# HL7NULTRA (C2 Ultra) service manual

Revision History						
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### 1. Important Safety Information



### 1.1 Precautions

BEFORE SERVICING THE Smart Mini Projector, READ THE SAFETY PRECAUTIONS IN THIS MANUAL.USE ONLY MANUFACTURER SPECIFIED REPLACEMENT PARTS WHEN SERVICING.USE OF NON-AUTHORIZED PARTS WILL VOID THE MANUFACTURE'S WARRANTY

The service procedures recommended by Hisense and described in this Service Guide are effective methods of performing service operations. Some of these service operations require the use of tools specially designed for the purpose. The special tools should be used when and as recommended.

It is important to note that this manual contains various CAUTIONS and NOTICES which should be carefully read in order to minimize the risk of personal injury to service personnel. The possibility exists that improper service methods may damage the equipment and pose risk of personal injury. It is also important to understand that these CAUTIONS and NOTICES ARE NOT EXHAUSTIVE. Service should only be performed by an experienced electronics technician trained in the proper Smart Mini Projector safety and service methods and procedures.

1.2 Warning

### 1.2.1 Warning 1

Use of non-manufacturer's recommended parts may create shock, fire, or other hazards. Under no circumstances should the original design be modified or altered without written permission from RCA. Hisense assumes no liability, express or implied, arising out of any unauthorized modification of design. Service tech assumes all liability.

All ICs and many other semiconductors are susceptible to electrostatic

discharges (ESD). Careless handling during repair can reduce life drastically. When repairing, be sure to use anti-static table mats and properly use a grounding wrist strap. Keep components and tools also at this same potential. IMPORTANT:

Always disconnect the power cord from AC outlet before replacing parts or modules.

### 1.2.2 Warning 2

To prevent electrical shock, use only a properly grounded 3 prong outlet or extension cord.

### 1.2.3 Warning 3

Safety regulations require that after a repair the set must be returned in its original condition. In addition, prior to closing set, check that:

-Note:

>All wire harnesses and flex cables are properly routed and secured with factory tape and/or mounted cable clamps.

> All cables and connectors are properly insulated and do not have any bare wires/lead exposed

### 1.2.4 Warning 4

(1) Do not supply a voltage higher than that specified to this product. This may damage the product and may cause a fire.

(2) Do not use this product:

> High humidity areas

> In an area where any water could enter or splash into the unit. High humidity and water could damage the product and cause fire.

(3) If a foreign substance (such as water, metal, or liquid) gets inside the panel module, immediately turn off the power. Continuing to use the product may cause fire or electric shock.

(4) If the product emits smoke, and abnormal smell, or makes an abnormal sound, immediately turn off the power. Continuing to use the product, it may cause fire or electric shock.

(5) Do not pull out or insert the power cable from/to an outlet with wet hands. It may cause electric shock.

(6) Do not damage or modify the power cable. It may cause fire or electric shock.(7) If the power cable is damaged, or if the connector is loose, do not use the product: otherwise, this can lead to fire or electric shock.

(8) If the power connector or the connector of the power cable becomes dirty

or dusty, wipe it with a dry cloth. Otherwise, this can lead to fire.

(9) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over

### 1.3 Notes

The work procedures shown with the Note indication are important for ensuring the safety of the product and the servicing work. Be sure to follow these instructions.

• Before starting the work, secure a sufficient working space.

• At all times other than when adjusting and checking the product, be sure to turn OFF the POWER Button and disconnect the power cable from the power source during servicing.

• To prevent electric shock and breakage of PC board, start the servicing work at least 30 seconds after the main power has been turned off. Especially when installing and removing the power board, start servicing at least 2 minutes after the main power has been turned off.

• While the main power is on, do not touch any parts or circuits other than the ones specified. If any connection other than the one specified is made between the measuring equipment and the high voltage power supply block, it can result in electric shock or may trip the main circuit breaker

• Be sure to handle the circuit board by holding the large parts as the heat sink or transformer. Failure to observe this precaution may result in the occurrence of an abnormality in the soldered areas.

