trip level and the alarm condition is exited.
- Trip Level (dB):** The input level below which the input is considered silent, in dB below 0 dBu. Range: -12 to -35 dB.
- Dual-mono mode:** When dual input mono mode is selected, both the left and right inputs must be below the trip level before the input is considered silent.
- Log Device:** Enables the email snapshot logging of the input.

NOTE:

*After any item has been changed, you **MUST** press the “Save Settings” button for your changes to be saved.*

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“Email/Network Setup” Web Page

AUDIO Sentinel® + Streaming**Email/Network Setup**

Device Address

192.168.1.55

Device Netmask

255.255.255.0

Gateway Address

192.168.1.1

DNS Server Address

8.8.8.8

HTTP Port

80

SMTP Server Address

smtp.gmail.com

SMTP Port

587

SMTP Return Address

example@email.com

SMTP Timeout (seconds)

60

SMTP Host ID

BTI

Secured SMTP (STARTTLS)

Required

SMTP Authentication

☒

SMTP Username

username@gmail.com

SMTP Password

••••••••

☐ show password

Logging Email Address

example@email.com

Logging Email Snapshot Interval (Hours)

0

Logging Email Update Interval (Hours)

0

Email Alarms Immediately

☐

Email Alarms Daily

☒

Daily Alarm Email Time (Hour)

0.0

Recipient Addresses

1 example@email.com

2

3

4

5

6

7

8



CAUTION!

Broadcast Tools
*products, as any elec-
tronic device, can fail*
...



NOTE:

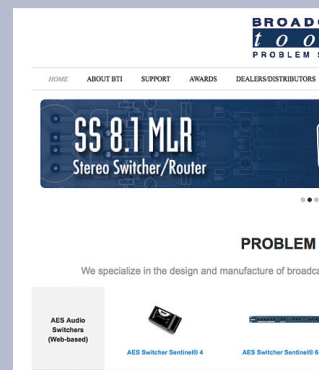
*For safety, **DO NOT**
connect ...*

! TIP

Helpful tips area.

WEBSITE:

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additional information.*



“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:	The user can enter either an IP address in the xxx.xxx.xxx.xxx format or a URI in the form: smtp.comcast.net. In order to resolve the URI, a working DNS server must be present.	
SMTP Port:	Normally Port 25 or 587.	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 something here to identify the device.	
Secured SMTP:	STARTTLS secure authentication is supported by most providers. This must be enabled for Gmail's SMTP server. Leave disabled for standard Base64 authentication.	
SMTP Authentication:	When checked SMTP authentication is used.	
SMTP Username:	Enter SMTP server user name here.	
SMTP Password:	Enter SMTP server password here.	

The user must press the “Save Settings” button after entering the SMTP information before attempting an email test. If authentication fails, the email is not sent, please ensure that the username and password are correct.

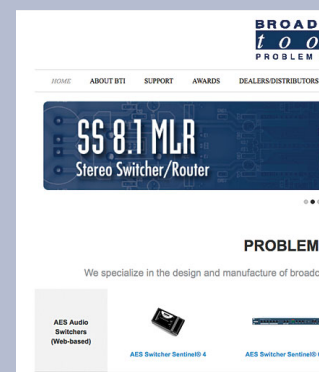


NOTE:

The user must enter the following items before an email can be successfully sent: SMTP Server Address, SMTP Port, SMTP Return Address, SMTP Host ID, SMTP username and SMTP password must be supplied if authentication is turned on and Recipient Address 1. The test email is sent to email recipient address 1.

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“Email/Network Setup” Web Page – Email Logging Settings

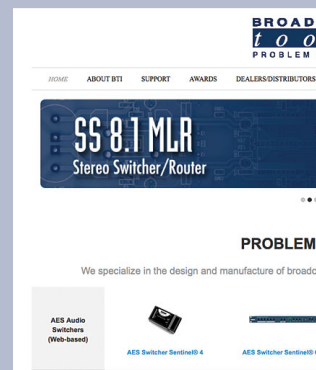
- Logging Email Address: Email address for the “Logging” email recipient (may be different from the 8 “Alarm” Recipient Addresses. Logging emails and Daily emails are sent to this address.
- Logging Email Snapshot Interval: The period in hours that a snapshot is taken of the system. The logging email is not sent on this interval.
- Logging Email Update Interval: The period in hours that the logging 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. The number of queued alarms is displayed on the Monitor/Control page.
- Daily Alarm Email Time: The time 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 address correlate to the 8 email addresses selectable on each I/O Device. Test emails will be sent to recipient address 1 only.

