

**MODEL : SB-8802**

8x8 COMPONENT VIDEO MATRIX SWITCHER



**8x8 COMPONENT VIDEO MATRIX SWITCHER**

***Component Video Matrix Switcher Series***

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*Thank you for purchasing the SB-8802 Component Video Matrix Switcher. You will find this unit easy to install and highly reliable but it is essential that you read this manual thoroughly before attempting to use this switcher.*



## SAFETY INFORMATION



1. To ensure the best results from this product, please read this manual and all other documentation before operating your equipment. Retain all documentation for future reference.
2. Follow all instructions printed on unit chassis for proper operation.
3. To reduce the risk of fire, do not spill water or other liquids into or on the unit, or operate the unit while standing in liquid.
4. Make sure power outlets conform to the power requirements listed on the back of the unit. Keep unit protected from rain, water and excessive moisture.
5. Do not attempt to clean the unit with chemical solvents or aerosol cleaners, as this may damage the unit. Dust with a clean dry cloth.
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.
7. Do not force switched or external connections in any way. They should all connect easily, without needing to be forced.
8. 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.
9. AC 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.
10. Turn power off and disconnect unit from AC current before making connections.
11. Never hold a power switch in the "ON" position.
12. This unit should be installed in a cool dry place, away from sources of excessive heat, vibration, dust, moisture and cold. Do not use the unit near stoves, heat registers, radiators, or other heat producing devices.
13. 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 dust and matter.
14. To reduce the risk of electric shock, do not remove the cover. There are no user serviceable parts inside. Refer all servicing to qualified service personnel. There are no user serviceable parts inside.
15. When moving the unit, disconnect input ports first, then remove the power cable; finally, disconnect the interconnecting cables to other devices.
16. Do not drive the inputs with a signal level greater than that required to drive equipment to full output.
17. The equipment power cord should be unplugged from the outlet when left unused for a long period of time.
18. 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.
19. Service Information Equipment should be serviced by qualified 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.

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## INTRODUCTION

Congratulations on your purchase of one of the most innovative 8x8 Component Video (YPBPR) matrix product on the market Today. The SB-8802 is a true Matrix Routing Switcher for Component Video YPBPR signals. Support Higher Full HD resolution 480p, 720p and 1080i/p. It is a 8 individual Component Video inputs with 8 individual Component Video outputs. Because it is a matrix router, any input may be routed to any output; or the same input maybe routed to all outputs or any combination. It completely eliminates the need to constantly move around video YPBPR input and output cables. The SB-8802 is useful for Matrix signals from Component Video YPBPR source devices (such as: VCRs, Camcorders, Video Game Consoles, Video CDs, DVDs, Satellite Receivers, CAT5 Set Top Boxes, etc.) to Component Video YPBPR destination devices (such as: LCD TV, HDTV, Plasma displays, Projectors, etc.). Selection of inputs is made via the Front Panel push buttons or an Infrared Remote Control unit or RS-232 control by computer.

## PACKAGE CONTENTS

Check that you have the following components;

- SB-8802 Matrix Switcher
- IR Remote Controller (SW-8802)
- 19 inch Ear mount bracket (Part # 1U-440L)
- IR Extender receiver (SB-100)
- CD Contents: This manual, Windows GUI
- RS-232 Cable
- Users Guide
- AC/DC Adapter: 12VDC, 2A Universal Type 50/60Hz, 100~230 VAC

## SAFETY PRECAUTIONS

Please read all instructions before attempting to unpack, install or operate this equipment and before connecting the power supply. Please keep the following in mind as you unpack and install this equipment:

- Always follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Never spill liquid of any kind on or into this product.
- Never push an object of any kind into this product through any openings or empty slots in the unit, as you may damage parts inside the unit.
- Do not attach the power supply cabling to building surfaces.
- Use only the supplied power supply unit (PSU). Do not use the PSU if it is damaged.
- Do not allow anything to rest on the power cabling or allow any weight to be placed upon it or any person walk on it.
- To protect the unit from overheating, do not block any vents or openings in the unit housing that provide ventilation and allow for sufficient space for air to circulate around the unit.