• Do not stack the circuit boards. Failure to observe this precaution may result in problems resulting from scratches on the parts, the deformation of parts, and short-circuits due to residual electric charge.

• Perform a safety check when servicing is completed. Verify that the peripherals of the serviced points have not undergone any deterioration during servicing. Also verify that the screws, parts and cables removed for servicing purposes have all been returned to their proper locations in accordance with the original setup.

The lightning flash with arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated dangerous voltage within the products enclosure that may be of sufficient magnitude to constitute a risk of electric shock.

The exclamation point within an equilateral triangle is intended to alert

# 2. Disassembly and assembly

# 3. Internal structure and materials

See the following doc for details

# Contents

- First. Prepare tools before disassembling the machine
- Second. Remove the case
- Third. In-disassembling
- Fourthly. Optical engine removal
- Fifth. Sensor
- Sixth. Guide rail in the middle shell
- Seventh. Assembly precautions
- Appendix: wiring diagram



# First. Prepare tools before disassembling the machine





Prepare screwdriver, small screwdriver, flat-head screwdriver, needle nose tweezers, oil seal screwdriver (with bent hook)



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Turn the machine over and you can see that there are four screws in the bottom shell





FIFA WORLD CUP Oat\_ar2022

Remove the rubber plugs from these four screws with needle-tipped tweezers







Remove these four screws





Remove the three screws with a screwdriver

Use a flat-head screwdriver like that to reach into the front panel trim and push it outward

# Second. Remove the case

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### 3、Remove the back casing





Insert the oil seal screwdriver (bent hook) into the vertical hole of the rear shell for heat dissipation, and pull the rear shell outward After the back shell is removed, there are a total of 11 screws (2 large screws +9 small screws)





### 4、Remove the back shell ring





### Insert the back shell ring with an oil seal screwdriver (bent hook) and tilt outward to remove the back shell ring

### After the back ring is removed

# Second. Remove the case

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5、Slowly pull out about 1/3 of the main engine





Insert the finger along the red arrow, lift up, pay attention to the two bases of the red frame to lift, and then slowly pull outward

### Special attention:

Pull out about 1/3 of the host and take care to pull out the cable

When assembling, pay attention to this column, where the line press does not interfere with the colum







### 6、pull out the line



Pull out about 1/3 of the host and take care to pull out the cable

1 - main board power supply cable, 2 - button& indicator cable, 3 - base subwoofer cable, 4- light sensing board cable





### 7、Pull the main engine out completely



-

1 - middle shell, 2 - front panel trim, 3 - back shell, 4 - back shell ring, 5 main engine







### 1、Remove motherboard screw



Remove the six screws from the mainboard, and pull out the cables, and take off the mainboard with a little force (the heat conductive sticker adsorbs the chip).



1 - DMD line, 2 - motor line, 3 - limit switch board line, 4 - fan 1 line, 5 - fan 2 lines, 6 - laser NTC line, 7 - vibration diffusion plate line, 8 audio line, 9 - motherboard to laser driver plate power supply line, 10 - camera line, 11 - WiFi& Bluetooth line, 12-3D TOF line, 13 -Motherboard to the laser driver board control signal cable, 14 - inlet NTC line

# Third. In-disassembling

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### 



Remove the seven screws from the mainboard support



You can lift the mainboard support by removing the seven screws from the mainboard support











1 - Laser cable, 2 - Power supply cable of the main board to the laser driver board, 3 - control signal cable of the main board to the laser driver board



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### 1、Remove optical engine screws



Remove the five screws. The fan does not have any screws. Manually remove the fan









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### 2、Disassemble DMD and DMD board





First, remove the 4 screws of the laser heat sink, and then remove the laser heat sink





### 2、Disassemble DMD and DMD board



First, remove the 4 inter axis screws of the DMD heat sink, cancel the DMD heat sink, and then remove the 4 inter axis screws on the DMD board to remove the DMD board







