

BROADCAST[®]
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Installation and Operation Manual



Switcher Sentinel[®] 3 » Web

Manual update: 03/27/2012

For firmware versions equal to or greater than X_V1.13 / W_V1.12 / P_V1.0

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.

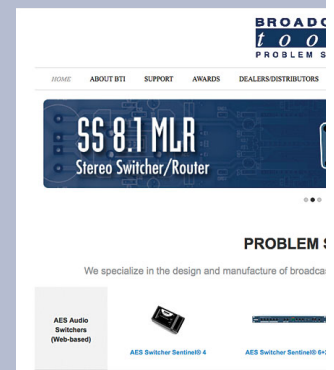
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INTRODUCTION

Thank you for your purchase of a Broadcast Tools® **Switcher Sentinel® 3** >> **Web** is a web enabled transparent three input, single output stereo switcher/router (referred to as the Switcher Sentinel® 3 throughout this manual). 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® Switcher Sentinel® 3.

SAFETY INFORMATION

Only qualified technical personnel should install the Switcher Sentinel® 3. 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 Switcher Sentinel® 3 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 Switcher Sentinel® 3.

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:

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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.

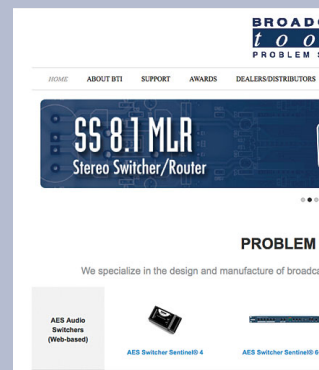


NOTE:

This manual should be read thoroughly before installation and operation.

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INTRODUCTION

Product Overview

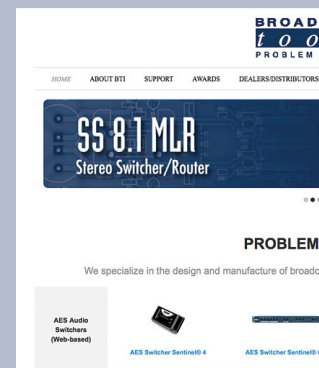
The Switcher Sentinel® 3 is a web enabled transparent three input, single output stereo switcher/router. The Switcher Sentinel® 3 is perfect for all types of passive signal switching via a web browser, front panel switch and/or contact closures. The passive switching utilizing gold contact relays, which means that the unit can route a signal in either direction. Due to the passive nature of the switching, any input level and impedance can be used. Inputs may be balanced or unbalanced, while output levels, impedance, distortion, noise and balancing will match that of the selected input. The Switcher Sentinel® 3 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. The active audio output is monitored for silence and may be configured to perform user defined action sequences when the audio drops to a pre-configured level and switch to a defined back-up source. Email notifications may be configured to alert up to eight recipients. When logged in to the device the user may also enable a sound effect to play on their PC speaker when an alarm is generated. Logging of system status, along with the site ID may be emailed in time spans from once an hour to once a day.

Features/Benefits

- Front panel channel step push button with active channel LED indicators.
- Web monitor and control page with channel selection switches and active channel indicators.
- Front panel valid audio output LED indicators.
- Stereo silence sensor monitors the output audio and is equipped with a four position web LED display with user programmable switching functions.
- Silence trip level detection of -20dB, -25dB, -30dB and -35dB below reference.
- Precise time delay from 0(OFF) to 65535 seconds (18 hours, 12 min and 15 sec's) in one-second increments for each channel.
- The audio "MUTE" function allows the user to turn off all audio.
- Audio switching via sealed relays utilizing 2-form-C bifurcated - crossbar silver alloy with gold overlay contacts.
- The power-up feature allows the user to select which source is active at power up, including the last source selected.
- During loss of power, input one is passed to the output.
- Up to eight alarm email recipients.
- Logging of all user selected input status with site ID information which may be emailed from once an hour to once a day, along with hourly snap-shot functionality.
- SNMP capabilities allow multiple units to be monitored.
- Eight Usernames and Passwords may be configured for up to three access levels.
- Plug-in euroblock screw terminals for audio I/O and step input connections.
- RJ-45, 10/100base-T LAN/Ethernet interface.
- Protocols: TCP/IP, UDP/IP, ARP, ICMP, SNMP, TFTP, Telnet, DHCP, BOOTP, HTTP, and AutoIP.
- Fully RFI proofed.
- Surge protected power supply. Domestic power supply provided.
- Removable euroblock screw terminal connector simplifies wiring and service, mating plugs are supplied.
- Up to four units may be mounted on the optional RA-1 rack shelf, using user supplied Velcro. Desk top and wall mounting is also possible.

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OVERVIEW

Applications

Analog and/or AES audio source switching; Studio selection and routing; Audio processing selection; Exciter input selection; STL source selection; EAS audio switching; composite stereo audio, AES digital audio signals, NTSC video signals, RS-232, 422 or 485 data signals and telephone lines.

Inspection

Please examine your Switcher Sentinel® 3 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 Switcher Sentinel® 3, this manual and/or CD, 7 foot BLUE straight-through CAT 5 cable, 7 foot GRAY crossover CAT 5 cable, and the 7.5 to 9.0 VDC wall transformer. Manuals may also be downloaded from our web site.

