Haier SERVICE MANUAL

Order No. TV1012S001V0

LCD TV

Model No. L26F6
L32F6

MST6M36JS Chassis

⚠ WARNING

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

Haier Group

CONTENTS

Chapter 1.General Information

1-1. Document Information

Document format: Adobe PDF
Author:
Compiler:

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 literture accompanying the appliance.

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

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

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

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

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 ncidence 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.

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

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

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

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

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

Safety Component

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

1-3-6. Safety check after repairment

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

General Servicing Precautions

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

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

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

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

3. Do not spray chemicals on or near this receiver or any of its assemblies.

4. Unless specified otherwise in this service manual, clean electrical contacts only by applying the following mixture to the contacts with a pipe cleaner, cotton-tipped stick or comparable non-abrasive applicator; 10% (by volume) Acetone and 90% (by volume) isopropyl alcohol (90%-99% strength).

CAUTION: This is a flammable mixture.
Unless specified otherwise in this service manual, lubrication of contacts is not required.
Capacitors may result in an explosion hazard.

5. Do not defeat any plug/socket B+ voltage interlocks with which receivers covered by this service manual might be equipped.

6. Do not apply AC power to this instrument and/or any of its electrical assemblies unless all solid-state device heat sinks are correctly installed.

7. Always connect the test receiver ground lead to the receiver chassis ground before connecting the test receiver positive lead.

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

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

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

9. Remove the antenna terminal on TV and turn on the TV.

10. Insulation resistance between the cord plug terminals and the eternal 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.

12. Use only a grounded-tip soldering iron to solder or unsolder ES devices.

13. Use only an anti-static type solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ES devices.

14. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.

15. 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).

16. 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.

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

1-3-7. Ordering Spare Parts

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

1. Model number, serial number and software version
The model number and serial number can be found on the back cover of each product. Software version can be found in the *Spare Parts List*.

2. Spare part No. and description
Spare part No. and description can be found in the *Spare Parts List*.

1-3-8. Photo used in this manual

The illustration and photos used in this Service 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

1-4-1. Using icons:

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

Note:

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

Caution:

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

Warning:

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

Reference:

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

Chapter 2. Specification

2-1. Specification list

Model	L26F6	L32F6
Screen size	26 inch	31.5 inch
Aspect ratio	16:9	16:9
Resolution	1366*768	1366*768
Response Time (ms)	5ms	6.5ms
Angel of view	H:160/V:150	H:178/V:178
Contrast	800:1	3000:1
Brightness	450cd/m2	420cd/m2
OSD language	English Portuguese Spanish	English Portuguese Spanish
Color system	NTSC PAL	NTSC PAL
Audio system	M N	M N
Audio output power(Built-in)(W)	7W*2	9W*2
Total power input (W)	90W	130W
Voltage range (V)	110-240V	110-240V
Power frequency (Hz)	50/60HZ	50/60HZ
Net weight(KG)	7.8 KG(withstand)	10KG(withstand)
Gross weight(KG)	9.5 KG(withstand)	13 KG(withstand)
Net dimension(MM)	658*200*491 (withstand)	798*230*575 (with stand)
Packaged dimension(MM)	885*180*535 (withstand)	870*267*657 (withstand)

2-2. External pictures (four faces)

2-2-1 L26F6

Front Side

Left Side

Right Side

Back Side

2-2-2 L32F6

Front Side

Left Side

Right Side

Back Side

Chapter 3. Disassemble and Assemble

3-1. L26F6

3-1-1. Remove the Stand

① Lay down the unit so that rear cover faces upward

② Remove the four screws from the rear cover indicated with ↙

③ Then remove the stand.

3-1-2. Remove the Back Cover

① Remove the fourteen screws indicated on figure above by ↙

② Then remove the back cover from the unit.

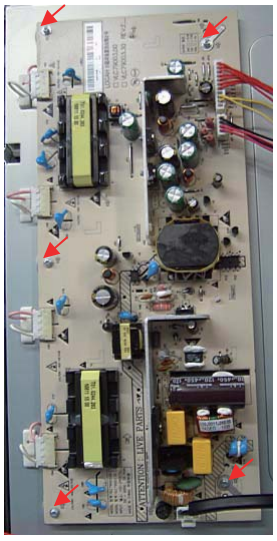
3-1-3. Remove the mainboard

① Remove the four screws indicated on the figure above by ↙

② Disconnected the coupler CNA2、CN1、CNA1、CNC1、CND1、CND2、CN6、CN5

③ Remove the Main board

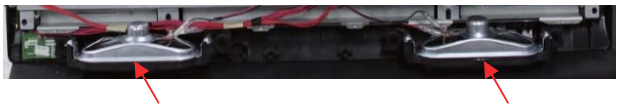
3-1-4. Remove the power supply



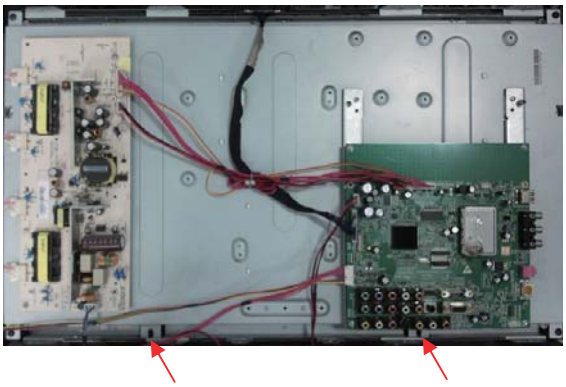
① Remove the five screws indicated on the figure above by ↙

② Then remove the power supply.

3-1-5. Remove the Speaker



Take out the speaker directly.



① Remove the two screws indicated on the figure above by ↙
②Then remove the Panel.

3-1-6. Remove the remote control

Remove the screw,
take out the remote control board.

3-1-7. Remove the Ornamental Assembly

① Remove the two screws indicated on the figure above by ↙
② Then remove the Ornamental Light Assembly

3-1-8. Remove screws fastened the Panel

3-2. L32F6

3-2-1. Remove the Stand

① Lay down the unit so that rear cover faces upward
② Remove the four screws from the rear cover indicated with ↙
③ Then remove the stand.

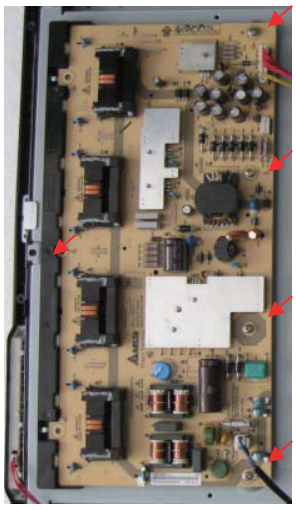
3-2-2. Remove the Back Cover

① Remove the fourteen screws indicated on figure above by ↙
② Then remove the back cover from the unit.

3-2-3. Remove the mainboard and bracket of Side AV

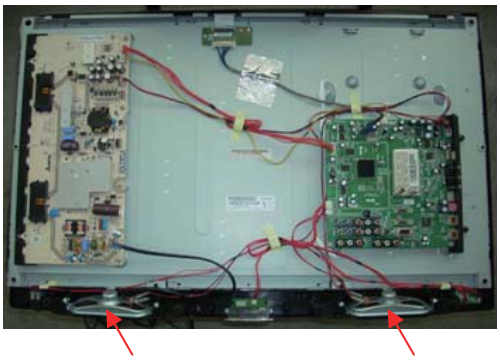
① Remove the four screws indicated on the figure above by ↙
② Disconnected the coupler CNA2、CN1、CNA1、CNC1、CND1、CND2、CN6、CN5
③ Remove the Main board

3-2-4. Remove the power supply



① Remove the five screws indicated on the figure above by ↙
② Then remove the power supply.

3-2-5. Remove the Speaker



Take out the speaker directly.

3-2-6. Remove the remote control

Remove the screw,
take out the remote control board.

3-2-7. Remove the Ornamental Assembly

① Remove the two screws indicated on the figure above by ↙

② Then remove the Ornamental Light Assembly

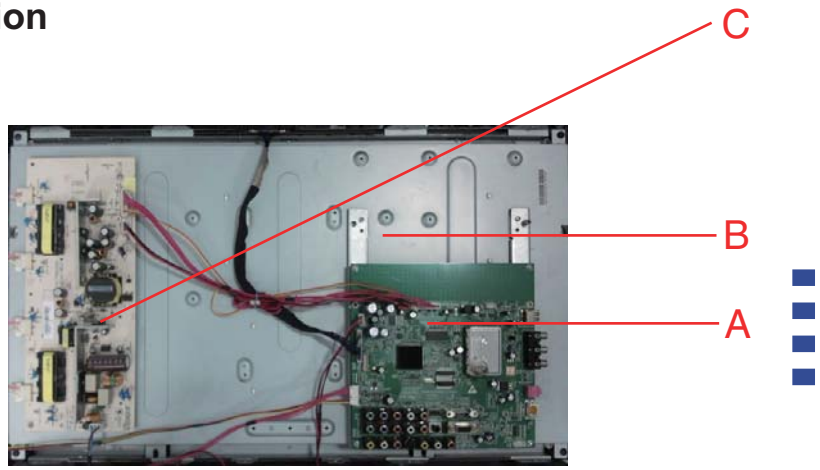
3-2-8. Remove the Panel

① Remove the six screws indicated on the figure above by ↙
② Then remove the panel.

Chapter 4. Location of Controls and Components

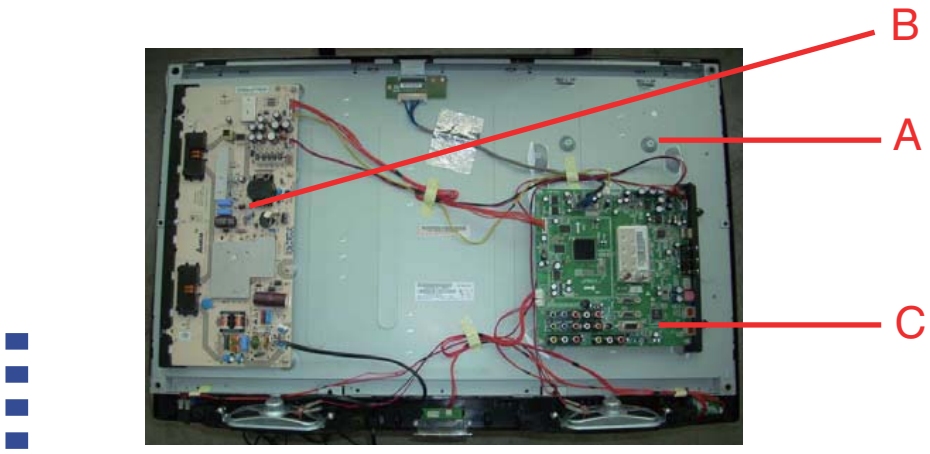
4-1. Board Location

4-1-1. L26F6



No.	Parts number	Description
A Board	DC1GM0E0200M	Main Board(0090722213)
B Board	009400125 7MA	LCD Panel
C Board	0094001283B	Power Supply

4-1-2. L32F6



No.	Parts number	Description
A Board	0094001236DC	Panel
B Board	0094001274B	Power Supply
C Board	DC1CS0E0400M	Mainboard Assembly

