

## *Instruction Manual*



MODEL : SB-3866  
8x2 MultiVIDEO TO VGA SWITCHER

### ***8x2 MultiVideo To VGA Switcher Series***

*Thank you for purchasing the SB-3866 MultiVideo To VGA 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 8x2 MultiVideo To VGA Switcher.*



# SAFETY INFORMATION



1. 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.
7. 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.

# INTRODUCTION AND TABLE OF CONTENTS

The SB-3866 is a 8:1 Multi-Video Routing Switcher featuring 8 inputs and pre-emphasized 2 outputs.

- > 8 inputs as following :
  - 2 x Composite Video+Audio
  - 2 x S-Video+Audio,
  - 2 x Component Video+Audio,
  - 2 x VGA+Audio,

- > 2 same signal outputs as following :
  - 2 x VGA+Audio

Automatic input TV standard system detection :

- > NTSC 3.58 / NTSC-EIAJ / NTSC 4.43
- > PAL / PALM / PAL-N / PAL-COMB-N/PAL-60
- > SECAM

This switcher supports full data rates and enabling input HDMI 480p, 720p or 1080i/p formats. PC resolution (1920 x 1200HD) is ideally suitable for high Definition LCD Television, HDTV, Plasma display or Monitor applications.

Control is provided via Front panel buttons with LED readout, IR remote control, or RS-232..

A RS-232 interface is provided for interfacing with a third party controller.

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## 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 "dangerous voltage" within the products enclosure that enclosure tha may be of sufficient magnitude to constitute a risk of electric shock to persons.

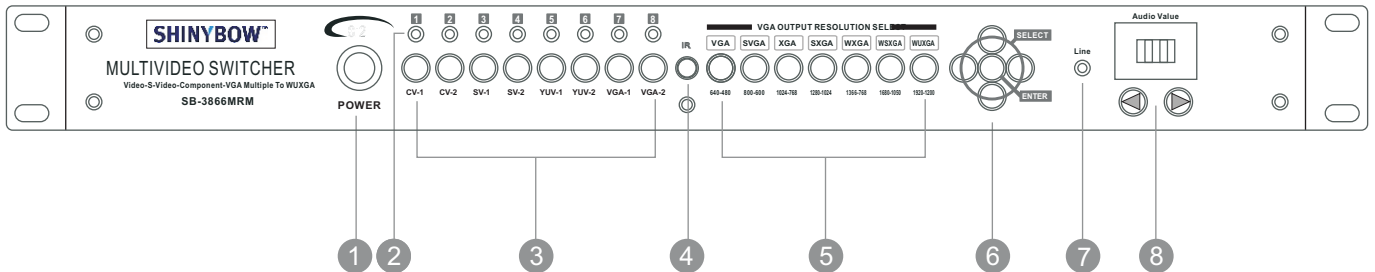


This symbol is intended to alert the user to the presence of important operational and maintenance (servicing) instructions in the literature accompanying the appliance.

Caution: 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.

# 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

### 2 INPUT SOURCES DISPLAY

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

### 3 SOURCE SELECT BUTTONS

A separate output 1 and 2 source select buttons are provided for each destination.

- # Input 1 - Composite Video / Stereo Audio
- # Input 2 - Composite Video / Stereo Audio
- # Input 3 - S-Video / Stereo Audio
- # Input 4 - S-Video / Stereo Audio
- # Input 5 - Component Video (YPBPR) / Stereo Audio
- # Input 6 - Component Video (YPBPR) / Stereo Audio
- # Input 7 - VGA (RGBHV) / Stereo Audio
- # Input 8 - VGA (RGBHV) / Stereo Audio

### 4 IR SENSOR

The IR sensor receives IR commands from the supplied remote controller.

### 5 SELECT VGA RESOLUTION BUTTONS

VGA output resolutions via selection buttons.

- # 1 - VGA Resolution : 640 x 480
- # 2 - SVGA Resolution : 800 x 600
- # 3 - XGA Resolution : 1024 x 768
- # 4 - SXGA Resolution : 1280 x 1024
- # 5 - WXGA Resolution : 1366 x 768
- # 6 - WSXGA Resolution : 1680 x 1050
- # 7 - WUXGA Resolution : 1920 x 1200

### 6 OSD CONTROL

Adjust OSD on display via display screen.

