

# Haier

# SERVICE MANUAL

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**LED TV**

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**Model No. LE40B650CF**

**SIS231C1CI Chassis**



## **WARNING**

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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# Chapter 1. General Information

## 1-1. Document Information

Document format: Adobe PDF

Author: Gao Bingbing

Compiler:

## 1-2. General Guidelines

When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.

After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.

After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

- 1) Leakage Current Cold Check
- 2) Leakage Current Hot Check
- 3) Prevention of Electro Static Discharge (ESD) to Electrostatically Sensitive

## 1-3. Important Notice

### 1-3-1. Follow the regulations and warnings

Most important thing is to list up the potential hazard or risk for the service personnel to open the units and disassemble the units. For example, we need to describe properly how to avoid the possibility to get electrical shock from the live power supply or charged electrical parts (even the power is off).



This symbol indicates that high voltage is present inside. It is dangerous to make any kind of contact with any inside part of this product.



This symbol indicates that there are important operating and maintenance instructions in the literature accompanying the appliance.

### 1-3-2. Be careful to the electrical shock

To prevent damage which might result in electric shock or fire, do not expose this TV set to rain or excessive moisture. This TV must not be exposed to dripping or splashing water, and objects filled with liquid, such as vases, must not be placed on top of or above the TV.

### 1-3-3. Electro static discharge (ESD)

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such

components commonly are called Electrostatically Sensitive (ES) Devices. The following techniques should be used to help reduce the incidence of component damage caused by electrostatic discharge (ESD).

## **Electrostatically Sensitive (ES) Devices**

Some semiconductor (solid-state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by static by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed to prevent potential shock reasons prior to applying power to the unit under test.

2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.

### **1-3-4. About lead free solder (PbF)**

This product is manufactured using lead-free solder as a part of a movement within the consumer products industry at large to be environmentally responsible. Lead-free solder must be used in the servicing and repairing of this product.

### **1-3-5. Use the genuing parts (specified parts)**

Special parts which have purposes of fire retardant (resistors), high-quality sound (capacitors), low noise (resistors), etc. are used.

When replacing any of components, be sure to use only manufacture's specified parts shown in the parts list.

## **Safety Component**

- Components identified by mark have special characteristics important for safety.

### **1-3-6 Safety check after repairment**

Confirm that the screws, parts and wiring which were removed in order to service are put in the original positions, or whether there are the positions which are deteriorated around the serviced places serviced or not. Check the insulation between the antenna terminal or external metal and the AC cord plug blades. And be sure the safety of that.

## **General Servicing Precautions**

1. Always unplug the receiver AC power cord from the AC power source before:
  - a. Removing or reinstalling any component, circuit board module or any other receiver assembly.
  - b. Disconnecting or reconnecting any receiver electrical plug or other electrical connection.
  - c. Connecting a test substitute in parallel with an electrolytic capacitor in the receiver.

**CAUTION:** A wrong part substitution or incorrect polarity installation of electrolytic capacitors may result in an explosion hazard.

2. Test high voltage only by measuring it with an appropriate high voltage meter or other voltage measuring device (DVM, FETVOM, etc) equipped with a suitable high voltage probe.

Do not test high voltage by "drawing an arc".

3. Do not spray chemicals on or near this receiver or any of its assemblies.

4. Unless specified otherwise in this service manual, clean electrical contacts only by applying the following mixture to the contacts with a pipe cleaner, cotton-tipped stick or comparable non-abrasive applicator; 10% (by volume) Acetone and 90% (by volume) isopropyl alcohol (90%-99% strength).

**CAUTION:** This is a flammable mixture.

Unless specified otherwise in this service manual, lubrication of contacts is not required. Capacitors may result in an explosion hazard.

5. Do not defeat any plug/socket B+ voltage interlocks with which receivers covered by this service manual might be equipped.

6. Do not apply AC power to this instrument and/or any of its electrical assemblies unless all solid-state device heat sinks are correctly installed.

7. Always connect the test receiver ground lead to the receiver chassis ground before connecting the test receiver positive lead.

Always remove the test receiver ground lead last. Capacitors may result in an explosion hazard.

8. Use with this receiver only the test fixtures specified in this service manual.

**CAUTION:** Do not connect the test fixture ground strap to any heat sink in this receiver.

9. Remove the antenna terminal on TV and turn on the TV.

10. Insulation resistance between the cord plug terminals and the external exposure metal should be more than Mohm by using the 500V insulation resistance meter.

11. If the insulation resistance is less than M ohm, the inspection repair should be required. If you have not the 500V insulation resistance meter, use a Tester. External exposure metal: Antenna terminal Headphone jack.

12. Use only a grounded-tip soldering iron to solder or unsolder ES devices.

13. Use only an anti-static type solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ES devices.

14. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.

15. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it.

(Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).

16. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

**CAUTION:** Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

17. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device.)

### 1-3-7. Ordering Spare Parts

Please include the following informations when you order parts. (Particularly the Version letter)

1. Model number, serial number and software version

The model number and serial number can be found on the back cover of each product. Software version can be found in the Spare Parts List.

2. Spare part No. and description

Spare part No. and description can be found in the Spare Parts List.

### 1-3-8. Photo used in this manual

The illustration and photos used in this Service Manual may not base on the final design of products, which may differ from your products in some way.

## 1-4. How to Read this Service Manual

### Using icons

Icons are used to attract the attention of the reader to specific information. The meaning of each icon is described in the table below:



Note:

A "note" provides information that is not indispensable, but may nevertheless be valuable to the reader, such as tips and tricks.

**Caution:**

A “caution ” is used when there is danger that the reader, through incorrect manipulation, may damage equipment, loose data, get an unexpected result or has to restart(part of) a procedure.

**Warning:**

A “warning” is used when there is danger of personal injury.

**Reference:**

A “reference” guides the reader to other places in this binder or in this manual, where he/she will find additional information on a specific topic.



## Chapter 2. Specification

### 2-1. Specification list

Model	LE40B650CF
Screen Size	40"
Aspect Ratio	16:9
Resolution	1920x1080
Brightness (cd/m <sup>2</sup> )	250
Contrast	1500:1
Response Time (ms)	8
Angel of View	H:170°, V:160°
Color Display	16.7M
OSD Language	English, French, Spanish. German. Italian. Dutch. Hungarian. Polish. romana. Czech.
Color System	PAL
Audio System	BG, DK, L, L'
Audio Output Power (Built-in) (W)	8Wx2
Audio Output Power (outer) (W)	No
Total Power Input (W)	100W
Voltage Range (V)	AC100V~240V
Power Frequency (Hz)	50~60Hz
Time of Sleep Timer (MINS)	240Min
Net Weight (KG)	17.82lbs
Gross Weight (KG)	22.66lbs
Net Dimension (MM)	930mm*105mm*612mm

**2-2. External pictures (four faces)**



**Front Side**



**Up Side**



**Right Side**



**Back Side**

## Chapter 3. Disassemble and Assemble

### 3-1. LE40B650CF

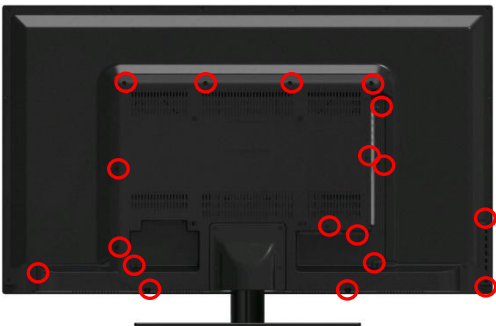
#### 3-1-1. Remove the Stand



1. Lay down the TV set .
2. Remove the four screws from the stand which in the picture above.
3. Remove the stand.



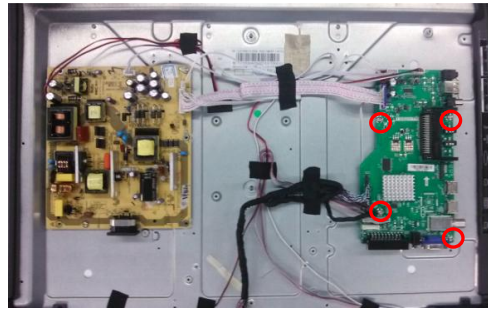
#### 3-1-2. Remove the Back Cabinet



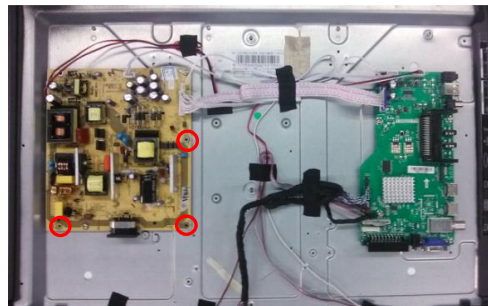
1. Remove the eighteen screws indicated with red circles.
2. Flip machine, panel side up.
3. Carefully raise the Front shell from bottom.

#### 3-1-3. Remove the Mainboard

1. Remove the four screws indicated with red circles.
2. Remove the Mainbord.



#### 3-1-4. Remove the Power Supply Module



1. Remove the five screws indicated with red circles in below picture.
2. Remove the Power Supply Module.

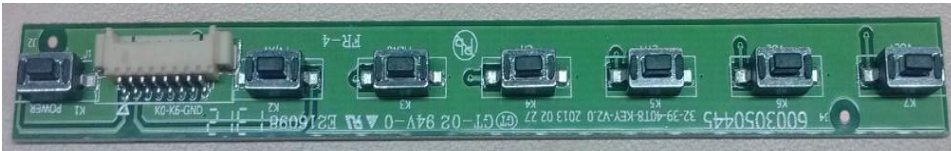
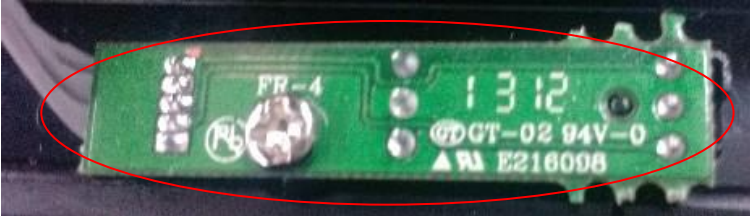
#### 3-1-5. Remove the Speaker

Remove the Speaker indicated by red circle in below picture.



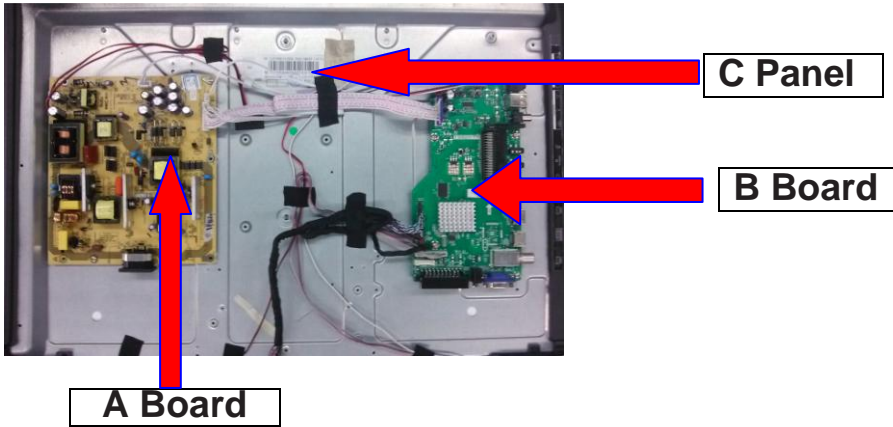
### 3-1-6. Remove the Remote Control Board And the Key Board

Remove the Remote Control Board and the Key Board indicated by red circle in below picture.



