

LED BACKLIGHT LCD TELEVISION

SERVICE MANUAL

Chassis: CVT: TP.VST59.P83

Product type: LEDN32D20

Version: 1.0

Guangdong Hisense Electronics Co., Ltd.

March, 2013

Contents

Contents	- 2 -
Service Manual	- 3 -
1. Precautions and notices.....	- 3 -
1.1 Warning.....	- 4 -
1.2 Notes.....	- 5 -
2. Product Function Specifications	- 6 -
2.1 Product Function.....	- 6 -
2.2 Specification	- 7 -
2.3 Main board layout.....	- 8 -
3. Factory/Service OSD Menu and Adjustment.....	- 8 -
3.1 To enter the Factory OSD Menu	- 8 -
3.2 Factory OSD Menu.....	- 8 -
3.3 Designer Menu.....	- 9 -
4. Software Upgrading.....	- 10 -
4.1 Get ready for upgrading.....	- 10 -
4.2 Upgrading with the MstarTool	- 14 -
4.3 Update with USB directly.....	- 16 -
5. Troubleshooting	- 17 -
5.1 Troubleshooting for Remote Control	- 17 -
5.2 Troubleshooting for Function Key.....	- 18 -
5.3 TV won't Power On.....	- 19 -
5.4 Troubleshooting for Audio.....	- 19 -
5.5 Troubleshooting for TV/VGA/HDMI input.....	- 20 -
5.6 Troubleshooting for YPbPr input.....	- 20 -
5.7 Troubleshooting for Video input	- 21 -
6. Schematic circuit diagram	- 22 -
6.1 Block Diagram.....	- 22 -
6.2 Main board power assignment.....	- 23 -
7. Explode View.....	- 23 -

Service Manual

1. Precautions and notices

BEFORE SERVICING THE LED BACKLIGHT TV, PLEASE READ THE SAFETY PRECAUTIONS IN THE MANUAL. USE ONLY MANUFACTURER SPECIFIED REPLACEMENT PARTS WHEN SERVICING.

USE OF NON-AUTHORIZED PARTS WILL VOID THE MANUFACTURE'S WARRANTY.

Proper service and repair are important to the safe, reliable operation of all Hisense Equipments. The service procedures recommended by Hisense and described in this Service Guide are effective methods of performing service operations. Some 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 is 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 Television safety and service methods and procedures

Hereafter throughout this manual, Hisense will be referred to.

1.1 Warning

1.1.1

Critical components having special safety characteristics are identified with a Ref. No. in the parts list. 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 Hisense assumes no liability, express or implied, arising out of any unauthorized modification of design. Service tech assumes all liability.

DANGER CAUTION ▲

TO ENSURE THE CONTINUED RELIABILITY OF THIS PRODUCT, USE ONLY ORIGINAL MANUFACTURER'S REPLACEMENT PARTS, WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THIS SERVICE GUIDE.

1.1.2.

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 antistatic 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.

1.1.3

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

1.1.4

When replacement parts are required, be sure to use replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards and will void the manufacturer's warranty.

1.1.5

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

>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.

1.1.6

(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.

1.2 Notes

Notes on Safe Handling of the LCD panel and during service 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 of the TV 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. When installing the LCD module in, and removing it from the packing carton, be sure to have at least two persons perform the work.
- When the surface of the panel comes into contact with the cushioning materials, be sure to confirm that there is no foreign matter on top of the cushioning materials before the surface of the panel comes into contact with the cushioning materials. Failure to observe this precaution may result in, the surface of the panel being scratched by foreign matter.
- 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 insinuated dangerous voltage within the products enclosure that may be of sufficient magnitude to constitute a risk of electric shock.

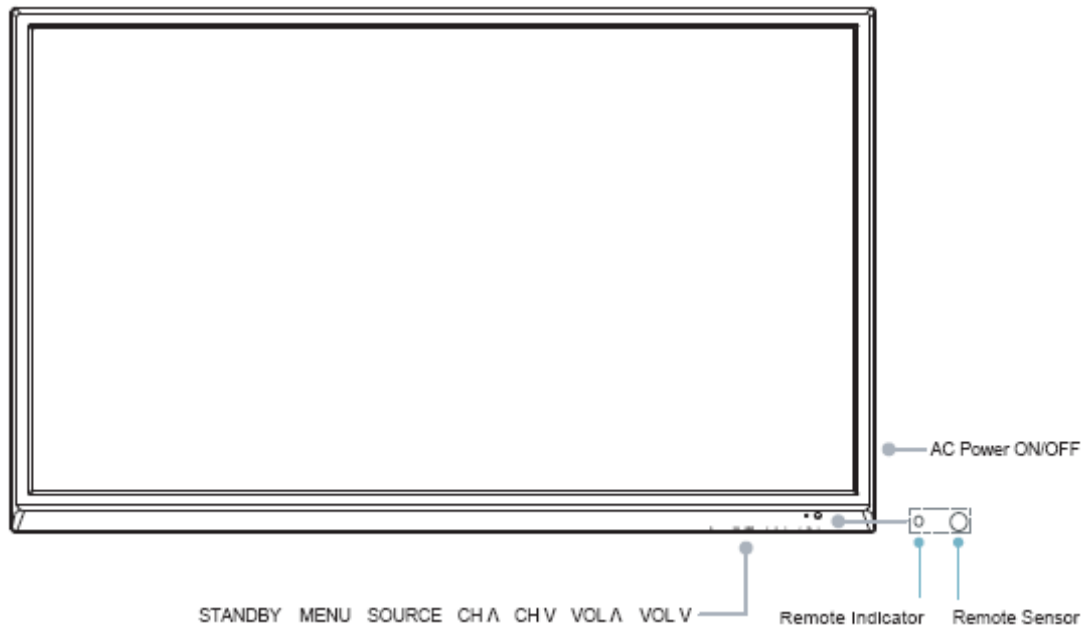



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the set.

2. Product Function Specifications

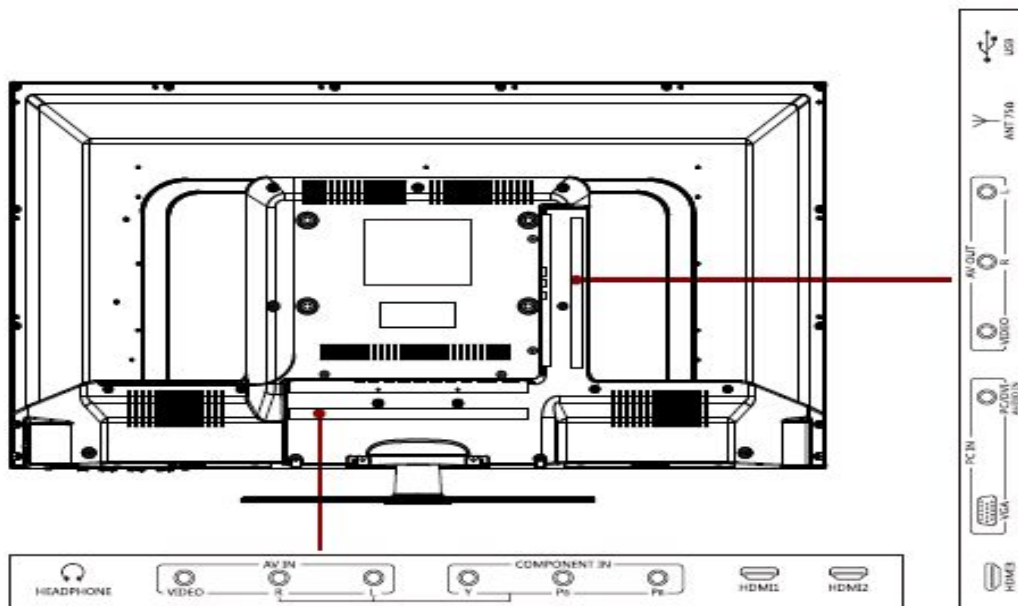
2.1 Product Function

TV Front



<i>item</i>	<i>Description</i>
Remote Sensor	Receives remote signals from the remote control. Do not put anything near the sensor, as its function may be affected.
Remote Indicator	Red light up in standby mode. Blue light up in power on mode
MENU	Open the OSD menu
SOURCE	Select among the different signal sources.
CH A / V	Select the channel
VOL A / V	Adjust the volume.
STANDBY 	Turn on the TV or put the TV in standby mode.

TV Rear



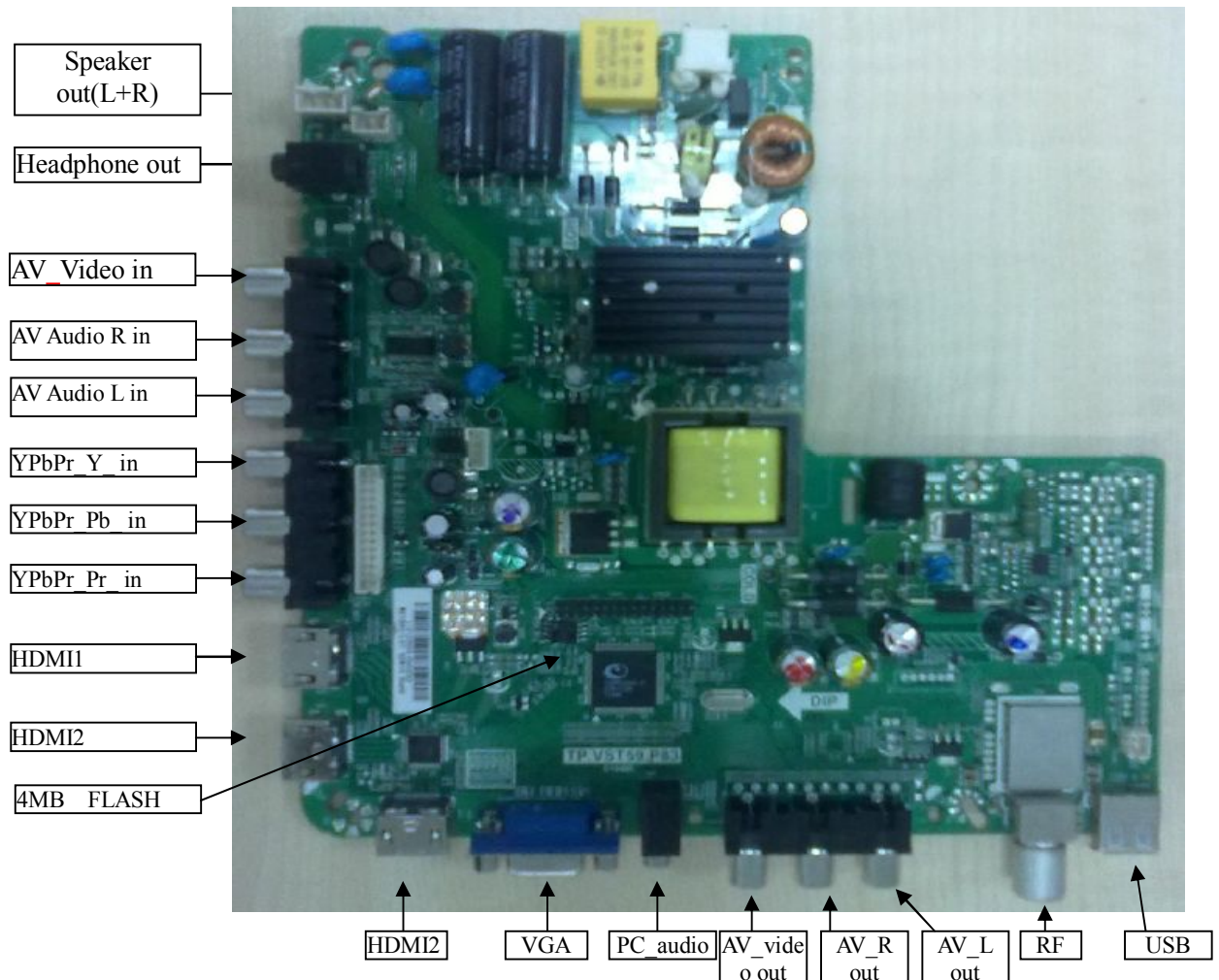
2.2 Specifica

NOTE: Specifica
improvements.

Item	Description
ANT CABLE	Connect an antenna or cable TV to this jack.
HDMI	HDMI (High-Definition Multimedia Interface) provides an uncompressed. Support: 480i/480p/576i/576p/1080i/1080p
COMP	Connect to a DVD player, Digital Set-Top-Box, or other A/V devices with component (YPbPr) video and audio output jacks. Component audio Jack share AV IN audio Jack. Support: 480i/480p/576i/576p/1080i/1080p
AV IN	Connect to the composite video and audio (L/R) output jacks on external video devices.
VGA PC AUDIO IN	Connect to a PC or other devices with a VGA interface.
HEADPHONE	Connect headphone for private listening.
USB	Video, MP3, Jpeg play and software update.

Dimension	With Stand	Width: 738.3 mm Height: 495 mm Depth: 180mm
	Without Stand	Width: 738.3 mm Height: 450.5 mm Depth: 90.3 mm
Weight	Without Stand	6.2 kg
	With Stand	7.6 kg
LED Panel Minimum size (diagonal)		32 inches
Screen resolution		1366 × 768
Audio power		8 W + 8 W
Power consumption		50W
Power supply		100~240 V ~ 50 / 60 Hz
Receiving systems	Analog	PAL SECAM
Environmental conditions		Temperature: 5°C~ 45°C Humidity: 20%-80% RH Atmospheric pressure: 86 kPa - 106 kPa

2.3 Main PCB Layout view



3. Factory/Service OSD Menu and Adjustment

3.1 To enter the Factory OSD Menu

a. With factory RC (remote control)

1. Press “M” button and enter factory mode.
2. Press “Menu” button and enter factory OSD menu.
3. Press “CH+”/“CH-” button select the function menu, press “VOL+”/“VOL-” enter the selected function menu. Press “VOL+”/“VOL-” button adjust values in the menu.

b. With user's RC

Power TV On

Press Menu button and call up User OSD Menu

Select Audio-> Balance0

Enter 1->9->6 ->9 in sequence.

Note: If necessary, re-do number keys.

Factory OSD appears.

Press Exit again and leave factory OSD.

3.2 Factory OSD Menu

3.2.1 White Balance

Note: Different source has different WB values. Before adjusting, please change to desired source and aging for 30 minutes.

Factory Setting → Picture → W/B ADJUST

	Color Temperature	Note
TEMPERATURE	Medium	Picture Medium mode
	Warm	Picture Warm mode
	Cool	Picture Cool mode

Item 0		Note
W/B ADJUST	R-GAIN	Red Driver adjust
	G-GAIN	Green Driver adjust
	B-GAIN	Blue Driver adjust
	R-OFFSET	Red Cut adjust
	G-OFFSET	Green Cut adjust
	B-OFFSET	Blue Cut adjust

3.2.2 Factory Option

Note: The factory menu date varies according to different sources. Incase changing the factory data by error, you can choose to "INIT TV", press RC right key or "ok" key , by which you can resume the default value as software set to clear the FLASH:

- Select the item "INIT TV".
- Press right button to clear the Flash data.
- Close the OSD menu after 5 seconds.
- auto restart the TV.

3.3 Designer Menu

Item 0		Note
GENERAL SETTING	LVDS MAP	Lvds map select(0-15)
	LOGO	Power on LOGO(on/off)
	POWER	POWER OFF STATE(off/on/last)
	WHITE PATTERN	White pattern test mode (ON/RED/BLUE/GREEN/GREY/...)
	PWM	PWM SETTING (PORT/CYCLE/PERIOD/...)
	HOTEL MODE	HOTEL MODE SETTING(ON/OFF)
PICTURE	Backlight	Led backlight setting
	W/B ADJUST	WHITE BALANCE SETTING
	PQ NONLINEAR	PQ nonlinear setting
	Color setting	Color setting
	Luma_other	Luma_other SETTING
	Peaking setting	Peaking setting
	NR SETTING	NOISE reduction setting
	CTI SETTING	CTI SETTING
	gamma	Gamma setting
	DLC	DLC setting
	VIP	VIP select
	Backlight	Led backlight setting
SOUND	SOUND MODE	SOUND MODE SELECT(SRANDARD/MUSIC/MOVIE/SPORTS/USER)

	VOLUME CURVE	VOLUME CURVE SETTING(MODE/OFFSET/AVC THRESHOLD/VOLUME TABLE...)
	AUDIO OUTPUT	AUDIO OUTPUT setting(MainspeakOUT/SIFOUT/SPDIFout)
DEBUG	QMAP ADJUST	QMAP ADJUST
	PEQ	PEQ ADJUST
	VIF1	VIF ADJUST
	VIF2	VIF ADJUST
	VIF3	VIF ADJUST
	Init all(WB+ADC)	INITIAL DATA
	UART DEBUG	Uart debug port enable
	TIMER TEST	Timer test
	ERASE DB bank	Erase data bank
ADC ADJUST	AUTO ADC	ADC ADJUST
	MODE	ADC ADJUST
	R/G/B-GAIN	ADC ADJUST
	R/G/B-OFFSET	ADC ADJUST SETTING
EMC SETTING	MIU enable	MIU SPECTRUM SPREAD SETTING
	MIU SPAN	MIU SPECTRUM SPREAD SETTING
	MIU STEP	MIU SPECTRUM SPREAD SETTING
	LVDS ENABLE	LVDS SPECTRUM SPREAD SETTING
	LVDS SPAN	LVDS SPECTRUM SPREAD SETTING
	LVDS STEP	LVDS SPECTRUM SPREAD SETTING
SW INFORMATION	BUILD TIME/VERSION	SW INFORMATION
Software update(USB)		PLUG IN U disk in USB port(put “ bin_v59.bin” file in root dictionary),press right button or OK in RC ,TV will update automatic. Red and blue led indicator in TV will flash alternately .When led always show red color, the updating is finished.
INIT FAC CHANNEL		Initial factory channel
INIT TV		Initial TV data(SW set)
Burn mode		Burn mode select(quit burn mode please press “standby” in TV key board)

The above “Factory/Service OSD Menu” is for reference only , please refer to the actual units to determine the appearances.

4 Software Upgrading

4.1 Get ready for upgrading

4.1.1 Install the driver



PL-2303 Driver Installer.rar



cp210x_driver.rar



ISP_Tool_4537.rar

Serial connector: to TV's VGA port.

For the first connecting, the pc will recognize and automatically install the USB device. The process is just like the installation of a mini disk, see the following picture.



Select the default value, the driver will be installed step by step.

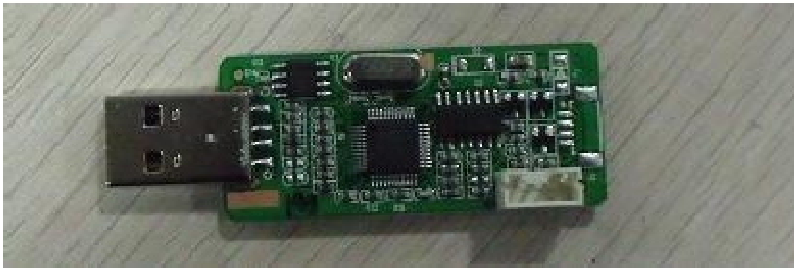
4.1.2 Hardware connecting

Connect the unit to your pc with a USB-to-serial port cable. USB port connects to your pc, and serial port to the TV's VGA port.

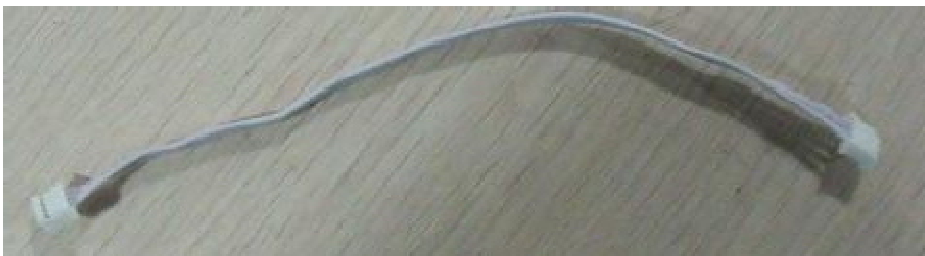
USB Extension cord:



Serial port board: B.CNSISP7A



4-Pin connection line:



Plug in with VGA port:

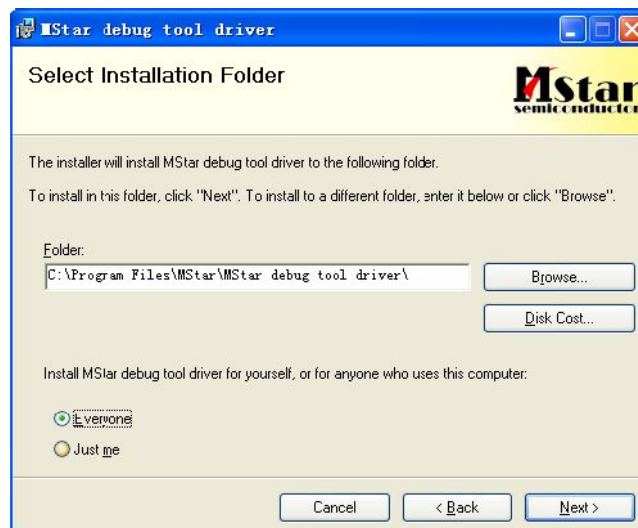
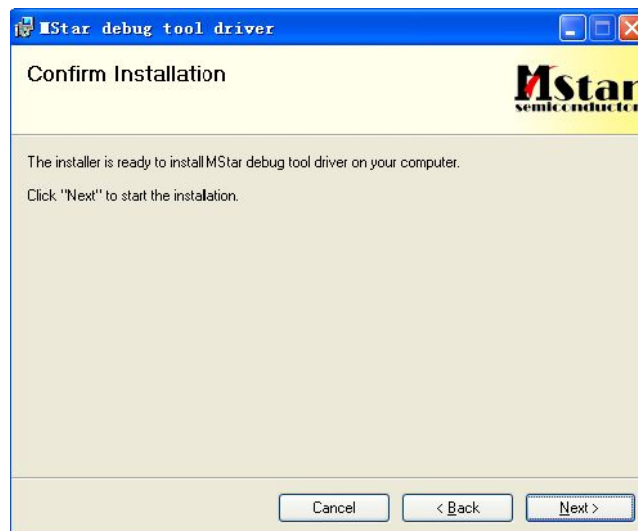


For the first connecting, the pc will recognize and automatically install the USB device. The process is just like the installation of a mini disk, see the following picture.

