INSTRUCTION MANUAL

SB-4106

4x1 VGA/HDTV Selector Switch w/ IR Control



SHINYBOW™ USA

MULTIMEDIA AUDIO AND VISUAL

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 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.

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HDTV Distribution Amplifier Series

Thank you for purchasing the SB-3879 HDMI Video Scaler. 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 HDMI Video Scaler.

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INTRODUCTION

Congratulations on your purchase of one of the most innovative VGA (RGBHV) 4x1 router matrix switching products on the market today. The SB-4106 is a true routing switcher for VGA (RGBHV) signals. It has (4) individual VGA (RGBHV) inputs with (1) individual RGBHV outputs. Because it is a router, any input may be routed to output.

It completely eliminates the need to constantly move around VGA video input cables and output cables. The SB-4106 is useful for routing signals from VGA source devices (such as: Personal computer, Set Top Boxes and Satellite Receivers, etc.) to VGA destination devices (Such as LCD Monitors, VGA Monitors, Plasma LCD TV, VGA Projectors, etc.). Selection of inputs is made via the front panel push buttons or an Infrared Remote Control unit.

PACKAGE CONTENTS

Check that you have the following components;

- SB-4106 4x1 Switcher
- IR Remote Control
- RS-232 driver CD (All Windows Operating Systems)
- Users Guide
- AC/DC Adapter: 12VDC, 100mA~230mA
  AC/DC Adaptor Types : CE/UL/SAA/BS

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

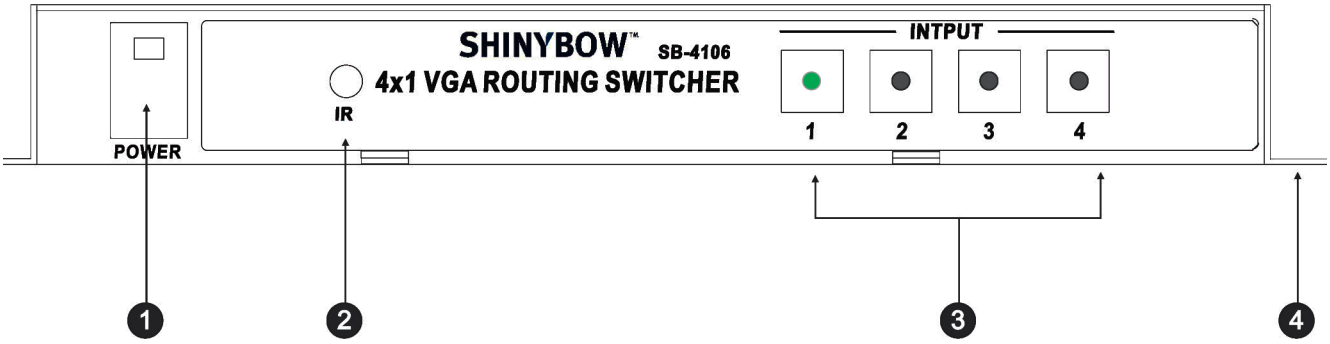
- Supports (4) inputs to (1) output VGA Switcher
- Suppors PC resolution:
  - VGA (640x480)
  - SVGA (800x600)
  - XGA (1024x768)
  - SXGA (1280x1024)
  - UXGA (1600x1200)
  - WUXGA (1900x1200)
- Video Bandwidth: 380MHz (-3db), 200mVp-p
- Excellent video (VGA-RGBHV) Performance
- Low all hostile crosstalk of -83dB@5Mhz
- Excellent ESD rating exceeds 4000V
- Switching RGBHV in LCD monitors and plasma monitor displays
- Suitable for full HD high resolution Video player device and LCD/Plasma monitor displays
- Infrared IR remote control (38KHz)
- Supports lower power consumption full load under 550mA
- Universal type power supply offers 100~230VAC switch

