

# Haier SERVICE MANUAL

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**LED TV**



**Model No. LET19C430**

**MSD306**

**Chassis**



## **WARNING**

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

# Chapter 1: General Information

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## **1-2. General Guidelines**

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

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

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

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

## **1-3. Important Notice**

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

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

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

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

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

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

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

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. The following techniques should be used to help reduce the incidence of component damage caused by electrostatic discharge (ESD).

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

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

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

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

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

### **Safety Component**

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

### 1-3-6 Safety Check after Repairment

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

#### General Servicing Precautions

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

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

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

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

3. Do not spray chemicals on or near this receiver or any of its assemblies.
4. Unless specified otherwise in this service manual, clean electrical contacts only by applying the following mixture to the contacts with a pipe cleaner, cotton-tipped stick or comparable non-abrasive applicator; 10% (by volume) Acetone and 90% (by volume) isopropyl alcohol (90%-99% strength).

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

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

5. Do not defeat any plug/socket B+ voltage interlocks with which receivers covered by this service manual might be equipped.
6. Do not apply AC power to this instrument and/or any of its electrical assemblies unless all solid-state device heat sinks are correctly installed.
7. Always connect the test receiver ground lead to the receiver chassis ground before connecting the test receiver positive lead.

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

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

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

9. Remove the antenna terminal on TV and turn on the TV.
10. Insulation resistance between the cord plug terminals and the external exposure metal should be more than Mohm by using the 500V insulation resistance meter.
11. If the insulation resistance is less than M ohm, the inspection repair should be required. If you have not the 500V insulation resistance meter, use a Tester. External exposure metal: Antenna terminal Headphone jack

## Electrostatically Sensitive (ES) Devices

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

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed to prevent potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static type solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it.  
(Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

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

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

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

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

1. Model number, Serial number and Software Version

The model number and Serial number can be found on the back of each product and the Software Version can be found at the Spare Parts List.

2. Spare Part No. and Description

You can find them in the Spare Parts List

### 1-3-8. 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.

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

### **Using Icons:**

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

### **Note:**

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

### **Caution:**

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

### **Warning:**

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

### **Reference:**

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

## 2. Specifications

<b>Model</b>	<b>LET19C430</b>
Screen Size	18.5 inch
Aspect Ratio	16:9
Resolution	1366x768
Response Time (ms)	8.0 (GRAY TO GRAY)
Angel of View	176o
Color Display	16777216
No. of Preset Channels	400
OSD Language	English
Color System	PAL/SECAM
Audio System	DK, BG, I, M, L, L'
Audio Output Power (Built-in) (W)	3W×2
Audio Output Power (outer) (W)	No
Total Power Input (W)	36W
Voltage Range (V)	AC100V-240V
Power Frequency (Hz)	50~60Hz
Net Weight (KG)	2.8
Gross Weight (KG)	4
Net Dimension (MM)	458*38*310
Packaged Dimension (MM)	458*145*350



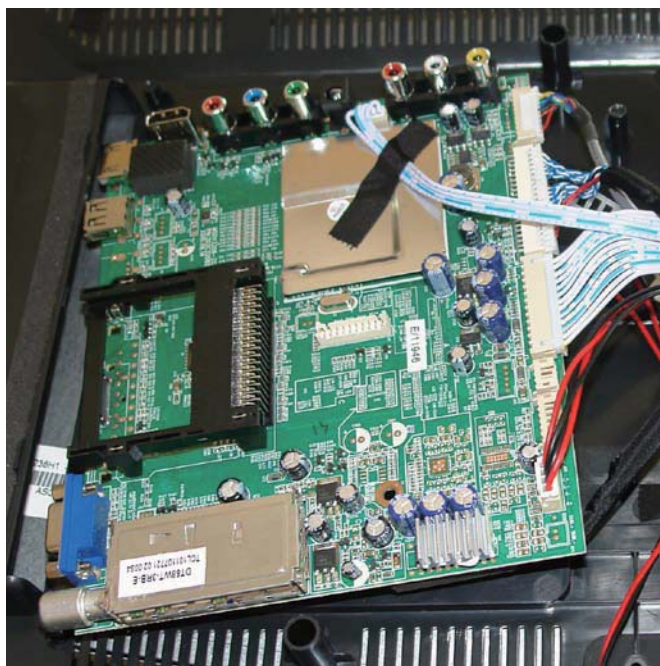
### 3. Location of Controls and Components

#### 3-1 Board Location



No.	Description	
A Board	Main Board	DC1JR0M0102M
B Board	Power Board	514C2414M02

#### 3-2 Main Board



### 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

#### Power connectors (J2)

		J2	
		Pin number	Signal name
		1	GND
		2	ADJ
		3	BK ON /OFF
		4	+5V
		5	POWER ON/OFF
		6	+5VSTB
		7	+5V
		8	+5V
		9	GND
		10	GND
		11	GND
		12	+12V
		13	+12V

#### Notes:

J2-Pin 3: Backlight on/off:

The system can turn on or turn off the backlight of TFT LED Panel through the power supply unit path.

J2-Pin 5: System power on / standby

System board will use this pin to control system power.

J2-Pin 2: Control the luminance of backlight

The system can generate the PWN signal to control the strength of TFT LED Panel's backlight through this connector

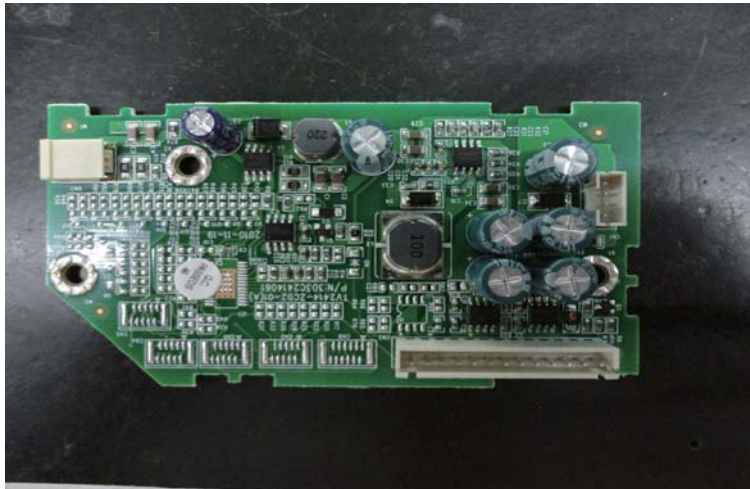
**Keypad and remote connector (J28)**

Pin number	Signal name	Description
1	GND	
2	KEY1	
3	KEY0	
4	NC	
5	5V	POWER FOR REMOTE
6	GND	GND
7	IR	REMOTE CONTROL
8	STANDBY	
9	LED_G	LAMP GREEN
10	LED_R	LAMP RED

**Speaker connector J26**

Pin number	Signal name	Description
1	RSPK+	RSPK+
2	RSPK-	RSPK-
3	LSPK-	LSPK-
4	LSPK+	LSPK+

### 3-3. Power Board



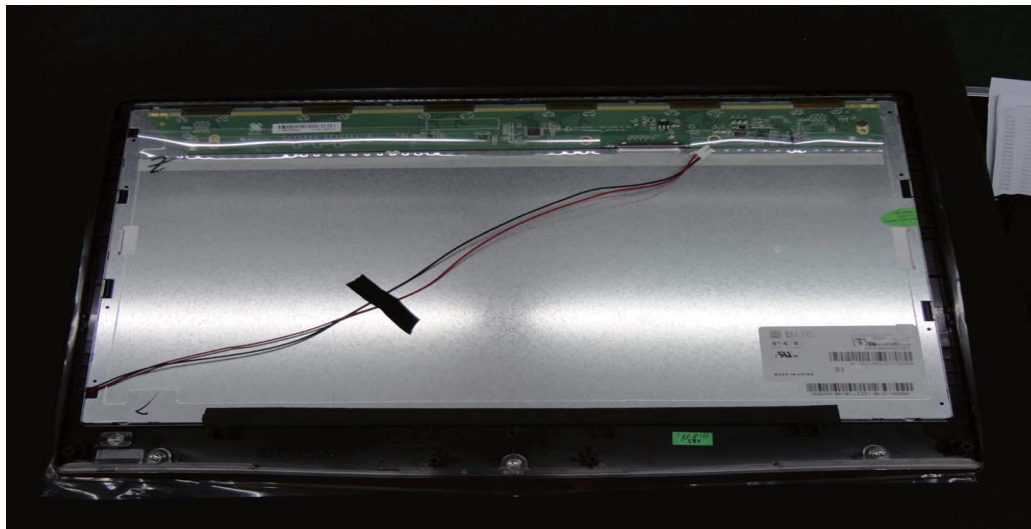
#### 3-3-1 Function Description:

Supply power for Main board, Panel.

#### 3-3-2 Connector definition

CN1		CN3	
Pin number	Signal name	Pin number	Signal name
1	+12V	1	POWER ON/OFF
2	+12V	2	+12V
3	GND	3	+12V
4	GND	4	GND
		5	GND
		6	+5V
		7	+5VSTB
		8	+5V
		9	GND
		10	GND
		11	BK ON /OFF
		12	ADJ
		13	NC

### 3-4. LED Panel



MTC185LED-C05H(LED:V185B1-PE1)

**3-4-1 Function Description: Display the signal.**

Used connector: 093G30-B2001A (STARCONN) or compatible

PIN NO.	SYMOBL	FUNCTION
1	NC	NC
2	NC	NC
3	NC	NC
4	GND	Power ground
5	RXIN0-	Negative LVDS differential data input(0)
6	RXIN0+	Positive LVDS differential data input(0)
7	GND	Power ground
8	RXIN1-	Negative LVDS differential data input(1)
9	RXIN1+	Positive LVDS differential data input(1)
10	GND	Power ground
11	RXIN2-	Negative LVDS differential data input(2)
12	RXIN2+	Positive LVDS differential data input(2)
13	GND	Power ground
14	RXCLKIN-	Negative LVDS differential clock input(clock)
15	RXCLKIN+	Positive LVDS differential clock input(clock)
16	GND	Power ground
17	RXIN3-	Negative LVDS differential data input(3)
18	RXIN3+	Positive LVDS differential data input(3)
19	GND	Power ground
20	NC	NC
21	NC	NC
22	NC	NC
23	GND	Power ground
24	GND	Power ground
25	GND	Power ground
26	VCC	Power supply input voltage(5.0 V)
27	VCC	Power supply input voltage(5.0 V)
28	VCC	Power supply input voltage(5.0 V)
29	VCC	Power supply input voltage(5.0 V)
30	VCC	Power supply input voltage(5.0 V)

- 1) Keep the NC Pin and don't connect it to GND or other signals.
- 2) GND Pin must connect to the ground, don't let it be a vacant pin.



## 4. Disassemble and assemble

### 4-1 Remove the Pedestal



- ☐ Lay down the unit so that rear cover faces upward
- ☐ Remove the three screw from the rear cover indicated with ○
- ☐ Then remove the pedestal

### 4-2 Remove the Back Cover



- ☐ Remove the these screw indicated on figure above by ○
- ☐ Then remove the back cover from the unit.

