Thank you for purchasing the SB-5688LCM HDMI 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 8x8 HDMI Matrix 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.

THIS SAFETY INFORMATION IS OF A GENERAL NATURE AND MAY BE SUPERSEDED BY INSTRUCTIONS CONTAINED WITHIN THIS MANUAL
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 sufficient space for air to circulate around the unit.

DISCLAIMERS

The information in this manual has been carefully checked and is believed to be accurate. We assume no responsibility for any infringements of patents or other rights of third parties which may result from its use.

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Version 2.2 MAY 2014

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FEATURES & SPECIFICATIONS

FEATURES

• 8x HDMI with DVI-Audio source devices matrix switched to 8x HDMI output devices.
• HDMI digital Video w/ embedded HDCP, DVI format and CEC/HDCP 2.0 compliant
• Worldwide control EDID modes for HD Video resolutions.
• Link speeds of up to 6.75 Gbps (link clock rate of 340Mhz). Support HDMI 1.4a 3D formats.
• Wide range of HD resolutions from PC XGA to WUXGA 1920x1200 and HDTV/DTV HDMI resolutions 480i/480p, 576i/576p, 720p, 1080i & 1080p
• Compatible with all HDMI source devices, PC monitors, Plasma HD display, HDTV and audio receivers or audio amplifiers.
• Digital Video TMDS formats Resolution up to 1080p-60 with Deep color 36-bit.
• Digital Audio Support : Dolby TrueHD, Dolby Digital, Dolby Digital Plug/ex, DTS, DTS-HD, DTS-HD Master, DTS-EX, PCM, PCM2, LPCM2
• Various User Interface control:
  • Windows based GUI control via RS-232 port
  • Front Panel push button
  • IR wireless remote control
  • Ethernet Switcher control
  • Third party RS-232 controller (via simple ASCII)
• Support world wide control functions: ALL/OFF/RECALL/ENTER/MEMORY/EDID/LOCK
• Support EDID modes :
  • Embedded EDID modes : FSS/H24-3D/H24-3D-M/H36-3D/H36-3D-M/DVI-D 1280x1024-60Hz/DVI-D 1920x1200-60Hz/AUTO
  • External modes : Learning mode
• Automatic scanning input & output status via LED show on front panel
• Support IR Remote and IR Extender with distance up to ~ 984 ft (300M) Maximum.

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 HDMI Switcher: 8x HDMI inputs To 8x HDMI Outputs Matrix Switcher
• HDMI Support: HD 1080p-@60Hz, H36-bit Deep color, 3D (1.4a) formats
• HDCP / CEC Support: HDCP 2.0 Compliant, CEC Compliant
• Video Bandwidth: Double Data Rates: 340Mhz, Total 6.75Gbps bandwidth
• Digital Video Support: Full HD Resolution: 480i / 480p / 720p / 1080i / 1080p
• Controls:
  • 1x IR Remote Controller (remote switcher)
  • 1x Select & Function buttons on front panel
  • 1x IR External port (switch control)
  • 1x RS-232 series interface (switch control)
  • 1x Ethernet series interface (switch control)
• Preview Output: Support 1x preview output port simultaneously via Output-#1
• Source Status: Automatically Scan Sources Inputs via LED
• Function Control Key: ALL / OFF / RECALL / ENTER / MEMORY / LOCK / EDID
• Infrared Frequency: 38 Khz
• IR External Distance: ~1000 feet / 300 meters max
• HDMI I/O Connector: HDMI Type A - SMD 19pin Female Type
• Temperature: 32 °F - 100 °F Operation (0 °C - 38 °C)
• Dimensions (LxWxH): 19” x 9.85 x 1.75 in (*with rackmount bracket) (482 x 250 x 44 mm)
• Rack Mount: Rack Mount 1RU High 19” Rack Mount (with rack mount)
• Power Supply: DC12V / 5A, Universal world wide Type 50/60Hz, 100~230 VAC
• Power Consumption: 3880 mA Maximum
• Safety Approvals: CE, FCC, RoHS (2002/95/EC)
• Product Weight: 13 lbs

As product improvements are continuous, specifications are subject to change without notice.
1. **POWER SWITCH**
   The power switch turns the unit on and off. The LCM will illuminate red to indicate that the switcher is ON and is receiving power. The Switcher will remember the 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 LCM 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**
   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.*

5. **EDID MODE SELECT BUTTONS**
   Used to select EDID mode using Input buttons #1 and #2.

