

VSP 9516S Quick Start



- Max 2048×1152@60Hz/2560×816×60Hz input/output resolution
- User-defined resolution adjustment
- Picture in picture
- Audio and video sync
- Seamless switching between inputs
- DSK for subtitle overlay
- LED display connection from front panel directly
- Two LED sending card install inside already

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Product Introduction

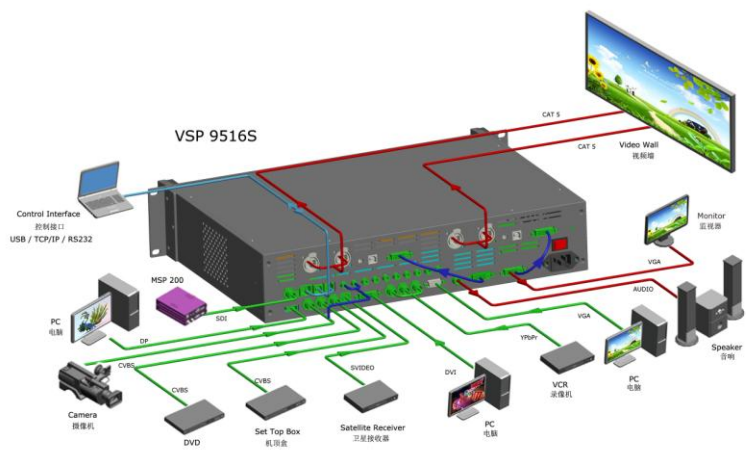
VSP 9516S is the first LED video processor developed by RGBlink which does support the LED display connection function. It supports inputs including 3×CVBS, 1×S-Video, 1×YPbPr, 1×VGA, 1×DVI-I (compatible with HDMI), 1×Displayport, 1×3G-SDI, up to 9 channels inputs, and 2×DVI-I, 1×VGA, up to 3 simultaneous outputs. VSP 9516S is not only a video scaler for video and graphic processing or just provides power and makes room for the sending cards to install inside.

VSP 9516S embedded a special menu for local control LED display by its each LED sending card in connected, operator will easily operate display connection, brightness adjustment, Gamma correction by <DISPLAY CONNECTION> menu after decide the sending card model.

VSP 9516S integrates Display Setting Remote Control Interface with the video processing remote control software also, operator will have more remote control options.

System Connection

RGBlink offers solutions to demanding technical problems. Any application questions, or required further information, please contact with our customer Support Engineers.



VSP 9516S System Connection Diagram

Packing Configuration

Power Cord



SDI Cable



DB9 to RJ11
Cable



RCA to BNC
Cable



DVI-D Cable



USB Cable



USB Disk



Screw Driver



Antistatic Bag



Certification



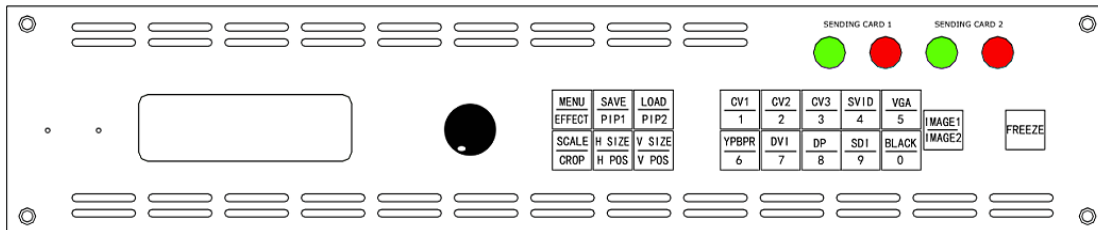
Note: SDI cable is only for VSP 9516S.

Chinese Standard, American Standard or European Standard power cord is option.

The color of the screw driver is randomly when packing.

