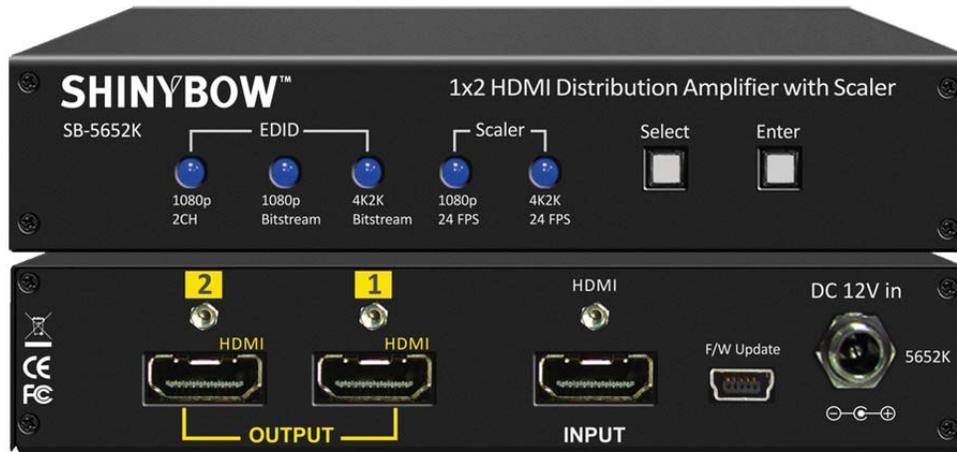


**MODEL : SB-5652K**

1x2 HDMI 4K2K Distribution Amplifier with Scaler



1x2 HDMI 4K2K Distribution Amplifier with Scaler



***HDMI-4K2K Distribution Amplifier series***

*Thank you for purchasing the SB-5652K HDMI Distribution Amplifier with 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 1x2 HDMI 4K2K Distribution Amplifier.*



## 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.

# TABLE OF CONTENTS

## CONTENTS

INTRODUCTION .....	1
FEATURES & SPECIFICATIONS .....	2
FRONT PANEL .....	3
REAR PANEL .....	4
EDID FUNCTIONS .....	5
TYPICAL APPLICATION .....	6

## INTRODUCTION

The SB-5652K is professional 1x2 4K2K HDMI Distribution Amplifier with Scaler. Supporting one (1) HDMI Input and output supported two (2) HDMI 4K2K ports. It is based on the HDMI standard 4k2k and supports full 4K2K HD resolution HDMI Video with embedded three (3) EDID modes, Video signal bandwidth of 340Mhz, there is no signal degradation. High Definition Digital signals can be distributed to (1) Input to (2) outputs. The Distributor is certified as being fully CEC and HDCP 2.0 compliant, full HD 4K2K HDMI V1.4a 3D formats, data rates up to 6.75 Gbps. Supports UXGA/WUXGA DVI 1920x1200 resolution to any HD DVI displays. Use 1x HDMI connector for Input, effectively making this an one (1) input x two (2) output distributor. The EDID management can be selected between three (3) different modes 1080p-2ch/1080-bitstream/4K2K-bitstream and The Scaler management (2) modes as the scaling up to 4K2K (24Hz) and scaling down to 1080p(24Hz). Control is provided via Front panel push buttons.

## PACKAGE CONTENTS

Check that you have the following components;

- SB-5652K Distribution Amplifier
- 1 inch high wall mount bracket (P/N: WM-1inch-130mm)
- Users Guide
- Power Supply Input: DC12V, 1A, (Worldwide Universal 100~240 VAC, AC 50/60Hz.)



## 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.

## 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.

We assume no responsibility for any inaccuracies that may be contained in this document. We make no commitment to update or to keep current the information contained in this document.

We reserve the right to make improvements to this document and/or product at any time and without notice.

## COPYRIGHT NOTICE

No part of this document may be reproduced, transmitted, transcribed, stored in a retrieval system, or any of its part translated into any language or computer file, in any form or by any means — electronic, mechanical, magnetic, optical, chemical, manual, or otherwise — without express written permission and consent

© Copyright 1997. All Rights Reserved.

Version 1.2 DEC 2013

## TRADEMARK ACKNOWLEDGMENTS

All products or service names mentioned in this document may be trademarks of the companies with which they are associated.