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# FEATURES & SPECIFICATIONS

## FEATURES

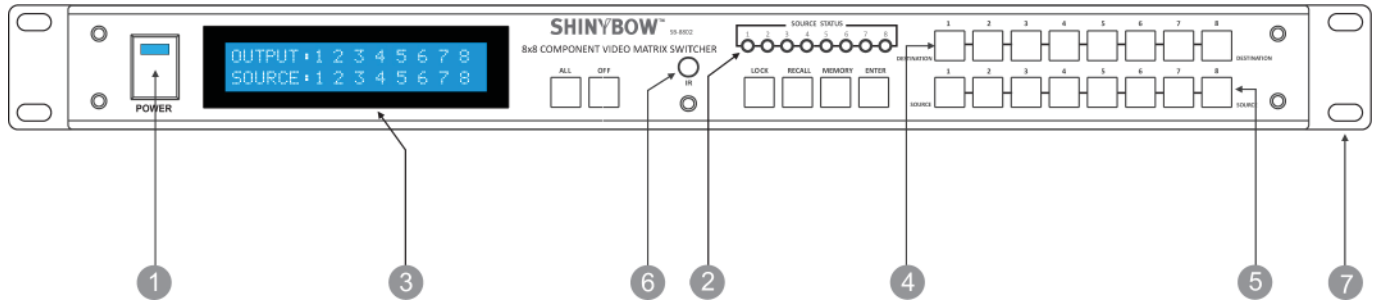
- Supports 8x inputs to 8x outputs Component Video(YPBPR) Matrix Switcher
- Input/Output signals via Component Video(YPBPR)
- Higher Video Bandwidth 325MHz each path signals.
- Supported HDTV high definition resolutions 480p, 576i/p, 720p, 1080i/1080p
- Support 300M long distance IR Extender Remote control port.
- Compatible with all Component Video devices, Plasma TV display and HDTV
- Supported RS-232 serial interface protocol commands list
- Control PC RS-232 Drive compatible with win-95/98/2000/xp
- Various User Interface controls:
  - Attached Window based control software for Desktop or NB control by RS-232 port
  - Manual controlled by Front Panel button
  - IR remote control
- Support desktop with Ear mount and 19 inch 1U High Rack mountable type panel
- Power supply DC12V, Universal Type Switch 100~230VAC, 50/60Hz

## SPECIFICATIONS

- **Type of Switcher:** 8 in To 8 out, Component Video (YPBPR) Matrix Switcher
- **I/O Signals:** Component Video (YPBPR) 0.5~1.0Vpp, DDC 5Vpp
- **Video Bandwidth:** 325MHz (-3db), 200mVp-p
- **Video Supported:** Higher resolution formats 480i/p, 720p & 1080i/p
- **Low All Hostile Crosstalk:** -83 db@5MHz
- **Controls:** IR remote, Select buttons on the front panel & RS-232
- **PC RS-232 Control:** RS-232 interface serial via DRV on a PC
- **IR Extend Distance:** 300M IR line cable via IR Remote Control
- **Gain Control:** 60MHz 0.1 db gain flatness
- **Chassis Material:** Metal
- **Dimensions (WxDxH):** 19 x 7.87 x 1.75 in (482x200x44mm)
- **Shipping Weight:** 3.95 Kgs / 6.58 lb
- **Safety Approvals:** CE, FCC, RoHS(2002/95/EC)
- **Power Supply:** DC12V / 2A (consumption 1.6A Max) Use Universal Switch Type 50/60Hz,100~230 VAC

# FRONT PANEL

## FRONT PANEL



### 1. POWER ON 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.

### 2. INPUT STATUS DISPLAY

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

### 3. OUTPUT STATUS DISPLAY

Each output (destination) channel shows which input (source) is assigned.

### 4. DESTINATION SELECT BUTTONS

Outputs 1 thru 8 select buttons are provided for each destination assignment. Routing can be one source to one 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 respectively.

### 5. SOURCE SELECT BUTTONS

Inputs 1 thru 8 select buttons are provided for each source selection.

