




# MIG-EC90 Event Console

User manual V1.0

 Before using this video processor, please read this manual carefully and keep it for reference in the future.

## MAGNIMAGE

All-in-one 4K Event Console

## Statement

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The product specifications and information mentioned in this manual is just for reference, will not give prior notice if there is any update. Unless there is a special agreement, it is just used as guidelines. All the statements or information in this manual shall not constitute any form of guarantee.

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# Briefs

Thanks for your purchasing our MIG-EC90 event controller. Do hope you can enjoy the experience of the product performance. The design of the LED video processor conforms to international and industry standards. But if with improper operation, there will be a personal injury and property damage. In order to avoid the danger, please obey the relevant instructions when you install and operate the product.

## Trademark credit

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- VESA is a Video Electronics Standards Association's trademark.
- HDMI, HDMI mark and High-Definition Multimedia Interface are all from HDMI.

Even if not specified company or product trademarks, trademark has been fully recognized VESA is a Video Electronics Standards Association's trademark.

## Features

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- 2 Program output + 1 Multi-preview + 2 AUX outputs
- 4K×2K@60Hz Program output and AUX output
- Customized input and output resolution
- Support HDMI 2.0, DP 1.2 & 12G SDI inputs
- 8 standard 4K×2K@60Hz input
- Support expand 2 input modules, each one has 2 inputs
- Extended board support DP1.2, HDMI2.0, SDI, DVI
- Support HDCP1.4&2.2
- 4: 4: 4 processing technology
- Internal multi-layer processing allows 6 layers seamless switching
- Support layer clip, crop and zoom
- Support layer clone and shadow function
- Support save & load up to 3 logos
- Support layer mirror and shadow effect
- Support virtual output setting
- Support layer box effect
- Layer and Logo support chroma-key
- Save & Load 20 user presets
- Support touch screen, rotary knob control and T-BAR switch
- Support USB upgrade
- Support customized Multi-preview window and input rename

## Safety instructions

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- The power input voltage range of the product is 100~240V AC/60HZ, please use the correct power supply accordingly.
- When you need to connect or pull out any signal or control cables. Please confirm that all the power supply cords have been pulled out ahead.
- When you need to add hardware device for the machine, make sure all of the signals and power cables have been pulled out ahead.
- Before you operate any hardware, please turn off the machine' s power, release static electricity from your body by touching the ground surface.
- Please use the machine in clean, dry and ventilated environment, do not use it in the high temperature or humidity environment.
- The product is the electronic product; please stay away from the fire, water and of which is inflammable and blast, dangerous.
- This product is with high pressure components, please do not open the case or repair the equipment by yourself.
- As there is exceptional condition with smoke, ill-smelling, please turn off the switch at once and contact with the dealers.

Specification	
Input power supply	100 ~ 240VAC, 50/60Hz
Power consumption	120W
Overall dimension(L×W×H)	600×456.4×145.8 Unit mm(L×W×H)
Net Weight	13.5Kg

# Function introduction

## Brief

---

MIG-EC90 is a 4K seamless switcher which combines input, output, switching and controlling in one machine. Based on its 4K/60Hz 4:4:4 processing technology and matrix design, this switcher is able to manage and switch 4K video freely.

MIG-EC90 is equipped with a touch screen, which supports fast menu browsing and parameter adjustment the T-bar and the rotary knob can adjust the parameters of the layer precisely. It is a indispensable event controller with small size, powerful function and easy use in the video switching domain .

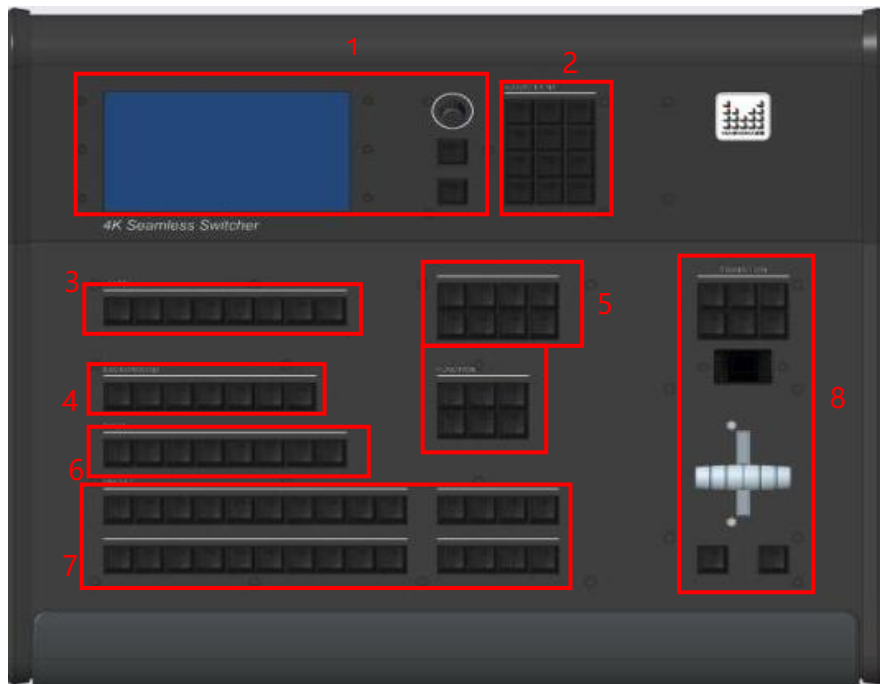
There are abundant input and output ports:

Input: DP 1.2×4 and HDMI 2.0×4, 12G SDI with EDID function.

Output : 2 Program outputs, 1 Multi-preview and 2 AUX outputs, each one support 4096 × 2160@60Hz and customized output resolution. The Multi-preview is fixed 1920 x 1080@60Hz.