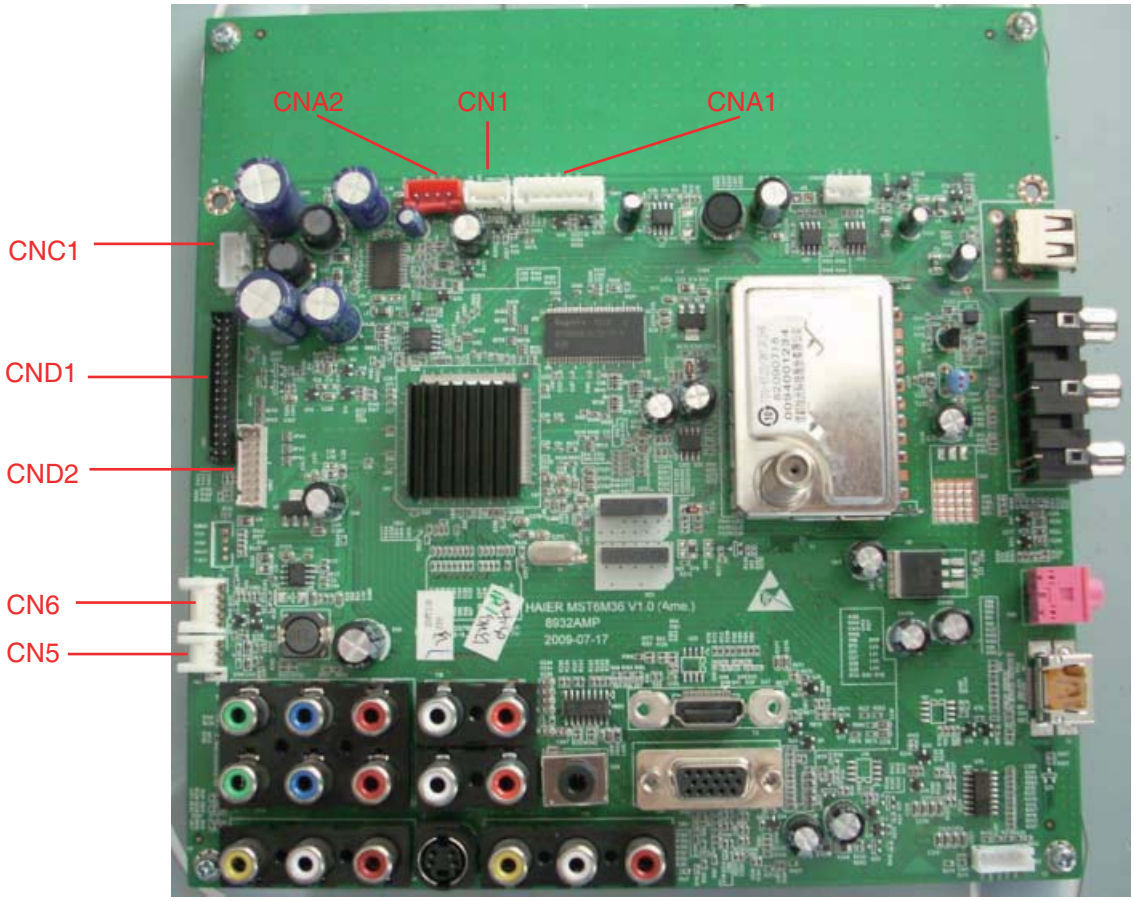
4-2.Mainboard

4-2-1. Function Description:

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

4-2-2.Connector definition

4-2-2-1.Mainboard of L26F6 L32F6



4-2-2-2.Connector definition

Power connectors (CNA1)

Pin number	Signal name	Description
1	PW-ON/OFF	ON/OFF
2	GND	GND
3	5VS	5V-Stand
4	GND	GND
5	GND	GND
6	12VA	12V-Mainboard
7	12VA	12V-Mainboard

Back light connectors (CN1)

Pin number	Signal name	Description
1	ADJ	Back light adjust
2	PBON	Back light ON/OFF
3	GND	GND
4	5VS	5VS

Power of audio anplifier connector (CNA2)

Pin number	Signal name	Description
1	24V	24V
2	24V	24V
3	GND	GND
4	GND	GND

Speaker connector (CNC1)

Pin number	Signal name	Description
1	L+	Left of audio
2	L-	Left of audio
3	L+	Right of audio
4	R+	Right of audio

Key connector (CN5)

Pin number	Signal name	Description
1	GND	GND
2	KEY1	KEY1
3	KEY0	KEY0

Remote connector (CN6)

Pin number	Signal name	Description
1	5V	5V
2	IRIN	IR IN
3	LEDR	LED-RED
4	LEDB	LED-BLUE
5	GND	GND

LVDS Connector (CND1)

Pin number	Signal name	Description	Pin number	Signal name	Description
1	GND	GND	17	GND	GND
2	GND	GND	18	GND	GND
3	B0+	BO+	19	ODSEL2	ODSEL2
4	B0-	BO-	20	ODSEL1	ODSEL1
5	B1+	B1+	21	B4-	B4-
6	B1-	B1-	22	B4+	B4+
7	GND	GND	23	PNL_SDA	PNL_SDA
8	GND	GND	24	PNL_CLK	PNL_CLK
9	B2-	B2-	25	GND	GND
10	B2+	B2+	26	GND	GND
11	BC-	BC-	27	VCC	VCC
12	BC+	BC+	28	VCC	VCC
13	GND	GND	29	VCC	VCC
14	GND	GND	30	VCC	VCC
15	B3-	B3-	31	BRI_IN	BRI_IN
16	B3+	B3+	32	PB-ADJUST	PB-ADJUST

LVDS Connector (CND2)

Pin number	Signal name	Description	Pin number	Signal name	Description
1	A0-	A0-	9	AC-	AC-
2	A0+	A0+	10	GND	GND
3	A1-	A1-	11	A3-	A3-
4	A1+	A1+	12	A3+	A3+
5	A2-	A2-	13	A4-	A4-
6	A2+	A2+	14	A4+	A4+
7	GND	GND	15	N/A	N/A
8	AC+	AC+	16	N/A	N/A

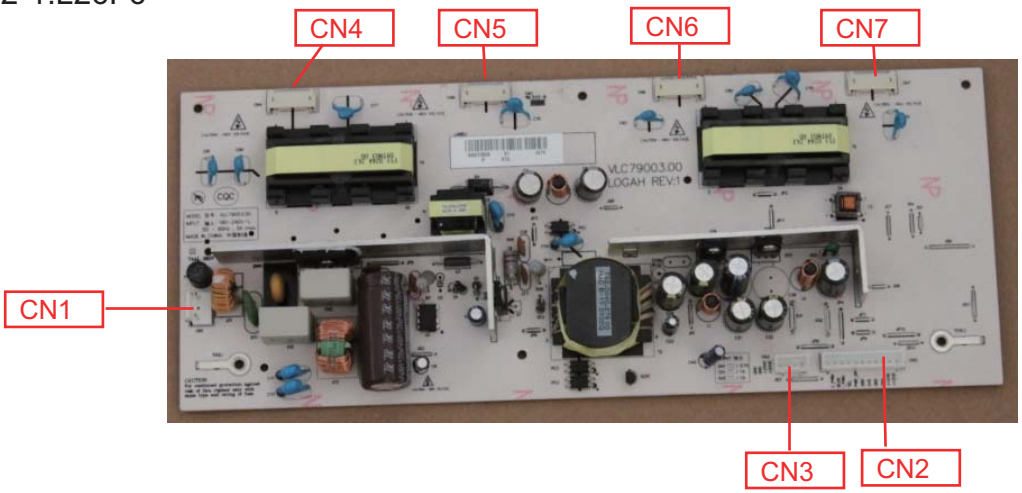
4-3. Power Supply Board

4-3-1. Function description:

To supply power for Mainboard, Panel.

4-3-2. Connector definition:

4-3-2-1.L26F6



CN1

Pin number	Signal name
1	L
2	N

CN2

Pin number	Signal name	Pin number	Signal name
1	+12VD	7	PWR_ON
2	+12VD	8	SEL
3	GND	9	I_PWM
4	GND	10	BLON
5	5VS	11	E_PWM
6	GND		

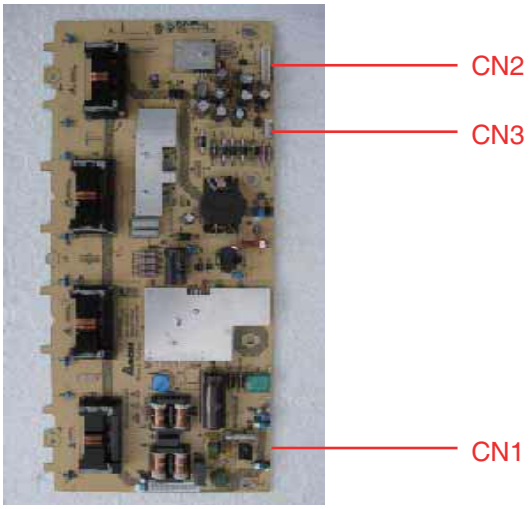
CN3

Pin number	Signal name
1	+24VD
2	+24VD
3	GND
4	GND

CN4 CN5 CN6 CN7

Pin number	Signal name
1	Lamp High Voltage
2	Lamp High Voltage

4-3-2-2.L32F6



CN2

PIN NUMBER	DESIGNATION
1	12V
2	12V
3	GND
4	GND
5	5VSTB
6	GND
7	STN
8	SEL
9	V-IPWM
10	BL-ON
11	V-EPWM

CN1

Pin number	Signal name
1	L
2	N

CN3

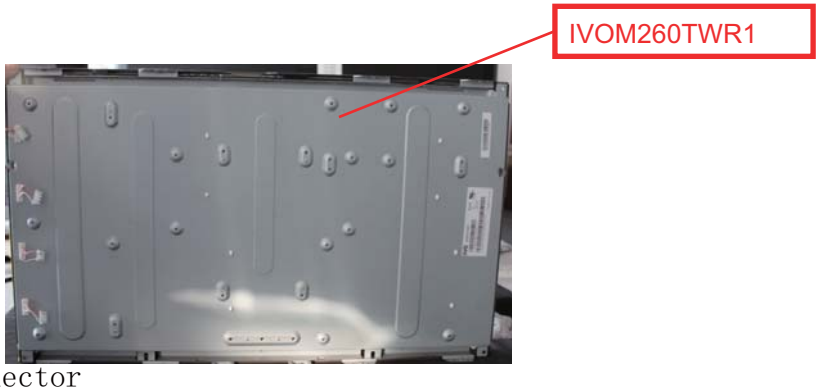
Pin number	Signal name
1	24V
2	24V
3	GND
4	GND

4-4.LCD Panel

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

4-4-2. Connector definition

4-4-2-1.L26F6



LVDS Connector

1	NC	Not connected
2	NC	Not connected
3	NC	Not connected
4	GND	Ground
5	RX0-	Negative LVDS differential data input
6	RX0+	Positive LVDS differential data input
7	GND	Ground
8	RX1-	Negative LVDS differential data input
9	RX1+	Positive LVDS differential data input
10	GND	Ground
11	RX2-	Negative LVDS differential data input
12	RX2+	Positive LVDS differential data input
13	GND	Ground
14	RXClk -	Negative LVDS differential clock input
15	RXClk +	Positive LVDS differential clock input
16	GND	Ground
17	RX3-	Negative LVDS differential data input
18	RX3+	Positive LVDS differential data input
19	GND	Ground
20	NC	Not connected
21	NC	Not connected
22	TP	Test point
23	GND	Ground
24	GND	Ground
25	GND	Ground
26	VDD	power supply +12.0V
27	VDD	power supply +12.0V
28	VDD	power supply +12.0V
29	VDD	power supply +12.0V
30	VDD	power supply +12.0V

Backlight Characteristics

Symbol	Parameter	Min	Design Point	Max	Units	Condition
ICCFL	CCFL current	6.5	7	7.5	[mArms]	Ta=25[deg C] (Note A)
FCCFL	CCFL Frequency	40	--	80	[KHz]	Ta=25[deg C] (Note B)
VCCFLi	Inverter Ignition Voltage	1,700	--	--	[Vrms]	Ta=0[deg C] (Note C)
		1,500	--	--		Ta=25[deg C] (Note C)
VCCFL	CCFL Voltage	--	1,270	1,330	[Vrms]	@ICCFL=7mA Ta=25[deg C]
CCFL Life	Lamp life time	50,000	--	--	[Hours]	(Note E)

4-4-2-2.L32F6

BACKLIGHT CONNECTOR PIN CONFIGURATION :

	Description		Min	Typ	Max	Unit	Condition/Note
1	Operating Voltage	Vo	639	710	781	Vrms	1. Dimming range is set 100% 2. Base on lamp specification, for each lamp need to be applied at least minimum operating voltage to ensure each lamp can be normally worked!
2	Operating Current	Io	12	12.5	13	mArms	1. Dimming range is set 100% 2. Base on lamp specification, for each lamp need to be applied at least minimum operating current to ensure each lamp can be normally worked!
3	BL Total Power Dissipation	PBL	76	**78**	80	Watt	1. Dimming range is set 100%. 2. In order to get typical light out, the backlight need to be applied typical power. 3. Input power of JIG BD is about 78 W (typ) by AUO measure!
4	Striking Voltage At 0℃	Vstrike	1500	1650		Vrms	1. Base on lamp specification, to ensure each lamp can be normally ignited, need to apply at least minimum striking voltage to each lamp
	Striking Voltage At 25℃		1350	1500			
5	Striking Time	Ts	1000	-	1500	msec	1. To ensure each lamp can be normally ignited, each lamp need to be applied at least minimum striking voltage during minimum striking time.
6	Operating Frequency	fo				kHz	1. Operating frequency is set by customer. 2. Need to double confirm display quality.(*)
7	PWM Operating Frequency	F_PWM	120	180	240	Hz	1. PWM frequency is set by customer. 2. Need to double confirm display quality.(*)
8	PWM Dimming Duty Ratio	D_PWM	**20**	-	**100**	%	**Note 1. Dimming range** **Note 2.** **Note 3. Duty ratio definition.**
9	Lamp Type		U type				
10	Number of Lamps		4			pcs	

