B-100 / B-300 Series HDMatrix Switchers

Overview

The following information will guide the installer through simple set up and programming for Serial control of a Binary B-100 / B-300 Series HDMatrix Switcher.

Please read through the entire document before attempting to control via RS-232.

Should you have any questions about Serial control after reading this document, please contact SnapAV: Technical Support.

Contacting Technical Support

Phone: (866) 838-5052 (704) 909-5229

Email: TechSupport@SnapAV.com

Before Beginning

Before you begin the setup of the HDMatrix for RS-232 control make sure the following items are at hand.

- B-100-HDmatrix or B-300-HDMatrix with the proper firmware version
  See Firmware Version section for details.
- Home Automation System or other control device
- Owner's Manual for the Home Automation System
- B-100-HDMatrix or B-300-HDMatrix Owner's Manual
- Cable to connect the switcher to the Home Automation System
- List of the functions that you intend to program into the Home Automation System
- Knowledge of this document and the Control Device being used.

Firmware Version

The information contained in this document is intended for switchers with the latest version of firmware. Please verify that you have the latest version of firmware for each switcher in the system.

If the firmware version of the switcher is below the version listed here, it is recommended that it is updated.

Firmware Version: 1.0.0

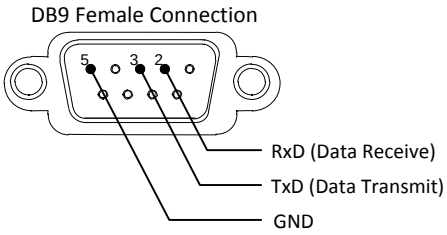
Determining Firmware Version

To determine the firmware of the switcher use the programming software available on the SnapAV site.

RS232 Port Configuration

The Binary™ HDMatrix receives control data on pin 2 (Rxd – Data Receive) and transmits control data on pin 3 (TxD - Data Transmit). The connection cable between the HD MATRIX and the Automation System will need to be configured so that pin2 (RxD) on the HD MATRIX is connected to the Automation Systems Txd pin, and pin3 (TxD) on the HD MATRIX is connected to the Automation Systems Rxd (Receive Data) pin. See below for details.

Configuration for the Automation System control ports can vary. Refer to the documentation for the Automation System you are using to ensure proper connection and configuration.



Pin	**Function**
2	RxD (Data Receive)
3	TxD (Data Transmit)
5	GND

In addition to the RS232 DB9, the 8x8 switchers add an Ethernet port that can be used to control the device using Telnet Protocol. This port follows 568 A/B standards, please refer to these standards when creating wiring.

Serial Communications Format

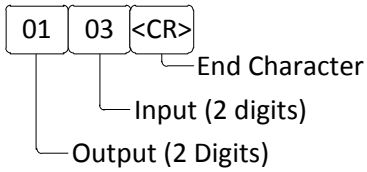
Set the serial communications to the following format on the Home Automation Systems control port.

Baud Rate : 9600 bps
Data Bit : 8 bits
Parity : None
Stop Bit : 1 bit

Output/Input Commands

The commands for the switcher are sent and received in ASCII format. With a few exceptions, the commands for control and feedback are the output and input being controlled.

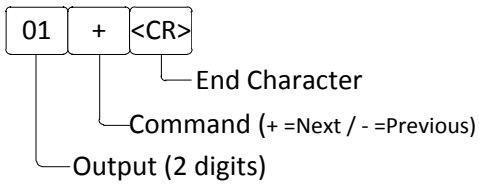
Direct Output/Input Selection



Example	Command	Response
Select Input 3 on Output 1	0103<CR>	o01i03
Select Input 2 on Output 3	0302<CR>	o03i02

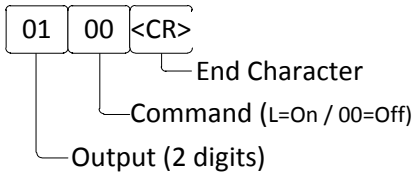
Note: Command structure must be Output followed by Input.

Next/Previous Input Selection



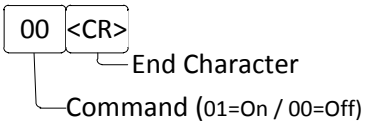
Example	Command	Response
Select the next Input on Output 1	01+<CR>	o01i04
Select the Previous Input on Output 1	01-<CR>	o01i03

Turn Outputs On and Off



Operation	Command	Example Response
Turn Output 1 Off	0100<CR>	o01i00
Turn Output 1 On	01L<CR>	o01i03

Turn Switcher On or Off

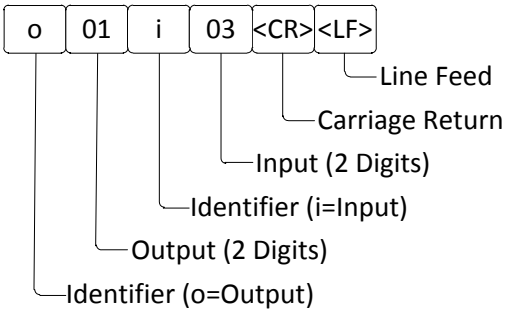


Operation	Command	Example Status
System On	01<CR>	p01
System Off	00<CR>	p00

Output/Input Command Response

Whenever a serial or IR command is sent, a string identifying the state of the switcher is returned. At the end of response line the system sends a <CR> and <LF>.

Output/Input Status

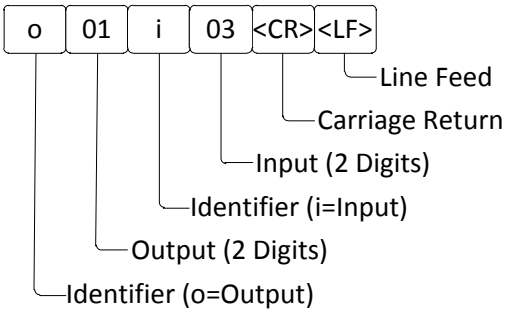


Status Commands

Input to Output Mapping

Command	Function
STMAP	Request Input to Output Mapping

Response



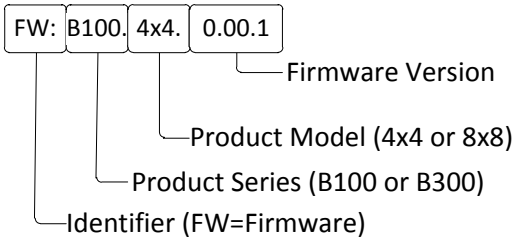
When returned the response will list all outputs and their associated input for the available number on inputs on the switcher.

4x4 Switcher Example	8x8 Switcher Example
o01i01	o01i01
o02i02	o02i02
o03i03	o03i03
o04i04	o04i04
	o05i05
	o06i06
	o07i07
	o08i08

Firmware Version

Command	Function
VR	Request Firmware Version

Response



Example
FW:B100.4x4.0.00.1

IP Address (8x8 Only)

Command	Function
IP	Request IP Address

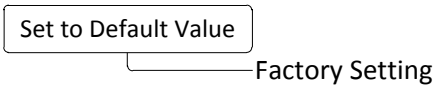
Response

Example
192.168.1.21

Factory Defaults

Command	Function
FASET	Reset Switcher to Factory Settings

Response



Example
Set to Factory Value

Factory Values:

EDIDs: 1080i Stereo

I/O: All Outputs set to Input 1