## Chapter 4. Location of Controls and Components

### 4-1. Board Location



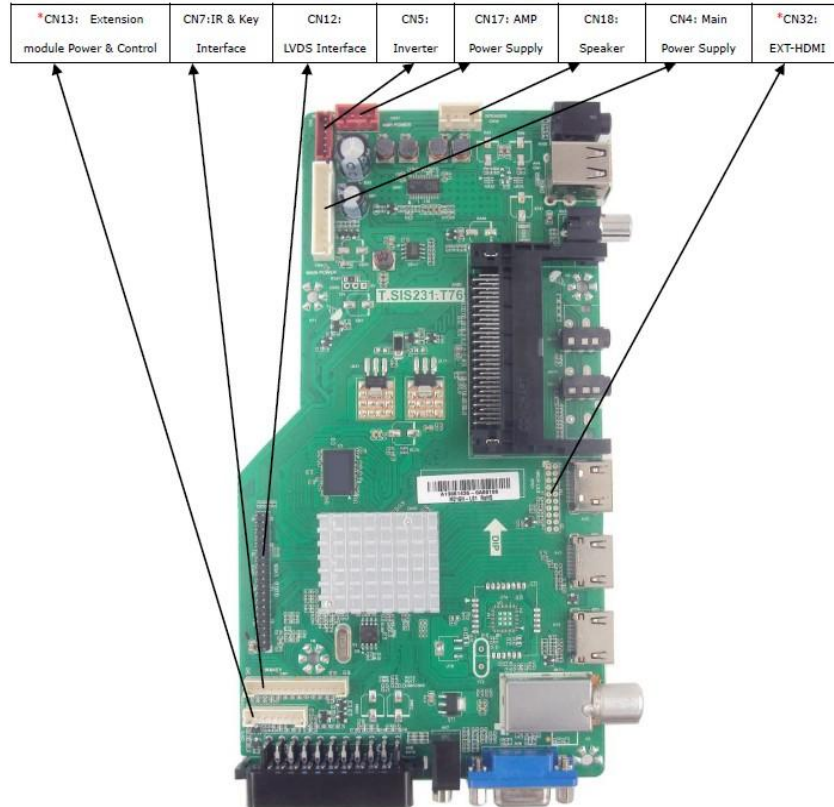
No.	Model	Description
A Board	HKL-420406	Power Supply Module
B Board	T.SIS231.T76	Mainboard
C Panel	LSC400HM06-T	LCD Panel

## 4-2. Mainboard

### 4-2-1. Function Description

Process signal which incept from exterior equipment then translate into signal that panel can display.

### 4-2-2. Connector definition



IR & Key Interface CN7	
Pin number	Signal name
1	5V
2	RED
3	GRE
4	IR
5	GND
6	K0
7	K1
8	K2
9	K3
10	K4
11	K5
12	K6
13	K7
14	GND

Inverter connector CN5	
Pin number	Signal name
1	12V
2	12V
3	BLO
4	ADJ
5	GND
6	GND

Speaker connector CN18	
Pin number	Signal name
1	ROUT+
2	ROUT-
3	LOUT-
4	LOUT+

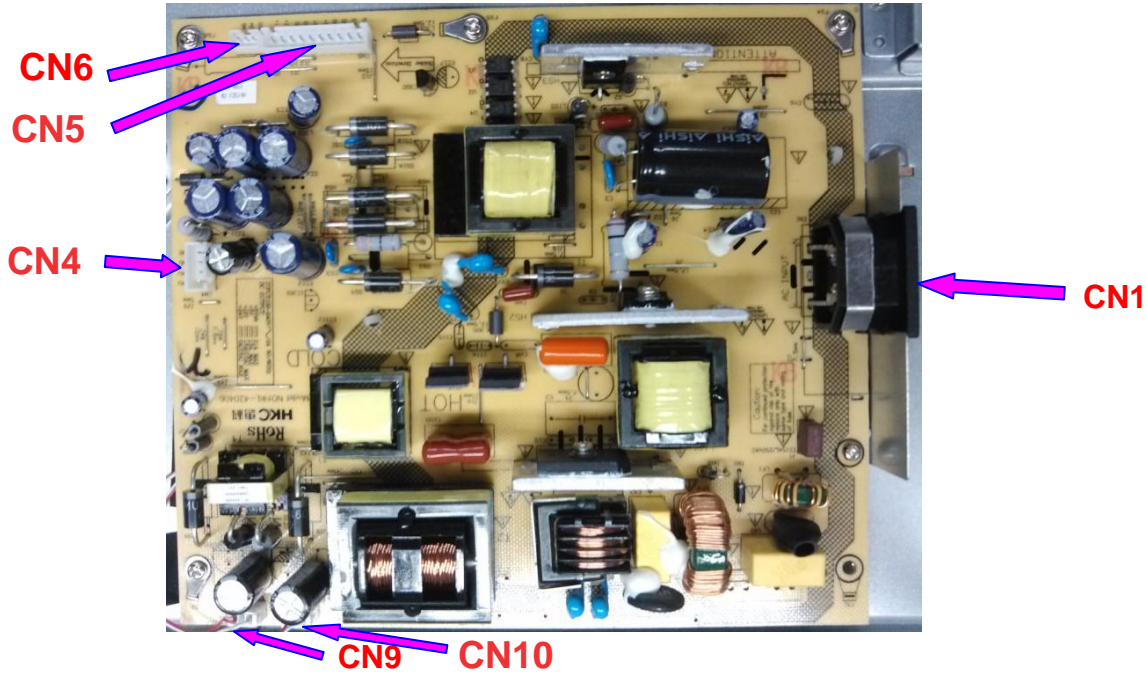


### 4-3. Power Supply Module

#### 4-3-1. Function Description

To supply power for Mainboard, Panel.

#### 4-3-2. Connector definition



Mainboard power supply connector CN5	
Pin number	Signal name
1	12V
2	12V
3	GND
4	GND
5	5V
6	5V
7	GND
8	GND
9	STB
10	5VSB

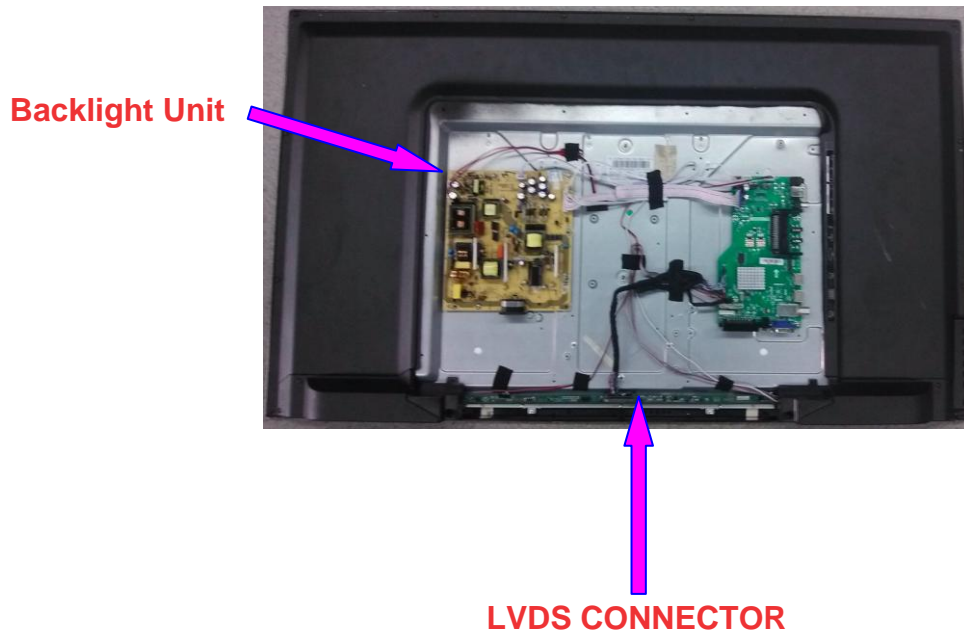
LED driver connector CN9, CN10	
Pin number	Signal name
1	+
2	-
Backlight adjust connector CN6	
1	BL_ON
2	ADJ
3	GND
AMP power connector CN4	
1	GND
2	GND
3	VCC
4	VCC

CN1 is the Power cord connector.



#### 4-4. LCD Panel

LE40B650CF



#### Connector Definition

##### Backlight Unit

Pin No.	Symbol	Description
1	IRLED1	Cathode
2	IRLED2	Anode
3	IRLED3	Cathode
4	IRLED4	Anode

## TFT LCD Module

Pin	Symbol	Description
1	B_INT	I2C
2	SCL	I2C
3	SDA	I2C
4	NC	
5	NC	
6	NC	
7	LVDS_SEL	
8	LUT_SEL0	DCC LUT SELECTION
9	LUT_SEL1	DCC LUT SELECTION
10	NC	
11	GND	Ground
12	RO[0]N	Odd LVDS Signal -
13	RO[0]P	Odd LVDS Signal +
14	RO[1]N	Odd LVDS Signal -
15	RO[1]P	Odd LVDS Signal +
16	RO[2]N	Odd LVDS Signal -
17	RO[2]P	Odd LVDS Signal +
18	GND	Ground
19	ROCLK-	Odd LVDS Clock -
20	ROCLK+	Odd LVDS Clock +
21	GND	Ground
22	RO[3]N	Odd LVDS Signal -
23	RO[3]P	Odd LVDS Signal +
24	RO[4]N	Odd LVDS Signal -
25	RO[4]P	Odd LVDS Signal +
26	NC	
27	NC	
28	RE[0]N	Even LVDS Signal -
29	RE[0]P	Even LVDS Signal +
30	RE[1]N	Even LVDS Signal -
31	RE[1]P	Even LVDS Signal +
32	RE[2]N	Even LVDS Signal -
33	RE[2]P	Even LVDS Signal +
34	GND	Ground
35	ROCLK-	Even LVDS Clock -
36	ROCLK+	Even LVDS Clock +
37	GND	Ground
38	RE[3]N	Even LVDS Signal -
39	RE[3]P	Even LVDS Signal +
40	RE[4]N	Even LVDS Signal -
41	RE[4]P	Even LVDS Signal +
42	NC	
43	NC	
44	GND	Ground
45	GND	Ground
46	GND	Ground
47	NC	
48	VIN	DC power supply
49	VIN	DC power supply
50	VIN	DC power supply
51	VIN	DC power supply

## Chapter 5. Installation Instructions

### 5-1. Accessories



Remote Control



Batteries

## 5-2. External Equipment Connections

### Antenna Connection

Connect your aerial to the back of the TV into the ANTENNA IN socket.

### Improve Your Signal

To improve picture quality in a poor signal area, use a signal amplifier (not supplied).

### Connect Your PC to the TV

You can use your TV as a monitor for your personal computer by connecting it with a VGA cable (not supplied).

- A Read your computer user guide and check it has a VGA connector.
- B Turn off your TV and PC.
- C Connect a D type 15-pin VGA interface cable to the VGA video interface connector on the PC. Connect the other end of the cable to the PC interface connector on the TV. Tighten the screws on the VGA connectors and connect the audio cable (not supplied) to the audio input socket on the back of the TV.
- D Turn on the TV firstly and then the PC.
- E Press the Source button on the TV or TV remote control to set the video input mode to PC.
- F Once the image shows, if there is noise present, change the PC mode to other resolutions, change the refresh rate to other rate or adjust the brightness and contrast on the menu until the picture is clear.

### Connect a DVD Player to Your TV

Connect the DVD video outputs (Y, P<sub>b</sub>, P<sub>r</sub>) to the COMPONENT (Y, P<sub>b</sub>, P<sub>r</sub>) IN socket on your TV.

- A Turn on the DVD player and insert a DVD disk.
- B Press the SOURCE button to select COMPONENT mode.
- C Refer to the DVD player user guide for operating instructions.

### Connect a DVD Player or VCR to Your TV

There are two ways in which you can connect a DVD player or VCR to your TV. Make sure that both the TV and DVD player or VCR are switched off before you connect them.

### HDMI Input

- A Connect the cable from the HDMI device to the TV HDMI socket.
- B Press the **SOURCE** button to select HDMI mode.
- C Refer to the HDMI device user guide for how to operate.

## Chapter 6. Operation Instructions

### 6-1. Front Panel Controls

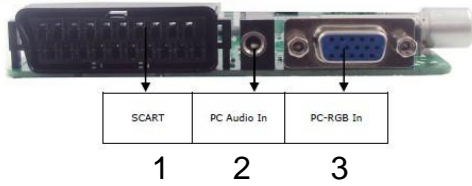


1	POWER	Press to turn the TV on and off.
2	SOURCE	Toggles between all the available input sources.
3	MENU	Press to select the main menu.
4	CH-	TV channel down.

