

Instruction Manual



MODEL: SB-5688 8x8 HDMI MATRIX SWITCHER

HDMI Matrix Switcher Series

Thank you for purchasing the SB-5688 HDMI Matrix Switcher. You will find this unit easy to install and highly reliable but it is essential that you read this manual throughly before attempting to use 8x8 HDMI Matrix switcher.

Part No.: ENCL005688000A2



SAFETY INFORMATION



- Save the carton and packing material even if the equipment has arrived in good condition. Should you ever need to ship the unit, use only the original factory packing.
- 2. Read all documentation before operating your equipment. Retain all documentation for future reference.
- 3. Follow all instructions printed on unit chassis for proper operation.
- 4. Do not spill water or other liquids into or on the unit, or operate the unit while standing in liquid.
- 5. Make sure power outlets conform to the power requirements listed on the back of the unit.
- 6. Do not use the unit if the electrical power cord is frayed or broken. The power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords and plugs, convenience receptacles, and the point where they exit from the appliance.
- Always operate the unit with the AC ground wire connected to the electrical system ground. Precautions should be taken so that the means of grounding of a piece of equipment is not defeated.
- 8. Mains voltage must be correct and the same as that printed on the rear of the unit. Damage caused by connection to improper AC voltage is not covered by any warranty.
- 9. Power down & disconnect unit from mains voltage before making connections.
- 10. Never hold a power switch in the "ON" position.
- 11. Do not use the unit near stoves, heat registers, radiators, or other heat Producing devices.
- 12. Do not block fan intake or exhaust ports. Do not operate equipment on a surface or in an environment which may impede the normal flow of air around the unit, such as a bed, rug, carpet, or completely enclosed rack. If the unit is used in an extremely dusty or smoky environment, the unit should be Periodically "blown free " of foreign matter.
- 13. Do not remove the cover. Removing the cover will expose you to potentially dangerous voltages. There are no user serviceable parts inside.
- 14. Do not drive the inputs with a signal level greater than that required to drive equipment to full output.
- 15. Non-use periods. The power cord of equipment should be unplugged from the outlet when left unused for a long period of time.
- 16. Service Information Equipment should be serviced by qualifier service personnel when:
 - A. The power supply cord or the plug has been damaged.
 - B. Objects have fallen, or liquid has been spilled into the equipment.
 - C. The equipment has been exposed to rain
 - D. The equipment does not appear to operate normally, or exhibits a marked change in performance
 - E. The equipment has been dropped, or the enclosure damaged.

IMPORTANT SAFETY INSTRUCTIONS

To insure the best from this product, please read this manual carefully. Keep it in a safe place for future reference.

To reduce the risk of electric shock, do not remove the cover from the unit. No user serviceable parts inside. Refer servicing to qualified personnel.

To reduce the risk of fire, do not expose the unit to rain, water or excessive moisture.

Do not force switched or external connections.

When moving the unit disconnect the serial port connections first then the power cable and finally the interconnecting cables to other devices.

Do not attempt to clean the unit with chemical solvents or aerosol cleaners, as this may damage the unit. Use a clean dry cloth.

Installation of this unit should be in a cool dry place, away from sources of excessive heat, vibration, dust, moisture and cold.

TABLE OF CONTENTS

TABLE OF CONTENTS	3
INTRODUCTION AND PACKAGE OF CONTENTS	4
FEATURES AND SPECIFICATIONS	5
EDID FUNCTIONS	6
EDID FUNCTIONS	7
CEC FUNCTIONS	8
FRONT PANEL	9
FRONT PANEL - CONTROL FUNCTIONS	10
REAR PANEL	11
TYPICAL APPLICATION	12
REMOTE CONTROL	13
REMOTE CONTROL - DATA CODE LIST	14
IR EXTENDER	15
RS-232 SERIAL INTERFACE	16
RS-232 SERIAL COMMANDS	17



CAUTION

RISK OF ELECTRIC SHOCK DO NOT OPEN



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, NO USER SERVICEABLE PARTS INSIDE,

REFER SERVICING TO QUALIFIED SERVICE PERSONAL.