4.1.3 USB Board Driver

After connecting USB connection line to pc and USB board to TV set:

Click “Setup.Exe”, ignoring any question, click “Next”

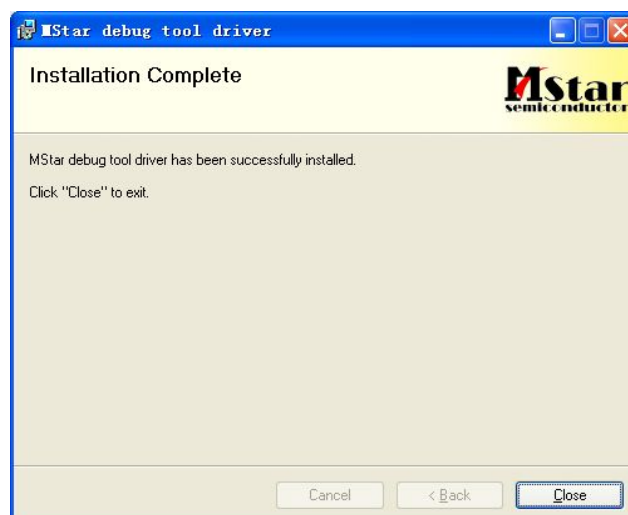
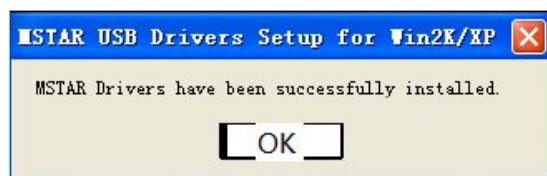




Select continue installation



Successful installed:

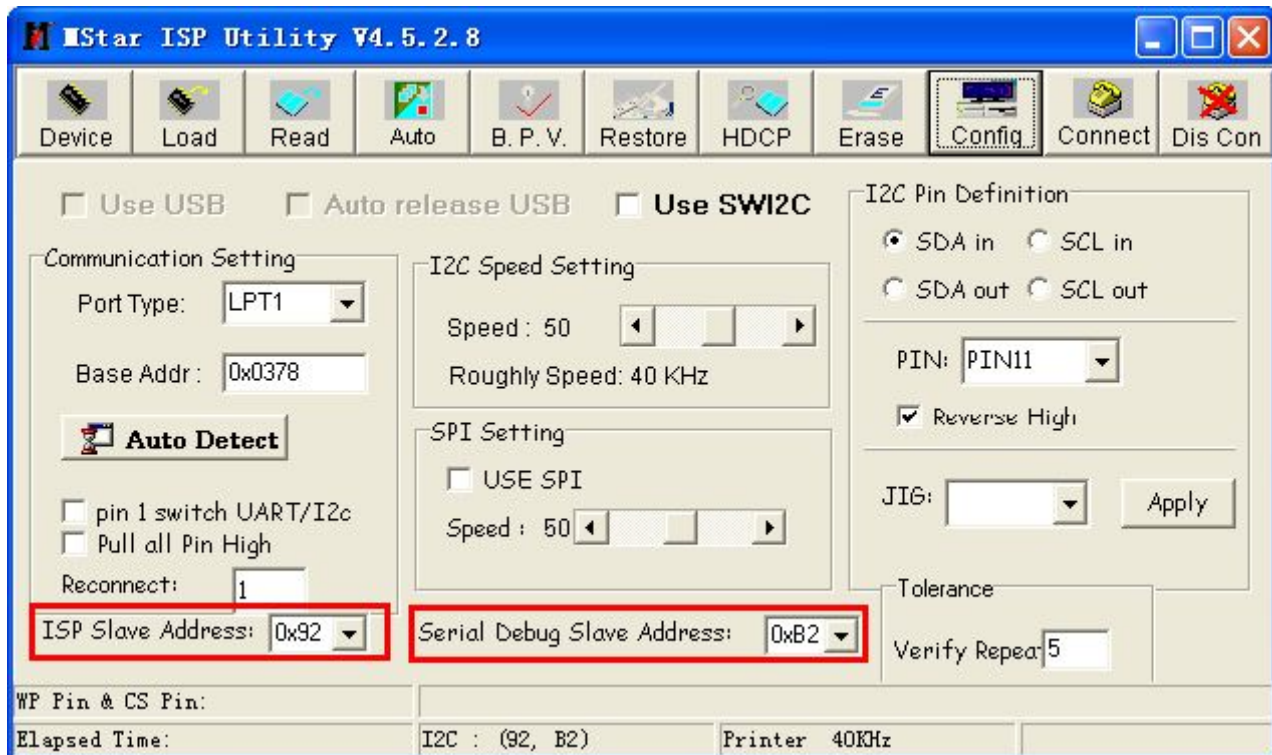


4.2 Upgrading with the Mstar Tool

ISP_Tool_4527 driver installation:

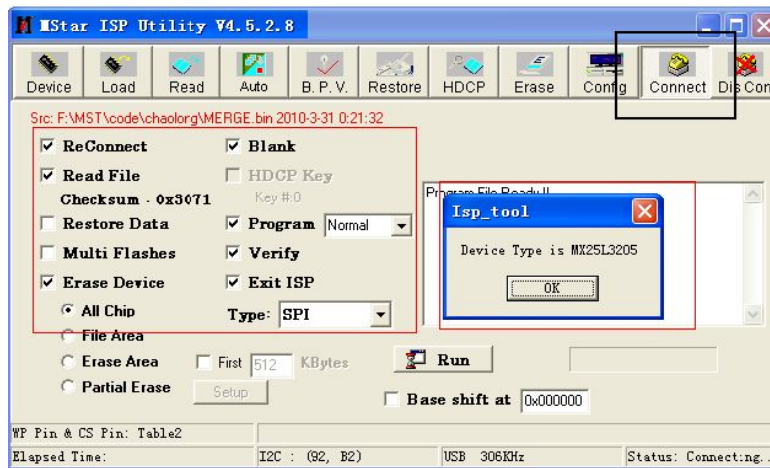
Decompress "ISP_Tool_4527", click "ISPISP_Tool.exe"

Set ISP Slave Address with "0x92", Serial Debug Slave Address with "0xB2" in "Config" Page:

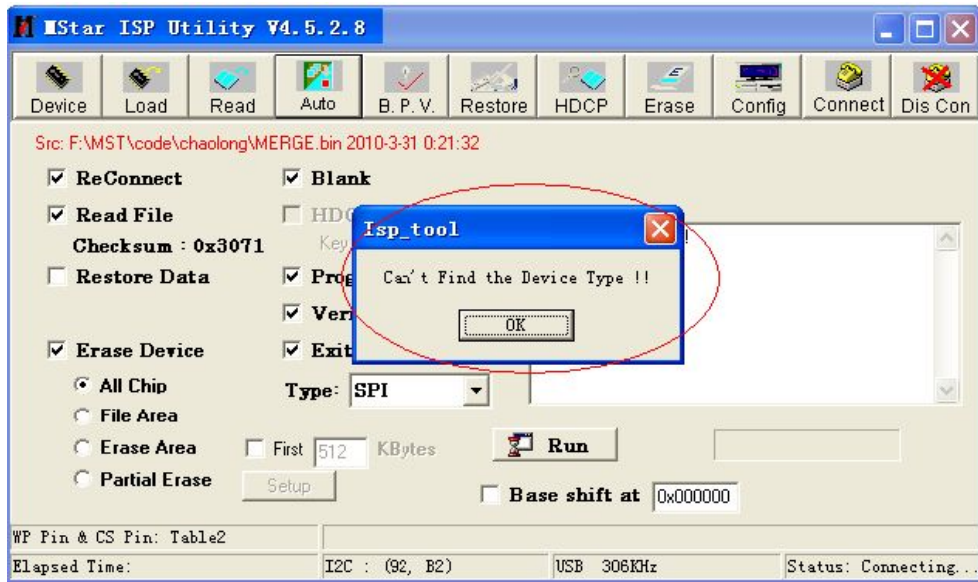


4.1.5 double click "ISPISP_Tool.exe", if show "Device Type", it shows installation is OK.

Note: It should be selected in Red box:

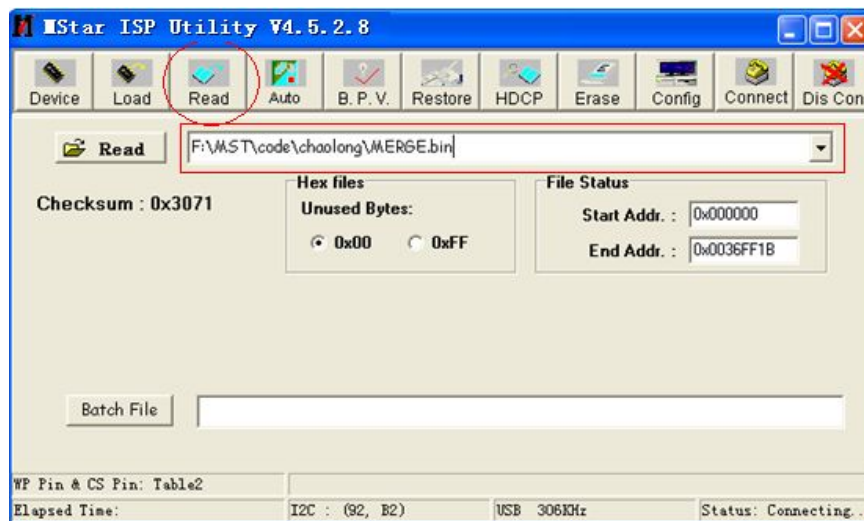


If shown the picture, it not well installation:



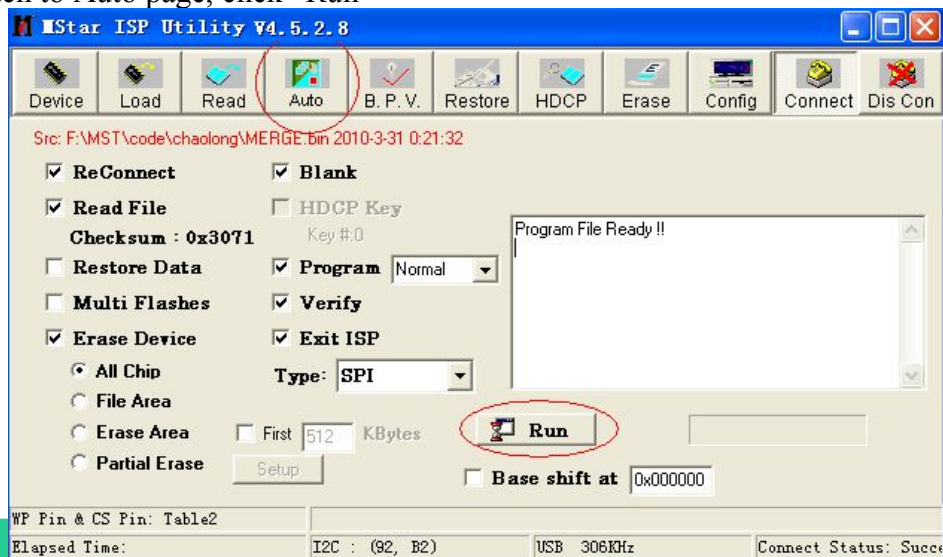
Please check: a. whether power on; b. whether USB board connected ok; c. whether connection line matched ok.

4.1.6 upgrading SW file:

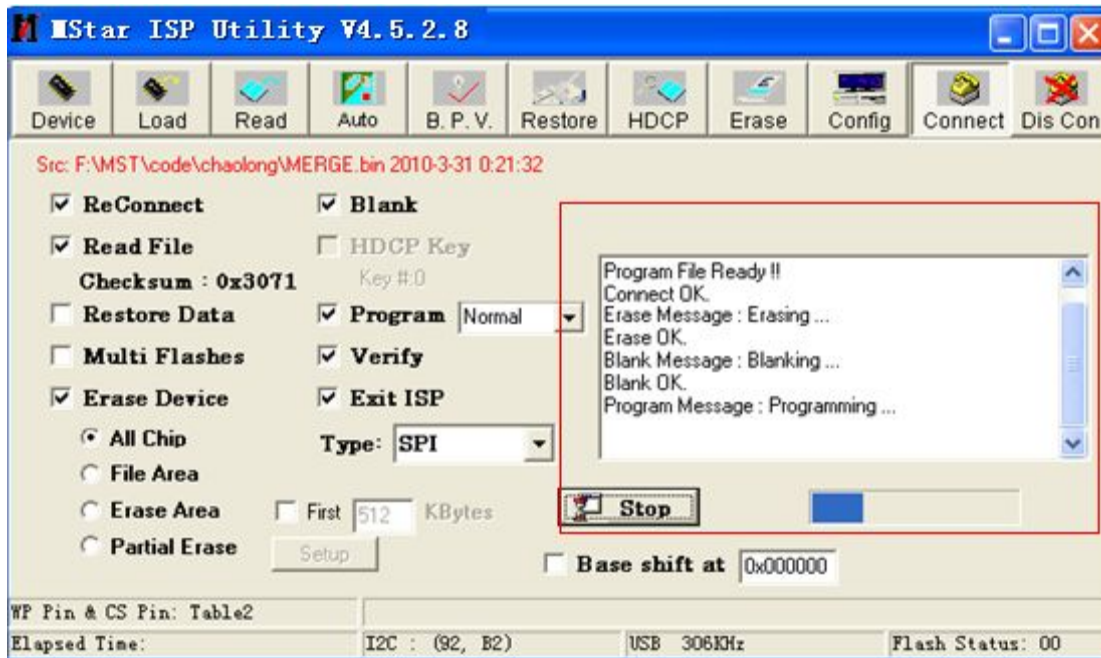


File name should be "bin_v59.bin"

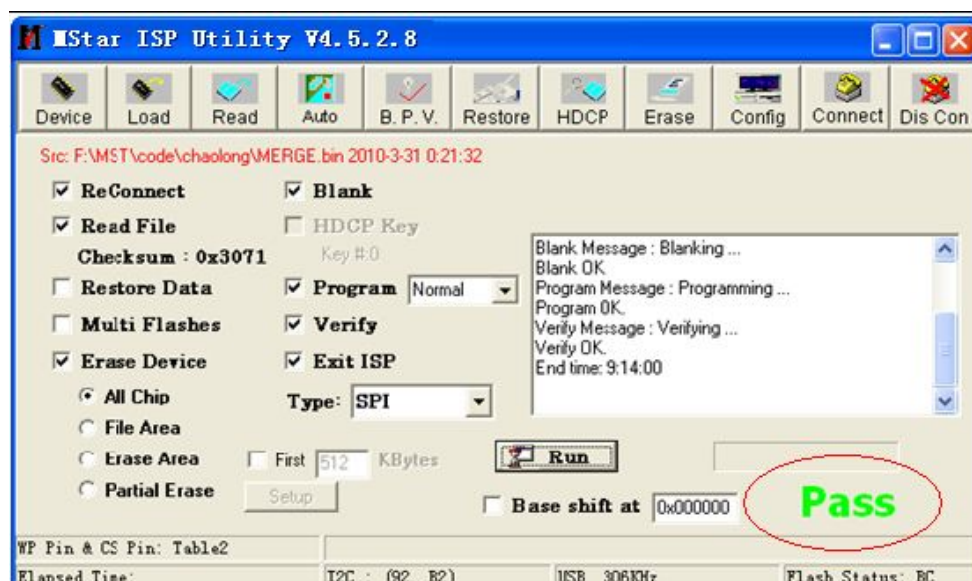
4.1.7: switch to Auto page, click "Run"



Upgrading:



Successfully upgraded:



If pass, please power on again to new SW state.

If fail, please power on again to upgrade anew.

4.3 Update with USB directly

4.3.1 The first upgrading method:

Put “bin_v59.bin” file in root dictionary in U disk, first power off TV ,Plug in U disk in USB port ,then power on TV by switching on ,TV will update automatic. Red and blue led indicator in TV will flash alternately .When led always show red color, the updating is finished.

Note: if upgrading sw version is same as to TV inside, it will not comply automatic.

4.3.2 The second upgrading method:

power on TV by switching on, put “bin_v59.bin” file in root dictionary in U disk, Plug in U disk in USB port ,then get in Factory OSD, select “Software update(USB)” , press OK or right in RC,TV will update

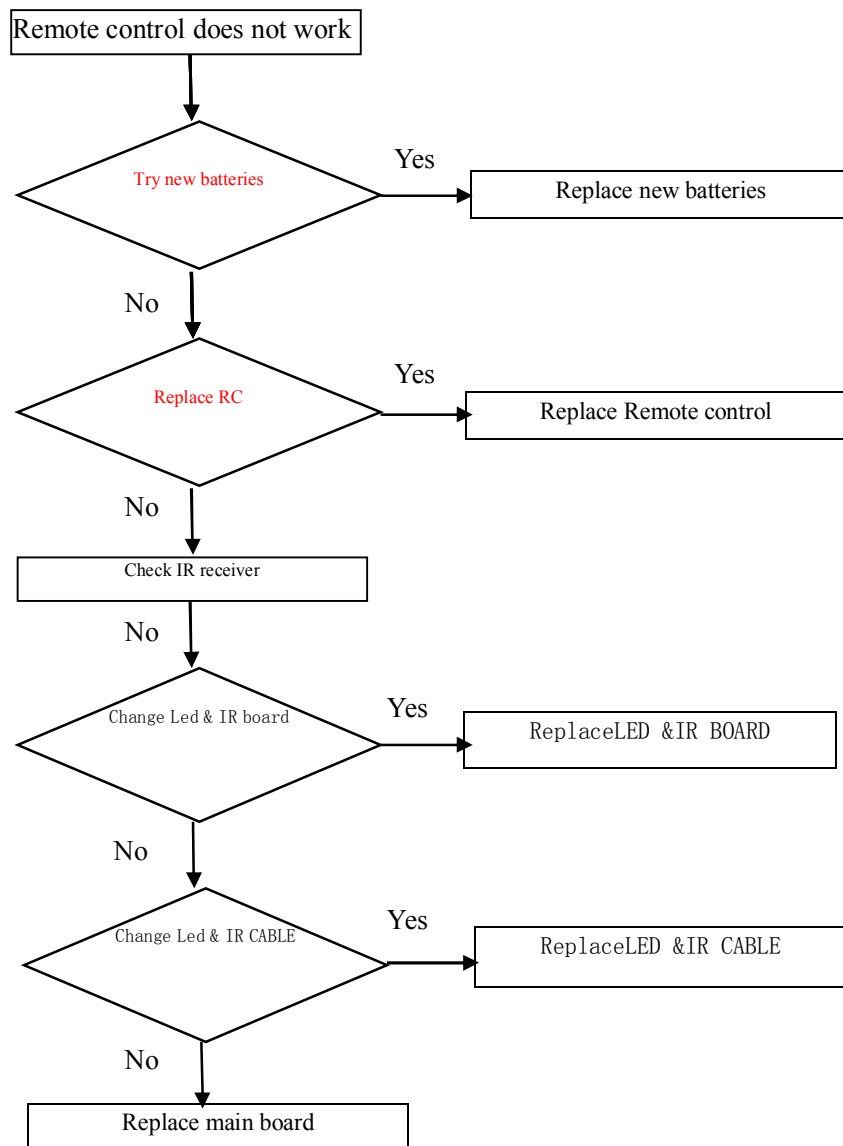
automatic. Red and blue led indicator in TV will flash alternately .When led always show red color, the updating is finished.

5. Troubleshooting

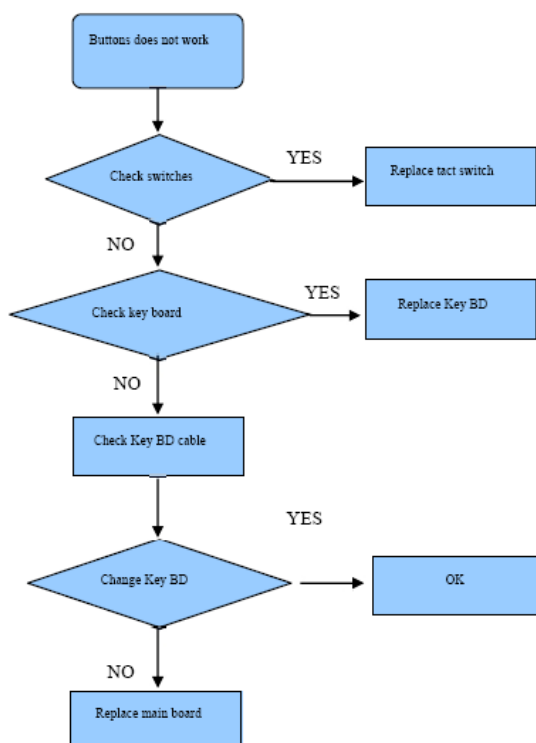
When there is something wrong with you TV, you can try turning off the TV and then restart it. You can also operate according to the following chart.

No sound or picture	<ol style="list-style-type: none"> 1. Check if the power line is in the outlet and if it has electricity. 2. Check if you have pressed Power button on the TV or Power button on the remote control. 3. Check the setting of picture brightness and contrast. 4. Check the volume.
The picture is normal but there is no sound	<ol style="list-style-type: none"> 1. Check the volume. 2. Check if Mute mode is set.
No picture and white or black picture	<ol style="list-style-type: none"> 1. Adjust Picture Setting. 2. Check Color System.
The sound and picture are interfered	<ol style="list-style-type: none"> 1. Try to find the appliance affecting TV set, and move it far away from the TV set. 2. Try to insert the power plug of the TV set into another outlet.
Unclear picture or picture with snow	<ol style="list-style-type: none"> 1. Check the direction, position and connection of your antenna. 2. Adjust the direction of your antenna or reset or fine tune the channel.
The remote control does not work	<ol style="list-style-type: none"> 1. Change the batteries in the remote control. 2. Clean the upper side of the remote control (radiating window) 3. Check the contacting points of the batteries. 4. Check if there is obstruction between the remote control and the monitor. 5. Check if the batteries are correctly installed.
H/V strip or the picture shaking	Check if there is interfering source nearby, such as appliance or electric tools.
The cabinet of the TV makes "Click" sound	makes "Click" sound"Sometimes the room temperature change can cause the television cabinet to inflate or contra, which makes the sound. This does not mean the TV breaks down.

