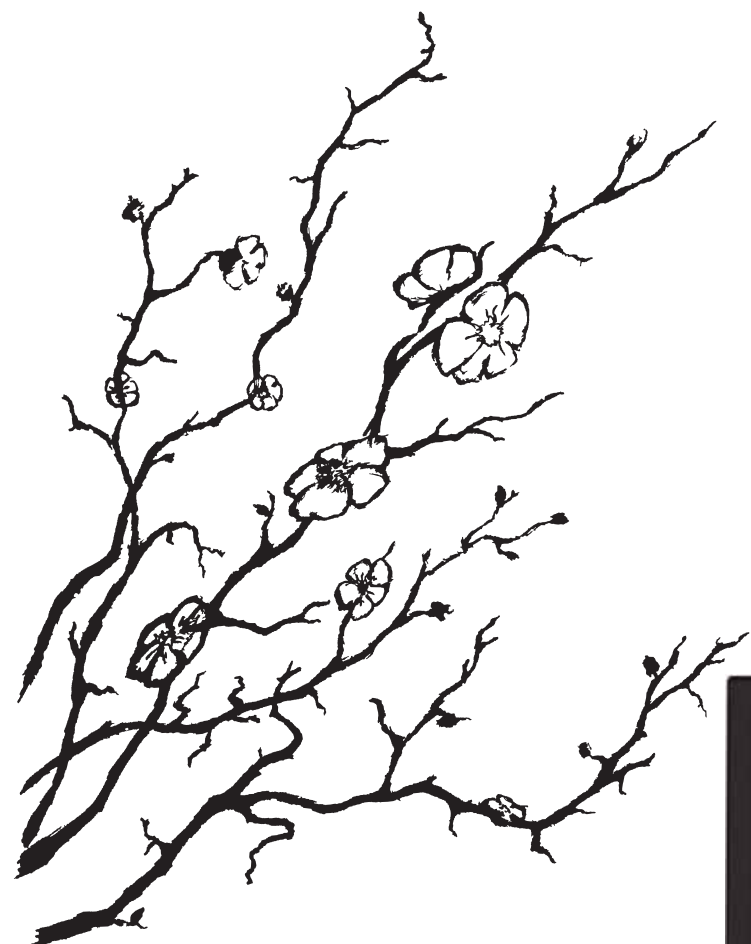


AKAI

Multisystem LCD TV set

LTA-15S5N1M



Service manual

AKAI

LTA-15S5N1M

SERVICE MANUAL

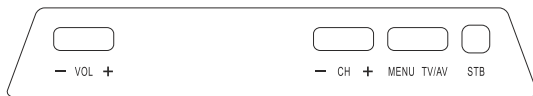
Only For Professional Service Personnel Using

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1. OPERATION PARTS -----	2
2. SYMPTOMS and CORRECTIONS -----	5
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OPERATION PARTS

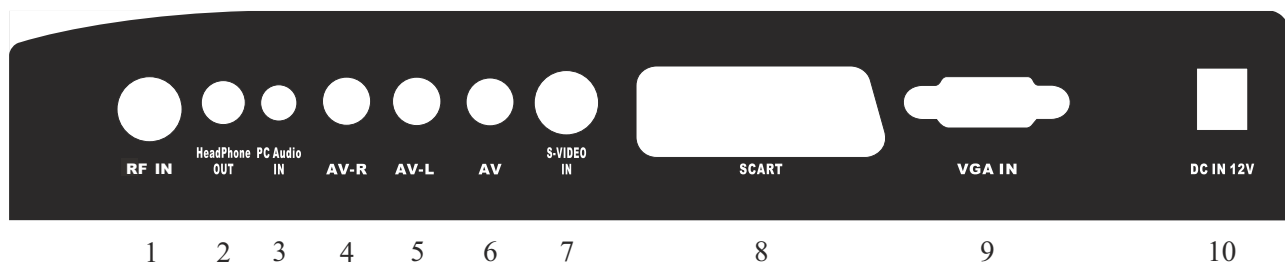
■ Top View of TV Set:



ITEM	BUTTON NAME	FUNCTION DESCRIPTION
1	-VOLUME+	Press to increase or decrease the sound level.
2	-CH+	Press to scan through channels. To scan Quickly channels, press and hold down Either +/- button.
3	MENU	Press to bring up the main menu to the Screen.
4	TV/AV	Press to select the input source.
5	STANDBY	Switch ON the LCD TV when at standby Mode or vice versa

■ Rear View of TV Set

- | | |
|------------------|---|
| 1. RF IN | 8. SCART |
| 2. HeadPhone OUT | 9. VGA IN |
| 3. PC Audio IN | 10. DC IN 12V |
| 4. AV-R | 11. HeadPhone OUT (front, W/Volume control) |
| 5. AV-L | |
| 6. AV | |
| 7. S-VIDEO IN | |

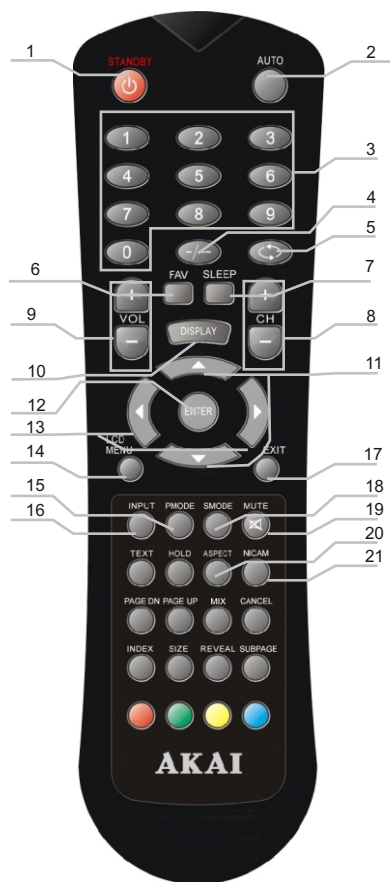


11

Tips: Headphone (back) and Headphone (front, W/Volume control) use only one.

OPERATION PARTS

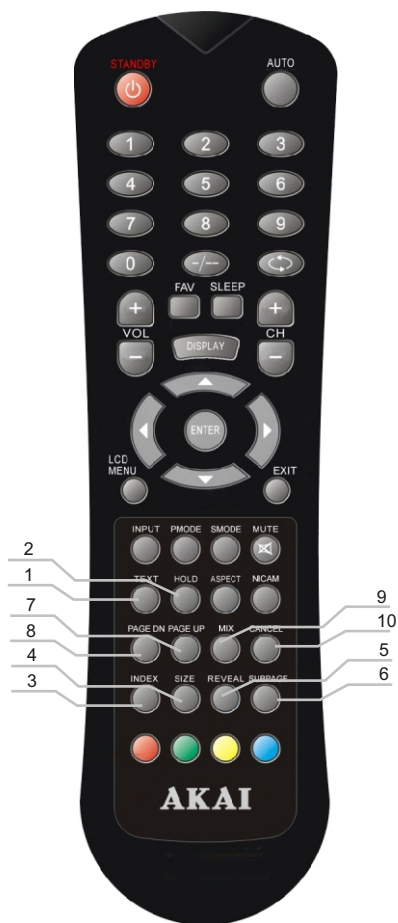
Remote Control Unit



1. STANDBY	Press this button to switch on the TV when in standby mode or to enter standby mode
2. AUTO	Press to do auto configuration directly for PC-RGB.
3. 0-9	Number selection.
4. -/--	To enter a program number for multi program channel such as 2-1, etc.
5. ↺	Press to return to the previously viewed program.
6. FAV	Press to select the favorite channels.
7. SLEEP	Press to Set the sleeper timer for turning off into standby.
8. CH+ or CH-	Press these buttons to select channels in ascending or descending order.
9. VOL- or VOL+	Press these buttons to lower or raise the volume.
10. DISPLAY	Press to display program or channel's information.
11. ▲ / ▼	UP/DOWN
12. ENTER	Confirmation key
13. ◀ / ▶	LEFT/RIGHT
14. LCD MENU	LCD TV Menu enter/exit.
15. PMODE	Press to cycle through the different picture mode.
16. INPUT	Press to cycle through the input source to select TV, AV, S-VIDEO, SCART, PC.
17. EXIT	Exit menu operation.
18. SMODE	Press this button to select the desired sound mode.
19. MUTE	Mute or restore sound
20. ASPECT	Press to select Picture Ratio.
21. NICAM	Multi-sound mode selection.

OPERATION PARTS

TELETEXT OPERATIONS



1. TEXT	Switch on or off the teletext mode.
2. HOLD	Hold on or off for current page display.
3. INDEX	Request the index page.
4. SIZE	Change display size in teletext.
5. REVEAL	Reveal the teletext information.
6. SUB.PG	Sub page.
7. PAGE UP	Page up.
8. PAGE DN	Page down.
9. MIX	MIX the teletext and TV picture.
10. CANCEL	Cancel teletext information.