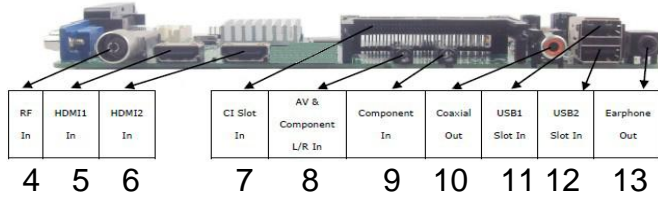
5	CH+	TV channel up.
6	VOL-	Press to decrease the volume.
7	VOL+	Press to increase the volume.

## 6-2. Back Panel Controls

FRONT VIEW OF T.SIS231.T76



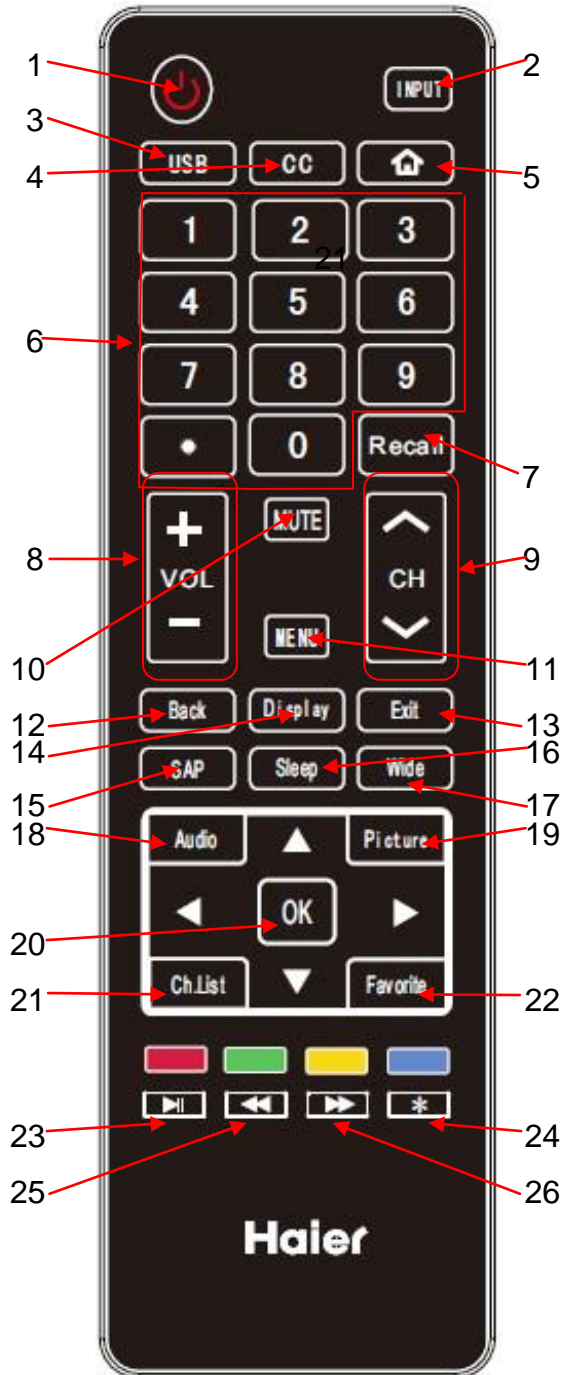
SIDE VIEW OF T.SIS231.T76



- |    |            |        |
|----|------------|--------|
| 1  | Scart      | input  |
| 2  | PC Audio   | input  |
| 3  | VGA        | input  |
| 4  | ANT        | input  |
| 5  | HDMI1      | input  |
| 6  | HDMI2      | input  |
| 7  | CI Slot    | input  |
| 8  | MINI-AV    | input  |
| 9  | MINI-YPbPr | input  |
| 10 | COAX       | output |
| 11 | USB1       | input  |
| 12 | USB2       | input  |
| 13 | Earphone   | output |

### 6-3. Setting Up Your Remote Control

When using the remote control, aim it towards the remote sensor on the TV.



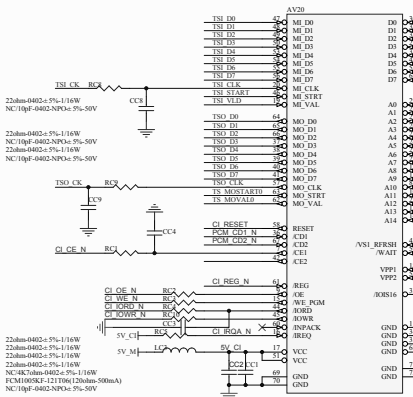
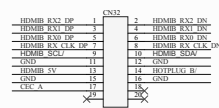
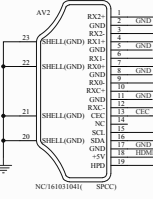
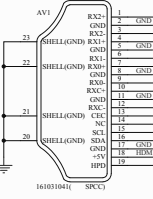
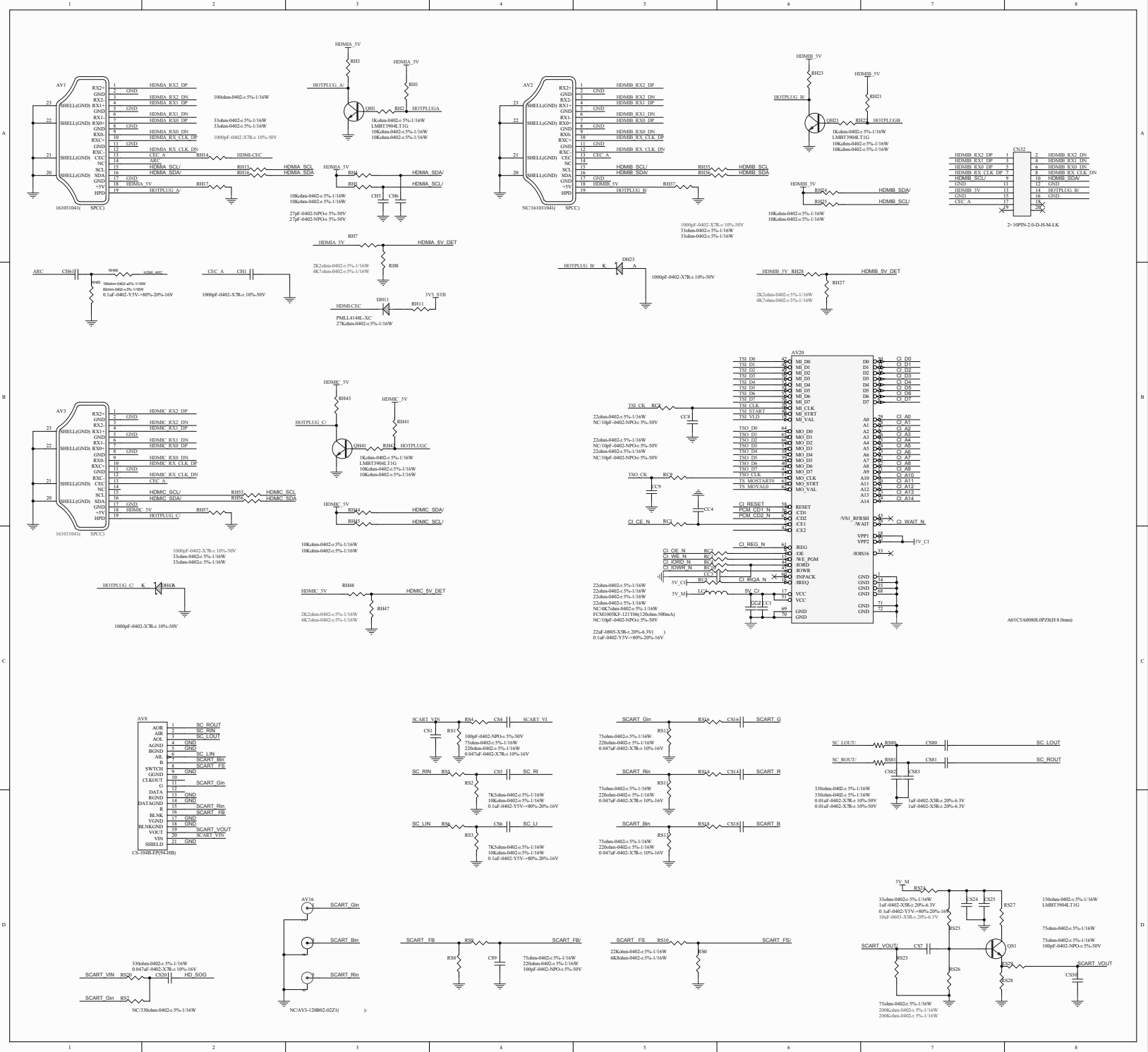
- 1 POWER.
- 2 INPUT.
- 3 USB Shortcut button.
- 4 CC.
- 5 HOME;
- 6 Program Number Channel selection.
- 7 RECALL button.
- 8 VOL+/VOL-: Volume selection.
- 9 CH^/CHv: Channel selection.
- 10 Mute.
- 11 Menu button.
- 12 Back button.
- 13 Exit button.
- 14 DISPLAY button.
- 15 SAP button.
- 16 Sleep button.
- 17 Wide button.
- 18 Audio button.
- 19 Picture Mode.
- 20 OK button.
- 21 Channel List.
- 22 Favorite program.
- 23 Play / Pause button (only for USB).
- 24 EPG button.
- 25 Fast Reverse (only for USB).
- 26 Fast Forward (only for USB).

