



Instruction Manual

**1T-VS-434
PC/HD Cross Converter**

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1.0 INTRODUCTION

Thanks for purchasing this TV One-task product from TV One. The 1T-VS-434 is designed to cross convert between a wide variety of PC and/or HDTV analog resolutions. Resolutions range from 480i to 1080p for the HDTV resolutions and up to WUXGA for the PC resolutions. An extensive On Screen Display (OSD) menu provides complete control over the components of the video signal and allows the user to tailor the output to their individual needs. Our professional video conversion products have been serving the industry for over twenty years. TV One offers a full line of high quality Seamless Switchers, Video Scalers, Up/Down/Cross Converters, Analog-Digital Converters (SD/HD-SDI, HDMI, DVI), Format Converters, Standards Converters, TBC/Frame Synchronizers, Matrix Routing Switchers, Signal Distribution Amplifiers and Cat.5 Transmission Systems.

1.1 Liability Statement

Every effort has been made to ensure that this product is free of errors. TV One cannot be held liable for the use of this hardware or any direct or indirect consequential damages arising from its use. It is the responsibility of the user of the hardware to check that it is suitable for his/her requirements and that it is installed correctly. All rights reserved. No parts of this manual may be reproduced or transmitted by any form or means electronic or mechanical, including photocopying, recording or by any information storage or retrieval system without the written consent of the publisher.

TV One reserves the right to revise any of its hardware and software following its policy to modify and/or improve its products where necessary or desirable. This statement does not affect the legal rights of the user in any way.

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1.2 Features

The 1T-VS-434 has many features that enable it to perform in a superior manner. Among those features you will find:

- Ultra Compact, High Performance
- Convert PC-to-PC, PC-to-HD, HD-to-PC or HD-to-HD
- PC Resolutions to 1920x1200
- HD Resolutions to 1080p
- All HDTV Progressive Scan Resolutions
- Integral Picture Adjustments
- On Screen Display for Setup and Adjustment
- Rugged Metal Case
- Locking DC Power Connector for Security

1.3 Getting the Best Results

There are many factors affecting the quality of results when scaling video signals. Some basic precautions will ensure the best possible performance from your Video Scaler.

- **Output display device** – The quality of the output signal will depend largely upon the type and quality of display device used.
- **Using Native Resolution** – It is always best to set the output resolution of the scaler to the native resolution and refresh rate of the display device. This allows our scaler to do most of the work, which usually results in a superior picture.
- **Distance between the Video Scaler and the display device** – This plays a major role in the final result. Long distances are possible, but special measures should be taken in order to avoid cable losses. These include using high quality (coax-type) cables or adding line amplifiers.
- **Output connection cables** – Low quality cables are susceptible to interference. They degrade signal quality due to poor matching and cause elevated noise levels. Therefore, cables should be of the best quality. Coax-type computer cables are recommended because of their superior internal shielding characteristics.
- **Interference from nearby electrical devices** – These can have an adverse effect on signal quality. For example, an older computer monitor often emits very high electromagnetic fields that can interfere with the performance of video equipment in its proximity.

2.0 SPECIFICATIONS

I/O Signal Levels	RGBHV @ 0.7V p-p, 75Ω, H&V Sync @ 3-5V p-p, TTL Y @ 1V p-p, 75Ω. Pb, B-Y, Pr, R-Y @ 0.7V p-p, 75Ω
I/O Connectors	HD15 Female, 1x In, 1x Bypass, 1x Output
Controls	Front Panel Buttons
Information Menu	On Screen Display
Video Adjustments	Brightness, Contrast, Color, Saturation, Sharpness, R-G-B Levels, Aspect Ratio
Weight	332g (0.73lbs)
Dimensions - HxWxD	25x102x157mm (.98"x4.16"x6.18")
Environmental	Operating Temperature 0° to +50° C (+32° to +122° F) Operating Humidity 10% to 90%, Non-condensing Storage Temperature -10° to +60° C (+14° to +140° F) Storage Humidity 10% to 90%, Non-condensing
Power Source	100~240VAC to 5VDC@2A AC-DC Adapter