# FEATURES & SPECIFICATIONS

## FEATURES

- (1)x HDMI 4K2K Standard input distribution To two (2)x HDMI 4K2K Distribution Amplifier
- HDMI digital Video w/embedded HDCP, DVI format and CEC/HDCP 2.0 compliant
- Build in three (3) worldwide Embedded EDID modes control HDMI full 4K2K (24/25/30Hz) resolutions
- Link speeds of up to 6.75 Gbps (link clock rate of 340MHz), Support HDMI 1.4a, 3D formats
- Wide range of HD DVI resolutions from PC XGA to WUXGA 1920x1200 and HDTV/DTV
- HDMI resolution supports 480i/480p, 576i/576p, 720p, 1080i/p & 4K2K (24/25/30Hz)
- Digital Video TMDS formats Resolution up to 4K2K with Deep color 36-bit
- Digital Multi-channel Audio Support : Dolby TrueHD, Dolby Digital, Dolby Digital Plug/ex, DTS, DTS-HD, DTS-HD Master, DTS-EX, PCM, PCM2, LPCM2
- Various User Interface controls via Front Panel push button
- Support worldwide (2)x control function keys via front panel controls: Select/ Enter
- Support Embedded three (3) EDID modes : 1080p-2ch / 1080 bitstream / 4K2K-bitstream
- Support two (2) Scaling up / down modes : Down to 1080p (24Hz) / Up to 4K2K-(24Hz)
- HDMI Signal Booster : for 1080p Distance 328 feet (30M) and 4K2K Distance 229 feet (20M)
- Automatic LED show out via press the select function button
- Support Universal switch power adaptor AC100V~AC240V, 50/60Hz

The Distributor will remember that last state during a power cycle. When power is removed and resorted, the last configuration will be invoked.

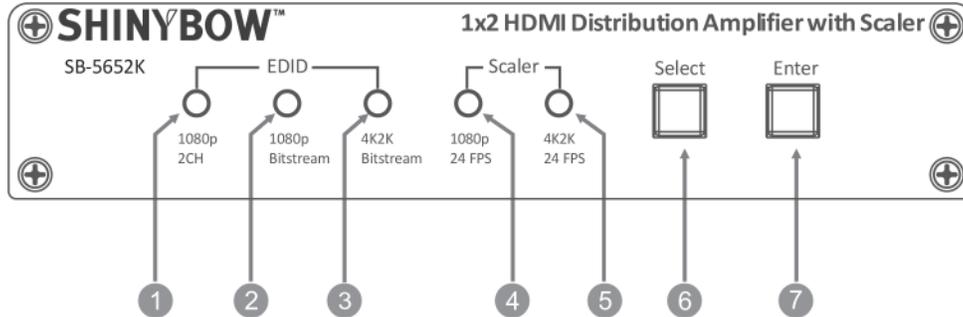
## SPECIFICATIONS

- **Type of HDMI Distribution Amplifier:** 1x input To 2x Outputs HDMI Distribution Amplifier with Scaler
- **HDMI Support:** HDMI 4K2K, 1080p-@60Hz, H36-bit Deep color, 3D of HDMI V1.4 formats
- **HDCP / CEC Support:** HDCP 2.0 Compliant, CEC Compliant
- **Video Bandwidth:** Double Data Rates: 340 MHz, Total 6.75Gbps bandwidth
- **Digital Video Support:** HD:480i/ 480p/ 720p/ 1080i/p and 4K2K up to 36bit deep color
- **HDMI Input:** 1x HDMI (HDMI or DVI digital source)
- **HDMI Outputs:** 2x HDMI (To Destination)
- **Audio Outputs:** Multi-channel Audio Formats: 5.1 / 7.1, MAT(MLP), Dolby Digital, Dolby TrueHD, Dolby Digital Plus, DTS, DTS-ES 6CH, DTS-HD, DTS-HD-HRA, DTS-HD Master, (PCM-2CH)
- **Controls:**
  - 1x Select Function button on front panel (Data status via LED panel show out)
  - 1x Enter function button (confirm entries)
- **EDID-Scaling Status:** EDID & Scaling status LEDs indicates presence of a live signal
- **(2) Function Control Keys:**
  - 1. Select press button
  - 2. Enter press button
- **(3) EDID management:** Select Embedded EDID modes : **Mode1:** 1080p-2ch **Mode2:** 1080p-Bitstream **Mode3:** 4K2K-Bitstream
- **HDMI Signal Booster:**
  - Signal for 1080p Distance 98 feet / 30 meters maximum
  - Signal for 4K2K Distance 65 feet / 20 meters maximum
- **HDMI Signal Booster:** Select Scaling down / scaling up : **Mode1:** 1080p (24Hz) **Mode2:** 4K2K (24Hz)
- **HDMI I/O Connector:** HDMI Type A - SMD 19-pin female type
- **Temperature:** Operating Temperature 32°F - 100°F (0°C - 32°C)
- **Dimensions (LxWxH):** 5 x 3.14 x 1.00 in (127mm x 80mm x 25mm)
- **Wall Mount:** 1 inch High wall mount pack, P/N:1in-130mm (with wall mount pack)
- **Power Supply:** DC12V, 1A, Power Input AC 100~240 VAC 50/60Hz (universal switch Type Supply)
- **Safety Approvals:** CE, FCC, RoHS, REACH.
- **Product Weight:** 0.75 Kgs / 1.65 lb

