The Broadcast Tools SRC-8 III Relay & Trigger Box

Installation and Configuration

Overview

The SRC-8 III is a self contained 8-channel Relay and 8-channel Trigger box that interfaces to Simian via a standard RS232 serial port.

As the unit is self-contained, there is no longer a requirement to open up your PC to install Triggers or Relay interfaces – connections to / from the SRC-8 III are via easy to use screw terminals at the rear of the case.

A clear front-panel display indicates Relay and Trigger status, together with Power Supply and RS232 data burst. (It's also possible to use the SRC-8 III via an RS422 interface)

(Trigger) Inputs are optically isolated and contacts are sourced from eight SPDT 1-amp relays.

Should additional capacity be required, a number of units can be "daisy chained" to provide up to 32 inputs and 32 outputs.

Setup

Connect the supplied 9v (AC) power supply to the power socket which is located on the right hand side of the rear panel. (The supplied power supply is designed to be run from 110V AC, if your local mains supply voltage differs you will need to obtain a power supply capable of delivering 9V AC at a current of 500mA).

The SRC-8 III connects to your computer via a standard RS232 Serial cable (supplied) which plugs into the standard 9-way D-Type connector on the back panel. The other end will attach to your PC serial port. (In most cases, this will also be a 9-way D-type although some very old machines may be fitted with a 25-way D-type in which case an adapter may be sourced, or a cable custom built).

If you are making up your own serial cable, take care that it is screened well if your facility experiences a high RF field. The connections are as follows:

Pin 5 = Ground
Pin 2 = Transmit
Pin 3 = Receive

The SRC-8 III is capable of communicating at speeds of up to 38400 baud, but we suggest using the default setting of 9600, 8, N, 1 (8 Data bits, No Parity, 1 Stop bit).

Relay Outputs and Trigger Inputs are via the two rows of green terminal connectors on the left of the rear panel. The top row is the Trigger Inputs, whilst the bottom row is the Relay Outputs. Wiring is as follows:

TRIGGER INPUTS																RS422 (SEND)	
1 A	1 B	2 A	2 B	3 A	3 B	4 A	4 B	5 A	5 B	6 A	6 B	7 A	7 B	8 A	8 B	RS-422 TX -	RS422 TX +

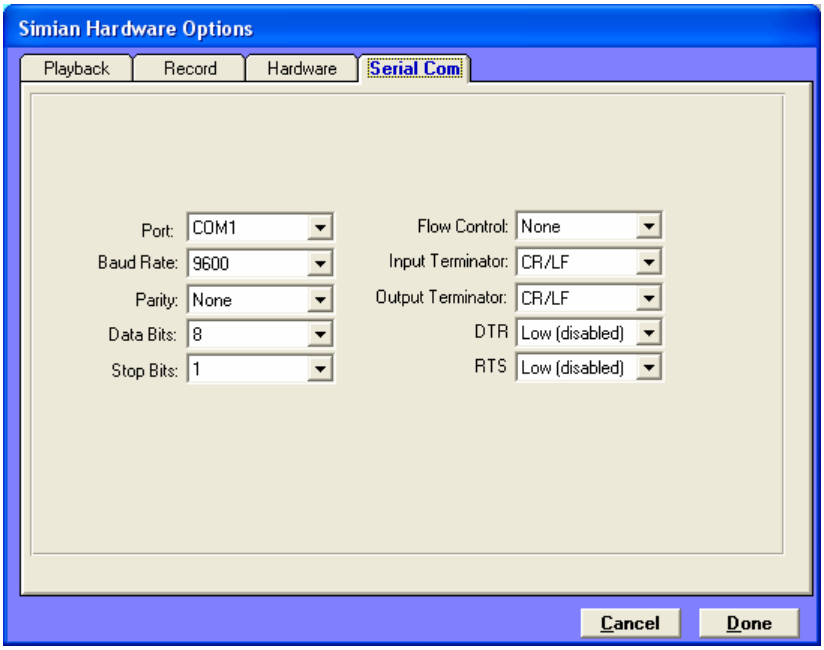
RELAY OUTPUTS																RS422 (RECEIVE)	
1 A	1 B	2 A	2 B	3 A	3 B	4 A	4 B	5 A	5 B	6 A	6 B	7 A	7 B	8 A	8 B	RS422 RX -	RS422 RX +

Trigger Input and Relay Output Connections

Configuring Simian

Select **Tools, Hardware Options** and then click the **Serial Com** tab.

