USER MANUAL

WVG4A PA

VGA/Stereo Audio Auto–switch Selection Switcher 4x1

Index:

1. General Instruction:

WVG4A PA is the auto-switch VGA 4x1 selection switcher, which enables an easy manual or auto switching between four computers video following stereo audio. It is compatible with PC resolutions up to 3200×2400@60MHz, and also supports HDTV.

The audio is preset-able. The volume/Bass/Tremble can be controlled via RS232.And the audio can be breaked away.

2. Product Picture:

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3. Features:

- Automatically switching function. It keeps detecting all the input sources and switching to the prior source.
- Super Bandwidth: 1GHz(-3dB), fully loading. QUXGA, up to 3200×2400@60MHz.
- High Resolution: including QUXGA, QXGA, WQXGA, WQUXGA etc., up to 3200×2400@60(-3dB).
- Compatible with RGBS, RGsB, HDTV, component video, S-video, and composite video signals.
- Audio break away switching, controlled via RS232.
- Audio following switching, sync-switch with the audio.
- Output volume 61 degrees controllable. Bass/Treble is separately controllable (15 degrees).
- RS232 serial control port. Public command.
- 6 buttons on the front panel for control, including volume control and auto-switch control.
- Extensibility: It can be controlled by PTN panel (WP18R,WP19), optional function.
- GCSSP(built in Gain Compensation and Synchronization Signal Proofread technology).
- Static resistant case with protection.
- Wall/Table-mountable aluminium enclosure, PT case design.
- Internal international power supply (100Volt~240Volt AC, 50/60Hz).
- Fast switching speed. It is the high speed for the good performance.
- Front panel LED indicator, for power and working status.

4. Specification

Video Input		Video Output	
Input	4 VGA	Output	1 VGA
Input Connector	VGA (15 pin HD), female	Output Connector	VGA (15 pin HD), female
Video Signal	RGBHV, RGBS, RGsB, RsGsBs, component video, S-video, composite video	Video Signal	RGBHV, RGBS, RGsB, RsGsBs, component video, S-video, composite video
Video General			
Resolution Range	3200x2400@60Hz(-3dB) 0~10MHz is +0.1dB to -0.1dB 0~130MHz is +6dB to -0.8dB	Bandwidth	1GHz (-3dB) full loading
Return Loss	-30dB@5MHz	Crosstalk	-50dB@5MHz
Switching Speed	200ns (Max.)	Input/Output Level	0.5Vp-p ~ 2.0Vp-p
Gain	0dB	I/O Impedance	75Ω
Audio Input		**Audio Output**	
Input	4 stereo audio	Output	1 stereo audio
Input Connector	3.5mm mini jack connector	Output Connector	3.5mm mini jack connector
Audio Input Impedance	>10Ω	Audio Output Impedance	50Ω
Switching Speed	200ns (Max.)	Output Volume	61 degree controllable(0~61)
		Output Bass	15 degree controllable(-7~+7)
		Output Treble	15 degree controllable (-7~+7)
Audio General			
Frequency Response	20Hz~20KHz	Stereo Channel Separation	>80dB@1KHz
CMRR	>90dB @20Hz to 20K Hz	Switching Soltuion	Audio break away switching
Control Parts			
Control/Remote	Buttons; RS-232 (9-pin female D connector)	Pin Configurations	2 = TX, 3 = RX, 5 = GND
Options	TCP/IP control by PTNET		
General			
Max DC compensation	1.5V	Humidity	10% ~ 90%
Temperature	-20 ~ +70℃	Power Consumption	10W
Power Supply	100VAC ~ 240VAC, 50/60Hz	Product Weight	0.5Kg
Case Dimension	W160 x H44x D100mm		

NOTE: All nominal levels are at ±10%.

5. Function Description

5.1 Front panel operation

5.1.1 Press the buttons "1,2,3,4" to switch the inputs, audio/video sync-switching.

5.1.2 Press the buttons "Up", "Down" to control the output volume up/down. (not including the bass/treble setting)

5.1.3 Press the button "1" for 3 seconds, the WVG4A PA will enter the auto-switching mode. The LED light of "Auto-SW" will be on. Please check the index"5.2" for the auto-switching principle.
And, pressing the button "1" for another 3 seconds, to quit the auto-switching and return to the regular manual switching. The LED light of "Auto-SW" will be off.

LED indicator of "Auto-SW"

Under the "auto-switching" mode, the other front panel buttons can't be used. But, the RS232 port is still available for controlling.

5.2 RS232 controlling

The RS232 port is used for the third-party device controlling. It is the bi-direction RS232, under 9600bps baud rate. The commands are listed from index "6". Please check.

5.3 Automatic switching function

Under the auto-switching mode, the WVG4A will detect the input source and switching automatically, following some priority principle:

1: Priority of the new connection

When you connect a new valid VGA source to the WVG4A PA, under Auto-Sw mode, the WVG4A PA will switch to this new source.

