

# Haier SERVICE MANUAL

**COLOR TV**

**Model No. : HL19KN1**

**CHASSIS: MST721**



## **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 dealt with in this service information by anyone else could result in serious injury or death.

©2009 (Qingdao Electronics limited company)

All rights reserved. Unauthorized copying and distribution is a violation of law.

# CONTENT

<b>Table of contents</b> .....	<b>2</b>
<b>1. General Information</b> .....	<b>3</b>
1.1. General Guidelines.....	3
1.2. Important Notice.....	3
1.3. How To Read This Service Manual.....	4
<b>2. Specifications</b> .....	<b>5</b>
<b>3. Location Of Controls And Components</b> .....	<b>7</b>
3.1 Board Location.....	7
3.2 Main Board.....	8
3.3 Power Board.....	12
3.4 Lcd Panel.....	13
<b>4. Disassemble And Assemble</b> .....	<b>14</b>
<b>5. Installation Instructions</b> .....	<b>19</b>
<b>6. Operation Instructions</b> .....	<b>24</b>
6.1 Front Panel Controls.....	24
6.2 Back Panel Controls.....	24
6.3 Universal Remote Controller.....	26
<b>7. Measurements And Adjustments</b> .....	<b>27</b>
<b>8. Electrical Parts</b> .....	<b>29</b>
8.1 Connective Wire Photo.....	29
8.2 Circuit Diagram.....	29
<b>9. Trouble Shooting</b> .....	<b>40</b>

# 1. General Information

## 1-1 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

## 1-2 Important notice

### 1-2-1. 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

### 1-2-2. 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

### 1-2-3. 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 electro Static discharge (ESD).

### 1-2-4. 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 repair of this product.

### 1-2-5. Use the genuine 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 manufacturer's specified parts shown in the parts list.



#### Safety Component

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


### 1-2-6. 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 portions 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.

#### Insuration Test

1.  Unplug the plug from the AC outlet.
  2.  Remove the antenna terminal on TV and turn on the TV.
  3. Insulation resistance between the cord plug terminals and the eternal exposure metal should be more than M ohm by using the 500V insulation resistance meter
  4. 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

### 1-2-7. Ordering Spare Parts

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

1. Model number and Version letter

The model number can be found on the back of each product and the Version letter can be found at the end of the serial number.

2. Part No. and Description

You can find them in your service manual.

### 1-2-8. Photo used in this manual

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

## 1-3. How to read this Service Manual

### 1-4-1. 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.

## 2. Specification

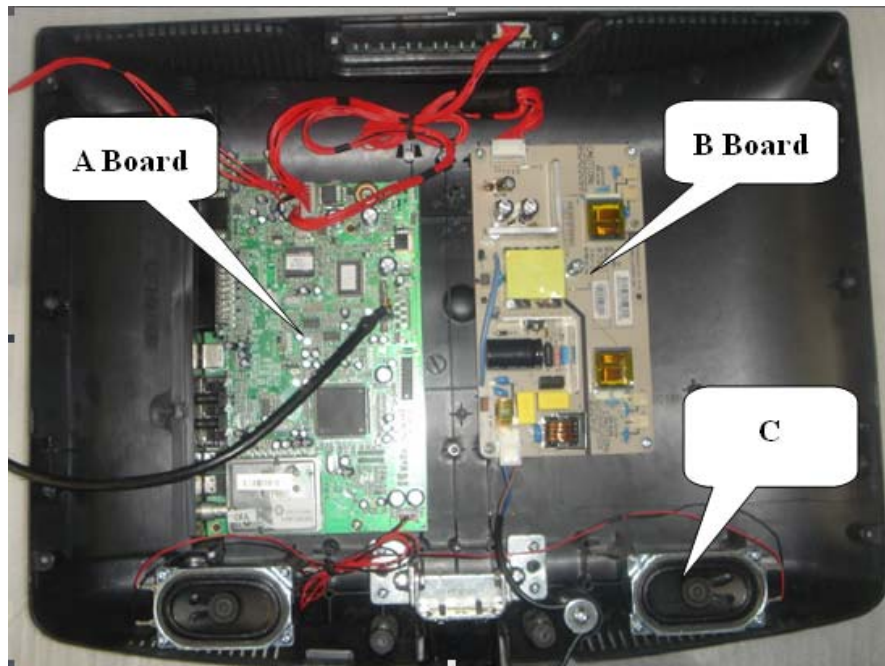
Model	HL19KN1
Screen size	18.5 inch
Aspect ratio	16:9
Brightness	400cd/m2
Contrast Ratio	800:1
Angel of view	H170/V160
Color display	16.7M
OSD language	English,
3D decoder	NO
2D comb filter	YES
DNR	YES
3A ENGINE	NO
Same picture split demo (SPD)	NO
double picture demo (DPD)	NO
 AV stereo	YES
Surrounding sound	NO
NICAM	YES
MUSIC/STANDARD/THEATRE/USE	MUSIC/THEATRE/PERSONAL/VOICE
Bass, Treble	YES
Balance	YES
BBE	NO
LIP SYNC	NO
Equalizer	NO
Earphone	YES
Mute	YES
AV input	NO
DVD terminal	NO
S-video jack	YES

Y P <sub>B</sub> P <sub>R</sub>	YES
Monitor out	NO
D-SUB jack	YES
DVI socket	NO
HDMI	YES
SCART jack	YES
Windows Menu	NO
pc automatic adjust	YES
movie mode	NO
Semitransparent menu	YES
ZOOM	NO
16:9 mode	YES
ADVANCED 4:3	YES
PIP	NO
POP	NO
PBP	NO
3A WINDOWS	NO
ATS	YES
Nation Select	YES
Channel List	NO
Input Frequency by Manual and Channel Number Input	NO
Lock	YES
TELTEXT	10
NO. of built-in speakers	2
NO. of outer speakers	No
Color display	240
NO. of preset channels	100
OSD language	English
Color system	PAL/SECAM
Audio system	DK,BG,I, LL'
Audio output power(Built-in)(W)	1.5W×2

Audio output power(outer)(W)	No
Total power input (W)	60W
Voltage range (V)	AC150V~AC240V
Power frequency (Hz)	50~60Hz
Time of sleep timer(MINS)	240Min
Net weight(KG)	4.67
Gross weight(KG)	5.73
Net dimension(MM)	471/189/411
Packaged dimension(MM)	530/225/460

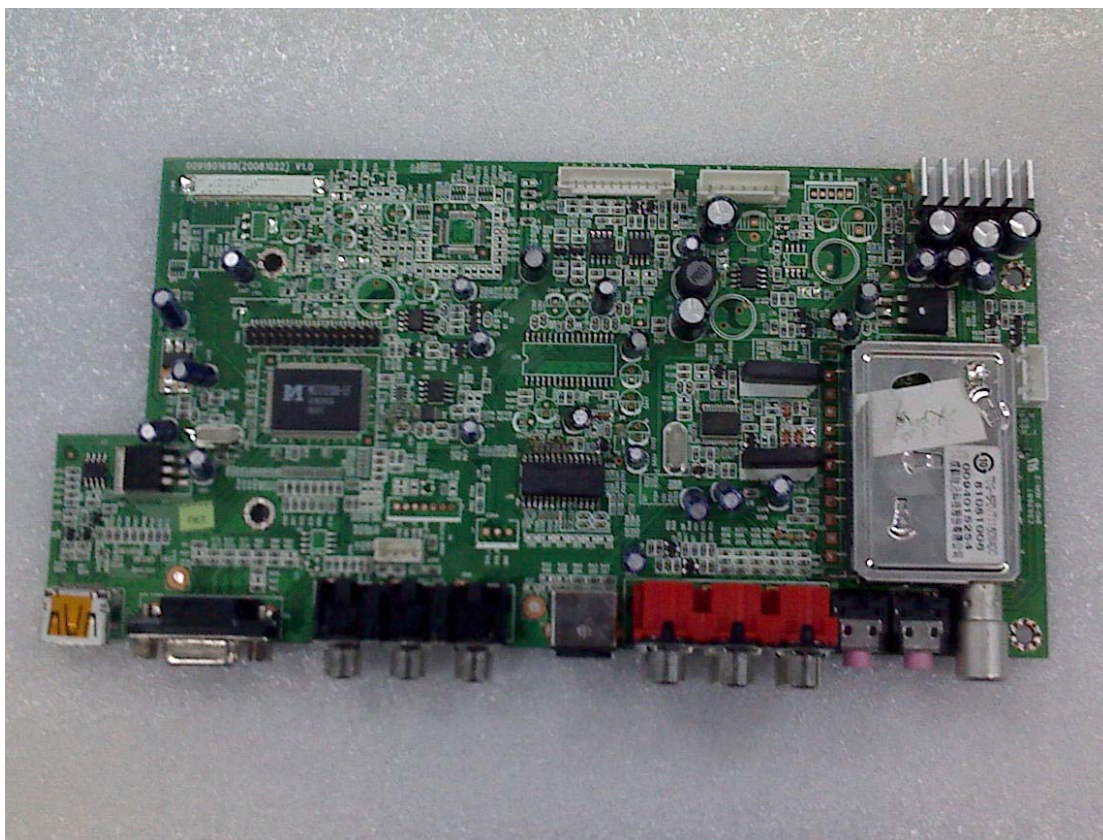
### **3. LOCATION OF CONTROLS AND COMPONENTS**

#### **3.1. Board Location**



No.	Parts number	Description
A Board		MainBoard Assembly
B Board		Power adaptor
C		Speaker

### 3.2.A.Board----MainBoard

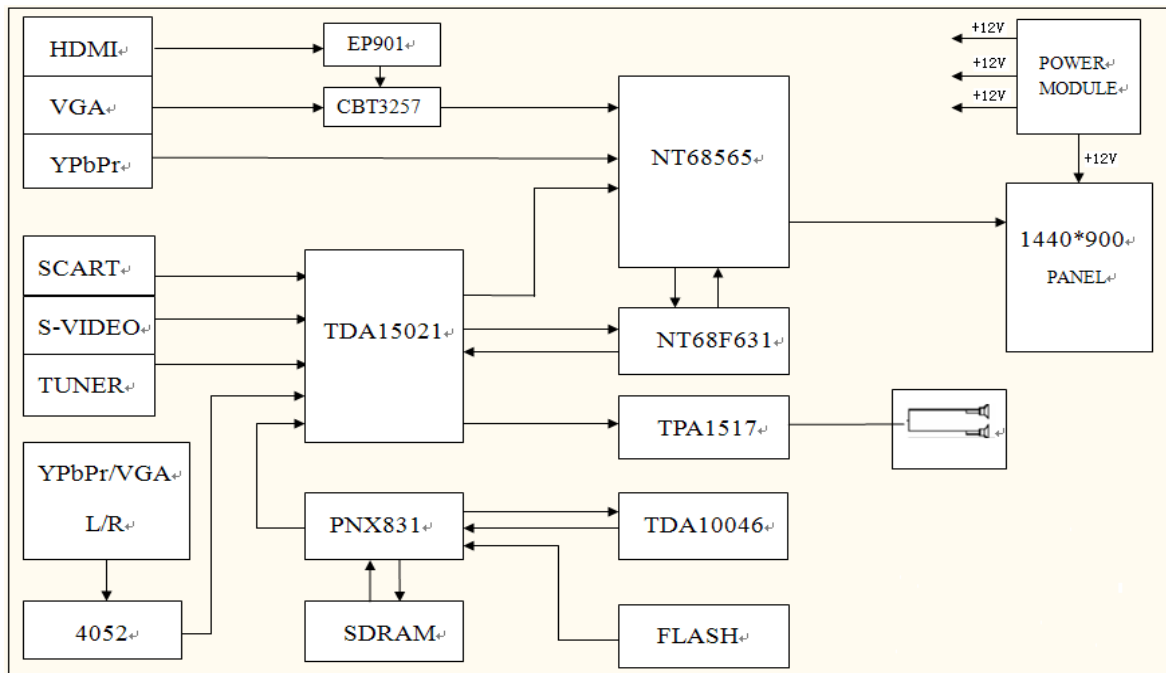


#### 3.2. 1 Function Description:

**Main Board:**

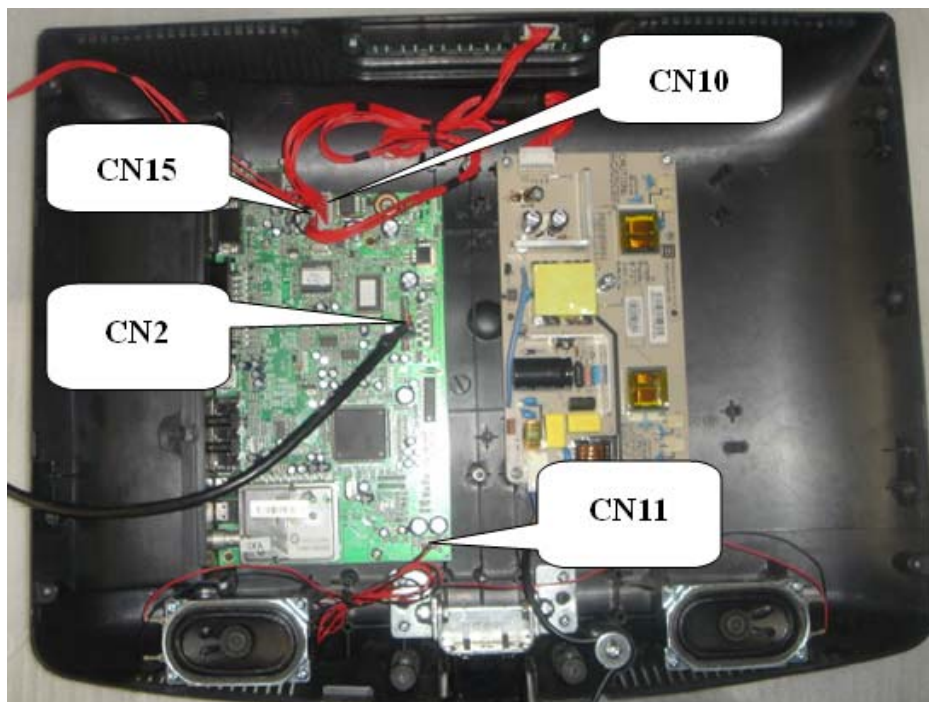


Process signal which incept from exterior equipment, then translate into signal that panel can display.



### 3.2.2 Connector definition

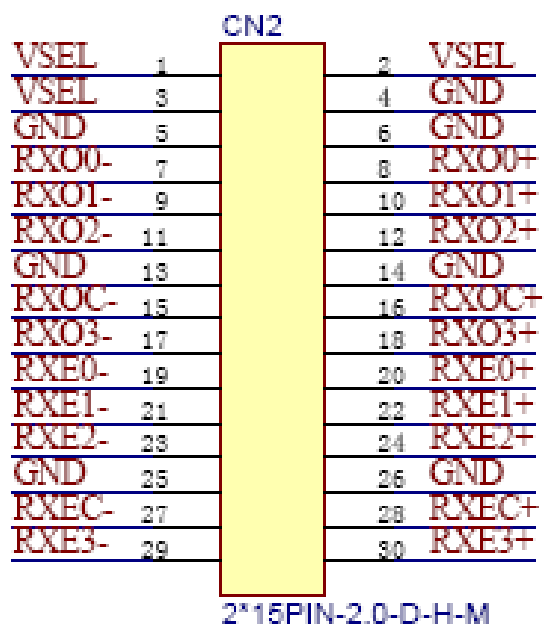
Main board connector



#### LCDS Connector (CN2)

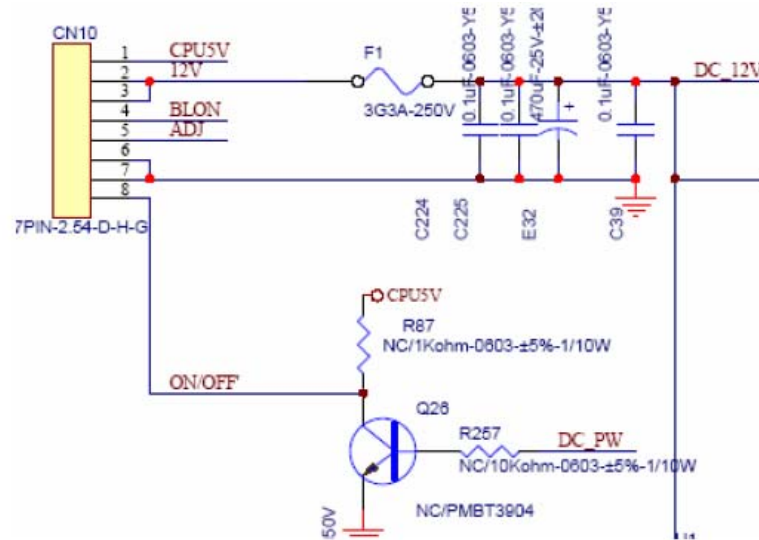
Pin number	Signal name	Description
1	LCD-VDD	Supply voltage to Panel
2	LCD-VDD	Supply voltage to Panel
3	LCD-VDD	Supply voltage to Panel
4	GND	Ground
5	GND	Ground

6	GND	Ground
7	RX00-	LVDS ODD 0 - Signal
8	RX00+	LVDS ODD 0 + Signal
9	RX01-	LVDS ODD 1 - Signal
10	RX01+	LVDS ODD 1 + Signal
11	RX02-	LVDS ODD 2 - Signal
12	RX02+	LVDS ODD 2 + Signal
13	GND	Ground
14	GND	Ground
15	RX0C-	LVDS ODD Clock - Signal
16	RX0C+	LVDS ODD Clock + Signal
17	RX03-	LVDS ODD 3 - Signal
18	RX03+	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	GND	Ground
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