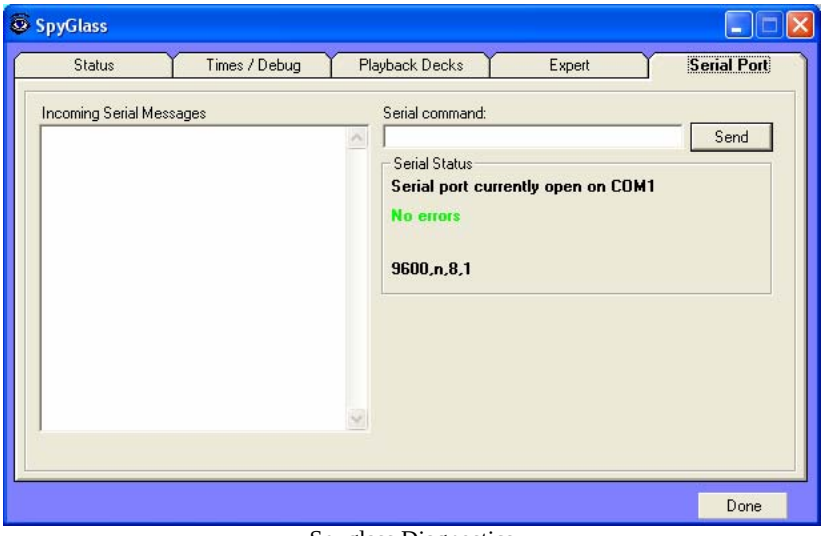
The settings should match those shown below. Note the **Flow Control** is turned off, or selected to **NONE.** Click **Done** when you are finished.



Setting Up The Serial Port

Testing Serial Communication

The built in Simian Spyglass Diagnostics are perfect for testing communication. Go to **Help, Spyglass Diagnostics a**nd then click the **Serial Port** tab.



Spyglass Diagnostics

If all is well, you'll see a screen similar to the one above, indicating that the Serial Port is open and that there are no errors.

Now, type in the following Serial Command into the box and click the **Send** button (that's a Zero followed by the letter 'O').

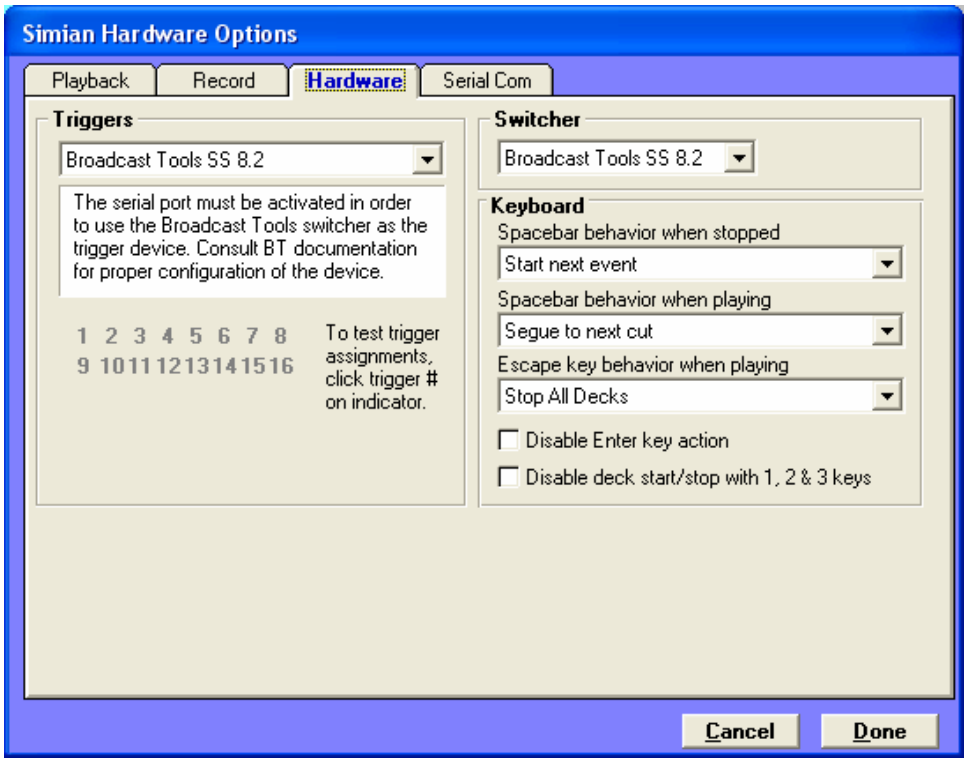
*0OR1L

Now take a look at the Relay Indicators on the front panel of the SRC-8 III. Relay 1 should now be latched on. Now try *0OR2L, *0OR3L, *0OR4L, *0OR5L, *0OR6L, *0OR7L and finally *0OR8L – relays 2 to 8 will now switch on each time your press the **Send** button.

To turn the Relays off, use the command *0OR1F (replacing the 1 with whichever relay you wish to turn off).

Having confirmed that the computer and Simian are fully communicating with the SRC-8 III we can finalise our setup.