SYMPTOMS and CORRECTIONS

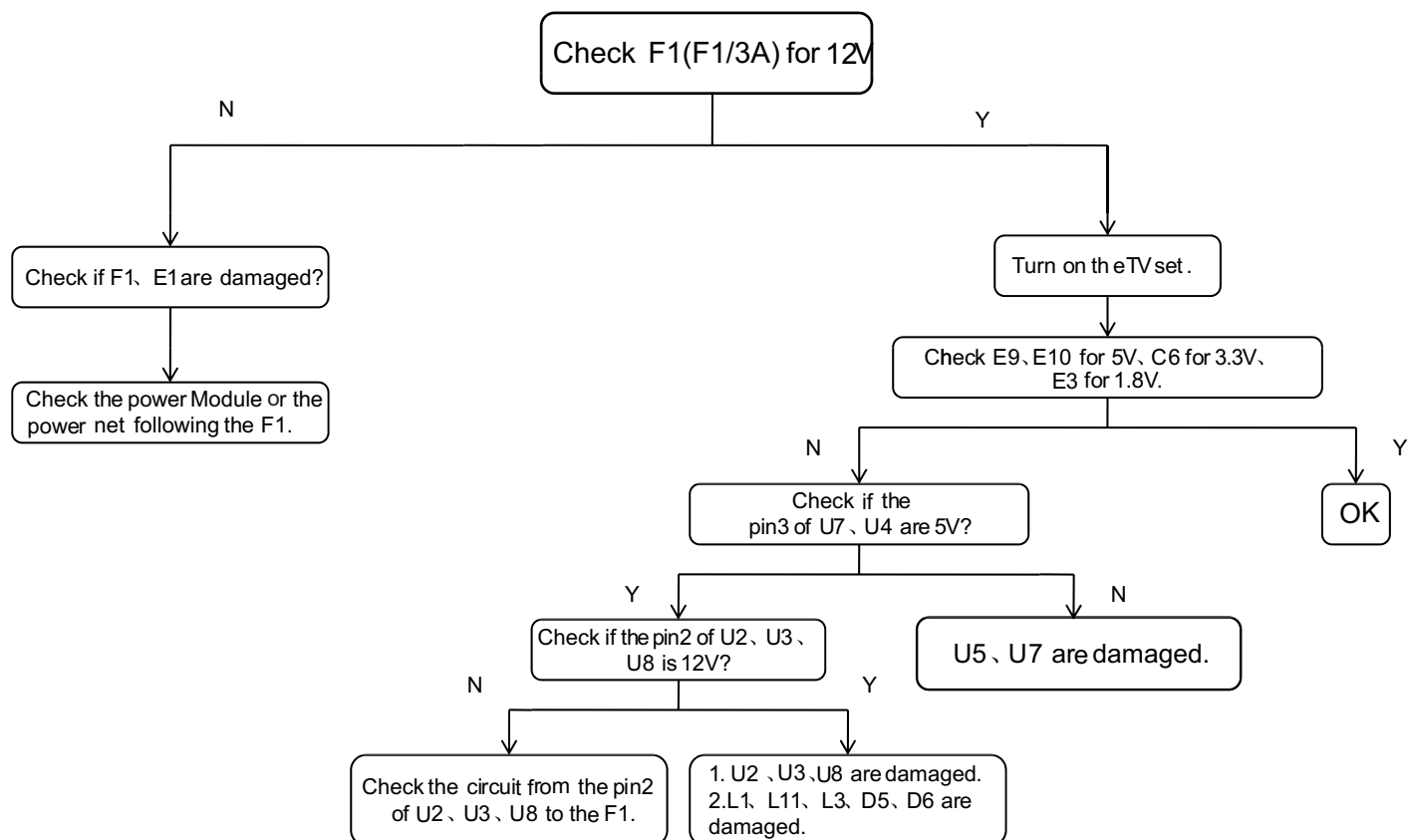
SYMPTOMS and CORRECTIONS for TV SET

Please make these simple checks as indicated (●) on the chart for the respective symptoms and their possible remedies.

Symptoms	Possible Remedies										
	Try different channel, if OK, probably station trouble	Check aerial connections on back of set	Check aerial for broken wires	Re-orient aerial (if indoor type)	Probably local interference, such as an appliance	Adjust fine tuning control	Adjust brightness control	Adjust contrast control	Check if station is broadcasting colour	Adjust colour control	Check if system is correctly set
No picture, no sound	●	●	●			●					●
Poor sound, picture OK	●			●	●	●					●
Poor picture, sound OK	●	●	●	●	●	●	●				●
Weak picture	●	●	●	●		●					●
Blurred picture	●		●	●		●					●
Double image	●	●	●	●		●					
Lines in picture	●		●	●	●	●					
Distorted picture	●		●	●		●					●
Weak reception on some channels	●	●	●	●	●	●					●
Horizontal bars			●	●	●						
Picture rolls vertically	●		●	●	●						●
Poor colour	●	●	●	●	●	●	●	●		●	●
No colour	●	●	●	●		●			●	●	●
Misoperation of Remote control											
Remote control unit no operation											
On Screen Display Control outside the screen											●