WARNING!

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.



This symbol is intended to alert the user to the presence of uninsulated of uninsulated idangerous voltage: within the products enclosure that enclosure the may be of sufficientmagnitude to constitue a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operational and maintenance (serving) instructions in the literature accompanying the appliance.

To prevent electric shock do not use this (polarised) plug with an extension cord, receptacle or other outlet unless the blades can be fully inserted to prevent blade exposure. To prevent electric shock, match wide blade of plug to wide slot, fully insert.

INTRODUCTION AND PACKAGE CONTENTS

INTRODUCTION

The SB-5688 is high-performance 8x8 matrix routing switcher for HDMI signals. This switcher supports data rates up to 6.75 Gbps, enabling 1080p HDMI formats and UXGA/WUXGA/DVI resolution to any HD display. High Definition Digital signals can be selected and distributed to any 8 outputs simultaneously. The Switcher is certified as being fully HDMI® and HDCP® compliant, with RoHS,CE,FCC certification. Support high resolution HDMI sources routed to HDMI displays, monitors, projector or audio receivers. The EDID can be selected between seven (7) different modes. Control is provided via Front panel push buttons, IR remote or via RS-232. An RS232 Windows GUI interface is provided for matrix routing.

The SB-5688 is a 8x8 HDMI Matrix Switcher featuring 8 inputs and pre-emphasized 8 outputs. Full support HDMI / HDCP compliant.

8 inputs as following : 8 x HDMI (Digital Video-TMDS / Digital Audio) 8 matrix outputs as following : 8 x HDMI (Digital Video-TMDS / Digital Audio)

Support Seven Control Function Keys:

ALL > OFF > PREV(RECALL) > PLAY/DEMO(ENTER) > SAVE(MEMORY) > EDID > LOCK

EDID support:

1. INTERNAL modes:

Auto / 1080P- 2C

1080P-5.1/

1080P-7.1

1080i- 2CH/

720P-2CH

2. EXTERNAL mode

PACKAGE CONTENTS

- 1. Main console unit
- 2. Operating Instructions
- 3. IR Remote Controller (SW-5688)
- 4. 19 inch Ear mount bracket (Part # 1U-440L)
- 5. IR Extender receiver (SB-100)
- 6. CD Contents: This manual. Windows GUI
- 7. RS232 Cable
- 8. Power Supply 12VDC, 4A Universal Type 50/60Hz, 100~230 VAC

FEATURES and SPECIFICATIONS

FEATURES

- 1. Support 8x HDMI digital source devices matrix switched to 8x HDMI devices.
- 2. HDMI digital video w/embedded audio, DVI format and HDCP compliant
- 3. Seven (7) function key control and worldwide EDID modes for HDTV resolutions.
- 4. Link speeds of up to 6.75 Gbps (link clock rate of 340Mb Hz), for 3D formats.
- 5. Wide range of HD resolutions from PC XGA to WUXGA 1920x1200 and HDTV/DTV resolutions 480i/480p, 576i/576p, 720p, 1080i & 1080p
- 6. Compatible with all HDMI source devices, PC monitors, Plasma HD display, HDTV and audio receivers/amplifiers.
- 7. Digital Video TMDS formats
- 8. Support IR Remote and IR Extender with distance up to ~ 1000' (300M) Maximum.
- 9. Various User Interface control:

Windows based GUI control via RS232 port

Front Panel push button

IR wireless remote control

Third party RS232 controller (via simple ASCII)

- 10. Front panel buttons: ALL/OFF/PREV/PLAY/SAVE/EDID/LOCK
- 11. Automatic scanning input & output status
- 12. Desktop with optional rack mount via included 19 inch bracket.
- 13. EDID configuration via Internal modes.
- 14. Consumer Electronic Control (CEC) switch all open or OFF

The Switcher will remember that last state during a power cycle.