1- Camera, 2-3D TOF







3D TOF main control chip and its heat dissipation bracket coated with thermal conductive silicone grease







The guide rail of the middle shell

# Seventh. Assembly precautions





Fixed line, away from the upper and lower guide rails Fix the wire to the casing with adhesive tape in advance, which will facilitate assembly

When inserting the host, be sure to press this line in this direction and avoid interfering with the pillar



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FIFA WORLD CUP



# 4. Wiring diagram



# 5. Factory/Service OSD Menu and Adjustment

### 5.1 How to enter the Factory Menu

With user's RC

- (1) Power Smart Mini Projector on
- (2) Press button on the RC then call up "Menu" option.

(3) Move and "ok "button on RC to select settings—» Sound—» Audio Output

### Settings—》Balance

(4) On the **Balance**, input figure 1->9->6->9 in sequence on RC.



Note: It is important to remember that the hand fingers can't shield the RC emitter diode.





(5) Call up a "**M**" on the left-top of Smart Mini Projector, then press the menu button again, the Factory menu appear then

(6) DC power off and DC power on the Smart Mini Projector by Remote contrl, which can exit Factory OSD.

### 5.2 Factory OSD Menu

Factory OSD menu list: if you want to learn more about Smart Mini Projector, you'd better read it but would not adjust the value please. The Factory menu may be have difference for diverse market and customer.

### 5.2.1 Options

	White Balance				
	Options Laser Options	ToFac			
Version MAC Adr Cur project ID HDCP2.2 key HDCP1.4 key ESN WIDEVINE key EDV key Service No.	Soft Varsion Write Keys H7.V0000.NUTRA.00. 07.560.C0022 A0:00-4C:9C:22.24 DEU Inc.12.24 DEU Inc.12.24 DEU Inc.12.24 D7374518 HISETLXC4700000 0000000007076 01251485 19LAOUVDDCA01949820020	Region Logo Lang UART PQ COM Gamma Status Runing time	Europa A 62 Germany 1 Hisense 1 Enplah Off Off Test: Pattern Inley Pattern NG AutoGamma Reset 0d:0h:10m		

- (1) To Fac: When you select M, you can directly press the M key on the factory remote to enter factory mode
- (2) Uart Switch: If you want to use the rear terminal serial port function, enable this function

### 5.2.2 Laser



- (1) Eye Protect Switch: Enable or disable the eye protection function.
- (2) Temp Protect: Turn on or off the temperature protection function.
- (3) Actuator Adjustment: Extend Pixel Actuator
- (4) Screen Select: Screen selection function.
- (5) Fans Speed: You can view the speed of each fan.
- (6) Running time: You can check the total startup time of the machine.
- (7) Color wheel adjust: You can adjust the color wheel value.

### 5.2.3 Soft Version

Fastory D Version MAC Adr Cur project ID HDCP2.2 key HDCP1.4 key ESN WIDEVINE key EDV key Service No,	esign White Balance Options Laser Options Projector Soft Version Write Keys H7.V0000.NULTRA.00. 07.606.00822 A0:00:4C:9C:82:24 DEU his eng 002 HL7NULTRA 03729304 03729304 03734518 HISETLKC4700000 000000007076 00000000776 00000000776 01251485 230013695768 1PLAOLVDDE0A01949620020	Soft Version TCON Version FRC Version BLU Version BLU Status MAC Version ChipID DLP version	H7.V0000.NULTRA.00. 07.606.00822 NULL NULL NULL NULL A0:00:4C:9C:92:24 000433cc595cdd 3a6dc7001 69		

You can see the software information, For example, TV software version, FRC Version, MCU version, DLP version and so on.

### Note:

The Factory menu may be have difference for diverse market and customer, above Factory menu only for reference.

The factory menu data varies according to different sources. Incase changing the factory data by error, you can choose to "Clear all", by which you can resume the default value.