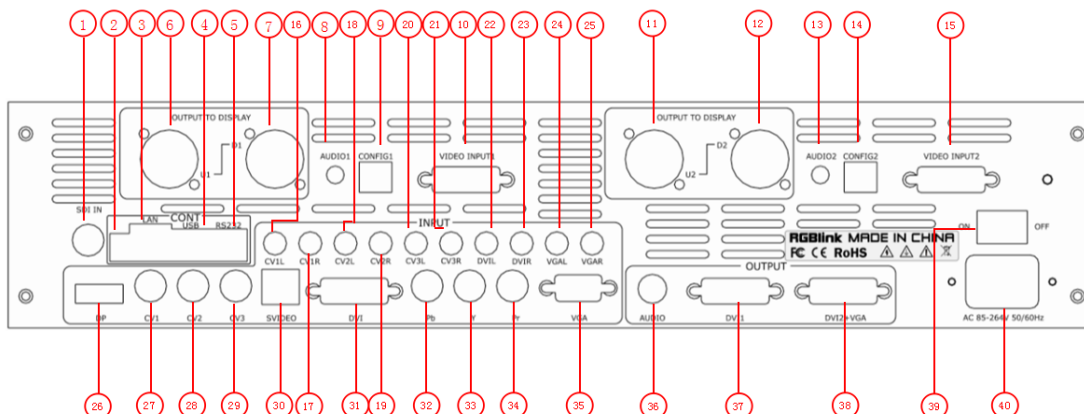
Hardware Orientation

Front Panel



Button Instruction			
MENU/EFFECT	Menu and effect reuse button	DP	Displayport signal source button
SAVE/PIP1	Save and PIP reuse button	SDI	SDI signal source button
LOAD/PIP2	Load and PIP reuse button	BLACK	Black button
SCALE/CROP	Scale and crop reuse button	IMAGE1/ IMAGE2	IMAGEA and IMAGE B select reuse button
H SIZE/H POS	Width and horizontal position setting reuse button	FREEZE	Freeze button
V SIZE/V POS	Height and vertical position setting reuse button	0~9	Number button, use for scale and custom setting
CV1,CV2,CV3	CVBS signal source button	Green indicator	Signal indicator, the light is on when device has signal input
SVID	S-Video signal source button	Red indicator	Power indicator, the light is on when device has power supply
VGA	VGA signal source button	OLED Panel	Show operation menu items
YPBPR	YPBPR signal source button	Knob	Confirm and adjust LCD menu
DVI	DVI signal source button		

Back Panel



Input Interface	
1	3G-SDI input BNC Port
16~25	Audio Input Port
26	Displayport Input Port
27~29	CVBS Input BNC port
30	S-Video Input DIN 4 Port
31	DVI Input DVI-I Port
32~34	YPbPr Input
35	VGA Input DB15 Port

Output Interface	
36	Audio Output
37	DVI Output DVI-I port
38	DVI+VGA Output DVI-I

Other Interface	
2	Dial Switch
3	10/100M Interface RJ45
4	USB Interface USB-B Port
5	RS232 Interface
6.7.11.12	Gigabit Copper Port
8.13	Audio Input of Sending Card
9.14	USB Control Port of Sending Card
10.15	DVI Input Port of Sending Card
39	Power Switch
40	Power IEC-3

Operating Instruction

Content

- How to Realize Single Image Switching
- How to Set up the PIP
- How to Do Customized Output Resolution
- How to Set up the Size and Position of the Single Image
- How to Realize the Screen Size Setting
- How to Realize the Text Overlay Setting
- How to Set up the Volume
- How to Realize LED Display Connection
- How to Use Black Out
- How to Save the Parameter
- How to Load the Saved Parameter

How to Realize Single Image Switching

1. Boot the system default CV1 to the current input source, if need seamless switching other source such as DVI, push DVI button.
2. CV1 button light turns off after pushing DVI button. DVI button light is on if the DVI signal is effective and stable. And if the DVI signal is invalid or no input, DVI button light will flash.

Note: Only cut switching is supported among the switch of CV1, CV2 and CV3.

How to Set up the PIP

Push the [SAVE/PIP1] or [LOAD/PIP2] button for two times, button led light is on, and enter to the PIP function menu.

LAYOUT: Can choose PIP layout, the corresponding results are as follows:

PIP L+T



PBP L+R



PBP T+B



SWAP IMAGE: It can set PIP to swap exchange, when choose ON, it can realize the IMAGE A and IMAGE B exchange.

ALPHA: Can set the image transparency, the regulating range is among 0 to 16.

SELECT: Can choose to set the size or position of IMAGE A or IMAGE B individually.

How to Do Customized Output Resolution

Push the [MENU/EFFECT] button to enter the menu items, turn the knob and choose <OUTPUT>, push the knob to confirm. Turn the knob, choose <OUTPUT FORMAT>, push the knob to confirm and go into the output format menus, as following:

STANDARD--Standard resolution.

CUSTOM--Used defined resolution setting.