When power is removed and resorted, the last configuration will be invoked.

SPECIFICATIONS

Type of Switcher: HDMI 8 x 8 Matrix Routing Switcher
 Input Signals: Video (TMDS) 0.5~1.0Vpp, DDC 5Vpp
 Signal Supports: HDMI Standard, DVI and HDCP Compliant

4. Video Supported: 1080p HDMI formats and DVI UXGA 1600x1200 HD resolutions.

5. Audio Supported: (HDMI only) DTS-HD Master Audio, Dolby True -HD & Dolby Digital Plus

6. Video input interface:

7. Controls:

RGB/YCBCR: 24/30/36-bits

YCBCR: 8/10/12/16/20/24-bits

Double data rate interface for RGB/YCBCR: 12/15/18-bits IR, IR EXT, Select & function buttons on the front panel & RS232

8. Data Rates: 250Mbps to 6.75Gbps.

9. IR Extender Distance: ~1000 feet / 300 meters maximum.

10. Infrared frequency: 38KHz.

11. Safety Approvals: CE, FCC, RoHS (2002/95/EC).

12. Dimensions (WDH): 19 " x 9.85 " x 1.75 " (482mm x 250mm x 44mm) *with rack mount

13. Power Supply: DC12V / 4A (consumption 2580mA Maximum)

Universal world wide Type 50/60Hz, 100~230 VAC

14. Product Weight : 2.50 Kgs / 4.170 lb

As product improvement is continuous, specifications are subject to change and without notice or liability.

EDID FUNCTION

EDID function for HDMI Matrix Switcher

To view the current EDID status.

Step 1 . Press EDID button, the button will flash blue and the display will show the current EDID Status.

Step 2 . Press EDID button to exit.

To change the EDID setup.

Method 1

Step 1 . Press EDID button, the button will flash blue and the display will show the current EDID Status.

Step 2 . Press the Input (source) button row) to select EDID mode.

Repeatedly depressing the source **1** button will cycle **up** thru the options.

Repeatedly depressing the source 2 button will cycle **down** thru the options.

Options are:	Auto	Display =	Auto < Default>
	1080p/2CH	Display =	1080P-2CH
	1080p/ 5.1	Display =	1080P-51
	1080p/7.1	Display =	1080P-71
	1080i/2CH	Display =	1080i-2CH
	720p/2CH	Display =	720P-2CH
	EXTERNAL	Display =	EtL

All Outputs will be set to the highest common resolution of all connected display devices.

Example for single source

Destination > press #1 and then Source > press #1

Destination device #1 will set to the highest common resolution of source #1

Example for multiple sources

Destination device #1, #2, #3 will be set to the highest <u>common</u> resolution available and source device #1 will output this same resolution.

Step 3 . Press the **Demo or ENTER** button to set **EDID** mode. The switcher will return to operation mode. Press the **EDID** button again to leave **EDID** setting menu.

Method 2

In some cases, the display screen maybe dark, or no picture, distorted color or without sound. This is caused by import ability of the EDID.

Some caused of this are:

- 1. Destination resolution 480p EDID. Source is 1080p or 720p
- 2. Destination resolution 1080p EDID. Source is 480p, 720p or 1080p
- 3. Either Source or destination has no EDID code, or firmware is older version.

in this event. you can manually link source EDID to destination EDID.

- **Step 1** . Press EDID button, the button will flash blue and the display will show the current EDID Status.
- **Step 2**. Press Output button 1 thru 4 destination row on the affected display.
- **Step 3**. Press DEMO or ENTER to save setting and return switcher to regular operating mode.

EDID FUNCTION

EDID function for HDMI Matrix Switcher

Method 2

In some cases, the display screen maybe dark, or no picture, distorted color or without sound. This is caused by import ability of the EDID.

