

LED COLOUR TV

MAINTENANCE MANUAL

MODEL: LS09C CHASSIS

Please read this manual carefully before maintenance.

CATALOG

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Chapter1:Safety and notes

1-1 Installation notes

- (1) Please don't beat or rub, scratch the surface of the LCD screen heavily, don't touch it with hand casually.
- (2) When the screen is dirty, please clean it with absorbent cotton or cotton cloths lightly.
- (3) Please clean it timely when water or other viscosity pollution fall, which may make the LCD face or color change.
- (4) Please don't make the LCD screen shocked by a strong external force.

1-2 Attention points of operation and using

- (1) Please unplug the power cable before moving LCD screen.
- (2) Please don't change the mainboard's original setting, otherwise brightness, white balance etc. may not meet the specification.
- (3) Radiation of long time use at room temperature is larger than at low temperature.
- (4) Please note that the long displaying image may remain at the top when shutdown the machine .
- (5) Please avoid the impact from mobile phone to protect your TV.

1-3 Storage notes

- (1)When store for a long time, please keep the temperature between 0℃to 40℃,don't expose the TV to the sun, the humidity should be less than 85%RH.
- (2)Please don't put your TV under high humidity and high temperature circumstance ,e.g temperature: 60℃,humidity:85%RH.
- (3)Please don't put your TV under low temperature circumstance ,e.g temperature lower than 25℃.

1-4 Dismantling notes

- (1)As LCD screen is easy to be damaged, when dismantle, please attention to protect.
- (2)Please attention the position of each screw when dismantle, in case to beat the wrong position when install which may lead to crack or slide of the face frame.
- (3) If you need to dismantle the power board or the mainboard, please attention the position and direction of each line, especially the direction of the screen line, in case of causing accident when install. Before dismantle ,we can take some photos of the line route for the comparison of installing.
- (4)After check and maintenance, please assure that there is no foreign body in the machine when install.

1-5 High-voltage warning

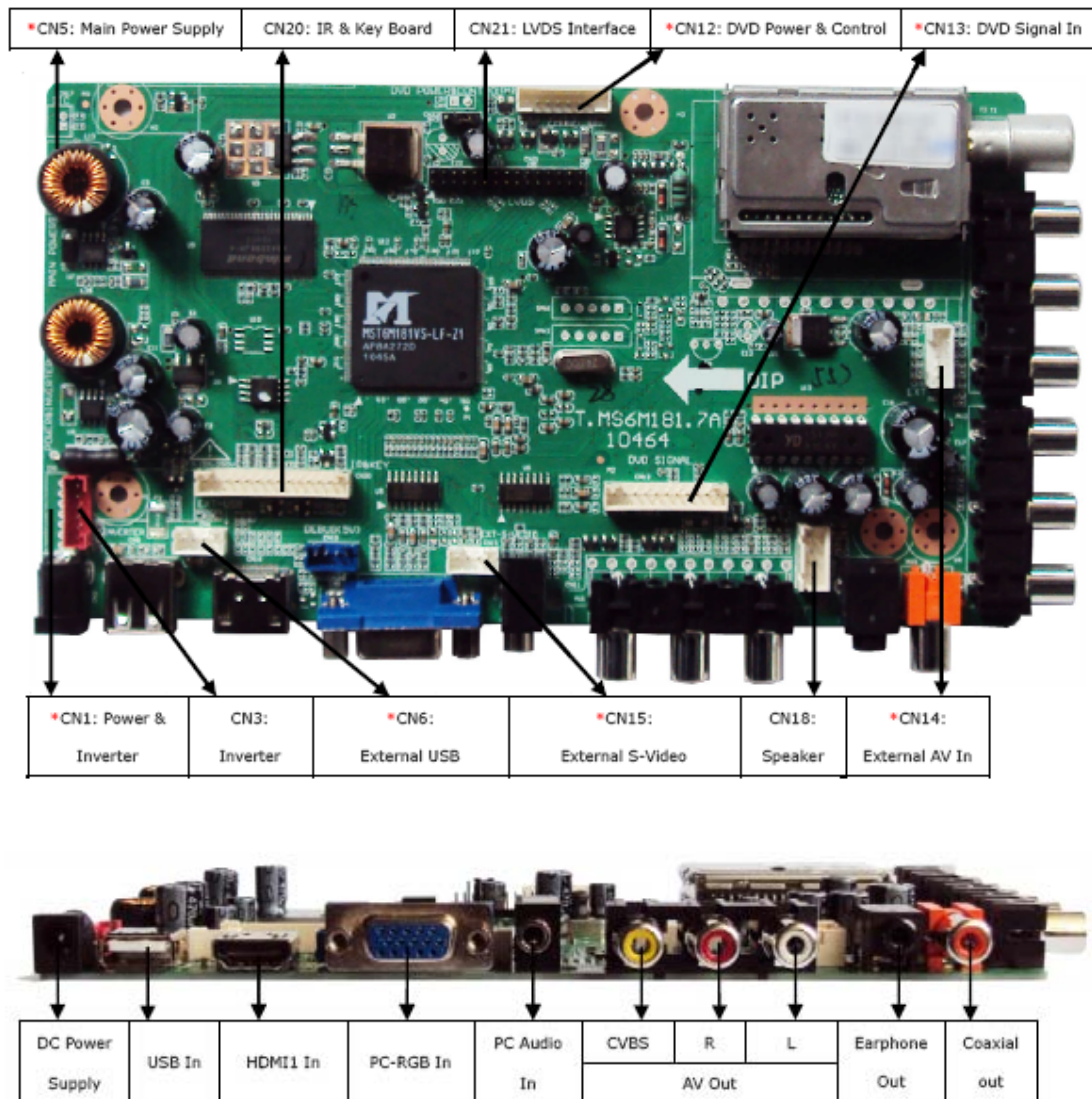
The high-voltage of the LCD screen is generated by the power supply step-up board, without attention to exposure to high voltage, one may meet a serious electric shock.

Chapter2: TV specifications and ports function

2-1 Basic specifications (The parameters are for reference only, the specifications should accord to practicality of the batch orders)

PANEL	Panel Type		LED/LCD	
	Interface		Single/Dual LVDS Interface	
	Max Resolution		1920×1080	
VIDEO INPUT	TV	Receiving Range		48.25MHz-863.25MHz
		Input impedance		75Ω
		Video System		PAL/SECAM
		Sound System	B/G,D/K,I	
			NICAM/A2	
		Max storage Channels		200CH
		TELETEXT		1000Pages
	PC-RGB	Format	Up to SXGA@75Hz	
	CVBS	Video System		PAL/NTSC/SECAM
		Video level		1.0 V _{p-p} ±5%
	Ext. S-Video		S-Y:0.714 V _{p-p} ±5%, S-C:0.286 V _{p-p} ±5%	
	Component		480i, 480p, 576i, 576p, 720p, 1080i, 1080p	
	HDMI		480i, 480p, 576i, 576p, 720p, 1080i, 1080p	
AUDIO INPUT	PC Audio		Earphone Input	0.2 ~ 2.0 V _{RMS}
	CVBS1 Audio		L/R RCA Input	0.2 ~ 2.0 V _{RMS}
	CVBS1 & Component Audio		L/R RCA Input	0.2 ~ 2.0 V _{RMS}
AUDIO OUTPUT	Frequency Response		120Hz~14KHz @±3dB (1KHz, 0dB reference signal)	
	Max Output power		2×3W(4Ω) THD+N<10%@1KHz (Power Supply: 12V, Audio Input: 0.5V _{RMS})	
POWER	Requirement		12V DC,12V(Built In),12V/5V(Built In), 12V/5V/5VSB(Built In)	
	To Panel		3.3V, 5V, 12V	
	Management		Standby Power Consumption < 0.5W(Board Only)	
KEY FUNCTION		MENU, CH+, CH-, VOL+, VOL-, INPUT, POWER		
TERMINALS	INPUT	TV		1IEC-Connector 75Ω
		USB		1 USB Slot(horizontal)
		HDMI		1 HDMI terminal(horizontal)
		PC-RGB		1 D-SUB terminal(blue,15 pin)
		PC Audio		1 Earphone terminal(black)
		CVBS1		1 RCA terminal(yellow)
		Component		3 RCA terminals(green, blue, red)
		CVBS2		1 RCA terminal(yellow)
		CVBS2 & Component Audio		2 RCA terminals(red, white)
	OUTPUT	Coaxial(optional)		1 RCA terminal(orange)
		Earphone Out		1 Earphone terminal(black)

2-2 Introduction of ports(practicality photos)



ATTENTION:

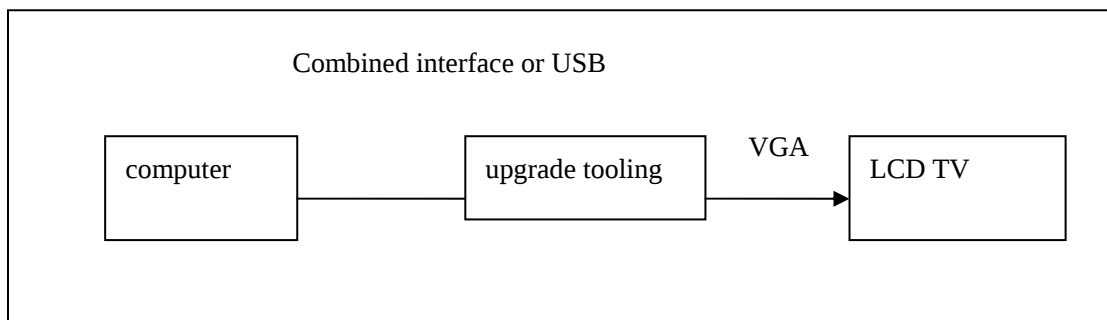
1. HDMI and YPbPr support to 1080P;
2. The recommendation resolving ratio of VGA is 1024X768;
3. Av output supports TV input /AV output, Av input /AV output;
4. The picture is for a reference only, the actual item is the standard.

