

制造

洛阳瑞光影视光电技术有限公司

_{监制} 深圳市领马科技有限公司 http://www.ruige.com TL2000HDA-CO

COLOR LCD MONITOR (Carry-on)

PRODUCT MANUAL

我公司保留力改进产品而变更设计与规格的权利,届时都不另行通知 印刷过程可能使资料中的产品与实物有轻微差别,请以实物为准 所有资料经过小心核对以求准确。如有任何印刷错漏或翻译时可能产生的误差,本公司不承担由此产生的后果



TL2000HDA-CO COLOR LCD MONITOR (Carry-on)



▲ Special Notice

- ※ Non-professional maintenance personne should not dismantle the product without approval!
- $\stackrel{\times}{\times}$ The voltage of other DC power used shall not be $\stackrel{\times}{\times}$ Higher than nominal input voltage
- * Confirm whether power polarity is correct.
- ※ Liquid crystal screen is made of non-rigid materials and shall not been collided or squeezed.
- Rub the surface of display screen with absorbent cotton or soft cloth.
- ** Don't use the monitoring function of this product when it is installed on the handle of camera for shooting to prevent possible sound feedback.
- ** Don't use this product in humid, high-temperature environment.

http://:www.ruige.com Email:ruige@ruige.com

Preparation before operation- open the case



1. Follow the arrow to open the case



2. Lightly lift the box cover, the upper cover automatically open and stop at the designing angle $\,$



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Malfunction detect

Below checking method can be adopted if any problem occurred when operating this system.

If there is still problem that can not be resolved please contact neighbouring RUIGE sales center.

No image	Solution
1. Video cable come off or wrong connection	Checking cable quality and confirm input end
2. No signal input	Checking whether the output end is connected well or not
3. LCD monitor power is off	Put the power switch on the "-" location
4. Using the power cable with adverse pole	Refer to (Power input method)

Picture /color abnormal display	Solution
1. Video cable with bad connection	Change the new cable
2. Outside interfere to the video cable	Change the new environment to check again
3. The video signal input intensity is too low	Checking whether the intensity is less than 0.8v
The saturation and brightness is adjusted too much	Adjust to middle location
5. Picture distortion	Reset the aspect ratio

Speaker can not work	Solution
1. Audio cabl with bad connection	Checking whether the output end is well connected or not
2. The volumeis adjusted the lowest location	Adjust it at the proper location
3. Switch the video signal ,then no voice	Only 1 line audio output

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Preparation before operation- fix the sunhood

1. The sunhood can not only meet the normal demand of the shading, but also protect the screen from being impacted. After finishing the shooting, fold the sunhood and put in the inside of the case, no need other space for the hood.



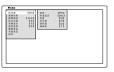
2. Under special circumstances, hood can be extended by 8cm $\,$ to get better shading effect.





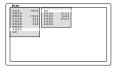
Note: the hood is removable, indoor monitoring ,just turn the switch on the upper right corner to easily take away the hood.

Restore Setting



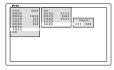


◆Press the (BRIGHT)knob to enterthe



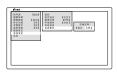


Turn the (BRIGHT) knob to select the "System setting" and press it to enter the "System setting" interface.





After entering the "System setting" interface, turn the (BRIGHT) knobto select the 'Sytem restore "to get the dialog box.



Turn the (BRIGHT) knob to select the [Yes] and press the (BRIGHT knob to confirm menu disappear automatically, all the parameterrestore to the original status.



■ Video input mode is 【HDMI】 after restoring

Specification

Size: 20"

Resolution: 1600×900

Dot pitch: 0.2766 (H) \times 0.2766 (W) mm

Brightness: 250cd/m² Contrast: 1000:1

Viewing angle: Left / Right / Up / Down 89°/89°/89°/89°

Aspect ratio: 4:3/16:9 (Switch) Video input: HD/SD-SDI \times 2line Composite \times 1line

(NTSC / PALAuto detect, Loop through)

 $\begin{array}{l} \text{HDMI} \times \text{1line} \\ \text{VGA} \times \text{1line} \end{array}$

