

# LED Video Splicer & Processor

## AMS-SC358

# User Manual

## LED Video Processor

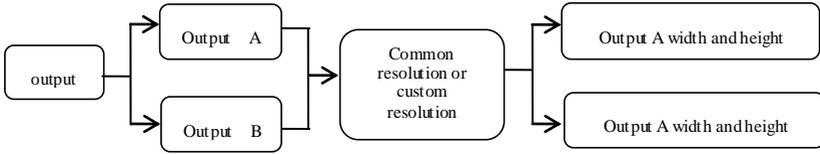


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## -----Splice Wizard-----

### 1、 set the channel A, B resolution



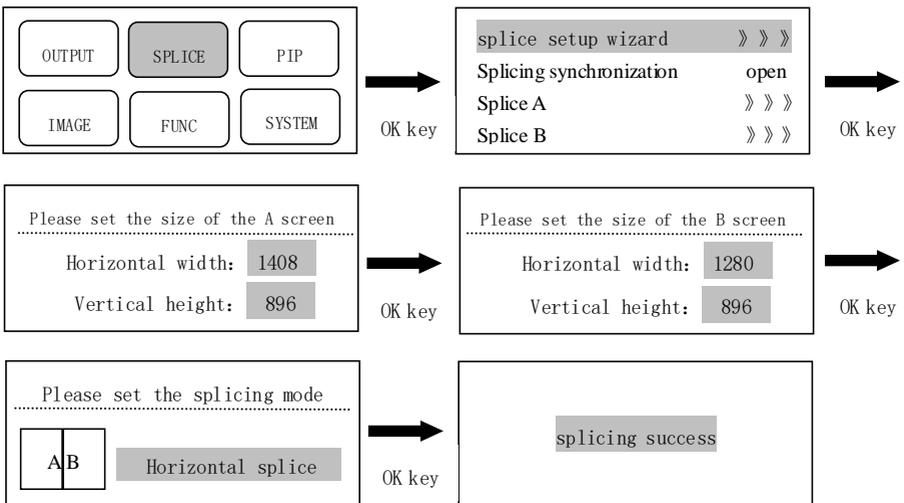
Output A channel: Default menu→ Output →Output A→Custom resolution →Horizontal width (Knob adjustment size) →Vertical height (Knob adjust size) →Change resolution

Output B channel: Default menu→ Output →Output A→Custom resolution →Horizontal width (Knob adjustment size) →Vertical height (Knob adjust size) →Change resolution

### 2、 Set up splicing

Default menu →splice→splice setup wizard →Set A screen size (Horizontal width、 Vertical height, OK key selection determination) →Set B screen size (Horizontal width、 Vertical height, OK key selection determination) →Set splicing mode (Horizontal / vertical splicing, OK key selection determination)

Schematic diagram is as follows: (such as one screen is 1408 x896, Another screen is 1280x896, The resolution of the entire large screen is 2688 x 896)



## Safety Instructions



This symbol prompts the user, the device user manual has important operating and maintenance instructions.



This symbol warns the user of the equipment inside the enclosure exposed to hazardous voltages, there is the risk of electric shock.

## Note

**Read the manual** • Read and understand all safety and operating instructions before using the equipment.

**Save the manual** • The safety instructions should be kept for future reference.

**Follow Warnings** • Follow all warnings and instructions marked on the equipment or in the user information.

**Avoid Attachments** • Do not use tools or attachments that are not recommended by the equipment manufacturer because they may be hazardous.

## Warning

**Power sources** • This equipment should be operated only from the power source indicated on the product.

This equipment is intended to be used with a main power system with a grounded (neutral) conductor. The third (grounding) pin is a safety feature, do not attempt to bypass or disable it.

**Power disconnection** • To remove power from the equipment safely, remove all power cords from the rear of the equipment, or the desktop power module (if detachable), or from the power source receptacle (wall plug).

**Power cord protection** • Power cords should be routed so that they are not likely to be stepped on or pinched by items placed upon or against them.

**Servicing** • Refer all servicing to qualified service personnel. There are no user-serviceable parts inside. To prevent the risk of shock, do not attempt to service this equipment yourself because opening or removing covers may expose you to dangerous voltage or other hazards.

**Slots and openings** • If the equipment has slots or holes in the enclosure, these are provided to prevent overheating of sensitive components inside. These openings must never be blocked by other objects.