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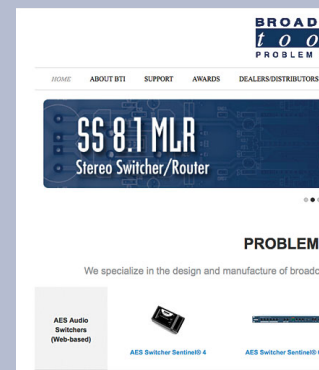


“Email/Network Setup” Web Page

SNMP Enable Traps	Enabled ▾		
SNMP Manager IP Address	192.168.1.170		
SNMP Manager Trap Port	162		
SNMP Read Community	public		
SNMP Write Community	private		
NTP Enabled	Enabled ▾		
NTP Server Address	pool.ntp.org		
NTP Port	123		
NTP Update Interval (Minutes)	30		
Site ID	SITE_ID		
Monitor Refresh Time	1	Seconds	
MTU Size	DISABLED		
Time Zone Offset from UTC	-8.0		
	Hour	Minute	Second
	13	56	3
Set Time	Month	Day	Year
	10	13	2014
Time is only saved when "Save Time" is clicked			
Enable Event Logging	<input type="checkbox"/> Login		
	<input type="checkbox"/> Email		
	<input type="checkbox"/> Reboot		
	<input type="checkbox"/> Alarms Cleared		
Save Settings		Reboot Device	
Send Test E-mail		Reload Defaults	
Clear Daily Logs		Send Daily Logs	
Firmware	Browse_	No file selected.	

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“Email/Network Setup” Web Page – SNMP Manager Settings

SNMP Enable Traps:	When enabled trap messages will be sent. When unchecked, no trap messages will be sent.
SNMP Manager IP Address:	This is the IP address of the SNMP manager. The system will send traps to this IP address only.
SNMP Manager Trap Port:	This is the port number that SNMP trap messages will be sent. Default port 162.
SNMP Read Community:	This is the community name for Read-Only access.
SNMP Write Community:	This is the community name for Read-Write access.

NOTE: A cold-start trap will be sent when the unit boots up if the SNMP Enable Traps is checked, otherwise trap messages are 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

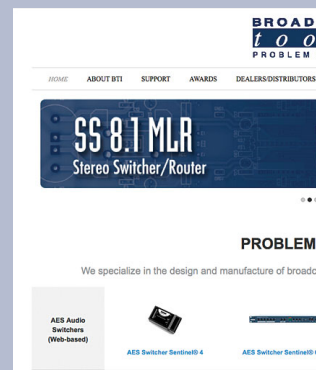
NTP Enabled:	Must be enabled to sync.	Default: Enabled
NTP (Time) Server Address:	Enter the NTP address here.	Default: pool.ntp.org
NTP Port:	Normally 123.	Default: 123
NTP Update Interval (Min):	Interval between timing updates.	Default: 30

“Email/Network Setup” Web Page – Other Settings

Site ID:	This is the Site Identifier that is display on the web and in each email.
Monitor Refresh Time (Sec):	Interval at which the Monitor & Control page refreshes. Default: 1 sec.
Time Zone Offset from UTC:	Sets the time zone offset from GMT. Default: -8 hours
Set Time:	The hour, minute, second, month, day and year boxes can be used to set the time of the RTC. The time is only updated if you click “Save Time” and not when you “Save Settings”.
Enable Event Logging:	Enabling these checkboxes will generate an alarm, but will not send an email. If the system is configured for Daily Alarm emails, then that Daily Alarm email will contain the Event Logging items as well.
Login:	Whenever someone logs into the system, the username and date/time will be logged.
Email:	Whenever an email is sent, the type of email and date/time will be logged.
Reboot:	Whenever the device boots, the date/time will be logged.

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Alarms Cleared: Whenever 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.

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 the web page will return to the login screen after the device reboots.