### Power supply and Inverter Connector (CN10)

Pin number	Signal name	Description
1	ON/OFF	Preparative switch control
2	GND	Ground
3	GND	Ground
4	ADJ	INVERTER Lightness Adjust
5	BLON	INVERTER Switch Control
6	+12V	12V Power
7	+12V	12V Power



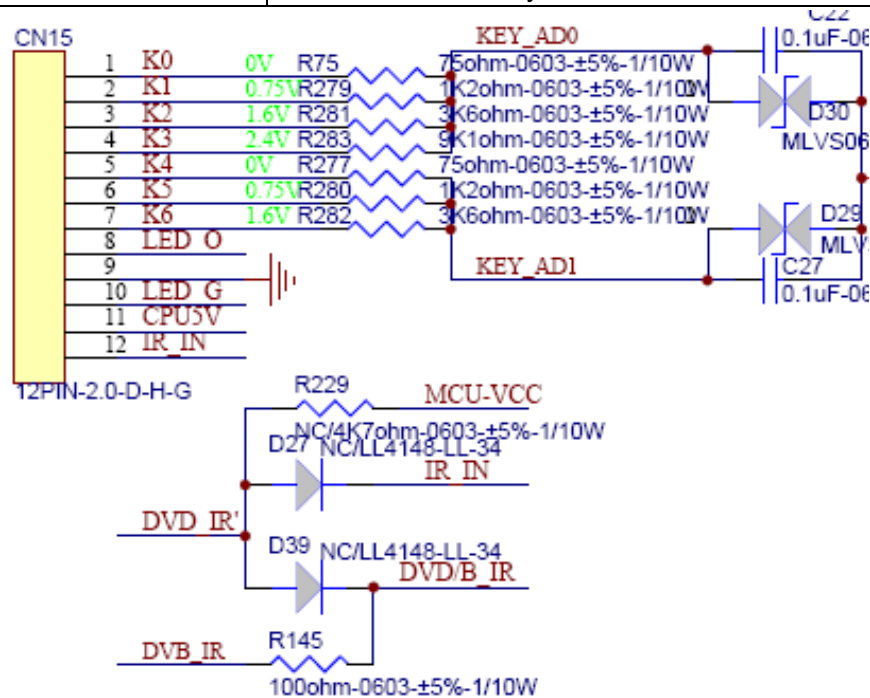
### Audio Output Connector (CN11)

Pin number	Signal name	Description
1	LSPK	Left Audio Output
2	GND	Ground
3	GND	Ground
4	RSPK	Right Audio Output

### Remote Board and Key board Connector (CN15)

Pin number	Signal name	Description
1	IR_IN	IR
2	CPU5V	5V Power
3	LED_G	Green Indicator light
4	GND	Ground
5	LED_R	Red Indicator light
6	K6	Key Connector POWER

7	K5	Key Connector MENU
8	K4	Key Connector P-
9	K3	Key Connector P+
10	K2	Key Connector V-
11	K1	Key Connector V+
12	K0	Key Connector SOURCE



### 3.3B Board----- (Power Board)

Supply power for Main board and Panel



#### Power supply and Inverter Connector (CN6)

Pin number	Signal name	Description
1	ON/OFF	Preparative switch control
2	GND	Ground
3	GND	Ground
4	ADJ	INVERTER Lightness Adjust
5	BLON	INVERTER Switch Control

6	+12V	12V Power
7	+12V	12V Power

**AC150V~AC240V Input (CN6)**

**Power supply for panel (CN2. CN3. CN4. CN5.)**

### 3.4. LCD PANEL.



Pin No	Symbol	Function	Remark
1	RXO0-	Negative Transmission data of Pixel 0 (ODD)	
2	RXO0+	Positive Transmission data of Pixel 0 (ODD)	
3	RXO1-	Negative Transmission data of Pixel 1 (ODD)	
4	RXO1+	Positive Transmission data of Pixel 1 (ODD)	
5	RXO2-	Negative Transmission data of Pixel 2 (ODD)	
6	RXO2+	Positive Transmission data of Pixel 2 (ODD)	
7	GND	Power Ground	
8	RXOC-	Negative Transmission Clock (ODD)	
9	RXOC+	Positive Transmission Clock (ODD)	
10	RXO3-	Negative Transmission data of Pixel 3 (ODD)	
11	RXO3+	Positive Transmission data of Pixel 3 (ODD)	
12	RXE0-	Negative Transmission data of Pixel 0 (EVEN)	
13	RXE0+	Positive Transmission data of Pixel 0 (EVEN)	
14	GND	Power Ground	
15	RXE1-	Negative Transmission data of Pixel 1 (EVEN)	
16	RXE1+	Positive Transmission data of Pixel 1 (EVEN)	
17	GNG	Power Ground	
18	RXE2-	Negative Transmission data of Pixel 2 (EVEN)	
19	RXE2+	Positive Transmission data of Pixel 2 (EVEN)	
20	RXEC-	Negative Transmission Clock (EVEN)	
21	RXEC+	Positive Transmission Clock (EVEN)	
22	RXE3-	Negative Transmission data of Pixel 3 (EVEN)	
23	RXE3+	Positive Transmission data of Pixel 3 (EVEN)	
24	GND	Power Ground	Note 1
25	(CE)	LCD internal use only	Internal Use
26	(CTL)		Internal Use
27	NC	No. Connection	
28	VDD	Power Supply: +5V	
29	VDD		
30	VDD		

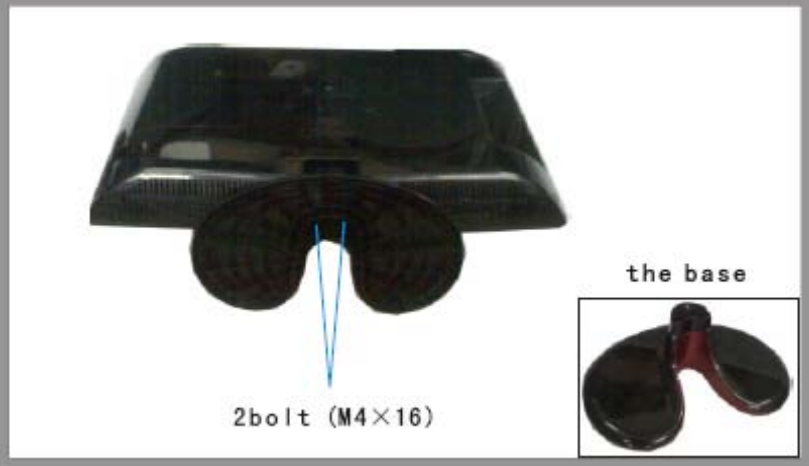
## 4. DISASSEMBLE AND ASSEMBLE

# HL19KN1 KNOCKED-DOWN SHOW

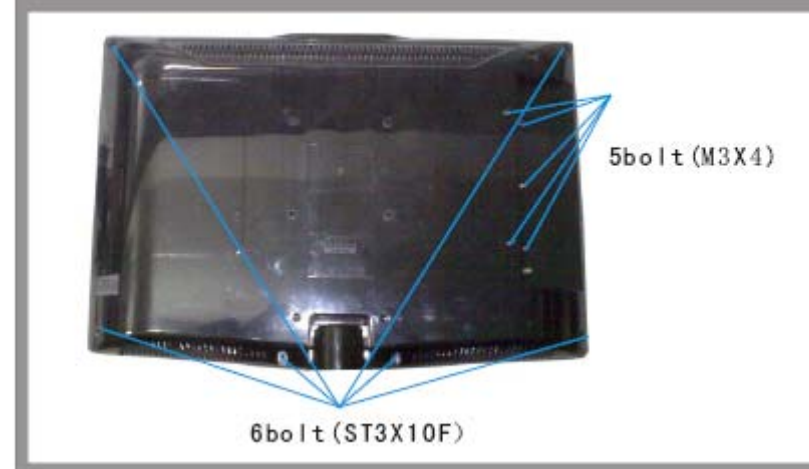
## 1.1 Backside



## 1.2 Tearing down the base



## 1.3 Tearing down the plastic back Cabinet



#### 1.4 Tearing down the terminal board



2bolt (ST3X8F)

#### 1.5 Tearing down the plastic front Cabinet-1



Reversing TV and opening the plastic front Cabinet

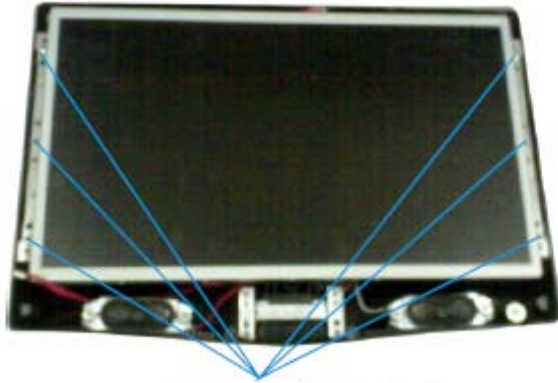
#### 1.6 Tearing down the plastic front Cabinet-2



pulling out the remote control wire

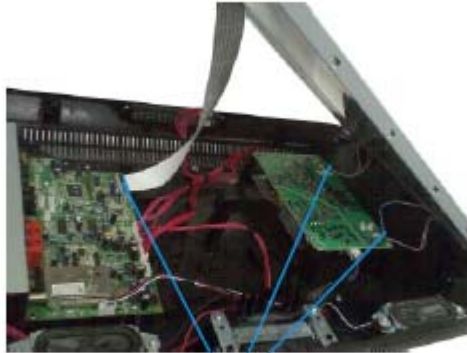


### 1.7 Tearing down the lcd panel-1



screw off 6 bolt(ST4X12F)

### 1.8 Tearing down the lcd panel-2



Pulling out the LVDS wire and 4 inverter wires , then take off the panel

### 2.1 Tearing down the lcd panel-3



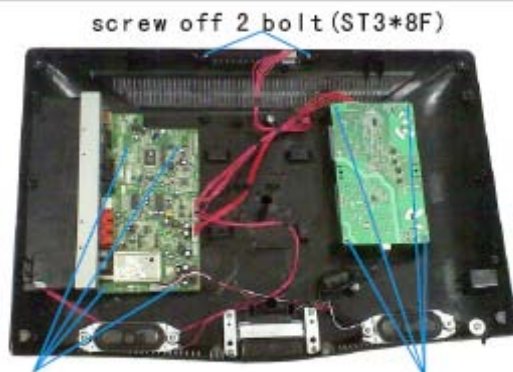
2 bolt (M3\*8) (zygomorphous)

## 2.2 Tearing down 2 speakers



screwing off 4 bolt (ST3\*12),  
then take off the speaker

## 2.3 Tearing down the mainboard and the power supply board



screw off 2 bolt (ST3\*8F)

screw off 4 bolt (ST3\*8F)    screw off 4 bolt (ST3\*10F)

## 2.4 Tearing down the remote control board



1 bolt (ST3\*12)

## 2.5 Circuit-1



Mainboard

# 5. INSTALLATION INSTRUCTIONS

## Accessories



Remote Control



User Manual



Battery



Audio wire

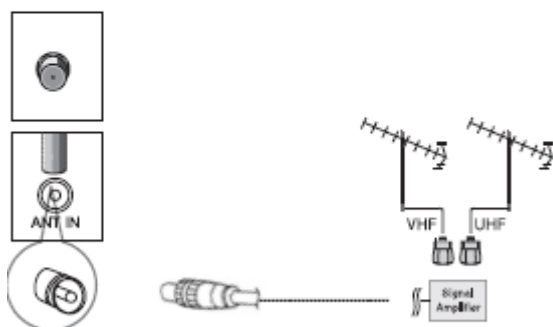
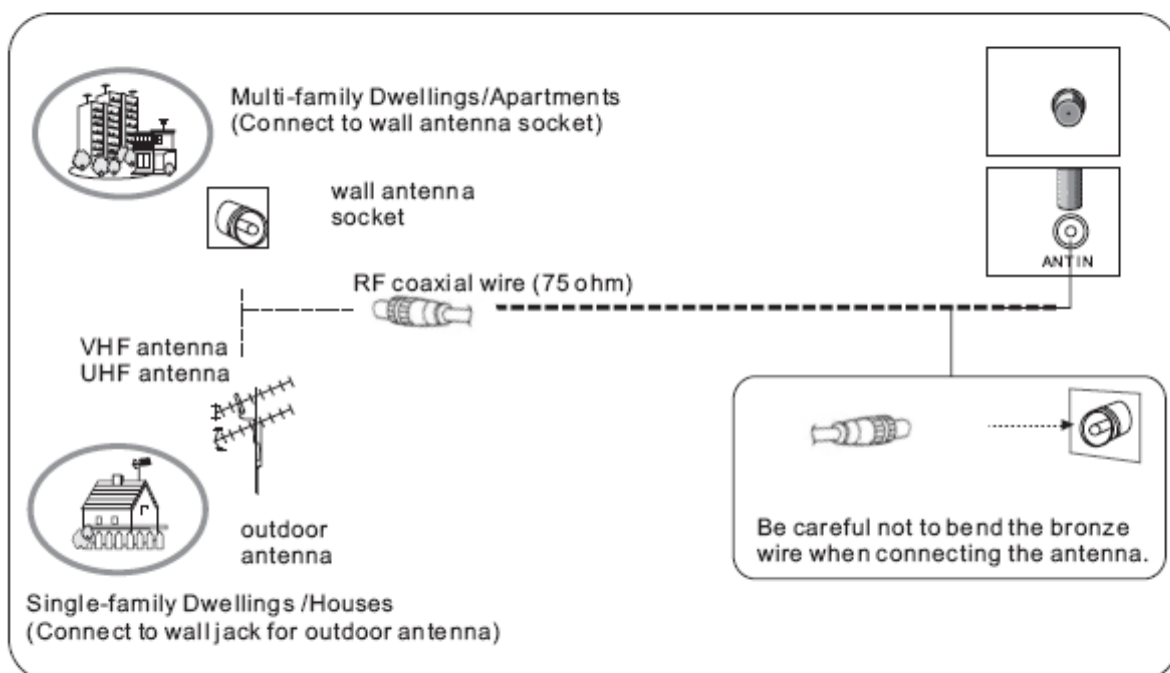
## Grounding

Ensure that you connect the grounding / earth wire to prevent possible electric shock. If grounding methods are not possible, have a qualified electrician install a separate circuit breaker. Do not try to ground the unit by connecting it to telephone wires, lightening rods, or gas pipes.

## External Equipment Connections

### Antenna Connection

- Antenna or Cable Service with a Cable Box Connections
- For optimum picture quality, adjust antenna direction if needed.



- To improve picture quality in a poor signal area, purchase and install a signal amplifier.
- If the antenna needs to be split for two TV' s, install a "2-Way Signal Splitter" in the connections.
- If the antenna is not installed properly, contact your dealer for assistance.

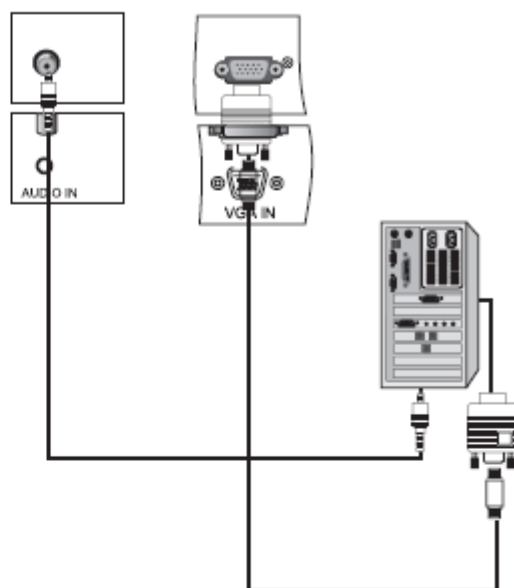
**NOTE:** All cables shown are just for example.

## VGA Input

You can use your LCD-TV as a monitor for your personal computer using a VGA cable (not supplied).

### Connection and use steps:

1. Read the user guide supplied with your computer and ensure that it has a VGA connector;
2. Make sure that the power of the LCD-TV and the PC are off;
3. Connect a D type 15-pin VGA interface cable (not supplied) to the VGA video interface connector on the PC. Then connect the other end to the PC video interface connector on the back of the LCD-TV. Tighten the screws on the VGA connectors once they are firmly connected, connect the audio cable (not supplied) to the audio input on the back of your LCD-TV;
4. Turn on the power of the LCD-TV first, and then turn on the power of the PC;
5. Press the **SOURCE** button to set the video input mode of the LCD-TV to PC;
6. Check the image on your TV. There may be noise associated with the resolution, vertical pattern, contrast or brightness in PC mode. If noise is present, change the PC mode to another resolution, change the refresh rate to another rate or adjust the brightness and contrast on the menu until the picture is clear. If the refresh rate of the PC graphic card cannot be changed, change the PC graphic card or consult the manufacturer of the PC graphic card.



Mode	Resolution	Line frequency (KHz)	Frame frequency (Hz)
VGA	640*480	31.5KHz	60Hz
SVGA	800*600	37.9KHz	60Hz
XGA	1024*768	48.4KHz	60Hz

Note: All above listed are subject to VESA Criteria.

