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Video {processing} for any scale

M1
Quick Start

- ● Modular design throughout
- ● Support hot swap modules
- ● Preview 4 inputs
- ● Seamless switching between PST and PGM
- ● Multiple audio outputs available
- ● 2 video layers plus   additional layers for OSD,LOGO,STILL
- ● Mask feature for forground layer including support
     for user defined mask
- ● Compatible with all display types
- ● Genlock Y In
- ● Save Presets and settings on board and to USB
- ● 14 Transition Effects on the T-bar and TAKE button

CONTENTS

Product Introduction

M1 is All-in-one scaling and vision mixing Tools.

M1 can be up-down and cross-convert any input signal to the output, support 2 layers seamless switching from preview to PGM. Supports Integrated audio also.

Operator can run M1 by its touch panel and its operations control panels, preview all the inputs and Preset by its PVW HDMI output ports, and seamless switching on its PGM program output port, with seamless transition efforts including Fade or Wipe.

M1 is not only a traditional video mixer, but also a video scaler by its integration pixel scale engine for the modern displays, including LED display, which user doesn't need to have a video scaler behind.

And M1 is fully modular base to meet different flexible configuration requirement.

System Connection

RGBlink video processing solutions provide a range of flexible configuration options for professional applications.
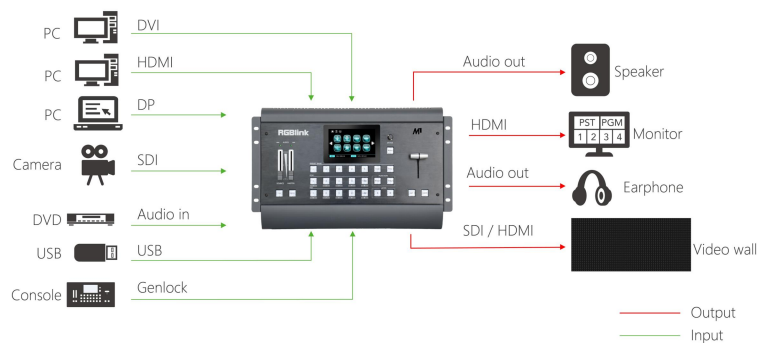
M1 System Connection Diagram

Packing Configuration

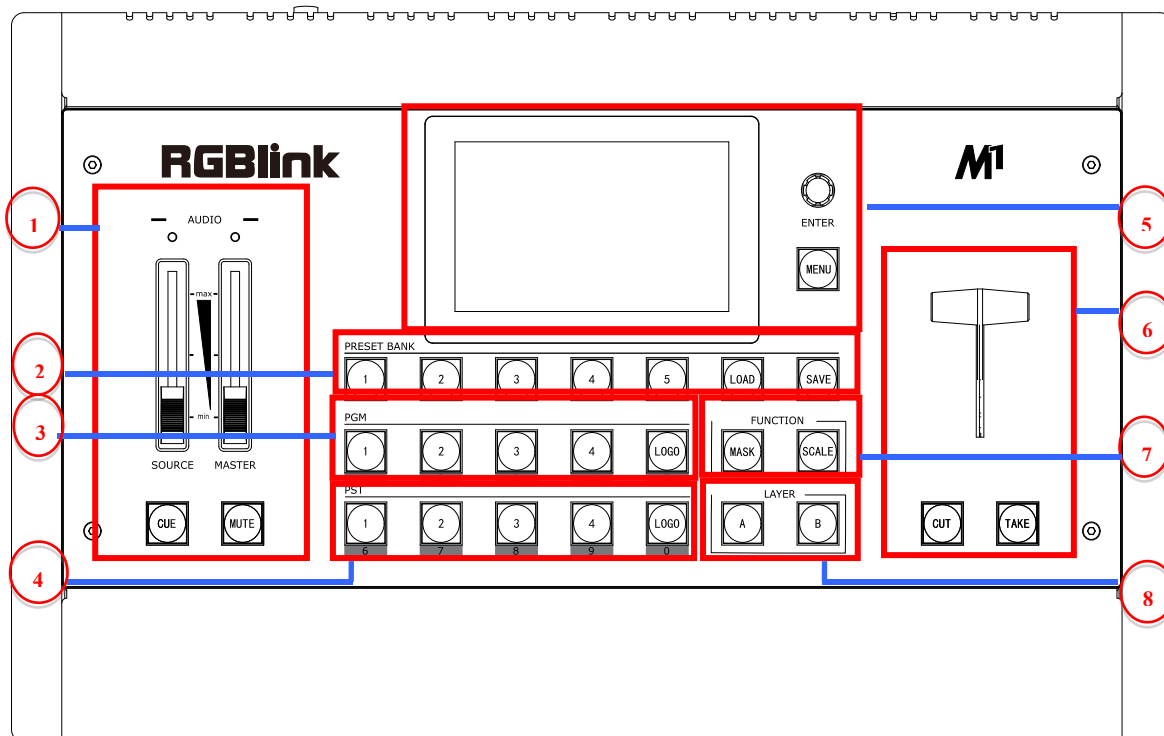| AC Power Cable	USB Cable	HDMI to DVI Cable	Network Cable