### 6. IR SENSOR

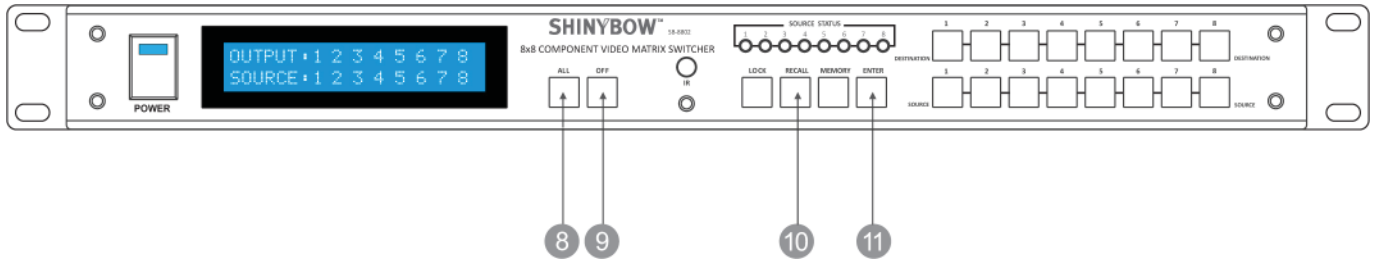
The IR sensor receives IR commands from the supplied remote controller or third party IR emitter.

### 7. 19 INCH EAR MOUNT PAIR

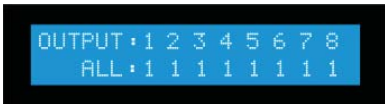
Converts the desk-top to 19-inch rack mount. Bracket (part # 1U-440L) included. Image shows rack mount bracket attached.

# FRONT PANEL

## FRONT PANEL



### 8. FUNCTION KEY - ALL



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

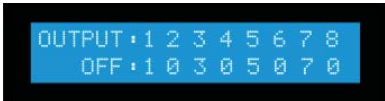
Option 1

- 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.

### 9 FUNCTION KEY - LOCK



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

- Press **OFF** button followed by any Destination channel.
- Press 1 thru 8 output destination. The display will show " 0 " for the selected channel indicating no video selected.

### 10. FUNCTION KEY - RECALL



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 8 on either Source or Destination row.
- Press **ENTER**. The pre-set configuration will execute.

Operation completes.

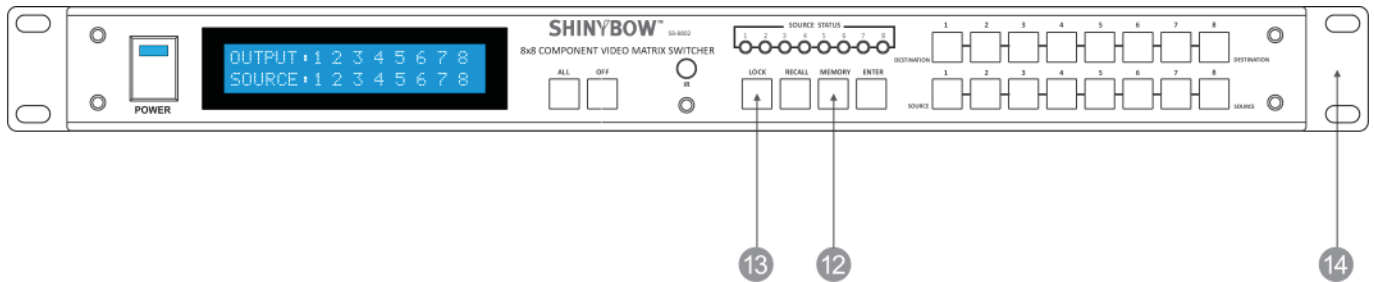
**Note: Operation will abort if no keys are dressed within 5 seconds.**

### 11. FUNCTION KEY - ENTER

Press **ENTER** to confirm entries.

# FRONT PANEL

## FRONT PANEL



### 12. FUNCTION KEY - MEMORY



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

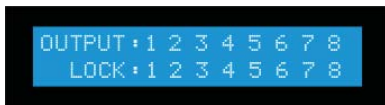
Presets are stored in local memory using Source keys 1 thru 8 or Destination keys 1 thru 8 as the memory preset location.

