

## NTSC/PAL/VGA>PAL/NTSC/VGA Digital MultiVideo System Converter INSTRUCTION MANUAL



MODEL : SB-3690  
MultiVideo System Converter

### ***Digital Video Converter Series***

*Thank you for purchasing the SB-3690 MultiVideo System Converter. 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 converter.*



## 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.

# INTRODUCTION

Input: NTSC 3.58/4.43, PAL, PAL-N, PAL (Comp-N)  
VGA: 640x480, 800x600, 1024x768 VGA

Output: NTSC 3.58/4.43, PAL, PAL-N, PAL (Comp-N), PAL-M  
VGA: 640x480, 800x600, 1024x768 VGA

Power Input: +DC9V /1.5A 



**CAUTION**  
RISK OF ELECTRIC SHOCK  
DO NOT OPEN



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,  
DO NOT REMOVE COVER (OR BACK),  
NO USER SERVICEABLE PARTS INSIDE,  
REFER SERVICING TO QUALIFIED SERVICE PERSONAL.

## 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 non-insulated "dangerous voltage" within the products enclosure that 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.

To prevent electric shock do not use this (polarized) 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.

## INTRODUCTION


Congratulations on your purchase of one of the most innovative multi-video system converter products on the market today. The SB-3690 multi-video system converter uses Digital Signal Processing (DSP) to convert any world TV systems or computer VGA signals to any world TV system and computer VGA. It will also re-generate sync-pulse and can help stabilize poor quality video signals such as from multi-generation videotape. It embodies many useful features such as composite or S-Video selectable inputs and picture zooming.

### Before you make any connections

Make sure all Video devices to be connected to the Multi-video System Converter are functioning according to their respective operation manuals before connecting them. Always connect the Component Video/Audio devices to the Multi-video System Converter one at a time and make sure each works just as it did before it was connected.

### Supplied Accessories

Check that you have the following components in your converter pack;

- (1) 1 Instruction Manual
- (2) 1 SB-3690 Converter
- (3) R-R, S-S, VGA-VGA Cables
- (4) 1 AC Adaptor : +DC9V /1.5A 

AC/DC Adaptor Types : CE/UL/SAA/BS

### Safety Notice!

To prevent damage to your television equipment use only the supplied AC Adaptor and make the power connections to your television

# FEATURES & SPECIFICATIONS

## FEATURES

- No video delay. Real Time video Conversion.
  - Use your PAL equipment in a NTSC country and NTSC equipment in a PAL country
  - Very easy to use, one time set-up no additional action needed.
  - Uses a standard AV or S-Video or VGA connection to convert any input signal to any specified output source.
  - Recording is permitted from any of the outputs. You can take advantage of making copies out of devices which are plugged in. Most DVD movies and VHS tapes.
  - Crisp and clear converted video. Latest video correction technology. You will even get better results on your video by using the SB-3690
  - Stand-alone and stylish compact design, light and portable for traveling.
  - LED Lamp shows current input and output video signal
  - Detects input manually between: All PAL, All NTSC systems
  - Universal power adapter, which will work in any country in the world (ships with North American plug)
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## SPECIFICATIONS

- **Input TV System:** PC (VGA), NTSC 3.58, NTSC 4.43, PAL, PAL-B, PAL-D, PAL-I, PAL-G, PAL-K, PAL-H, PAL-M, PAL-N
- **Video Input:** 0.50 V-pp ~ 2V-pp; 75 Ohms
- **1x PC VGA Input:** 0.7 Vpp
- **1x S-Video Input:** Y-1Vpp, C-0.25 Vpp
- **Output TV System:** PC (VGA), NTSC 3.58, NTSC 4.43, PAL, PAL-B, PAL-D, PAL-I, PAL-G, PAL-K, PAL-H, PAL-M, PAL-N
- **Color Subcarrier Frequency:** NTSC-3.578545 MHz / PAL-M 3.575611 MHz / PAL-4.433619 MHz / PAL-N 3.582056 MHz
- **Video Composite Output:** 1 V-pp; 75 Ohms
- **S-Video Output:** y-1Vpp, C-0.25 Vpp
- **VGA Output:** 0.7 Vpp
- **VGA Horizontal Frequency:** 31.50 KHz
- **PAL/NTSC Line Conversion:** NTSC 525/PAL625 Lines
- **PAL/NTSC Field Conversion:** NTSC 60Hz/ PAL 50Hz/PAL-M 60Hz Fields
- **Frequency Response:** 5MHz
- **Digital Component:** 8 Bit
- **Differential Phase:** 1
- **Differential Gain:** 1%
- **Resolution Horizontal/Vertical:** 1024x768 lines
- **Sampling Frequency:** Input 14.318 MHz/ Output 28.636 MHz
- **Field Memory:** 16M bit
- **Connection Terminals Input:** Video x 1, S-Video x 1, D-15F x 1
- **Connection Terminals Output:** Video x 1, S-Video x 1, D-15F x 1
- **Power Supply: Input:** 100-240VAC, 47-63Hz/ Output: DC 9V/1.5A