## YPbPr Input

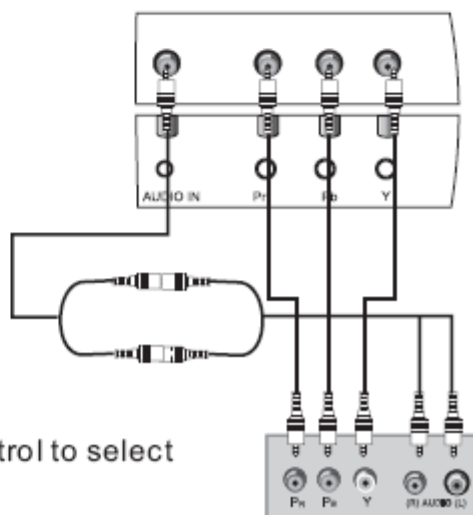
### How to connect

Connect the DVD video outputs (Y, PB, PR) to the COMPONENT(Y, Pb, Pr) IN socket on the TV and connect the DVD audio outputs to the AUDIO IN jacks on the TV, as shown in the figure.

**NOTE:** If your DVD player does not have component video output, use S-Video.

### How to use

1. Turn on the DVD player, insert a DVD.
2. Use the **SOURCE** button on the remote control to select



COMPONENT (If connected to S-VIDEO, select the S-VIDEO external input source.)

3. Refer to the DVD player's manual for operating instructions.

### Component Input ports

To get better picture quality, connect a DVD player to the component input ports as shown below.

Component ports on the TV	Y	P <sub>B</sub>	P <sub>R</sub>
------------------------------	---	----------------	----------------

Video output ports on DVD player	Y	P <sub>B</sub>	P <sub>R</sub>
	Y	B-Y	R-Y
	Y	Cb	Cr
	Y	P <sub>B</sub>	P <sub>R</sub>

### S-VIDEO Input

- To avoid picture noise (interference), leave an adequate distance between the VCR and TV

### Connection and use steps:

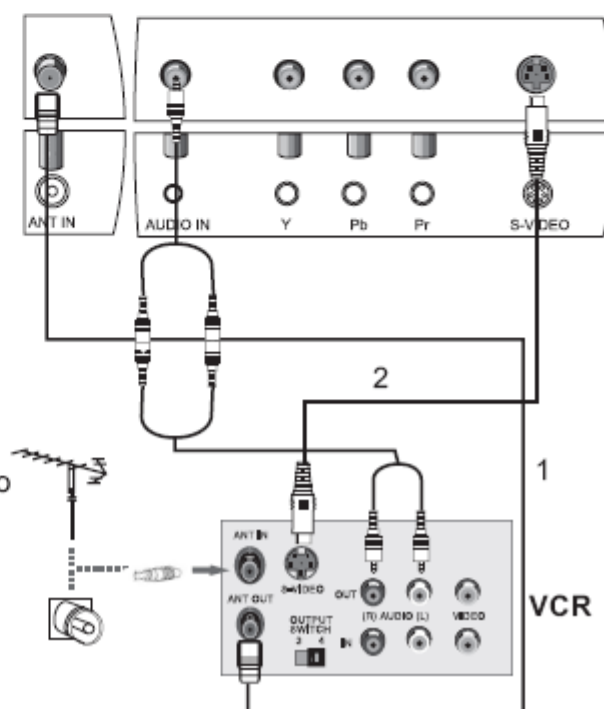
1. Read the user guide supplied with your AV devices and ensure that it has S-Video connectors;
2. Make sure that the power of the LCD-TV and the AV device are switched off;

### Connection Option 1

Set VCR output switch to 3 or 4 and then tune TV to the same channel number.

### Connection Option 2

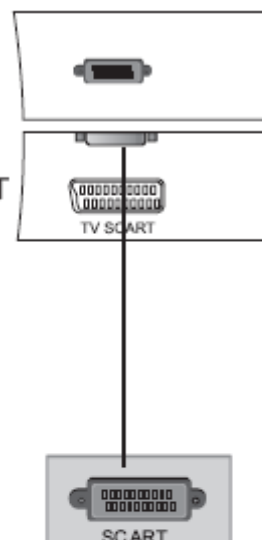
1. Connect the audio and S-VIDEO cables from the VCR's output jacks to the TV input jacks, as shown in the figure.
2. Insert a video tape into the VCR and press PLAY on the VCR. (Refer to the VCR owner's manual.)
3. Turn on the power of the LCD-TV first ; and then turn on the power of the AV device;
4. Press the **SOURCE** button to set the video input mode of the LCD-TV to S-VIDEO mode .





## SCART Input

1. Connect the scart lead from the external device(DVD players, settop boxes or game consoles, to the TV SCART socket.
2. Press **SOURCE** to select SCART mode.
3. Press Play button on external equipment and it should appear on the screen.



External equipment

## HDMI Input

### HDMI Devices

Connect the cable from the HDMI devices to the TV HDMI, as shown in the figure.

### How to use

1. Select the HDMI source by using the **SOURCE** button on the remote control.
2. Operate the corresponding external equipment. Refer to external equipment operating guide.



HDMI Devices

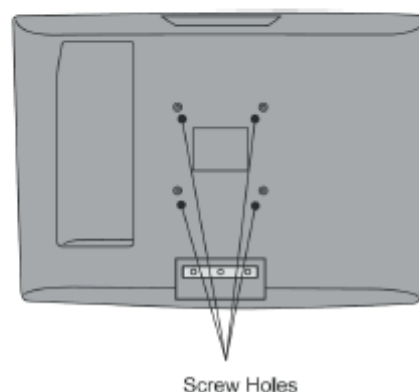
Note: The audio cable included with the TV should be used when connected with PC/ COMPONENT/S-VIDEO.

## Wall Mounting

Use 4 machine screws(M4x8mm not included) to mount the TV on the Bracket(not included)

For the Wall Bracket-Refer to the user instructions supplied with the wall bracket(not included)

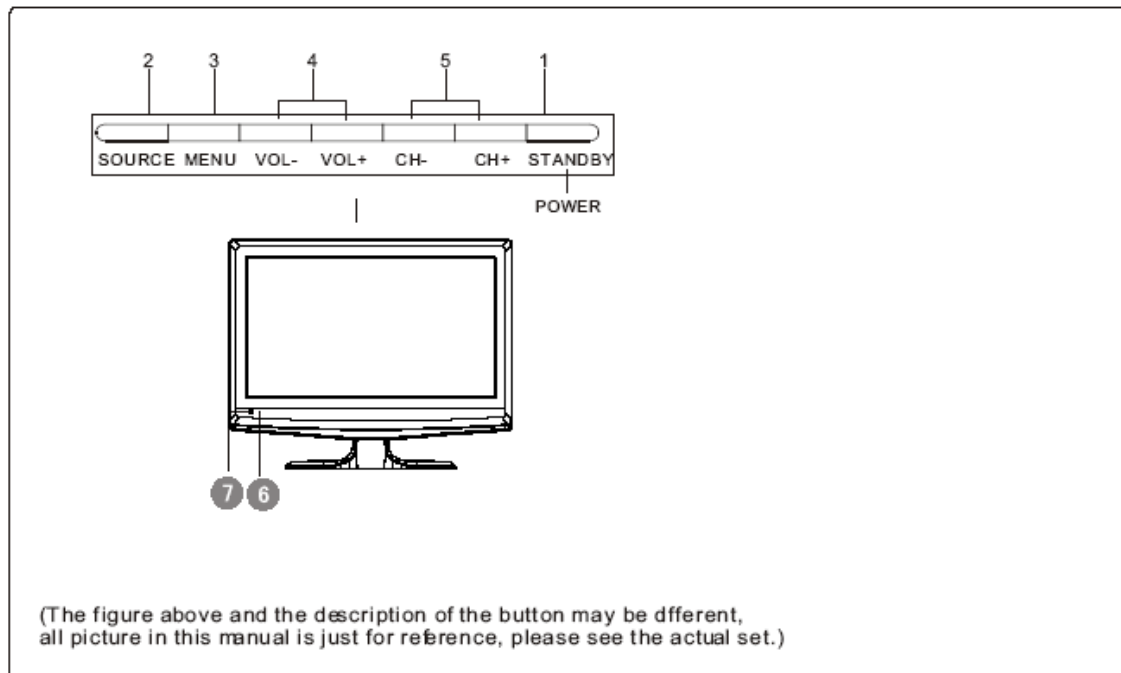
Remark: Wall mount is not applicable to 15 inch TV



## 6. OPERATION INSTRUCTIONS

### Basal information

#### 6.1 Front panel controls

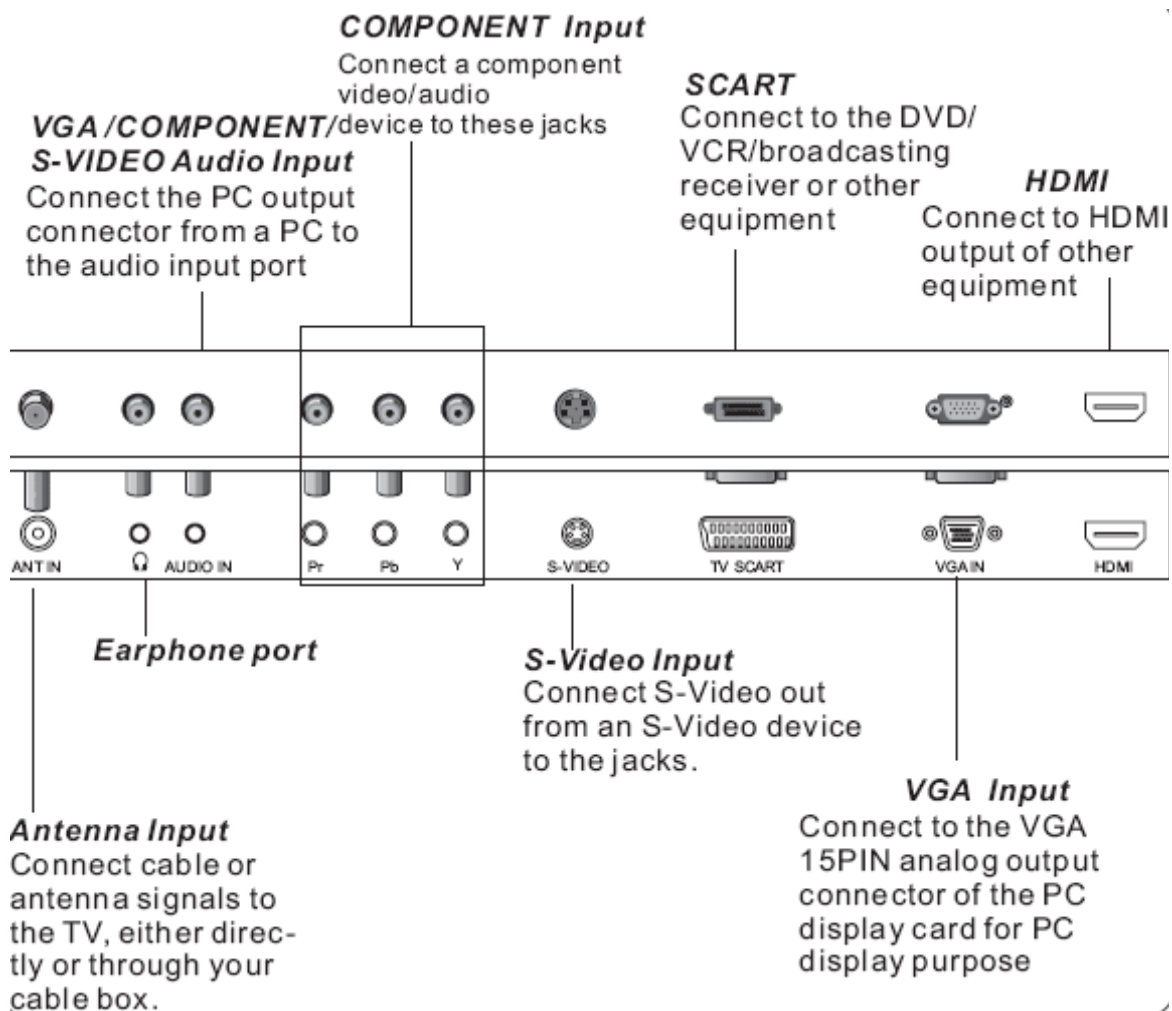


#### Control Panel Function

1. Standby switch
2. SOURCE Call the Input Source menu/Confirm button when operation menu.
3. MENU Press to select the main menu
4. VOL- Volume down / Left orientation to adjust the item in the OSD  
VOL+ Volume up / Right orientation to adjust the item/Press to enter
5. CH- TV channel down / to select the item in the menu  
CH+ TV channel up / to select the item in the menu
6. Power indicator
7. Remote Sensor

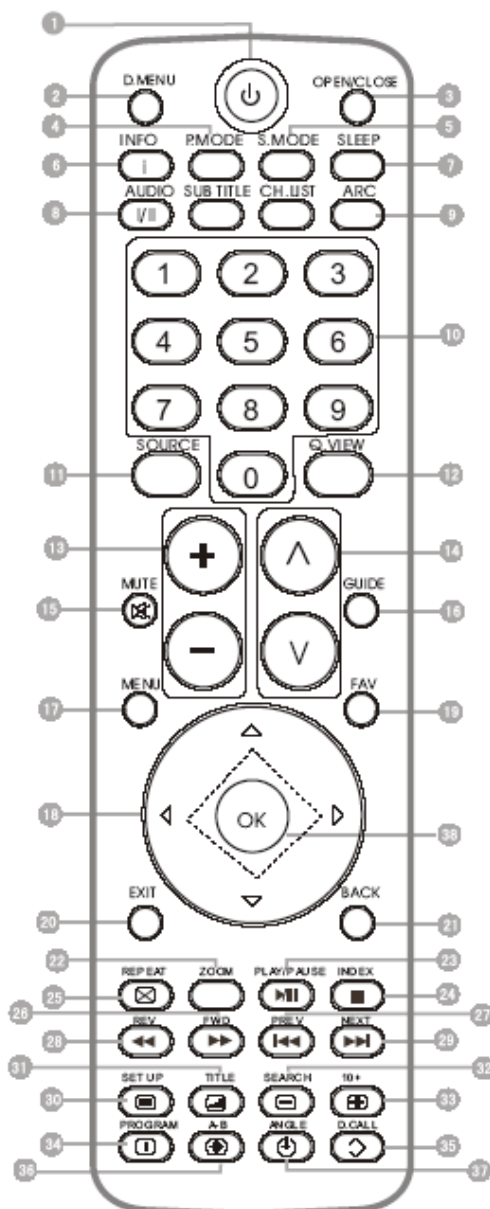
#### 6.2 Back panel controls





## 6.3 Setting up Your Remote Control

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



### Buttons on the remote control

- 1 Stand By
- 2 DVD Menu
- 3 DVD open/close
- 4 Picture Mode
- 5 Sound Mode
- 6 Call Screen Display
- 7 Sleep button
- 8 DVD Audio/DTV Audio/NICAM
- 9 ARC button
- 10 Program Number Channel selection
- 11 Source Exchange
- 12 Q.VIEW
- 13 V+/V- :Volume selection
- 14 P+/P-:Channel selection
- 15 Mute
- 16 GUIDE Button
- 17 Menu button
- 18 Cursor Mover Button
- 19 DVB-T favourite
- 20 Exit Screen Display
- 21 Back button (only for USB)
- 22 Zoom(only for DVD &USB)
- 23 Play/pause button(only for DVD &USB)
- 24 Teletext index/STOP(only for DVD &USB)
- 25 REPEAT(only for DVD &USB)
- 26 FAST FORWARD(only for DVD &USB)
- 27 PREVIOUS(only for DVD &USB)
- 28 FAST REVERSE(only for DVD &USB)
- 29 NEXT(only for DVD &USB)
- 30 DVD SET UP/ TEXT
- 31 DVD TITLE/TELETEXT MIX
- 32 DVD SEARCH/TELETEXT SUBCODE
- 33 DVD 10+/TELETEXT HOLD
- 34 DVD PROGRAM/TELETEXT REVEAL
- 35 DVD CALL/TELETEXT MODE
- 36 DVD A-B REPEAT/TELETEXT SIZE
- 37 DVD ANGLE/TELETEXT TIME
- 38 OK Button

## 7. MEASUREMENTS AND ADJUSTMENTS

### How to use

The way to the factory mode menu:

1st, press call,

2en, Bond followed by red, green, yellow button

3<sup>rd</sup>, press call again,

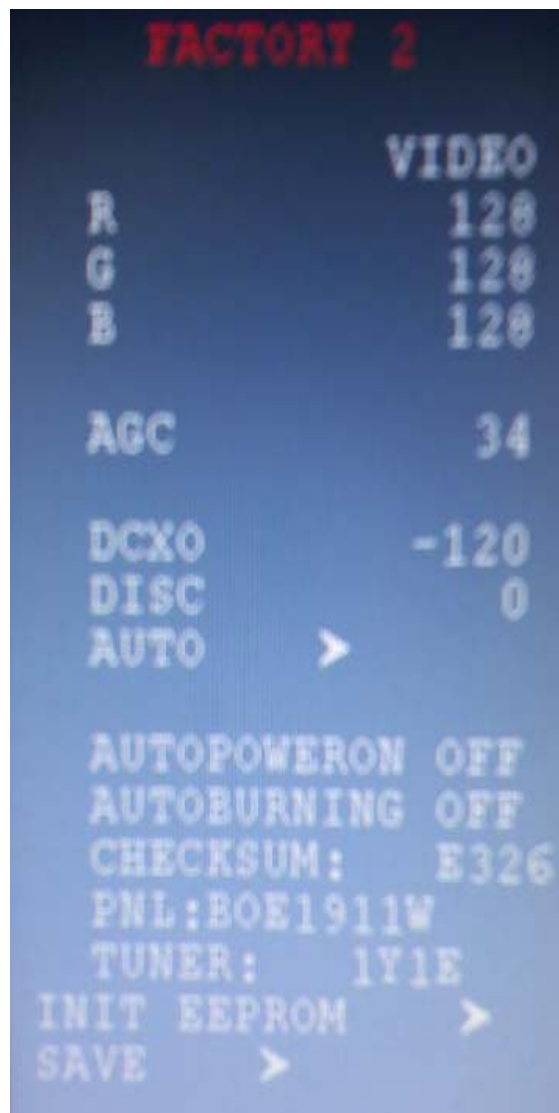
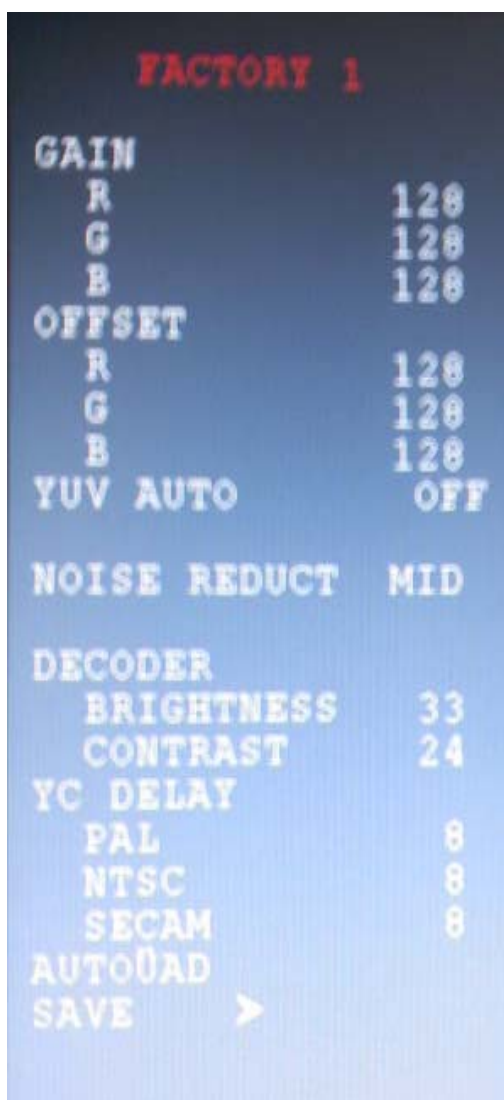
Finished these operations , system will be into the factory mode menu.

useable key:

1.menu: show the next menu page

2.p+/p-: select function

3.v+/v-: set function



**FACTORY 3**

	FRESH
BRIGHTNESS	55
CONTRAST	60
COLOUR	50
VOLUME	47
DVD MODE	OFF
SCAME L/L'	ON
NICAM	ON
TELETEXT	ON
LOCK SET	ON
FIRST SEARCH	OFF
HDMI	ON
AV	OFF
SCART	ON
COMPONENT	ON
ATS FUNC	ON
LANGUAGE	EU8
CHANNEL TAB	QD
NO SYNC TIME	10M
SAVE	>

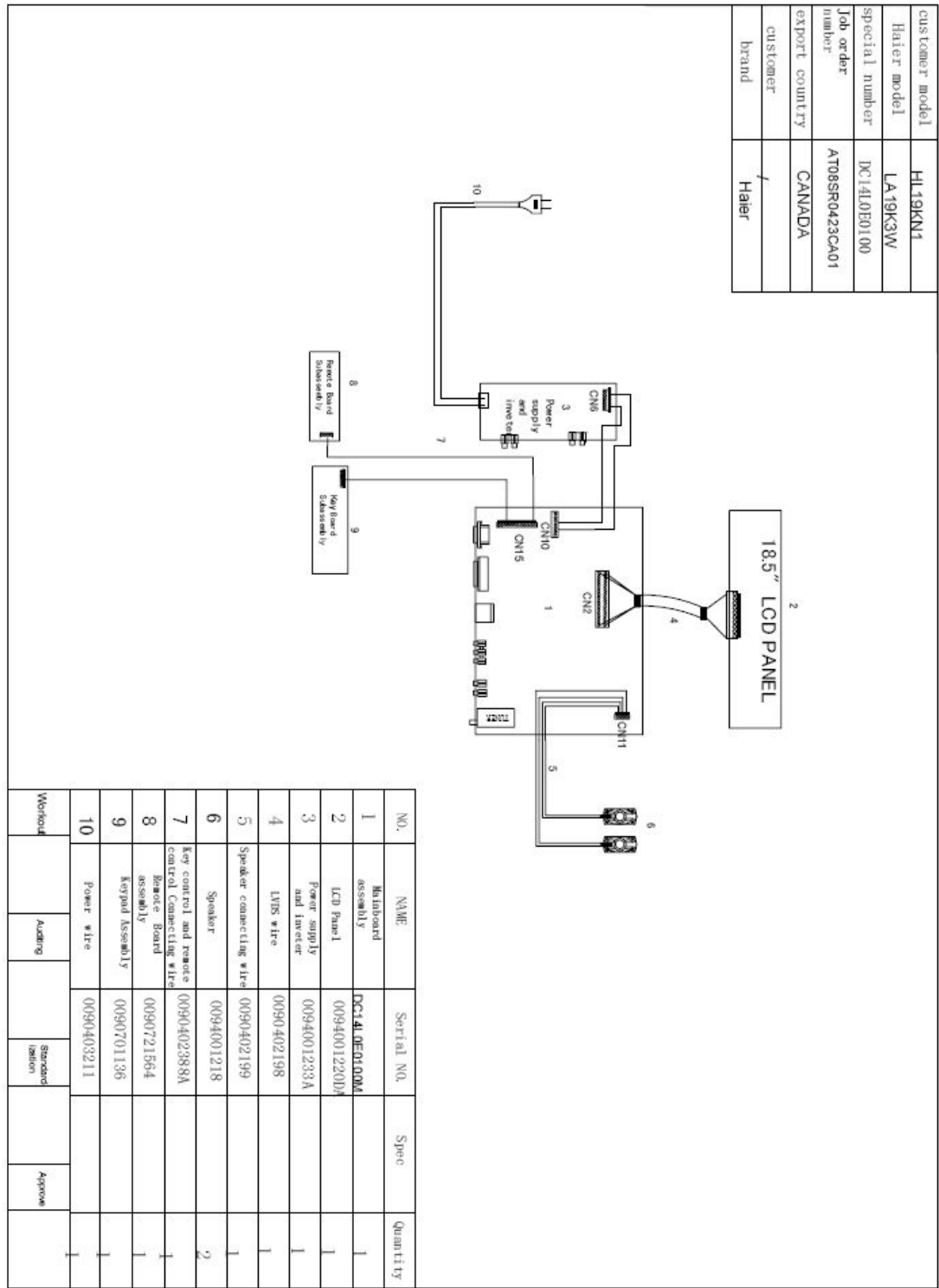
**FACTORY 4**

	VOICE
BASS	30
TREBLE	70
MAX BASS	63
MAX TREBLE	63

Press the button of OK to quit the factory menu.

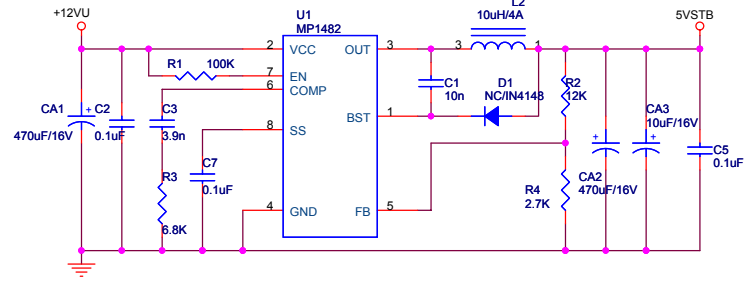
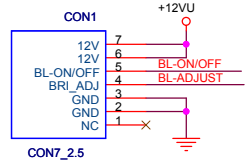
8 Electrical Parts

8.1 Connective Wire Photo

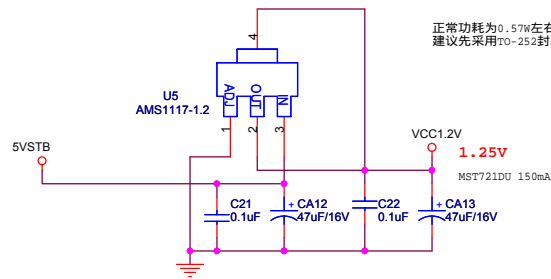
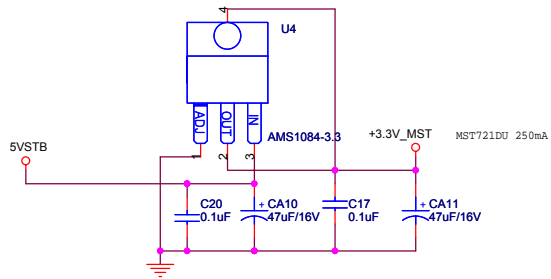
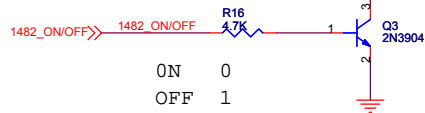
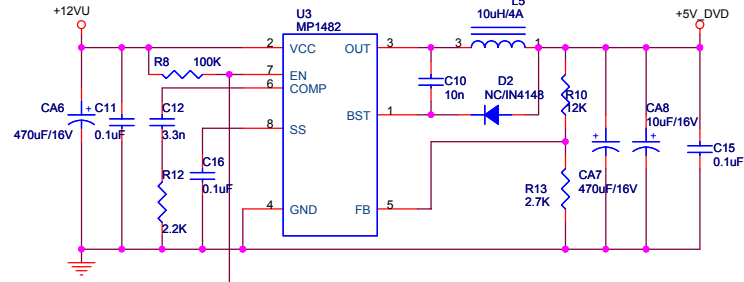
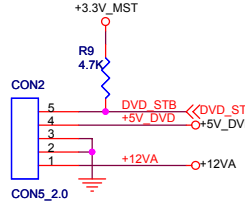


8.2 Circuit Diagram

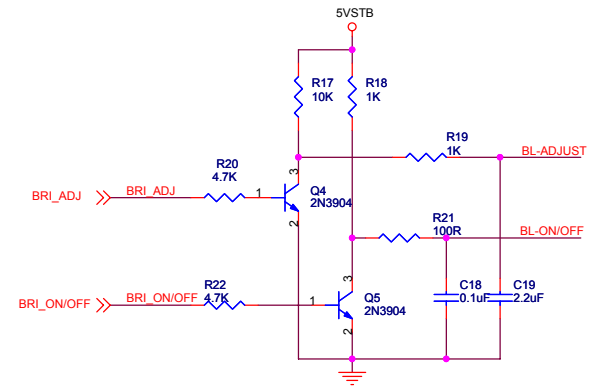
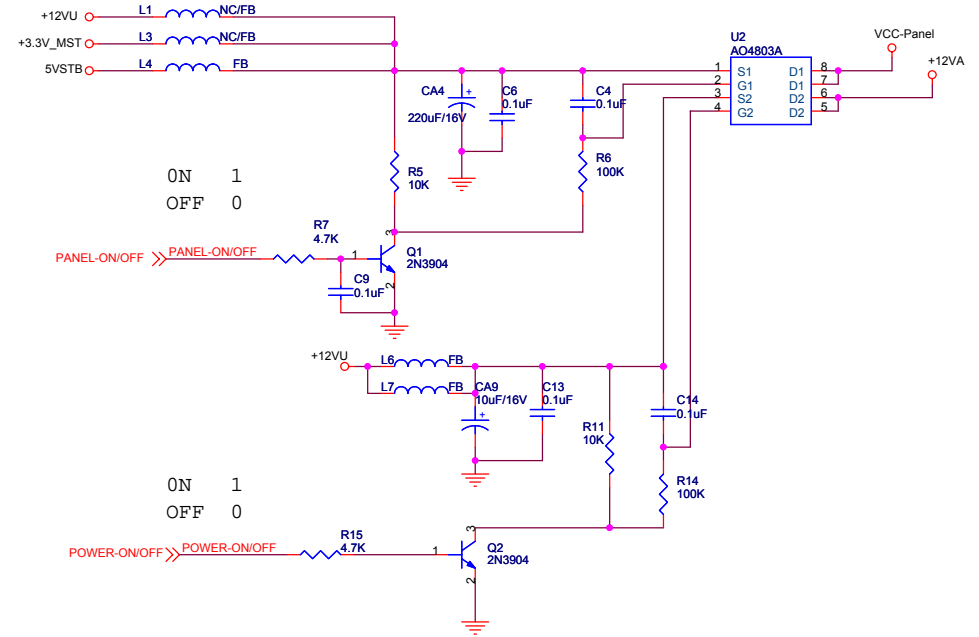
## POWER



# DVD\_POWER

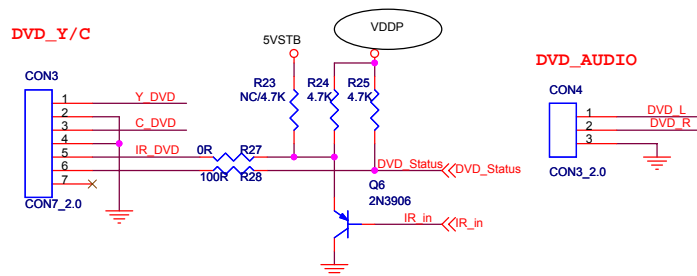


正常功耗为0.57W左右  
建议先采用TO-252封装

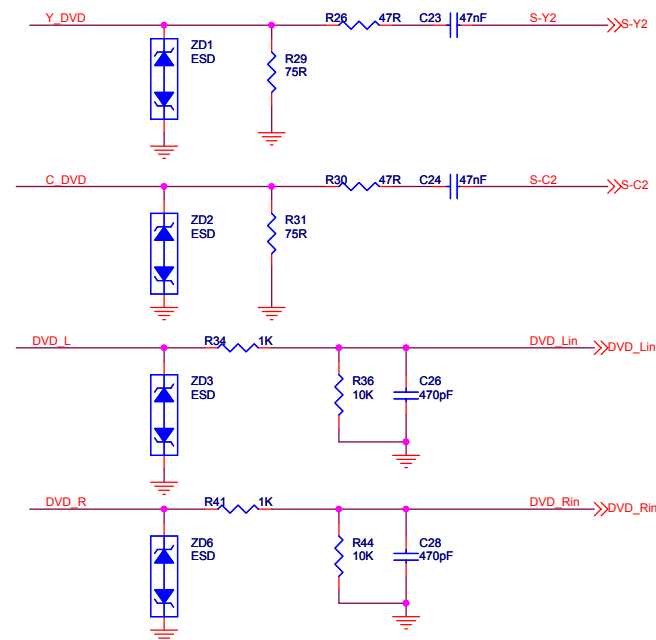
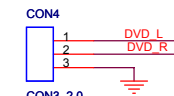


Title <Title>			
Size A3	Document Number <Doc>		Rev <Rev Code>
Date:	Thursday, November 27, 2008	Sheet 2 of	11

## DVD\_Y/C

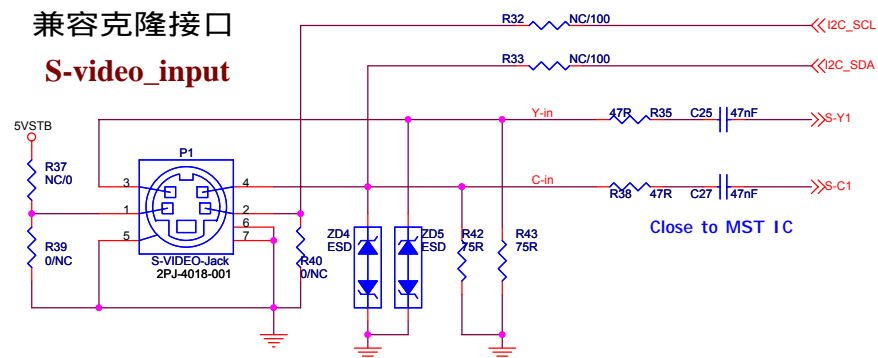


## DVD\_AUDIO



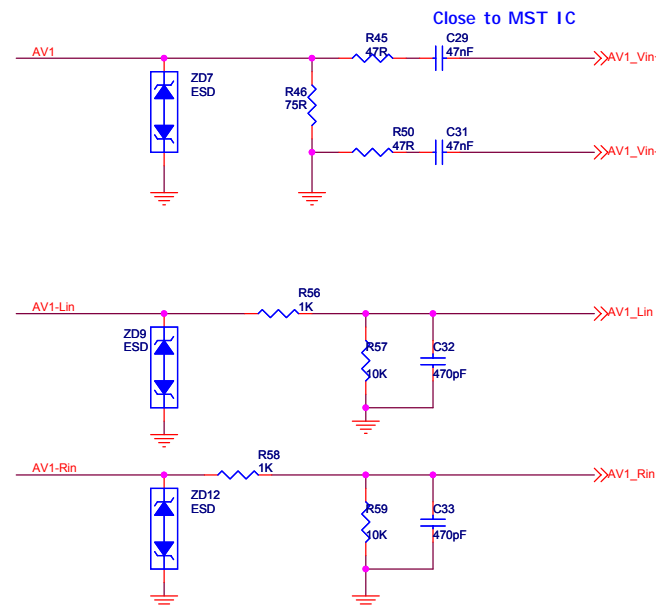
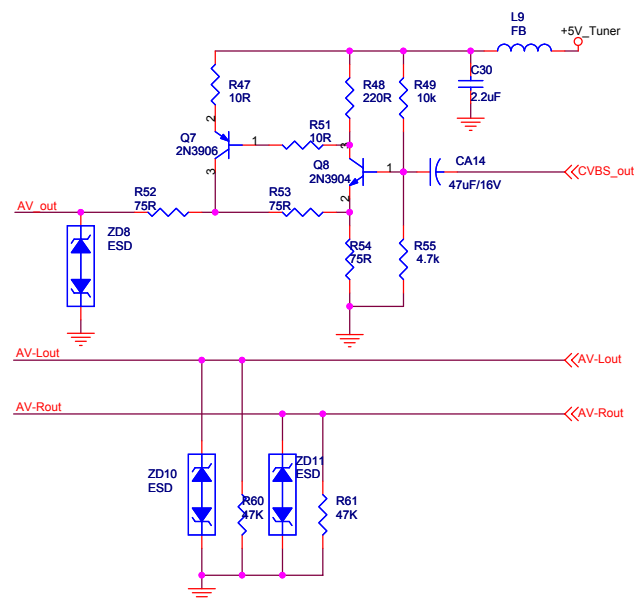
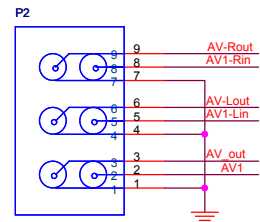
## 兼容克隆接口