LVDS:

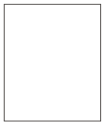
Connector on Panel: **093G30-B0001A-1** (Manufactured by Starconn)

Pin No	Symbol	Description	Default
1	VCC	+12V, DC, Regulated	
2	VCC	+12V, DC, Regulated	
3	VCC	+12V, DC, Regulated	
4	VCC	+12V, DC, Regulated	
5	GND	Ground and Signal Return	
6	GND	Ground and Signal Return	
7	GND	Ground and Signal Return	
8	GND	Ground and Signal Return	
9	LVDS Option	Low/Open for Normal (NS), High for JEIDA	NS mode
10	Reserved	Open	AUO internal test
11	GND	Ground and Signal Return for LVDS	
12	RIN0-	LVDS Channel 0 negative	
13	RIN0+	LVDS Channel 0 positive	
14	GND	Ground and Signal Return for LVDS	
15	RIN1-	LVDS Channel 1 negative	
16	RIN1+	LVDS Channel 1 positive	
17	GND	Ground and Signal Return for LVDS	
18	RIN2-	LVDS Channel 2 negative	
19	RIN2+	LVDS Channel 2 positive	
20	GND	Ground and Signal Return for LVDS	
21	RCLK-	LVDS Clock negative	
22	RCLK+	LVDS Clock positive	
23	GND	Ground and Signal Return for LVDS	
24	RIN3-	LVDS Channel 3 negative	
25	RIN3+	LVDS Channel 3 positive	
26	GND	Ground and Signal Return for LVDS	
27	Reserved	Open or High	AUO internal test
28	Reserved	Open or High	AUO internal test
29	GND	Ground and Signal Return	
30	GND	Ground and Signal Return	

Chapter 5. Installation Instructions

5-1. Accessories

Remote controller



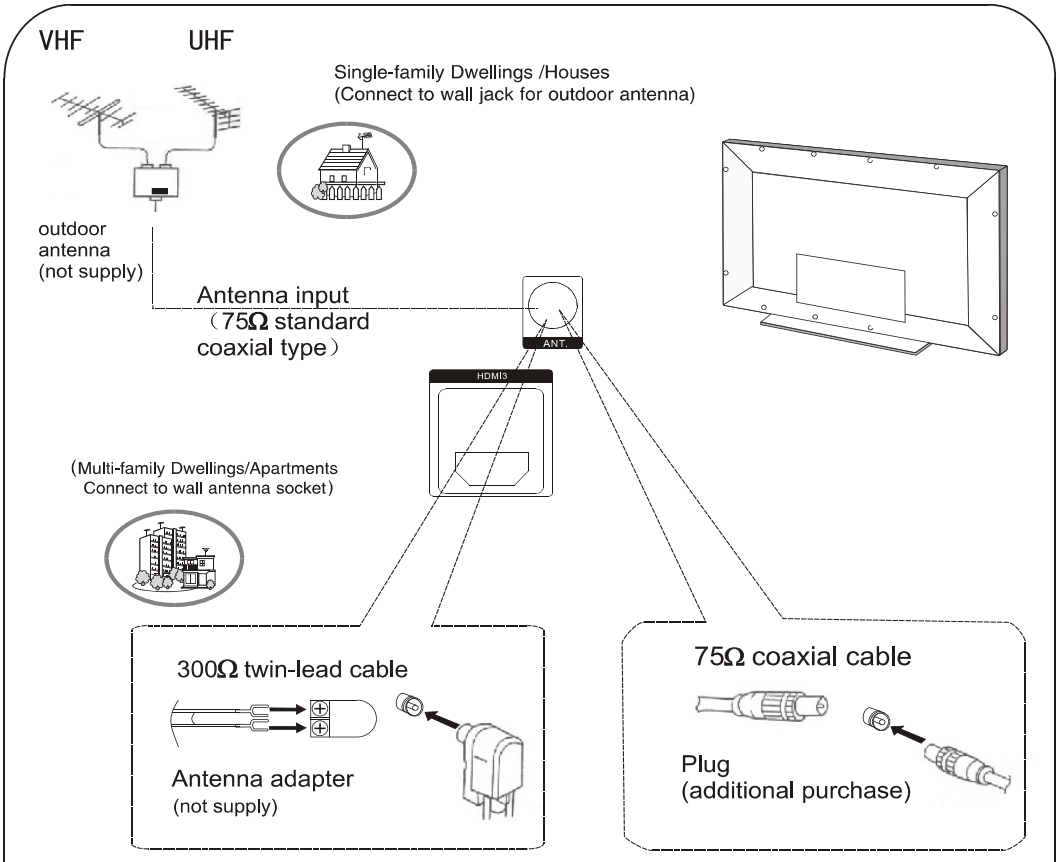
Owner's manual

Alkaline battery
(AAA)×2

5-2. External Equipment Connections

Antenna Connection

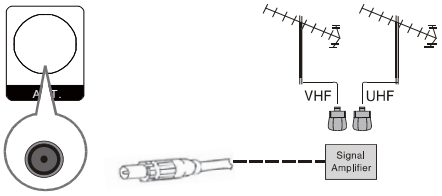
- Antenna or Cable Service without a Cable Box Connections
- For optimum picture quality, adjust antenna direction if needed.



Note:

* It is recommended that you'd better use 75Ω coaxial cable to remove the disturbance caused by airwave.

* Don't bind antenna cable and electric wire together.



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

External Equipment Connections

NOTE: All cables shown are not included with the TV.

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 ways to connect your TV.
Choose the connection which is best for you.

VCR Connection

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

Connection Option 1

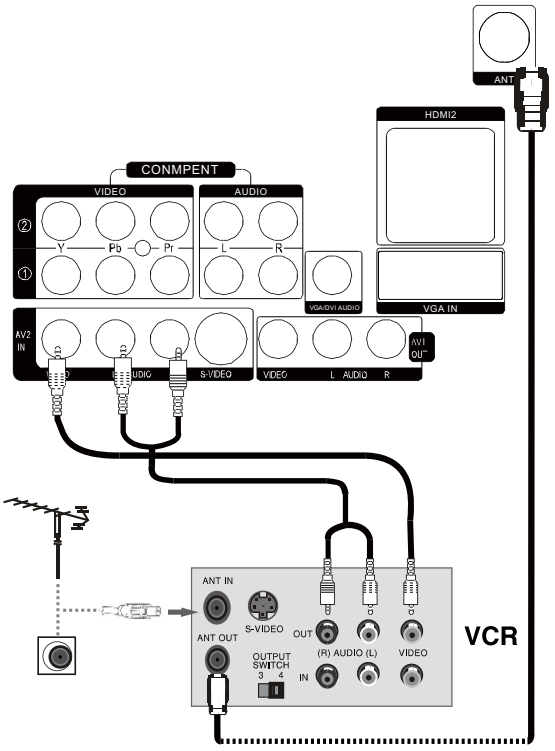
Set VCR output switch to channel 3 or 4 and then tune the TV to the same channel number.

Connection Option 2

1. Connect the audio and video cables from the VCR's output jacks to the TV input jacks, as shown in the figure.
When connecting the TV to VCR, match the jack colors
(Video = yellow, Audio Left = white, and Audio Right = red).
If you connect an S-VIDEO output from VCR to the S-VIDEO input,
the picture quality is improved; compared to connecting a regular
VCR to the Video input.

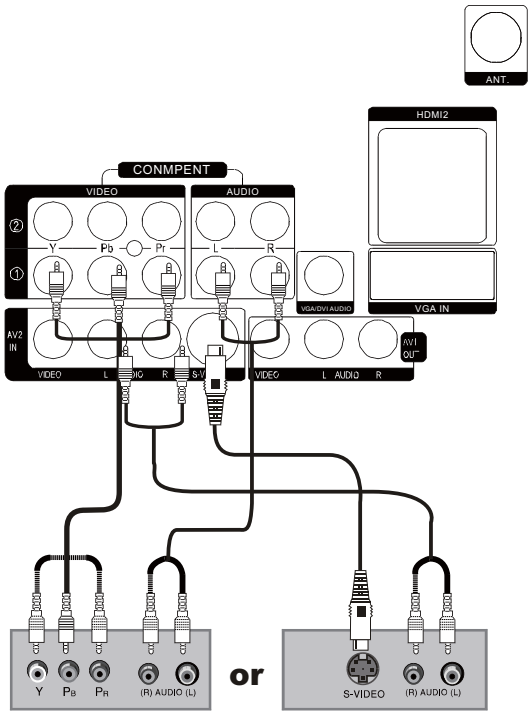
2. Insert a video tape into the VCR and press PLAY on the VCR.
(Refer to the VCR owner`s manual.)

3. Select the input source with using the INPUT button on the remote control, and then press CH+/- button to select the source, press the VOL+ button to confirm.



External Equipment Connections

DVD Setup



DVD or cable box

How to connect

1. Connect the DVD video outputs (Y, Pb/Cb, Pr/Cr) to the COMPONENT (Y, Pb/Cb, Pr/Cr) input jacks on the TV and connect the DVD audio outputs to the AUDIO jacks on the TV, as shown in the figure.
2. If your DVD only has an S-Video output jack, connect this to the S-VIDEO input on the TV and Connect the DVD audio outputs to the AV IN jacks on the TV, as shown in the figure.

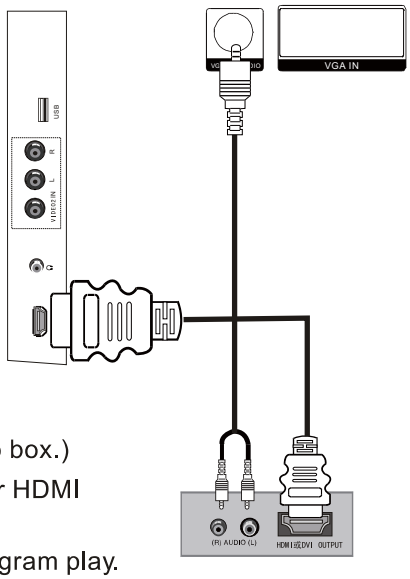
NOTE: If your DVD player does not have component video output, use S-Video.

How to use

1. Turn on the DVD player, insert a DVD.
2. Use the S-Video button on the remote control to select S-VIDEO or YPbPr/YCbCr mode.
3. Press Play button on external equipment for program play.
4. Refer to the DVD player's manual for operating instructions.

HDMI or DVI Setup

-To watch digitally broadcast programs, purchase and connect a digital set-top box.



How to connect

Use the TV`s COMPONENT (Y, Pb/Cb, Pr/Cr) INPUT jacks, VGA or HDMI port for video connections, depending on your set-top box connections available. Then, make the corresponding audio connections.

How to use

1. Turn on the digital set-top box. (Refer to the owner`s manual for the digital set-top box.)
2. Use INPUT on the remote control to select PC or HDMI (Y, Pb/Cb, Pr/Cr) mode.
3. Press Play button on external equipment for program play.

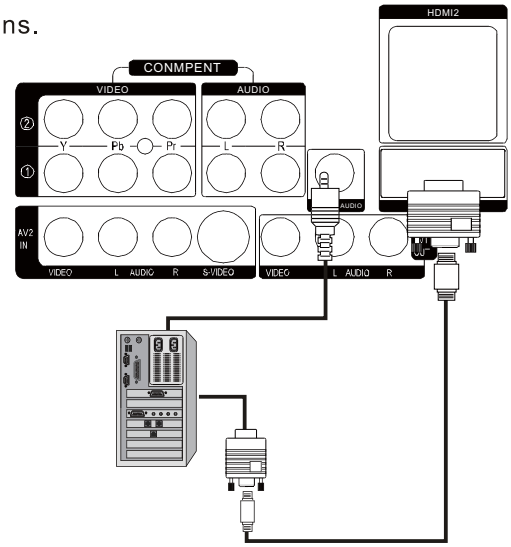
External Equipment Connections

PC Setup

How to connect

1. Use the TV`s VGA IN port for video connections.

2. Then, make the corresponding audio connection. If using a sound card, adjust the PC sound as required.



How to use

1. Turn on the PC and the TV.
2. Turn on the display by pressing the POWER button on the TV's remote control.
3. Use PC/DVI on the remote control to select VGA source.
4. Check the image on your TV. There may be noise associated with the resolution, vertical pattern, contrast or brightness in PC mode. If noise is present, change the PC mode to another resolution, change the refresh rate to another rate or adjust the brightness and contrast on the menu until the picture is clear. If the refresh rate of the PC graphic card can not be changed, change the PC graphic card or consult the manufacturer of the PC graphic card.