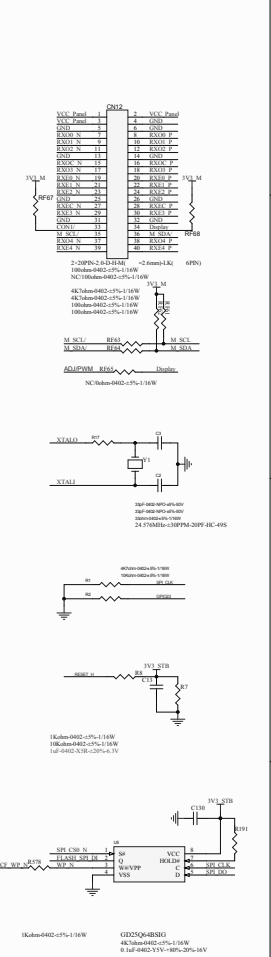
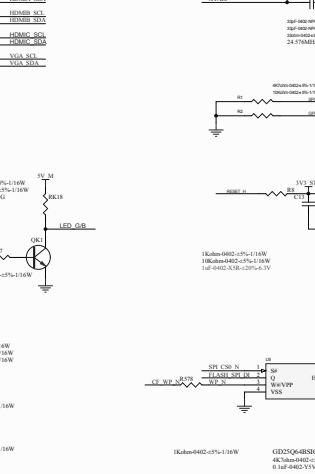
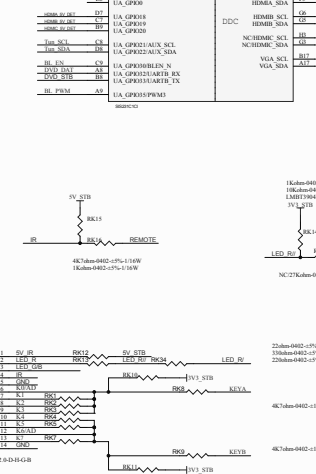
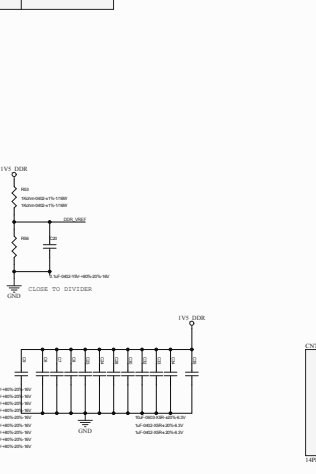
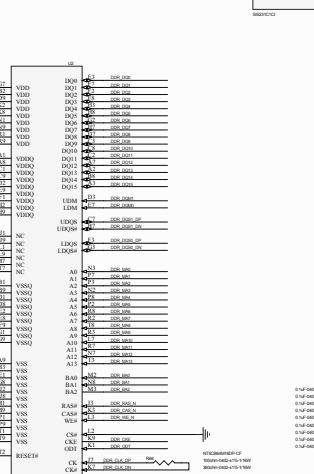
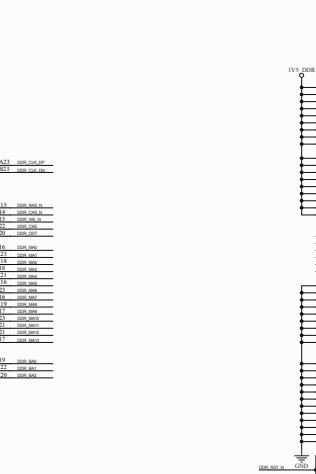
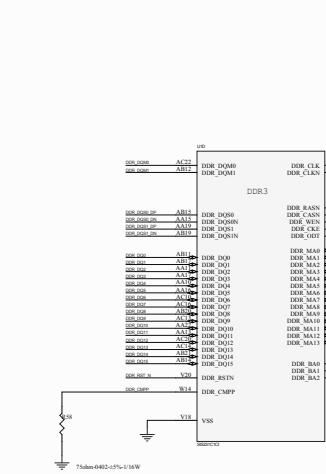
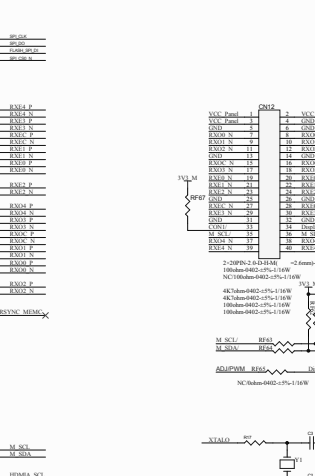
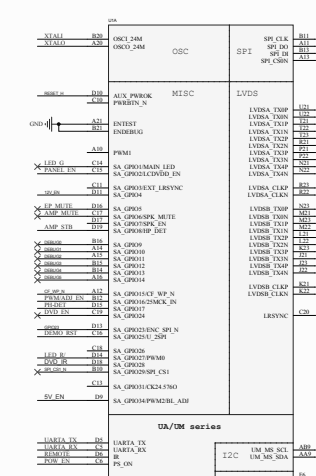
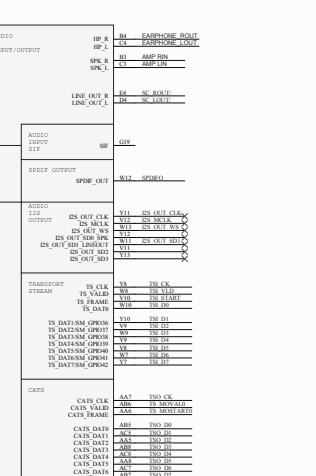
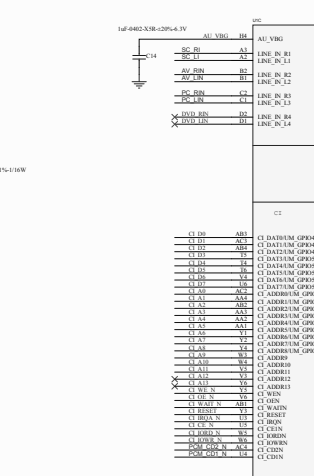
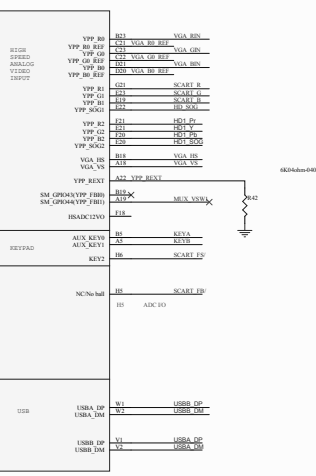
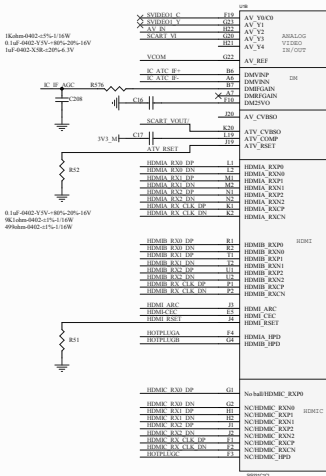




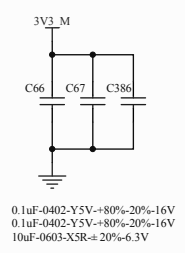
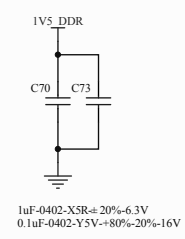
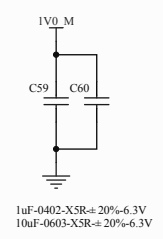
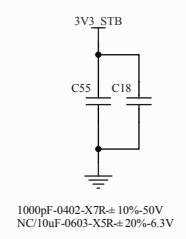
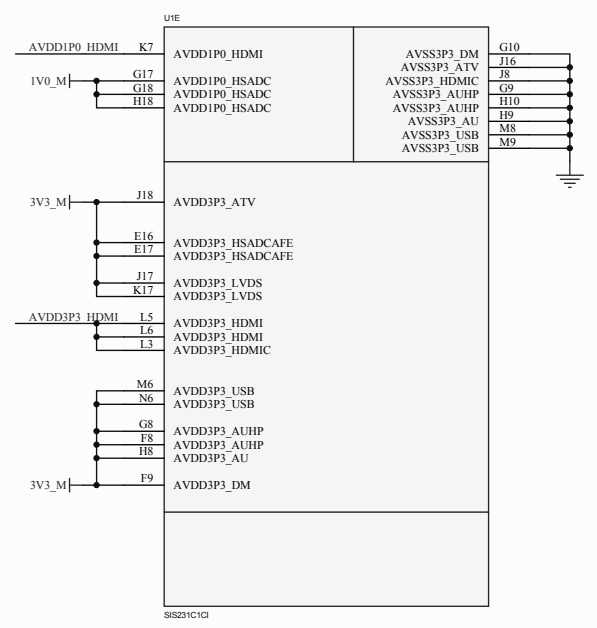
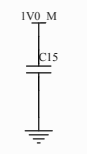
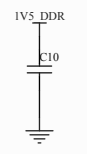
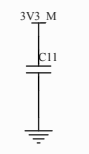
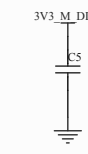
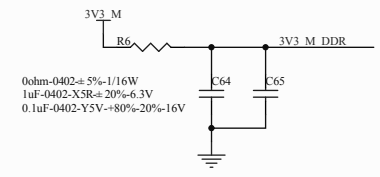
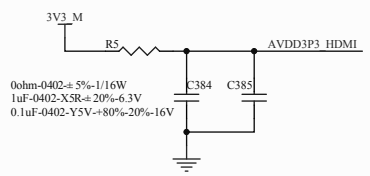
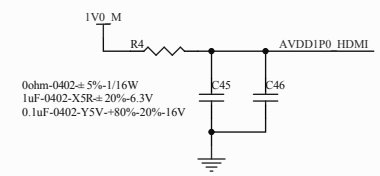
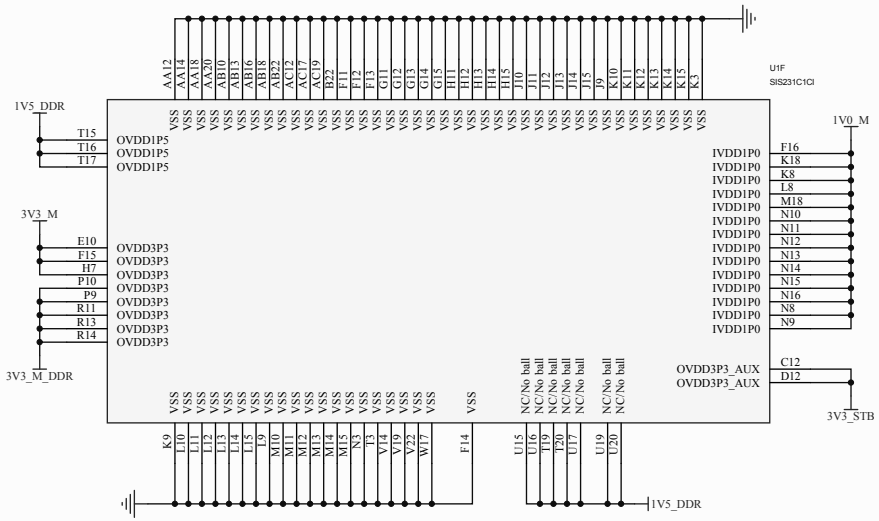




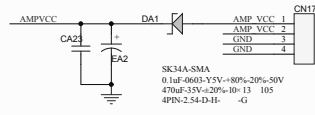




Item	Quantity	Description
1	1	40KHz-402-1% 10W
2	1	40KHz-402-1% 10W
3	1	40KHz-402-1% 10W
4	1	40KHz-402-1% 10W
5	1	40KHz-402-1% 10W
6	1	40KHz-402-1% 10W
7	1	40KHz-402-1% 10W
8	1	40KHz-402-1% 10W
9	1	40KHz-402-1% 10W
10	1	40KHz-402-1% 10W
11	1	40KHz-402-1% 10W
12	1	40KHz-402-1% 10W
13	1	40KHz-402-1% 10W
14	1	40KHz-402-1% 10W
15	1	40KHz-402-1% 10W
16	1	40KHz-402-1% 10W
17	1	40KHz-402-1% 10W
18	1	40KHz-402-1% 10W
19	1	40KHz-402-1% 10W
20	1	40KHz-402-1% 10W
21	1	40KHz-402-1% 10W
22	1	40KHz-402-1% 10W
23	1	40KHz-402-1% 10W
24	1	40KHz-402-1% 10W
25	1	40KHz-402-1% 10W
26	1	40KHz-402-1% 10W
27	1	40KHz-402-1% 10W
28	1	40KHz-402-1% 10W
29	1	40KHz-402-1% 10W
30	1	40KHz-402-1% 10W
31	1	40KHz-402-1% 10W
32	1	40KHz-402-1% 10W
33	1	40KHz-402-1% 10W
34	1	40KHz-402-1% 10W
35	1	40KHz-402-1% 10W
36	1	40KHz-402-1% 10W
37	1	40KHz-402-1% 10W
38	1	40KHz-402-1% 10W
39	1	40KHz-402-1% 10W
40	1	40KHz-402-1% 10W
41	1	40KHz-402-1% 10W
42	1	40KHz-402-1% 10W
43	1	40KHz-402-1% 10W
44	1	40KHz-402-1% 10W
45	1	40KHz-402-1% 10W
46	1	40KHz-402-1% 10W
47	1	40KHz-402-1% 10W
48	1	40KHz-402-1% 10W
49	1	40KHz-402-1% 10W
50	1	40KHz-402-1% 10W
51	1	40KHz-402-1% 10W
52	1	40KHz-402-1% 10W
53	1	40KHz-402-1% 10W
54	1	40KHz-402-1% 10W
55	1	40KHz-402-1% 10W
56	1	40KHz-402-1% 10W
57	1	40KHz-402-1% 10W
58	1	40KHz-402-1% 10W
59	1	40KHz-402-1% 10W
60	1	40KHz-402-1% 10W
61	1	40KHz-402-1% 10W
62	1	40KHz-402-1% 10W
63	1	40KHz-402-1% 10W
64	1	40KHz-402-1% 10W
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74	1	40KHz-402-1% 10W
75	1	40KHz-402-1% 10W
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82	1	40KHz-402-1% 10W
83	1	40KHz-402-1% 10W
84	1	40KHz-402-1% 10W
85	1	40KHz-402-1% 10W
86	1	40KHz-402-1% 10W
87	1	40KHz-402-1% 10W
88	1	40KHz-402-1% 10W
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90	1	40KHz-402-1% 10W
91	1	40KHz-402-1% 10W
92	1	40KHz-402-1% 10W
93	1	40KHz-402-1% 10W
94	1	40KHz-402-1% 10W
95	1	40KHz-402-1% 10W
96	1	40KHz-402-1% 10W
97	1	40KHz-402-1% 10W
98	1	40KHz-402-1% 10W
99	1	40KHz-402-1% 10W
100	1	40KHz-402-1% 10W