Cable DVI a HDMI

Note:

AC Power Cable supplied as standard according to destination market.

Front Panel

Panel Instruction			
1	Audio adjust area	5	Menu and LCD display area
2	Audio input area	6	Switching mode area
3	PGM output area and Logo button	7	Function area
4	PST output area and Logo button	8	Layer selection area

Audio adjust area

1	**SOURCE FADER** Source fader adjust 4 input signals' voice separatly to same value, each signal request to save. Remark: adjustment may not work if push it quickly **MASTER FADER** MASTER FADER is an amplification-factor of all channel invoice, come true Source value multiply by current Master value Remark: adjustment may not work if push it quickly **CUE** CUE is to switch PST audio preview or PGM audio preview. **MUTE** MUTE is for single audio output/Mix audio output

Audio input area

2	**SAVE** To adjust M1 audio input and output. **LOAD** Press load button once to lock audio; press load button for 3 seconds to factory reset. **1/2/3/4/5** The button 1/2/3/4/5 is to select audio input.

PGM output area and Logo button

3	**LED INDICATOR** The button 1/2/3/4/LOGO is lit when the signal or background input is selected for use. **PGM AREA** For indicating, user can not change the channel or set the size or position in PGM area. **LOGO** For fade out to black softly **1/2/3/4/5** Each button is numbered and can be used as direct number entry when values such as resolution and size.

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PST output area and Logo button

4	**LED INDICATOR** The button 1/2/3/4/LOGO is lit when the signal or background input is selected for use. **PST AREA** For indicating, user can not change the channel or set the size or position in this area. **LOGO** For switching from PGM to test pattern. **6/7/8/9/0** Each button is numbered and can be used as direct number entry when values such as resolution and size. **PST AREA** For indicating, the button is lit when output the signal in PST channel. For selecting, push any button to switch the PST signal. For editing, (button light is lit -- the channel is used but can not be edited, button light is flashing -- the channel can be edited, button light is off -- the channel is not selected.

Menu and LCD Display Area

5	**MENU** Menu and exit reuse button. **SELECT/ENTER** Confirmation button. **LCD DISPLAY** Displays current status of the product, and for feature selections provides interactive choices in conjunction with buttons on the Rear Panel.

Switching Mode Area

6	**CUT** Zero delay switching. **TAKE** Seamless switching with transition effects. **T-BAR** WIPE and mix switching.

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Funtion Area

7	**MASK**	
	Choose the button to full screen the selected layer	
	SCALE	
	Press this button to set PIP in PST window.	
	Remar: Press the button to open PIP, select A/B layer to close PIP.	

Layer Selection Area

8	**A/B**	
	For adding or deleting the layer, the button light is lit when add the layer, off when delete the layer, and flash when select the layer.	