### S-video\_input



Close to MST IC

### AV\_input & output

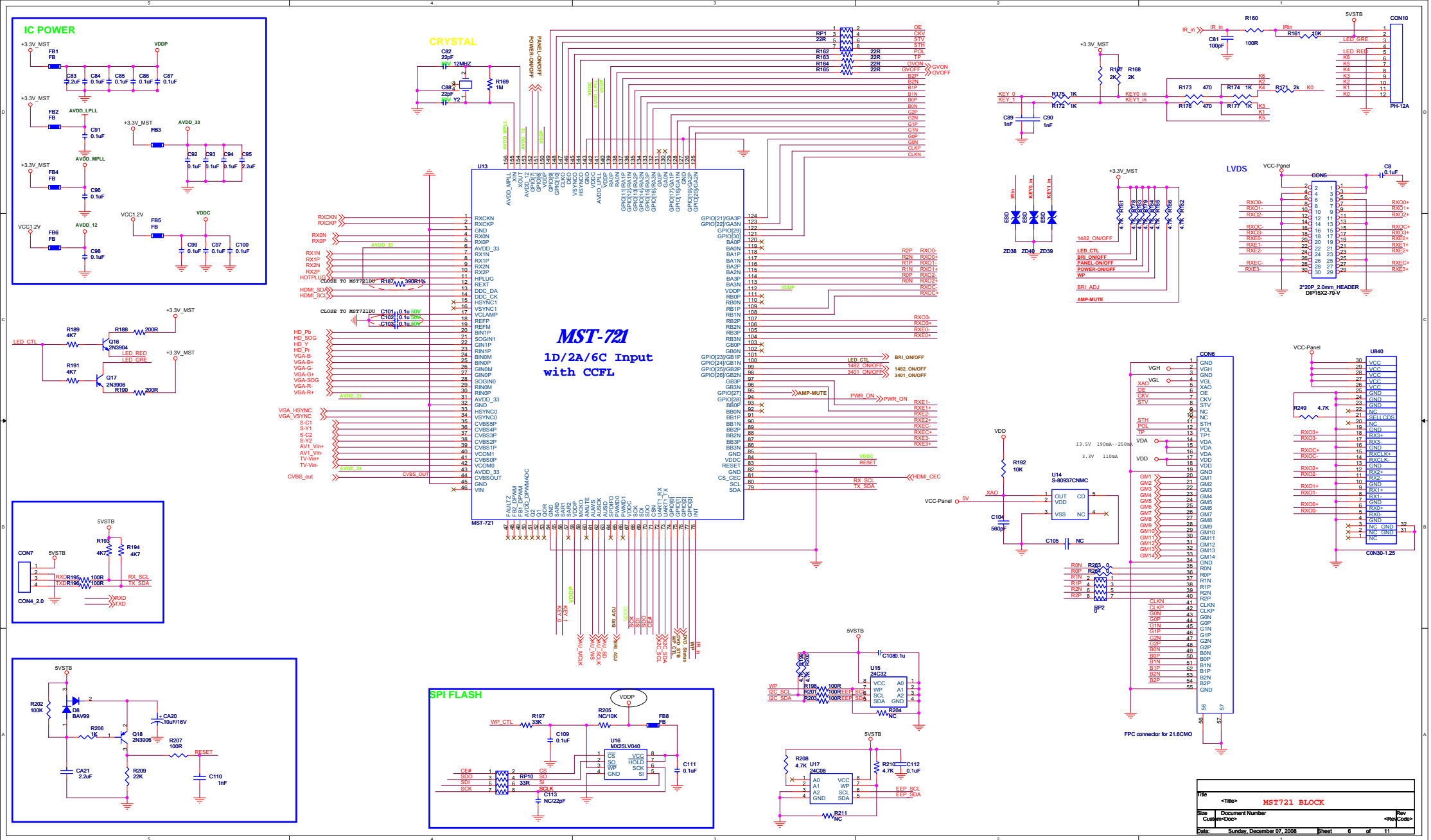


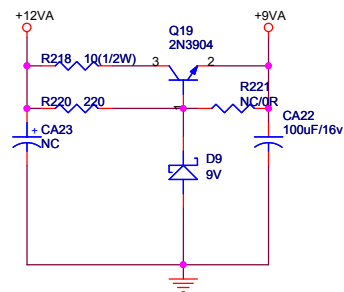
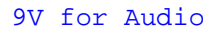
Title			
<Title>			
Size	Document Number	Rev	
A3	<Doc>	<RevCode>	
Date:	Tuesday, August 19, 2008	Sheet	3 of 11





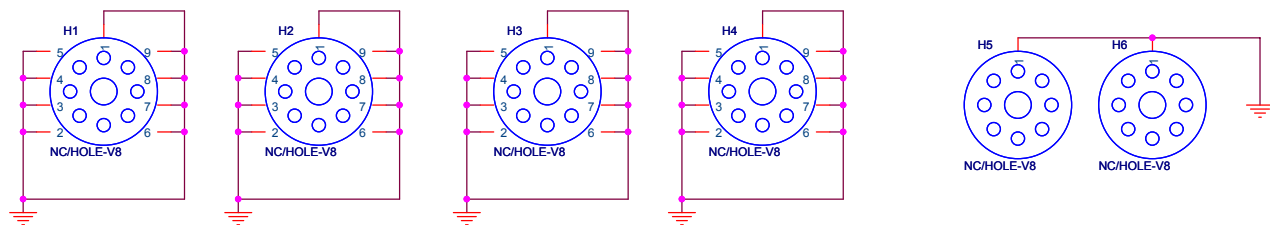
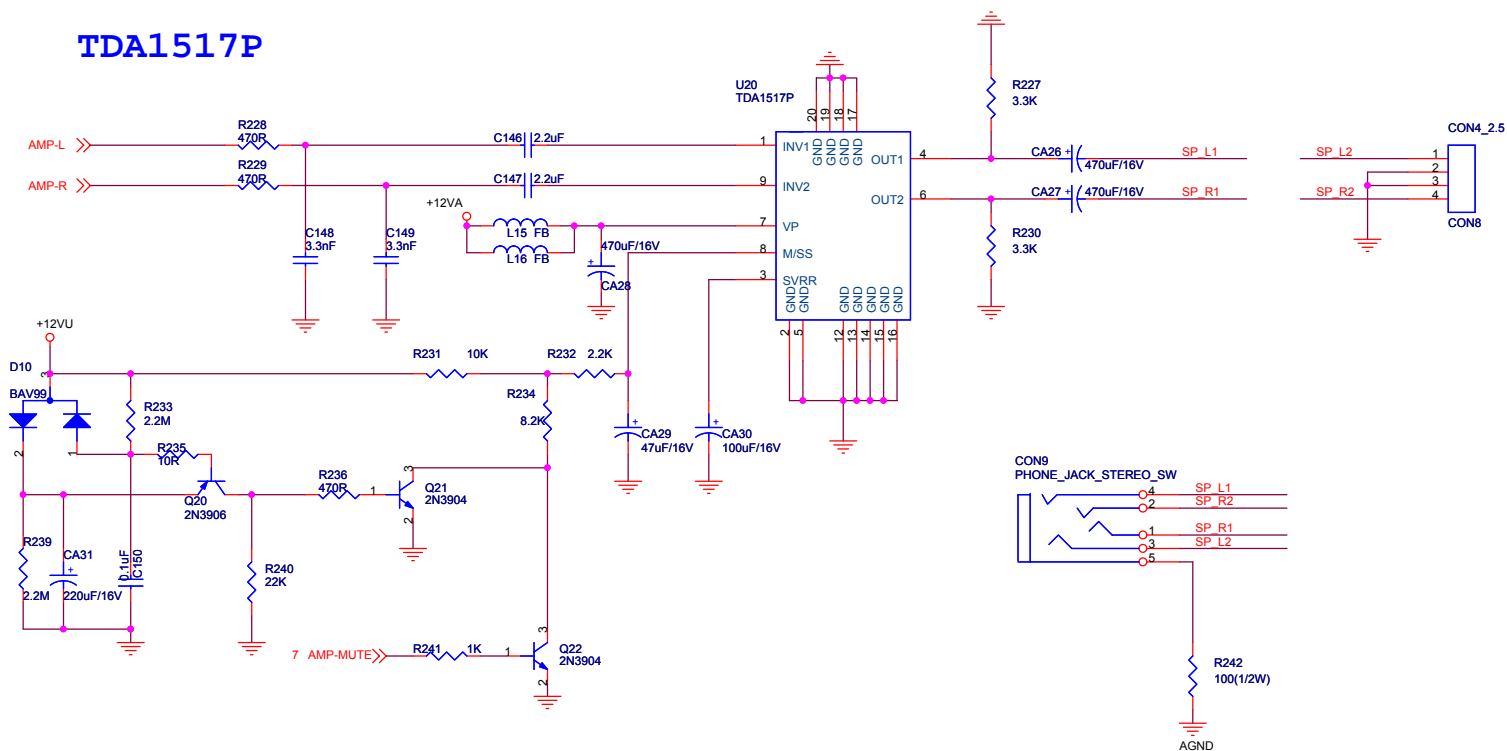






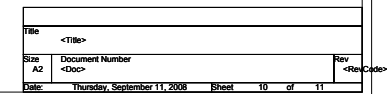
Title				<Title>			
Size		Document Number					Rev
Custom	<Doc>					<RevCode>	
Date:	Monday, November 24, 2008		Sheet	7	of	11	

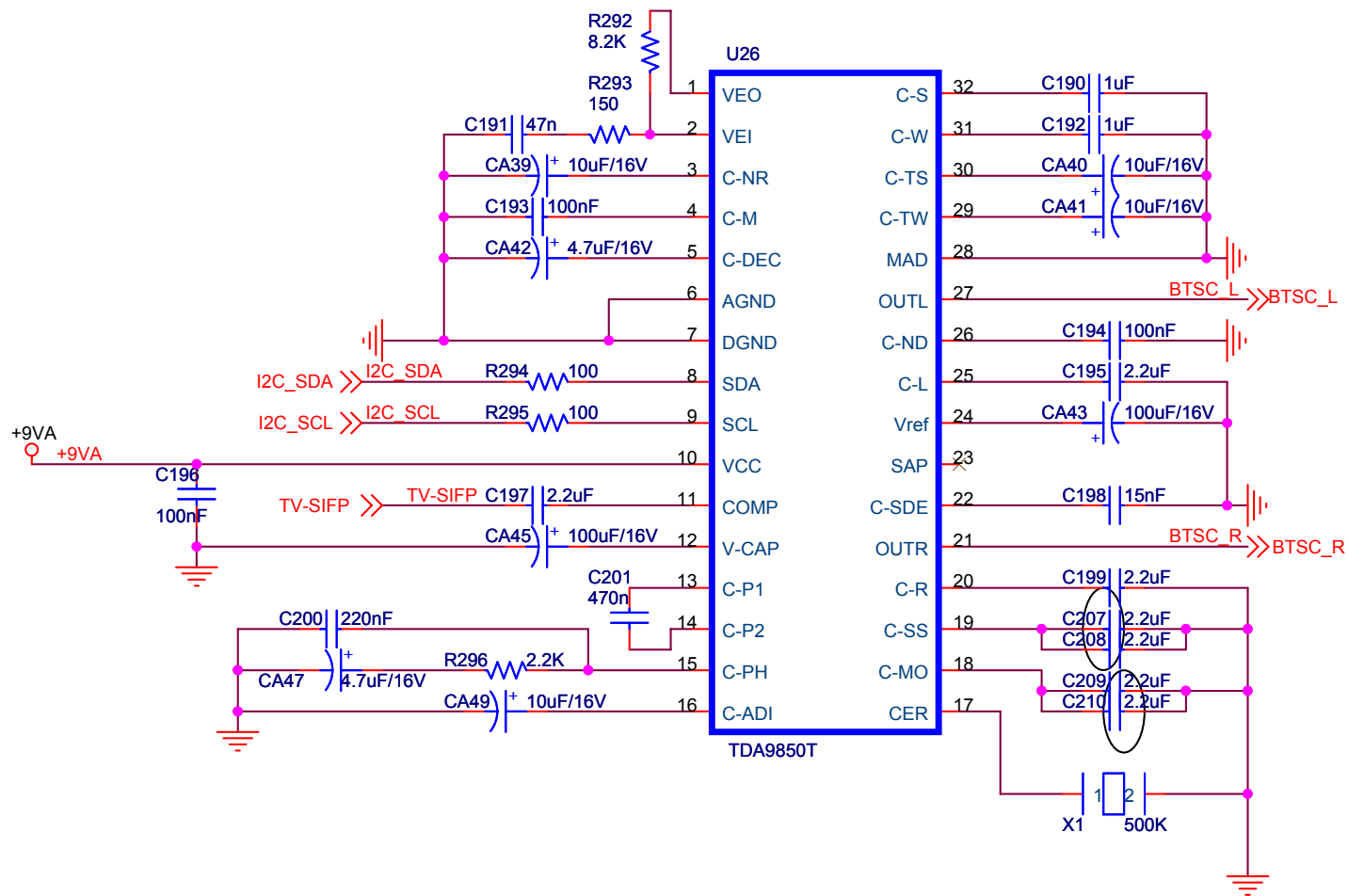
# TDA1517P



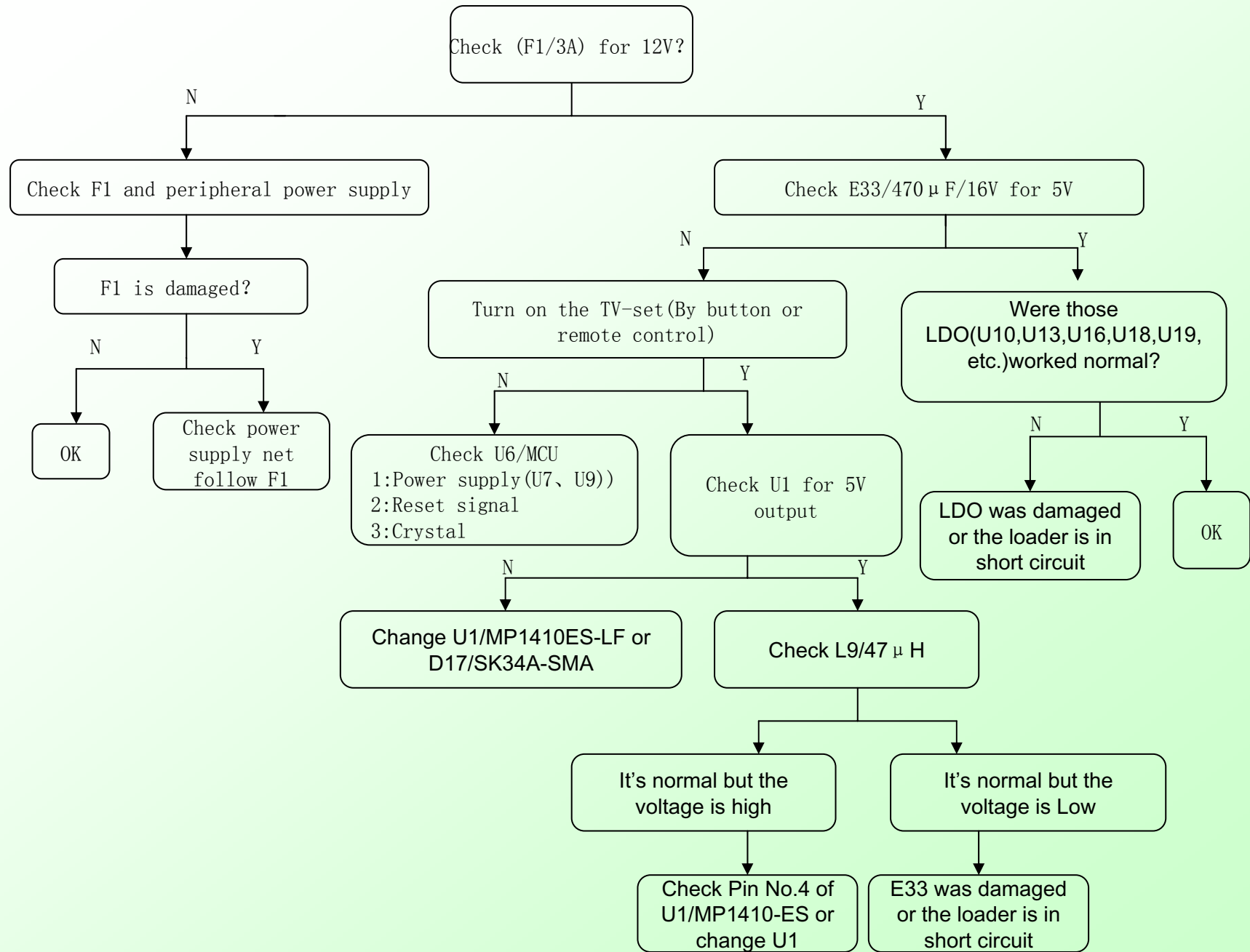
Title		
<Title>		
Size	Document Number	Rev
A3	<Doc>	<RevCode>
Date:	Sunday, December 07, 2008	Sheet 8 of 11