Installation

The Switcher Sentinel® 3 interfaces to external equipment through removable euroblock screw terminals. The terminals accommodate wire sizes from 16 - 28 AWG solid or stranded wire. Before installing a wire, remove the euroblock 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.

CAUTION! If this product is to be used for other than analog audio switching, the silence sensor circuitry **MUST** be disabled. By disabling the circuitry, automatic switching, along with the web VU meters will not function. To disable the silence sensor, disconnect all connections and power. Remove the cover by unscrewing the two capture screws on the bottom. Locate and remove RN1, the 14 pin, 1K ohm resistor network and stow it for future use. Re-assemble the product, re-attach all connections and apply power.

CAUTION! Installation of the Switcher Sentinel® 3 in high RF environments should be performed with care. The station ground should be connected to the designated chassis ground terminal using a 20 to 24-gauge wire.

Surge Protection

The Switcher Sentinel® 3 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 Switcher Sentinel® 3 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 Switcher Sentinel® 3 to a UPS system. A UPS helps minimize the risk to the Switcher Sentinel® 3 and provides power during a power outage.

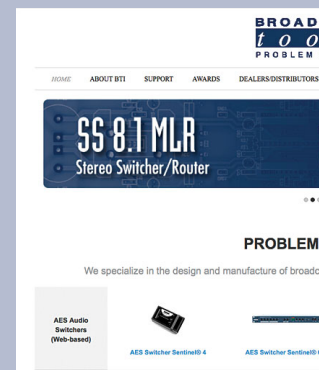
NOTE: *During a power outage, the signal is routed from input one to the output.*

"NET" network RJ45 connector

Connect one end of the supplied CAT5 (straight or crossover) cable to the desired ETHERNET (WAN/LAN) or PC network port.

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INSTALLATION

DC POWER connector

This is the connector used to power the unit. Never use any type of power supply other than the specified power supply.

The rear panel audio inputs, outputs and step input connections are routed through plug-in euroblock screw terminals.

Audio Inputs connections

Connect your audio sources to any and/or all of the three stereo balanced channels labeled LT1-/+ and RT1 -/+, LT2-/+ and RT2 -/+ and/or LT3-/+ and RT3 -/+.

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.

For single monaural applications the inputs should have their left and right connected to the mono input source in parallel.

NOTE: *Please observe proper phasing.*

Audio Output Connections

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

Remote control “STEP” input and ground connection.

Connect a momentary (ONLY) contact closure between the “STEP” terminal and GND. Each rising edge transition will increment through all three input channels and mute. Holding the input low for two seconds or longer, will toggle the unit between auto and manual modes.

NOTE: *Only use the “GND” terminal close to the step terminal.*

Please refer to the appendix for connector, LED and switch layouts.

Front panel Step and Web control switches

The front panel channel “Step” switch will allow the user to step through the three channels and mute, as long as the unit is in manual operation. The step switch may be used to switch between auto and manual mode. To toggle between the two modes, depress the front panel “STEP” switch for approximately two seconds. Watch for the AUTO led to illuminate when in auto mode and the “AUTO” led to extinguish in manual mode.

The Monitor & Control web page allows the user to select either manual or automatic operation. When in manual mode, each web switch represents an input to be routed to the output. Each web switch has an associated indicator, which will illuminate when that particular source is routed to the outputs. When a source is selected, the previous source will be deselected, (interlocked operation). The web page is also equipped with a MUTE switch and LED indicator used to turn OFF the audio output.

LED Indicators

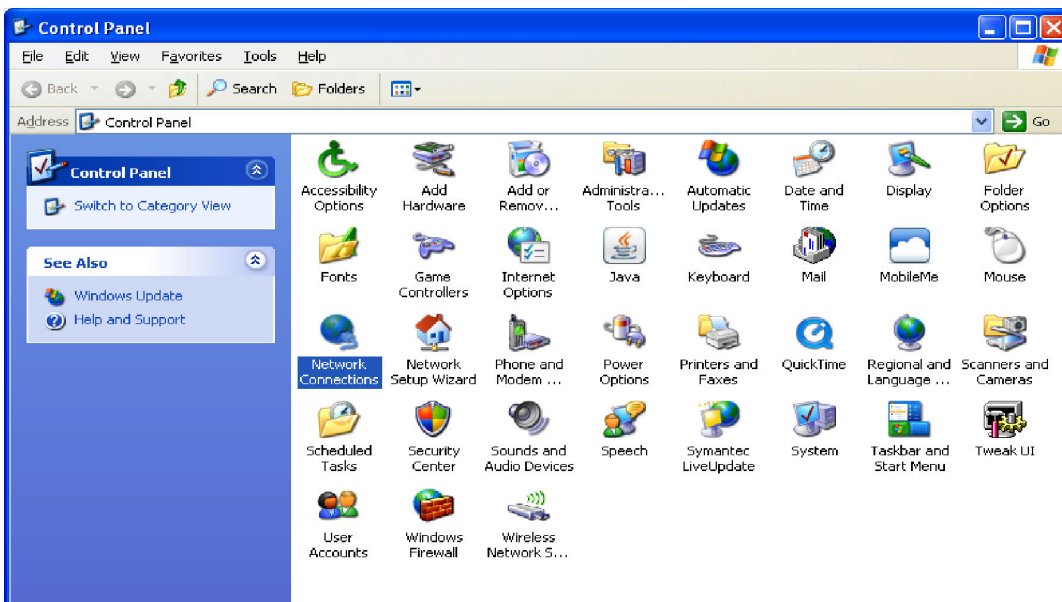
- Channel LEDs: Illuminates indicating the selected input channel or mute.
- “PWR/HB” LED: Blinks when valid power and the control processor is running.
- “OK-LT/OK-RT” LEDs: Illuminates when audio activity is present at the output. Audio thresholds are set via the web interface.
- “AUTO” LED: Illuminates when in AUTOMATIC mode.

