CREATOR® 快捷

CREATOR CORPORATION（CHINA）

Multi-signal Upscaling Mixed Matrix
User's Manual

Version 1.1

Meaning of the symbols

■ Safety Instruction

Symbols are used in the Manual and devices, referring to the possible risk to users or others，as well as the damage to property, for helping you to safely and properly use the devices. The instruction and the implications are as follows. Please make sure your correct understanding of these instructions before using the Manual.

⚠ Warning	To remind user to conduct according to the attached operation and maintenance instructions. If ignore these information, death or injury could possibly happen
⚡ Caution	To remind the user that the risky uninsulated voltage in the device could caused electric shock to human.
⚠CAUTION⚠ DO NOT OPEN RISK OF ELECTRIC SHOCK	Caution: To avoid electric shock, please don't open the case, nor put the useless parts in it. Please contact with qualified service staff.
CE	CE authentication indicates the product is in line with the EU safety regulation, and for assurance of safety use.
SGS	SGS Authentication indicates the product has reached the QC standard of the global-biggest Swiss universe surveyor.
TÜV CERT ISO9001:2000	This product has acquired the ISO9001 International Quality Authentication (Authentication authority: Germany Rheinland TUV)

■ General Information Instruction

💡	List the situation of causing unsuccessful operation or setup, and relevant information needed to notice.
☞	Lead to the page with detailed information on relevant topic.

Important Notice

⚠ Caution

To ensure the device in reliable use and personal safety, please abide by the following items when in installation, use and maintenance:

Notice in installation

◆ Please DO NOT use the product in following places: the places with dust, oily smoke, electrical conductive dust, corrosive gas, inflammable gas; the places with high temperature, due, rain and wind exposures; the places endangered by shock and vibration. Electric shock, fire and incorrect operation could also cause damage and deterioration to the product.

◆ When conducting screw drilling and wiring process, DO NOT let metal irons and wire lead drop into the controller and air vent, which could possibly cause fire, failure and accidental operation.

◆ After finishing the installation, it is necessary to ensure there is no foreign matter including the packing material like contact paper on the ventilation surface, otherwise, it could cause poor heat dissipation while running, as well as fire, failure and accidental operation.

◆ Avoid conducting wiring and plugging in/out cable socket with electricity, otherwise, electric shock, circuit damage could easily happen.

◆ Installation and wiring should be firm and reliable. Poor contact could cause malfunction.

◆ With regard to the application situations with strong interference, shielded cable should be used for the input and output of HF signal, to improve the anti-interference performance of the system.

Note in Wiring

◆ Installation and wiring shouldn't be conducted until external electric power is cut off, otherwise, electric shock or device damage could happen.

◆ The product is grounded by the earth lead of the power cable. To avoid electric shock, the earth lead is necessary to be connected with the ground. Before making connection with the output end or input end of the product, please ensure it is correctly grounding.

◆ Upon finish wiring, remove the sundries. Please cover up the terminal plate for avoiding electric shock.

Note for Operation and Maintenance

◆ Please DO NOT touch the terminal when with electricity, otherwise, electric shock could happen.

◆ Don't clean up and screw the terminal tight before power is off. Such operation could cause electric shock when with electricity.

◆ Please turn off the power before connecting or disconnecting the communication signal cable, peripheral modules or control units, otherwise, device could be damaged and accidental operation could happen.

◆ Please DO NOT disassemble the device, so as to avoid internal electric components damage.

◆ It is necessary to read through the Manual and fully ensure the safety, before altering the

program, trial running, starting and stopping operation.

◆ Button battery shouldn't be replaced before the power is off. If it has to be replaced when the device is running, it should be conducted by professional electric technician wearing insulated gloves.

Note for declaration of worthless.
When declaring of worthless, please note
◆ Explosion of electrolytic capacitor on the circuit board could happen when burning it.

◆ Please classify and dispose it. Don't dispose it into household garbage.

◆ Please deal it as industrial waste, or in accordance with local environmental protection regulation.

Forward

User's Manual of Multi-signal PIP Upscaling Switcher mainly introduces the operation of SC-PIP202 Switcher, primary parameters and general troubles shooting.

The Manual serves as user's operation instruction, rather than for maintenance service purpose. Since the date of release, any function or relevant parameter alteration will be in supplement instruction. Please refer to the manufacturer or dealers for inquiry.

CREATOR Electronics own the copyright of the Manual. Without permission, any unit or person shall not take part or total of the Manual for business purpose.

The copyright of the Manual is protected by Copyright Law and other Intellectual Property Law. Without written permission, any copy or distribution is prohibited.

Contents

Chapter 1 Overview

1.1 About Multi-signal PIP Upscaling Switcher

PIP202 is specially designed and applicable for different signals switching and high-resolution image display. It is a high performance AV switcher with functions of DVI output, monitor, line doubler and PIP. LCD monitor and luminous operation keyboard design make the operation more explicit.

It support a variety of controls of panel keyboard, RS-232 and Ethernet remote, compatible to multiple signal sources like component video signal (COMP), composite video (CV), S-Video (Y/C), VGA and DVI, with high definition display under SVGA, XGA, SXGA signal modes.

The product is mainly applied in multimedia conference room, command control center, classroom church, hospital and stage etc.

1.2 Functions and Features

◆ Support and self-adapt to multiple component video signal (COMP) formats including NTST, PAL, SECAM, composite video (CV), S-Video (Y/C), VGA and DVI and other signal sources.

◆ Support HDTV compatible component

◆ Support output resolutions:
800X600@60Hz 、 1024X768@60Hz 、 1280X720@60Hz 、 1280X1024@60Hz 、 1366X768@60Hz 、 1400X1050@60Hz 、 1920X1080@60Hz。

◆ To conduct real-time seamless switching within the screens, including special effects of fade in/out, pull-and-push and stretch

◆ With PIP function, any video image can be inserted into PC display signal.

◆ Use port and touch screen to adjust the size and location of PIP

◆ Support frozen screen, audio output mute control

◆ Support color, hue, sharpness, contrast and brightness adjustment, satisfying your different need for screen visual effect.

◆ High quality 3:2 and 2:2 line doubling process.

◆ Support panel keyboard, RS-232 and Ethernet remote control, in convenient and flexible operation.

◆ With front panel lock function, avoiding accidental operation.