### 4-3. Remove the adhesive tape

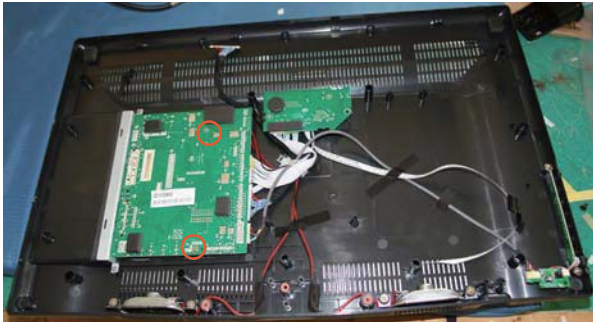


Remove the front frame on the figure above



Remove the adhesive tape indicated on the figure above

#### 4-4 Remove the Terminal Bracket



- ☐ Remove the two screw indicated on the figure above by ○
- ☐ Then put the terminal bracket to the side

#### 4-5 Remove the power module



- ☐ Remove the two screw indicated on the figure above by ○
- ☐ Then remove the power module

#### 4-6 Remove the Main board



- ☐ Disconnected the coupler J20 □ J2 □  
□ J28 □ J26 □ CON2
- ☐ Remove the Main board



#### **4-7 Remove the speaker**



Take out the speaker

#### **4-8 Remove the remote control**



Remove the screw, take out the remote control board

## 5. Installation Instructions

### 5-1 External Equipment Connections

#### Accessories



**Remote Control**

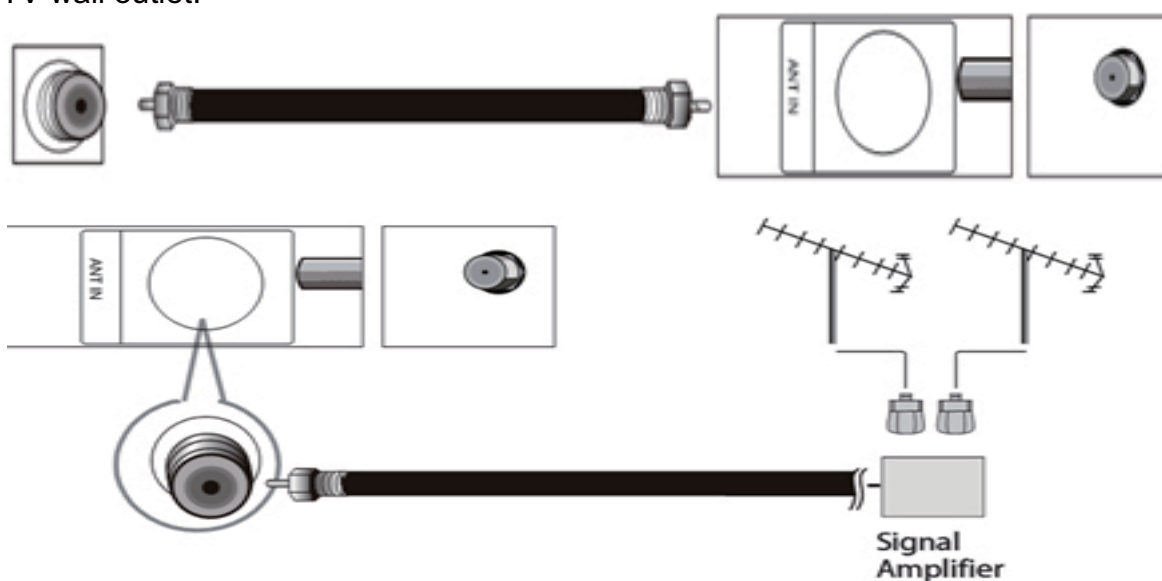
**User GUIDE**



**Battery**

#### Antenna Connection

Connect one end of a coaxial cable (not included) to the ANT IN jack on the back of your TV/DVD combo, then connect the other end of the cable into the antenna or cable TV wall outlet.



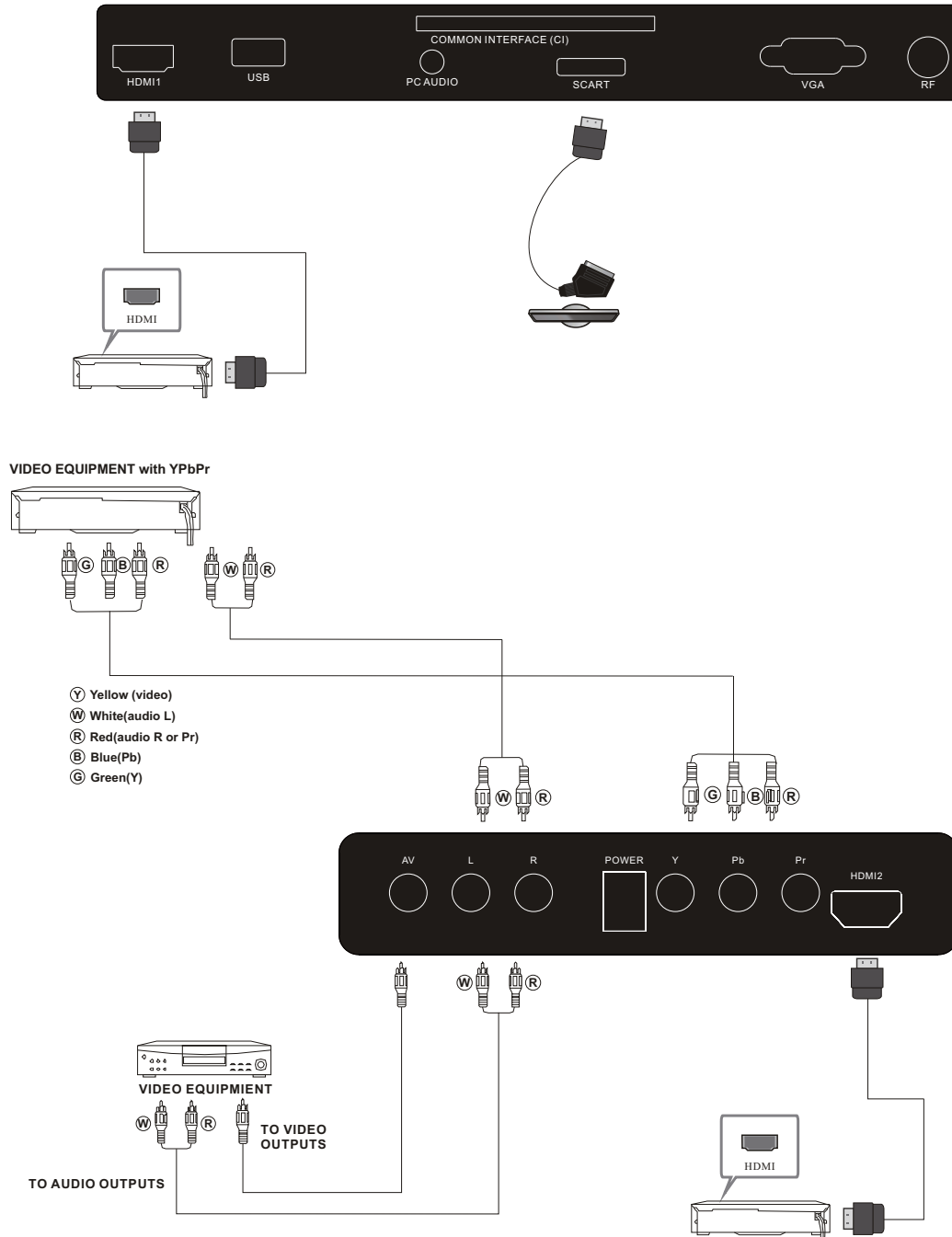
To improve picture quality from an antenna in a poor signal area, install a signal amplifier.

If you need to split the antenna signal to connect two TVs, install a two-way splitter.

## AV EQUIPMENT

This TV provides one group of AV ,one group of YPbPr and one SCART for convenient connection to VCR,DVD or other video equipment. Please refer to the owners manual of the equipment to be connected as well.

You can use the input terminals on TV set rear as follows.



It can be connected to the following appliances: VCR, multi disc player, DVD, camcorder, video game or stereo system, etc.....

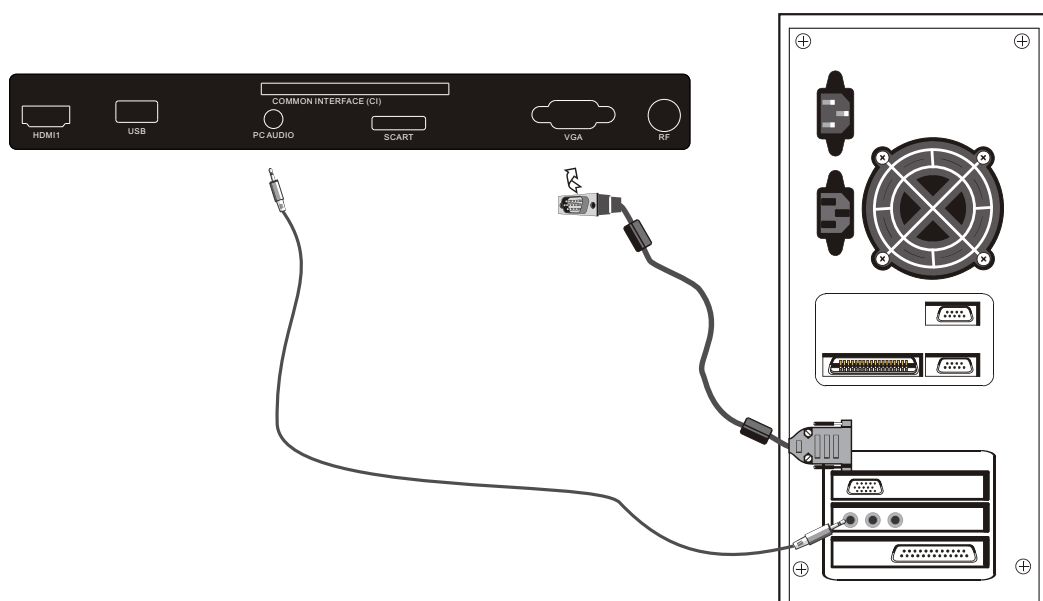
YPbPr can support these video formats:480i,576i,480p,576p,720p,1080i.

**PC****STEPS:**

Be sure both the TV and computer are set to Poweroff.

- 1.Connect VGA and audio cable.
- 2.Connect the powercord.
- 3.Power on the TV, switch to PC mode.
- 4.Power on the PC.

This sequence is very important.

**PC****PRESET MODE**

	RESOLUTION	V.Freq.(Hz)	H.Freq.(KHz)
1	640x480	60	31.47
2	800x600	60	37.88
3	1024x768	60	48.36
4	1360x768	60	47.7
5	1280x1024	60	63.98

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## 5-2 HDMI Connections

### **When the source device(DVD player or Set Top Box) supports HDM How To Connect**

1. Connect the source device to HDMI port of this TV with an HDMI cable(not supplied with this product).
2. No separated audio connection is necessary.

#### **How To Use**

If the source device supports Auto HDMI function, the output resolution of the source device will be automatically set to 1280x720p.

If the source device does not support Auto HDMI, you need to set the output resolution appropriately.

To get the best picture quality, adjust the output resolution of the source device to 1280x720p.

Select HDMI input source in input source option of Select Main source menu.

### **When the source device(DVD player or Set Top Box) supports DVI How To Connect**

1. Connect the source device to HDMI port of this TV with a HDMI-to-DVI cable(not supplied with this product).
2. A separated audio connection is necessary.
3. If the source device has an analog audio output connector, connect the source device audio output to DVI Audio In port located on the PC port.

#### **How To Use**

If the source device supports Auto DVI function, the output resolution of the source device will be automatically set to 1280x720p.




If the source device does not support Auto DVI, you need to set the output resolution appropriately.

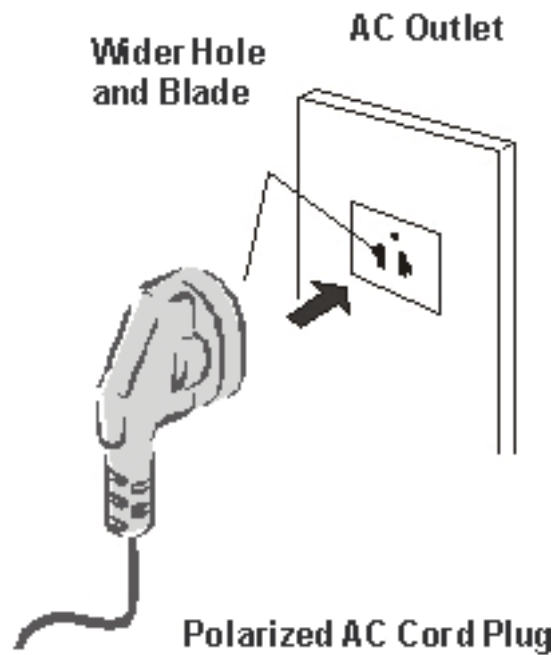
To get the best picture quality, adjust the output resolution of the source device to 1280x720p.

Press the INPUT button to select HDMI input source in input source option of Select Main source menu.

Installation

## Cable sample

	HDMI Cable (not supplied with the product)
	HDMI to DVI Cable ( not supplied with the product)
	Analog Audio Cable (Stereo to RCA type) (not supplied with the product)



**Power source**

## **TO USE AC POWER SOURCE**

Use the AC polarized line cord provided for operation on AC.  
Insert the AC cord plug into a standard polarized AC outlet.

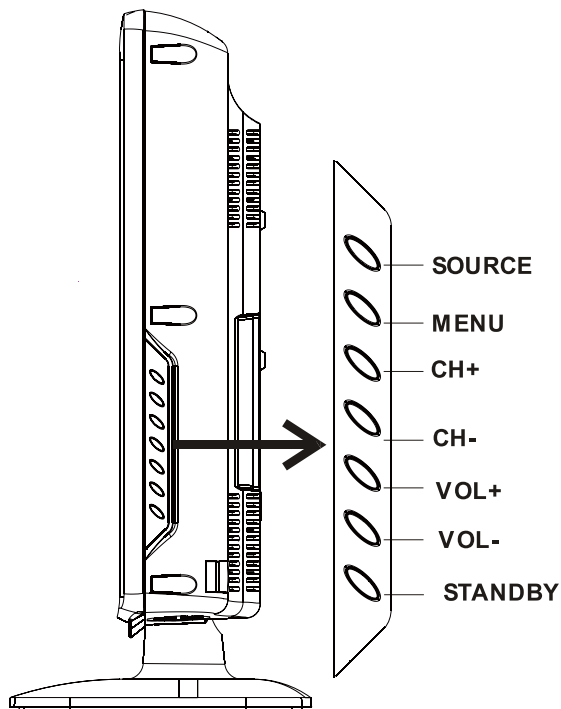
### **NOTES:**

- Never connect the AC line cord plug to other than the specified voltage.  
Use the attached power cord only.
- If the polarized AC cord does not fit into a non-polarized AC outlet, do not attempt to file or cut the blade. It is the user's responsibility to have an electrician replace the obsolete outlet.
- If you cause a static discharge when touching the unit and the unit fails to function, simply unplug the unit from the AC outlet and plug it back in. The unit should return to normal operation.