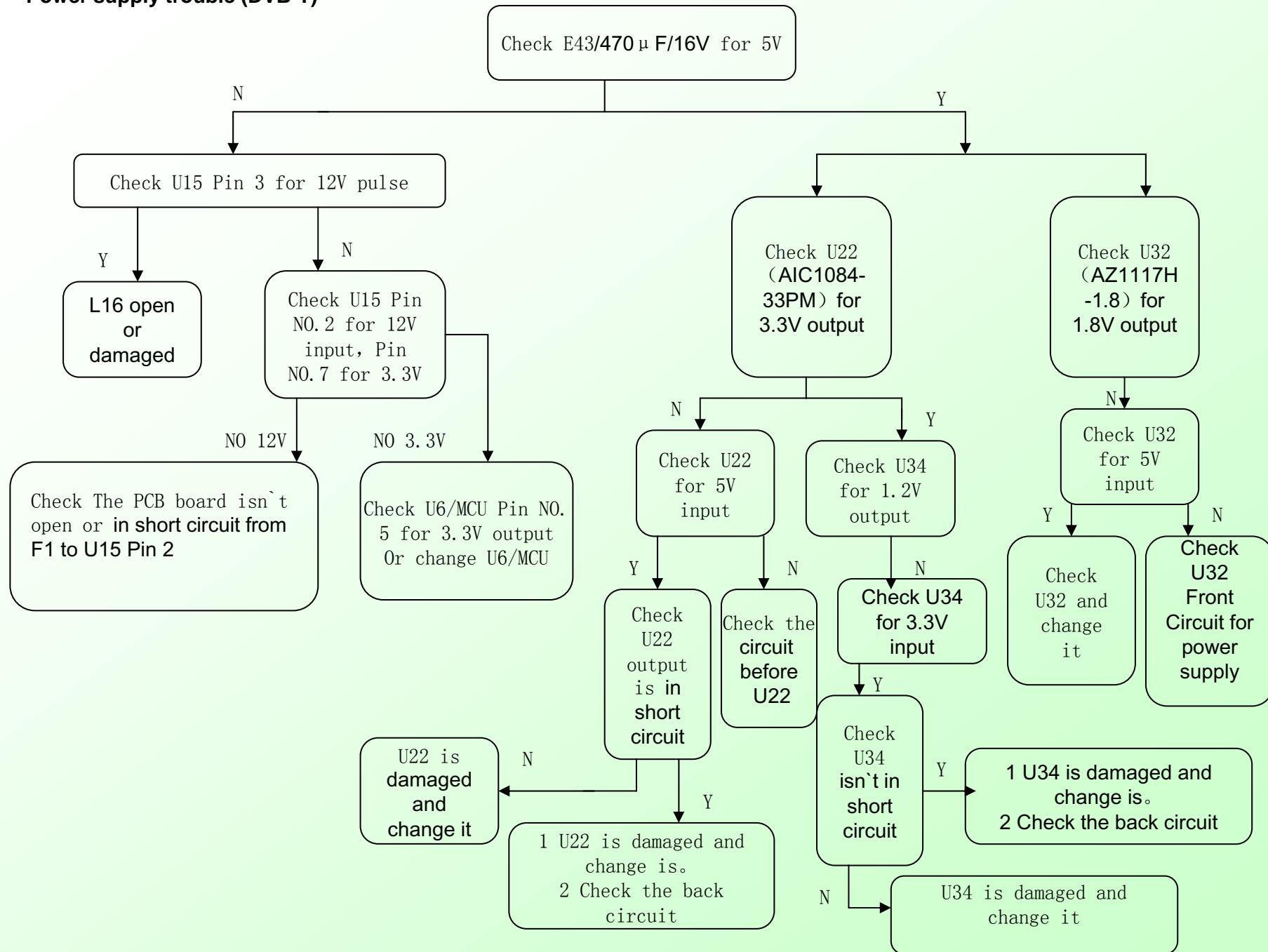


Title		
<Title>		
Size	Document Number	Rev
A	<Doc>	<RevCode>
Date:	Thursday, September 11, 2008	Sheet 11 of 11

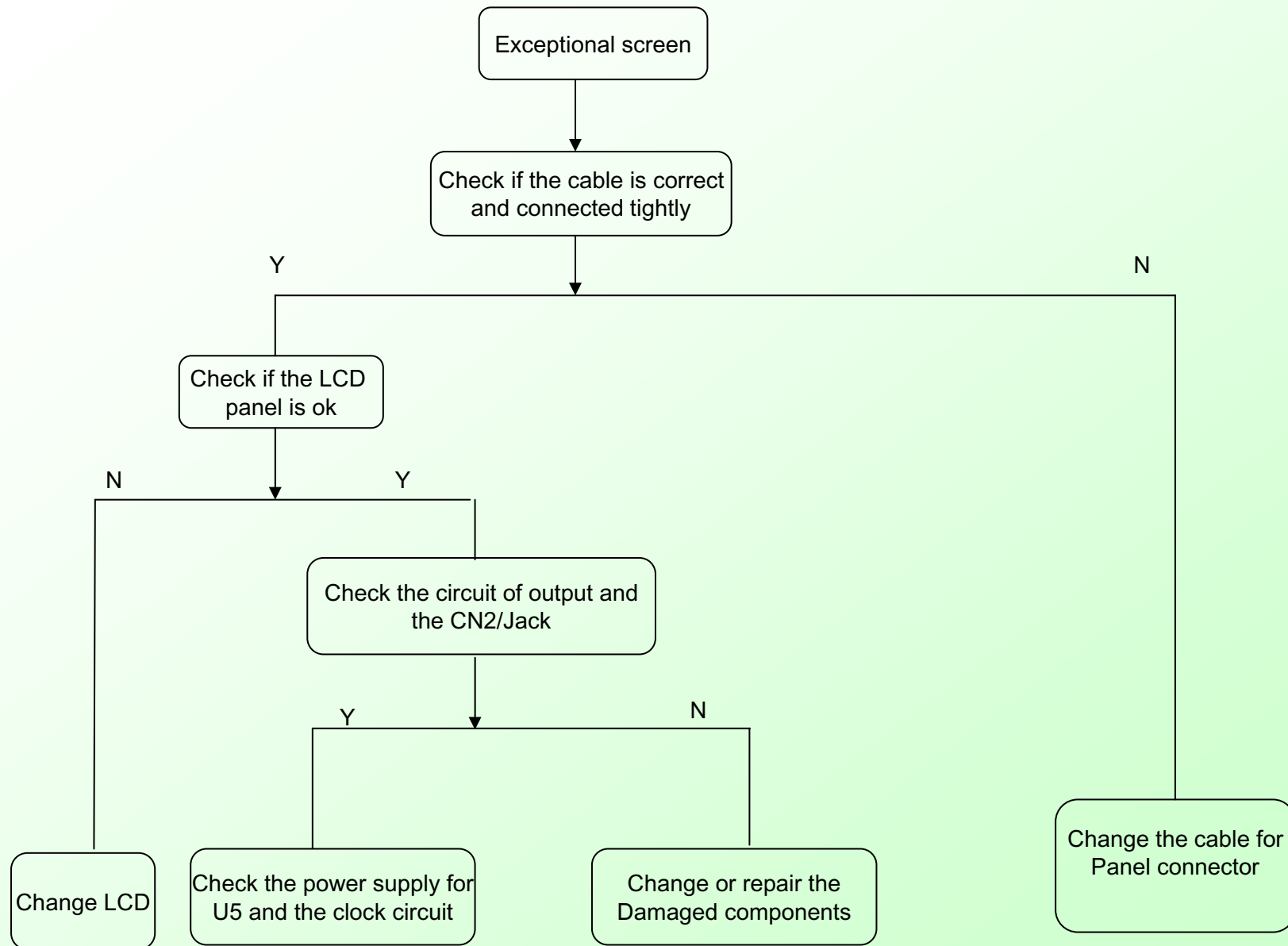
**Power supply trouble**



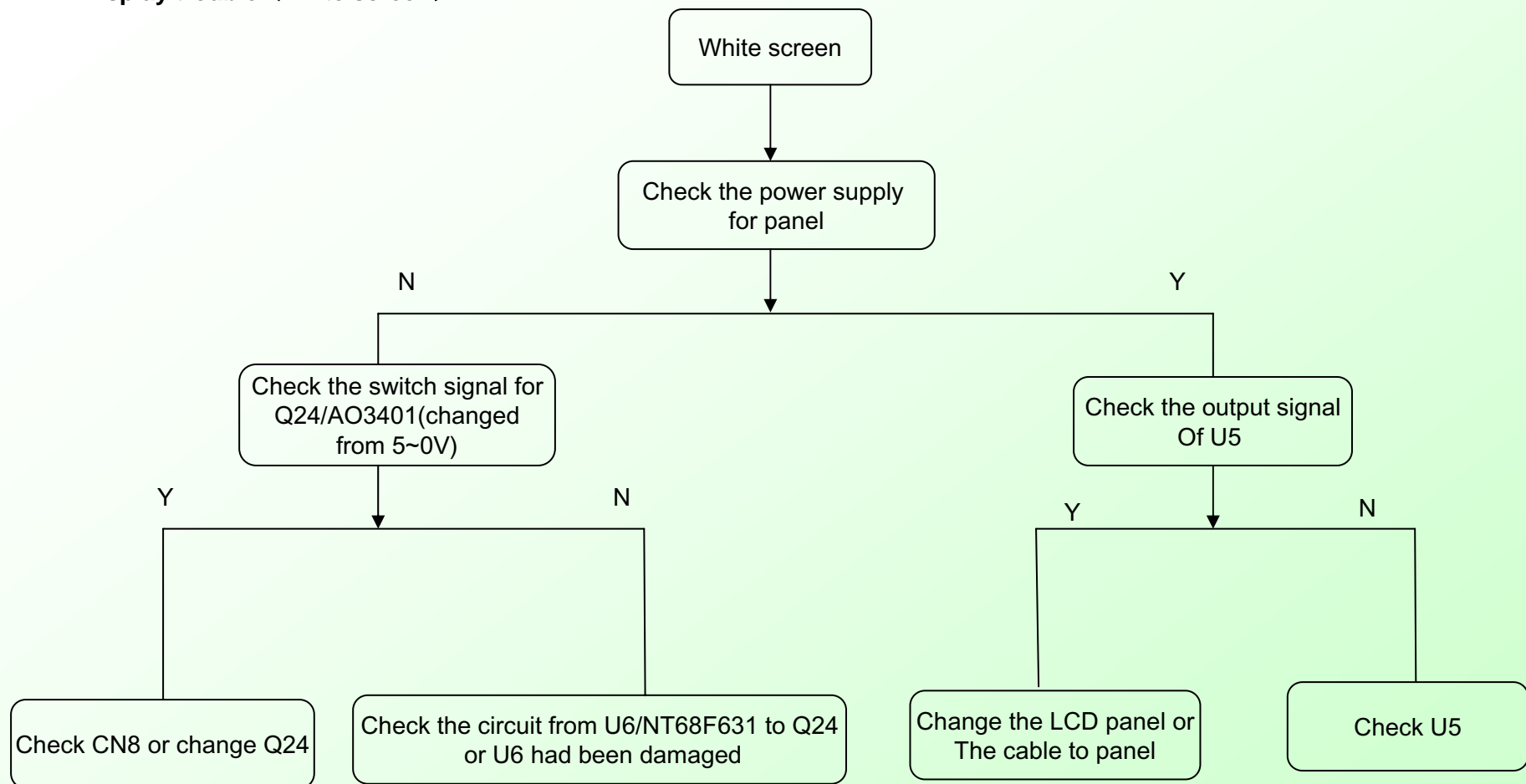
## Power supply trouble (DVB-T)



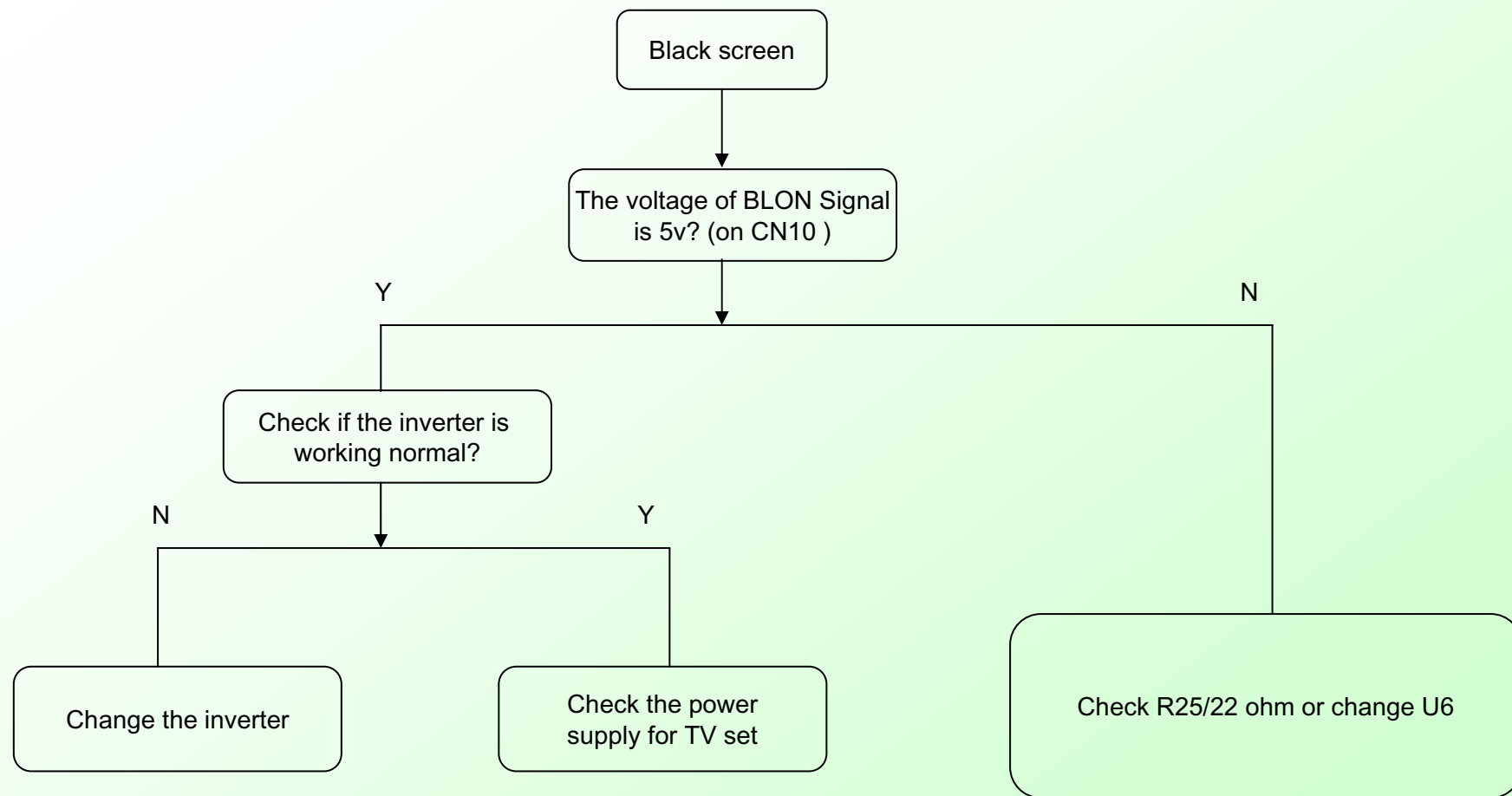
**Display trouble (exceptional screen)**