Chapter3: Software upgrade tooling , software upgrade instructions , software initialization , parameter setting , software version and screen matching instructions

3-1 Software upgrade tooling

there are two kinds of using upgrade tooling:

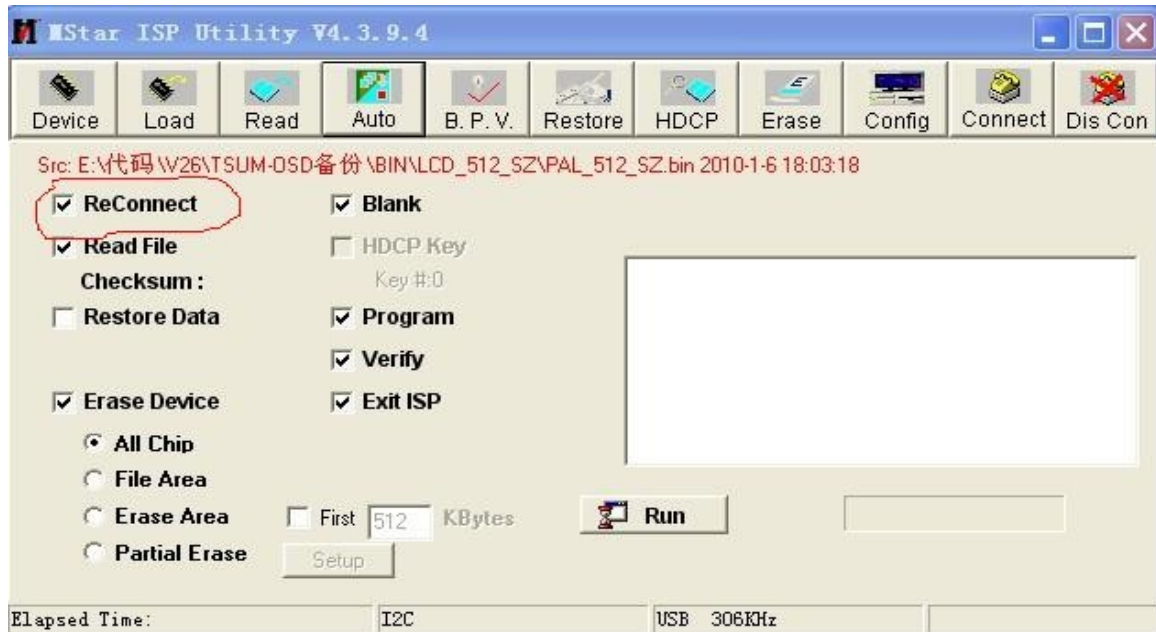
1. Use the combined interface(the parallel port) upgrade tooling :use the upgrade program: ISP_Tool V4.0.5.exe (and higher versions)
2. Use USB interface upgrade tooling , use the upgrade program : versions higher than ISP Tool V4.3
3. Use the USB upgrade



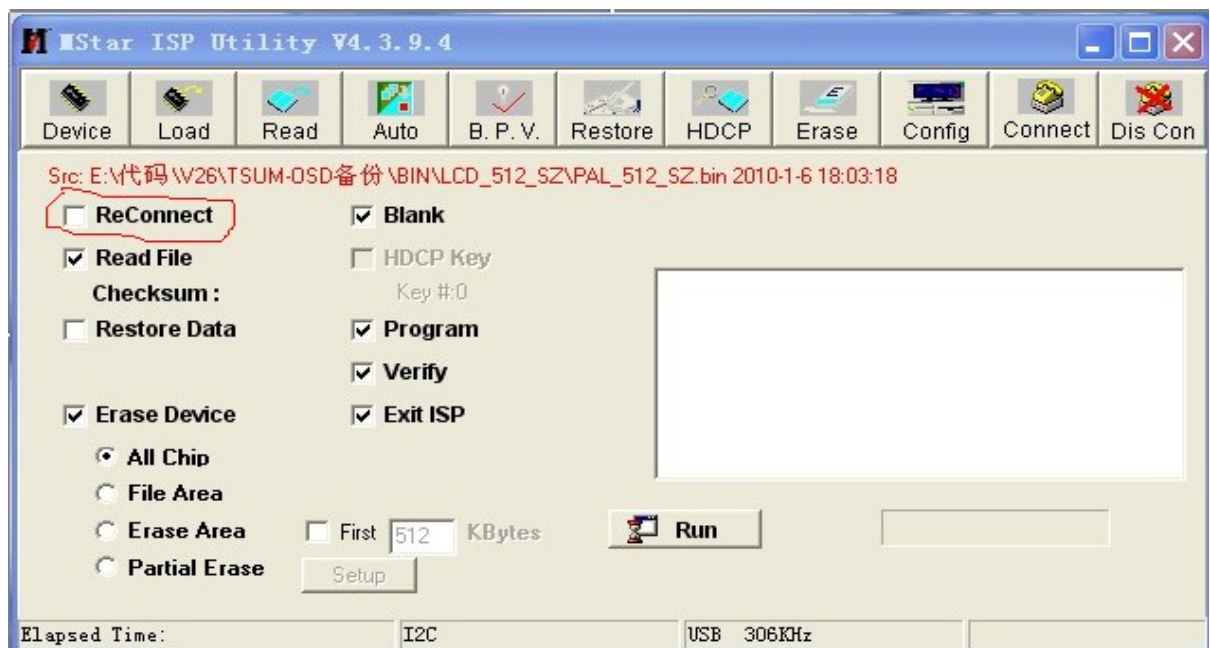
3-2 Software upgrade instructions

3-2-1 Tooling upgrade

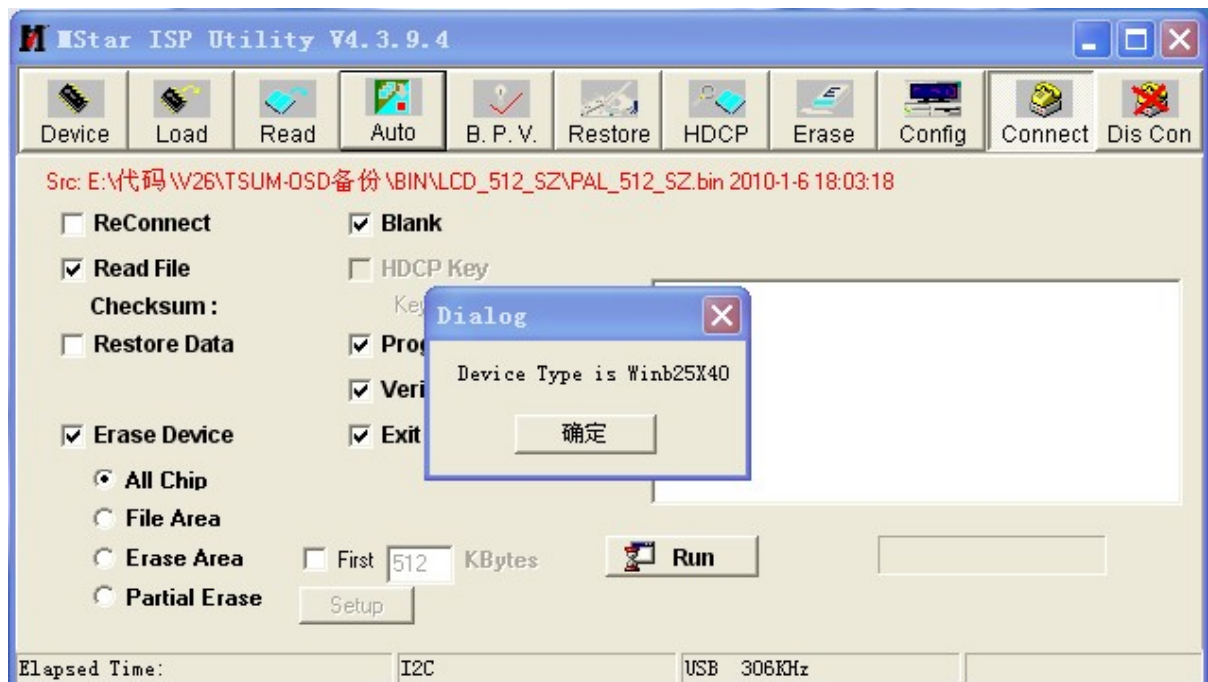
1. Driver Installation: Upgrade tooling connected to the computer via USB, the first connection will be prompted to find the hardware, follow the prompts to install the driver, Driver file from the attachment "usb-updateTOOL-DRIVER" folder inner tube MSTAR name of the subfolder word where you can, you are prompted three times, three times to be installed.
2. After installing the driver tooling, tooling and TV connected (switched on), open the upgrade tool "ISP_Tool V4.3.9.4.exe" (Note: The following chart version of the tool used for the interception chart, the upgrade is still using V4 .3.9.4 version), run the upgrade program