Some caused of this are:

- 1. Destination resolution 480p EDID. Source is 1080p or 720p
- 2. Destination resolution 1080p EDID. Source is 480p, 720p or 1080p
- 3. Either Source or destination has no EDID code, or firmware is older version.

in this event. you can manually link source EDID to destination EDID.

- **Step 1**. Press **EDID** button, the button will flash blue and the display will show the current.
- **Step 2** . Press **Output** (destination) button, 1 thru 8 on the affected display. The SB-5688 will accept the commend and restart.

CONSUMER ELECTRONICS CONTROL (CEC)

CONSUMER ELECTRONIC CONTROL (CEC)

In brief, CEC allows HDMI devices to control each other when necessary and allows the user to operate multiple devices with one remote control handset.

To Enable CEC

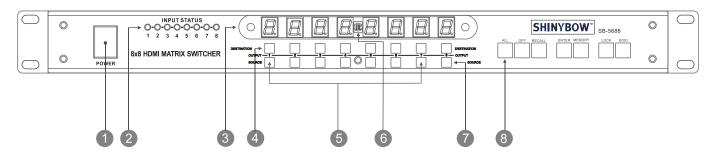
- Press **EDID** button
- Press ALL button
- Press **EDID** button The pre-set configuration will execute.

To Disable CEC

- Press **EDID** button
- Press **OFF** button
- Press **EDID** button The pre-set configuration will execute.

FRONT PANEL

FRONT PANEL



POWER SWITCH

The power switch turns the unit on and off. The LED will illuminate red to indicate that the switcher is ON and is receiving power.

The Switcher will remember that last state during a power cycle.

When power is removed and resorted, the last configuration will be evoked.

INPUT STATUS DISPLAY

Input sources 1 to 8 LED illuminates blue to indicate that a video source is present on that input.

OUTPUT STATUS DISPLAY

Each Output (destination) Channel shows which input (source) is assigned.

DESTINATION SELECT BUTTONS

Separate outputs 1 thru 8 select buttons are provided for each destination assignment.

Routing can be Source to Destination or one source to multiple destinations.

Example: Press Destination 1,3,5 then press Source 2 will route Input 2 to Output 1,3,5 respectfully.

EDID MODE SELECT BUTTONS

Used to select EDID mode using buttons #1 thru #2

IR SENSOR

The IR sensor receives IR commands from the supplied remote controller or third party IR emitter.

SOURCE SELECT BUTTONS

Separate inputs 1 thru 8 select buttons are provided each source selection.

FUNCTION KEY - ALL

Disables (mute) video on all destinations OR Selects the same source to all destinations.

Option 1

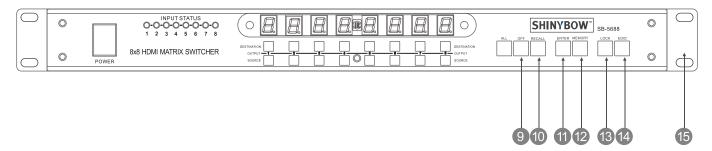
- Press ALL followed by OFF button. The display will show " 0 " indicating all destinations have no video selected.

Option 2

- Press ALL followed by Source 1 thru 8. The display will show the Source selected.
- Press **ENTER** The pre-set source selection will be assigned all destinations.

FRONT PANEL

FRONT PANEL



9 FUNCTION KEY - OFF

Disables (mute) video to selected channels. Either destinations.

- Press **OFF** button followed by any Destination channel.
- Press 1 thru 4 output destination. The display will show " 0 " for the selected channel indicating no video selected.

TUNCTION KEY - RECALL (preview)

The system will show previously stored presets, up to a total of 16. Presets are stored in local memory using Source keys 1 thru 8 or Destination keys 1 thru 8 as the memory preset location.

- press **RECALL** button.
- press 1 thru 4 on either Source or Destination row.
- press **ENTER** The pre-set configuration will execute.