Rear Panel

Input Interface

1	Optional Input Module 4 input card slots, supports input signals including DVI, HDMI, USB, SDI. Each DVI module supports 1 DVI-I input and compatible CVBS, VGA,YPbPr. Each HDMI module supports 1 HDMI-A input Each USB module supports 1 USB-B input and 1 USB backup. Each SDI module supports 1 SDI input and 1 SDI loop out.

Output Interface

2	HDMI PVW Output
3	HDMI PGM Output
4	SDI PGM Output (Optional, not standard)

Audio Area

5	Audio In
	Audio Out
	Audio Out (Earphone)

Control Interface

6	Genlock input BNC port
7	LAN port RJ-45
8	USB port USB-A
9	TALLY Light

Power Connection

10	Power Switch
11	AC 85-264V Max 65W, IEC-3

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Using Your Product

Menu Structure

The menu structure is shown on the LCD Screen and in the figure below:
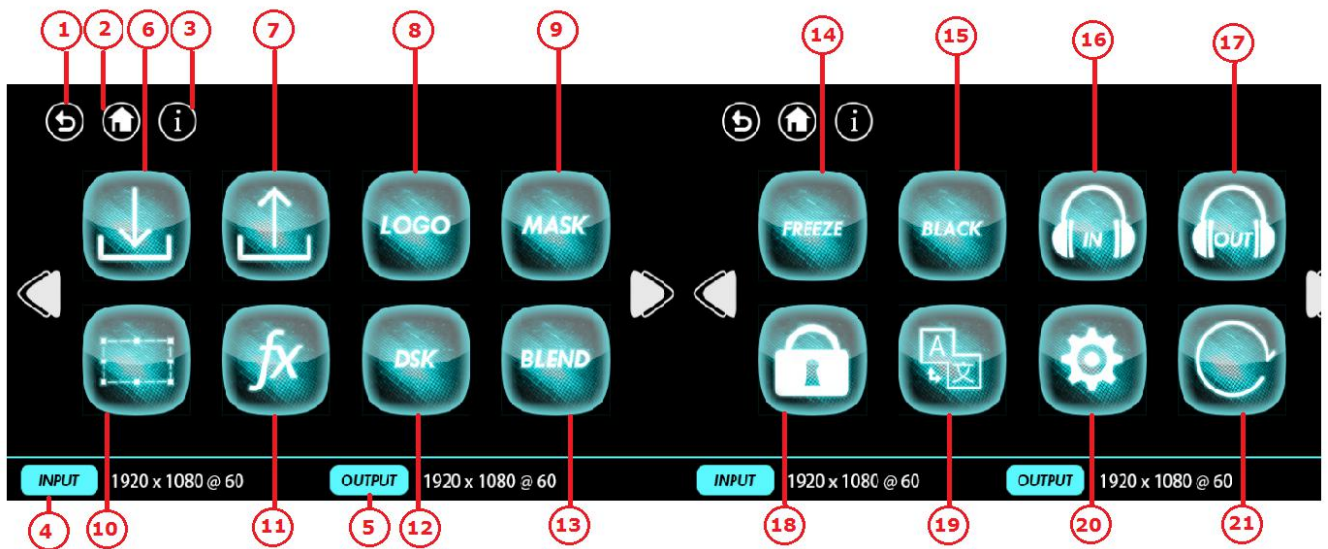
LCD Touch Screen Menu Instruction			
1	Return Button	12	DSK
2	Homepage	13	BLEND
3	Information Page	14	FREEZE
4	Input Resolution Display	15	BLACK
5	Output Resolution Display	16	Audio In
6	Input Menu	17	Audio Out
7	Output Menu	18	Lock Rear Panel
8	LOGO	19	Language/语言
9	MASK	20	System
10	Scale	21	Factory Reset
11	Transition Effect		

Menu Tree (Standard Version)