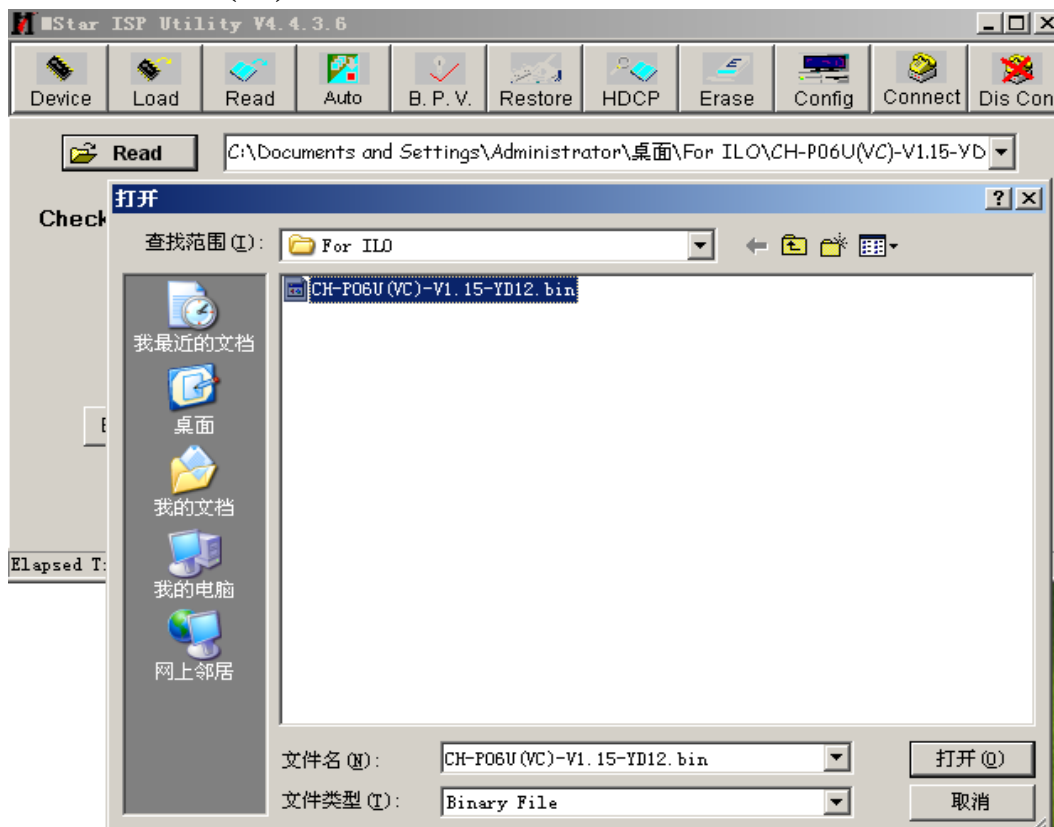
Cancel the selection in the red line frame of last chart , as following shows:



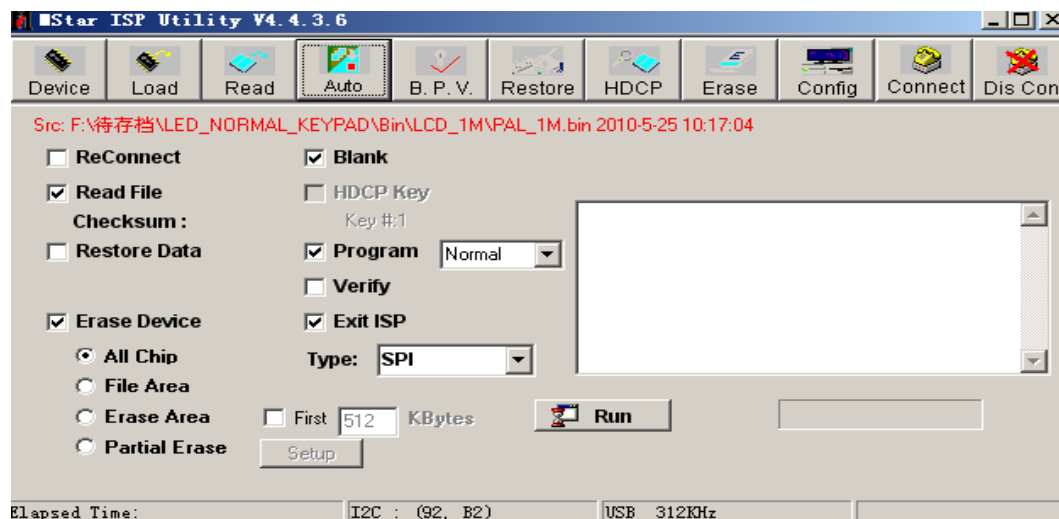
3.Select(connect)first ,if normal ,system will feedback the flash style of the machine chassis As following



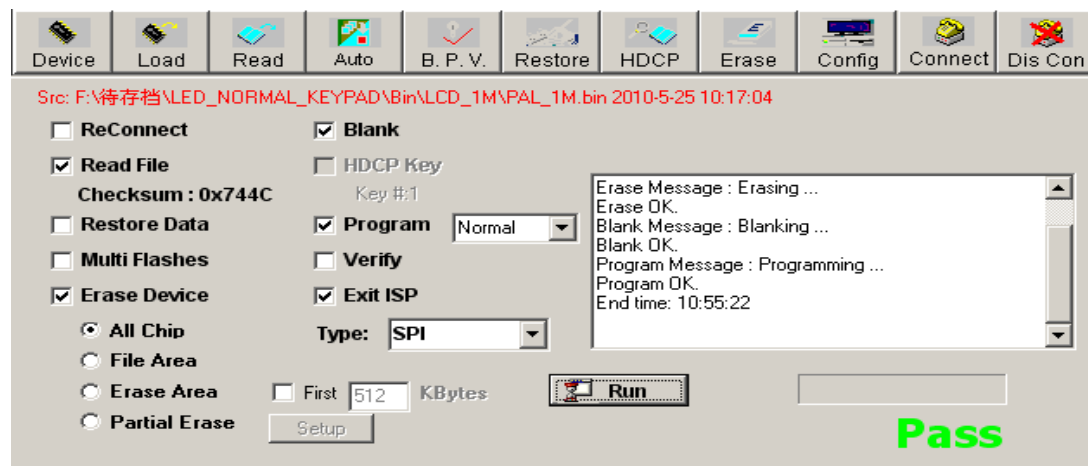
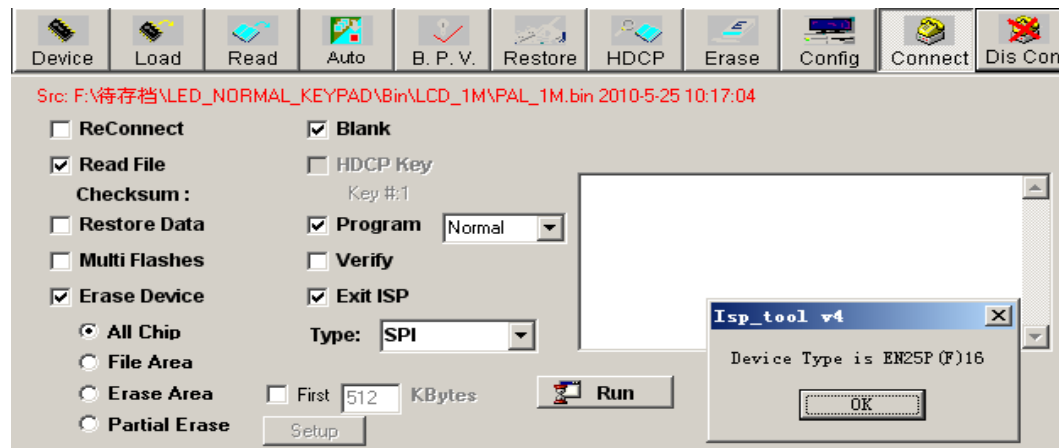
4. Select the toolbar on the "Read", then click on the bottom there's "Read", select the upgrade file, such as "CH-P06U (VC)-V1.15-YD12.bin"



5. select "Auto", and check the options according to the following chart



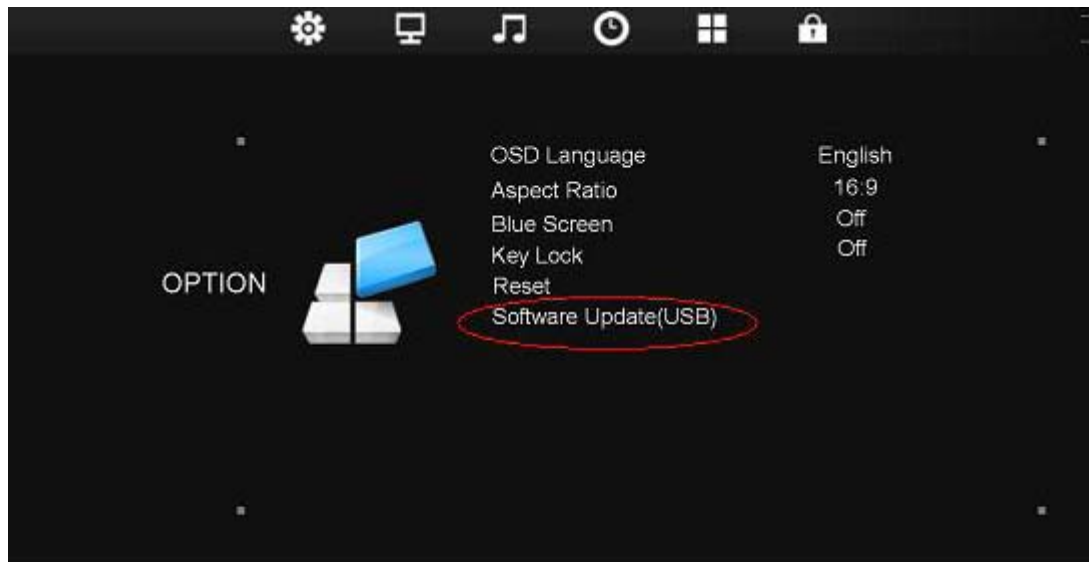
6. Select the top of the "Connect", if connected, there will be "Device Type" prompt, select "OK" and then click "RUN", After the upgrade is complete, the green "PASS" prompt will appear in the progress bar below



3-2-2 USB Upgrade

1) The first method

Copy the file to root catalogue of USB, The filename has to be for "bin_6m181. bin". Turn on the TV, Insert the USB flash , .Entre the menu to choose "Sotfware Update(USB)", And press key "ENTER" of remote control , Then follow the on-screen prompt to request and complete your update.