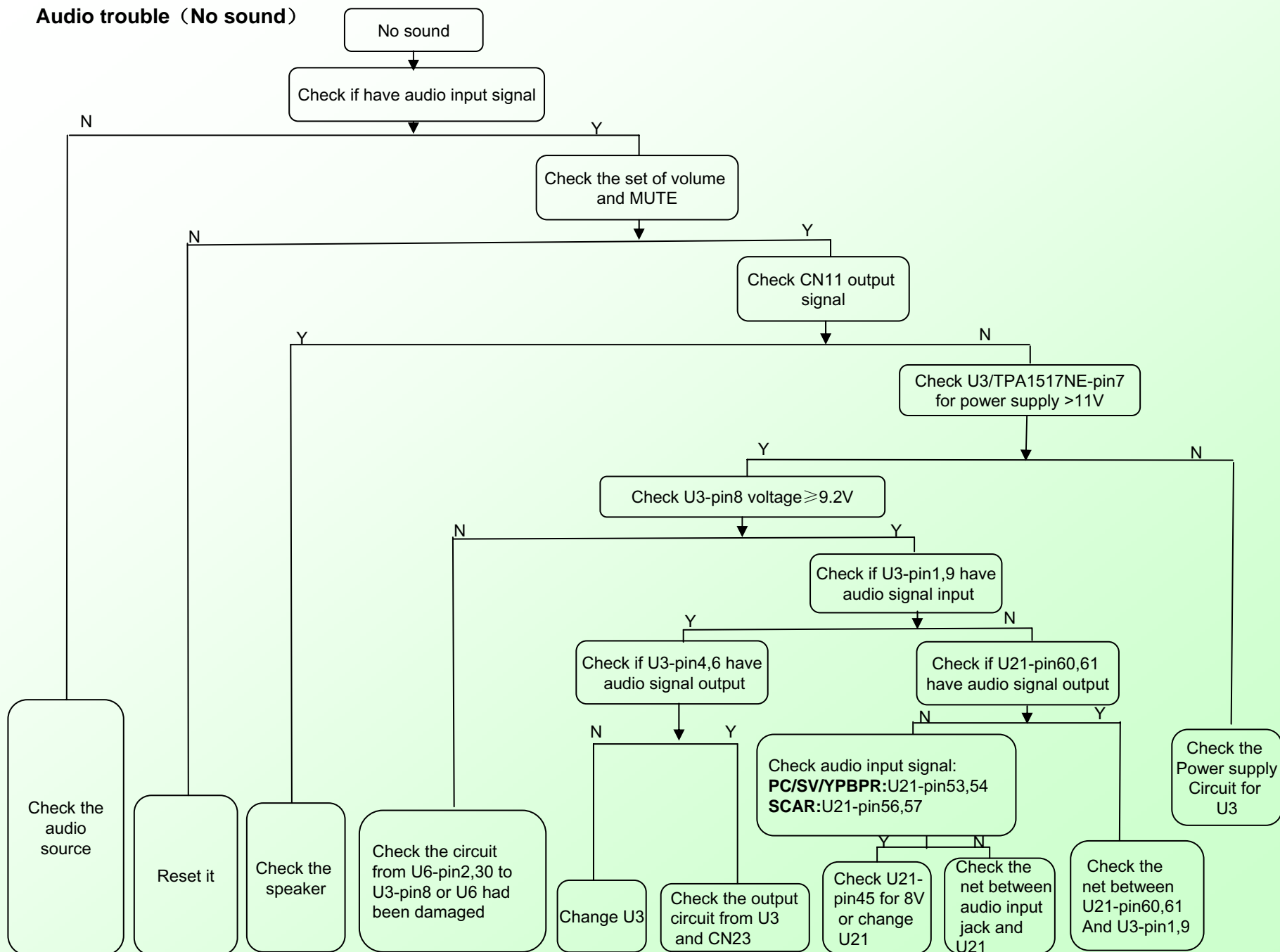
## Display trouble (white screen)



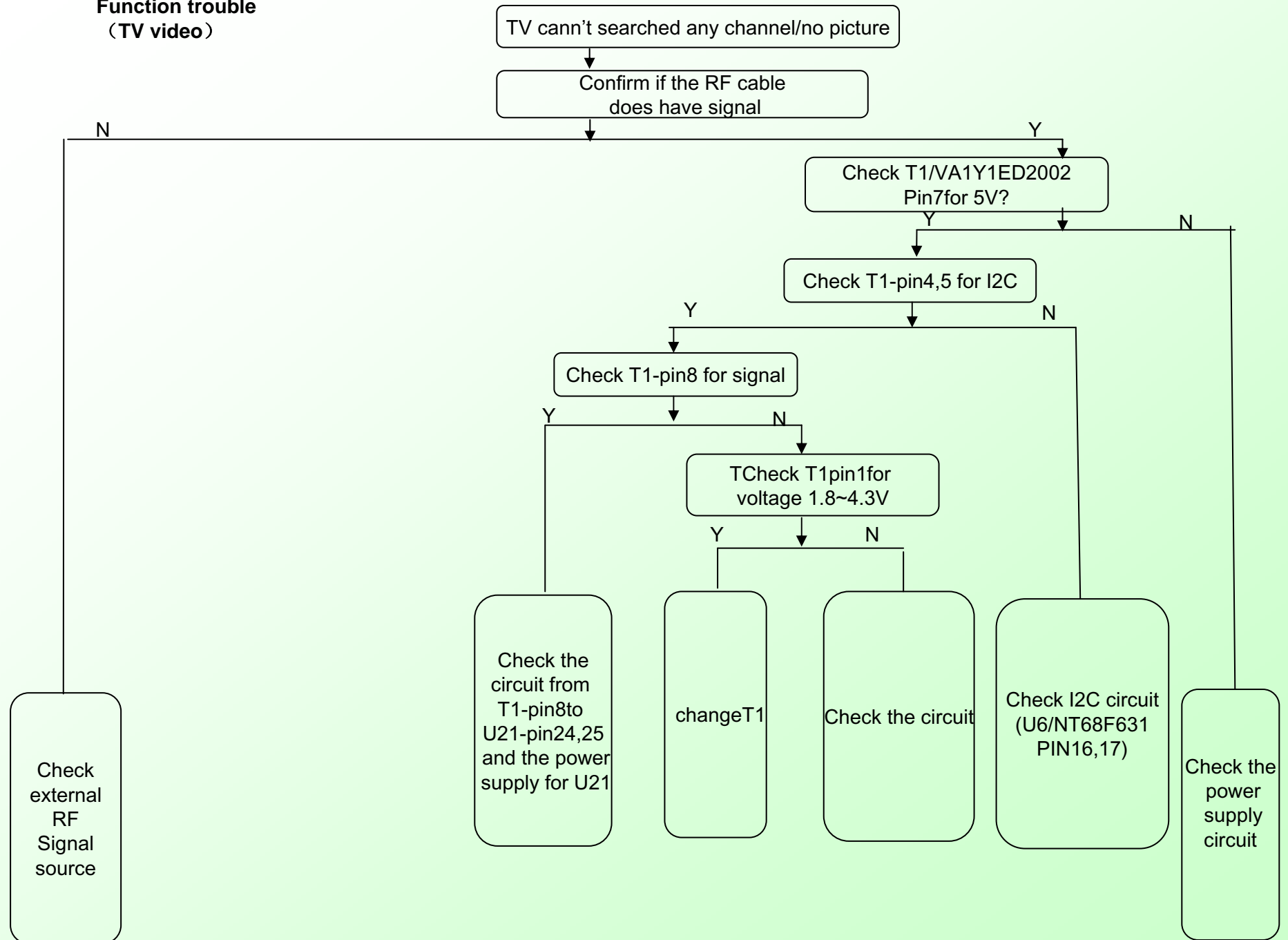
## Display trouble (black screen)



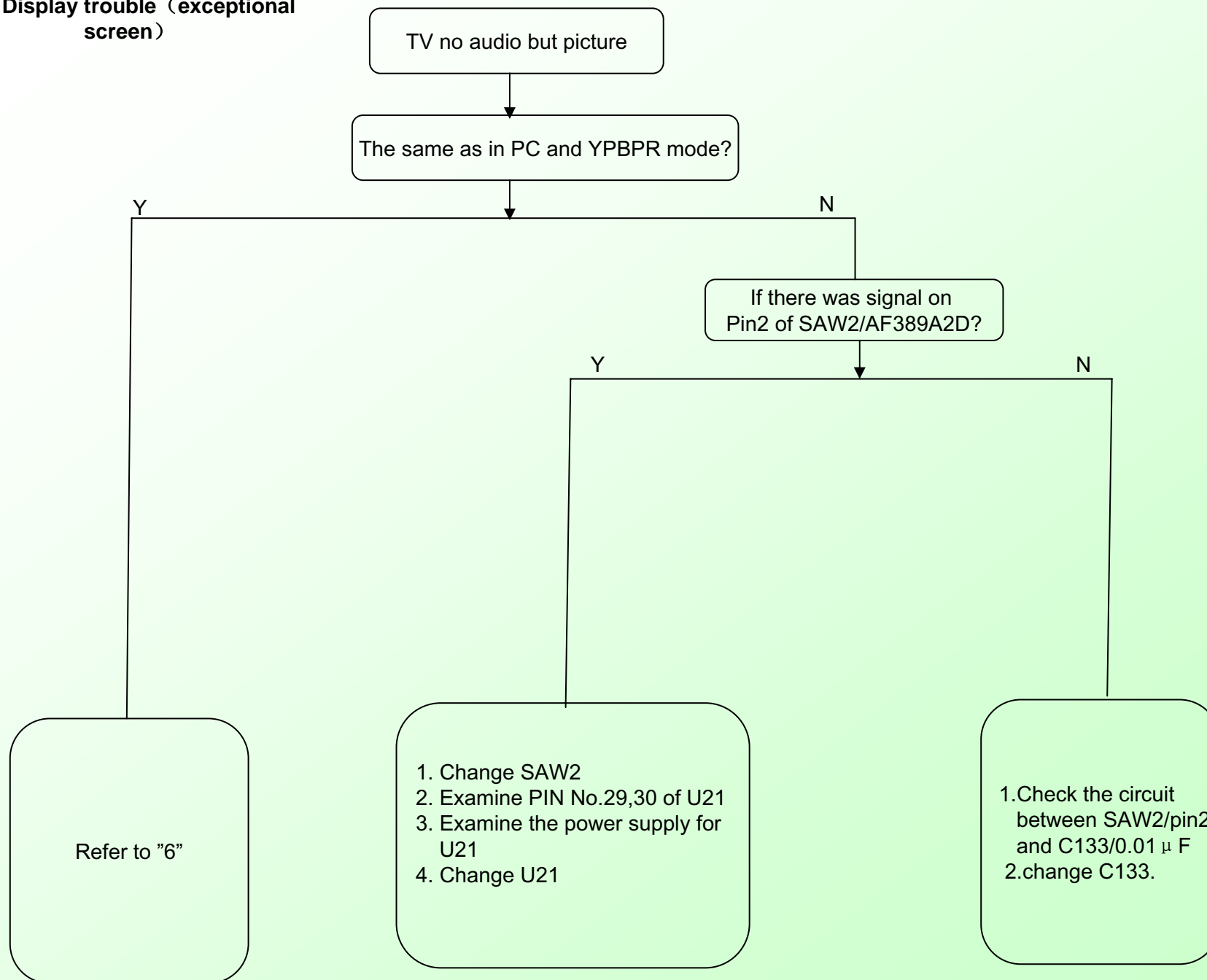
## Audio trouble (No sound)