Input	Output	Audio In	Language/语言	System	Factory Reset
Input 1	Output Format	Audio Input 1	English	Transition	Factory Reset
Input 2	Output Setting	Audio Input 2	中文	Version	Factory Reset, Save IP
Input 3	External Sync	Audio Input 3		Ethernet	
Input 4		Audio Input 4		T-Bar Correction	
				Fader Correction	
				Key Board Test	
				Advanced	
				Camera	
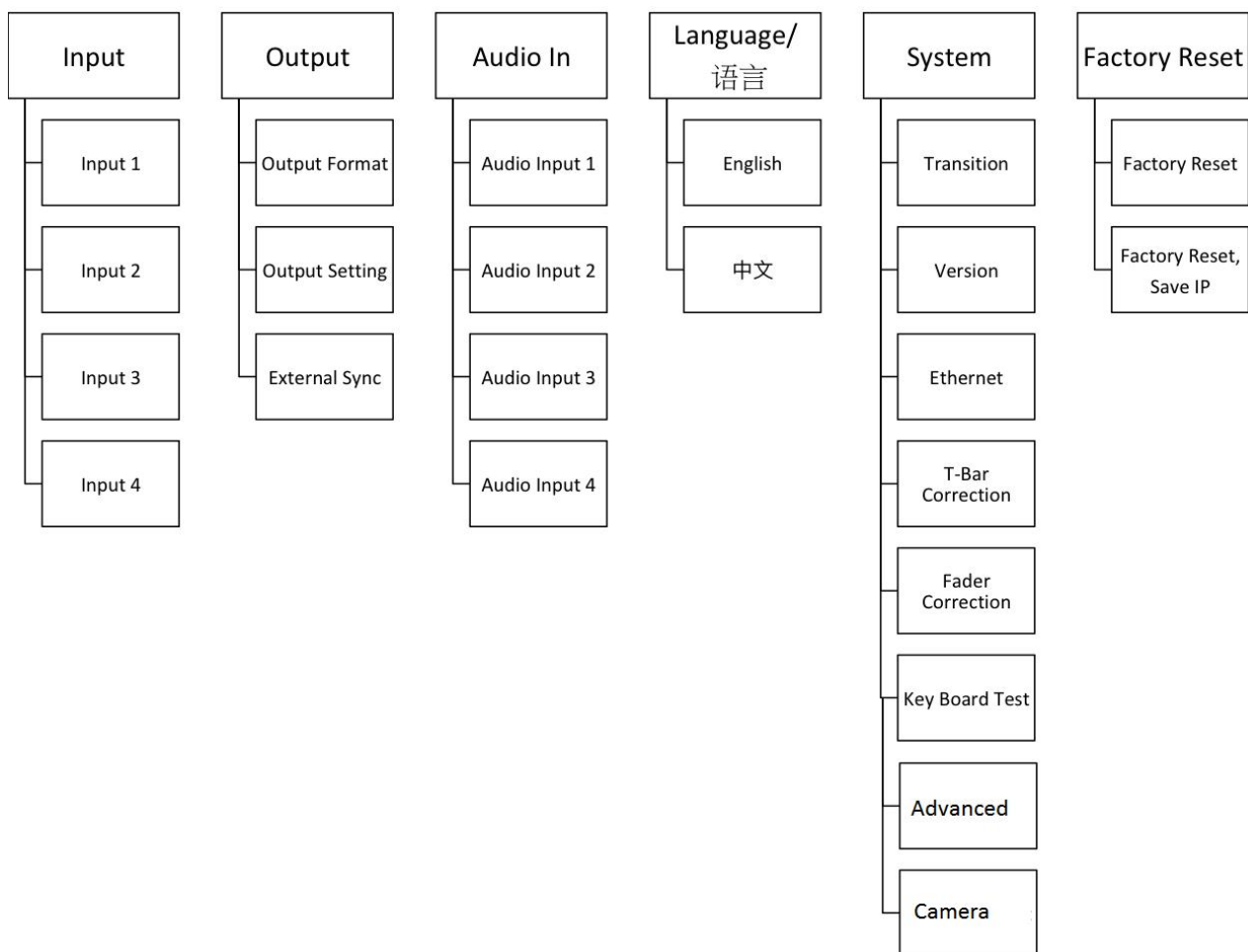
Customized version for broadcasting

