Video to PC/HD Scaler Converter

ID# 705

Operation Manual

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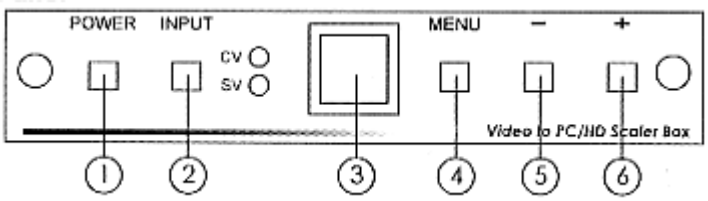
Introduction

Video to PC/HD Scaler designed to convert and upscale Composite and S-Video signals to a variety of computer and HDTV resolutions, including 1080p and WUXGA. It handles video input from TV systems of PAL and NTSC standards, and includes automatic signal detection and switching.

Features

- Motion adaptive 3D Y/C separation comb filter (for composite video input)
- 3D (frame based) motion adaptive YNR/CNR noise reduction (for Y/C video input)
- Advanced 3D motion adaptive de-interlace
- Automatic 2: 2/3 : 2 film mode detection
- Supports 50Hz to 60Hz frame rate conversion
- Video quality improvement: DCTI (Digital chroma transient improvement), DLTI (Digital luminance transient improvement), Black level extension
- Average picture level (APL), automatic contrast limiter (ACL) function supported
- OSD menu for picture quality adjustment
- Built-in 8-bit DAC for RGB or YPbPr output
- Front panel and IR remote control
- Automatic NTSC/PAL video format detection and switching

Operation Controls and Functions



Front panel

1. **Power button and LED indicator:**
   Press the button once to power on the unit, Press again to power off.
   when the unit is powered on, one of the input LEDs will illuminate depending on your last selection of input source before power off.
   The factory default setting for the input is CV (composite video).
   The green LED illuminates when composite video is selected.
   The Yellow LED illuminates when S-Video is selected.
2. **Input select button:** Press the button to select your desired input source between composite video and S-Video.
3. **IR Sensor:** Infrared remote control sensor.
4. **Menu/Enter:** This button serves two purposes.
   a. Press the button to enter OSD main control menu as shown in the "OSD Operation".
   b. To act as a "enter" key to enter sub menu of your selected item.

5/6. +/- button: Press the button to move up or down the tick V to your

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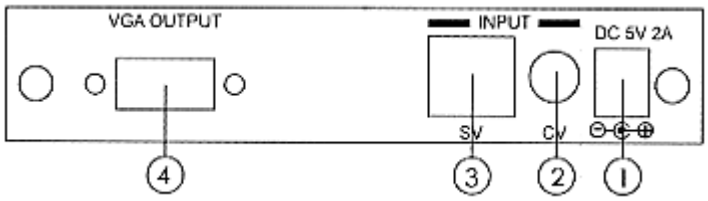
desired parameter. Or after a parameter is selected, Press the button to alter the value of your selected parameter.

Rear Panel



1. **DC power jack:** 5V 2A DC power input.
2. **Composite Video:** Use a Composite video cable to connect the composite video output of the source equipment to this composite video(CV) input of the scaler.
3. **S-Video:** Use a S-Video cable to connect the S-Video output of the source video equipment to this " S-Video" input on the back of the video Scaler. S-Video provides improved performance over composite video and is recommended over composite.
4. **PC/HD output:** This HD-15 D-Sub connector is shared by PC/RGBHV output and HDTV/YPbPr output.

When PC/RGBHV output resolution (VGA to WUXGA) is selected,
use the HD-15 to HD-15 VGA cable to connect this output to the PC input of your display monitor.
When HDTV/YPbPr output (480p, 576p, 720p, 1080i,1080p) is selected, use the HD-15 to YPbPr 3 x RCA cable to connect this output to
the YPbPr input of you HDTV display.
Note: Use of wrong cable for your selected output will result in an abnormal picture on the screen.

OSD Operation:
After you power on the unit , press the menu button to bring up the main menu page as below:

Main Menu
V Picture adj.
Output Setup
Exit

Use +,- button to move "V" to your desired parameter, then pressing MENU/ENTER to enter into sub-menu of your selected parameter.

Picture Adjust
When Picture Adjust is selected a sub menu as below comes up.

	Default	Range
Bright	16	1-31
V Contrast	16	1-31
Color	16	1-31
Tint	16	1-31
Sharp	05	1-19
Default	OK	
Exit		

USE +,- to move the tick (V) to your desired adjust item, Press the Menu/Enter to confirm your selection.

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At this point, the selected parameter will turn red, and you can use +,- to increase or decrease the value of the parameter.
When adjustment is complete, Press "Menu" to leave the parameter. Move the tick "V" to "Exit", then press menu/enter to exit.

Output Setup

When Output Set up is selected a submenu as below appears:

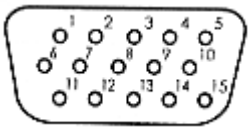
Output Setup
V Timing XGA
Exit

Press the " MENU/ENTER" button to enter into output timing select mode. Press +,- to toggle through a variety of output resolutions as below. Once your desired resolution is selected. press the menu/enter
to enter the resolution.

	Resolution	Vertical rate
VGA	640x480	60Hz
SVGA	800x600	60Hz
XGA	1024x768	60Hz
WXGA	1280x768	60Hz
SXGA	1280x1024	60Hz
UXGA	1600x1200	60Hz
WUXGA	1920x1200	60Hz
480p	720x480	60Hz
576p	720x576	50Hz
720p	1280x720	60Hz
Pseudo 1080i	960x540p	60Hz
1080p	1920x1080	50,60Hz

Note: 1. - The output signal format (VGA-WUXGA) is RGBHV.
- The output signal format for the 5 HD resolutions (480p-1080p) is YPbPr.