### 7 LINE DISPLAY

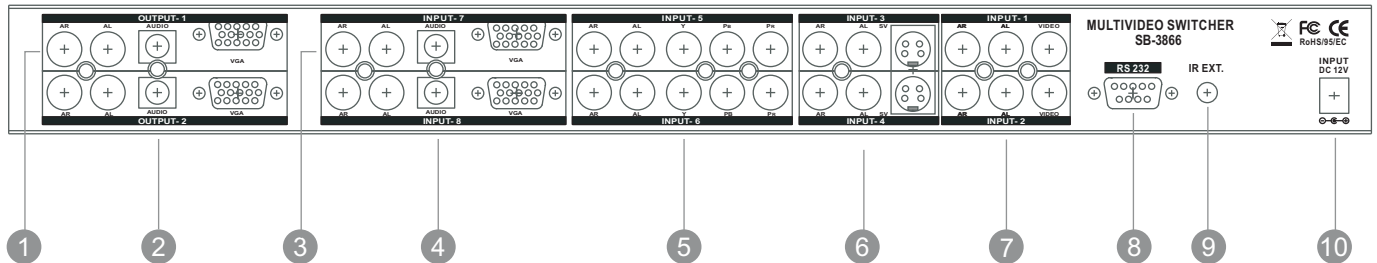
Optional function for unit line to another unit.

### 8 ADJUST AUDIO OUTPUT VOLUME

Adjust output Audio Volume via LED display.

# REAR PANEL

## REAR PANEL



### 1 2x VGA-AUDIO OUTPUTS

Two VGA-Audio outputs are same picture via RCA connector is provided for Audio output via DB-15p connector for VGA output  
 # Output 1 - VGA-RGBHV / Stereo Audio  
 # Output 2 - VGA-RGBHV / Stereo Audio

### 2 2x OD3.5mm AUDIO OUTPUTS

Provided 2x same Stereo Audio outputs. Audio Source from VGA series ports 4 input 7&8 only.

### 3 INPUT 7& 8 VGA-AUDIO INPUTS

Support VGA(RGBHV) & Stereo Audio Inputs  
 # Input 7 - VGA-RGBHV via 1x DB-15p connector  
 - Stereo Audio via 2x RCA connectors  
 # Input 8 - VGA-RGBHV via 1x DB-15p connector  
 - Stereo Audio via 2x RCA connectors

### 4 INPUT 7& 8 AUDIO with OD3.5mm Jack

Support 2x Audio via OD3.5mm Jack input 7&8 to Output port.  
 Input 7 is a stereo audio(AR/AL) via OD3.5mm phone jack  
 Input 8 is a stereo audio(AR/AL) via OD3.5mm phone jack

### 5 INPUT 5& 6 COMPONENT-AUDIO INPUTS

Support input 5 & input 6 Component(YPbPr)/Stereo Audio.  
 # Input 5 - Component(YPbPr) via 1x RCA connectors  
 - Stereo Audio via 2x RCA connectors  
 # Input 6 - Component(YPbPr) via 1x RCA connectors  
 - Stereo Audio via 2x RCA connectors

### 6 INPUT- 3&4 S-VIDEO INPUTS

Support S-Video / Audio via Input 3 and input 4  
 # Input 3 - S-Video (Y/C) via 1x Mini din-4 Female connector  
 - Stereo Audio via 2x RCA connectors  
 # Input 4 - S-Video (Y/C) via 1x Mini din-4 Female connector  
 - Stereo Audio via 2x RCA connectors

### 7 INPUT- 1&2 COMPOSITE-AUDIO INPUTS

Support Composite Video / Stereo Audio via Input 1 and input 2  
 # Input 1 - Composite Video via 1x RCA connectors  
 - Stereo Audio via 2x RCA connectors  
 # Input 2 - Composite Video via 1x RCA connectors  
 - Stereo Audio via 2x RCA connectors

### 8 RS 232 CONTROL

RS 232 control port to allow for interfacing to a PC.

### 9 IR EXTENDER CONTROL

IR Extender for 300M extend distance.