Input/Output Resolutions and Formats

	VESA	Resolution	Refresh Rate
Input Resolutions	VGA	640x480	RGBHV 60, 72, 75, 85Hz
	SVGA	800x600	RGBHV 56, 60, 72, 75, 85Hz
	XGA	1024x768	RGBHV 60, 70, 75, 85Hz
	WXGA	1280x768	RGBHV 60Hz
	SXGA	1280x1024	RGBHV 60, 75, 85Hz
	WSXGA	1680x1050	RGBHV 60Hz
	UXGA	1600x1200	RGBHV 60Hz
	WUXGA	1920x1200	RGBHV 60Hz
	480i	720x480 NTSC	YPbPr 60Hz
	576i	720x576 PAL	YPbPr 50Hz
	1080i	1920x1080	YPbPr 50, 60Hz
	480p	720x480	RGBHV, YPbPr 60Hz
	576p	720x576	RGBHV, YPbPr 50Hz
	720p	1280x720	RGBHV, YPbPr 50, 60Hz
1080p	1920x1080	RGBHV, YPbPr 50, 60Hz	
Output Resolutions	VGA	640x480	RGBHV 60Hz
	SVGA	800x600	RGBHV 60Hz
	XGA	1024x768	RGBHV 60Hz
	WXGA	1280x768	RGBHV 60Hz
	WXGA+	1440x900	RGBHV 60Hz
	SXGA	1280x1024	RGBHV 60Hz
	SXGA+	1400x1050	RGBHV 60Hz
	WSXGA	1680x1050	RGBHV 60Hz
	UXGA	1600x1200	RGBHV 60Hz
	WUXGA	1920x1200	RGBHV 60Hz
	480i	720x480 NTSC	YPbPr 60Hz
	576i	720x576 PAL	YPbPr 50Hz
	1080i	1920x1080	YPbPr 50, 60Hz
	480p	720x480	YPbPr 60Hz
	576p	720x576	YPbPr 50Hz
	720p	1280x720	YPbPr 50, 60Hz
1080p	1920x1080	YPbPr 50, 60Hz	

3.0 CHECKING PACKAGE CONTENTS

Before attempting to use this unit, please check the packaging and make certain the following items are contained in the shipping carton:

- 1x 1T-VS-434
- 1x 100~240VAC to 5VDC Power Adapter
- 1x User Manual

Note: Please retain the original packing material should the need ever arise to return the unit. If you find any items are missing, contact your reseller or TV One immediately. Have the Model Number, Serial Number and Invoice available for reference when you call.

4.0 CONNECTING THE HARDWARE

The first step is to connect a video source to the input of the 1T-VS-434 and to connect its output to a display device. Below is a drawing of the unit.



4.1 Connecting the Input

The 1T-VS-434 PC/HD Cross Converter can accept RGBHV or YPbPr Component inputs. The Scaler will automatically detect the input signal resolution and format. Verify that the input source is working properly and then connect the input cable to the source and then to the 1T-VS-434,

4.2 Connecting the Output

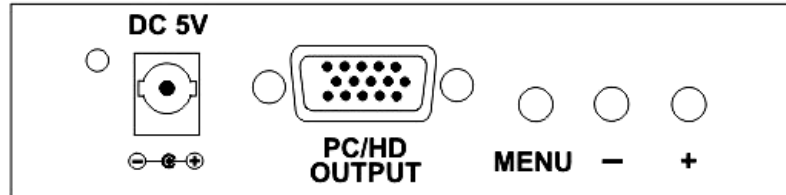
The 1T-VS-434 PC/HD Cross Converter can output either RGBHV or YPbPr formats. Verify that the display device is working properly and then connect the output cable to the 1T-VS-434 and then to the display.

4.3 Connecting Power to the Unit

The 1T-VS-434 is shipped with a Power Adapter to convert 115VAC-240VAC@50-60Hz to 5VDC. Connect the DC Output from the Power Adapter to the back of the unit and then plug the Power Adapter into an AC Receptacle. When the unit is receiving power, the power LED indicator will illuminate.

5.0 OPERATING THE UNIT

The 1T-VS-434 is controlled via three buttons. Status is indicated via an On Screen Display (OSD).



Menu Button: This Button displays the Menu Options via the On Screen Display on the display device connected to the output.

+ and - Buttons: These Buttons allow navigation within the Menu and adjustments of the parameters.

XGA Reset: Simultaneously depressing the Menu and + buttons sets the output to XGA.

480p Reset: Simultaneously depressing the Menu and - buttons sets the output to 480p.

If you are going to be using the RGBHV output, perform the XGA reset to establish a starting point to fine tune the output resolution. If you are going to use the YPbPr output, perform the 480P reset to establish a starting point to fine tune the resolution. Once you have a picture, you can use the OSD to set the final resolution.

5.1 Menu Structure

The 1T-VS-434 provides an extensive On Screen Display (OSD) user interface which allows customization of the operating parameters used by the unit.

Press the Menu button to cause the OSD to be displayed on your monitor. Next, use + and – Buttons to choose the parameter you want to adjust and then press the Menu (Enter) to highlight your selection. Once a parameter is highlighted, use + and - Buttons to increase or decrease the value of the setting. Press Menu again to leave the setting. Move the arrow to Exit and press Menu/Enter to Exit.

