



tvone·TASK

Instruction Manual

DVI to VGA Scaler
1T-DVI-VGA

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1.0 INTRODUCTION

Thanks for purchasing this DVI to VGA Scaler from TV One. The 1T-DVI-VGA is designed to convert DVI Video to Analog RGB output (VGA). Our professional video conversion products have been serving the industry for over twenty years. TV One offers a full line of high quality Video Scalers, Scan Converters, Analog-Digital (DV, SDI, DVI) Converters, Standards Converters, Digital Video Recorders, Frame Synchronizers, Time Base Correctors, LCD Monitors, Matrix Routing Switchers and Distribution Amplifiers.

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

- Ultra Compact, High Performance Units
- Converts DVI Inputs to RGB Outputs
- The input may be DVI or HDTV signals in RGBHV, YPbPr or YCbCR data bitstream via a 24 pin DVI connector
- The output may be Analog VGA, or HDTV in the format of analog RGBHV or YPbPr via an HD15 connector
- Automatic Detection of Input Resolution
- DVI input allows low loss conversion of signals
- 48Mb Frame Memory
- Output Picture Adjustments of Brightness, Contrast, Color and H/V Positions
- On Screen Display for Setup and Adjustment
- Rugged Metal Case
- Locking DC Power Connector for Security

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. For instance, some video projectors just look better than others.

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) VGA cables and Premium DVI Cables. Line amplifiers may also be necessary.

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

Input Signal Specifications

Input Format	Digital RGBHV, YPbPr or YCbCr
Input Signal	Digital RGB Data Bitstream
Output Format	Analog RGBHV, YPbPr
Output Signal	RGBHV: 0.7 V p-p, 75 Ω , H/V: 3 to 5 p-p TTL, Y: 1 V p-p 75 Ω , Pb/Cb, Pr/Cr: 0.7 V p-p 75 Ω
Input Connector Type	24 Pin DVI Connector
Output Connector Type	HD15 Female VGA Connector
Control	Front Panel Buttons
Information Display	On Screen Display
Video Adjustments	Brightness, Contrast, Color, H and V Position
Weight	1.5 lbs (680 grams)
Dimensions – HxWxD	1" x 7" x 4" (25x175x100mm)
Power Source	100~240VAC to 5VDC@2.0A In-Plug Switching Adapter

Output Signal Specifications

PC Resolutions		Vert Rate	Format	Scan Type
VGA	640x480	60,72,75,85 Hz	RGBHV	Progressive
VESA85	640x480	85 Hz	RGBHV	Progressive
VGA70	720x400	70 Hz	RGBHV	Progressive
SVGA	800x600	60,72,75,85 Hz	RGBHV	Progressive
XGA	1024x768	60,70,75,85 Hz	RGBHV	Progressive
MAC	1152x864	70,75 Hz	RGBHV	Progressive
WXGA	1280x768	60 Hz	RGBHV	Progressive
1280A	1280x960	60 Hz	RGBHV	Progressive
SXGA	1280x1024	60,75 Hz	RGBHV	Progressive
HDTV Resolutions		Vert Rate	Format	Scan Type
480p	720x480	60Hz	YPbPr, RGBHV	Progressive
576p	720x576	50Hz	YPbPr, RGBHV	Progressive
720p	1280x720	50,60Hz	YPbPr, RGBHV	Progressive
1080i	1920x1080	50,60Hz	YPbPr, RGBHV	Pseudo Interlaced
Note 1				

Note 1 - The 1080i Output is actually a doubled 540p signal. It will appear as 1080i on most displays, however, it is not a true 1080i signal format.

3.0 CHECKING PACKAGE CONTENTS

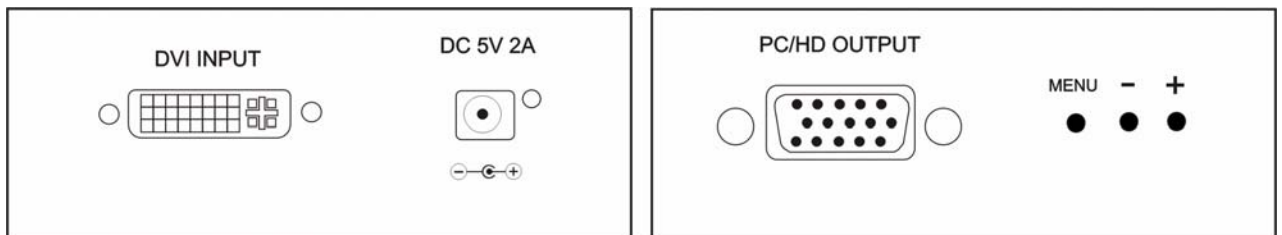
Before attempting to use this unit, please check the packaging and make certain the following items are contained in the shipping carton:

- 1T-DVI-VGA Scaler
- 100-240VAC AC/DC Power Adapter
- 6 Ft DVI Cable
- 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 Scaler and to connect it's output to a display device. Below you'll find drawings of the unit showing the locations of the input, output and power connectors.