Audio input: Dual speaker \times 1line (8 Ω 2W) 0.7Vp-p

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Video output: $HD/SD-SDI \times 1$ line

 $Composite \times 1 line \ (NTSC \, / \, PAL \, Auto \, detect)$

 $\label{eq:constraint} \mbox{Voltage input: DC 12V}$ $\mbox{Power consumption: \leqslant 30W}$

Dimension: L 550×H 430×D 210mm

Weight: around 7.25 Kg

Preparation before operation-lift the controller

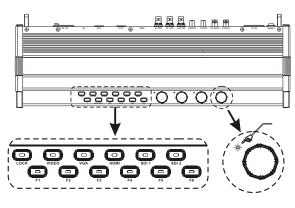
1. Turn the switch of the audio / video controller (shown as below), the controller automatically rise so that the user can operate the function keys



2. In order to avoid interference with the LCD screen and sun hood, the controllermust return back after use , press the middle(shown as below) of the controller to the lock location



Instruction of knobs and buttons operation



Function selection buttons

Analogue adjust knobs

 $\blacklozenge Press\ the\ button\ \ (LOCK)\ \ and\ hold\ it for\ three seconds, it\ will show\ \ ``KEY\ LOCK"$ On " on the screen, and the green light on front panel will turn on, it means LOCK UP $\,$ function is open.

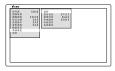
1. LOCK (Lock up buttons and knobs)

- ♦In state of LOCK UP function, press (LOCK) button and hold it for three seconds, it will show "KEY LOCK OFF" on the screen, it means unlocked.
- In stated of LOCK UP, all the buttons and knobs are invalid. It will still keep LOCK UP state, even though restart the power.
- ♦Switch the buttons based on different input signal, screen middle will display the signal format meanwhile the green indicator light will be on, prompting the input signal.
- ullet When no signal input , screen middle will display 【NO SYNC】, prompting the user to check the signal source.

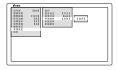
Text color



◆ Press the (BRIGHT)knob to enterthe main menu.

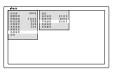


Turn the knob to select "System setting" then press the knob to enter the "System" setting" interface.





After entering "System setting" interface Turn the knob to select "Text color" . Then press the knob to enter "Text color" inter-

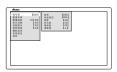


Turn the (BRIGHT) knob to select the color pressit to confirm.



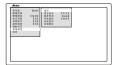
Options: [white] [red] [blue] [green] ■ The original color is 【white】

Device information





◆Press the (BRIGHT)knob to enterthe main menu.





Turn the knob to select the "System setting", then press the knob to enter the "System setting" interface.





After entering the "System setting" interface, turn the (BRIGHT) knob to select "SYSTEM INFOR", press the knob to display the device information.



The device information include :model no, product ID no, after service phone no and website

Preparation before operation -external power

1. Outdoor shooting normally use the DC power . TL2000HD-CO can use 14.4V lithium ion $\,$ camera $\,$ battery as power supply.

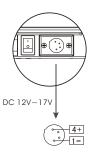
The high elasticity sponge in the case make it easy to hold the battery





2.If use other external power, the power connection is shown as below





power connection sketch

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Signal Formats

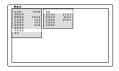
视频信号	支持信号格式	
COMPOSITE	PAL/NTSC AUTO DETECT	
HD-SDI	1080/24p / 24psf / 25p / 30p / 50i / 60i、 720/50p / 60p、480i / 576i	
SD-SDI	480i / 576i	
HDMI	1080/24p/24psf/25p/30p/50i/60i/50p/60p 720/50p / 60p、480i / 480p、576i / 576p	
VGA	FREQUENCY: 60Hz RESOLUTION: 640×480、800×600、 1024×768、1280×1024	

Language



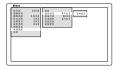


◆Press the (BRIGHT)knob to enter the main menu.



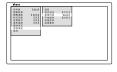


Turn the knob to select the "system setting" .Press the (BRIGHT) knob to enter the "system setting" interface.





After entering the "system setting" interface, turn the knob to select " Language" . Then press the (BRIGHT) knob to enter the "Language" interface



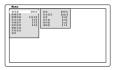
After entering the "Language" interface, turn the knob to select the language, Press the knob to confirm.