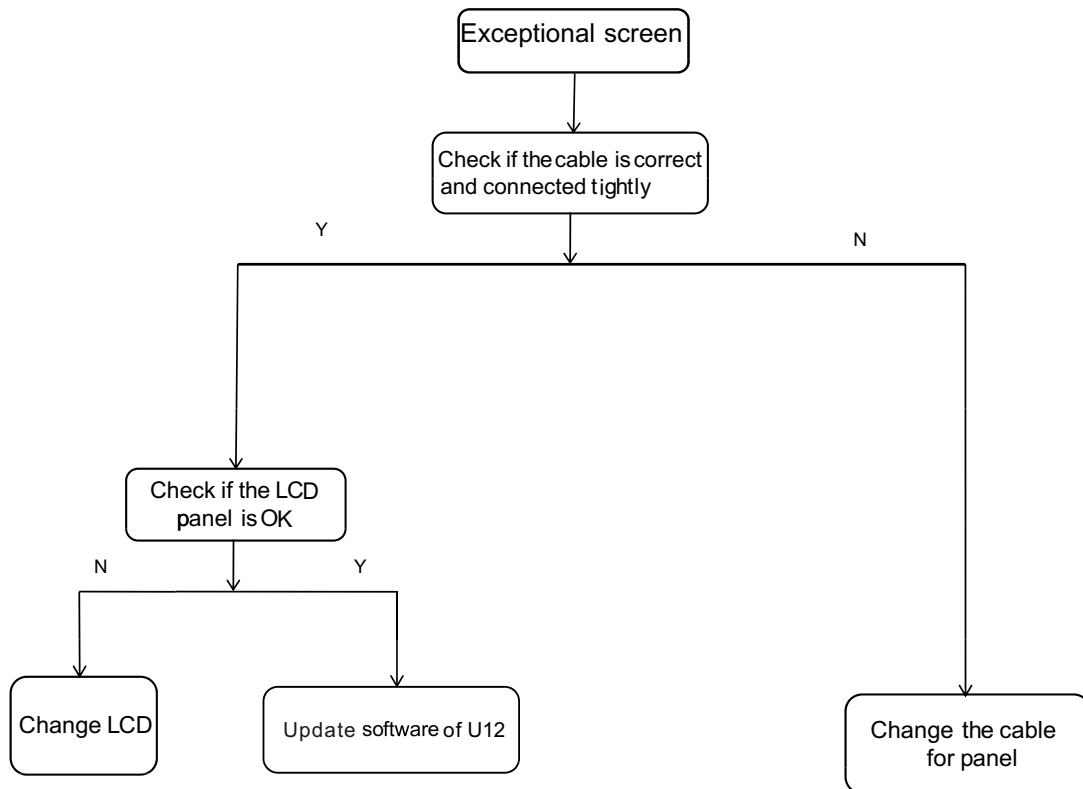
MANI BOARD FAULT JUDGMENT

1. Power supply trouble

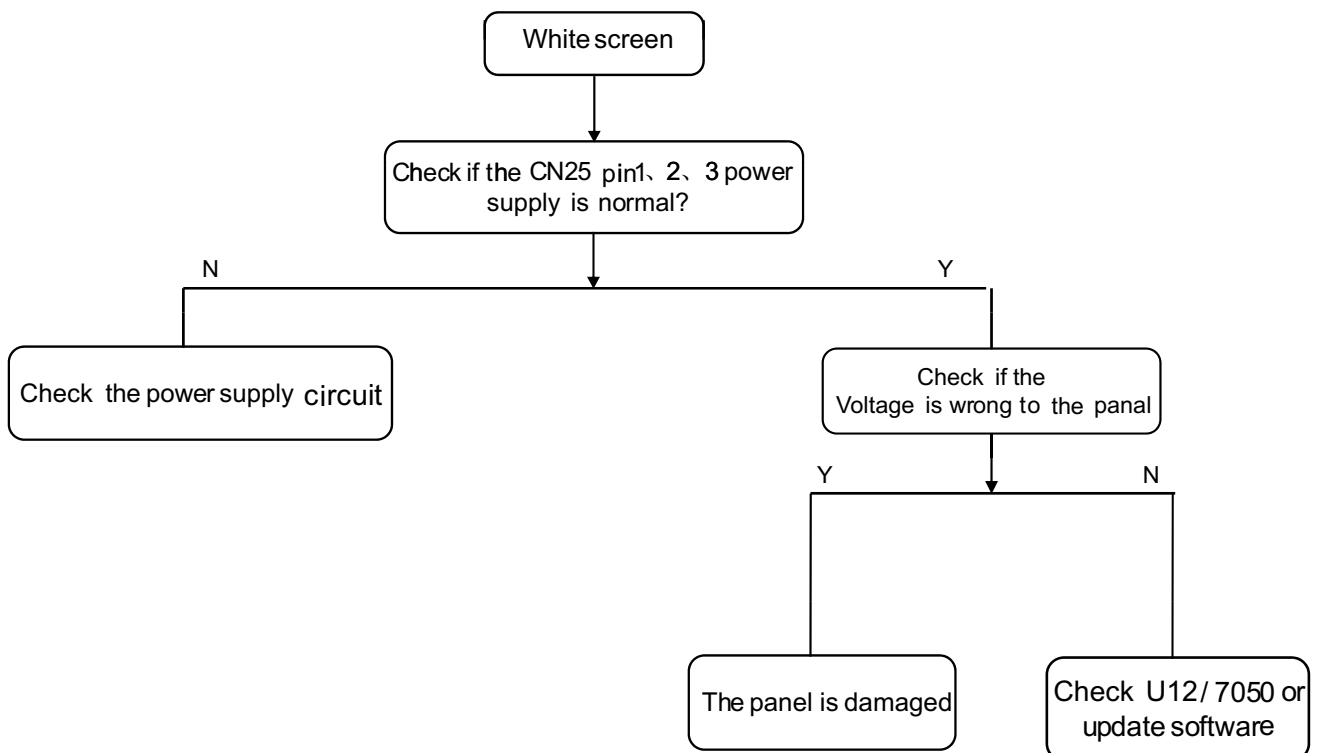


MANI BOARD FAULT JUDGMENT

2. Display Trouble(exceptional screen)

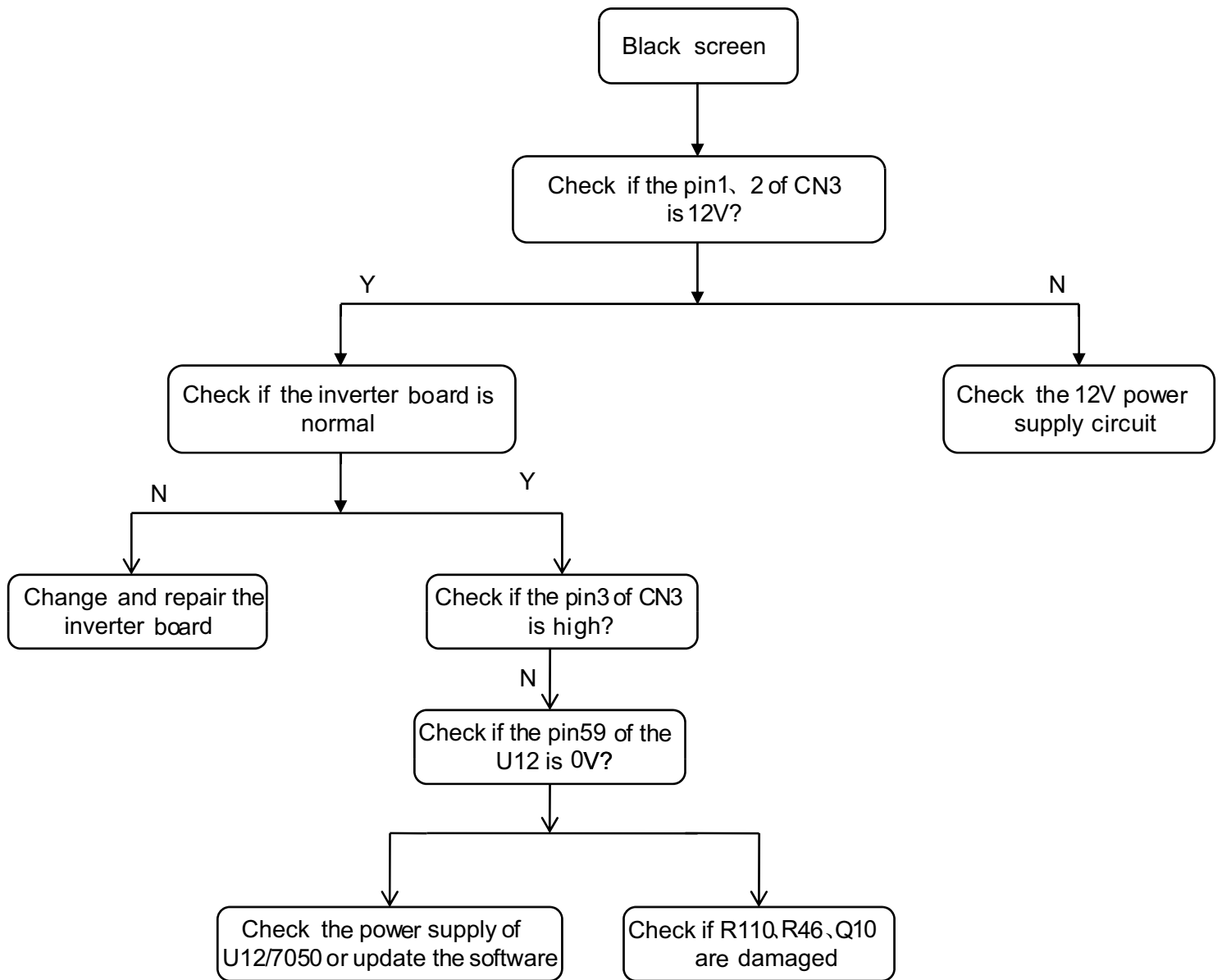


3. Display Trouble (white screen)



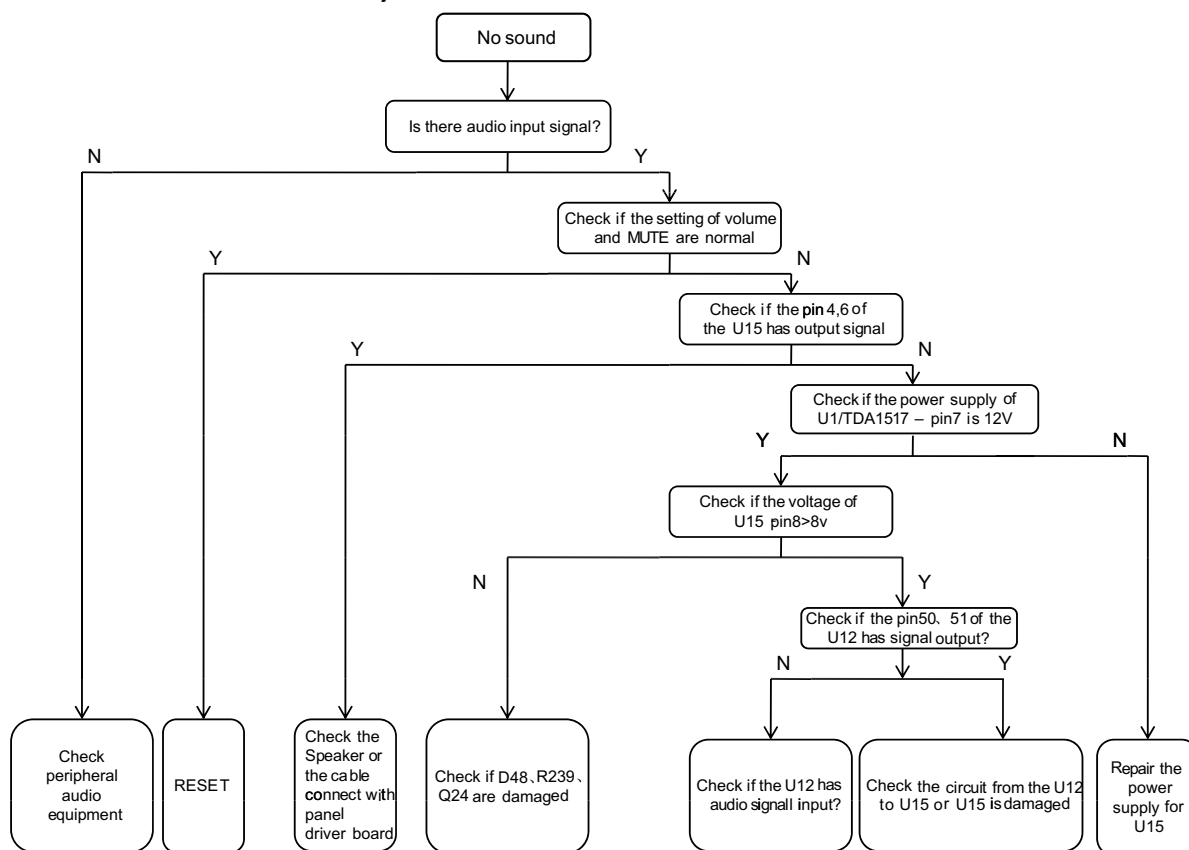
MANI BOARD FAULT JUDGMENT