Web Setup/Operation

Ethernet “Quick Start” guide

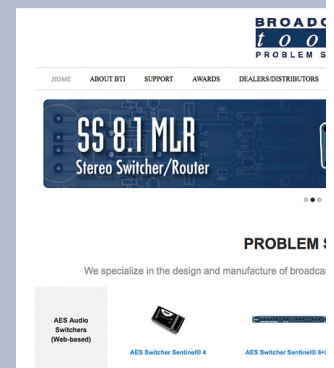
CAUTION! If you are not familiar with Ethernet enabled equipment, it may be useful to contact your IT department, network administrator or network consultant for help. Assigning an IP address already in use by another device may cause problems with your network! Instructions for changing the IP address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

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.)

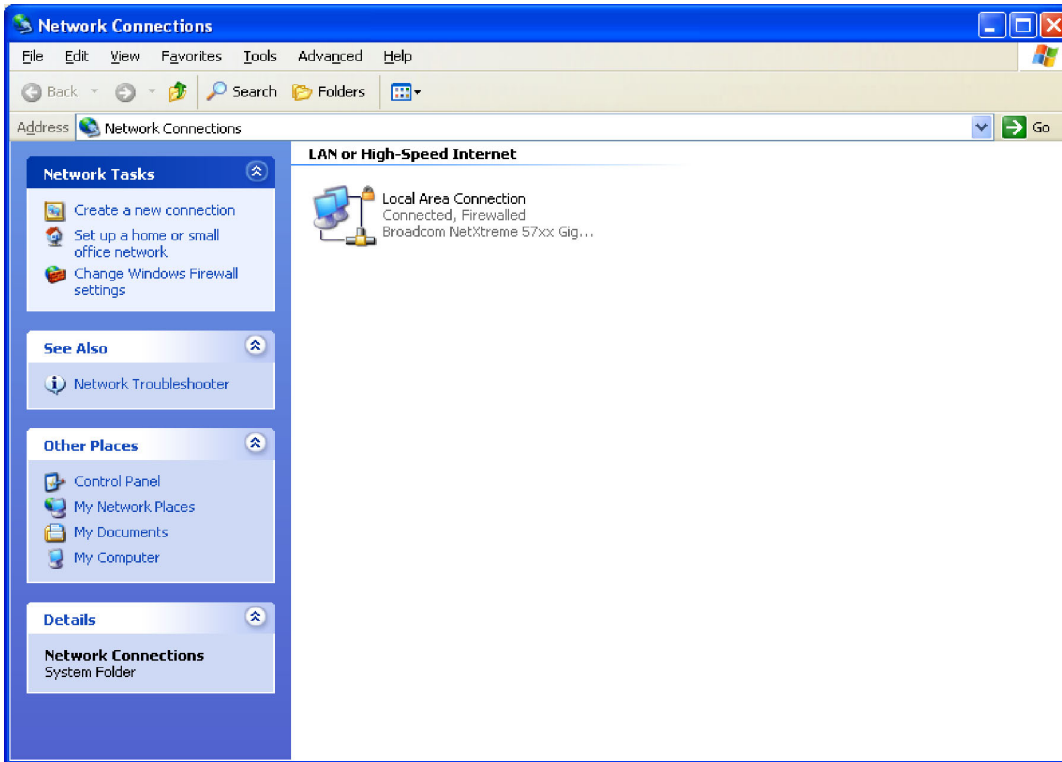


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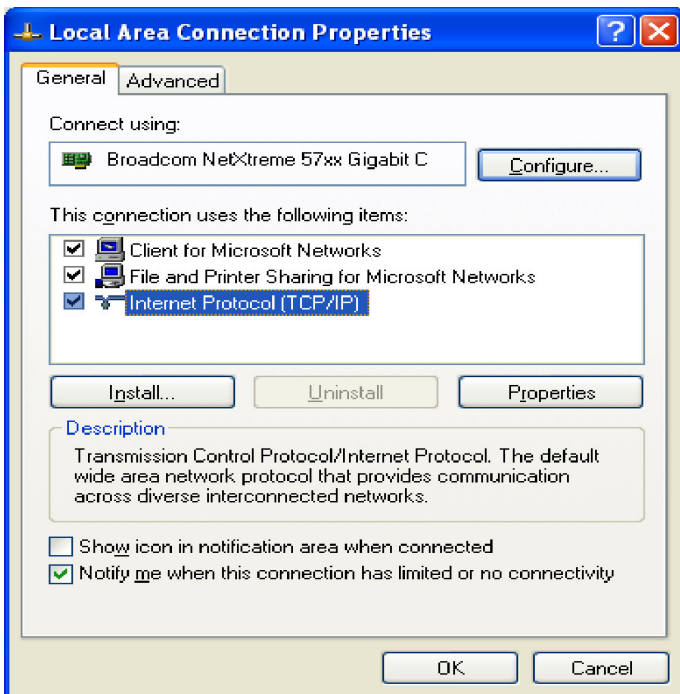