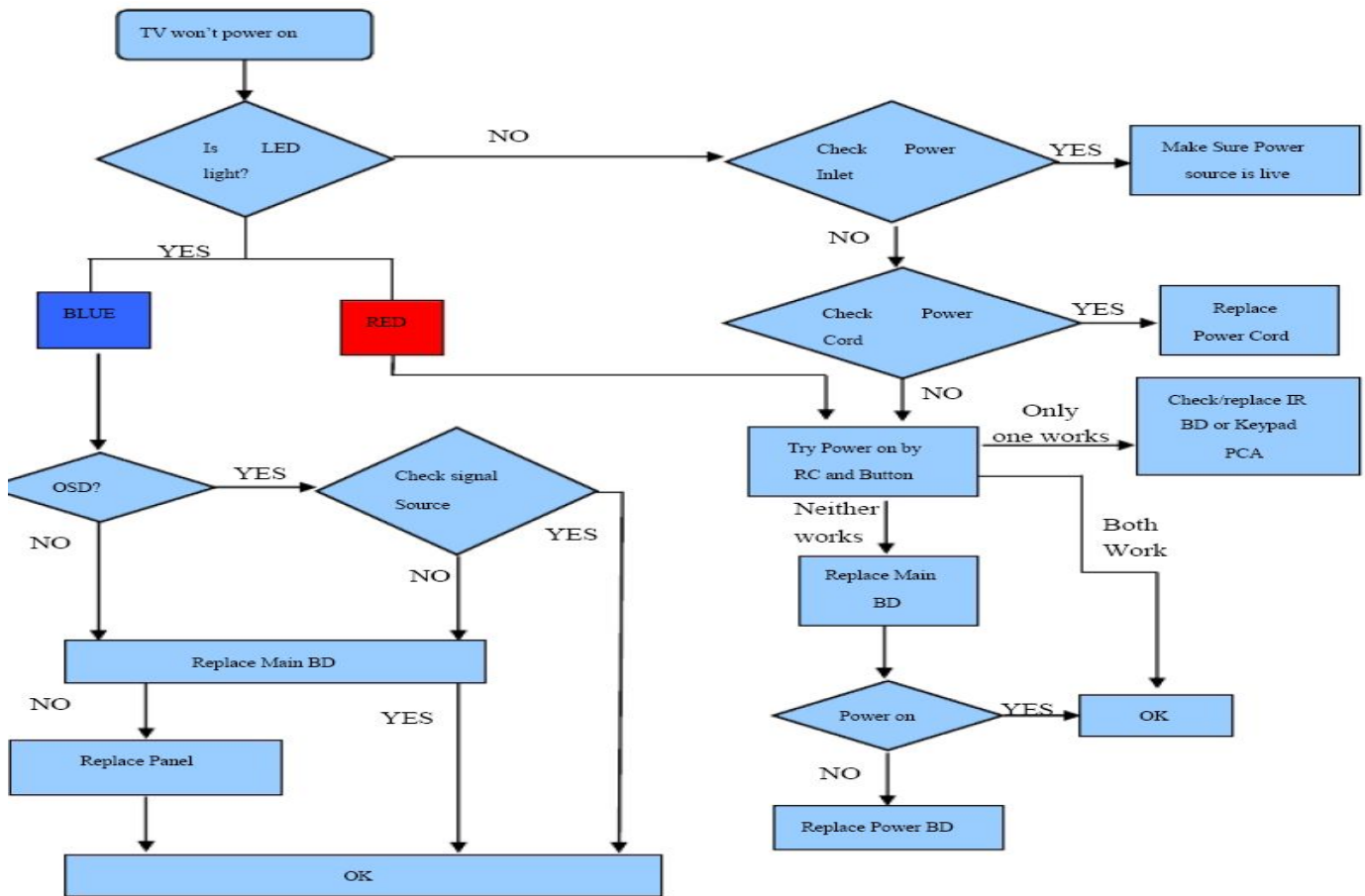
5.1 Troubleshooting for Remote Control



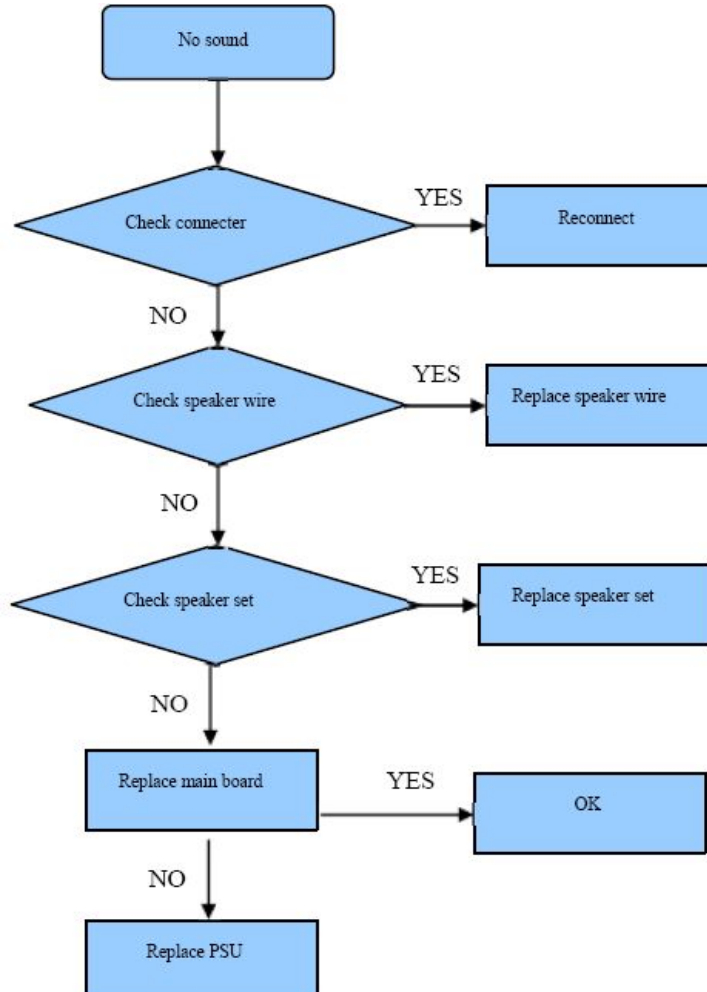
5.2 Troubleshooting for Function Key



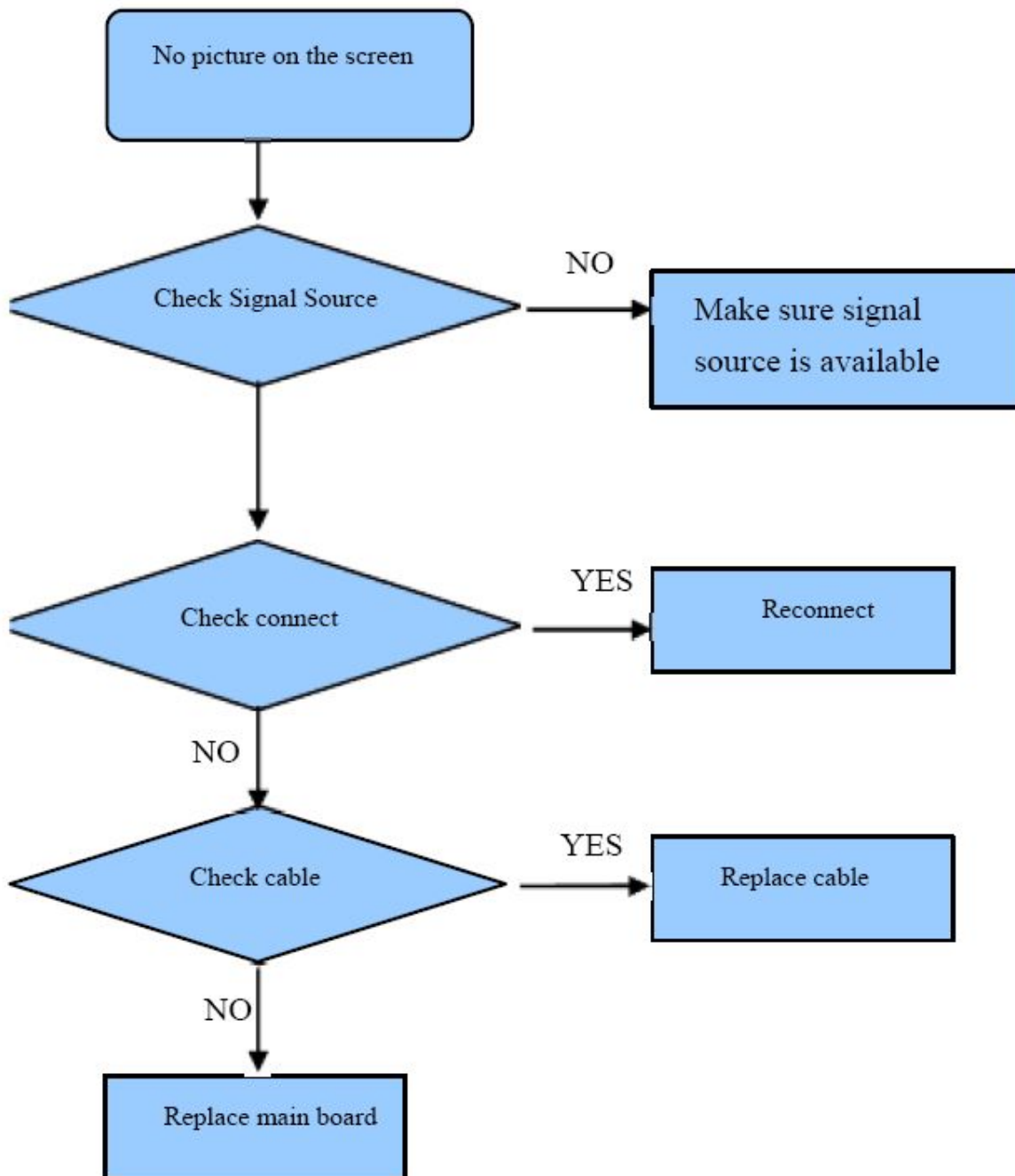
5.3 TV won't Power On



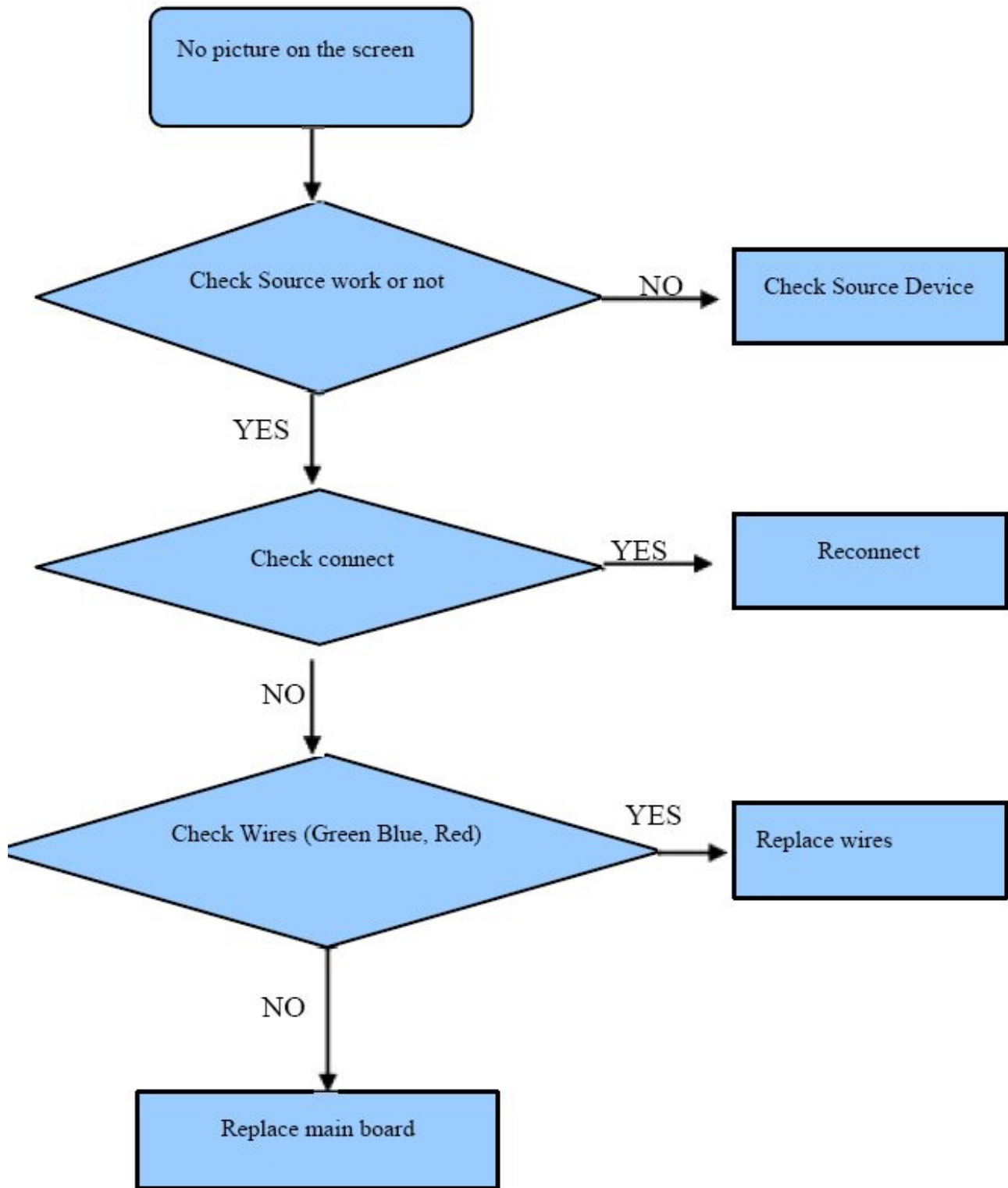
5.4 Troubleshooting for Audio



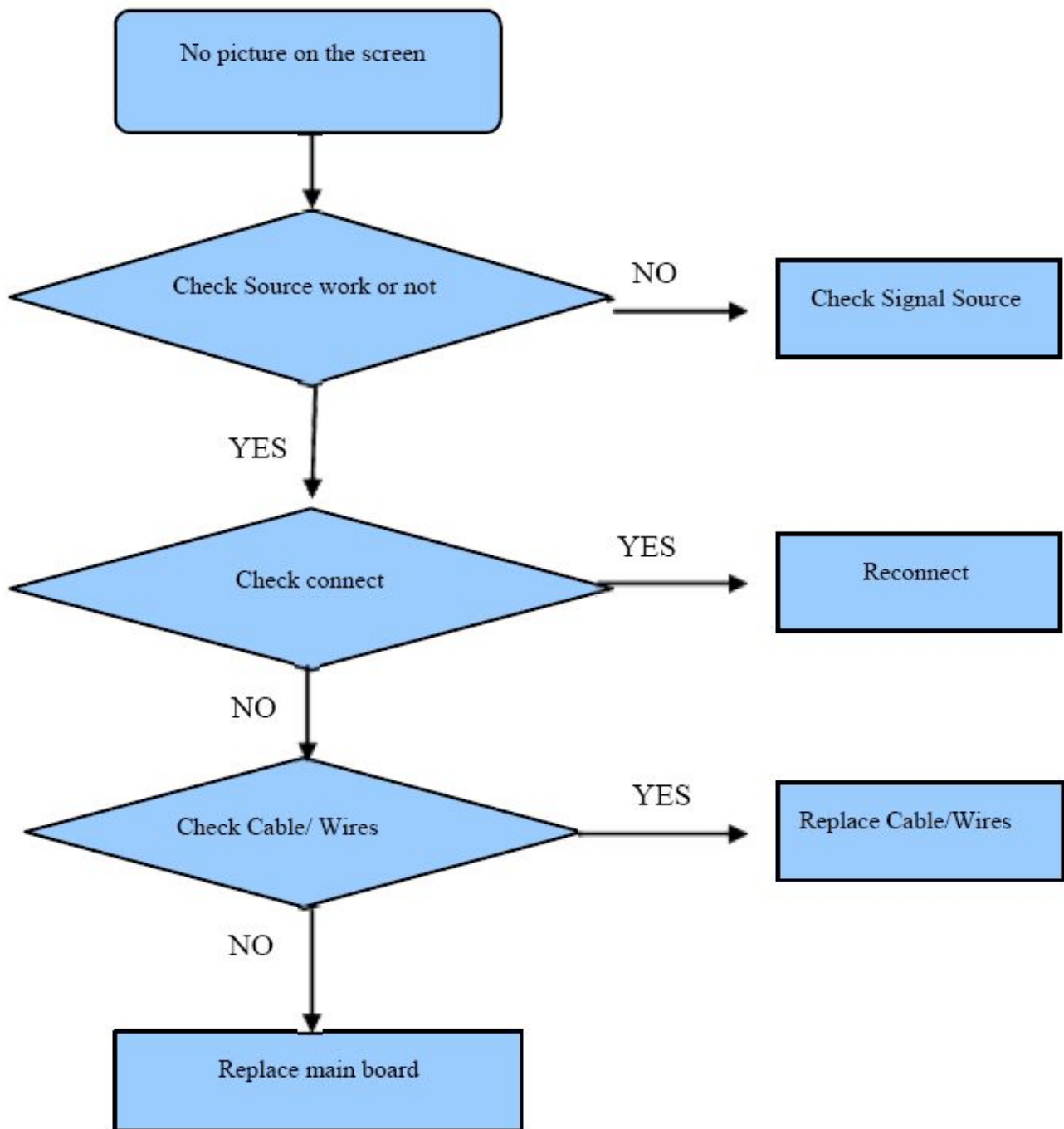
5.5 Troubleshooting for TV/VGA/HDMI input



5.6 Troubleshooting for YPbPr input

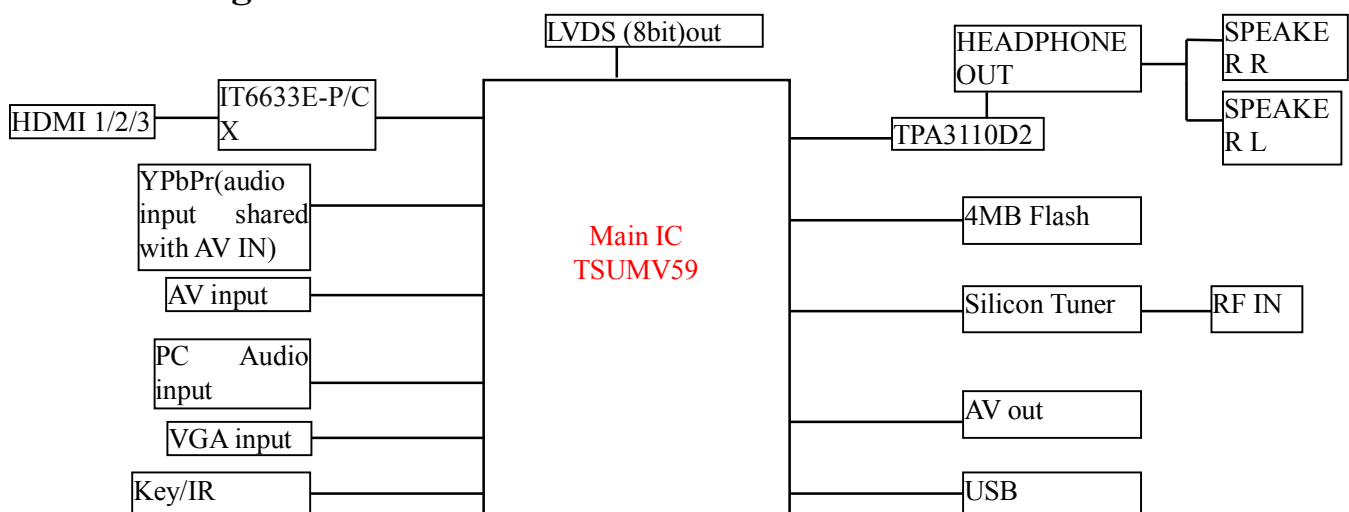


5.7 Troubleshooting for Video input

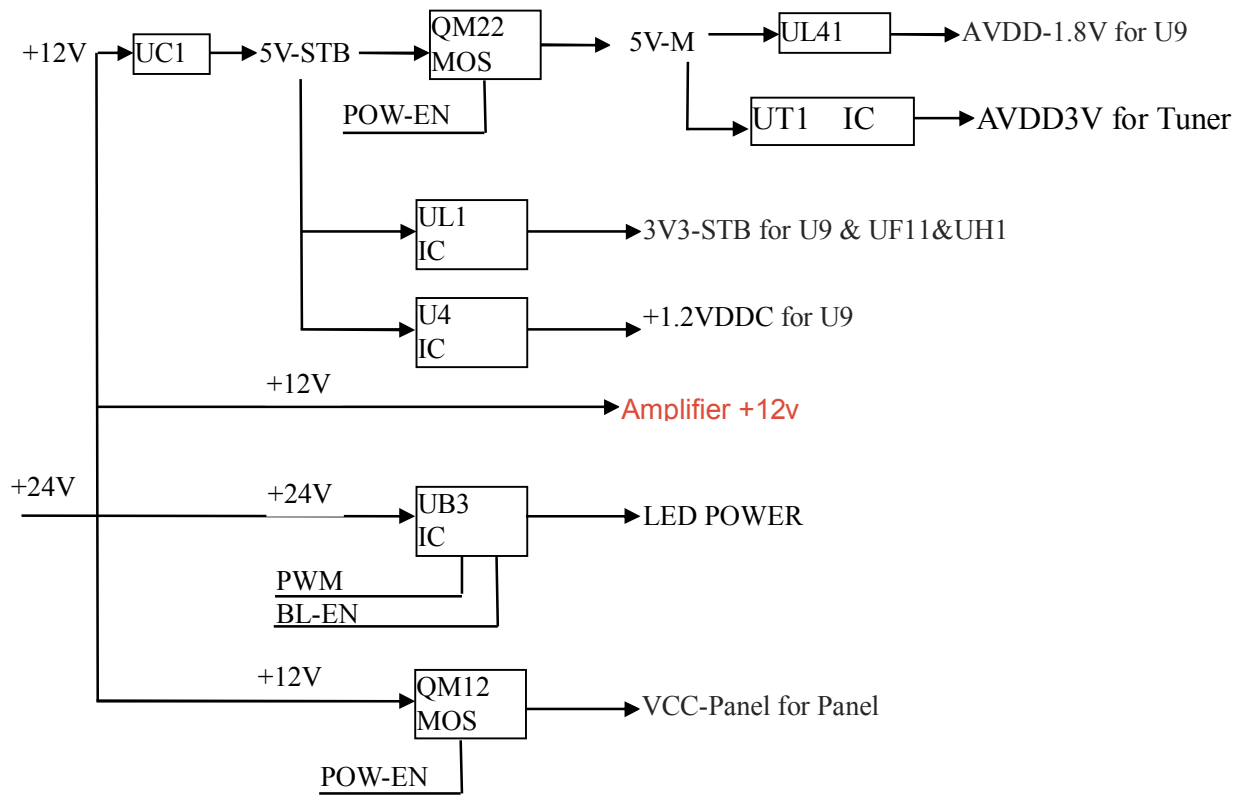


6. Schematic circuit diagram

6.1 Block Diagram

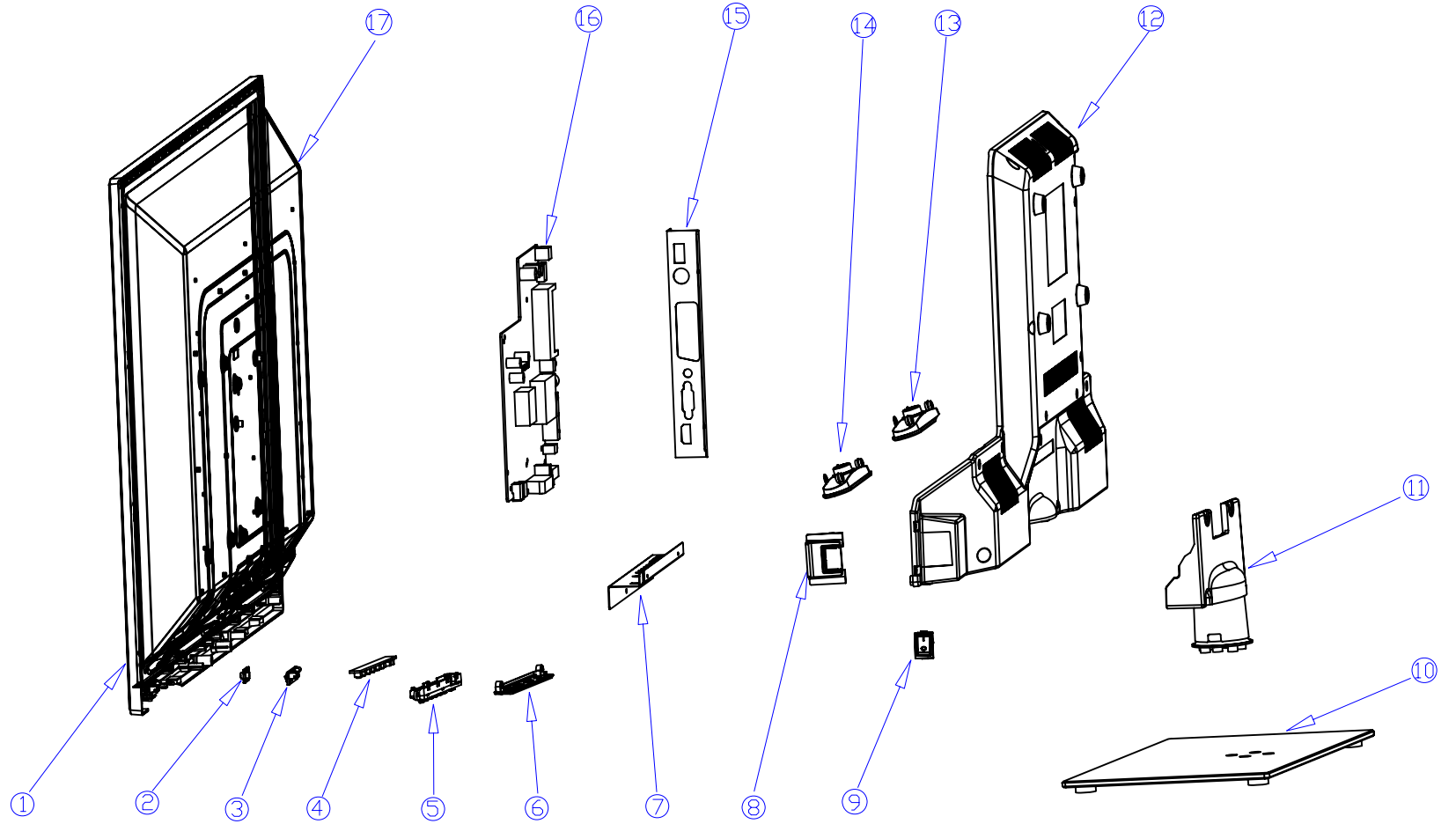


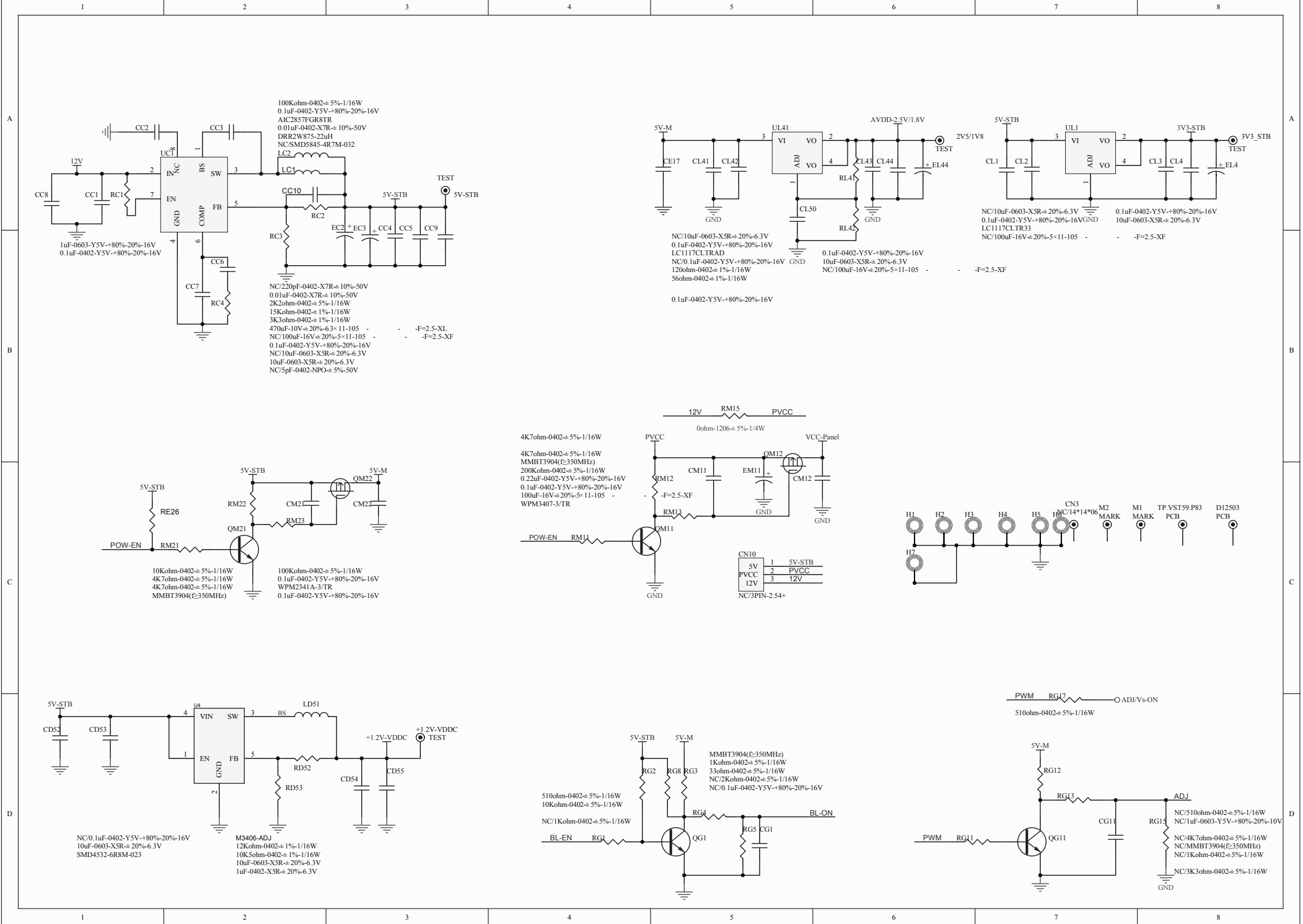
6.2 Main board power assignment

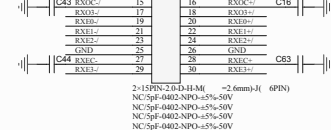
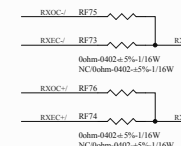
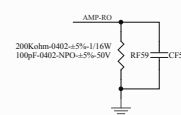
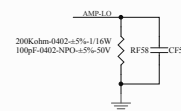
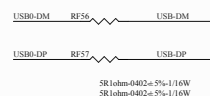
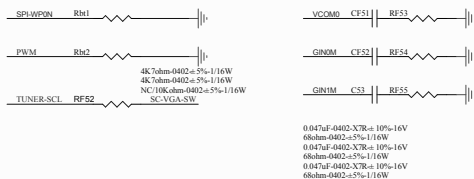
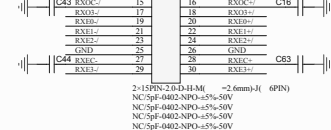
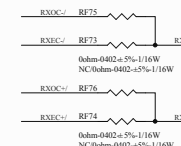
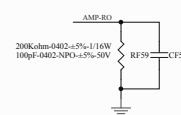
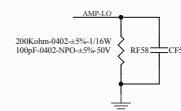
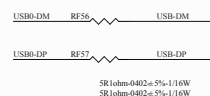
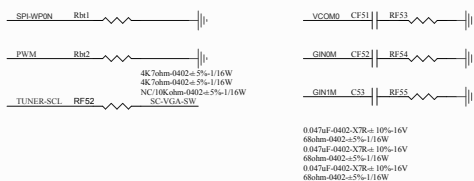
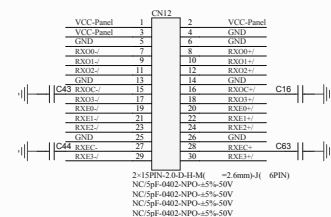
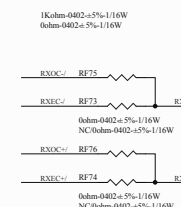
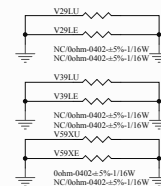
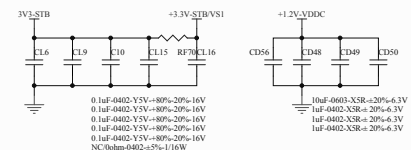
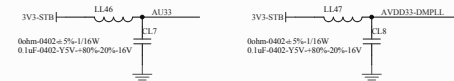
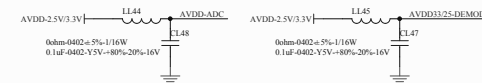
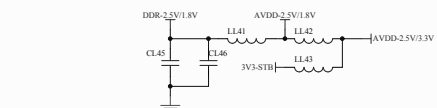
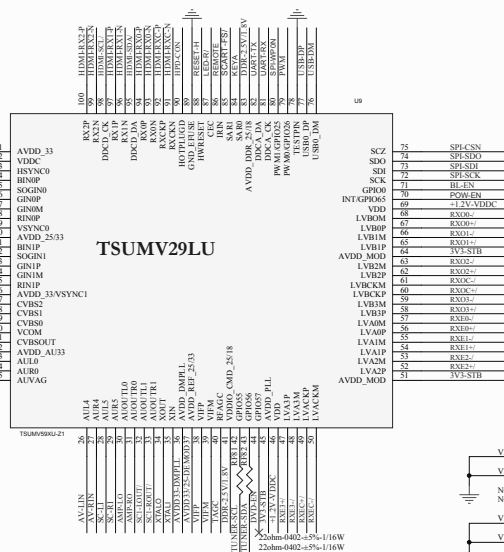
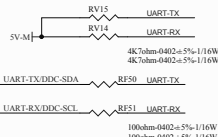
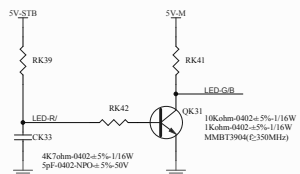
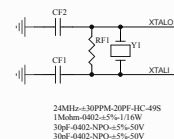
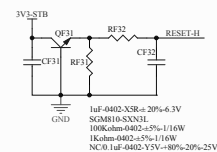
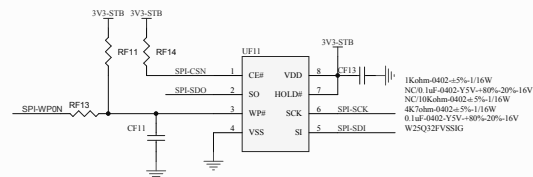
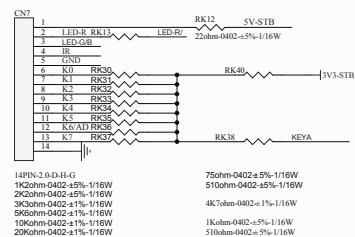


