

S/M NO. :

Service Manual LED TV

CHASSIS : SE-V26XB

Model : EX236E2BCFA

Caution : In this Manual, some parts can be changed for improving. their performance without notice in the parts list. So, if you need the latest parts information, please refer to PPL(Parts Price List)in Service Information Center.

DAEWOO 
ELECTRONICS



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1. Safety Precaution

When moving or laying down a LCD Set, at least two people must work together. Avoid any impact towards the LCD Set.

Do not leave a broken LCD Set on for a long time. To prevent any further damages, after checking the condition of the broken Set, make sure to turn the power (AC) off.

When opening the BACK COVER, you must turn off power (AC) to prevent any electric shock.

When loosening screws, check the position and type of the screw. Sort out the screws and store them separately for reassembling. Because screws holding PCBs are working as electric circuit grounding, make sure to check if any screw is missing when assembling / reassembling. Do not leave any screws inside the set.

A LCD Set contains different kinds of connector cables. When connecting or disconnecting cables, check the direction and position of the cable beforehand.

Connect/disconnect the connectors slowly with care especially FFC (film) cables and FPC cables. Do not connect or disconnect connectors instantaneously with force, and handle them carefully for reassembling.

Connectors are designed so that if the number of pins or the direction does not match, connectors will not fit. When having problem in plugging the connectors, check their kind, position, and direction.

2. Preliminary Troubleshooting

LCD TV does not response or remote controller does not work.

Check the power cord to be plugged.

Check the battery of the remote controller.

Sound is discontinuous or broken sometimes.

Check if [SOUND] -> [Bass] is Min or Max.

Set the [SOUND] -> [Treble] is Min or Max.

Picture of analog program is noisy.

Check the RF cable connection.

Check if [Picture] -> [N.R] is ON.

Change the [Channel] -> [Fine Tune] value.

Sound is not generated in HDMI mode.

Reconnect HDMI jack.

DVI signal has no sound. Check the output signal of device to be connected to LCD TV.

If you want to use DVI-HDMI cable, you should also connect audio cable into the LCD TV.

In spite of 'Auto Setup', picture size is not completely adapted to the screen in PC mode.

Check if the input signal is available.

Ensure that the desktop has no black area.

Some errors (picture position problem) will be occurred according to certain video card. In this case, you should adjust 'Phase', 'Clock', 'H.Position', 'V.Position' control.

In spite of 'Auto Setup', picture is not clear in the PC mode.

Adjust 'Phase' control.

3. SPECIFICATION

1) GENERAL DESCRIPTION

The board is a multi-purpose LCD/LED TV control board which can support LCD/LED panel with dual/single LVDS interface. It supports resolution up to 1920x1080.

The board supports CC, Vchip, MTS, Component, HDMI, PC-RGB, CVBS, S-Video and analog TV. It includes an audio power amplifier which can support 2X3W (4Ohm) output.

2) FEATUERS

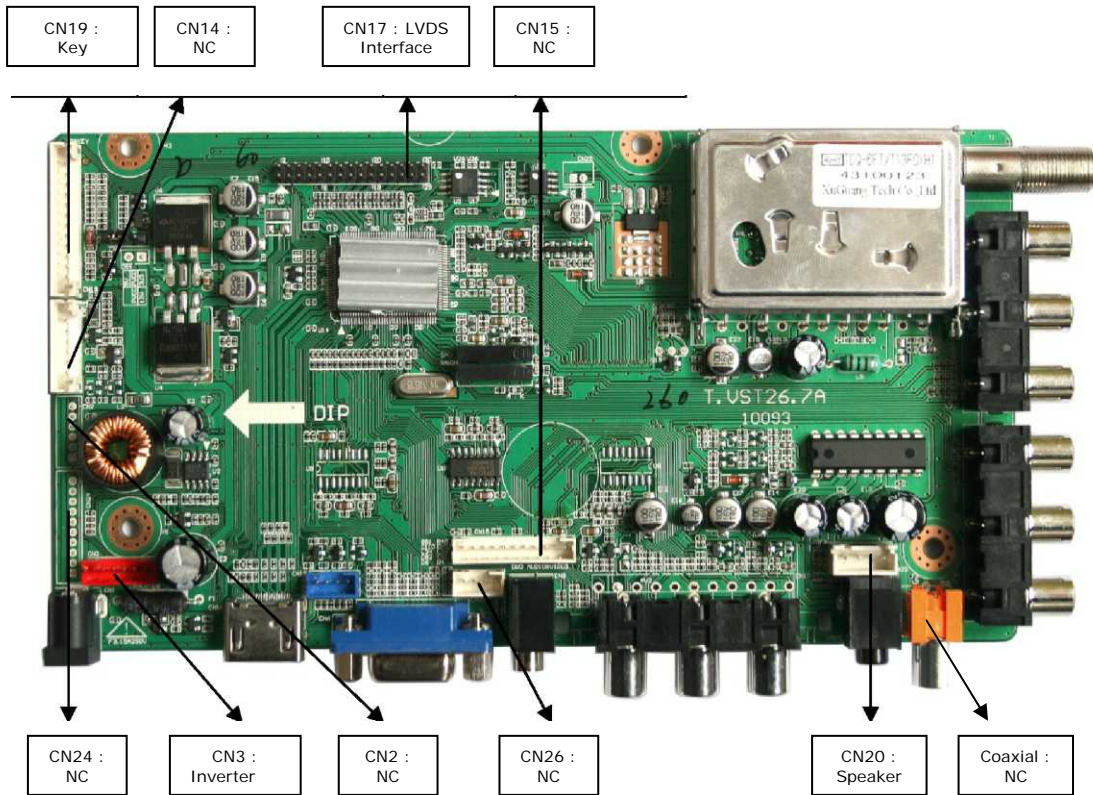
Chipset	TSUMV26KE-LF		
Market Area	South America		
OSD Language	English, French, Spanish, Portuguese		
Panel	Interface	dual/single LVDS	
	Resolution	Up To 1920x1080	
Video Input	TV	Tuner Receiving Range	55.25MHz-801.25MHz
		Input Impedance	75fi
		Video System	PAL/NTSC
		Sound System	M/N
			MTS
	Max. storage Channels	181CH	
	PC-RGB	Format	Up to 1920x1080@60Hz
	CVBS	Video System	PAL/NTSC
		Video Level	1.0 Vp-p ±5%
	S-Video	S-Y:0.714Vp-p±5% S-C:0.286Vp-p±5%	
	HDMI	480i, 480p, 576i, 576p, 720p, 1080i, 1080p	
Component	480i, 480p, 576i, 576p, 720p, 1080i, 1080p		
Audio Input	PC-RGB	Earphone Input	0.2 - 2.0 Vrms
	CVBS	L/R RCA Input	0.2 - 2.0 Vrms
	Component		
Audio Output	Frequency Response	120Hz - 14000Hz @±3dB (1KHz 0dB reference signal)	
	Max Output Power	2x2.5W(4Ohm) THD+N<10%@1KHz	
Power	Requirement	DC +12V Power Supply	
	To Panel	3.3V(Max 700mA), 5V, 12V	
	Management	Low power consumption mode,	

		standby < 0.6W
Color Filter	2D	
Deinterlace	2D	
Weak signal enhancement	YES	
Noise reduction	YES	

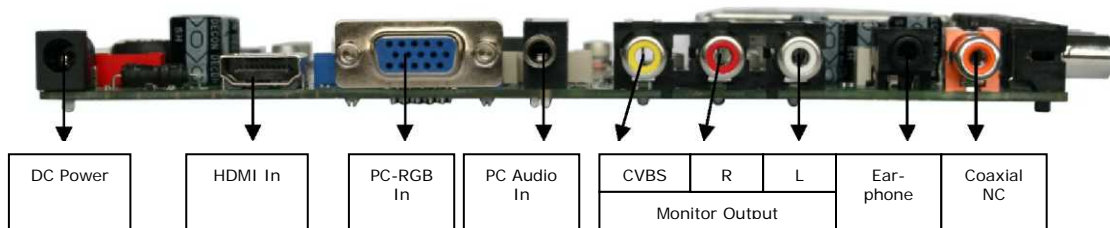
Key Function	MENU, CH+, CH-, VOL+, VOL-, INPUT, POWER		
Terminlas	Input	TV	1 F-Connector 75ft
		HDMI	1 HDMI terminal
		PC-RGB	1 D-SUB 15Pin terminal
		CVBS	1 RCA terminal
		Component	3 RCA terminals
		CVBS Audio	2 RCA terminals
		Component Audio	
		PC-RGB Audio	1 Earphone terminal
	Output	Earphone	1 Earphone terminal
		CVBS & Audio Out	3 RCA terminals(CVBS, R,L)

4) FUNCTION LAYOUT

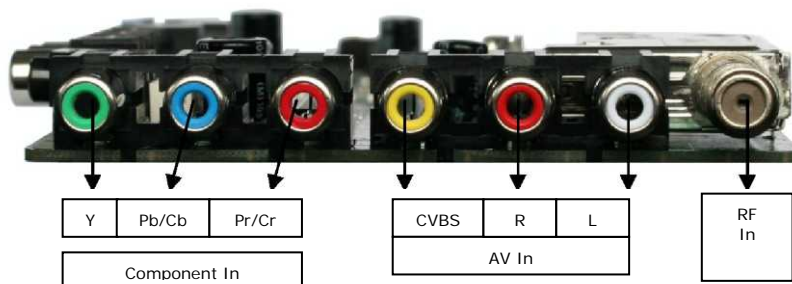
TOP VIEW



FRONT VIEW



SIDE VIEW OF T.VST26.7X



5) Connector Specification

◆ CN3(6PIN/2.0): INVERTER CONNECTOR

NO.	SYMBOL	DESCRIPTION
1	12V	+ 12V DC Power Supply
2	12V	
3	BLO	Back-Light ON/OFF Control for Panel
4	ADJ	Brightness Adjustment for Panel
5	GND	Ground
6	GND	

◆ CN17(2x15PIN/2.0): LVDS INTERFACE

NO.	SYMBOL	DESCRIPTION
1	VSEL	Power Supply for Panel
2	VSEL	
3	VSEL	
4	GND	Ground
5	GND	
6	GND	
7	RXO0-	LVDS ODD 0- Signal
8	RXO0+	LVDS ODD 0+ Signal
9	RXO1-	LVDS ODD 1- Signal
10	RXO1 +	LVDS ODD 1+ Signal
11	RXO2-	LVDS ODD 2- Signal
12	RXO2+	LVDS ODD 2+ Signal
13	GND	Ground
14	GND	
15	RXOC-	LVDS ODD Clock- Signal
16	RXOC+	LVDS ODD Clock+ Signal
17	RXO3-	LVDS ODD 3- Signal
18	RXO3+	LVDS ODD 3+ Signal
19	RXE0-	LVDS EVEN 0- Signal
20	RXE0+	LVDS EVEN 0+ Signal
21	RXE1-	LVDS EVEN 1- Signal
22	RXE1 +	LVDS EVEN 1+ Signal
23	RXE2-	LVDS EVEN 2- Signal