Input	Output	Advanced	System	Scale	Audio	Fx	Dsk	Logo/Still	Mask	Information
HDMI	Output Format	Freeze	Transition							
SDI	Output Setting DE Adjust	Black	Version							
DVI	External Sync	Blend	Ethernet							
USB	Test Pattern	Factory	T-Bar Correction							
		Lock panel	Fader Correction							
		Language	Key Board Test							
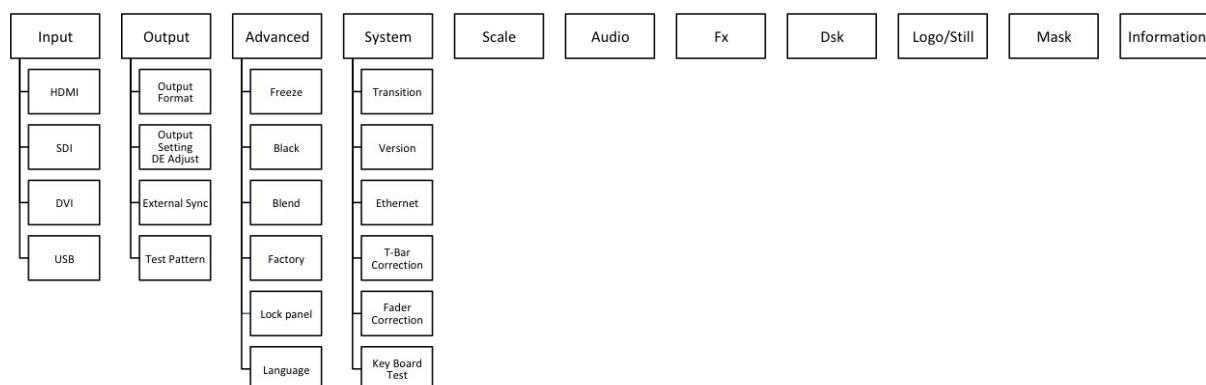
PST Mode

M1 supports 1 HDMI preview output, and it supports the functions as below:

Signal Selection

Push any button in PGM or PST output area, for example, push the button [5], the border of signal 5 will change to yellow, and the signal in PGM monitor will be changed to signal 5.

Add or Delete Layer

Push any button of [A] to [B] in Layer Selection Area to add or delete the layer.
Add layer: The light is lit.
Select layer: The light is flashing.
Delete layer: The light is off.

Freeze the Layer

Push the [FREEZE] button in LCD screen, Select as needed to freeze layer A, layer B or 2 layers, push the button<Live> , the layer is live.

<div style="background:black;color:cyan;text-align:center">

FREEZE A   FREEZEB   FREEZE ALL   LIVE

</div>

2 Layers Presets

1. Push A or B button in Layer selection Area to select 1 or 2 layouts, including 1P, PIP.
2. User can adjust the position, size for the selected layer, and set DSK, BLEND and MASK, some function coming soon.

Set the Position

1. Push any button of [A] to [B] in Layer Selection Area, the light is red lit when the layer is selected.

2. Push the [SCALE] button in Layer Adjustment Area or on the LCD screen, and enter to the menus as

   follows:

->H Pos	465
V Pos	1248
H Size	956
V Size	540
Reset	>>

Use the rotary knob to adjust the position of the layer.

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Scale and Crop the Layer

1. Push any button of [A] to [B] in Layer Selection Area, the light is flashing when the layer is selected.

2. Touch ![icon] on LCD screen, and enter to the menus as follows:

Use the rotary knob to adjust the size of the layer.

If select <Crop>, it will enter to the menus as follows:

Crop H Pos: Crop the horizontal position.

Crop V Pos: Crop the vertical position.

Crop H Size: Crop the horizontal size.

Crop V Size: Crop the vertical size.

Reset: Reset crop if image quality distorts by improper operation.