Reboot Device: When you press the “Reboot Device” button, the device will restart.

Send Test Email: Press this button to send a test email to Recipient address #1. The status of the test email will be displayed below. If an email was not sent correctly, please review your SMTP and network settings and correct as necessary.

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 its default settings. After resetting you must navigate your web browser to the new IP address: 192.168.1.55

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.

Firmware: Click the browse button to select a firmware update file to apply to the Audio Sentinel + Streaming.

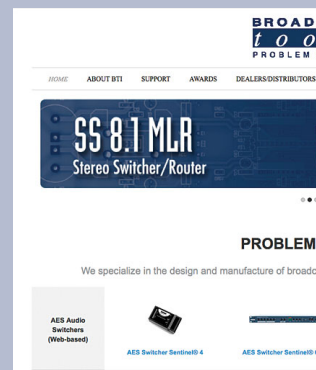


CAUTION!

Never load firmware updates unless instructed to do so by broadcast tools®. doing so deletes all software and voids all warranties from broadcast tools®, inc.

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“Show Alarms” Web Page

BROADCAST t o o l s AUDIO Sentinel® + Streaming Alarms					
NAVIGATION About Monitor/Control User Setup I/O Setup Email/Network Setup Show Alarms Help Logout Control Enable Sound Silence Alarms Clear Alarms	Device/Event	Message	Date	Time	Values
	Silence Sensor 1	Active - RMT	11/6/2014	15:18:22	N/A
	Silence Sensor 2	Active - Button	11/6/2014	15:18:0	N/A
	Silence Sensor 1	Active - Auto	11/6/2014	15:17:35	N/A
	Silence Sensor 1	Exited Alarm	11/6/2014	15:17:35	-18, -18
	Silence Sensor 2	Active - Auto	11/6/2014	15:16:40	N/A
	Silence Sensor 1	Silent	11/6/2014	15:16:40	-29, -29
	Event	Logs Cleared	11/6/2014	15:15:48	Normal
	Last Updated 11/6/2014 15:18:59				

This page displays current alarms.

Device/Event: Displays which device and/or devices triggered the alarm.

Message: Displays the type of alarm/event.

Date: Displays what date the event was logged.

Time: Displays what time the event was logged.

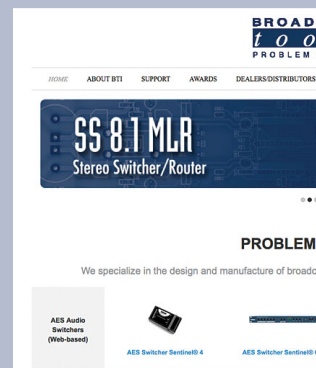
Values: Displays the parameter recorded.

NOTE: With the “admin” access level, the user may control all functions.

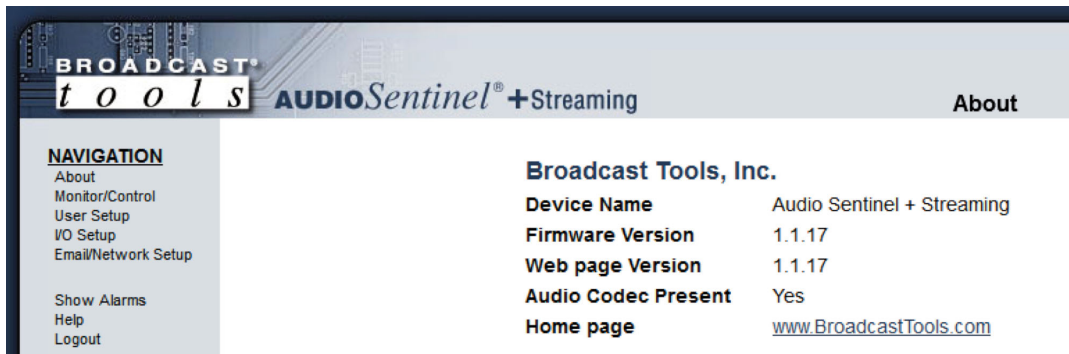
With the “Monitor/Control” or “Monitor” only access level, the user may view the “Show Log”, enable/disable PC speaker sound and silence alarms.