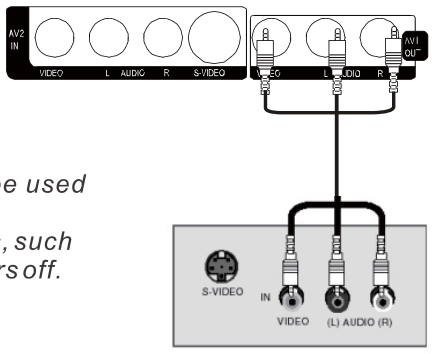
NOTES:

1 Avoid keeping a fixed image on the TV's screen for a long period of Time. The fixed image may become permanently imprinted on the screen.
2 The synchronization input form for Horizontal and Vertical frequencies is separate.
3 To obtain the best picture, do not play the USB, YPbPr, HDMI or PC source at the same time.

Monitor Out Setup

The TV has a special signal output capability which allows you to hook up a second TV or monitor.

Connect the second TV or monitor to the TV`s AV OUT. See the Operating Manual of the second TV or monitor for further details regarding that device`s input settings.



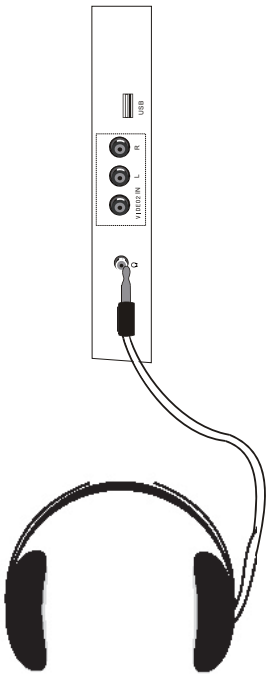
Notes:

■ *YPbPr, PC, HDMI, S-Video input sources cannot be used for Monitor out.*
■ *When connecting with external audio equipments, such as amplifers or speakers, please turn the TV speakers off.*

External Equipment Connections

Connecting Headphones

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



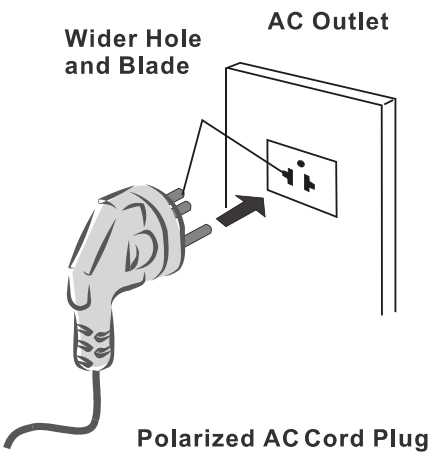
Plug a set of headphones into the 3.5mm mini-jack socket on the rear panel of the set.

Note:

■ Prolonged use of headphones at a high volume may damage your hearing.

■ You will not receive sound from the speakers when you connect headphones to the system.

Power source



TO USE AC POWER SOURCE

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

NOTES:

■ Never connect the AC line cord plug to other than the specified voltage. Use the attached power cord only.

■ If the polarized AC cord does not fit into a non-polarized AC outlet, do not attempt to file or cut the blade. It is the user`s responsibility to have an electrician replace the obsolete outlet.

■ If you cause a static discharge when touching the unit and the unit fails to function, simply unplug the unit from the AC outlet and plug it back in. The unit should return to normal operation.

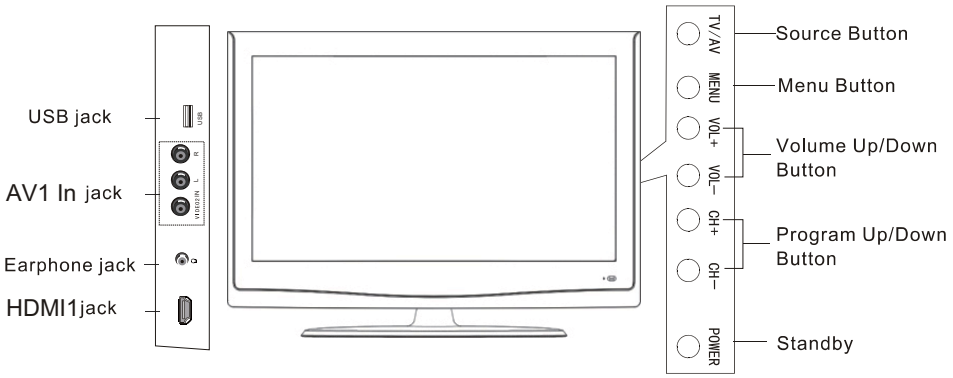
Polarized AC Cord Plug.

Chapter 6. Operation Instructions

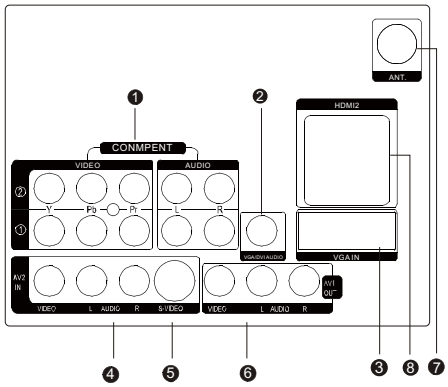
6-1. Get to know your TV

- This is a simplified representation of front panel.
- Here shown may be somewhat different from your TV.

Panel Control



Rear Terminals Control

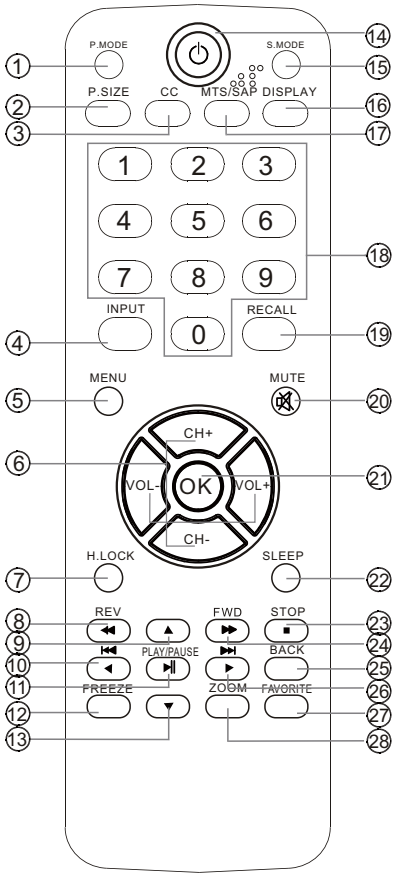


1.COMPONENT In：Connect a component Video/Audio device to these jacks
2.VGA/DVI AUDIO：Connect a VGA/DVI Audio device to these jacks
3.VGA IN: Connect the monitor output connector from a PC to the jack
4.AV2 In：Connect Video/Audioout from an Video/Audio device to these jacks
5.S-VIDEO：Connect S-Video out from a S-Video device to these jacks
6.AV OUT：Video/Audio output terminal
7.ANT In：Connect cable pr antenna signal to the TV, either directly or through your cable box
8.HDMI2: Connect a signal to HDMI