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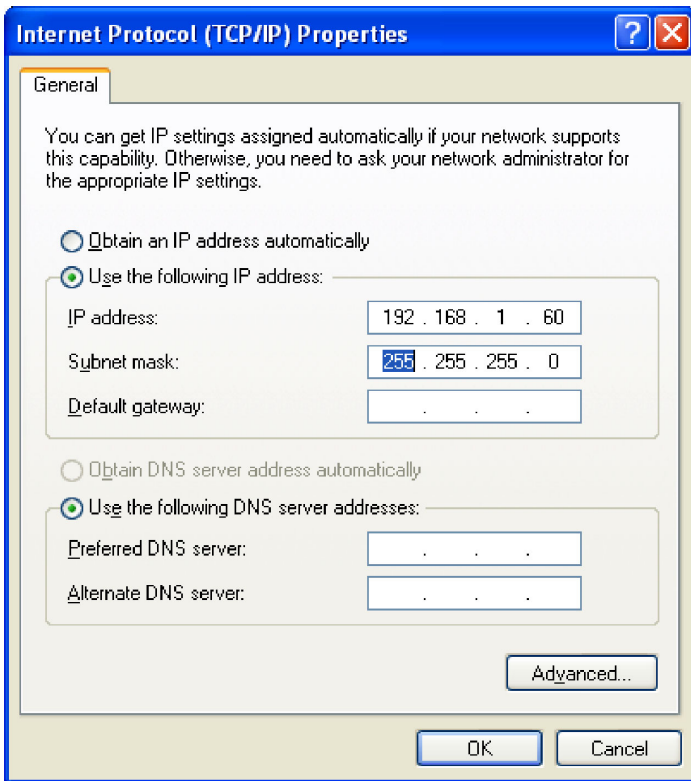
Step 2: Double click on the icon labeled Network Connections. The following menu will pop up.



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.



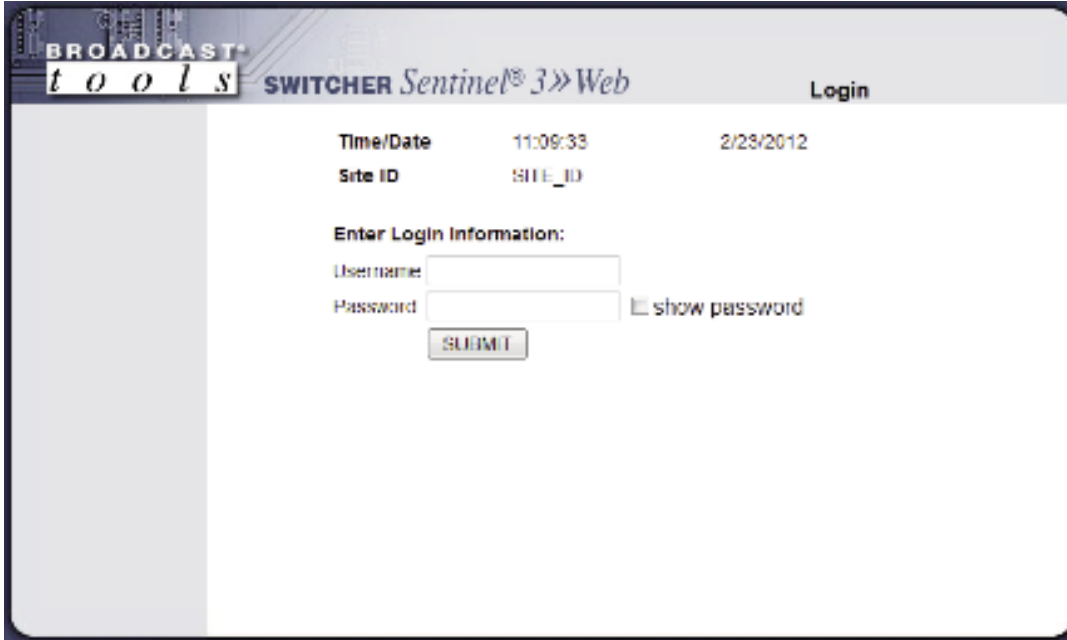
Step 4: On the Local Area Connection Properties page, double click on Internet Protocol (TCP/IP) to display properties.



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.

“Login” Web Page

The Login screen displays the username and password entry points.