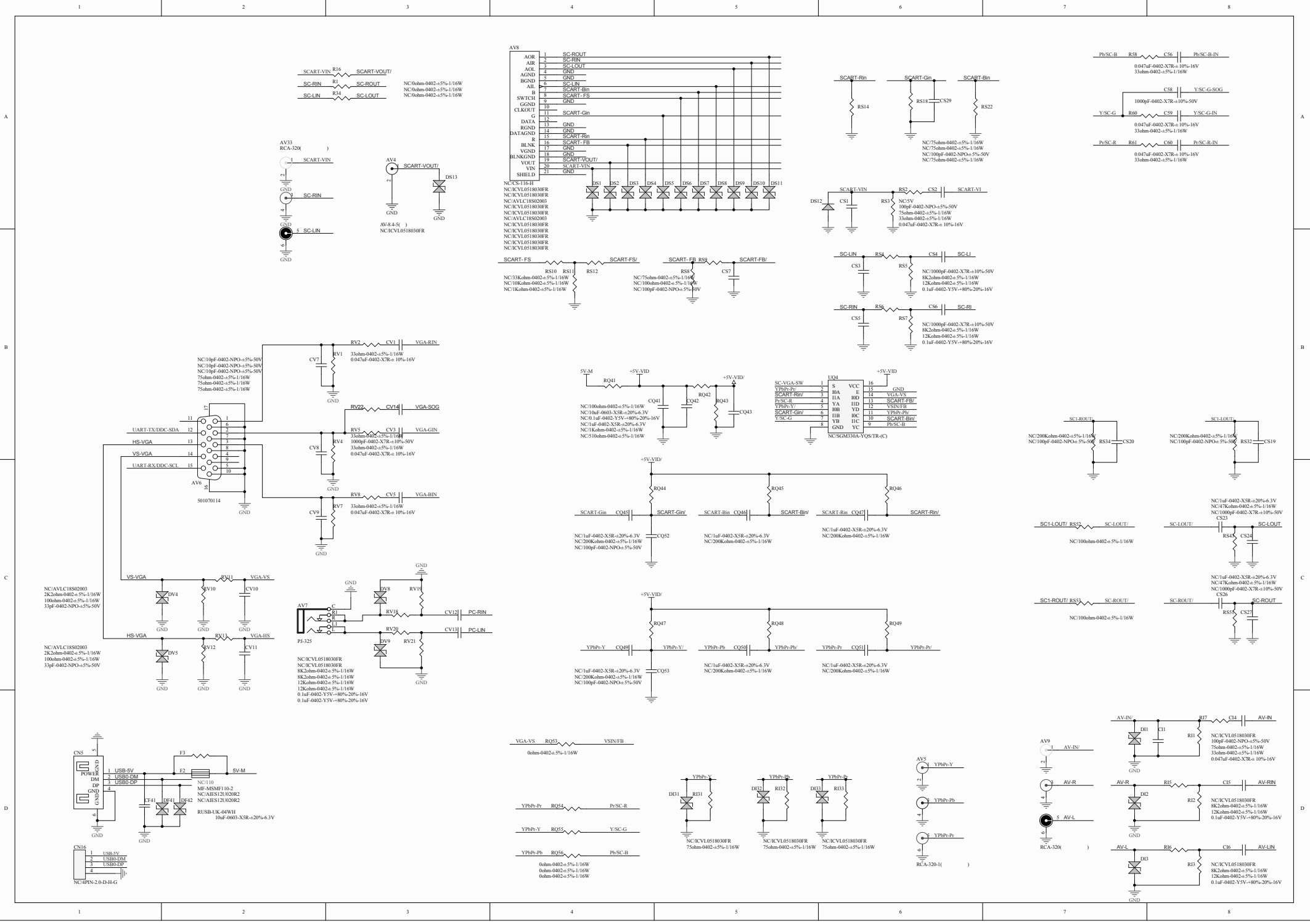
7. Explode View

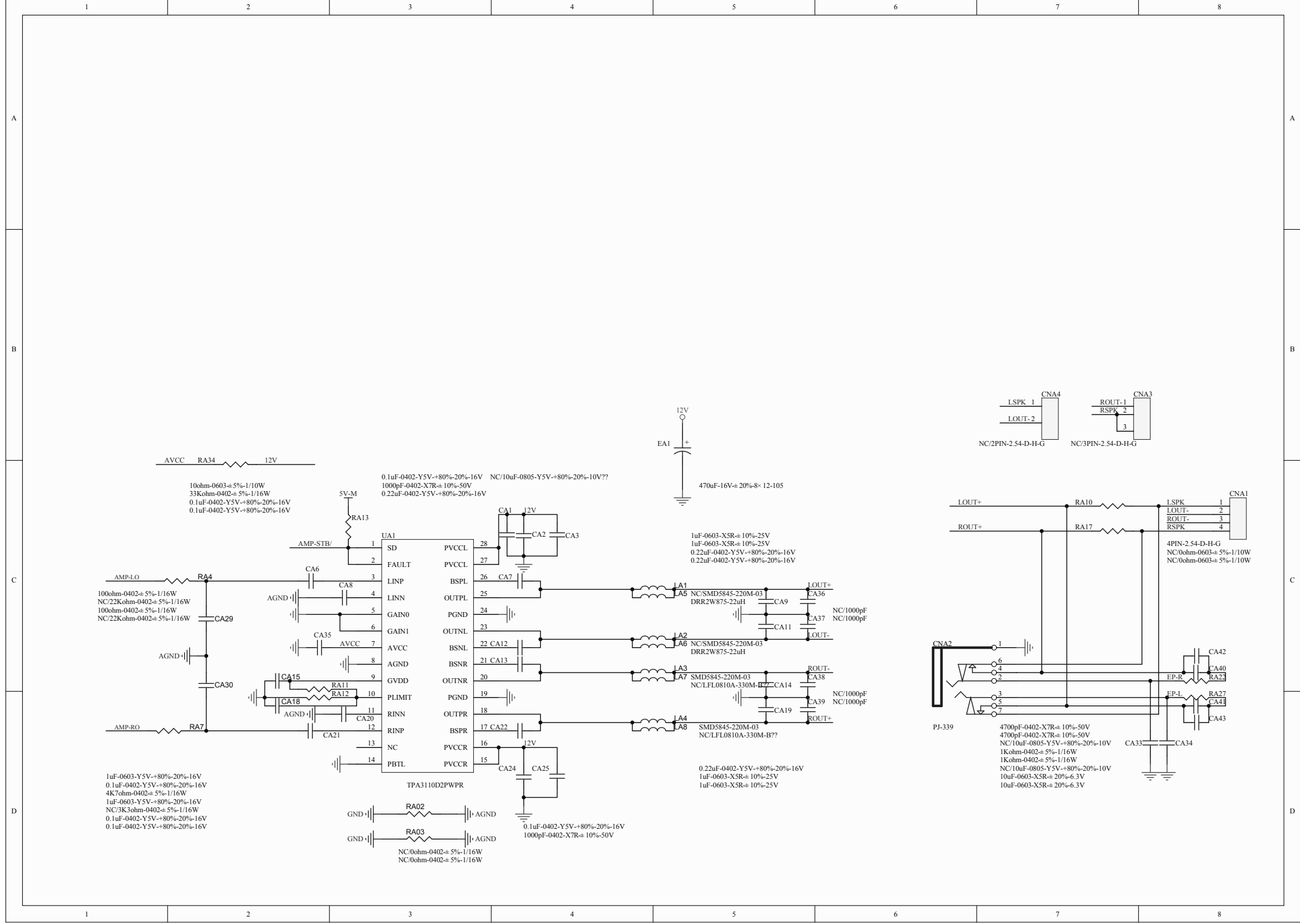
17	Panel	1
16	Mainboard	1
15	Side Terminal Bracket	1
14	Left Speaker	1
13	Right Speaker	1
12	Back Cover	1
11	Base Neck	1
10	Glass Base Plate	1
9	Power Switch	1
8	Switch Bracket	1
7	Below Terminal Bracket	1
6	Key Bracket	1
5	Key Button	1
4	Key Board	1
3	Remote Board	1
2	IR Lens	1
1	Front Cover	1
No.	Name of Materiel	Quantity













茂鑫源电子(深圳)有限公司
MAKENA ELECTRONIC (SHENZHEN) CO.,LTD

LED-TV Service Manual

Model:RB-22S5F

Makena Electronic(Shenzhen) CO,LTD

<http://www.makenachina.com>



Contents

Contents	— — — — —	2
Safety precautions	— — — — —	3
Maintenance tools	— — — — —	4
Size and composition	— — — — —	5
Simple failure & solve	— — — — —	6
Maintenance flow chart	— — — — —	7



茂鑫源电子(深圳)有限公司
MAKENA ELECTRONIC (SHENZHEN) CO.,LTD

Safety precautions

Warning:

To prevent fire or shock, please don't place TV on a fog places. Don't Scratch and striking panel surface with hard things.

Note:

- 1, This product directly use AC power supply. Please refer to the rating label about power supply voltage.
- 2, Please pull out power supply and antenna signal In the weather of Lightning storm or abnormal AC power supply.
- 3, please don't put the television to the extreme heat, wet or much dust place, ensure good television. Good air convection.
- 4, TV screen belong to precision components, and the screen above have the individual window, the dark spots or red Green, blue, a little dead pixels, this is normal phenomenon, do not belong to bad product.
- 5, LCD screen normal working temperature is 0-40 °C, too high or low may affect TV Machine working normally.



茂鑫源电子(深圳)有限公司
MAKENA ELECTRONIC (SHENZHEN) CO.,LTD

Repairing tools

Soldering iron , multimeter , oscilloscope
,screwdriver , pliers ,Forceps , suction tin



茂鑫源电子(深圳)有限公司
MAKENA ELECTRONIC (SHENZHEN) CO.,LTD

Specification

Screen size: 22"(55CM)	Screen Ratio: 1920*1080
Power supply: DC 12V 3A, 50/60HZ	Digital TV video system : N/A
Output Power:36W	Digital TV sound system: AC-3
Standby: < 0.5W	Analog TV video system : PAL/SECAM
Brightness: 220cd/m ²	Analog TV sound system : D/K,B/G
Contrast:1000:1	M/B: MSTV59



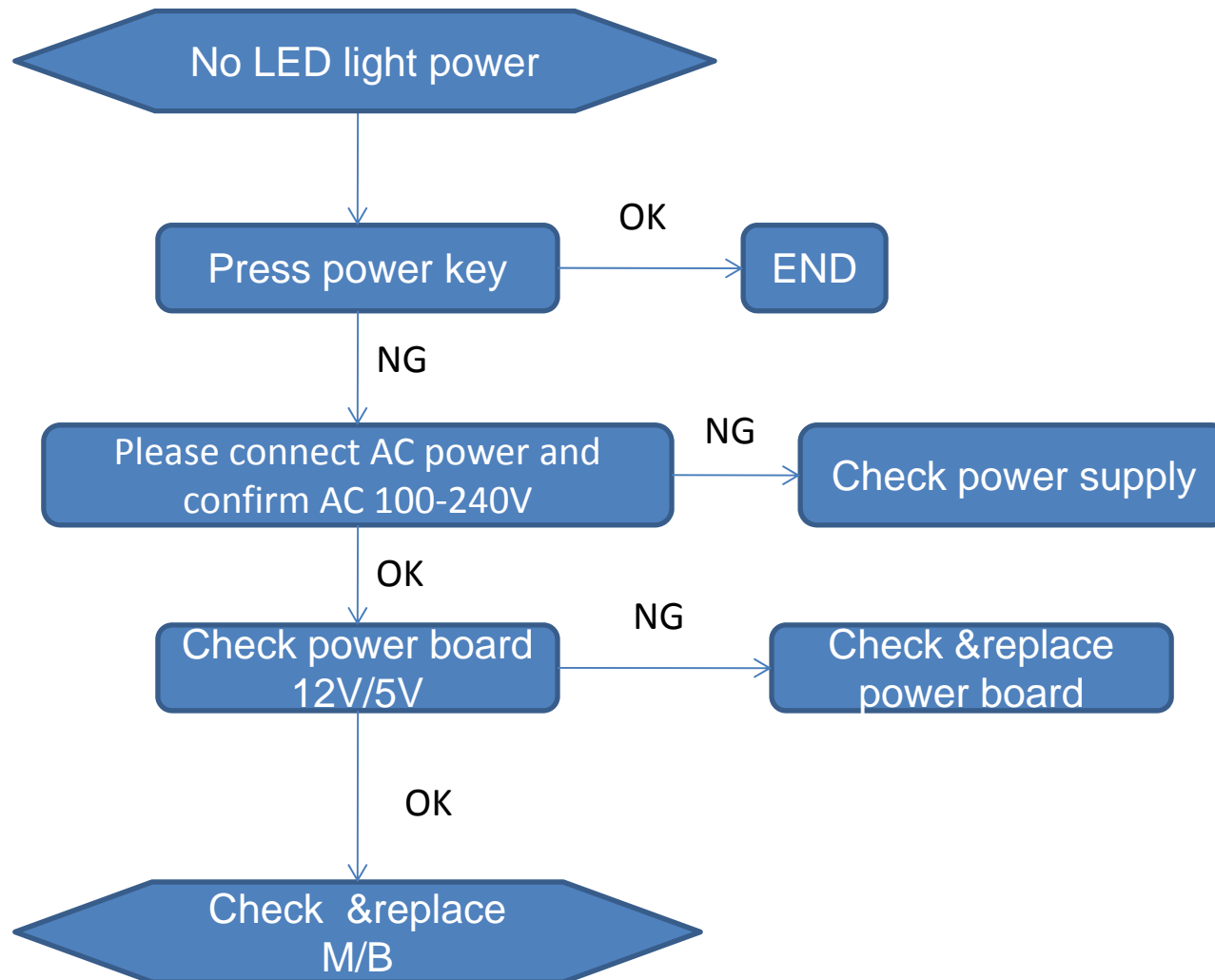
Symptoms & Solutions

Symptom	Check contents
No power no images & silent	Power AC is connected well? Is standby? TV is turned on?
No picture	Check the brightness is set too small? Whether input port have signal? Is there any problem on display
Picture & silent	Check it's the silent state? Check the headset is connected? Check the sound settings and sound system? AV output port settings are correct?
Image too bright or too dark	Check the brightness and color set normal ? Check the screen is normal?
Remote no effect	Check the validity of the remote control batteries? Check the remote control is normal?
Image is not clear ,shaking	Check the input signal is too weak? Antenna is connected properly?
Unsteadiness image	Input power is unstable? Is there have high pressure electromagnetic interference?