## 6. Operation Instructions

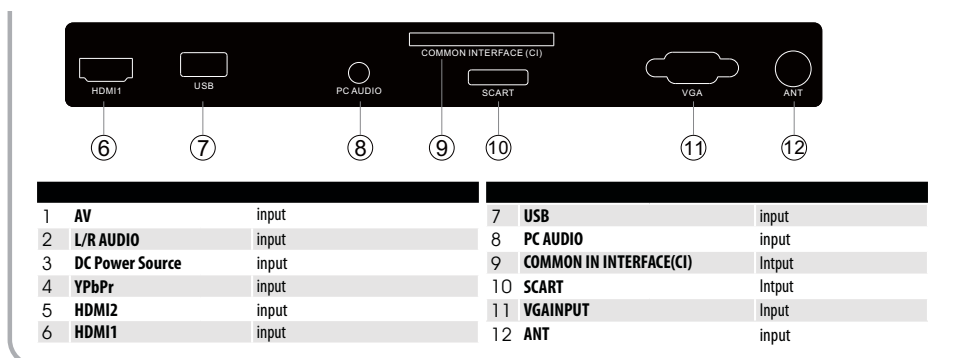
### Basal information

#### 6-1 Front panel controls



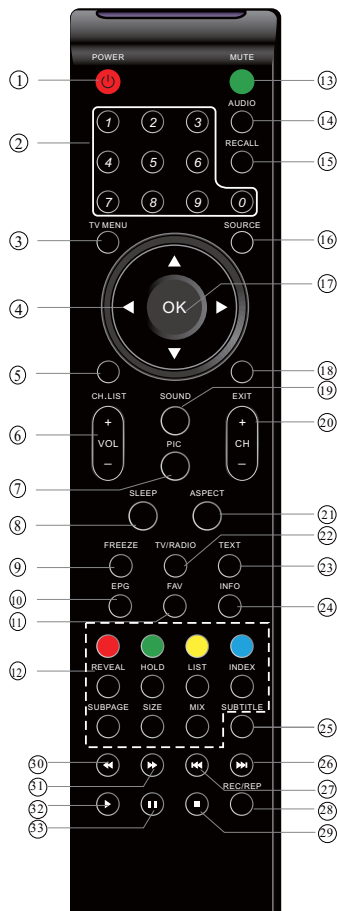
1. **SOURCE** Display the input source menu.
2. **MENU** Display main MENU.
3. **CH+/CH-**: In TV mode press “CH+” or “CH-” to change the channel up and down. In MENU mode, press “CH+” or “CH-” to select items. In standby mode, press “CH+” or “CH-” to turn on the TV.
4. **VOL+/VOL-**: Adjust sound level. In MENU mode, press “VOL+” or “VOL-” to adjust the item that you selected.
5. **STANDBY** : Press this button to turn the unit ON from STANDBY mode. Press it again to turn the set back to STANDBY.

#### 6.2 Back panel controls

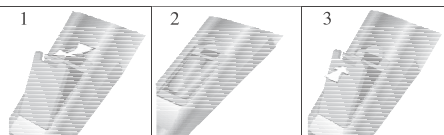




## 6-3 Setting Up Your Remote Control



### Insert Batteries Into the Remote Control



1. Remove the battery cover.
2. Inserting the 2 AAA 1.5V batteries making sure the polarity (+ or -) of the batteries matches the polarity marks inside the unit.
3. Mount the battery cover. Replace with new batteries when the TV set begins to show the following symptoms: Operation is unsteady or erratic. Sometimes the TV set does not function with Remote Control Unit.

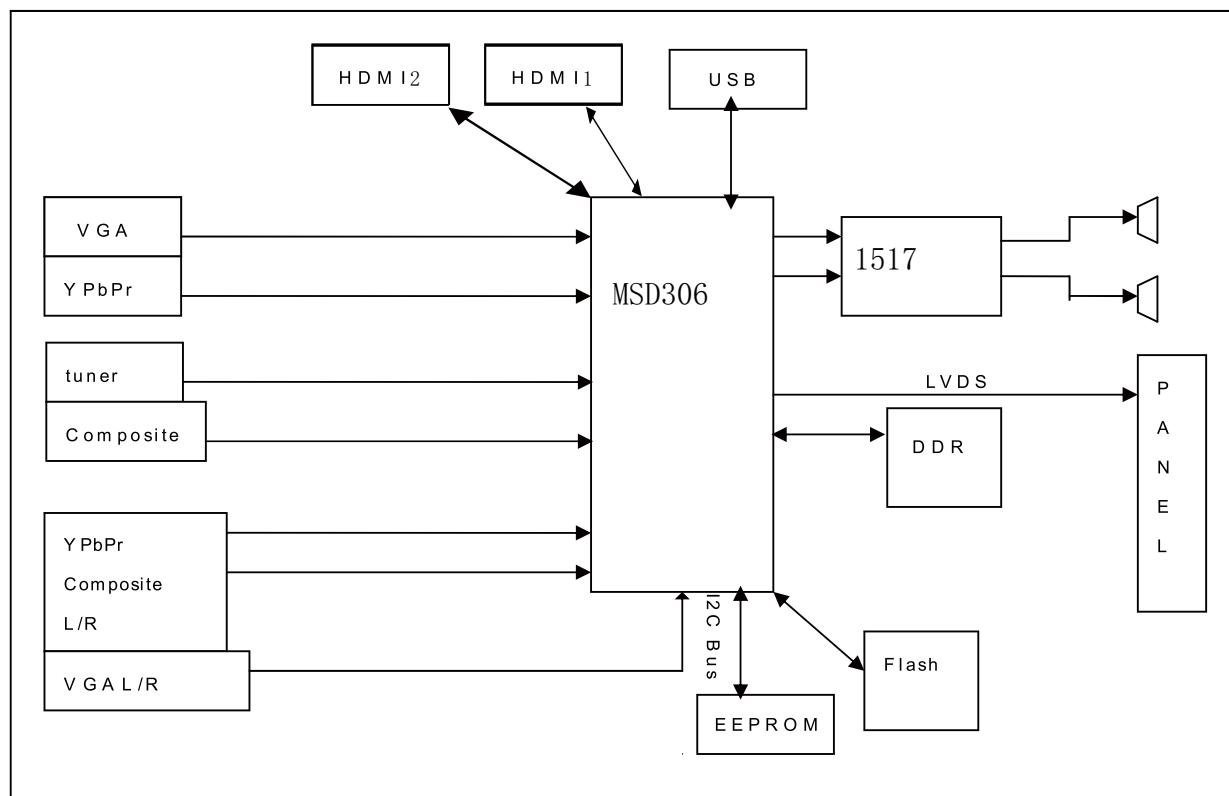
#### Remark:

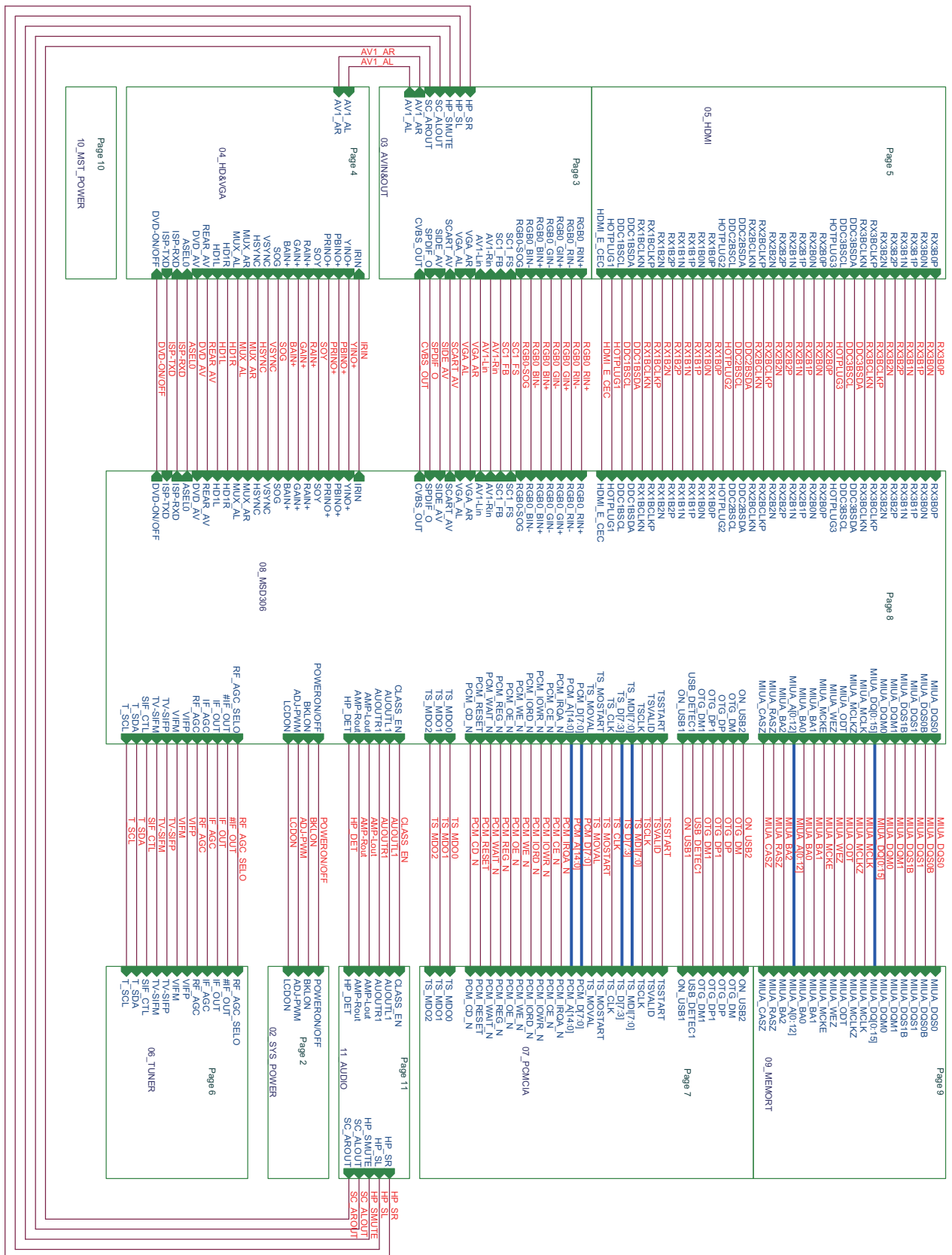
- 1) Alkaline Battery Recommended.
- 2) Remove batteries when they are exhausted or if the remote control is not to be used for Long time.

- 1: **POWER**: To set the TV to standby or power on.
- 2: **NUMERIC KEY**: For direct access to channels.
- 3: **TV MENU**: To display TV menu.
- 4: **CURSOR**: To move within the menu.
- 5: **CH.LIST**: To display the channels list.
- 6: **VOL+/-**: To adjust sound level.
- 7: **PIC**: To switch picture mode.
- 8: **SLEEP**: Set timer to turn off the TV.
- 9: **FREEZE**: To freeze the picture.
- 10: **EPG**: To display information about the program being viewed and what's on next in DTV mode.
- 11: **FAV**: To access your favourite channels list in TV or DTV mode.
- 12: **TELETEXT KEYS**: Please refer to next page.
- 13: **MUTE**: To disable or enable the sound output.
- 14: **AUDIO**: To select the available audio /language of TV programs.
- 15: **RECALL**: To access the previously viewed channel.
- 16: **SOURCE**: To select input source.
- 17: **OK**: To confirm selection.
- 18: **EXIT**: To return to the previous menu or exit menu.
- 19: **SOUND**: To switch sound mode.
- 20: **CH+/CH-**: To access the next or previous channels.
- 21: **ASPECT**: To change picture aspect ratio.
- 22: **TV/RADIO**: In DVB mode, it is used to switch between digital TV channels and radio stations. Display/remove the programme information.
- 23: **TEXT**: To enter or exit TELETEXT.
- 24: **INFO**: To display information about the channel being viewed or further information about the program when in small EPG screen in DTV mode.
- 25: **SUBTITLE**: To switch between different subtitles in DTV mode.
26. To skip to the next file in USB mode.
27. To skip to the previous file in USB mode.
28. **REC/REP**: Press to record the TV program you are watching in DTV Mode or press to repeat play in USB Mode.
29. Stop the media player in USB mode.
30. To scan in reverse, during USB, USB playback.
31. To scan in forward, during USB, USB playback.
32. Play the media player in USB mode.
33. Pause the media player in USB mode, time shift in DTV mode.