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## Copyright

Copyright © 2018 Amoonsky splicing processor and video processor manufacturers all rights reserved.

## Trademarks

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## Introduction

This manual contains information about how to use, install and configuration the LED video splicer & processor, in addition, also relates to knowledge LED video processor and LED video systems. If Use the LED video processor , please read this manual carefully.

### About LED Video Splicing Processor

The LED splicing processor has three powerful video processing cores, multi-graphics multi-input smart splicing processor, which can be widely used in performing arts activities, command and control center, video conferencing, hotels, courts and conference rooms.

The LED splicing processor has 3-channel output, 2-channel for splicing, 1 channel for monitoring. Can achieve 2 × 1 or 1 × 2 channel hybrid splicing, a single product can splice 5.3 million pixel user-defined output.

The LED splicing processor can accommodate a wide range of input sources, can access up to 11 video inputs, including 2 DVI, 2 HDMI, 4 VIDEO, 2 VGA and 1 SDI (optional). Each channel can accept standard resolution or high resolution video signals, the DVI and VGA can receive up to 1920 × 1200 @ 60Hz resolution input, to meet a variety of high-definition output.

The splicing processor is easy to use, using the key panel and menu system to complete the complex settings. A variety of input interfaces, to meet the different signal needs. Built-in 4 LED sending card installation location to meet the installation requirements of large-screen system.

# Panel

## Rear panel

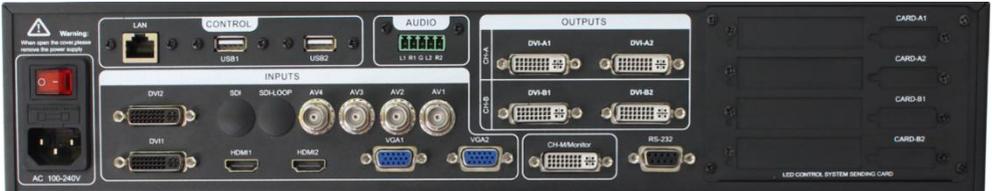


Figure 1- Rear Panel

**AC connector** — Use IEC standard power cable, input 100-240 VAC, 50-60Hz.

**AC switcher** — power on/off.

**Video input connector :**

- AV1, AV2, AV3, AV4 -- Composite video input, BNC connector, support PAL、PAL-M/N、NTSC、SECAM formats. You can connect DVD players and camcorders.
- DVI1, DVI2 – DVI video input. DVI-I/DVI-D connector. support VESA standard video format.
- HDMI1, HDMI2 – HDMI video input. HDMI-A connector. support HDMI1.3 / VESA standard.
- VGA1, VGA2 – VGA video input. DB-25 connector. support VESA standard video format.
- SDI, SDI-LOOP – SDI video input, loop out. BNC connector. Enter the video support HD video camera, etc..

**Video output connector:**

- CH-A/CH-B -- DVI video output. DVI-I connector. CH-A, CH-B output same signal.
- CH-M/Monitor -- DVI video output. DVI-I connector. Connect to monitor screen.

**RS-232** — Serial communication connector for engineering testing, the device is programmed, PC software control, communication baud rate is 115200bps.

**LED sending card slot** — Built-in 4 sending card slot. LED sending card installation location aside. When installed, the user can first open the back cover and the small bracket, mounting, internal set aside four 5V power connector, four 2.0x4PIN connectors. After installing the plug 5V power supply.

**Control connector** — Net cable, USB input control.

**Audio connector** — Audio output (L1 R1 GND L2 R2) .

## Front panel



Figure 2- Front Panel

**LCD display** — display the parameters and user settings.

**Operating button** — operate the menu system.

- **OK** “confirm”
- **ESC** “exit” or “back”
- **Knob** press down “OK”, turn right “+” turn left “-” adjust the parameters on menu.

**INPUTS** —INPUT button in the region, including 11 input signal selection, screen testing function, VGA auto correction. button Indicators of the button state in the region there are three kinds, namely:

**Indicator light function – the button light on when power on.**

- (1) Slow flicker: the interval is 1 second and keep flicker – no input signal.
- (2) Fast flicker: the interval is 0.3 second – decoding the input signal.
- (3) Light on: no flicker – input signal working.



Figure 3- Inputs

- AV1, AV2, AV3, AV4 -- video input selection button.
- VGA1, VGA2 -- VGA input selection / auto correction button. Keep press VGA1/2 button one more time could enable the auto correction function. When the input channel for VGA1, and VGA1 have screen output, press VGA1 (AUTO) button, you can recalibrate the current

VGA1 signal. VGA2 button also has the same functionality and operation.