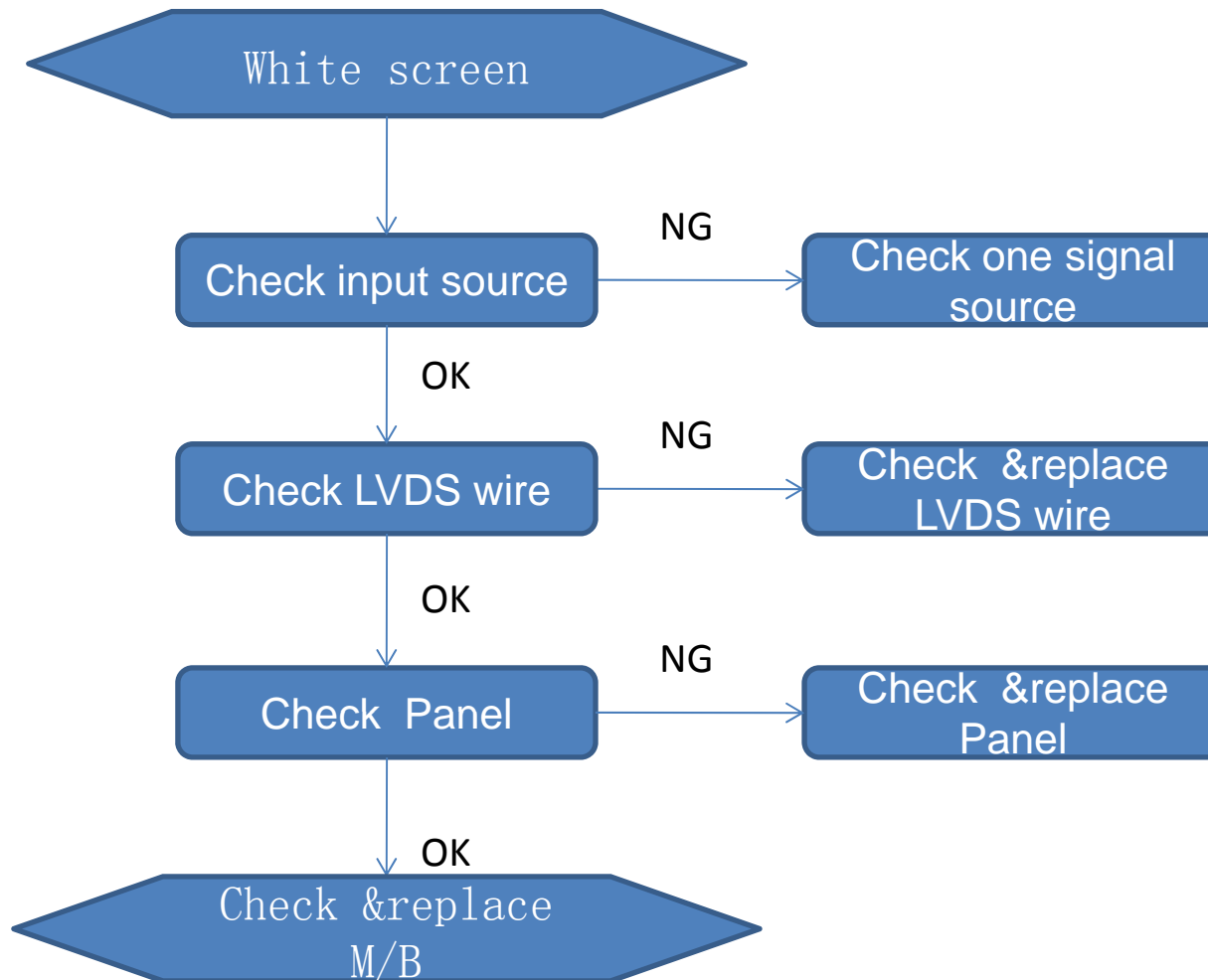


Repairing flow chart

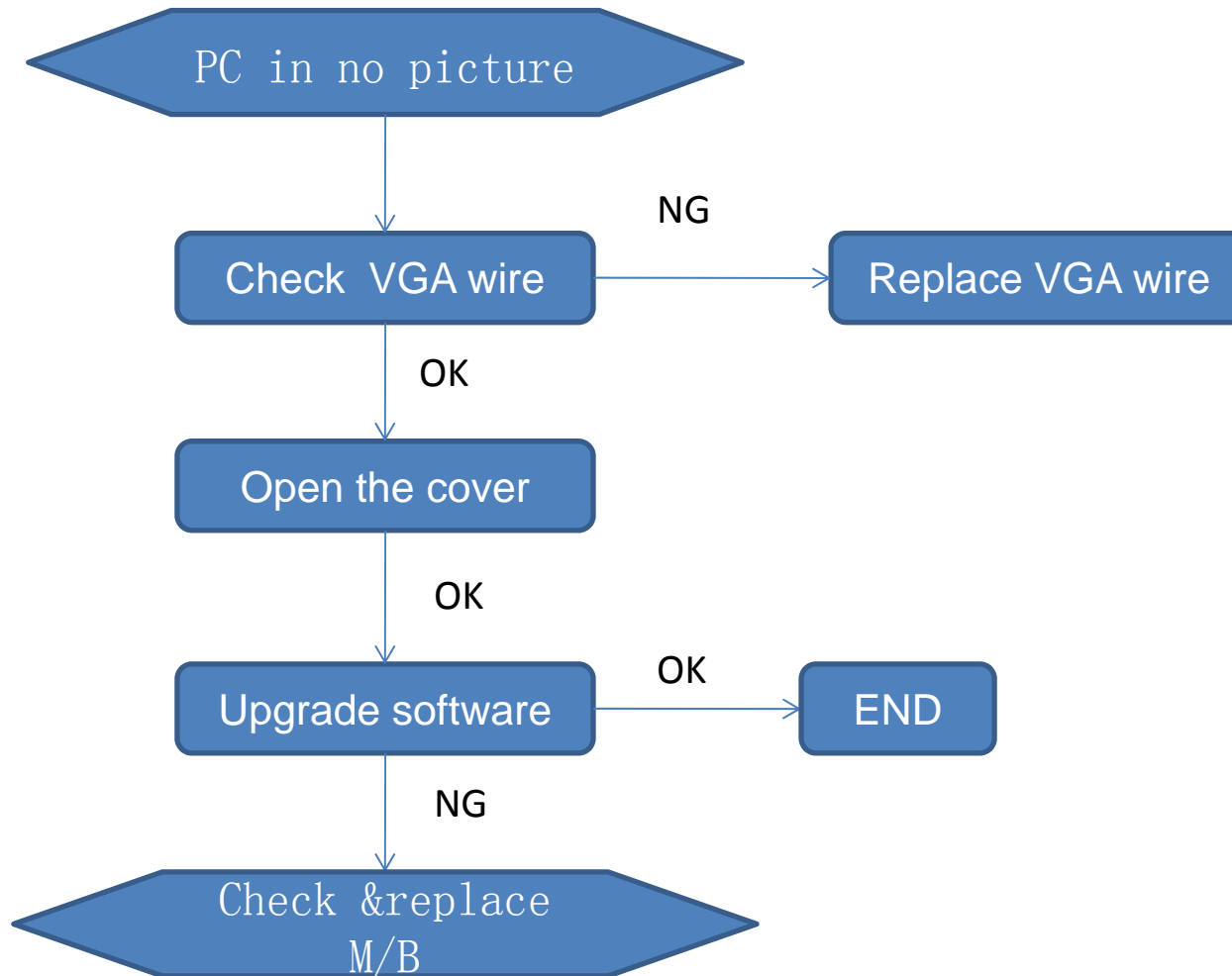
1, Flow chart for no LED light Power



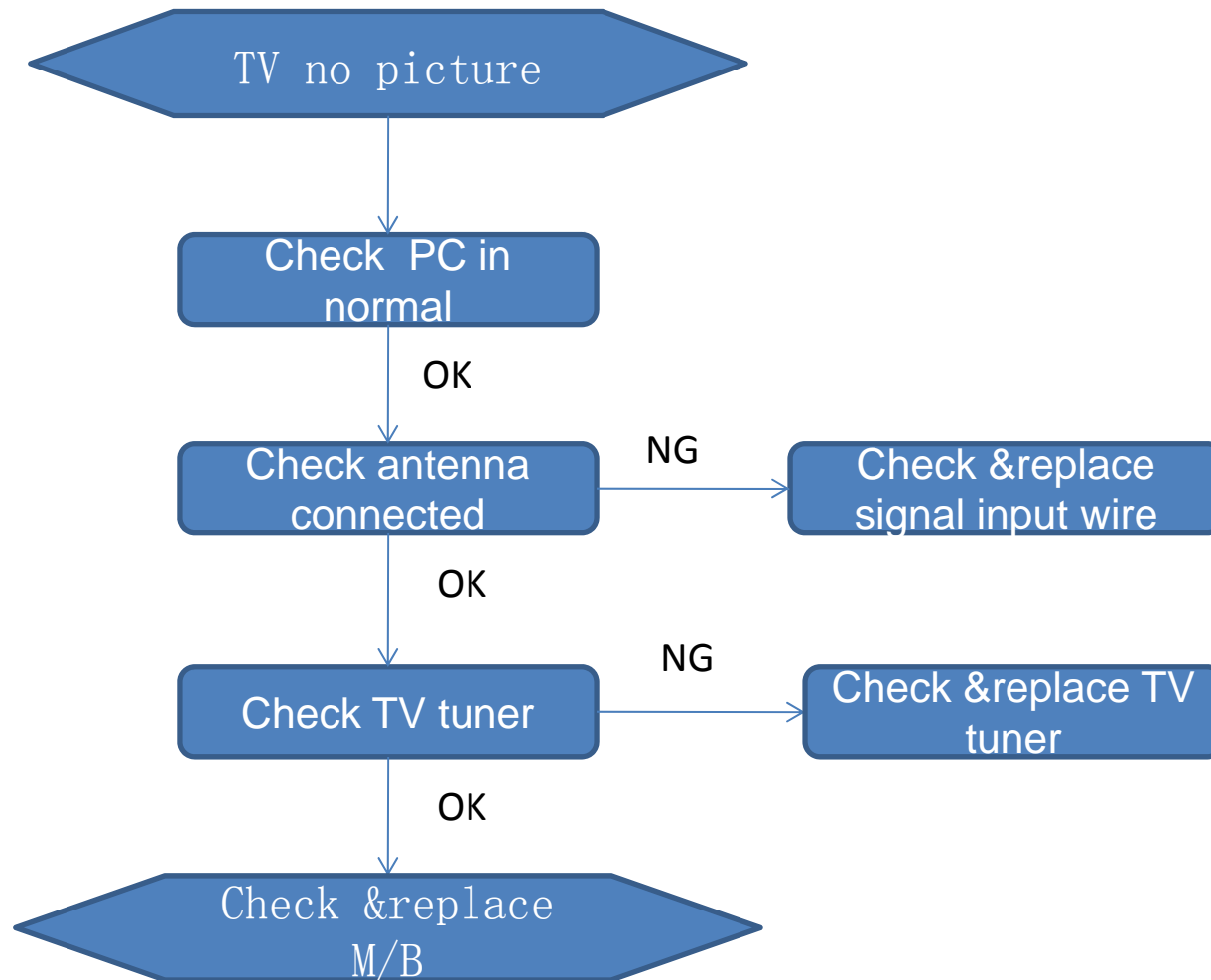
2, Flow chart for white screen



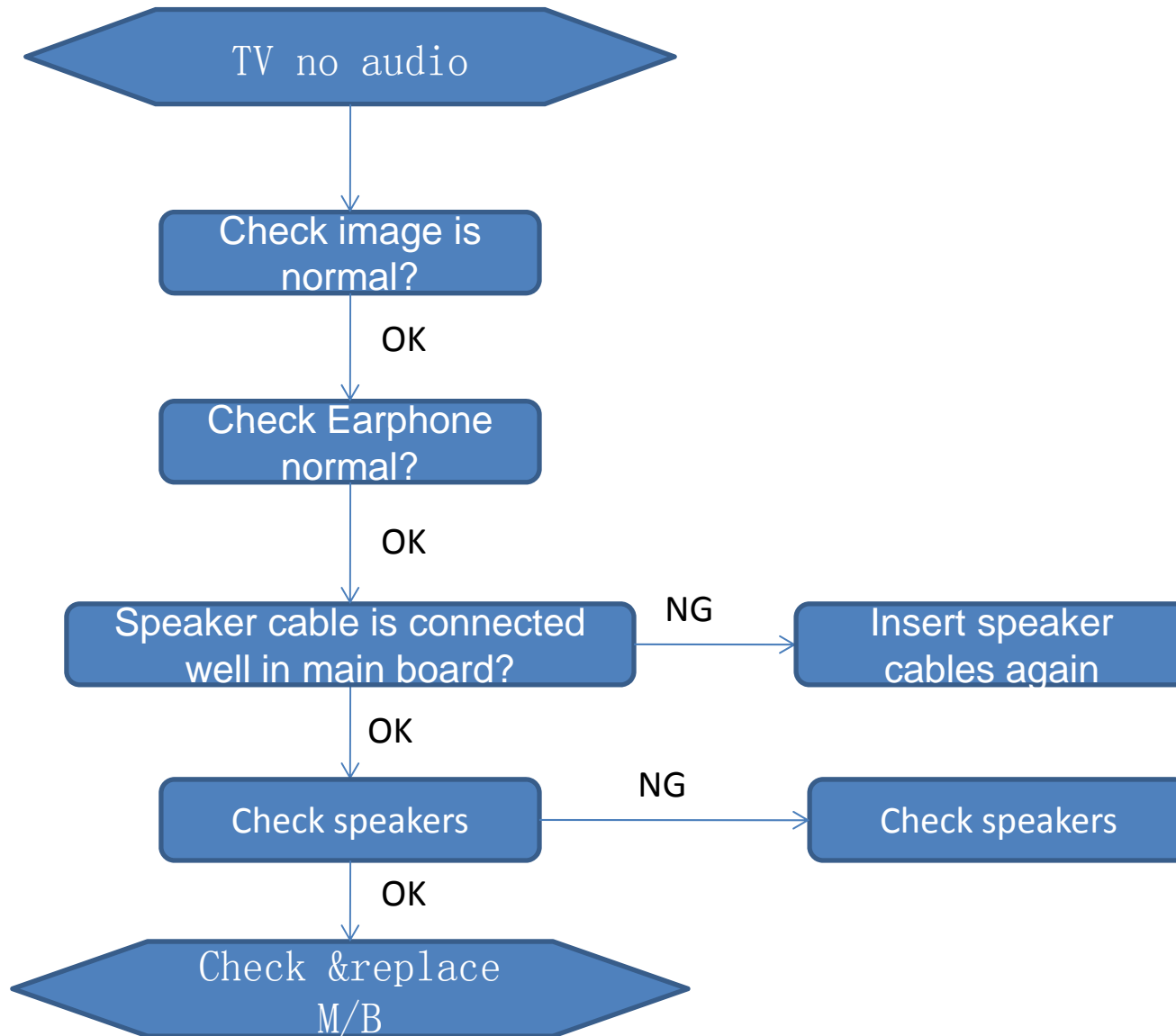
3, Flow chart for PC in no picture



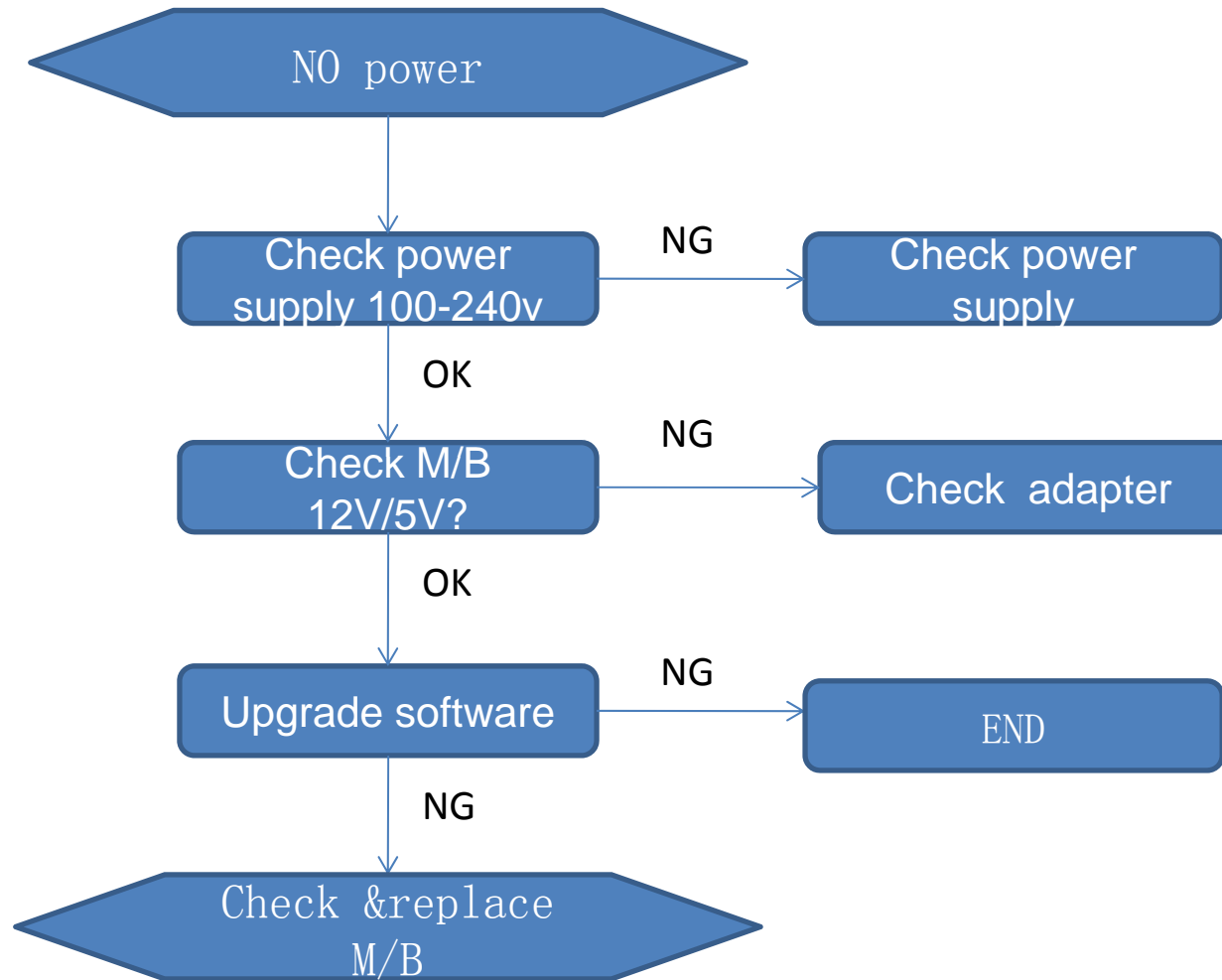
4, Flow chart for TV no picture



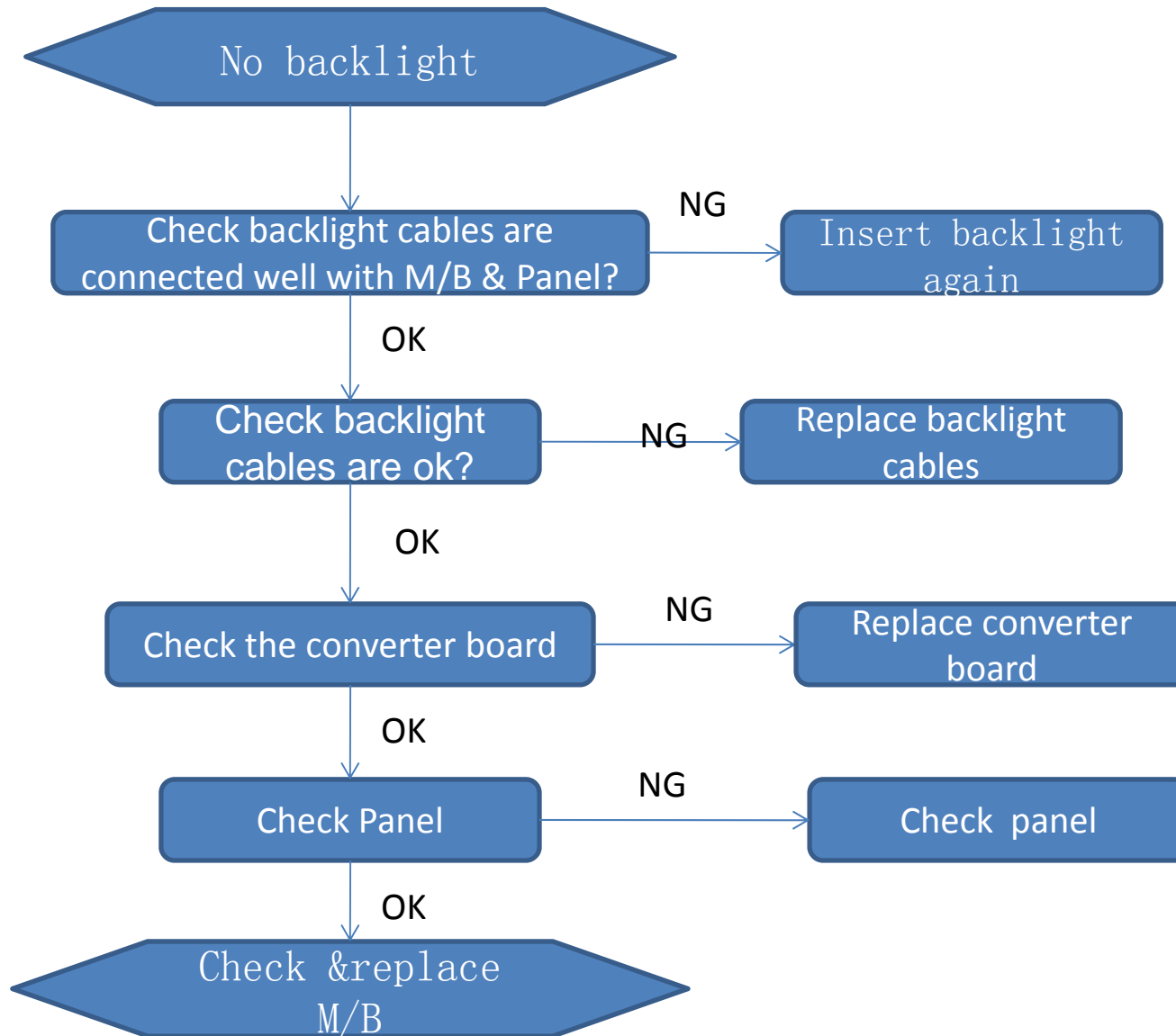
5, Flow chart for TV no audio



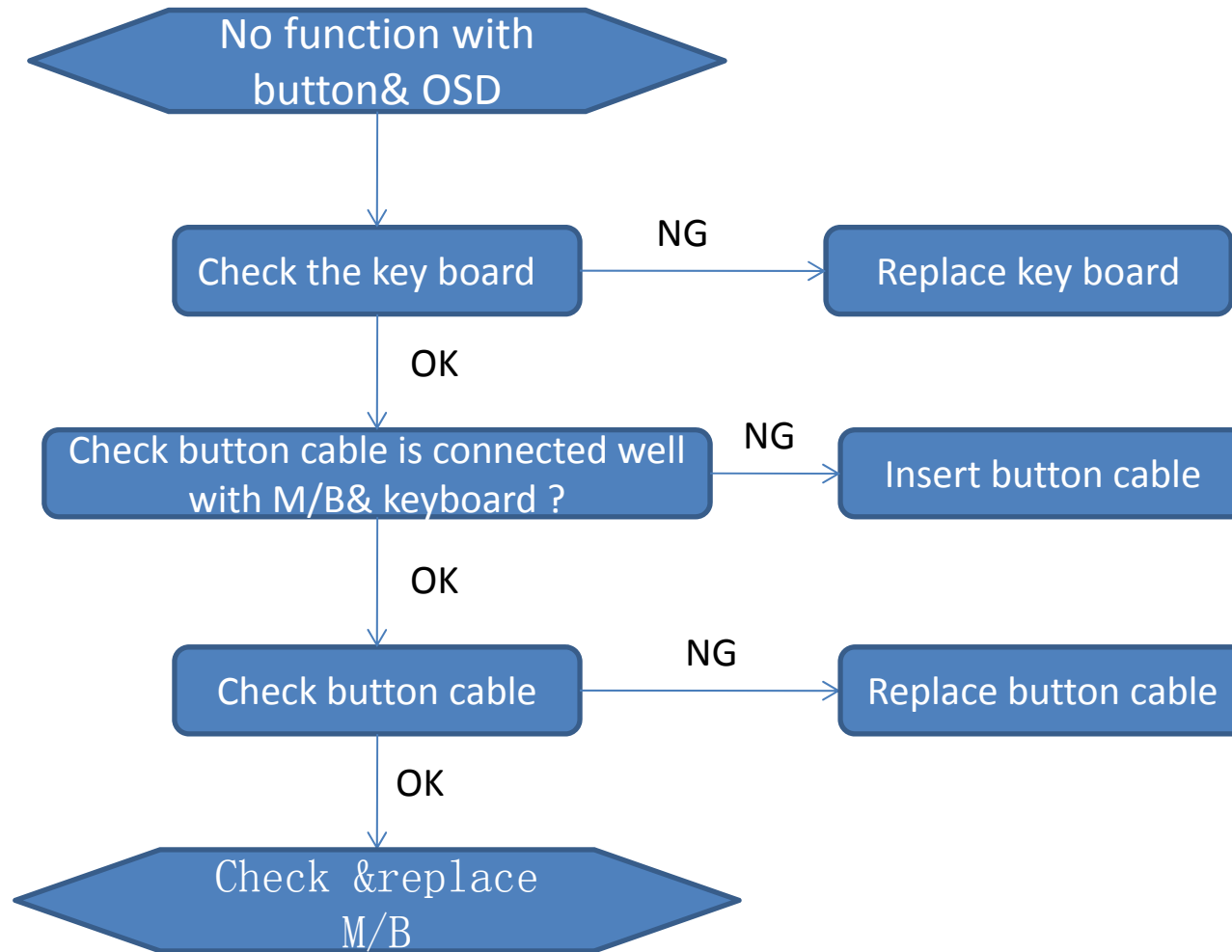
6, Flow chart for no power



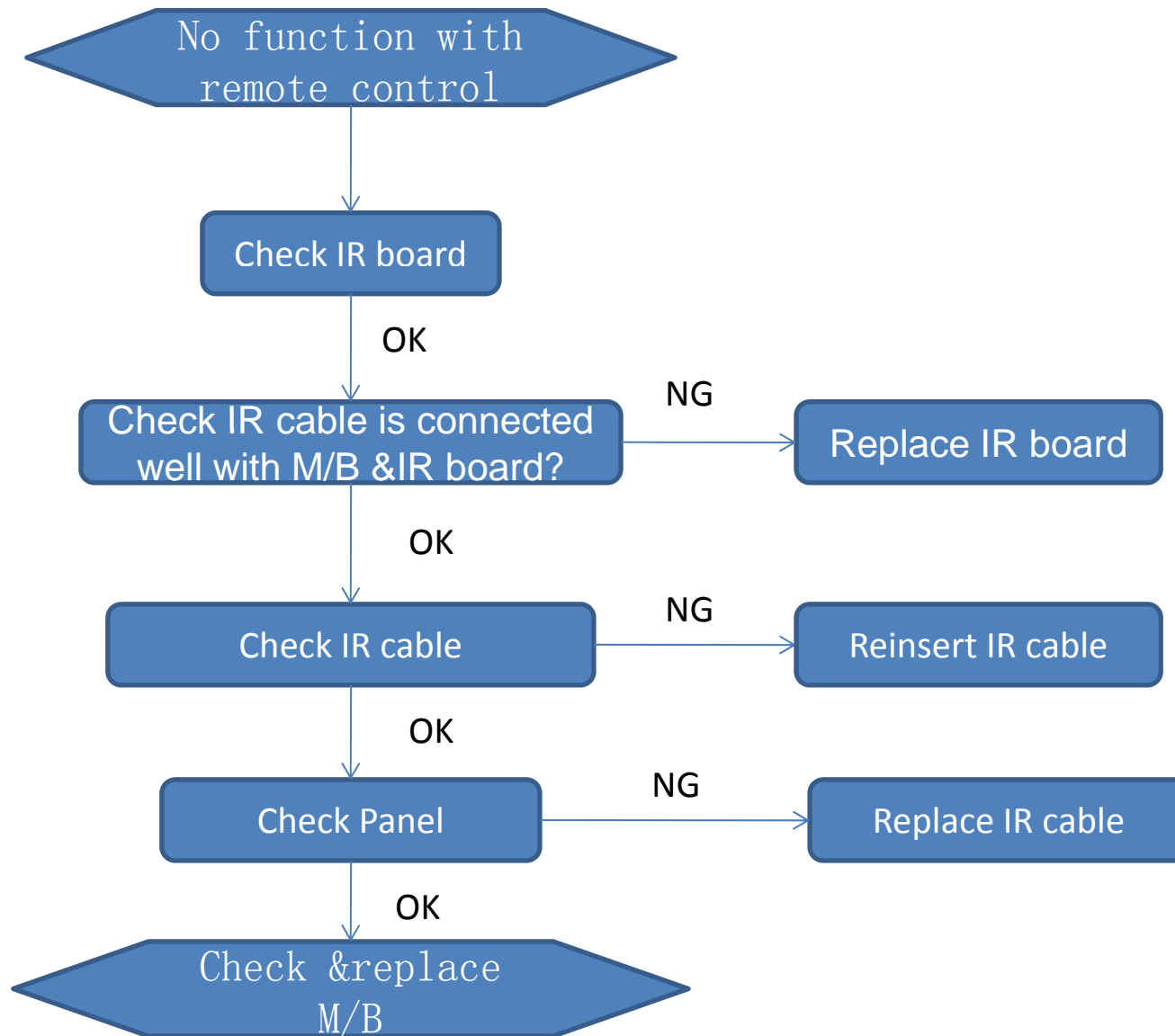
7, Flow chart for No panel backlight



8. Flow chart for problem with key board& OSD



9, Flow chart for remote control





茂鑫源电子(深圳)有限公司
MAKENA ELECTRONIC (SHENZHEN) CO.,LTD

LED-TV Service Manual

Model:RB-32D5

Makena Electronic(Shenzhen) CO,LTD

<http://www.makenachina.com>



Contents

Contents	— — — — —	2
Safety precautions	— — — — —	3
Maintenance tools	— — — — —	4
Size and composition	— — — — —	5
Simple failure & solve	— — — — —	6
Maintenance flow chart	— — — — —	7



Safety precautions

Warning:

To prevent fire or shock, please don't place TV on a fog places. Don't Scratch and striking panel surface with hard things.

Note:

- 1, This product directly use AC power supply. Please refer to the rating label about power supply voltage.
- 2, Please pull out power supply and antenna signal In the weather of Lightning storm or abnormal AC power supply.
- 3, please don't put the television to the extreme heat, wet or much dust place, ensure good television. Good air convection.
- 4, TV screen belong to precision components, and the screen above have the individual window, the dark spots or red Green, blue, a little dead pixels, this is normal phenomenon, do not belong to bad product.
- 5, LCD screen normal working temperature is 0-40 °C, too high or low may affect TV Machine working normally.



茂鑫源电子(深圳)有限公司
MAKENA ELECTRONIC (SHENZHEN) CO.,LTD

Repairing tools

Soldering iron , multimeter , oscilloscope
,screwdriver , pliers ,Forceps , suction tin



茂鑫源电子(深圳)有限公司
MAKENA ELECTRONIC (SHENZHEN) CO.,LTD

Specification

Screen size: 32"(80CM)	Screen Ratio: 1366*768
Power supply: AC ~100-242V, 50/60Hz	Digital TV video system : N/A
Output Power:65W	Digital TV sound system: AC-3
Standby: < 1W	Analog TV video system : PAL/SECAM
Brightness: 250cd/m ²	Analog TV sound system : D/K,B/G
Contrast:3000:1	M/B: MSTV59



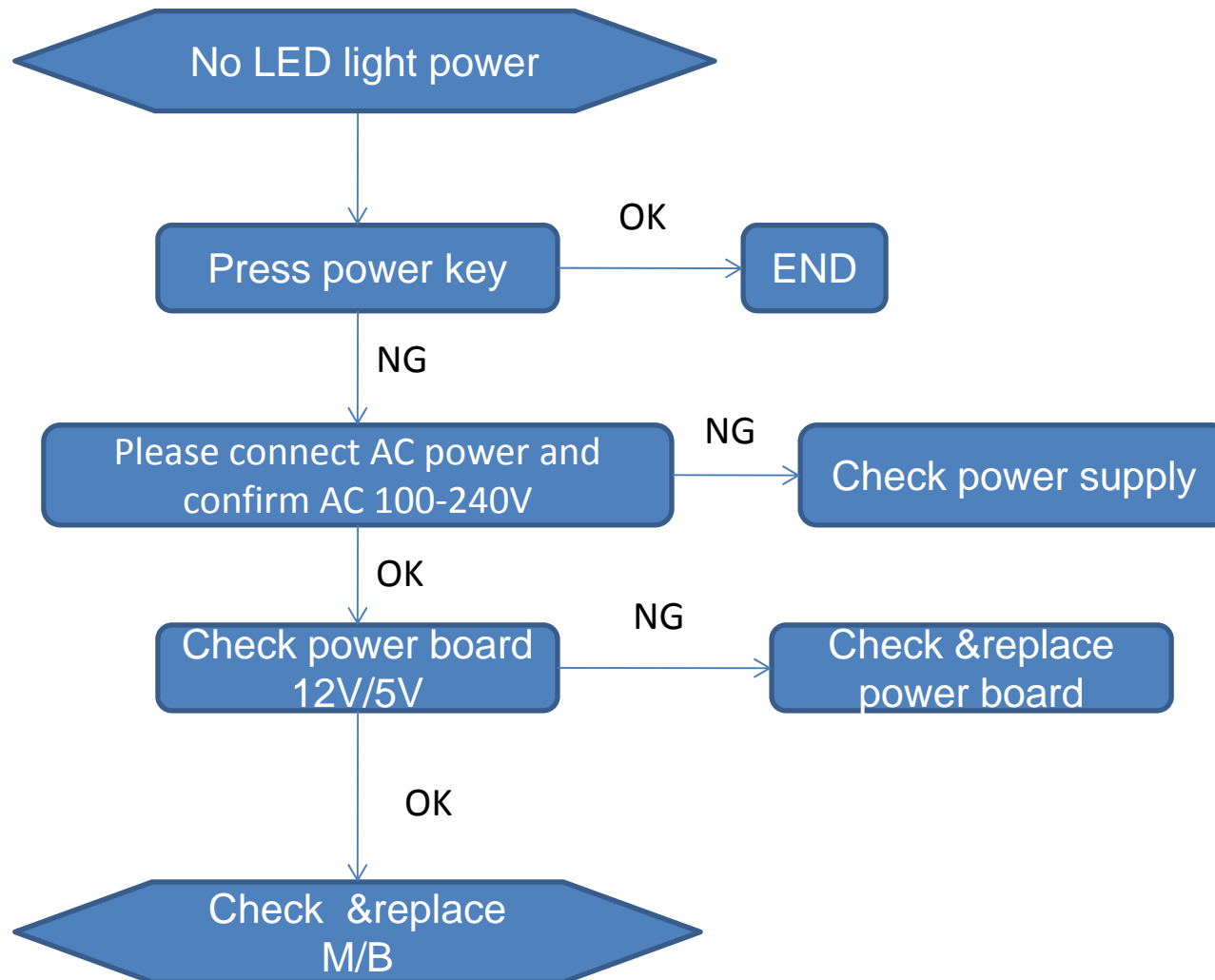
Symptoms & Solutions

Symptom	Check contents
No power no images & silent	Power AC is connected well? Is standby? TV is turned on?
No picture	Check the brightness is set too small? Whether input port have signal? Is there any problem on display
Picture & silent	Check it's the silent state? Check the headset is connected? Check the sound settings and sound system? AV output port settings are correct?
Image too bright or too dark	Check the brightness and color set normal ? Check the screen is normal?
Remote no effect	Check the validity of the remote control batteries? Check the remote control is normal?
Image is not clear ,shaking	Check the input signal is too weak? Antenna is connected properly?
Unsteadiness image	Input power is unstable? Is there have high pressure electromagnetic interference?