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

7. **SOURCE SELECT BUTTONS**
   Separate inputs 1 thru 8 select buttons are provided each source selection.
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.
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. FUNCTION KEY - EDID

- Press EDID to select new EDID mode or select source row #1 or #2 for LINK source EDID again.
- Press DESTINATION again, press the same DESTINATION # to learn CATx EDID, The EDID for CATx has been learned.

15. 19 INCH EAR MOUNT PAIR

Converts desktop to 19 inch rack mount. Bracket (part # 1U-440L) INCLUDED.
Image shows rack mount bracket attached.
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 5A Max (Center pin positive).

Power Jack:
DC Jack - Inner OD O 2.1mm (+)
Outside OD O 5.5mm (GND)
Power input - 12VDC, 5A

2. IR EXTENDER CONTROL
Support one of IR Extender (IR input) Extend distance maximum 984 ft (300M)
Note: DO NOT install or remote this connection with the power ON.

IR Extender Jack: Female Jack - inner OD O 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. ETHERNET CONNECTION
ETHERNET control port to allow for TCP/IP interfacing to a PC Such as a computer or touch panel control (not a web-browser), to the switcher via this RJ-45 Female connector to control switcher.

Remote port : Control the switcher RJ-45 Female connector
Ethernet Port: Note: the Ethernet port and RS-232 port cannot be used simultaneously. Any connection to the Ethernet port will disable serial commands send to the RS-232 port.

5. PREVIEW OUTPUT -01 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.
Preview port HDMI signal as the same as Output 1

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.

6. 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.

7. 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 ~ 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.
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 CONTROL KEY:

1. / 2. SWITCH 1 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. SOURCE : 1 thru 8 INPUT SOURCE SELECTION
   Press input 1~8 sources with selection button

5. FUNCTION KEY
   ALL - function selection button
   OFF - function selection button
   EDID - function selection button
   RECALL - function selection button
   MEMORY - function selection button
   ENTER - function selection button
   LOCK - function selection button
IR REMOTE CUSTOM AND DATA CODES (NEC STANDARD)

HOW TO SETUP IR CODES:

CUSTOM CODE : 09F6
POWER ON : 09F6 A15E
POWER OFF : 09F6 A25D
ALL : 09F6 B04F
OFF : 09F6 B14E
EDID : 09F6 B748
LOCK : 09F6 B54A
RECALL : 09F6 B24D
MEMORY : 09F6 B44B
ENTER : 09F6 B34C

PRESS DESTINATION - # then PRESS SOURCE - #

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

For example:
Select Destination # 1 to show Source #1~8,

The IR Data Code list:
Destination # 1 , Source #1  09F6 10EF  09F6 01FE
Destination # 1 , Source #2  09F6 10EF  09F6 02FD
Destination # 1 , Source #3  09F6 10EF  09F6 03FC
Destination # 1 , Source #4  09F6 10EF  09F6 04FB
Destination # 1 , Source #5  09F6 10EF  09F6 05FA
Destination # 1 , Source #6  09F6 10EF  09F6 06F9
Destination # 1 , Source #7  09F6 10EF  09F6 07F8
Destination # 1 , Source #8  09F6 10EF  09F6 08F7
## EDID FUNCTION SETUP

<table>
<thead>
<tr>
<th>EDID Setup</th>
<th>To Change the EDID Setup</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1. Press the <strong>EDID</strong> button</td>
<td>The display will show the currently selected EDID mode</td>
</tr>
<tr>
<td>Step 2. Press <strong>SOURCE #1</strong> or <strong>#2 button row</strong></td>
<td>The button will flash blue and the display will show the current <strong>Embedded EDID</strong> Status.</td>
</tr>
<tr>
<td>Step 3. Press the <strong>ENTER</strong> button</td>
<td>To set <strong>EDID</strong> mode. The switcher will return to operation mode.</td>
</tr>
</tbody>
</table>