◆ Standard 19" case design

1.3 System Device
◆ SC-PIP202
Multi-signal Upscaling PIP Mixed Matrix System Host
Auxiliary and Compatible Devices

◆ Wireless Touch Screen
CR-Wifi G7 Wireless programmable touch screen

◆ Wireless Transmitter and Receiver.
CR-WF10 Wireless Access Point
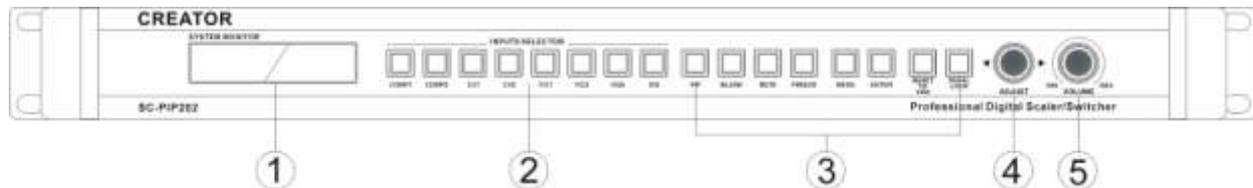
1.4   Installation of the Host

The host of the SC-PIP202 Multi-signal PIP
Upscaling Switcher can be installed in a standard
19" cabinet, with accessory of a pair of cabinet
brackets. See
installation as follows:
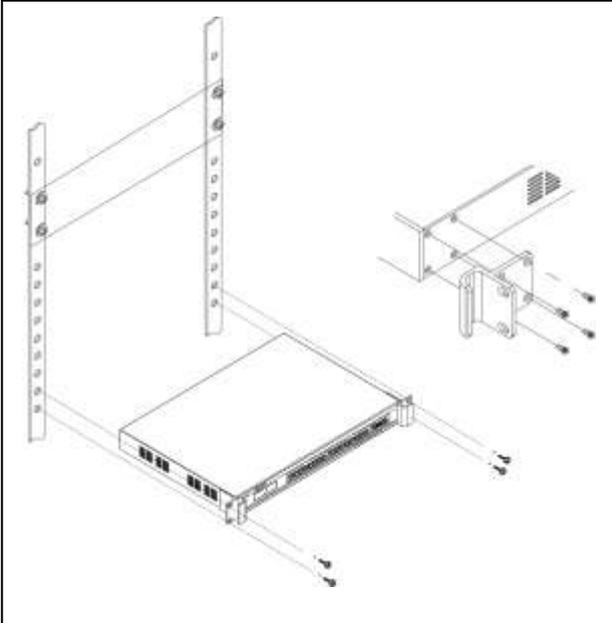
Chapter 2 Panel Instruction

2.1 Front Panel of SC-PIP202

Front Panel:：

① **LCD Monitor**

Display current status and operation information of the main screen.

② **INPUTS SELECTOR**

Selection of monitor signal include 8-way signal choices of COMP1、COMP2、CV1、CV2、Y/C1、Y/C2、VGA and DVI

③ **PIP:**Switch the monitor screen in PIP way in main screen.

BLANK:Blank screen switch

MUTE:Main output audio mute switcher

FREEZE:Main screen frozen switcher

MENU:OSD menu display

ENTER:Select and move to the lower tier menu of OSD menu

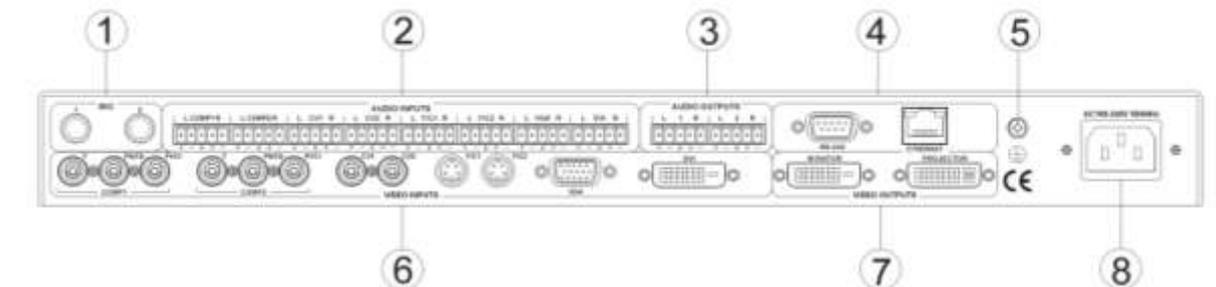RESET TO VGA:Press and hold it for 3 seconds to restore the output resolution to factory default （1024X768）

PANEL LOCK:Keyboard lock: To make all keyboard operation invalid.

④ **ADJUST:** Control the left and right move within the same tier menu under OSD menu.

⑤ **VOLUME:**Volume adjustment knob

2.2   SC-PIP202 Rear Panel

Rear Panel:

① **MIC**

Microphone input, support dynamic MIC and condenser MIC.

② **AUDIO INPUTS**

Audio input port is corresponding 8-way video inputs.

③ **AUDIO OUTPITS**

Audio output port is with 2-way balanced audio output. Port 1 is for projector audio output, with changeable channels and volume. Volume is for separate adjustment. Port 2 is for monitor audio output, with channels changeable only.

④ **RS-232**

Serial port is for connection to PC or the third party control devices (For example: CREATOR, CRESTRON, AMX control host etc.)

ETHERNET

Ethernet port is for connection to external network or direct connection to CR-WF10 to finalize touch screen remote control.

⑤ Ground Polar

⑥ **VIDEO INPUTS**

Video input port is with 8-way video input (COMP 1 COMP2、CV1、CV2、Y/C1、Y/C2、VGA、DVI）, connecting to video signal sources and a variety of external devices, like DVD, PC,

high-resolution player etc.

⑦ **VIDEO OUTPUTS**

Video output port is for connection to video monitor with DVI port, like high-resolution monitor, projector or the devices connecting to video player.

⑧ System Power Input Port

System power input supports AC 100V-240V 50/60Hz

Chapter 3 OSD Menu Setup

Press the MENU button on the panel, the main output connecting to Multi-signal PIP Upscaling Switcher will disappear the OSD menu of the product.

Note: Under the output resolution of 800x600@60Hz, OSD menu control is not for access.

1. When the big screen is displaying the signal from CV 、 YC 、 YPBPR or DVI, PICTURE, ADVANCE, OSD are for you to set up.

After accessing to the screen, move the ADJUST button left or right to set up the needed value, while the monitor will display the status in real-time.

After finishing the setup, press the ENTER button on the panel to access to the lower tier menu, and then conduct relevant setup.

For example: OSD H-POSITION option should be set as 50.

Step 1: After accessing to setup screen, turn the ADJUST knob and move the cursor to OSD setup options. With yellow frame, it indicates successful selection. Press ENTER button to confirm it and access to OSD setup. See 3-1
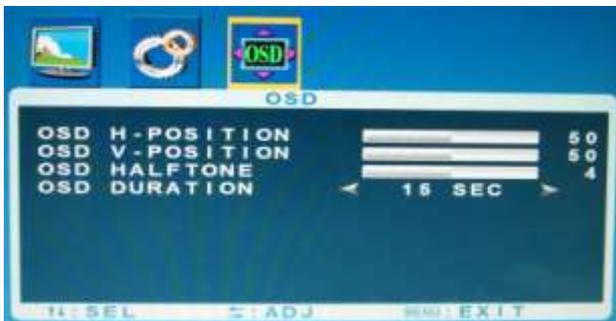
Picture 3-1

Step 2: After accessing to the setup screen, the cursor will stay on OSD H-POSITION, the first

setup option with the font of OSD H-POSITION turning into yellow, indicating the value is ready for setup. Press ENTER button to confirm it.