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“About” Web Page

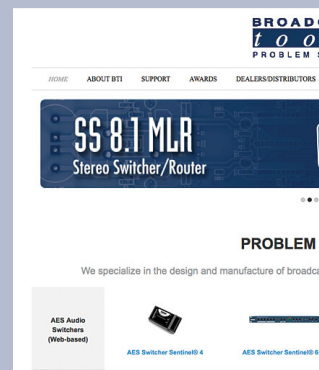


Broadcast Tools, Inc.	
Device Name	Audio Sentinel + Streaming
Firmware Version	1.1.17
Web page Version	1.1.17
Audio Codec Present	Yes
Home page	www.BroadcastTools.com

The “About” Web Page displays the product name, firmware version numbers, Audio Codec status (required for streaming functionality), and Broadcast Tools® Web site link.

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SPECIFICATIONS

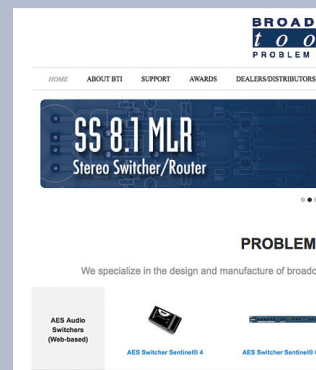
Ethernet Interface:	RJ-45, 10base-T or 100base-TX, auto sensing with link & activity led indicators - Full/half duplex.
Input Level:	-14 to +24 dBu, 22 K ohm, balanced.
Program switcher:	Inputs may be balanced or unbalanced. Output levels, impedance, distortion, noise and balancing will match that of the selected input.
Silence Sense (1 & 2) Level:	-15 to -35 dB below normal level, in 1dB steps.
Select/EXternal Input:	Closure to ground. Internally pulled up to 5 VDC. (Sustained or momentary depending on mode).
Relays (K1, K2, K3):	3 - SPDT dry contacts, rated 30 VDC @ 1 Amp.

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

Connectors:	All I/O, removable euro-block screw terminals. Mating plugs supplied.
Power supply:	Universal switching power supply with domestic AC connector supplied. International connectors optional. +/-15 VDC 400mA output with 3-pin AMP-style latching power connector.
Size:	5.65" x 7.10" x 1.575" (WDH) Aluminum chassis w/ 4 4-40 mounting holes.
Weight:	2.0 lb.
Options:	* RA-1, 1-RU rack shelf. Accommodates 3 units.

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LIMITED WARRANTY

The term “Buyer” as used in this document refers to and includes both (but only) (a) any person or entity who acquires such an item for the purpose of resale to others (i.e., a dealer or distributor of an item), and (b) the first person or entity who acquires such an item for such person’s or entity’s own use.

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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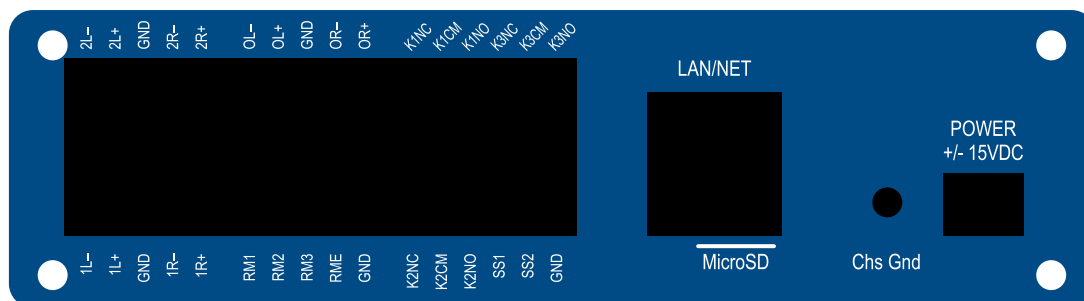
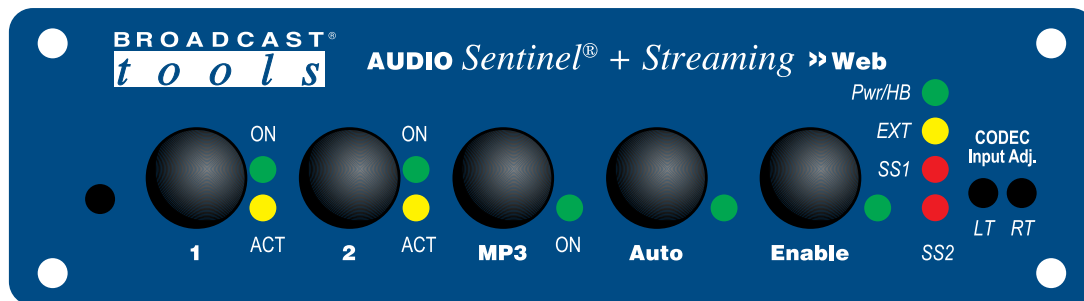
NO LIABILITY FOR CONSEQUENTIAL DAMAGES