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

### Embedded EDID Modes

<table>
<thead>
<tr>
<th>Mode</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: FSS</td>
<td></td>
</tr>
<tr>
<td>2: H24-3D-PCM</td>
<td></td>
</tr>
<tr>
<td>3: H24-3D-M</td>
<td></td>
</tr>
<tr>
<td>4: H36-3D</td>
<td></td>
</tr>
<tr>
<td>5: H36-3D-M</td>
<td></td>
</tr>
<tr>
<td>6: 1280x1024-60Hz</td>
<td></td>
</tr>
<tr>
<td>7: 1920x1200-60Hz</td>
<td></td>
</tr>
<tr>
<td>8: AUTO</td>
<td></td>
</tr>
</tbody>
</table>

### Total 8 EDID Modes

To select Embedded EDID mode or LEARNING mode. Press [EDID] button: The LCM will show the current EDID status.

Repeatedly depressing the **Source 1** button will cycle **up** thru the options. Repeatedly depressing the **Source 2** button will cycle **down** thru the options.

Select Embedded EDID: Mode 1: **FSS** Mode 5: **H36-3D-M**

Mode 2: **H24-3D** Mode 6: **1280x1024-60Hz**

Mode 3: **H24-3D-M** Mode 7: **1920x1200-60Hz**

Mode 4: **H36-3D** Mode 8: **AUTO**

### RESET

#### How to RESET EDID mode

Press [EDID] button: The LCM will show the current EDID status.

Press [RECALL] button: The LCM will show the RESET EDID.

Press [ENTER] to confirm entries.

The EDID will return to FSS mode and resolution 1080p-2CH.

### EDID FUNCTION FOR HDMI MATRIX SWITCHER

#### LEARNING EDID

**Learning EDID Setup**

Press [EDID] > [DESTINATION] > SOURCE > [ENTER]

Press [EDID] > [DESTINATION] Button:
The LCM will be show LEARNING.

Switcher will **LEARN** destination EDID and pass the selected source.

**NOTE**: The already learned EDID cannot be modified. You can only rebuild a new Learning EDID.

**For example:**

When the Source has “Learned” the EDID data from a destination, it will save that EDID information into EPROM and the EDID data cannot change.

Please select new learning destination to sources or change to one of the embedded EDID modes when you want to remove the learning EDID memory from EPRPM.
# EDID FUNCTION

## EDID FUNCTION : 8X EMBEDDED EDID MODES

<table>
<thead>
<tr>
<th>Mode 1. FSS (Fast Speed Start)</th>
<th>Mode 5. H36-3D-M (1080p-36 bits)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fast Speed Start mode shortens the startup time of the switcher. Selecting this mode does not force the EDID setup to be cancelled. Users may first select one EDID mode from mode 2 to 3, and then select mode 1 for fast speed start.</td>
<td>Video Support : All resolutions up to and including 1080p. Audio Support : MAT (MLP) 7.1CH, PCM 2CH, One Bit Audio 2CH, AC-3 5.1CH, DTS 5.1CH, PCM 7.1CH, Dolby Digital + 7.1CH, DTS-HD 7.1CH</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mode 2. H24-3D (1080p-24 bits)</th>
<th>Mode 6. 1280x1024-60Hz (DVI-D)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video Support : All resolutions up to and including 1080p. Audio Support : PCM 2CH</td>
<td>DVI Support : DVI-D 1280x1024 60Hz</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mode 3. H24-3D-M (1080p-24bits)</th>
<th>Mode 7. 1920x1200-60Hz (DVI-D)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video Support : All resolutions up to and including 1080p. Audio Support : MAT (MLP) 7.1CH, PCM 2CH, One Bit Audio 2CH, AC-3 5.1CH, DTS 5.1CH, PCM 7.1CH, Dolby Digital + 7.1CH, DTS-HD 7.1CH</td>
<td>DVI Support : DVI-D 1920 x 1200 60Hz</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mode 4. H36-3D (1080p-36 bits)</th>
<th>Mode 8. AUTO &lt;Default&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video Support : All resolutions up to and including 1080p. Audio Support : PCM 2CH</td>
<td>Video Support : All resolutions up to and including 1080p. All Outputs will be set to the highest common resolution of all connected display devices.</td>
</tr>
</tbody>
</table>

## EDID FUNCTION : LEARNING

### Learning EDID Single to Single

**Example** : Learn Destination #8 EDID To Source #5.

**Step 1.** Press EDID button

The button will flash blue and the display will show the current Embedded EDID Status.