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

# FRONT PANEL

## FRONT PANEL



### 1. EDID Mode 1 : 1080p-2ch

Digital Video 1080p (1920x1080)@60Hz, Digital Audio Multi-Channel Audio 2CH.

### 2. EDID Mode 2 : 1080p-BitStream

Digital Video 1080p (1920x1080)@60Hz

**Digital Audio Multi-Channel Audio:** Multi Audio Formats 5.1 / 7.1, MAT(MLP), Dolby Digital, Dolby TrueHD, Dolby Digital Plus, DTS, DTS-ES 6CH, DTS-HD, DTS-HD-HRA, DTS-HD Master, (PCM-2CH).

### 3. EDID Mode 3 : 4K2K-BitStream

Digital Video 4K2K (3860x2160)@24/25/30Hz

**Digital Audio Multi-Channel Audio:** Multi Audio Formats 5.1 / 7.1, MAT(MLP), Dolby Digital, Dolby TrueHD, Dolby Digital Plus, DTS, DTS-ES 6CH, DTS-HD, DTS-HD-HRA, DTS-HD Master, (PCM-2CH).

### 4. SCALER Mode 1 : 1080p-24Hz

Digital Video 1080p (1920x1080)@24Hz

**Digital Audio Multi-Channel Audio:** Multi Audio Formats 5.1 / 7.1, MAT(MLP), Dolby Digital, Dolby TrueHD, Dolby Digital Plus, DTS, DTS-ES 6CH, DTS-HD, DTS-HD-HRA, DTS-HD Master, (PCM-2CH).

### 5. SCALER Mode 2 : 4K2K-24Hz

Digital Video 4K2K (3860x2160)@24Hz

**Digital Audio Multi-Channel Audio:** Multi Audio Formats 5.1 / 7.1, MAT(MLP), Dolby Digital, Dolby TrueHD, Dolby Digital Plus, DTS, DTS-ES 6CH, DTS-HD, DTS-HD-HRA, DTS-HD Master, (PCM-2CH).

### 6. SELECT button

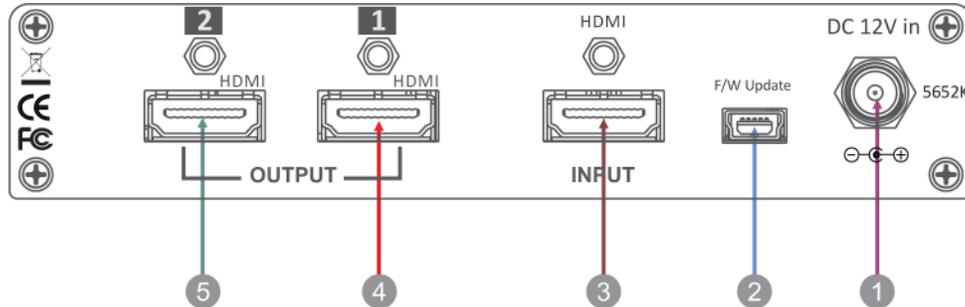
Used to select EDID mode using buttons Select button.