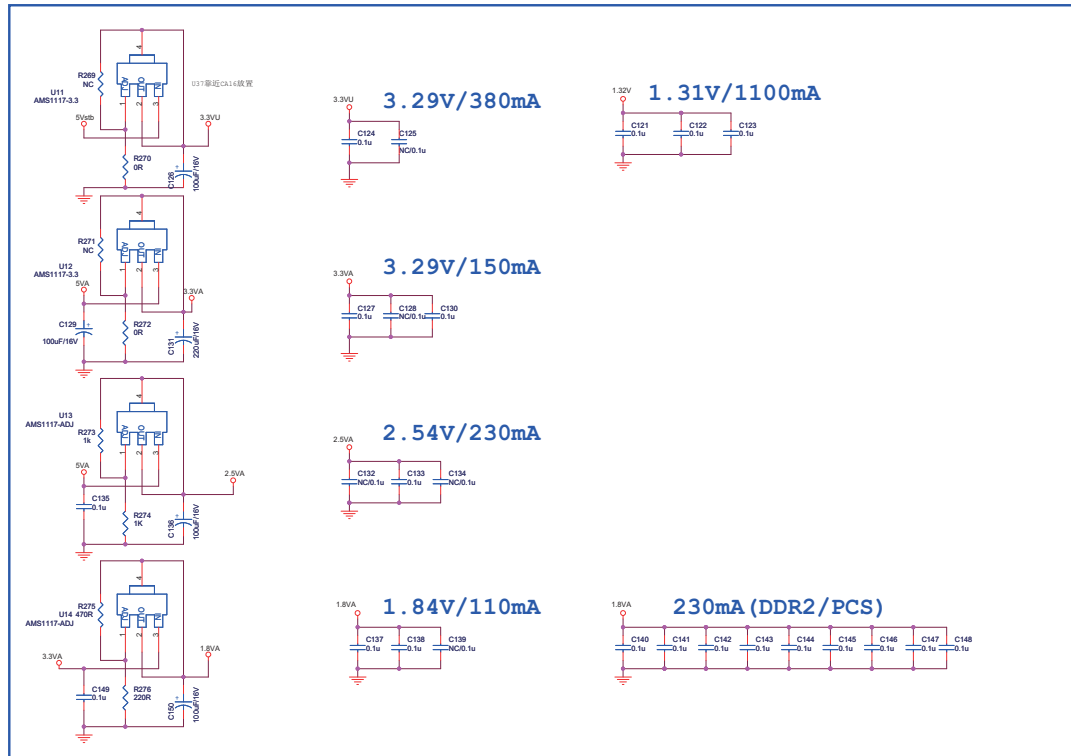
## 7. Electrical parts

### 7-1. Block diagram

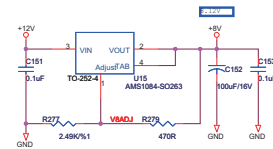
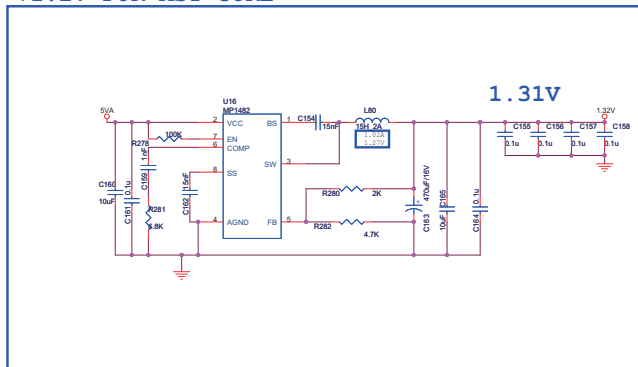




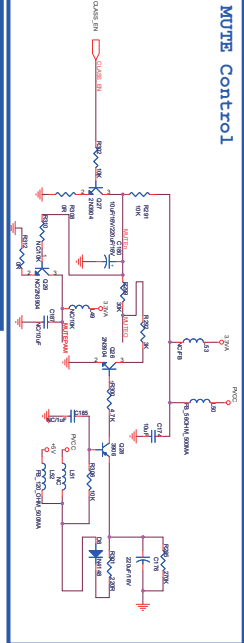
## MSD306 POWER SUPPLY



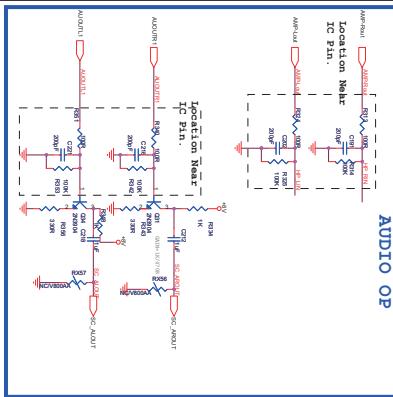
## +1.2V FOR MST CORE



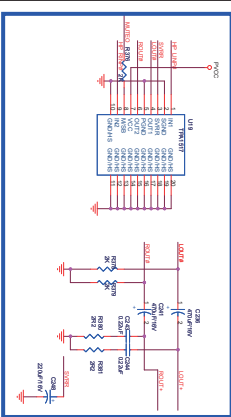
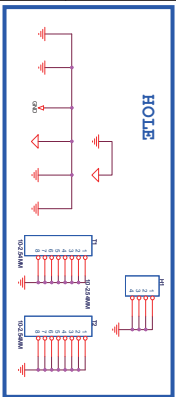
### MUTE Control



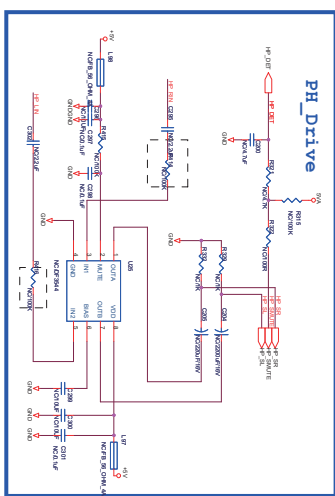
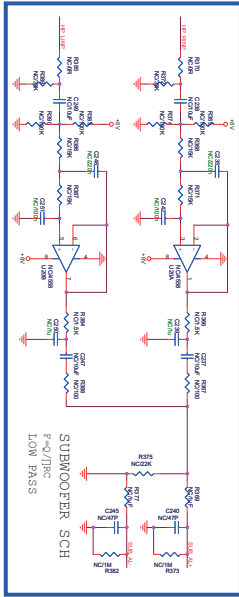
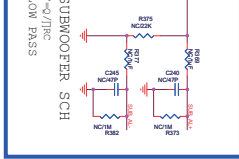
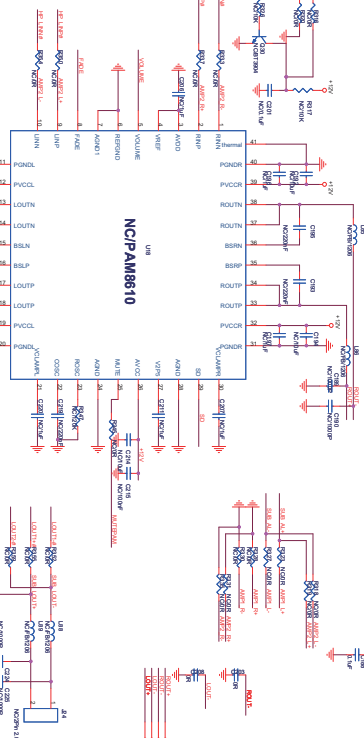
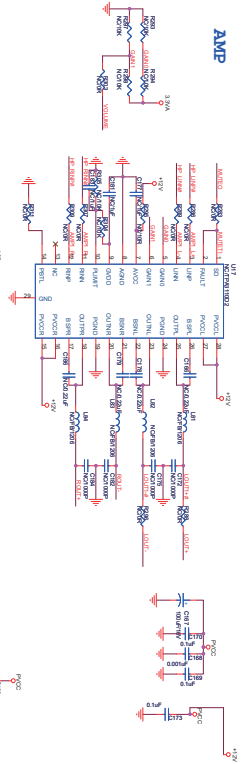
### AUDIO OP

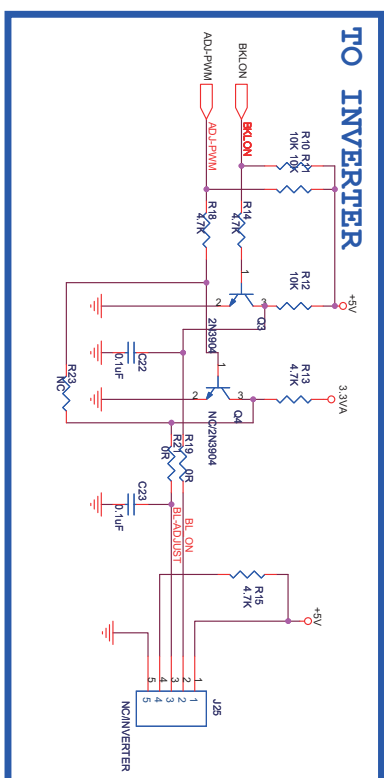
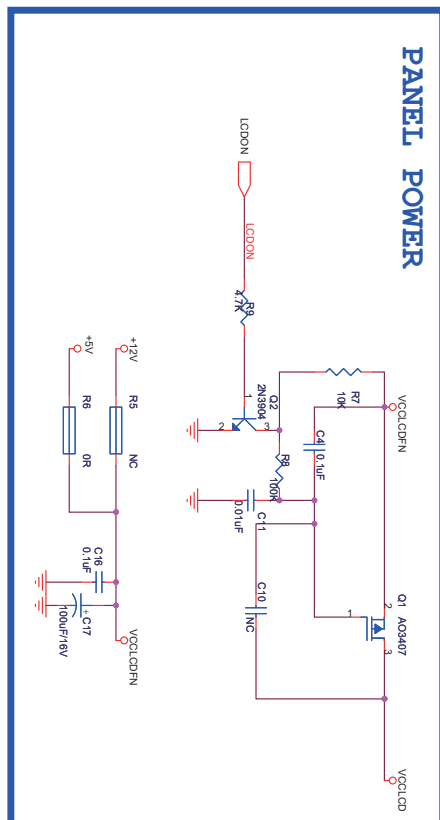