Push knob and go into <CUSTOM> menu:

1. Turn the knob on each digital position, and change the value of the digital by the digital buttons on the front panel.
2. After the digital, push the knob will add *, means before * is the horizontal size. Same operation for vertical size:
3. After the digital, push the knob will add @, means before the @ is the vertical size, and after the @ is the refresh rate. Only digital 50 or digital 60 supports for the refresh rate. Use the digital buttons to finish the settings.
4. After input all the values, push knob to enable VSP 9516S to output this resolution. VSP 9516S will take 5-10 seconds to enable this output resolution.

How to Set up the Size and Position of the Single Image

Push the [SCALE/CROP] button, and enter the scale function menus, the OLED module show as follows.

The lights of number button 0~9 turn on, user can adjust the following items by knob or number buttons.

H SIZE: Width setting.

V SIZE: Height setting.

H POS: Horizontal phase setting.

V POS: Vertical phase setting.

RESET: If image quality distorts by improper operation, it can be recover by reset.

How to Realize the Screen Size Setting

VSP 9516S supports the screen parameters to meet the requirement where user want to switch between scale screen size and full display size (like monitor). This is only enable for a single display window. Following is an example of a screen size is 1408 x 832.

Operator can defined the VSP 9516S output resolution from standard output resolution list or customized the output resolution which is higher than 1408 x 832. For this application 1440x900 is an example:

Push the [MENU/EFFECT] button to go into the menu items, turn the knob and choose <OUTPUT>, push the knob to confirm, then turn the knob and choose <SCREEN>, push the knob and goes into the screen menus as following:

H SIZE--Horizontal pixels, turn knob or use the digital button to input the value 1408.

V SIZE--Vertical pixels, turn knob or use the digital button to input the value 832.

H POS--Horizontal position, default value is 0, set the value as the way of H SIZE and V SIZE.

V POS--Vertical position, default value is 0, set the value as the way of H SIZE and V SIZE.

MODE-- Mode option, choose SCREEN SIZE.



How to Realize the Text Overlay Setting

Before setting the text overlay, please make sure the input channel of the text. For example, set VGA input as the text channel. Then make sure the channel that the text will overlay, for example, overlay the text on CV1 channel. The operations are as follows:

1. Push VGA button to make sure there is VGA input.
2. Push CV1 button to make sure there is CV1 input.
3. Push the [MENU/EFFECT] button, turn the knob, choose <OUTPUT>, push the knob to confirm, turn the knob, and choose <TEXT OVERLAY>, push the knob to confirm.

Then enter into <TEXT OVERLAY> menu items, turn the knob, and choose <TEXT OVERLAY>, push the knob to confirm, turn the knob again, and choose "ON" to enable the text overlay function.

4. Make sure VGA input is IMAGE B, and CV1 input is IMAGE A, if not, choose <SWAP WINDOW> option in <PIP>, and choose "ON" for <SWAP WINDOW>.
5. Choose the VGA image in "IMAGE B" in <SELECT> in <PIP> menu, and push [SCALE/CROP] button to adjust the size and position of VGA image, then set the VGA image to the required position. The standard position and size is: ensure the VGA image overlay on the CV1 image, display normally and without black edges. If there are black edges around VGA image, choose <ZOOM> option in <PICTURE> to adjust.
6. Set the text overlay mode: choose <PRESET> option in <TEXT OVERLAY>, push the knob to enter into the <PRESET> menu items. Turn the knob to choose the preset mode, for example, set the VGA text as WhOnBk, choose WhOnBk1 or WhOnBk2 (Note: Text Overlay only support monochrome subtitles), user can also adjust the <BLEND MODE> or <BLEND LEVEL> to get a better effect.
7. Push the [SAVE/PIP1] button to save the above parameters.

How to Set up the Volume

In single image mode, the operations are as follows:

1. Push [MENU/EFFECT] to enter the menu items, turn the knob, choose <AUDIO>, push the knob to confirm, turn the knob, and choose <MUTE>.
2. Turn the knob, and choose "OFF", disable the mute function.
3. Turn the knob, choose <VOLUME>, turn the knob to adjust the volume.

In PIP mode, first, choose IMAGE A or IMAGE B as audio input source, specific steps are as follows:

MENU → AUDIO → AUDIO IN → IMAGE A/IMAGE B, or push the [IMAGE1/IMAGE2] button, choose IMAGE A or IMAGE B, then repeat the step1 to 3 above.

How to Realize LED Display Connection

VSP 9516S can realize three connections as follows: connecting the Port D or Port U of one sending card to LED display, connecting the both Port D and Port U of one sending card to LED display, connecting the Port D and Port U of two sending cards to LED display. The following are the detailed operation steps of the three connections.