6-2. Get to know your remote control

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

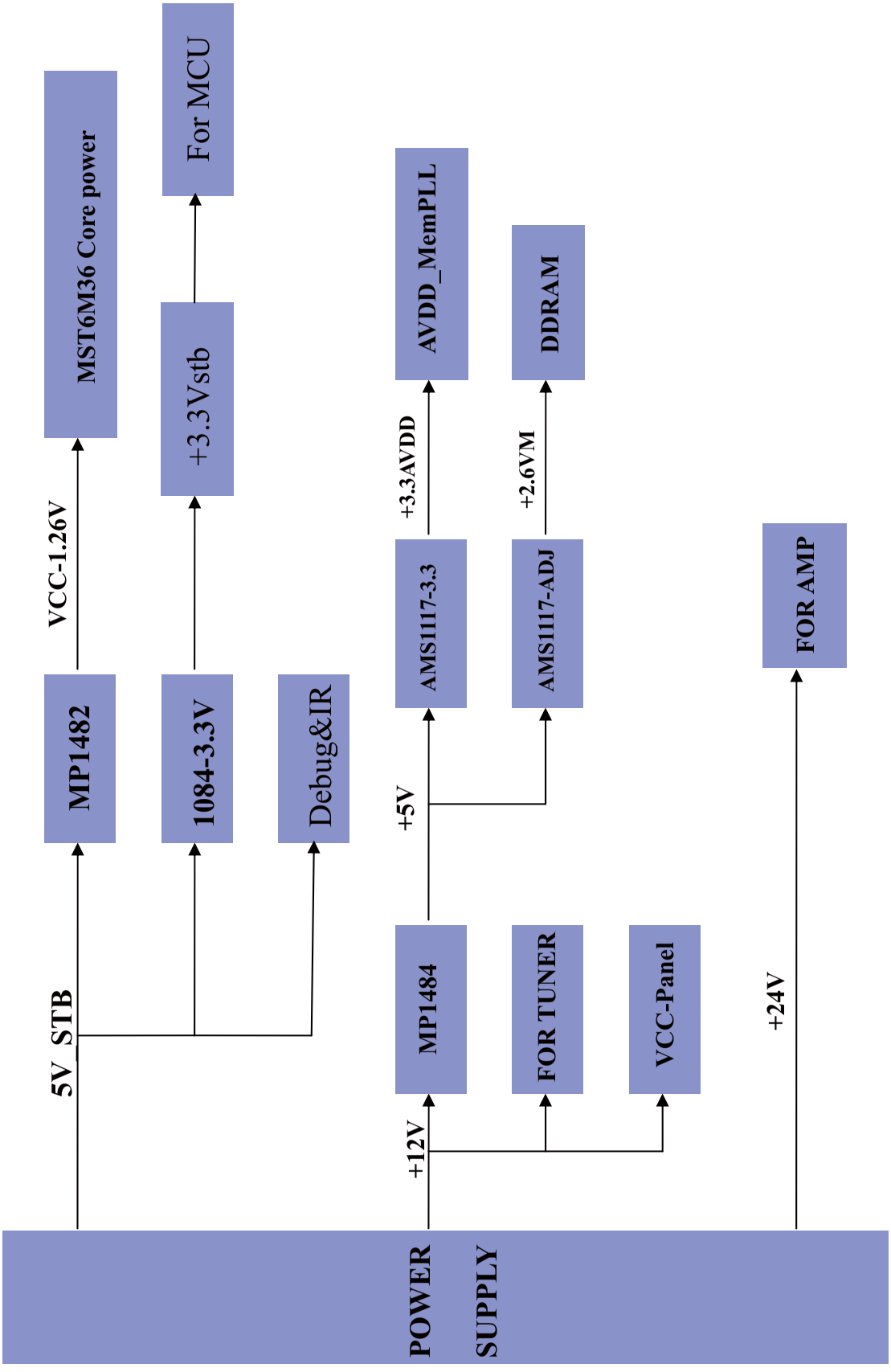
Function introduction



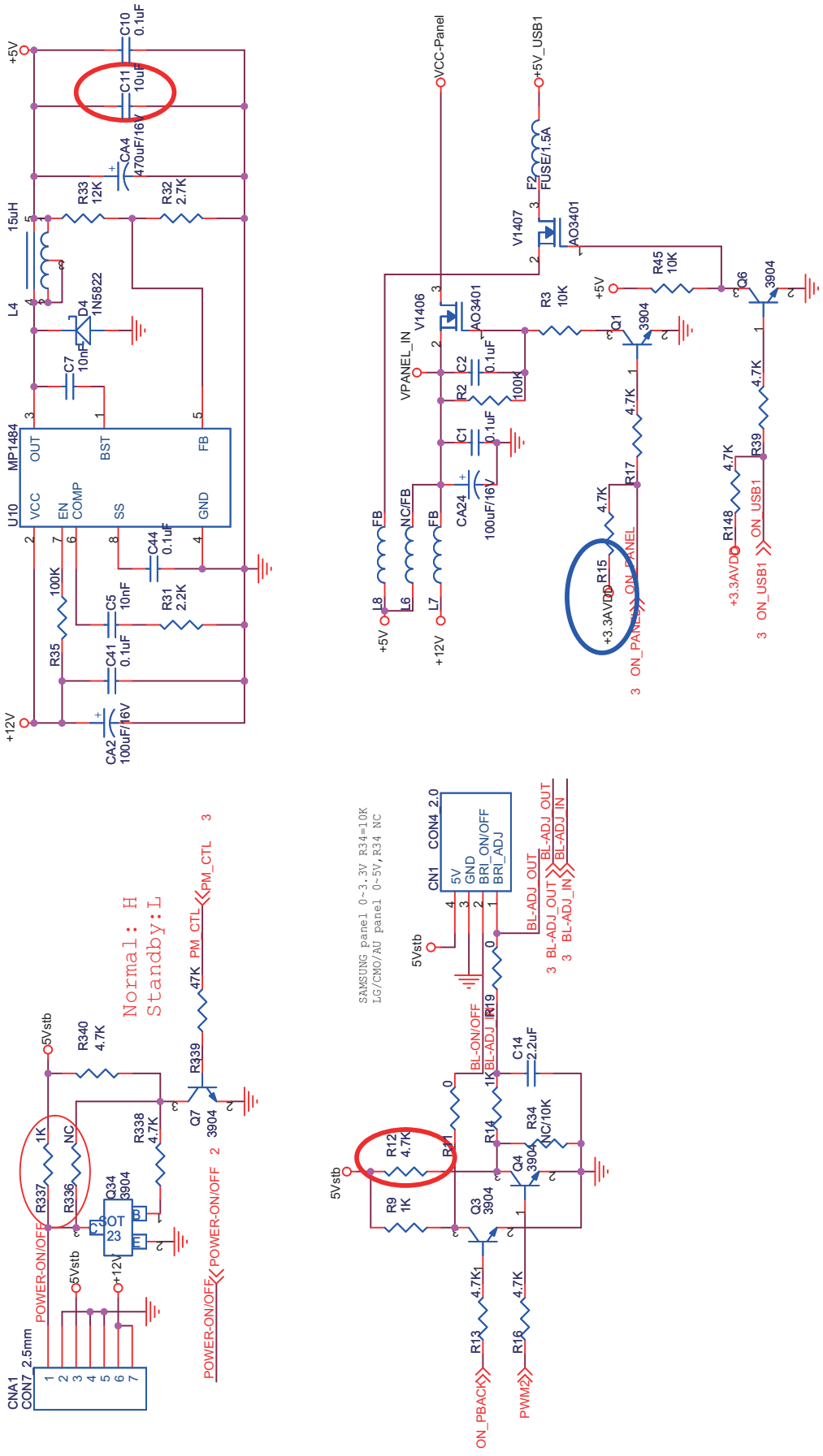
1.Press repeatedly to cycle through the available picture modes
2.Press to change the aspect ratio
3.Select a closed caption option
4.Show the input source
5.Press to open the on-screen menu
6.Volume/Channel Selection
7.H.LOCK
8.USB fast reverse
9.USB up
10.USB Previous Chapter/USB left
11.USB PLAY/PAUSE
12.Press once to display a frozen image of the current program, but audio continues. Press again to return to the program
13.USB down
14.Press to turn on and off the TV
15.Press to cycle through different sound settings
16.Press to display the TV status information on the top of the TV screen
17.Select MONO, STEREO, SAP in NTSC system
18.Press to change a channel
19.Press to jump back and forth between two channels
20.Switches the TV sound on or off
21.Confirm button/Exit on screen display
22.Press to display the sleep timer option
23.USB STOP
24.USB fast forward
25.Press to return to the previous menu
26.USB next chapter/USB right
27.Open the favorite channel list in TV
28.Picture zoom function

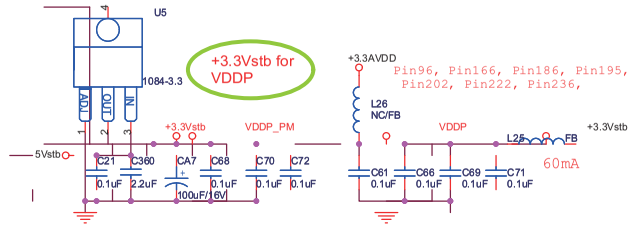
Chapter 7. Electrical Parts

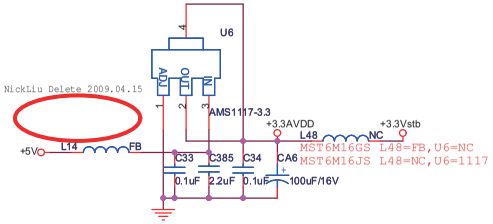
7-1. Block Diagram

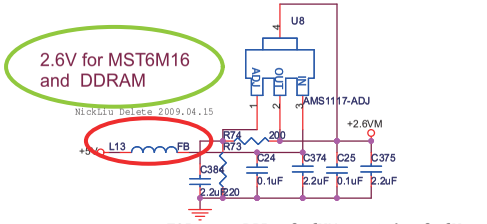


7-2. Circuit Diagram

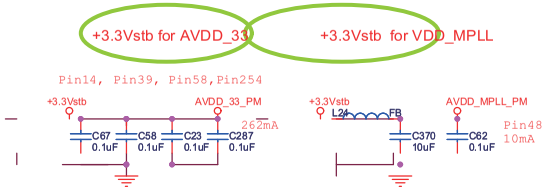


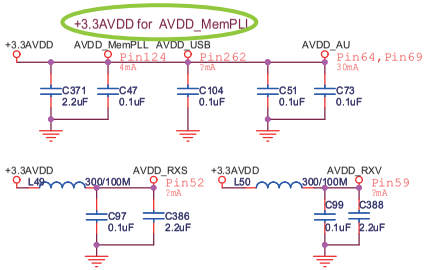


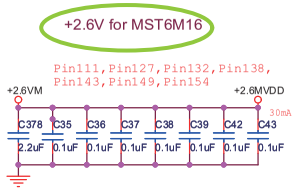


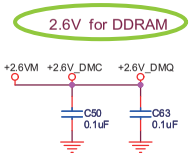


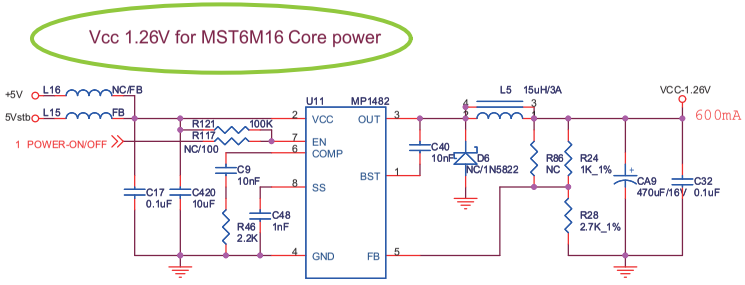
FOR use DDR,+2.6VM must be 2.6V
FOR use SDRAM,+2.6VM must be 3.3V