# The front panel

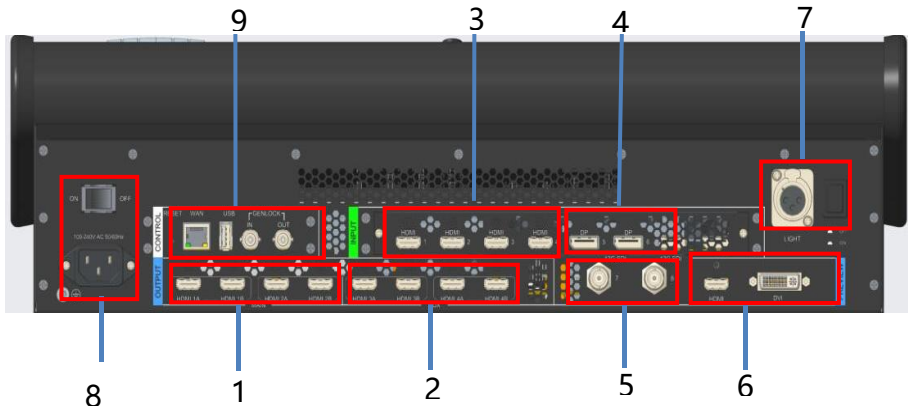


Button instruction		
1	MENU area	Include touch screen, the rotary knob, OK button and return button to adjust parameters and operate menu
2	ADJUSTMENT area	Number buttons to adjust parameters
3	LAYER area	Choose and operate layer area
4	BKG area	Choose and operate BKG area
5	FUNCTION 1~2 area	Function area
6	INPUT area	Choose input signal area
7	PRSET area	Choose and operate preset area
8	TRANSITION area	Include T-bar and buttons to switch function setting

## The rear panel

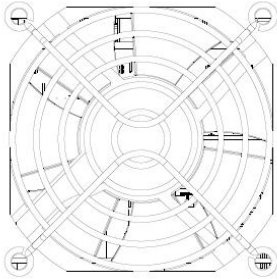
---

MIG-EC90 standard configuration:



- 1- Program output 1-2, with copy backups
- 2- AUX output 1-2, with copy backups
- 3- Input 1-4, HDMI 2.0\*4
- 4- Input 5-6, DP 1.2\*4
- 5- Input 7-8, 12G SDI\*2
- 6- Multi-preview output
- 7- LED light and switch
- 8- Power port and switch
- 9- LAN: Control the machine
- 10- USB: MIG-EC90 software upgrade  
Genlock in & out

## Other



The fan, power port and switch

## Technical specifications

Standard inputs		
Port	Quantity	Resolution
HDMI 2.0 (1-4)	4	3840×2160/60Hz and EDID management
DP 1.2 (5-6)	2	3840×2160/60Hz and EDID management
12G SDI (7-8)	2	3840×2160/60Hz

Output		
Port	Quantity	Resolution (single output)
PROGRAM HDMI(1-2) A-B	2×2	1920×1080/60Hz      3840×1280/60Hz
		4096×2160/60Hz      1920×1080/59.94Hz
		3840×2160/30Hz      3840×2400/60Hz
		1920×1080/50Hz      4096×2160/30Hz
		3840×2160/50Hz      1920×1200/60Hz
		1920×2160/60Hz      4096×2160/50Hz
		3840×1080/60Hz      3840×2160/60Hz
AUX 1-2 HDMI(1-2) A-B	2×2	Customized resolution (optimized bandwidth) : Horizontal resolution up to 4352 pixels Vertical resolution up to 2176 pixels
PREVIEW HDMI&DVI	DVI×1 HDMI×1	1920×1080/60Hz

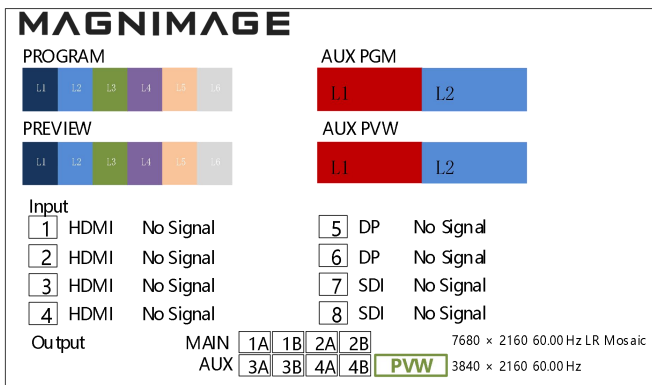
Remarks: 2×2 indicates 2 groups of output and 2 duplicate output ports in each group.

Control port	
RJ45×1	RJ45 interface to control MIG-EC90
USB×1	USB port to upgrade MIG-EC90
GENLOCK IN×1 OUT×1	Genlock port to keep synchronization between multiple units of MIG-EC90

# User menu

## Default status introduction

After turning on the power of MIG-EC90 event controller, the front panel of the LCD screen will display the opening interface in system start-up procedure, and the LCD screen will display the default status as below.




Here is the guidance:




Window	Description
PROGRAM & AUX PGM	Show the layer' s size, position and status of the PROGRAM. Notes: The PROGRAM frames will be not synchronous with the PREVIEW after turning on TAKE EDIT, but the PROGRAM output frames of the machine are synchronous with the PREVIEW.
PREVIEW & AUX PVW	Tell the layer' s size, position and status of the PREVIEW. The red frame indicates the selected layer and the white frame indicates the layer that is not selected
Layer 1-6	The color lump status corresponds with the layer1-6 in the preview.
Input 1-8	Tell the info of input type, resolution and refresh rate.
Output 1-4	Tell the info of output status, mosaic, resolution and refresh rate.

## Main menu introduction


The symbols listed in the below table will appear in the main menu , the specific meanings are as follows:


Icon	Explanation
	Return to the main menu or return to the previous menu


In the main menu, the user selects and adjusts each item by using the three buttons "OK" , "↶" and the knob or by touching the corresponding menu. The operation mode is as follows:


Operation	Button
Open the main menu	Press the "OK" button or press the "knob" by default
Selected each item	Rotate the knob to select each item or touch click on the corresponding menu
Adjust parameters	When the right end of the item is a number or option parameter, press the "knob" to select the parameter, or touch click  " "  " to adjust the parameter to be small or large, or touch the parameter and click in the pop-up numeric key input area. Parameter adjustment
Enter the next menu	When the right end of the item is the  " symbol, press the "OK" button or press the knob or touch to click the menu.
Process some function	Use the knob to select the item to be executed, press the "OK" button or touch to click the function.
Return to the previous menu	Press the "↶" button or touch the return icon
Confirm operation	In order to avoid wrong operation in reset operation, it is necessary to confirm operation or touch click with "OK" key.
Menu button appear to yellow box	Indicate knob selected,could move to next operation
Function menu word is yellow	Indicate this function menu is occupied
Function menu word is white	Indicate this function menu is not occupied

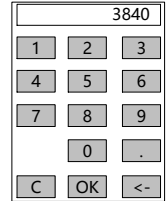
Numeric keypad description: In addition to any parameters that need to be modified, except press and rotate the knob, touch the left and right arrow keys to operate, it also clicks the corresponding parameter and pops up the numeric keypad on the screen to operate. 0 to 9 represent numbers,

: A decimal point

 : To exit the numeric keypad mod

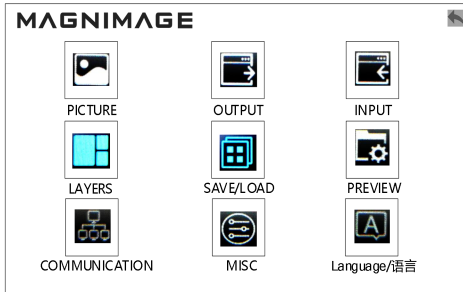
: Confirmation of the modified parameters

 : A backspace to delete the entered number. The numeric keypad is shown below.