24	RXE2+	LVDS EVEN 2+ Signal
25/26	GND	Ground
27	RXEC-	LVDS EVEN Clock- Signal
28	RXEC+	LVDS EVEN Clock+ Signal
29	RXE3-	LVDS EVEN 3- Signal
30	RXE3+	LVDS EVEN 3+ Signal

◆ CN19(14PIN/2.0): KEY & IR BOARD CONNECTOR

NO.	SYMBOL	DESCRIPTION
1	5V	+ 5V DC Power Supply
2	RED	Red Indicator
3	GRN	Green Indicator
4	IR	IR Receiver
5	GND	Ground
6	K0	K0
7	K1	K1
8	K2	K2
9	K3	K3
10	K4	K4
11	K5	K5
12	K6	Power (Only for power function.)
13	K7	K7
14	GND	Ground

◆ CN20(4PIN/2.54): SPEAKER CONNECTOR

NO.	BOL	DESCRIPTION
1	LO	Audio Left Channel Output
2	GND	Ground
3	GND	
4	RO	Audio Right Channel Output

4. Product Specification

Available Input Signal

i) TV Mode

Color Standard : NTCS, PAL-M/N

Reception Channel : Ch 2-13 (VHF), Ch 14-69 (UHF), Ch 1, 14~125(Cable)

Sound Transmission System : FM Mono, 2 Carrier

IF & Subcarrier:

PIF : 45.75MHz
 SIF : 41.25MHz
 Sound Subcarrier: 4.5MHz, 4.72 MHz
 Color Subcarrier: 3.58MHz

ii) Multimedia Mode

Resolution	V-freq	HDMI	PC(D-Sub)	Component	Standard
640 X 480	60Hz	O	O	X	Industry Standard
800 X 600	60Hz	O	O	X	VESA Guidelines
1024 X 768	60Hz	O	O	X	VESA Guidelines
1280 X 1024	60Hz	O	O	X	VESA Standard
1360 X 768	60Hz	O	O	X	
1440 X 900	60Hz	O	O	X	
1680X1050	60Hz	O	O	X	
720 X 480i	60Hz	O	X	O	
720 X 576i	50Hz	O	X	O	
720 X 480p	60Hz	O	X	O	
750 X 576p	50Hz	O	X	O	
1280 X 720p	50Hz	O	X	O	
	60Hz	O	X	O	
1920 X 1080i	50Hz	O	X	O	
	60Hz	O	X	O	
1920 X 1080p	50Hz	O	X	O	
	60Hz	O	X	O	

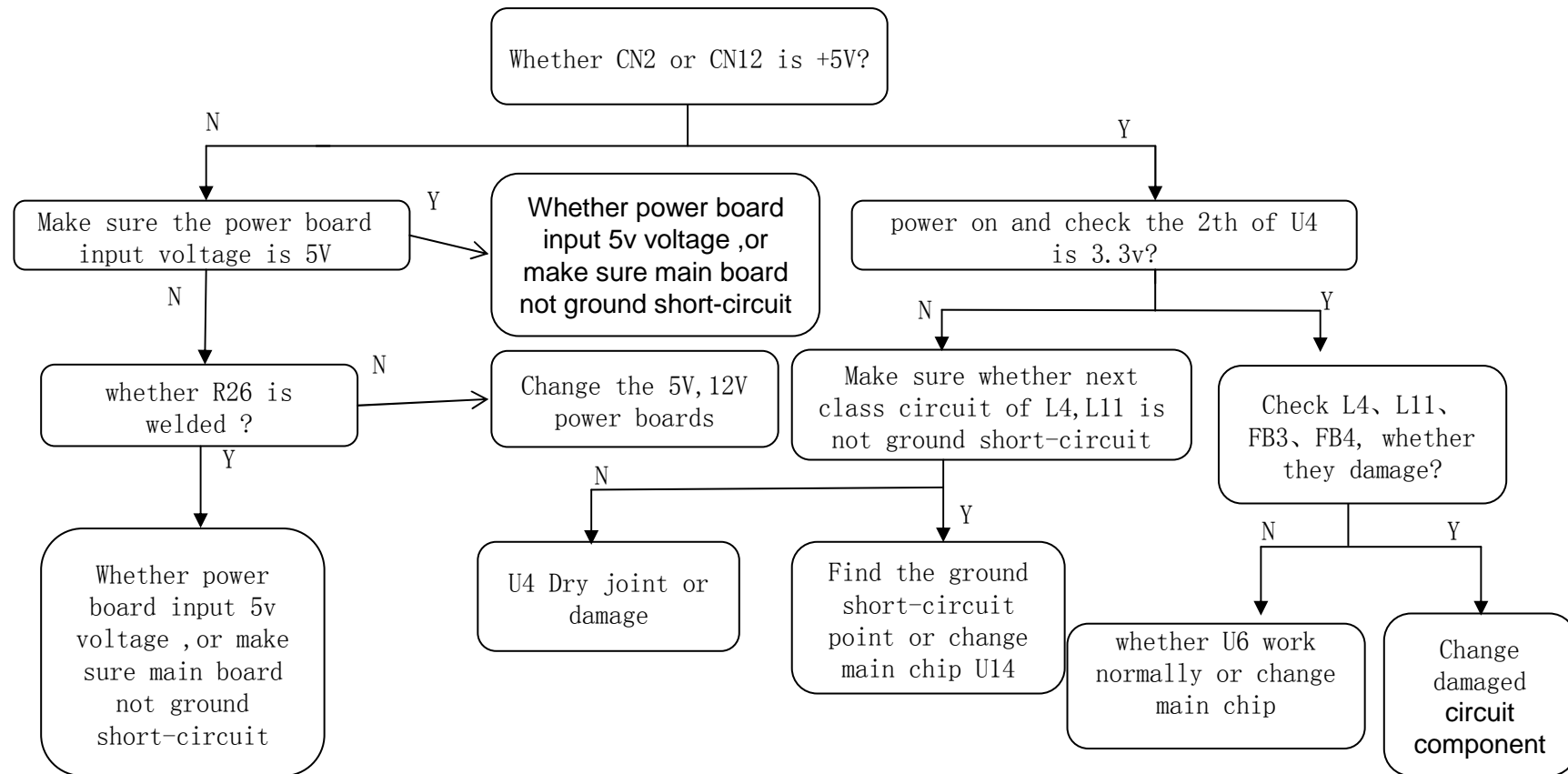
Note :

When you connect with component, PC (D-Sub), and HDMI, you must check the input resolution of external devices.

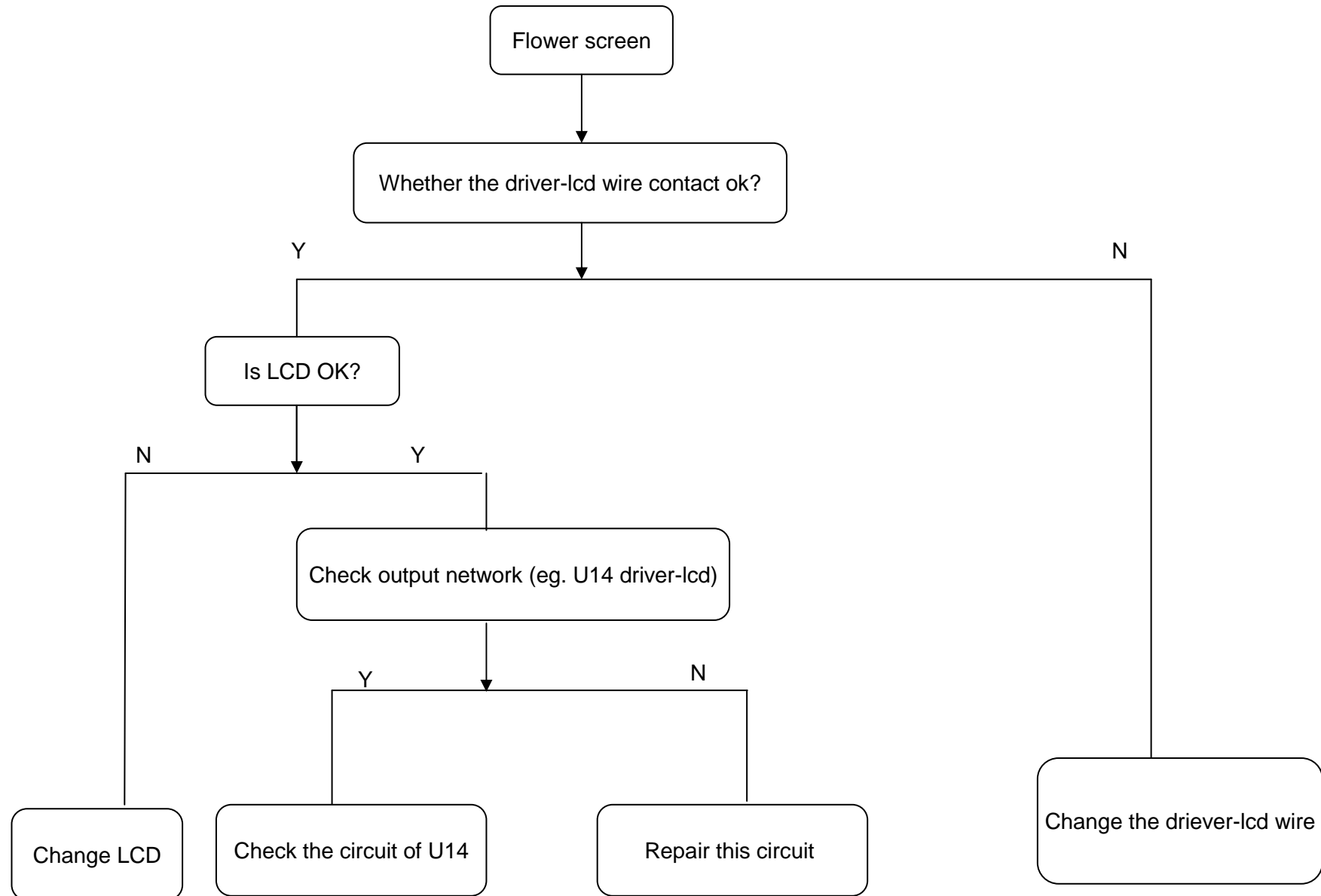
So if this mode is used at PC mode, the screen can be enlarged.