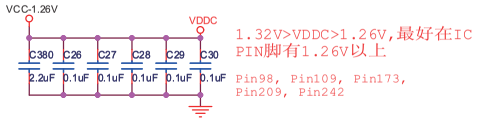






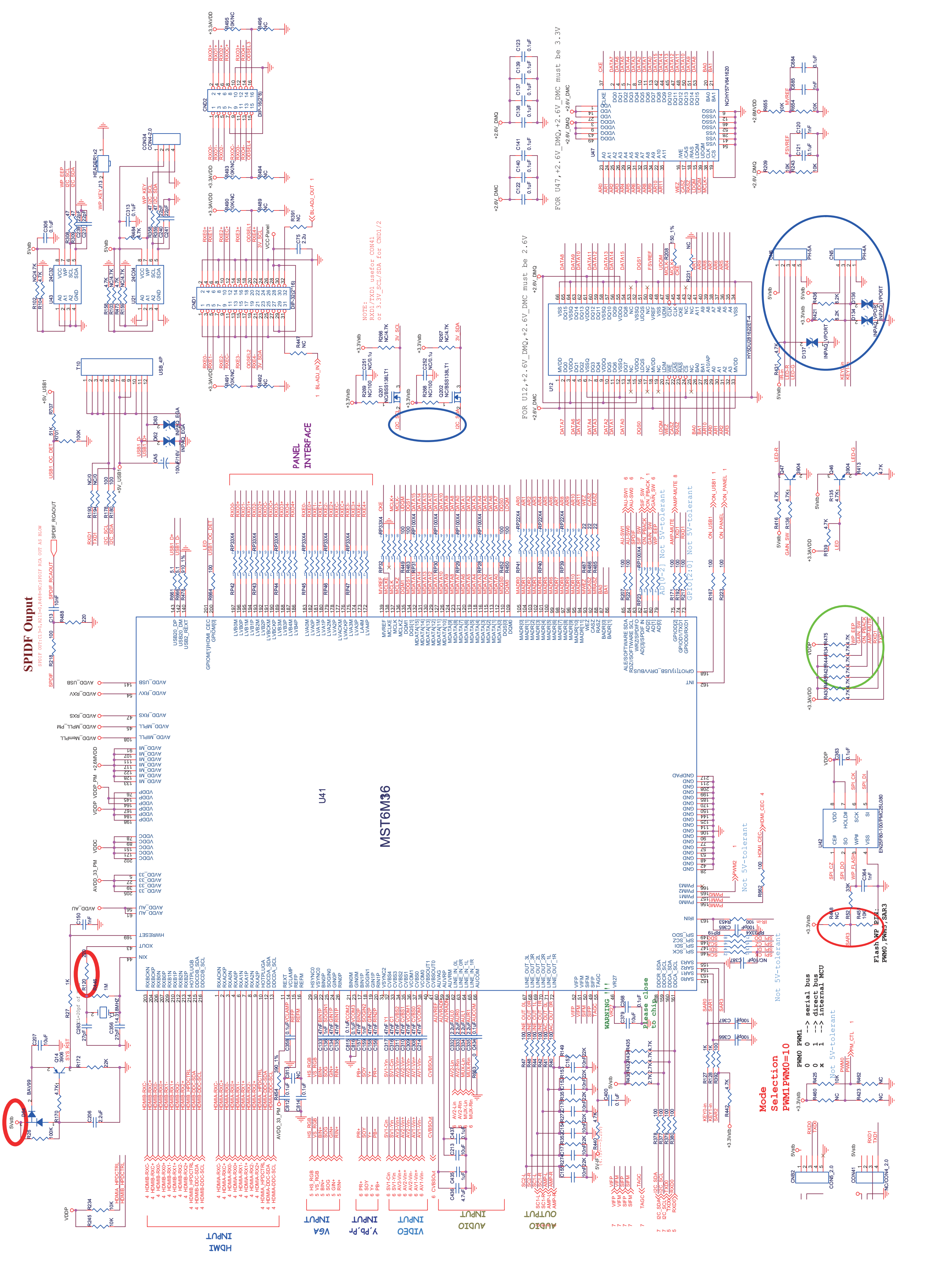


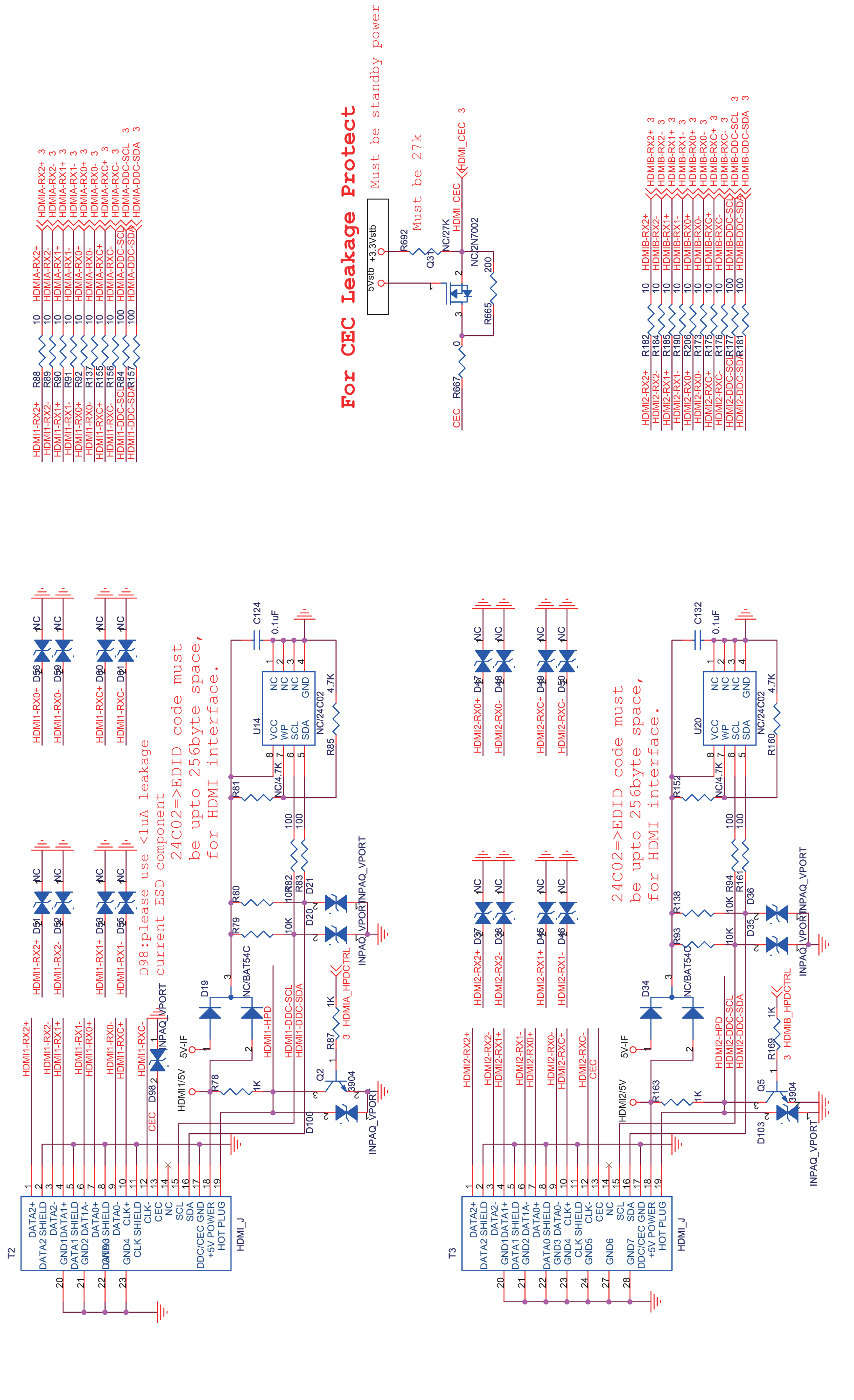
0.923*(1+Rup/Rdown)=1.26V---Rup=1.0K, Rdown=2.7K