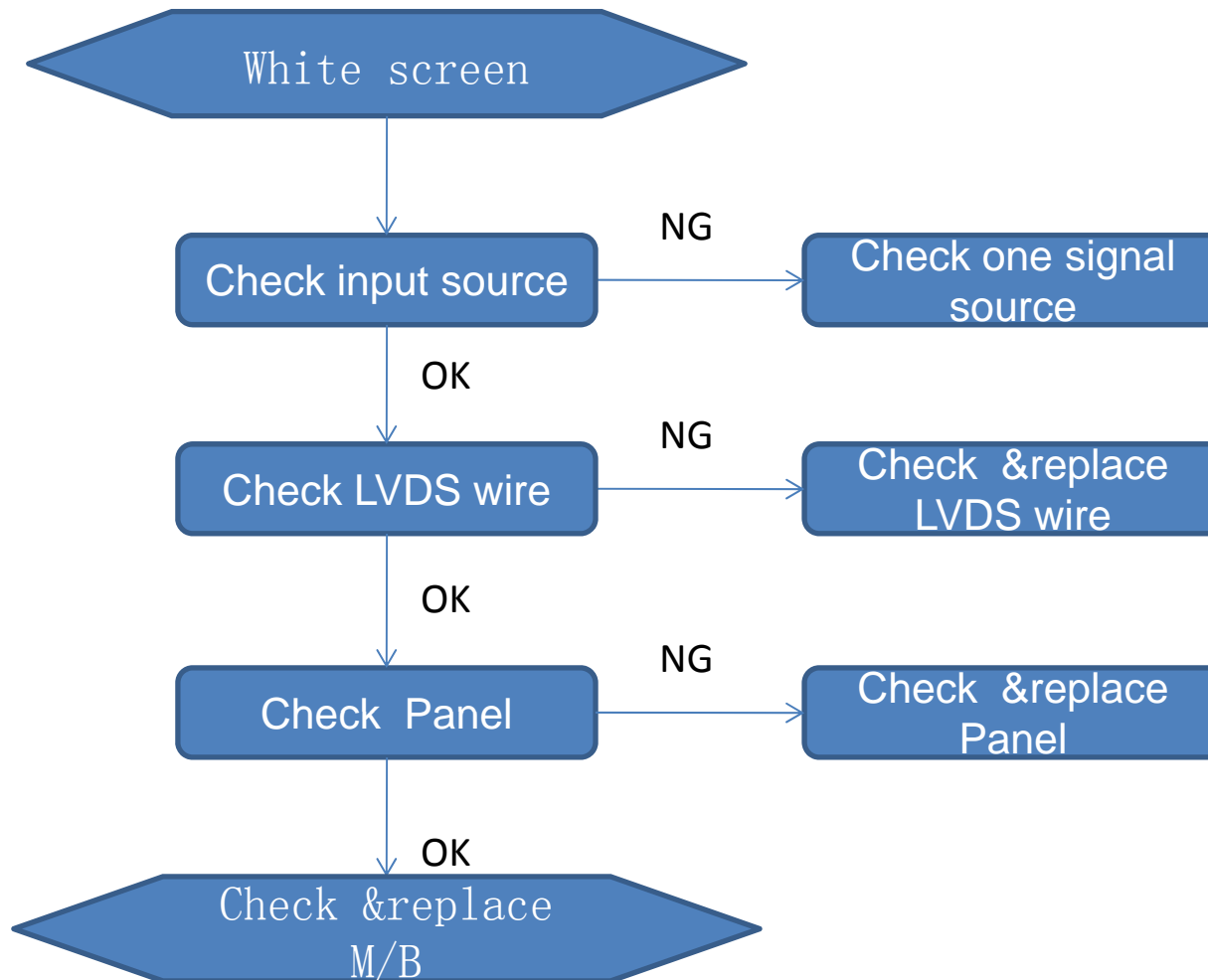


Repairing flow chart

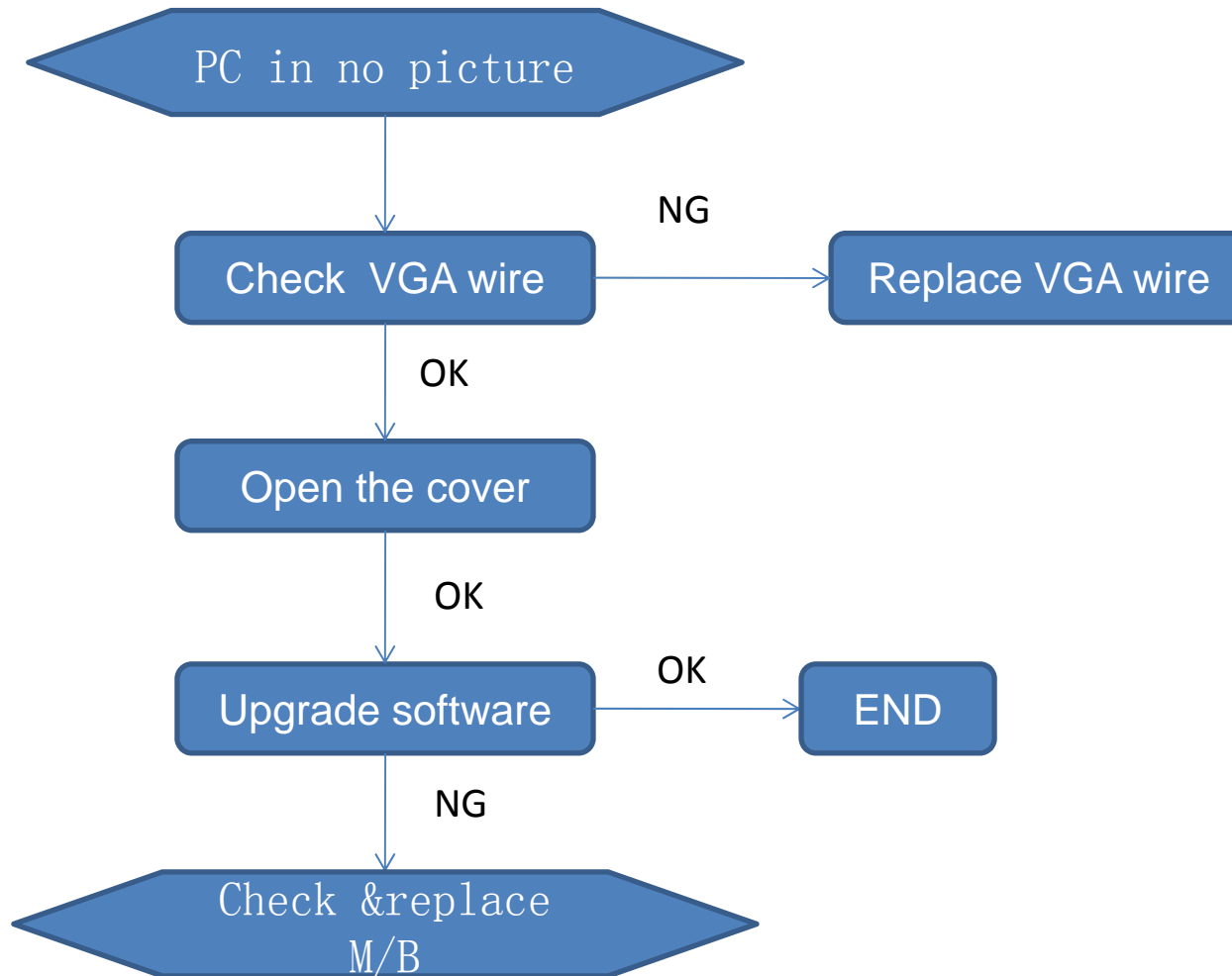
1, Flow chart for no LED light Power



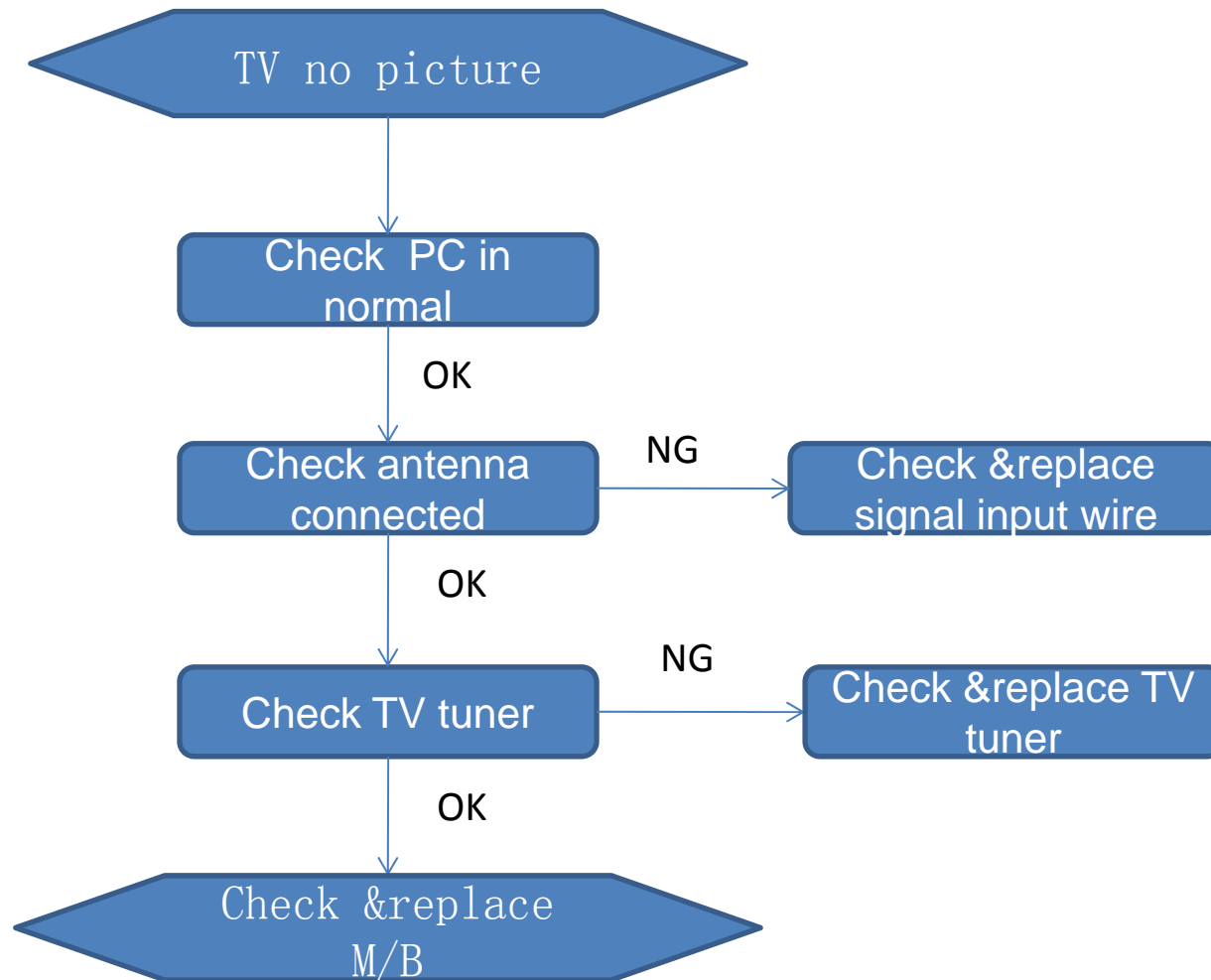
2, Flow chart for white screen



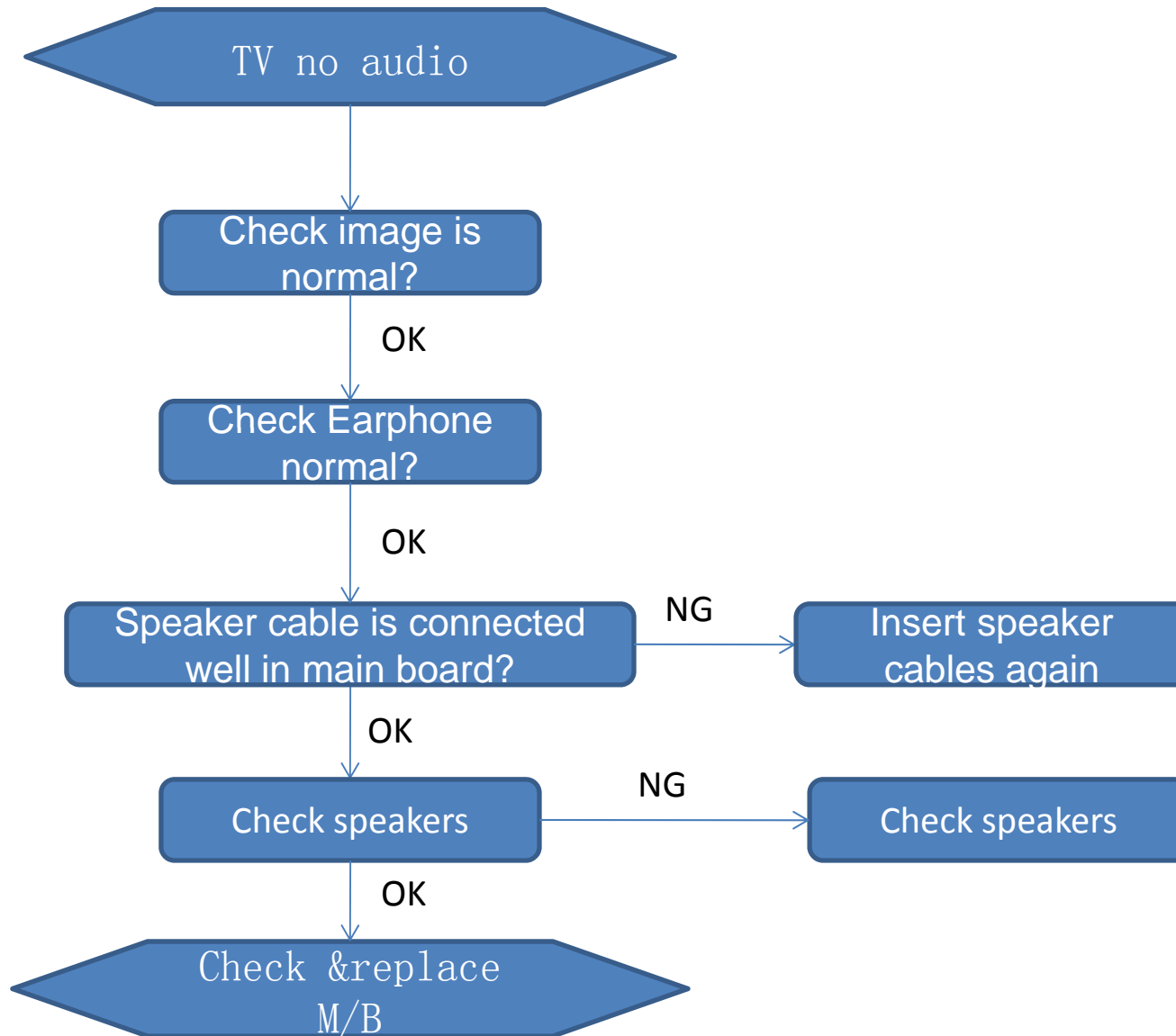
3, Flow chart for PC in no picture



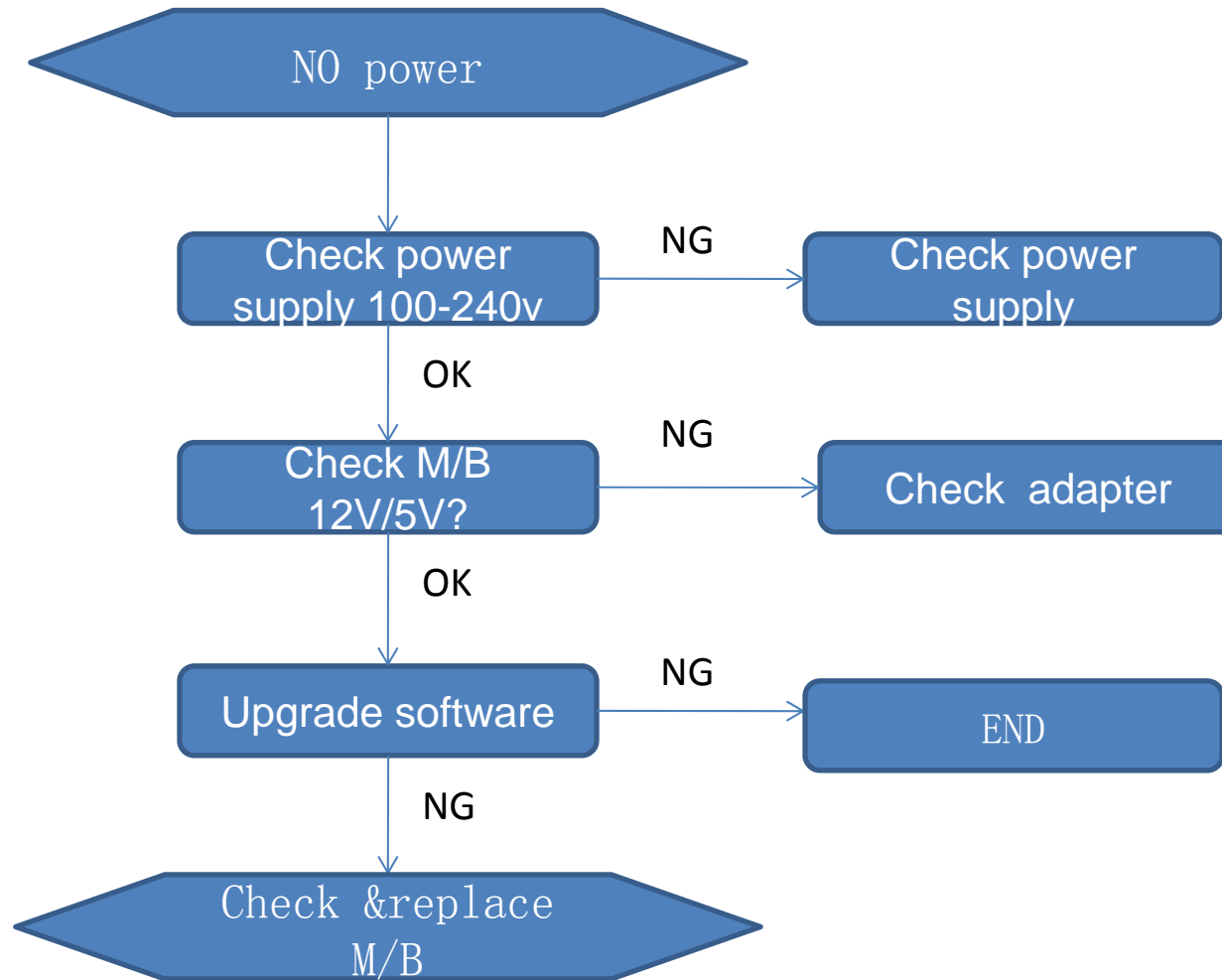
4, Flow chart for TV no picture



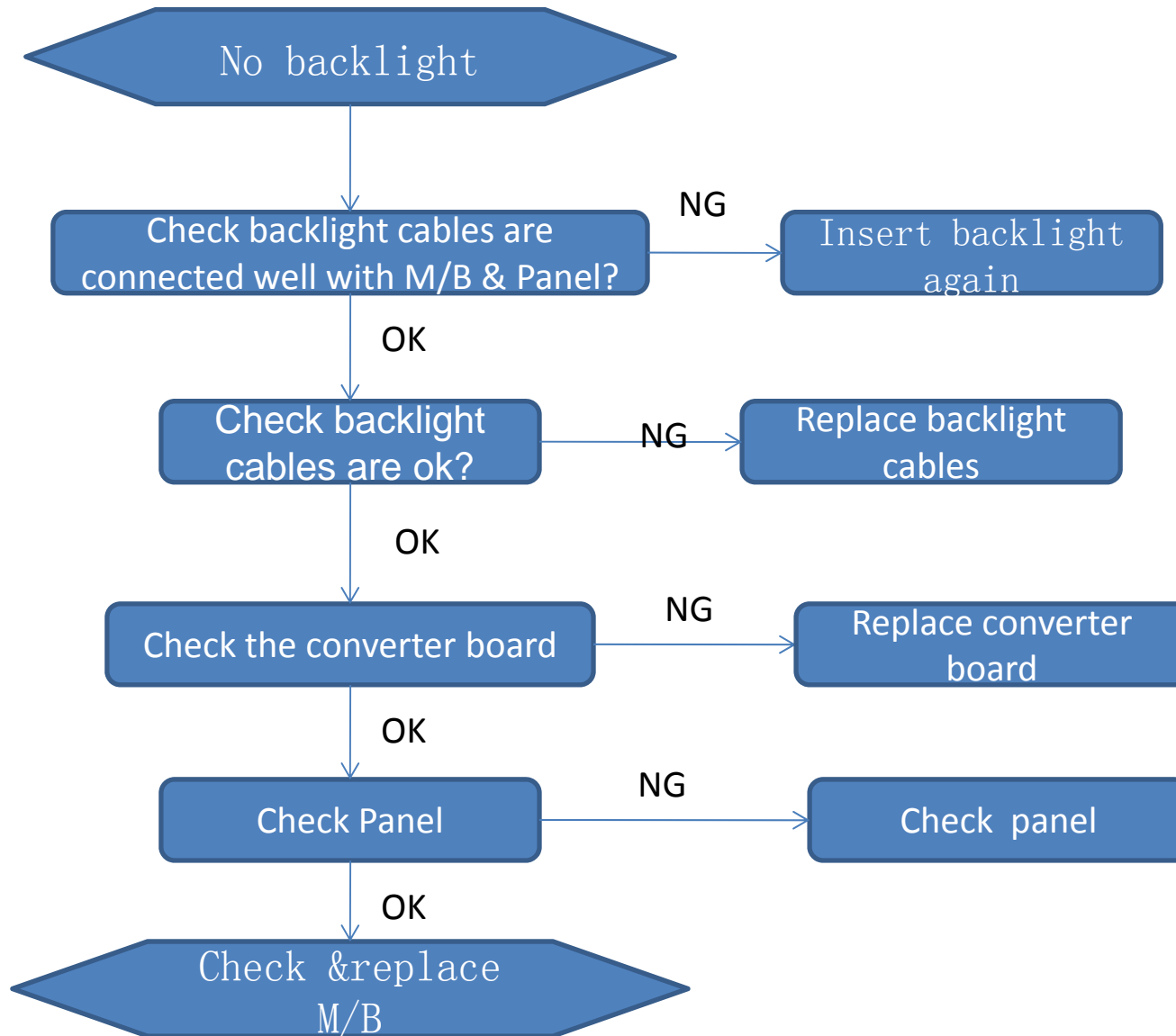
5, Flow chart for TV no audio



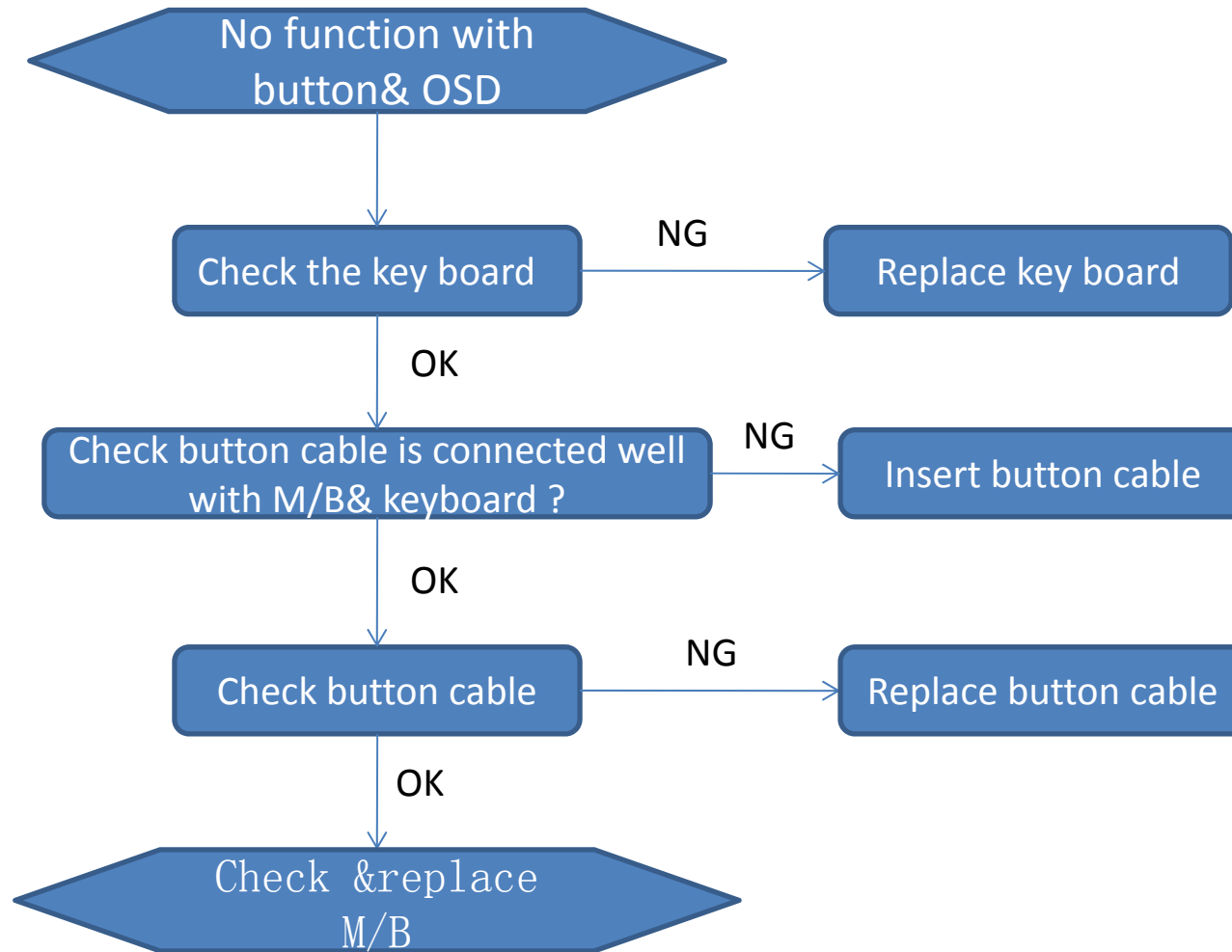
6, Flow chart for no power



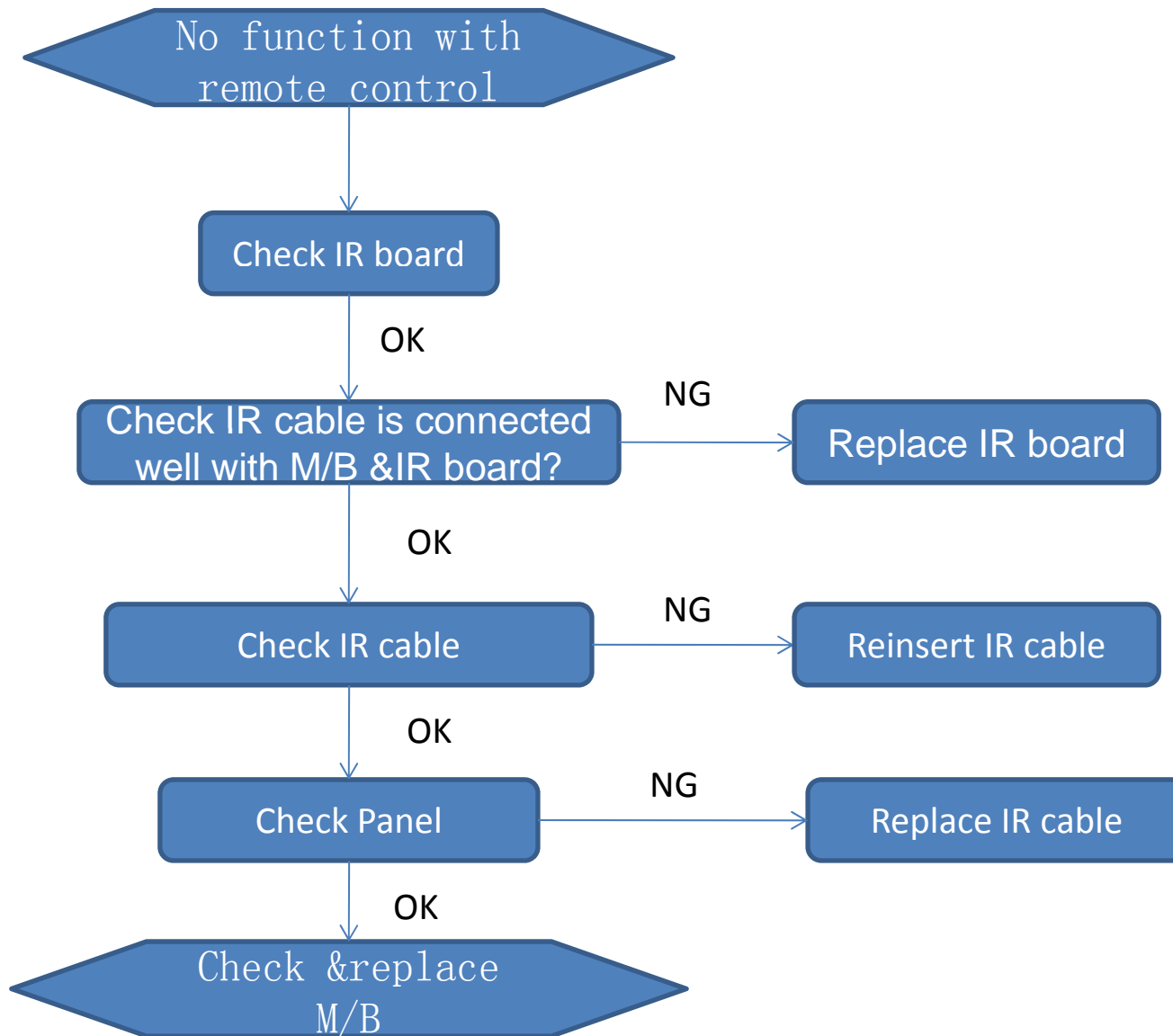
7, Flow chart for No panel backlight



8. Flow chart for problem with key board& OSD



9, Flow chart for remote control





茂鑫源电子(深圳)有限公司
MAKENA ELECTRONIC (SHENZHEN) CO.,LTD

LED-TV Service Manual

Model:RB-39D5F

Makena Electronic(Shenzhen) CO,LTD

<http://www.makenachina.com>



Contents

[illegible]



茂鑫源电子(深圳)有限公司
MAKENA ELECTRONIC (SHENZHEN) CO.,LTD

Safety precautions

Warning:

To prevent fire or shock, please don't place TV on a fog places. Don't Scratch and striking panel surface with hard things.

Note:

- 1, This product directly use AC power supply. Please refer to the rating label about power supply voltage.
- 2, Please pull out power supply and antenna signal In the weather of Lightning storm or abnormal AC power supply.
- 3, please don't put the television to the extreme heat, wet or much dust place, ensure good television. Good air convection.
- 4, TV screen belong to precision components, and the screen above have the individual window, the dark spots or red Green, blue, a little dead pixels, this is normal phenomenon, do not belong to bad product.
- 5, LCD screen normal working temperature is 0-40 °C, too high or low may affect TV Machine working normally.



茂鑫源电子(深圳)有限公司
MAKENA ELECTRONIC (SHENZHEN) CO.,LTD

Repairing tools

Soldering iron , multimeter , oscilloscope
,screwdriver , pliers ,Forceps , suction tin



茂鑫源电子(深圳)有限公司
MAKENA ELECTRONIC (SHENZHEN) CO.,LTD

Specification

Screen size: 39"(98CM)	Screen Ratio: 1920*1080
Power supply: AC ~100-242V, 50/60Hz	Digital TV video system : N/A
Output Power:75W	Digital TV sound system: AC-3
Standby: < 1W	Analog TV video system : PAL/SECAM
Brightness: 270cd/m ²	Analog TV sound system : D/K,B/G
Contrast:3000:1	M/B: MSTV59



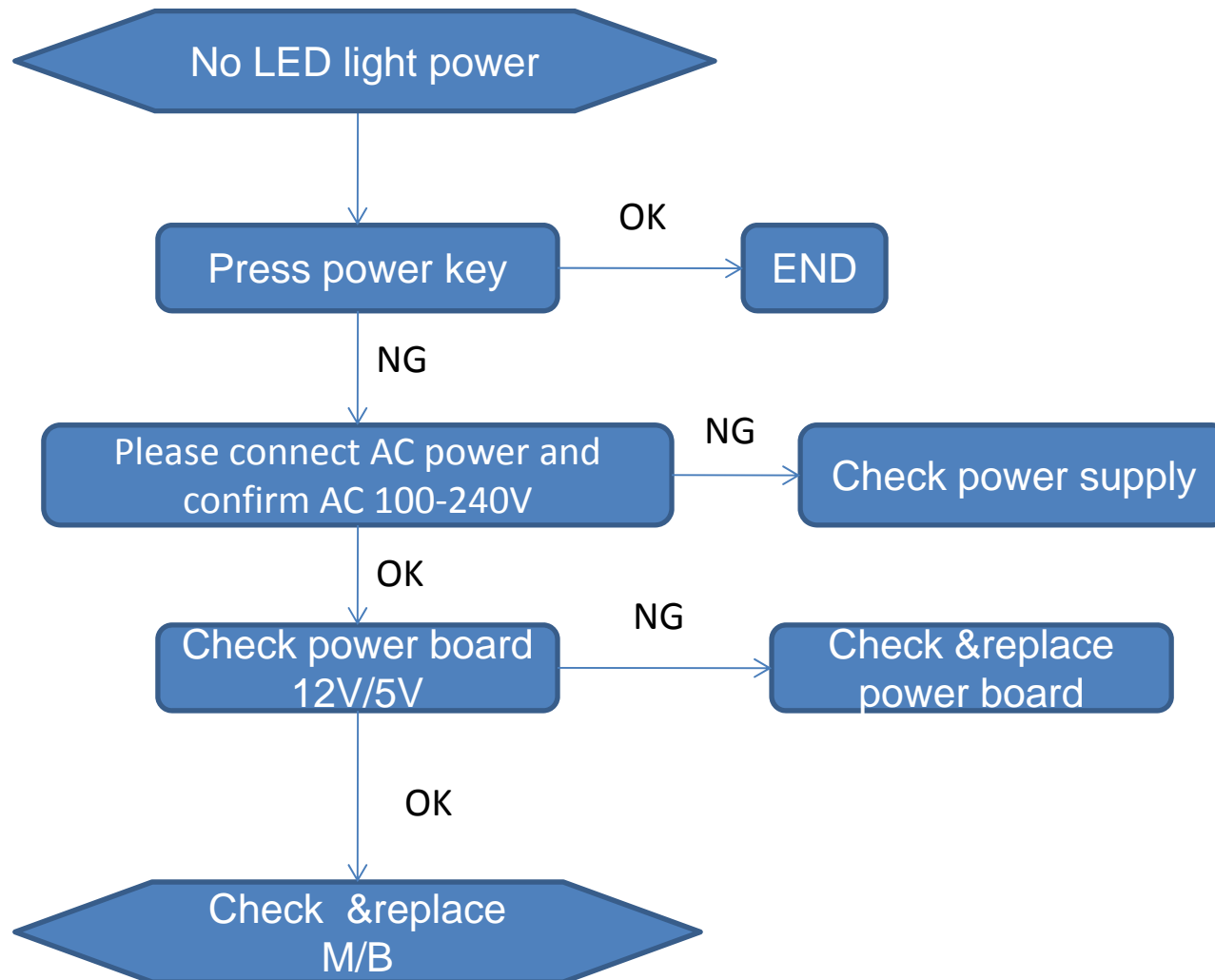
Symptoms & Solutions

Symptom	Check contents
No power no images & silent	Power AC is connected well? Is standby? TV is turned on?
No picture	Check the brightness is set too small? Whether input port have signal? Is there any problem on display
Picture & silent	Check it's the silent state? Check the headset is connected? Check the sound settings and sound system? AV output port settings are correct?
Image too bright or too dark	Check the brightness and color set normal ? Check the screen is normal?
Remote no effect	Check the validity of the remote control batteries? Check the remote control is normal?
Image is not clear ,shaking	Check the input signal is too weak? Antenna is connected properly?
Unsteadiness image	Input power is unstable? Is there have high pressure electromagnetic interference?