### 10 DC POWER INLET

The SB-3866 is fitted with a DC power plug-park input connector. Please ensure that the plug-park 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.

# REMOTE CONTROL

Before making any connections to the SB-3866. 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 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

- 1 SWITCH POWER ON or OFF**  
Controller with a power ON and OFF

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- 2 INPUT 1 To 8 SOURCES SELECT**  
The Input 1 to 8 Audio and Video source selections
  - Input- # 1 Composite Video / Stereo Audio
  - Input- # 2 Composite Video / Stereo Audio
  - Input- # 3 S-Video / Stereo Audio
  - Input- # 4 S-Video / Stereo Audio
  - Input- # 5 Component Video (YPbPr) / Stereo Audio
  - Input- # 6 Component Video (YPbPr) / Stereo Audio
  - Input- # 7 VGA-RGBHV / Stereo Audio
  - Input- # 8 VGA-RGBHV / Stereo Audio

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- 3 SELECT VGA OUTPUT RESOLUTIONS**  
Select VGA output resolutions as following :
  - SXGA 1280 x1024
  - WXGA 1366 x 768
  - WSXGA+ 1680 x1050
  - WUXGA 1920 x1200

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- 4 MEMU - OSD**  
OSD to setup or Adjust output resolutions and color.

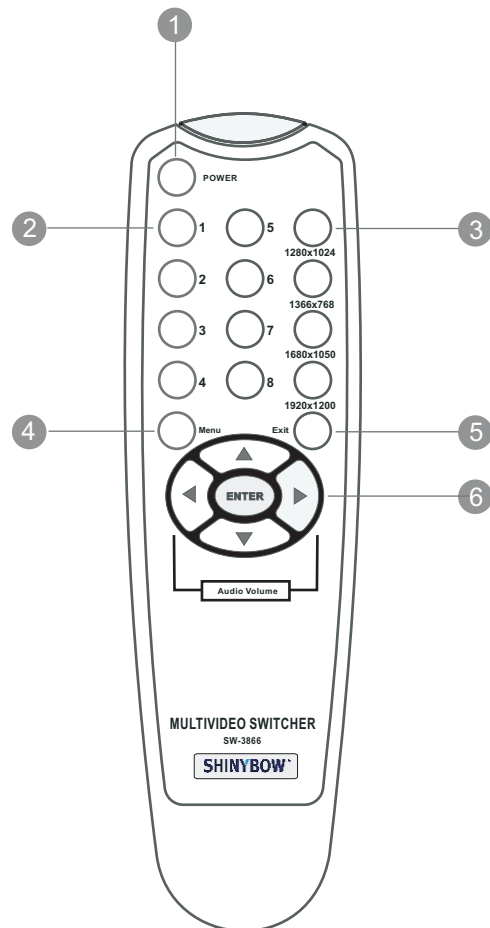
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- 5 EXIT - OSD**  
OSD to EXIT

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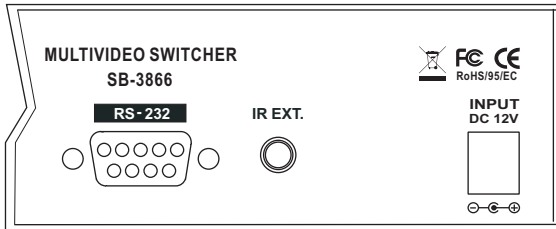
- 6 AUDIO VALUE ADJUSTMENT**  
OSD to setup or Adjust Audio output Volume

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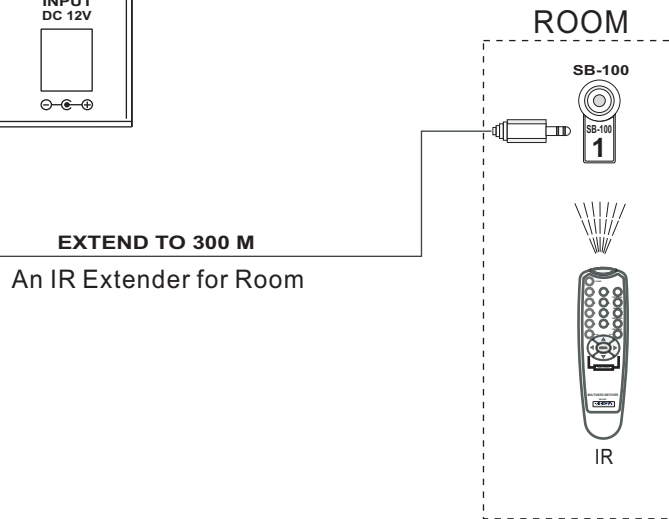