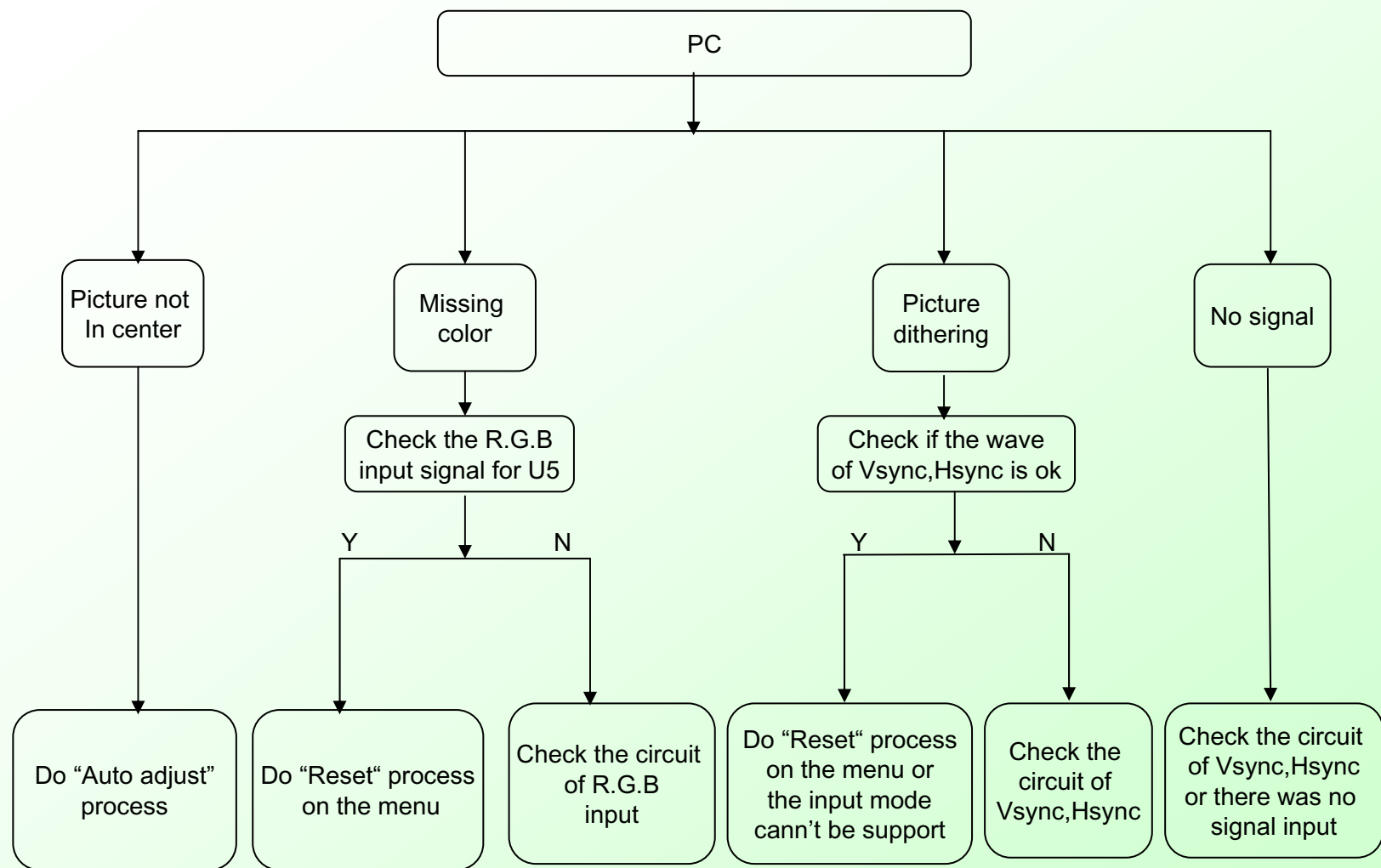
**Function trouble**  
**(TV video)**



**Display trouble (exceptional screen)**

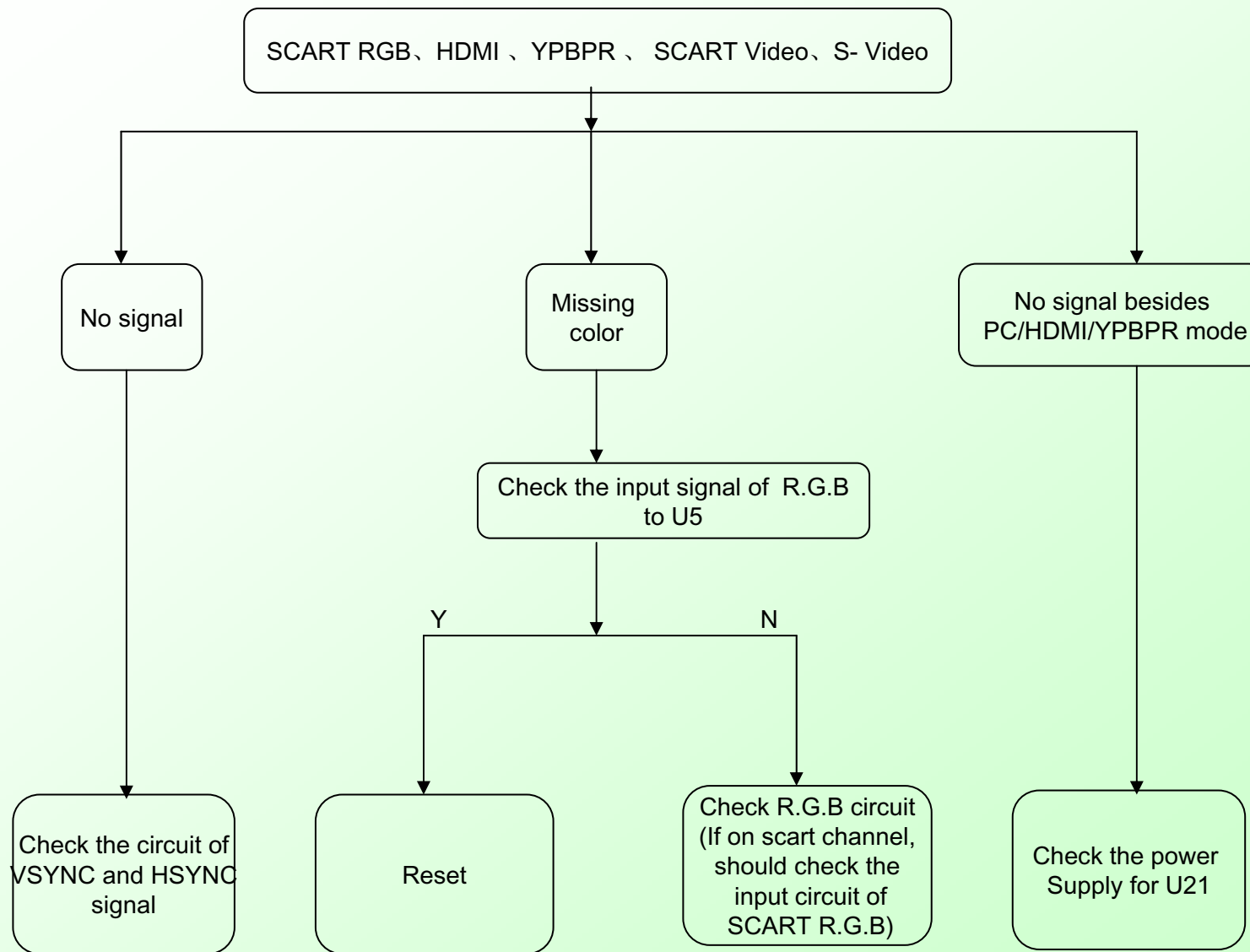


## Function Trouble (PC)

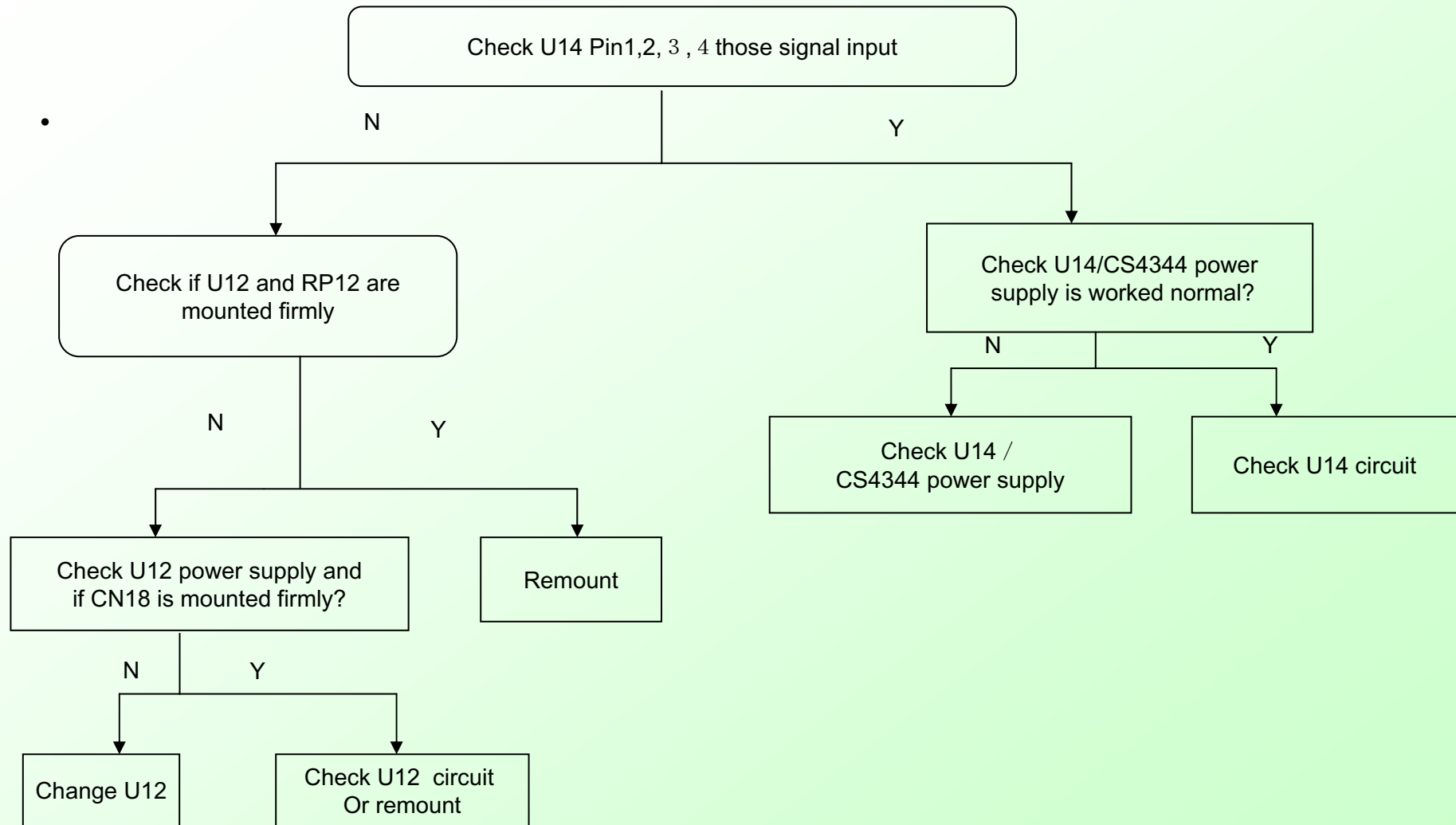




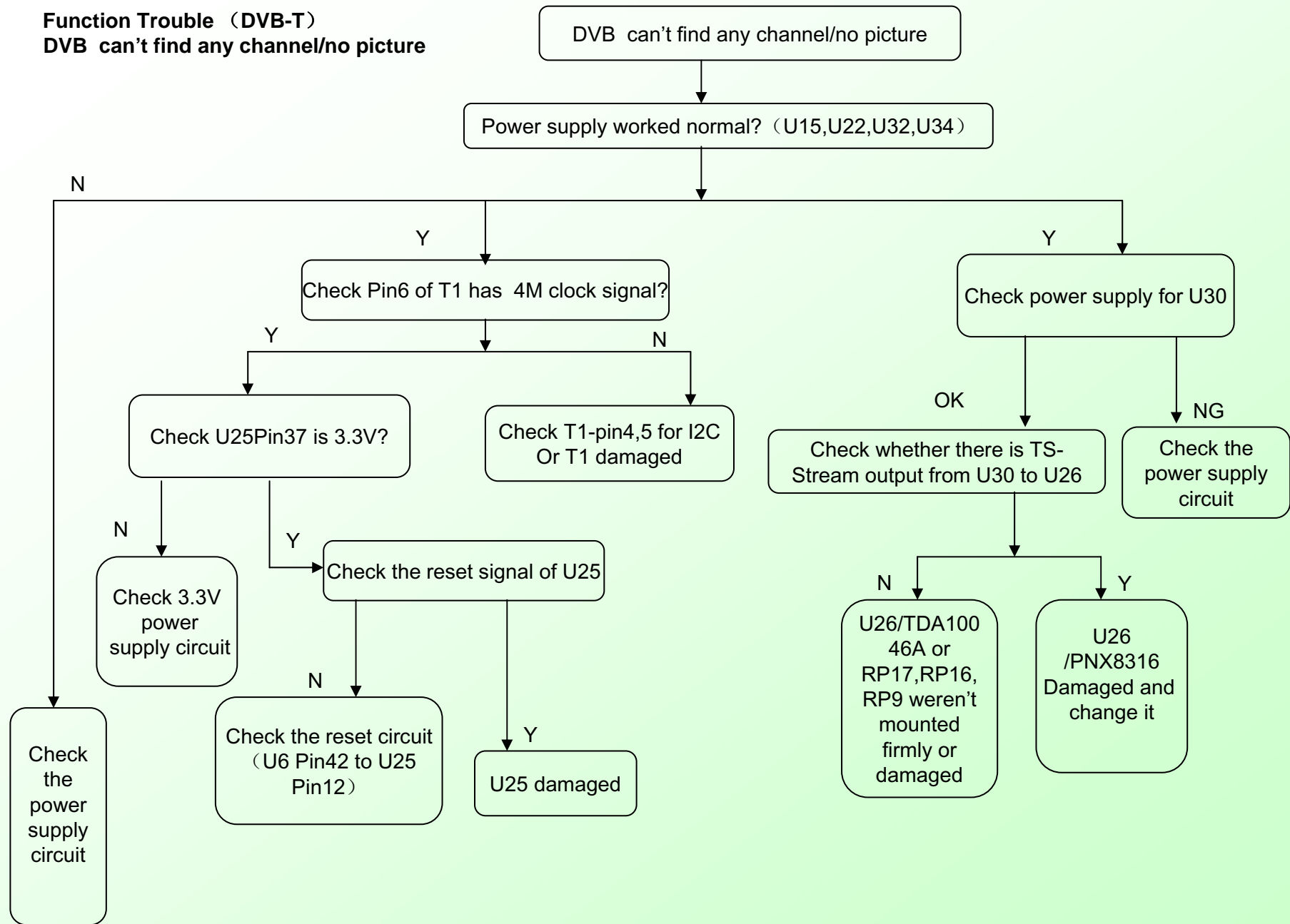
## Function Trouble (Scart,HDMI,YPBPR)



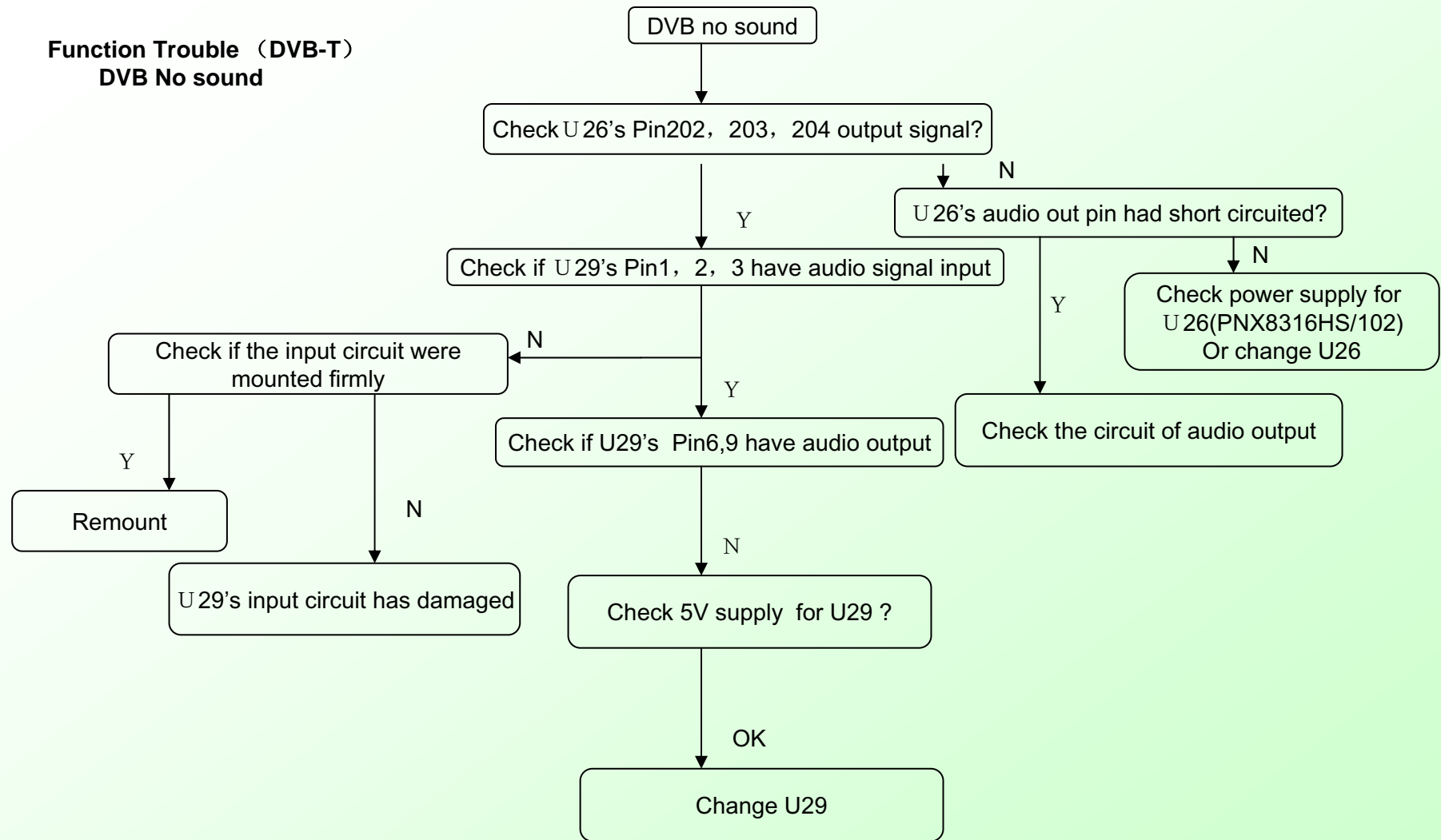
### Audio (HDMI no sound trouble)

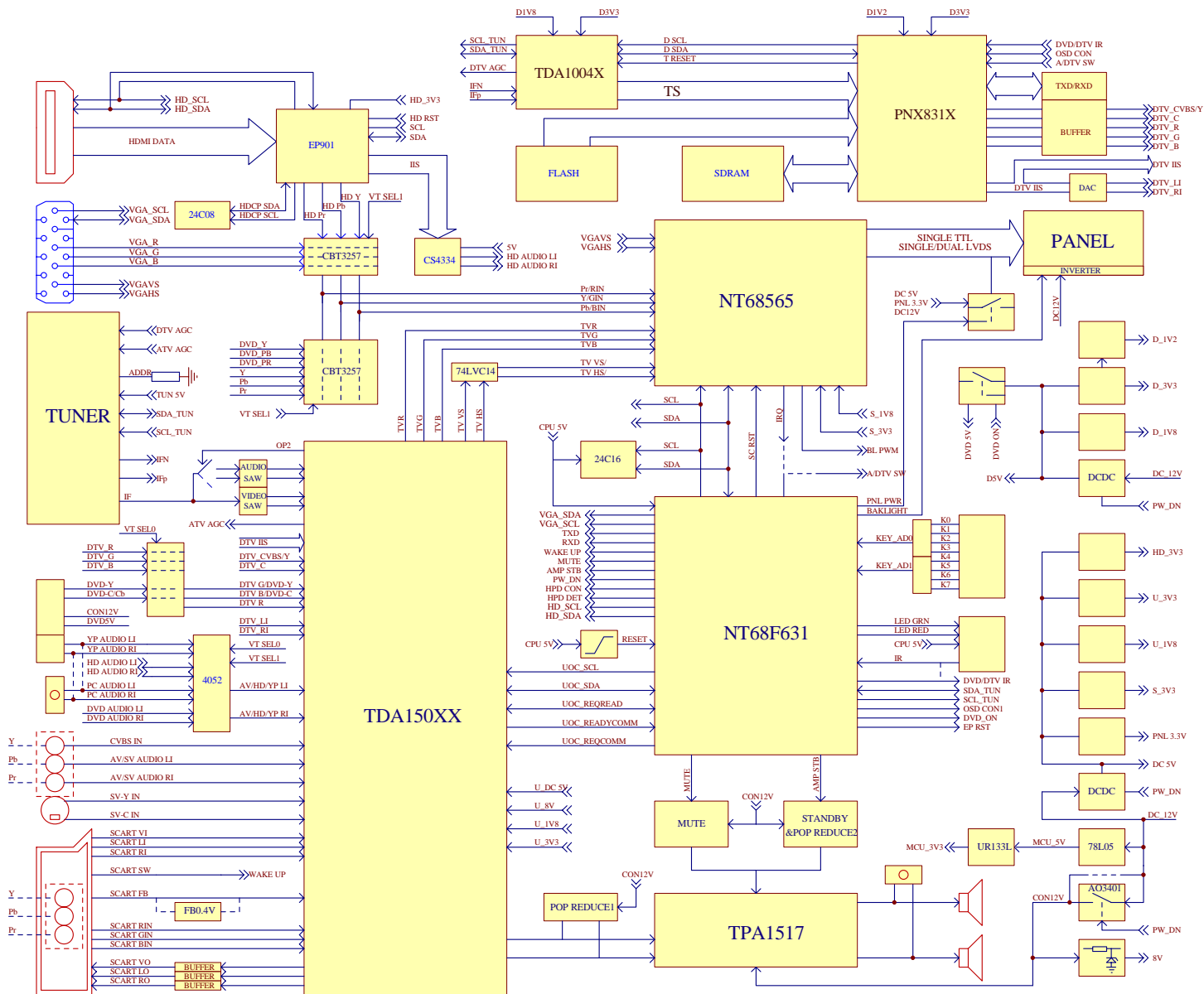


**Function Trouble (DVB-T)**  
**DVB can't find any channel/no picture**



**Function Trouble (DVB-T)**  
**DVB No sound**





# FACTORY MENU ADJUSTMENT

## FACTORY 1

GAIN (White balance value ;0-255)

R 128

G 128

B 128

OFFESET (Black balance value ;0-255)

R 128

G 128

B 128

CONTRAST (0-63)

R 0

G 0

B 0

DECODER

BRIGHTNESS (0-63)

CONAST (0-63)

YC DELAY

PAL 0-15

NTSC 0-15

SECAM 0-15

AUTO (Adjust white blance auto)

SAVE

## FACTORY 2

VIDEO (PC colour temperature ;0-255)

R 128

G 128

B 128

AGC 30

DCXO -120

DISC 0

AUTO (Ajust Nicam ,DISC set up to from 125 to 129)

AUTO POWER OFF/ON (When push AC SWITCH ,TV turn on automatically or not)

AUTO BURNING OFF/ON(When push AC SWITCH ,TV enter burning mode or not)

INIT EEPROM > (Initiate EEPROM and TV standby)

SAVE >

### FACTORY 3

STANDARD/MILD/FRESH (Adjust picture mode)

BRIGHTNESS 50

CONTRAST 50

SATURATION 50

VOLUME 0-63 (Max volume)

DVD MODE OFF/ON

SECAM L/L' OFF/ON

NICAM OFF/ON

TELETEXT OFF/ON

LOCK SET OFF/ON (Hotel Lock function)

FIRST SEARCH OFF/ON (Auto search or not when first power on)

HDMI OFF/ON

AV OFF/ON

SCART OFF/ON

COMPONENT OFF/ON

LANGUAGE EC/EU8/ER (Language selection)

CHANNEL TAB QD/JN (Factory signal tab)

NO SYNC TIME 5M/10M (Standby time when no signal for five minutes or ten)

SAVE >

NOTICE: 1. If you want to adjust some factory setting value, you must enter the factory menu. The method of entering the factory menu is that pressing "DISPLAY、red key、green key、yellow key、DISPLAY" successively on the remote control. Usually, the factory value of every TV is set OK before leaving factory, so we suggest that you'd better not adjust it.

2. You can press "V+、V-" to change parameter, and "P+、P-" to select each item.

3. Use the MENU key to switch FACTORY 1, FACTORY 2 and FACTORY 3 and use the EXIT key to exit factory menu.

---

**Sincere      Forever**

---