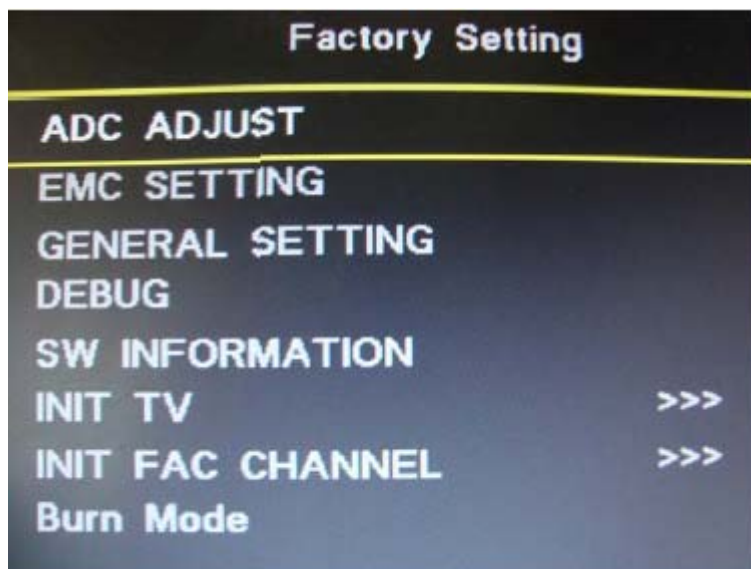


2) The second method

Copy the file to root catalogue of USB, The filename has to be for "bin_6m181. bin" ,Insert the USB flash , then turn on the AC switch, update will be completed automatically, during updating, The indicator will gleam.

3-3 Software initialization

After finishing the software upgrading ,enter into the factory menu ,select INIT TV, clear EEPROM.

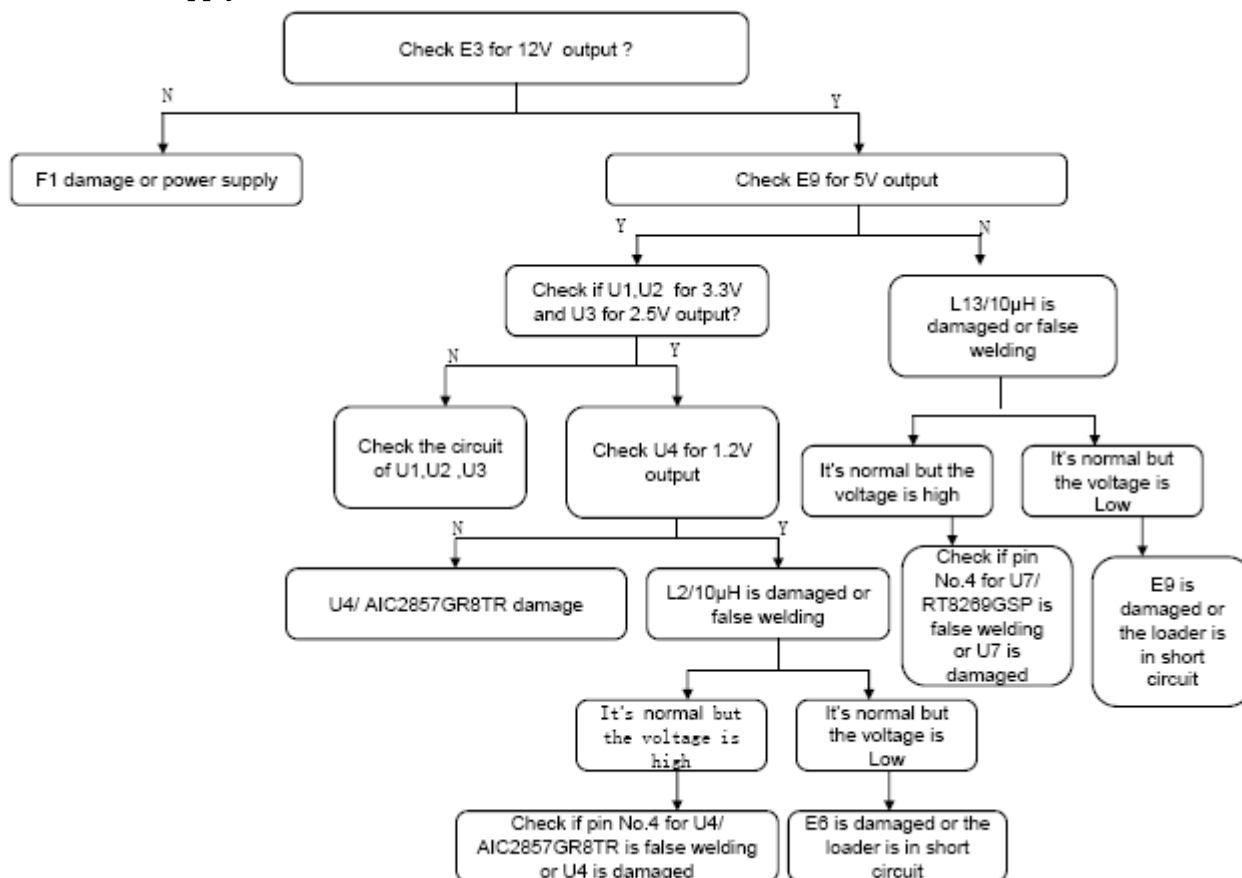


5-4Software version

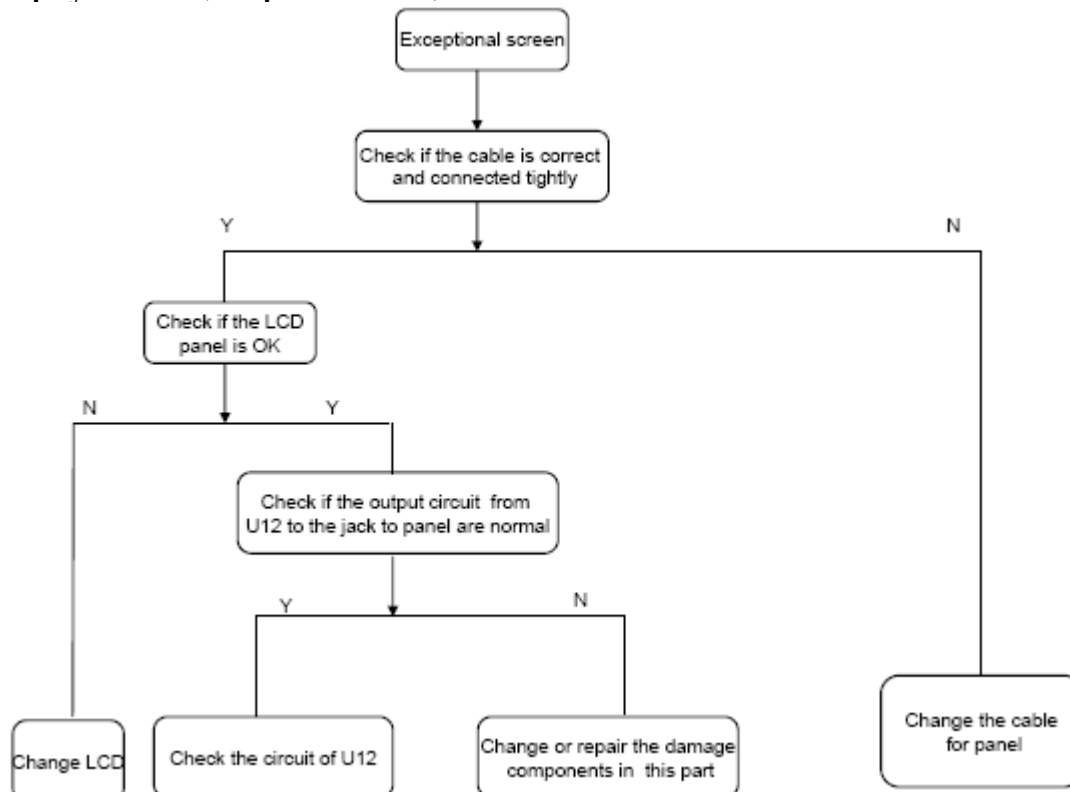
Enter into the factory menu ,select SW INFORMATION