4. Display Trouble (black screen)

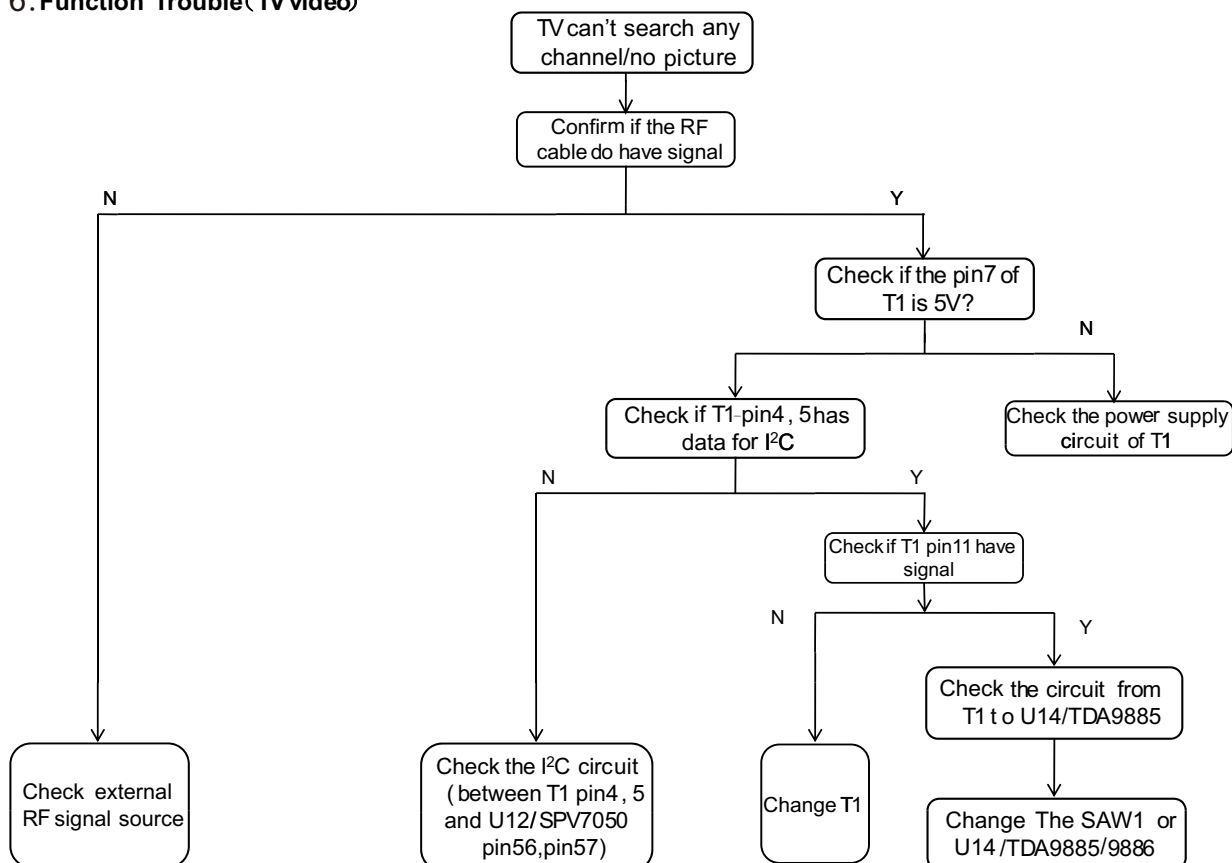


MANI BOARD FAULT JUDGMENT

5. Audio Trouble(No sound)

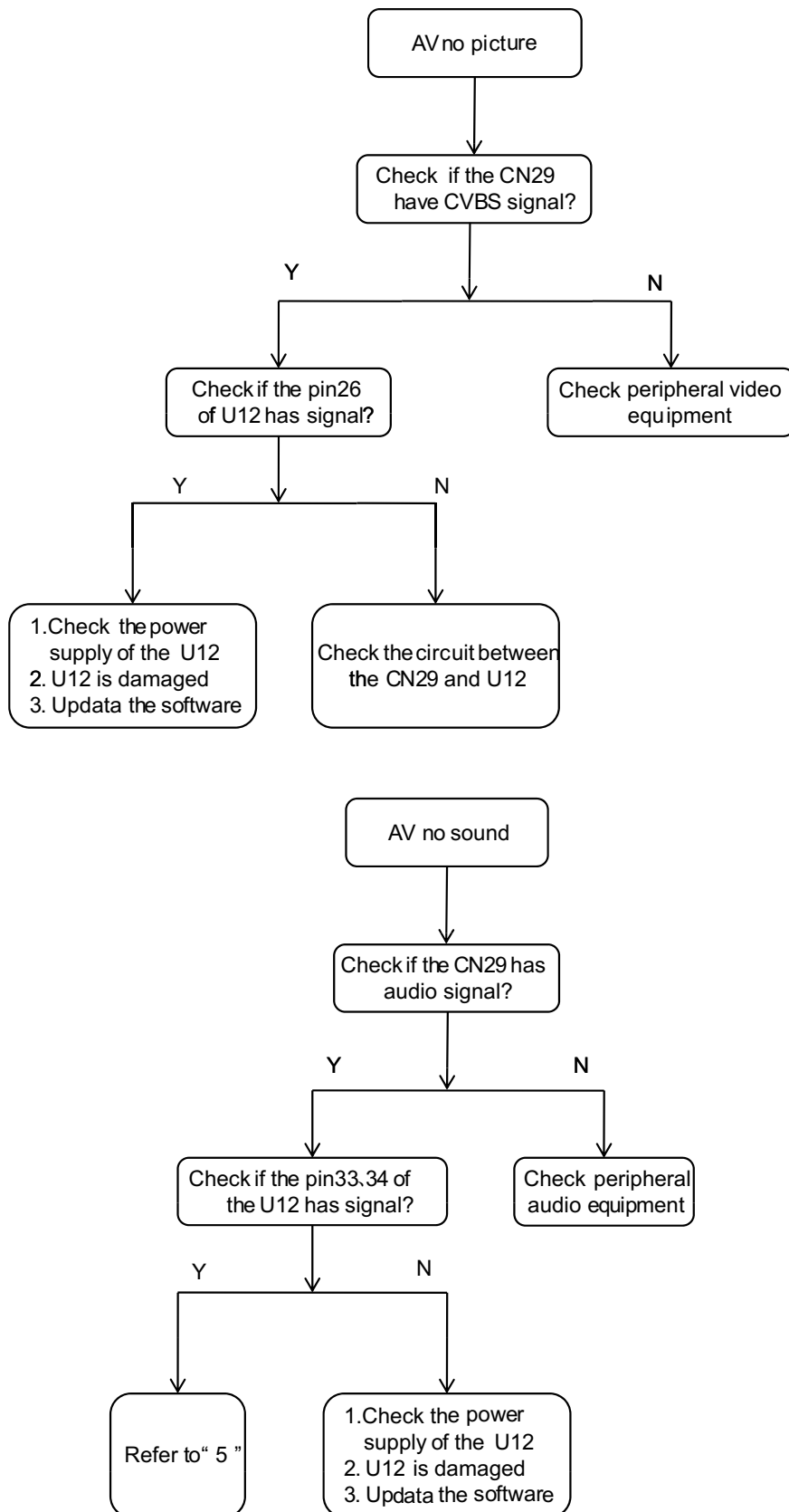


6. Function Trouble(TV video)



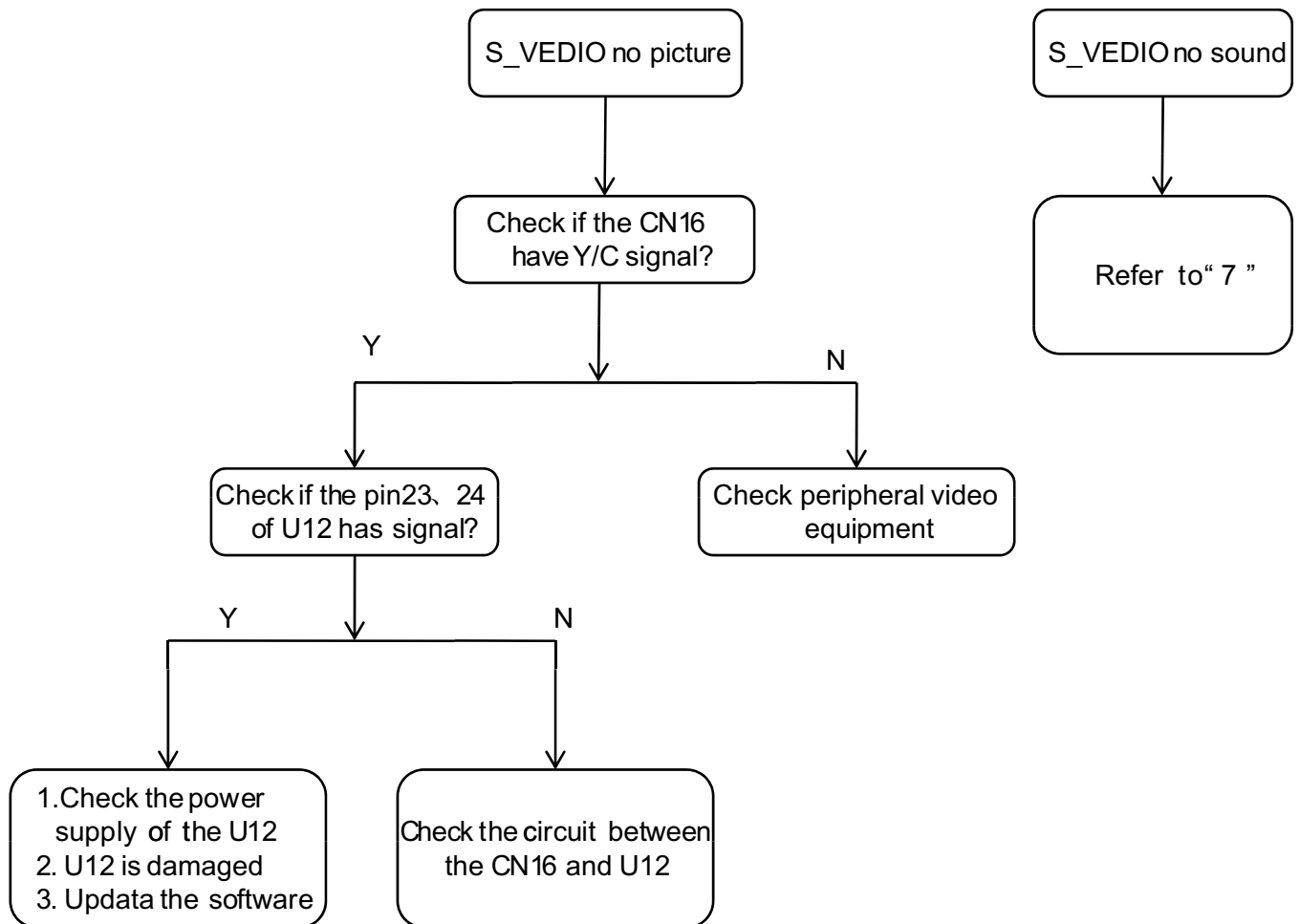
MANI BOARD FAULT JUDGMENT

7.Function Trouble(AV、S_VEDIO、SCART、HDMI、VGA)