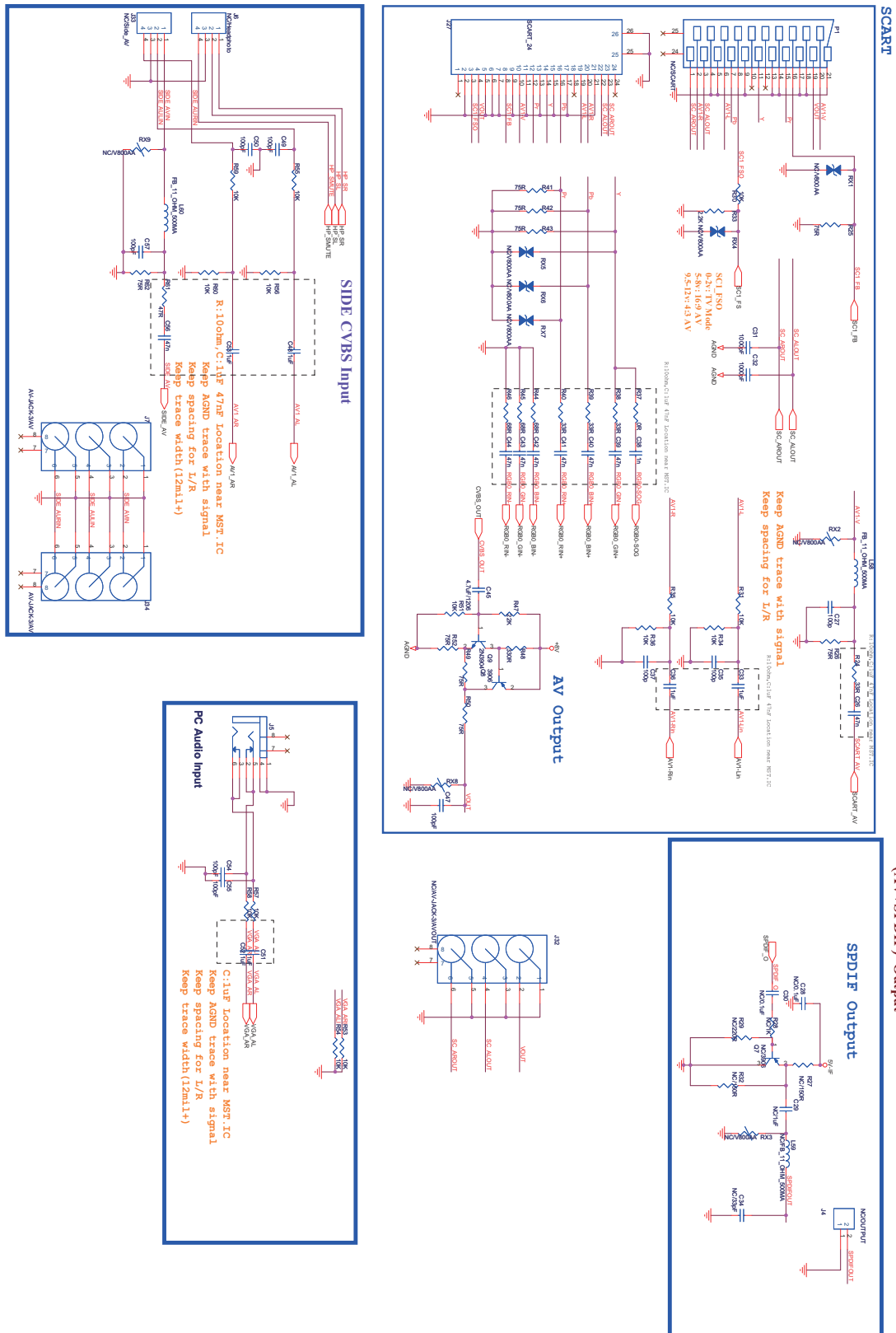
### HOLE

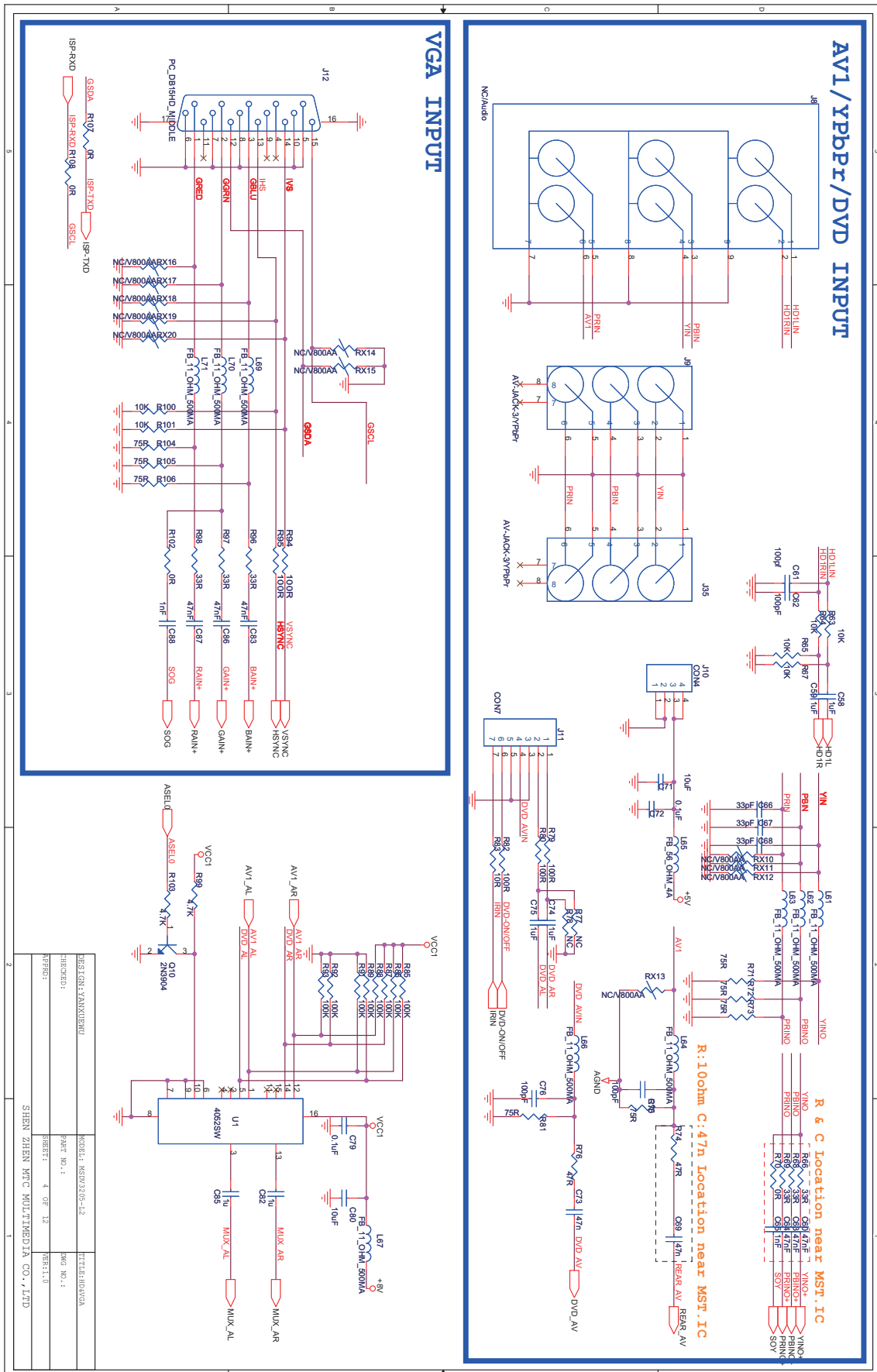


### AMP

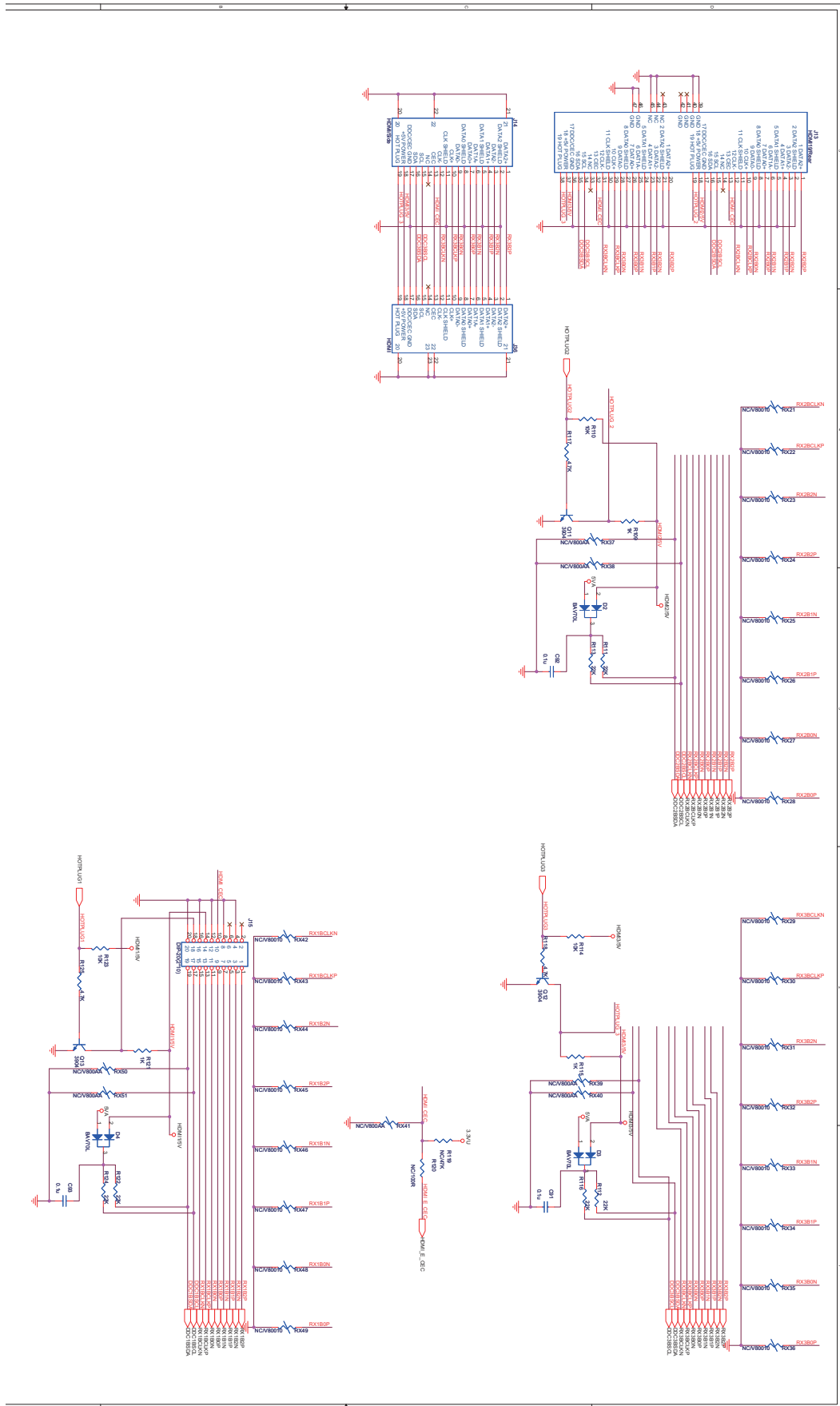




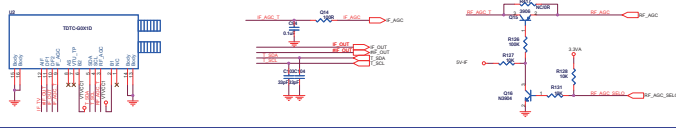




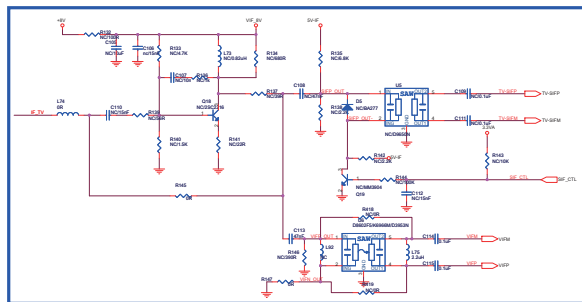
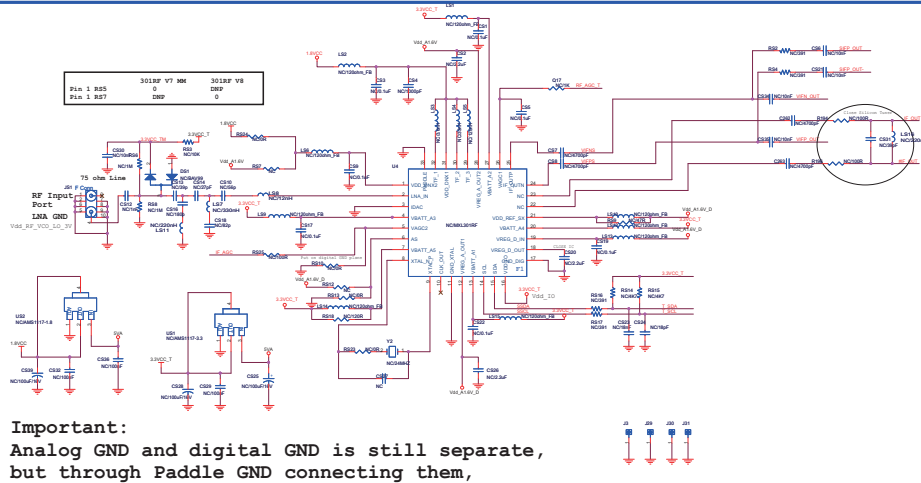
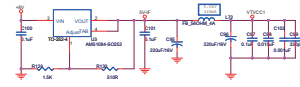