1T-DVI-VGA

4.1 Connecting the Input

The 1T-DVI-VGA can accept both PC and HDTV inputs in the DVI format. When connecting a DVI format input, use the provided DVI cable. The 1T-DVI-VGA will automatically detect the mode and resolution of the PC/HDTV input.

4.2 Connecting the Output

The 1T-DVI-VGA Video Scaler can output a wide variety of Analog RGB resolutions.

Use a high quality HD15/HD15 cable to connect the scaler to a display device. If you wish to send the signal to an Analog HDTV display device, use a high quality HD15 to YPbPr/3 RCA adaptor cable. (See note):

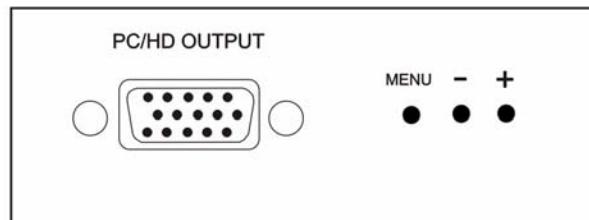
Note: Proper signal levels are very important to the operation of this product so make sure your inputs are of the levels specified on page 5. If improper operation of the unit occurs and the unit has power, the most likely cause of the problem is high or low signal levels, use of a low quality cable or the use of a wrong input cable.

4.3 Connecting Power to the Unit

The Video Scaler is shipped with an In-Plug Power Adapter to convert 100~240VAC@50-60Hz to 5VDC. Connect the DC Output Cord from the Power Adapter to the back of the unit and then plug the Power Adapter into an AC Receptacle. When the unit's front panel Power Switch is turned On, the Power LED indicator will illuminate.

5.0 OPERATING THE UNIT

The Scaler is controlled via three buttons with status indicated by On Screen Display.



- **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 available.
- **XGA Reset:** Simultaneously depressing the – and + buttons returns settings to factory defaults and sets the output to XGA@60 Hz.

Pressing the Menu Button results brings up the Initial or **Main Menu**. Move the cursor to the desired setup option by using the + and – buttons. Press the Menu Button again to call up that option.

Input Set up
Output Set up
Picture Adjust
HV Adjust
OSD Adjust
System Information
Auto Adjust
Exit

Once the desired option is reached and selected, a new Menu will appear and you once again use the + & - Keys to select the parameter you wish to change or adjust.

5.1 OSD Menus

If you select the first item on the main menu, **Input Set up**, a secondary menu will show the following items:

5.1.1 Input set up - When it is selected, a simple, two-selection sub menu will appear.

This menu allows you to manually select the type of input you are feeding to the scaler. You can select either YPbPr or RGB as the input type. Selecting the wrong type of input will cause unpredictable results on the output.

Pressing the + or - buttons to select the input type, press menu to save your selection, press + and – as required to navigate to the Exit word and, once there, press Menu again to exit this menu.

5.1.2 Output set up - When Output Set Up is selected, a new sub-menu appears. This OSD choice will give you a display showing all the possible output resolutions and formats. Use the + and – buttons to navigate to your choice, pres the menu key to save your choice then use the + and – buttons again to navigate to the exit command and press the menu button to exit the OSD display.

5.1.3 Output Modes

PC Resolutions		Vert Rate	Format	Scan Type
VGA	640x480	60,72,75,85 Hz	RGBHV	Progressive
VESA85	640x480	85 Hz	RGBHV	Progressive
VGA70	720x400	70 Hz	RGBHV	Progressive
SVGA	800x600	60,72,75,85 Hz	RGBHV	Progressive
XGA	1024x768	60,70,75,85 Hz	RGBHV	Progressive
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HDTV Resolutions		Vert Rate	Format	Scan Type
480p	720x480	60Hz	RGB	Progressive
576p	720x576	50Hz	RGB	Progressive
720p	1280x720	60Hz	RGB	Progressive
1080i	1920x1080	60Hz	RGB	Pseudo
Note 1				Interlaced
480p	720x480	60Hz	YPbPr	Progressive
576p	720x576	50Hz	YPbPr	Progressive
720p	1280x720	60Hz	YPbPr	Progressive

Note 1 - The 1080i Output is actually a doubled 540p signal. It will appear as 1080i on most displays, however, it is not a true 1080i signal format.