-> Crop H Pos	0
Crop V Pos	0
Crop H Size	1920
Crop V Size	1080
Reset	>>

DSK Setting

1. Firstly, enable the 2 layers function.

2. Push [MENU] button, and enter to the menu items. Turn the rotary knob, and select <DSK> option in LCD screen, rotary the knob or touch the <DSK> to confirm.

Preset	Black BlackGround
Mode	Key In
Alpha	128
Red Min	0
Red Max	208
Green Min	0
Green Max	208
Blue Min	0
Blue Max	208
DSK	ON

Preset: Can select user, black background, white background, red background, green background and blue background.

Mode: Select Key In or Key Out.

Alpha: The adjustment range is between 0~128.

Red Min: The adjustment range is between 0~255.

Red max: The adjustment range is between 0~255.

Green Min: The adjustment range is between 0~255.

Green Max: The adjustment range is between 0~255.

Blue Min: The adjustment range is between 0~255.

Blue Max: The adjustment range is between 0~255.

DSK: Can select enable or disable the DSK function.

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Transitions Setting

1. Touch the transition buttons in LCD screen, M1 supports 15kinds of wipe modes:

Touch the transition button ![icon] , user can select ←[]→.

Touch the transition button ![icon], can select L→R.

Touch the transition button ![icon], user can select T→B.

Touch the transition button **FADE**, can select fade.

Touch the transition button ![icon], user can select LT→RB.

Touch the transition button ![icon], user can select ←+→.

Touch the transition button ![icon], user can select L←R.

Touch the transition button ![icon], user can select B→T.

Touch the transition button ![icon], user can select L←M→R.

Touch the transition button ![icon], user can select T←M→B.

Touch the transition button ![icon] , user can select →+←.

Touch the transition button ![icon], user can select III→.

Touch the transition button ![icon], user can select →[]←.

Touch the transition button ![icon] , user can select ←O→.

Touch the transition button ![icon], user can select →O←.

2. Push the [TAKE] button, or use T-bar switcher to switch the image to program with selected wipe.

Audio In Setting

1. Push [MENU] button, and enter to the menu items. Turn the rotary knob, select <Audio In> option in LCD

screen, rotary the knob or touch the ![icon]directly to confirm.

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2. Select the Audio input 1-4 for setting :

Audio Source Sel	Embedded
Audio Gain	0
Audio Delay	0 ms

Audio Source Sel: Embedded or External

Audio Gain: The adjustment range is between 0~100

Audio Delay: The adjustment range is between 0~20ms

Audio Out Setting

1. Push [MENU] button, and enter to the menu items. Turn the rotary knob, select <Audio Out> option in LCD screen, rotary the knob or touch the directly to confirm.

2. Select the Audio Output for setting :

Audio Source Sel	Layer A
Audio Gain	0
Monitor Select	0
Mute	On

Audio Source Sel: Select Layer A or Layer B

Audio Gain: The adjustment range is between 0~100

Monitor Select: Select PST or PGM

Mute: Select On or Off

BLEND Setting

1. Push [MENU] button, and enter to the menu items. Turn the rotary knob, select <BLEND>option in LCD screen, rotary the knob or touch the directly to confirm.

Layer Select	Layer A
Blending Mode	3D Frame
Blending Width	0
On/off	On

Layer Select: Select Layer A or Layer B

Blending Mode: Including 3D Frame, Pure Color Frame, Outside, Inline 4 modes

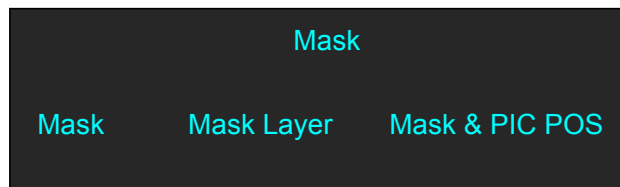**Blending Width:** The adjustment range is between 1~90

On/Off: Select On or Off

Mask Setting

1. Push [MENU] button, and enter to the menu items. Turn the rotary knob, select <Mask>option on LCD screen,

rotary the knob or touch the [MASK] directly to confirm.

```
                         Mask


        Mask        Mask Layer      Mask & PIC POS
```