# IR EXTENDER

## REAR PANEL IR EXTENDER PORTS

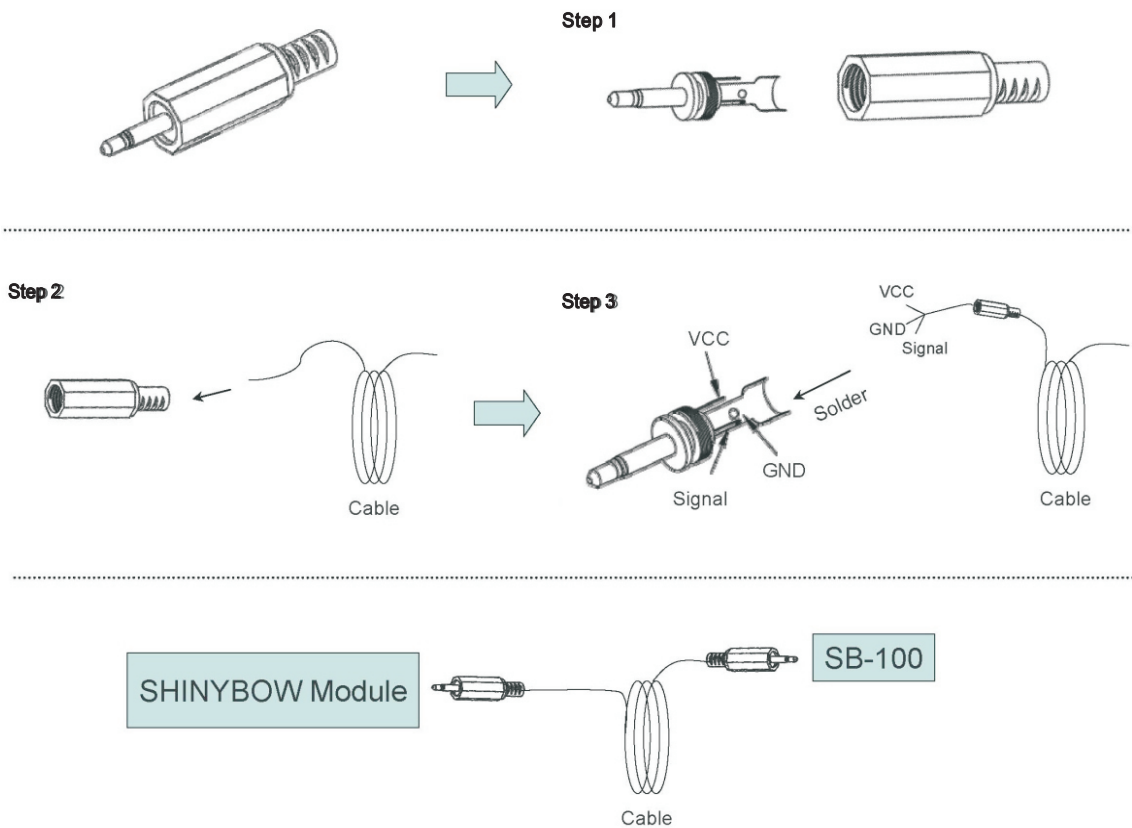


## IR EXTENDER CONTROL



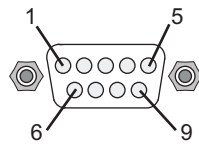
## IR EXTENDER PACKAGE :

## HOW TO SETUP THE IR EXTENDER COMPONENTS



# RS-232 SERIAL INTERFACE

## RS-232 SERIAL INTERFACE CONNECT a PC or CONTROL SYSTEM



### 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.

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 RS232 control, you should regularly poll the unit status to ensure the control system accurately reflects the current settings.

