



**SRC-8A**

**Serial Remote Control**

**Installation Manual**

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**Serial Remote Control Installation Manual  
Broadcast Tools, Inc.**

## INTRODUCTION

Thank you for your purchase of a Broadcast Tools, Inc., (SRC-8) Serial Remote Control. 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 unit.

 **NOTE:** This manual should be read thoroughly before installation and operation.

## SAFETY INFORMATION

Only qualified personnel should install broadcast Tools products. Incorrect or inappropriate use and/or installation could result in a hazardous condition.

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.

## 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 or Broadcast Tools, Inc. If you would like more information about Broadcast Tools, Inc., products, you may reach us at:

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Thank you for choosing Broadcast Tools!

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## **General Description**

The SRC-8A provides 8 remote relay, via the data channel of the Moseley or most of the digital STL system. The SRC-8A may also be used with dedicated modems from 1200 to 9600 baud. The SRC-8A consists of two units. The SRC-8T, which is located at the Origination end (Studio), and the SRC-8R that is at the receiving end (Transmitter site). Both units look identical and may be mounted within 20 feet of the DSP-6000 or similar equipment. Each unit is supplied with a 9 or 12 volt ac wall transformer, modular cord and a modular 9 or 25 pin D-sub adapter. The units allow up to 8 opto-isolated inputs on the SRC-8T and 8 SPST relays on the SRC-8R.

## **INSTALLING THE SRC-8A**

The SRC-8A connection to the serial port of the DSP-6000 is through the modular/9 pin D-sub adapter supplied with each end. Connect one end of the modular cable to the SRC-8A's modular jack labeled "RS-232" and the other to the 9 pin "D" connector on the DSP-6000 or data port via the modular/D-sub adapter. Looking at the front of the SRC-8A, the connection from the wall transformer is made on the far right hand side.

Relay connections on the SRC-8R are via a clamp style wire captive terminals located at the front of the unit. Connections made to the clamp style wire captive terminal strip should be made using 22 AWG or smaller solid or stranded wire. Strip off approximately 3/16" from the connection end of the wire, push the white lever just to the rear of the terminal strip connections towards the inside-rear of the SRC-8A. While continuing to push the lever, insert the bare wire end into the open orange hole at the desired connection point. Releasing pressure on the white lever will then clamp the wire into its connection. The relays are denoted as K1 for Relay 1 Normally Open, K1 for Relay 1 Common (wiper). This convention holds true for all eight relays.

## **For safety, do NOT connect 120 Volt circuits to the relays.**

The inputs on the SRC-8T are provided with the same connectors as the SRC-8R. The inputs are polarity sensitive, opto-isolated and factory configured for "DRY" inputs. These terminals may be connected to any pair of switch contacts, such as external relays, switches, etc. The inputs may also be connected to external open-collector circuits or 5 to 24 vdc signals. Follow the jumper layout for wet inputs.

# Programming and Operation


The Broadcast Tools SRC-8A may be programmed via jumpers on each unit. The factory set-up is as follows.

- J8/9 jumpers removed, baud rate is set to 9600 baud.
- All inputs set for "DRY" closures.

Note: Please refer to the jumper/layout sheet provided.

## SPECIFICATIONS

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<u>Serial:</u>	High integrity data format, baud rate adjustable from 1200 to 9600 8-N-1. RS-232C. This spec is for both units. (Optional RS-485).
<u>Logic:</u>	Microprocessor.
<u>Relays:</u>	Sealed relays with LED indicators on the SRC-8A receive unit, spst contacts. 1 amp/30 vdc,30w/62.5va.
 <b>NOTE:</b>	<i>For safety, do NOT connect 120VAC circuits to the relays.</i>
<u>Logic input:</u>	Opto-isolated /w selection of dry or wet inputs with LED indicator on the transmit unit. 5 to 24 vdc. Compatible with CMOS/TTL, open collector or contacts closures.
<u>Connectors:</u>	Clamp style wire captive terminals. Modular, RJ-12, RS-232/w 9 or 25 pin D-sub adapter.
<u>Power Requirements:</u>	9 to 12 Vac, 500 ma. 120 Vac 50-60 hz wall transformer. (240 Vac 50-60 hz optional)
<u>Size:</u>	7.0" X 1.00" X 4.15" (WHD)
<u>Mounting:</u>	Flanges with # 6 mounting holes.
<u>Mounting option:</u>	RM-2 or RM-3 allows rack mounting two (2) SRC-8A.
<u>Weight::</u>	1.5 lb.
<u>Shipping weight:</u>	3.0 lb.