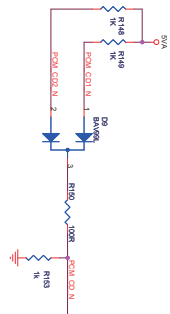
# PAL /DVB-T SYSTEM



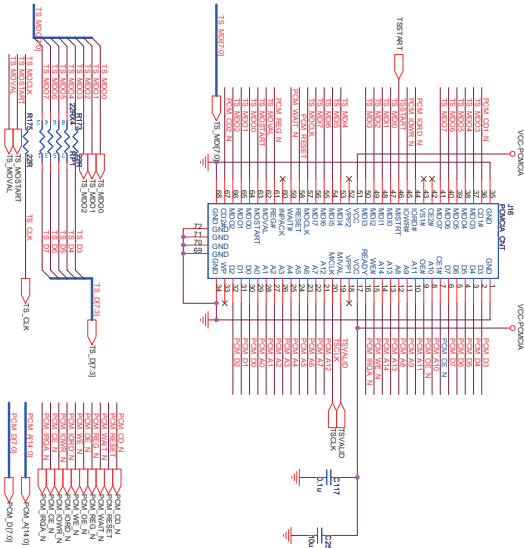
# POWER FOR ATV TUNER



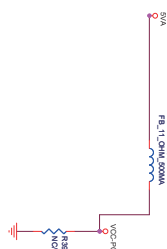
### CARD DETECT



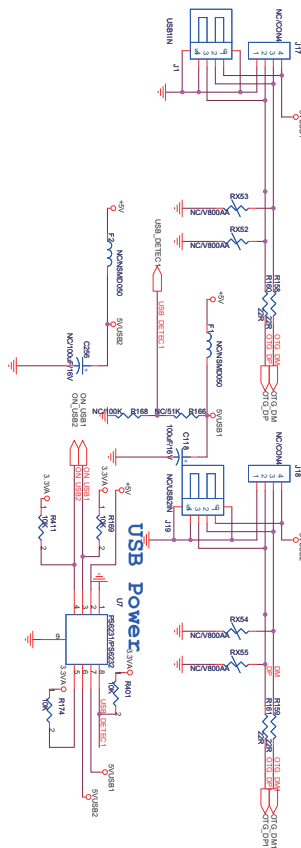
### PCMCIA Connector



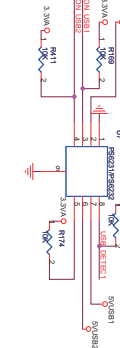
### PWR CTRL 5V card



### USB Interface



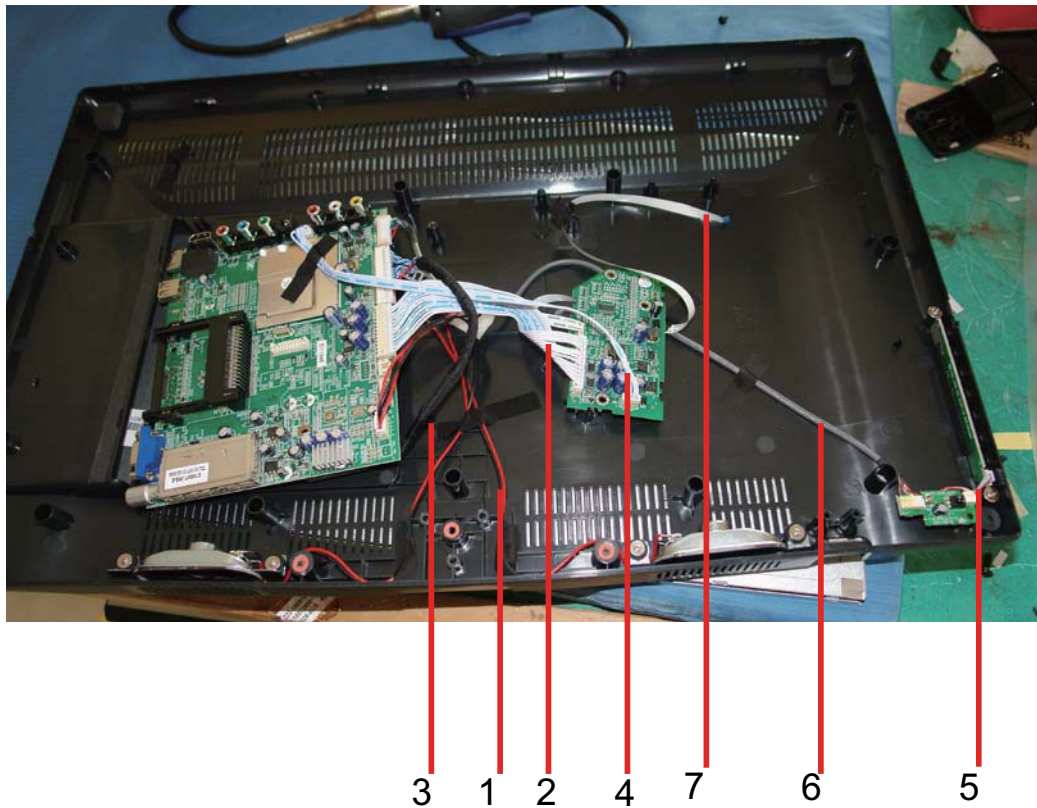
### USB Power







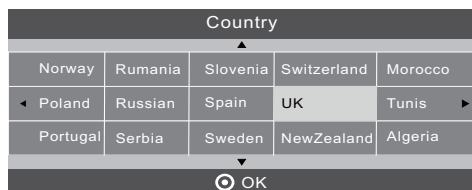
### 7-3 .Wiring Connection Diagram



NO.	Name
1	Connection Wire(For Speaker)
2	Connection Wire(Power For Mainboard)
3	LVDS Wire
4	Connection wire(12V input for power board)
5	Connection Wire(For Keyboard)
6	Connection Wire(For Remote)
7	Connection Wire(For inverter)

## 8. Measurements and Adjustments

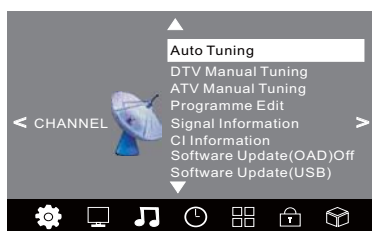
### Installation Guide



This screen only appear when the TV first time turn on or reset to factory set. You can choose language and country, auto turning programs . And after turning the screen will skip to the first DTV program.

### 1. CHANNEL MENU

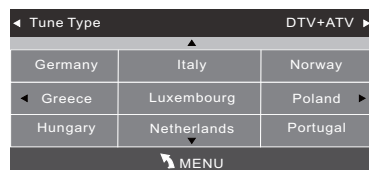
The first item of the MENU is channel menu( for TV or DTV source only).



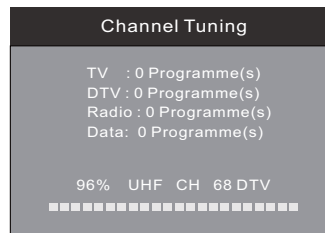
You can search channels and edit programs here.

#### 1).Auto tuning:

Search all the channels automatically(you can select ATV and DTV)



Pls press ◀▶▼▲ to select country at first , then press OK button to start auto tuning .



#### NOTE:

All the channels including ATV, DTV and Radio can be tuning by one time, if the Tune Type is DTV+ATV .

All the stored channels will be disappear after auto tuning .

After auto tuning , the channel will turn to the first DTV channel.

#### 2).DTV Manual tuning:

You can select a DTV channel then find the program in this channel.

Pls press ◀▶ to select the channel , then press OK to search the programs .

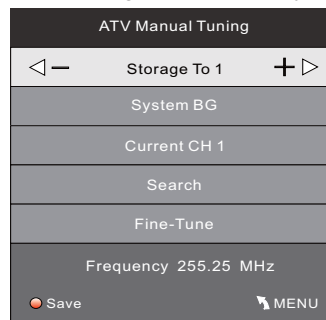
#### NOTE:

Bad Normal Good means signal intensity.



#### 3). ATV Manual tuning :

You can change the sound system to search the analog TV channels and fine tune the channels , then storage the channels you selected.

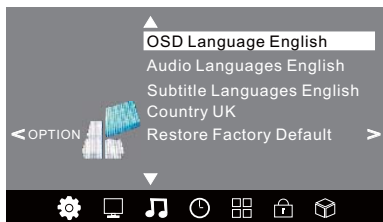






## 5.OPTION MENU

The fifth item of the MENU is the OPTION MENU. You can adjust the Menu language, Audio language, Subtitle language etc.

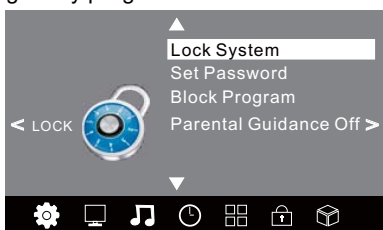


### NOTE:

Restore factory default will clear all the programs and password.

## 6.LOCK MENU

The sixth item of the menu is the LOCK MENU. You can lock system, set password, block program and set parental guidance. Once you set the lock system to on, you can not search the channels or change any programs.



### NOTE:

The default pass word is 6666.

Block program: Press ▼▲ to choose the program, press teletext green button to block the program. If you want unblock the program, pls enter the main menu, input the password, then press green button again. Parental guidance: Press ◀▶ to choose rating.

## 7.EPG Menu(Electronic Program Guide).

The EPG menu is used to look at what is being broadcasted on DTV or Radio channel in the day. To access the EPG menu, press the EPG button, the following menu will be displayed:

PROGRAMME GUIDE	TIME
28 Apr 04:39	
800 SZTVM01	No Information
801 SZTVM02	No Information
802 SZTVM03	No Information
803 SZTVM04	No Information
804 Date	No Information
INFO Schedule Remind INDEX	

### 1. INFO

Use ◀▶ to choose the programs, Press INFO key, you can display the highlight program's information.

### 2. Schedule

Press the teletext yellow key, It can list all the reminder schedule, press ▼▲ to choose the list, press red key DELETE to delete the schedule list, Press EPG to return to EPG menu.

Schedule List		04:55	28th Apr	Delete
Time	Date	Programme Title	Channel Name	

### 3. Remind

Press the blue key to choose one program and set up one reminder time, the TV screen will skip to the choosed program in the reminder time automatically.

Reminder setting		
◀ -	802 SZTVM03	+ ▶
08 Minute		
05 Hour		
Apr Month		
28 Date		
★ Once Mode		
OK		BACK

### 8.1 How to enter into the factory model

1. You can press "source-2-5-8-0" to go into factory setting. Press the key "exit" to shut the factory setting.



content:

1: ADC setup: set ADC value of YUV,VGA. It can also be auto-set. Adopt 100% color bar to yuv and Checkerboard signal to vga.

2: Adjust the brightness and contrast ratio of each signal, which do not affect the value of user's menu.

3: adjust the color temperature and white balance of each signal source.

4: SSC to adjust the spectrum for passing the EMC test.

5: special set

1) 2hour off-- for Aging test

2) WDT --watch dog

3) white pattern --set pure color output for the panel, used at the checking and aging test for panel.

4) reset

5) set the recorder

6) set power-on screen display.

6: QMAP adjust :adjust color quality.

7: PEQ set sound EQ

8: sw information: to check the software information

9: UART DEBUG : Access to serial port and connect a computer if set to HK.

10: BMTEST :cpu check the CPU

The last line is SW Ver.No

### 8.2 How to update software

Haier MSD306 F/W upgrade with USB SOP

Step 1: Ready for F/W Upgrade

1.1 Prepare a USB memory .

1.2 Copy the software file (merg.bin) from your computer to the USB memory, and remove it from computer's USB port!

Step 2: F/W Upgrade

2.1 AC ON



2.2, then input USB , press "MENU" and choose "update software", and then press "OK".















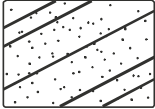



2.3, Now you should choose "Yes", TV begin to update. You should reset TV after update.



Note: When Upgrade on the process, please don't Power-Off!