The screenshot shows the login interface for the Switcher Sentinel® 3 Web. The header includes the 'BROADCAST tools' logo, the title 'SWITCHER Sentinel® 3 » Web', and a 'Login' link. The main content area displays the current 'Time/Date' as 11:09:33 on 2/23/2012 and the 'Site ID' as SITE_ID. Below this, there is a section titled 'Enter Login Information:' containing a 'Username' text box, a 'Password' text box, and a 'show password' checkbox. A 'SUBMIT' button is located at the bottom of the login fields.

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.

“Monitor/Control” Web Page



The Monitor/Control page allows the monitoring of the output audio level and the control of all inputs and mute. The “Active” LED’s display current switch status. The following is an explanation of each item on this page:

NOTE: The user defined Site ID, Time, Date and Queued Logs are always displayed. Only “admin” level access can edit some of these items.

Queued Logs: Displays the available number of queued logs.

Output Activity: Audio output level bar graph. Green=above -20dB, Yellow=above -25dB, Blue=above -30dB, Red=above -35dB, Grey= below -35dB.

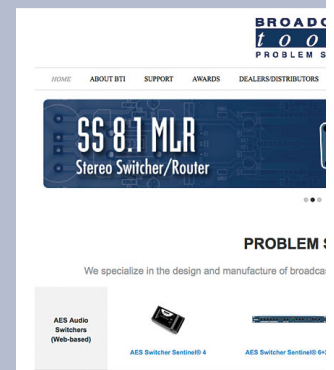
Active: The LEDs indicate which input is active, in manual mode the “Set Active” buttons allow for manual control of the switch.

Auto/Manual: LED indicates whether the device is in Auto or Manual switching mode. You can switch between the modes by clicking the “Auto” and “Manual” buttons. The behavior of the device in Auto mode is defined on the I/O Setup page.

To select other pages (if authorized), make your selection under the left hand Navigation column.

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“User Setup” Web Page

The screenshot shows the 'User Setup' web page. It features a navigation menu on the left with options like 'About', 'Monitor/Control', 'User Setup', 'ID Setup', 'Email/Network Setup', 'Show Alarms', 'Help', and 'Logout'. The main area is titled 'User Setup' and contains a 'Site ID' field. Below this are two columns of input fields for 'Username' and 'Password'. The first row is pre-filled with 'admin' and '****'. To the right of these columns is a 'Show Password' checkbox. Further right is an 'Access Level' section with three columns: 'Admin', 'Monitor Control', and 'Monitor Only'. Each column has a row of radio buttons. The 'Admin' column has the first radio button selected. At the bottom left of the form is a 'Save Settings' button.

Eight Usernames and Passwords may be configured for up to three access levels.

1. “admin” allows complete product 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.

Values on this page can only be defined by users with “admin” access level, which is the factory default.

The Site ID is displayed for the user convenience 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.

“I/O Setup” Web Page

Name: Each input can be given a custom label for easy identification.

Email Addresses: Email messages can be sent when an input source becomes active as a result of auto mode or manual control. Each input can have up to eight email address assigned to using the check-boxes labeled 1-8.

User Defined Action Sequences: The behavior of the Switcher Sentinel® 3 when in Auto mode (as indicated/controlled on the Monitor/Control page) is defined by the conditional statement: If (Input) is selected and is less than (audio threshold in dB), wait (time in seconds) then (action.) By default the Switcher Sentinel® 3 is configured to wait for 5 seconds after on the selected input and then switch to next input in ascending order.

Log Device: This enables the email logging of switch status. See the “Email/Network setup” page for email and logging settings.

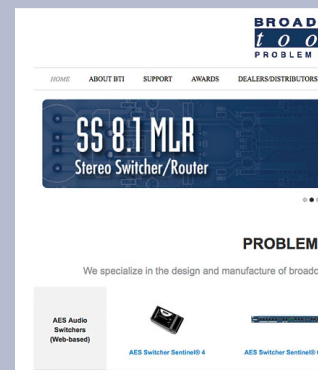
Enable Alarms: When enabled the device will record all switch position changes in the event log.

When booting switch to: When the device powers up it can be set to switch to any of the inputs, or to the “last input selected.”

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

BROADCAST tools SWITCHER Sentinel® 3 » Web Email / Network Setup

NAVIGATION
 About
 Monitor/Control
 User Setup
 IO Setup
 Email/Network Setup
 Status/Alarms
 Help
 Logout

Device Address: 192.168.1.55
 Device Netmask: 255.255.255.0
 Gateway Address: 192.168.1.1
 DNS Server Address: 192.168.1.1
 HTTP Port: 80

SMTP Server Address:
 SMTP Port: 25
 SMTP Return Address:
 SMTP Host ID:
 SMTP Authentication: ☐
 SMTP Username:
 SMTP Password: ☐ show password

Logging Email Address:
 Logging Email Snapshot Interval (Hours): 0
 Logging Email Update Interval (Hours): 0
 Email Alarms: ☒ Immediately ☐ Daily
 Daily Alarm Email Time (Hour): 0
 Recipient Addresses: 1
 2
 3
 4
 5
 6
 7
 8

SNMP Manager IP Address: 192.168.1.170
 SNMP Manager Trap Port: 162
 SNMP Read Community: public
 SNMP Write Community: private
 SNMP Enable Traps: ☐
 NTP Server Address: pool.ntp.org
 NTP Port: 123
 NTP Update Interval (Minutes): 30
 NTP Enabled: ☒

Site ID: SITE_ID
 Monitor Refresh Time: 1 Seconds
 Time Zone Offset from UTC: -8.0 hours
 Enable Event Logging: ☐ Log ☐ Email ☐ Report ☐ Alarms Cleared

Save Settings Reboot Device
 Send Test E-mail Reload Defaults
 Clear Daily Logs Send Daily Logs

“Email/Network Setup” Web Page cont

Restoring Network Factory Defaults

The Switcher Sentinel® 3 factory defaults may be restored by depressing the recessed front panel “default” push button for five seconds while powering up the unit.