### 5.2.4 clean the EEPROM

- (1) Select the item "Options"--"Clear Unprotectly" in Factory mode
- (2) Press button to clear the EEPROM data
- (3) Smart Mini Projector restarts automatically

Laser Options Tofae Projector Region Soft Version Location Write Keys Version H7.V000.NULTRA.00, Lang	M Clear All Europe A 62 Germany
Projector Region Soft Version Location Write Keys Logo Version H7. V0000. NULTRA.00, Logo	Clear All Europe A 62 Germany
Version Location Write Keys Logo Version H7.V0000.NULTRA.00, Lang	62 Germany
Version H7.V0000.NULTRA.00, Logo	
	1 Hisense
MAC Adr A010014C10C102101	Off
DEU his eng PQ COM	
HDCP2.2 key International Inte	est Pattern
HDCP1.4 key 03729384 Gamma Status	NG
ESN HISETLKC4700000 Runing time	Gamma Reset
000000000000000000000000000000000000000	0d:0h:10m
0000007076	
00000007076 WIDEVINE key 01251485	
03734518 Gamma Status HISETLKC4700000 Runing time	NG IGamma Reset Od:0h:10m

# 6. Error code

# 6.1 Warning indicator light

Light	Failure principle	Fault determination		
Flash 1	The NTC temperature exceeds the protection temperature	<ul> <li>(1) If there is a shield in the air outlet / inlet (the distance between the left and right sides of the main engine is 20CM) or the ambient temperature is too high (not higher than 35°), remove the shield / reduce the ambient temperature</li> <li>(2) NTC failure/poor plug-in shutdown cooling (25 degrees), the measurement value is about 10K, then NTC has no problem, such as the resistance value is too large or too small (obvious open circuit or short circuit), NTC is bad, replace NTC resistance.</li> </ul>		
Flash 2	The fan speed is slow or stops spinning	<ul> <li>(1) A foreign object jams the fan, causing the fan speed to be abnormal or stop rotating cleaning</li> <li>(2) The fan is brokenreplace the fan</li> <li>(3) Poor fan transmission <ul> <li>a. Fan directly connected to the display board replace the display board</li> <li>b. Poor replacement of the display board/fan adapter board optical engine fan</li> </ul> </li> </ul>		
Flash 3	DLP system failure	<ol> <li>(1) The FFC between the display board and the DMD board is poorly plugged/ failure reinserted/replaced FFC</li> <li>(2) DMD part is not installed in place/DMD failure/DMD board failure reassemble DMD/replace DMD/replace DMD board</li> <li>(3) The display board failure replace the display board</li> </ol>		

# 6.2 Display board warning light

This model does not have this function

# 7. Troubleshooting

# 7.1 Main board



#### 7.1.1 TV won't Power On



### 7.1.2 Troubleshooting for Audio



### 7.1.3 Troubleshooting for TV/HDMI /USB input



7.1.4 Troubleshooting for Video input



### 7.2 Power Adapter



### 7.3 cleaning requirements

No.	1	2		
		Electrostatic sensitive optical parts		
Catagon	Moor	1.DMD		
Calegory	vvear	2. Vibrating diffuser		
		3. Laser		
Environment	Normal light (60W)	Normal light (60W)		
	Mear finger equere gloves	Wear finger covers, gloves, and antistatic		
Action	and antistatic wristbands	wristbands airsoft		
		Handling: Pick up the edge of the lens;		
		1. The surface of DMD should not be dirty, dusty		
		or grease;		
		2. The surface of the lens should not be greased		
Cleanliness	Dirty/cracked and need to	and dirty		
standard	be replaced immediately	3. The color filter wheel should not be dirty or		
		scratched		
		4. The phosphor wheel should not have dirt, burns		
		and other mark		