Note: The user is cautioned to make certain that the display being used is capable of displaying the resolution selected. Failure to make certain that the display has the desired capability can result in a total loss of any video on the display. Should this happen, use either the XGA or 480P reset function explained above as appropriate.

When using the OSD, refer to the table below before making adjustments.

1st Tier Option	2nd Tier Option	Adjustment
CONTRAST	-	0 ~ 100 of Contrast Level
BRIGHTNESS	-	0 ~ 100 of Brightness Level
FINETUNE	- HUE	0 ~ 100 of Hue Level
	- SATURATION	0 ~ 100 of Saturation Level
	- SHARPNESS	0 ~ 100 of Sharpness Level
	- EXIT	Back to 1 st Tier
COLOR	- RED	0 ~ 100 of Red Color Level
	- GREEN	0 ~ 100 of Green Color Level
	- BLUE	0 ~ 100 of Blue Color Level
	- EXIT	Back to 1 st Tier
SIZE	-	FULL / OVERSCAN / UNDERSCAN / LETTERBOX / PANSCAN
OUTPUT	-	NATIVE / VGA / SVGA / XGA / SXGA / SXGA+ / WXGA+ / WSXGA / UXGA / WUXGA 480i / 480p / 720p@60Hz / 1080i@60Hz / 1080p@60Hz / 576i / 576p / 720p@50Hz / 1080i@50Hz / 1080p@50Hz
OSD	- HPOSITION	0 ~ 100 of OSD Horizontal Position
	- VPOSITION	0 ~ 100 of OSD Vertical Position
	- TIMER	0 ~ 100 of OSD Existing Time (sec.)
	- BACKGROUND	0 ~ 100 of OSD Transparent Level
	- EXIT	Back to 1 st Tier
INFORMATION	-	SOURCE (Input Interface) INPUT (Input Resolution) OUTPUT (Output Resolution) VERSION (Firmware Version)
EXIT	-	Close OSD Menu

6.0 TROUBLESHOOTING

Other than checking for faulty cables, the only common problem would be choosing a wrong Output Setting. Make sure the display is capable of handling the resolution and refresh rate selected and also make certain that the output type selected is correct for the type of display being used at the output. After trying the above suggestions should the problem still persist, contact your dealer for additional suggestions before contacting TV One. Should the dealer's technical personnel be unable to assist you, contact TV One via our support website: <http://tvone.crmdesk.com>. Create a technical support request on the site and our support team will respond within a short period of time.

7.0 LIMITED WARRANTY

LIMITED WARRANTY – With the exceptions noted in the next paragraph, TV One warrants the original purchaser that the equipment it manufactures or sells will be free from defects in materials and workmanship for a period of two years from the date of purchase. Should this product, in TV One's opinion, prove defective within this warranty period, TV One, at its option, will repair or replace this product without charge. Any defective parts replaced become the property of TV One. This warranty does not apply to those products which have been damaged due to accident, unauthorized alterations, improper repair, modifications, inadequate maintenance and care, or use in any manner for which the product was not originally intended.

Items integrated into TV One products that are made by other manufacturers, notably computer hard drives and liquid crystal display panels, are limited to the term of the warranty offered by the respective manufacturers. Such specific warranties are available upon request to TV One. If repairs are necessary under this warranty policy, the original purchaser must obtain a Return Authorization Number from TV One and return the product to a location designated by TV One, freight prepaid. After completed repairs, the product will be returned, freight paid.

LIMITATIONS - All products sold are "as is" and the above Limited Warranty is in lieu of all other warranties for this product, expressed or implied, and is strictly limited to two years from the date of purchase. TV One assumes no liability to distributors, resellers or end-users or any third parties for any loss of use, revenue or profit. TV One makes no other representation of warranty as to fitness for the purpose or merchantability or otherwise in respect of any of the products sold. The liability of TV One with respect to any defective products will be limited to the repair or replacement of such products. In no event shall TV One be responsible or liable for any damage arising from the use of such defective products whether such damages be direct, indirect, consequential or otherwise, and whether such damages are incurred by the reseller, end-user or any third party.

8.0 REGULATORY COMPLIANCE

The 1T-VS-434 has been tested for compliance with appropriate FCC and CE rules and regulations. The Power Adaptor/Supply has been tested for compliance with appropriate UL, CUL, CE, PSE, GS Rules, Regulations and/or Guidelines. This Product and Power Adapter is RoHS Compliant.

9.0 CONTACT INFORMATION

Should you have questions or require assistance with this product in areas not covered by this manual, please contact TV One at the appropriate location.

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