## 9. Trouble shooting

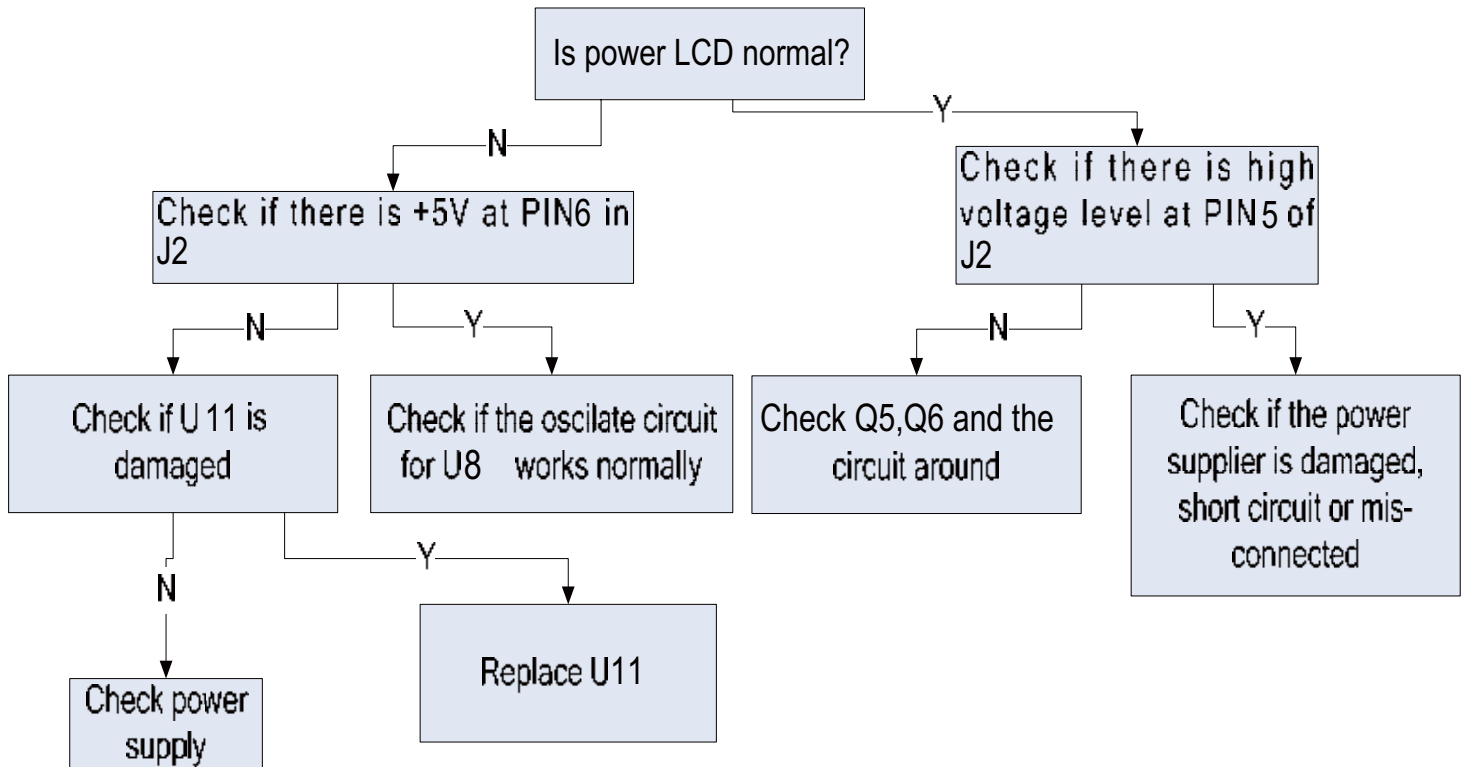
### 9-1. Simple check

Trouble phenomenon		Inspection
Picture	Audio	
 Snow	 Noise	antenna position, direction or connection
 Ghost	 Normal audio	antenna position, direction or connection
 Interfere	 Noise	electronic equipment, car/ motorcycle, fluorescent light
 Normal Picture	 Mute	Volume (inspect whether the mute function on the remote control are started, or audio system are correct or not)
 No picture	 Mute	Power cord is not inserted Power switch is not opened Contrast and brightness/volume setup Press standby key on the remote control for inspecting
 No color	 Normal audio	color control
 Scramble	 Normal audio or weak	retune channel
 No color	 Noise	Audio system

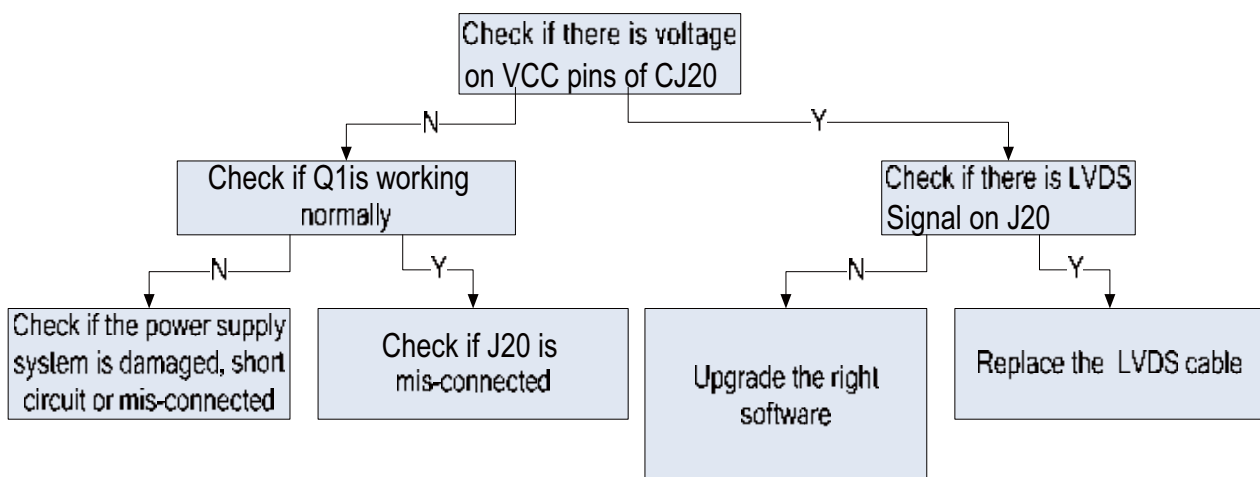
Special Explanation: The accessories such as remote control is not belongs to the guarantee.