## Main menu

In the default state, press “OK” or “Knob” to enter the main menu, and the LCD screen will show the details as below:



The main menu has nine sub menu items. Rotating the knob” to select the above listed nine sub menu title, the selected menu icon font color is yellow, selected, press “OK” button to enter the selected project, press “ ↩ ” to be back. Or touch the LCD screen enter correspond sub menu.

## Picture setting

**PICTURE** ↶

Bright LVL  ◀ OFF ▶

Main Layers Picture Setting ▶

AUX Layers Picture Setting ▶

Reset ▶

### Main output layer setting:

Layer1
Layer2
Layer3
Layer4
Layer5
Layer6 ↶

Brightness  ◀ 50 ▶

Contrast  ◀ 50 ▶

Color Temp  ▶

R  ◀ 128 ▶

G  ◀ 128 ▶

B  ◀ 128 ▶ Reset

Image setting sub menu is used to set this device output layer' s brightness level, Gamma value and the parameter for each layer.


Brightness level	Open or close this function, range from 0 to 16.
Gamma	Open or close this function, gamma range from 0.0 to 5.0.
Layer 1~6 picture setting	Brightness: range 0~100, the default is 50
	Contrast: range 0~100, the default is 50.
	Saturation: range 1~100, the default is 50.





	Layer 1~6 color	Divided into "4000K" , "5000K" , "6500" , "7500K" , " 8200K" , " 9300K" , "10000K" , "11500K" , "User" , total 9 options.
	temperature	Red range 0~225, the default is 128.
	setting	Green range 0~225, the default is 128.
		Blue range 0~225, the default is 128.
Layer 1~4 picture setting	Reset all the layers' picture parameters to default setting.	


Note: Arrow points to the menu that pops up for this option.


## Output setting


**OUTPUT** 

MAIN Resolution 


AUX Resolution 

MAIN Window 

AUX Window 

HDMI Output Config 

PGM 1, PGM 2, AUX 1, AUX2 output resolution:



1024×768 60Hz	1920×1200 60Hz	3840×2160 60Hz
1280×1024 60Hz	3840×1080 60Hz	3840×2400 60Hz
1920×1080 50Hz	3840×1280 60Hz	4096×2160 30Hz
1920×1080 59.94Hz	3840×2160 30Hz	4096×2160 50Hz
1920×1080 60Hz	3840×2160 50Hz	4096×2160 60Hz
<input type="button" value="Customized"/>		

### MAIN/Aux CUSTOMIZED RESOLUTION

H act

V act

FPS

Accept

Advanced

Cancel

Continue

3840

1 2 3

4 5 6

7 8 9

0 .

C OK <-

### MAIN RESOLUTION

Set Output Resolution To 1920x1080 60Hz

HDMI 1 Resolution 1920x1080 60.00Hz  
HDMI 2 Resolution 1920x1080 60.00Hz

0 19.20 19.20 38.40

HDMI 1 HDMI 2

Image Area 3840 x 1080 L+R MasaicV

Cancel

HDMI 1 Resolution 1920x1080 60.00Hz  
HDMI 2 Resolution 1920x1080 60.00Hz

0 19.20 0 19.20

HDMI 1 HDMI 2

Image Area 1920 x 1080 Copy

Accept

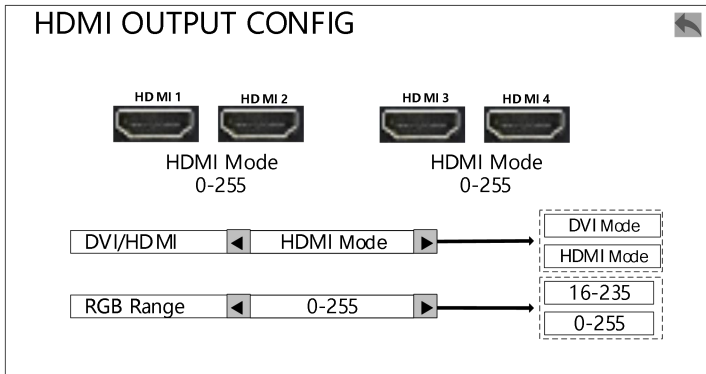
### AUX Resolution Setting

Set Output Resolution To 1920x1080 60Hz

Cancel

Accept

PGM 1, PGM 2, AUX 1, AUX2 HDMI output setting:



<p>Output setting is used to set the PGM 1-2 and AUX 1-2 output resolution and output format(Color space, output mode, color scale range).</p>	
<p>PGM 1, PGM 2, AUX 1, AUX 2 Output Resolution</p>	<p>MIG-EC90 series video switcher support 14 kind of fixed resolution and customized resolution(Fifth option), customized resolution, horizontal 4352 pixels, vertical maximum 2176 pixels, more detail, please check "Output indicators" .</p> <p>Note:</p> <ol style="list-style-type: none"> <li>1. When customize resolution out of range, it will pup up "resolution out of range" tips.</li> <li>2.Advanced menu within customize resolution could adjust H tot, output bandwidth and so on, please use with caution. If you accidentally modify this menu, you can reset the data by using fixed resolution.</li> </ol>
<p>PGM 1, PGM 2, AUX 1, AUX 2 HDMI Setting</p>	<p>Adjust the HDMI output format, including output mode (DVI mode and HDMI mode), RGB color scale range(16~235 and 0~255). The change of output format will make this machine more compatible with the receiving part.</p>

Note 1: For the MIG-EC90 main output and AUX output, A and B port output resolution is the same.

Note 2: The customized may not be a standard format, so some monitor will not recognize but LED screen will.