HD-15 Pin Assignment



PC RGB output (VGA-WUXGA)

Part No.	Pin No.	Description (PC out)
DB15HD	1	RED
	2	GREN
	3	BLUE
	4	GND
	5	GND (DDC-RETURN)
	6	GND-RED
	7	GND-GREEN
	8	GND-BLUE
	9	N.0
	10	GND-SYNC
	11	GND
	12	DDC-DATA
	13	H-SYNC
	14	V-SYNC
	15	DDC-CLOCK

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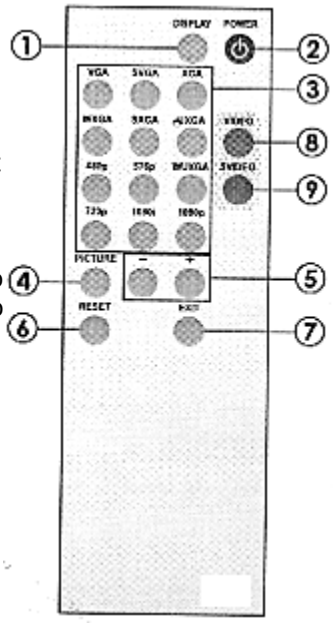
HD YPbPr output (480p-1080p)

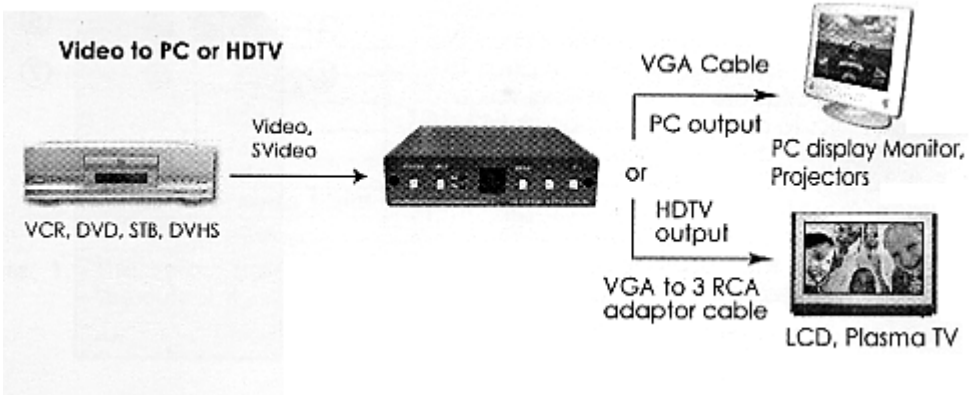
Part No.	Pin No.	Description (HD out)
DB15HD	1	Pr
	2	Y
	3	Pb
	4	GND
	5	GND (DDC-RETURN)
	6	GND-Pr
	7	GND-Y
	8	GND-Pb
	9	N.0
	10	GND-SYNC
	11	GND
	12	DDC-DATA
	13	H-SYNC
	14	V-SYNC
	15	DDC-CLOCK

Remote Control

1. **Display:** Press the button to display input source and output resolution on the screen.
2. **Power:** Power ON/OFF button.
3. **VGA-1080p:** Press to select your desired output resolution.
4. **Picture:** Press the button to enter picture adjust submenu. Use +,- button to move cursor (V) up/down to your desired parameter, press "Picture" again to confirm.
5. **+/-:** Press to move up/down the cursor (V) to your desired parameter,or press to increase/decrease the setting value.
6. **Reset:** Press to reset all setting back to factory default value.
7. **Exit:** To exit OSD.
8. **Video:** Press the button to select composite video input.
9. **SVideo:** Press the button to select SVideo input.



Installation



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Output Signal Specifications

PC Resolutions		Vert Rate	Format	Scan Type
VGA	640 X 480	60 Hz	RGBHV	Progressive
SVGA	800 X600	60 Hz	RGBHV	progressive
XGA	1024X768	60 Hz	RGBHV	Progressive
WXGA	1280X768	60 Hz	RGBHV	Progressive
SXGA	1280X1024	60 Hz	RGBHV	Progressive
UXGA	1600X1200	60 Hz	RGBHV	Progressive
WUXGA	1920X1200	60 Hz	RGBHV	Progressive
HDTV Resolutions		**Vert Rate**	**Format**	**Scan Type**
480p	720 x 480	60 Hz		Progressive
576p	720 x 576	50 Hz	YPbPr YPbPr	Progressive
720p	1280 x 720	50/60 Hz	YPbPr YPbPr	Progressive
Pseudo 1080i	960x540p*	50/60 Hz	YPbPr	Interlaced
1080p	1920x1080	50/60 Hz		Progressive

* The standard 1080i resolution is 1920 x1080i with sampling rate at 74 MHz. The 1080i output is 960x540p which is half of the standard resolution, therefore may be not be accepted by some of the HDTVs.

Note: For 720p/1080i/1080p output vertical rate depended on input system 50/60 Hz.

Specifications

Input Signal Levels	Video@l Vp-p, 75 ohm, Y@1 Vp-p, 75 ohm Color@ 0.7 Vp-p, 75 ohm
Output Format	Analog YPbPr / HDTV, or RGB/PC
Output Connector	HD 15 Female
Output Signal	RGB @ 0.7 Vp-p, H&V Sync @ 3 Vp-p, Y @ 1 Vp-p, Pb, Pr! 0.7 Vp-p 75 ohm
Weight(g)	400
Dimensions (mm)	125(W) x 123(D) x 30(H)
Operating Temperature	0°C~40°C
Silkscreen Color	Process Blue

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