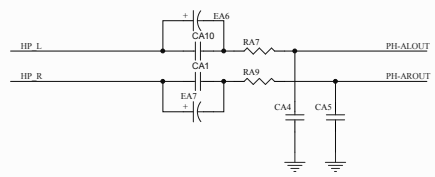
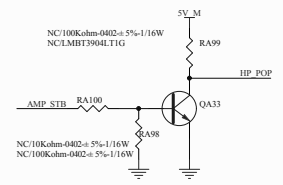
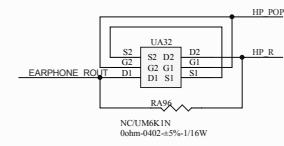
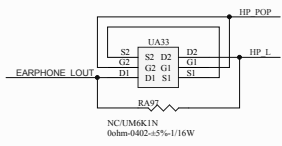
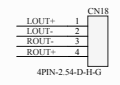
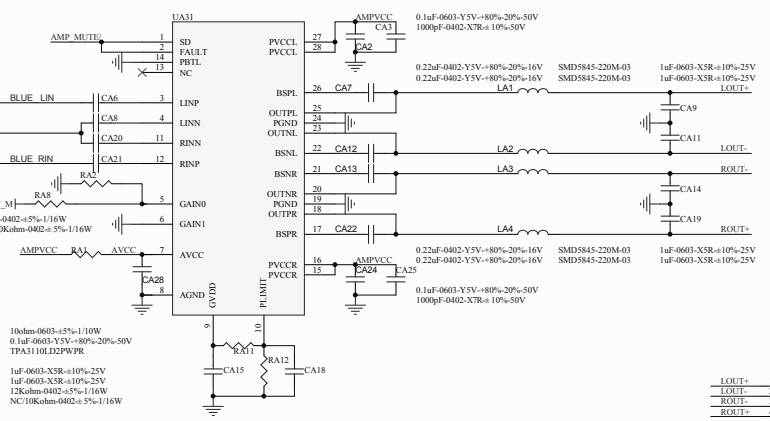


Title		
Size	Number	Revision
A3		
Date:	2013/6/19	Sheet of
File:	C:\Users\...05 SIS2x1 Power.SchDoc	Drawn By:



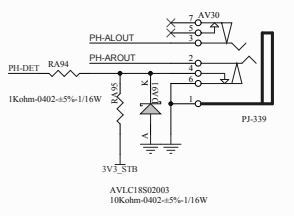
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0.033uF-0402-X7R-±10%-16V  
0.1uF-0402-Y5V-80%-20%-16V  
0.1uF-0402-Y5V-80%-20%-16V

100ohm-0402-±5%-1/10W  
0.033uF-0402-X7R-±10%-16V  
0.1uF-0402-Y5V-80%-20%-16V  
0.1uF-0402-Y5V-80%-20%-16V



NC100uF-16V-±20%-6-5.4-105  
NC100uF-16V-±20%-6-5.4-105  
10uF-0805-Y5V-80%-20%-10V  
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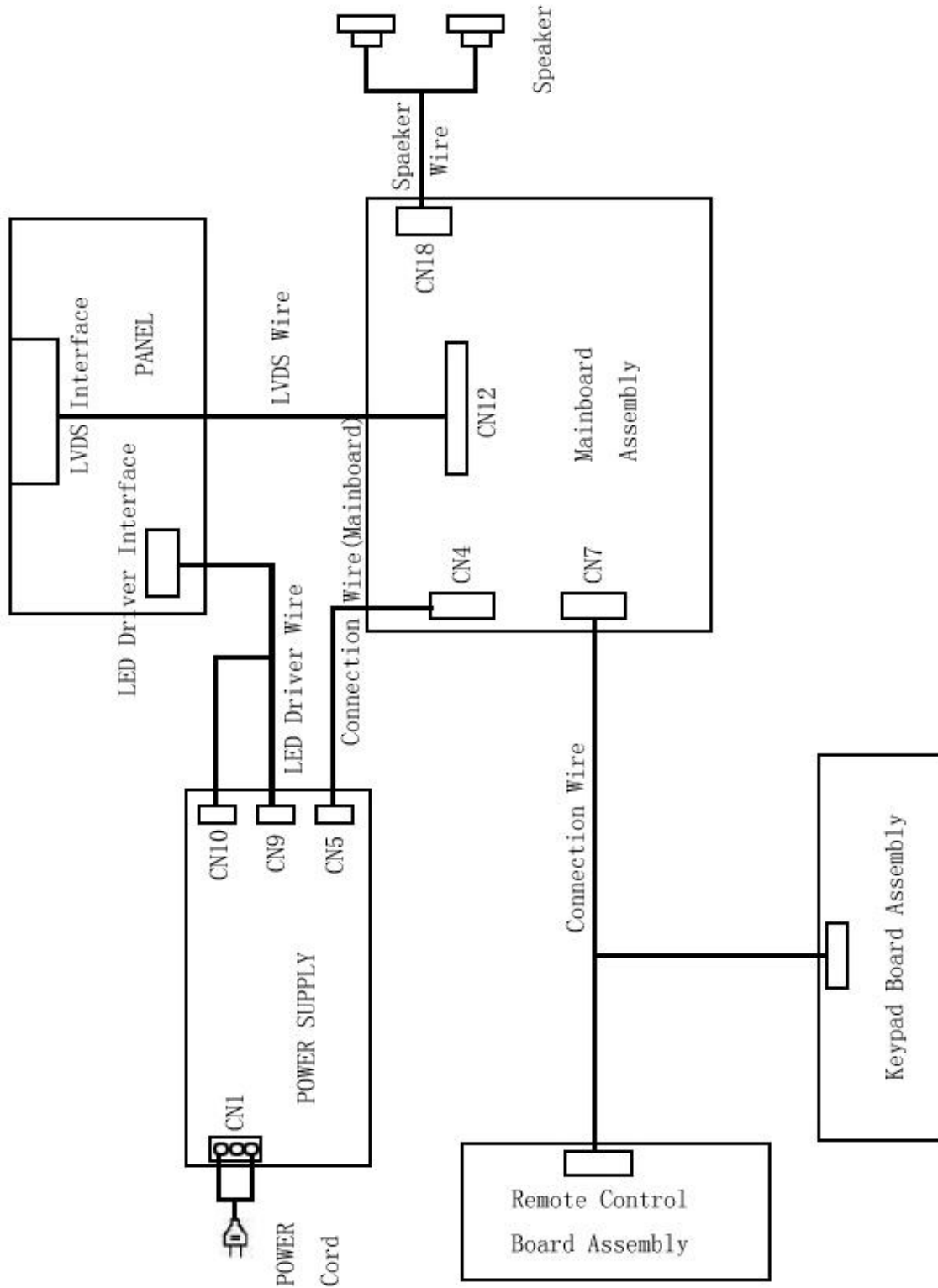
180ohm-0402-±5%-1/16W  
180ohm-0402-±5%-1/16W  
4700pF-0402-X7R-±10%-50V  
4700pF-0402-X7R-±10%-50V



AVLC18S02003  
10Kohm-0402-±5%-1/16W



7-2 . Wiring Connection Diagram



## Chapter 8. Measurements and Adjustments

### 8-1. Service Mode

#### 8-1-1. How to enter into Service Mode

The way to the factory mode menu:

Step 1: Press Menu,

Step 2: Input "8893",

System will be into the factory mode menu when 2 steps above are done.

Into Version of the main factory menu, you can see the edition of the software,

```
like this" BUILD TIME    2013-08-23 16:35:37
                Kernel Version          SVN794 "
```

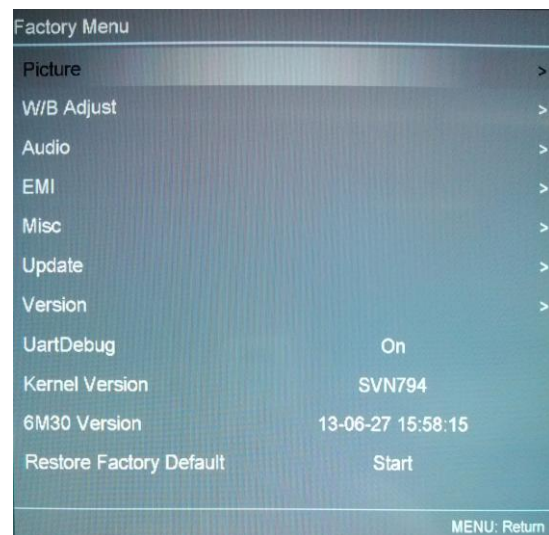
#### 8-1-2. How to exit

If you want to exit this factory menu, please press the button "Exit" on the remote. system will be out the factory mode menu.

### 8-2. Measurements and Adjustments

#### 8-2-1. The Main Menu

In factory mode menu, press up/down button to choose the up/down item, press right or OK button to the submenu. press MENU button to go back.

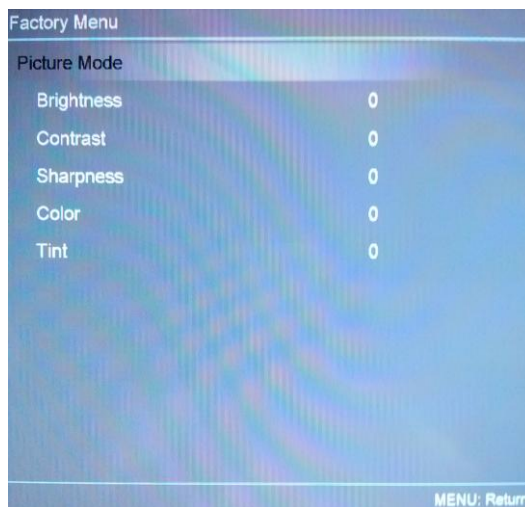




### 8-2-2. Picture Mode

Adjust the Picture Mode,Picture Curve:

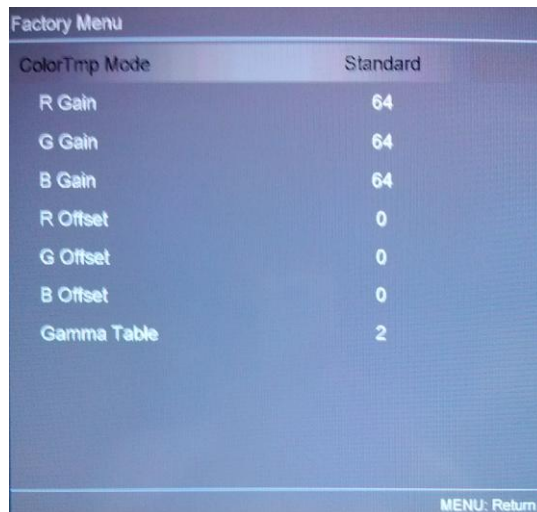
- 1)Brightness;
- 2)Contrast;
- 3)Sharpness;
- 4)Color;
- 5)Tint



### 8-2-3. ColorTmp Mode

Adjust the ColorTmp Mode, White Balance :

- 1)R Gain;
- 2)G Gain;
- 3)B Gain;
- 4)R Offset;
- 5)G Offset;
- 6)B Offset;
- 7)Gamma Table.



### 8-2-4. Audio Mode

Adjust the values of Audio Mode,

- 1) Treble;
- 2) Bass.

Factory Menu	
Audio Mode	Standard
Treble	0
Bass	0

MENU: Return

### 8-2-5. Misc

- 1) Burn In;
- 2) IF AGC;
- 3) IF AGC\_L;
- 4) ATS;
- 5) WSS;
- 6) DTG Scan;
- 7) ADC White Balance;
- 8) Auto Power On;
- 9) Back Light;
- 10) LCN Switch;
- 11) AGC Mode.