SPECIFICATIONS

- **Type of Switcher:** (4) inputs to (1) output VGA Switcher
- **Video Bandwidth:**
  - 380MHz (-3dB) 200mVp-p
  - 310MHz (-3dB) 2Vp-p
  - R=325MHz
  - G=325MHz
  - B=325MHz
  - H=110MHz
  - V=110MHz
- **Gain Flatness:** 0 Mhz, .1dB
- **Differential Gain Error:** .01% , .1dB
- **Differential Phase Error:** .02, .1dB (RL-150Ω)
- **Fast Settling Time:** 15ns to 0.1%
- **All Hostile Crosstalk:** -84db@5MHz, -54@50MHz
- **Channel Crosstalk:** -56db@100Mhz
- **Slew Rate:** 1000Vlus, G=+1.2VStep
- **High OFF Isolation:** -100dB@10MHz
- **Settling Time:** 50ns to 0.1%
- **Output Current:** 100mA
- **Low power CMOS:** 500uA Quiescent Current
- **Controls:** IR Remote Controller (38KHz), Front panel selection buttons with LED readout
- **Enclosure Type:** Support 19 inch Ear & Rack mountable panel
- **Dimensions (WxDxH):** 9.05 x 4.72 x 1 in (230x120x25 mm)
- **Net Weight (Unit Only):** About 3.85 lb (with metal case)
- **Safety Approvals:** CE, FCC, RoHS (2002/95/EC)
- **Power Voltage Input:** DC 12V@1.25A

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

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

3. SOURCE DEVICE SELECT BUTTONS: A direct output (1) thru (4) source select buttons are provided for each destination.

4. 1 INCH WALL MOUNT PAIR: 1 inch wall mount brackets (Optional)

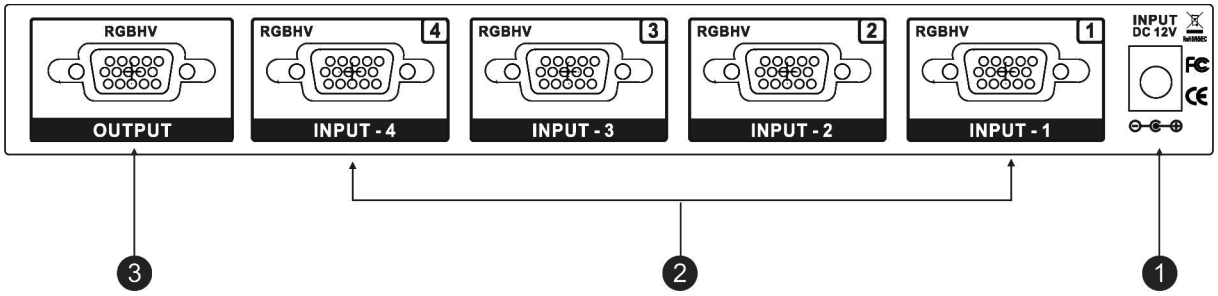
POWER AND CONNECTIONS: This unit is not disconnected from the AC power source as long as it is connected to the wall outlet. The off state for this unit is called standby mode. In standby mode the unit is designed to consume a reduced quantity of power compared to normal operating modes.

When it's not using the unit for a long period of time, insure that the AC power cord is disconnected from the wall outlet.

The AC wall outlet should be installed near to the unit and be easily accessible.

Do not plug in or attempt to operate an obviously damaged unit.

BACK PANEL



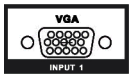
1. DC POWER INLET: The switcher is fitted with a DC power plug input connector. Please ensure that the plug used is of an approved type and is of sufficient current carrying capacity with the correct voltage and connector polarity. 12Volt DC power supply 660mA Max.



POWER JACK:
DC Jack - Inner OD Ø 2.1 mm (+)
Outside OD Ø 5.5mm (GND)
Power input -12VDC, 660mA
Switcher power suppler use universal
Part number: TA007

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2. INPUT: 1-4 VGA SOURCES: Connect a signal source of VGA (RGBHV) devise via VGA cable output to 4x VGA Monitor displays.



VGA (RGBHV) Via 1x HD-15p connector.
Note: With 1 x female D-Sub connector.

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3. OUTPUT: VGA DESTINATIONS: Connect a signal of VGA via VGA cable output to VGA Monitor displays from 4x VGA input source devices.



VGA (RGBHV) Via 1x HD-15p connector.
Note: With 1 x female D-Sub connector.

OPERATING THE UNIT: Once you have connected the switcher as described above, you must be certain that the input are being fed appropriate signals and are not suffering from signal loss due to cabling problems or problems with the source device. If the input signals to the switcher are appropriate, switch the power switch to <ON> and you should see and hear the signals on the devices you have connected to the various output connectors of the switcher.

REMOTE CONTROL

Before making any connections to the SB-4106. 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 1-4 select buttons. The supplied IR remote control.
- Upon power up the switcher will return to its last used setting before Powered down.