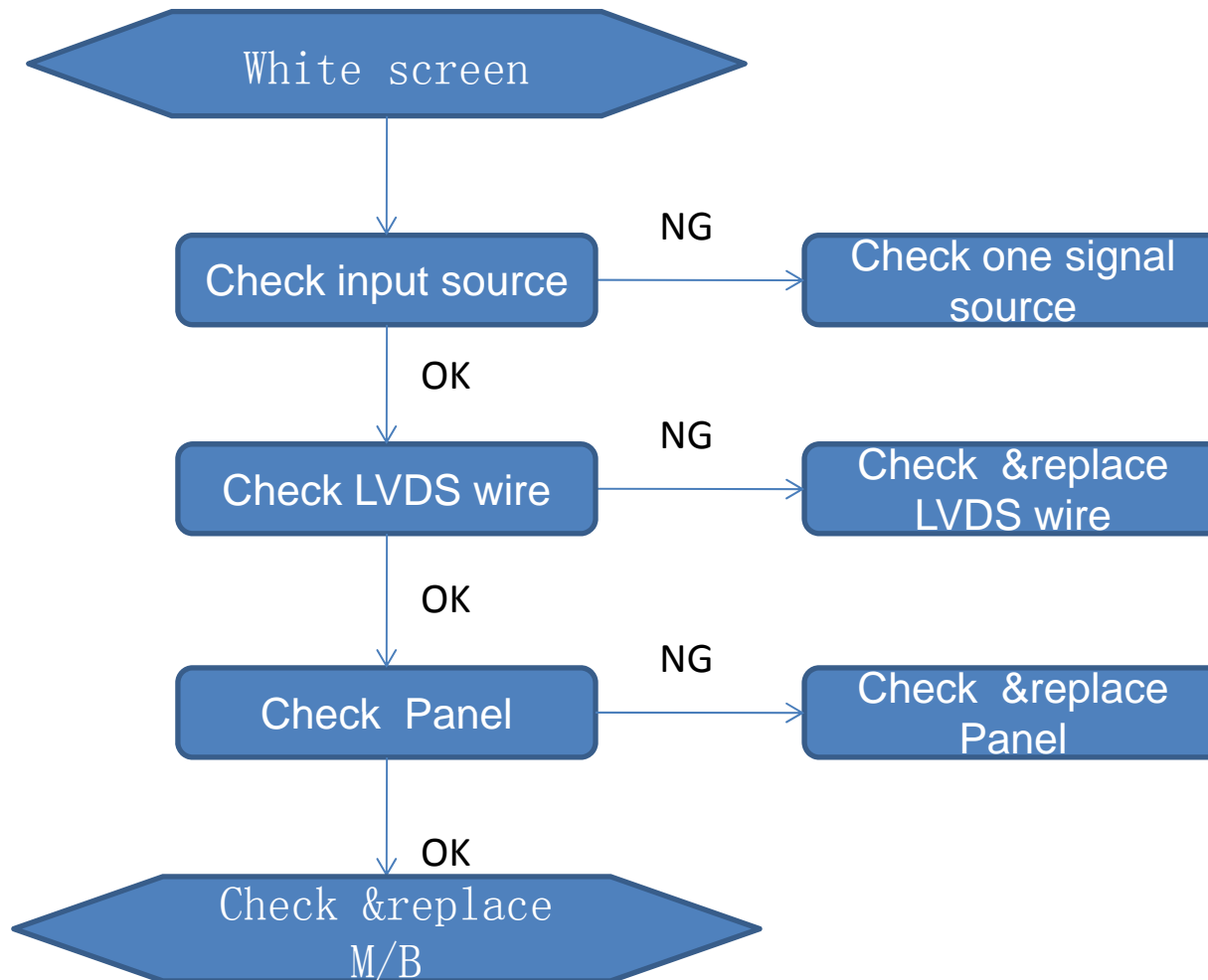


Repairing flow chart

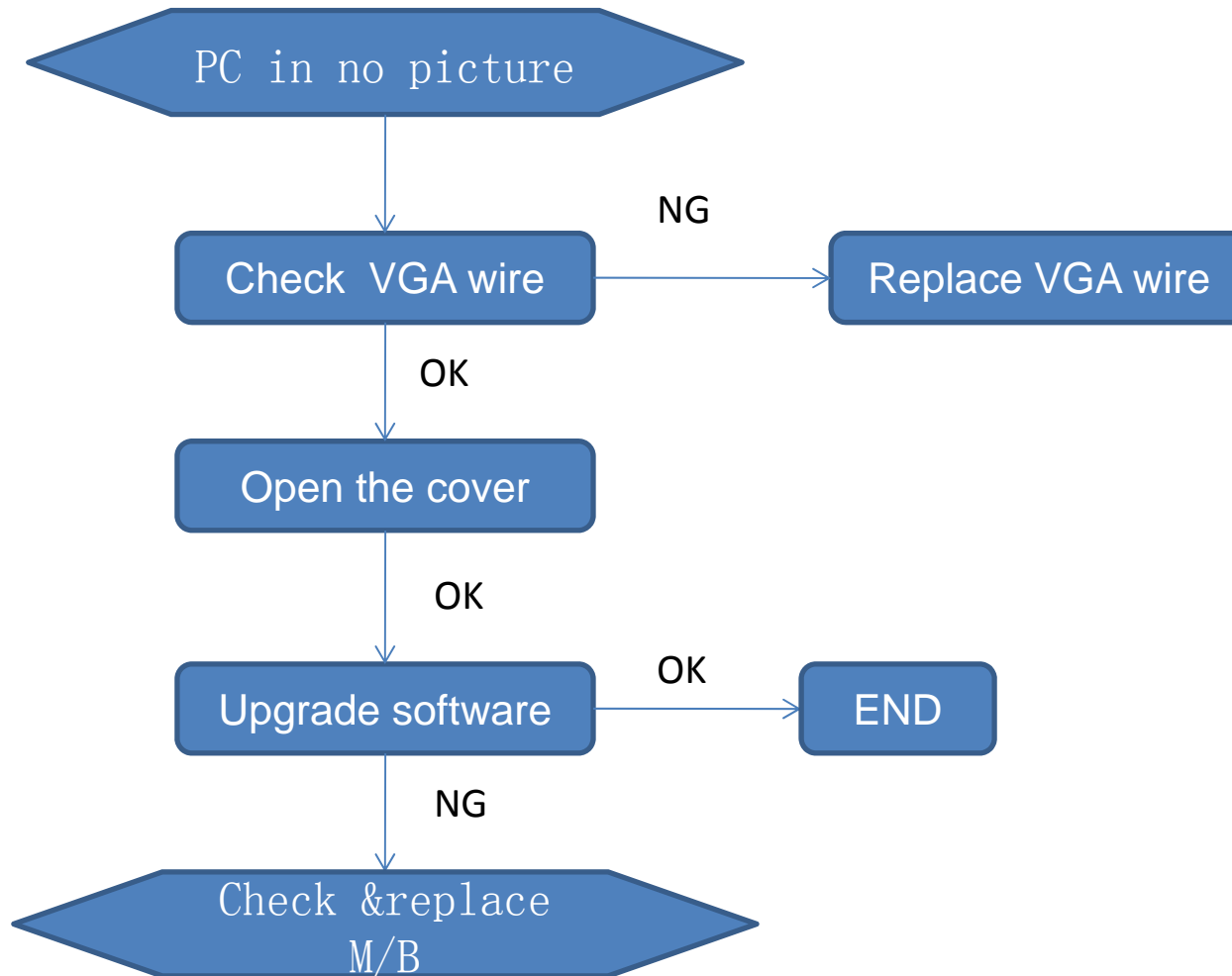
1, Flow chart for no LED light Power



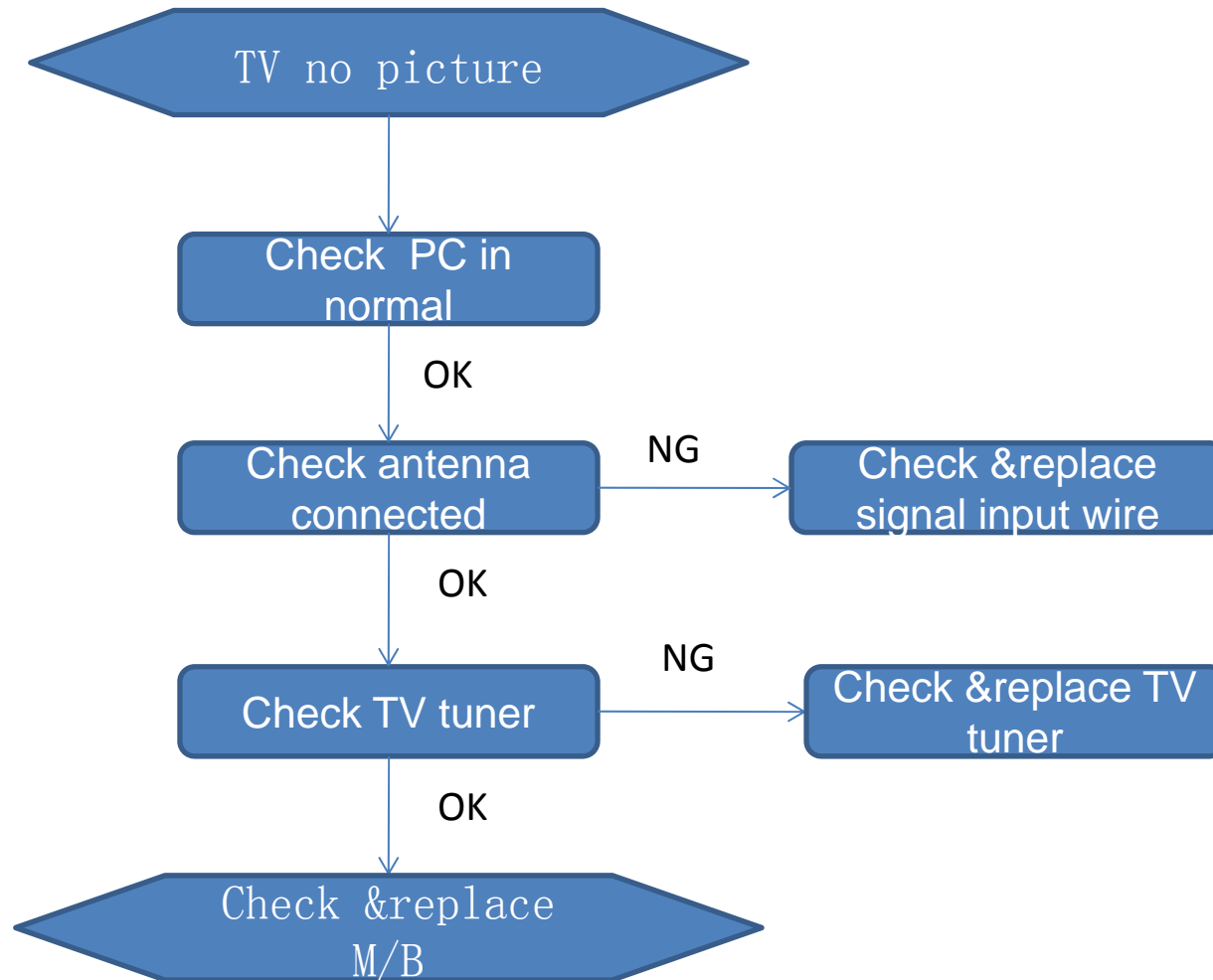
2, Flow chart for white screen



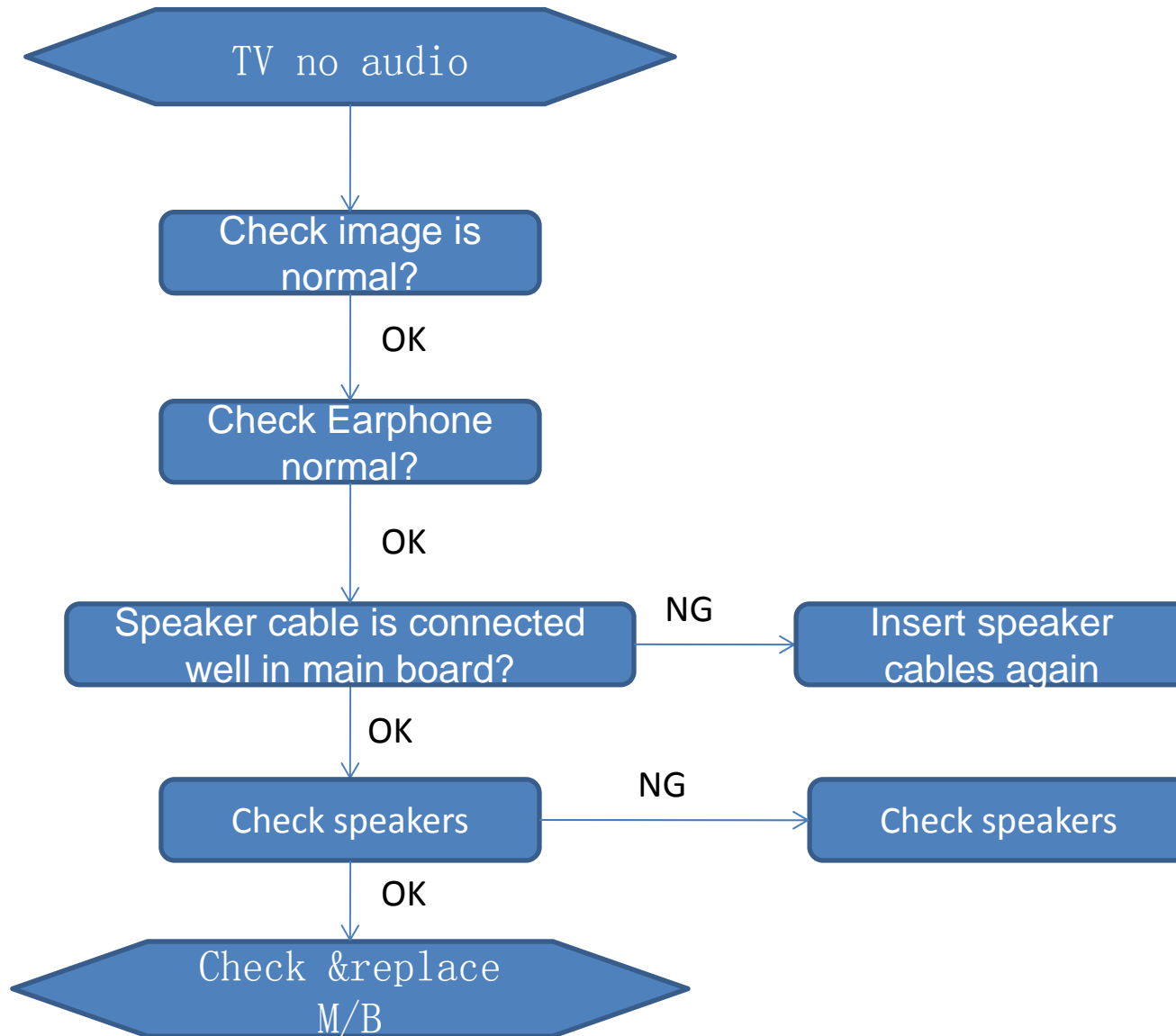
3, Flow chart for PC in no picture



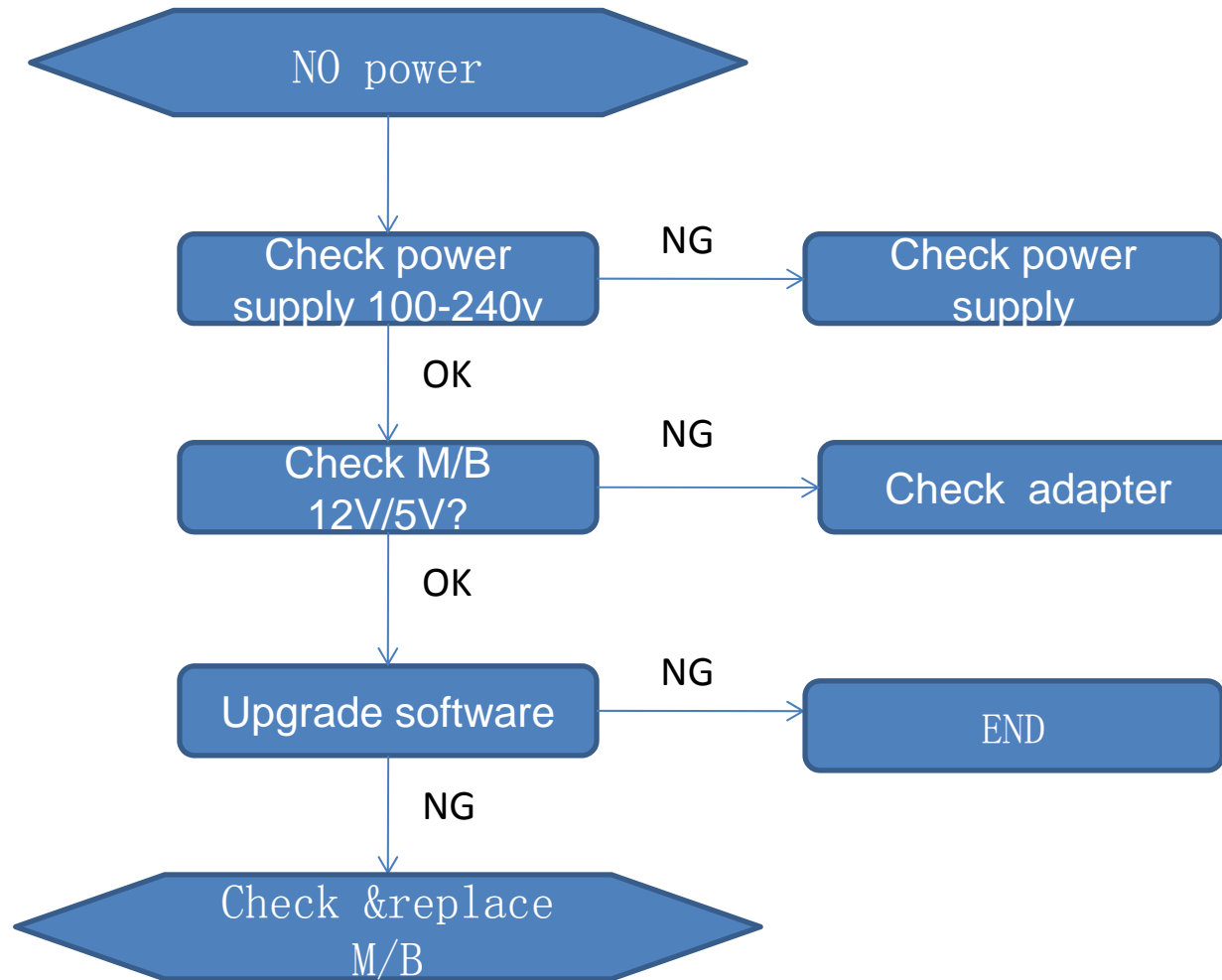
4, Flow chart for TV no picture



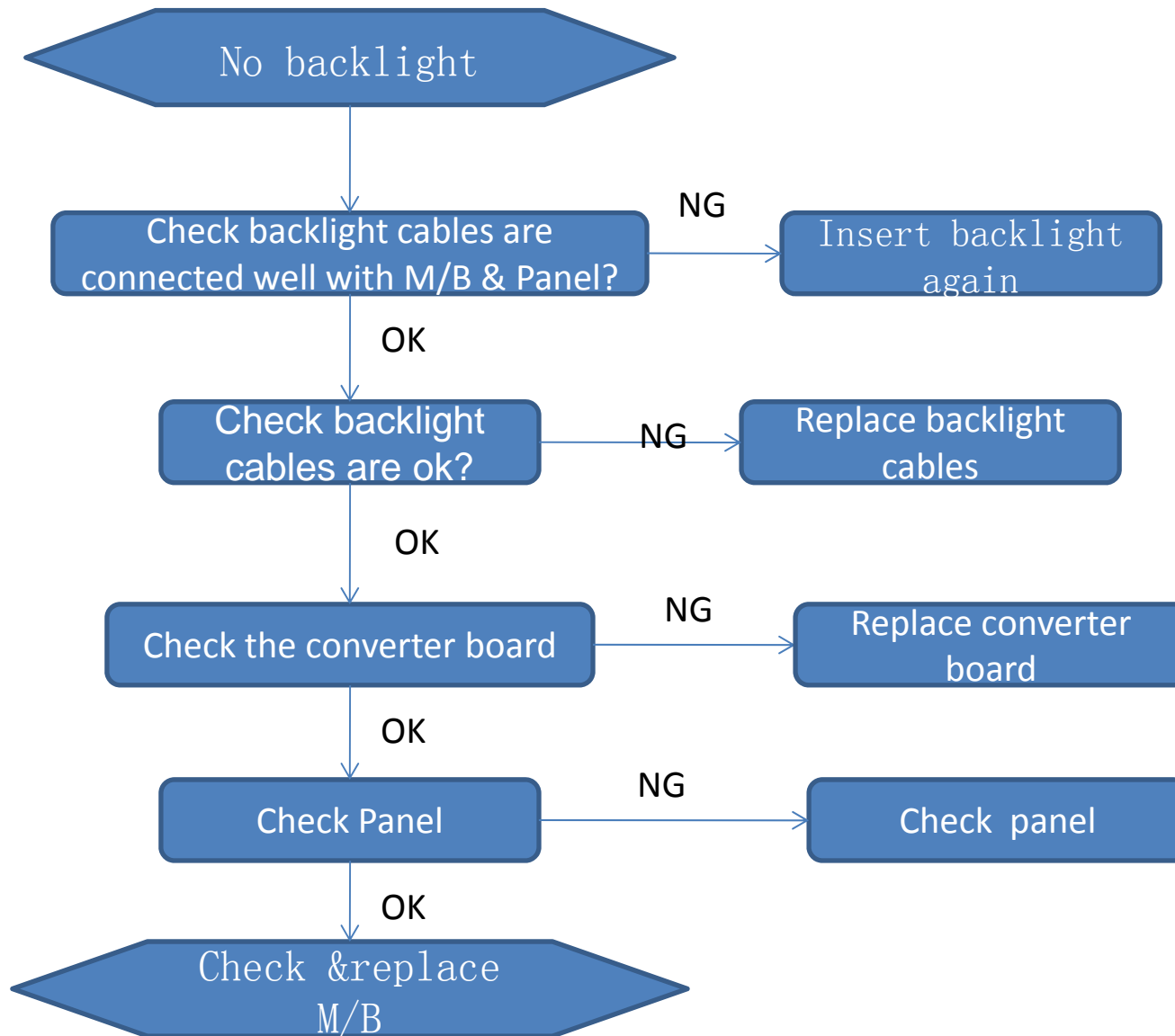
5, Flow chart for TV no audio



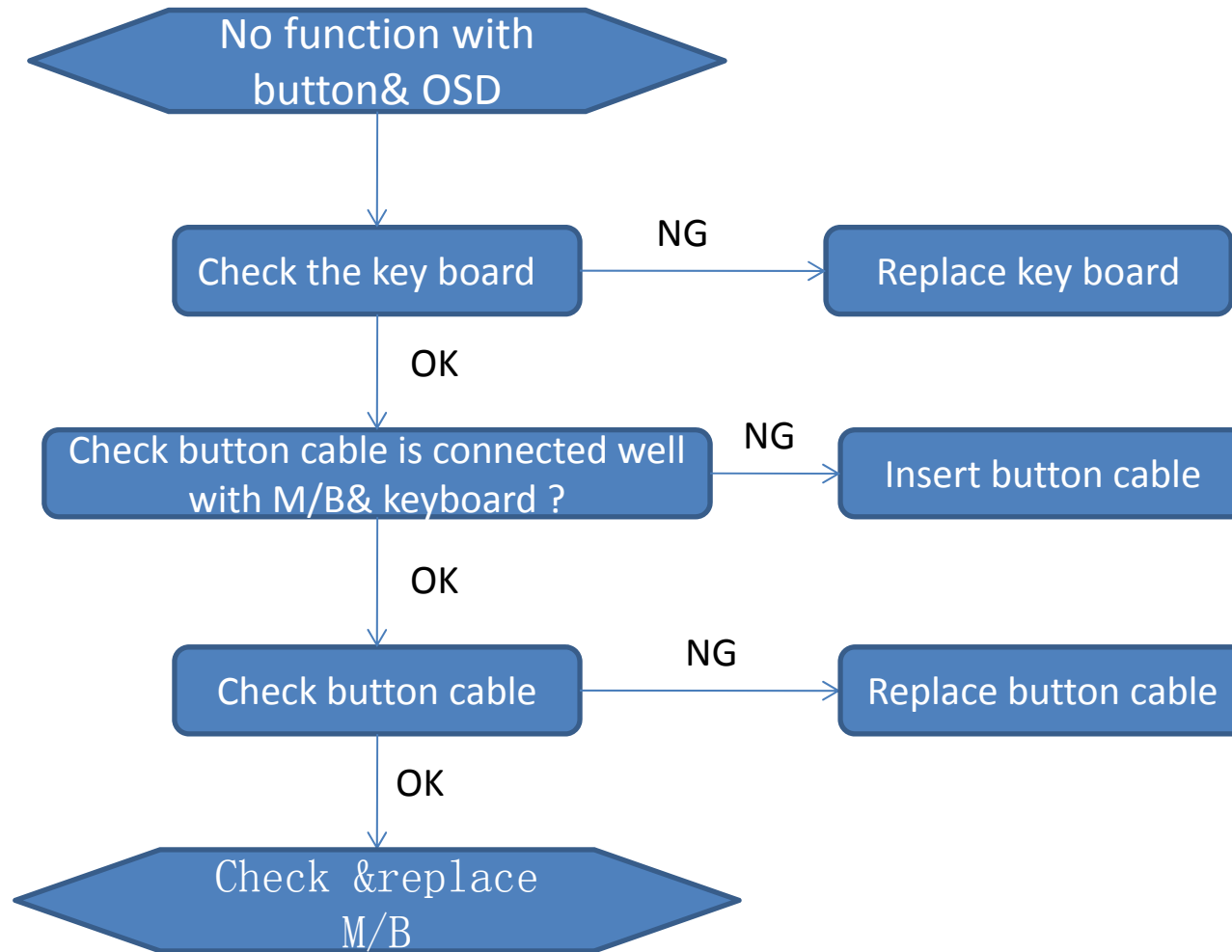
6, Flow chart for no power



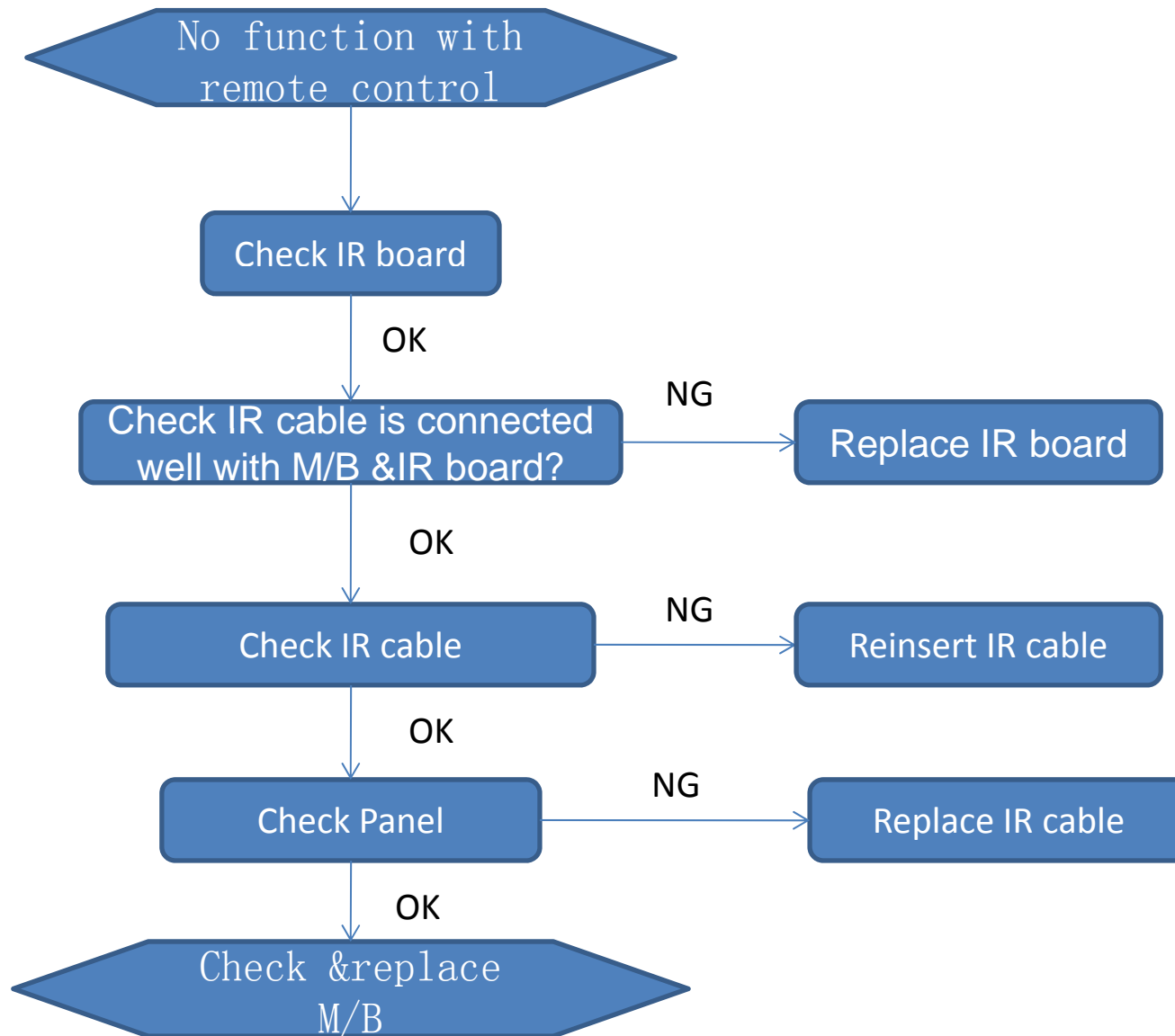
7, Flow chart for No panel backlight



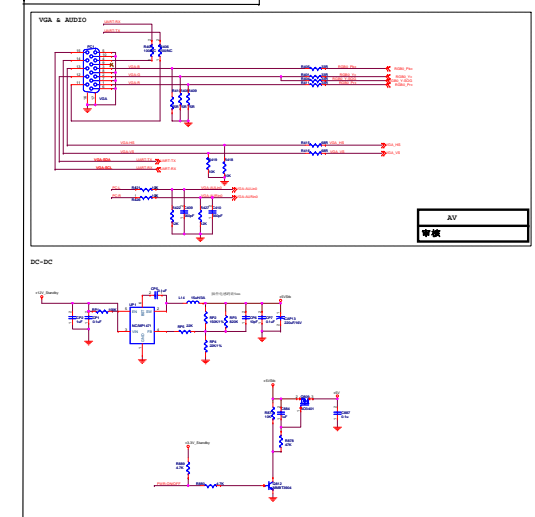
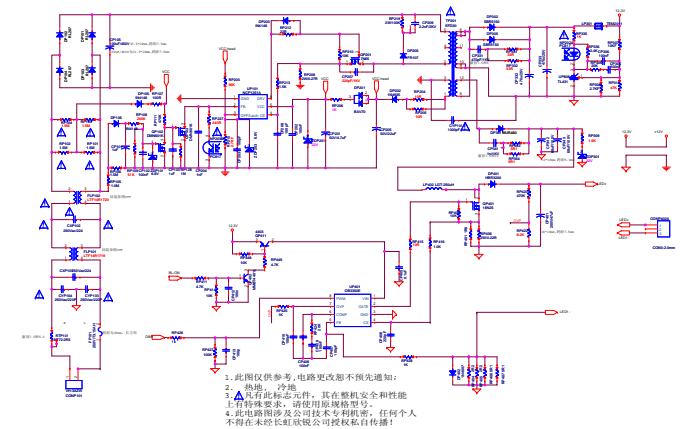