**SRC-8A**

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## Courier Modems in Leased Line Async Mode

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It is always best to bench test a leased line configuration. It is much easier to make configuration changes when the modems are connected to each other in the same room rather than when they two miles apart.

Below is a list of what needs to be done to set up both modems for leased line connections. This document assumes you have two Courier V.34 modems with the current firmware revision.

The leased line should be an Analog 2 wire full duplex with no conditioning. The modems transmit at -9dbm and will receive anywhere between -9dbm and -46dbm.

Line Specifications:

- 3002 type D circuit 2 wire connectors at each end of Leased Line.
- Full duplex (both ends can transmit and receive at the same time).
- Not mandatory but a Class A test to check the line from point to point (there may be a charge for this by the phone company).
- For dedicated line (the standard phone line included w/modem) the limit is 5 (five) miles. Otherwise, if the line is true leased line with power provided by the Telco Central Office, then there is no limit on length.
- No echo suppression.
- No line conditioning.
- Voice grade line.

**NOTE:** Lease line must be a 2-wire line, not 4-wire and not a digital line.

1. Connect the modem to a computer running communications software in terminal mode (i.e., HyperTerminal or Windows Terminal). Configure the communications software to match the data bit construction of the device/computer that the modem will be connected to when it is on the leased line. Data bit construction refers to the port speed or baud rate, parity, data bits and stop bits.
2. Put DIPswitches 3,5, 8 and 10 down to set them in the on position for both modems. This will load the factory defaults.
3. If the computer system the modem will be connected to will be using *Hardware Flow Control* then type the following in your communications software or terminal: (Use this one)  
**AT&F&B0&H0&I0&K0&N6&R1&S0&L1&W <enter>**
4. Modem 1 is the Answer Modem. Change the DIPswitches on Modem 1 so that 1 and 4 are down to set them in the on position and all other are up or off.

Modem 2 is the Originate Modem. Change the DIP switches on Modem 2 so that 1, 4, and 5 are down to set them in the on position and all others are up. Put the Originate modem at the studios.

5. Power off both modems. Connect one of the phone cables that comes shipped with the modems from the RJ11 jack labeled "JACK" on Modem 1 into RJ11 jack labeled "JACK" on the Modem 2. These are the Telco jacks on the modems, which are closest to the RS-232 cable connector.

6. Power on both modems. The modems will begin handshaking and connect. Ensure that this configuration works with the software you plan to use with your leased line configuration. Finally, take the modems to the actual leased line for installation.

**SRC-8A Half/Full Duplex  
One Way**

MASTER			SLAVE	
J16-J17	ON		J16-J17	ON
J43	ON		J43	ON
J6	A		J6	A
J7	A		J7	A
J25	ON		J25	ON
J26	ON		J26	ON
J22	B		J22	B
J1	ON		J1**	OFF
J8 - J9	OFF	9600	J8 - J9	OFF
J10	ON		J10	ON
J11	OFF		J11	OFF
J12	ON	L01	J12	ON
J13	ON	L01	J13	ON
J14 - J15	OFF	4 Times	J14 - J15	OFF
J18 - J19	ON		See <b>NOTE:</b>	

**NOTE:** Same configuration as the Master except when back to back testing; then one must be J18 - J19 while the other is J20 - J21.

\*\* No jumpers on J1,2,3 for half duplex.  
Jumper on J2 for full duplex as slave.

Use the supplied "V-25" male 25 pin D-Sub to modular adapter. Configure the adapter as

follows:      **Pin 2 = Yellow**              **Pin 3 = Green**              **Pin 7 = Red**

**BROADCAST TOOLS, INC.**  
**LIMITED WARRANTY AND REMEDIES**

**LIMITED WARRANTY**

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