### 7. ENTER button

Press ENTER to confirm entries.

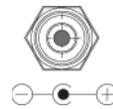
# BACK PANEL - SWITCH CONTROLS

## BACK PANEL



### 1. POWER INPUT:

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 1A Max (Center pin positive).



#### Power Socket :

DC Jack - inner OD Ø 2.1mm (+ )  
Outside OD Ø 5.5mm (GND)

Power input - 12VDC, 1A

### 2. FIRMWARE UPDATE:

Firmware update port to allow for interfacing to a PC mini-USB. Such as a computer or touch panel control, to update firmware via this Mini-USB-4pin Female socket jack.

F/W update

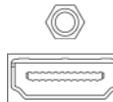


**Remote Port:** Mini-USB-4pin Female connector

### 3. HDMI INPUT - (1) PORT:

Connect an HDMI signal source to this Input. This HDMI port supports HDMI with embedded digital multi-channel audio and DVI sources. If you remove the HDMI screw post, you must use the provided ISO screws to keep the internal HDMI jack secure. Removing the HDMI Screws without installing the ISO screws will void your warranty.

HDMI in



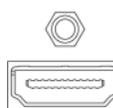
**HDMI Connector:** HDM Type A SMD 19pin Female socket connector.

**Note:** *With the proper adapters, the distributor can be used with DVI digital video signals HDCP compliant.*

### 4. / 5. HDMI OUTPUTS - (1) ~ (2) PORTS:

Connect an HDMI signal source to this Output. This HDMI port supports HDMI with embedded digital multi-channel audio and DVI sources. If you remove the HDMI screw post, you must use the provided ISO screws to keep the internal HDMI jack secure. Removing the HDMI Screws without installing the ISO screws will void your warranty.

HDMI out



**HDMI Connector:** HDM Type A SMD 19pin Female socket connector.

**Note:** *With the proper adapters, the distributor can be used with DVI digital video signals HDCP compliant.*

# EDID FUNCTION

## EMBEDDED EDID & SCALER MODES FOR HDMI DISTRIBUTION AMPLIFIER

EDID / Scaler setup	To change the EDID & Scaler modes
	The display will show the currently selected EDID mode
<b>Step 1.</b> Press <b>SELECT</b> button	The button will flash blue and the display will show the current <b>Embedded EDID &amp; Scaler</b> Status.
<b>Step 2.</b> Press the <b>ENTER</b> button	To set <b>EDID &amp; Scaler</b> mode. The switcher will return to operation mode.
Operation will abort if no keys are pressed within 5 seconds.	
Embedded EDID & Scaler modes	To select Embedded EDID mode or Scaler mode.
<p><b>Embedded EDID setup</b></p> <p>Press <b>SELECT</b> &gt; <b>ENTER</b> button</p> <p>Select Embedded EDID :</p> <p>Mode 1 : 1080p-2ch            Mode 2 : 1080p-Bitstream            Mode 3 : 4K2K-Bitstream            Mode 4 : H36-3D</p> <p>Select Scaler modes :</p> <p>Mode 1 : 1080p-24Hz            Mode 2 : 4K2K-24Hz</p>	<p>The button will flash blue and the display will show the current <b>Embedded EDID &amp; Scaler</b> Status.</p> <p>Press <b>SELECT</b> button : The LED will show the current <b>EDID &amp; Scaler</b> status.</p> <p>Repeatedly depressing the <b>SELECT</b> button will cycle modes thru the options.</p>
RESET	(EDID Return To Factory default)
<p><b>How to RESET EDID mode</b></p> <p>Press <b>ENTER</b> button</p>	<p>Operation will abort if keep pressed the <b>ENTER</b> button after 5 seconds.</p> <p>RESET To the FACTORY DEFAULT ( passing mode).</p> <p>Passing mode : The EDID will return to Pass mode.</p>