- Configure desired matrices.
- Press **MEMORY** button.
- Press 1 thru 8 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



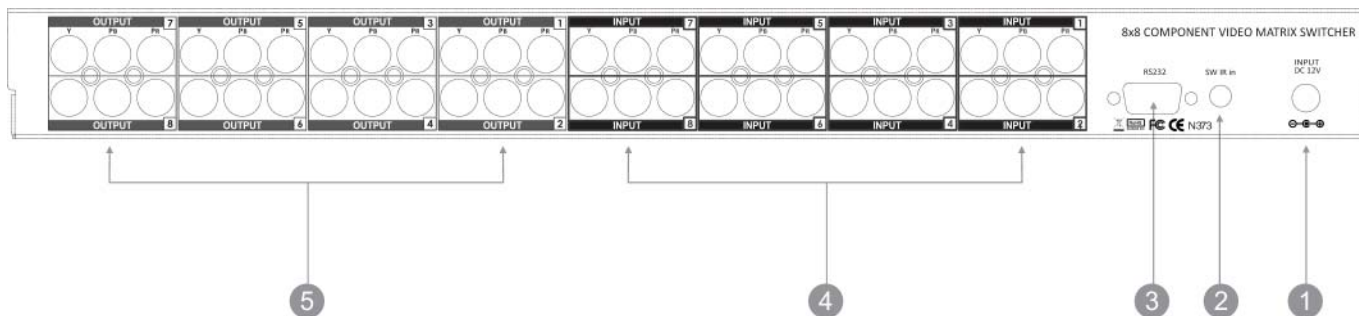
- Press and hold **LOCK** button for two seconds lockout the front panel.
- Press and hold **LOCK** button for two seconds to enable the front panel.

### 14. 19 INCH EAR MOUNT PAIR

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

# BACK PANEL

## BACK PANEL



### 1. DC POWER INLET:

The switcher is fitted with a DC power plug input connector. Please ensure that the plug used is of an approved type and is of sufficient current carrying capacity with the correct voltage and connector polarity. 12Volt DC power supply 2A Max.



### Power Jack:

DC Jack - Inner OD Ø 2.1 mm (+)  
Outside OD Ø 5.5mm (GND)  
Power input -12VDC, 2A

### 2. IR EXTENDER CONTROL:

Support one of IR Extender Extend distance maximum 300M

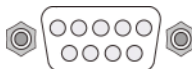


### IR Extender Jack:

Female Jack - inner OD Ø 3.5 mm

### 3. RS-232 CONNECTION:

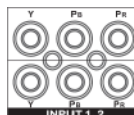
RS-232 control port to allow for interfacing to a PC, such as a computer or touch panel control, to the switcher via this DB-9pin Female connector for serial RS-232 control.



### Remote port : DB-9pin Female connector

### 4. INPUTS-1~8 COMPONENT VIDEO (YPBPR):

Connect a signal source of Component Video (YPBPR) device to 8x8 matrix switcher.



### Component Video (YPBPR) Via 3x RCAs

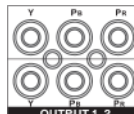
**Note: With 3x RCA female connectors**

Input 1~8 port source signals :

- Component Video(YPBPR), 3x RCA Connectors

### 5. OUTPUTS-1~8 COMPONENT VIDEO (YPBPR):

Connect a signal of Component Video (YPBPR) direct to female RCA connector. This connector supports Component Video (YPBPR) to HDTV display device.



### Component Video (YPBPR) Via 3x RCAs

**Note: With 3x RCA female connectors**

Output 1~8 display port signals :

- Component Video(YPBPR), 3x RCA Connectors



# REMOTE CONTROL

## Before making any connections to the SB-8802. 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-8802

IR PCB : RA-02

#### 1. & 2. SWITCH POWER ON or OFF:

Controller with a power ON and OFF

#### 3. DESTINATION : 1 thru 8 OUTPUT SELECTION:

Press the destination button to select the output display channel.