Click **Done** to close the Spyglass Diagnostics and now select **Tools**, **Hardware Options** from the main Simian menu and then click the **Hardware** tab.



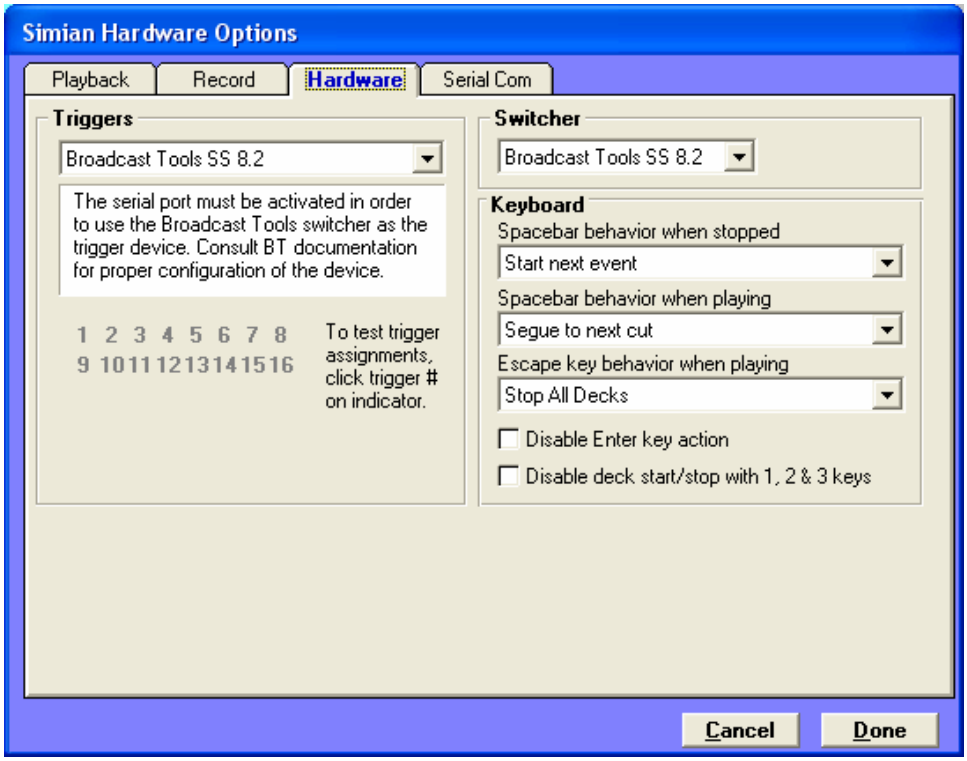
Simian Hardware Options

Although we are using the SRC-8 III, select the Broadcast Tools SS 8.2 as the **Triggers** and **Switcher** device using the drop down box provided. When you have finished, click **Done** and then make sure that you close down and restart Simian.

Testing Trigger Inputs

When Simian has restarted, activate Triggers by ensuring that you check **Async**, **Triggers Enabled** from the main Simian menu.

Now go back to **Tools**, **Hardware Options**, **Hardware** and look carefully at the Triggers numbers. Although 16 are shown, we are only interested in numbers 1 to 8.



Simian Hardware Options

Take a short piece of wire and connect the triggers contacts 1A and 1B together (refer to the diagram on page). If all is well, Simian will see the incoming trigger and the number '1' will momentarily flash green. To test all the trigger inputs, short out the A&B pairs for Triggers 2 to 8 too.

When you are finished, click **Done**.

Typically, you will use the closing contacts from a satellite receiver to activate the Trigger Inputs of the SRC-8 III. However, you could also use it to interface your Mixing Console, Fader Starts, external Silence Detector or Large "GO" button. Please refer to the full Simian manual for details of how to setup different Trigger sets to accomplish different tasks.

By default, the SRC-8 III is looking for Dry Contact closures via Switch, Relay or Open Collector. Please refer to the full SRC-8 III manual if you require Inverted, Non Opto-Isolated or "Wet" inputs. These features require changing some internal jumpers.

Testing the Relay Outputs

Simian has a built in Relay Rack Control that can be accessed by selecting Tools, Relay Rack from the main menu.

Click the **All Relays On** button and confirm that all the Relay Status LEDs on the front panel are lit. Click the **All Relays Off** button to turn them all off again.

You can access individual relays using the buttons 1 to 8 at the top of the Relay Rack, use the left button to "pulse" and the right button to "latch" the relay.

Using a simple multimeter and referring to the diagram on page 2, you can confirm that the Relay connections are now closed.

Click **Done** when you are finished.

Using the Relay macro in Simian, you can turn on and off relays from your main programme log or as scheduled events. Please refer to the full Simian manual for further information.

IMPORTANT NOTE: The relay contacts are rated at 1-amp, please refer to the full SRC-8 III manual for further technical specification.

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