5. Trouble shooting

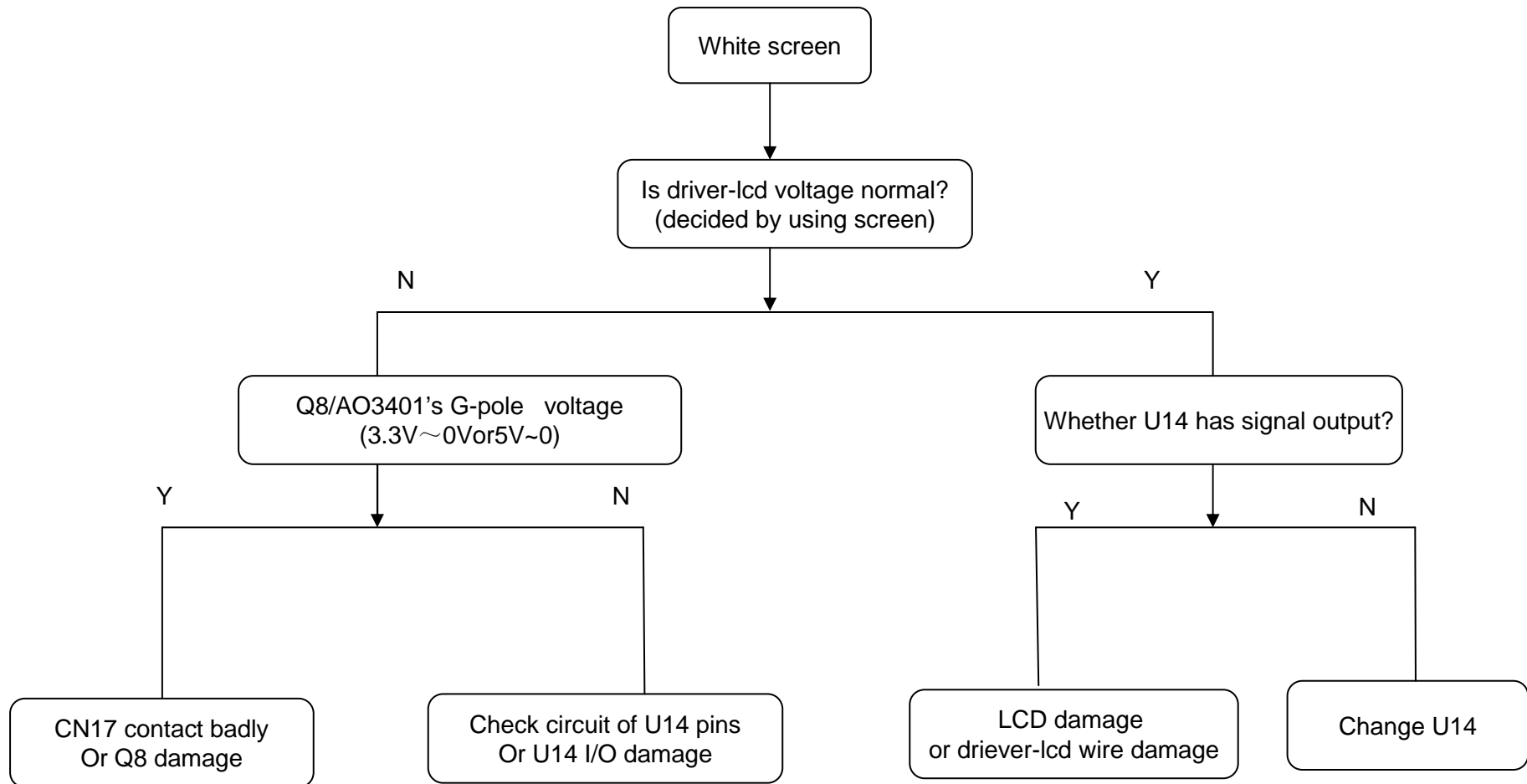
一、 Power supply Trouble



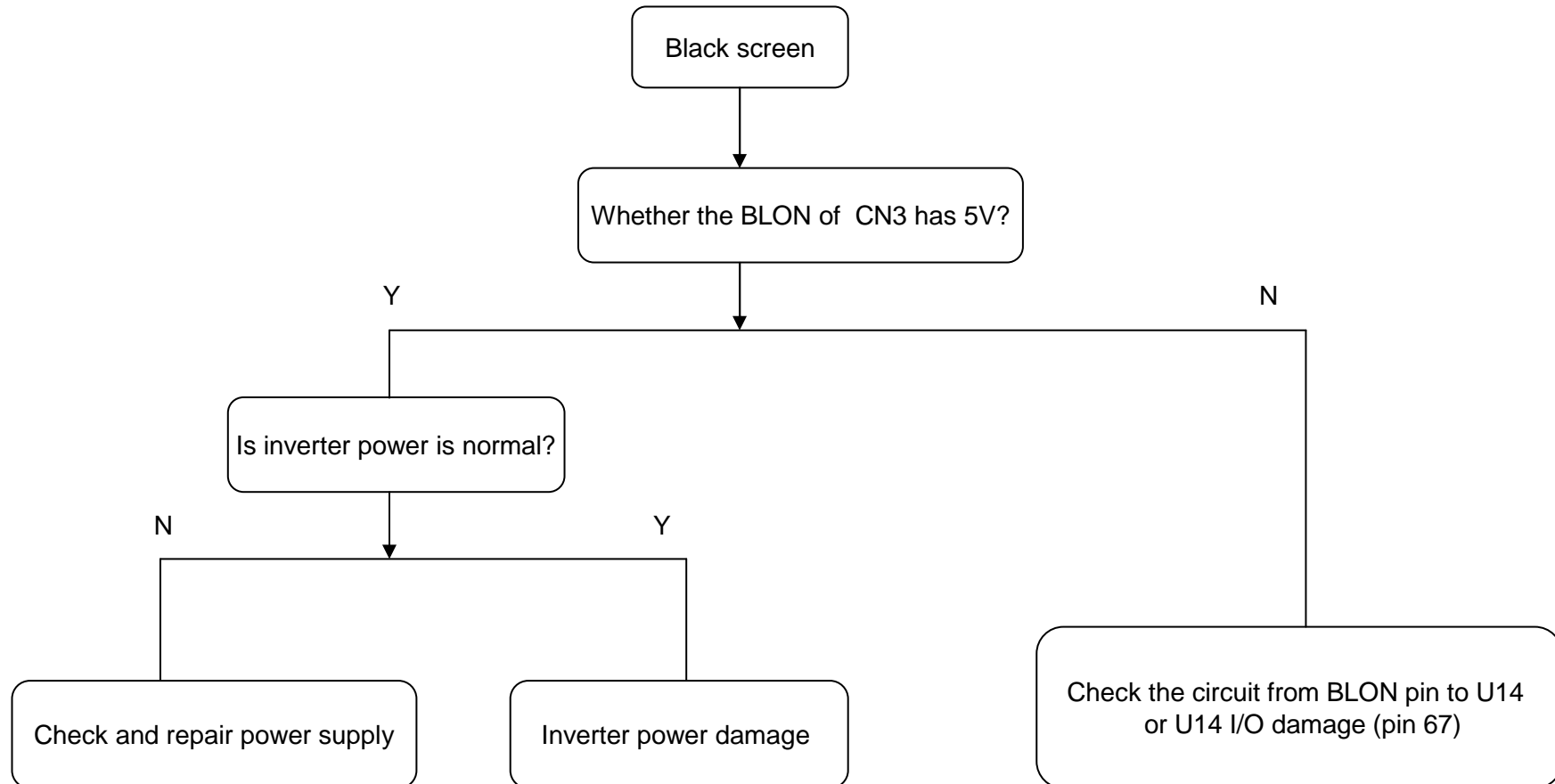
二、 Display Trouble (flower screen)



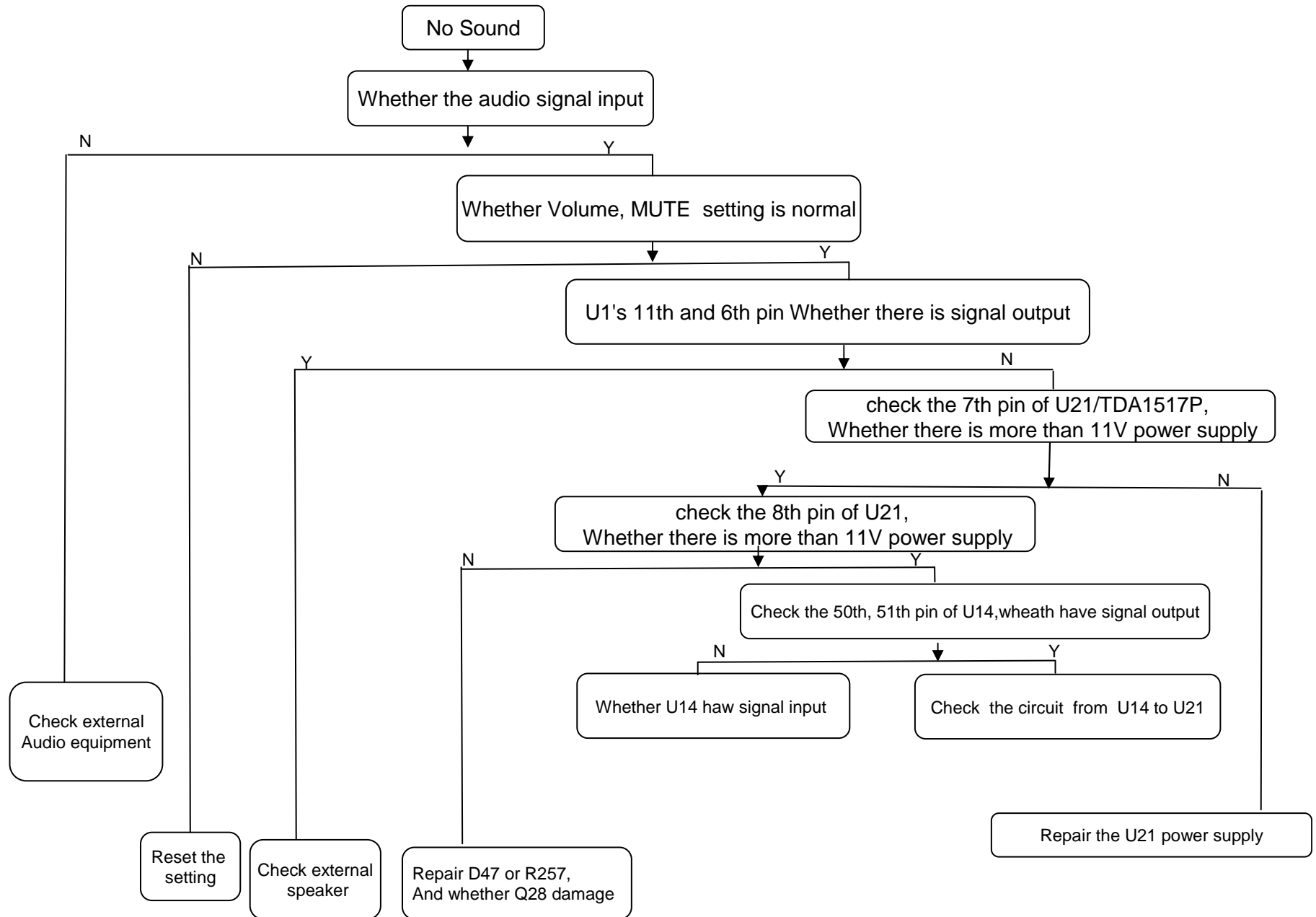
三、 Display Trouble (white screen)



