

Haier

MT5311 Training Documents

LED TV

Chapter 1: General Information

1-1. Table of Contents

1. General Information

1-1. Table of Contents	1
1-2. General Guidelines	3
1-3. Important Notice	3
1-4. How to Read this Service Manual	6

2. Specifications

7

3. Location of Controls and Components

3-1. Board Location	8
3-2. Main Board	8
3-3. Power Board	15
3-4. LCD Panel	16

4. Disassemble and Assemble

19

5. Introduction

Controls	25
Connection Options	26
Universal Remote control	27
Accessories	28
Install the Stand	28
Install the Wall Mount	28

6. Installation

Connecting to a DC input	29
Connecting to an Antenna input	29
Choose Your Connection	30
Connecting to an AV Device.....	30
Connecting to an Audio Device	31
Connecting to a PC	32
Connecting Headphones	33

7. Operation	
Channel menu	33
Video menu	36
Audio menu	37
Function menu	38
Lock Menu	42
Other Functions	45
Playing External Media	54
8. Universal Remote Control	
Setting Up Your Remote Control	58
Remote Control Codes	63
9. Maintenance	63
10. Specification	63
11. Electrical Parts	
Block Diagram	64
Circuit Diagram	65
12. TV OPERATION	
Upgrade software	77
Factory menu	78
13. Trouble-shooting	
Main Board Failure Check	79
Panel Failure	88

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 rain or excessive moisture. This TV must not be exposed to dripping or splashing water,

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.

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

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:

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.

CAUTION:

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

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

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:

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

Model	LE32D10F
Screen Size	32inch
Aspect Ratio	16:9
Resolution	1366x768
Response Time (ms)	8.5 (GRAY TO GRAY)
Angel of View	176(H)/176(V)
Color Display	16.7M
No. of Preset Channels	100
OSD Language	English/France/Spais
Color System	ATSC/NTSC
Audio System	m/mts/AC-3
Audio Output Power (Built-in) (W)	10W×2
Audio Output Power (outer) (W)	No
Total Power Input (W)	75W
Voltage Range (V)	AC100V-240V
Power Frequency (Hz)	60Hz
Net Weight (KG)	
Gross Weight (KG)	
Net Dimension (MM)	
Packaged Dimension (MM)	

3. Location of Controls and Components

3-1 Board Location

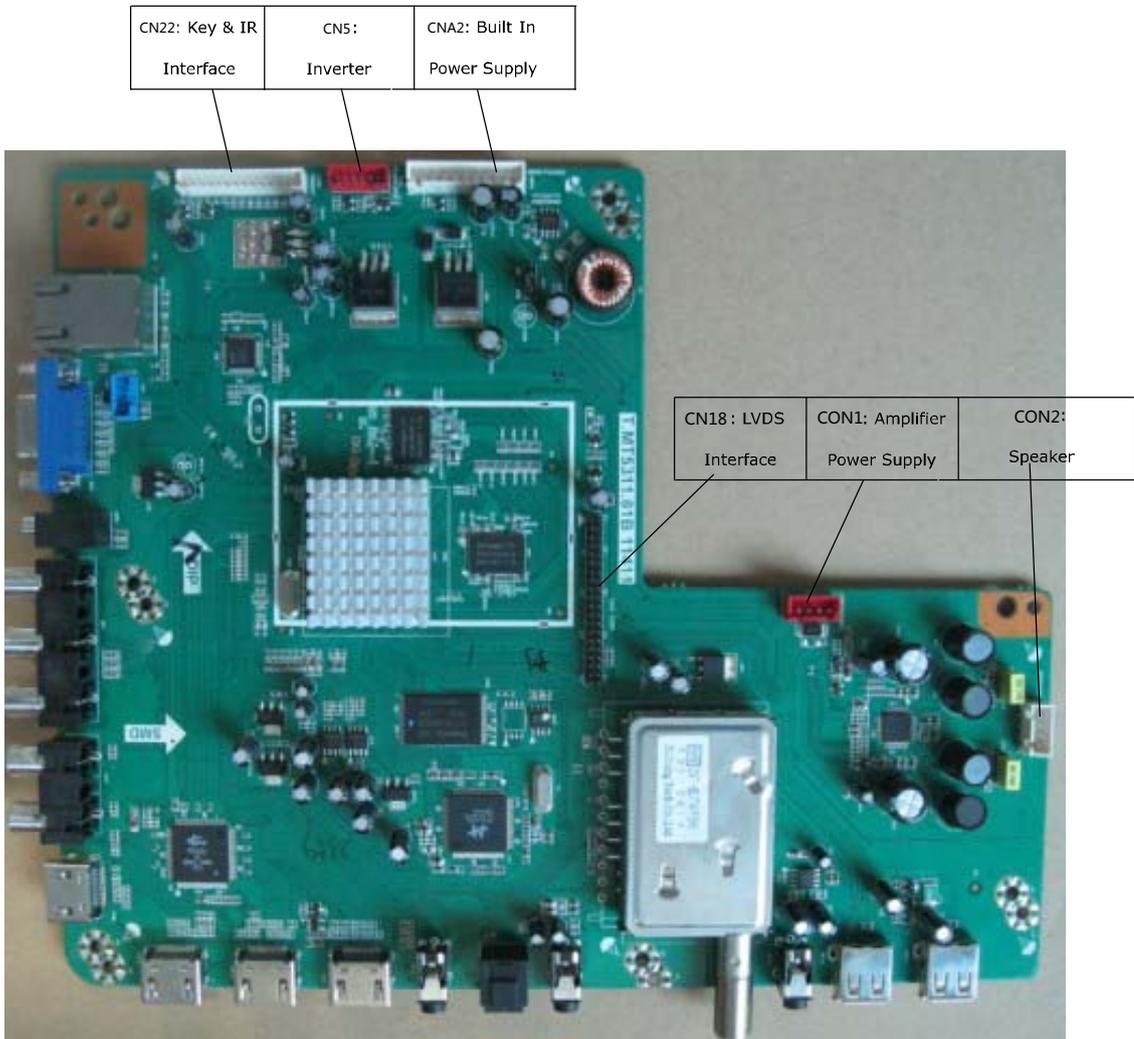


3-2 Main Board & AV Board

No.	Part Number	Description
A Board		Main board
B Board		Power board

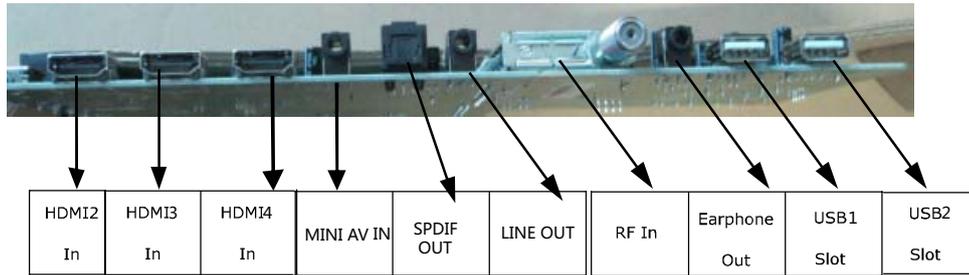
Model No.:

TOP VIEW OF T.MT5311.81B

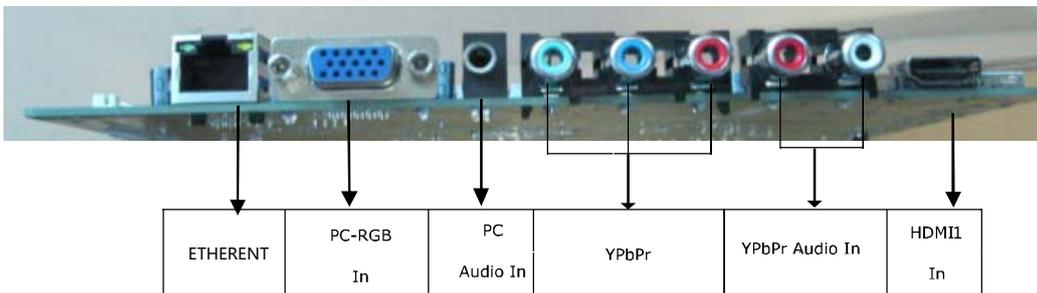


Model No.:

FRONT VIEW OF T.MT5311.81B



SIDE VIEW OF T.MT5311.81B



REQUIREMENT OF WIRE HARNESS

AV In



The optional connectors are marked with "*".

◆ CNA2(10PIN/2.54): BUILT-IN POWER SUPPLY CONNECTOR

NO.	SYMBOL	DESCRIPTION
1	5VSB	+5V Power Supply when Standby
2	PON	Power On/Off
3	GND	Ground
4	GND	
5	P5V	+5V Power Supply for Panel
6	P5V	
7	5V	Main +5V Power Supply
8	5V	
9	GND	Ground
10	12V	+12V DC Power Supply

◆ CN5(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	

◆ CN18(2× 20PIN/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	TX00-	LVDS ODD 0- Signal
8	TX00+	LVDS ODD 0+ Signal
9	TX01-	LVDS ODD 1- Signal
10	TX01+	LVDS ODD 1+ Signal
11	TX02-	LVDS ODD 2- Signal
12	TX02+	LVDS ODD 2+ Signal
13	GND	Ground
14	GND	
15	TXOC-	LVDS ODD Clock- Signal
16	TXOC+	LVDS ODD Clock+ Signal
17	TX03-	LVDS ODD 3- Signal

NO.	SYMBOL	DESCRIPTION
18	TXO3+	LVDS ODD 3+ Signal
19	TXE0-	LVDS EVEN 0- Signal
20	TXE0+	LVDS EVEN 0+ Signal
21	TXE1-	LVDS EVEN 1- Signal
22	TXE1+	LVDS EVEN 1+ Signal
23	TXE2-	LVDS EVEN 2- Signal
24	TXE2+	LVDS EVEN 2+ Signal
25	GND	Ground
26	GND	
27	TXEC-	LVDS EVEN Clock- Signal
28	TXEC+	LVDS EVEN Clock+ Signal
29	TXE3-	LVDS EVEN 3- Signal
30	TXE3+	LVDS EVEN 3+ Signal
31	GND	Ground
32	GND	
33	CON1	Logic Level Control (Default For High Level)
34	NC	No Connection
35	VSEL1	Reserved Power Supply/I2C SCL
36	VSEL2	Reserved Power Supply/I2C SDA
37	TXO4-	LVDS ODD 4- Signal
38	TXO4+	LVDS ODD 4+ Signal
39	TXE4-	LVDS EVEN 4- Signal
40	TXE4+	LVDS EVEN 4+ Signal

◆ CN22(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	Key0
7	K1	Key1
8	K2	Key2
9	K3	Key3
10	K4	Key4
11	K5	Key5
12	K6	Key6
13	K7	Key7
14	GND	Ground

Model No.:

◆ CON1 (4PIN/2.54): AMPLIFIER POWER SUPPLY CONNECTOR

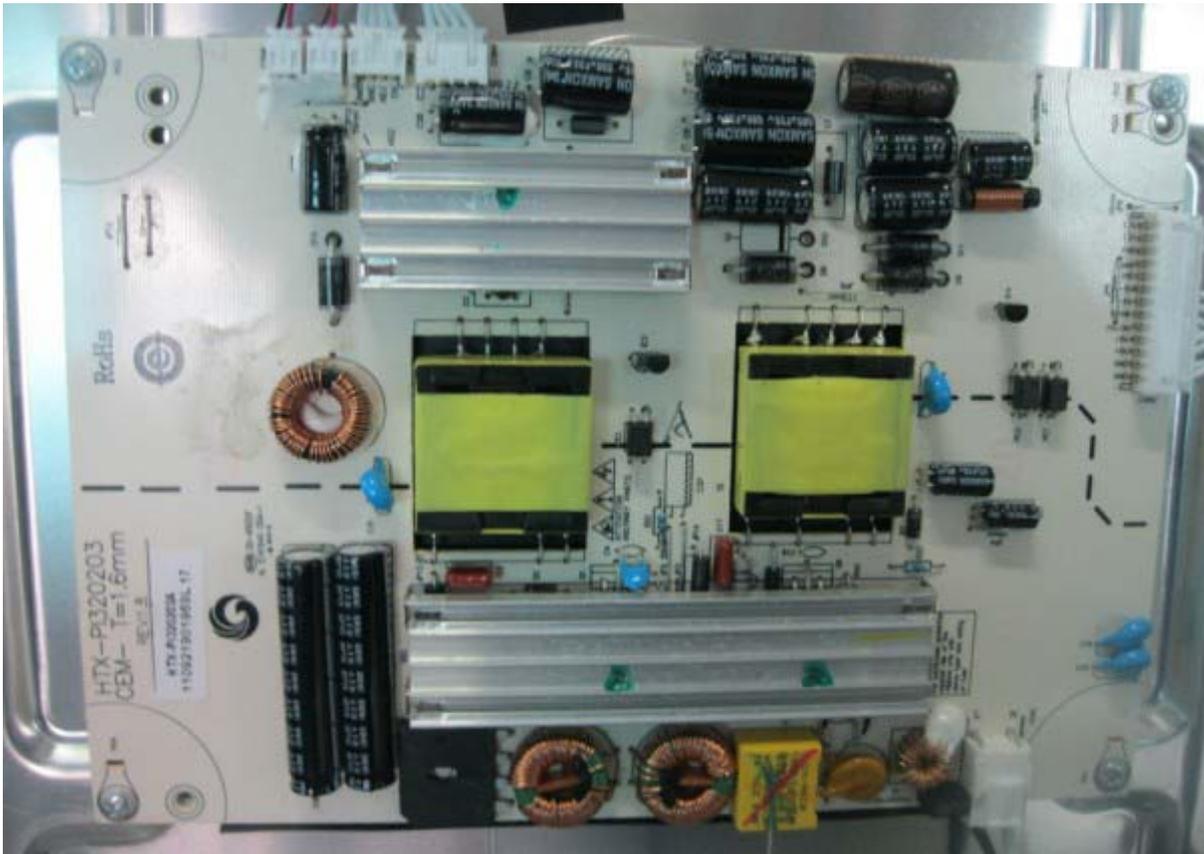
NO.	SYMBOL	DESCRIPTION
1	24V	+24V DC Power Supply
2	24V	
3	GND	Ground
4	GND	Ground

◆ CON2 (4PIN/2.54): SPEAKER CONNECTOR

NO.	SYMBOL	DESCRIPTION
1	L+	Audio Left Channel Output+
2	L-	Audio Left Channel Output-
3	R-	Audio Right Channel Output-
4	R+	Audio Right Channel Output+

Model No.:

3-3. Power Board



3-4. LED Panel



TC315B601

5. INTERFACE PIN CONNECTION

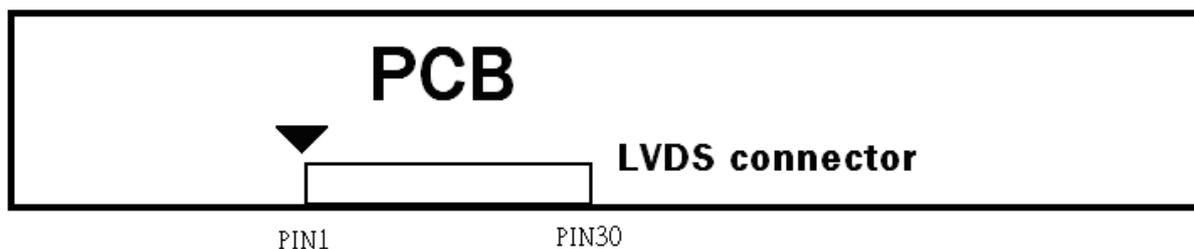
5.1 TFT LCD MODULE

CNF1 Connector Pin Assignment

Pin No.	Symbol	Description	Note
1	VCC	Power supply: +12V	
2	VCC	Power supply: +12V	
3	VCC	Power supply: +12V	
4	VCC	Power supply: +12V	
5	GND	Ground	
6	GND	Ground	
7	GND	Ground	
8	GND	Ground	
9	SELLVDS	Select LVDS data format	(2)(6)
10	ODSEL	Overdrive Lookup Table Selection	(3)(6)
11	GND	Ground	
12	RX0-	Negative transmission data of pixel0	
13	RX0+	Positive transmission data of pixel0	
14	GND	Ground	
15	RX1-	Negative transmission data of pixel1	
16	RX1+	Positive transmission data of pixel1	
17	GND	Ground	
18	RX2-	Negative transmission data of pixel2	
19	RX2+	Positive transmission data of pixel2	
20	GND	Ground	
21	RXCLK-	Negative of clock	
22	RXCLK+	Positive of clock	
23	GND	Ground	
24	RX3-	Negative transmission data of pixel3	
25	RX3+	Positive transmission data of pixel3	
26	GND	Ground	
27	TST_AGE	Aging Mode	(4)
28	NC	Noconnection	(5)
29	GND	Ground	
30	GND	Ground	

Note (1) Connector type: STARCONN 093G30-B0001A or P-TWO 187053-30091 or compatible

LVDS connector pin order defined as follows



Note (2) Low = Open or connect to GND: VESA Format, High = Connect to +3.3V: JEIDA Format.

Please refer to 5.5 LVDS INTERFACE

Note (3) Overdrive lookup table selection. The Overdrive lookup table should be selected in accordance to the frame rate to optimize image quality.

3.2 BACKLIGHT UNIT

3.2.1 LED LIGHT BAR CHARACTERISTICS (Ta = 25 ± 2 °C)

Parameter	Symbol	Value			Unit	Note
		Min.	Typ.	Max.		
Light Bar Input Voltage	V _{LED}	(17)	(19)	(21)	V _{DC}	(Duty 100%)
Light Bar Input Current	I _{LED}	--	(120)	--	mA _{DC}	(Duty 100%) per string
Power Consumption	P _{LED}	--	(15.96)	--	W	(1)
LED Life Time	L _{BL}	(30000)	--	--	Hrs	(2)

Note (1) $P_{LED} = (I_{LED} \times 7) \times V_{LED}$, LED matrix is 6S 6P.

Note (2) The lifetime of LED is defined as the time when it continues to operate under the conditions at Ta = 25 ± 2 °C and I = 120mA (Per EA) until the brightness becomes ≤ 50% of its original value.



4. Disassemble and assemble

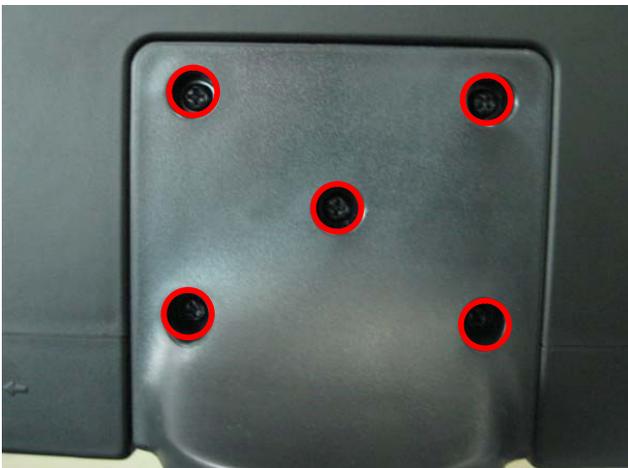
Front



Back



4-1.Remove the five screws as below picture



4-2 .Remove the 16 screws on the back cabinet



4-3.Remove the screw of the fixing board on the back cabinet.



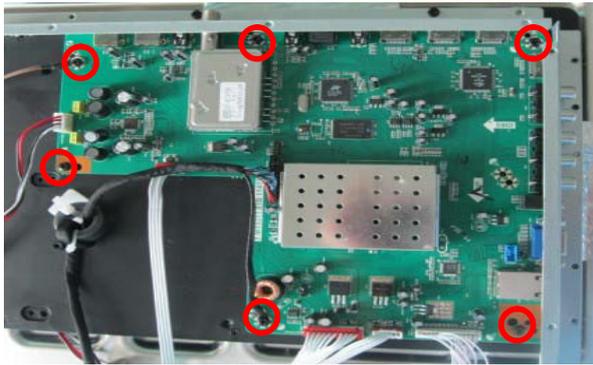
4-4.Remove the 9 screws on the back cabinet.



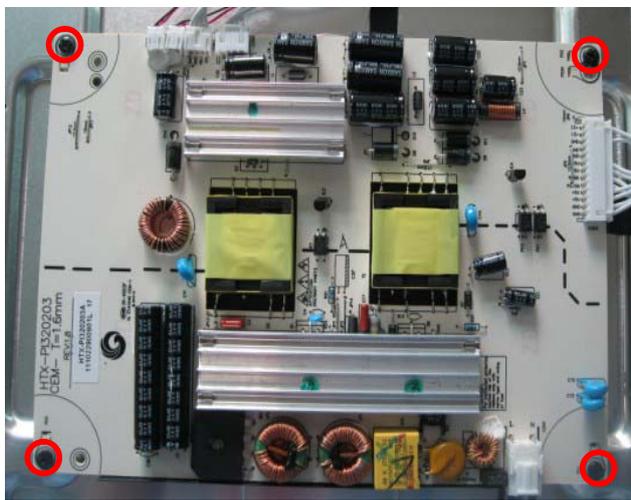
4-5. Remove the 2 screws fixing the socket connecting board



4-6.Remove the 6 screws fixing the main board



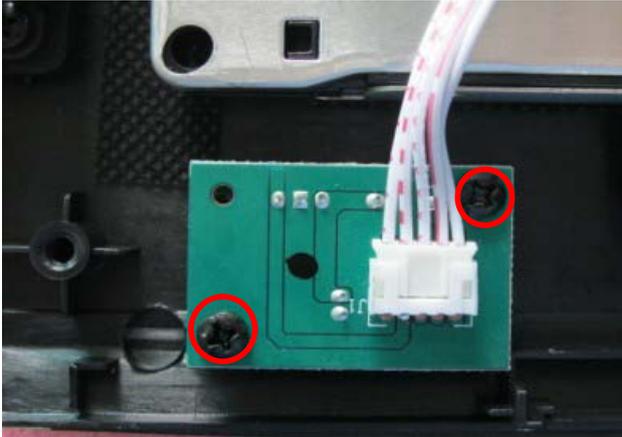
4-7.Remove the 8 screws fixing the power board.



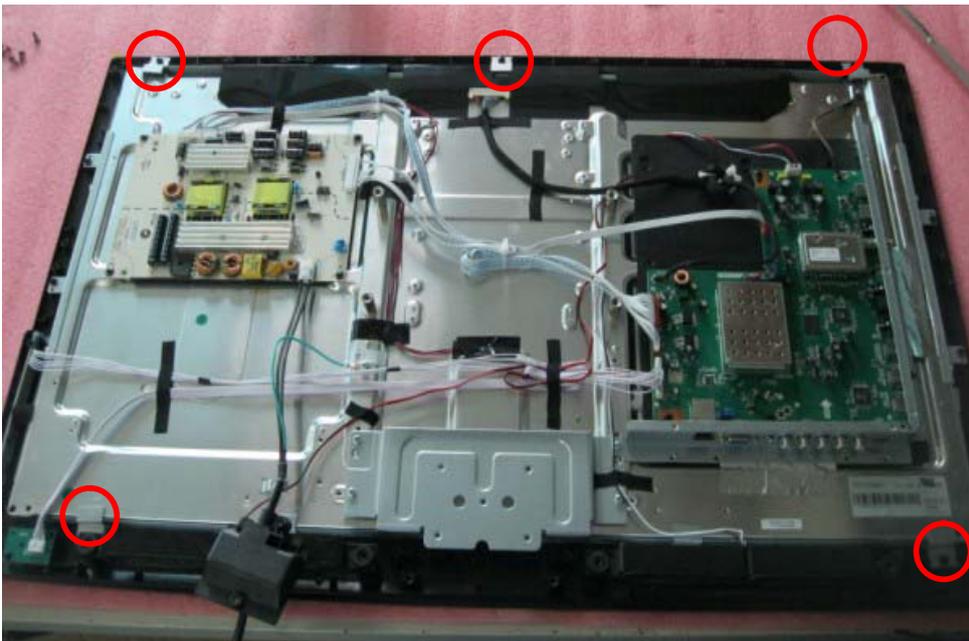
4-8.Remove the 3 screws fixing the keyboard



4-9.Remove the 2 screws fixing the remote sensor.