1. Connect the Port D or Port U of One Sending Card to LED Display

Here we take No.1 sending card, port U1 for example. (Note: No.1 sending card corresponding to port D1 and port U1, No.2 sending card corresponding to port D2 and port U2.

- (1) First, make sure that the device is in normal operation. The red power indicator lights when the device has power supply and the green signal indicator lights when device has signal input.
- (2) Choose the input signal, for example, choose DVI.
- (3) Connect the cable to Port U1.
- (4) Turn the knob, choose <SENDING CARD TYPE>, push the knob to confirm, turn the

knob, choose the sending card type, for example, choose Linsn (VSP 9516S can only support Linsn and Colorlight sending card). Shown as follows:

```
>SENDING CARD TYPE      COLOR LIGHT
SENDING CARD NO.        NO.1
BRIGHTNESS              50%
QUICK CONNECTION        >>
```



```
*SENDING CARD TYPE      LINSN
SENDING CARD NO.        NO.1
BRIGHTNESS              50%
QUICK CONNECTION        >>
```

(5) Turn the knob, choose <SENDING CARD NO.>, push the knob to confirm, turn the knob, choose NO.1, push the knob to confirm.

```
SENDING CARD TYPE      LINSN
>SENDING CARD NO.      NO.1
BRIGHTNESS             50%
QUICK CONNECTION       >>
```

(6) Turn the knob, choose <QUICK CONNECTION>, push the knob to confirm. Turn the knob, choose <RECEIVING CARD SET>, push the knob to confirm, and enter to the to the next level menu, the OLED module show as follows:

```
SENDING CARD TYPE      LINSN
SENDING CARD NO.      NO.1
BRIGHTNESS            50%
>QUICK CONNECTION     >>
```



```
SENDING CARD SET      >>
>RECEIVING CARD SET  >>
```



>CHOOSE CABLE	PORT D
HORIZONTAL CARD	1
VERTICAL CARD	1
WIDTH	64

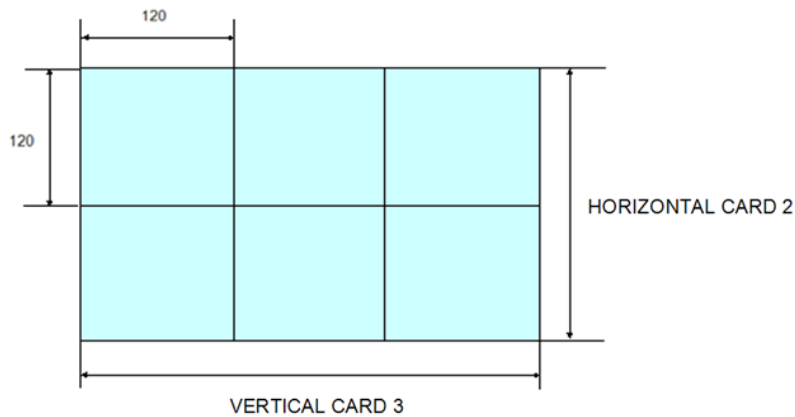
(7) Choose <PORT U>, and set the horizontal card, vertical card, width and height.

For example, set horizontal card as 2, vertical card as 3, width and height as 120, shown as follows:

>CHOOSE CABLE	PORT U
HORIZONTAL CARD	2
VERTICAL CARD	3
WIDTH	120


>HEIGHT	120
D PORT Offset (A/B) X	0
D PORT Offset (A/B) Y	0
DISPLAY CONNECTION	>>

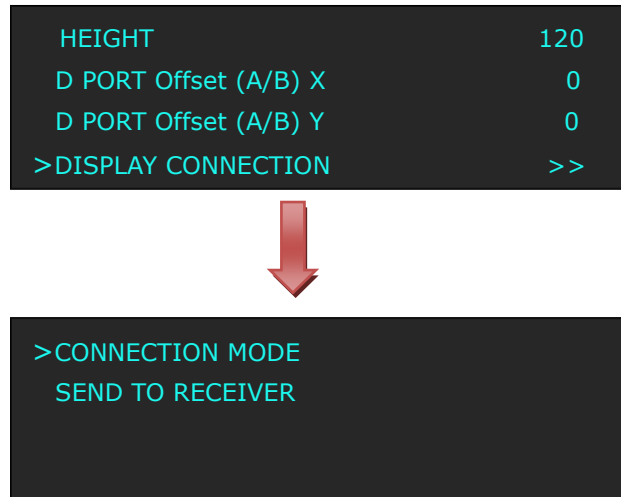
The setting is as follows:



(8) After setting, turn the knob, choose <DISPLAY CONNECTION>, push the knob to confirm, turn the knob again, and choose <CONNECTION MODE>. VSP 9516S

supports 8 kinds of connection modes, they are

and , user can choose the mode according to actual connection mode.