Step 3: After confirming it, the current status of OSD H-POSITION option will turn to yellow. Turn the ADJUST knob on the panel to 50, press ENTER to confirm it, then the job is done.

If not accessing to the setup sub-screen, turn the ADJUST knob to access to next setup option with the operation as above.

After finishing setup, press ENTER to return to upper tier menu.

If no need to conduct setup, wait for a few seconds（adjustable time frame), OSD menu setup will automatically exit.

A: PICTURE Setup Options

See 3-2. From top to bottom, they are:

PICTURE MODE:Select picture display modes including STANDARD, Dynamic, Sofe and Personal
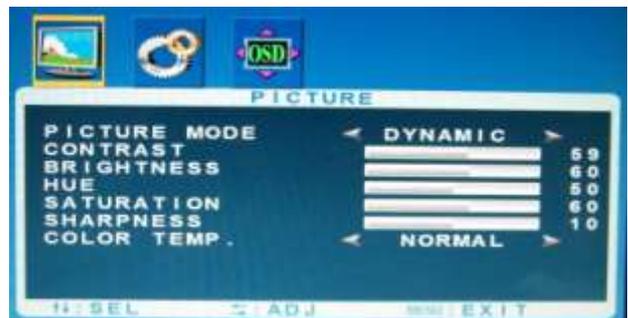
CONTRAST:Contrast adjustment

BRIGHTNESS: Brightness adjustment

HUE: Hue adjustment

SATURATION: Saturation adjustment

SHARPNESS: Sharpness adjustment

COLOR TEMP:Color temperature selections include normal, warm, cold and user.

Picture 3-2

B:ADVANCE Setup Option
    RESOLUTION: Display resolution information.
    NOISE REDUCE: Selection of noise reduction include off, low, mid, high and auto.

    SCALE: Selection of screen zoom in/out modes include full, normal and auto.
    MEMORY RECALL: Restore factory default.
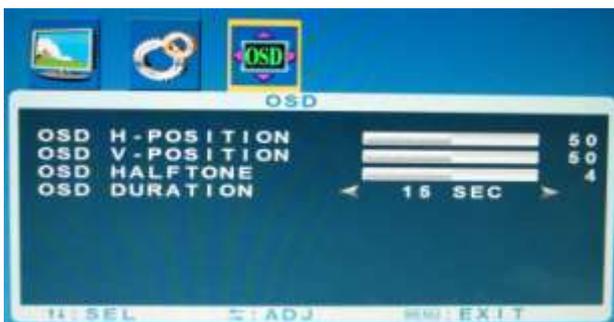

Picture 3-3

C:OSD Setup Options
    OSD H-POSITION:OSD horizontal position adjustment
    OSD V-POSITION:OSD vertical position adjustment
    OSD HALFTON:OSD transparency adjustment
    OSD DURATION:OSD display duration adjustment

Picture 3-4

2、When the big screen is displaying the signal from VGA, its OSD menu setup options include PICTURE、ADVANCE、OSD、GEOMETRY

After accessing to the screen, move the ADJUST

button on the panel to setup the needed value, while the monitor will display the status in real time.

After finishing the setup, press the ENTER button on the panel to access to the lower tier menu for relevant setup with the operation as above.

A:PICTURE Setup Options（See **3-5**）
    PICTURE MODE:select picture display modes including standard, dynamic, sofe and personal.
    CONTRAST:Contrast adjustment
    BRIGHTNESS: Brightness adjustment
    COLOR TEMP:Color temperature modes selection, including normal, warm, cold and user.
    USER-R:When the COLOR TEMP is under the User mode, parameter R is ready for setup
USER-G:When the COLOR TEMP is under the User mode, parameter G is ready for setup

    USER-B:When the COLOR TEMP is under the User mode, parameter B is ready for setup
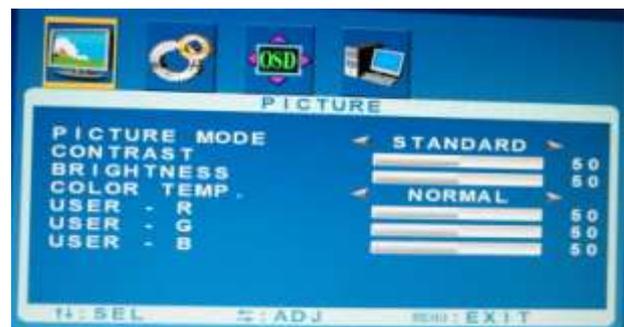
Picture 3-5

B:ADVANCE Setup Options（See **3-6**）
    RESOLUTION:Option of Display resolution
    NOISE REDUCE: Selection of noise reduction include off, low, mid, high and auto
    SCALE:Selection of screen zoom in/out modes includes full, normal and auto
    MEMORY RECALL: Restore factory default.