Factory Menu	
Burn In	Start
IF AGC	90
IF AGC_L	105
ATS	Enable
WSS	Disable
DTG Scan	Disable
ADC White Balance	Start
AutoPowerOn	Off
Back Light	12
LCN Switch	Off
AGC Mode	Disable

MENU: Return

### 8-2-5. Version

Used to view detailed information of the software, including:

- 1) Build Time;
- 2) Kernel Version;
- 3) BootRom Version;
- 4) 8051Rom Version;
- 5) AudioRom Version;
- 6) Customer SW Version;
- 7) HDCP Key;
- 8) CI Key.

Factory Menu	
Build Time	2013-08-23 17:58:36+08:00
Kernel Version	SVN794
BootRom Version	SISEU23X8M(a1_EU_C8D0_Winbon...
8051Rom Version	HAIER EU a1
AudioRom Version	v3.41_832K_CPU330_20130522
Customer SW Version	1920x1080
HDCP Key	
CI Key	No CI key!

MENU: Return

## 8-3. Software Update

### 8-3-1. SIS231C1CI software update

1. Copy the software files to a USB disk on the root directory;



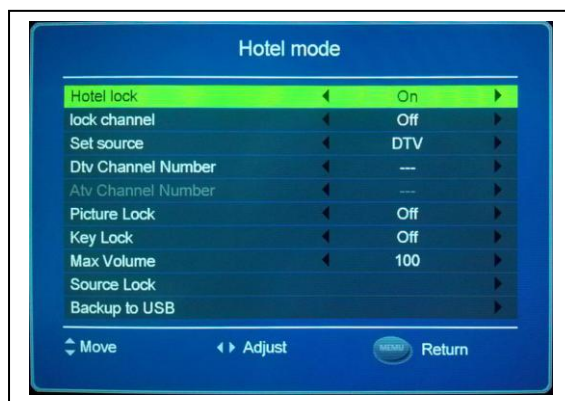
2. Insert the USB disk when the AC power is off;
3. Turn on the AC power in turn to begin;
4. Turn off the AC power until the indicator light fast twinkling;
5. Pull out the USB disk and power on the television.

Note:

Do not turn off the TV while it is updating.

### 8-3-2. Hotel Mode

Please press MENU key first, and then press number key "1001" to enter into Hotel Mode.



**Hotel lock** : Set Hotel mode on/off.

**Lock channel** : Lock the channel which you want.

**Set source** : Set to the default source.

**Dtv Channel Number** : Set to the default channel of the DTV source.

**Atv Channel Number** : Set to the default channel of the ATV source.

**Picture Lock** : Lock the picture.

**Key Lock** : Lock the keyboard.

**Max Volume** : Set max volume limited, this option allows you to set the max volume level.

**Source Lock** : Lock the source menu.

**Backup to USB** : Backup hotel settings to USB device.

**Restore from USB** : Restore hotel settings from USB device.

**Clear Lock** : Clear all lock.

**Standby Light Power** : Select the status of power on.

## Chapter 9. Trouble shooting

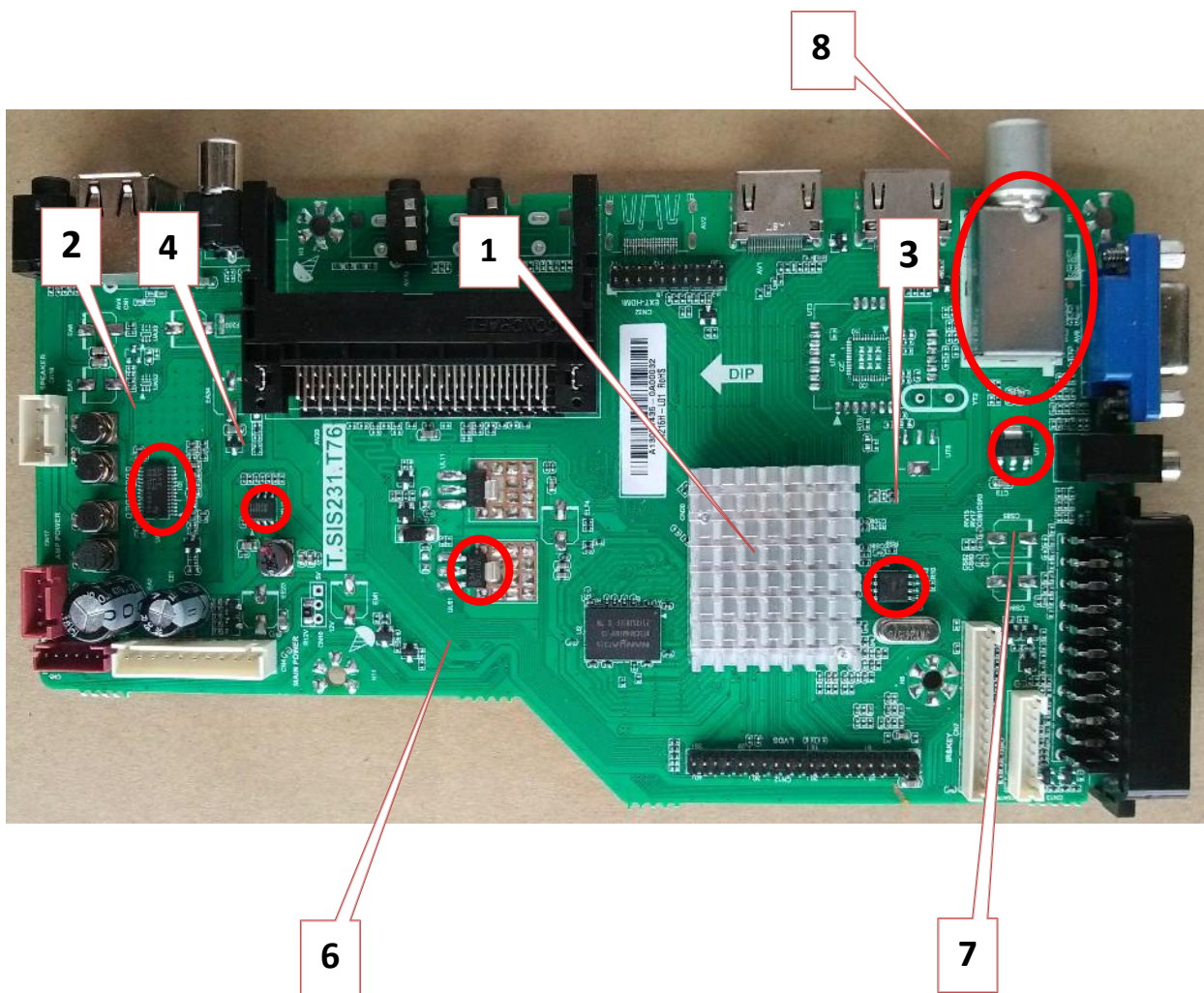
### 9-1. Simple check

No picture/ No sound	<p>Verify if the television is properly plugged</p> <p>Verify if the television is properly supplied power</p> <p>Verify if electricity is available.</p>
Blank screen	<p>Verify if correct signals are input</p> <p>Press SOURCE button to change signal input to TV input</p> <p>Restart the television if power supply is interrupted</p>
No sound	<p>Press the MUTE button and verify that Mute mode is active.</p> <p>Switch to another channel to check whether the same problem occurs.</p> <p>Press the VOL+ button to see if the problem can be solved.</p>
Poor sound	<p>Verify that the sound system is correct. Refer to the user manual for instructions on how to adjust it.</p>
No picture on some channel	<p>Verify if correct channel is selected.</p> <p>Adjust the antenna.</p> <p>Make adjustments by Fine Tune and MANUAL Scan.</p>
No color for some channel program (black and white)	<p>Verify that the same problem exists on other channels.</p> <p>Check the picture and sound systems.</p> <p>Refer to the relevant instructions in the manual to adjust the colour.</p>
Spots with some or all pictures	<p>Verify if the antenna is correctly connected.</p> <p>Verify if the antenna is in good condition.</p> <p>Make fine adjustment of channel.</p>
Television is not working	<p>Disconnect the television from the power supply for 10 seconds, then reconnect the television. If the problem persists, contact an authorised after-sales service provider for technical assistance.</p>
Television out of control	<p>Disconnect the television from power supply and 10 seconds later, connect the television to the power supply. If the problem still exists, contact authorized after-sales service for technical assistance.</p>