Chapter4:Classical accident maintenance procedures and examples

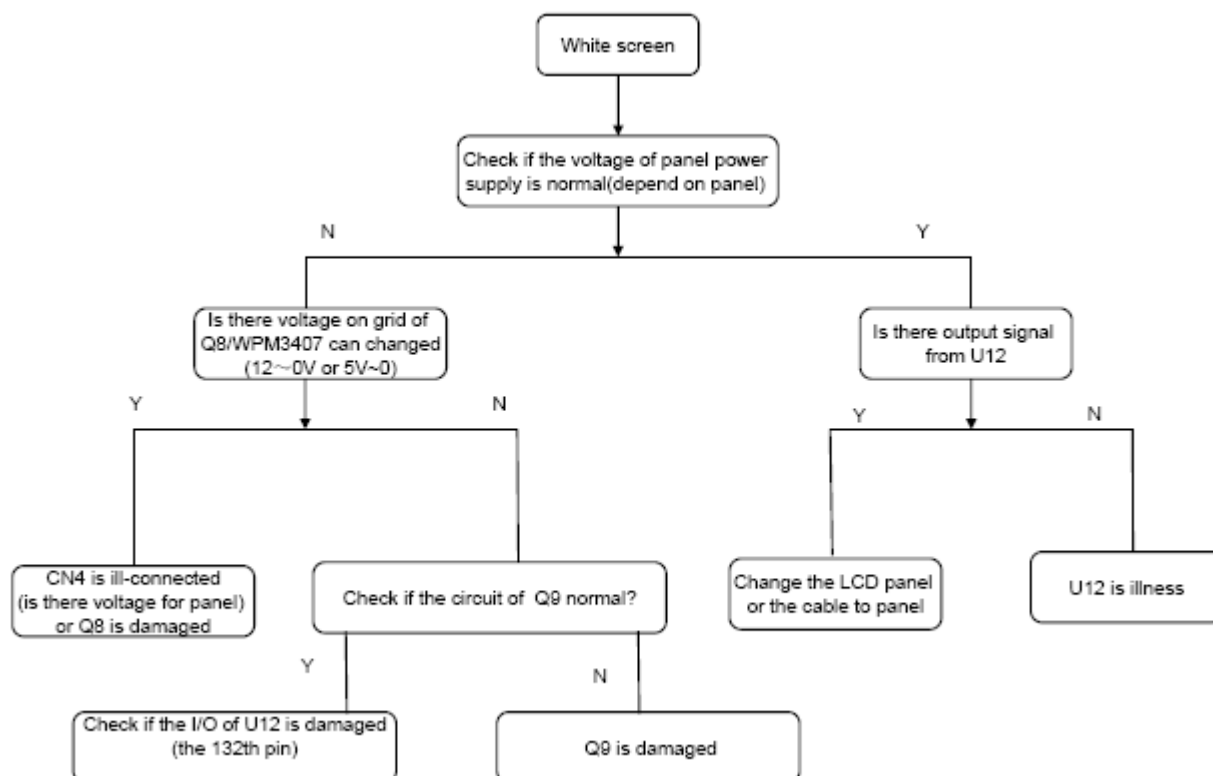
4-1 Power Supply Trouble



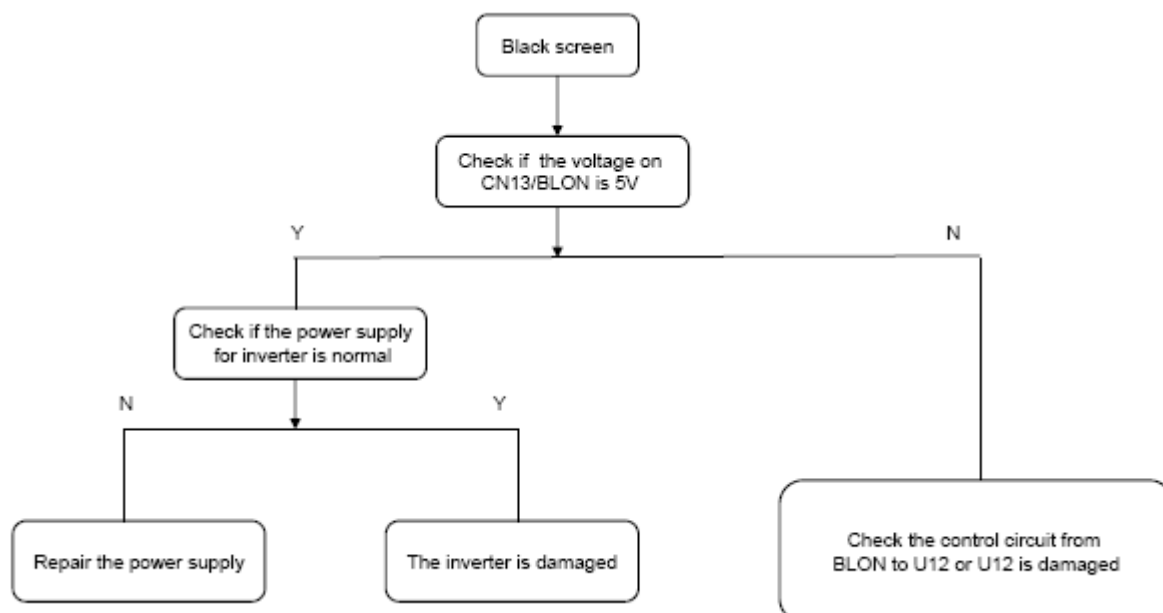
4-2 Display Trouble (exceptional screen)



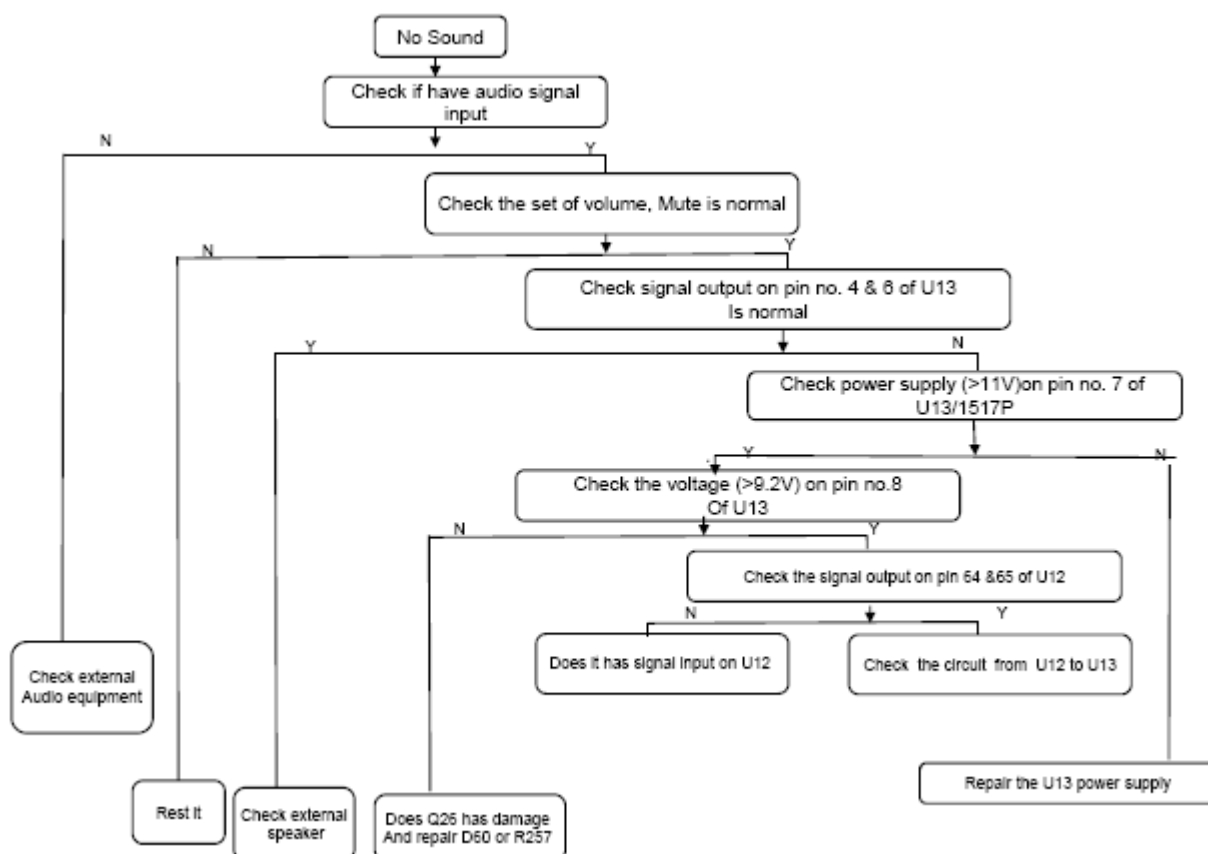
4-3 Display Trouble (white screen)