Picture 3-6
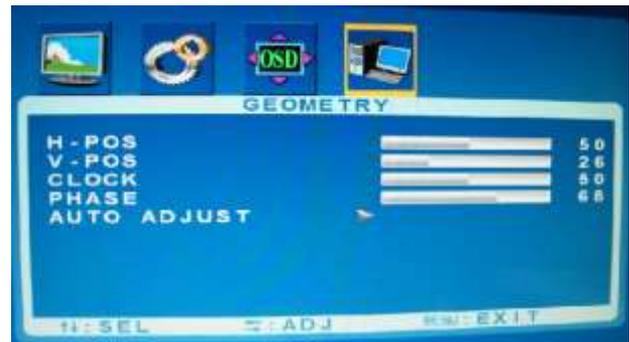
Picture 3-8

C:OSD Setup Options（See **3-7**）

OSD H-POSITION:OSD horizontal position adjustment

OSD V-POSITION: OSD vertical position adjustment

OSD HALFTONE: OSD transparency adjustment

OSD DURATION: OSD display duration adjustment

Picture 3-7

D:GEOMETRY Setup Options（See **3-8**）

H-POS: Manual adjustment for screen horizontal position

V-POS: Manual adjustment for screen vertical position

CLOCK: Manual adjustment for clock

PHASE: Manual adjustment for phase

AUTO ADJUST: Auto adjustment for screen

Chapter 4   System Connection Diagram

4.1   System Connection Overview

4.2   SC-PIP202 Matrix System and WiFI G7 Wireless Touch Screen

Chapter 5 Wifi G7 Touch Screen

5.1 Introduction to the functions of Wifi G7 Touch Screen

To have easy and quick operation, CREATOR specially designs WiFi G7 wireless touch screen in application together with SC-PIP202. Wifi G7 touch screen adopts high-end Touch Lens craft, realizing perfect combination of Lens and touch panel, making full smooth surface in touch screen and the case, and excellent wh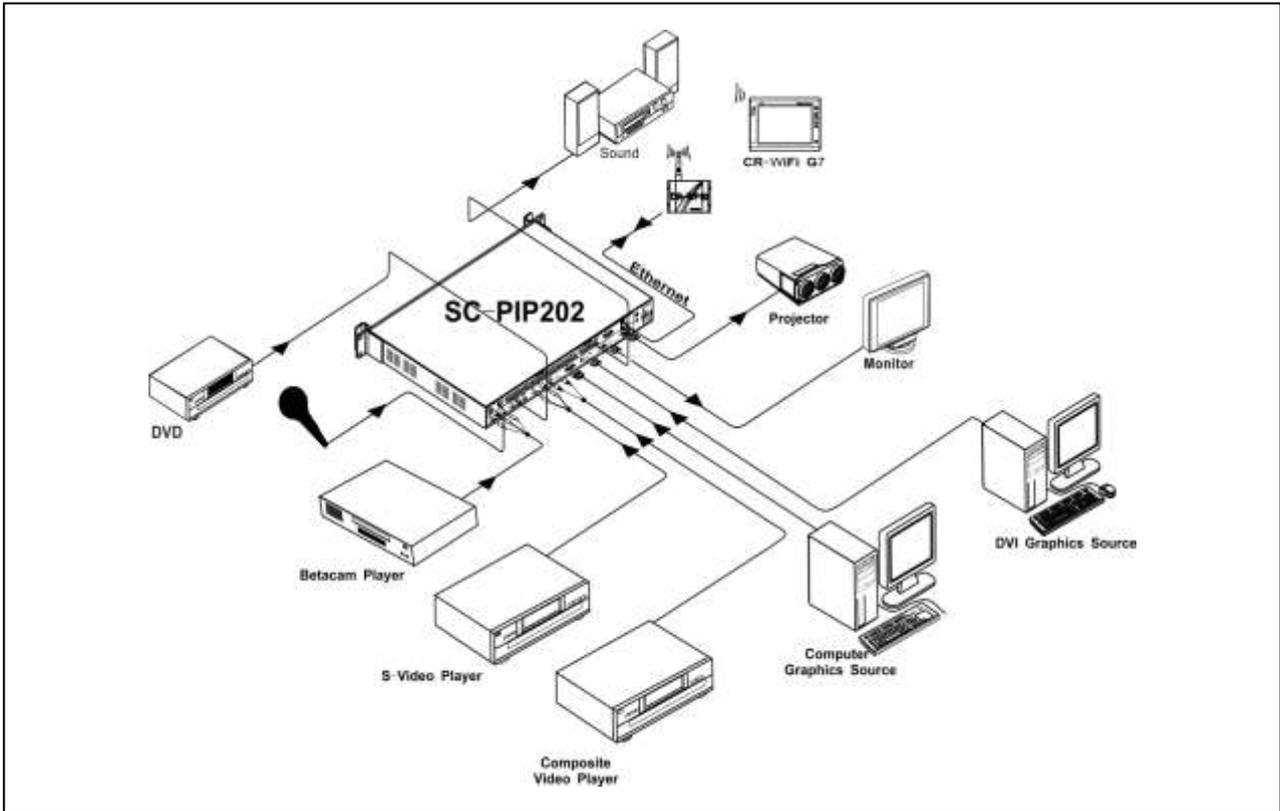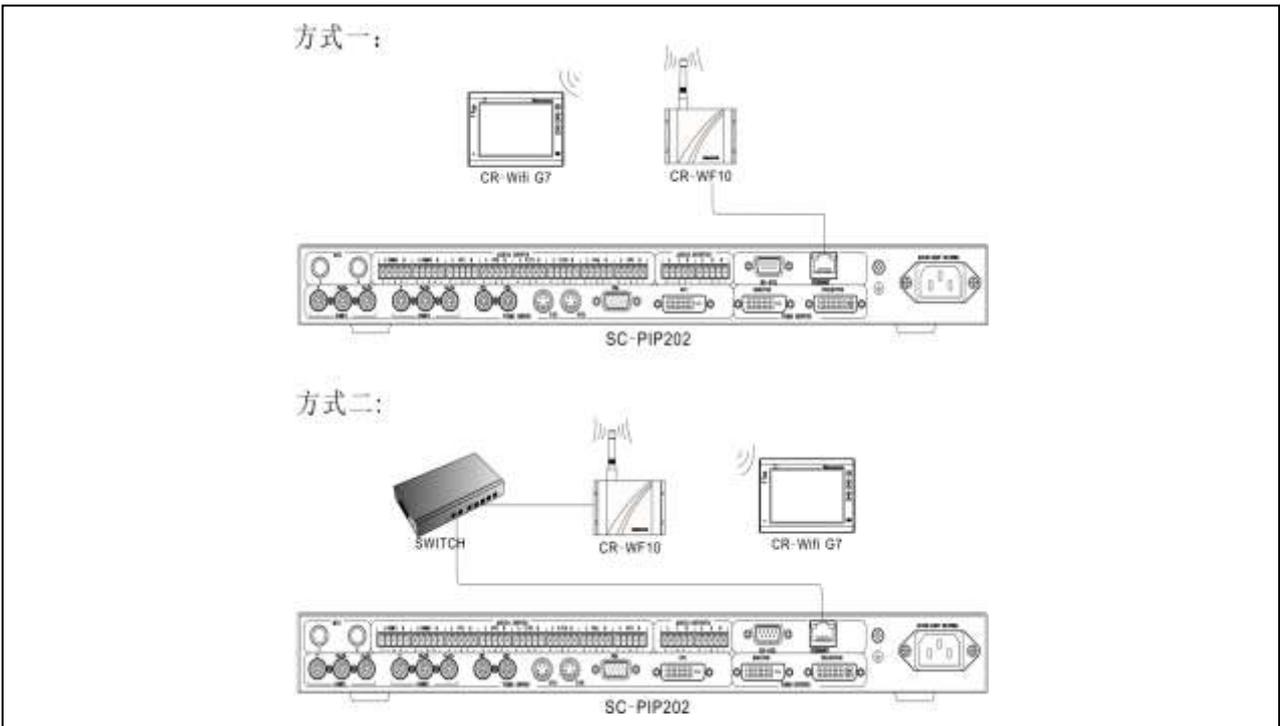atever the touch and appearance, with the advantages of long lifetime, quick respond and advanced structure and beautiful. Also, the high light transmission brings great visual effect to the screen.

It supports bi-lingual display, 802.11b/g Ethernet dual communication, TFT true color LCD, 16:9 high definition color (18-digit color depth), wide screen high resolution display, intelligent human sense identify technology, luminousness sensor function. Besides for embedded installation, it could be used at desktop on the foundation.