#### 4. SOURCE : 1 thru 8 INPUT SOURCE SELECTION:

ALL - function selection button

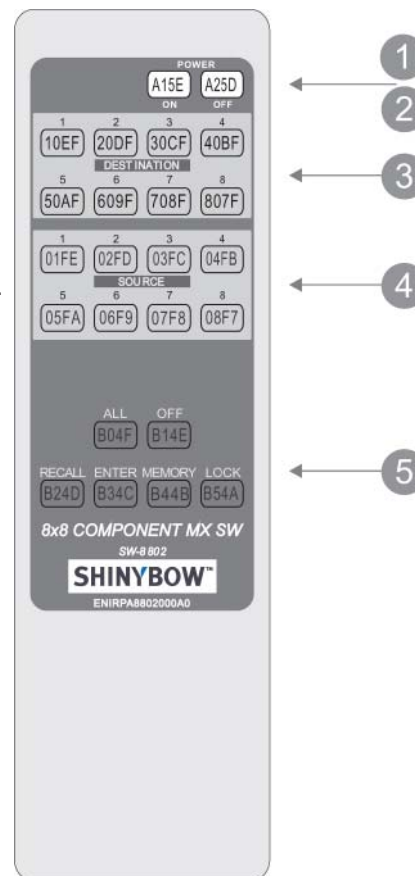
OFF - function selection button

RECALL - function selection button

ENTER - function selection button

MEMORY - function selection button

LOCK - function selection button



## CONNECTING THE HARDWARE

Please study the panel drawings below and become familiar with the signal input-output, Power requirements plus any controls present.

Before using the switcher, please take the time to make certain that the device you wish to connect to its inputs is functioning properly in all respects. Verify that the video and audio signals are present and are being displayed properly on a suitable device.

If all is well connect the appropriate cables between the output of the device you wish to distribute to output(s) of the switcher to the various devices you wish to feed a signal to. Lastly, connect the AC to DC adaptor, connect the DC connector to the switcher first and then plug the adaptor into a functional AC outlet.

# REMOTE PROTOCOL COMMANDS

## IR REMOTE CUSTOM AND DATA CODES (NEC STANDARD)

### HOW TO SETUP IR CODES :

#### CUSTOM CODE : 04FB

POWER ON : 04FB A15E  
POWER OFF : 04FB A25D  
ALL : 04FB B04F  
OFF : 04FB B14E  
LOCK : 04FB B54A  
RECALL : 04FB B24D  
MEMORY : 04FB B44B  
ENTER : 04FB B34C

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#### PRESS DESTINATION - # then PRESS SOURCE - #

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

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For example;

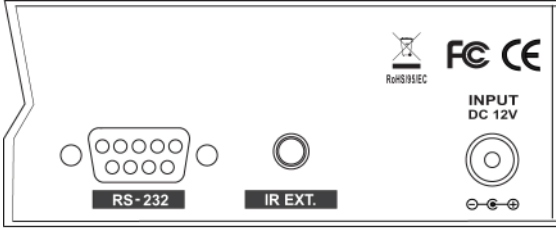
Select Destination # 1 to show Source #1~8,

The IR Data Code list :

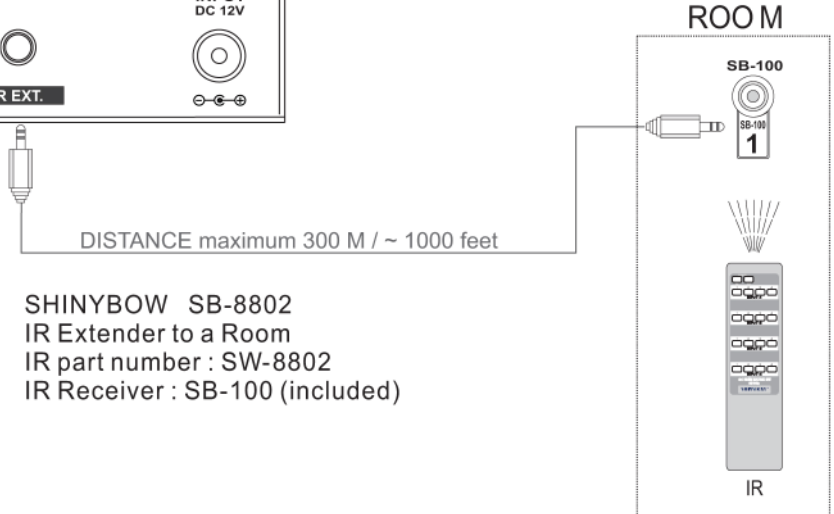
Destination # 1 , Source #1 04FB 10EF 04FB 01FE  
Destination # 1 , Source #2 04FB 10EF 04FB 02FD  
Destination # 1 , Source #3 04FB 10EF 04FB 03FC  
Destination # 1 , Source #4 04FB 10EF 04FB 04FB  
Destination # 1 , Source #5 04FB 10EF 04FB 05FA  
Destination # 1 , Source #6 04FB 10EF 04FB 06F9  
Destination # 1 , Source #7 04FB 10EF 04FB 07F8  
Destination # 1 , Source #8 04FB 10EF 04FB 08F7