- DVI1, DVI2, HDMI1, HDMI2 – DVI, HDMI input selection button.

**FUNCTION** — including display mode, black output, preset, pip function and switch type.



Figure 4- Function

- PART/FULL – part screen display function, set the parameters in SPLICE menu.
- PIP – enable/disable the PIP function, set the parameters in PIP menu.

**Hint:** when PIP function is working, PART/ FREEZE/BLACK/FADE are disabled.

- BLACK – output black/freeze screen, select the output in the FUNC menu.
- OUT – set the output resolution for A, B output-channel and monitor output.
- SDI – SDI input selection button.
- TEST – output testing pattern(colorful image, color bar etc.).
- MODE – save or load the user settings.
- FADE/CUT – select switching type, support seamless and fade-in/fade-out switching.

# Menu System

## Menu Structure

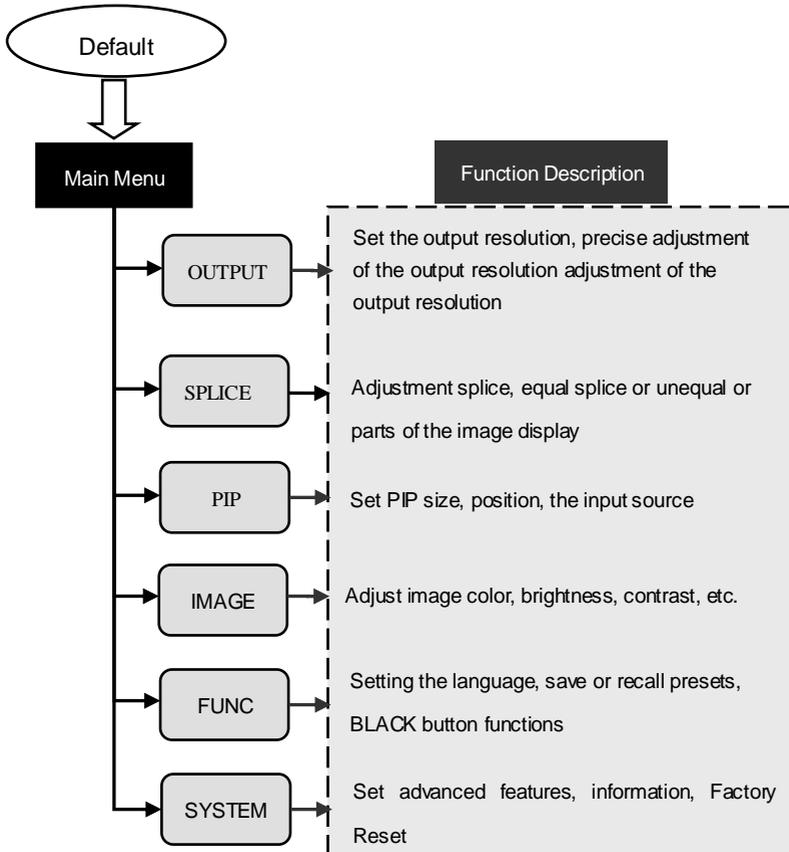


Figure 5 - Main Menu structure diagram

## Operation menu

The main menu operation buttons ESC "exist", **knob**, **OK** the man-machine interface for a 240x64 dot matrix LCD screen.

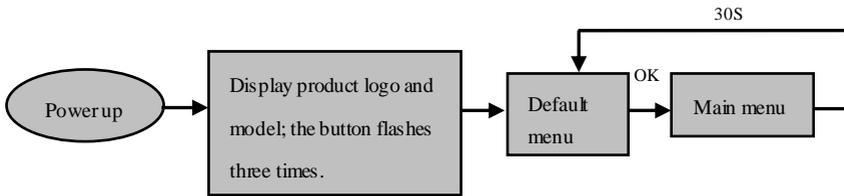


Figure 6- boot process and enter the main menu

## Default menu

The default menu after the device starts, LCD screen interface, shown above, the input source, the input source connected state, the input source is connected, the output resolution, mosaic mode, brightness and output audio channels and other information, shows the processing the main parameters menu system.