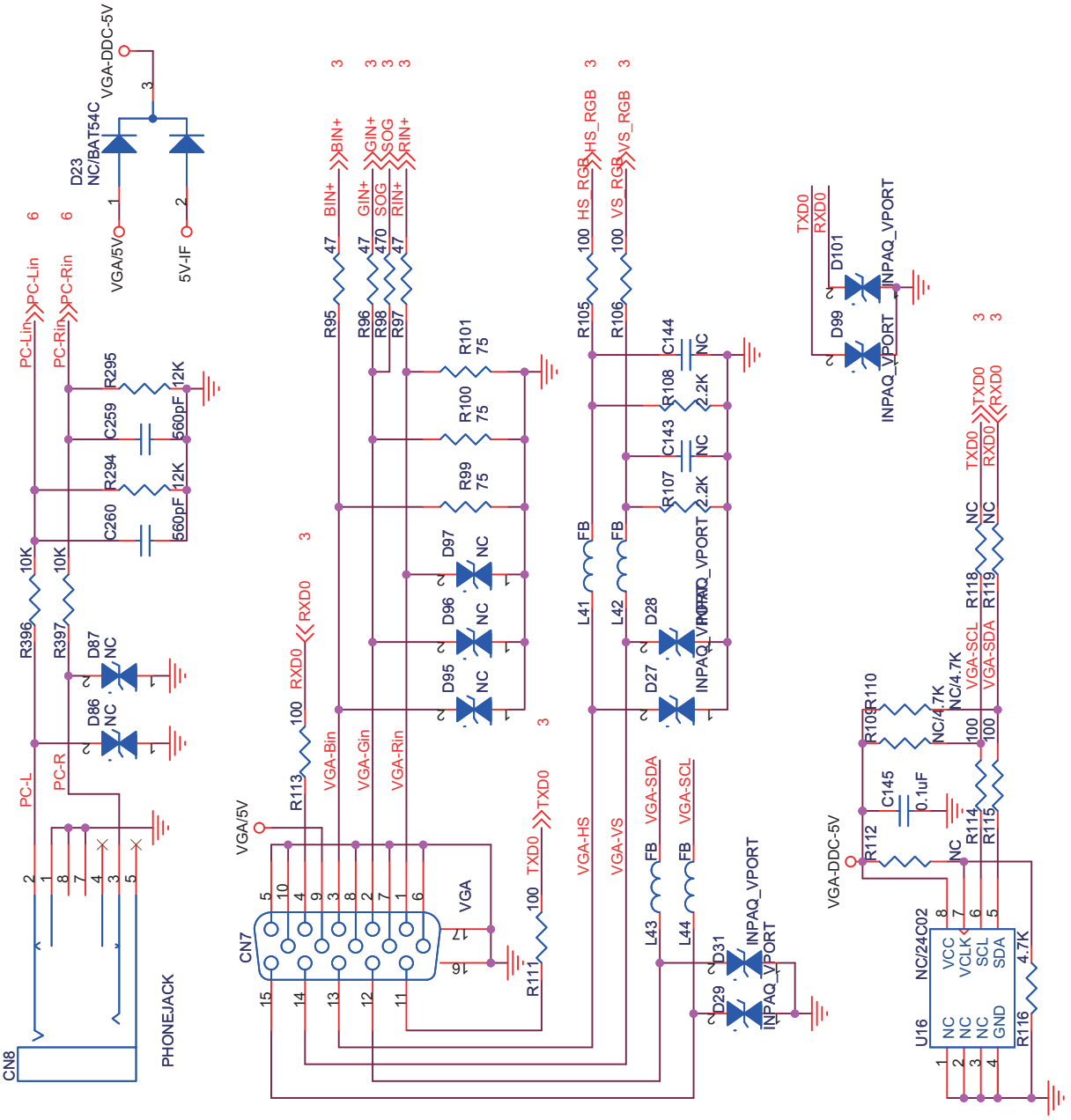


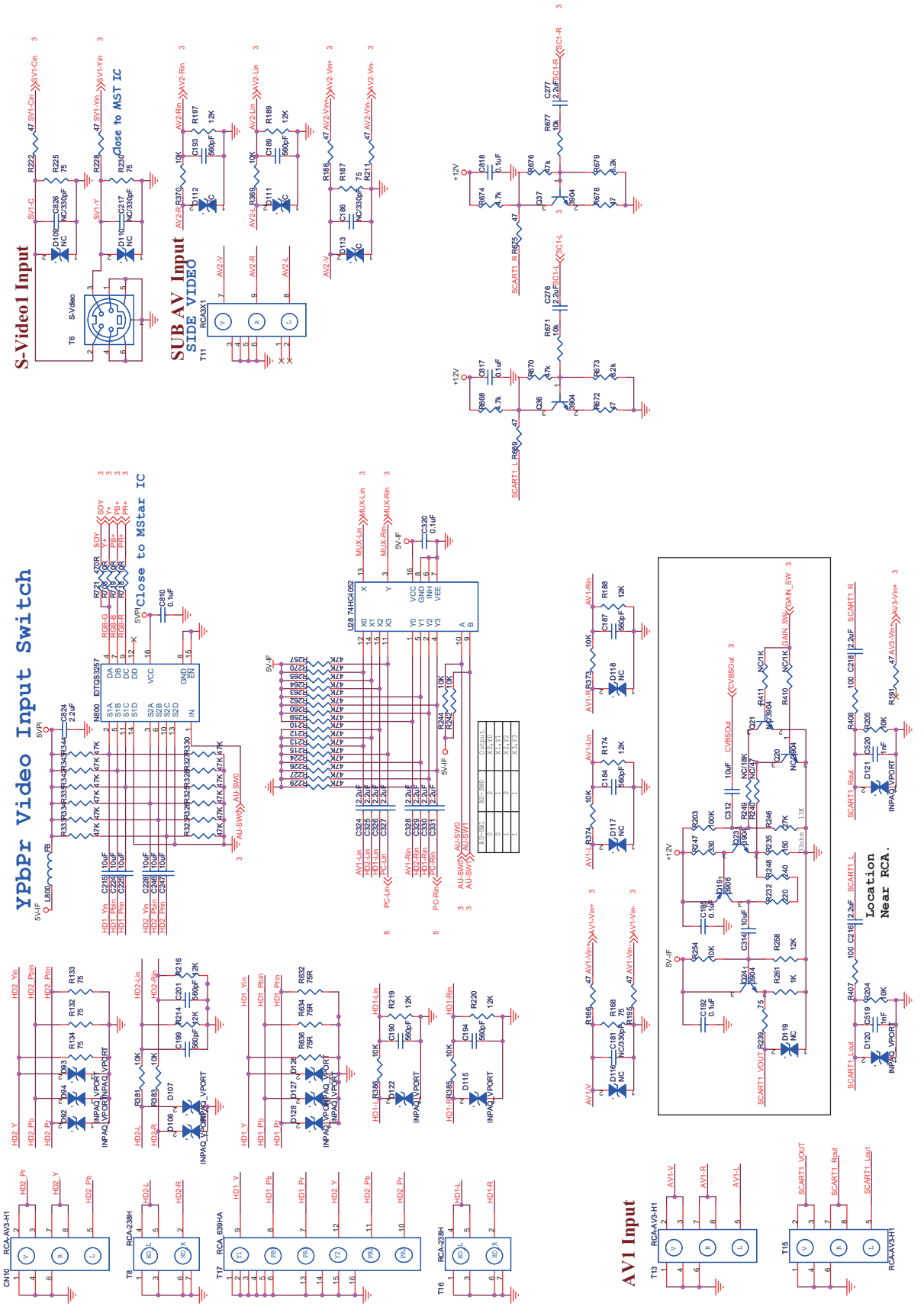
1.32V>VDDC>1.26V,最好在IC PIN脚有1.26V以上

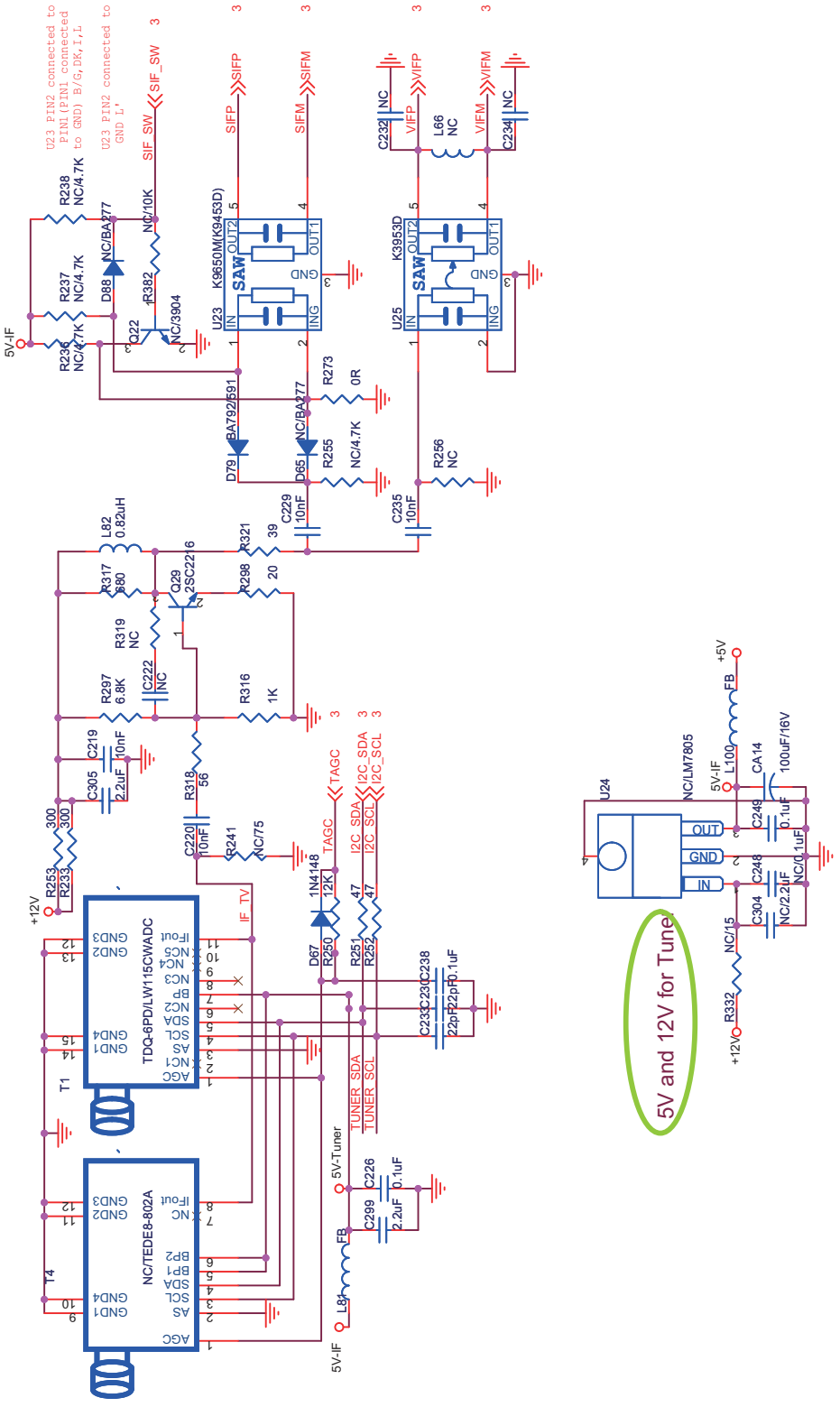
Pin98, Pin109, Pin173, Pin209, Pin242

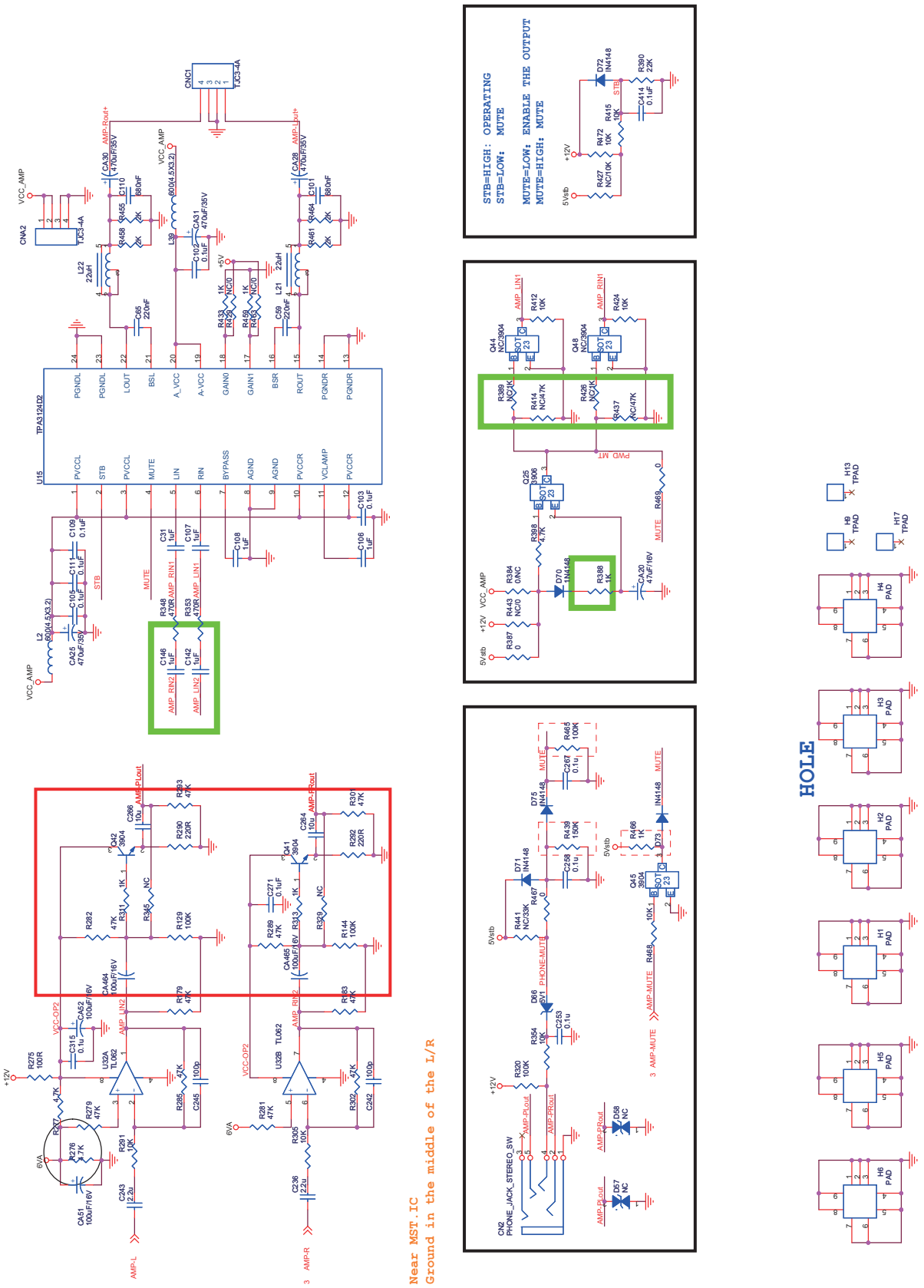

SPIDF Ouput
PANEL INTERFACE
U41
MST6M36
HDMI INPUT
VGA INPUT
Y,Pb,Pr INPUT
VIDEO INPUT
AUDIO INPUT
AUDIO OUTPUT
Mode Selection PWM1PWM0=10


For CEC Leakage Protect
Must be standby power
Must be 27k
D98:please use <1uA leakage
current ESD component
24C02=>EDID code must
be upto 256byte space,
for HDMI interface.
24C02=>EDID code must
be upto 256byte space,
for HDMI interface.


VGA-DDC-5V
D23
NC/BAT54C
VGA/5V
5V-IF
PC-Lin
PC-Rin
R295
12K
C259
560pF
R294
12K
C260
560pF
R396
10K
R397
10K
D87
NC
D86
NC
PC-L
PC-R
CN8
PHONEJACK
VGA/5V
CN7
VGA
R113
100
RXD0
VGA-Bin
VGA-Gin
VGA-Rin
R111
100
TXD0
VGA-HS
VGA-VS
VGA-SDA
VGA-SCL
R95
47
R96
47
R98
470
R97
47
R101
75
R100
75
R99
75
D97
NC
D96
NC
D95
NC
BIN+
GIN+
SOG
RIN+
L41
FB
L42
FB
L43
FB
L44
FB
D28
D27
D31
D29
INPAQ_VPORT
R105
100
R106
100
HS_RGB
VS_RGB
C144
NC
R108
2.2K
C143
NC
R107
2.2K
D101
D99
R103
NC/4.7K
R110
NC/4.7K
C145
0.1uF
R112
NC
R114
100
R115
100
R118
NC
R119
NC
U16
NC/24C02
VCC
VCLK
SCL
SDA
NC
NC
NC
GND
R116
4.7K

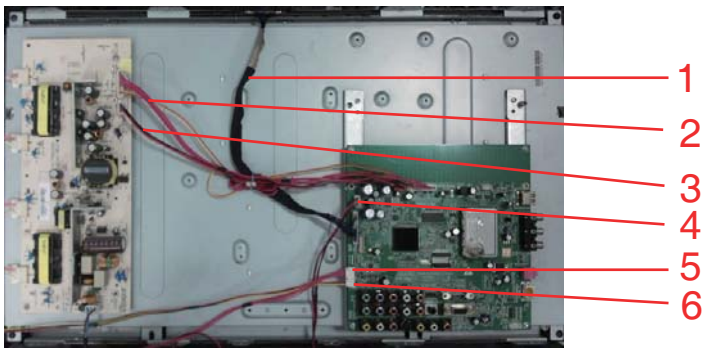

YPbPr Video Input Switch
S-Video1 Input
SUB AV Input
SIDE VIDEO
Close to MStar IC
Close to MST IC
AV1 Input
Location
Near RCA.


5V and 12V for Tuner


STB=HIGH: OPERATING
STB=LOW: MUTE
MUTE=LOW: ENABLE THE OUTPUT
MUTE=HIGH: MUTE
Near MST.IC
Ground in the middle of the L/R
HOLE

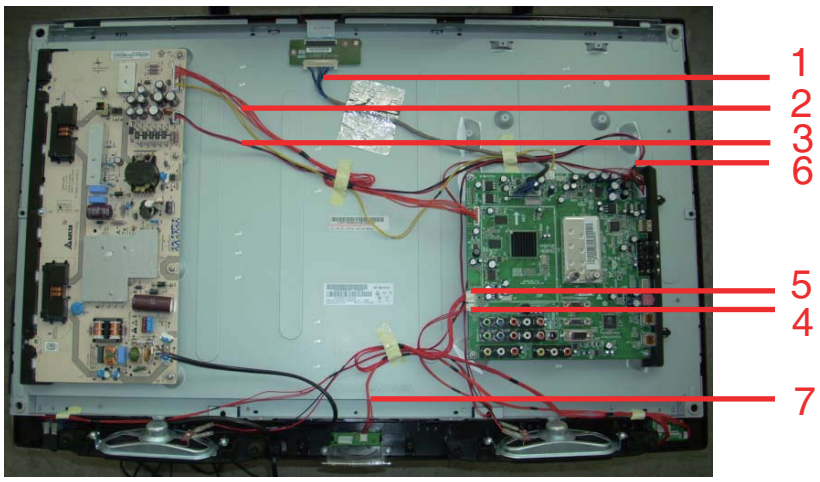
7-3. Wiring Connection Diagram

L26F6



NO.	Name	Parts number
1	LVDS Wire	0090402496
2	Connection Wire(Power For Mainboard)	0090402469
3	Connection Wire(Power For Audio Amplifier)	0090403399H
4	Connection Wire(For Speaker)	0090400647C
5	Connection Wire(For Remote)	0090401643C
6	Connection Wire(For Keyboard)	0090402849A

L32F6



NO.	Name	Parts number
1	LVDS Cable	0090402070B
2	Cable(Power For Mainboard)	0090402469
3	Cable(Power For Audio Amplifier)	0090403399H
4	Cable(For Keypad)	0090402849A
5	Cable(For Remote)	0090401643D
6	Cable(For Speaker)	0090400647D
7	Cable(For Ornamental Light)	0090402750B

Chapter 8. Measurements and Adjustments

8-1. Service Mode

8-1-1.How to enter into Service Mode

The way to the factory mode menu:
1st, press menu,
2en, input 8893,
Finished these operations ,system will be into the factory mode menu.
At the end of the main factory menu, you can see the edition of the software,
like this" L_MST6M36J S_AU32VP_BX ".

8-1-2.How to exit

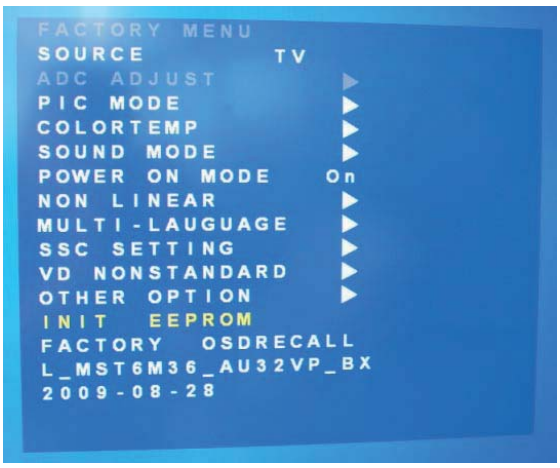
If you want to exit this factory menu, please press the button "Exit" on the remote.
system will be out the factory mode menu.

8-2. Measurements and Adjustments

8-2-1. The Main Menu

In factory mode menu,press up/down button to choose the up/down item,press left/right button to the submenu,press "OK"button to affirm .press MENU button go to the next page.

MST6M36J S Factory Menu

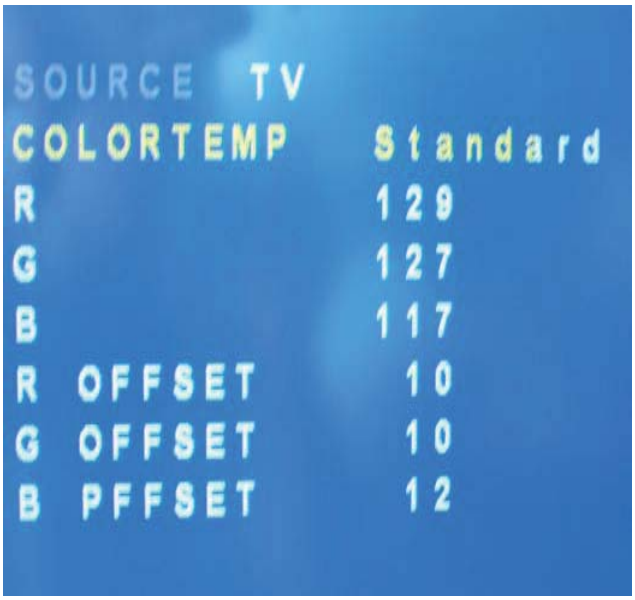


In this page, you just consider "INT EEPROM" function.This function you can reset all data return to factory state.if you encounter inextricable problem,you can try this function.