# IR EXTENDER

## REAR PANEL IR EXTENDER PORT



## IR EXTENDER CONNECTION

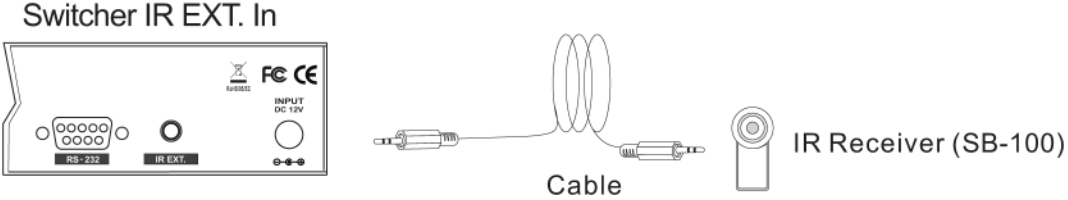
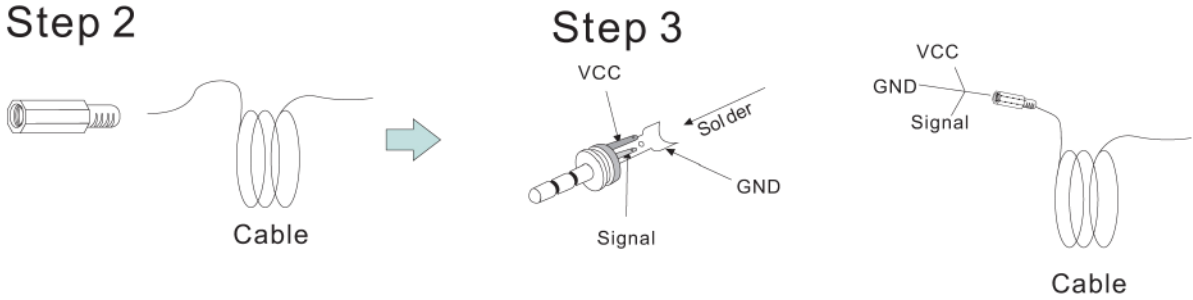
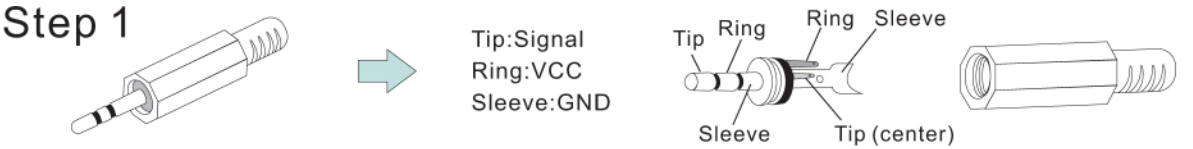


SHINYBOW SB-8802  
 IR Extender to a Room  
 IR part number : SW-8802  
 IR Receiver : SB-100 (included)

\*\*\* 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



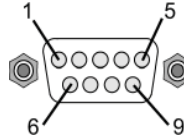
# RS-232 SERIAL INTERFACE

## RS-232

The ShinybowUSA 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 recognizes a complete command it will perform the requested action - there is no delimiter character required.

The unit does not send out a message when a value is changed from the front panel or by IR control. If the unit needs to be controlled via the front panel in addition to the RS-232 control, you should regularly poll the unit status to ensure the control system accurately reflects the current settings.