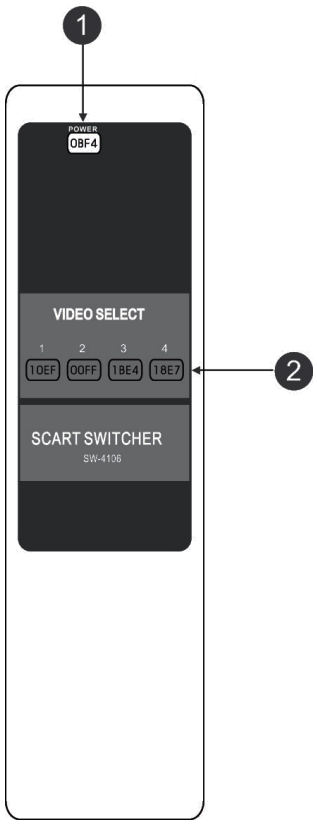
REMOTE CONTROL

1. SWITCH POWER ON or OFF:

Controller with a power ON and OFF

2. INPUTS: 1-4 VGA DEVICE SOURCES:

Input - Source 1: VGA Signal source device # 1
Input - Source 2: VGA Signal source device # 2
Input - Source 3: VGA Signal source device # 3
Input - Source 4: VGA Signal source device # 4



HOW TO SETUP IR CODES:

IR TYPE: uPD6121G
IR CODE: 08F7
POWER ON : 08F7 0BF4
POWER OFF: 08F7 0BF4

INPUT#1 : 08F7 10EF
INPUT#2 : 08F7 00FF
INPUT#3 : 08F7 1BE4
INPUT#4 : 08F7 18E7

CONNECTING THE HARDWARE

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

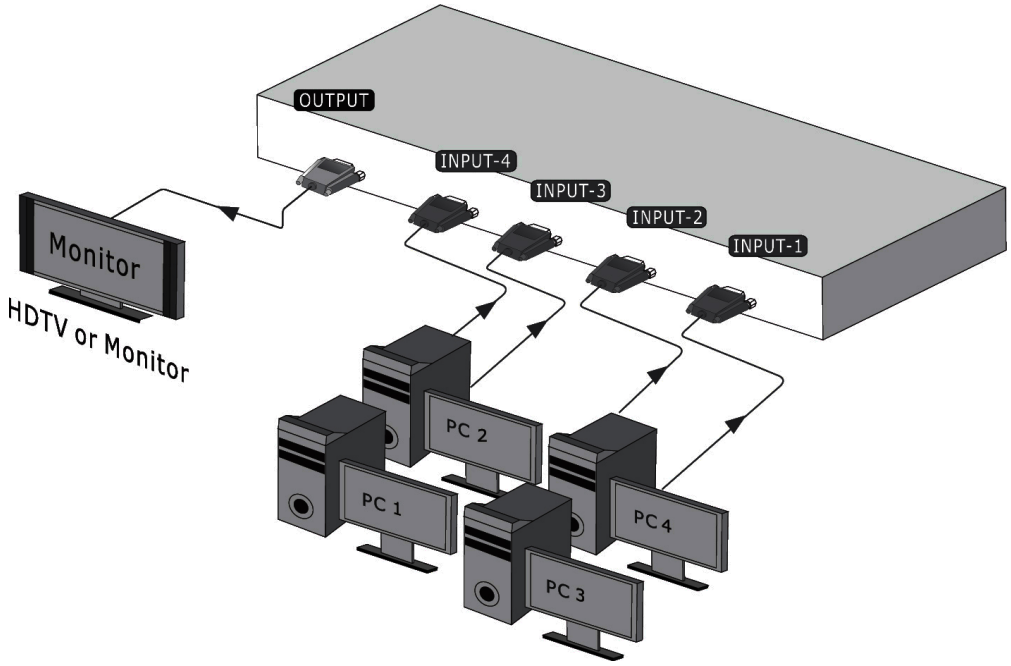
Before using the switcher, please take the time to make certain that the device you wish to connect to its input is functioning properly in all respects. Verify that the video and audio signals are present and are being displayed properly on a suitable device.

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 carious 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.

TYPICAL APPLICATION

4 X VGA SOURCE DEVICES TO 1 X VGA DISPLAY MATRIX SWITCHER

SB-4106



INSTALLING

CONTROL PORTS:

1. IR REMOTE - IR Remote Controller
2. FRONT PANEL - Selection Buttons

INPUTS 1 - 4 PORT VGA SOURCE DEVICE SIGNALS: VIDEO - VGA (RGBHV), connector with HD-15p (D-Sub)

OUTPUT PORT VGA CONNECT TO DISPLAY MONITOR SIGNALS: VIDEO - VGA (RGBHV), connector with HD-15p (D-Sub)

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