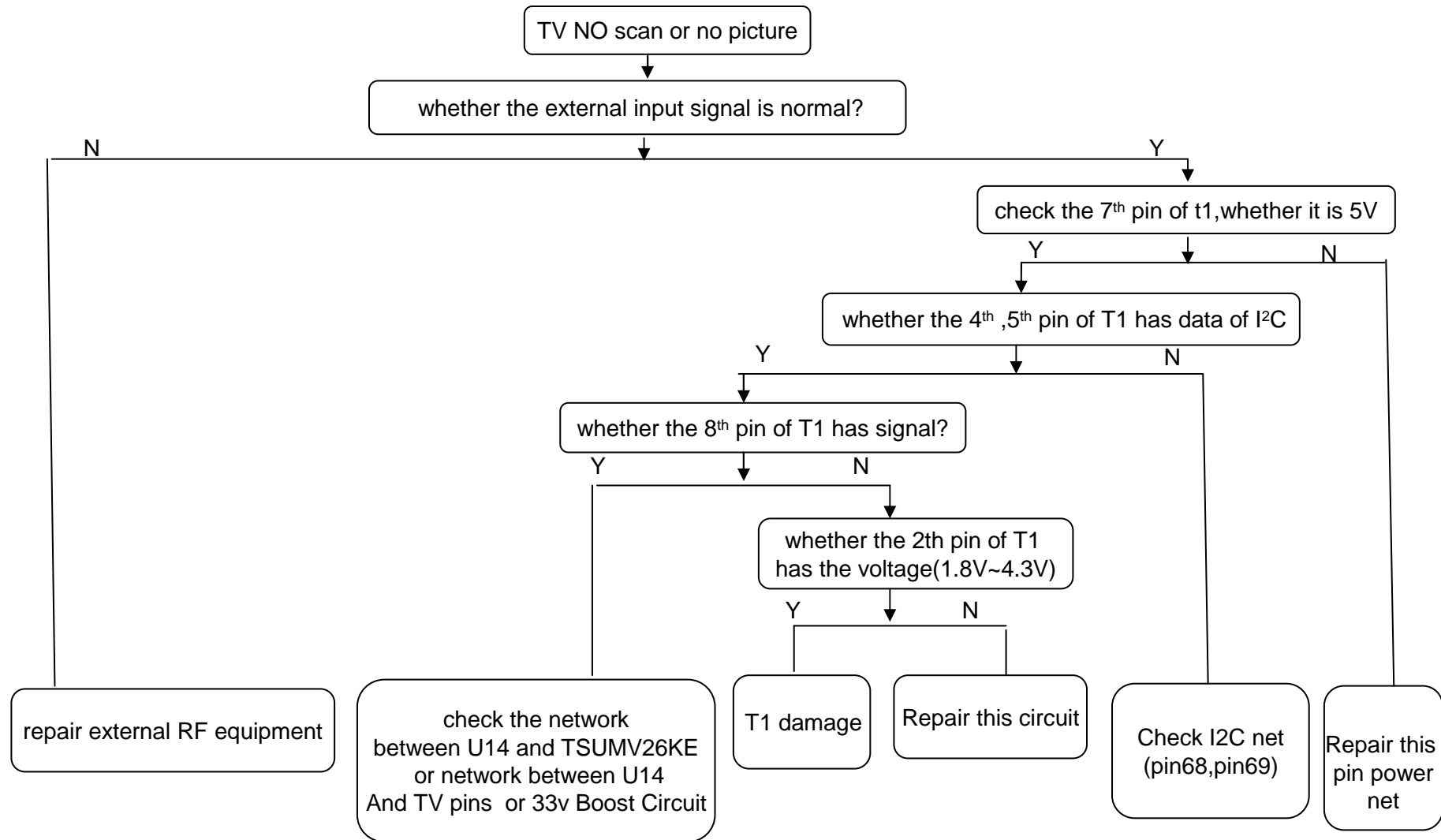
四、 Display Trouble (black screen)



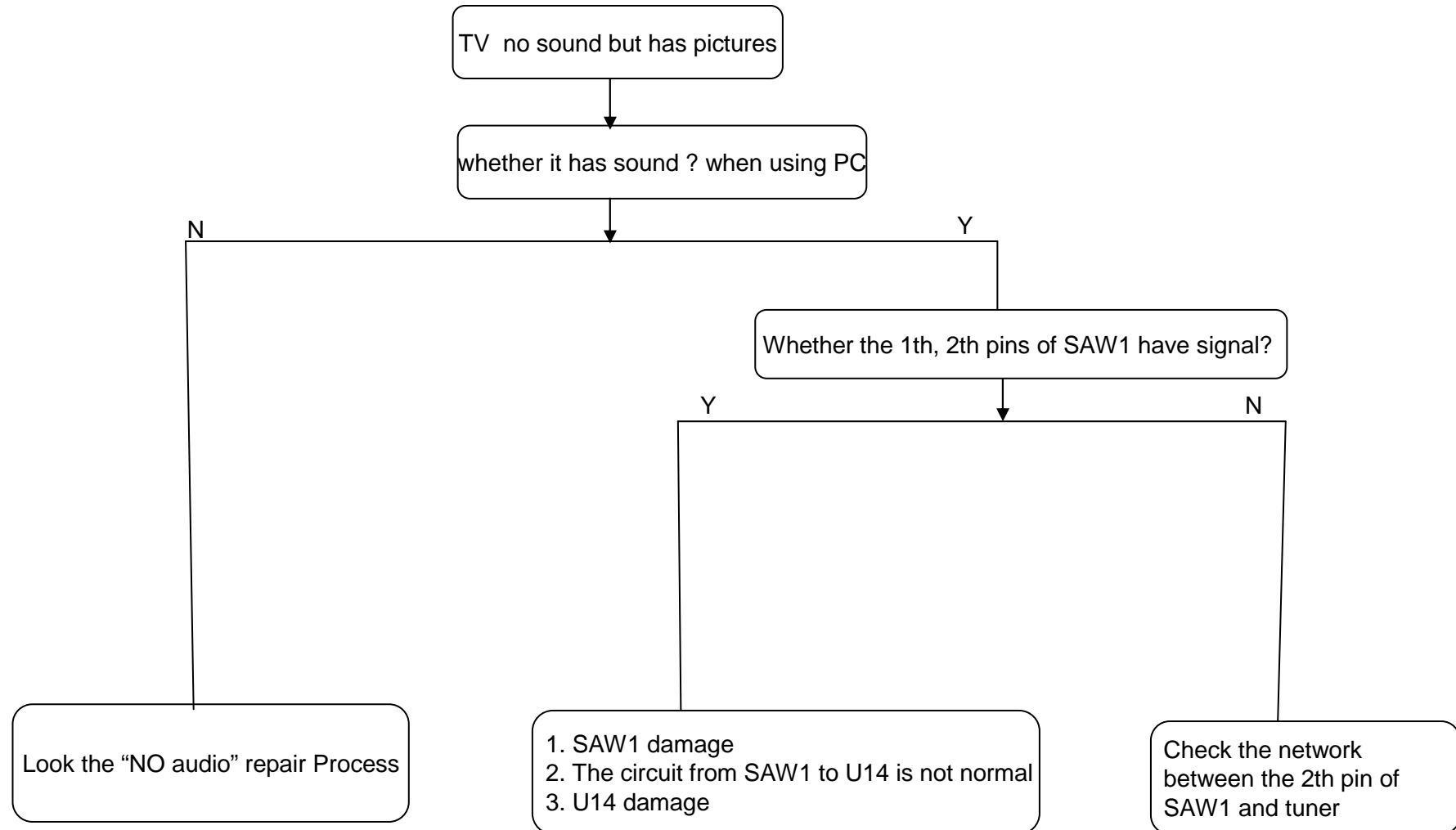
五、Audio Trouble (no sound)