“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: 192.168.1.1
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 or its IP address entered into the system.

SMTP Port: Normally Port 25 Default: 25

SMTP Return Address: Enter your return email address here. If an email cannot be delivered, a message stating why will be sent to this address.

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 the Recipient Address 1. The test email is sent to email recipient address 1.

The user should 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 is correct.

SMTP Host ID: Enter something here to identify the device.

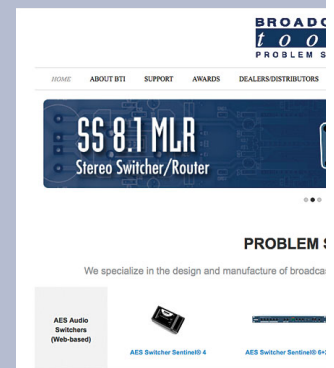
SMTP Authentication: When checked, Base64 SMTP authentication is used. SSL/TLS is not supported.

SMTP Username: Enter user name here.

SMTP Password: Enter password here.

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

Logging Email Address:	IP 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 when logging is enabled. Emails are not sent on this interval.
Logging Email Update Interval:	The period in hours that the collected 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 the queued alarms are sent in accordance with the Daily Alarm Email Time. The number of queued alarms at any given time 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.
Recipient Address:	Email addresses for up to 8 addresses. These address correlate to the 8 email addresses selectable on each I/O Setup page.

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

SNMP Manager IP Address: This is the IP address of the SNMP manager. The system only accepts SNMP requests from this IP address, and will send traps to this IP address only.

SNMP Manager Trap Port: Port number that SNMP trap messages will be sent.

SNMP Read Community: This is the community name for Read-Only access.

SNMP Write Community: This is the community name for Read-Write access.

SNMP Enable Traps: When checked, trap messages will be sent. When Unchecked, no trap messages will be sent.

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 (Time) Server Address: Enter the NTP address here. Default: pool.ntp.org

NTP Port: Normally 123. Default: 123

NTP Update Interval (Min): Time between timing updates. Default: 30

NTP Enabled: Must be enabled for correct timing.
Default: Enabled

“Email/Network Setup” Web Page – Other Settings

Site ID: This is the Site Identifier that will be sent in each email.

Monitor Refresh Time (Sec): How many seconds the Monitor page refreshes. Shorter times may increase network traffic.

Time Zone Offset from UTC: Must be set for correct timing. Default: -8

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.

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.

“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 the web page will return to the login screen after the device reboots.
- Reboot Device:** When you press the “Reboot Device” button, the device resets, you must navigate your web browser to the new IP address.
- Send Test Email:** Press this button to send a test email to recipient #1. When the email has completed, an alert box will pop-up indicating the status of the email and an error condition if the email was not sent correctly. If an email was not sent correctly, please review your SMTP settings and correct as necessary.

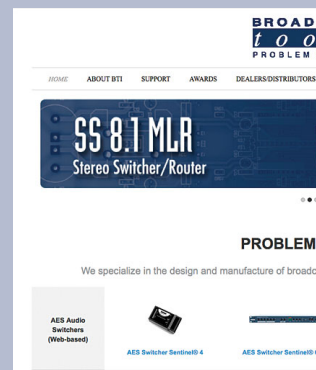
“Email/Network Setup” Web Page

- Reload Defaults:** When you press the “Reload Defaults” button, the device resets to factory default settings, 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 #).
- 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 then clear those logs as if the correct time has expired.

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

WEBSITE:

Visit our web site for product updates and additional information.



“Show Log” Web Page



This page displays current alarms.

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

With the “Monitor/Control” access level, the user may view the “Show Log”, enable/disable PC speaker sound and silence alarms but they cannot Clear Alarms.

NOTE: Adobe “Flash” must be installed and operating properly on your PC for the “Alarm Sound” to work when enabled.

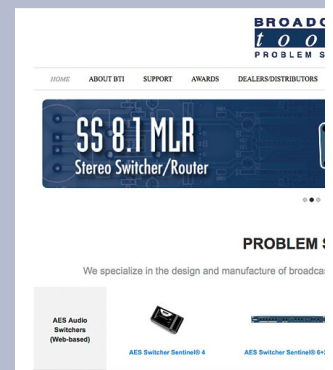
“About” Web Page



The “About” Web Page displays the product name, firmware version numbers, and Broadcast Tools® Web site link.

WEBSITE:

Visit our web site for product updates and additional information.