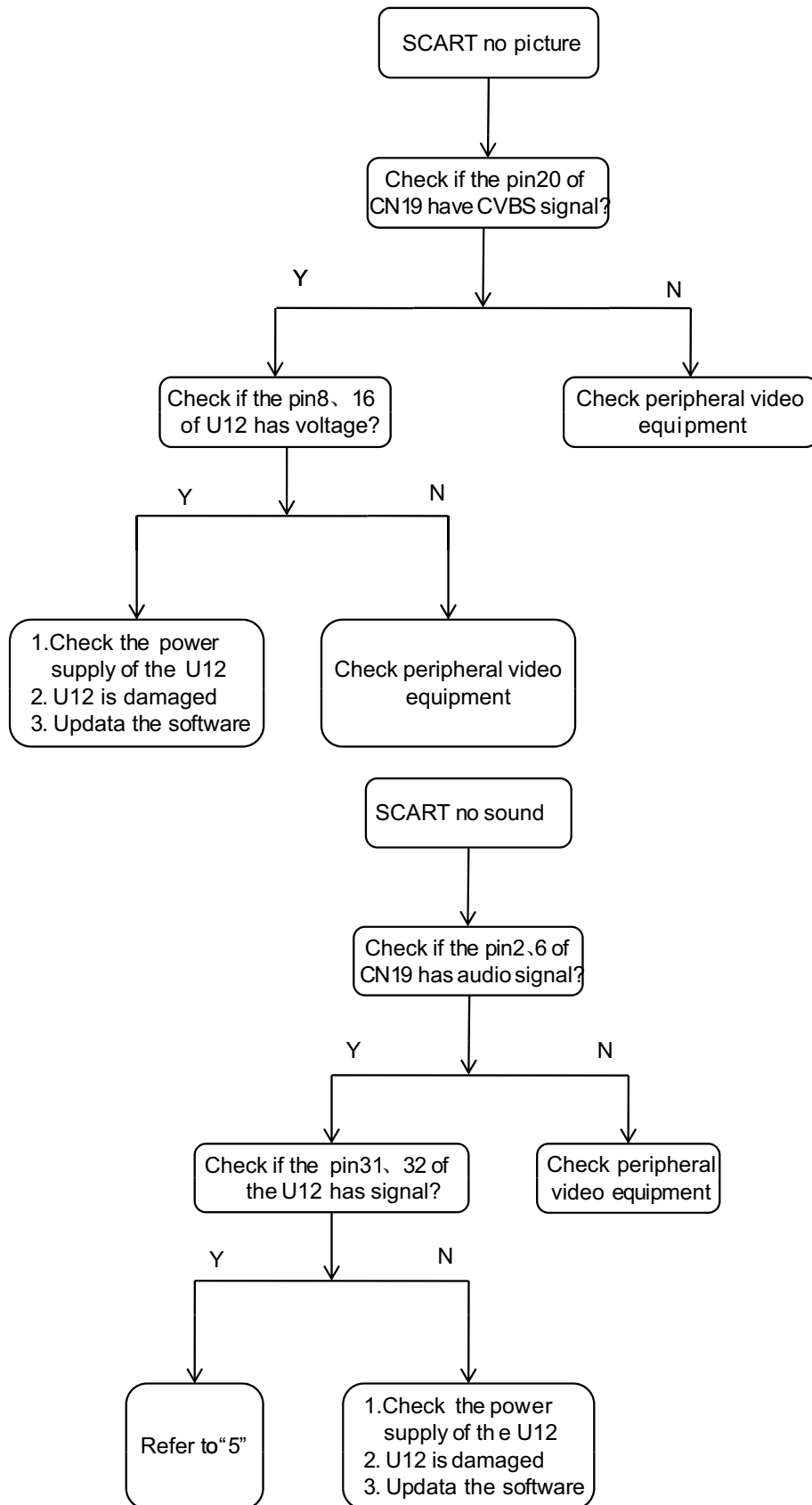
MANI BOARD FAULT JUDGMENT

8. Function trouble (S_VEDIO)



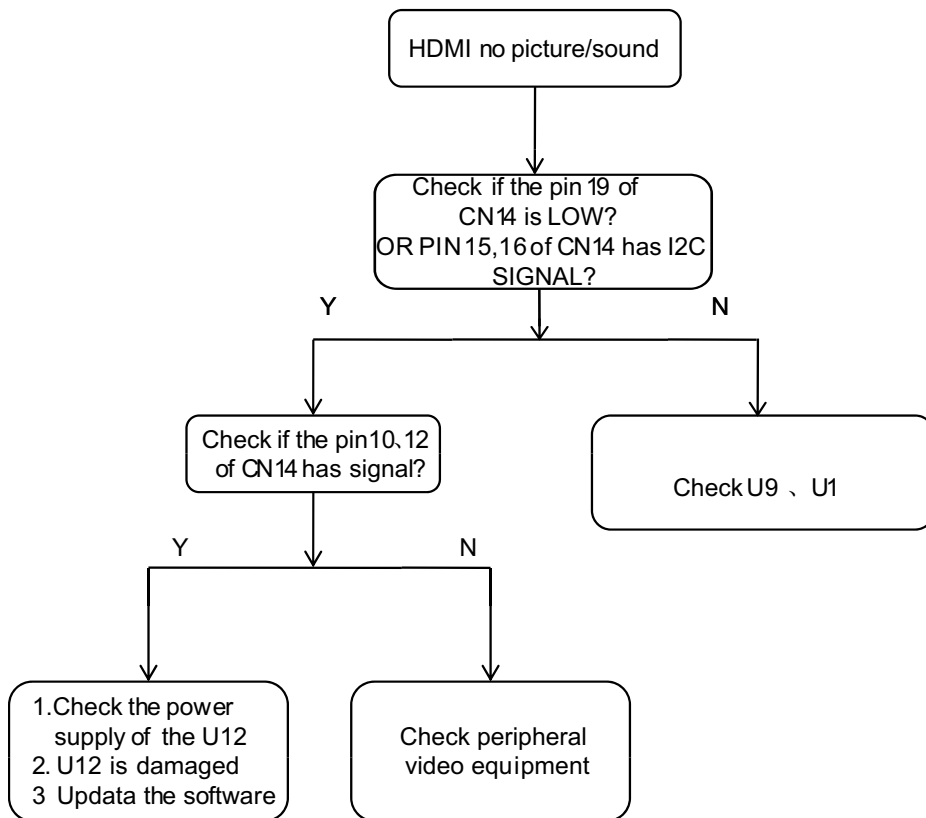
MANI BOARD FAULT JUDGMENT

9. Function trouble(SCART)

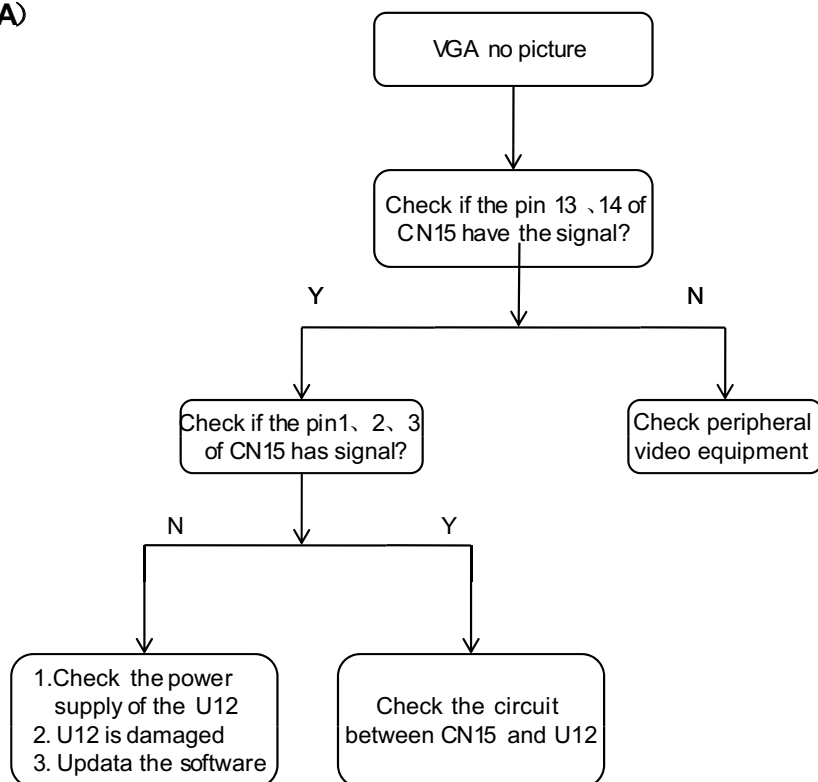


MANI BOARD FAULT JUDGMENT

10. Function trouble (HDMI)



11. Function trouble (VGA)

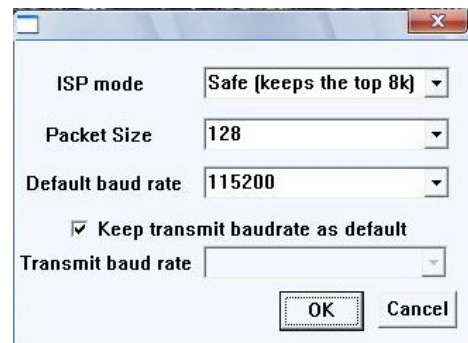
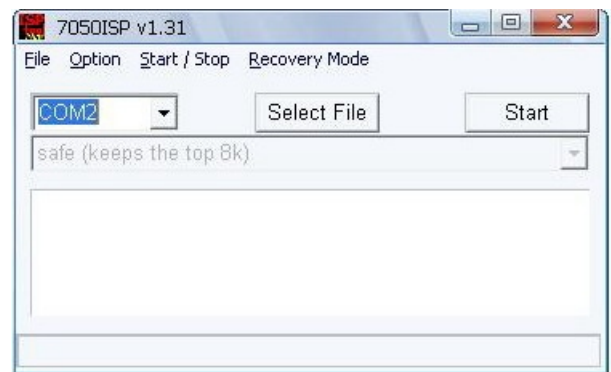


SOFTWARE UPGRADE

■ ATV SOFTWARE UPGRADE

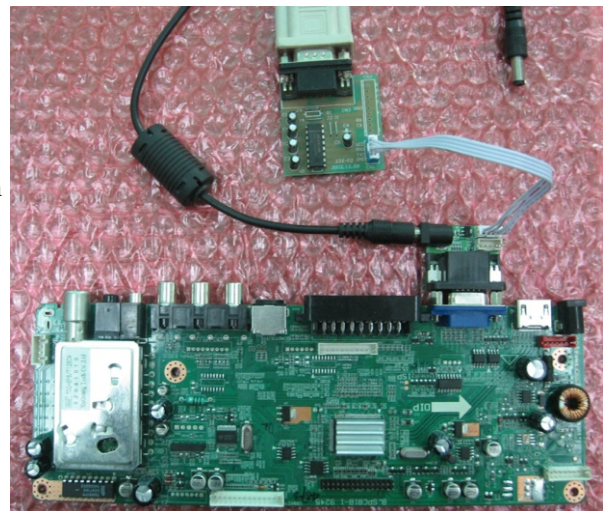
1. PC settings

- 1.1. Please run operation system of windows XP, advice Using English windows XP.
- 1.2. Please open the computer's hardware device manager, Set the Baud Rate of port COM1 and port COM2 to 115200. Please use default setting about other setting Items.
- 1.3. Open control panel of windows XP, enter view item Of folder option, cancel selecting hidden extension of Known file type.
- 1.4. Copy "7050ISP" folder into PC. cancel all File's attributes of folder.
- 1.5. Run 7050ISP.exe, Press "Option" and set these item as:
Choose effectual port between COM1 or COM2.
ISP mode: Safe (Keeps the top 8k)
Packet Size: 128
Default baud rate: 115200
And choose Keep transmit baud rate as default



2. Connection PC and TV

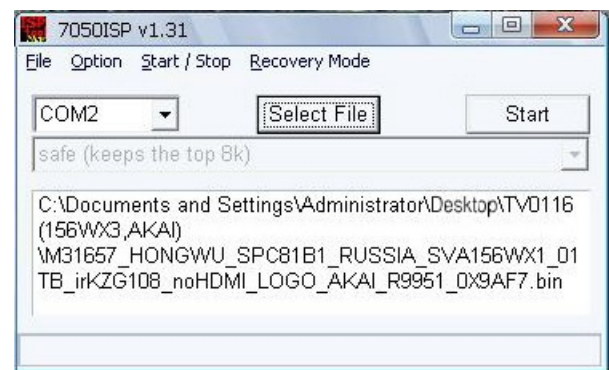
2. 1. Disconnection the Power from TV.