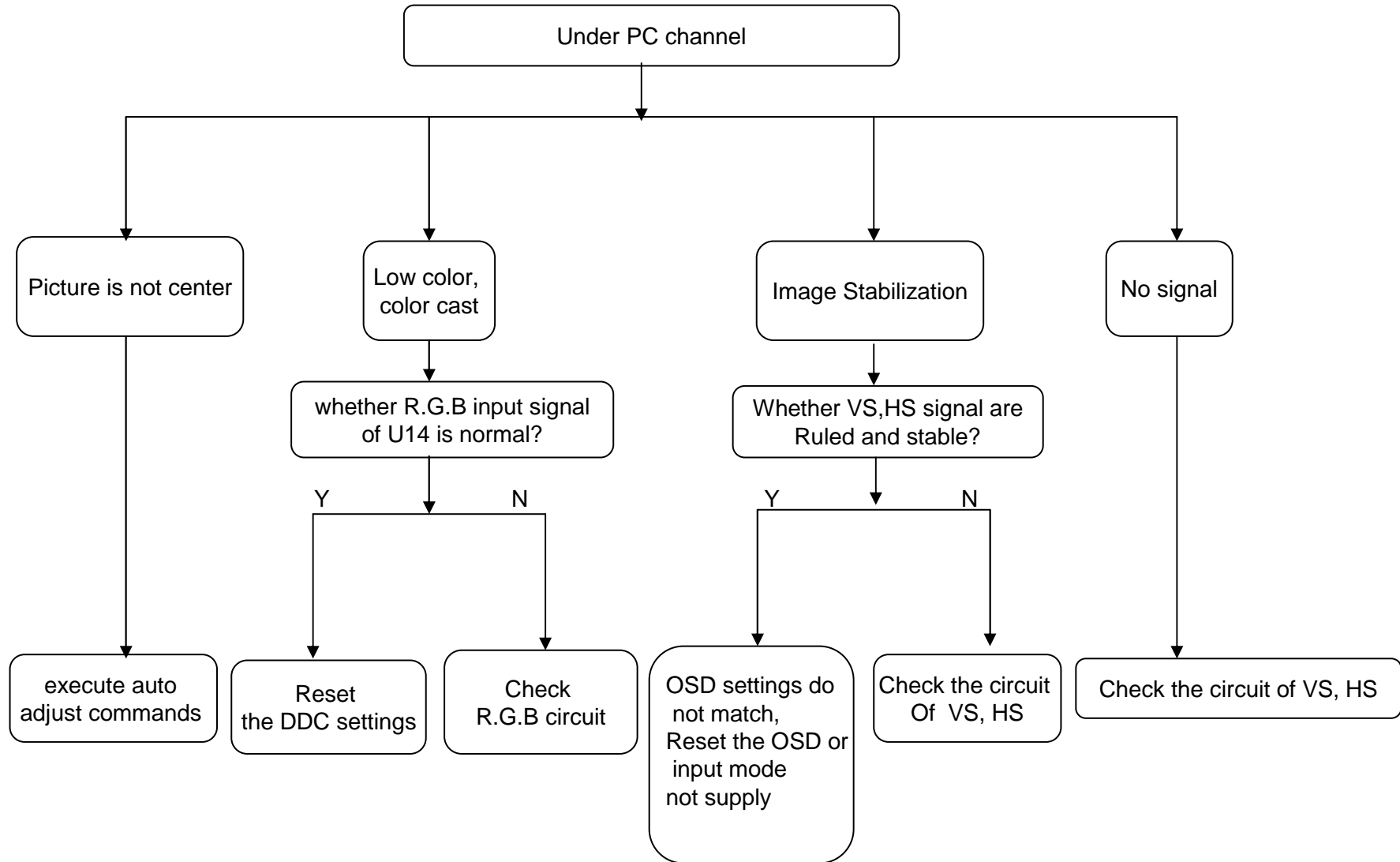
六、Function Trouble (TV video)



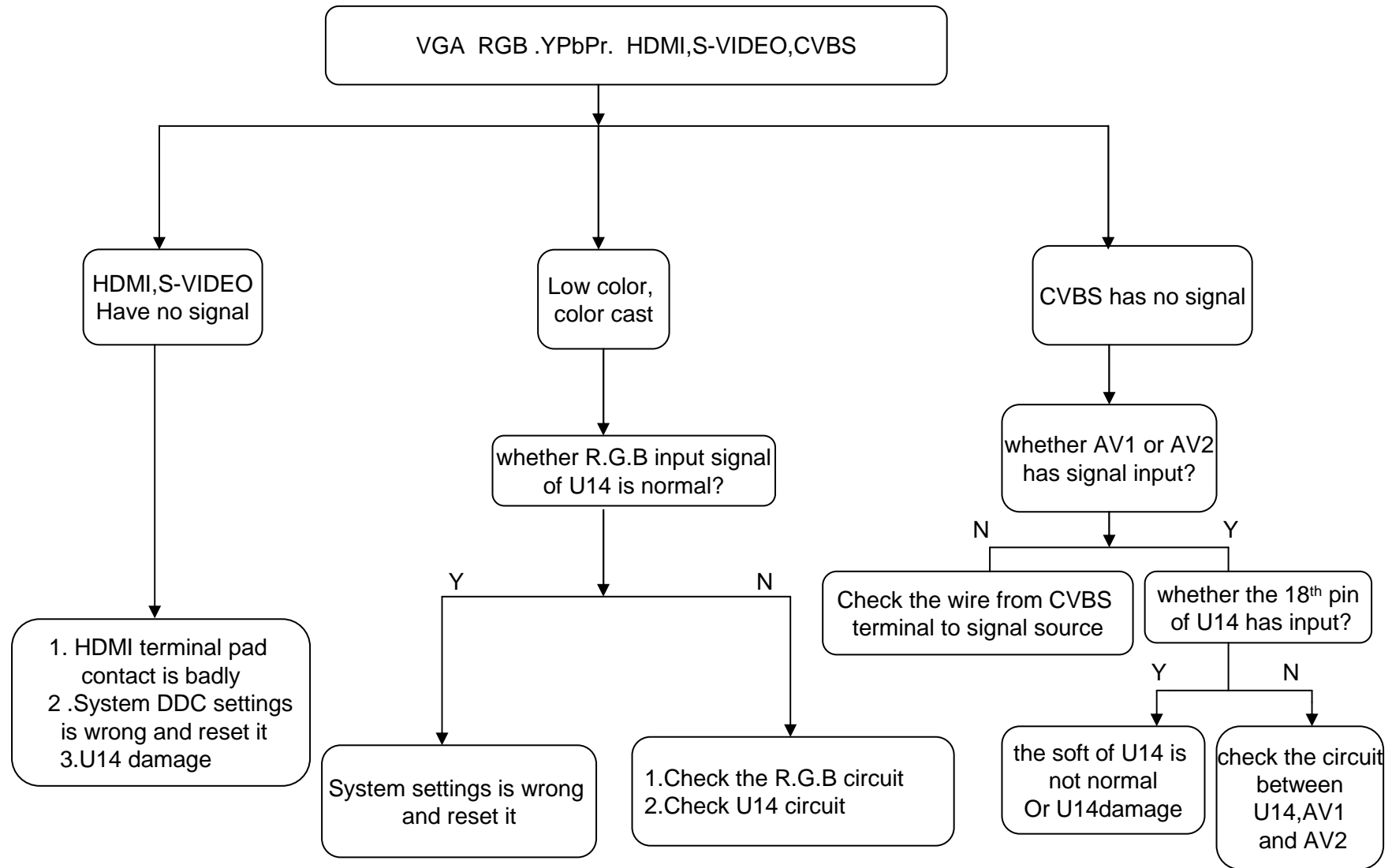
七、Function Trouble (TV audio)



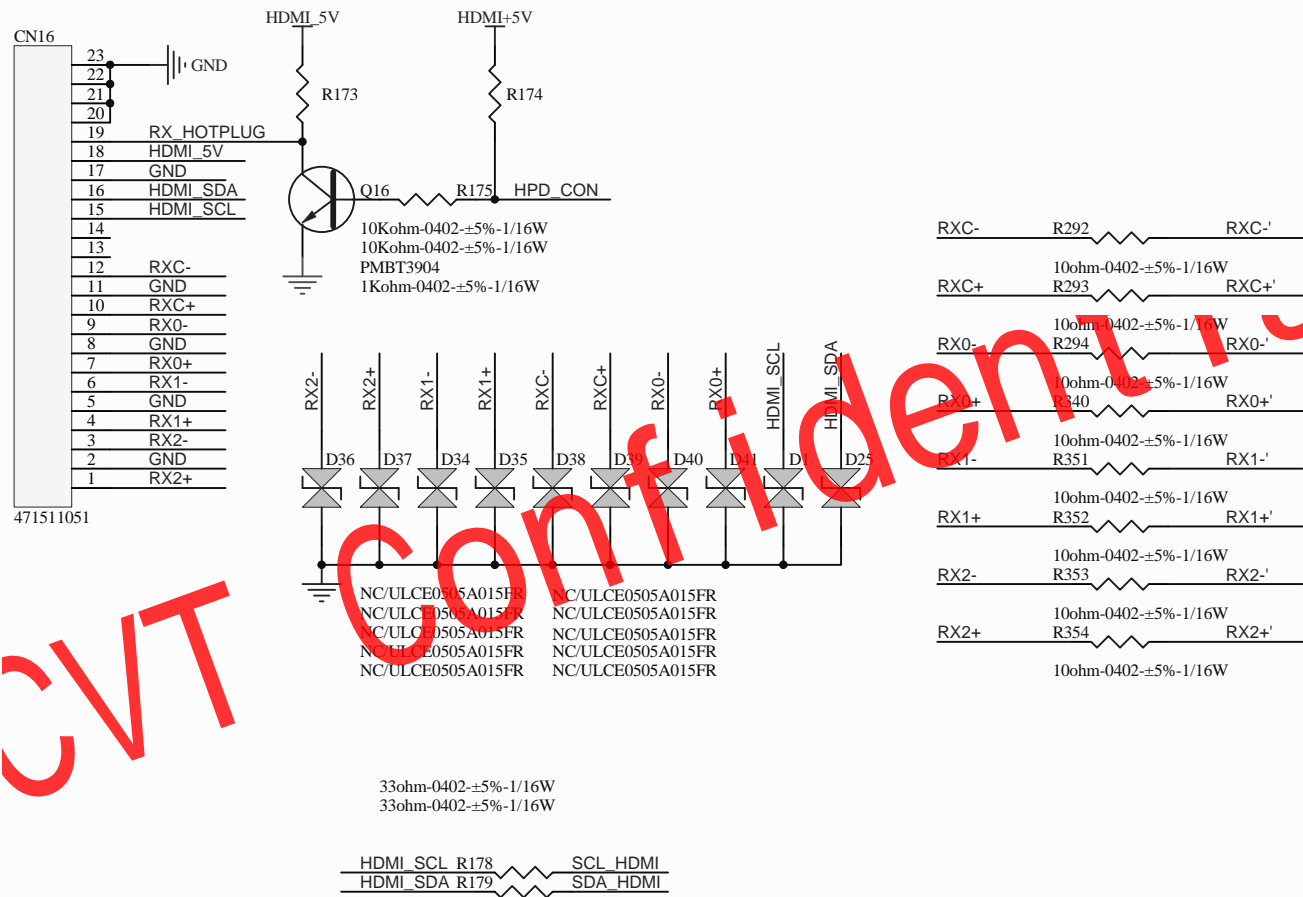
八、Function Trouble (PC)



九、Function Trouble (YPbPr、HDMI)