Operation completes.

Note: Operation will abort if no keys are dressed within 5 seconds.

11 FUNCTION KEY - ENTER (or DEMO)

Press **ENTER** to confirm entries.

12 FUNCTION KEY - MEMORY (or SAVE)

The system will show store presets, up to a total of 16.

Presets are stored in local memory using Source keys 1 thru 8 or Destination keys 1 thru 8 as the memory preset location.

- Configure désired matrices..
- Press MEMORY button.
- Press 1 thru 4 on either Source or Destination row.
- Press ENTER to ready memory location.
- or press **MEMORY** again to cancel operation.

Operation completes.

Note: Operation will abort if no keys are pressed within 5 seconds.

13 FUNCTION KEY - LOCK

- Press and hold **LOCK** button for two seconds lockout the front panel.
- Press and hold **LOCK** button for two seconds to enable the front panel.

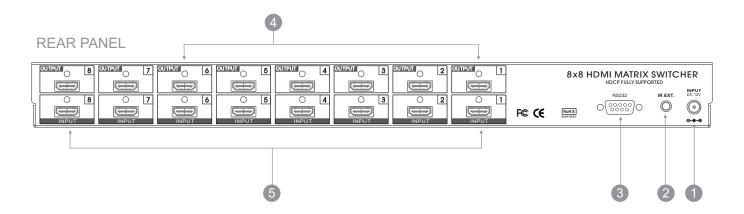
14 FUNCTION KEY - EDID

- press EDID to select new EDID mode or select source row #1 or #2 for LINK source EDID again.

19 INCH EAR MOUNT PAIR

Converts desktop to 19 inch rack mount. Bracket (part # 1U-440L) INCLUDED. Image shows rack mount bracket attached.

REAR PANEL



1 DC POWER INLET

The Switcher is fitted with a DC power plug input connector. Ensure that the used is of an approved type and is of sufficient current carrying connector capacity with the correct voltage and connector polarity. 12Volt DC power supply 4A Max (Center pin positive).



Power Jack: DC Jack - inner OD ϕ 2.1mm (+) Outside OD ϕ 5.5mm (GND) Power input - 12VDC, 4A

2 IR EXTENDER CONTROL

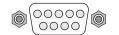
Support one of IR Extender Extend distance maximum 300Meters / ~1000 feet When you plug the External IR extender into the switcher, the front panel IR receiver remain active.



IR Extender Jack: Female Jack - inner OD Ø 3.5 mm

3 RS 232 CONNECTION

RS 232 control port to allow for interfacing to a PC, Such as a computer or touch panel control, to the switcher via this DB-9pin Female connector for serial RS-232 control.



Remote port : DB-9pin Female connector

4 INPUTS- 1,2,3,4,5,6,7, & 8 HDMI

Connect a signal link of HDMI direct digital video/audio to this Female HDMI connector. This connector supports HDMI digital video/audio and DVI digital video sources.

HDMI Digital Video/Audio, Connector with fix screw Input 1 ~ Input 8



HDMI digital video/audio connector: HDMI Female connector.

Note:

With the proper adapters, the switcher can be used with DVI digital video signals HDCP compliant. DVI does not support audio.

5 OUTPUTS- 1,2,3,4,5,6,7 & 8 HDMI

Connect a signal link of HDMI direct digital video/audio to this Female HDMI connector. This connector supports HDMI digital video/audio and DVI digital video sources.