Input: HDMI 1080p	Model: Full
Monitor: 1024x768/60	Bright: 50
Output A: 1024x768/60	PIP : CV1
Output B: 1024x768/60	

Figure 7 - Default menu

## 2. Main menu

The Main Menu is an important parameter adjustment user interface, almost all of the settings can be done in the main menu. In the following sections there will be a detailed description of the operation and settings for each function.

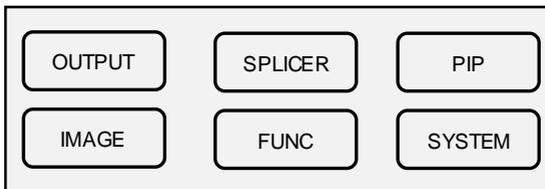


Figure8 - Main menu

# Setting and Operation

## Language

Before using LED video processor, make sure the language you wish to use, if not, please follow the operation to complete.

**Default Menu → Main Menu → FUNC → Language**

Above is the menu operation path, use the button to enter the language settings menu you can select the language.

## Reset

When using LED video processor may not be confirmed because of errors or problems arise when setting these parameters, you can enter the menu, make overall reset. Here is the process of resetting the machine.

**Default Menu → Main Menu → SYSTEM → Reset All →OK**

After the reset, all user parameters back to factory state, users with caution.

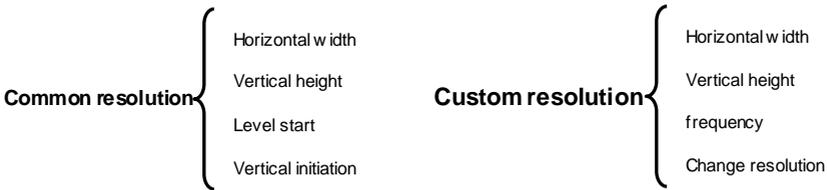
## Output Resolution

Using different resolution display or LED screen, to achieve point-to-point output, it is necessary to set the output resolution and the resolution of precise adjustment.

1. select a larger than screen resolution

**Default Menu → Main Menu →OUTPUT → Output resolution→ confirmed**

2. to fine-tune the output resolution



Tip: You reset the output resolution, the system will reset all parameters menu splicing to ensure data consistency. Accurate adjustment of the user is smaller than the resolution of only the currently selected resolution when the resolution is equal to the exact adjustment of the currently selected resolution, the horizontal and vertical start value start value can not be adjusted.

## Switching Effect

Processor with two Switching Effect, Fast switching, fade in fade out and corresponding **CUT or FADE** button.

**FADE (when the button is not light):** when the input video switch, switch-free stay.

FADE (when the key light is on): when the input video switcher, both before and after the video image fusion, the switching process smoother over.

1. press **CUT** or **FADE** button, press the button, the button indicator lights to alert the user of the current state of transition effects.
2. to enter the menu settings

**Default Menu → Main Menu → FUNC → Seamless**

## Fade time settings

Fade time can be controlled fade switching state of the time, the processor provides 0.5 seconds to 1.5 seconds fade time setting switch. Enter the menu settings as follows

**Default Menu → Main Menu → FUNC → Fade Time**

## Black and Freeze settings

Black and screen freezes shared the **FREEZE / BLACK** button, in the menu system is displayed as "BLACK button." It is set as follows

**Default Menu → Main Menu → FUNC → BLACK FUNC**

Once set up, simply press **FREEZE / BLACK** button to achieving a black screen or screen freeze

# Splicing applications

LED Video Processor has a powerful splicing, Maximum output resolution 5120 x 816 @60Hz, 3840 x 1200 @60Hz, achieve frame synchronization. There introduce it's equal splicing and unequal

Tip: set the splicing parameters before the first to confirm whether the output B output A/ channel resolution is set.

## Equal Splicing (Left and right splicing)

Output A channel splicing settings

Default Menu→Main Menu→SPLICE→SPLICE **A**→SPLICE→On

Default Menu→Main Menu→SPLICE→SPLICE **A**→Pattern→**Equal**

Default Menu→Main Menu→SPLICE→SPLICE **A**→Parameters→H Units→**1**

Default Menu→Main Menu→SPLICE→SPLICE **A**→Parameters→V Units→**2**

Default Menu→Main Menu→SPLICE→SPLICE **A**→Parameters→Position→**1**

Output A channel splicing settings

Default Menu→Main Menu→SPLICE→SPLICE **B**→SPLICE→On

Default Menu→Main Menu→SPLICE→SPLICE **B**→Pattern→**Equal**

Default Menu→Main Menu→SPLICE→SPLICE **B**→Parameters→H Units→**1**

Default Menu→Main Menu→SPLICE→SPLICE **B**→Parameters→V Units→**2**

Default Menu→Main Menu→SPLICE→SPLICE **B**→Parameters→Position→**2**

Tip: two equal parts splicing (up and down), just change the parameter settings in the level of splicing, the vertical splicing parameters can be.