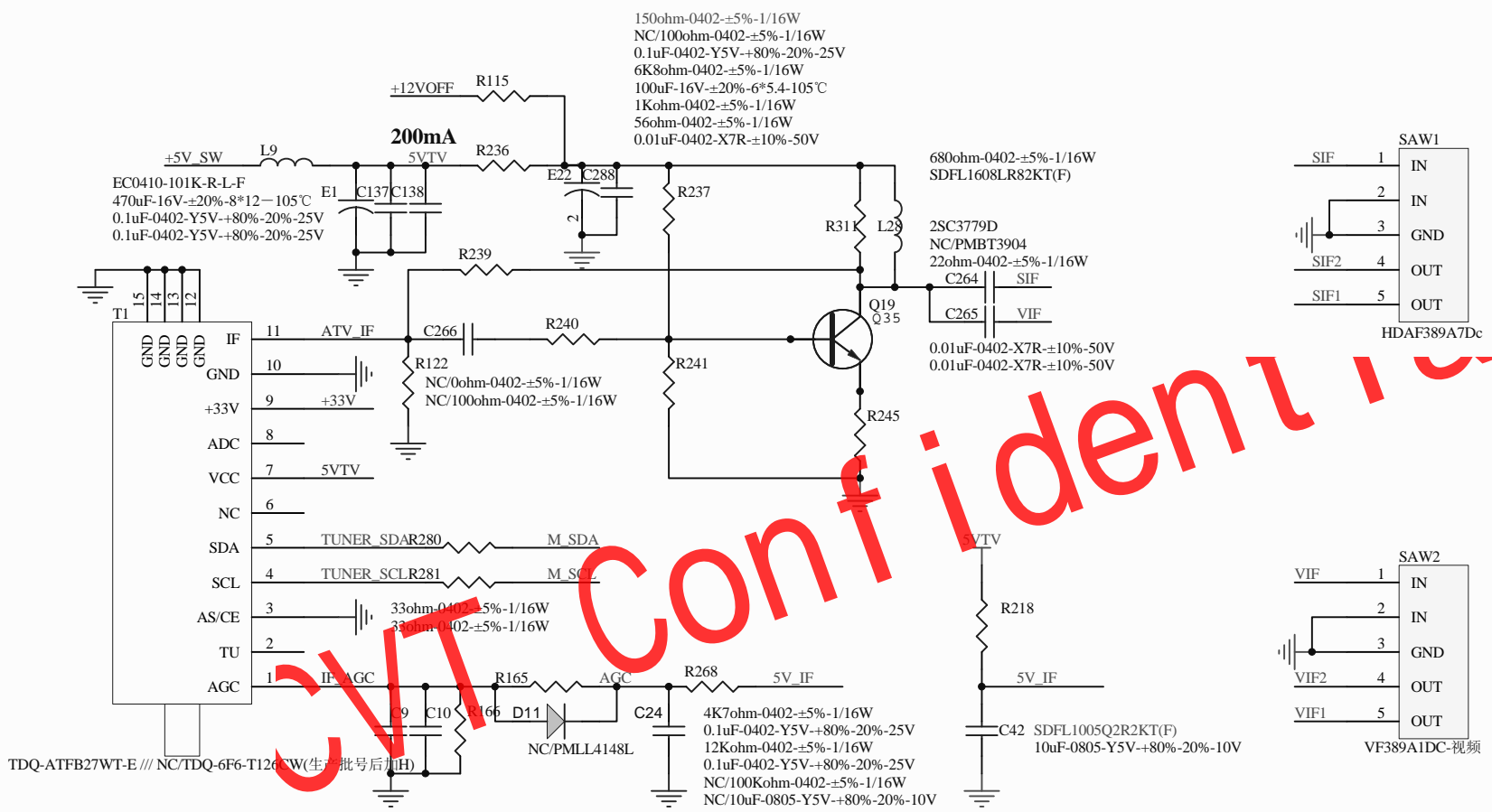


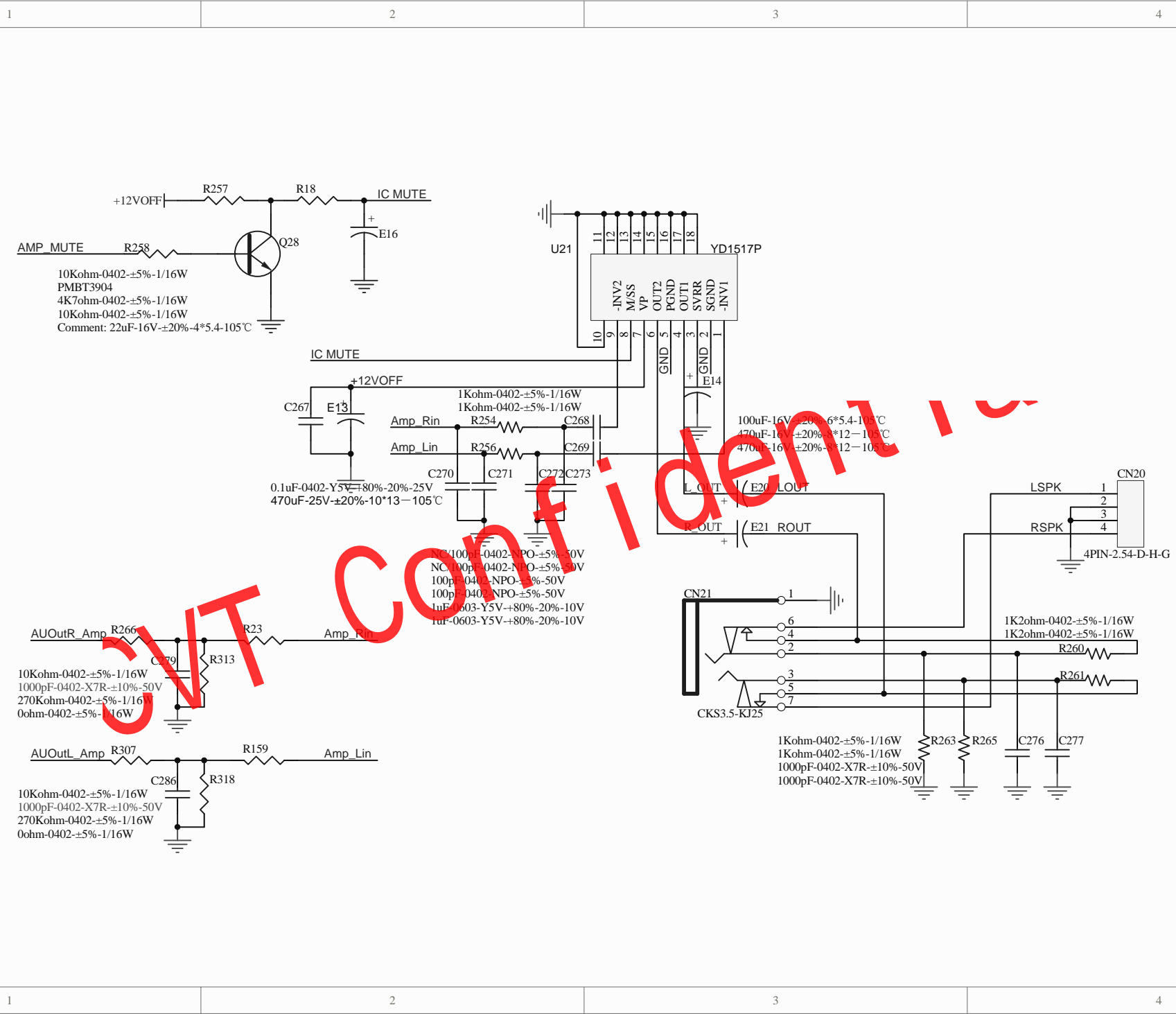
6. Schematics



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10Kohm-0402-±5%-1/16W
 PMBT3904
 4K7ohm-0402-±5%-1/16W
 10Kohm-0402-±5%-1/16W
 Comment: 22uF-16V-±20%-4*5.4-105°C

0.1uF-0402-Y5V-±80%-20%-25V
 470uF-25V-±20%-10*13-105°C

1Kohm-0402-±5%-1/16W
 1Kohm-0402-±5%-1/16W
 100pF-0402-NPO-±5%-50V
 NC-100pF-0402-NPO-±5%-50V
 100pF-0402-NPO-±5%-50V
 100pF-0402-NPO-±5%-50V
 1uF-0603-Y5V-±80%-20%-10V
 1uF-0603-Y5V-±80%-20%-10V

100uF-16V-±20%-6*5.4-105°C
 470uF-16V-±20%-6*12-105°C
 470uF-16V-±20%-6*12-105°C

10Kohm-0402-±5%-1/16W
 1000pF-0402-X7R-±10%-50V
 270Kohm-0402-±5%-1/16W
 0ohm-0402-±5%-1/16W

10Kohm-0402-±5%-1/16W
 1000pF-0402-X7R-±10%-50V
 270Kohm-0402-±5%-1/16W
 0ohm-0402-±5%-1/16W

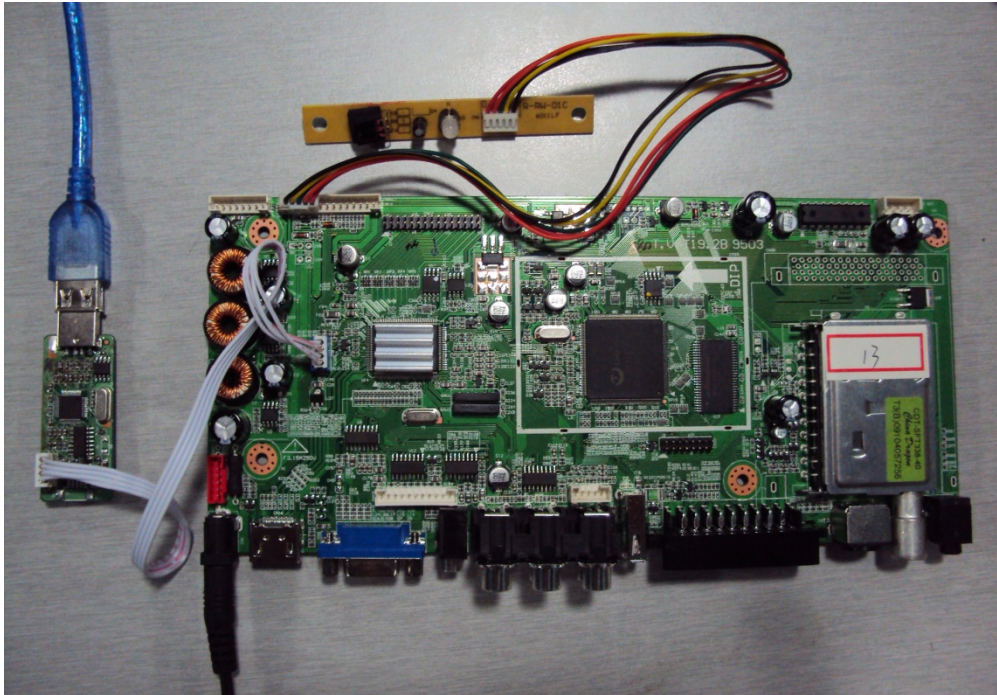
1Kohm-0402-±5%-1/16W
 1Kohm-0402-±5%-1/16W
 1000pF-0402-X7R-±10%-50V
 1000pF-0402-X7R-±10%-50V