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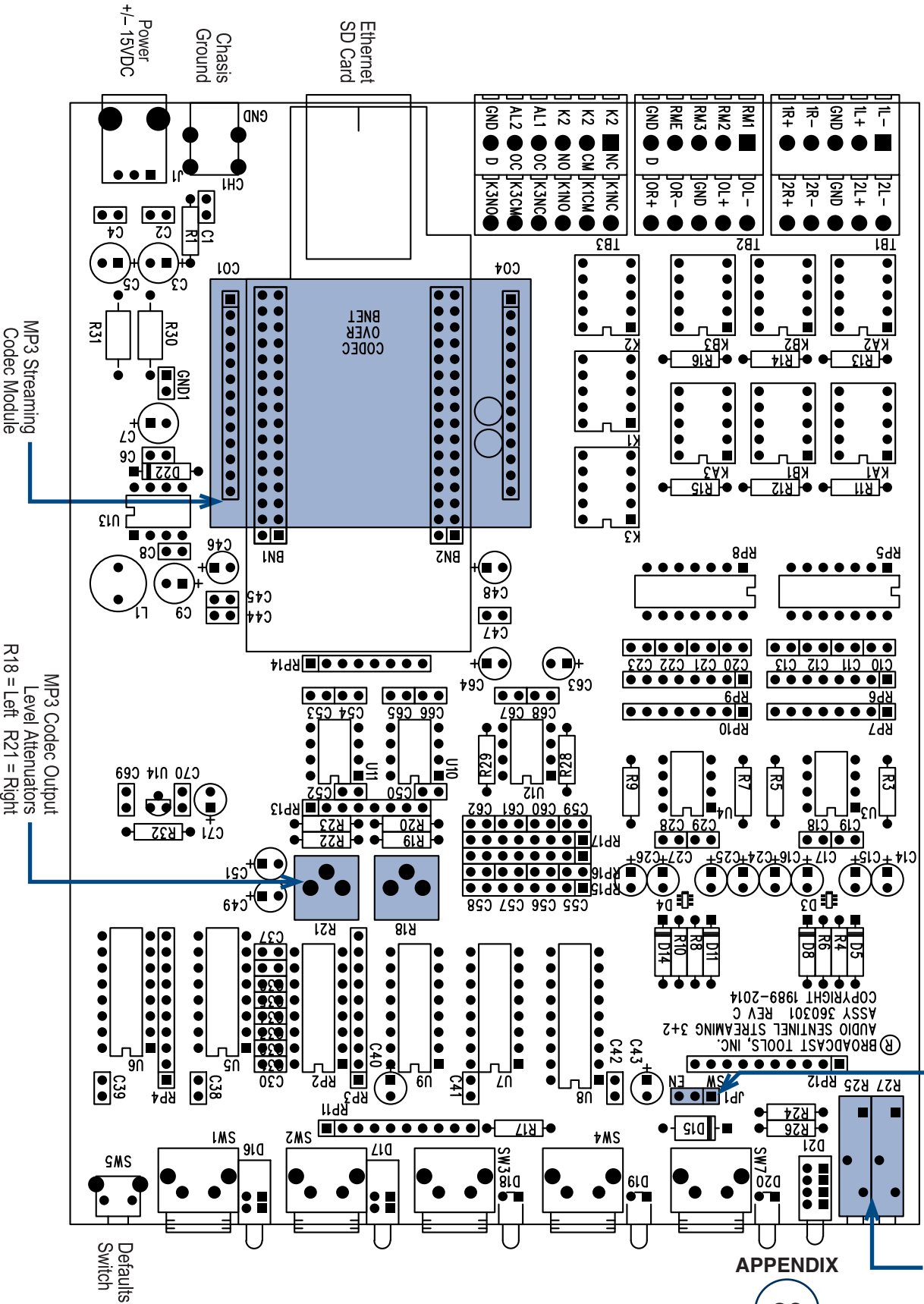