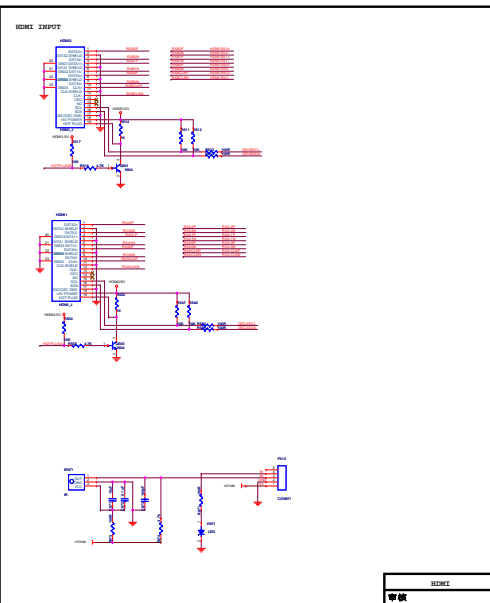
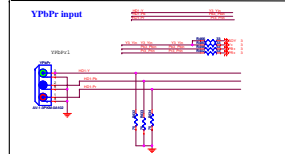
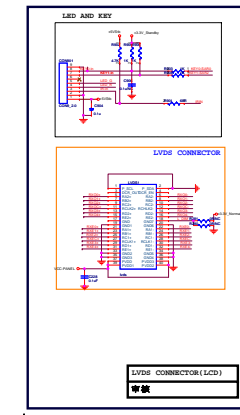
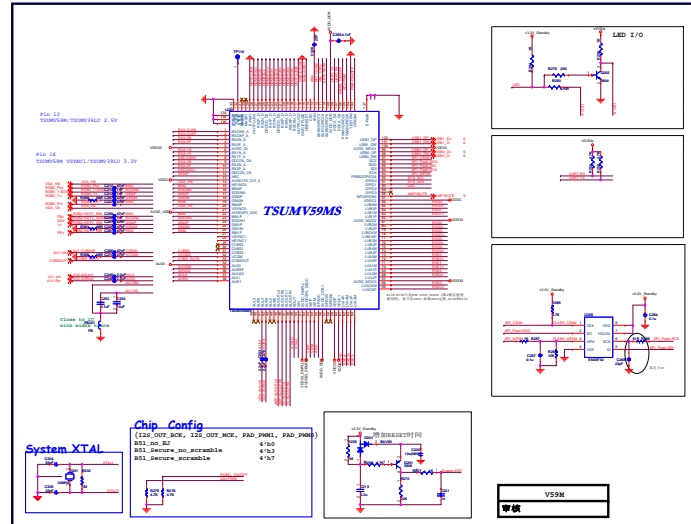
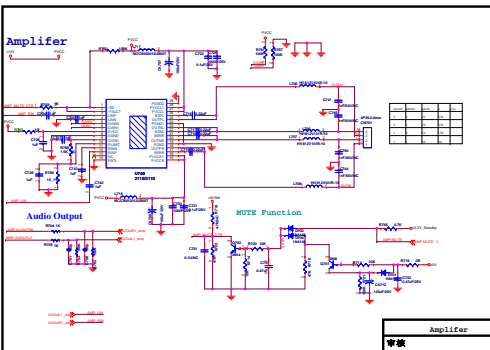
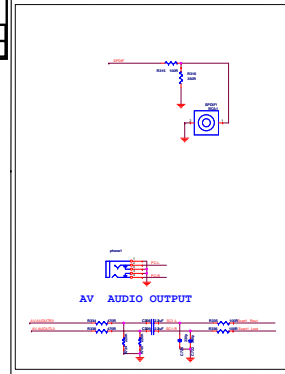
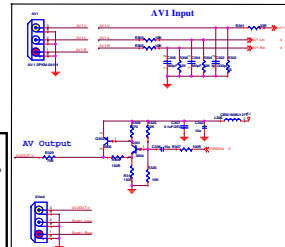
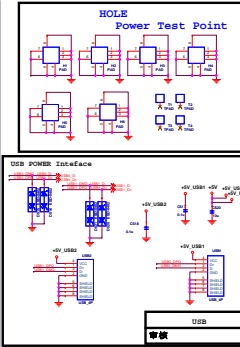
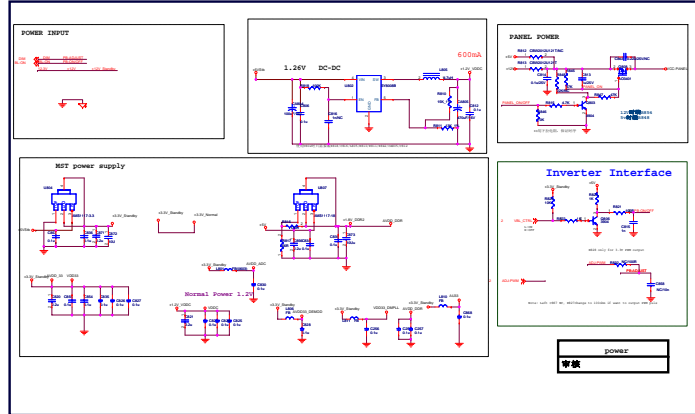
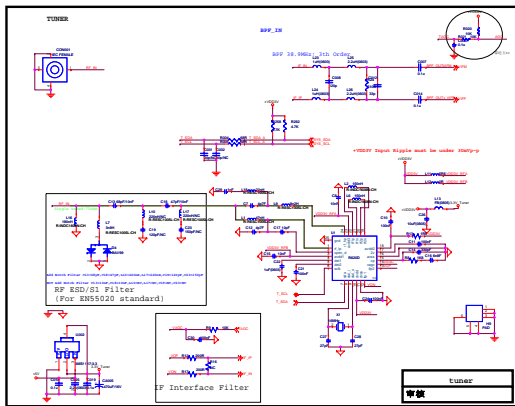
8. Flow chart for problem with key board& OSD




9, Flow chart for remote control



LS0D_322500_MSTV59 Circuit_V1.0(JUG7.820.1408)



1. 此图仅供参考, 电路更改恕不预先通知;
2. 热地, 冷地
3.  凡有此标志元件, 其在整机安全和性能上有特殊要求, 请使用原规格型号。
4. 此电路图涉及公司技术专利机密, 任何个人不得在未经长虹欣锐公司授权私自传播!

批准:

主管:

审核:

拟制：

[illegible]