7. Software upgrade

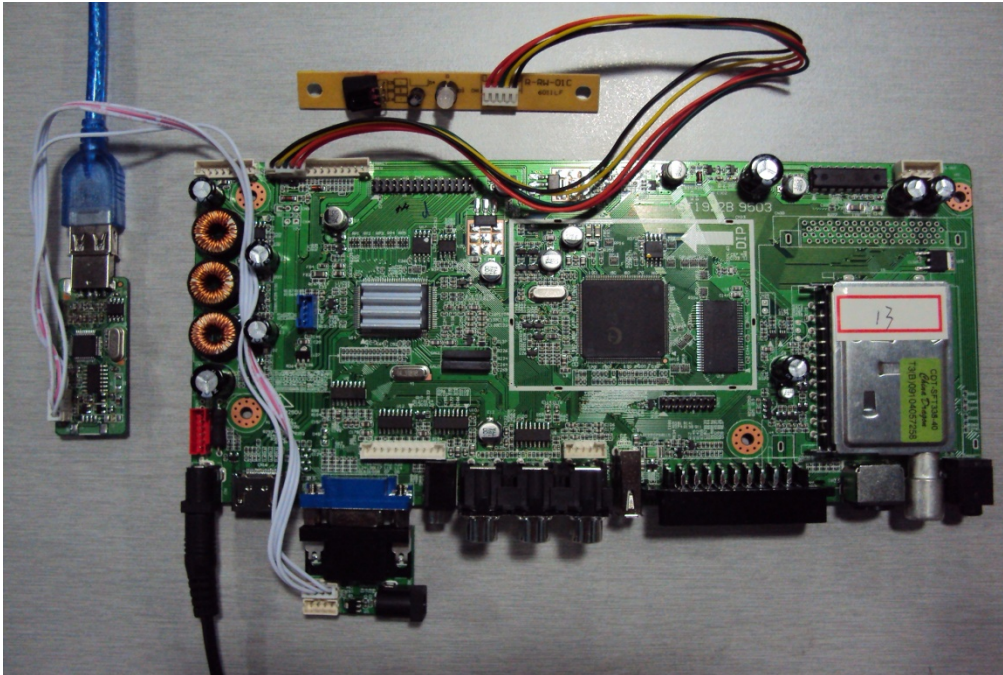
SW Upgrade Manual

1. Hardware connected:

- 1.1 Connect the USB ISP tool to USB port of PC, then install driver.
- 1.2 For board upgrade, Connect the USB ISP tool and blue CN18 of main board with 4pin cable as below picture.



- 1.3 For CBU upgrade, Connect the USB ISP tool to VGA board with 4pin cable, then plug the VGA board to main board.



Note: Please use the VGA upgrade method generally.

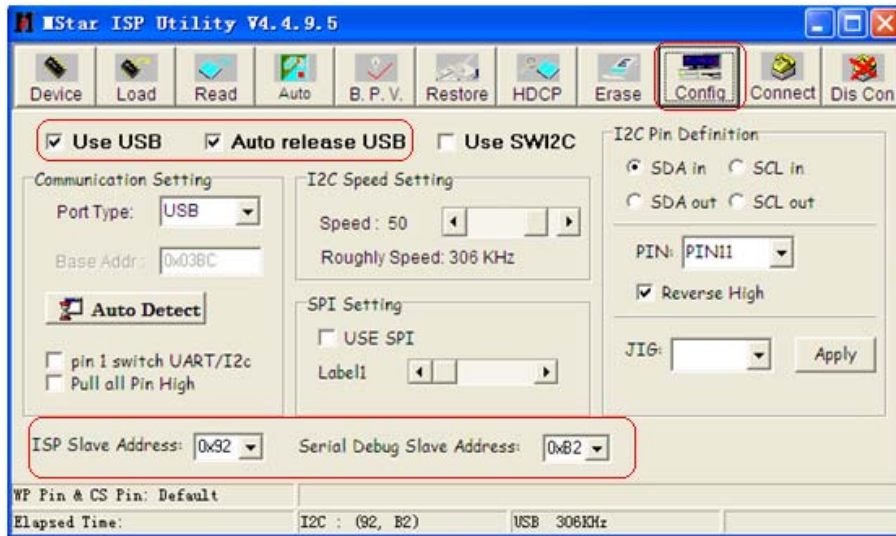
Please check carefully the connection of TXD and RXD between upgrade board and VGA board.

2. Upgrade step:

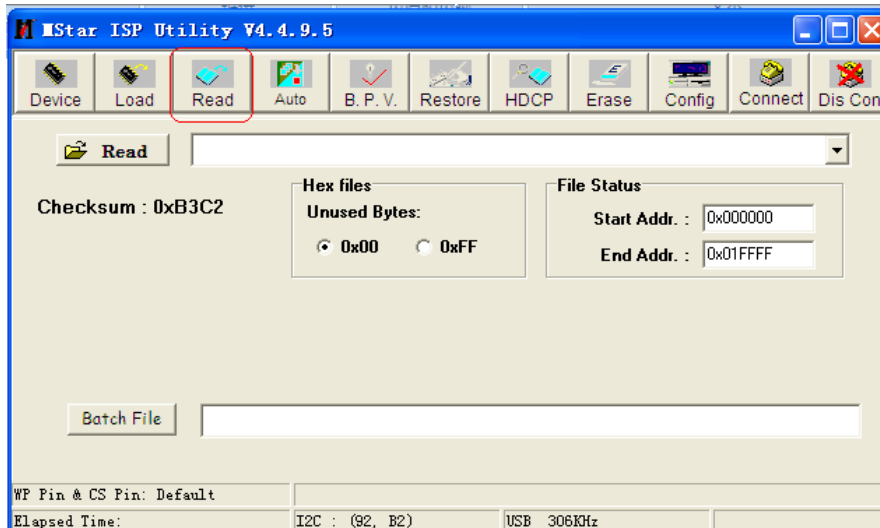
1. Run the ISP_Tool.exe on your computer as below picture.



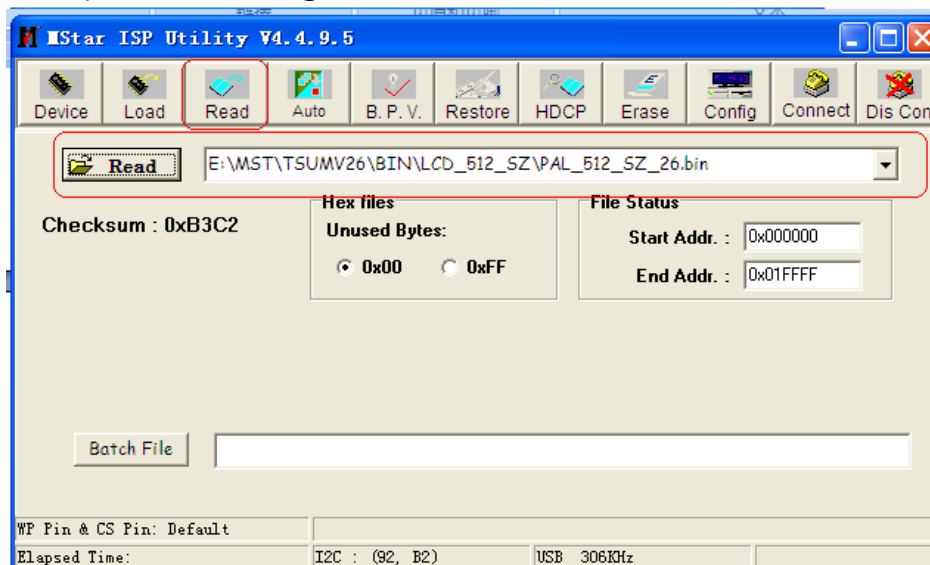
- 2.1 Check the Config parameter as below.



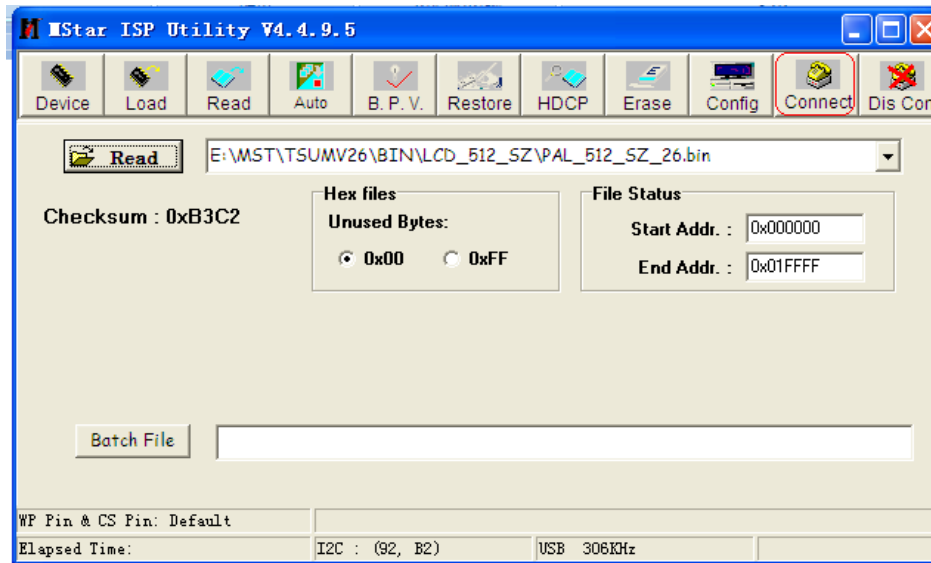
2.2 Press "Read" to choose burning file as below picture.



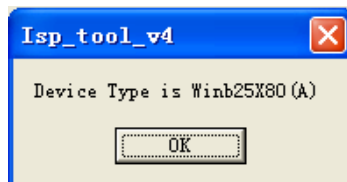
2.3 Open the burning file(*.bin).