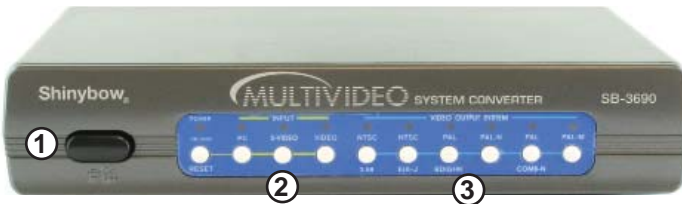
As product improvements are continuous, specifications are subject to change and without notice.

# TYPICAL HOOKUP AND OPERATION

## SB-3690



**Front:**



1. Power ON/OFF
2. Select Input Sources: Video, S-Video, PC
3. Select Video Output System:
  - NTSC (3.58) NTSC (EIA-J)
  - PAL (B.D.I.G.H.K)
  - PAL-N
  - PAL-N (COMB-N)
  - PAL-M

**Back:**



1. Adjust Output Resolution:
  0. 640 x 480
  1. 800 x 600
  2. 1024 x 768
  3. 1280 x 1024
  4. 1366 x 768
  5. 1440 x 900
  6. 1680 x 1050
  7. 1920 x 1200(HD)
2. Video Outputs: Video, S-Video, VGA (Maximum Output 1920x1200)
3. Video Inputs: Video, S-Video, VGA (Maximum Output 1280x1024)
4. DC 12V Input

## OPERATION AND CONTENT

### Front Panel

1. Power: press the button to turn ON/OFF. The LED will illuminate when the power is turned on.
2. Input Selection Buttons: Press each of buttons (PC/S-VIDEO/VIDEO) to select the desired input source.
3. Output Selection Buttons: Press each of buttons (NTSC-M3.58,J/,PAL-B,D,I, G,H,K,M,N,COMB-N), to select the desired output source.
4. Switch the converter on by depressing the on-off button on the front panel. The defaults to PC input converter and NTSC output
5. Pressing the buttons to select the correct TV system
6. If you have a VGA monitor connected, this will work automatically.
7. Start your video source playing, plus, if required, connect on your PC and you should now be able to view the picture on the TV and VGA simultaneously.

### Front Panel

1. Output resolutions adjustment: There is a DIP SW on rear of the SB-3690 which allows you to change the output resolution The SB-3690 default is 640x480 You available resolutions are 640x480, 800x600, 1024x768 1280x1024, 1366x768, 1440x900, 1680x1050 and 1920x1200HD to your PC, TV, or VGA monitor.
2. Support AV and SV output solutions: NTSC3.58, NTSC-EIA-J, PAL(B,D,I,G,H,K, PAL-M, PAL-N, PAL-N(COMB-N)
3. Power: Plug the 12VDC power supply into the unit and connect the adaptor to AC wall outlet.

## TYPICAL HOOKUP AND OPERATION CONT'D

### Safeguards and Precautions

- A. Keep this unit away from fire, extremely hot areas, water or moisture of any kind.
- B. Do not place this unit on any support that is not firm, level and strong.
- C. Do not service the unit yourself. Opening the unit's housing will void the warranty.
- D. Servicing must be by Shinybow or by an authorized technician.
- C. Illegal duplication of copyrighted material is strictly prohibited by Federal Laws.



# LIMITED WARRANTY

## SHINYBOW WARRANTY

SHINYBOW Technology warrants this product against defects in materials and workman ship for a period of 3 years from the date of purchase. Please be sure to send in your warranty registration card promptly, as the warranty will not be active without registration.

Should this product, in SHINYBOW Technology's opinion, after inspection, prove defective within this warranty period, SHINYBOW Technology, at its option, will repair or replace this product without charge, to whatever extent it shall deem necessary to restore said product to proper operation condition. This does not extend the warranty period.

This warranty does not apply if the fault has been caused by misuse, improper handling care, electrical or mechanical abuse, and abnormal operating conditions 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 there is a signal being fed to its inputs from the connected device is acceptable.

Disconnect the cables from the 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 he 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.

Verify that there is power to the device. If the unit is receiving power, the power on indicator light in the power switch should be glowing.

The second most common problem with the 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 problems.

We recommend using the highest quality cables so that you can achieve the best results. Poor quality cables provide will poor quality signals.

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