4-10.Remove the panel press as below picture



4-11.Remove the 4 screws as below pictures



4-12.

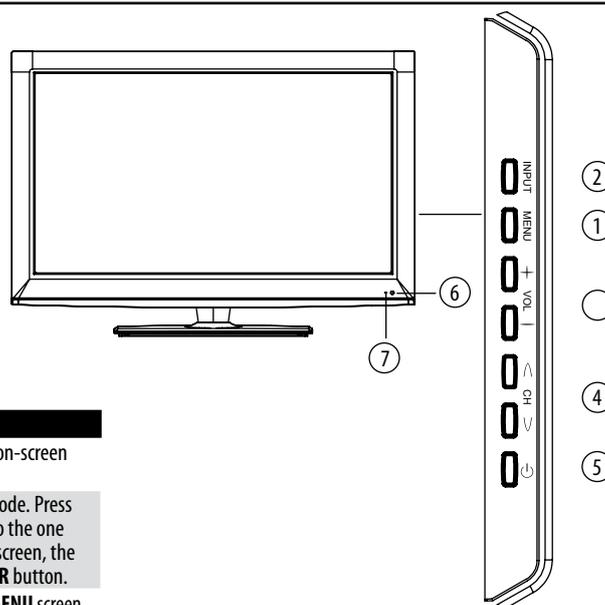


Introduction

Controls

This is a simplified representation of the TV front panel, side panel control buttons and side inputs.

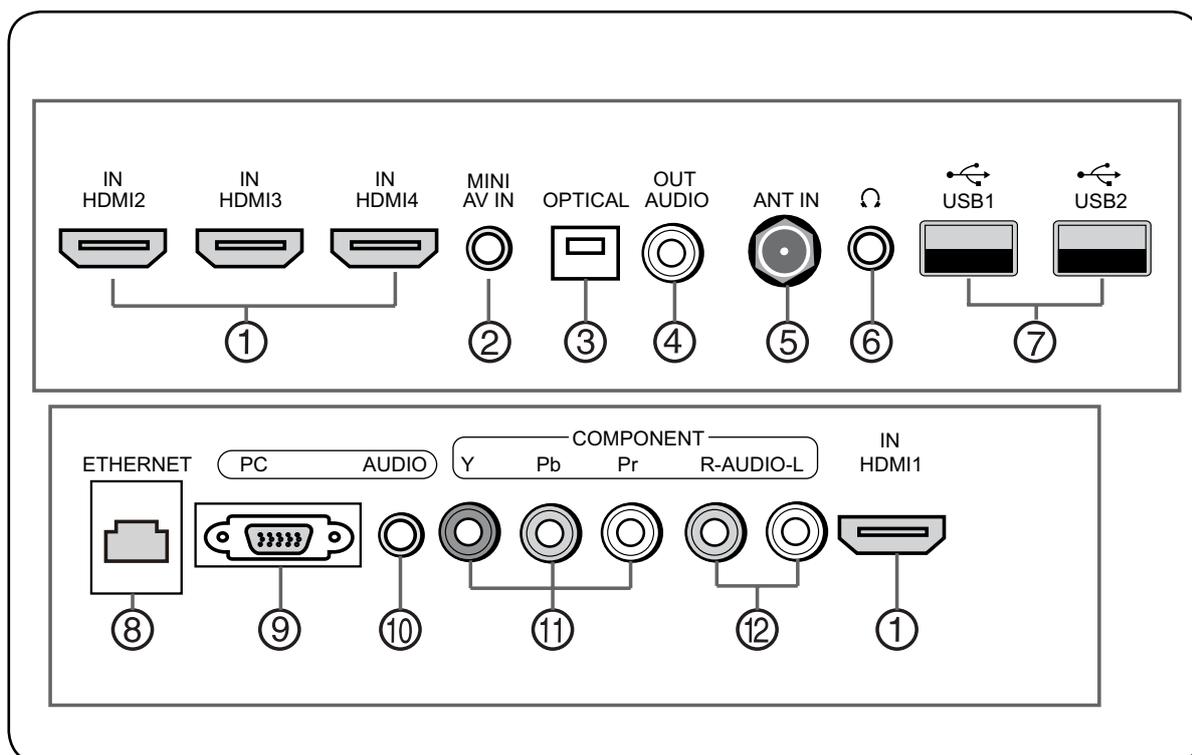
TV Side panel controls and connections



①	MENU	Menu display. Press to access the on-screen menu display.
②	INPUT	Press to access the input source mode. Press repeatedly to change the source to the one you want to watch. In the MENU screen, the INPUT button serves as the ENTER button.
③	VOL +/-	Press to adjust the volume. In the MENU screen, these buttons serve as left/right buttons.
④	CH +/-	Press to scan through channels. To scan quickly through channels, press and hold down either +/- . In the MENU screen, these buttons serve as up/down buttons.
⑤	POWER	Press to turn on and off the TV.
⑥	Remote Sensor	Receives IR signals from the remote control. Do not put anything near the sensor, which may block the remote control signal.
⑦	Power indicator	

Connection Options

Back panel connections



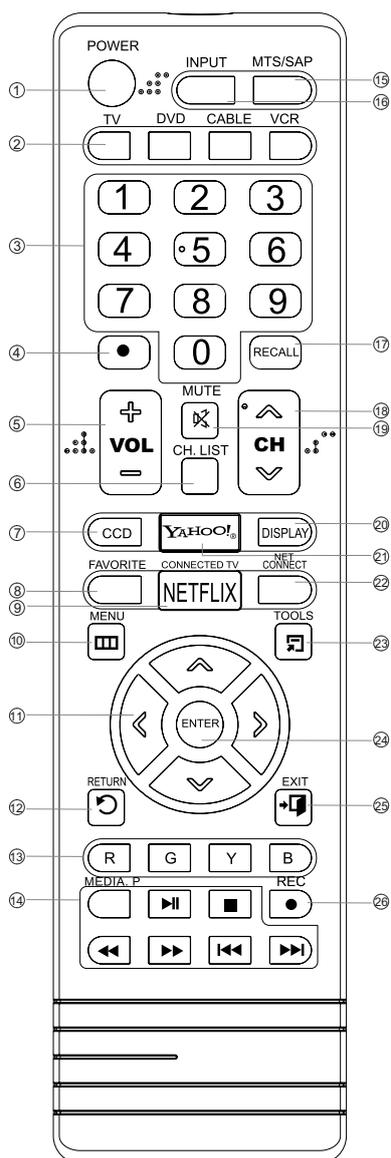
①	HDMI In x4	Connect a HDMI device to receive digital audio and uncompressed digital video. Note * HDMI 1 supports (ARC)Audio Return Channel.
②	MINI AV In	Connect the video and audio signal from a video device with the converter cable.
③	Optical	Connect to the digital audio equipment.
④	AUDIO Out	Connect the audio L/R cables to your audio equipment.
⑤	Antenna Input	Connect cable or antenna signals to the TV, either directly or through your cable box.

⑥	Headphone jack	Headphone audio output terminal.
⑦	USB Input x2	Connect a USB flash drive to view videos, images or music, and support wifi.
⑧	ETHERNET	Connect a ETHERNET cable to the Network.
⑨	PC Video In	Connect a video cable from a computer.
⑩	PC Audio In	Connect the audio cable from a computer.
⑪	Component Video In	Connect a component video device or an AV composite video.
⑫	Component AUDIO In	Connect the audio L/R cables from the component source or an AV audio.

Universal Remote control

The remote control cannot be operated unless the batteries are properly loaded.
When using the remote control, aim it at the remote sensor on the TV.

Function introduction



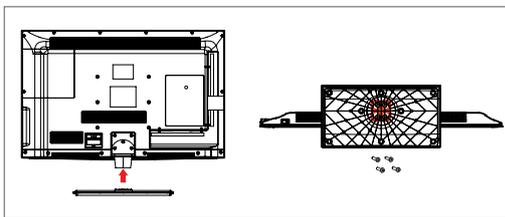
①	Power	Press to turn on and off the TV
②	TV DVD CABLE VCR	To select one of the system modes in which the remote control can be used.
③	Number buttons	Press to change a channel.
④	• button	Press to select digital channels. For example, to enter "54-3", press "54", "•" and "3".
⑤	VOLUME UP/DOWN	Press to adjust the volume.
⑥	CH.LIST	Display the channel list in TV mode.
⑦	CCD(closed caption)	Select a closed caption.
⑧	FAV.LIST	Press to display the favorite channel list in TV mode.
⑨	NETFLIX	Press to launch Netflix.
⑩	MENU	Press to display the on-screen menu
⑪	Arrow keys (Up/Down/Left/Right)	Allows you to navigate the on-screen menus and adjust the system settings.
⑫	RETURN	Return to the previous menu.
⑬	R G Y B	Buttons used in the Channel list, Media Play menu, etc.
⑭	Media Player Functions	◀◀/▶▶ Rewind / Fast ▶▶ Backward / Forward ■ Stop ▶▶ Play/Pause
⑮	MTS/SAP	Select MONO, STEREO, SAP in NTSC system
⑯	INPUT	Show the input source list.
⑰	RECALL	Press to jump back and forth between two channels.
⑱	CHANNEL UP/DOWN	Press to scan through channels. To scan quickly between the last two channels, press and hold down either ▲/▼.
⑲	MUTE	Switches the sound on or off.
⑳	DISPLAY	Press to display the TV status information on the top of the TV screen.
㉑	YAHOO!	Launches Yahoo Connected TV!
㉒	Net Content	Display the Net Connect main menu, which includes Yahoo, Netflix, Multimedia, and more.
㉓	TOOLS	Quickly select frequently used functions.
㉔	ENTER	Accesses the highlighted item in the on-screen menu
㉕	EXIT	Clears all on-screen displays and returns to TV viewing from any menu
㉖	REC	Press to start the timeshift process.

Accessories

- Remote x1
- Owner's manual x1
- Alkaline battery (AAA) x2
- USB Wifi Adapter x1
- Mini AV converter cable x1
- USB extension cable x1

Install the Stand

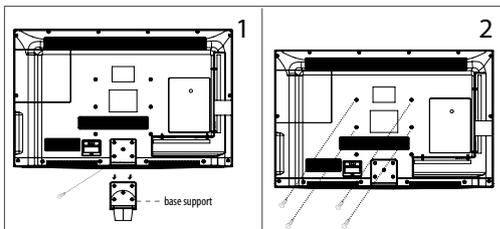
Carefully place the TV screen side down on a table. We suggest that you place the wrapping material from the TV package on the table top to protect the screen from damage. connect the TV to the Stand as shown.



Install the Wall Mount

1. **Removing** the TV base support

When **mounting** the TV onto a wall, **remove** the TV base support as shown.



2. **Installing Wall-Mount**

Use screws to secure the wall bracket to the back of your TV.

For more information on how to install a wall mount, refer to the wall mount's user manual.

Securing the Installation Space

Keep the required distances between the product and other objects (e.g. walls) to ensure proper ventilation. Failing to do so may result in fire or a problem with the product due to an increase in the internal temperature of the product.

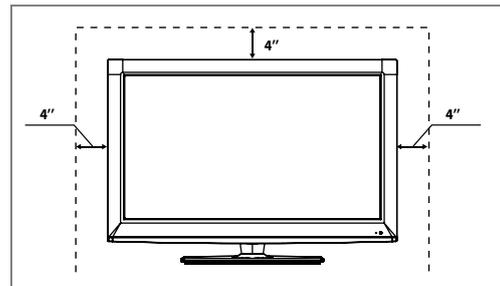
Install the product so the required distances shown in

the figure are kept.

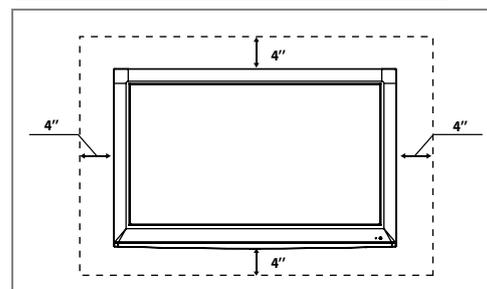
Note

- * The appearance may differ depending on the product.

When installing the product within an enclosure



When installing the product with a wall-mount

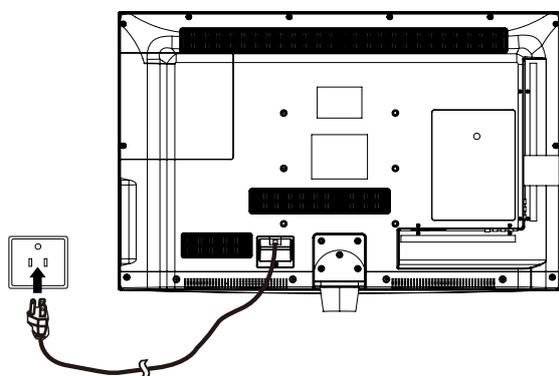


Installation

Connecting to a DC input

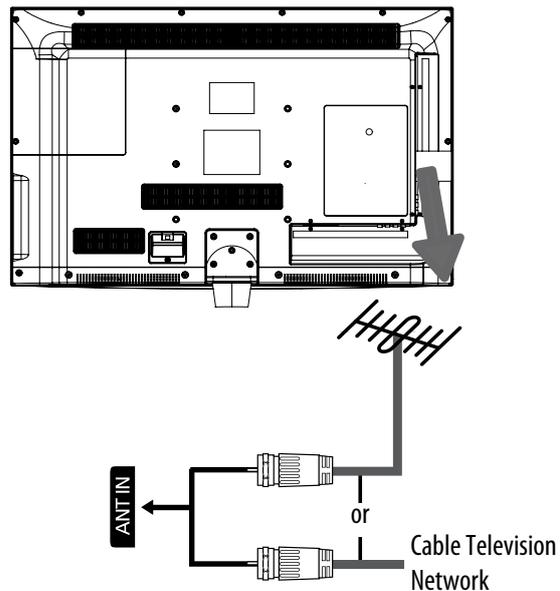
To use AC Power Supply

Connect the power cable to the power outlet, as shown in the figure.



Connecting to an Antenna

Over-the-air TV reception quality will depend on your antenna type, antenna location and antenna positioning.



Note

- * To improve the picture quality in a poor signal area, please purchase a signal amplifier and install properly.
- * If the antenna needs to be split for two TV's, install a "2-Way Signal Splitter".
- * To install the antenna properly please contact a professional in your area.

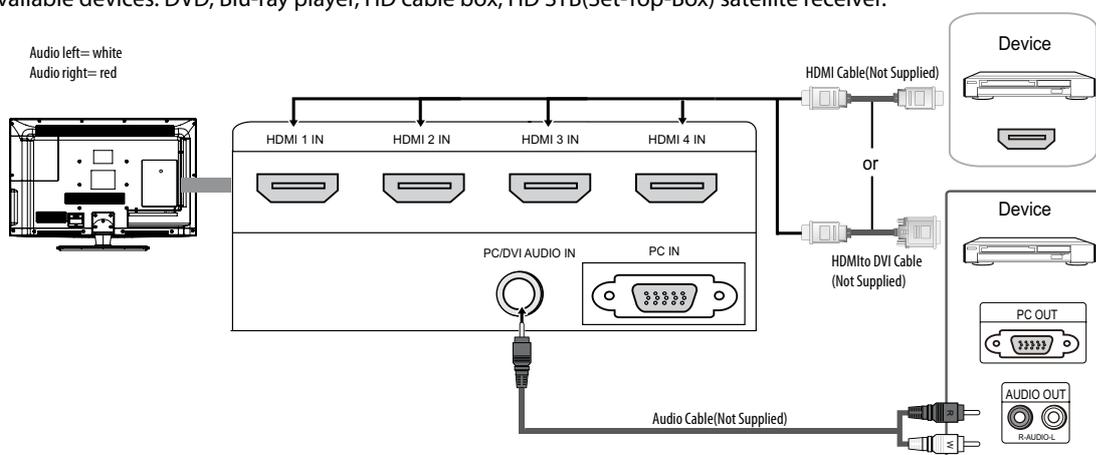
Choose Your Connection

There are several ways to connect your television, depending on the components you want to connect and the quality of the signal you want to achieve. The following are examples of some different ways to connect your TV with different input sources.

Connecting to an AV Device

Using an HDMI Cable: HD connection(up to 1080p)

Available devices: DVD, Blu-ray player, HD cable box, HD STB(Set-Top-Box) satellite receiver.



HDMI IN/DVI AUDIO IN

- 1** When using an HDMI/DVI cable connection for video, the PC/DVI AUDIO IN jack is required for audio.
- 2** Haier TVs support HDMI 1.4 (Audio Return Channel). However, the ARC(Audio Return Channel) function is only supported on HDMI 1 IN (ARC).
- 3** The ARC function enables digital output of sound using the HDMI 1 IN (ARC) port and can only be operated when the TV is connected to an audio receiver that supports the ARC function.

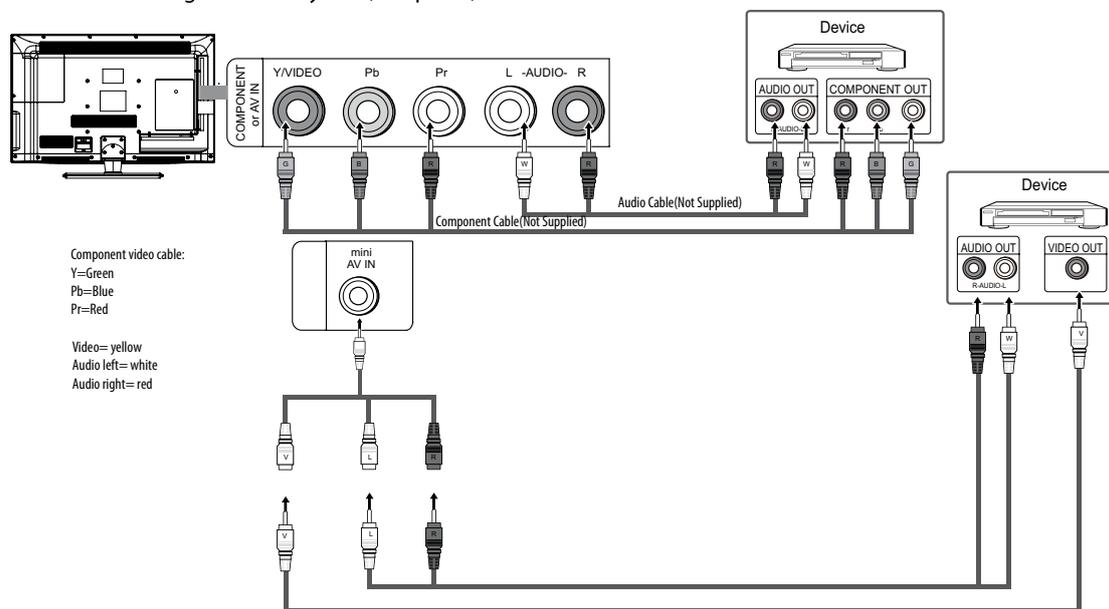
The ARC Single mode is only enabled when the TV is connected to the device when using a Category2 High Speed HDMI cable.

When the Input source is the TV, the ARC function allows audio to be heard from a receiver. The audio is sent to a receiver from the TV via an HDMI cable without the need for a separate optical cable.

- 4** It is recommended you purchase an HDMI-certified cable. Otherwise, the screen may appear blank or a connection error may occur.

Using a Component(up to 1080p) or Audio/Video (480i only)Cable

Available devices: Digital Audio System, Amplifier, Home Theater.



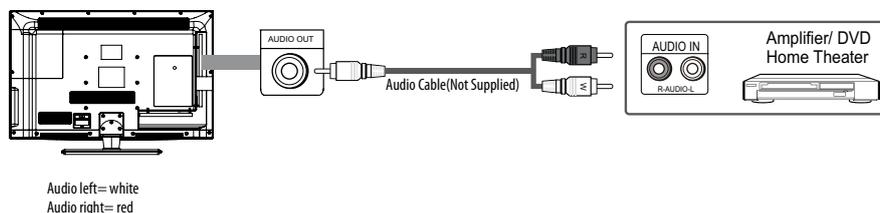
Note

* For better picture quality, the Component connection is recommended over the A/V connection.

Connecting to an Audio Device

Using an Audio(Analog) Cable Connections

Available devices: Digital Audio System, Amplifier, DVD Home Theater.

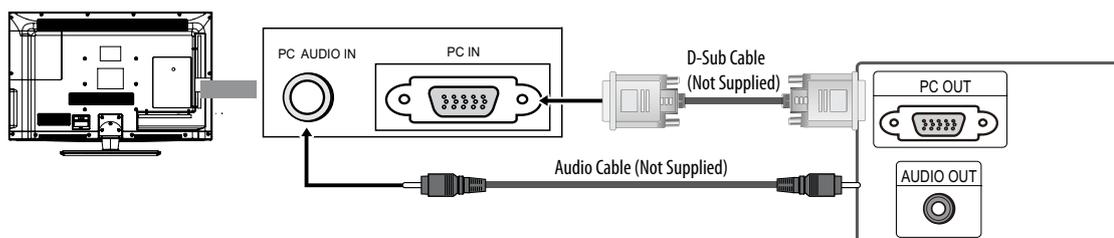


AUDIO OUT

- 1 When connecting, use the appropriate connector (sold separately).
- 2 When an audio amplifier is connected to the AUDIO OUT jacks: Decrease the volume of the TV and adjust the volume level with the Amplifier's volume control.

Connecting to a PC

Using an HDMI/DVI Cable or a D-Sub Cable



Display Modes(D-Sub and HDMI/DVI Input)

Optimal resolution is 1920x1080@60Hz.

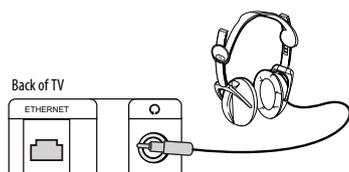
Mode	Resolution	Horizontal Frequency (KHz)	Vertical Frequency (Hz)	Pixel Clock Frequency (MHz)	Sync Polarity(H/V)
IBM	720×400	31.469	701.087	28.322	-/+
MAC	640×480	35.000	66.667	30.240	-/-
	832×624	49.726	74.551	57.284	-/-
	1152×870	68.681	75.062	100.000	-/-
VESA DMT	640×480	37.861	72.809	31.500	-/-
	640×480	37.500	75.000	31.500	-/-
	800×600	37.879	60.317	40.000	+/+
	800×600	48.007	72.118	50.000	+/+
	800×600	46.875	75.000	49.500	+/+
	1024×768	48.363	60.004	65.000	-/-
	1024×768	56.476	70.069	75.000	-/-
	1024×768	60.023	75.029	78.750	+/+
VESA DMT-DTV CEA	1280×720	45.000	60.000	74.250	+/+
	1920×1080p	67.500	60.000	148.500	+/+

Note

- * The set may operate abnormally if a non-standard video format is selected.
- * Separate and Composite modes are supported. SOG(Sync On Green) is not supported.