TCP Control Commands

The Switcher Sentinel 3 can be configured to accept ASCII control strings over TCP. The TCP port used, TCP timeout and TCP enable check box can be found on the Email/Network Setup page. TCP must be enabled for TCP control to work.

By default the Switcher Sentinel 3 uses TCP port 56 for control. A Telnet client such as PuTTY may be used to test the TCP control interface.

Audio Switch Control Commands: (Carriage return not required)

*uii - Select input “ii”.

Command example: *001

Where * (asterisk) is the beginning of string, “u” is unit ID, zero on these products and “ii” is the two digit input number: 01, 02, etc.

*uMA - Mute outputs.

Command example: *0ma

Where * (asterisk) is the beginning of string, “u” is unit ID, zero on these products and “MA” is the command.

*uCAx - Auto/Manual mode.

Command example: *0cay

Where * (asterisk) is the beginning of string, “u” is unit ID, zero on these products and “CA” is the command and “x” is the modifier. Where x = y to turn Auto mode on, and x = n to turn auto mode off (manual mode).

When x = ? the unit will return C0A,1<CR><LF> if Auto mode is On and C0A,0<CR><LF> if auto mode is Off.

Information Retrieval Commands: (Carriage return not required)

*uSL - Send Audio Status.

Command example: *0sl

Where * (asterisk) is the beginning of string, “u” is unit ID, zero on these products, and “SL” is the command.

Response example: “S0L,0,0,1<CR><LF> says that input 3 is selected.

The response will list all inputs, “1” if the input is selected and zero “0” if not selected.

Note: Status is automatically sent each time a channel is changed.

*uSS - Send status of output silence detector.

Command example: *0ss

Where * (asterisk) is the beginning of string, “u” is unit ID, zero on these products, and “SS” is the command.

Response example: S0S,1<CR><LF>

0 = Valid audio, 1 = Silence.

Note: Status is automatically sent each time an error is detected.

*uU - Send unit firmware version and Site ID.

Command example: *0u

Where * (asterisk) is the beginning of string, “u” is unit ID, zero on these products, and “U” is the command.

Response example: <SS3X_1.20,SITE_ID><cr><lf

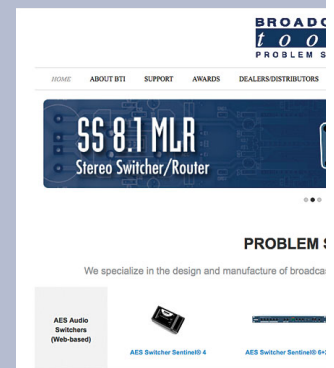
Note: Unit information is automatically sent each time this information is requested.

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, TFTP, Telnet, DHCP, BOOTP, HTTP and AutoIP.
Inputs/Outputs:	Any input level and impedance can be used. Inputs may be balanced or unbalanced. Output levels, impedance, distortion, noise and balancing will match that of the selected input.
Switching Method:	Passive, sealed relays utilizing 2-form-C bifurcated – crossbar silver alloy with gold overlay contacts.
Connectors:	Removable euroblock screw terminals for all I/O.
Operation Control:	Front panel, remote step input selection switch and web input selection.
Status:	Front panel and web input indicators, along with audio and power indicators.
EMI / FCC Compliance:	See the Declaration of Conformity page. Operation is subject to the following two conditions: 1) This device may not cause harmful interference, and 2) this device must accept any interference received, including that which may cause undesired operation.
Required power supply:	7.5 to 9.0 VDC only @ up to 1 amp. 2.1mm ID x 5.5mm OD coaxial connector. Surge protected. Domestic PS supplied.
Operating Temperature:	-40°F to +185°F (-40°C to +85°C)
Size:	6.18" x 3.70" x 1.42" (L,W,H)
Weight:	1.0 lb.
Options:	<ul style="list-style-type: none">* CE certified universal power supply.* RA-1, 1-RU rack shelf. Note: Velcro may be used to secure the product to the RA-1 shelf.

WEBSITE:

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SPECIFICATIONS

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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Declaration of Conformity

The XPORT Device contained in the Switcher Sentinel® 3 conforms to the following standards: (according to ISO/IEC Guide 22 and EN 45014)

Manufacturer's Name & Address:

Switcher Sentinel® 3: Broadcast Tools®, Inc.
131 State Street, Sedro Woolley, WA 98284-1503 USA

XPort: Lantronix 15353 Barranca Parkway, Irvine, CA 92618 USA
Declares that the following product:

Product Name Model: XPORT™ Device Server

Conforms to the following standards or other normative documents:

Electromagnetic Emissions:

EN55022: 1998 (IEC/CSPIR22: 1993) Radiated RF emissions, 30MHz-1000MHz
Conducted RF Emissions – Telecom Lines – 150KHz – 30MHz
FCC Part 15, Subpart B, Class B
IEC 1000-3-2/A14: 2000
IEC 1000-3-3: 1994

Electromagnetic Immunity:

EN55024: 1998 Information Technology Equipment-Immunity Characteristics
Direct ESD, Contact Discharge
Indirect ESD
Radiated RF Electromagnetic Field Test
Electrical Fast Transient/Burst Immunity
RF Common Mode Conducted Susceptibility
Power Frequency Magnetic Field Test