HDMI Digital Video/Audio, Connector with fix screw Output 1 \sim Output 8

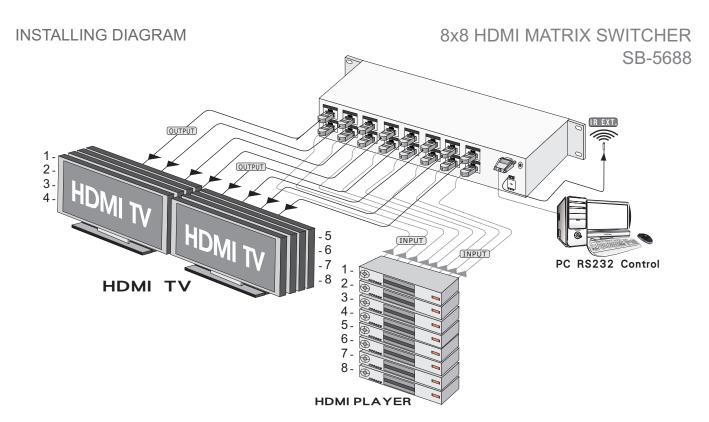


HDMI digital video/audio connector: HDMI Female connector.

Note:

With the proper adapters, the switcher can be used with DVI digital video signals HDCP compliant.

TYPICAL APPLICATION



CONNECTION PORTS:

CONTROL PORTS:

 IR EXTEND - External IR receiver 2. RS-232 - PC RS-232 Series port

INPUTS PORT SIGNALS:

- 1. HDMI (HDCP Compliant)
- 2. HDMI (HDCP Compliant)
- 3. HDMI (HDCP Compliant)
- 4. HDMI (HDCP Compliant)
- 5. HDMI (HDCP Compliant)
- 6. HDMI (HDCP Compliant)
- 7. HDMI (HDCP Compliant)
- 8. HDMI (HDCP Compliant)

OUTPUT PORT SIGNALS:

- 1. HDMI (HDCP Compliant)
- HDMI (HDCP Compliant)
 HDMI (HDCP Compliant)
 HDMI (HDCP Compliant)
 HDMI (HDCP Compliant)
- 4. HDMI (HDCP Compliant)
- 5. HDMI (HDCP Compliant)
- 6. HDMI (HDCP Compliant)
- 7. HDMI (HDCP Compliant)
- 8. HDMI (HDCP Compliant)

DC POWER INPUT:

SUPPORT DC12V POWER INPUT

SB-5688 SUPPORT EIGHT HDMI INPUTS TO EIGHT HDMI MATRIX OUTPUTS SUPPORT IR EXTENDER & RS232 CONTROLS.

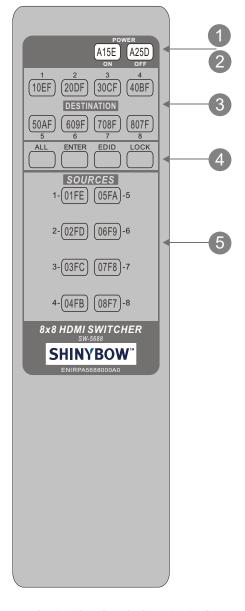
REMOTE CONTROL

Before making any connections to the switcher. Observe the following:

- > Ensure the mains voltage supply matches the label on the supplied plug-Pack (+/- 10%)
- > Ensure that the power switch is OFF
- > Ensure that all system grounds (earth) are connected to a common point.
- > Avoid powering equipment within a system from multiple power sources that may be separated by large distances
- > Connect all audio video sources and destination equipment
- > power up all source and destination audio-visual sources
- > For each destination output select the appropriate input source by using The front panel input 1~8 select buttons. The supplied IR remote control. Or through the RS 232 serial communications port.
- > Upon power up the switcher will return to its last used setting before Powered down.

REMOTE CONTROL

IR REMOTE: SW-5688



IR REMOTE CONTROL KEY:

- 1 2 SWITCH POWER ON or OFF
 Controller with a separate power ON and OFF
- 3 DESTINATION: 1 thru 8 OUTPUT SELECTION Press the destination button to select the output display channel.
- 4 FUNCTION KEY

ALL - function selection button ENTER - function selection button EDID - function selection button LOCK - function selection button

5 SOURCE: 1 thru 8 INPUT SOURCE SELECTION Press input 1~8 sources with selection button

REMOTE CONTROL

IR REMOTE CUSTOM AND DATA CODES (NEC Standard)

