SHINYBOW™ USA

MULTIMEDIA AUDIO AND VISUAL

INSTRUCTION MANUAL

MODEL : SB-5654

1x4 HDMI DISTRIBUTION AMPLIFIER



1x4 HDMI DISTRIBUTION AMPLIFIER

HDMI DISTRIBUTION AMPLIFIER Series

Thank you for purchasing the SB-5654 1x4 HDMI DISTRIBUTION AMPLIFIER. 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 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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INTRODUCTION

The SB-5654 is high quality HDMI distribution amplifier, HD high performance designed to distribution HDMI signal. Providing I/O as following:

1x input : 1x HDMI (Digital Video-TMDS and Audio)
4x outputs : 4x HDMI (Digital Video-TMDS and Audio)

Automatic input/output HD signals detection:

PC monitor from VGA to UXGA
HDMI 480i To 1080p
DVI 480i To 1080p

The distributor support data rates up to 2.25 Gbps. And enable 1080p HDMI formats and UXGA DVI resolution(1920x1200) to LCD and Plasma display applications. Auto scan function software is built-in to extend HDMI signal for long distance. This product is certified as being fully HDMI and HDCP compliant. This product is also RoHS, CE, FCC compliant. Support high HDMI (HDCP) source to multiple HDMI (HDCP) displays, LCD monitors or HD projectors.

PACKAGE CONTENTS

Check that you have the following components;

- SB-5654 Switcher
- IR Remote control
- RS-232 Software (All Windows Operating Systems)
- Users Guide
- AC Adaptor: 12VDC, 500mA

Input: 4x HDMI
Output: 1x HDMI

Power Input: DC+12V, @500mA

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

- Support 1x4 HDMI Distribution Amplifier
- I/O Signals : HDMI with HDCP Digital Video and Digital Audio (PCM)
- HDMI and HDCP compliant
- Support link speeds of up to 2.25 Gbps (link clock rate of 225 MHZ)
- Support wide range of PC resolutions from XGA to UXGA 1600x1200 and HDTV/DTV resolutions 480i/480p, 576i/576p, 720p, 1080i & 1080p
- Compatible with all HDMI devices, PC monitors, Plasma TV display and HDTV
- Support Digital Video TMDS formats in Deep Color 12bits
- Support colour depth of up to 36 bits and ensures robust transmission of high-quality uncompressed video content, along with state-of-the-art uncompressed and set top boxes.
- Bi-direction colour space conversion(SCS) between RGB and YCBCR color spaces with programmable coefficients.
- Auto-Scan input and outputs status via LED display on front panel
- Control by Selection buttons on front panel and use IR Remote Controller
- Support desktop with Ear mount and 19 inch Rack mountable type panel
- Power supply DC12Volt, Universal Type switch 100~230VAC, 50/60Hz

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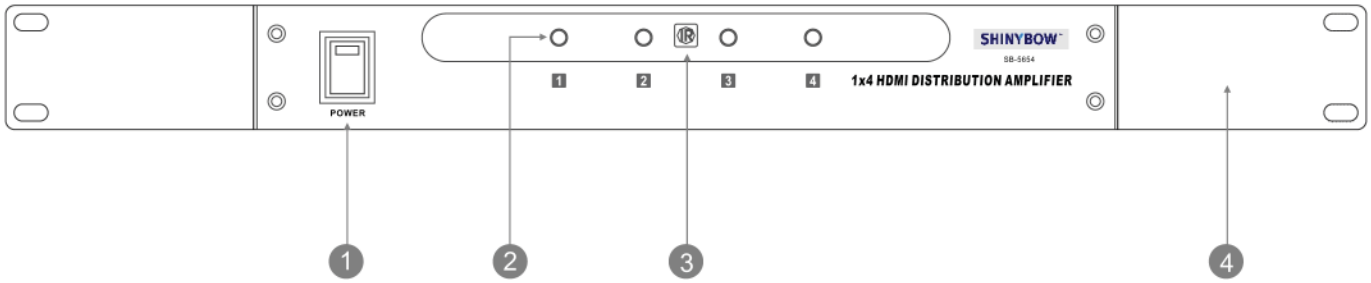
SPECIFICATIONS

