



S-102A

10x1 Stereo Audio Routing Switcher

**Videoquip Research Limited
595 Middlefield Road, Unit #4
Scarborough, Ontario, Canada
M1V 3S2**

Introduction

The S-102A is a 10 input by one output stereo audio routing system.

Audio selections are made using the front panel pushbuttons, or via remote control. All inputs and outputs are balanced. The gain of each input and output is adjustable using the front panel controls.

The S-102A consists of two completely independent audio switching networks, for the left and right channels. The two channels switch simultaneously, providing a stereo system.

The unit occupies a single rack space.

S-102A Installation

All audio inputs and outputs are balanced, and all connections are made on the rear panel. If remote operation is required, the unit must first be configured internally.

Schematic diagrams of a complete S-102A system are included at the end of this section.

Audio Installation

Connect the audio signals from the left and right channels of each device to the left and right inputs (1-10) on the S-102A, using a small slotted screwdriver.

Connect the S-102A left and right channel outputs to the signal destination. Two outputs are available for each channel (Left and Right), in order to provide audio to two destinations. Each output is individually buffered.

Note the signal polarity (+ and -) of the balanced signals on all connections. These are clearly indicated on the rear panel. If connecting unbalanced inputs, connect the signal to the '+' input, and connect the shield to the Ground (G) input. It is not necessary to connect the unused '-' input to Ground.

Remote Control Configuration

The S-102A must be configured internally for remote operation. A total of 6 jumpers and 1 eight-position DIP switch must be set.

For RS-422 communication (factory setting), install the 5 jumpers between JP3 and JP4. Installing JP-1 provides a 100 ohm termination on the RS-422 receive line. In systems with several S-102A units daisy-chained to the same control system, only the S-102A at the end of the daisy-chain should be terminated.

For RS-232 communication, install the 5 jumpers between JP4 and JP5. JP1 has no effect.

Remote Control Configuration (Cont'd)

The DIP switch sets the S-102A unit number and baud rate. Set the switches according to Table 1 and Table 2.

Note that the factory settings are for RS-422 protocol, with the 100 ohm termination installed, at 9600 baud, and Unit #1.

DIP Switch Position					Unit Number
5	4	3	2	1	
0	0	0	0	0	Invalid
0	0	0	0	1	1
0	0	0	1	0	2
0	0	0	1	1	3
0	0	1	0	0	4
0	0	1	0	1	5
0	0	1	1	0	6
0	0	1	1	1	7
0	1	0	0	0	8
0	1	0	0	1	9
0	1	0	1	0	10
0	1	0	1	1	11
0	1	1	0	0	12
0	1	1	0	1	13
0	1	1	1	0	14
0	1	1	1	1	15
1	0	0	0	0	16

Table 1. Setting the S-102A Unit Number (1=On, 0=Off)

Dip Switch Position			Baud Rate
8	7	6	
0	0	0	1200
0	0	1	2400
0	1	0	4800
0	1	1	9600
1	0	0	19.2 K
1	0	1	38.4 K
1	1	0	57.6 K
1	1	1	115.2 K

Table 2. Setting the S-102A Baud Rate (1=On, 0=Off)

Remote Control Connector Wiring

The 9-pin D-connector for the remote control is wired differently for RS-422 and RS-232. Make the necessary connections according to Table 3. The pinout for the remote connector is shown in Figure 1.

Pin #	RS-422	RS-232
1	GND	GND
2	TX-	TX
3	RX+	RX
4	GND	GND
5	GND	GND
6	GND	GND
7	TX+	N/C
8	RX-	CTS
9	GND	GND

Table 3. S-102A Remote Control Connector Pin Assignments

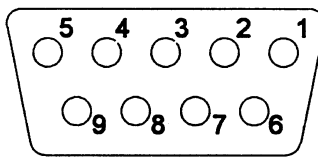


Figure 1.

S-102A Chassis Rear Panel, Remote Control DB-9F Connector Pinout

S-102A Audio Level Adjustment

All adjustments are made using the front panel controls. All channels are preset at the factory for unity gain.

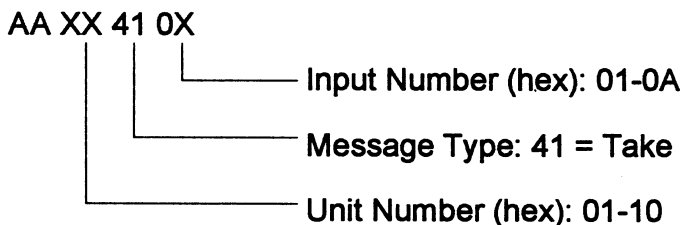
The level of each of the two outputs (L and R) may be adjusted over a +/-6 dB range using the output controls. Note that adjusting the output level will change the effective level of all channels accordingly.

To adjust the level of only a single channel, use the individual channel level controls (L and R for each channel). The level for each channel may be adjusted over a +/- 10 dB range.

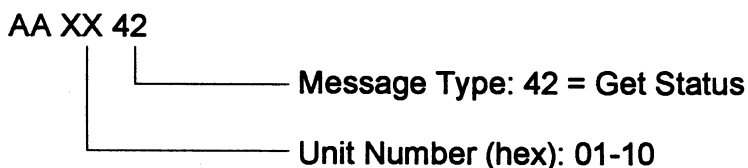
Remote Control Protocol

Two remote control commands are currently available for the S-102A: the Take command, and the Get Status command. The following protocol is used to communicate with the S-102A. All communications are asynchronous.

Take Command



Get Status Command



Response from S-102A (to 'Get Status' command)



S-102A Optional Parallel Remote

The optional parallel remote allows input selection using external relays, switches, or other devices. The pinout for the parallel remote connector is shown below.

Input selections are made by connecting the corresponding pin (1-10) to ground. The connection may be either momentary or sustained. Note that only one pin should be grounded at any time.

Pin Number	Function
1	Select Input 1
2	Select Input 2
3	Select Input 3
4	Select Input 4
5	Select Input 5
6	Select Input 6
7	Select Input 7
8	Select Input 8
9	Select Input 9
10	Select Input 10
11	Ground
12	Ground
13	Ground
14	Ground
15	Ground

S-102A Parallel Remote Connector Pinout