## COMMANDS

### To Switch Inputs to Outputs

`SBI0X00Y` - Where X is Output Number (1-1) and Y is Input Number (1-8)

Unit will respond with

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

Example : Send Input 6 to Output 1

`SBI06O01` -Send

`SBUD06O1` -Rcvd



# RS-232 SERIAL COMMANDS

## MORE STUFF FOR SB-3866

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**Note:** Turning the unit System Power Off over 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 LEDs 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

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**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

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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

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# FEATURES & SPECIFICATIONS

## FEATURES

1. Support 8 inputs to 2 outputs Routing Switcher  
Multivideo signal as VGA/S-Video/Composite Video/Component Video/Audio
2. Inputs : 8x Group as 2x AV, 2x S-Video/Audio, 2x Component/Audio & 2x VGA/Audio  
Outputs: 2x (VGA+Stereo Audio)
3. Automatically input TV standard composite video/S-Video and HDTV Component Video 50/60Hz, 480p,720p and 1080i/p system detection
4. Automatically scan 8 input video sources display by LED on front panel
5. Direct video input selection by front panel buttons with LED readout
6. Direct VGA output resolution selection.
7. Auto Scaling Video picture up to high HD resolution output.
8. Adjust Stereo Audio Value on front panel
9. OSD (on screen display) for menu color, resolution and input source selections
10. Two VGA(RGBHV) outputs resolution scaling up to 1920x1200 HD
11. Support RS232 interface control driver for win 95/98/2000/xp
12. An IR transceiver on the front panel by infrared remote control and an IR External port on the rear panel support extend distance about 300Mt.
13. Support desktop with Ear mount and 19 inch Rack mountable type panel

## SPECIFICATIONS

1. Video Scaling outputs  
2x via HD-15 Female connectors, (Audio : 4x RCA & 2x OD3.5 connectors )
2. Video Input Signals  
TV standards : NTSC-M 3.58, NTSC-J 4.43, PAL-B-D-I-G-H-K, PAL-M, PAL-N  
PAL-N COMB-N, SECAM (Impedance:75 ohms)  
Composite Video : 2 x via RCA connectors  
S-Video(Y/C) : 2 x via 4 pin Mini-Din connectors  
Component Video(YPbPr) : 6x via RCA connectors  
PC-VGA(RGBHV) : 2x via HD-15 Female connectors
3. OSD menu selections & Adjustments  
Input sources : 1 & 2 AV, 3 & 4 S-Video, 5 & 6 Component Video, 7 & 8 VGA  
Color : Contrast, Brightness, Sharpness, Level and TINT  
VGA output resolutions: VGA, SVGA, XGA, SXGA, WXGA, WSXGA+, WUXGA
4. Video bandwidth : 400MHz, (-3 dB), Audio Bandwidth: 60MHz, (-3 dB)
5. Audio Frequency Respond : 20Hz~20KHz
6. Safety Approvals: CE, FCC, RoHS(2002/95/EC)
7. Dimension(LWH): 19 " x 7.87 " x 1.75 " (482mm x 200mm x 44mm)
8. Power Supply: 12VDC, Universal type 50/60Hz 100~230 VAC

# OSD PICTURE ADJUSTMENT

## Content



The OSD Picture Adjustment menu is displayed. It features a vertical list of icons on the left: a color wheel, a screen with a crosshair, two pens, two gears, and a red 'X' in a circle. The main menu area is titled 'PICTURE' and contains five settings, each with a horizontal slider and the value '50': BRIGHTNESS, CONTRAST, COLOR, TINT, and SHARPNESS.



A horizontal slider control for BRIGHTNESS, with the value '50' displayed on the right side.

### Brightness

Adjusts back ground BRIGHTNESS black level of the screen image ,low enough that a black area of the picture emits no light ,but high enough that setting the control any higher would cause the area to become a dark gray .



The OSD Picture Adjustment menu is displayed. It features a vertical list of icons on the left: a color wheel, a screen with a crosshair, two pens, two gears, and a red 'X' in a circle. The main menu area is titled 'PICTURE' and contains five settings, each with a horizontal slider and the value '50': BRIGHTNESS, CONTRAST, COLOR, TINT, and SHARPNESS.