OPTIONS: [CHINESE] [English] ■DEVICE SYSTEM DEFAULT 【CHINESE】

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Menu duration





Press the (MENU) knob to enter the main menu.



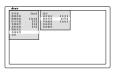


Turn the (BRIGHT knob to select "System setting" .Then press the knob to enter the "System setting" interfac.





After entering "System setting" interface, turn the knob to select "Menu duration" .Then press the knob to enter the "Menu duration" interface.



Turn the (BRIGHT) knob to select the required duration.press the knob to confirm.



OPTIONS: [108] [208] [308] [608]

The original menuduration [308]

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Knob/Button function introduction

♦ F1~F6 isthe system default shortcut key, the functions as below

F1----WAVEFORM F2---- COLORONLY F3---- SCALING
F4---- MARK F5---- AUDIO DISPLAY F6----MARK ASPECT

- ◆ Press the Short-cut Key repeatedly to cycle in the options.
- ◆The former setup will be invalidafter you setup the FastKey for a new function, please see to Page 12 for more setting about Short-cutKey.

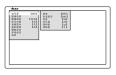
2. Analogue adjust knobs

- 1. BRIGHT (MENU)
- Press the (BRIGHT) knob to enterthe main menu, select the item and adjust it based on your demand
- ◆Turn the (CONTRAST) knob to adjust the "CONTRAST"
- 2. CONTRAST (VOL)
- ◆Press the (CONTRAST) knob, then turn the knob to adjust the volume
- 3. SATURATION (B/W)
 - ◆Turn the (SATURATION) knob to adjust the "SATURATION"
 - $\blacklozenge Press\ the\ \ \langle SATURATION \rangle\ \ knob\ \ to\ switchCOLOR\ \ and\ B/W$
- 4. SHARPNESS (PTP)
 - ◆Turn the (SHARPNESS) knob to adjust the "SHARPNESS"
- ◆Gradually press the (SHARPNESS) knob to enterthe "PIXEL TOPIXEL" mode, screen display theoriginal picture by scale 1:1, the displaying order is: middle upper left, upper right, lower left, lower right, press the knob again to exit the mode

Adjust hint LED

Each knob has one indicator light on the upper left , when the value is the system default (BRIGHTNESS:32,CONTRAST 32,SATURATION 32,SHARPNESS 0), the indicator lightis green If the value deviate from the system default , the indicator light is in red.

Color temperature





 Press the (BRIGHT) knob to enterthe main menu





Turn the knob to select "IMAGE EFFECT", and then press the knob to enter the "IMAGE EFFECT" interface.





After entering "IMAGE EFFECT" interface, turn the (BRIGHT) knob to select the "COLOR-TEMP." and press the knob to enterthe " "COLOR-TEMP." Interface.



Turn the (BRIGHT) knob to select color temperature, press it again to confirm.



■ONLY 【USER-DEFINITION CAN ADJUST THE "R/G/B-GAIN" ■DEVICE SYSTEM DEFAULT 【D65】

TALLY mode setting





◆Press the (BRIGHT) knob to enterthe





Turn the knob to select "AUXILIARY SETTING", Then press the knob to enter the "AUXILIARY SETTING" interface.





After entering the "AUXILIARY SETTING" interface, Turn the knob to select the "TALLY CONTROL" .Then press the knob to enter the "TALLY CONTROL" interface.



Turn the (BRIGHT) knob to select the required TALLY display mode, press the (BRIGHT) knob toconfirm.

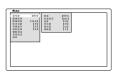
TALLY CONTROL OPTIONS: [OFF] [ALWAYS] [BLINK]



■ DEVICE SYSTEM DEFAULT 【OFF】

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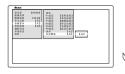
Peaking Filter



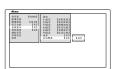
◆Press the (BRIGHT)knob to enterthe main menu.