Audio Sentinel[®] + Streaming

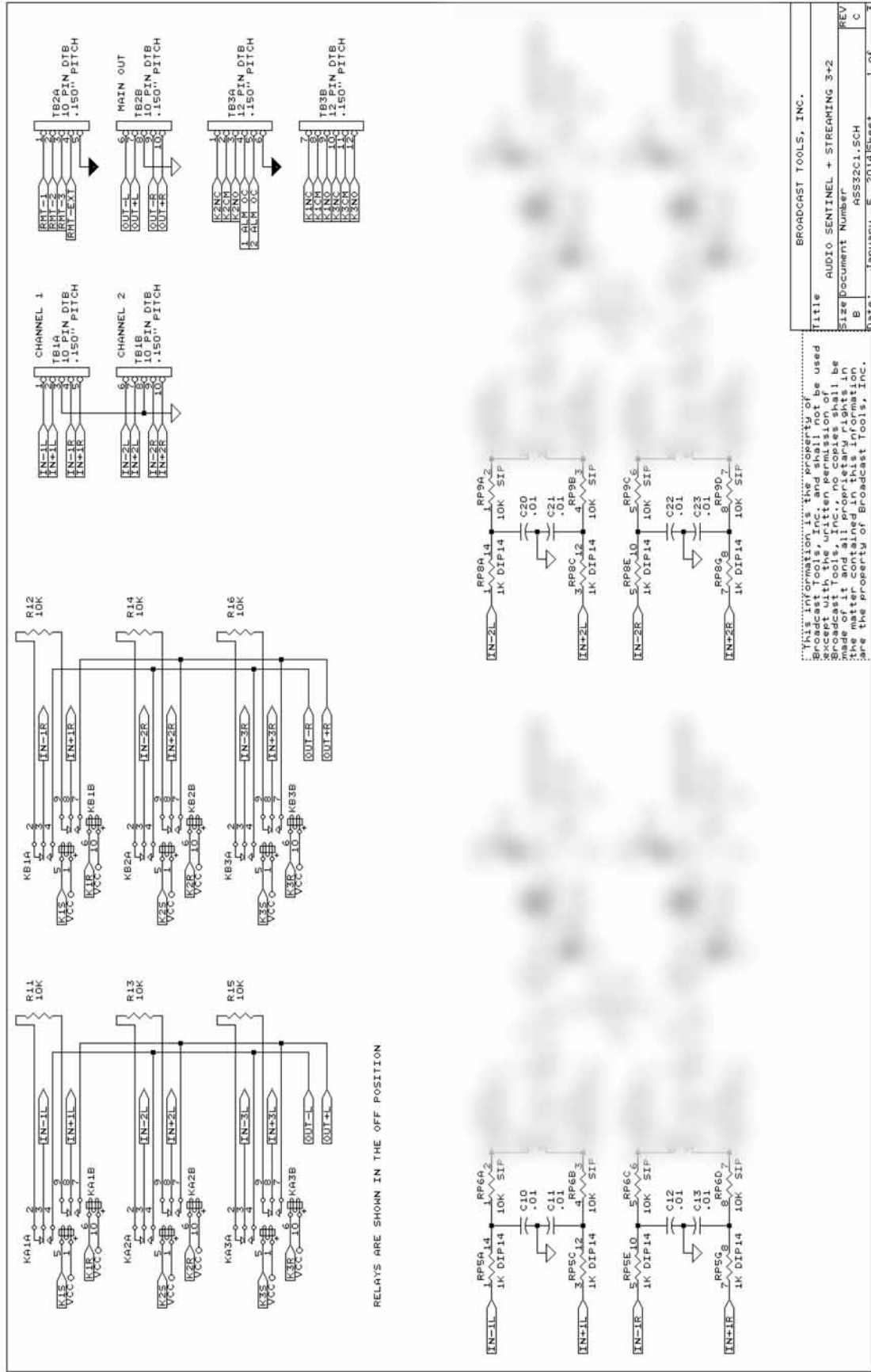
Component Layout

JP1
Front Panel Enable
Switch Jumpers

MP3 Streaming Codec
Input Level Trimmers (15-tum)