Connecting Headphones

You can connect a set of headphones to your set if you wish to watch a TV programme without disturbing the other people in the room.



Plug a set of headphones into the 3.5 mm jack on the back panel of the set.

Note

- * Prolonged use of headphones at a high volume may damage your hearing.
- * When headphones are connected, the TV's speakers will still be on. Select the **Audio** menu press the **▶/ENTER** button and press the **▲/▼** button to select Speaker, press the **◀/▶** button to set the speaker Off.

Operation

In the manual, the OSD (on screen display) may be different from your TV's, because it is just an example to help you with the TV operation. There are several options you might need to set up in order for your TV to work properly. Read the instructions that follow.

Initial Setup: Set according to the screen display.

Switching On/Off the TV set

- 1 First, connect the power cord correctly.
- 2 Select the source you want to view by using the **INPUT** button on the remote control.
- 3 When finished using the TV, press the **POWER** button on the remote control. The TV reverts to standby mode.
- 4 If you will not use the TV for an extended period of time, it is recommended to disconnect the power plug from the wall power outlet.

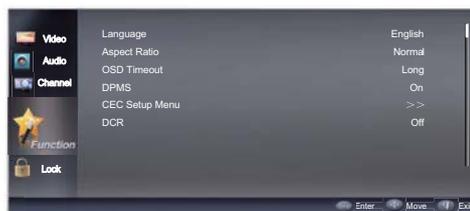
Note

- * When the TV is powered on, an on screen display will indicate the active input source for a few moments then disappear. If there is no signal present at that input, "No Signal" will be displayed on the screen.

Choose the Menu Language

When you start using your set for the first time, you must select the language which will be used for displaying menus and messages.

- 1 Choose the **TV** input and then press the **MENU** button.
- 2 Press the **▲/▼** button to select the **Function** menu.
- 3 Press the **▶/ENTER** button and then use the **▲/▼** button to select **Language**.
- 4 Press the **◀/▶** button to select language. (**English, Español or Français**)



Choose the Input source

Change the picture source so you can watch your TV, VCR, DVD player, cable box, or other devices that are connected to your TV.

- 1 Press the **INPUT** button to enter the Select Source menu and then use the **▲/▼** button to select the desired items (TV, Video, Component, PC, HDMI 1, HDMI 2, HDMI3, HDMI4).
- 2 Press the **ENTER** button to confirm.

Select the desired program

- 1 Using the **CH▲/▼** buttons. Press the **CH▲** button to change the channel higher. Press the **CH▼** button to change the channel lower.

Note

* If skip is set to ON for a channel, pressing the **CH** buttons will not show the skipped channel(s).

- You can also enter a channel number directly by entering the channel number using the number pad on the remote control and then pressing **ENTER**.

Select the desired volume level

Press the **VOL** buttons on the remote or the side of the TV set to adjust the volume level. The range is 0~100. When the volume buttons are pressed the volume level is displayed automatically on the TV screen.

Mute

- Press the **MUTE** button on the remote control and an icon indicating the MUTE function is active will display on the screen. At this time, the sound of the TV set is turned off.
- If you want to enable the sound, press the **MUTE** button again or directly press the **VOL+** button.

SAP Broadcasts Setup

This TV can receive **MTS** stereo programs and SAP (Secondary Audio Program) that accompanies the stereo program, if the station transmits an additional sound signal as well as the original one.

When the **MTS** button on the remote control is pressed, the TV will only receive the signal if the TV station transmits the proper signals.

Mono sound is automatically received if the broadcast is only in Mono, even if Stereo or SAP has been selected. Select Mono if you want to listen to mono sound during stereo/SAP broadcasting. Stereo or SAP can be received in an analog channel.

- Use the **MTS** button to select your desired MTS mode in an analog signal.
 - Each time you press the **MTS** button, Mono, Stereo or SAP appear. If other languages are available in the digital signal, select them with the **MTS** button.
- Press the **EXIT** button to save and return to TV

viewing.

Channel menu

- This TV set has two methods to set the channels: Channel Scan and Channel Skip.
- In this section, using the remote control to set the channels is explained. You can also use the buttons on the TV to set the channels.

Note

* The Channel Menu is only accessible while the input source is set to TV.

Channel Scan

- Press the **MENU** button and then use the **▲ / ▼** button to select the **TV** menu.
- Press the **▶ / ENTER** button to select **Antenna**.
- Press the **◀ / ▶** button to select **Air** or **Cable** mode.
- Press the **▲ / ▼** button to select **Channel Scan**.



- Press the **▶ / ENTER** button to start searching.
- To cancel searching, press the **EXIT** button.

Note

* When **Air** is selected, the TV will detect antenna signals and will search for antenna TV (NTSC and ATSC) channels available in your local area.

* When **Cable** is selected, the TV will detect cable company supplied signals and will search for cable TV (NTSC, QAM modulated) channels available in your Area.

Channel Skip

A channel that has been set to skip will not be viewable when using the ▲ / ▼ buttons to browse channels. A skipped channel can be viewed by using the remote control keypad to select the channel. Default un-scanned analog channels are set to skip. Channels with a check mark icon are skipped channels..

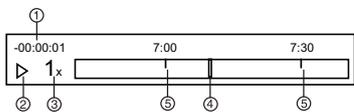
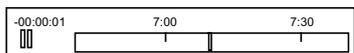
- 1 Press the **MENU** button and then use the ▲ / ▼ button to select the **Channel** menu.
- 2 Press the ► / **ENTER** button and then use the ▲ / ▼ button to select **Channel Skip**.
- 3 Press the ▲ / ▼ button to select a channel, then press the **ENTER** button to toggle between and .



Time Shifting Mode

To turn the Time Shifting Mode on or off.

- 1 Set the Time Shifting On, then insert a USB drive in the **USB** input.
- 2 Press **PLAY/PAUSE** to play or pause the program. If you want to stop the time shift function, press the **EXIT** button.



1. Time shift time. The time delay to the current program time.

2. Current time

3. Channel name

Playback status: It shows the playback status (Play, Pause, Fast Forward, Rewind).

▶	Play/Pause	▶▶	Fast forward
■	Stop	◀◀	Fast backward

3. Playback speed: playback speed can be changed - 1x, 2x, 4x, 8x, 16x, 32x.

4. Playback position: The playback position is always at the center of the time bar.

5. Time scale: shows the time in half hour increments.

Note

- Time Shift function is only available in DTV mode.
- The maximum recording duration is determined by the memory size of the USB drive and the signal resolution. Please use a high-speed USB 2.0 drive with a minimum of 1GB capacity.
- Time shift is only supported on USB drives formatted to the FAT32 file-system.
- Time shift supports more than 4GB recordings by using multi-file storage.
- When the maximum recording duration is reached, the oldest program will be deleted and the latest program is recorded.
- When changing channels or changing input source, the time shift will stop automatically.
- Time shift will store the video, audio and data service. Maximum allowed:

Video streams: Max 1 stream

Audio streams: Max 8 streams

CC stream: Unlimited.

- During recording, the data is not guaranteed to be stored on the disk. If the timeshift playback plays a corrupted data block, it will show "Data lost" message to indicate that the current data is not stored correctly.
- Please connect the TV antenna or Cable TV coaxial cable to the Antenna input on the TV. Then, complete the channel scan. The Time Shift feature only is available when using your ATSC tuner and QAM cable tuner.

Audio Language

Press the ◀ / ▶ button to select audio language. (English, Español or Français)

Note

This function is only available in digital channel mode.

Video menu

Note

- * Depending on the input signal, one or more menu items may not be selectable.

How to select picture mode

The picture mode provides the pre-defined video settings: User, Mild, Standard, Vivid and Movie.

- 1 Press the **MENU** button and then use the ▲ / ▼ button to select the **Video** menu.
- 2 Press the ► / **ENTER** button and then use the ▲ / ▼ button to select **Picture Mode**.
- 3 Press the ◀ / ▶ button to select the option User, Mild, Standard, Vivid and Movie.

How to customize video settings

- 1 Press the **MENU** button and then use the ▲ / ▼ button to select **Video** menu.
- 2 Press the ► / **ENTER** button and then use the ▲ / ▼ button to select the desired items.
- 3 Press the ► / **ENTER** button and then use the ◀ / ▶ button to adjust the setting.

Picture Mode

Select the picture mode (User/Mild/Standard/Vivid/Movie).

Brightness

This will adjust the light output of the complete picture, which will mainly affect the darker areas of the picture.

Contrast

This will adjust the intensity of bright parts in the picture but keep the dark parts unchanged.

Color

This will adjust the saturation level of the colors to suit your personal preference.

Tint

Allows you to select the color mix (Tint) of the picture.

Sharpness

This will adjust the sharpness of fine details in the picture.

Note

- * Video adjustments are only available in the User mode.

- * If adjustments are attempted in any of the other Picture modes the system will automatically switch to the User mode.

- * Only when the picture mode is set to User can the Brightness, Contrast, Color, Tint, Sharpness and Color Temperature be adjusted. All other Picture Modes are preset.

Color temperature

This will increase or decrease Warm (red) and Cool (blue) colors to suit personal preferences. Select Cool to give the white colors a blue tint, Normal to give the white colors a neutral tint, Warm to give the white colors a red tint.

Advanced Video

To adjust the picture in advanced: DNR, MPEG NR, Adaptive Luma Control, Flesh Tone, DI Film Mode, Blue Stretch, Game Mode, HDMI Mode and Overscan.

- **DNR:** Digital Noise Reduction, adjust to reduce the appearance of digitizing error caused by compression: Medium/Strong/Auto/off/Low.
- **MPEG NR:** To adjust the MPEG Noise Reduction: Medium, Strong, Off or Low.
- **Adaptive Luma Control:** To adjust changes in the luminance of the picture: Medium, Strong, Off or Low.
- **Flesh Tone:** To adjust the flesh colors: High, Off, Low or Medium.
- **DI film mode:** To set DI film mode: Auto or off.
- **Blue Stretch:** To set Blue Stretch: On or Off.

PC Set

When you select the PC input, this function is used.

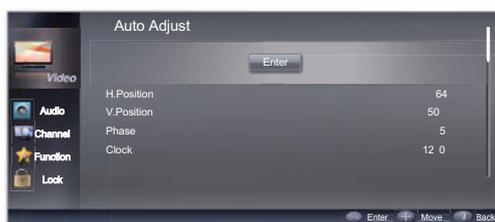
Adjustment for screen Position, Clock, Phase, Setting
Display adjustment menu by pressing the **INPUT** button then use the ▲ / ▼ button to select the source of PC item.

- **Auto Adjust:** Automatically adjust the display of the picture (Only available in PC source).
- **H. Position:** Press the ▲ / ▼ button and then press the ◀ / ▶ button to adjust the horizontal position of the picture.
- **V. Position:** Press the ▲ / ▼ button and then press the ◀ / ▶ button to adjust the vertical position of the picture.
- **Phase:** Adjust the phase of the pixel clock.
- **Clock:** Adjust the clock of the input signal.

- 1 Press the **MENU** button and then use the ▲ / ▼ button to select the **Video** menu.



- 2 Press the ▶ / ENTER button and then use the ▲ / ▼ button to select **PC**.



- 3 Press the ▶ / ENTER button and then use the ◀ / ▶ button to adjust the setting.

Audio menu

How to select audio mode

- 1 Press the **MENU** button and then use the ▲ / ▼ button to select the **Audio** menu.
- 2 Press the ▶ / ENTER button and then use the ▲ / ▼ button to select **Sound Mode**.



- 3 Press the ▶ / ENTER button to select the audio mode (Off, Rock, Pop, Live, Dance, Techno, Classic and Soft).

How to customize audio settings

- 1 Press the **MENU** button and then use the ▲ / ▼ button to select the **Audio** menu.
- 2 Press the ▶ / ENTER button and then use the ▲ / ▼ button to select desired items.
- 3 Press the ▶ / ENTER button and then use the ◀ / ▶ button to adjust the setting.
 - **Balance:** Adjust to emphasize left or right speaker balance.
 - **Bass:** Adjust to increase or decrease lower-pitched sounds.
 - **Treble:** Adjust to increase or decrease higher-pitched sounds.
 - **Sound Mode:** To adjust the equalizer: Off, Rock, Pop, Live, Dance, Techno, Classic and Soft.
 - **Speaker:** To adjust the speaker on, off or Auto(CEC).
 - **SPDIF Type:** To adjust the SPDIF type off, Dolby digital or PCM.
 - **AVL(Auto Volume Leveler):** This will reduce the differences in volume level during commercials or when changing the channel.

Function menu

Menu Language

When you start using your set for the first time, you must select the language which will be used for displaying menus and messages.

- 1 Press the **MENU** button and then use the ▲ / ▼ button to select the **Function** menu.
- 2 Press the ► / **ENTER** button and then use the ▲ / ▼ button to select **Language**.
- 3 Press the ◀ / ► button to select a language. (**English, Español or Français**)



Aspect Ratio

Occasionally, you may want to change the size of the image on your screen. Your TV comes with several screen size options, each designed to work best with specific types of video input. Your cable box/satellite receiver may have its own set of screen sizes as well. In general, though, you should view the TV in Normal mode as much as possible.

Note

- If a fixed image is displayed on the screen for a long time, the image may become permanently burned on the screen and remain visible.

- 1 Press the **MENU** button and then use the ▲ / ▼ button to select the **Function** menu.
- 2 Press the ► / **ENTER** button and then use the ▲ / ▼ button to select **Aspect Ratio**.
- 3 Press the ◀ / ► button to select **16:9, Normal, Cinema, Zoom**.

OSD Timeout

- 1 Press the **MENU** button and then use the ▲ / ▼ button to select the **Function** menu.
- 2 Press the ► / **ENTER** button and then use the ▲ / ▼ button to select **OSD Timeout**.
- 3 Press the ◀ / ► button to select **Short, Middle** or **Long**. (Short is for 5 seconds; Middle is for 10 seconds; Long is for 15 seconds)

DPMS

Press the ► / **ENTER** button to select On or Off.

- 1 In PC mode, the **TV** will go into standby mode automatically if there is no PC input signal present for 1 minute. The set will turn on and automatically go into PC mode when the PC input is connected.
- 2 With all other sources, the set will go into standby mode automatically if there is no signal present for 5 minutes.

CEC Setup Menu

Consumer electronic control (**CEC**) allows you to control other devices using your remote control when those devices are connected via HDMI.

- 1 Press the **TOOLS** button and then use the ▲ / ▼ button to select **CEC Setup Menu**.



- 2 Press the ◀ / ► button to set.

CEC function: Turn CEC On or Off. When set to Off, your TV will not send or receive any CEC commands.

Device Discovery: Register devices with **your** TV. Before CEC will work, perform a device discovery to see if there are any CEC supported devices connected to your TV.

Note

- Only devices that support CEC will be compatible

with this function.

DCR

Dynamic Contrast Ratio. Press the ◀/▶ button to select On or Off.

Note

- * Dynamic Contrast delivers deeper blacks in predominantly dark scenes and brighter whites in bright scenes.

Blue Screen

This will select the background color.

- 1 Press the **MENU** button and then use the ▲/▼ button to select the **Function** menu.
- 2 Press the ▶/ENTER button and then use the ▲/▼ button to select **Blue Screen**.
- 3 Press the ◀/▶ button to select **On** or **Off**.

Note

- * When Blue Screen is set to On, the TV will display a blue screen when there is no signal present. When it is set to Off, a black screen will be displayed.

Time Setup

This function allows you to select your local time zone. Broadcasted time information will correct the clock display for your local time.

- **Time Zone:** Press the ◀/▶ button to select the appropriate time zone.
- **Time:** Press the ▶/ENTER button to enter the submenu.



Auto Synchronization: Press the ◀/▶ button to select On or Off. When Auto Synchronization mode is

on, the time cannot be adjusted. Select Off, to set the time manually.

Date: Press the ◀/▶ button to select the position and use the number buttons to set the date.

Time: Press the ◀/▶ button to select the position and use the number buttons to set the time. Press the ENTER button to switch AM and PM.

Note

- * A daily or one-time preset on/off time can be programmed.

Power On/Off Time: Press the ◀/▶ button to select **On**, **Off** or **once**. If **Off** is selected, the time cannot be adjusted.

Timer: Press the ◀/▶ button to select the position and use the number buttons to set the time. Press the ENTER button to switch **AM** and **PM**.

- **Sleep Timer:** Press the ◀/▶ button to select the number of minutes: Off, 5 Minutes, 10 Minutes, 15 Minutes, 30 Minutes, 60 Minutes, 90 Minutes, 120 Minutes, 180 Minutes or 240 Minutes.

Closed Caption

This allows you to modify how digital captions are displayed on your TV. Select from the following options to change the visual characteristics of your TV's digital captioning. Customize the DTV/CADTV captions that appear on your screen.

Press the ▶/ENTER button to enter the submenu.



- **Analog Caption:** Press the ◀/▶ button to select the Closed Caption options. It helps the hearing impaired with the broadcast program, as well as helping children learn how to read. A built in decoder displays the audio portion of a program as text on the screen when this option is selected.

CC1: When CC1 is displayed on the TV, it means CC mode is turned on.

CC2 to CC4: For other modes of video related broadcast information.

Text1: For program guide and other information displayed by broadcasters. (This blocks a large portion of the picture on your screen).

Text2 to Text4: For other modes of information displayed by broadcasters. (This blocks a large portion of the picture on your screen).

IMPORTANT: Closed captioning availability entirely depends on broadcasters supplying the signal. Therefore, closed captioning might not always be available and language availability will differ by broadcast.

Select CC1 for full translation of the primary language such as English in your area. Select CC2 for secondary language translation such as French or any other language that may be broadcast in your area.

- **Digital Closed Caption:** Press the ◀ / ▶ button to select Off/Service1/Service2/Service3/Service4/Service5/Service6.

There are 6 standard services. Select one of the digital service channels made available by the caption provider. Service 1 is designated as the Primary Caption Service. This service contains the verbatim, or near-verbatim captions for the primary language being spoken in the accompanying program audio. Service 2 is designated as the Secondary Language Service. This service contains captions in a secondary language which are translations of the captions in the primary Caption Service. The other service subchannels are not pre-assigned. It is up to the discretion of the individual caption provider to utilize the remaining service channels.



- **Digital Caption Style:** Press the ▶ / ENTER button to enter the submenu.
Caption Style: [Select Default or Custom mode.](#)
Font Size: To adjust the font size: Large, Small or Medium.
Font Style: To adjust the font style: Style1, Style2, Style3, Style4, Style5, Style6 or Style7.
Font Color: To adjust the font color: White, Green,

Blue, Red, Cyan, Yellow, Magenta or Black.
Font Opacity: To adjust the font opacity: Solid, Translucent or Transparent.
Background Color: To adjust the background color: Black, White, Green, Blue, Red, Cyan, Yellow or Magenta.
Background Opacity: To adjust the background opacity: Solid, Translucent or Transparent.
Window Color: To adjust the window color: Black, White, Green, Blue, Red, Cyan, Yellow or Magenta.
Window Opacity: To adjust the window opacity: Translucent, Transparent or Solid.

Network Setup

Your TV's wireless Internet network connection can be established automatically or manually. Follow the instructions below to establish a network connection.

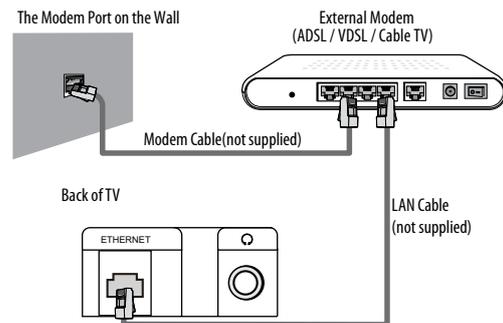
Connecting to a Network

You can set up your TV to access the Internet through your local area network (LAN) using a wired or wireless connection.

Connecting to a Wired Network

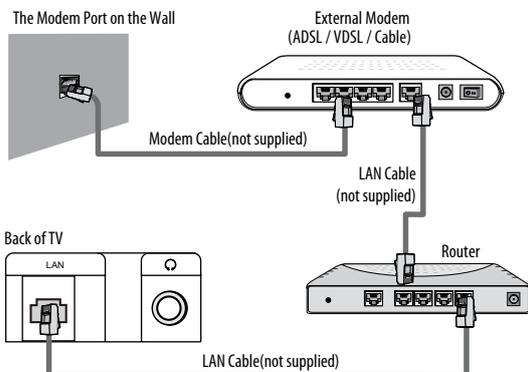
You can attach your TV to your LAN using a cable (cable not included) in three ways:

- You can attach your TV to your LAN by connecting the LAN port on the back of your TV to an external modem using a Cat 5 cable. See the diagram below:

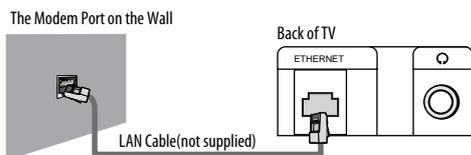


- You can attach your TV to your LAN by connecting the LAN port on the back of your TV to a router

which is connected to an external modem. Use a Cat 5 cable for the connection. See the diagram below:



- Depending on how your network is configured, you may be able to attach your TV to your LAN by connecting the LAN port on the back of your TV directly to a network wall outlet using a Cat 5 cable. See the diagram below. Note that the wall outlet is attached to a modem or router elsewhere in your house.



Note

- * The terminals (the position of the port and the type) of the external device may differ depending on the manufacturer.
- * If the IP address allocation by the DHCP server has failed, turn the external modem off, turn it on again after at least 10 seconds and then try again.
- * For the connections between the external modem and the router, refer to the owner's manual of the corresponding product.
- * You can connect the TV to the LAN directly without connecting it through a router.
- * You cannot use a manual-connection-type ADSL modem because it does not support DHCP. You have to use an automatic connection-type ADSL modem.

How to set up automatically

- Press the **MENU** button and then use the

▲ / ▼ button to select the **Function** menu.

- Press the ▶ / **ENTER** button and then use the ▲ / ▼ button to select **Network**. Press the ▶ / **ENTER** button, and the network screen appears.



- Press the ▶ / **ENTER** button, the menu appears.



- Press the ◀ / ▶ button to set the interface to **Ethernet**.
- Press the ▲ / ▼ button to select **IP Setting** and press the ▶ / **ENTER** button to enter the menu.
- Press the ◀ / ▶ button to select address type **AUTO**.



- AUTO** acquires and enters the needed Internet values automatically.
- Wait two minutes, and then press the **BACK** button on the remote. Select **Connection Test** to check the Internet connectivity.

How to set up Manually

For use when connecting your TV to a network that requires a static IP address. Follow the steps below to set up your TV's network

connection manually.