## Input Setting

### INPUT








Input Ports List 

Image Crop 

HDMI/DP RGB Range 

EDID 

Input source:

INPUT PORTS LIST		Page: 1/1  	
1	HDMI--4094×2176 60Hz	Total: 4294×2196	
2	HDMI--No Signal		
3	HDMI--No Signal		
4	HDMI--No Signal		
5	DP --4096×2176 60Hz	Total: 4294×2196	
6	DP --No Signal		
7	SDI --No Signal		
8	SDI --No Signal		

### Image crop:

**IMAGE CROP**

1 HDMI OFF	2 HDMI OFF	3 HDMI OFF	4 HDMI OFF
5 DP OFF	6 DP OFF	7 SDI OFF	8 SDI OFF

**IMAGE CROP**

Input Key 1 HDMI -3840×2160

Function OFF

Function ON

Reset

Match to Input

H Pos. ◀ 0 ▶    Width ◀ 1920 ▶    H Range ◀ 1920 ▶

V Pos. ◀ 0 ▶    Height ◀ 1080 ▶    V Range ◀ 1080 ▶

### HDMI/DP RGB Range

**HDMI/DP RGB RANGE**

1 HDMI AUTO	2 HDMI AUTO	3 HDMI AUTO	4 HDMI AUTO
5 DP AUTO	6 DP AUTO	7 SDI AUTO	8 SDI AUTO

### HDMI/DP RGB Range

Input Key 1 HDMI-3840×2160

## EDID Configuration

### EDID

1 HDMI 38.40×2.160 60.00Hz	2 HDMI 19.20×1.080 60.00Hz	3 HDMI 38.40×1.080 60.00Hz	4 HDMI 38.40×2.160 60.00Hz
5 DP 38.40×2.160 60.00Hz	6 DP 19.20×1.080 60.00Hz	7 SDI NO EDID	8 SDI NO EDID

### EDID

#### Input Key 1 HDMI

H Active ◀ 1920 ▶ V Active ◀ 1080 ▶

V Freq ◀ 60 ▶

H Blank ◀ 280 ▶ V Blank ◀ 45 ▶

1920		
1	2	3
4	5	6
7	8	9
	0	.
C	OK	<-

EDID setting	EDID can be set for all input signals except SDI, and the corresponding input signal can be selected to enter the EDID configuration menu.	
	Input Key 1 HDMI	The current input that is doing EDID setting
	H Active	Modify the horizontal resolution of EDID
	V Active	Modify the vertical resolution of EDID
	Reset	Reset the EDID parameter
	Accept	Write in EDID parameter
	Advanced	H Blank
V Blank		Modify the V Blank of EDID

**Note 1:** During EDID setting, the computer display mode should be set to extended mode.

**Note 2:** After setting EDID, please reboot if different computers or graphic output, or select the corresponding output resolution in the computer resolution option.

Input source list	Display this machine all input signals resolution information.		
Image crop	Can select any part of image from input signal to display		
	Input button 1 -4096 × 2176	Indicates the currently selected input signal and resolution	
	Function off	Turn off image crop function	
	Function on	Turn on image crop function	
	Reset	Reset the image crop parameters	
	Match input signal	Match image crop parameters and references to the resolution of the input signal	
	Image crop setting	H Pos	Set image crop horizontal position
		Width	Set image crop horizontal width
		H range	Set image crop horizontal range
V Pos		Set image crop vertical position	
Height		Set image crop vertical height	
	V range	Set image crop vertical range	
HDMI/DP RGB Range	To set the RGB range of HDMI or DP input. The default setting is "Auto" . The setting range is from 0-255 and 16-235, in order to fit the input.		
EDID configuration	Set the EDI configuration to select and send the the suitable input resolution.		



**Note 1:** After turning on image crop function, please match input signal.

**Note 2:** Crop parameter could be set by the knob or the number keyboard.

**Note 3:** The image crop function is to intercept the input signal and output it according to the layer size. Therefore, the size and position of the window crop by the image is limited to input signal window. The setting parameters in the above table are mutually restricted.

**Note 4:** When image crop function is open for the selected input signal, all the layers of this signal which are cropped image.

## Layer setting

Include MAIN layer and AUX layer.

LAYER CONFIGURATION

MAIN Layers

AUX Layers

MAIN LAYERS

Size/Position

Zoom

Layer Crop/Msak

Keying Settings

Border Effect

Layer Template

Size/Position

LAYER CONFIGURATION | Layer 5 Mirroring

Layer 1 Layer 2 Layer 3 Layer 4 Layer 5 Layer 6

OFF ON

Dot to Dot

Resize By H


Resize By V

Lock H+V

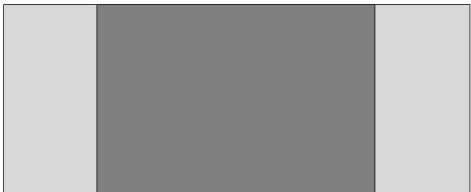
H Pos. 0 Width 3840

V Pos. 0 Height 2160

## Zoom

**ZOOM** 

Layer 1 Layer 2 Layer 3 Layer 4 Layer 5 Layer 6 Function OFF



Function ON


Reset

Match To Input

H Pos. ◀ 0 ▶ Width ◀ 1920 ▶ H Range ◀ 1920 ▶

V Pos. ◀ 0 ▶ Height ◀ 1080 ▶ V Range ◀ 1080 ▶

## Layer crop

**LAYER CROP/MASK** 

Layer 1 Layer 2 Layer 3 Layer 4 Layer 5 Layer 6

Lift ◀ 0 ▶


Right ◀ 0 ▶

Top ◀ 0 ▶

Bottom ◀ 0 ▶


Reset

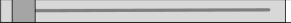


## Keying setting


**KEYING SETTINGS** 


Luma Keyer ▶

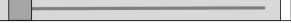


Color Keyer ▶

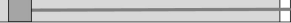


**LUMA KEYER** Display Pixels Of Layer 6 Above Luma 




Luma  0  


**KEYING SETTINGS** Quick Templates For Layer 6 



**COLOR KEYER** Layer 6 Color In Range Displayed 



R Low  0  

G Low  0  

B Low  0  

R High  0   Pixel Grab

G High  0 

B High  0 

# Boarder effect

### BORDER EFFECT

None Layer 1   None Layer 2   None Layer 3   None Layer 4   None Layer 5   None Layer 6

None   Line Border   Shadow

### BORDER EFFECT

8   None   None   None   None   None

Layer1   Layer2   Layer3   Layer4   Layer5   Layer6

None   Line Border   Shadow

Line Width   8

R   0

G   0

B   0

### BORDER EFFECT

16   None   None   None   None   None

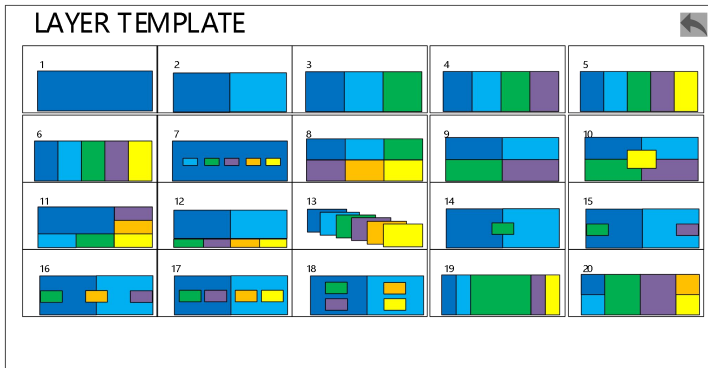
Layer1   Layer2   Layer3   Layer4   Layer5   Layer6