Send to receiver after choose the connection mode, observe the LED display and make sure if display image is correct. If wrong, change the connection modes. Then connect the Port D or Port U of One Sending Card to LED display is finished.

(9) The setting for port D1 is same as the above setting.

Rendering is as follows:



2. Connect the Port D and Port U of One Sending Card to LED Display

- (1) First, make sure the device is in normal operation. The red power indicator lights when device has power supply and the green signal indicator lights when device has signal input.
- (2) Choose the input signal, for example, choose DVI.
- (3) Connect one end of the cable to Port D1, and the other one to U1.

(4) Connect Port U1 of No.1 Sending Card to LED display, the settings are the same as Step 4 to Step 8 of “**Connect the Port D or Port U of One Sending Card to LED Display**”.

(5) Connect Port D1 of No.1 Sending Card to LED display, setting steps are as follows:

a. Turn the knob, choose <SENDING CARD TYPE>, push the knob to confirm, turn the knob, choose the sending card type, for example, choose Linsn (VSP 9516S can only support Linsn and Colorlight sending card). Shown as follows:

```
>SENDING CARD TYPE      COLOR LIGHT
SENDING CARD NO.        NO.1
BRIGHTNESS              50%
QUICK CONNECTION        >>
```



```
*SENDING CARD TYPE      LINSN
SENDING CARD NO.        NO.1
BRIGHTNESS              50%
QUICK CONNECTION        >>
```

b. Turn the knob, choose <SENDING CARD NO.>, push the knob to confirm, turn the knob, choose NO.1, push the knob to confirm.

```
SENDING CARD TYPE      LINSN
>SENDING CARD NO.      NO.1
BRIGHTNESS             50%
QUICK CONNECTION       >>
```

c. Turn the knob, choose <QUICK CONNECTION>, push the knob to confirm. Turn the knob, choose <RECEIVING CARD SET>, push the knob to confirm, and enter to the to the next level menu, the OLED module show as follows:

```
SENDING CARD TYPE      LINSN
SENDING CARD NO.        NO.1
BRIGHTNESS             50%
>QUICK CONNECTION      >>
```




```
SENDING CARD SET >>
>RECEIVING CARD SET >>
```



```
>CHOOSE CABLE PORT U
HORIZONTAL CARD 2
VERTICAL CARD 3
WIDTH 120
```

d. Turn the knob, choose <CHOOSE CABLE>, push the knob to confirm. Turn the knob, choose <PORT D>, push the knob to confirm.

```
>CHOOSE CABLE PORT D
HORIZONTAL CARD 2
VERTICAL CARD 3
WIDTH 120
```

e. Turn the knob, and choose <D PORT Offset (A/B) Y>, and set D PORT Offset (A/B) Y as 240 (Note: D PORT Offset (A/B) Y=HORIZONTAL CARD×HEIGHT, before we set horizontal card as 2 and height as 120). Shown as follows:

```
>HEIGHT 120
D PORT Offset (A/B) X 0
D PORT Offset (A/B) Y 240
DISPLAY CONNECTION >>
```

f. Turn the knob, choose <DISPLAY CONNECTION>, push the knob to confirm, turn the knob again, and choose <CONNECTION MODE>. the OLED module show as follows:

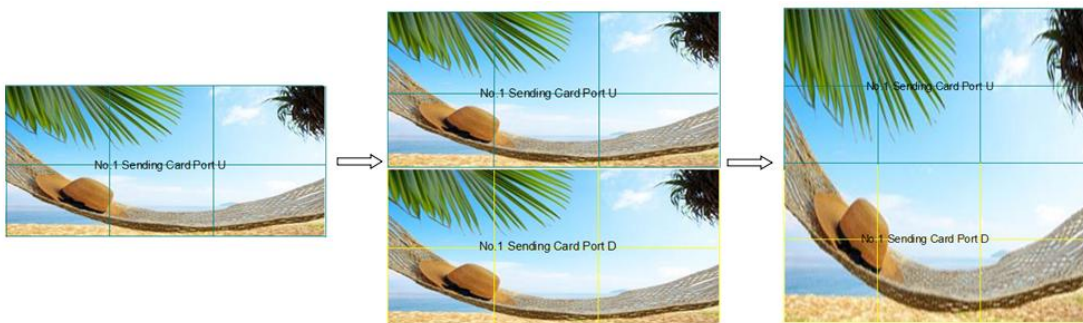
```
HEIGHT 120
D PORT Offset (A/B) X 0
D PORT Offset (A/B) Y 240
>DISPLAY CONNECTION >>
```