R25 = Left R27 = Right



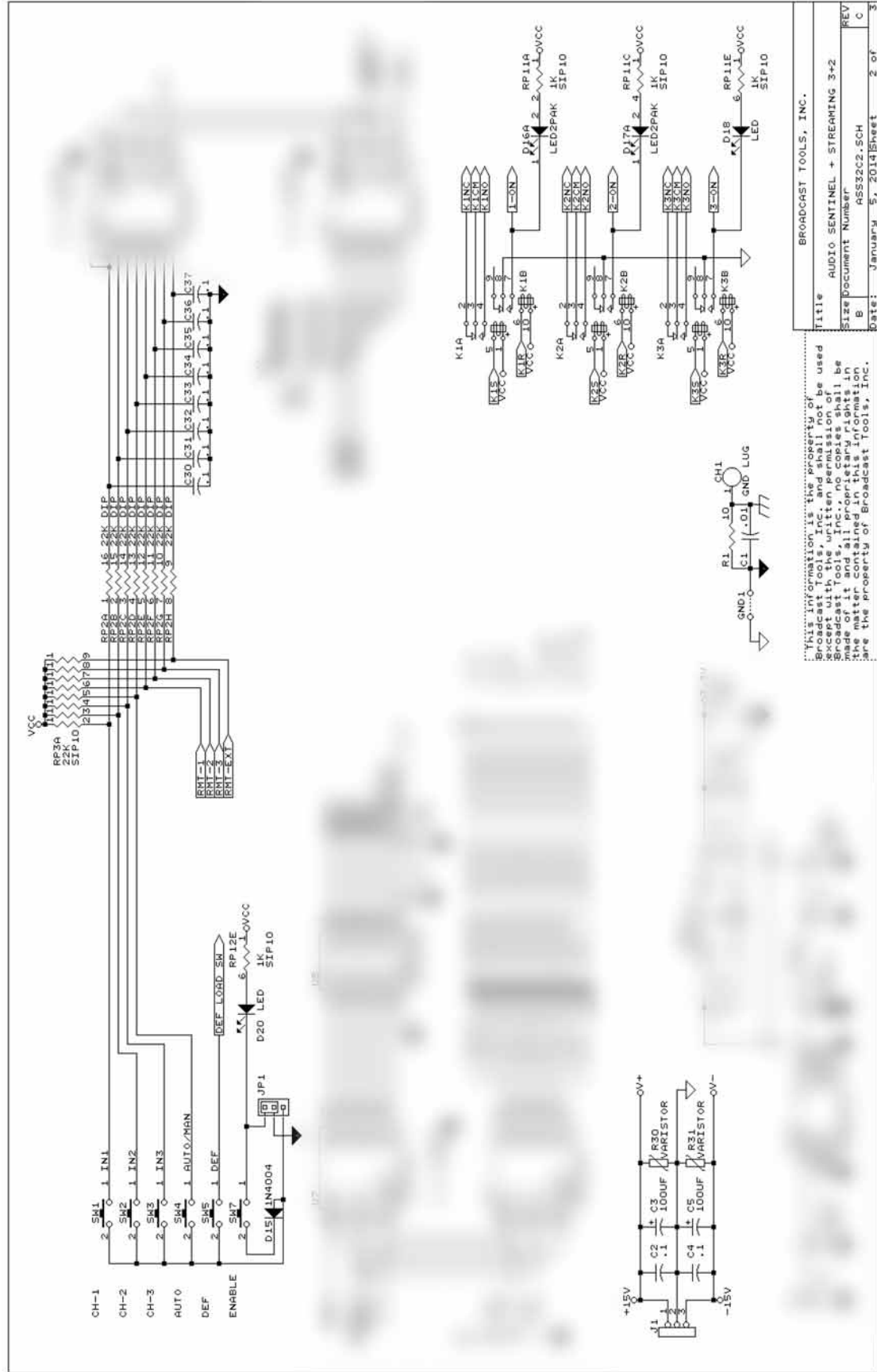
FRACTIONAL SCHEMATIC



APPENDIX

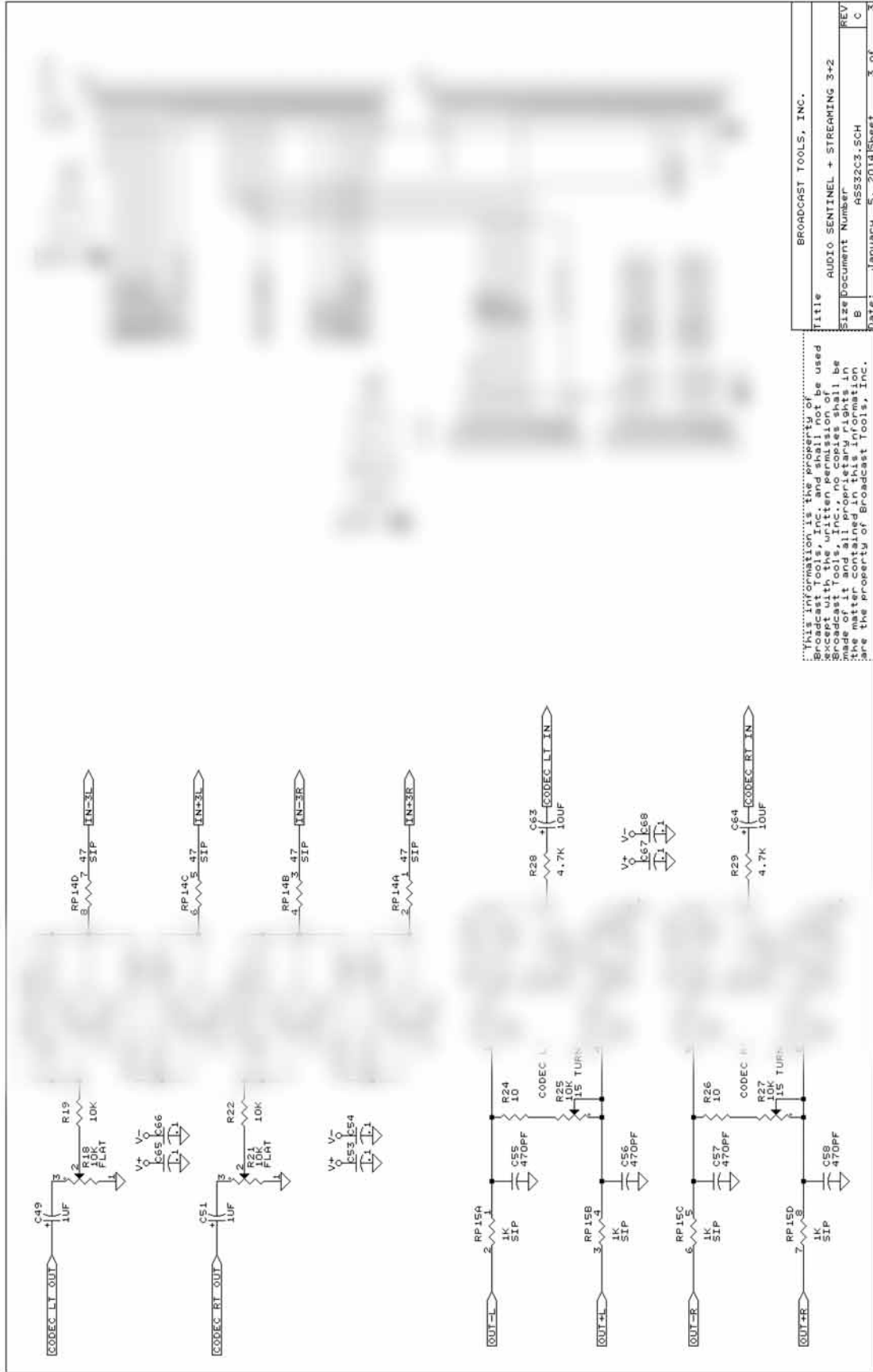
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FRACTIONAL SCHEMATIC



APPENDIX

FRACTIONAL SCHEMATIC



APPENDIX

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