None   Line Border   Shadow

Shadow Width   16

Gray Level   15

# Layer template



Layer Configuration	Set the layer parameter, like size/position, zoom, crop, color key, shadow effect, layer scale.			
Size/Position	Layer 1~6	Select the layer		
	Close/Open	Layer open or close		
	Horizontal & vertical position	Set the layer horizontal and vertical position		
	Width and height	Set the layer width and height		
	Layer clone	Clone the current layer(Please review the notes below)		
	Mirror clone	Clone and mirror the original layer		
Zoom	Layer 1~6	Select the layer		
	Function on/off	Turn on/off the zoom function		
	Reset	Reset the layer zoom parameter		
	Match input signal	Match the layer zoom datum with the input resolution.		
	Horizontal & vertical position	Set the layer horizontal and vertical position		
	Width and height	Set the layer width and height		
	Horizontal and vertical datum	Set the layer zoom datum, the datum of every direction is the sum of position and size		
Layer Crop/Mask	Layer 1~6	Select the layer to be cropped		
	Left, right, up, down	Select the start position(4 direction) to crop		
	Reset	Reset the crop parameter		
Keying Settings	Luma Keyer	Remove the part of low brightness according to the brightness setting, leave the high brightness part.		
		Luma	Range 0~255, set a brightness value, remove the part of the image where brightness above the value	
		Edge	Range 0~4, boundary processing, the bigger the value, the stronger the effect.	
		Function on/off	Turn on/off the luma keyer function	
		Not exchange/exchange	Default not to exchange; after exchange, leave the low brightness part, remove the high brightness part	
	Color Keyer	Quick Templates	Multiple available templates	
			Background color mode	Remove the background color which is selected
			Text color mode	Leave the text color which is selected
			On/Off	Function on or off
		Edit	Customize color keyer, for the top layer, leave the image color within the setting, remove the image color beyond the setting	
			Bottom value of RGB	Set a bottom value of RGB, range 0~255
			Top value of RGB	Set a top value of RGB, range 0~255
			On/Off	Turn on/off the customize color keyer
			Swap / No Swap	Default not to exchange; after exchange, leave the low brightness part, remove the high brightness part

Color Keyer	Color Keyer	Edit	Pixel reading	A yellow frame will show up, move it to select the color should be remove.	
				RGB value	Display the RGB value which is selected
				Horizontal/vertical position	Change the horizontal/vertical parameter to move the yellow frame, in order to select the color.
				Color range fast setting	After click, remove the color in the frame; click again to close.
Boarder effect	Set the layer' s boarder effect				
	Layer 1~6	Choose the layer for setting			
	ON/OFF	Turn on or off the effect			
	Width	Set the width of boarder or shadow			
Layer template	There are 20 different templates for choosing.				

**Note1:** Only layer 5 support mirror effect.

**Note2:** Only layer 6 support chroma key. Chroma key and shadow effect does not allow to set at the same time.

**Note3:** There are more layer settings on PGM than AUX. On the AUX, you can scale and zoom the layer.



# Save and load

**SAVE/LOAD** Page: 1/2

Save Preset

Load Preset

Clear All Preset

Preset Source Preview

Background

**SAVE/LOAD** Page: 2/2

Save Include MAIN Included

Save Include AUX Not Included

## Save a preset

**SAVE PRESET**

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20

## Load a preset

**LOAD PRESET**

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20

## Background

**BACKGROUND**

BKG1	3840×1080
BKG2	1920×1080
BKG3	7680×2160
BKG4	None
BKG5	None

OFF (BKG Black)

Load

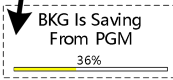
Save

Select Image Source

PGM	PVW
Start	Cancel

Delete

### BACKGROUND

BKG1	3840 × 1080	Load
BKG2	1920 × 1080	Save
BKG3	7680 × 2160	 <p>BKG Is Saving From PGM 36%</p>
BKG4	None	
BKG5	None	Delete

OFF (BKG Black)

### BACK GROUND

BKG1	3840 × 1080	Laod
BKG2	1920 × 1080	Save
BKG3	7680 × 2160	
BKG4	3840 × 2160 PVW	
BKG5	None	Delete


OFF (BKG Black)


Save Preset	1~20	This machine can save 20 presets,two indicator lines at the bottom of each preset number: the left indicate lines that the main output preset has been saved, and the right indicate lines that the AUX output preset has been saved.		
Load Preset	1~20	This machine can load 20 presets, the main output presets will be called on the Multi-preview, the auxiliary output presets call please see the table below the "auxiliary output load presets" description		
Clear All Preset	Clear all saved presets on this machine			
Save preset channel	Select to save the preset from Program or Preview			
Logo	Save Logo	Logo 1/Logo 2/Logo 3	Select the Logo button to save	
		Logo 1	Displays the Logo number of the current operation	
		Save	Skip to the progress bar menu to save the Logo	
			Cancel/Continue	Select save Logo or not
		Program/Preview	Select the channel to save the logo	
		Horizontal position and vertical position	Set the horizontal and vertical positions to save the Logo	
		Horizontal width and vertical height	Set the horizontal width and vertical height of the saved Logo	
	Load all Logos	Load all saved logos		
	Clear all Logos	Clear all saved logos		
	Logo saving channel	Select the channel where you want to grab the Logo ,Program or Preview		
Auxiliary output loading presets	Whether the auxiliary output is switched to the preset setting when loading the preset, after "switch" is selected, call the preset, the auxiliary output will be switched directly.			
Save the main output presets	Select whether to save the setting for the main output as preset			
Save the auxiliary output preset	Select whether to save the setting for AUX output as preset			


**Note 1:** When the layer is selected to load the logo, the layer size will change to the size of the logo, and the Logo will always be on the bottom .


**Note 2:** After power-on, the machine will load all logos automatically . Please wait for the completion of Logo loading before operation.