>CONNECTION MODE
SEND TO RECEIVER

Choose the connection mode, the setting is same as Port U1. Then connection of both the Port D and Port U of One Sending Card to LED Display is finished.

Rendering is as follows:



3. Connect the Port D and Port U of Two Sending Cards to LED Display

- (1) First, make sure the device is in normal operation. The red power indicator lights when device has power supply and the green signal indicator lights when device has signal input.
- (2) Choose the input signal, for example, choose DVI.
- (3) Connect four cables to Port U1, Port D1, Port U2 and Port D2 respectively.
- (4) Connect Port D1 and Port U1 of No.1 Sending Card to LED display, the settings are same as “**Connect the Port D and Port U of One Sending Card to LED Display**”.
- (5) Same as above, connect Port D2 and Port U2 of No.2 Sending Card to LED display.
- (6) Turn the knob, choose <DISPLAY CONNECTION>, push the knob to confirm, turn the knob again, choose <SENDING CARD NO.>, push the knob to confirm, turn the knob, choose NO.2, push the knob to confirm.

SENDING CARD TYPE	LINSN
>SENDING CARD NO.	NO.2
BRIGHTNESS	50%
QUICK CONNECTION	>>

(7) Turn the knob, choose <QUICK CONNECTION>, push the knob to confirm. Turn the knob, choose <RECEIVING CARD SET>, push the knob to confirm, and enter to the next level menu, the OLED module show as follows:

SENDING CARD TYPE	LINSN
SENDING CARD NO.	NO.2
BRIGHTNESS	50%
>QUICK CONNECTION	>>



SENDING CARD SET	>>
>RECEIVING CARD SET	>>



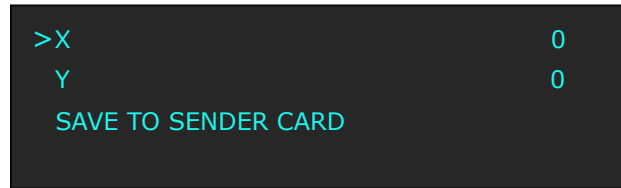
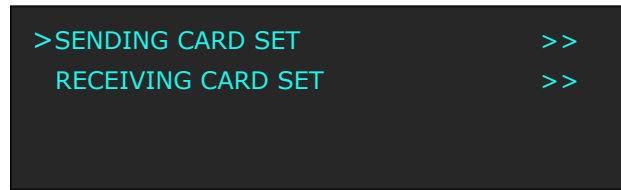
>CHOOSE CABLE	PORT D
HORIZONTAL CARD	2
VERTICAL CARD	3
WIDTH	120

(8) Turn the knob, choose <CHOOSE CABLE>, push the knob to confirm. Turn the knob, choose <PORT U>, push the knob to confirm.

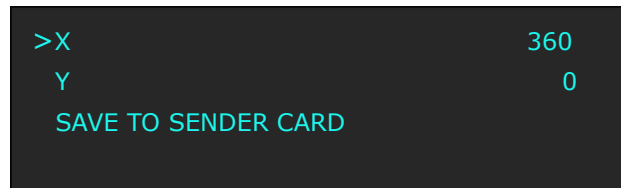
>CHOOSE CABLE	PORT U
HORIZONTAL CARD	2
VERTICAL CARD	3
WIDTH	120

(9) Push the [MENU/EFFECT] button to return to the previous menu, turn the knob, and

choose <SENDING CARD SET>, push the knob to confirm, and enter to the next level menu:



(10) Turn the knob, choose <X>, and set X as 360 (Note: X=VERTICAL CARDxWIDTH, before we set vertical card as 3 and width as 120). Shown as follows:

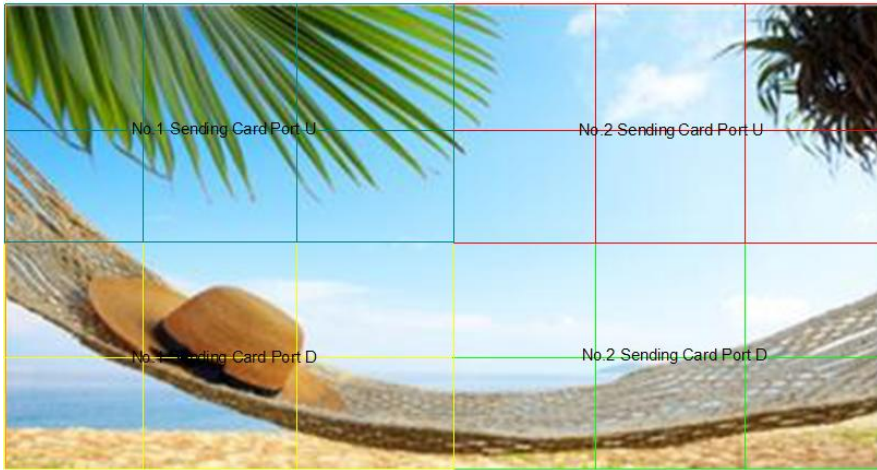


(11) Same as above, set X of Port D of No.2 sending card as 360. Then connect the Port D and Port U of Two Sending Cards to LED display is finished.

Rendering is as follows:







How to Use Black Out

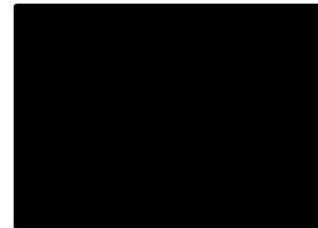
Black out description:

Black signal realizes one-key-touch to a black screen.

VSP 9516S black provides effect processing when output, Black switching with fade in fade out effect. The operation is as below:

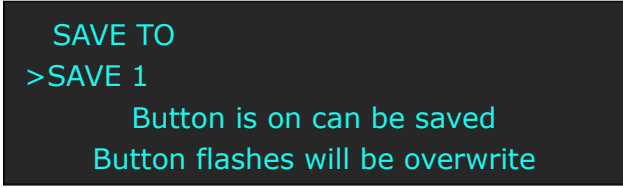
Push [BLACK/0] button, and the output turns to BLACK with fade in fade out effect.

As shown below:



How to Save the Parameter

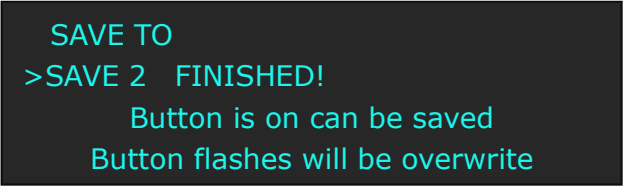
1. Push the [SAVE/PIP1] button, the button light is on, and enable the SAVE function.



SAVE TO
>SAVE 1
Button is on can be saved
Button flashes will be overwrite

2. Turn the knob, and choose the position that will save, push the knob to confirm.

3. The figure: 1, 2, 3, 4, 5, 6, 7, 8, 9, 0 means SAVE1~10, user can push any button on to save. For example, save to SAVE 2, push button 2, the OLED panel will show as follows after saving.



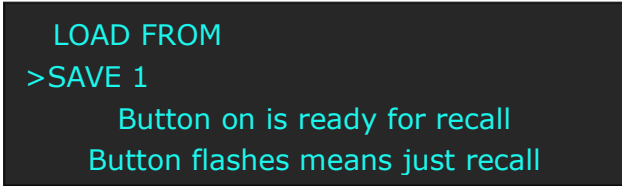
SAVE TO
>SAVE 2 FINISHED!
Button is on can be saved
Button flashes will be overwrite

User can also push the [MENU/EFFECT] button to enter to the menu items, turn the knob to choose <SAVE SETUP>, and choose <SAVE TO> to save the parameter.

4. Again push the [SAVE/PIP1] button, the button light is off, and disable the SAVE function.

How to Load the Saved Parameter

1. Push the [LOAD/PIP2] button, the button light is on, and enable the LOAD function.



LOAD FROM
>SAVE 1
Button on is ready for recall
Button flashes means just recall

2. Turn the knob, and choose the position that will load, push the knob to confirm.

User can also push the [MENU/EFFECT] button to enter to the menu items, turn the knob to choose <SAVE SETUP>, and choose <LOAD FROM> to load the saved parameter.