Turn the knob to select the "AUXILIARY SETTING" .Press the (BRIGHT) knob to enter the "AUXILIARY SETTING" interface



After entering "AUXILIARY SETTING" interface, turn the (BRIGHT) knob to select "PEAKING FILTER" and press the knob to enter the "PEAKING FILTER" interfac



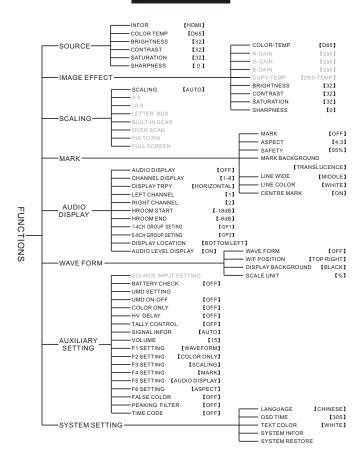
Turn the (BRIGHT) knob to select 【ON】, press the (BRIGHT) knob to confirm"

PEAKING FILTER OPTIONS: [OFF] [ON]



■ DEVICE SYSTEM DEFAULT 【OFF】

Functional menu



 $Remark: the \ function \ in \ grey \ word \ \ can \ not \ work$

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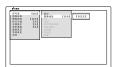
Scan mode



◆Press the (BRIGHT)knob to enterthe main menu and turn the knob to select the "SCALING" .Press the knob to enter the "SCALING" interface



After entering "SCALING" interface, turn the (BRIGHT) knob to select "SCALING" and press the knob to enter the "SCALING"



Turn the (BRIGHT) knob to select the 【USER】 press the (BRIGHT) knob to confirm

SCALING OPTIONS: [AUTO] . [USER]



Turn the (BRIGHT) knob to select the scan mode. press the (BRIGHT) knob to confirm, "[V]" will appear after selection SACAN MODE OPTIONS: [BUILT-IN SCAN]

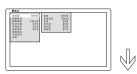
[OVER SCAN] [PIX-PIX]



- ■SCAN MODE CAN BE ADJUSTED BASED ON SCALING WITH [USER]
- ■DEVICE SYSTEM DEFAULT IS 【STANDARD】

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HV delay



◆Press the (BRIGHT)knob to enterthe main menu。



Turn the (BRIGHT knob to select the "AUXILIARY SETTING" .Press the knob to enter the "AUXILIARY SETTING" inter-



After entering "AUXILIARY SETTING" interface, turn the (BRIGHT) knob to select "HV DELAY" and press the knob to enter the "HV DELAY" interface.



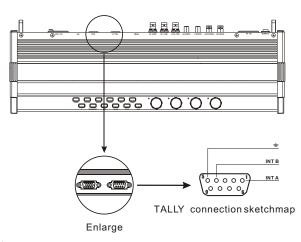
Turn the (BRIGHT) knob to select the [ON], then press the knob to con-

HV DELAY OPTIONS: [OFF] [ON]



■HV DELAY CAN BE USEFUL ONLY BASED ON SDISIGNAL ■DEVICE SYSTEM DEFAULT HV DELAY IS 【OFF】

TALLY connection



- ◆ Connecting the external TALLY signal with the plug DB-9, shown as the map
- ♦ How to connect:
- 1. Judge the external TALLY signal level
 - ●Low signal level: 0V ~ 0.7 V
- Red TALLY light
- ●High signal level: 0.7V ~ 3.3 V Green TALLY light
- 2. Shown as the map , connecting the high (low) signal level with INTA (PIN1) or INT B(PIN4)

MODE	INT A(High level)	INT B (Low level)
Always being on	GREEN	RED
Blink	GREEN	RED



- ■Active connection : external device is common-grounded with the monitor
- ■Refer to the next page for the Tally light mode choosing

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Scaling seting





◆Press the (BRIGHT)knob to enterthe main menu, turn the knob to select "SCALING", Then press the knob to enter the "SCALING" interface.

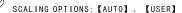




After entering the "SCALING" interface, Turn the knob to select the "SCALING" .Then press the knob to enter the "SCALING" interface.



Turn the (BRIGHT) knob to select the 【USER】 item , press the knob to confirm.





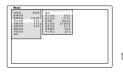
Turn the (BRIGHT) knob to select the required item, then press the knob to confirm, "[V]" will appear.