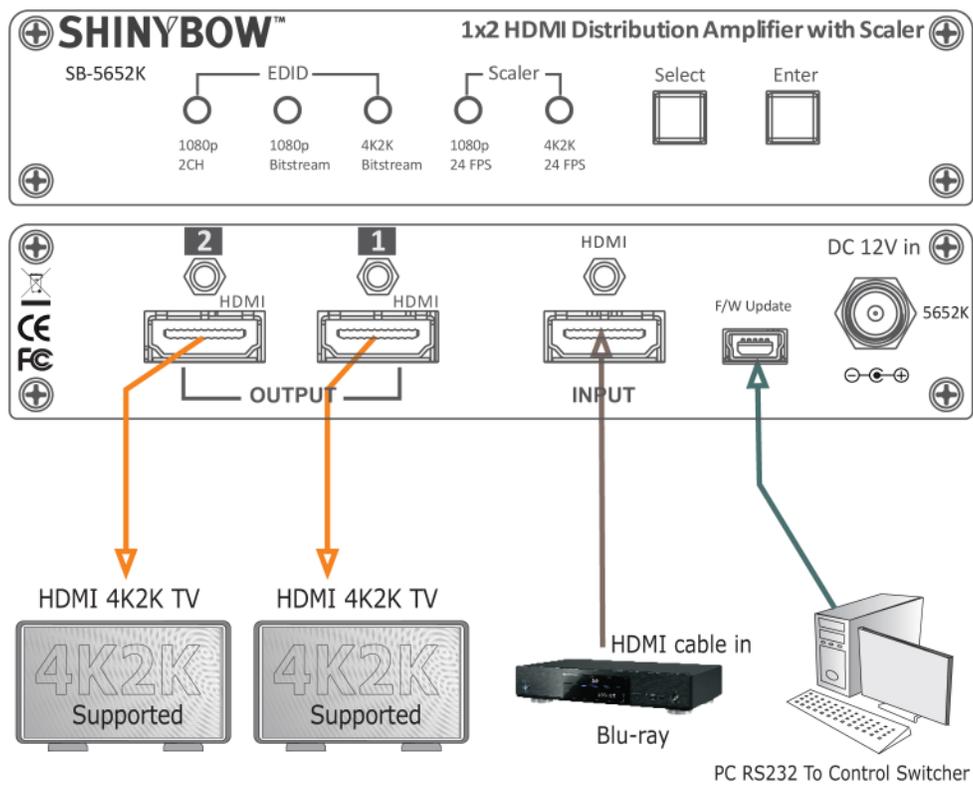
# TYPICAL APPLICATION

## INSTALLING DIAGRAM

Using the press button to select the Embedded EDID modes or Scaler modes to control HDMI Distribution Amplifier SB-5652K via SELECT and ENTER press buttons.

### NOTE:

1. Update TX/RX chip Firmware via a PC USB.
2. Up-Scaling to 4K2K@24Hz mode requires a source Input signal to be 1080p@24Hz only.
3. Down-Scaling to 1080p@24Hz mode requires a source Input of 4K2K@24Hz only.



Application use 1080p and 4K2K HDTV via 1x2 Distribution Amplifier with Scaler.

# LIMITED WARRANTY

PLEASE READ THE FOLLOWING TERMS AND CONDITIONS CAREFULLY BEFORE USING THIS HARDWARE, COMPONENTS AND SOFTWARE PROVIDED BY, THROUGH OR UNDER SHINYBOWUSA, INC (COLLECTIVELY, THE "PRODUCT"). By using installing or using the Product, you unconditionally signify your agreement to these Terms and Conditions. If you do not agree to these Terms and Conditions, do not use the Product and return the Product to SHINYBOWUSA, Inc. at the return address set forth on the Product's packing label at your expense. SHINYBOWUSA, Inc. may modify these Terms and Conditions at anytime, without notice to you.

## **RESTRICTIONS ON USE OF THE PRODUCT**

It is your responsibility to read and understand the installation and operation instructions, both verbal and in writing, provided to you with respect to the Product. You are authorized to use the Product solely in connection with such instructions. Any use of the Product not in accordance with such instructions shall void any warranty pertaining to the Product. Any and all damages that may occur in the use of the Product that is not strictly in accordance with such instructions shall be borne by you and you agree to indemnify and hold harmless SHINYBOWUSA, Inc. from and against any such damage.

The Product is protected by certain intellectual property rights owned by or licensed to SHINYBOWUSA. Any intellectual property rights pertaining to the Product are licensed to you by SHINYBOWUSA, Inc. and/or its affiliates, including any manufacturers or distributors of the Product (collectively, "SHINYBOWUSA") for your personal use only, provided that you do not change or delete any proprietary notices that may be provided with respect to the Product.