2. 2. Connect the upgrade match board to PC by RS232 Cable, connect the VGA plug on the upgrade match board to VGA Socket on TV main board.
2. 3. Connect DC12V to upgrade match board. but don't connect the Power to TV now.



SOFTWARE UPGRADE

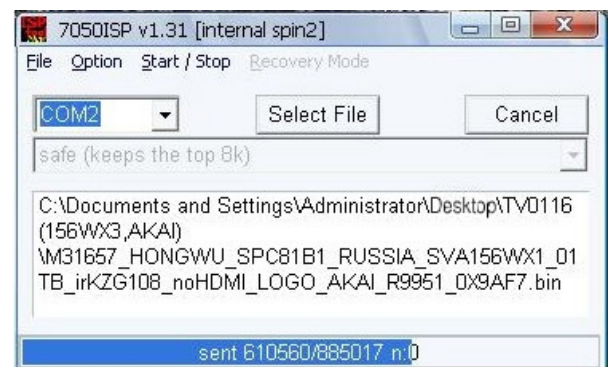
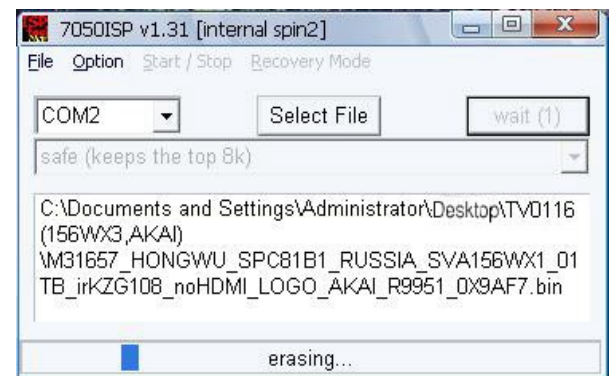
3. Upgrade

3. 1. Press "Select Files", and choose and open the Upgrade file.



3. 2. Connect DC12V to TV main board.

3. 3. Press "Start", then upgrade start.



3. 4. Until it display "finished!...", upgrade is finished.

3. 5. First disconnection the Power from TV, then pull out the VGA plug from TV main board.



Warning: Don't disconnection the Power while upgrading!

Note: This software need restoration after upgraded.

SOFTWARE DATA'S RESTORATION AND ADJUSTMENT

ATV

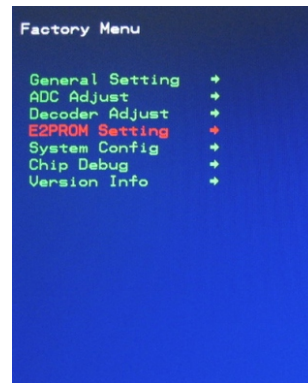
1. OSD RESTORATION

- 1.1. Enter LCD TV menu.
- 1.2. Select Function item.
- 1.3. Select Reset item, then press ENTER button, OSD will Restore.



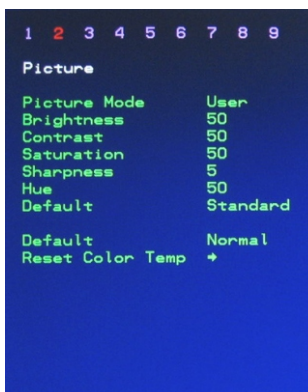
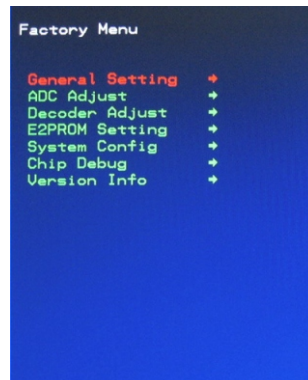
2. INNER DATA RESTORATION

- 2.1. Press LCD MENU button, then press 1147 numbers, It's into Factory Menu. Press LCD MENU button Again can exit Factory menu.
- 2.2. Select E2PROM Setting item, press RIGHT button enter it.
- 2.3. Select Reset Factory item, press RIGHT button or ENTER button, then will restore inner data.