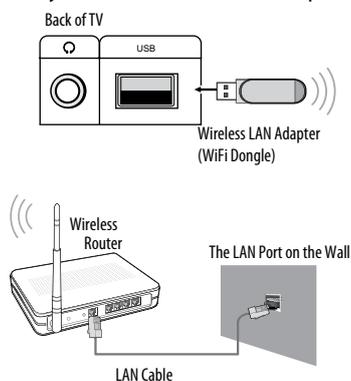
- 1 Follow Steps 1 through 5 in the "How to set up automatically" procedure.
- 2 Press the ◀ / ▶ button to select address type **Manual**.



- 3 Enter the **IP Address, Subnet Mask, Default Gateway, Primary DNS** and **Secondary DNS** entry values. Use the number buttons on your remote to enter numbers and the ▲ / ▼ / ◀ / ▶ buttons to move from one entry field to another.
- 4 When finished, press the **BACK** button on the remote.
- 5 Select **Connection Test** to check the Internet connectivity.

Connecting to a Wireless Network

To connect your TV to your wireless network, you need a wireless router or modem and a wireless LAN Adaptor (**included**), which you connect to the USB input.



Note

- * You must use the included Wireless LAN Adaptor (**included**) to connect to a wireless network.
- * To use a wireless network, your TV must be connected to a wireless **router**. If the wireless **router** supports DHCP, your TV can use a DHCP or static IP address to connect to the wireless network.
- * The Included Wireless LAN adaptor supports IEEE 802.11A, IEEE 802.11B, IEEE 802.11G, IEEE 802.11N.

When you play DLNA video over IEEE 802.11B/G connection, the video may not play smoothly.

- * If the wireless **router** allows you to turn the Ping connection function on/off, turn it on.
- * Select a channel for the wireless **router** that is not currently being used. If the channel set for the wireless **router** is currently being used by another device nearby, this will result in interference and communications may fail.
- * When connecting the Wireless LAN Adapter to the TV in 802.11N mode, WEP/TKIP/TKIP-AES is not supported
- * Connection methods: you can set up the wireless network connection four ways. Haier Auto Configuration, PBC(WPS), Auto Network search, or manually.

Yahoo! Connected TV version info

Press **ENTER** button to display the Yahoo version.

Yahoo! Connected TV Reset Default

Press **ENTER** button, and select YES item to return the Yahoo settings to the initial state.

Reset Default

Press the ▶ / **ENTER** button to enter the submenu. If OK is selected and confirmed, then the TV's settings will be changed to the factory default setting. Resetting to the factory default will affect video, audio and function settings only. All Channel programming information remains as it was.

Lock Menu

Parental Control can be used to block specific channels **and content by using a rating system**.

The parental control function is used to block program viewing based on the ratings sent by the broadcasting station. The default setting is to allow all programs to be viewed. Viewing can be blocked by choosing the type of the program and the categories.

Parental Control rating and categories

Rating guidelines are provided by broadcasting stations. Most television programs and television movies can be blocked by TV Rating or Individual Categories. Movies that have been shown at the theaters or direct-to-video movies use the Movie Rating System (MPAA) only.

Ratings for Television programs:

Parental Guide:

TV-Y	(All children)
TV-Y7	(Children 7 years older)
TV-G	(General audience)
TV-PG	(Parental guidance suggested)
TV-14	(Parents strongly cautioned)
TV-MA	(Mature audience only)

TV Rating:

A (Age)	(applies to TV-Y, TV-Y7, TV-G, TV-PG, TV-14, TV-MA)
D (Dialogue - sexual dialogue)	(applies to TV-PG, TV-14)
L (Language - adult language)	(applies to TV-PG, TV-14, TV-MA)
S (Sex - sexual situations)	(applies to TV-PG, TV-14, TV-MA)
V (Violence)	(applies to TV-PG, TV-14, TV-MA)
FV (Fantasy Violence)	(applies to TV-Y7)

Ratings for Movies previously shown in theaters:

MPAA Rating:

G	(General audience)
PG	(Parental guidance suggested)
PG-13	(Parents strongly cautioned)
R	(Restricted)
NC-17	(No one 17 and under admitted)
X	(Adult only)

If you set PG-13 : G and PG movies will be available, PG-13, R, NC-17 and X will be blocked.

CA Eng Rating:

C	Children
C8+	Children eight years and older
G	General Programming, suitable for all audiences
PG	Parental Guidance
14+	Viewers 14 years and older

18+ Adult Programming

CA Fren Rating:

G	General
8 ans+	Not recommended for young children
13 ans+	Programming may not be suitable for children under the age of 13
16 ans+	Programming is not suitable for children under the age of 16
18 ans+	Programming restricted to adults

Lock setup

Set up blocking schemes to block specific channels, ratings, and external viewing sources.

A password is required to gain access to this menu.

- 1 Press the **MENU** button and then use the **▲ / ▼** button to select the **Lock** menu. Then, press the **▶ / ENTER** button.
 - The TV is set up with the initial password "0-0-0-0" and security default password is 9-4-4-3.
- 2 Use the **▲ / ▼** button to select the desired items, and press the **▶ / ENTER** button to enter the next menu. Once the option is selected, change the settings to your preference.



Channel Block

- 1 Press the **MENU** button and then use the **▲ / ▼** button to select **Lock** menu.
- 2 Press the **▶ / ENTER** button and then use the **▲ / ▼** button to select **Channel Block**.
- 3 Press the **▲ / ▼** button to select the item, press the **ENTER** button to set.



Program Block

Press the **▶ / ENTER** button to enter the submenu.



■ **Parental Lock:** Press the **◀ / ▶** button to select On or Off.

■ **Parental Guide:** Press the **▶ / ENTER** button to enter the submenu. To clearly understand the TV program rating codes, read the following information:



Note

- The Parental control will automatically block certain categories that are “more restrictive”. For example, if you block “TV-Y” category, then all the categories in the “young adult” group will be blocked (TV-Y, TV-Y7, TV-G, TV-PG, TV-14 and TV-MA).
- The sub-ratings (A, D, L, S, V, FV) work together similarly.
- How to set the A, D, L, S, V and FV sub-ratings
 - First, press **▲ / ▼** button select one of these Ratings: TV-Y, TV-Y7, TV-G, TV-PG, TV-14, or TV-MA.
 - A symbol “□” will be displayed for each sub-rating.
 - While “□” is selected, press **ENTER** button to go to a sub rating. To select a different Rating, press **▲ / ▼** buttons and then repeat the process.

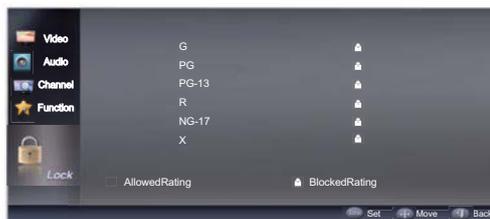
Note

- The V-chip will automatically block certain categories that are “More restrictive”. For example, if you block “□” sub-rating in TV-PG, then the “□” sub-ratings in TV-14 and TV-MA will automatically be blocked.

MPAA Rating

- Blocks movies according to the movie ratings limits specified, so children cannot view certain movies. You can set the ratings limit by blocking out all the movies with the ratings above a specified level. Keep in mind that the movie ratings limit only applies to movies shown on TV, not TV programs, such as soap operas.

- 1 Press the **▲ / ▼** button to select the **MPAA Rating** item.
- 2 Press the **▶ / ENTER** button and then use the **▲ / ▼** button to select the rating.
- 3 Press the **ENTER** button to set block or unblock.



CA Eng Rating

- Canadian English Language Rating
 - 1 Press the **▲ / ▼** button to select the **CA Eng Rating** item.
 - 2 Press the **▶ / ENTER** button and then use the **▲ / ▼** button to select the rating.
 - 3 Press the **ENTER** button to confirm.



CA Fren Rating

Canadian French Language Rating

- 1 Press the ▲ / ▼ button to select the **CA Fren Rating** item.
- 2 Press the ► / **ENTER** button and then use the ▲ / ▼ button to select the rating.
- 3 Press the **ENTER** button to confirm.



Change Password

Press the ► / **ENTER** button to enter the submenu, by entering a 4 digit number using the 0-9 buttons on the remote control for both the New Password and Confirm Password prompts.

Clean All

Press the ► / **ENTER** button to enter the submenu: If OK is selected and confirmed, all parental lock options will be set to the factory default setting, which is all programming and all channels are allowed. The reset may take several moments to complete...up to 30 seconds.

Note

□ If there is any lock mark on the top of the set such as channel lock, parental lock and so on, you can press OK to resume it. (Press OK to display the password menu and input your password.)

Other Functions

Net Connect Function – Yahoo! Connected TV

You can monitor financial stocks, share photos with

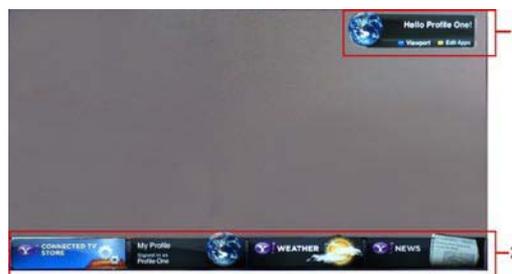
friends and family, and track news and weather all through the Yahoo Widget Engine.

Note

□ Depending on your country's regulations, some applications may have limited service or not be supported.

Screen Display

Dock Mode



1. Welcome Banner: Shows your profile.
2. Dock: Displays your snippets. Snippets are quick launch icons for your widgets.

Sidebar Mode

1. Widget logo and Current menu.

2. Contents List: The current selection is highlighted in Blue. Display the current page and number of total pages.

3. Controls:

- Red: To close the widget.
- Green: To change the widget's settings.
- Yellow: To manage your snippets.
- Blue: To size video to fit or display in full screen.



Note

□ Some buttons may not be available with certain widgets.

Editing Snippets in the Dock

1. Editing a snippet by selecting in the dock and pressing the Yellow button.
2. The snippet moves to the Second position and its tile slides up to show the following help text:

Note

- Using the color buttons with the dock mode.
- Red(Delete): To remove the widget.
- Deleted widgets can be restored from **Widget Gallery**.
- Blue(Move): To rearrange snippets.
- Yellow(Done): To exit the **Editing Snippet** menu.

PROFILE Widget

Set up user profiles through Profile Widget. You can set up multiple profile, each with its own list of widgets. Use the **Switch Profile** option to switch to a different user profile.

Note

- There must be at least two registered profiles. For instructions on adding a profile, refer to **Administrative Controls**.

- Use the **Profile Settings** option to customize and protect your profile.

User profiles can be customized with a unique name and avatar (a picture used to represent your profile).

Your profile's name and avatar are displayed in the profile snippet in the dock.

Protect your profile using the **Create Profile PIN** option.

When setting up a new PIN, you can set a **Security Question**.

- The **Profile Settings** option limits access to the profiles widgets.

If you forget your profile PIN, answer your profile's **Security Question**.

New widgets cannot be added to profiles with **Limit Profile** indicator enabled.

Note

- Owner PIN must be set to use this feature. For instructions on setting Owner PIN, refer to **Administrative Controls**.
- System **Settings** allows you to:



Change your Location and **Zip Code(US only)** to tailor contents specific to your region.

Replay the tutorial that was shown during guided setup.

Restore Factory Settings resets all widget settings and information.

Note

- When you cannot run **Restore Factory Settings** normally or you cannot install/run the specific widgets normally, press the remote control buttons in the following sequence, which resets the Yahoo Service:

- From the **Administrative Controls** menu you can:
 - Configure Screen Saver timeout to avoid screen burn-in.
 - Create Owner PIN and set a **Security Question** to control other profiles.
 - Create and configure a new profile with a unique set of widgets.
 - Delete an existing profile.

- Sign into Yahoo! from PROFILE Widget using your **Yahoo! ID**

If you have a **Yahoo! ID**, you can access personalized content using Yahoo! TV widgets.

You will be automatically signed-in to all installed Yahoo! TV widgets with your profile's **Yahoo! ID**.

If you do not have a Yahoo! account, visit "www.yahoo.com" to create one.

You may not be able to log in with an ID created through a Yahoo website in a country that does not support Internet@TV.

- About Profile Widget: Press the Green button to view a brief description of Profile Widget, Copyright Policy, Terms of Service, and Privacy Policy.

PROFILE Widget

Use Yahoo! Widget Gallery to add more widgets to your TV. View available TV widgets in the following categories:

- **Featured:** Displays recommended widgets.
- **Latest:** Displays the most recent widgets.
- **All widgets:** Displays all widgets.
- **Categories:** Displays all widgets by category.

Note

- To install a widget, navigate to the detail screen and select **Aaa Widget to My Profile** and press the **ENTER** button. The widget will be installed and

become available in the dock.

■ **Widgets Gallery Settings:** Press the Green button.



About yahoo! Widget Gallery... You can view brief information for the Widget Gallery, Copyright Policy, Terms of Service, and Privacy Policy.

TV Widget Software: Displays the current version of the system software, and installed widgets.

Create your own widgets through the **Developer Settings** menu. For more information, visit our

developer site at <http://connectedtv.yahoo.com/>.

Yahoo!® Connected TV

You can enjoy the best of the Internet in perfect harmony with the simplicity and reliability of your TV.

Understanding Yahoo!® Connected TV

Yahoo! Connected TV provides an integrated Internet and TV experience

- Use your remote control to access your favorite Internet content while watching TV.
- Add TV Apps from Yahoo! and your favorite Internet and media companies.
- Keep up with world, business, entertainment, and sports news.
- Track your stocks and stay current with financial news.
- Share photos with friends and family.
- View photos on your big screen TV.
- Watch your favorite web videos.
- Access user-generated content.

Using the Remote Control

Remote Control Key	Operation
	Display/hide the Yahoo! Connected TV user interface.
	Highlight and focus on buttons in the Yahoo! Connected TV user interface.

	Move the focus selection up.
	Move the focus selection down.
	Move the focus selection to the left.
	Move the focus selection to the right.
	Select the focused item.
	Go to the TV Menu.
	Close the app.
	Change the app's settings.
	Add, delete, or move your apps.
	Resize the video to fit onscreen, or to make it fullscreen.

Getting Started Out of the Box

Once your television is powered up and your network is operational, the Yahoo! Connected TV software guides you through its step-by-step setup wizard.

These setup steps are designed to provide you with the information and settings you will need to start using Yahoo! Connected TV.

Activating Yahoo! Connected TV

Press the Yahoo! TV Key to activate the Yahoo! Connected TV user interface.



What is a TV App?

- TV App is an Internet application designed to run on your TV.

What is the Dock?

- The dock is the horizontal list of TV App bookmarks appearing at the bottom of your TV screen when you press the Yahoo! TV Key on the remote control.

What is a TV App bookmark?

Operation

- A TV App bookmark is a shortcut which launches a TV App sidebar.
- TV App bookmarks are dynamic icons to TV App content.

Guided Setup

Guided Setup Welcome to Yahoo! Connected TV!
Press the Yahoo!



	Press the Yahoo! TV Key to activate Yahoo! Connected TV. The first time you use TV Apps this step-by-step wizard begins with the Welcome Screen.
	Select Let's get started! If you select Exit Setup now, this step will resume the next time you press the Yahoo! TV Key.
	Follow the onscreen instructions. Highlight and focus on buttons in the Yahoo! Connected TV user interface.
	Select the focused item.

Activate Yahoo! Connected TV. The first time you use TV Apps this step-by-step wizard begins with the Welcome Screen.

Welcome to Yahoo! TV Apps!

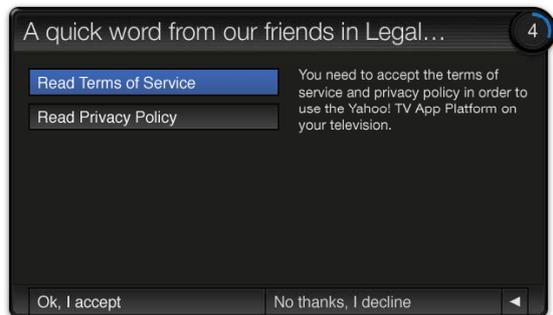
	Select Let's get started! If you select Exit Setup now, this step will resume the next time you press the Yahoo! TV Key.
--	--

Where do you live?

	Choosing your location allows TV Apps to use localized content. Highlight your country.
	Select your country.



A quick word from our friends in Legal...



	Accepting the Yahoo! Terms of Service and Privacy Policy is required to use Yahoo! Connected TV. Select Ok, I accept .
--	---

What's your name?



	Enter your name to setup your profile. Highlight letters on the keyboard and spell your name.
	Select Save this name to create your profile.

Success!



	Test your network connection. Setup is now complete. A tutorial on how to use Yahoo! Connected TV is next. Select Continue and review the tutorial. Select Exit setup to start using Yahoo! Connected TV now.
--	---

Activating Yahoo! Connected TV

	Press the Yahoo! TV Key to activate Yahoo! Connected TV.
--	---

- The horizontal list at the bottom of your TV screen is called "the dock."
- The items in this list are called TV Apps or "bookmarks."
- A bookmark is a shortcut which launches a TV App sidebar.



Moving between TV App Bookmarks

Activate Yahoo! Connected TV. The first time you use TV Apps th

	Move between TV App bookmarks by pressing the Left or Right Arrow .
--	---

- Focus is located in the leftmost region (the highlighted bookmark).
- The dock scrolls bookmarks under this focal point.

Moving between TV App Bookmarks

	Open the TV App sidebar by pressing ENTER when its bookmark is in focus.
--	---



- The TV App logo and Home button are at the top of the sidebar.
- Use the **Up & Down Arrows** to navigate to a menu item.
- The currently focused button is highlighted.
- Press **ENTER** to select the focused button.

Using the Sidebar Toolbar

	Close the APP.		Manage your bookmarks
	Change the App's settings		Size video to fit, or mark it fullscreen

The sidebar's bottom toolbar includes four color-coded buttons that correspond to the colored keys on the remote control.

Using the Profile TV App

- The **Profile TV App** configures your user profile.
- You can set up multiple profiles for multiple users.
- Each profile maintains its own list of TV Apps.
- The **Switch Profile** menu allows you to switch to a different user profile.
- The **Profile Settings** menu allows you to customize and protect your profile.
- The **System Settings**



Operation

menu allows you to change your Location, Repeat the Tutorial, and Restore Factory Settings.

- The **Administrative Controls** menu allows you to set the **Screen Saver** timeout, create the **Owner PIN**, and to **Create a Profile**.
- The **Sign in to Yahoo!** menu allows you to personalize your experience using your Yahoo! ID.
- Visit <http://www.yahoo.com> to create a Yahoo! ID.

Using the Connected TV Store

- The **Connected TV Store** allows you to browse and discover new TV Apps.
- The featured TV Apps are highlighted in the display case at the top of the sidebar.
- You can also browse available TV Apps by category.
- To install an app, select **Add App to My Profile** and press the **ENTER** key.
- The **Owner PIN** is needed to install apps for profiles that have been protected through the **Limit Profile** indicator under the **Profile TV App--Profile Settings** menu.
- Refer to the **Profile TV App--Administrative Controls** menu to set the **Owner PIN**.



Using the Connected TV Store

- The **Yahoo! News TV App** provides the latest headline news for business, entertainment, politics, sports, top stories, and many other categories.
- Select a category, press **ENTER**.
- Select a headline within the category, press **ENTER**.
- View the dynamically updated news summary for the selected headline.



Using the Yahoo! Weather TV App

- The **Yahoo! Weather TV App** provides updates on your local and favorite weather locations.
- Press the **GREEN** key to display the **Settings** menu.
 - Add a New City by entering the name of the city.

- Delete a City by selecting the city you want to delete from the city list.

- Select the Display Units As button to change the temperature indication mode to Imperial or Metric.

- To create a bookmark for a favorite city:

- Select the city from the home page.

- Press the **YELLOW** key.

- Select the **Add Bookmark** button and press **ENTER**.

- To delete a bookmark for a city:

- Navigate to the bookmark and press **ENTER** to start the app.

- Press the **YELLOW** key.

- Select the **Delete Bookmark** button and press **ENTER**.



Using the Yahoo! Finance TV App

- View the latest stock news with the Yahoo! Finance TV app.

- Press the **GREEN** key to set up your stocks.

- Use the **Add New Symbol** menu to enter the name of a new stock.

- The **Import Symbols From Yahoo!** menu retrieves the stocks from your Yahoo! Finance portfolio.

- The **Merge Symbols** button merges with your portfolio.

- The **Replace Symbols** button replaces your symbols with the symbols from your portfolio.

- The **Display Format** button changes the stock-price fluctuation transition to **Value** or **Percentage**.

- To create a bookmark for a favorite stock:

- Select the stock symbol from the home page.

- Press the **YELLOW** key.

- Select the **Add Bookmark** button and press **ENTER**.

- To delete a bookmark:

- Navigate to the bookmark and press **ENTER** to start app.

- Press the **YELLOW** key.

- Select the **Delete Bookmark** button and press **ENTER**.



Using the flickr TV App

- The flickr TV App enables slideshows of family and friends' photos on your TV.
- Personalize the flickr TV App by logging in with your Yahoo! ID.
- To view photos in a slideshow:
 - Select a thumbnail of a photo and press **ENTER** to view the photo's details.
 - Select **Start Slideshow** and press **ENTER**.
- To control the slideshow display:
 - Press **ENTER** during a slideshow.
 - The thumbnails of photos are displayed on the bottom of the screen.
 - When the slideshow control is displayed, you can **Pause, Play,** and **Stop** the slideshow.
 - If you select the  button and press **ENTER**, you can view details for the photo.
- To configure the Settings press the **GREEN** key.
- The **Time Per Slide** button controls the speed of the slideshow.
- The **Repeat** button will restart the slideshow at the beginning after the last photo is shown.



Using Yahoo! TV Apps

- The Yahoo! News TV App provides the latest headline news for business, entertainment, politics, sports, top stories, and many other categories.
- The Yahoo! Weather TV App provides updates on your local and favorite weather locations.
- View the latest stock news with the Yahoo! Finance TV App.
- The flickr TV App enables slideshows of family and friends' photos on your TV.

Using Yahoo! TV Apps

<p>Yahoo! Connected TV is an open software platform for extending Internet services to televisions and other living room devices.</p>	
<p>Our Compelling User Interface is designed to address the needs of the TV watcher.</p>	
<p>An Open Yahoo! Connected TV Store ensures you have access to all of the services you want, without walls or restrictions.</p>	
<p>The Yahoo! Connected TV Developer SDK provides developers with powerful tools for building applications using the languages and systems with which they are familiar.</p>	

NET CONNECT

- Press the **NET CONNECT** button, the **NET CONNECT** menu will be displayed:



Press the ◀ / ▶ button to select YAHOO, NETFLIX, Youtube, Blockbuster, TV, USB menu.

 **Note**

- * Services may be added or removed.

NETFLIX

- 1 Press the **NETFLIX** button to enter the menu launch Netflix.



- 2 Follow the instructions displayed on the screen.