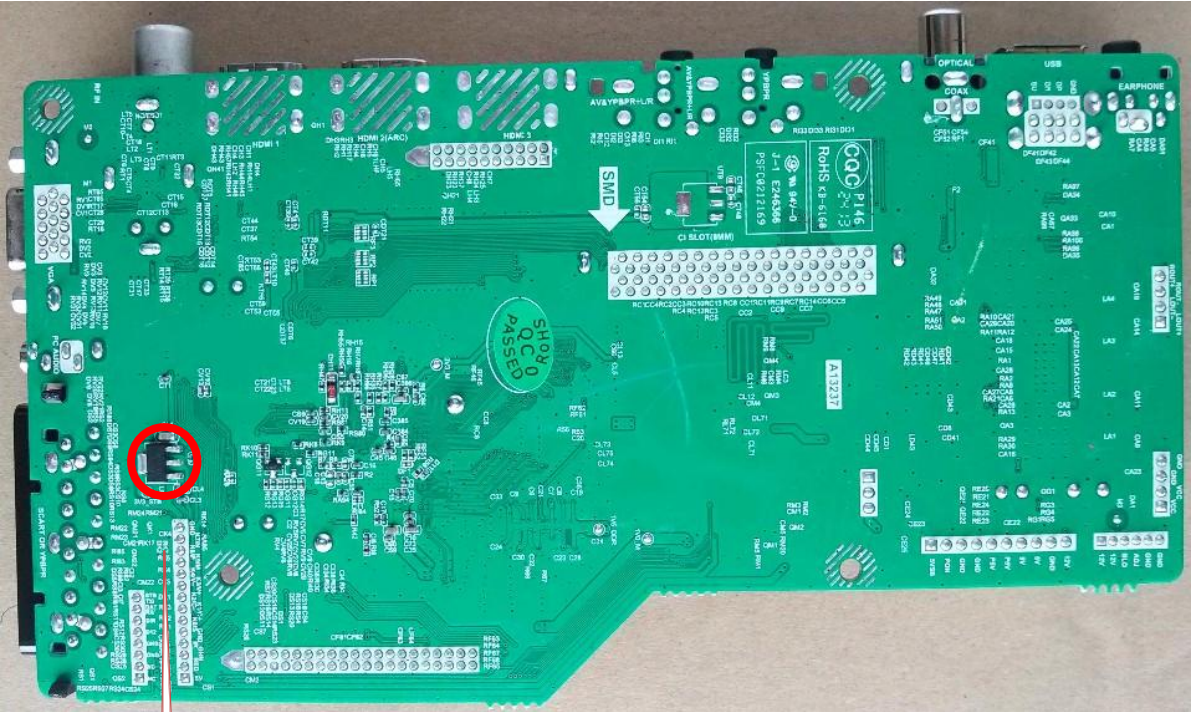


## 9-2. Mainboard IC Introduction

Top view



Bottom view

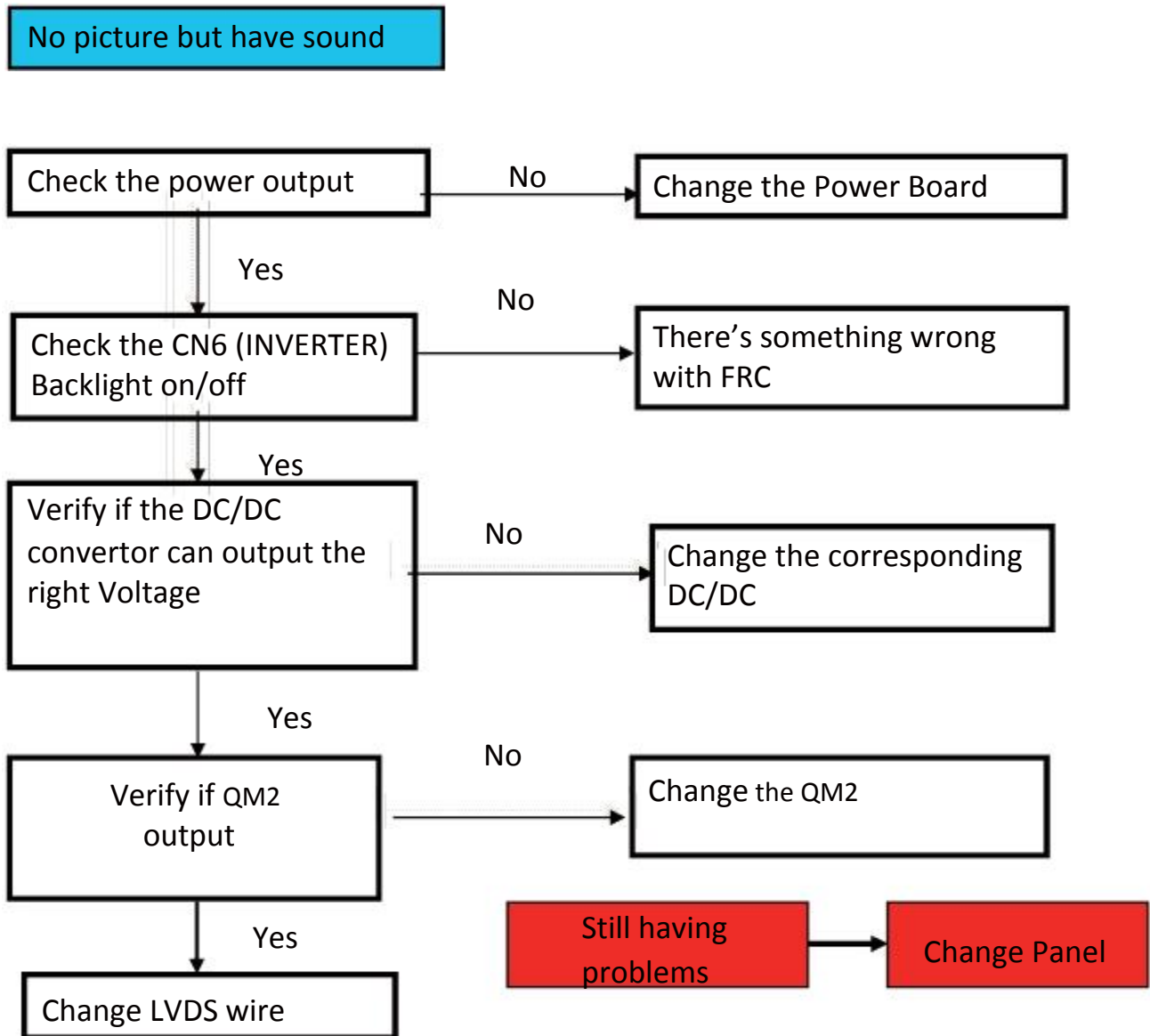


5

1. Mainchip—SIS231C1CI (U1)
2. Audio Amplifier—PA3110LD2PWPR (UA31)
3. Main Flash Memory—GD25Q64BSIG (U5)
4. DC/DC convertor 5V-1.0V for SIS231C1CI (U1)—RT7237CHGSP (UD41)
5. voltage convertor 5V to 3.3V\_STB —LC1117CLTR33 (UL2)
6. voltage convertor 5V to 1.5V\_DDR —LC1117CLTRAD (UL61)
7. voltage convertor 5V to 3.3V for tuner—LC1117CLTR33 (UT1)
8. Tuner —BW21S7511A01TF (RFT1)

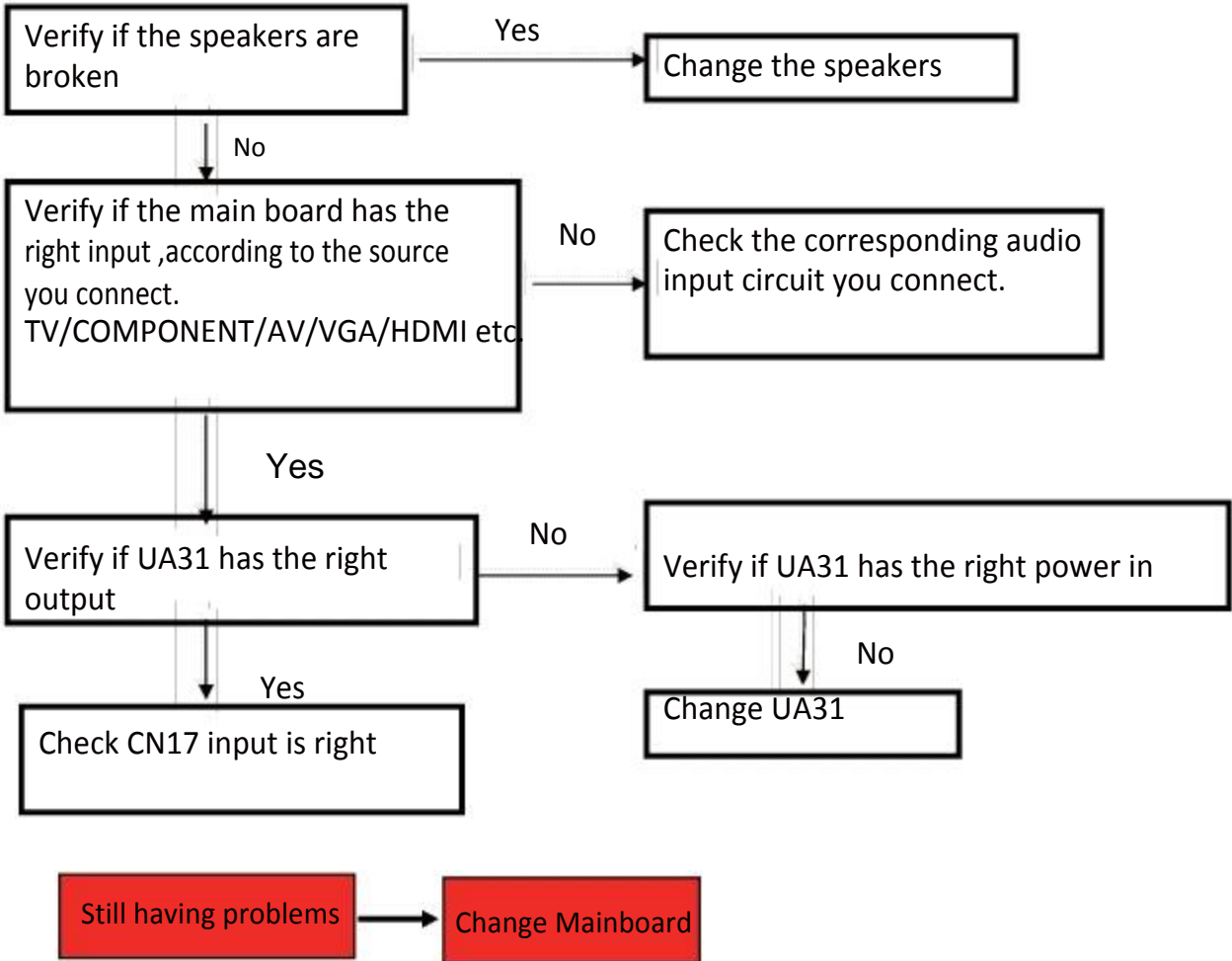
Please check the Schematic Diagram for the particular support