## Unequal Splicing

(For example, a screen is 1408 x 896, Another screen is 1280 x 896)

Default Menu→ **Main Menu**→SPLICE→SPLICE **A** →SPLICE →on

Default Menu→ **Main Menu**→SPLICE→SPLICE **A** →**Pattern**→Unequal

Default Menu→ **Main Menu**→SPLICE→SPLICE **A** →**Parameters**→H Total→→**2688**

Default Menu→ **Main Menu**→SPLICE→SPLICE **A** →**Parameters**→V Total→**896**

Default Menu→ **Main Menu**→SPLICE→SPLICE **A** →**Parameters**→H Start→**0**

Default Menu→ **Main Menu**→SPLICE→SPLICE **A** →**Parameters**→V Start→**0**

- Default Menu→ **Main Menu**→SPLICE→SPLICE **B** →SPLICE →on
- Default Menu→ **Main Menu**→SPLICE→SPLICE **B** →**Pattern**→Unequal
- Default Menu→ **Main Menu**→SPLICE→SPLICE **B** →**Parameters**→H Total→**2688**
- Default Menu→ **Main Menu**→SPLICE→SPLICE **B** →**Parameters**→V Total→**896**
- Default Menu→ **Main Menu**→SPLICE→SPLICE **B** →**Parameters**→H Start→**1408**
- Default Menu→ **Main Menu**→SPLICE→SPLICE **B** →**Parameters**→V Start→**0**

## Capture

Interception of part of the screen function is unequal extension splicing function. In actual use, may be used to intercept the partial screen display, displays only a partial area of input channels. Such as the Windows user interface, users simply DV11 channel video playback window, the other input channel to full screen. Processor provides users with two control keys, as shown below.

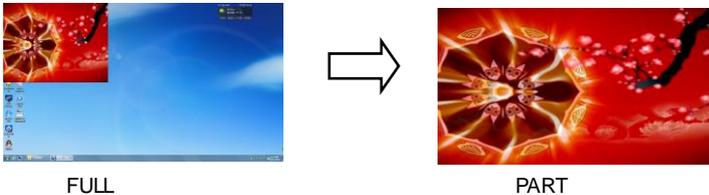


Figure9-Capture

## Setting:

1. Select the channel you want to capture part of the screen, such as DV11;
2. To enter the menu settings unequal splicing parameters (equivalent to capture part of the screen parameters), the total pixel values and the start value is adjusted by visual inspection is completed.

Default Menu →**Main Menu** →**FUNC** →**Partial function** →**no**

Default Menu →**Main Menu**→ **FUNC**→ **Partial function** →**Partial mode**→ **user**

Default Menu →**Main Menu**→ **FUNC**→ **Partial function**→H Total (**User defined**)

Default Menu →**Main Menu**→ **FUNC**→**Partial function**→V Total (**User defined**)

Default Menu →**Main Menu**→ **FUNC**→**Partial function** →H Start (**User defined**)

Default Menu →**Main Menu**→ **FUNC**→**Partial function**→V Start (**User defined**)

## PIP

PIP is the use of digital technology to display two programs on the same screen. That is the normal viewing of the main screen, while the insertion of one or more sub-picture compressed in order to appreciate the main screen while monitoring other channels. When operating in PIP mode, the user must provide at least two of the input signal, and the PIP menu settings accordingly. PIP function can

be realized outside-picture effects, namely POP, PBP is a special application of the PIP.

Steps:

(1) Turn on PIP, there are two ways to open, one by **PIP** button, the second is in the menu system

Default Menu → Main Menu → PIP → PIP mode → PIP

NOTE: When the PIP is enabled, cut and fade function can not be used.

(2). Set the input source, the processor of the main channel and PIP channel, the same type of input source can not be achieved PIP function, so users can refer to the following table PIP source conflict table.