For more information about Netflix, please visit www.netflix.com

DLNA (Digital Living Network Alliance)

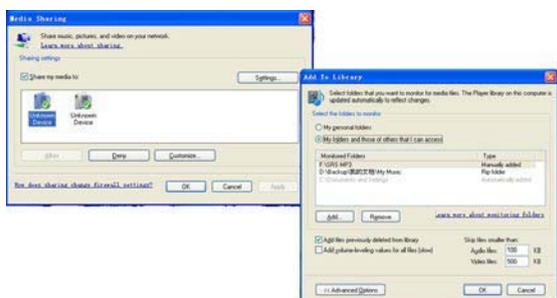
Digital Living Network Alliance (DLNA) is a standard that allows various consumer electronic devices to share content with each other across a standard home network. This would allow a device such as a DLNA compatible television to play music or view videos or photos stored on a desktop computer or other compatible device.

- 1 Press the **MENU** button and then use the ▲ / ▼ button to select the **Function** menu.
- 2 Press the ▶ / **ENTER** button and then use the ▲ / ▼ button to select **Network**.



3 Press the **▶ / ENTER** button and then use the **▲ / ▼** button to select **Applications**.

4 Press the **▶ / ENTER** button and then use the **◀ / ▶** button to select **On**.



5 Launch the Multimedia Player by pressing the **MEDIA.P** button.



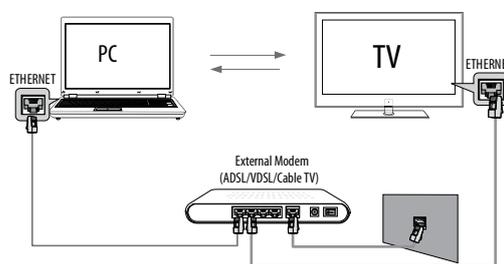
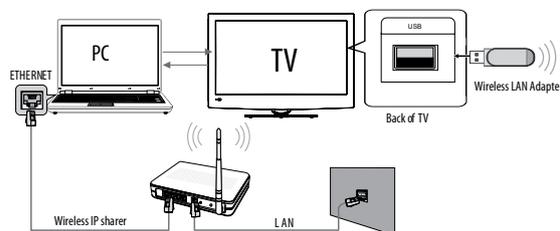
6 Press **▲ / ▼ / ◀ / ▶** button to select the desired item.

To access content from your computer or other device, it must be properly set up. Refer to the documentation that came with your computer, operating system, or device.

Example: If your computer is running Windows 7, you can stream media using Windows Media Player 12.

Connecting to your PC through a network

You can play pictures, music and movies saved on your PC on your TV through a network connect in the Media Play mode.



For more information on how to configure your network, refer to "Network Connection"

CCD (Closed Caption Display)

Closed Captions

- Closed captioning is a process which converts the audio portion of a television program into written words which then appear as subtitles on the television screen. Closed captions allow viewers to read the dialogue and narration of television programs.

Using Closed Captions

- Captions are the subtitles of the dialogue and narration of television programs. For prerecorded programs, program dialogue can be arranged into captions in advance. Its possible to caption a live program by using a process called real-time captioning, which creates captions instantly.
- Real-time captioning is normally done by professional reporters using a machine shorthand system and computer for translation into English. Captioning is an effective system for the hearing-impaired, and it

can also aid in teaching language skills.

- In ATV mode the CCD function allows you to configure the way you choose to view the digital captioning (Off, CC 1, CC 2, CC 3, CC 4, Text 1, Text 2, Text 3 or Text 4).

■ **CAPTION**

The term for the words that scroll across the bottom of the TV screen, usually the audio portion of the program provided for the hearing impaired.

■ **TEXT**

The term for the words that appear in a large black frame and almost cover the entire screen; usually messages provided by the broadcaster.

- In DTV mode allows you to configure the way you choose to view the digital captioning (Off, service 1, service 2, service 3, service 4, service 5 or service 6).
- Select one of the digital service channels made available by the caption provider.
- There are 6 standard services. Service 1 is designated as the Primary Caption Service. This service contains the verbatim, or near-verbatim captions for the primary language being spoken in the accompanying program audio. Service 2 is designated as the Secondary Language Service. This service contains captions in a secondary language which are translations of the captions in the primary Caption Service. The other service subchannels are not pre-assigned. It is up to the discretion of the individual caption provider to utilize the remaining service channels.

 **Note**

- * The captions do not always use correct spelling and grammar. Not all TV programs and product commercials are made for broadcast with Closed Caption information included. Refer to your area's TV program listings for the TV channels and times of Closed Caption shows. The captioned programs are usually noted in the TV listings with service marks such as "CC".

Playing External Media

1 Supported media and file formats:

Digital pictures: (.JPG/ .JPEG/ .BMP(Baseline & Progressive)/ .PNG)

Digital music: (.MP3(8~320kbps))

Video: (.avi/.mpg/.mpeg/.vro/.vob/.ts coded with MPEG-1 or MPEG-2 standard) files.

- Due to differences in the file code and file mode, it

is possible that some files cannot be read.

- 2** Before starting operation, verify that the USB storage device is formatted to the FAT32 file system. At present, this television does not support NTFS and the file systems of other formats.
- 3** Supports Plug & Play (no need to reset the TV). USB hard drive support - only supports the class of USB hard drive that follows USB power consumption spec.
- 4** The television operation may be halted (screen freezes, no function operation) due to excessive rate of information code errors. In such a case, restart the system (by unplugging the TV from the AC power source, waiting 15 seconds and then reconnecting the power source). Please note that there are many non-standard USB mobile devices in the market. If a non-standard device is used then an identification problem may occur.

Connecting a USB Device

- 1** Turn the TV on.
- 2** Connect a USB device containing photo, music and/or movie files to the USB jack on the back of the TV.
- 3** When the USB is connected to the TV, then you can select the Media Play mode.

USB Media Menu operation

- 1** Plug-in an external storage device into the USB port.
- 2** Press the **MEDIA.P** button on the remote to display the multimedia selection menu.

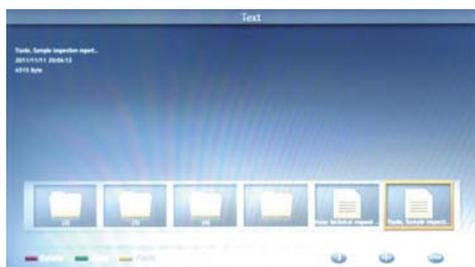


- 3** Press the **ENTER** button on the remote to display the sub menu.

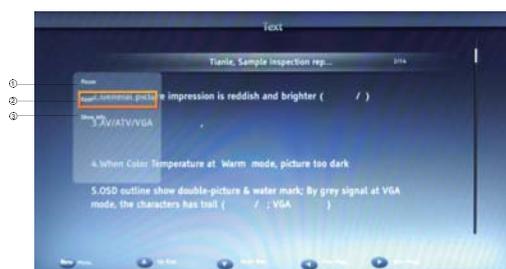
- 4 Press the **EXIT** button on the remote to return to the previous menu.

To play text

- 1 Press the **◀ / ▶** button to select **Picture**, then press the **ENTER** button in the Media Play menu.
- 2 Use the **▲ / ▼ / ◀ / ▶** buttons to select the desired picture in the file list.



- 3 Press the **MENU** button to display the option list.



- | | |
|---|-------------------|
| 1 | Play/Pause |
| 2 | Font |
| 3 | Show Info |

- 4 Press the **EXIT** button to return to the previous menu.
Press the **MEDIA.P** button to exit the Media Play mode.

To play pictures

- 1 Press the **◀ / ▶** button to select **Picture**, then press the **ENTER** button in the Media Play menu.
- 2 Use the **▲ / ▼ / ◀ / ▶** buttons to select the desired picture in the file list.

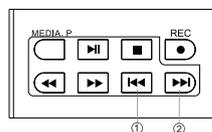


- 3 Press the **MENU** button to display the option list.



- | | | | |
|---|-------------------|---|------------------|
| 1 | Play/Pause | 4 | Duration |
| 2 | Repeat | 5 | |
| 3 | Shuffle | 6 | Show Info |

- 4 Press the button on the remote control to select an option. Press the **ENTER** button to confirm.



- | | |
|----|----------------------|
| 1. | Play previous |
| 2 | Play next |

- 5 Press the **EXIT** button to return to the previous menu.
Press the **MEDIA.P** button to exit the Media Play mode.

To play music

- 1 Press the ◀ / ▶ button to select **Music**, then press the **ENTER** button in the Media Play menu.

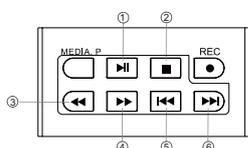


- 2 Use the ▲ / ▼ / ◀ / ▶ buttons to select the desired music in the file list.
- 3 Press the **MENU** button to display the option list.



1. Play/Pause	4. Show Info
2. Repeat	5. Hide Spectrum
3. Shuffle On or Off	6. Audio Only

- 4 Press the button on the remote control to select an **option**. Press the **ENTER** button to confirm.



1. Play or pause
2. Stop
3. Fast reverse
4. Fast forward
5. Play previous
6. Play next

- 5 Press the **EXIT** button to return to the previous menu. Press the **MEDIA.P** button to exit the Media Play mode.

To play movies

- 1 Press the ◀ / ▶ button to select **Movie**, then press the **ENTER** button in the Media Play menu

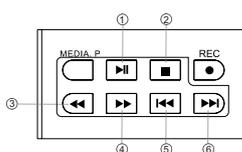


- 2 Use the ▲ / ▼ / ◀ / ▶ buttons to select the desired movie in the file list.
- 3 Press the **MENU** button to display the option list.



1. Play/Pause	4. Picture Mode
2. Repeat	5. Screen Mode
3. Show Info	

- 4 Press the button on the remote control to select an **option**. Press the **ENTER** button to confirm.



1. Play or pause
2. Stop
3. Fast reverse
4. Fast forward
5. Play previous
6. Play next

- 5 Press the **EXIT** button to return to the previous menu. Press the **MEDIA.P** button to exit the Media Play mode.

Note

- * Do not remove USB device from the TV until you have exited the USB mode otherwise you may damage the USB device.

Universal Remote Control

Setting Up Your Remote Control

After it has been set up properly, your remote control can operate in **four** different modes: TV, DVD, VCR or CABLE.

 **Note**

- * The remote control might not be compatible with all DVD Players, VCRs and Cable boxes.

Control Operation

- 1** Program the remote control to work with your device.
- 2** Change the device mode by pressing the TV, DVD, CABLE or VCR key. When the device is set, the related device LED will turn on for 1 second and then turn off.
- 3** Aim the remote at the device.
- 4** Use the other remote control buttons to operate the device. The device LED will blink if you press any key (if the key has a function in the current mode). If the key has no function, then the LED will not blink.

* Manually Programming the Remote Control

Check the code no. from the code list.

- 1** Choose the device you want to program.
- 2** While pressing and holding the **ENTER** key, press the **INPUT** key, and the device LED will be ON. **After about 3 seconds**, and the LED will blink, indicating that the remote control is ready for programming, then release both keys.
- 3** The LED will blink once when you enter a digit key, indicating the digit key is programmed. If 3 digits are programmed successfully, the device LED will turn ON for about 3 seconds and then blink twice per second.

You can now:

- A) Try to operate the device by using the power key.
- B) If the device powers on, press the **ENTER** key to save the current 3-digit code to memory and exit the manual programming mode.
- C) Return to step 3 to reprogram the control.

- 4** If your input is incorrect, the LED will blink 6 times in 3 seconds. And then keep **blinking**. You can now return to step 3 and reprogram the device. You must enter the 3-digit brand code corresponding to your device within 30 seconds. If time **runs out** or any key other than Power or digits are pressed, the LED will turn off and the manual programming process will exit.

* Manual scan mode

With manual scan and program, the remote control tests all the codes available in the codeset database and assigns the correct one for the selected device. Although this method is more time consuming, it saves you the trouble of looking up the brand codes necessary for manual programming.

To manually-scan and program the remote control:

- 1** Turn OFF the device **that you wish to program**. (TV, VCR, DVD or cable box equipment).
- 2** Choose the device you want to program.
- 3** While pressing and holding the **ENTER** key, press the **INPUT** key, and the device LED will be ON. **It will remain on for about 3 seconds** and then the LED will blink, indicating that the remote control is ready for programming, then release both keys.
- 4** Press and release the **CH•**   key. it will emit the next or the previous POWER key code. The LED **will blink rapidly (10 times per second)**, indicating that the remote control is in manual scan mode.
- 5** Press the **CH•**  key repeatedly until the device switches ON (**CH•**  key conducts a upward search while the **CH•**  key conducts a downward search in the code set database). When the device turns ON, press and release the **ENTER** key to program the remote control with the new code, saving the code to **memory**.
- 6** After saving the new code, press the **POWER** key. If the device responds, no further programming is required. If the device does not respond, repeat step 3 through 5. And searching will start from the current code that is set.

To exit without programming, press any other key. The code will not be saved to **memory**.

After searching the entire data base, this mode will automatically exit and the LED will blink 3 times. The code will not be saved to **memory**.

* Automatic Scan Programming the Remote

Control

To automatically scan and program the remote control:

- 1 Turn OFF the device you wish to program. (TV, VCR, DVD or cable box equipment).
- 2 Choose the device you wish to program.
- 3 While pressing and holding the ENTER key, press the INPUT key and the device LED will turn ON. The LED will remain on for about 3 seconds and it will blink, indicating that the remote control is ready for programming, then release both keys.
- 4 Press and release the Mute key to enter automatic scan mode. And the remote will automatically send codes to the device every 2 seconds.
- 5 When the device turns ON, press ENTER key to program the remote control with the new code, saving it to memory.
- 6 Press the POWER key, if the device responds, no further programming is required. If the device does not respond repeat steps 1 through 5.
- 7 After searching the entire data-base, this mode will automatically exit and the LED will blink 3 times. The will not be saved to memory.

In automatic scan mode, press any key other than the ENTER key to exit without programming.

Display mode

- 1 Choose the device you wish to program.
- 2 To enter display mode, while pressing and holding the ENTER key, press the INPUT key and the device LED will turn ON. It will remain on for about 3 seconds and then the LED will blink, indicating that the remote control is ready for programming, then release both keys.
- 3 Press 9 then 8 then 0 to enter display mode.
- 4 Press the 1 key to get the first digit of the current code. For example, if the first digit of code is 1, the led will blink once and remain OFF. Digit "0" in the code will not be displayed.
- 5 Press the 2 key to get the second digit of the current code. For example, if the second digit of the code is 3, then the LED will blink three times.
- 6 Press the 3 key to get the third digit of the current

code.

- 7 Only digit 1, 2, 3 are valid in this mode. And the sequence is not fixed.

The remote control will not send out data in this mode if you press any key other than the 1, 2 or 3 key.

Pass-Through Features

The remote control provides pass-through features that allow users to control the TV volume and DVD or VCR operation while the remote control is in another device mode.

* Volume Pass-Through

The TV Volume/Mute pass-through feature allows you to control the volume and mute function of your TV while the remote control is in another device mode. The feature is applicable for all devices and brands that do not use the volume control buttons for other purposes.

* Playback Control Key Pass-Through

The DVD or VCR playback control key pass through feature lets you control the PLAY, STOP, PAUSE, REWIND, FF and RECORD functions of your DVD or VCR while the remote control operates in other modes. The feature is applicable for all devices and brands that do not use the playback control keys for other purposes.

Fast Programming Haier default TV code

Pressing and holding the ENTER key and then press the POWER key for 3 seconds, the LED will blink 3 times and turn off, default Haier codeset (001) will be programmed to the control.

Remote Control Codes

TV

NO.	Brand	Code
1	Haier	001 002 003 004 005 006 007 008 009 010 240 241 297 307 355
2	Abex	077
3	Acer	267
4	Addison	333
5	Admiral	057 078 334 338
6	Advent	324
7	Adventura	079
8	Aiko	066 333
9	Aiwa	165
10	Akai	038 058 258 271 279 331 350
11	Albatron	321 325
12	Alleron	068
13	America Action	335
14	Ampro	323
15	Amtron	067
16	Anam	335
17	Anam National	059 067
18	AOC	060 061 062 222 331 349 350 353
19	Apex	092 135 151 195 339
20	Archos	308
21	Astar	259

Universal Remote Control

NO.	Brand	Code
22	Audiovox	067 189 191 207 256 333 335 337
23	Aventura	053
24	Axion	280
25	Bang & Olufsen	345 346
26	Baur	058
27	Belcor	060 349
28	Bell & Howell	057
29	Benq	245 246 284 329
30	Bradford	067 335
31	Brilliant	342
32	Brockwood	060 349
33	Broksonic	197 335 338
34	by:sign	310
35	Candle	060 062 063 079 331 350
36	Carnivale	331 350
37	Carver	055 320
38	CCE	239 351
39	Celebrity	058
40	Celera	339
41	Centurion	064
42	Changhong	339
43	Ching Tai	333
44	Chun Yun	333 335 361 374
45	Chung Hsin	335 364
46	Citizen	060 062 063 066 067 074 076 331 333 350 352 354 380
47	Clarion	335
48	Coby	210
49	Colortyme	060 062
50	Colt	377
51	Commercial Solutions	332
52	Concerto	060 062
53	Contec	335
54	Contec/Cony	065 067
55	Craig	067 335
56	Crosley	055 293 320
57	Crown	067 071 335 352
58	CTY	235
59	Curtis Mathes	038 055 056 060 062 074 076 088 320 331 332 334 337 340 350 352 354
60	CXC	067 335
61	Cytron	238 278
62	Daewoo	060 061 062 066 076 093 117 125 152 333 337 349 352 380
63	Daytron	060 062 076 349
64	Dell	251 285 304
65	Denon	340
66	DiamondVision	311 317 319
67	Dimensia	056 088
68	Disney	132
69	Dumont	031 060 330 349
70	Durabrand	053 097 137 341 335 338
71	Dwin	322 334
72	Electroband	058
73	Electrograph	243
74	Electrohome	058 059 060 062
75	Element	228
76	Emerson	053 060 062 065 067 068 076 093 137 266 292 335 338 349 352 380
77	Emprex	314
78	Envision	060 062 222 331 350
79	Epson	225
80	Erres	347
81	ESA	053
82	Ether	362
83	Firststar	372
84	Fujiitsu	068 216
85	Funai	053 067 068 335
86	Furi	368
87	Futuretech	067 335
88	Gateway	243 274 341 360
89	GE	027 056 059 060 062 069 070 085 088 107 116 332 337 378
90	GFM	051 305
91	Gibraltar	031 060 330 331 349 350
92	Go Video	328
93	Goldstar	060 061 062 065 076 077 331 349 350 379
94	Gradiente	242
95	Grundig	351
96	Grunpy	067 068 335
97	Hallmark	060 062
98	Hankook	335 362 371
99	Harman/Kardon	055
100	Harvard	067 335
101	Havermy	334
102	Hello Kitty	337
103	Hewlett Packard	175 204 219
104	Hisense	250 370 375

NO.	Brand	Code
105	Hitachi	032 060 062 065 126 127 134 149 150 186 200 340
106	HP	204 219
107	Hyundai	327
108	Ilo	174 254 266 312
109	IMA	067
110	Infinity	055 071 320
111	InFocus	275
112	Initial	277
113	Innova	351
114	Insignia	097 237 298 299 300 306 313
115	Inteq	330
116	Janeil	079
117	JBL	055 071 320
118	JC Penney	056 060 061 062 063 069 070 074 076 077 088
119	JCB	058
120	Jean	333 363 370 372
121	Jensen	060 062 236
122	Jinxiang	365 368 370
123	JVC	047 048 049 065 070 114 154 172 199 201
124	Kawasho	058 060 062
125	Kaypani	353
126	KEC	335
127	Kenwood	060 062 331 349 350
128	Kioto	055
129	KLH	339
130	Kloss Novabeam	067 079
131	Kolin	335 369
132	KTV	067 076 331 335 350 352
133	LG	030 060 061 182 224 257 302 321 350
134	Loewe	071
135	Logik	057
136	Luxman	060 062
137	LXI	055 056 062 071 088 151 320 332
138	M & S	055
139	Magnasonic	380
140	Magnavox	052 055 060 062 063 071 090 105 108 110 163 174 176 218 320 331 350
141	Magnin	378
142	Majestic	057
143	Marantz	055 060 062 071 231 272 320 331 350 351
144	Matsushita	336
145	Maxent	243 252 301
146	Mediator	374
147	Megapower	321
148	Megatron	062 340
149	Memorex	057 061 062 137 181 338 376 379
150	MGA	060 061 062 331 349 350 378
151	Midland	031 070 076 077 330 332 352
152	Mintek	174
153	Minutz	069
154	Mitsubishi	060 061 062 119 159 170 334 349
155	Monivision	321 325
156	Montgomery Ward	057
157	Motorola	059 078 334
158	MTC	060 061 062 074 331 349 350 354
159	Multitech	067 335
160	Multivision	072
161	NAD	062 151 351
162	NEC	059 060 061 062 234 268 331 349 350
163	Netsat	351
164	NET-TV	243 247
165	Newave	333 367 371
166	Nikko	062 066 331 333 350
167	Norcent	222
168	Noshi	348
169	NTC	066 333
170	Olevia	138 192 221 357 358
171	Onwa	067 335
172	Oppo	282
173	Optimus	336 376
174	Optoma	276
175	Optonica	073 078 334
176	Orion	097 338
177	Otto Versand	058
178	Panasonic	021 022 023 024 025 026 059 070 071 086 103 122 144 147 155 168 183 185 336 376
179	Penney	151 331 332 348 349 350 352 354 378 379
180	Philco	055 059 060 061 062 063 065 071 181 320 331 349 350
181	Philips	040 041 042 043 044 045 046 055 059 060 063 065 071 089 090 091 096 160 162 164 169
		174 177 179 190 208 291 320 347 351
182	Philips Magnavox	042 045 089 090 096
183	Phonola	347
184	Pilot	060 076 331 349 350 352