2: Priority of power reboot or VGA signal removing

When the power is rebooted under the auto-Sw mode, the WVG4A PA will detect the 4 VGA inputs, ranging from input1, input2, input3, input4. When it finds a valid VGA signal, it will switch to this channel.

When the displaying input is removed under the auto-Sw mode, the WVG4A PA will detect the 4 VGA inputs, ranging from input1, input2, input3, input4. When it finds a valid VGA signal, it will switch to this channel.

Under the auto-switching mode, the video/audio is switching synchronization only, not separately switching.

6. The switching command: RS232 controlling
Communication protocol:

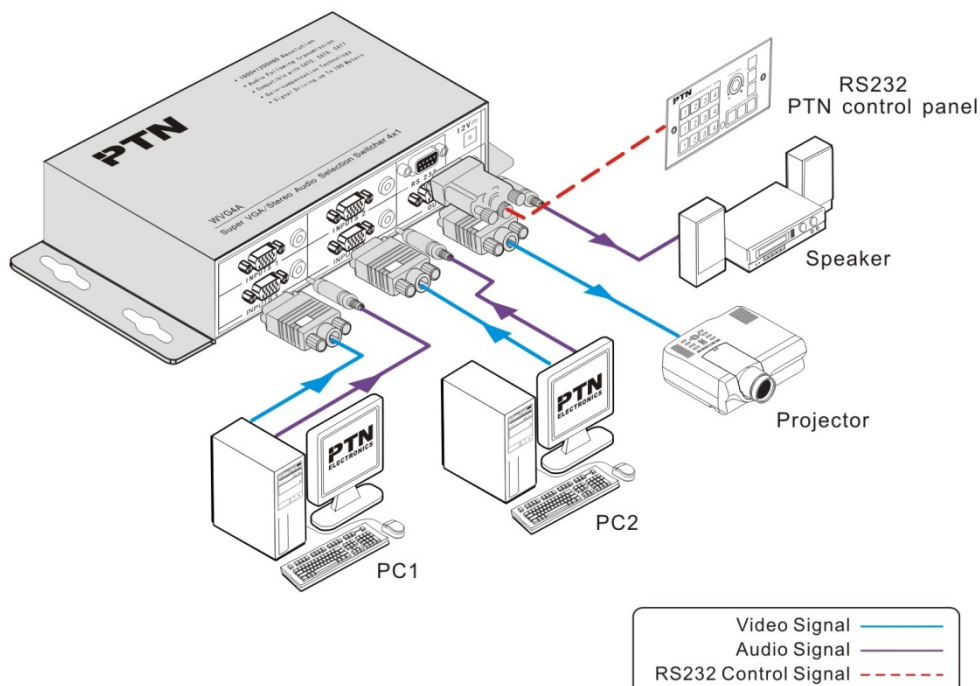Baud rate: 9600   Data bit: 8   Stop bit: 1   Parity bit: none
Format: ASCII

Commands (ASCII)	Function Description	Return Code (ASCII)
7[xx]%	Preset the volume level, the [xx] is ranging from "00" to "60".	Volume :31
8[xx]%	Preset the bass level, the [xx] is ranging from "00" to "14".	Bass : 01
9[xx]%	Preset the treble level, the [xx] is ranging from "00" to "14".	Treble : 01
[x]B1.	Switching both Audio and Video, the [x] is ranging from "1" to "4".	AV: [x] -> 1
[x]V1.	Switching Video only, the [x] is ranging from "1" to "4".	V: [x] -> 1
[x]A1.	Switching Audio only, the [x] is ranging from "1" to "4".	A:[x] -> 1

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0B0.	Mute the output of video/audio	Mute Output
0V0.	Mute(cut) the output of video	Mute Video
0A0.	Mute(cut) the output of audio	Mute Audio
0B1.	Unmute the output of video/audio	Unmute Output
0V1.	Unmute (cut) the output of video	Unmute Video
0A1.	Unmute (cut) the output of audio	Unmute Audio
600%	Checking the working status (switching status, volume status, audio setting status.)	V: 1 -> 1 A: 1 -> 1 Volume :30 Bass +00 Treble +00
601%	Jump to the Auto-Switching mode	Auto Switch
602%	Jump to the regular switching mode	Manual Switch
603%	Volume Up (61 degrees)	Volume :31
604%	Volume Down (61 degrees)	Volume :30
605%	Bass Up (15 degrees)	Bass 07
606%	Bass Down (15 degrees)	Bass 08
607%	Treble Up	Treble +01
608%	Treble Down	Treble +00
609%	Initialization the setting. It return to the regular switching (switching/volume/bass/treble)	V: 1 -> 1 A: 1 -> 1 Volume :30 Bass +00 Treble +00

7.System Diagram

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8. Panel Drawing

Unit: mm