2. Select the Mask for setting :

```
                         Mask
        Heart                          0
        Oval                           0
        Round                          0
        Crescent Left                  0
        Star                           0
        Diamond                        0
        Custom 1                       0
```

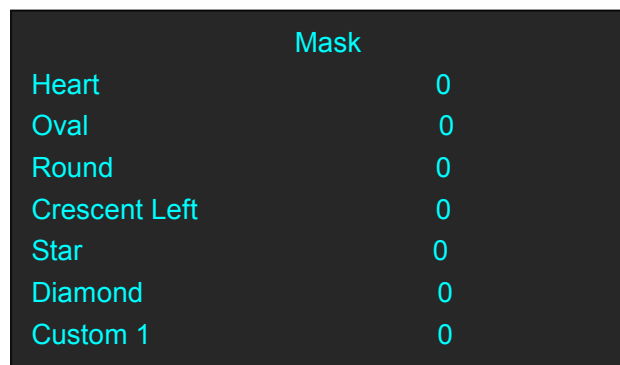**Customs:** Coming soon

Custom LOGO

1. Push [MENU] button, and enter to the menu items. Turn the rotary knob, select <LOGO>option in LCD screen,

rotary the knob or touch the [LOGO] directly to confirm.

```
                         Logo


        Capture Logo    Logo Present    Delete Logo
```

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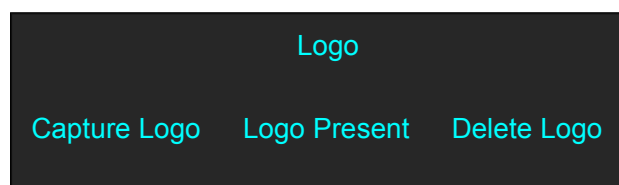
PGM Mode

1. Switch the edited PST image to program by pushing the [CUT], [TAKE] button or T-bar, and then the PGM image will return to PST state, which can be edited.
2. There are 1 HDMI output and 1SDI output for program, and maximum realize 1920x1080 output.

Switching Mode

1. T-BAR switch: Switch the PST image to program with wipe and fade by T-bar.

2. CUT switch: Seamless switch the PST image to program by pushing [CUT] button.

3. TAKE switch: Switch the PST image to program with wipe and fade by pushing [TAKE] button.

4. CUE: Switch PST audio preview or PGM audio preview by pushing [CUE] button.

5. MUTE: Switch single audio output/Mix audio output.

Set the Output Parameter

1. Select the Output Resolution

Push the [MENU] button, and enter to the menu items, turn the rotary knob and select <Output> or :

Push the rotary knob to confirm, and enter to the menus as below:

```
Output Format
Output Setting
External Sync
Test Pattern
```

<Output Format> is the default option, push the rotary to confirm. Turn the rotary knob, select the output resolution according to actual need.

Customs Output Resolution

Continue the above operation, setting the HActive, VActive, Freq, and select <Set>, confirm the Set setting to Yes.Then the LCD screen shown as below:

```
Standard          C_1024×768@60
Custom Format          On
HActive               1024
VActive               768
Freq                  60
Set                   >>
```

2. Output Setting

Push the rotary knob or touch the button <Output setting> to confirm, and enter to the menus as below:

```
PST                DVI
PGM                DVI
SDI Level          Level A
```

PST and PGM can be choose DVI or HDMI as output port, SDI Level choose Level A or Level B.

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3. External Sync

```
                    External Sync
    External                 Off
    Input                    No Input
    Format                   1920x1080 @60
```

External Including option Off and On,

Input will shown as actual input resolution.

Format support choose 2 default resolution: 1280x720 @60 & 1920x1080 @60.

4. Test Pattern

```
                    Test Pattern
    Output                   PST
    Test Pattern             Off
    Red                      0
    Green                    0
    Blue                     0
```

Output: Select PST or PGM

Test Pattern: Select Off, Color Bar, Solid Color

Red: The adjustment range is between 0~255

G**reen:** The adjustment range is between 0~255

Blue: The adjustment range is between 0~255

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Using Black Out

Black out description:

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

M1 provides black effect processing for program output and preview output, with cut black effect. Operation is as below:

Touch the [BLACK] button or key, then the program output is cut to black.