**Step 2.** Press the Destination #8 button row

Copy the Destination #8 Display EDID.

**Step 3.** Press the Source #5 button row

Learning the Destination #8 EDID to Source # 5.

**Step 4.** Press ENTER button

To confirm entries.

### Learning EDID Single to Multiple

Learning destination EDID link to the majority Sources

**Step 1.** Press EDID button

The button will flash blue and the display will show the current Embedded EDID Status.

**Step 2.** Press the Destinations #1 ~ 8 button row

Copy any 1~8 Destinations EDID.

**Step 3.** Press the Source #1, #6~#8 button row

Learning the Destination EDID link to Source #1, #6 ~ #8.

**Step 4.** Press ENTER button

To confirm entries.

### Learning EDID Single to ALL

Learning destination EDID link to All Sources

**Step 1.** Press EDID button

The button will flash blue and the display will show the current Embedded EDID Status.

**Step 2.** Press destination button 1 thru 8

Learning anyone 1~8 Destination EDID to all sources.

**Step 3.** Press ALL button

Learning selected destination EDID to all sources.

**Step 4.** Press ENTER button

To confirm entries.
# EDID FUNCTION FOR HDMI MATRIX SWITCHER

<table>
<thead>
<tr>
<th>EDID Status</th>
<th>To view the current EDID status.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1.</strong> Press EDID button</td>
<td>The button will flash blue and the display will show the current Embedded EDID Status.</td>
</tr>
<tr>
<td><strong>Step 2.</strong> Press EDID button</td>
<td>To exit.</td>
</tr>
</tbody>
</table>

## How to setup FSS Function

<table>
<thead>
<tr>
<th>Fast Speed Start</th>
<th>To setup and Install all devices.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1.</strong> Press the Destination #1~8 button row</td>
<td>Select a optimum status of Embedded EDID mode.</td>
</tr>
<tr>
<td><strong>Step 2.</strong> Press EDID button</td>
<td>To select the EDID FSS mode.</td>
</tr>
<tr>
<td><strong>Step 3.</strong> Press ENTER button</td>
<td>To confirm entries.</td>
</tr>
<tr>
<td><strong>Step 4.</strong> Press EDID button</td>
<td>To confirm entries.</td>
</tr>
</tbody>
</table>

## LEARNING EDID Definition

**1.** Switcher will LEARN destination EDID and pass the selected source.

**2.** To set up learning between a single destination and single source:

- Press EDID button > Press Destination 1 thru 8 > Press Source 1 thru 8 > Press ENTER to confirm.
  - Switcher will learn destination EDID to source device.

**3.** To set up learning between a single destination and Multiple sources:

- Press EDID button > Press Destination 1 thru 8 > Press the majority Sources 1 thru 8 > Press ENTER.
  - Switcher will learn single destination EDID to many source devices.

**4.** How to Learning single destinations with all sources.

- Press EDID button > Press ALL button > Press ENTER to confirm.

## Auto Mode Definition

Switcher will find highest common Resolution and Audio from all destination EDID to link Source.

**Example for single source**

- Destination > press #1 and then Source > press #1
  - Destination device #1 will set to the highest common resolution and Audio of source #1

**Example for multiple sources**

- Destination device #1, #2, #3 will be set to the highest common resolution and Audio available and source device #1 will output this same resolution.
TYPICAL APPLICATION

INSTALLING DIAGRAM
Sample connection using IR Transmitters (SB-101) and IR Receiver (SB-100) with SB-6335T & SB-6335R to control a projector.

NOTE:
1. IR Control Projector Over HDBaseT Extender:
   SB-6335 HDBaseT Transmitter
   SB-6335R HDBaseT Receiver
2. Preview Output : Picture as same OUTPUT-1
3. RS-232 Control
4. External IR Remote.
5. IR Extender Transmitter :
   SB-101 IR Extender Transmitter.
6. IR Extender Receiver :
   SB-100 IR Extender Receiver.