		1. Light pollution (dust, fingerprints): use a dust- free cloth to dip the cleaning solvent, gently wipe the surface, pay attention to avoid wiping hard				
		and wipe the surface quickly, which is conducive to liquid evaporation and does not loave streaks				
		If this step does not remove the dirt, continue to				
		step 2; 2. Medium contaminants (saliva oil droplets): dip				
	Normal work requires wearing gloves on both thumbs, index fingers, and middle fingers	alcohol with wiping paper, then gently wipe the				
		surface, pay attention to avoid scrubbing				
		surface to make it rub against stubborn dirt, and				
		then repeat step 2 operation;				
Wipe		Under 60W light, carefully inspect the lens surface.				
method		If dirt is found, repeat the above cleaning steps				
		scratches cannot be removed.				
		PS: Dust-free cloth folding angle standard:				
		a. Fold the prepared dust-free cloth in half at 1/3, change one direction and fold it in half at 1/3 to				
		get an angle and fold it in half, so that a sharp				
		angle of 45 degrees is obtained. Dip the sharp corners in a little cleaning solvent, avoid dripping,				
		and wipe in circular motions from the middle of				
		the lens to the edges. After wiping once, the sharp corner position cannot be reused, and the sharp				
		corner needs to be refolded to replace it, and so				
	-	on until it is wiped clean.				
Example image						
	NG	· · · · · · · · · · · · · · · · · · ·				

		Airsoft purging: the distance between the parts and the airsoft should be kept about 15cm, about
Niete	Dirty/cracked and need to	5S, and the purge time can be appropriately
INULE	be replaced immediately	increased for stubborn dirt;
		Alcohol wiping: If the surface is not dirty, no wipe
		is required

# 7.4 Warning prompts and troubleshooting

### 7.4.1 Thermal protection and Dust removal mode



#### Explanation 1:

1. Tm1 is the NTC temperature of laser LD1; Tm2 is the LD2 NTC temperature of the laser; Tm3 is the LD3 NTC temperature of the laser; Tm4 is the LD4 NTC temperature of the laser; Sf1 is the speed of fan 1; Sf2 is the speed of fan 2; Sf3 is the rotational speed of fan 3; T is the startup running time, which needs to be able to store, accumulate, and reset, and is the basis for determining whether dust removal and cleaning mode is needed; Ta1 is the NTC temperature at inlet 1, and Ta2 is the NTC temperature at inlet 2, which are the criteria for determining whether the ambient temperature is too high.

2. When starting up for the first time, t is synchronized with the accumulated usage time, and t reminds to start the dust removal mode every 500 hours. After selecting it, t is reset to zero, and it will automatically count and store the time. It must be used every time it is turned on; Ta is the ambient temperature, which can be detected immediately.

Explanation 2: (The time and text of the prompt are for reference only):

3. Tip 1: Last time it was shut down due to thermal protection, please confirm if there is a heat source near the host and if there are any obstructions in the air inlet and outlet.

4. Tip 2: If the host is used for a long time, it is necessary to activate the dust removal and cleaning mode to extend the lifespan of the optical machine (about 3 minutes, which does not affect user use and may increase noise).

5. Tip 3: The current ambient temperature is too high. Please check if there is a heat source near the host and if the air inlet and outlet are blocked. 6. Tip 4: The current ambient temperature is too high. To effectively protect the host, we have intelligently adjusted the mode for you. Please check if there is a heat source near the host and if the air inlet and outlet are blocked.

#### Explanation 3:

7. At the end of the program, no more data or prompts will be read before shutting down, and it will continue to execute the next time it is turned on. (All prompts are only given once within the boot range)

Explanation 4:

8. The prompt is not displayed in full screen and will automatically disappear after 5 seconds.

Explanation 5:9. The red font in the flowchart above represents the configuration items, which should be configured according to the project

### 7.5 Catch LOG method

### 7.5.1 Catch TV log method

(1) Connect the tool to the TV and computer.

There are two connect tools, you can choose different serial cables according to the actual interface of the machine.

One is



The other one is



(2) Install the driver PL2303\_Prolific\_DriverInstaller\_v1160.exe After the installing, restart the computer.

(3) Check the computer COM and remember it. (Like my computer, it is COM4);



(4) In this file,

click "SecureCRT/SecureCRTPortable/App/SecureCRT/SecureCRT.exe"



then click the Quick Connect.