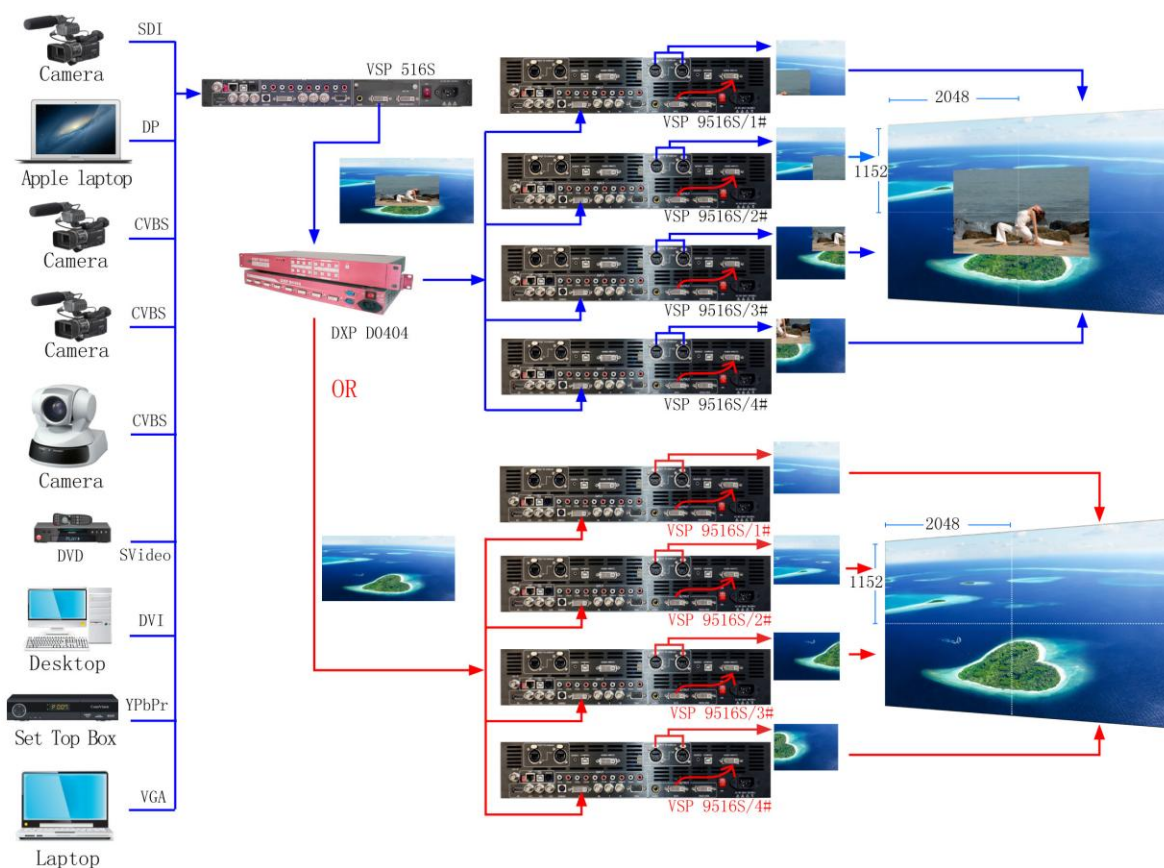
3. Push the [LOAD/PIP2] button again, the button light if off, and disable the LOAD function.

Product Application

Multiple Mosaic

Project 1: Input different signals to VSP 516S, and set VSP 516S/1# as PIP mode, and output signal to VSP 9516S/1#, VSP 9516S/2#, VSP 9516S/3# and VSP 9516S/4# for cascade by DVI matrix (DXP D0404). The split modes include "FIELD GLYPH", "HORIZONTAL 1/4", "VERTICAL 1/4" and "IRREGULAR".

Project 2: Input different signals to VSP 516S, and output signal to VSP 9516S/1#, VSP 9516S/2#, VSP 9516S/3# and VSP 9516S/4# for cascade in DVI format by DVI matrix (DXP D0404).



Contact Information

Warranty:

All video products are designed and tested to the highest quality standard and backed by full 3 years parts and labor warranty. Warranties are effective upon delivery date to customer and are non-transferable. RGBlink warranties are only valid to the original purchase/owner. Warranty related repairs include parts and labor, but do not include faults resulting from user negligence, special modification, lighting strikes, abuse(drop/crush), and/or other unusual damages.

The customer shall pay shipping charges when unit is returned for repair.

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