- **Type of Distributor:** 1x4 HDMI Distribution Amplifier
- **Signal Supports:** HDMI Standard, DVI and HDCP Compliant
- **Video Supported:** 1080p HDMI formats 1920x1200 and DVI UXGA HD resolutions
- **Audio Supported:** DTS-HD Master Audio, Dolby True -HD & Dolby Digital Plus
- **Type of Signal:** TMDS Digital Video PCM Digital Audio
- **Compliant with HDMI standard:** HDMI and HDCP
- **HDTV Support:** 1080p HDMI formats and UXGA 1600x1200 resolution
- **Controls:** IR Remote
- **Data Rates:** 250Mbps to 2.25 Gbps
- **Pixel clocks:** 25MHz to 225 MHz
- **HDMI Cable Distance:** 10 meters at 2.25Gbps
- **Various video input interface supporting digital video standards such as:**
  - 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
- **Infrared frequency:** 38KHz
- **Regulatory Approvals:** CE, FCC, RoHS (2002/95/EC)
- **Dimensions (WxDxH):** 11.97 x 5.90 x 1.73 in (304mm x 150mm x 44mm)
- **Net Weight (Unit Only):** 3.16 lbs / 1.90 Kgs
- **Power Supply:** DC12V/1A~2A (Full load Consumption Maximum 1.25A)

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

FRONT PANEL

FRONT PANEL



1. 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

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2. INPUT SOURCES STATUS DISPLAY

Input source 1 to 4 LED illuminates blue to indicate that a video source is present on that input.

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3. IR SENSOR

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

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4. 19 INCH EAR MOUNT PAIR

19 inch case Ear Mount pair Part number : 1U-300L

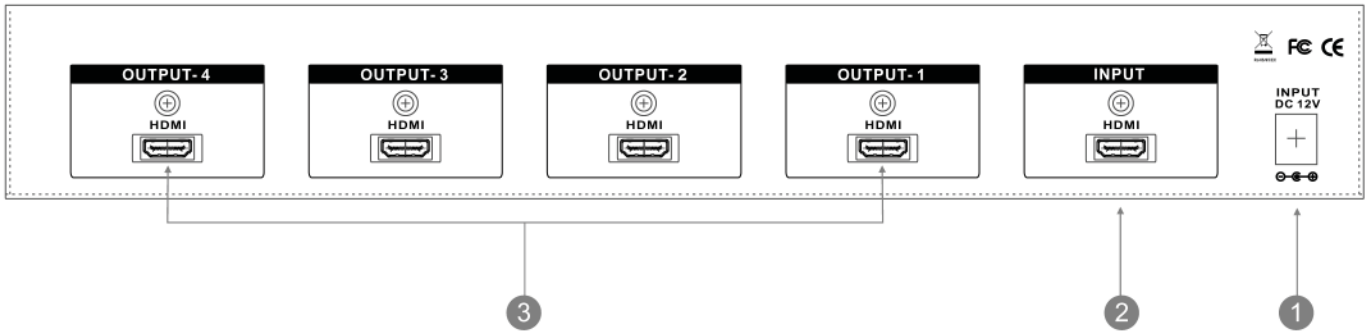
CONNECTING THE HARDWARE

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

Before using the distributor, 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 distributor to the carious devices you wish to feed a signal to. Lastly, connect the AC to DC adaptor, connect the DC connector to the distributor first and then plug the adaptor into a functional AC outlet.

REAR PANEL



1. DC POWER INLET

The distributor 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 1A~2A Max.



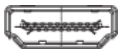
Power Jack:
DC Jack - Inner OD ⦰ 2.1mm (+)
Outside OD ⦰ 5.5mm (GND)
Power input - 12VDC, 1A~2A

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2. INPUT - 1x 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.

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



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.

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3. OUTPUTS - 1,2,3,4 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.

Output 1 - HDMI Digital Video/Audio, Connector with fix screw
Output 2 - HDMI Digital Video/Audio, Connector with fix screw
Output 3 - HDMI Digital Video/Audio, Connector with fix screw
Output 4 - HDMI Digital Video/Audio, Connector with fix screw



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.