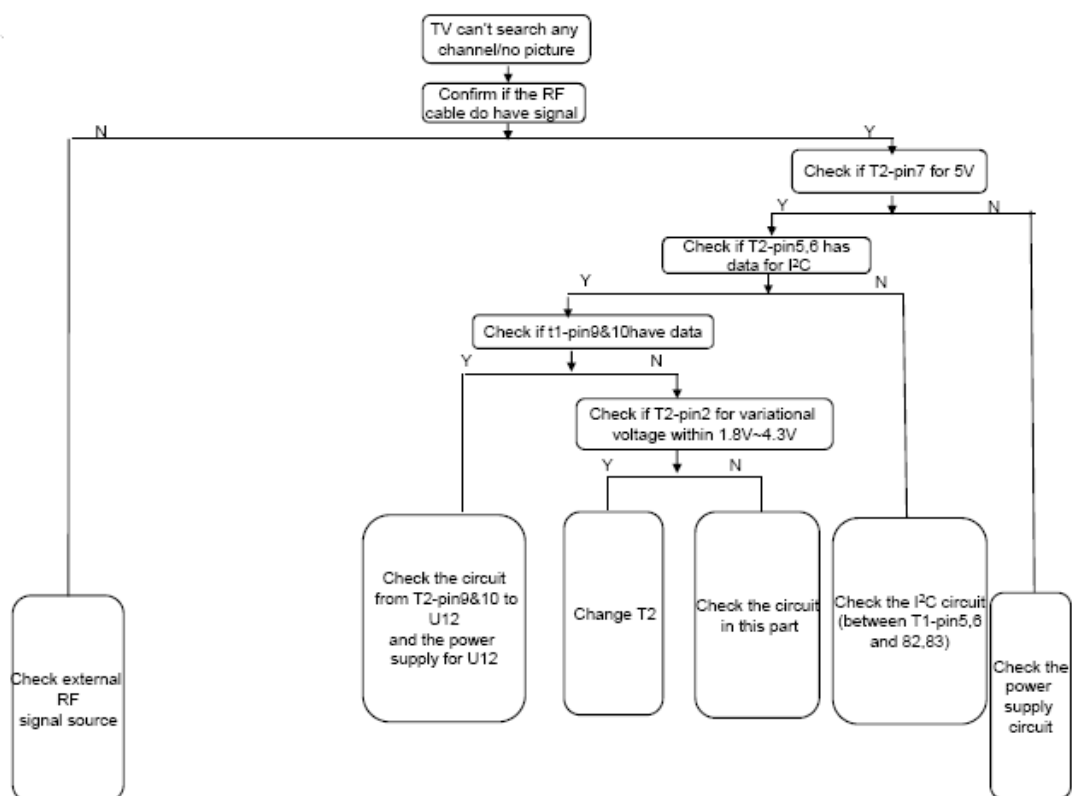
4-4 Display Trouble (black screen)



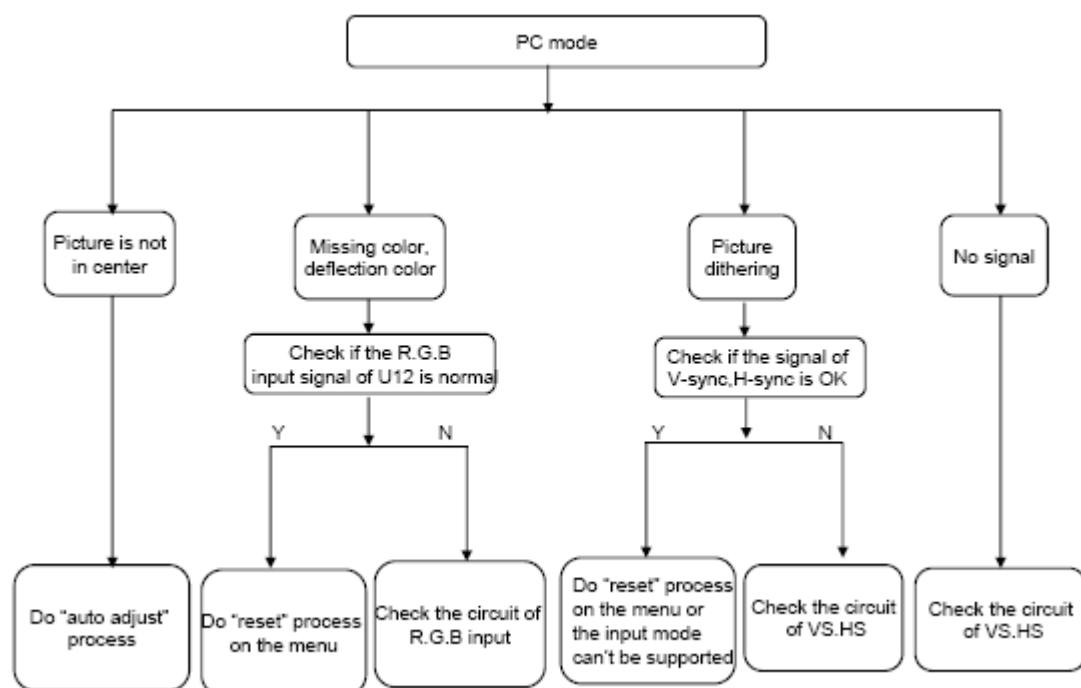
4-5 Audio Trouble (No sound)



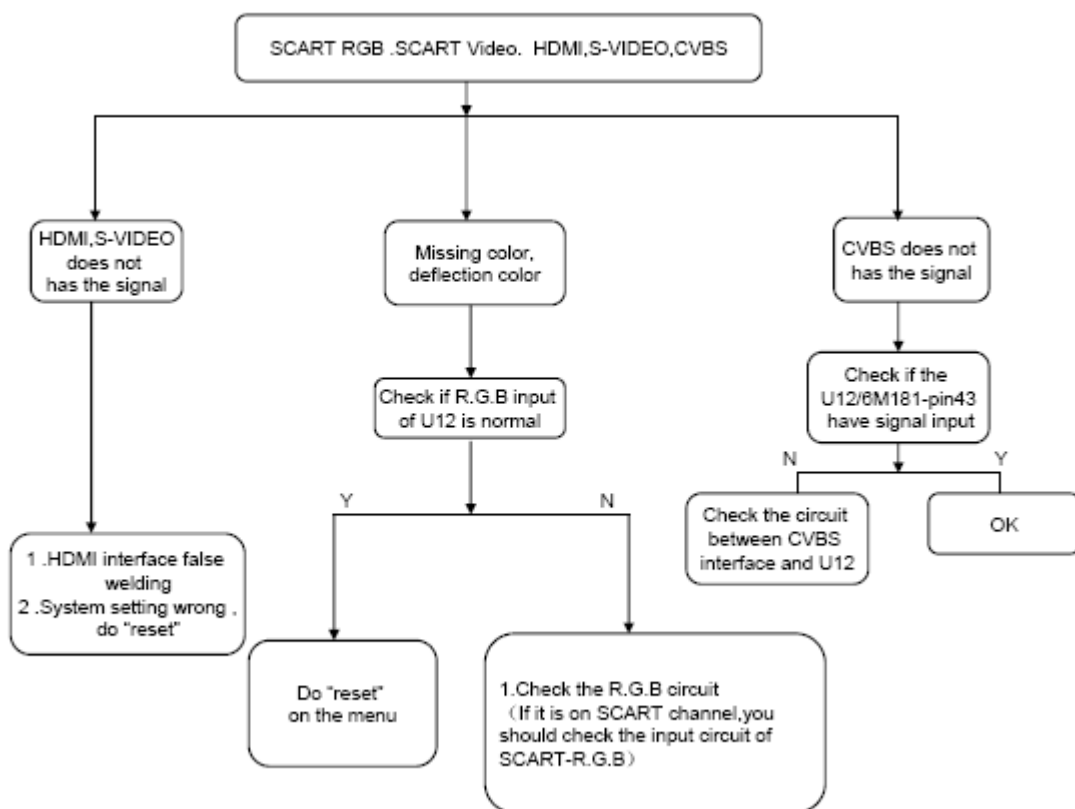
4-6 Function Trouble (TV video)



4-7 Function Trouble (PC)



4-8 Function Trouble (SCART、HDMI、YPbPr、DVB/TV)



4-9 When you meet the following common problems, you might diagnose and get the solutions without contacting with the technicians.

Symptoms	Possible Reason	Solutions
No picture, no sound, and no indicator light on	1.The power cord is not plugged in 2.The power is off	1.Plug in the power cord 2.Turn the power on
abnormity Picture and sound with	1.Contrast, sharpness, and color are set improperly 2.Color system is improperly 3.Sound system is improperly	1.Adjust the numerical value of Contrast, sharpness, and color 2.Set the Color system to the country broadcasting standard 3.Set the Sound system to meet the country's broadcasting standard
Picture is spotted or with snow	Signal source is low-grade or the signal cord is in a lower quality	Use the qualified signal cord
No picture, no sound and indicator light is green	Contrast, brightness, color and volume are all in the minimum value or TV is in mute mode.	Adjust the value of contrast, brightness, color and volume
	The signal cable is not correctly connected.	Connect the signal cable correctly
Blue screen, AV or SVIDEO is displayed	There is no signal input or the video cable is not connected or incorrectly connected	Connect the video cable correctly
Picture is unclear or shaking or with black horizontal strips (in VGA mode)	VGA picture is not correctly adjusted.	Enter "SETUP" menu, select "Auto Tracking" item to perform automatic calibration and adjust "Phase" to solve the problem
VGA picture is not centered		
No sound	There is no audio signal input or audio cable is not connected correctly	Connect the audio cable correctly
VGA picture display with improper color	The color temp is adjusted incorrectly by user	Readjust the color temp, or select the original color setting
HDMI source, with snow pixel of full screen	The signal source is not normal	Plug the HDMI cable again
The remote control does not work	Batteries are improperly installed or exhausted	1. Make sure the positive and the negative polarities are correct. 2.Check if there is a loose contact between the batteries and the springs 3.Replace the batteries

Chapter5: Factory mode parameter setting instructions and notes

5-1 Enter into the factory mode

Switch on TV set, and make it works normally:

- 1.Press 【MENU】 key on the remote control
- 2.Press number keys “1”、“1”、“4”、“7” on remote control to enter password. Finish entering the factory mode. If you want to quit the factory mode, Please. press 【EXIT】 key

Factory menu displays as bellow:

Factory Setting		工厂设置	
ADC ADJUST		ADC校正	
EMC SETTING		EMC设置	
GENNERAL SETTING	>>>	通用设置	
DEBUG		调试	
SW INFORMATION		软件更新信息	
INIT TV		初始化	
INIT FAC CHANNEL	>>>	初始化工厂频道	
Burn Mode		烧机模式	

Factory menu first page

5-1-1ADC ADJUST (ONLY FOR YPBPR AND VGA)

1. **AUTO ADC** : AUTO ADJUST FOR Ypbpr CHANNEL

ADC ADJUST			
AUTO ADC	FAIL	ADC校正	失败
Modo	RGB	模式	RGB
R-GAIN	3851	红增益	3851
G-GAIN	4238	绿增益	4238
B-GAIN	4158	蓝增益	4158
Restore Factory Def...		恢复工厂设置	

2. **Restore Factory Def:** RESET THE CHANGES

5-1-2. GENERAL SETING (Usually used)

GENERAL SETTING		通用设置	
W/B ADJUST		白平衡调整	
PICTURE MODE		图像模式	
Sound Mode		声音模式	
Volume Curve		音量模式	
WHITE PATTERN	OFF	背景图像	
Backlight	255	背光亮度	255
LVDS M A P	0	低压差分信号	0
power	OFF	电源模式	OFF
Logo	ON	标志	ON
Hotel Mode	OFF	旅馆模式	OFF

1.W/B ADJUST(Usually used): Going to the white balance adjusting page.

W/B ADJUST		白平衡调整	
TEMPERATURE	Medium	温度	温和
MODE	TV	模式	视频
R-GAIN	128	红增益	
G-GAIN	128	绿增益	
B-GAIN	128	蓝增益	
R-OFFSET	1024	红偏移量	
G-OFFSET	1024	绿偏移量	
B-OFFSET	1024	蓝偏移量	
COPY ALL			

2.PICTURE MODE: To change Parameters for different picture mode like mild warm...

PICTURE MODE		图像模式	
MODE	TV	模式	
BRIGHTNESS	128	亮度	
CONTRAST	128	对比度	
COLOR	50	颜色	
SHARPNESS	50	锐度	
TINT	50	色调	
COPY ALL	50		

3.Sound Mode :To change Parameters for different sound mode like standard music ...

4.Volume curve :To change the volume page.note:the volume curve mode should not set here
WHITE PATTERN Press to generate 6 kinds of output pattern like white red...

5.Backlight :Press to change the voltage of PIN ADJ to change the brightness of the panel.

6.LVDS MAP:Press to change the Lvds map (Caution: Press this may close the output signal ,you just keep press left or right or ok, and never press any key else especially key up and down)

7.POWER MAP:

Set it to: 0 : Means you must press the power key to run the TV when it get power. ON: Auto power on when get power Last: Go to the last state when it lost power supply.

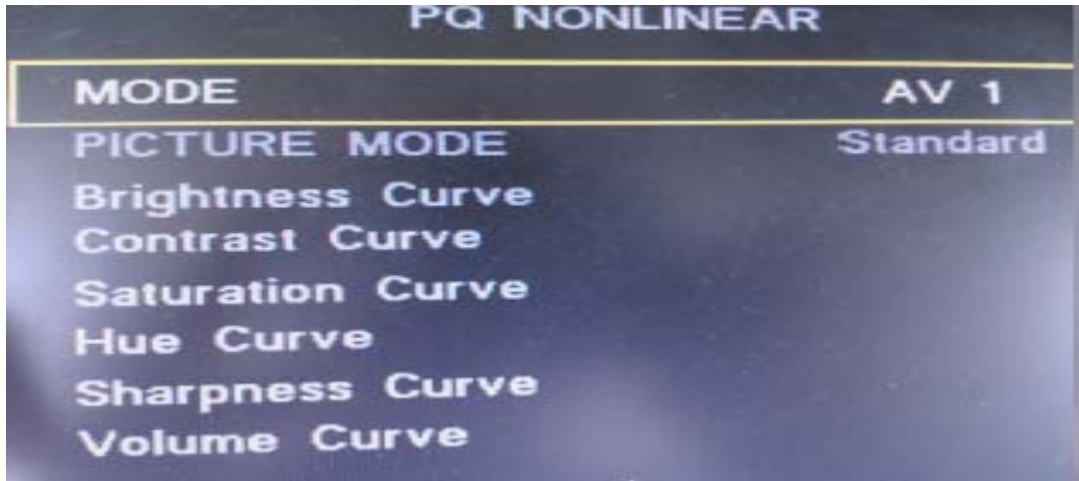
Logo:

It will not show logo when open up if you set it to close.

5-1-3.DEBUG

DEBUG		调试	
QMAP ADJUST		寄存器设置	
PEQ	OFF		
VIF1		寄存器	
VIF2		寄存器	
VIF3		寄存器	
PQ NONLINEAR		PQ调整	
PWM		脉冲宽度调制	
AUDIO Output		音频输出	
UART DEBUG	None	UART调试	

1.PQ NONLINEAR (Usually used)



MODE: Channel

PICTURE MDOE: Mostly we set it to standard

Brightness Curvel: To change the brightness page

Contrast Curve: To change the contrast page

Saturation Curve: To change the saturation page

Hue Curve: To change the hue page

Sharpness Curve: To change the sharpness page

Volume Curve: To change the volume page

All the CURVE are almost the same, so I only show Brightness curve as sample: Usually we only change the OSD_50 item , it is correspond to the brightness of user OSD with the value 50. OSD_100 is correspond to the value 100 of user OSD who is the max brightness.

The screenshot shows the 'Brightness Curve' menu. It displays a table with two columns: the first column lists OSD values (OSD_0, OSD_1, OSD_25, OSD_50, OSD_75, OSD_100) and the second column shows their corresponding numerical values (0, 5, 64, 132, 192, 255).

OSD Value	Value
OSD_0	0
OSD_1	5
OSD_25	64
OSD_50	132
OSD_75	192
OSD_100	255

5-1-4. SW INFORMATION :Press to show the detail of the software like the time and the checksum.

5-1-5. INIT TV: Initialize the TV totally, reset the EEPROM

5-1-6. INIT FAC CHANEL :Initialize the factory channel

5-1-7. Burn Mode: Go to burn mode (Power to exit)

5-2 Setting method of factory menu

1. Select the setting item

Operators can choose setting item with **【P+】** and **【P-】** key, font with background display means the item has been chosen. Press **【V+】** key to enter sub directory. Use **【P+】** and **【P-】** keys on remote control to select up and down, then use **【V+】** and **【V-】** keys to set.

2. Most of the menu functions are open under factory mode, if need , item checking and effect test can be done by using menu .

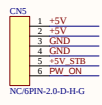
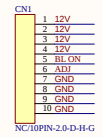
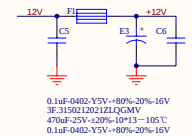
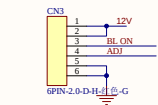
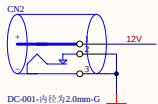
3. TV signal switching can be done by directly pressing the number keys in factory mode .Press **【MENU】** to back to the parental catalog ,press **【EXIT】** to quit factory mode.

Chapter6:Instructions of simple factory debugging specification

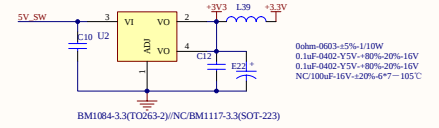
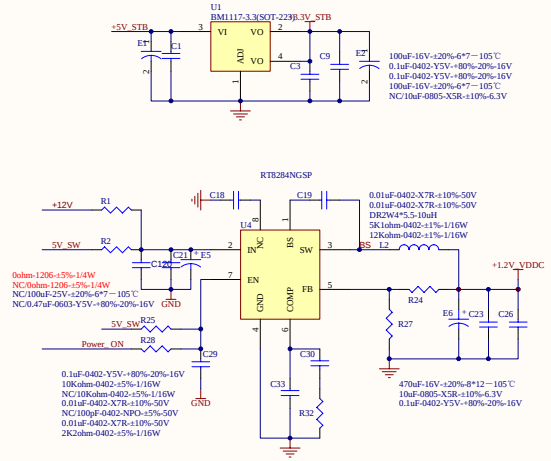
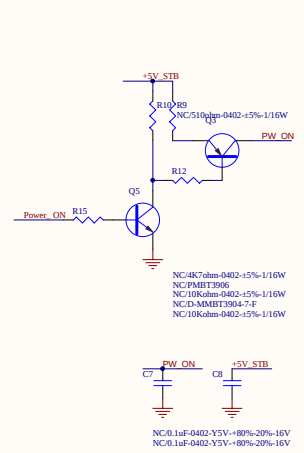
6-1 Clear EEPROM ,and set the parameters after upgrading according to the upgrade instructions.

6-2 Check each channel/source to see if the image and sound are normal.