5.2 Features of Wifi G7 Touch Screen

◆ Adopt high-end touch lens craft of touch

◆ Delicate appearance
Fashion and compact design, perfect combination of high-light and frosted texture, sbq quality aluminum alloy wiredrawing, making it in distinct gradations.

◆ Low power consumption, large capacity Li-ion battery
Dual CPU, Smart pbw power management, built-in dual bt Li-ion battery, 95 days super-long stand-by time, normal working for 2.5 days or above (relevant with power management and brightness setup)

◆ Intelligent Core
Powered by dual CPU with 667MHz, intelligent human sensor technology, our life is benefited by technology. The close-range sense function can wake up the touch screen when human gets close to the screen. LCD contrast can be automatically adjusted in daytime and evening.

◆ Adopt wince system
Move your finger tips on the screen whatever you want. Everything is so simple like that.

◆ Dual-channel download mode
Support both USB and network download modes (802.11b/g wireless Ethernet dual communication)

5.3 Wifi G7 Wireless Touch Screen Panel Diagram
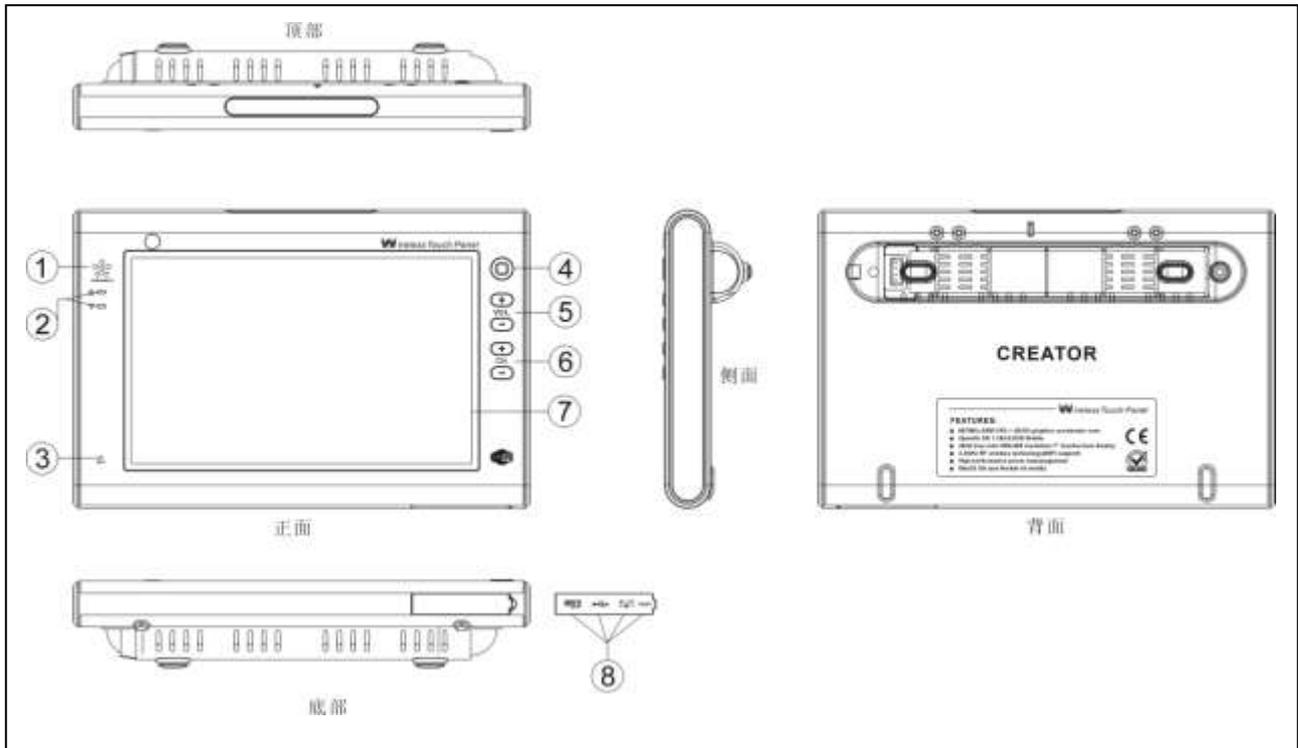
① SPEAKER: Loudspeaker

② ⏻ Power indicator

   📶 Signal indicator

③ MIC: MIC indicator

④ MENU: Menu button

⑤ Volume +/- adjustment button

⑥ Channel selection button

⑦ Monitor

⑧ 📷 USB port

   🔌 USB port

   DC 12V Power input port, support DC 12V input

   RESET Restore system to default

5.4 Operation on Wifi G7 Wireless Touch Screen

Turn on the power or the touch screen at stand-by mode, the system displays PIP202 simple operation screen. Under such circumstance, PIP202 video signal is ready to be switched, and the volume is ready for setup. See as following picture, touch setup button to access to PIP2002 detailed setup screen.

Picture 5-1

Detailed setup screen is shown as picture 5-2, split into two columns, with left as main control

zone. From the top to bottom, they are SIGNAL

SOURCE (signal source switching), PIP SETTING (PIP setup), SWITCH EFFECT (switching effect setup), OUTPUT CONTROL, MAIN AUDIO (main volume) and other instructions. The right is operation zone.

Picture 5-2

5.4.1 SIGNAL SOURCE
SIGNAL SOURCE includes CONTROL SELECTION, SOURCE and SWITCHING SELECTION.

Touch corresponding setup to select the parameters. See 5-3.

CONTROL SELECTION Setup Options
    Audiovisual: Control AV and AV input.
    Video: Control video input only.
    Audio: Control audio input only.

SOURCE Setup Option
Control 8 video sources of COMP1, COMP2, CV1,CV2,Y/C1,Y/C2, VGA and DVI

SWITCHING SELECTION Setup Option
    PIP: Switch the preview monitor AV to small screen of main output in picture-in-picture way.
    Single screen: Switch the preview monitor AV to main output in single screen way.
    dual screen: Switch the AV to main screen, and being as a sub-screen.
    PIP to enlarge: Enlarge the PIP screen to full screen.

left picture to enlarge: Enlarge the main

screen (left picture) to full screen.
    right picture to enlarge: Enlarge the sub-screen (right picture) to full screen.

Picture 5-3

5.4.2 PIP SETTING
PIP SETTING includes SIZE, POSITION, BORDER, and BORDER COLOR. Touch corresponding setup to select the parameters. See picture 5-4.