Default Menu → Main Menu → PIP → PIP setup → Input

Table 3 - PIP Source conflict table

Main Channel												
		AV1	AV2	AV3	AV4	VGA1	VGA2	DVI1	DVI2	HDMI1	HDMI2	SDI
PIP Channel 1	AV1	✓	×	×	×	✓	✓	✓	✓	✓	✓	✓
	AV2	×	✓	×	×	✓	✓	✓	✓	✓	✓	✓
	AV3	×	×	✓	×	✓	✓	✓	✓	✓	✓	✓
	AV4	×	×	×	✓	✓	✓	✓	✓	✓	✓	✓
	VGA1	✓	✓	✓	✓	✓	×	✓	✓	✓	✓	✓
	VGA2	✓	✓	✓	✓	×	✓	✓	✓	✓	✓	✓
	DVI1	✓	✓	✓	✓	✓	✓	✓	×	✓	✓	✓
	DVI2	✓	✓	✓	✓	✓	✓	×	✓	✓	✓	✓
	HDMI1	✓	✓	✓	✓	✓	✓	✓	✓	✓	×	✓
	HDMI2	✓	✓	✓	✓	✓	✓	✓	✓	×	✓	✓
	SDI	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

(3) Size and position parameters, specific parameters set by the user, the user can also adjust the PIP border transparency.

Default Menu → Main Menu → PIP → PIP setup → H Start

Default Menu → Main Menu → PIP → PIP setup → V Start

Default Menu → Main Menu → PIP → PIP setup → Width

Default Menu → Main Menu → PIP → PIP setup → High

## Keying

Keying is an extension of the PIP function, which is accomplished by the PIP channel input color image minus the red, green, blue, black, and white colors to get results. Keying function can be used for some simple effects processing and overlay subtitles. Easy setting operation, please refer to the setup.

For example, Figure 10A is a picture-channel playback of video for PPT, 10B is the main input channels, 10C is a matting effect.



Figure 10A-PIP Channel



10B-Main Channel



10C-Output

Setting step:

Default Menu → Main Menu → PIP → PIP mode → Keying

Default Menu → Main Menu → PIP → Keying Setup → Input → DVI

Default Menu → Main Menu → PIP → Keying Setup → Chroma Key → Black

## MODE

Preset is to facilitate users to use quickly recall commonly used in a variety of scenarios, reducing the user when the operation is repeated complicated settings, improve work efficiency. Each contains a preset mode signal channel mode, the display mode of various parameters, image quality settings. Processor provides 4 preset save space, here to save and recall preset mode operation.

### Save Mode

When the user adjust all the parameters, to enter to save the current preset

Default Menu → Main Menu → FUNC → Preset → Save Mode → Preset [1] → confirm

In saving mode submenu have Preset [1] to Preset [4], four storage space, the user can choose.

Storage space is empty, the right of the status display for ☆, when the state has been saved had the right argument appears as ★. Users can also cover save.

### Recall Mode

Recall preset parameters have two operating modes, keyboard shortcuts and menu calls

1. Use **MODE** button

In the default menu state, press the **MODE** button to call up the menu to enter the preset scene. Use the knob buttons to select the saved preset scene, press **MENU** button to confirm.

2. Setting in menu

Default Menu → Main Menu → FUNC → Preset → Read Mode → Preset [1] → confirm

## Key Lock

key lock function for the user in a complex environment to avoid misuse or others inadvertently

### Lock

Enter the system menu, enable key lock function

Default Menu → Main Menu → SYSTEM → Keypad Lock → on

### Unlock

Press the **ESC** button last 2 second, processor automatically unlocked.

## VGA Adjust

Under normal circumstances, switch to the VGA input source, the processor will automatically correct input source color, image size and position. If the processor does not automatically corrected successfully, the user can manually correct implementation.

### 1. Use AUTO to adjust

When the input source is switched to the VGA input, VGA button is pressed again, the system will self-correct input source.

### 2. Enter menu to adjust

Switching to the VGA input state, enter the menu

Default Menu → Main Menu → SYSTEM → VGA Setting → Auto Adjust → confirm

If automatic calibration is unsuccessful, you can try manually correct

Default Menu → Main Menu → SYSTEM → VGA Setting → H Position

Default Menu → Main Menu → SYSTEM → VGA Setting → V Position

Default Menu → Main Menu → SYSTEM → VGA Setting → H Clock

Default Menu → Main Menu → SYSTEM → VGA Setting → V Clock

NOTE: When no VGA signal input, the system prompts not correct.