2.4 Power on, press "Connect" to connect the main board.



2.4.1 If connect success, picture will be as below. Press "OK" continue.



2.4.2 If connect fail, picture will be as below. Press "OK" check.

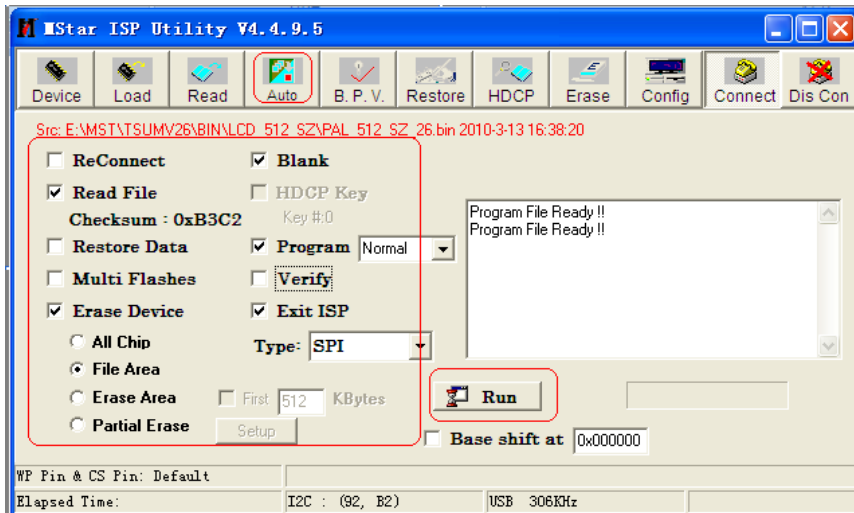


2.4.2.1 Check tool connect and driver install of USB ISP tool first.

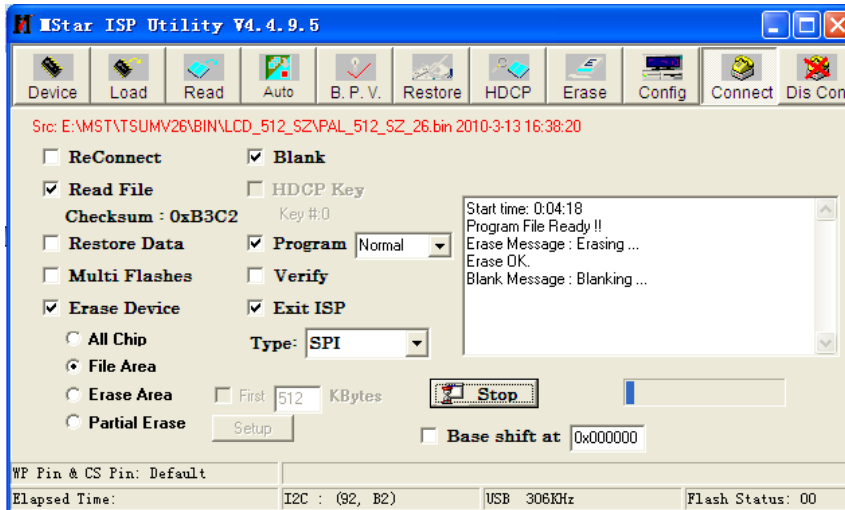
2.4.2.2 Check the power connect and power on.

2.4.2.3 Repress "Connect" retry

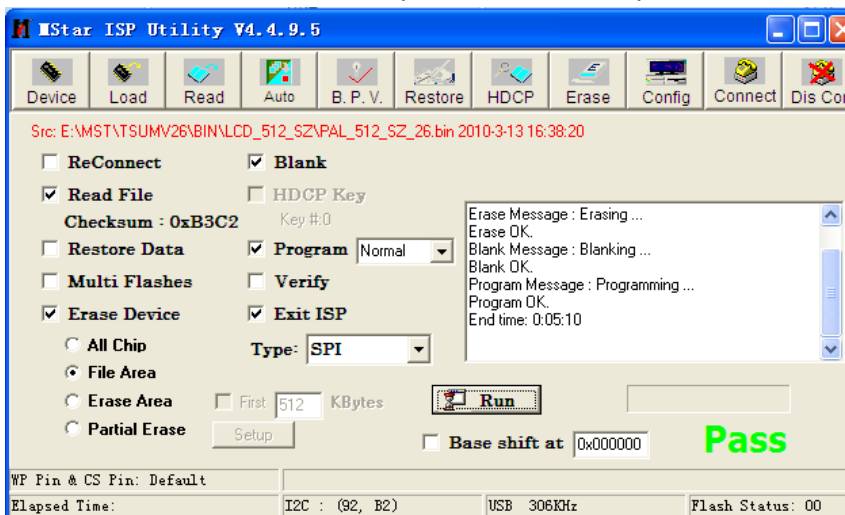
2.4.3 Press "Auto", choose parameter as below picture.



2.4.3.1 Burning, Please wait



2.4.3.2 Burn finished. Please power off, then power on.



2. If burn fail, please retry again from 2.4 step.

8. Service Part List

LOC	Part Code	PART NAME	DESCRIPTION
ZZ100	40SA240001	REMOTE CONTROL	SE-V26XB KA45
ZZ110	PTACPWG716	ACCESSORY AS	EX236E2BCFA
M861	40SA240008	MANUAL INSTRUCTION	SE-V26XB MANUAL INSTRUCTI
PWC1	40SA240006	CORD POWER	SE-V26XB 1 METER 2 PIN
ZZ120	PTBCSHG716	COVER BACK AS	EX236E2BCFA
M001	40SA240011	SCREW SELF TAPPING	SE-V26XB ST3X8
M002	40SA240013	SCREW SUNK	SE-V26XB M3X6
M003	40SA240011	SCREW SELF TAPPING	SE-V26XB ST3X8
M004	40SA240017	LED-REAR CABINET	SE-V26XB 23.6 LED-REAR
M005	40SA240009	LABEL PVC	SE-V26XB LABEL PVC
ZZ130	PTPKCPG716	PACKING AS	EX236E2BCFA
M001	40SA240033	PACKING BOX	SE-V26XB PACKING BOX
M002	40SA240034	BOX FOR ACCESSORY	SE-V26XB BOX FOR ACCESSOR
M003	40SA240035	POLYBAG FOR TV UNIT	SE-V26XB POLYBAG FOR TV U
M004	40SA240036	FOAM-1	SE-V26XB FOAM-1
M005	40SA240037	FOAM-2	SE-V26XB FOAM-2
M006	40SA240038	FOAM-3	SE-V26XB FOAM-3
ZZ140	PTCACAG716	CABINET AS	EX236E2BCFA
ADT1	40SA240007	ADAPTER AC	SE-V26XB 2PIN 12V 3.3A
M001	40SA240014	SCREW	SE-V26XB M4X10
M002	40SA240015	SCREW SELF TAPPING	SE-V26XB ST3X10
M003	40SA240020	SCREEN TABLET	SE-V26XB SCREEN TABLET
M004	40SA240021	STAND COVER	SE-V26XB STAND COVER
M005	40SA240022	STAND SUPPORT	SE-V26XB STAND SUPPORT
M006	40SA240030	RUBBER	SE-V26XB RUBBER
M007	40SA240031	SHAFT	SE-V26XB SHAFT
M008	40SA240032	FRONT CABINET CUSHION	SE-V26XB FRONT CABINET CU
P001	40SA240002	CABLE FFC	SE-V26XB A-0.5-12X400MM
P002	40SA240003	CABLE LVDS	SE-V26XB 22-3
P003	40SA240004	CABLES	SE-V26XB CABLES
V901	485EDDA240	LED PANEL	CMO V236H1-LE2
V902	4850M019NV	MODULE INVERTER	SE-V26XB SQD 605
ZZ200	PTFMSJG716	MASK FRONT AS	EX236E2BCFA
M001	40SA240010	SCREW SELF TAPPING	SE-V26XB ST3X6F
M002	40SA240011	SCREW SELF TAPPING	SE-V26XB ST3X8

M003	40SA240016	LED-FRONT CABINET	SE-V26XB 23.6 LED-FRONT C
M004	40SA240019	CONNECTING PLATE	SE-V26XB CONNECTING PLATE
ZZ210	PTSPPWG716	SPEAKER AS	EX236E2BCFA
SP01	40SA240005	SPEAKER	SE-V26XB 3073 5W 4 OHM
SP01A	40SA240012	SCREW SELF TAPPING	SE-V26XB ST2.5X8
SP01B	40SA240023	SPEAKER BRACKET	SE-V26XB SPEAKER BRACKET
SP01C	40SA240024	SPEAKER PAD	SE-V26XB SPEAKER PAD
SP02	40SA240005	SPEAKER	SE-V26XB 3073 5W 4 OHM
SP02A	40SA240012	SCREW SELF TAPPING	SE-V26XB ST2.5X8
SP02B	40SA240023	SPEAKER BRACKET	SE-V26XB SPEAKER BRACKET
SP02C	40SA240024	SPEAKER PAD	SE-V26XB SPEAKER PAD
ZZ290	PTMPMSG716	PCB MAIN MANUAL AS	EX236E2BCFA
M001	40SA240011	SCREW SELF TAPPING	SE-V26XB ST3X8
M002	40SA240010	SCREW SELF TAPPING	SE-V26XB ST3X6F
M003	40SA240010	SCREW SELF TAPPING	SE-V26XB ST3X6F
M004	40SA240012	SCREW SELF TAPPING	SE-V26XB ST2.5X8
M005	40SA240010	SCREW SELF TAPPING	SE-V26XB ST3X6F
M006	40SA240010	SCREW SELF TAPPING	SE-V26XB ST3X6F
M007	40SA240010	SCREW SELF TAPPING	SE-V26XB ST3X6F
M008	40SA240018	LED MAINBOARD BRACKET	SE-V26XB 23.6 LED- MAINBOA
M009	40SA240025	LED-DVD PLASTIC SEALED PLATE	SE-V26XB LED-DVD PLASTIC
M010	40SA240026	LED-PLASTIC SEALED PLATE	SE-V26XB LED-PLASTIC SEAL
M011	40SA240027	TERMINAL BLOCK SIDE	SE-V26XB TERMINAL BLOCK S
M012	40SA240028	TERMINAL BLOCK DOWN	SE-V26XB TERMINAL BLOCK D
M013	40SA240029	SEALED PVC	SE-V26XB SEALED PVC
PM001	4850M051PC	MODULE PCB	SE-V26XB EX236E2BCFA MAIN
ZZ310	PTSBSWG716	PCB SUB AS	EX236E2BCFA
PM001	4850M052PC	MODULE PCB	SE-V26XB EX236E2BCFA IR
ZZ320	PTAKSWG716	PCB A/V KEY AS	EX236E2BCFA
PM001	4850M053PC	MODULE PCB	SE-V26XB EX236E2BCFA KEY