SIZE Setup Option
    H-SIZE: Horizontal position H-SIZE adjustment
    V-SIZE: Vertical position V-SIZE adjustment

POSITION Setup Option
    H-POS: Horizontal position H-POS setup
    V-POS: Vertical position V-POS setup

BORDER Setup Options
Border decoration could make the picture more beautiful with white, grey and black border colors available.

    border: with border
    no border: without border

BORDER COLOR Setup Options
    white: White border
    grey: Grey border
    black: Black border

Picture 5-4

图 5-5

5.4.3 SWITCH EFFECT

SWITCH EFFECT could setup filtering effect in big and small screen and with following 16 options available:

no transition effect: automatic cycle

automatic revolving: No switch effect

Left-right Cover: drag from left to right

Right-left Cover: drag from right to left

Buttom-top Cover: drag from bottom up

Top-buttom Cover: drag from top buttom

Topleft-downright Extend: stretch from top left to down right

Topright-downleft Extend: stretch from top right to down left

Downleft-topright Extend: stretch from down left to top right

Downright-topleft Extend: stretch from down right to top left

Zoom-in from Center: enlarge from center

Horizontal extension from Center: stretch to left and right from center

Vertical extension from Center: Stretch from center to top and bottom

Fade-in Fade-out: Fade in and fade out

Also the speed of big screen transition can be set as slow and fast. See 5-5.

5.4.4 OUTPUT CONTROL

OUTPUT CONTROL includes PIP WINDOW, MAIN OUTPUT, OUTPUT RESOLUTION and OSD MENU, touch corresponding setup to select the parameters. See picture 5-6.

Picture 5-6

PIP WINDOW Setup Options

switch:Inter-switch the sub-screen and main screen

open: Open preview PIP function

close: Close preview PIP function

MAIN OUTPUT Setup Options

blank: Output blank screen, close the picture on monitor, display blank screen (blue screen), with same BLANK button function on the main host front panel.

cancel blank: Cancel blank output, i.e. close the output of blank screen (blue screen)

frozen: The displaying picture is frozen. i.e.

temporary stop playback. It is the same as

FREEZE button on the front panel of the host.

cancel frozen: Cancel frozen picture.

OUTPUT RESOLUTION Setup Options
Support the following resolutions output:
800x600@60H 、 1024x768@60H 、
1280x720@60H 、 1280x1024@60H 、
1366x768@60H 、 1400x1050@60H 、
1920x1080@60H and default（Reset to factory default resolution) optional。

OSD MENU Setup Option
OSD menu has enter, exit, left ,right, and OK options.

5.4.5   MAIN AUDIO
MAIN AUDIO (audio control of the main output) includes SOURCE SETTING (signal option) and VOLUME (target audio) and VOLUME SETTING.

SOURCE SETTING Setup Options

Control 8-way video sources of COMP1, COMP2, CV1, CV2, Y/C1, Y/C2, VGA and DVI

VOLUME Setup Options
main: Setup the audio source and MIC volume in the same time.
source: Separate control on the volume from audio sources
MIC: Separate control on MIC volume

VOLUME SETTING Setup Option
Setup volume and mute of the selected target

Picture 5-7

5.4.6   OTHER INSTRUCTIONS
OTHER INSTRUCTIONS include OTHER INSTRUCTIONS and READ AND WRITE EDID (EDID).

OTHER INSTRUCTIONS Setup Options
lock buttons: To avoid accidence, lock the buttons on the front panel of the host after setting up necessary values.
cancel: Open up the buttons function on the front panel of the host.
Erase memory: Delete the information automatically saved after powered off.

READ AND WRITE EDID Setup Option
Projection: Read and write the EDID from the monitor connected to the projector and transfer it to the device.
Preview: Read and write the EDID from the monitor connected to preview and transfer it to the device.
Default: Restore default EDID.

Note: When reading and writing EDID, DVI input signal is not for connection.

Picture 5-8

Chapter 6 Wireless Access Point

CR-WF10 Wireless Access Point is a WiFi connector for communication between SC-PIP202 host and WiFi G7 Wireless Touch Screen.

6.1 CR-WF 10 Wireless AP

CR-WF 10 Wireless (WiFi) AP is a brand new wireless point, and a mediate of resolving the communication between CREATOR Wireless (WiFi) Dual Touch Screen and control host.

Tiny and concise in appearance, the product supports IEEE802.11b/g protocol, with maximum transmission rate of 54Mbps, supporting high-speed wireless internet connection, providing stable wireless connection for an area of 40 square meters, supporting multiple cascade connections, wireless connection mode, wireless AP/relay mode, and bridging mode.

Functions and Features
◆ Flexible and reliable WAP support makes any model of touch screen working in an extensive covered area or region.

◆ Support multiple VLAN (Visual local-area network), single WAP can be used for establishing inter-independent and safe network. And it can be operated separately.

◆ With 3 configuration modes: wireless access point mode, wireless access point/relay mode and bridging mode.

◆ Support computer high speed internet connection.

◆ Support IEEE 802.11b/g international protocol.

◆ Support remote control as far as 40m (without

obstacle) indoor, and 305m (without obstacle) outdoor.

◆ Support maximum transmission rate of 54Mbps.

Socket Instruction
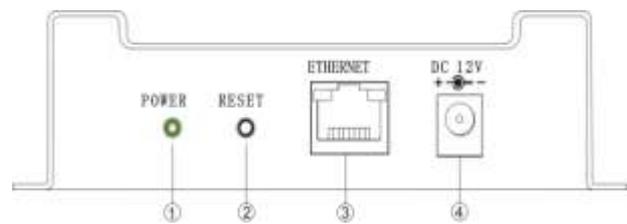
① POWER:Power indicator.

② RESET:Reset button is for restoring factory default setting. Press it slightly to reset, press and hold it for 10 seconds to restore factory default setting.

③ ETHERNET: Connect to internet.

④ Power socket: Self-adapt to DC 12V power

6.1.1 CR-WF10 Setup Instruction
1、 Connect CR-WF10 Wireless (WiFi) Access Point to PC with a standard network cable.

2、 Connect to power and turn it on.

3、 Open Explorer, and input 192.168.1.254 (default). See picture 6-1.

4、 Input user name: admin and password: admin (default) in the pop-up window.

Picture 6-1

Picture 6-2

5、Having accessed to module setup window, user may setup some network information of the module.

Status displays the configuration information of the current device, as following picture 6-3.

Picture 6-3

Network Setting

Network Setting displays the configuration of the network, such as IP address, gateway, range of dhcp connection etc. (See picture 6-4)

Picture 6-4

Working Mode Setup

Wireless Setting displays working mode setup window, please make necessary setup, as picture 6-5.

Picture 6-5

Wireless Serial Setting

Serial Setting displays wireless serial setting window, please make necessary setup, as picture 6-6.

Picture 6-6

Security Setup

Security displays safety setting window. Please set up the likes of information of network encryption, as picture 6-7.

图 6-7

Other Setting

Others displays other settings, with following options available.

A:Code Setting

Region Settings display code setting window. Please make relevant selections, as picture 6-8.

Picture 6-8

B:Password Management Setting

Password displays the window of password management setting. Please make relevant password management setting, as picture 6-9.

Picture 6-9

C:Identification Setting.

Log displays identification setting window, as picture 6-10.

Picture 6-10

D: Firmware Upgrade

Upgrade displays the window of firmware upgrade, as picture 6-11.