Press up/down button to select "INT EEPROM ",then press "VOL+" button.It needs a few secounds. After "INT EEPROM", choose "FACTORY OSDRECALL" and reset all data to out-factory state.

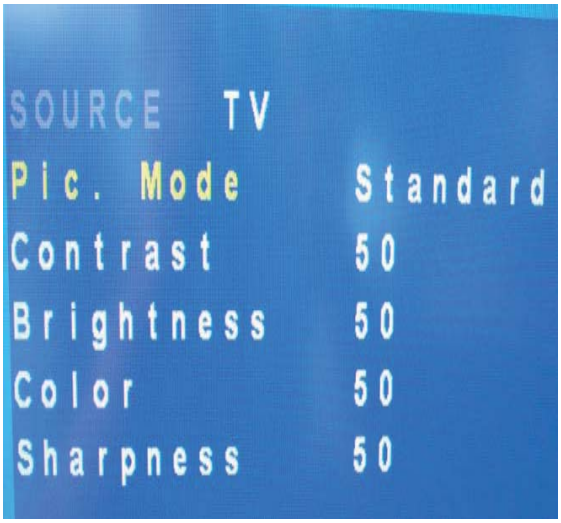
NOTE : After reset ,please shut off the power firstly.
Be carefully use this function.

8-2-2. Video



Color Temperature

This page is control the Color Temperature, like standard,warm,cool.



Picture Mode

This page is control the picture effect , like Brightness,contrast,color,sharpness.

8-2-3. Audio

This page is control the sound effect ,like user,standard,music,theater.

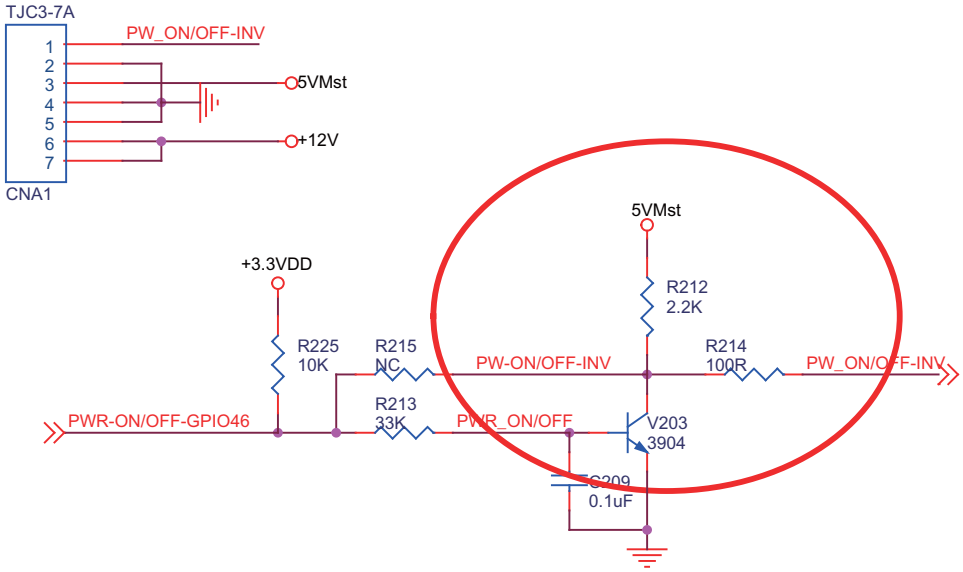
Chapter 9. Trouble shooting

9-1. Simple check

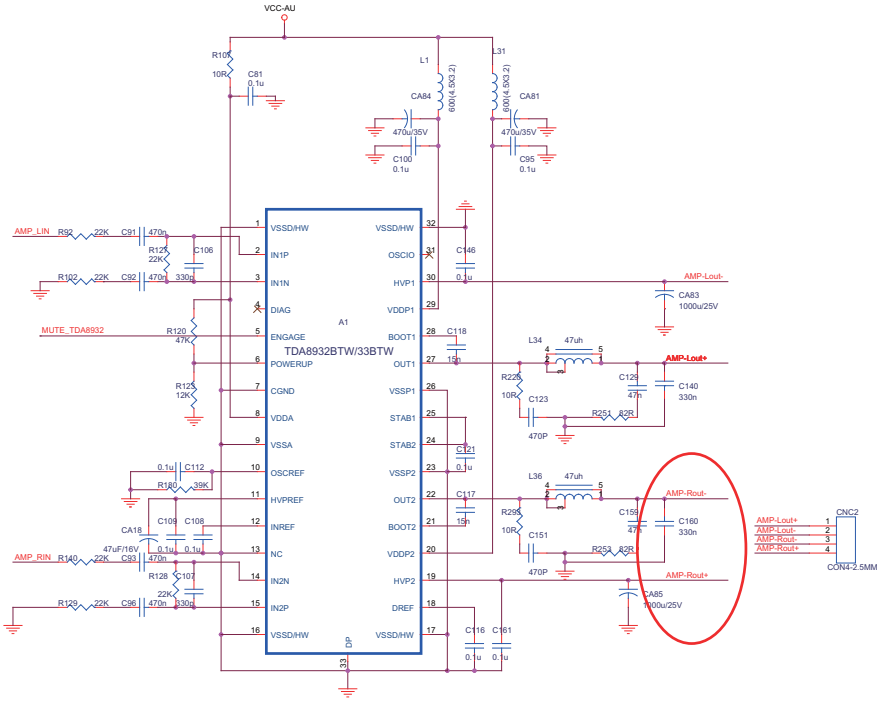
No picture/ No sound	Verify if the television is properly plugged Verify if the television is properly supplied power Verify if electricity is available.
Blank screen	Verify if correct signals are input Press INPUT button to change signal input to TV input Restart the television of power supply is interrupted
No sound	Press Mute button and verify if Mute mode is set. Switch to otger channel and verify if the same problem happens. Press VOL+ button to see of he problem can be solved.
Poor sound	Verufy if sound system is correct .Refer to some chapter for adjust.
No picture in some channel	Verify if correct channel is selected. Adjust the antenna. Make adjustments by Fine Tune and MANUAL Scan.
No color for some channel program (black and white)	Verify if the same problem exists in other channels. check out of picture and sound system. Refer to relative instructions in the Manual for color adjust.
Spots with some or all pictures	Verify if the antennal is correctly connected. Verify if the antennal is in good condition. Make fine adjustment of channel.
Horizontal/ vertical bars or picture shaking	Check for local interference such as an electrical appliance or power tool.
Television out of control	Disconnect the television from power supply and 10 seconds later, connect the television to the power supply. If the problem still exists, contact authorized after-sales service for technical assistance.

9-2. Power Supply Board Failure Check.

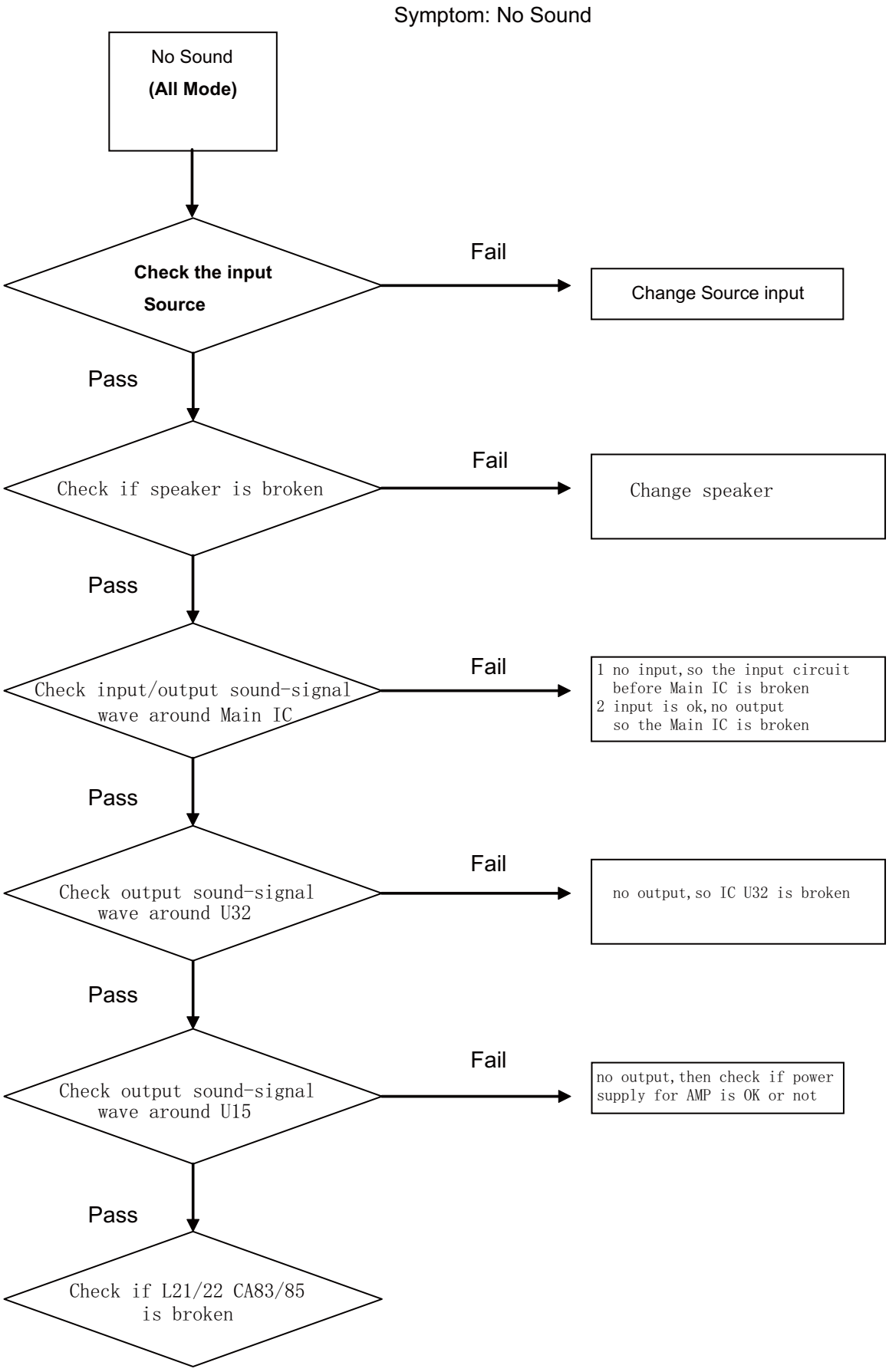
State:No picture
First,check cables which connect with PSU,then check as follows
Check input voltage
voltage: +5VSB----POWER ON(2.6V) -----+12V



State:No sound
First,check cables which connect with PSU,then check as follows
1) Check input voltage as NO picture
2) Check speaker output
First,check speaker anode(+) and cathode(-),confirm speaker short or not.If short ,replace speaker.
Second, check CNC1 with oscillograph, confirm wave output or not.



9-3. Mainboard Failure Check

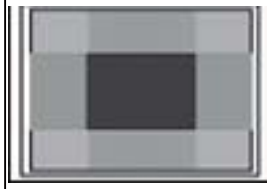


9-4. Pannel Failure

Failure Mode

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

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

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		
	FIIcker	Crosstalk		LCD Vcom imbalance
	Abnormal Color	Only color abormal		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

Part	Name	Description	Phenomena	Failure cause
	Mechanlcal Nolse	When turn panel,appear cacophony		Caused by Mechanica noise of backlight unit
	Ripple	Connectric circle		Causeed 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 badnessShort between wire and electrode
	B/L wire damaged	B/L wire damaged		Operation abnormal or systemic noise
	B/L wire open	Without backlight		Operation abnormal or systemic noise
	B/L shut down	B/L shutdown in sometime		Short bitween lamp housing and wire, Because consume power too much
	F/M	F/M inB/L ,white,balck Rotundity or wirelike		F/M in B/L unit

Part	Name	Description	Phenomena	Failure Cause
Mechanlcal 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

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Printed in China