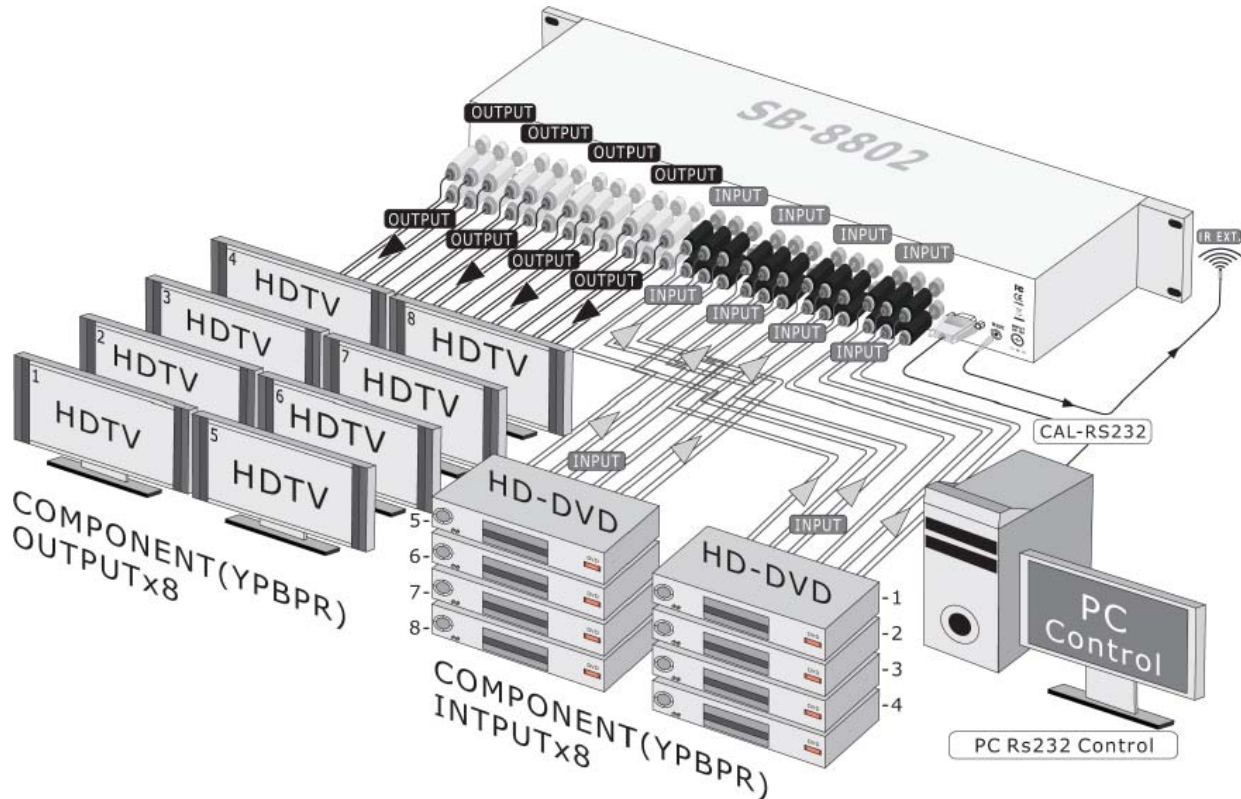
RS-232 SERIAL CONNECT

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

# TYPICAL APPLICATION

## 8X COMPONENT VIDEO TO 8X COMPONENT VIDEO OUTPUT MATRIX SWITCHER

SB-8802



## INSTALLING

### CONTROL PORTS:

1. FRONT PANEL - Function Key Press Buttons
2. IR REMOTE - IR Remote Controller
3. RS-232 Interface - RS-232 interface system

### INPUTS 1 ~ 8 PORT HD SOURCE SIGNALS:

COMPONENT VIDEO - Component Video(YPBPR), connector with RCA

### OUTPUT 1 ~ 8 PORT HDTV DISPLAY SIGNALS:

COMPONENT VIDEO - Component Video(YPBPR), connector with RCA

SB-8802 SUPPORT 8x INPUTS TO 8x OUTPUTS COMPONENT VIDEO MATRIX SWITCHER  
SUPPORT CONTROL IR & RS-232 INTERFACE SYSTEM PORTS.

# LIMITED WARRANTY

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