## Preview


**PREVIEW OUTPUT SCREEN SETTING** 

Layout Templates 

Customized Layout 

Input Rename 

## PREVIEW MODE

**PREVIEW OUTPUT SCREEN SETTING** 

<table border="1"><tr><td>PROGRAM</td><td>AUX PGM</td></tr><tr><td>PREVIEW</td><td>AUX PVW</td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr></table> <p>Layout 1</p>	PROGRAM	AUX PGM	PREVIEW	AUX PVW					<table border="1"><tr><td colspan="2">PROGRAM</td></tr><tr><td colspan="2">PREVIEW</td></tr><tr><td>AUX PGM</td><td>AUX PVW</td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr></table> <p>Layout 2</p>	PROGRAM		PREVIEW		AUX PGM	AUX PVW					<table border="1"><tr><td colspan="2">PROGRAM</td></tr><tr><td colspan="2">PREVIEW</td></tr><tr><td colspan="2">AUX PGM</td></tr><tr><td colspan="2">AUX PVW</td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr></table> <p>Layout 3</p>	PROGRAM		PREVIEW		AUX PGM		AUX PVW					
PROGRAM	AUX PGM																															
PREVIEW	AUX PVW																															
PROGRAM																																
PREVIEW																																
AUX PGM	AUX PVW																															
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<table border="1"><tr><td>PROGRAM</td><td></td></tr><tr><td>PREVIEW</td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr></table> <p>Layout 4</p>	PROGRAM		PREVIEW						<table border="1"><tr><td colspan="2">PROGRAM</td></tr><tr><td colspan="2">PREVIEW</td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr></table> <p>Layout 5</p>	PROGRAM		PREVIEW						<table border="1"><tr><td>PROGRAM</td><td>AUX PGM</td></tr><tr><td>PREVIEW</td><td>AUX PVW</td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr></table> <p>Customized</p>	PROGRAM	AUX PGM	PREVIEW	AUX PVW										
PROGRAM																																
PREVIEW																																
PROGRAM																																
PREVIEW																																
PROGRAM	AUX PGM																															
PREVIEW	AUX PVW																															

# Customized Preview Layerout

### PREVIEW OSD AREA CONFIG

PROGRAM		AUX PGM	
PREVIEW		AUX PVW	

PROGRAM	PREVIEW	INPUT 1	INPUT 2
AUX PGM	AUX PVW	INPUT 3	INPUT 4
INPUT 5	INPUT 6	INPUT 7	INPUT 8

Status  ON

H Pos.

V Pos.

Width

Height

Apply

# Inputs Rename

### INPUTS RENAME

1 HDMI <input type="text"/>	2 HDMI <input type="text"/>	3 HDMI <input type="text"/>	4 HDMI <input type="text"/>
5 DP <input type="text"/>	6 DP <input type="text"/>	7 SDI <input type="text"/>	8 SDI <input type="text"/>

# Communication

### IP SETTINGS

IP Address	192.168. 1. 10	Edit
Gateway	192.168. 1. 1	Edit
MAC	E2-66-96-B9-86-88	

1	2	3	4	5	6	7	8	9	0
.	C	OK	<-						

### COMMUNICATION

IP Settings

Protocol Info

### RPOTOCOL INFO

UDP Port: 61215

Take Fade      Hexadecimal      Length39[0×27]

ED CB 28 48 00 01 01 00 2A

Take Cut

ED CB 28 48 00 01 00 29

Load Preset

1	ED CB 28 48 01 01 01 00 2A
2	ED CB 28 48 01 01 01 00 2B
10	ED CB 28 48 01 01 09 00 33
20	ED CB 28 48 01 01 13 00 3D

Communication setting		Make the computer to use the computer to connect to this switcher through the network by modifying the IP address of this processor.
IP Settings	IP address	Display or modify the IP address of this machine, you can select the number to edit through the knob or OK key, or click the edit key on the right side to enter the number .
	Gateway	Display or modify gateway of this machine, you can select the number to edit through the knob or OK key, or click the edit key on the right side to enter the number .
	MAC	Displays the physical address of this machine
	Reset	Reset the IP address and gateway of this machine
	Apply	Apply the modified IP address and gateway
Protocol Info		Displays communication protocol information in this machine