🗖 not	conn	ected	l – Secu	reCRT			
<u>F</u> ile	<u>E</u> dit	<u>V</u> iew	<u>O</u> ptions	<u>T</u> ransfer	<u>S</u> cript	Too <u>l</u> s	<u>H</u> elp
<b>S</b>	J 🖇	3 20 1	ħ <b>ħ</b> #	1 😼 😼	818	28 1	🕐   🛃 🖕

(5) Set up as the picture. Click-Connect

	<ul> <li>Quick</li> <li>Prot</li> <li>Part</li> <li>1, select serial</li> <li>2, select a serial pc</li> <li>3, this rate (11520)</li> </ul>	k Corrections of the second se	serial COM4 15200 15200 RTS/CTS XON/XOFF XON/XOFF Dased on the p must be select Open in a Connect	previous serial port information ected sesson in a tab net Cancel
(6)	Click File, choice Log		ession, set up the gerial-COI2 (1) - not of le Edit View Options Ir Connect Alt+C Quick Connect Alt+Q Connect in Tab Alt+B Reconnect Reconnect All Disconnect All Clone Session Connect SFIP Tab Alt+P Lock Session Print Setup Log Session	he Log's name. ™

(7) Operate the problem and save the log. Provide the log to HQ. We can well know the issue easily and exactly.

Ra<u>w</u> Log Session <u>T</u>race Options

### 7.5.2 Catch display(DLP) log method

- 1、Tools preparation
  - (1) Computer on which the SecureCRT software is installed



### (2) DLP print board



(3) micro USB cable



- 2、Device connection
  - (1) You need to connect one port of the printing board to the display board,

the other port to the USB cable, and the other end of the USB cable to the computer;





(2) Check the computer COM and remember it. (Like my computer, it is COM4);

(3) then click the Quick Connect.

🗖 not	com	iected	l – Secu	reCRT			
<u>F</u> ile	<u>E</u> dit	<u>V</u> iew	<u>O</u> ptions	<u>T</u> ransfer	<u>S</u> cript	Too <u>l</u> s	Help
<b>1 2 3</b>	J. 3	9 <b>X</b>	Ъ <b>В А</b>	1 😼 😼	818	28 📍	🕐   🛃 🖕

(4) Set up as the picture. Click-Connect, after the connection is successful, the text box will blink the cursor

1、select serial 2、select a serial 3、this rate(115	Quick Connect Protocol: Port: Data Bits: Parity: Stop bits: 1 Stop bits: 1 Stop way duck connect on startup Show quick connect on startup Carlow Context on startup Carlow Carlo	e previous serial port ected ve session en in a tab omect Cancel	t information
	•••		

(5) Click File, select Log Session, set up the Log's name.



(6) Turn on the Smart Mini Projector, the DLP log is automatically refreshed.

#### 7.5.3 Remote control

We can also help you grab the log, but you need to install the following software Install teamview13.exe After the installing, restart the computer.

First the computer connect network, then Click , will generate YOUR ID and PASSWORD. please give us them (YOUR ID and PASSWORD) Ps: before these please according to 7.6.1 or 7.6.2 open SecureCRT.



# 8. Special operating procedure

### 8.1 Eye Protection- Open by default, user can close

### a. Function:

When a person approaches, a prompt box will pop up (countdown 5S). If the human is far away within 5 seconds, the prompt box will disappear and the light machine will not be turned off, otherwise the light machine will be turned off, and the light machine will be turned on automatically when the human body is far away;

b. Screen prompt:

In order to protect your eyes, do not look into the lens. This projector is shutting down in 5 seconds

c. The path for turning off the eye protection function:

### Settings-> Projector ->Auto Eye Protection

d. Fault determination:

If the 3D TOF board failure, the eye protection function is not effective

If the 3D TOF board poor connection, the unit will no image





### 8.2 Power Indicator

Function:

When turn on the Smart Mini Projector, the White Power Indicator flashes;

When the Smart Mini Projector is in factory mode, the White Power Indicator flashes;

When the Smart Mini Projector is running normally, the White Power Indicator is off;

When the Smart Mini Projector is error, the Red Power Indicator flash to report the error.