## 9-2. Main board failure check

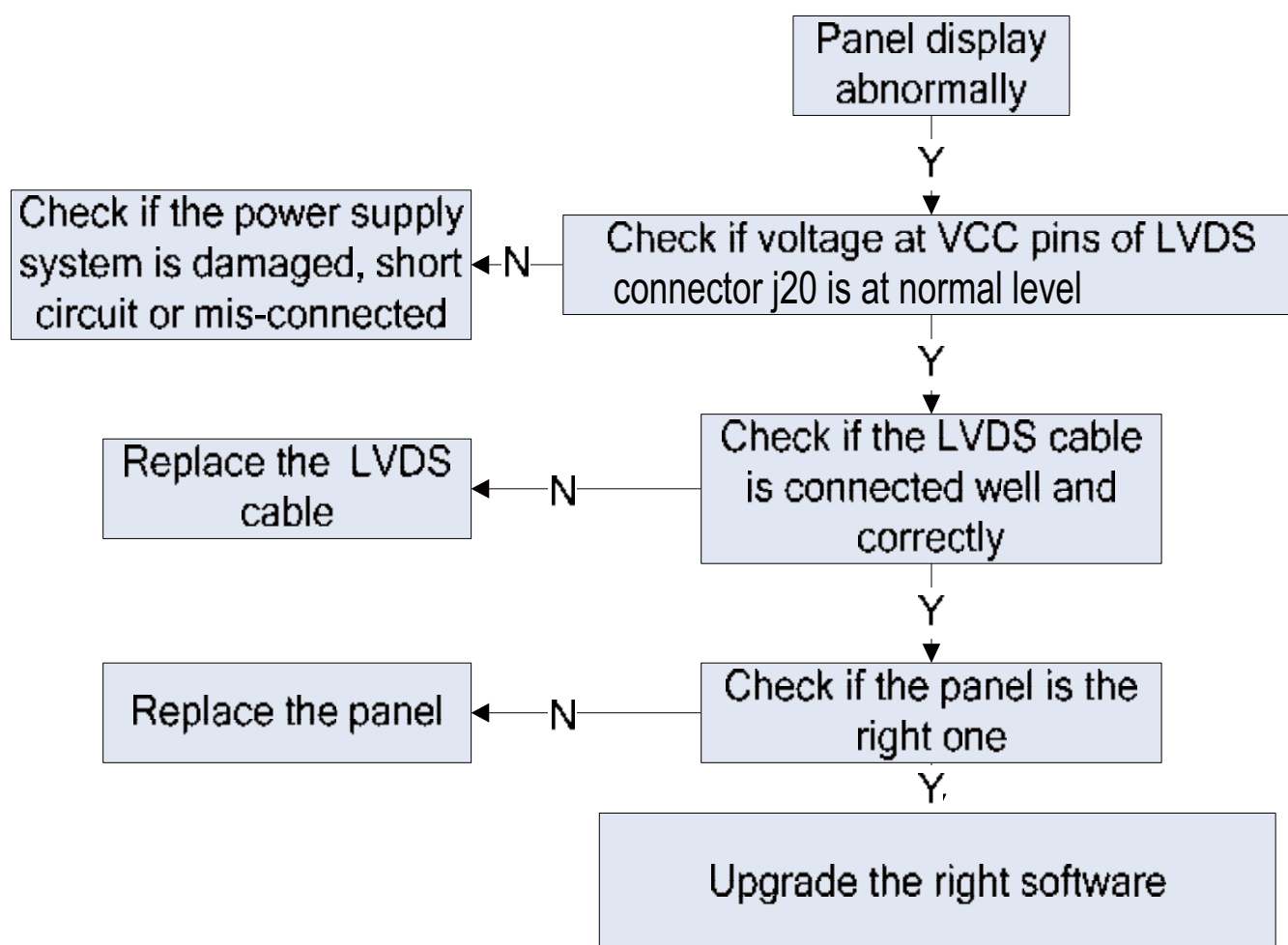
### 1) Black creen



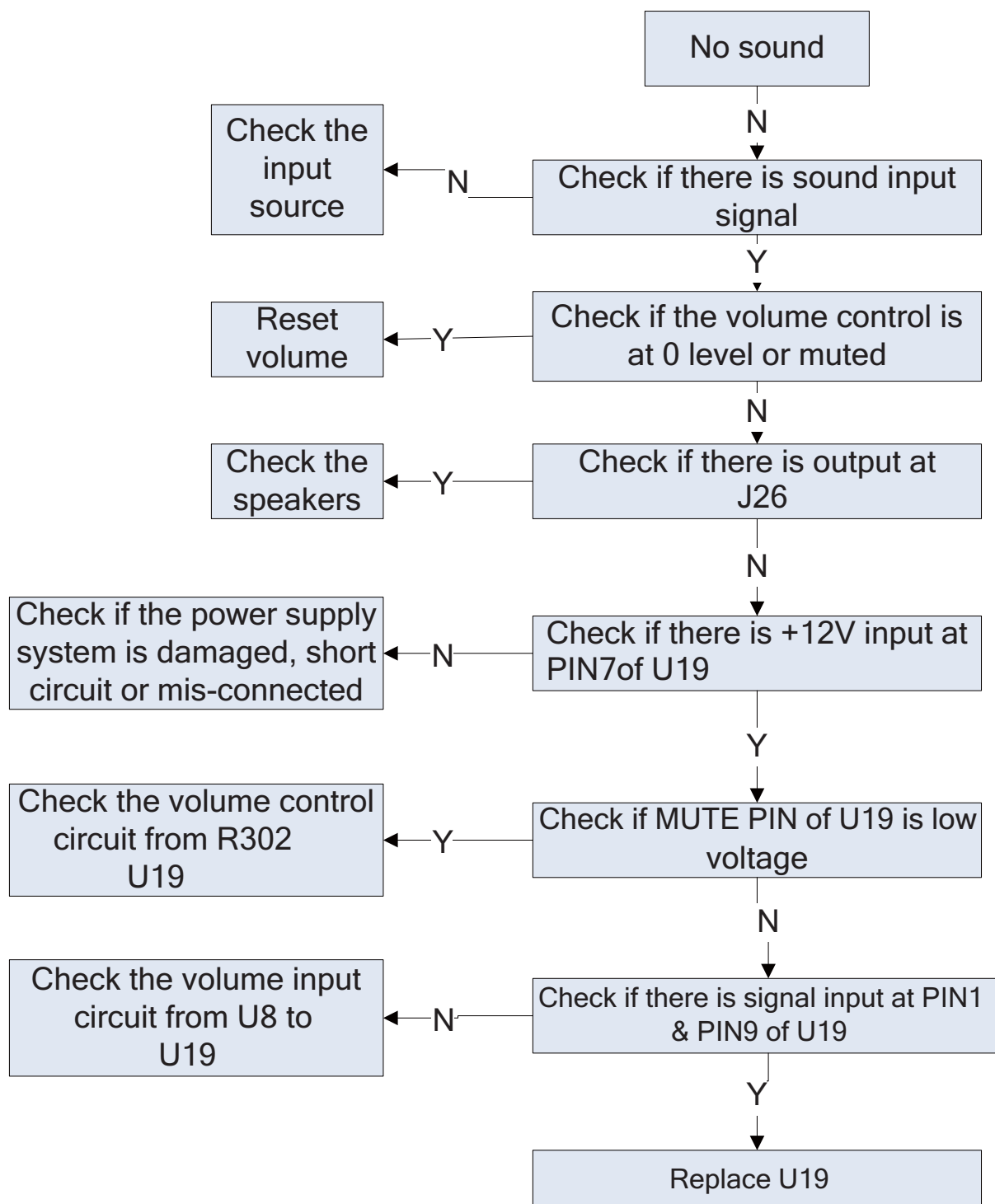
### 2) White screen



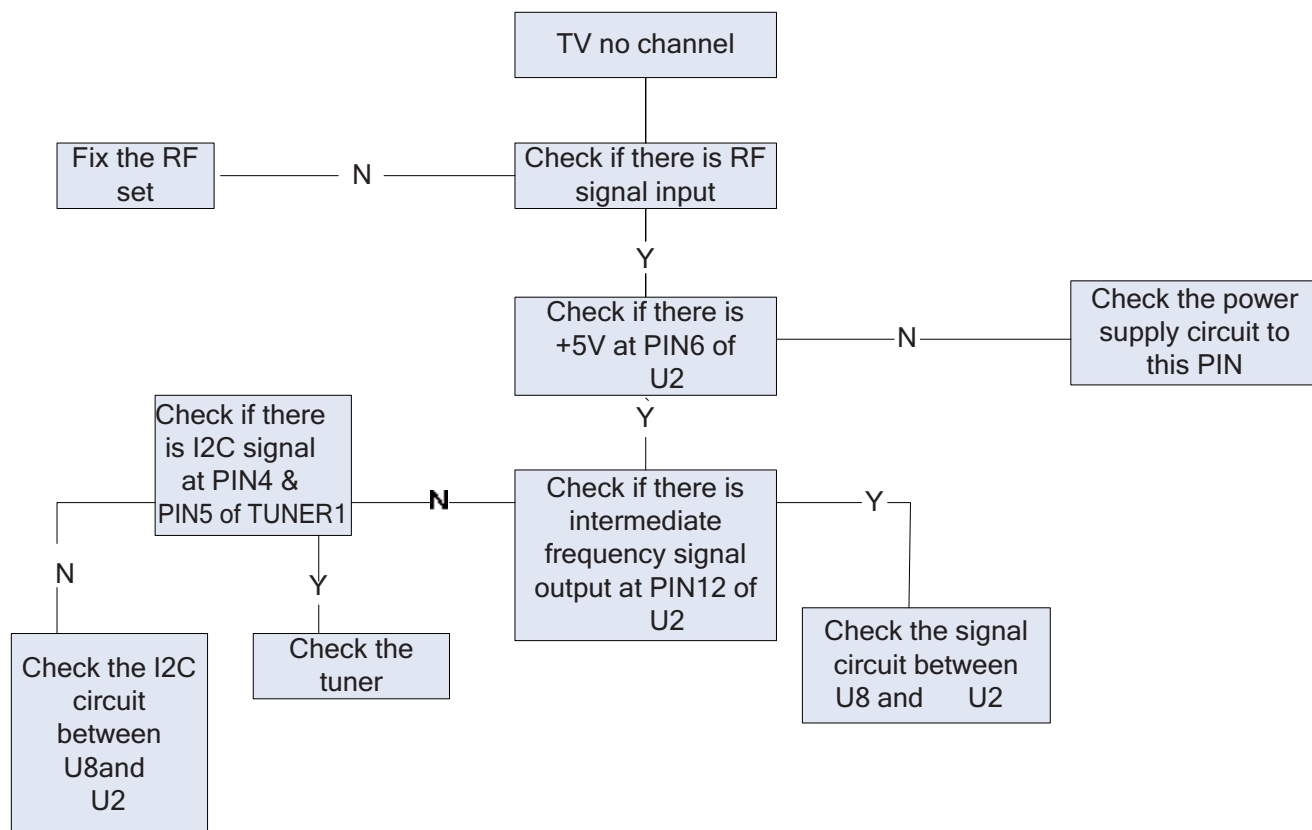
### 3) Panel display abnormally



## 4) No sound

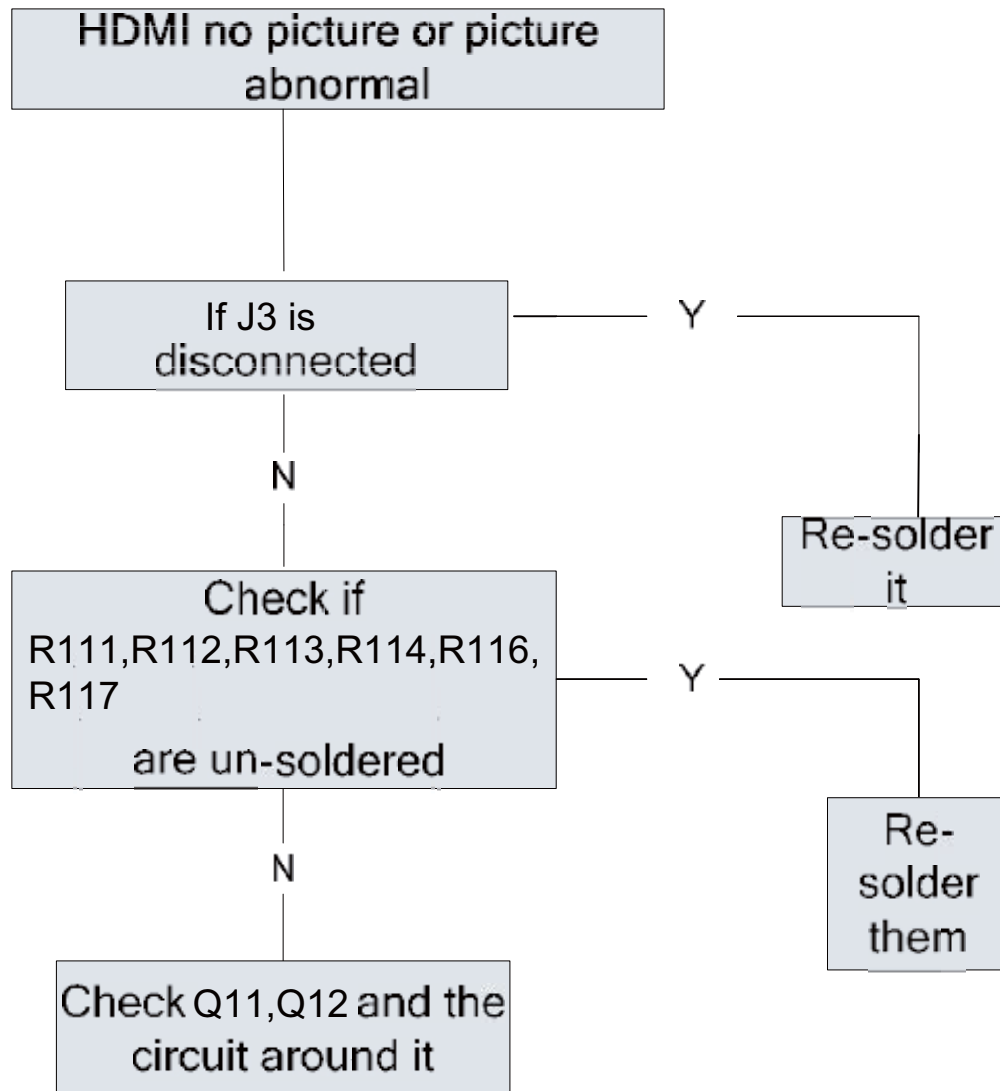


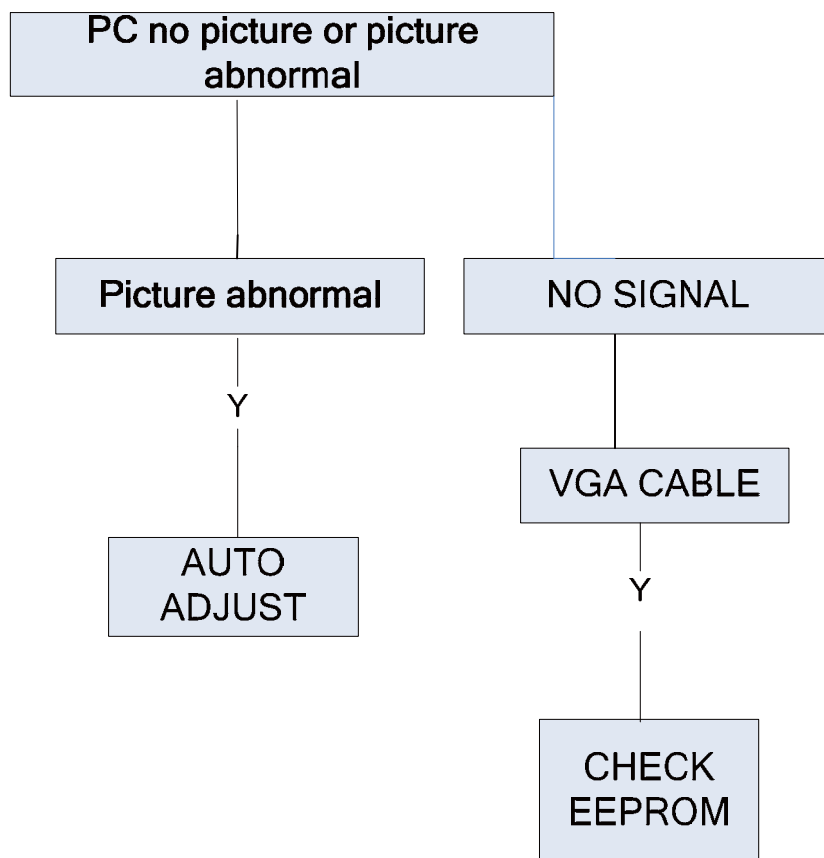
## 5) TV failure

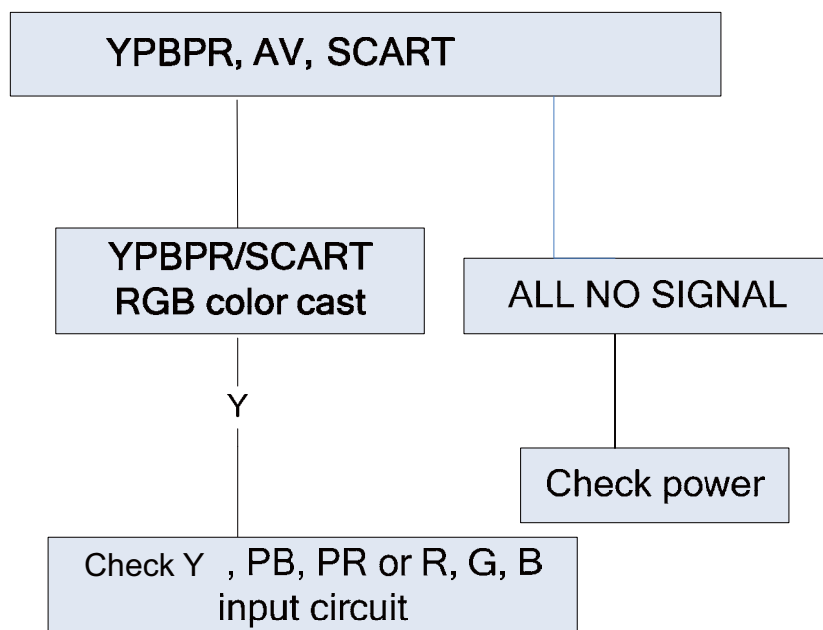




## 6) HDMI no picture or picture abnormal


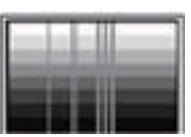
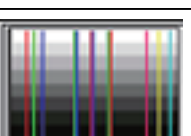

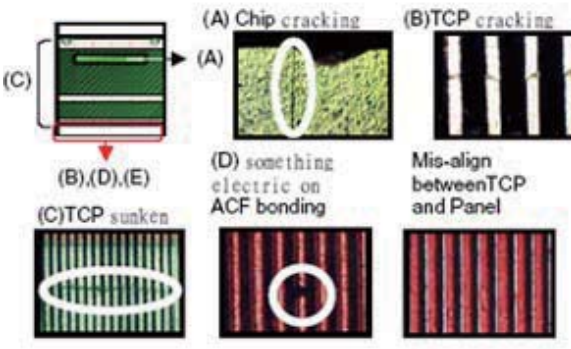





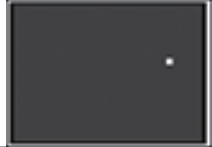
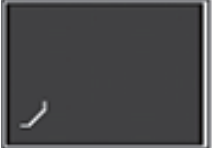


**7) PC no picture or picture abnormal**

**8) YPBPR, AV, SCART no picture or picture abnormal**





### 9-3. Pannel failure

#### Failure Mode






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

Part	Name	Description	Phenomena	Failure cause
Panel or Polarizer	Dot Defect	Bright dot dark dot in pannel		Incoming Inspection Standard
	Polarizer Bubble	Bladder in Polarizer		Bladder between Polarizer and top glass
	Polarizer Scratch	Polarizer Scratch		Tine or rigidity arose
	F / M inside Polarizer	Eyewinker inside Polarizer		Eyewinker inside Polarizer
Circuit	Abnormal Display	Abnormal Display		1.Chip lose action 2.IC ahort or jointiog bad 3.Pannel and vsc connect bad
	Flashing	Bright and dark display alternately		

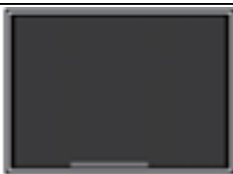

## Failure Mode

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

## Failure Mode

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

## Failure Mode

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



# Sincere Forever



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