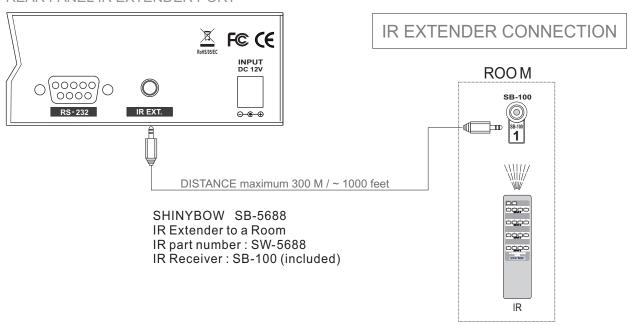
HOW TO SETUP IR CODES:

PRESS DESTINATION - # then PRESS SOURCE -

DESTINATION #1			10EF	SOURCE #1			01FE
DESTINATION #2	:	09F6	20DF	SOURCE #2	:	09F6	02FD
DESTINATION #3	:	09F6	30CF	SOURCE #3	:	09F6	03FC
DESTINATION #4	:	09F6	40BF	SOURCE #4	:	09F6	04FB
DESTINATION #5	:	09F6	50AF	SOURCE #5	:	09F6	05FA
DESTINATION #6	:	09F6	609F	SOURCE #6	:	09F6	06F9
DESTINATION #7	:	09F6	708F	SOURCE #7	:	09F6	07F8
DESTINATION #8	:	09F6	807F	SOURCE #8	:	09F6	08F7

IR EXTENDER

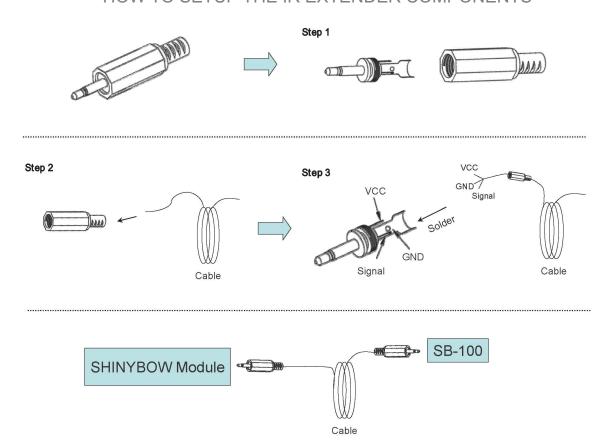
REAR PANEL IR EXTENDER PORT



*** When you plug the External IR extender into the switcher, the front panel IR receiver remains active. ***

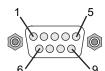
IR EXTENDER PACKAGE:

HOW TO SETUP THE IR EXTENDER COMPONENTS



RS-232 SERIAL INTERFACE

RS-232 SERIAL INTERFACE CONNECT a PC or CONTROL SYSTEM. VERSION COMPATIBLE V1.0 & V1.5



RS-232 SERIAL INTERFACE

Pin	RS-232	Definition
1		Not used
2	TX	Transmitter
3	RX	Receiver
4		Not used
5	GND	Ground
6		Not used
7		Not used
8		Not used
9		Not used

RS232

The Shinybow switcher can be controlled via the RS-232 serial control port to allow for interfacing to a PC, or similar third party control system.

The serial communication parameters are 9600 baud, 8 bit, No Parity and 1 stop bit - this is often referred to as 9600 8N1. When the unit recognises a complete command it will perform the requested action - there is no delimiter character required.

0 =the number 0 =the letter

PROTOCOL COMMANDS (RS232 Control driver V1.0)

Several of the most common commands are listed below.

For a complete list of commands, please reference external document "Extended RS-232 Protocol and Commands".