# MISC

MISC Page: 1/2

Status Info

Test Pattern

Duration  0.5 S


Take Mode  Swap


Sync Lock Mode Select


Swap

Edit

MISC Page: 2/2

Ambient Light  4

Screen Touch  Enable

T-Bar  Enable

T-Bar Calibration

Factory Reset

Enable

Disable

Disable




Enable

## Status Info

STATUS INFO

Firmware Version




Hardware Status

**FIRMWARE VERSION** Page: 1/1   

MAGNIMAGE MIG-690

UI Version: U0015-10004-20004-30004  
Mar 3 2021 12:13:20

VP Version: M0007-A3069-B4157-C100D  
Mar 3 2021 10:46:01

**ELECTRIC INFO** Page: 1/1   

Tbar 4095 Min 0000, Cur: 4010, Max: 4095

Core Temperture 59C 58C


MVCCP 0936, P:0936, PT: 1872, ERAM: 0936mv




AVCCP 0936, P:0936, PT: 1872, ERAM: 0936mv


M TX 0x0, RX: 0x0 A TX 0x0, RX: 0x0

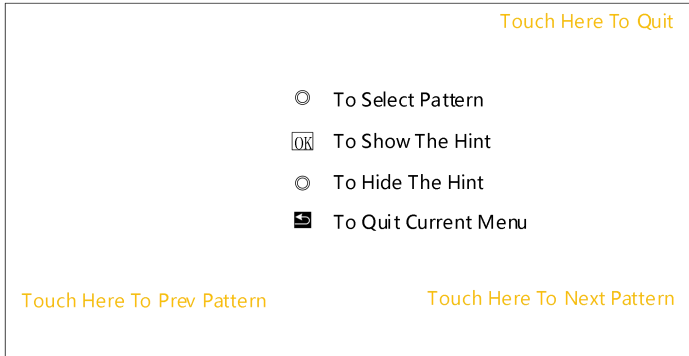
R2378-E2376, BKG: 255

### Test Pattern

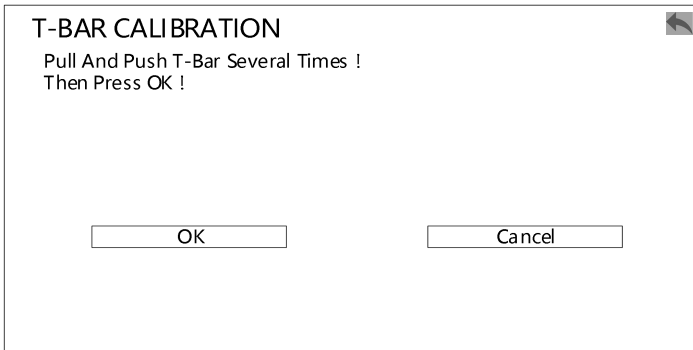
**TEST PATTERN** 

Test Pattern  0  

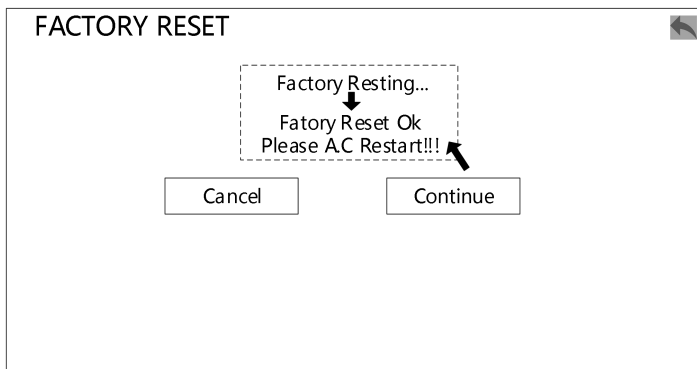
Test Pattern For LCD Screen 



### T-Bar Calibration



### Factory Reset



MISC Option	Set up the functions of this machine	
Status Info	Firmware version	Displays the firmware version of this machine
	Electrical state	Display the electrical status of each part of this machine
Test Pattern	Output test screen (main output), 0 is closed	
	LCD panel test pattern	Test whether the LCD panel of this machine displays normally or not, operate through the knob or the prompt menu on the LCD screen.
Duration	Select the switch speed of the TAKE button, ranging from 0 to 3 seconds, 0.5 seconds is default	
Take Mode	Select the switch mode of this switcher, switch mode or edit mode, switch mode is default	
Frame Lock Setting	Select the synchronous mode of this machine, publish as free scroll, synchronize to layer 1 and Genlock, you can just use the default free scroll mode.	
Touch Screen	Select to enable touch screen. It is enabled by default	
T-bar	Select to enable the T-bar.It is enabled by default	
T-bar Calibration	Calibrate the T-Bar	
Factory Reset	Reset the machine to factory settings ,prompt A.C. Restart after confirming to continue.Then the power off and restart.	

**Note:** If you want to upgrade the firmware version, please contact the technical support from Magnimage .

## Language/语言

Language/语言 

English

简体中文 

繁體中文 

English	Set the menu language as English
简体中文	Set the menu language as simplified Chinese
繁體中文	Set the menu language as traditional Chinese

# Multi-preview introduction

After turning on MIG-EC90 switcher and work with a external monitor by the Preview port, you will see the Multi-preview interface as below.

PROGRAM		AUX PGM	
PREVIEW		AUX PVW	
1 HDMI 1	2 HDMI 2	3 HDMI 3	4 HDMI 4
5 DP 1	6 DP 2	7 SDI 1	8 SDI 2

Window	Guidance
PROGRAM	PROGRAM, the size and position of output layers, real-time image are showed ( same as the LED screen).
PREVIEW	PREVIEW, the size and position of output layers, real-time image. When the layer has no signal or no layer, the corresponding area shows black
INPUT INFORMATION	The serial number, signal type and input resolution of all input signals are displayed.

# Button

The menu system of the product can be set up conveniently and intuitively to meet the user's requirements.

The MIG-EC90 event console uses a full color single touch LCD to display the entire user menu. The LCD screen will display the default state if the user has no operation or the operation has timed out. If you use the keys on the front panel of the machine to set the machine, the LCD screen will display the corresponding menu according to the user's operation, so as to prompt the user to operate better, faster and more intuitively.

The menu system of MIG-EC90 series video console will be introduced in detail for you by combining the button function and the display of the LCD screen.

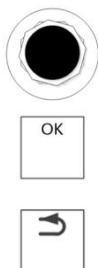
## How to use the button

---

There are 9 button areas of MIG-EC90, including MENU, ADJUSTMENT, LAYER, LOGO, INPUT, FUNCTION 1 & FUNCTION 2, TRANSITION and PRESET.

## MENU area :

This area contains 2 buttons and a knob that can be pressed: OK、↩button and knob.



Short press "knob", its function is same as confirm key (OK); When the return key is pressed(↩), the menu system will return to the next level in turn until it returns to the default state, or long press to return to the main interface.

In the main menu, the confirm key is also used to switch between browsing mode and setting mode, for example:

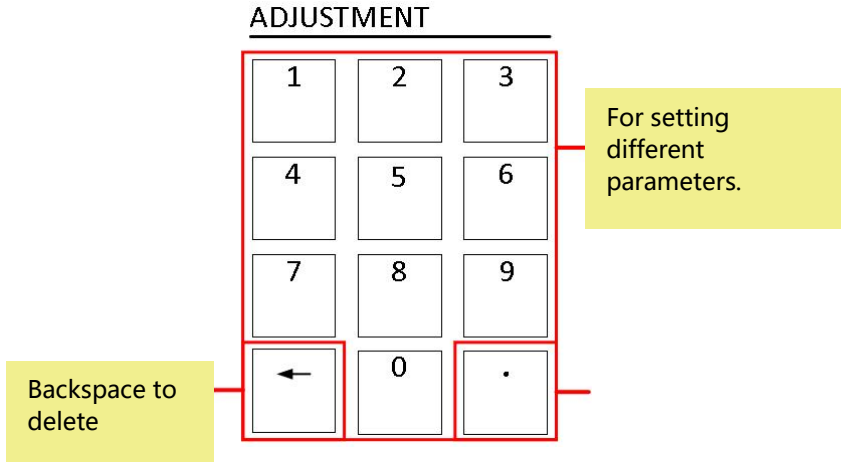
Browsing mode	Setting mode																
<table border="1"> <tr> <td>Layer 1 image mode</td> <td></td> </tr> <tr> <td>Brightness</td> <td>50</td> </tr> <tr> <td>Contrast</td> <td>50</td> </tr> <tr> <td>Saturation</td> <td>50</td> </tr> </table>	Layer 1 image mode		Brightness	50	Contrast	50	Saturation	50	<table border="1"> <tr> <td>Layer 1 image mode</td> <td></td> </tr> <tr> <td>Brightness</td> <td>50</td> </tr> <tr> <td>Contrast</td> <td>50</td> </tr> <tr> <td>Saturation</td> <td>50</td> </tr> </table>	Layer 1 image mode		Brightness	50	Contrast	50	Saturation	50
Layer 1 image mode																	
Brightness	50																
Contrast	50																
Saturation	50																
Layer 1 image mode																	
Brightness	50																
Contrast	50																
Saturation	50																
↖ OK button、 Light press "knob" , switch between the above two modes ↗																	