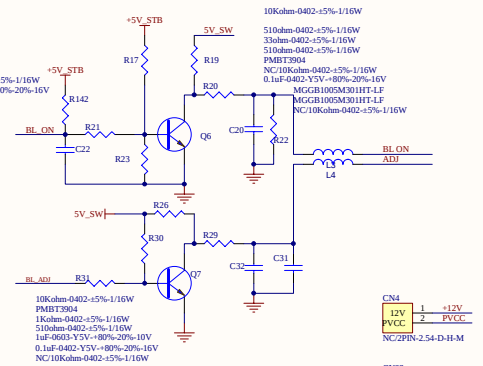
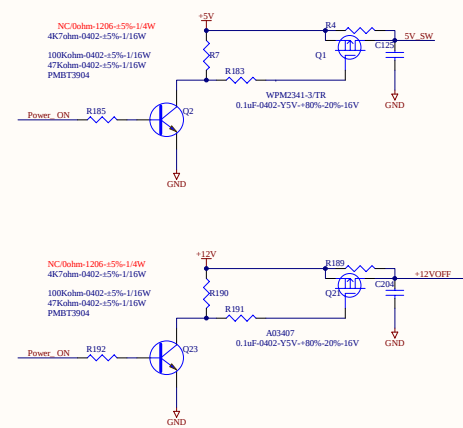
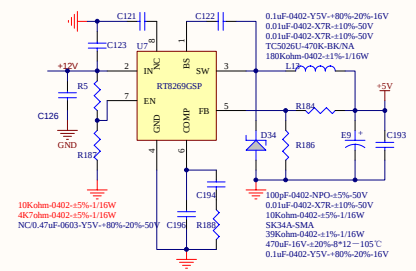
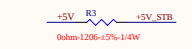
A



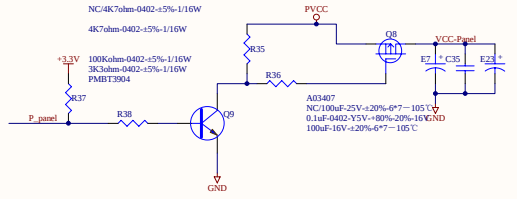
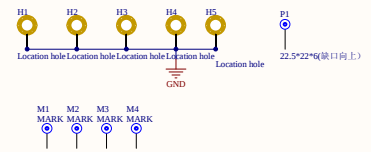
B

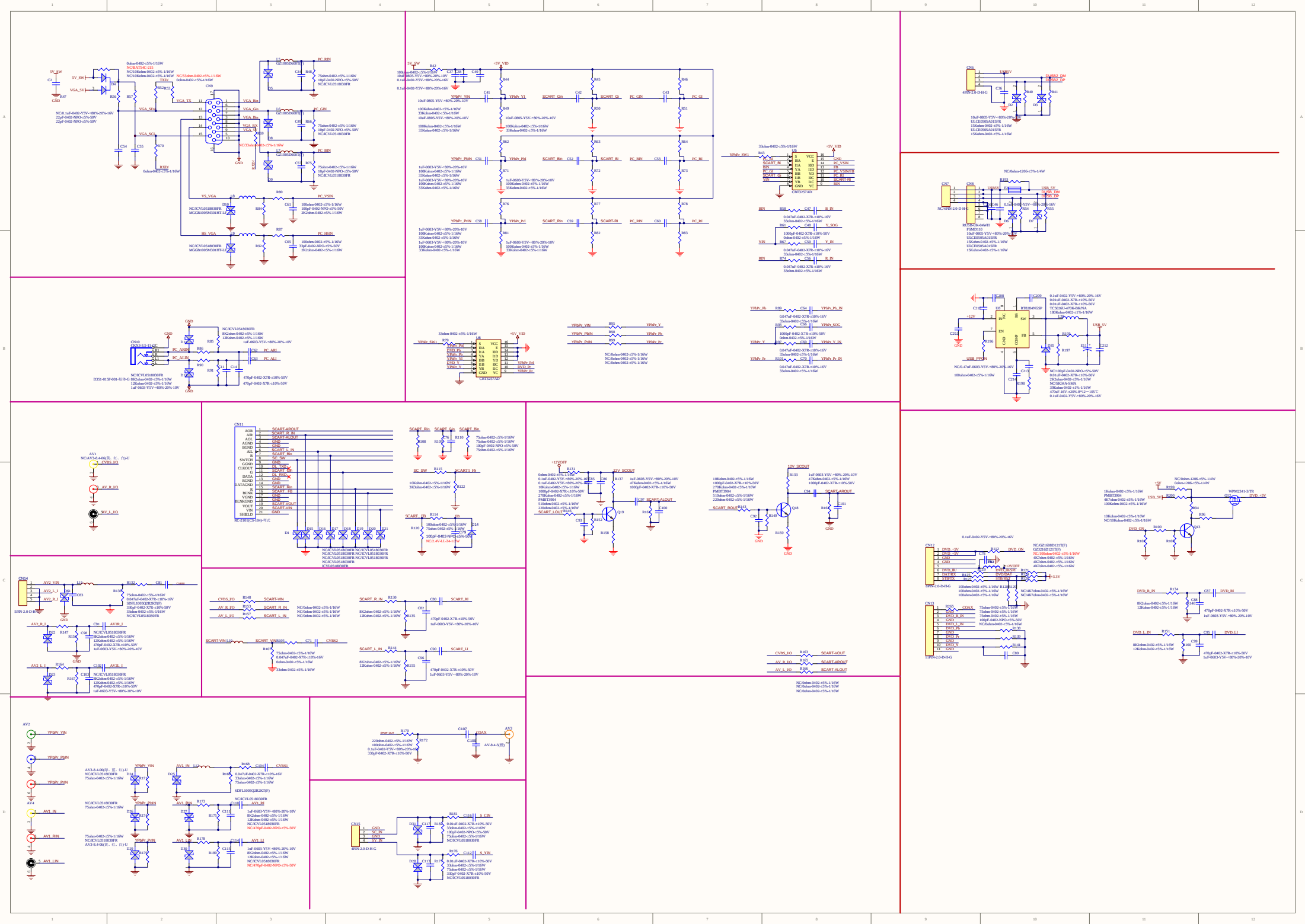


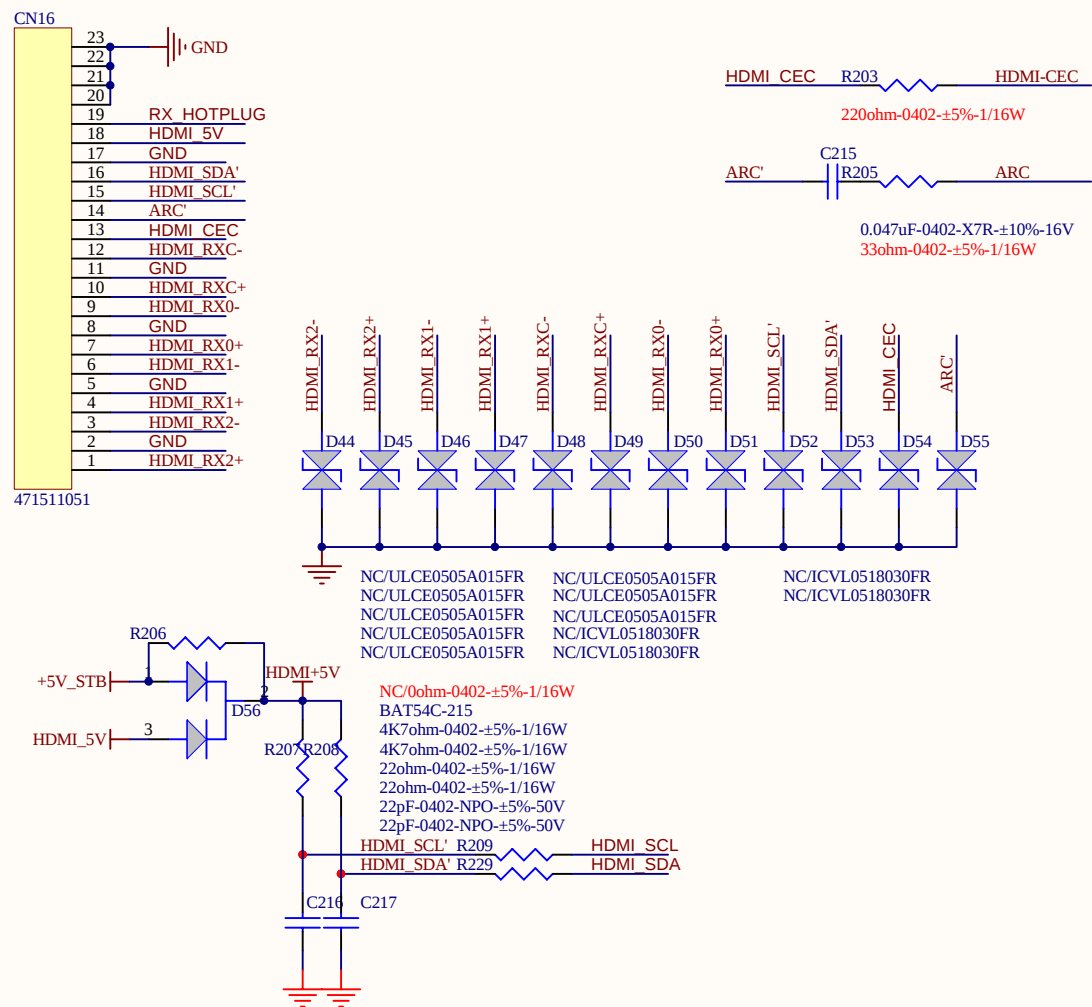
C



D







A

B

C

D

A

B

C

D