In the process of upgrade, please do not disconnect the power. Otherwise the upgrade will be failed. The process of upgrade takes about 2 minutes. After finishing the upgrade, the system will automatically jump to the front page. Please be patient to wait.

Picture 6-11

E: Restore Factory Default Setting

Factory Default displays the option window of restoring to factory default, as picture 6-12.

After restoring to factory default, all user configurations will be deleted. If necessary, please use the function of Backup Configuration to save current router configuration. You may access to http://192.168.1.254 to re-setup the router using "admin" as both user name and password.

图 6-12

F: Reboot Router

Reboot displays the option window of restarting the router, as picture 6-13.

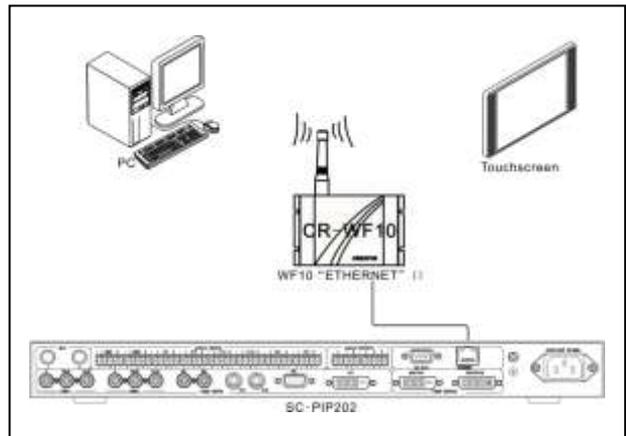Network will be suspended for a short time when router reboot is in progress.

Picture 6-13

6 、 Connect to power, and open wireless connection, double click the location indicated in picture 6-14 to connect to the selected network.

Picture 6-14

6.1.2 Connection

Chapter 7 Instructions Set

Baud Rate:9600   Data Bit:8   Stop Bit:1   Parity Check: None

Remarks:xx = [mm，nn]   indicates the number area of xx is mm~nn, with nn-mm+1 values in total

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

Note: xx = [mm，nn] indicates the value range of xx is mm~nn, with nn-mm+1values all together

	Order	Function Description
AV Switch	xx*01!	Switch xx audio input to preview output xx= [01,08]
	xx*02!	Switch xx video input to preview output xx = [01,08]
	xx*03!	Switch xx audio input to main output xx= [01,08]
	xx*04!	Switch xx audio input to preview output xx = [01,08]
	01*06!	Switch preview AV to main output in PIP small screen
	02*06!	Switch preview AV to main output in single screen
	03*06!	Switch AV to the sub-screen from main output in dual-screen mode.

	Order	Function Description
Audio/Video Switch	xx*01!	Switch the XX way audio input to preview output xx = [01,08]
	xx*02!	Switch the XX way video input to preview output xx = [01,08]
	xx*03!	Switch the XX way audio input to main output xx = [01,08]
	xx*04!	Switch the XX way audio input to preview output xx = [01,08]
	01*06!	Switch the preview AV to the small screen of the main output in PIP way.
	02*06!	Switch the preview AV to main output in single screen way.
	03*06!	Switch the AV to the sub-screen of the main output in dual screen way.

Main menu control	01*07!	Swap the main screen of main output with small PIP screen in (instant, no effect)
	02*07!	Open PIP screen
	03*07!	Close PIP screen
	04*07!	Freeze main screen
	05*07!	Cancel main screen frozen
	06*07!	Blank screen output from main
	07*07!	Cancel blank screen output from main
	08*07!	Zoom in to full screen, for PIP or dual-screen display mode only.
	09*07!	Zoom in to full screen, for dual-screen display mode only.

OSD Menu	01*08!	Menu display
	02*08!	Left move on the menu
	03*08!	Right move on the menu
	04*08!	Menu confirmation
	05*08!	Menu exit

	01*09!	800 x 600(SVGA) at 60Hz
	02*09!	1024 x 768(XGA) at 60Hz
Output	03*09!	1280 x 720(HDTV 720p) at 60Hz
Resolution	04*09!	1280 x 1024(SXGA) at 60Hz
Setting	05*09!	1366 x 768(HDTV 768p) at 60Hz
	06*09!	1400 x 1050 at 60 Hz
	07*09!	1920 x 1080(HDTV 1080p) at 60 Hz

	Order	Function Description
Preview small screen setup	xx*16!	H_POS in PIP screen is xx. Xx=[00,99] Note: H_SIZE number area [0,99], current XX setup range [0,100-H_SIZE]
	xx*17!	V_POS in PIP screen is xx, xx = [00,99] Note: V_POS number area [0,99], current XX setup range [0,100-V_SIZE]
	xx*18!	H_SIZE in PIP screen is xx+1, xx = [00,99] Note: H_SIZE number area [1,100], current XX setup range [1,100-H_POS]
	xx*19!	V_SIZE in PIP screen is xx+1, xx= [00,99] Note: V_SIZE number area [1,100], current XX setup range[1,100-V_POS]
	00*20!	Horizontal position H-POS in PIP screen reduces 1 unit.
	01*20!	Horizontal position H-POS in PIP screen increases 1 unit.
	10*20!	Vertical position V-POS in PIP screen reduces 1 unit
	11*20!	Vertical position V-POS in PIP screen increases 1 unit
	20*20!	Horizontal size H-SIZE in PIP screen reduces 1 unit
	21*20!	Horizontal size H-SIZE in PIP screen increases 1 unit
	30*20!	Vertical size V-SIZE in PIP screen reduces 1unit
	31*20!	Vertical size V-SIZE in PIP screen increases 1 unit
	09*14!	Transition effect when switching PIP to main screen. Switching is done instantly.
	10*14!	Screen transition effect: dragging from left to right
	11*14!	Screen transition effect: dragging from right to left
	12*14!	Screen transition effect: dragging from the bottom up
	13*14!	Screen transition effect: dragging from top to bottom
	14*14!	Screen transition effect: Stretching from top left to down right.
	15*14!	Screen transition effect: Stretching from top right to down left.
	16*14!	Screen transition effect: Stretching from down left to top right
	17*14!	Screen transition effect: Stretching from down right to top left
	18*14!	Screen transition effect: Zoom from center
	19*14!	Screen transition effect: Stretching from center to both left and right
	20*14!	Screen transition effect: Stretching from center to both top and bottom
	21*14!	Screen transition effect: fade in and fade out
	31*14!	Automatically using transition effects in rotation of above sequence.
	32*14!	Close PIP border
	33*14!	Display PIP border
	34*14!	Set up PIP border color: black

	35*14!	Set up PIP border color: Grey
	36*14!	Set up PIP border color: White
	xx*15!	Set up the speed PIP transition effect (total frames) xx=[01,99]