The Product is sold to you and any use of any associated intellectual property is deemed to be licensed to you by SHINYBOWUSA for your personal use only. SHINYBOWUSA does not transfer either the title or the intellectual property rights to the Product and SHINYBOWUSA retains full and complete title to the intellectual property rights therein. All trademarks and logos are owned by SHINYBOWUSA or its licensors and providers of the Product, and you may not copy or use them in any manner without the prior written consent of SHINYBOWUSA, which consent may be withheld at the sole discretion of SHINYBOWUSA.

The functionality and usability of the Product is controlled by SHINYBOWUSA, Inc. from its offices within the State of Texas, United States of America. SHINYBOWUSA makes no representation that materials pertaining to the Product are appropriate or available for use in other locations other than the shipping address you provided with respect thereto. You are advised that the Product may be subject to U.S. export controls.

Disclaimers and Limitation of Liability

SHINYBOWUSA may change or modify the Product at any time, from time to time.

THE PRODUCT IS PROVIDED "AS IS" AND WITHOUT WARRANTIES OF ANY KIND EITHER EXPRESS OR IMPLIED. SHINYBOWUSA DOES NOT WARRANT OR MAKE ANY REPRESENTATIONS REGARDING THE USE OR THE RESULTS OF THE USE OF THE PRODUCT'S CORRECTNESS, ACCURACY, RELIABILITY, OR OTHERWISE.

SHINYBOWUSA has no duty or policy to update any information or statements pertaining to the Product and, therefore, such information or statements should not be relied upon as being current as of the date you use the Product. Moreover, any portion of the materials pertaining to the Product may include technical inaccuracies or typographical errors. Changes may be made from time to time without notice with respect to the Product.

TO THE FULLEST EXTENT PERMISSIBLE PURSUANT TO APPLICABLE LAW, SHINYBOWUSA DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT. SHINYBOWUSA DOES NOT WARRANT THE ACCURACY, COMPLETENESS OR USEFULNESS OF ANY INFORMATION WITH RESPECT TO THE PRODUCT. SHINYBOWUSA DOES NOT WARRANT THAT THE FUNCTIONS PERTAINING TO THE PRODUCT WILL BE ERROR-FREE, THAT DEFECTS WITH RESPECT TO THE PRODUCT WILL BE CORRECTED, OR THAT THE MATERIALS PERTAINING THERETO ARE FREE OF DEFECTS OR OTHER HARMFUL COMPONENTS. SHINYBOWUSA WILL USE ITS REASONABLE EFFORTS TO CORRECT ANY DEFECTS IN THE PRODUCT UPON TIMELY WRITTEN NOTICE FROM YOU NOT TO EXCEED 10 BUSINESS DAYS AFTER RECEIPT BY YOU OF THE PRODUCT, BUT YOU (AND NOT SHINYBOWUSA) ASSUME THE ENTIRE COST OF ALL NECESSARY SERVICING, REPAIR AND CORRECTION THAT WAS CAUSED BY YOU UNLESS OTHERWISE AGREED TO IN A SEPARATE WRITING BY SHINYBOWUSA.

UNDER NO CIRCUMSTANCES, INCLUDING, BUT NOT LIMITED TO, NEGLIGENCE, SHALL SHINYBOWUSA BE LIABLE FOR ANY SPECIAL OR CONSEQUENTIAL DAMAGES THAT RESULT FROM THE USE OF, OR THE INABILITY TO USE THE PRODUCT IN ACCORDANCE WITH ITS SPECIFICATIONS, EVEN IF SHINYBOWUSA OR ITS REPRESENTATIVES HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT SHALL SHINYBOWUSA'S TOTAL LIABILITY TO YOU FROM ALL DAMAGES, LOSSES, AND CAUSES OF ACTION (WHETHER IN CONTRACT, OR OTHERWISE) EXCEED THE AMOUNT YOU PAID TO SHINYBOWUSA, IF ANY, FOR THE PRODUCT.

END OF DOCUMENT

# SHINYBOW™ USA

MULTIMEDIA AUDIO AND VISUAL

---