### 9-3. Mainboard Failure Check

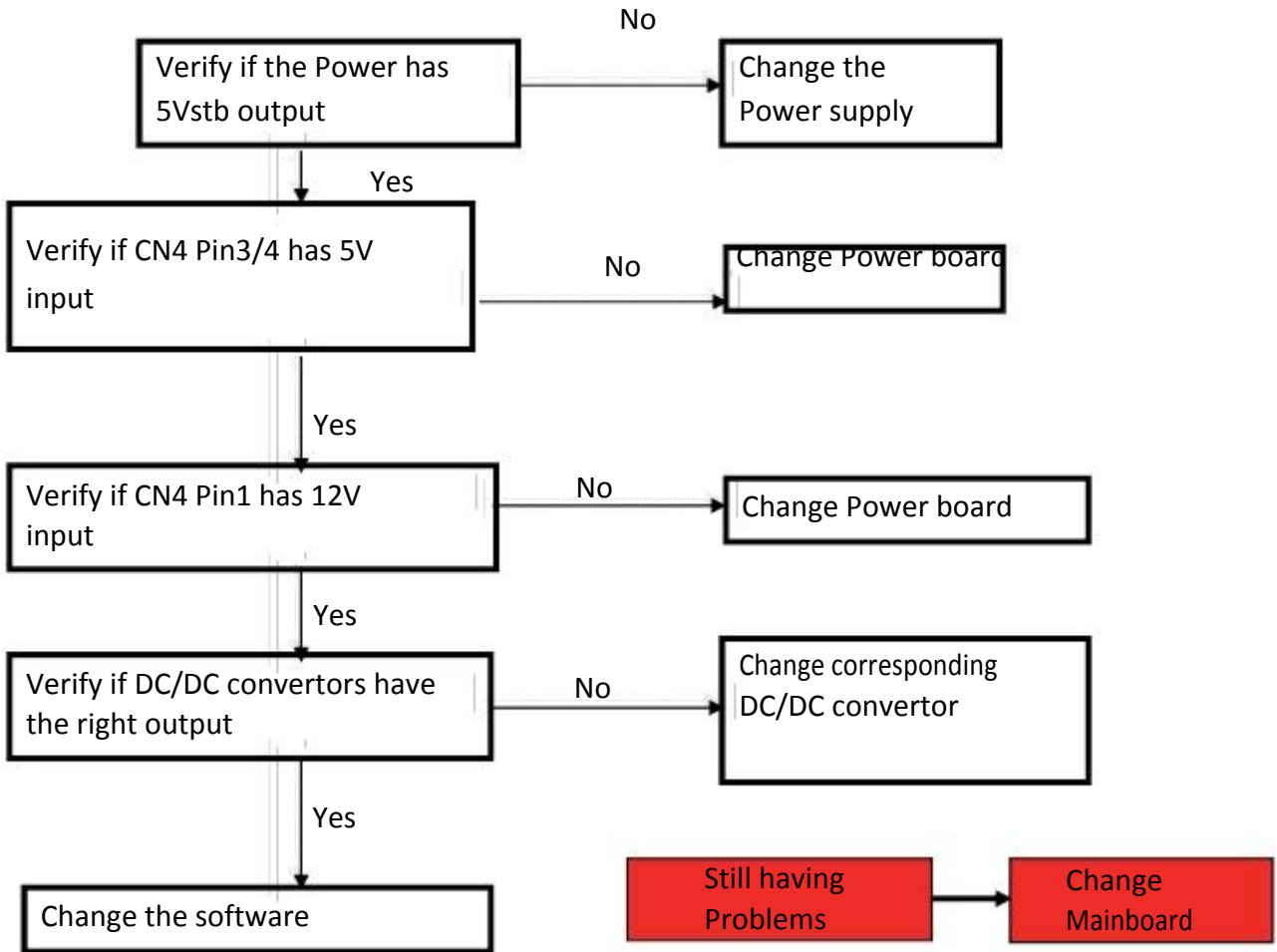


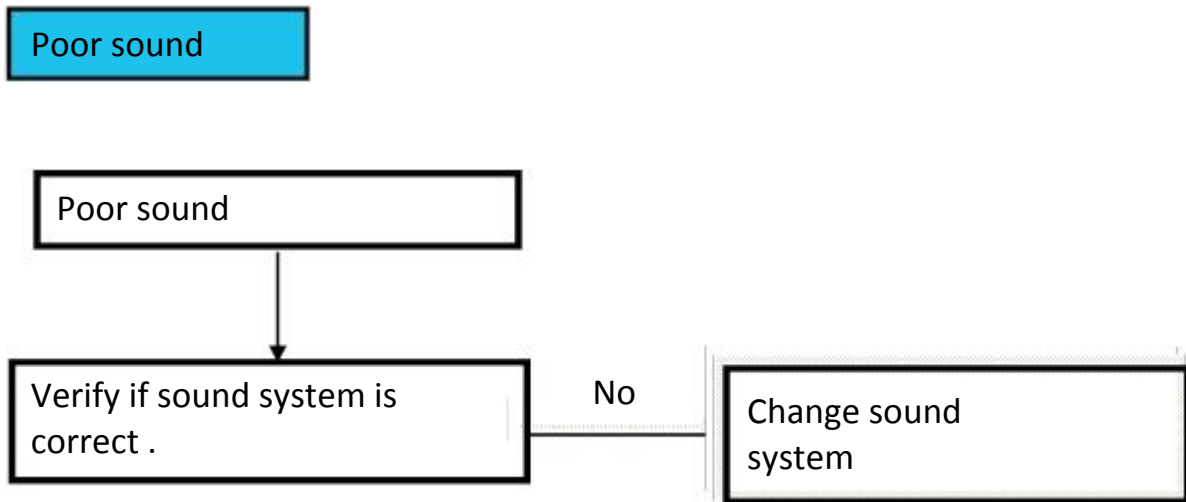


No sound but have picture

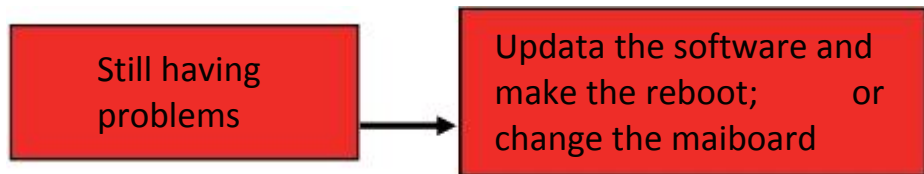


No sound No picture

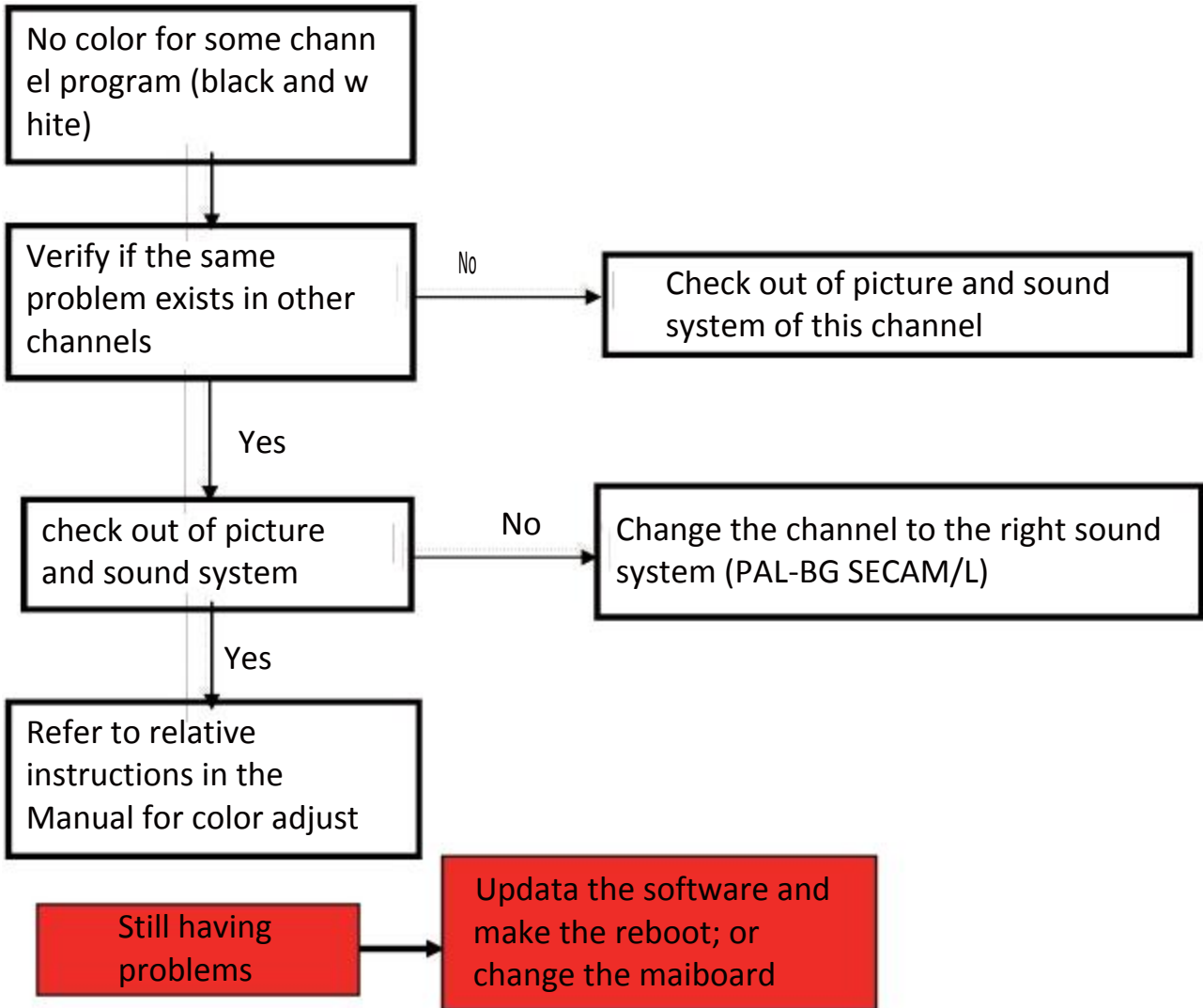




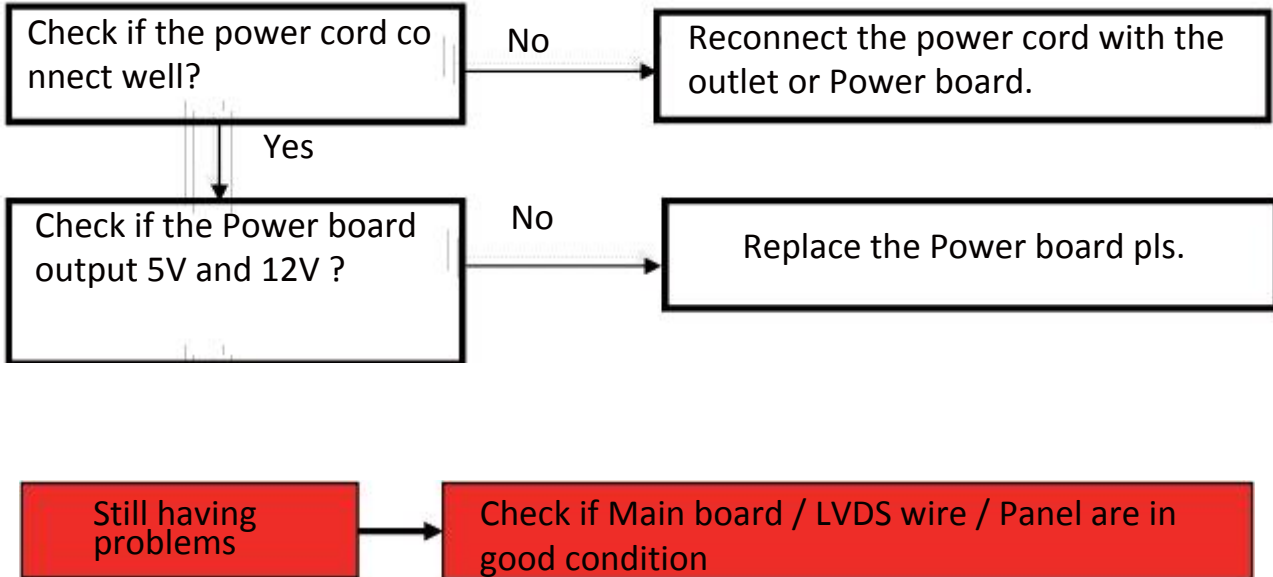
For ease of use, recommend that customer format the picture and sound settings in the automatic option.



No color for some channel program (black and white)






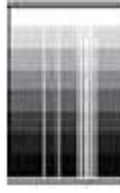


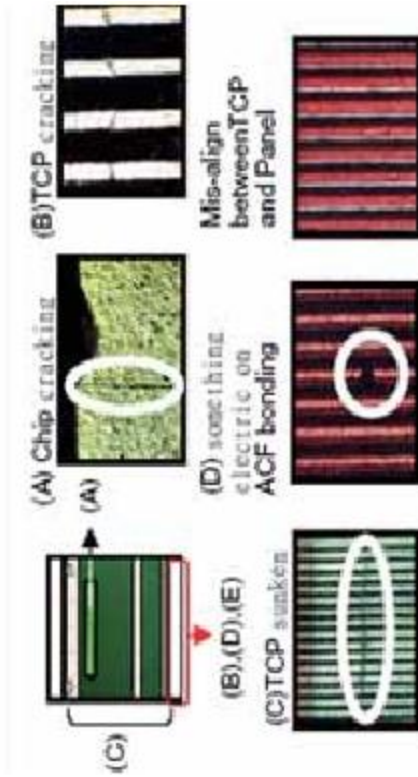
How to know whether the Power board is broken?






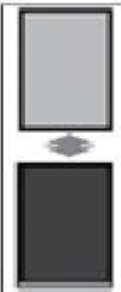
### 9-4. Pannel Failure





Failure Mode

Part	Name	Description	Phenomena	Failure cause
	V B/D	Vertical bar		Block Defect :TCP cracking or cracking Dim or L/D :TCP Sunken :TCP lead cracking :ACF bonding short
	V Dim	Vertal gray line		:Awful environment and something electric enter into LCD
	V L/D	Vertical color line(light or dark forever)		:Mis-align between TCP and Panel :Panel failure :TCP failure
TCP	H B/D	Horizontal bar		(A) Chip cracking (B)TCP cracking
	H Dim	Horizontal gary line		(D) something electric on ACF bonding Mis-align between TCP and Panel
	H L/D	Horizontal line(light or dark forever)		(B),(D),(E) (C)TCP sunken










Part	Name	Description	Phenomena	Failure Cause
Panel or Polarizer	Dot Defect	Bright dot dark dot in pannel		Incoming Inspection Standard
	Polarizer Bubble	Bladder in Polarizer		Bladder between Polarizer and top glass
	Polarizer Scratch	Polarizer Scratch		Tine or rigidity arose
Circuit	F/inside Polarizer	Eyewinker inside Polarizer		Eyewinker inside Polarizer
	Abnormal Display	Abnormal Display		<ol style="list-style-type: none"> <li>1. Chip lose action</li> <li>2. IC ahort or jointiog bad</li> <li>3. Pannel and vsc connect bad</li> </ol>
	Flashing	Bright and dark display alternately		

Part	Name	Description	Phenomena	Failure Cause
	White Screen	B/L normal, only white screen display		Maybe caused by surge current and EDS
	Black Screen	B/L normal, only Black screen display		
Circuit	Flicker	Crosstalk		LCD Vcom imbalance
	Abnormal Color	Only color abnormal		Capacitance improper bring crosstalk inside LCD pannel
	Abnormal Color	Only color abnormal		1. Chip lose action 2.IC short or jointion bad 3.Pannel and vsc connect bad



Part	Name	Description	Phenomena	Failure cause
	Mechanical Noise	When turn panel, appear cacophony		Caused by Mechanica noise of backlight unit
	Ripple	Connectric circle		Caused by between mechanism and pannel
	B/L off	B/L lose action		*Connect badness between wire and electrode
	B/L dark	B/L brightness darker than normal		*Connect badnessShort between wire and electrode
	B/L wire damaged	B/L wire damaged		Operation abnormal or systemic noise
	B/L wire open	Without backlight		Operation abnormal or systemic noise
	B/L shut down	B/L shutdown in sometime		Short between lamp housing and wire, Because consume power too much
	F/M	F/M inB/L ,white,back Rotundity or wirelike		F/M in B/L unit

Part	Name	Description	Phenomena	Failure Cause
	Light leakage	Brightness at bottom of LCM brighter than normal		B/L unit badness
Mechanical or B/L	Uniformity	B/L brightness asymmetric		Sheet in B/L unit is uneven
	Mount hole	Lack screw or screw damage		*Lack screw Screw damage

# Sincere Forever



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