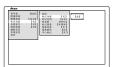
SCALING OPTIONS: [4:3] [16:9] [LETTER BOX]

■SCALING MODE CANBE ADJUSTED ONLY BASED ON [USER]
■DEVICE SYSTEM DEFAULT IS 【AUTO】

Mark aspect



◆Press the (BRIGHT)knob to enterthe main menu, turn the knob to select "MARK" and press it to confirm it.



After entering the "MARK" interface. Turn the (BRIGHT) knobto select "MARK" and Press it to enter the "MARK" interface.



Turn the (BRIGHT) knob to select the 【ON】 press the (BRIGHT) knob to confirm it, then turn the (BRIGHT) item to select the "ASPECT", press the knob to confirm.



Turn the (BRIGHT) knob to select the $required \ mark \ aspect \ , then \ press \ the$ (BRIGHT) knob to confirm.

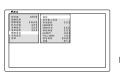
MARK ASPECT ASPECT OPTIONS: [4:3] [16:9] [1.85:1] [2.35:1] [4:3&1.85] 【4:3&2.35】【15:9】【关】



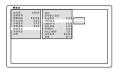
- ■MARK ASPECTCAN BEADJUSTED ONLY BASED ON MARK WITH [ON]
- ■DEVICE SYSTEM DEFAULTIS 【 4:3】

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UMD Setting

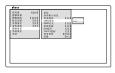


◆Press the (BRIGHT)knob to enterthe main menu, turn the knob to select the "AUXILIARY SETTING" . Then press the (BRIGHT) knob to enter "AUXILIARY -SETTING" interface.



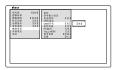


After entering the "AUXILIARY SETTING" interface, turn the(BRIGHT) knob to enterthe "UMD SETTING", pressthe (BRIGHT) knob again to confirm.





UMD setting can be made by 12 digitals at most ,including ENGLISHcharacter, number , symbol, turn the (BRIGHT) knob to select suitable item, and press theknob to confirm, after selection, press the (LOCK) key on the panel to exit the UMD.

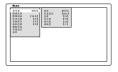


Turn the (BRIGHT) knob to select the "UMD ON_OFF" item, press the knob to enter the item, then turn the knob to select 【ON】, exit UMD setting, UMD appear on the screen.



■DEVICE SYSTEM DEFAULTIS 【OFF】

Color Only



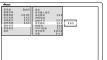


◆Press the (BRIGHT)knob to entermain menu.





Turn the knob to "AUXILIARY SETTING" and press it to enter "AUXILIARY SETTING" interface.





Turn the (BRIGHT) knob to select "COLOR ONLY", and press it to enter "COLOR ONLY" interface.



Turn the (BRIGHT) knob to select the color option ,then press the knob to confirm it , the image get the selected color.

COLOR ONLY OPTIONS: [B/W] [RED]
[GREEN] [BLUE] [OFF]



■DEVICE SYSTEM DEFAULTIS 【OFF】

Short-cut Key Setting





◆Press the (BRIGHT)knob to entermain menu.Turn the knob to "AUXILIARY SETTING" and press it to enter "AUXILIARY SETTING" interface.





Turn the knob to the second page of "AUXILIARY SETTING" Select "F1 SETTING", press the (BRIGHT) knob again to enter "F1 SETTING" interface.





required itempress the knob to confirm, F1 short-cut key change to new item the old setting no use.
F1-F6 shortcut key can be set as the above

Turn the (BRIGHT) knob to select the

SHORT-CUT KEY OPTIONS: [WAVEFORM] [MAKR] [AUDIO DISPLAY] [ASPECT]

[UMD ON_OFF] [HV DELAY] [CENTR] [COLOR ONLY]

[CHANNEL DISPLAY] [SCALING] [SAFETY]

[TEXT COLOR] [LINE COLOR]



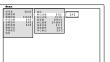
■Press any short-cut key to enter the selected item , meanwhile screen can display all the six short-cut keys information.

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Mark-line Options



◆Press the (BRIGHT) knob to enter the main menu, turn the knob to select "MARK", then press the knob to enter the "MARK" interface.



Turn the knob to select the "MARK". Then press the knobto enter the "MARK" interface, then turn the knob to select the 【ON】item,, and press the (BEIGHT) knob to confirm.