The effect is shown as below:

Lock Front Panel

1. Push the [MENU] button, and enter to the menu items, turn the rotary knob and select ![lock icon], enter to the Lock Front Panel, if select "on", then LCD screen shown follows:

> Locked Panel!
> Press Menu key For 3 seconds to Unlock!

2. Push <Menu>over 3 seconds then unlock the panel.

Language/语言

1. Push the [MENU] button, and enter to the menu items, turn the rotary knob and select ![language icon], enter to the language/语言 selection interface.
2. Select "ENGLISH"或"中文" as needed

System Setting

1. Push the [MENU] button, and enter to the menu items, turn the rotary knob and select ![settings icon], enter to the system setting interface.

> Transition
> Version
> Ethernet
> T-Bar Correction
> Fader Correction
> Key Board Test

2. Setting parameter as needed:

Transition: Trans Mode can be selected by "Stay" or "Swap". Trans Times setting range between 0-10S.

Version: Shown Device version information for main control board.

Ethernet: Shown Ethernet Information.

T-Bar Correction: Shown T-Bar correction steps.

Fader Correction: Shown Fader Correction steps.

Key Board Test:

   LED Light Test select "On", LED light for each key on front panel will be lit one by one, and KEY Value shown "MENU".
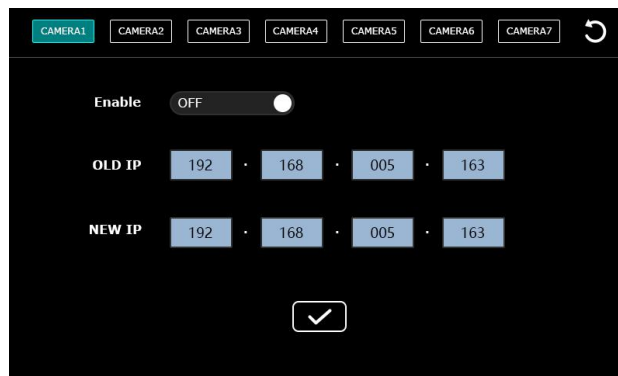
   LED Light Test select "Off", LED light for all keys will be off, and KEY Value shown "MENU".
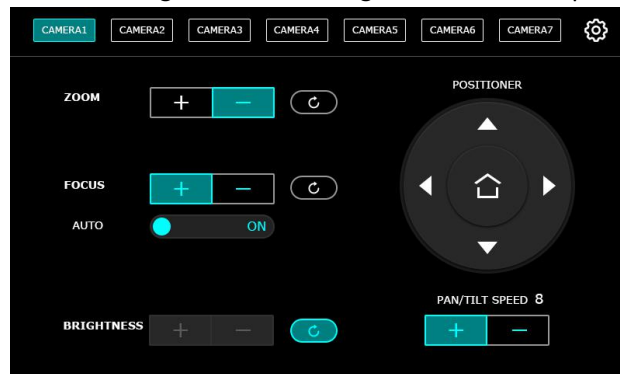
Control Camera

   M1 upgraded to V1.56 can support camera control. Here are the steps:

1.   Enter <System> and click camera icon

2.   Set IP address for camera

3.   Set camera parameters including Zoom, Focus,Brightness, Positon, Speed.

4.   Save camera position. Push <SAVE> button on M1 and rotate knob to choose page. There are 4 pages and each page includes 5 Bank. Push 1,2,3,4,5 button on Preset area to confirm Bank. For example, save camera setting to Page 2, Bank 5, just choose page 2 and push button 5 on Preset area.

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Factory Reset

1. Push the [MENU] button, and enter to the menu items, turn the rotary knob and select , enter to the factory reset interface.
2. Select "Factory Reset" or "Factory Reset, Save IP" as needed, then will clean up the before setting, return to default setting.

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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