Universal Remote Control

NO.	Brand	Code
185	Pioneer	060 062 156 157 205 212
186	Plasmasync	269
187	Polaroid	211 217 220 228 315 339
188	Portland	060 061 062 066 076 333 349 352
189	Price Club	074
190	Prima	281 324
191	Princeton	321
192	Prism	070
193	Proscan	027 056 088 332
194	Proton	060 062 065 353
195	Prottron	196 262
196	Proview	263 343
197	Pulsar	031 060 330 349
198	Pye	347
199	Quasar	022 059 070 336 376
200	Quelle	058
201	Radio Shack/Realistic	056 060 062 065 067 073 076 077
202	Radiola	347
203	Radio Shack	088 331 332 335 349 350 352
204	RCA	027 028 029 056 059 060 061 062 082 088 095 098 332 348 349 354 378
205	Realistic	088 331 335 349 350 352
206	Runco	031 330 331 350
207	Sampo	060 062 076 077 243 283 331 350 352 353
208	Samsung	037 038 039 060 061 062 065 074 076 077 129 130 140 143 158 166 178 193 194 209 213 229 232 286 294 295 331 349 350 351 354
209	Samsux	352
210	Sansui	097 338
211	Sanyo	060 249 270 378
212	SBR	347
213	Sceptre	264
214	Scimitsu	349
215	Scotch	062
216	Scott	060 062 065 067 068 255 335 349
217	Sears	053 055 056 060 062 068 080 088 151 244 320 332 379
218	SEI	058
219	Sharp	033 034 035 036 060 062 065 073 076 078 083 112 131 139 142 145 167 171 180 198 202 203 334 352
220	Shen Ying	333
221	Sheng Chia	334 367
222	Shogun	060 349
223	Signature	057
224	Simpson	063
225	Sinudyne	058
226	SKY	351
227	Skygiant	335
228	Sony	011 012 013 014 015 016 058 087 094 101 102 118 124 128 136 148 153 184 206 226 287 288
229	Soundesign	060 062 063 067 068 335
230	Sowa	366 370
231	Squareview	053 080
232	SSS	060 067 335 349
233	Starlite	067 335
234	Studio Experience	25
235	Superscan	052 260 334 356
236	Supre-Macy	079
237	Supreme	058
238	SVI	230 355
239	Sylvania	046 050 051 052 053 054 055 060 062 063 071 137 141 161 289 320 331 350
240	Symphonic	053 067 080 141 335
241	Synco	333 337 361 366 367 371
242	Syntax	138 192 344 357 358
243	Syntax-Brilliant	192 244
244	Tacico	333 371
245	Tandy	078 334
246	Tatung	059 253 273 341 360 363 366 370
247	Technics	070 336
248	Techview	326
249	Techwood	060 062 070
250	Teco	363 367 371
251	Teknika	055 057 060 061 062 063 065 066 067 068 074 076 320 333 335 349 352 354
252	Telecaption	075
253	Telefunken	038
254	Thomson	088
255	TMR	060 062
256	TNCi	330
257	Toshiba	017 018 019 020 074 075 099 100 104 106 109 111 113 115 120 123 146 151 173 227 354
258	Totevision	076 352
259	Trutech	248
260	Tuntex	333 362
261	TVS	338
262	Universal	069

NO.	Brand	Code
263	Vector Research	331 350
264	Victor	065
265	Vidikron	055 320
266	Vidtech	060 061 062 349
267	Viewsonic	133 214 218 223 233 243 316 356
268	Viking	079
269	Viore	254
270	Visco	309
271	Vizio	133 257 261 296 318 341 356 359 360
272	Wards	055 056 057 060 061 062 068 069 071 073 088 320 331 349 350
273	Waycon	151
274	Westinghouse	133 187 188 195 215 290 303 337
275	White Westinghouse	093 338
276	Yamaha	060 061 062 331 349 350
277	Yapshe	373
278	Zenith	030 031 032 057 060 081 084 093 121 330 333 338

DVD

NO.	Brand	Code
1	Accele Vision	250
2	Accurian	355
3	Advent	330
4	Aiwa	307
5	Akai	280 323 361
6	Alco	328
7	Allegro	349
8	Alpine	257
9	Amphion MediaWorks	258
10	AMW	258
11	Apex	025 026 027 028 078 117 172 192 342 343
12	Apple	319
13	Arigo	351
14	Aspire	332
15	Astar	252
16	Audiovox	164 167 223 328
17	Axion	281
18	Bang & Olufsen	344
19	Blaupunkt	249 343
20	Blue Parade	340
21	BOSE	062 079
22	BOSS	251
23	Boston Acoustics	381
24	Broksonic	123 323
25	California Audio Labs	325
26	CambridgeSoundWorks	290
27	Changhong	326 375
28	CineVision	196 349 350
29	Clarion	262
30	Classic	236
31	Coby	082 129 143 237 331
32	Curtis	129
33	Curtis Mathes	352
34	CyberHome	029 048 351 368 373 374 377
35	Cytron	279
36	Daewoo	113 349 361
37	Denon	070 182 198 209 299 300 325
38	Desay	268
39	DiamondVision	320 321 322
40	Disney	100 132
41	Dual	312
42	Durabrand	353
43	DVD2000	337
44	Eclipse	227
45	Emerson	063 248 324 345 385
46	Enterprise	345
47	ESA	259 354
48	Fisher	305 346
49	Funai	354 385
50	Gateway	376 378 384
51	GE	101 195 338 343
52	GFM	204
53	Go Video	118 349 382 384
54	Goldstar	120
55	GPX	194
56	Gradiente	270 325
57	Greenhill	343
58	Grundig	339
59	Haier	334
60	Harman/Kardon	224 347
61	Hitachi	014 136 203 244

Universal Remote Control

NO.	Brand	Code
62	Hiteker	342
63	iLive	293
64	Ilo	213
65	iLuv	314
66	Initial	278 343
67	Insignia	274 289 298 303 354
68	Integra	326 340
69	Irradio	174
70	iSymphony	294
71	Jamo	308
72	JBL	162 347
73	Jensen	311 331
74	JVC	030 031 032 033 034 035 036 037 038 086 087 085 103 122 141 142 161 173 214 218 243 306 341
75	Jwin	309
76	Kawasaki	328
77	Kenwood	325
78	KLH	115 272 328 343
79	Konka	359 360
80	Koss	153 286 327 334
81	Landel	363
82	Lasonic	263 348
83	Lennox	333 353
84	Lexicon	357
85	LG	102 151 165 185 189 201 211 242 256 283 345 349
86	Liquid Video	334
87	Liteon	158 219 355 384
88	Loewe	356 365
89	Magnavox	069 071 124 156 179 213 298 324 336 339 354
90	Marantz	245 301 302 339
91	Memorex	100 133 323
92	Microsoft	338
93	Mintek	213 278 343
94	Mitsubishi	106 177 190 337
95	NAD	264
96	Nakamichi	310
97	Nesa	343
98	Next Base	363
99	Nexstech	271
100	Norcent	129 246
101	Onkyo	145 188 197 206 207 326 336
102	Oppe	273 284
103	Oritron	327 334
104	Panasonic	017 018 019 020 021 022 023 024 051 059 067 070 072 073 077 080 083 091 099 135 138 160 181 183 184 199 205 233 234 235 325 336 387 388
105	Philco	328
106	Philips	007 041 042 071 098 137 144 152 157 168 174 176 178 208 213 336 339 357 385
107	Pioneer	043 044 045 046 047 058 110 150 200 229 247 340 390
108	Polaroid	028 241 277
109	Polk Audio	339
110	Portland	361
111	Presidian	385
112	Prima	282 383
113	Princeton	358
114	Proceed	342
115	Proscan	069 338
116	Pye	276
117	Qwestar	327
118	RCA	039 040 069 090 166 191 328 338 340 343
119	Regent	333
120	Rio	349
121	Rotel	341
122	Rowa	329
123	Sampo	119 265 370 372
124	Samsung	012 013 014 015 016 054 061 066 074 075 085 104 105 108 111 121 125 134 154 193 210 226 325 389
125	Sansui	228 275 323
126	Sanyo	287 323 346
127	Sensory Science	384
128	Sharp	093 119 187 202 220 291 295 296 297
129	Sharper Image	368
130	Sherwood	292 361
131	Shinco	260
132	Shinsonic	213 335
133	Sigma Designs	358
134	Sonic Blue	349
135	Sony	000 001 002 003 004 005 006 049 052 055 056 057 060 061 065 076 081 092 094 097 109 112 114 126 127 128 146 147 148 155 230 231 232 316 317 318 335
136	Sungale	267
137	Superscan	124 324
138	SWA	364
139	Sylvania	042 063 124 133 159 204 225 285 324 354 385 386

NO.	Brand	Code
140	Symphonic	133 159 385
141	Teac	266 328 371 379 380
142	Technics	325
143	Techwood	261
144	Terapin	366
145	Theta Digital	340
146	Toshiba	007 008 009 010 011 050 053 084 088 089 096 107 130 131 140 163 169 170 171 175 186 212 215 216 217 221 238 239 240 254 255 323 336
147	Tredex	362
148	Trutech	296
149	Tview	313
150	Urban Concepts	336
151	US Logic	213
152	Venturer	288 328
153	Vizio	367 369
154	Vocopro	315
155	Westinghouse	222
156	Xbox	338
157	Yamaha	180 253 325 339
158	Zenith	102 116 120 139 149 336 345 349

VCR

NO.	Brand	Code
1	ABS	111
2	Adventura	008 032
3	Aiwa	008 032 095 112
4	Akai	019
5	Alienware	111
6	American High	031
7	Apex	115
8	Asha	012 029
9	Audio Dynamics	016
10	Audiovox	030 082 112
11	Bang & Olufsen	113
12	Beaumarck	012 029
13	Bell & Howell	028
14	Broksonic	074 099 114
15	Calix	030 112
16	Candle	029 030
17	Canon	031
18	CineVision	094
19	Citizen	029 030 112 121
20	Colortyme	016
21	Colt	118
22	Craig	012 029 030 112
23	Curtis Mathes	016 029 031
24	Cybernex	012 029
25	Cyberpower	111
26	Daewoo	018 032 051 093 121
27	Davidson	008
28	DBX	016
29	Dell	111
30	Denon	013
31	DiamondVision	107
32	DIRECTV	110 122 124 125 129 130 134 136
33	Dishpro	133
34	Durabrand	025
35	Dynatech	008 032
36	EchoStar	133
37	Electrohome	010 030 112
38	Electrohome	030 112
39	Emerson	008 010 020 030 031 032 105 112 116 121
40	ESA	101
41	Expressvu	133
42	Fisher	028 073
43	Fuji	031
44	Funai	008 020 032 105 116
45	Garrard	008 032
46	Gateway	111
47	GE	012 029 031 055 119
48	Go Video	012 072
49	GOI	133
50	Goldstar	016 030 106 112 120
51	Gradiente	008 032
52	Harley Davidson	032
53	Harman/Kardon	016
54	Headquarter	028
55	Hewlett Packard	111
56	Hitachi	008 013 048
57	HNS	110

Universal Remote Control

NO.	Brand	Code
58	Howard Computers	111
59	HP	111
60	HTS	133
61	Hughes Network Systems	013 110 122 124 125 130
62	Humax	110 122
63	Hush	111
64	iBUYPOWER	111
65	Insignia	081
66	Instant Replay	031
67	JC Penney	016 028 029 030 031
68	JCL	031
69	JVC	014 015 016 028 040 059 060 083 084 085 086 122 133
70	KEC	112
71	Kenwood	016 028
72	Kodak	030 031 112
73	LG	030 081 091
74	Linksys	111
75	Lloyd's	008 032
76	LXI	030 112
77	Magnasonic	020 121
78	Magnavox	008 020 021 025 027 031 044
79	Magnin	012 030 119
80	Marantz	016 028 031
81	Marta	030 112
82	Matsushita	031
83	Media Center PC	111
84	MEI	031
85	Memorex	008 012 025 028 029 030 031 032 100 108 112 114 117 120
86	MGA	010 012 119
87	MGN Technology	012 029
88	Microsoft	111
89	Mind	111
90	Minolta	013
91	Mitsubishi	010 041
92	Motorola	031
93	MTC	008 012 029
94	Multitech	008 029 032
95	NEC	016 028
96	Nikko	030 112
97	Niveus Media	111
98	Noblex	012 029
99	Northgate	111
100	Olympus	031
101	Optimus	020 030 112 117
102	Optonica	023
103	Orion	045 108
104	Panasonic	000 001 002 003 031 035 037 056 063 079 089 098 109 117 128
105	Penney	012 013 112 119 120
106	Pentax	013
107	Philco	031
108	Philips	023 031 044 071 087 110 116 122 124 125 126
109	Philips Magnavox	044
110	Pilot	030 112
111	Polaroid	104 115
112	Presidian	116
113	Profitronic	012
114	Proscan	069 070 134
115	Pulsar	025
116	Pye	103
117	Quarter	028
118	Quartz	028
119	Quasar	031 076 117
120	Radio Shack	008 023 030
121	Radio Shack/Realistic	028 029 030 031 032
122	Radix	030 112
123	Randex	030 112
124	RCA	011 012 013 029 031 034 058 067 097 110 119 122 124 134 136
125	Realistic	008 023 028 029 030 031 032 112
126	ReplayTV	109 127
127	Ricavision	111
128	Runco	025
129	Samsung	012 017 018 019 029 043 049 050 068 080 110 124
130	Sanky	025
131	Sansui	008 045 102 108 114
132	Sanyo	012 028 029 073 119
133	Scott	010 018
134	Sears	008 013 028 030 031 112 120
135	Sharp	022 023 052 090 096
136	Shogun	012 029
137	Singer	031
138	Sonic Blue	109 127

NO.	Brand	Code
139	Sony	004 005 006 007 008 033 036 038 039 046 064 065 066 075 111 123 131 135
140	Stack	111
141	STS	013 031
142	Superscan	021
143	Sylvania	008 010 020 021 031 032 048 062 088 116
144	Symphonic	008 020 021 032 105 116
145	Systemax	111
146	Tagar Systems	111
147	Tandy	028
148	Tashiko	030
149	Teac	008 032
150	Technics	031
151	Teknika	008 030 031 032 112
152	Thomas	008
153	Tivo	110 122 123 124 126 130 131 135
154	TMK	012 029
155	Toshiba	009 010 018 042 047 053 054 057 061 077 111 132
156	Totevision	012 029 030 112
157	Touch	111
158	UltimateTV	136
159	Unitech	012 029
160	Vector	018
161	Vector Research	016
162	Video Concepts	016 018
163	Videomagic	112
164	Videosonic	012 029
165	Viewsonic	111
166	Villain	008
167	Voodoo	111
168	Wards	008 012 013 023 029 030 031 032
169	White Westinghouse	105
170	XR-1000	008 031 032
171	Yamaha	016 028
172	Zenith	008 024 025 026 078 092
173	ZT Group	111

CABLE

NO.	Brand	Code
1	ABC	009 010 011 013 031 044
2	Adelphia	007
3	Americast	050
4	Antronix	015 016
5	Archer	016
6	AT&T	003
7	Bell South	050
8	Cable Vision	006
9	Cabletenna	015
10	Cableview	014
11	Clearmaster	049
12	ClearMax	049
13	Colour Voice	018
14	Comcast	000 005
15	Comtronics	019
16	Contec	020
17	Coolmax	049
18	COX	005
19	Daeryung	057
20	Director	043
21	Dumont	056
22	Eastern	021
23	Everquest	045
24	Focus	048
25	GC Electronics	016
26	GE	009 010
27	Gehua	055
28	Gemini	045
29	General Instrument	005 008 010 040 042 043
30	Goldstar	046
31	Hamlin	022
32	Hitachi	010
33	Jasco	045
34	Jerrold	008 010 031 032 040 042 043 045
35	LG	053
36	Magnavox	025
37	MegaCable	005
38	Memorex	024 044
39	Motorola	000 003 005 008 039 040 042 043
40	Movie Time	025
41	Multitech	049

NO.	Brand	Code
42	NEC	012
43	NET Brazil	036
44	NSC	025
45	Oak	020
46	Pace	001 047
47	Panasonic	028 030 044
48	Paragon	044
49	Philips	017 018 023
50	Pioneer	002 026 033 038 046
51	PopularMechanics	048
52	Proscan	009 010
53	Pulsar	044
54	Quasar	044
55	Radio Shack	045 049
56	RCA	014 030
57	Realistic	016
58	Recoton	048
59	Regal	020
60	Regency	021
61	Rembrandt	010
62	Runco	044
63	Samsung	001 026 035 046
64	ScientificAtlanta	001 002 003 007 013 037 038 041
65	Signal	045
66	Signature	010
67	Sony	006 051
68	Spucer	030
69	StandardComponent	027
70	Starcom	031 045
71	Stargate	045
72	Starguest	045
73	Supercable	040
74	Supermax	049
75	TIME WARNER	004
76	Tocom	011
77	Torx	052
78	Toshiba	044
79	Trans PX	054
80	Tristar	049
81	TS	052
82	Tusa	045
83	Tv86	025
84	Unika	015 016
85	UnitedCable	031
86	Universal	015 016
87	V2	049
88	ViewStar	020 023 025
89	Viewmaster	049
90	Vision	049
91	VortexView	049
92	Zenith	029 034 044 050
93	Zentek	048

Maintenance

Maintenance

Early malfunctions can be prevented. Careful and regular cleaning can extend the amount of time you will have your new TV. Be sure to turn the power off and unplug the power cord before you begin any cleaning.

Cleaning the Screen

- Here's a great way to keep the dust off your screen for a while. Wet a soft cloth in a mixture of lukewarm water and a little fabric softener or dish washing

detergent. Wring the cloth until it's almost dry, and then use it to wipe the screen.

- Make sure the excess water is off the screen, and then let it air-dry before you turn on your TV.

Cleaning the Cabinet

To remove dirt or dust, wipe the cabinet with a soft, dry, lint-free cloth. Please be sure not to use a wet cloth.

Extended Absence

If you expect to leave your TV dormant for a long time (such as a vacation), it's a good idea to unplug the power cord to protect against possible damage from lightning or power surges.

Specification

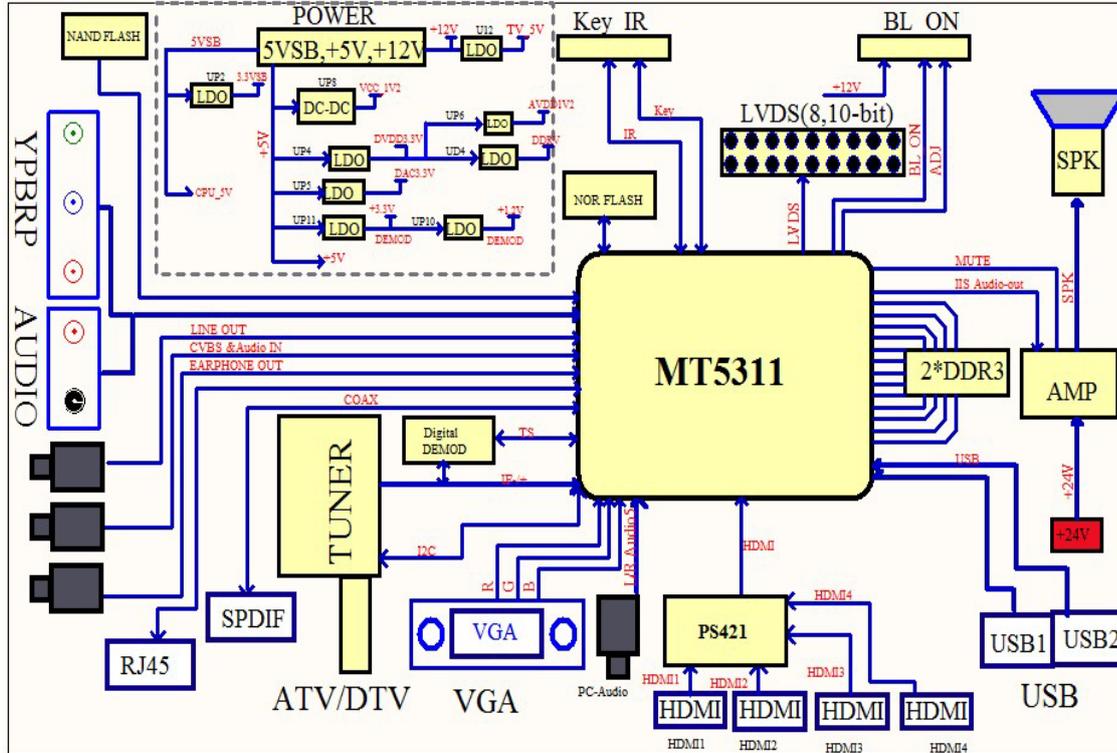
Product Specification

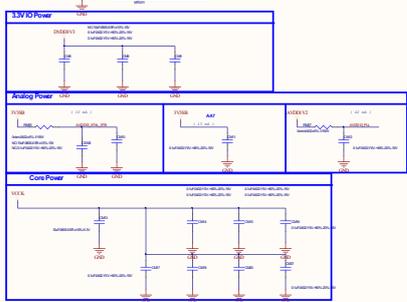
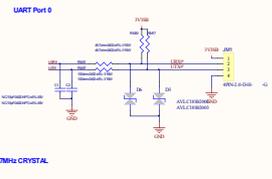
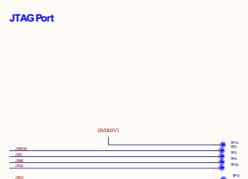
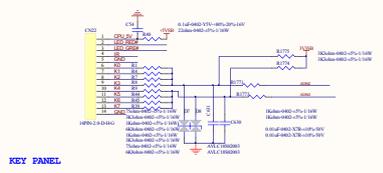
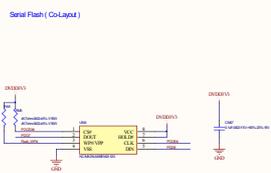
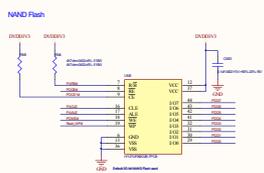
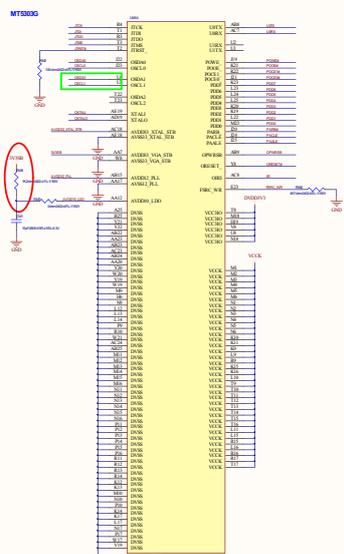
Resolution	32"
	1366x768 (Dot)
Estimated Yearly Energy Cost	\$11
Power requirement	120 V~, 60 Hz
Color system	NTSC, ATSC, Clear QAM
External Antenna Impedance	75 ohm
Color	1,070,000,000 (1024 steps of each R, G and B)
Operating Temperature	50~104 °F (10~40 °C)
Operating Humidity	20~80%
Storage Temperature	5~113 °F (-15~45 °C)
Storage Humidity	Less than 80%
Maximum Elevation	6561 feet (2000 m)

MODEL	Dimensen (WDXH) Unitinches/ mm (Including stand)	Weight (pounds/kg)
32"	31.2X7.9 X22.3 inches 792x200x565 mm	21.1/9.6

7. Electrical parts

7-1. Block diagram

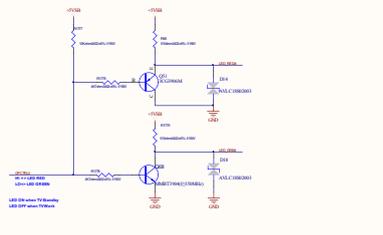
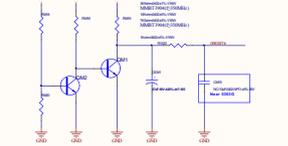




27MHz CRYSTAL



RESET Circuit

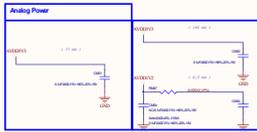
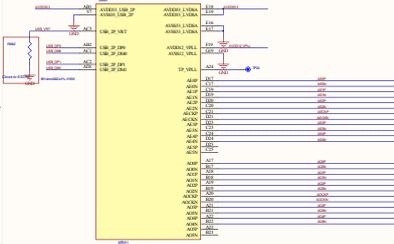


STRAPPING

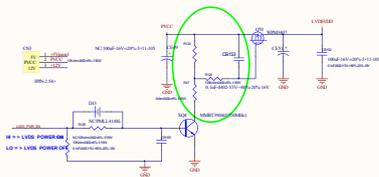
Circuit diagram for STRAPPING showing connections for the strapping circuit. It includes connections for VCC, GND, and various data lines.