3. SOFTWARE DATA'S ADJUSTMENT

- 3.1. Press LCD MENU button, then press 1147 numbers, It's into Factory Menu. Press LCD MENU button Again can exit Factory menu.
- 3.2. Select per item, it's may adjust the inner data.
- 3.2.1. General Setting 1-9:



SOFTWARE DATA'S RESTORATION AND ADJUSTMENT

1	2	3	4	5	6	7	8	9
Pic_Max_Min								
Bri-Min				8				
Bri-Max				196				
Con-Min				8				
Con-Max				196				
Sat-Min				0				
Sat-Max				255				
Hue-Min				0				
Hue-Max				255				

1	2	3	4	5	6	7	8	9
Image Process								
H Peaking				5				
DLTI				0				
DCTI				1				
UV Ex				0				
UV Offset				0				

1	2	3	4	5	6	7	8	9
Sound								
Sound Mode				Standard				
Treble				50				
Bass				50				
EQ100HZ				50				
EQ300HZ				50				
EQ1kHz				50				
EQ3kHz				50				
EQ8kHz				50				
Default				Vivid				
Volume 0				200				
Volume 1				540				
Volume 2				845				
Volume 3				880				
Volume 4				710				
Volume 5				740				

1	2	3	4	5	6	7	8	9
SOUND LEVEL								
ADC LEVEL				16				
MONO LEVEL				19				
DEC LEVEL				19				
SAP LEVEL				20				
DIGITAL LEVEL				16				
NICAM LEVEL				18				

1	2	3	4	5	6	7	8	9
Panel Config								
Lvds Map				0				
Lvds Bit Color				0				
Lvds Dither				1				
Panel Gamma				0				

1	2	3	4	5	6	7	8	9
EMC Emission								
EMC Test				Off				
EMC Spread spec				Low				

3.2. 2. ADC Adjust_Picture:

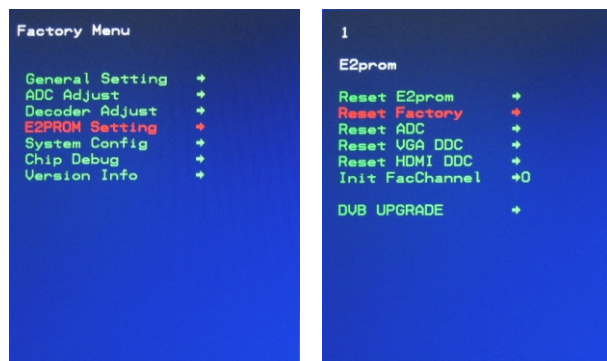
3.2. 3. Decoder Adjust_Picture:

1	2	3	4	5	6	7	8	9
Picture								
Auto Color				*				
R Gain				315				
G Gain				309				
B Gain				333				
R Offset				487				
G Offset				507				
B Offset				482				

1	2	3	4	5	6	7	8	9
Picture								
Con				85				
Bri				21				
Sat				164				
Hue				0				
Reset				→				

SOFTWARE DATA'S RESTORATION AND ADJUSTMENT

3.2. 4. E2PROM Setting, Reset Factory:



3.2. 5. System Config 1-2.



3.2. 6. Chip Debug, Tuner AGC adjust:



3.2. 7. Version Info:



Note: Inner data is in effect after exit all menu. if restore inner data, it get back inner data into default data, and manual adjustment data isn't saved.

Warning: Don't optionally adjust default data, TV can't Work if data is error.

Main Electric Parts List

■ Main Electric Parts List

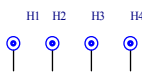
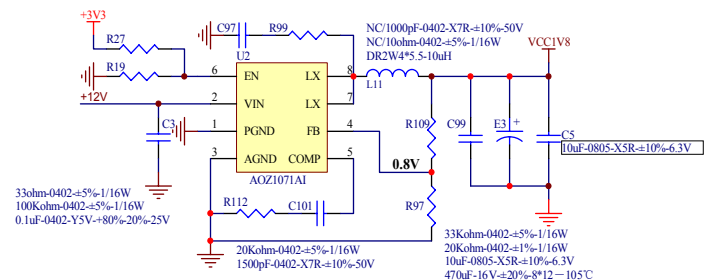
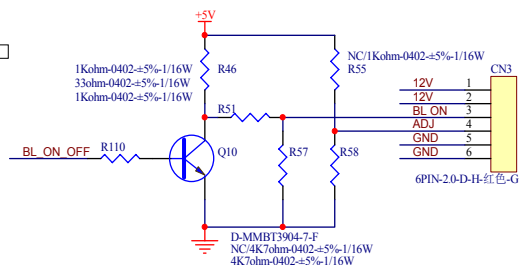
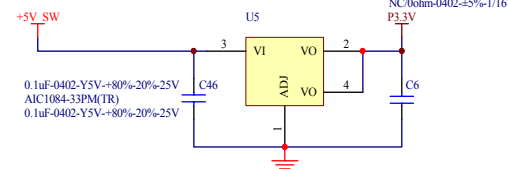
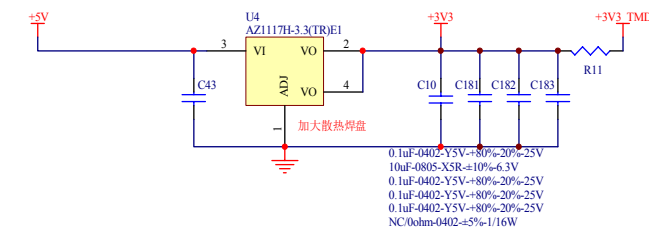
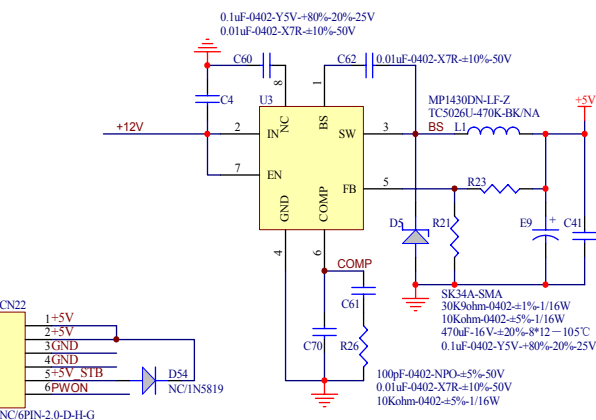
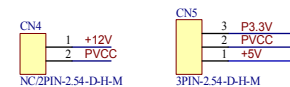
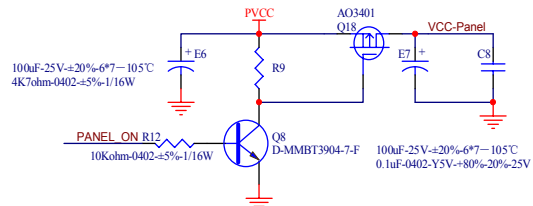
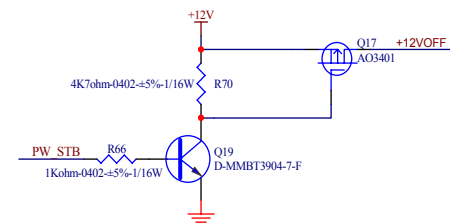
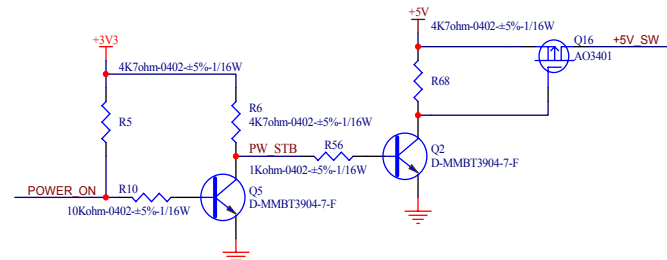
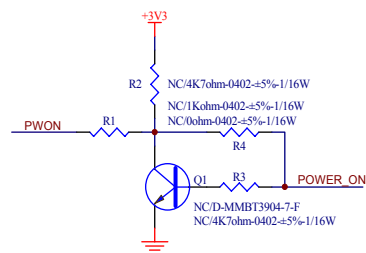
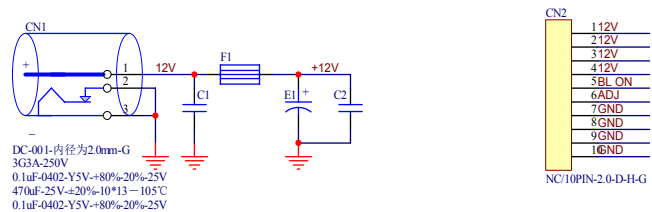
Main Electric Subassembly	Part Name	Referenced Model/Specification	Location
TV Main Board (Model:B. SPC81B-1)	Tuner	TDQ-6F6/T126CW	T1
	IC	TDA1517P	U15
		TDA9885TS	U14
		EH16A	U4, U1
		927432A-2GL1	U13
		T80-75HCP	U11
		SPV7050P	U12
		74HC4052D	U17
		940402B-2GL1	U9, U10
		MP1423DN	U3
		AZ1084S2-3.3E1	U5
		Z1071A1	U2
	SAW Filter	AF389A14Dd	SAW1
	SAW Filter	VF389A1Dc	SAW2
Back Light Inverter (Model: MI04BIT12-24-010)	Crystal	JWT27.000	Y1
	Fuse	250V/3A Tube	F1
	Transformer	EEL19-009GP	T1, T2
	IC	TE-5005	U1
LCD Module	MOS FET	4501SS	Q1, Q3
	LCD Module	LTA150XH-L06	
Speaker	Speaker	4Ω/5W, 3070	
Sensor Board	Sensor Board	190-15N1D2-52	
Key Switch Board	Key Switch Board	190-15W4J7-52	
AC-DC Adapter	AC-DC Adapter	INPUT: 100-240AC, OUTPUT: DC 12V/4A	