To Switch Inputs to Outputs

SBI0XO0Y - Where X is Input Number (1-8) and Y is Output Number (1-8)

Unit will respond with

SBUD0XOY - Where X is Input Number (1-8) and Y is Output Number (1-8)

Example: Send Input 8 to Output 7

SBI08O07 -Send SBUD08O7 -Rcvd

RS-232 SERIAL COMMANDS

MORE STUFF



Note: Turning the unit System Power Off via RS232 will extinguish the LED channel display leaving only the Power Switch LED on. The Video and Audio outputs will also mute. While the unit is turned off by RS232 it will continue to accept and act upon switching commands. For example, if the unit is in the off mode (via RS232) and you send a command to switch an input to an output, that route will complete and the video and audio will now appear on that channel only. The front panel LED channel display for that particular output will also show the input selected (for that single output channel only). The remaining LED\$ will remain off and video and audio outputs muted. The unit will still return status and change messages in response to commands sent while in Power Off state. A hard reset command (SBALLRST) will return the unit to normal operation and also unlock the front panel.

Power Off mode.

SBSYSMOF - Put system into Standby (Soft Power Off) SBSYSMON - Bring unit out of Standby (Soft Power On)

Unit will respond with

SBALOFAK - Unit is in Standby

SBALONAK - Unit is no longer in Standby

Example: Put Unit in Standby (Soft Power)

SBSYSMOF -Send SBALOFAK -Rcvd

FRONT PANEL LOCK



Note: Hard resetting the unit will unlock the Front Panel controls.

SBSYSMLK - When front panel is locked, changes can only be

made by RS232

SBSYSMUK - Front Panel Unlock

Unit will respond with

SBSYSLOK - Front Panel has been Locked SBSYSULK - Front Panel has been Unlocked

Example: Lock Front Panel Buttons

SBSYSMLK -Send SBSYSLOK -Rcvd

UNIT RESET

SBALLRST - Reset every output to Input 1

Unit will respond with

SBRSTACK - Unit has reset each Output to Input 1

Example: Reset all outputs to Input 1

SBALLRST -Send SBRSTACK -Rcvd

LIMITED WARRANTY

LIMITED WARRANTY

SHINYBOW WARRANTY

SHINYBOW Technology warrants this product against defects in materials and workman ship for a period of **1 year** from the date of purchase.

Should this product, in SHINYBOW Technology's opinion, Prove defective within this warranty period, SHINYBOW Technology, at its option, will repair this product without charge, to whatever extent it shall deem necessary to restore said product to proper operation condition. This does not extend the warranty period.

This warranty does not apply if the fault has been caused by misuse, improper handling care, electrical or mechanical abuse, and abnormal operating condition or non-SHINYBOW Technology authorized modification to the product.

If repairs are necessary under the warranty policy, the original purchaser must return the product to local distributor, freight prepaid.

After repairs are complete, the product will be returned.

LIMITED WARRANTY

REGULATORY COMPLIANCE

The product complies with the relevant standards for CE, FCC and RoHS approval.

The power Adaptor/Supply has been tested for compliance with UL.CSA and CE standards.

TROUBLESHOOTING

If you experience a <no signal> with this switcher or distributor outputs, first make certain that the signal being fed to its inputs is acceptable.

Disconnect the cables from the this switcher or distributor inputs and connect them directly to an appropriate monitoring device, if you do not see or hear a signal the problem may well be he signal source itself. Also check that the AC outlet you have used to power the switcher or distributor is actually providing power as a wall switch often controls an AC outlet.

The second most common problem with this switcher or distributor revolves around the cables, Inspect the cables for loose connectors or cable damage such as crushed cable or cables with cuts or nicks. Replace any cable exhibiting these problem.

You also must use the highest quality cables if you want to achieve the best results. Poor quality cables provide will poor quality signals.



1399 Wildfire Lane | Frisco, TX 75034

1-877-**SHINY-USA** 1-877-744-6987

1-972-377-2508

sales@shinybowusa.com

 $www.shinybow {\color{red} usa.} com$