Strapping	OPCTRL(S)	OPCTRL(A)	A0SDATA(I)
ICE mode = 27M = serial boot	0	0	0
ICE mode = NCM boot = 27M	0	0	1
ICE mode = SAM = serial boot	0	1	0
ICE mode = NCM boot = SAM	0	1	1
SEPT MODE	1	0	1
ON MODE MODE	1	1	0
Boundary Scan Mode	1	1	1

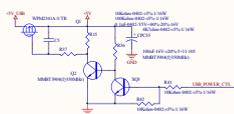
MTS303G



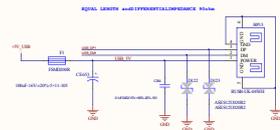
Panel Tact POWER Control



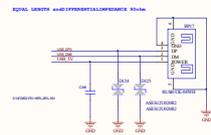
USB 5V POWER



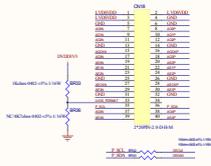
USB PORT 1



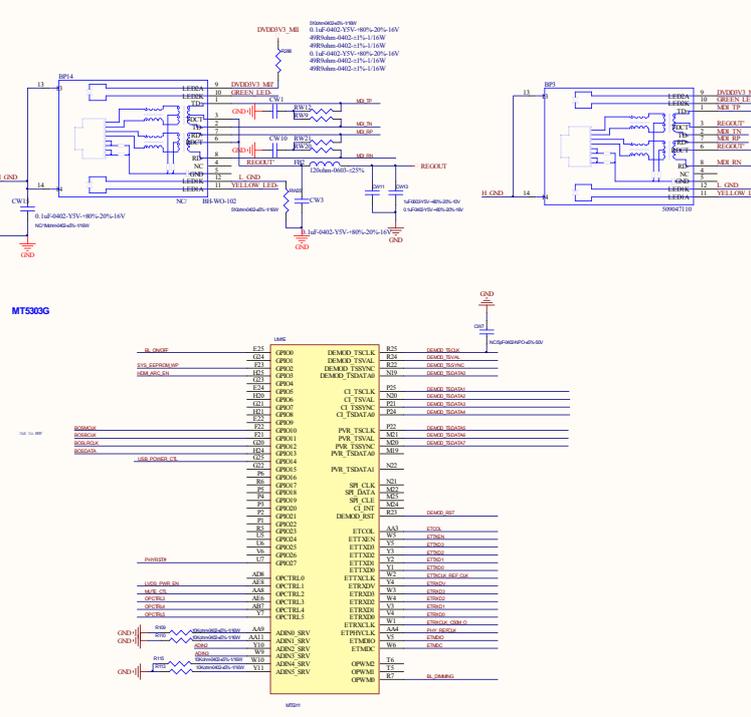
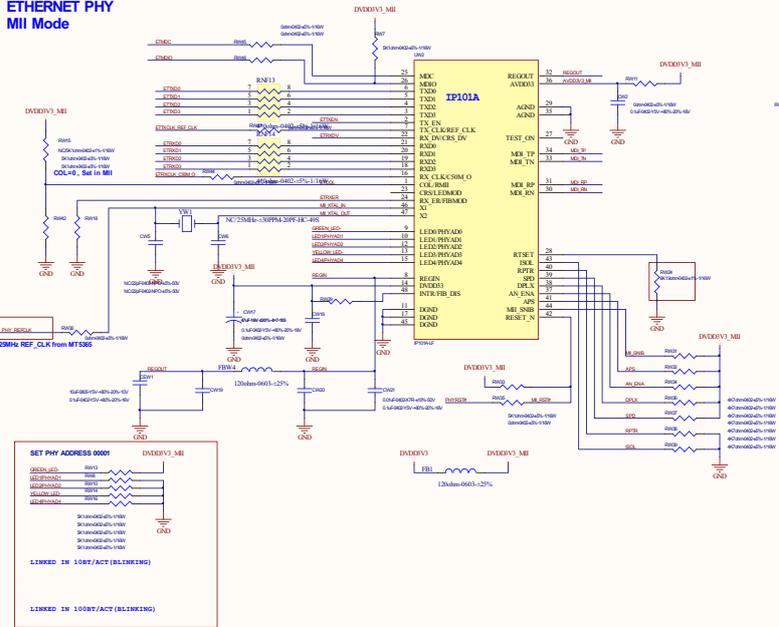
USB PORT 0 (WiFi Dongle)



LVDS



**ETHERNET PHY
MII Mode**



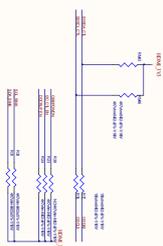
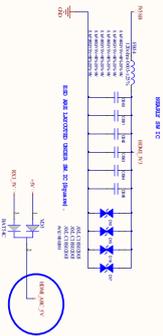
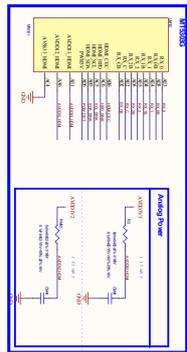


FIGURE 1
AVX5001 THROUGH PARTS

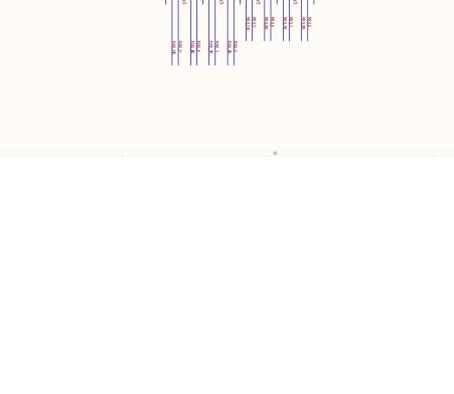
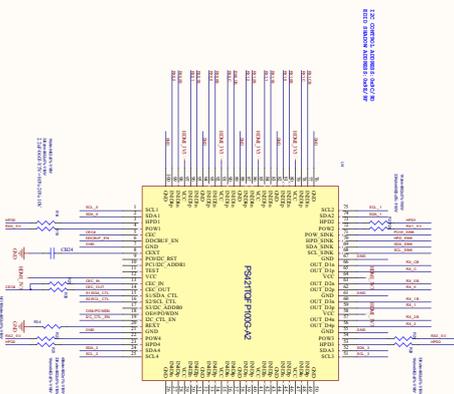
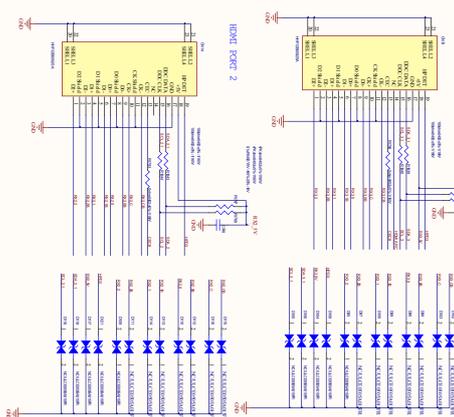


FIGURE 2

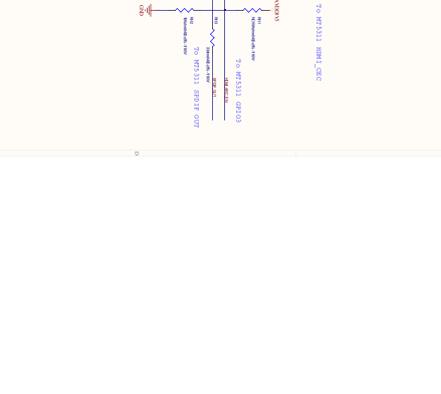
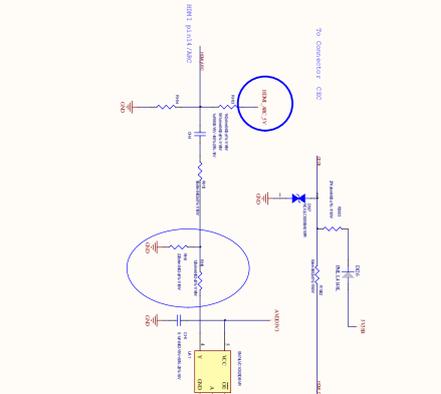
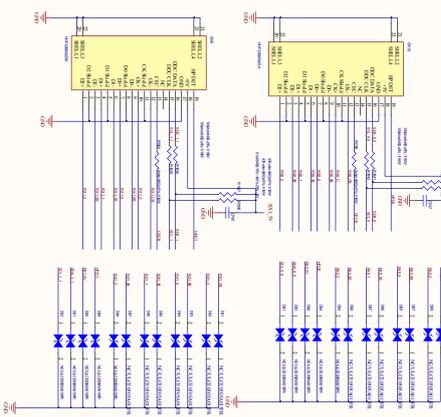
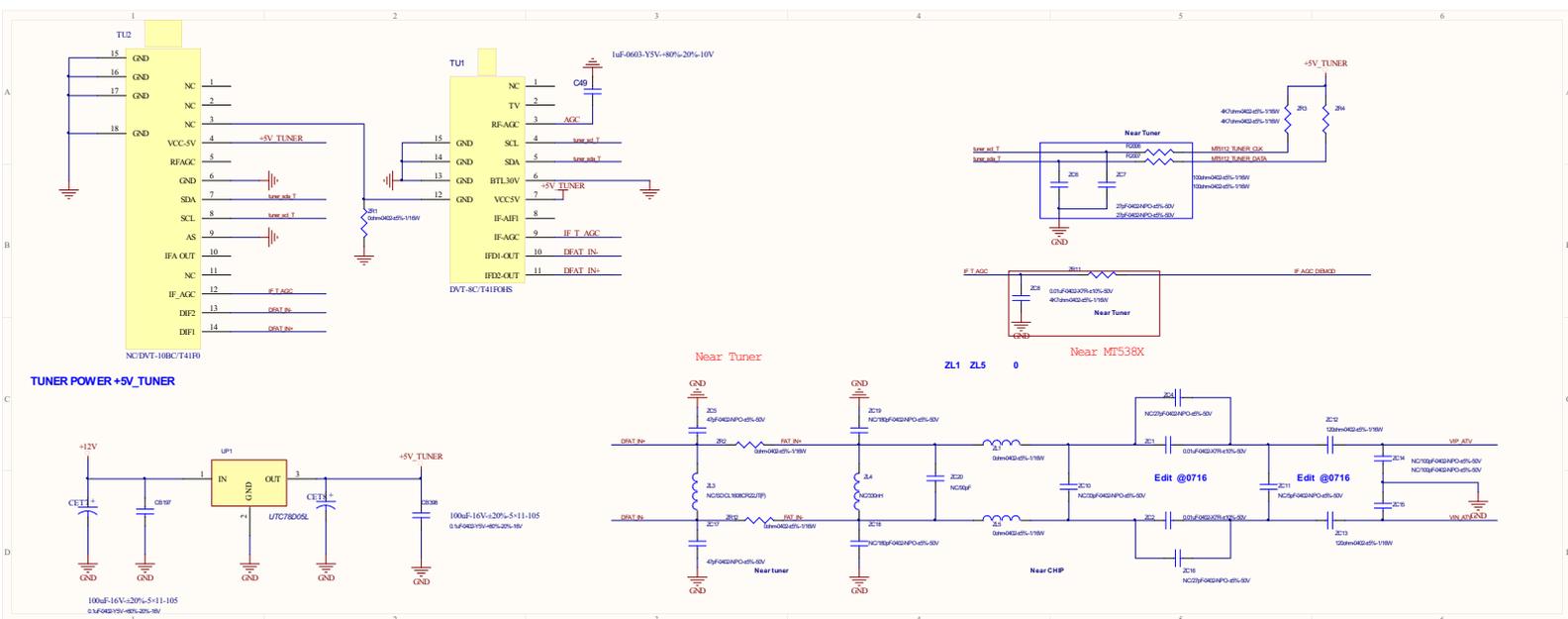
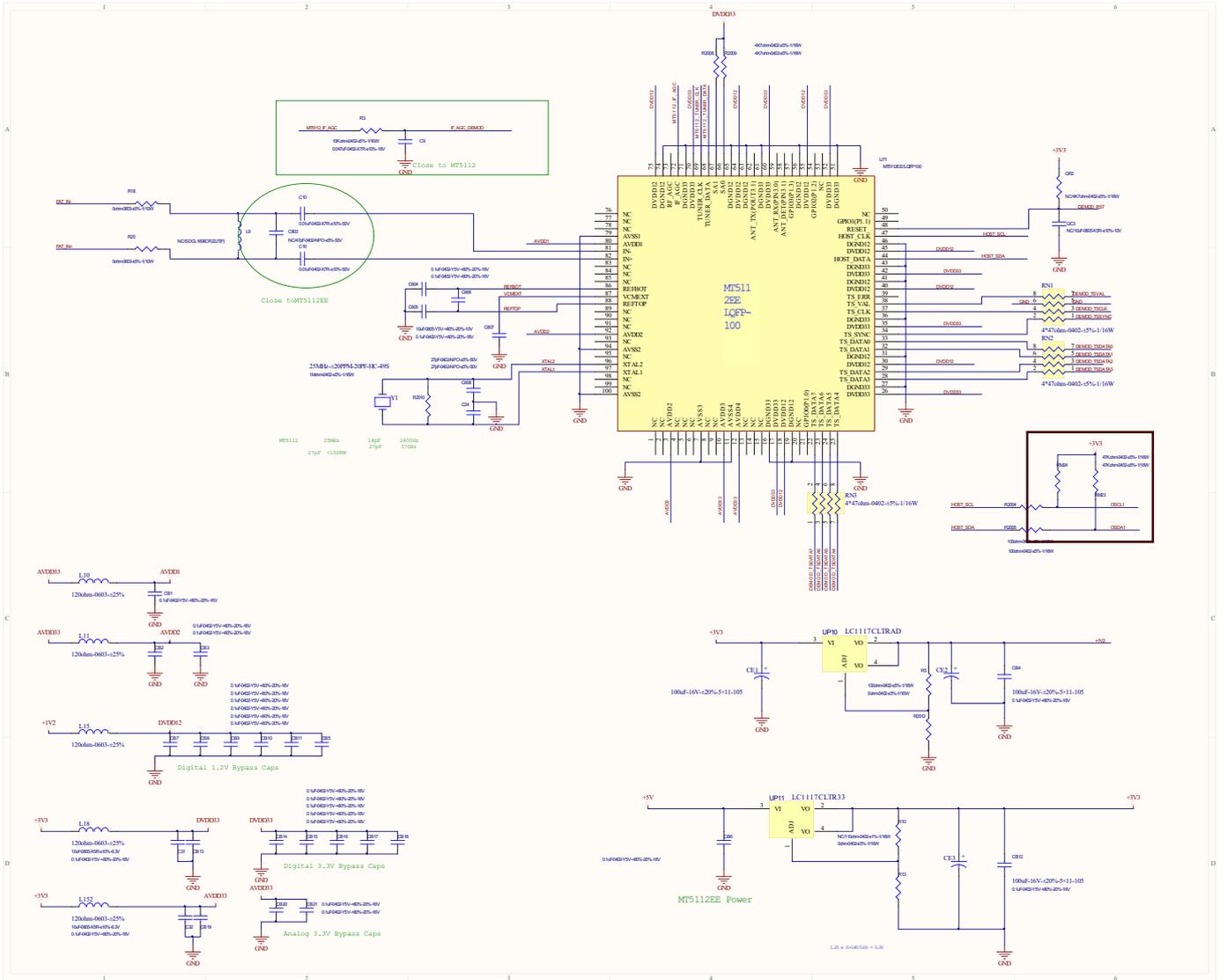


FIGURE 3





8-2 Upgrade software

Haier mtk5311 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(**.pkg)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 , Remote boot;

2.3, U disk light will flash until the lights do not flash U disk upgrade is successful

2.4,Then enter the factory reset menu, turn it off

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

8-3 Factory menu

1. You can press "MENU-8893" to go into factory setting. Presse the key "exit" to shut the factory setting.



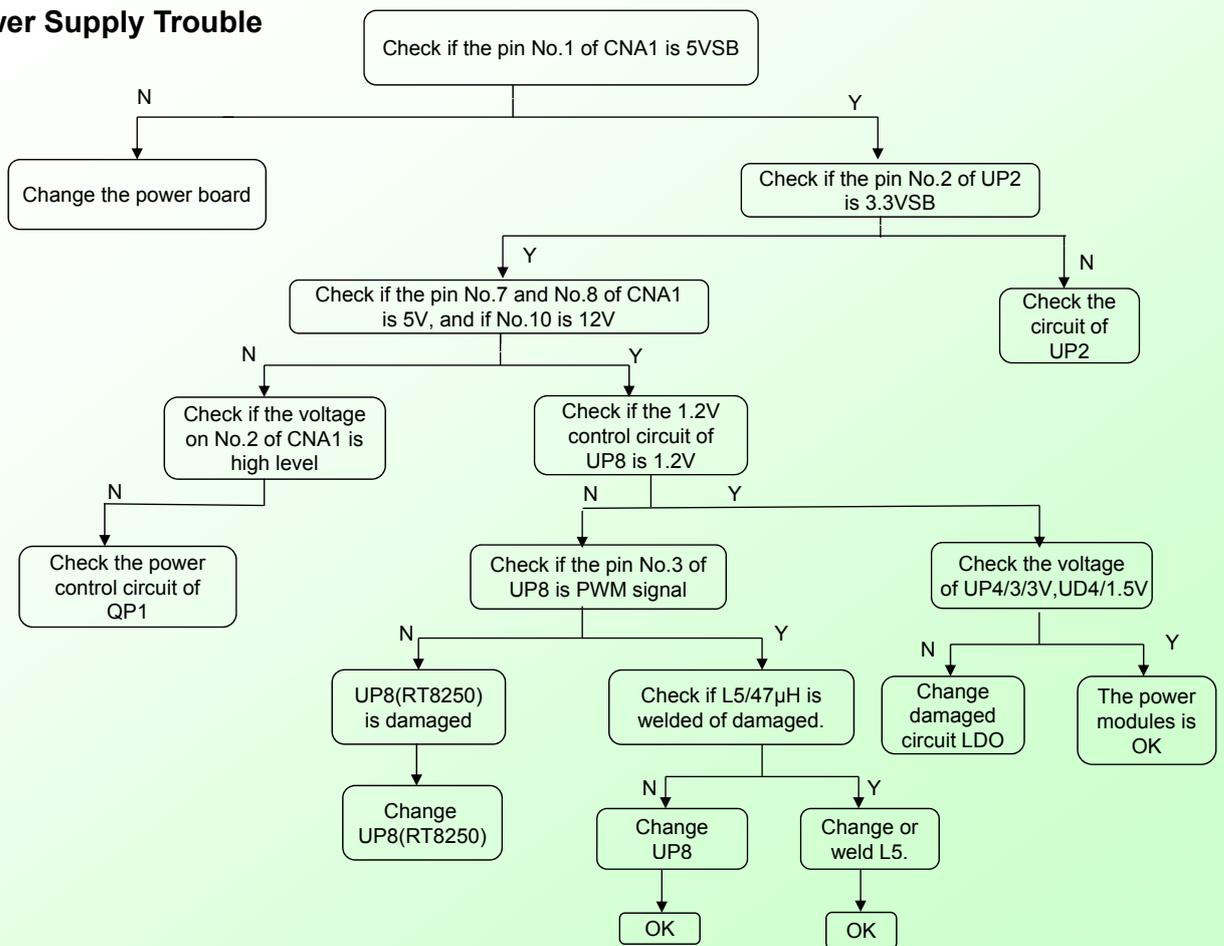
content:

1:Version Info:the information about the TV and software

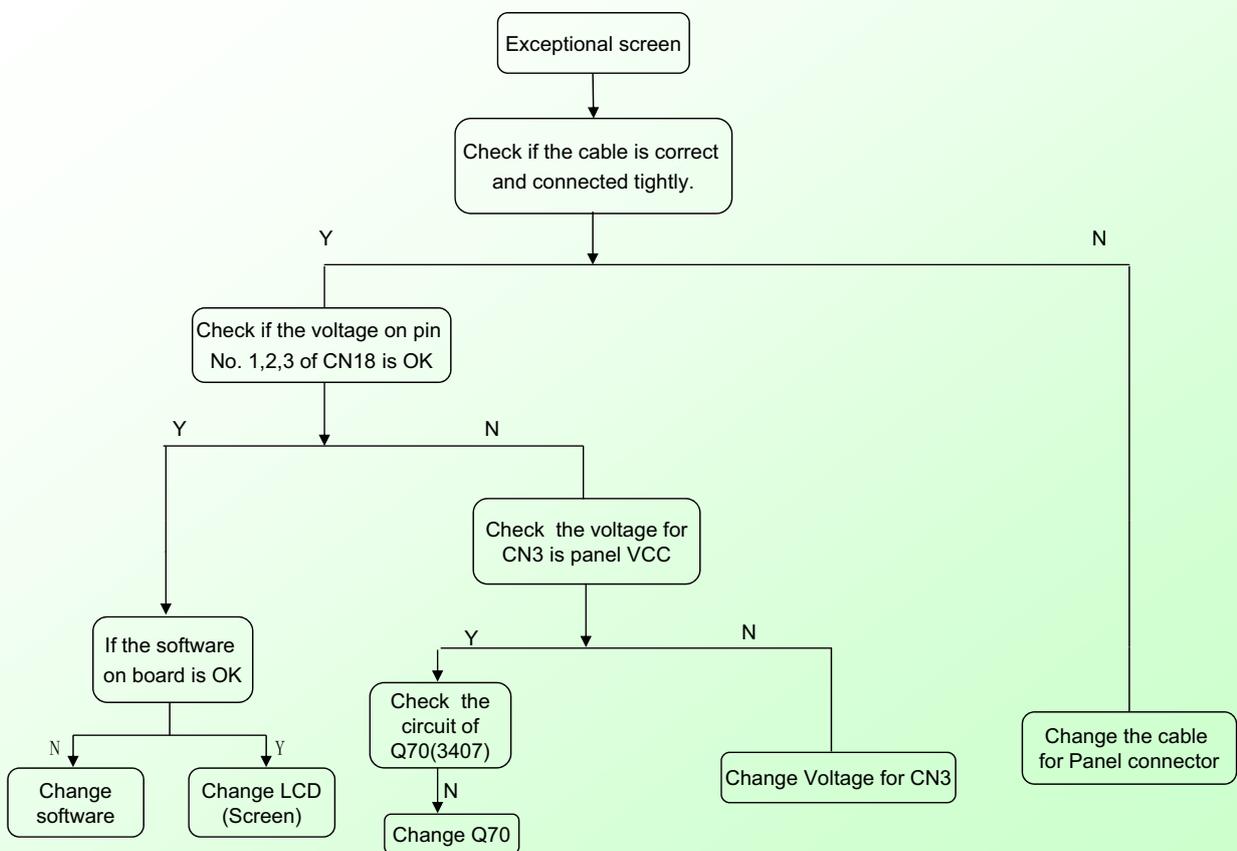


trouble-shooting

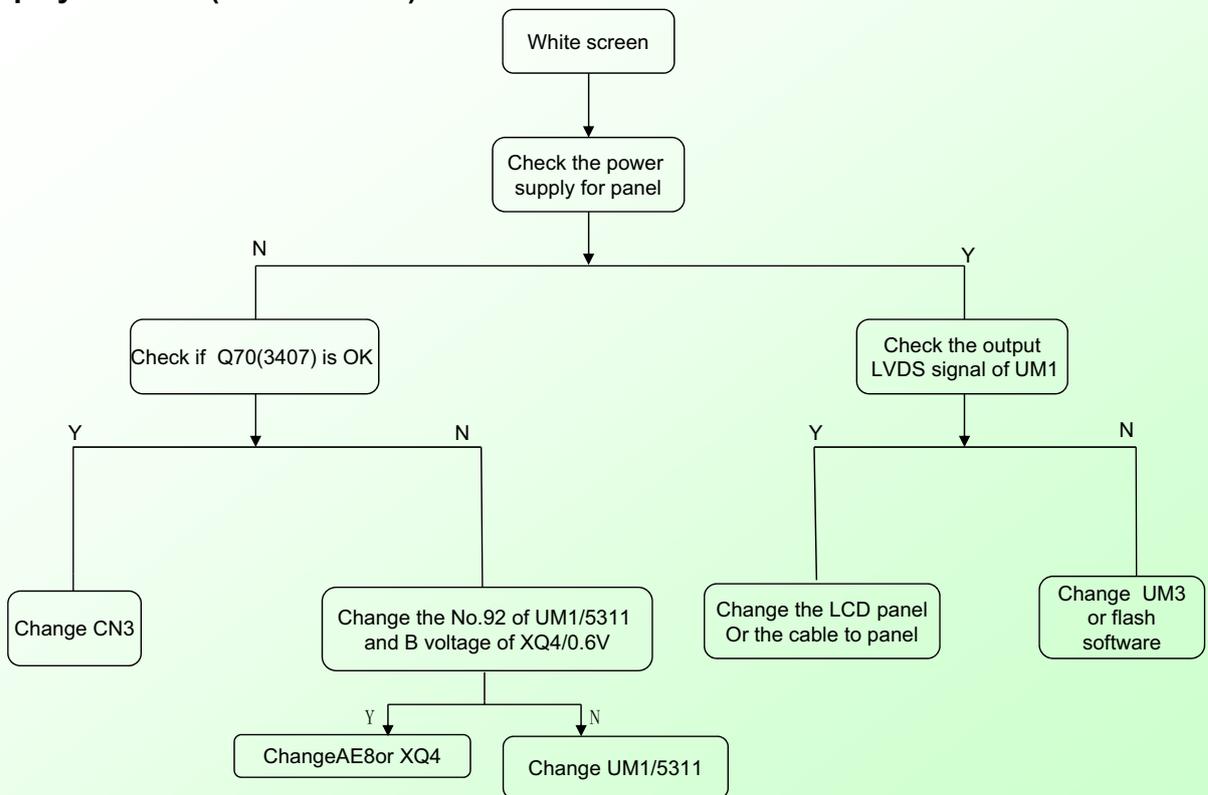
1. Power Supply Trouble



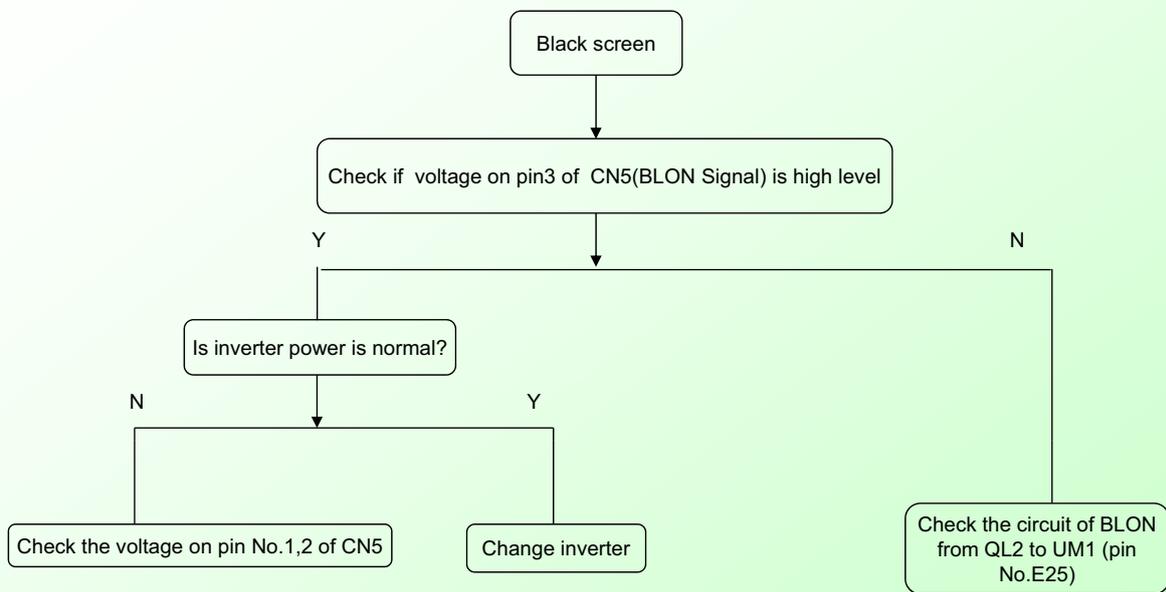
3. Display Trouble (Exceptional screen)



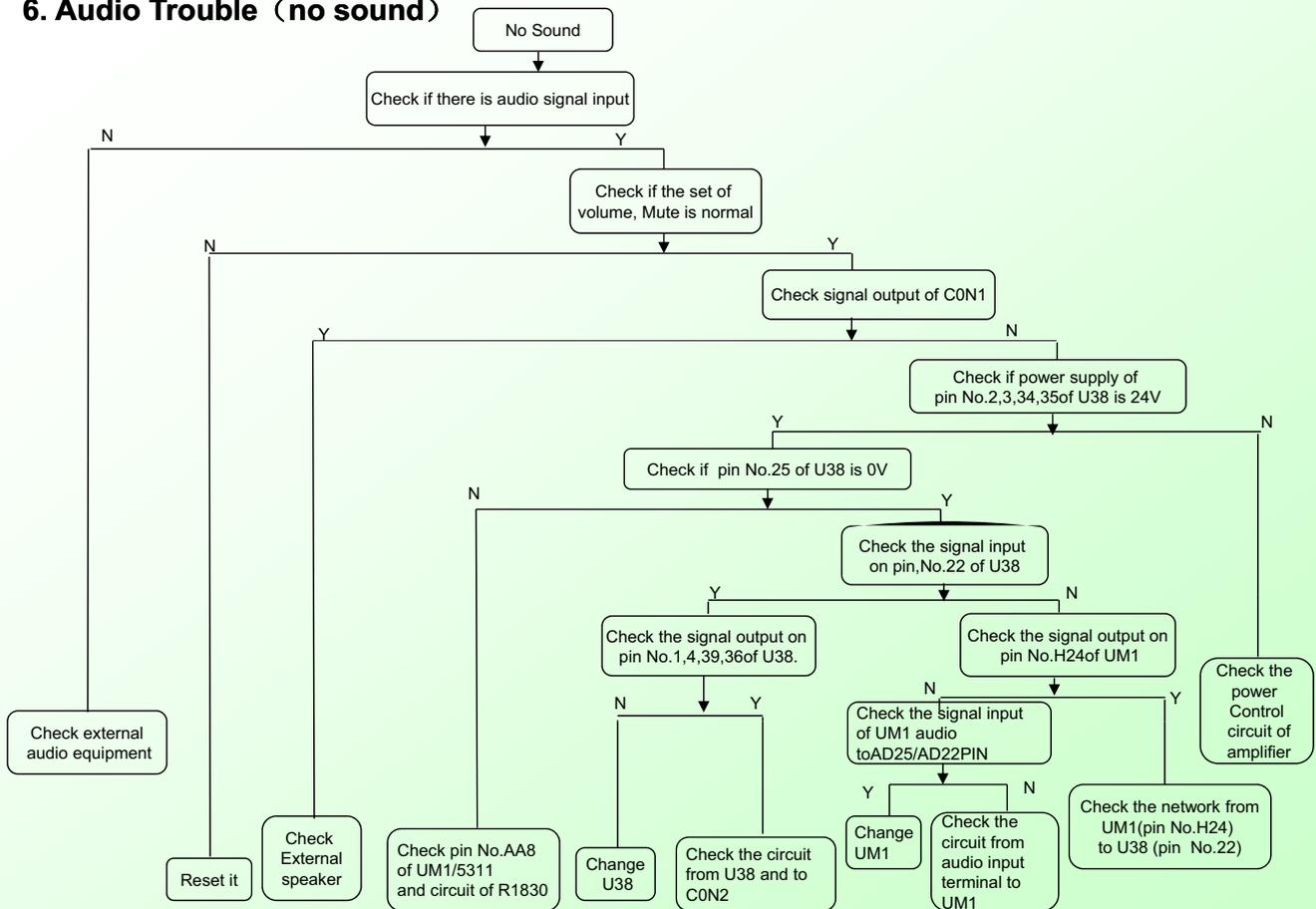
4. Display Trouble (White screen)



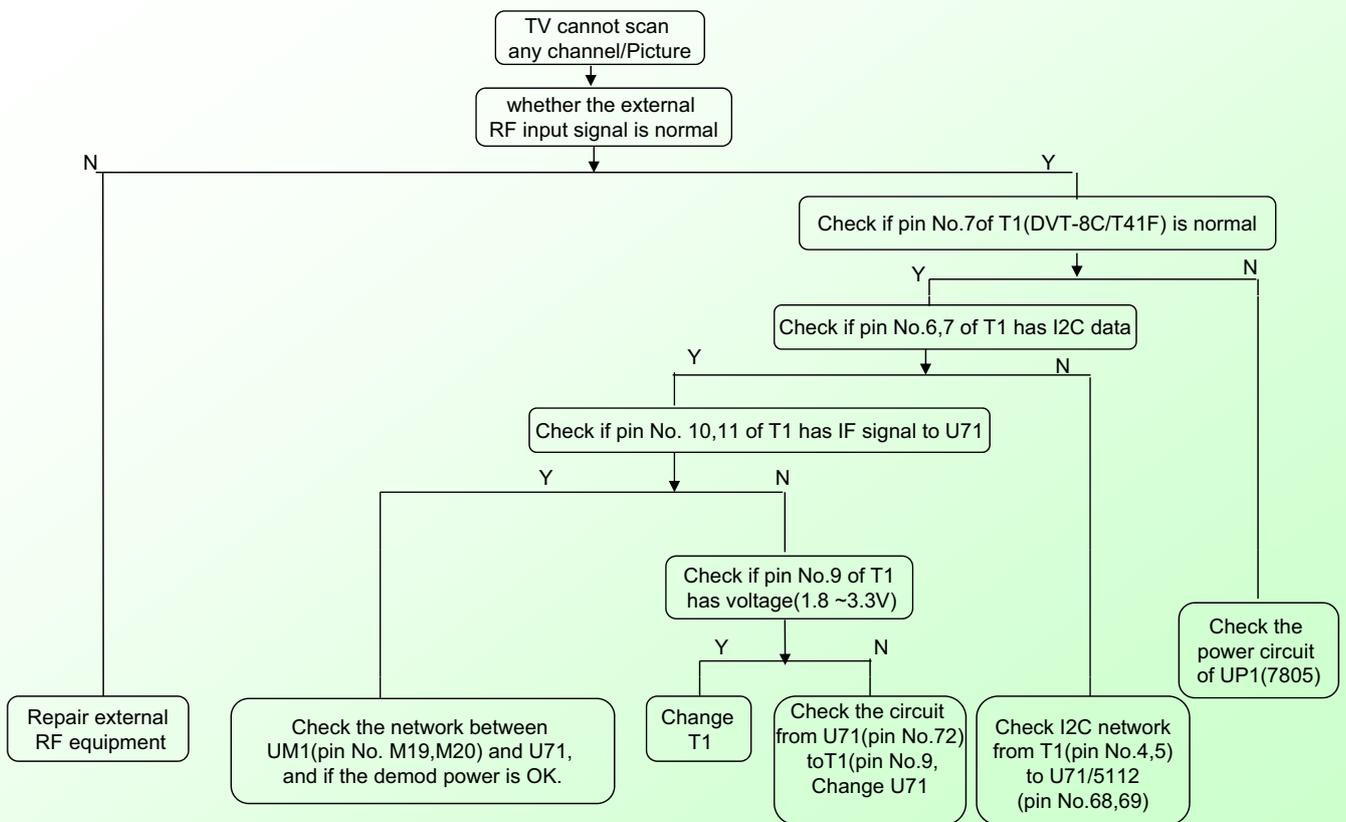
5. Display Trouble (Black screen)



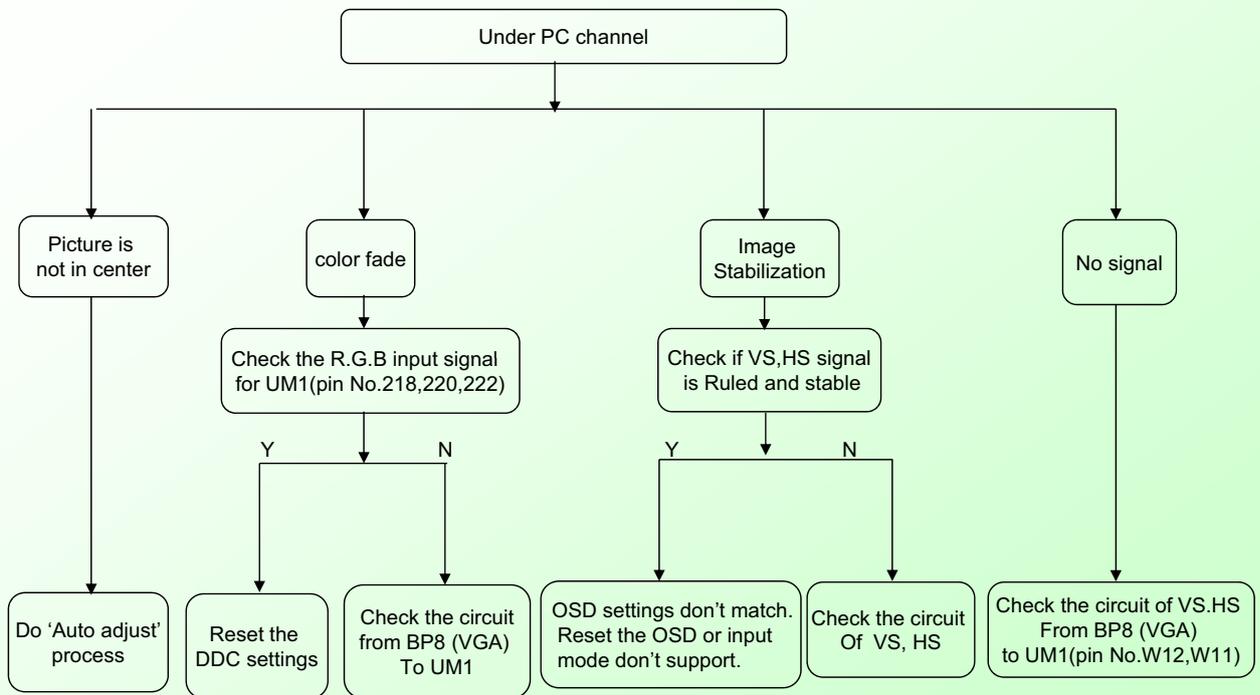
6. Audio Trouble (no sound)



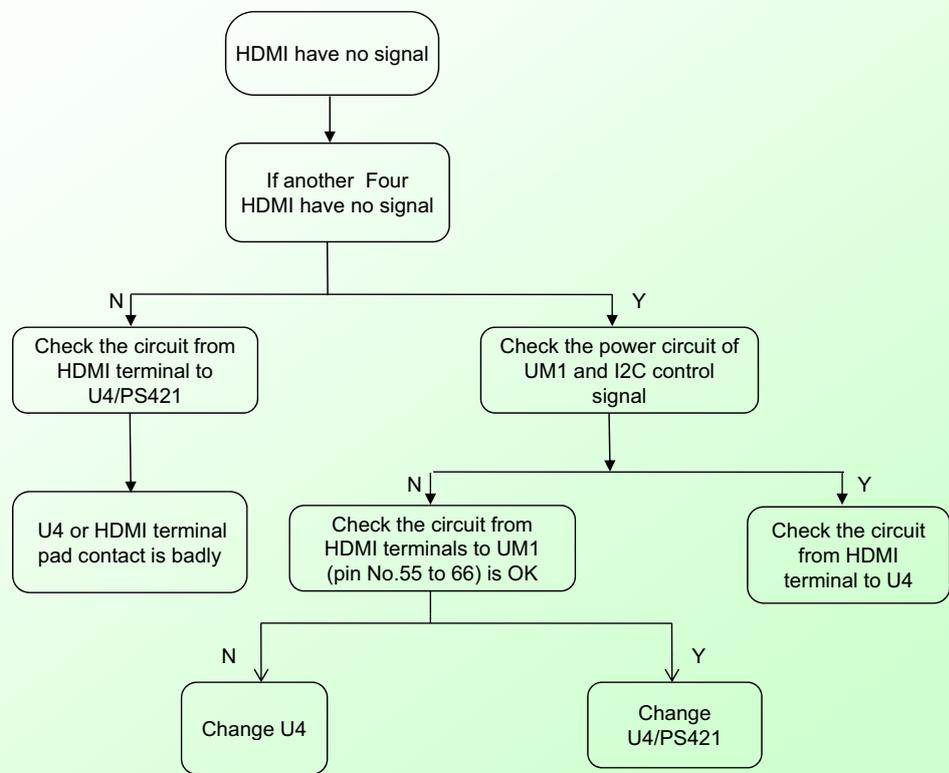
7. Function Trouble (TV video)



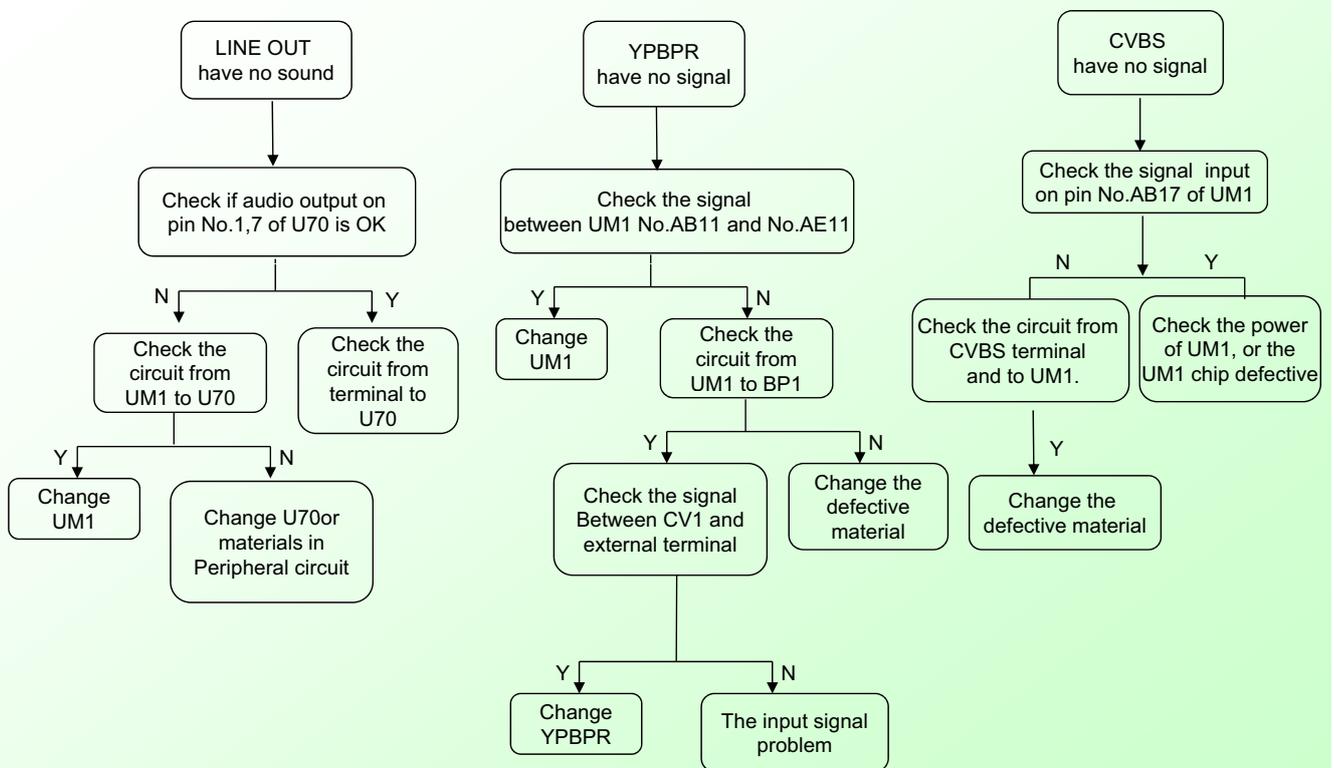
8.Function Trouble (PC)



9. Function Trouble (HDMI)

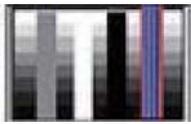
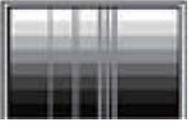
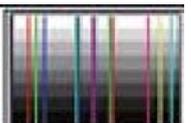
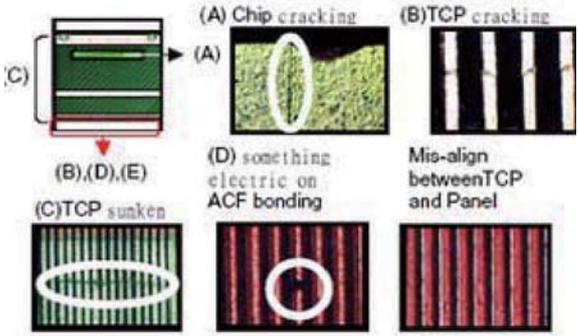
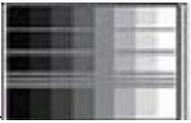


10. Function Trouble (YPBPR,CVBS,LINE OUT)

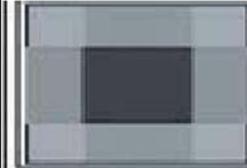


9-3. Pannel failure

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		 <p>(A) Chip cracking (B)TCP cracking (C)TCP sunken (D) something electric on ACF bonding (E) Mis-align betweenTCP and Panel</p>
	H Dim	Horizontal gary line		
H L/D	Horizontal line(light or dark forever)			

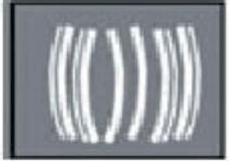
Failure Mode

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 <u>or systemic noise</u>
	B/L wire open	Without backlight		Operation abnormal <u>or systemic noise</u>
	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

Upgrade Software:

- 1, Copy the software into the root directory of the U disk;
- 2, Put your disk inserted into the TV set, then connect the tv to power supply.
- 3, The indicator lamp will flash for about 1 min.
- 4, Until the indicator lamp stop flashing. It means upgrade is successful
- 5, Then factory reset.
Factory Reset: menu/8893/function/clean storage select YES.