Manufacturer's Contact:

Switcher Sentinel® 3
Broadcast Tools®, Inc.
131 State Street
Sedro Woolley, WA 98284-1503 USA
Tel: 360 . 854 . 9559 Fax: 866 . 783 . 1742

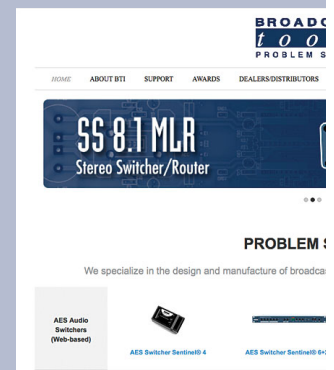
XPORT™

Lantronix:

Director of Quality Assurance
15353 Barranca Parkway, Irvine, CA 92618 USA
Tel: 949 . 453 . 3990 Fax: 949 . 453 . 3995

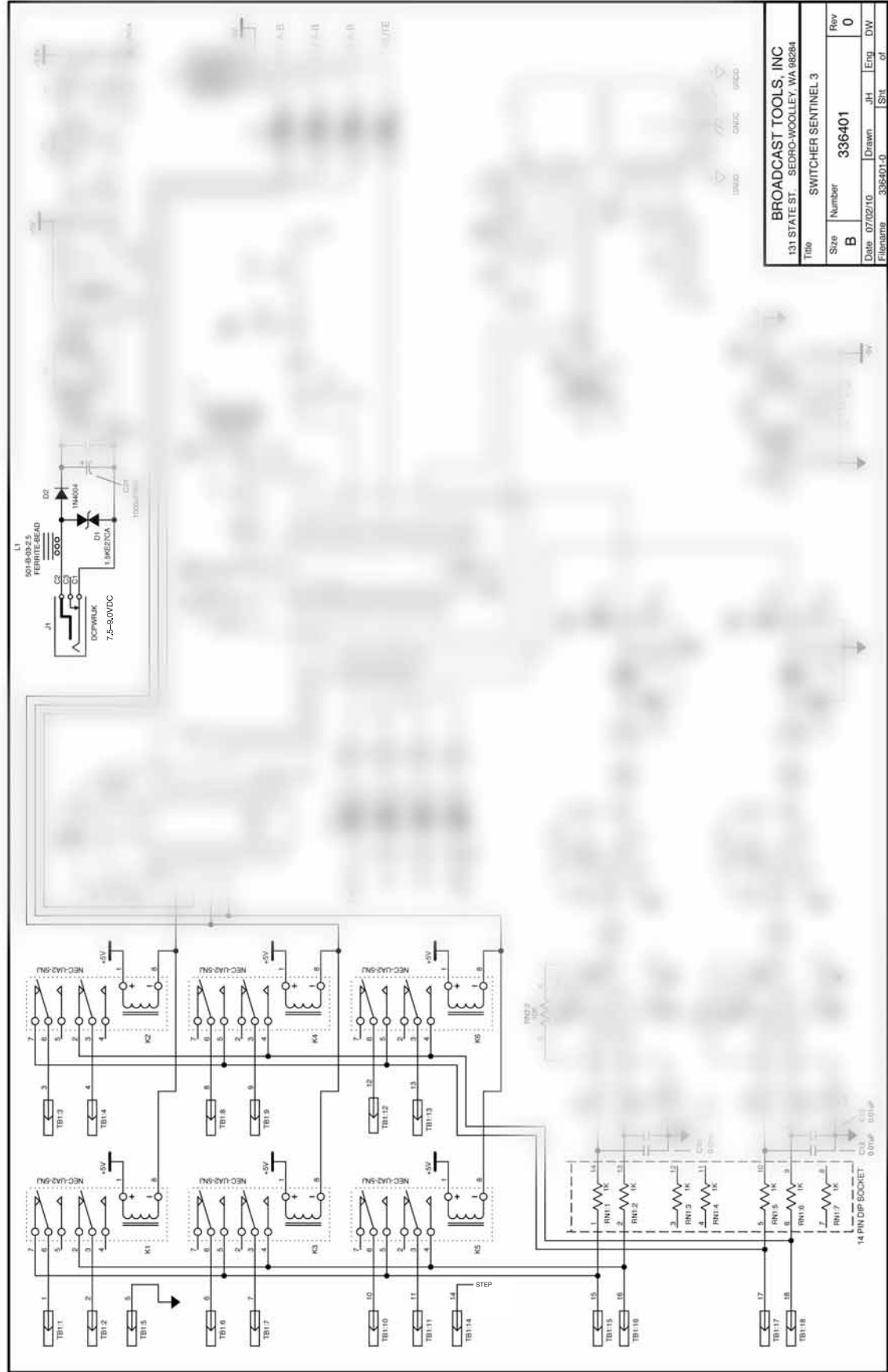
WEBSITE:

*Visit our web site for
product updates and
additional information.*



DECLARATION

Fractional Schematic



APPENDIX

27

SWITCHER Sentinel®3 » Web

Three input stereo passive switcher/router

CONNECTOR and LED LAYOUT