### 8.3 Automatic dust removal-users cannot close

### a. Function:

The machine will automatically trigger the automatic dust removal function every 500 hours of operation, and the fan of the whole machine will run at high speed for 3 minutes. There is a prompt at the bottom of the screen during dust removal.

b. Is it normal to watch the dust removal process  $\rightarrow$  yes

- c. Does the subtitle disappear during the dust removal process → not disappear, keeps prompting
- d. What happens when the dust removal ends → the subtitle prompt disappears directly after the dust removal ends

### NOTE: For the detailed logic of the dust removal mode, see 7.5.1

### 8.4 Temperature reminder

a. Function:

When the ambient temperature reaches 36, the screen will remind overheat protection, when the ambient temperature reaches 45, the machine will automatically shut down. (The ambient temperature sensor is at the rear air inlet)

b. Screen prompt:

When power on again, it will prompt "The previous shutdown was due to the high temperature of the Smart Mini Projector, and it was automatically turned off for protection"

c. Fault determination:

If there is a warning of overheating, first check if there are any obstructions around the machine, which may cause poor heat dissipation. If so, remove obstructions.

### NOTE: For detailed logic of thermal protection, see 7.5.1

### 8.5 Adjust color wheel

After replacing the display board or the color displayed is incorrect, you need to adjust the color wheel.

(1) Follow the steps in 5.1 to enter Factory mode "M"

(2) Press F4 button on the Factory RC then call up "color wheel" option.

(3) Select and adjust the color wheel using the arrow keys on the Factory RC.



### NOTE: This model does not have this function

8.6 Calibration after replace the foreign body detection board

### NOTE: This model does not have this function

After you replace the foreign object detection board, you need to calibrate the

foreign object detection function.

(1) Follow the steps in 5.1 to enter Factory mode "M".

(2) Press MEMU button on the Factory RC then call up "MEMU" option.

(3) Select the LASER option under the Factory menu, turn on the foreign object detect function.

(4) Select the calibration of backaround noise.



### 9.System self-test (if have)

### NOTE: This model does not have this function

### 10. Software Upgrade Method

Main software upgrade directly with USB

10.1 Smart Mini Projector in user mode

The main software can be upgraded with USB disk.

### 10.2 Smart Mini Projector in factory mode

(1) If Smart Mini Projector is in Factory mode, only have difference from chapter 4.1.1 b. as following. others are same.

(2) Smart Mini Projector is in factory mode, only AC power off SMART MINI PROJECTOR and insert the USB disk, next AC power on, SMART MINI PROJECTOR can identify automatically to update, till call up "Loading" interface, update process bar is 44%.

Once choose another SMART MINI PROJECTOR mode, must AC power off and power on the SMART MINI PROJECTOR to reboot.

Firgure-1: Loading



#### Firgure-2: Checking software



Firgure-3: installing Software.

USB Upgrade	
Installing.	— 5%
Software Update is in progress. Please do not power off the TV. This may take several minutes to complete.	

### 11. Cleaning and Maintenance

(1) Keep dry, avoid long periods of inactivity.

(2) When using the HDMI interface to connect or disconnect multimedia devices, be sure to do it after "turn off the SMART MINI PROJECTOR".

(3) Regular cleaning

**Host:** Use air blower to clean the dust, not touch or wipe with your hands. For oil stains and fingerprints, wipe carefully with a microfiber cleaning cloth to avoid damage to the optical coating.

Screen: Clean the screen with a brush or microfiber cleaning cloth. If there are dirt,

fingerprints, etc. on the screen, you can try to wipe it with clean water with a dust-free cloth first, and if it can't be wiped off, you can try to wipe it gently with a dust-free cloth dipped in alcohol.