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Turn the (BRIGHT) knob to select the "LINE WIDE" item ,press the knob to enter "LINE WIDE", turn the knob to select the requiredwide, then press the (BRIGHT) knob to confirm.

LINE WIDE OPTIONS: [THIN] [MIDDLE] [THICK]



Turn the (BRIGHT) knob to select the "LINE COLOR" item ,press the knob to enter "LINE COLOR" , turn the knob to select the required line color, then press the (BRIGHT) knob to confirm

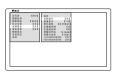
LINE COLOR OPTIONS: [WHITE] [RED] [GREEN] [BLUE]



■LINE SETTING CANBE ADJUSTED ONLY BASED ON MARKWITH 【ON】 ■DEVICE SYTEM DEFAULT LINE WIDE [MIDDLE], DEVICE SYTEM DEFAULT LINE COLOR [BLUE]

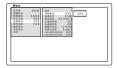
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Embedded Audio



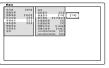


◆Press the (BRGHT)knob to enterthe main menu, turn the knob to select the "AUDIO DISPLAY" .Then press the knob to enter the "AUDIO DISPLAY" interface.





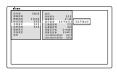
Turn the knob to select "AUDIO DIAPLAY" Then press the knob to enterthe "AUDIO DISPLAY" interface, turn the knob to select the 【ON】item, and press (BRIGHT)knob to confirm.





Turn the (BRIGHT) knob to selected "CHANNEL DISPLAY" item press the knob to enter the "CHANNEL DISPLAY" interface turn the knob to select the required channel. then press the knob to confirm.

CHANNEL DISPAY OPTIONS: [1-2] [1-4] **[1-8]**



Turn the (BRIGHT) knob to select the "DIS TYPE" , then turn the (BRIGHT) knob to select the required display type, press the (BRIGHT) knob again to confirm.

DIS TYPE OPTIONS: 【HORIZONTAL】

[VERTICAL]

Other options setting can refer to the above



■AUDIO DISPLAY CAN BE ADJUSTED ONLY BASED ON SDISIGNAL DEVICE SYSTEM DEFAULT CHANNEL DISPLAY [1-8]

DEVICE SYSTEM DEFAULT DISPLAY TYPE [HORIZONTAL]

Wave Form

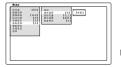


◆Press the (BRIGHT)knob to enterthe main menu and turn the knob to select the "WAVEFORM" .Press the knob to enter the "WAVEFORM" interface.



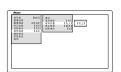
Turn the (BRIGHT) knob to select

"WAVEFORM" and press the knob to
enter the "WAVEFORM" interface.



Turn the (BRIGHT) knob to select the required WAVEFORM item, press the (BRIGHT) knob to confirm.





Turn the (BRIGHT) knob to select the "WF POSITION" "DISP BG" "SCALE UNIT"

WF POSITION OPTIONS: [UPPER RIGHT]
[UPPER LEFT]
DISP BG OPTIONS: [BLACK] [TRANSLUCENCE]
SCALE UNIT OPTIONS: [%] [VOLT]



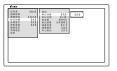
- ■WAVEFORM CAN BE ADJUSTED ONLY BASED ON SDISIGNAL
- ■DEVICE SYSTEM DEFAULT IS 【OFF】

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Safety Setting



◆Press the (BRIGHT) knob to enterthe main menu, turn the knob to select "MARK", Then press the knob to enter the "MARK" interface.



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After entering the "MARK" interface, Turn the knob to select the "MARK" .Then press the knobto enter the "MARK" interface.



Turn the (BRIGHT) knob to select 【ON】 item,press the (RIGHT) knob to confirm turn the (BRIGHT)knob to select the "SAFETY" then press the knob to confirm.



Turn the (BRIGHT) knob to select the required safety ratio, then press the (BRIGHT) knob to confirm.

SAFETY OPTIONS: [80%~99%] [OFF]



■SAFETY CAN BE ADJUSTED ONLY BASED ON MARK WITH 【ON】

■DEVICE SYSTEM DEFAULT IS 【95%】