5.1.4 Output Adjustments When in DVI-D Mode:

Picture Adjust - When the Picture Adjust Menu is selected, the following adjust parameters will appear on the OSD:

Contrast 070
Bright 130
Color 070
Reset
Exit

Use the + and – buttons to choose the desired parameter, press Menu to select and then use + or – to increase or decrease the value. Press Menu to save the value. When finished with all adjustments, use the + and – buttons to move to Exit and then press Menu to actually exit the routine.

5.1.5 Menu Ranges and Defaults

The adjustment range and factory preset value as follows:

Value	Range	Default
Contrast	0~255	047
Bright	0~255	102
Color	0~255	064

Note: Select reset to reset all adjustment back to the factory preset value.

HV adjust- When selected, the following sub-menu appears.

H-position 184
V-position 32

Use the + and – buttons to adjust the best horizontal and vertical position of the picture.

OSD adjust- When this mode is selected, you can adjust the Horizontal and Vertical position of the OSD menu.

System information- When selected, this shows the input/output resolutions and their vertical refresh rate on the screen.

Auto adjust- When selected, the T1-DVI-VGA will automatically adjust all the parameters to the factory presets.

Exit- Select to exit from the current menu page.

Notes:

- *The default output resolution of the 1T-DVI-VGA is XGA @60 Hz.*
- *The unit has non-volatile memory and memorizes all your setting before power off and recalls those setting on next power on however changing output resolution erases all settings.*
- *At any time, pressing + and - buttons simultaneously will reset the output resolution to XGA @60Hz, and other settings back to factory default values.*

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 make sure the output format selected (RGB or YPbPr) for the type of cable 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 repairs are complete, the product will be returned, freight prepaid.

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 Video Scaler has been tested for compliance with: FCC Class B and CE
The Power Adapter has been tested for compliance with: UL, CSA and CE

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 shown below:

TV One USA

1350 Jamike Drive
Erlanger, KY 41018
USA
Tel 800-721-4044
Fax 859-282-8225
sales@tvone.com
www.tvone.com

TV One Europe

Continental Approach
Westwood Industrial Estate
Margate, Kent CT9 4JG, UK
Tel +44 (0)1843 873311
Fax +44 (0)1843 873312
sales.europe@tvone.com
www.tvone.co.uk

TV One Latin America

2790 NW 79 Ave
Miami, FL 33122
USA
Tel 305-418-9305
Fax 305-418-3096
sales.latinoamerica@tvone.com
www.tvonela.com

TV One Mercosur

Honduras 5849, 2nd Floor, Office C
(C1414BNI) Capital Federal
Buenos Aires, Argentina
Tel +54 11 4771-5570
Fax +54 11 4771-5570
sales.mercosur@tvone.com
www.tvonela.com

TV One Asia

10F, NO.34, Sec. 2
San-Min Rd, Panchiao City
Taipei Hsien 220
Taiwan R.O.C.
Tel +886 2 8951-0674
Fax +886 2 8951-0675
sales.asia@tvone.com
www.tvoneasia.com

TV One China

Rm. A 17C,
Regalia Building No.29,
Xiangcheng Rd.
Pudong, Shanghai
China (200122)
Tel +86 21 5830-2960
Fax +86 21 5081-9096
sales.china@tvone.com
www.tvonechina.com

NOTES



We Provide Solutions

TV One USA

1350 Jamike Drive
Erlanger, KY 41018
USA
Tel 800-721-4044
Fax 859-282-8225
sales@tvone.com
www.tvone.com

TV One Europe

Continental Approach
Westwood Industrial Estate
Margate, Kent CT9 4JG, UK
Tel +44 (0)1843 873311
Fax +44 (0)1843 873312
sales.europe@tvone.com
www.tvone.co.uk

TV One Latin America

2790 NW 79 Ave
Miami, FL 33122
USA
Tel 305-418-9305
Fax 305-418-3096
sales.latinoamerica@tvone.com
www.tvonela.com

TV One Mercosur

Honduras 5849, 2nd Floor, Office C
(C1414BNI) Capital Federal
Buenos Aires, Argentina
Tel +54 11 4771-5570
Fax +54 11 4771-5570
sales.mercosur@tvone.com
www.tvonela.com

TV One Asia

10F, NO.34, Sec. 2
San-Min Rd, Panchiao City
Taipei Hsien 220
Taiwan R.O.C.
Tel +886 2 8951-0674
Fax +886 2 8951-0675
sales.asia@tvone.com
www.tvoneasia.com

TV One China

Rm. A 17C,
Regalia Building No.29,
Xiangcheng Rd.
Pudong, Shanghai
China (200122)
Tel +86 21 5830-2960
Fax +86 21 5081-9096
sales.china@tvone.com
www.tvonechina.com