Support HDBaseT Extender by SB-6335 Transmitter and SB-6335R Receiver via CAT5e/6/7 cable
TYPICAL APPLICATION

INSTALLING DIAGRAM
Sample connection using IR Transmitters (SB-101) and IR Receivers (SB-100) with SB-6335T and SB-6335R to control a Satellite Receiver.

NOTE:
1. IR Control Satellite Receiver Over HDBaseT CAT5e/6/7 Extender from room:
   - SB-6335 HDBaseT CAT5e/6/7 Transmitter
   - SB-6335R HDBaseT CAT5e/6/7 Receiver
2. Audio Extractor To Recode Audio:
   - SB-5609 HDMI Audio Extractor.
3. Control HDMI ARC:
   - SB-5610 ARC Control Box.
4. IR Extender Transmitter:
   - SB-101 IR Extender Transmitter.
5. IR Extender Receiver:
   - SB-100 IR Extender Receiver.
IR EXTENDER

IR RECEIVER:

1. SB-100 IR 300M Receiver
   Device: SB-100 IR Receiver Set
   Cable (3C): SB-100 Maximum Distance ~ 984 feet (300 meters)
   IR Receiver (SB-100)

2. SB-100C IR 2M Receiver
   Device: IR Receiver cable 6ft (2M)
   Cable (3C): SB-100C Maximum Distance ~ 6 feet (2 meters)
   IR Receiver (SB-100C)

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

PIN CONFIGURATION:

SB-100 and SB-100C Receiver Pin configuration

SB-100 Maximum Distance ~ 984 feet (300 meters)

SB-100C Maximum Distance ~ 6 feet (2 meters)

Note: The External IR jack has voltage on the “Ring” portion of a 3-conductor plug. You must use a 3-conductor plug (aka: stereo plug). Using a 2-conductor plug will short out the power supply. Always make connections with the switcher power off.
IR EXTENDER

IR EMITTER:

1. SB-101 IR 300M Transmitter

   **Device**
   - DC 12V
   - IR out
   - IR in
   - CAT6/6a/7
   - From Receiver
   - To Receiver
   - OUTPUT

   **Cable (3C)**
   - SB-101 Maximum Distance ~ 984 feet (300 meters)

   **IR Transmitter (SB-101)**
   - SB-101 IR Transmitter Set

2. SB-101C IR 2M Transmitter

   **Device**
   - DC 12V
   - IR out
   - IR in
   - CAT6/6a/7
   - From Receiver
   - To Receiver
   - OUTPUT

   **Cable (3C)**
   - SB-101C Maximum Distance ~ 6 feet (2 meters)

   **IR Transmitter (SB-101C)**
   - SB-101C Transmitter Cable

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

PIN CONFIGURATION:

SB-101 and SB-101C Transmitter Pin configuration

**Note:** The External IR jack has voltage on the “Ring” portion of a 3-conductor plug. You must use a 3-conductor plug (aka: stereo plug). Using a 2-conductor plug will short out the power supply. Always make connections with the switcher power off.
RS-232 SERIAL INTERFACE

RS-232 SERIAL INTERFACE CONNECT A PC OR CONTROL SYSTEM. VERSION -2.0 COMPATIBLE

RS-232 PROTOCOL COMMANDS (RS-232 Control driver V2.0.1)
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 recognizes a complete command it will perform the requested action - there is no delimiter character required.
ETHERNET SERIAL INTERFACE

ETERNET SERIAL INTERFACE CONNECT A PC OR CONTROL SYSTEM. VERSION COMPATIBLE V2.0

![Ethernet Diagram]

**Pin Ethernet Reference**

<table>
<thead>
<tr>
<th>Pin</th>
<th>Ethernet</th>
<th>Reference</th>
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<tr>
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</tr>
<tr>
<td>8</td>
<td>GND</td>
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</table>

**Note:**
Control the switcher
SPD: Speed
LINK: Ethernet link
RJ-45 Female 8P-8 Connector

**ETHERNET TCP/IP PROTOCOL COMMANDS (Ethernet / RS-232 Control driver V2.0.1)**

***The Ethernet port and RS-232 port cannot be used simultaneously.***

*Any connection to the Ethernet Control port will disable serial commands send to the RS-232 port.*
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