REMOTE CONTROL

Before making any connections to the SB-5654. 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

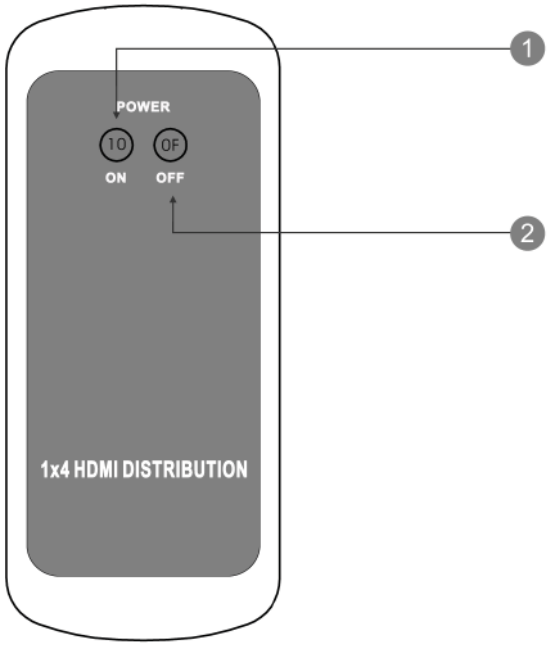
> For each destination output select the appropriate input source by using the front panel input 1~8 select buttons. The supplied IR remote control. Or through the RS-232 serial communications port.

> Upon power up the switcher will return to its last used setting before Powered down.

REMOTE CONTROL

1. & 2. SWITCH POWER ON or OFF:

Controller with a power ON and OFF



CONNECTING THE HARDWARE

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

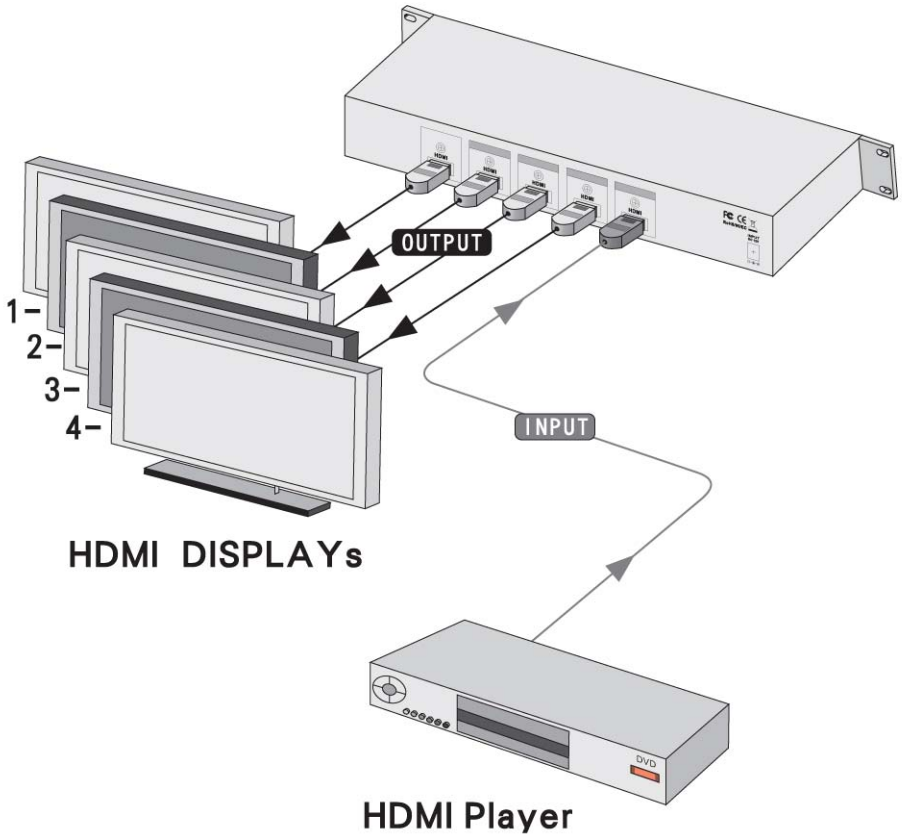
Before using the switcher, please take the time to make certain that the device you wish to connect to its inputs is functioning properly in all respects. Verify that the video and audio signals are present and are being displayed properly on a suitable device.

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 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

TYPICAL APPLICATION

1x HDMI source to 4 x HDMI displays Distribution Amplifier



INSTALLING

INPUT PORT SIGNAL :

1. HDMI - HDMI connector with fix screw

OUTPUTS PORT SIGNALS:

1. HDMI - HDMI connector with fix screw
2. HDMI - HDMI connector with fix screw
3. HDMI - HDMI connector with fix screw
4. HDMI - HDMI connector with fix screw

SB-5654 SUPPORT ONE HDMI INPUT TO FOUR HDMI DISTRIBUTOR OUTPUTS
SUPPORT IR REMOTE CONTROL

LIMITED WARRANTY

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