	Order	Function Description
Volume Control	xx*10!	Direct set up main audio output volume xx = [00,83]
	84*10!	Increase main audio output to one higher level
	85*10!	Decrease main audio output to one lower level
	86*10!	Mute main audio output
	87*10!	Cancel mute, restore volume of the main volume output
	xx*11!	Volume setup of audio input from main audio output, xx = [00,83]
	84*11!	Increase one level of volume in audio input from main audio output
	85*11!	Decrease one level of volume in audio input from main audio output
	86*11!	Mute in audio input from main volume output
	87*11!	Cancel mute of audio input from main volume output and restore volume
	xx*12!	Setup of the volume in MIC input from main audio output, xx=[00,83]
	84*12!	Increase one level of volume in MIC input from main audio output
	85*12!	Decrease one level of volume in MIC input from main audio output
	86*12!	Mute in MIC input from main audio output
	87*12!	Cancel Mute in MIC input from main audio output, restore volume

	01*13!	Front panel button lock
Other orders	02*13!	Cancel front panel lock
	03*13!	Remove power-down memory (remove when power is on next time)
	04*13!	Read EDID from PROJECT and input to DVI
	05*13!	Read EDID from PREVIEW and input to DVI
	06*13!	Read default EDIT and input to DVI
	Note: When reading EDID, DVI input signal is not for connection.	

Chapter 8 Technical Parameters

Type Spec	SC-PIP202				
Video					
Gain	0 dB				
Pixel bandwidth	Video, S-video, YPbPr/YCbCr:6MHz，VGA video:250 MHz， DVI video:165MHz。				
Differential phase/OS	<1.28°，3.58 MHz				
Differential phase error	0.1°， 3.58-4.43 MHz				
Differential gain error	0.1%， 3.58-4.43 MHz				
Switching speed	100 ns(Longest time)				
Signal Type	VGA，S-video，COMP component video(YPbPr/YCbCr)，composite video（CVBS），DVI。				
Video input	CV	S-Video	VGA	COMP	DVI
Port	RCA female connector	S-Video terminal (Y-C terminal)	24-pin HD female connector	RCA female connector	DVI-D
Signal Intensity	1V p-p : Y component video, S-video，Composite video； 0.7V p-p: VGA（PC signal）； 0.3V p-p: Component video、 C of S-video ，HDMI/DVI video				
Min/max Electric Level	Analogue signal: -2V/+2V				
Impedance	75 Ω				
Return Loss	<-30dB@5MHz				
Horizontal Frequency Response	60-200KHZ				
Vertical Frequency Response	100Hz-200Hz				
VGA Video Output					
Port	DVI-I port				
Min/max Electric Level	-2.0V / +2.0V				
Impedance	75 Ω				
Return Loss	<-40dB@5MHz				
DC Compensation	Max ±5mV				
VGA Sync Signal					
I/O Signal Type	RGBHV, RGBS, RGsB, RsGsBs, Composite Video, Component Video, S-Video				
Video System	NTSC 3.58，NTSC 4.43，PAL，SECAM				
Input Level	0.5V- 5.0V p-p,: 4.0V p-p Normal				
Output Level	AGC-TTL: 5Vp-p, unterminated				
Input Impedance	510 Ω				
Output Impedance	75 Ω				

Type / Spec	SC-PIP202
Max Transmission Delay	Horizontal :90ns Vertical:160ns
Max ascend/descend time	4ns
Polar	Positive or negative (same as input)
Audio Signal	
I/O Port	8-way 10pin jack/every way of unbalanced audio input, 1way 2RCA jack unbalanced output
Gain	0 dB
Frequency Response	20 Hz ~ 20 kHz,
Total harmonic distortion + noise	0.05% @ 1 kHz （Under rated voltage）
Signal to Noise ratio（S/N ）	>58dB
Stereo Channels Crosstalk	>80dB @ 1 kHz
Common-mode Rejection Ratio （CMRR）	>75dB @: 20 Hz ~ 20 kHz
Signal type	Stereo (non-patched audio)
Impedance	Input:>10 kΩ（Balanced or imbalanced connection) Output:50 Ω （imbalanced connection）, 100 Ω（Balanced connection）
Max Input Level	+19.5dBu, （Balanced or imbalanced connection)
Gain Error	±0.1dB @20 Hz ~ 20 kHz
Max Output Level	+19.5dBu, （Balanced or imbalanced connection)
MIC	
MIC Type	Moving Coil Response
Input Sensitivity	25mV
Frequency Response	50Hz-16K Hz
Jack Type	Mono input
Control Type	
Serial Control Port	RS-232, 9-pin D-type port
Baud Rate and Protocol	Baud rate:9600, Data Bit:8 bit, Stop bit:1, No parity bit
Serial Control Port Structure	2 = TX, 3 = RX, 5 = GND
Specification	
Power	100VAC-240VAC～50/60 Hz, International self-adapted power
Temperature	Storage and use temperature: -20°～ +70°C

Type Spec	SC-PIP202
Humidity	Storage and use humidity:10% ～90%
Case Size	1U
Product Height	1.9kg
Average failure interval time	30,000 Hours
Warranty	1 year warranty, lifetime maintenance

Chapter 9 General Troubles Shooting

Troubles	Solutions
The peripheral devices like projector connected to SC-PIP202 Matrix has ghosting or blur images	Possibly the projector is not properly adjusted or unqualified cable is in use. The projector should be well-adjusted and the cables should be replaced.
Color is lost or no video signal output	● Possibly both ends of VGA signal cable are not correspondingly connected or the cable is short-circuited.
Touch screen cannot control SC-PIP202 Matrix	● Battery is possibly running out, please replace it. ● Possibly the remote controller is out of order, please fix it.
The serial port (generally PC serial port) cannot control SC-PIP202 Matrix	●Inspect and see if the communication port configured by control software is corresponding to the serial port. ● Inspect and see if the communication port of the PC is in good condition and communication protocol is correct.
When switching the SC-PIP202 Matrix, there is return code, but no corresponding images output.	●Check if respective input terminals are with signal (inspect by oscilloscope or multi-meter). If there is no signal input, input cable could be broken or the joint is loose. Please replace it.
POWER indicator is off. No LCD display. No reaction to operation	● Please check if power input is in good contact
Output image is interfered	● Possibly input or output device is not well-grounded.
Feel distinct static electricity when plugging the AV ports.	● Possibly the ground wire of the device is not well-grounded. Please ground it in correct way. Otherwise, the host could be damaged, and the lifetime would be shortened.
LCD is in normal display. There is return code for communication port, but no image or audio output.	● Possibly AV port is loose, just replace it. ● Possibly the wiring is short-circuited, just replace it. ● Possibly the wiring is with broken circuit, just replace it.
When the panel button, communication port, touch screen of the SC-PIP202 are all out of control, possibly the internal of the host is damaged. Please ask professional staff for maintenance.	

CREATOR CORPORATION（CHINA）
Copyright by CREATOR