To enter the browsing mode, please rotate the "knob" counterclockwise and move the cursor up or to the left. Turn the knob clockwise and the cursor moves down or to the right. When the cursor is moved to the item to be adjusted, press the "knob" or the "confirm" key to enter the setting mode. At this time, rotate the "knob" counterclockwise to reduce the current parameter value. Turn the "knob" clockwise to increase the value of the current parameter. To continue setting other items on this page, please switch back to browse mode. To return to the next level menu, use the return button. If the adjustment is finished, press the back button

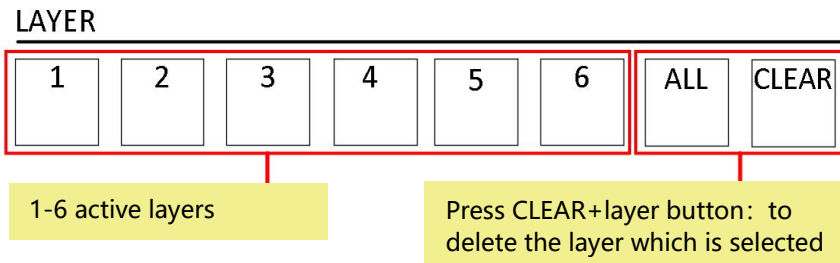


to return to the superior menu until the default state, or wait for the system timeout, the default state will be returned automatically (in some special interfaces, the system will not automatically return to the default state, such as: screen switching shortcut interface, user mode shortcut interface, test pattern interface, etc.).

## ADJUSYMENT area:



## LAYER area:



**Note:** When the light of LAYER 1-6 turns green, it means the layer is on, otherwise it means the layer is off. Yellow light means the selected layer, red light means the unselected layer.

## BACKGROUND area :

### BACKGORUND

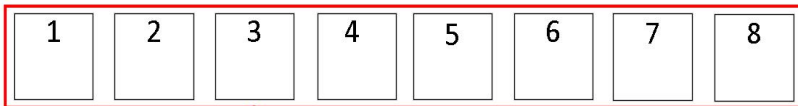


Yellow light means selected, green light means saved, and light-off means unselected.

OFF: Turn off the BKG  
SAVE: Enter the BKG saving menu

## INPUT area :

### INPUT



When the light of LAYER 1-6 turns green, it means the layer is on, otherwise it means the layer is off. Yellow means the selected layer, red means the unselected layer.

## FUNCTION:

SIZE	TOP	FULL	MAIN
ZOOM	BOTTOM	KEYER	AUX
<b>FUNCTION</b>			
TAKE SWAP		MIAIN TAKE	
TAKE EDIT	SHIFT	AUX TAKE	

SIZE: Enter the layer size/position setting;  
ZOOM: Enter the zoom setting  
TOP: Set the current layer to the top  
BOTTOM: Set the current layer to the bottom  
FULL: Stretch the current signal to the whole output  
KEYER: Enter the Keyer setting;  
MAIN: To set PGM output layer only  
AUX: To set AUX output layer only

Long press SHIFT+TAKE SWAP: PGM and Preview will swap when switching;  
Long press SHIFT+TAKE EDIT; PGM will change the same as what Preview change

Long press SHIFT+MAIN TAKE: When only MAIN TAKE button light on, it will only switch to the PMG ;

Long press SHIFT+AUX TAKE: When only AUX TAKE button light on, it will only switch to the AUX;

**Note :** SHIFT+TAKE EDIT will set the PGM and Preview as the same image/video status. In this setting, the PGM and Preview image/video will not change on the Multi-preview, but the real PGM output image/video will be the same as Preview.

## PRESET 区:

### PRESET

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20

1-20 represent the 20 presets. When the button light off, it does not have any preset setting. Green light means it is saved a preset. Yellow light means the preset is selected. Red light means there is no preset.

LOAD	CLEAR	MAIN	MAIN TO PVW
SAVE	TEMPLATE	AUX	AUX TO PVW

**LOAD:** Press this button to enter the preset area.

**SAVE:** Press this button with the 1-20 button(on the left) to save a preset

**CLEAR:** Press this button with the 1-20 button(on the left) to clear a preset

**TEMPLATE:** Access to fixed template

**MAIN:** Will save the PGM to preset when it is on

**AUX:** Will save the AUX to preset when it is on

**MAIN TO PVW:** Copy the PGM image/video to PVW

**AUX TO PVW:** Copy the AUX image/video to PVW

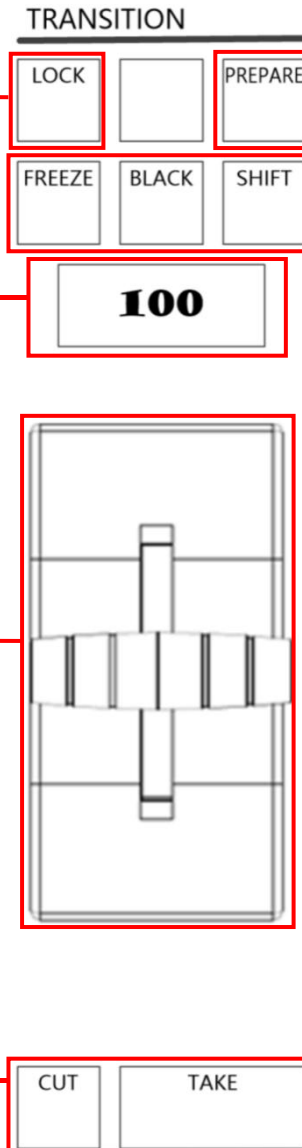
## TRANSITION area

Press SHIFT+LOCK to lock the all buttons on the machine, including T-Bar and once again to unlock.

The number 0 and 100 indicate the completion of switching, and the button PREPARE will be off when the switching is not completed.

T-Bar: A push to control the switching speed

Cut: Fast switching  
Take: Seamless fade in/out switching



PREPARE: It's a state indication button, you're able to load presets and switch when the button is lighting, but if the button quenched, you can't load presets and use CUT and TAKE to switch.

Press Shift+ Black: To turn PROGRAM as black and press it again to cancel.  
Press Shift+ Freeze: Freeze the PGM to stay in the last frame. Press it again and press it again to turn to normal.

# Warranty

## Machine warranty

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- 24 months from the date of purchase of the user' s invoice.
- If the user purchase invoice is lost, the 60 days after the production date will be the warranty start date for the product.

## Non-warranty

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- The machine soaking and collisions produced besmirch or surface scratches and other abnormal using causes of malfunction or damage.
- Demolition machine or modification, which is not to be agreed by our company.
- Using in the not specified used working conditions,resulting in fault or damage(such as high temperature, low voltage or unstable etc.).
- Force majeure (such as fire, earthquake, etc.), or natural disasters (like lightning, etc.) caused the fault or damage.
- The product is out of warranty expiry.