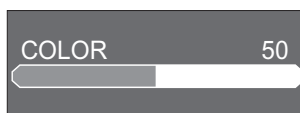
A horizontal slider control for CONTRAST, with the value '50' displayed on the right side.

### Contrast

Adjusts the foreground white level of the screen image .



The OSD Picture Adjustment menu is displayed. It features a vertical list of icons on the left: a color wheel, a screen with a crosshair, two pens, two gears, and a red 'X' in a circle. The main menu area is titled 'PICTURE' and contains five settings, each with a horizontal slider and the value '50': BRIGHTNESS, CONTRAST, COLOR, TINT, and SHARPNESS.



A horizontal slider control for COLOR, with the value '50' displayed on the right side.

### Color Adjustment

can be adjusted so that the colors you are seeing match that of the original object . This adjustment affects color saturation .

# OSD PICTURE ADJUSTMENT

## Content



PICTURE

BRIGHTNESS	50
CONTRAST	50
COLOR	50
TINT	50
SHARPNESS	50

TINT 50



### Tint

Allows adjustment to increase or decrease Tint .



PICTURE

BRIGHTNESS	50
CONTRAST	50
COLOR	50
TINT	50
SHARPNESS	50

SHARPNESS 50




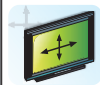
### Sharpness

Allows adjustment to increase or decrease the Sharpness of the image . This function does not change Resolution .

# OSD SETUP VGA OUTPUT RESOLUTIONS

## Content

	RESOLUTION
	640x480
	800x600
	1024x768
	1280x1024
	1366x768
	1680x1050
	1920x1200








### Resolution Adjustment

Changes the output resolution to one of the pre set values . Note that after you make this change ,your display device might need to re clock to the signal . You can do this by changing your source input and then back again to the SB 3866 input . For example : If you have the SB 3866 connected to the VGA input on your projector . After you change resolution ,you need to set the projector to switch to video input and then change back to VGA .

# OSD VIDEO SOURCES SELECTIONS

## Content

	INPUT SOURCE
	CVBS1
	CVBS2
	S VIDEO1
	S VIDEO2
	YPBPR1
	YPBPR2
	VGA1
	VGA2
	



### Input Source

Changes the Input Signal Source to one of pre set values .The front panel LED will also display the Input Signal Source selected .

As product improvements continues ,specifications and procedures are subject to change and without notice .

# OSD FUNCTION SETTING

## Content



### Language

Follow you to cheese from English or Chinese .



### Visibility

Changing this value sets the transparency ration between the OSD and the background image .



### Information

Display the software version .

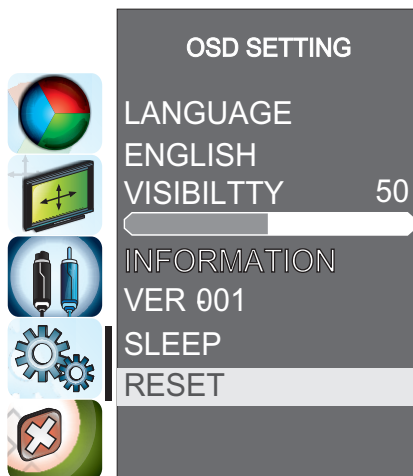
# OSD FUNCTION SETTING

## Content



### Sleep

The Sleep Timer will automatically shutdown the SB 3866 at a pre determined amount of time . The preset values start at 10 minutes and goes to 120 minutes ,in increments of 10 minutes each



### Reset

Selecting Reset will restore the unit to factory default conditions .The input will default to CVBS 4 at its lowest resolution .



### Exit

When finished with any menu ,selecting Exit will take you out of the On Screen Menu ( OSD ) .



# LIMITED WARRANTY

## SHINYBOW WARRANTY

SHINYBOW Technology warrants this product against defects in materials and workmanship 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, repair this product without charge, to whatever extent it shall deem necessary to restore said product to proper operation condition.

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.

## 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 the 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.



**SHINYBOW™ USA**

MULTIMEDIA AUDIO AND VISUAL

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