SPECIFICATIONS

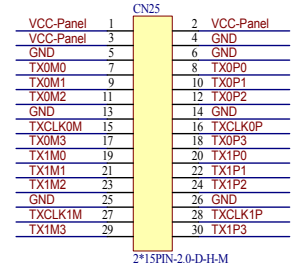
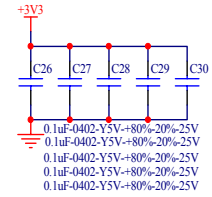
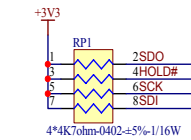
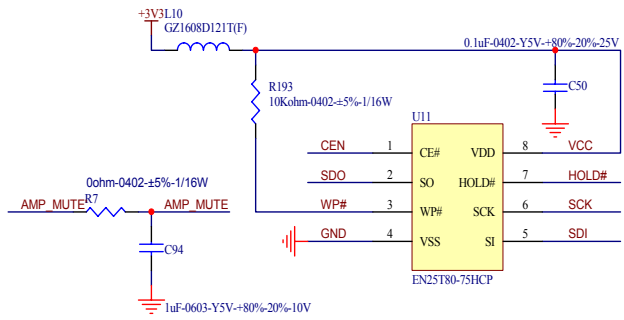
Screen Size	15 inch diagonal, 4:3
Power Supply / Power Consumption	100 -240Vac/50Hz/60Hz, 30W
RF System	PAL - BG/DK/ I, SECAM - BG/DK/L
Video System	PAL / SECAM NTSC 3.58/4.43
Frequency Range	48.25 - 863.25 MHz
Aerial Input	75 ohm coaxial
Channels Memory	199
HDMI Input Format	1080p / 1080i
VGA Input Format	Up to 1024*768 / 75Hz
Audio Output	2W + 2W

Specifications may be subject to change without notice for improvement.

ACCESSORIAL CIRCUIT DRAWING

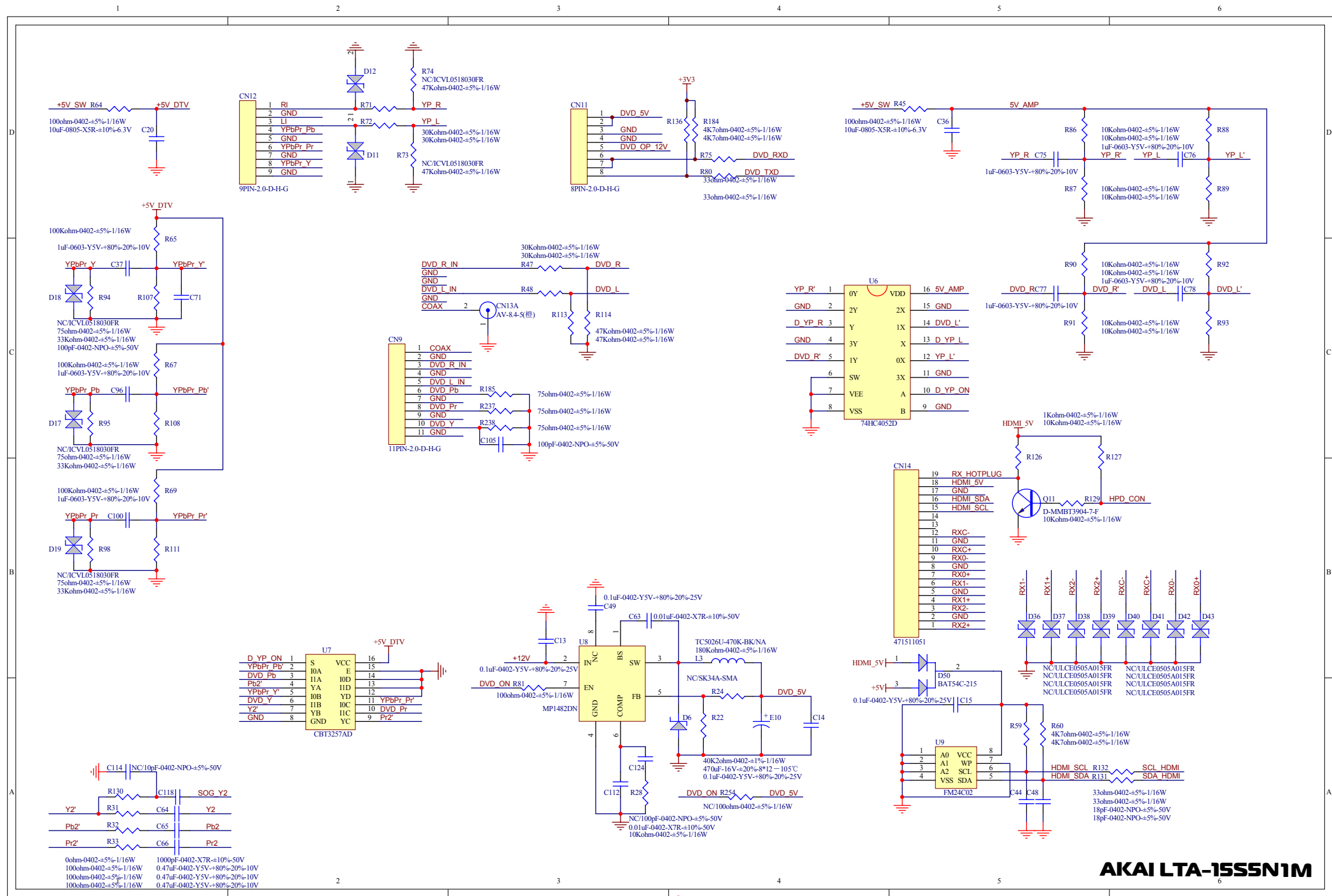


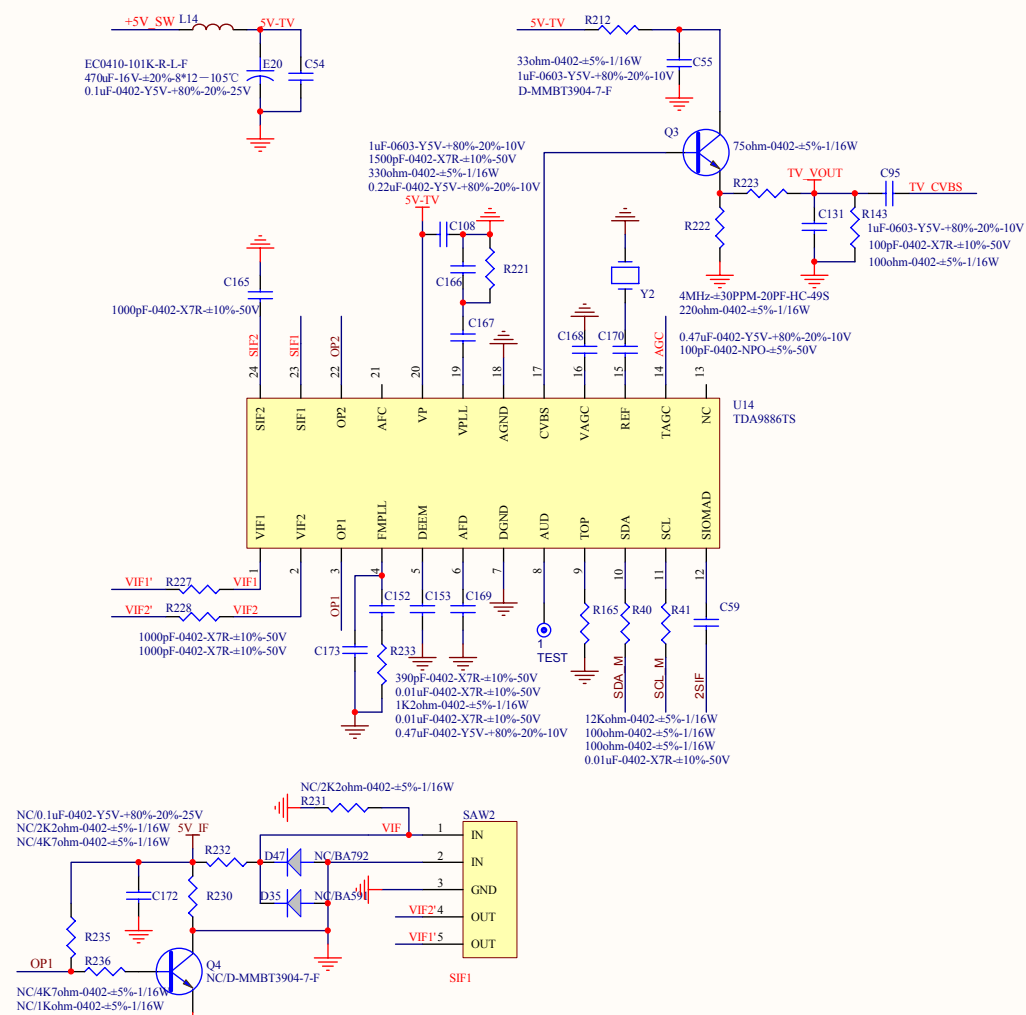
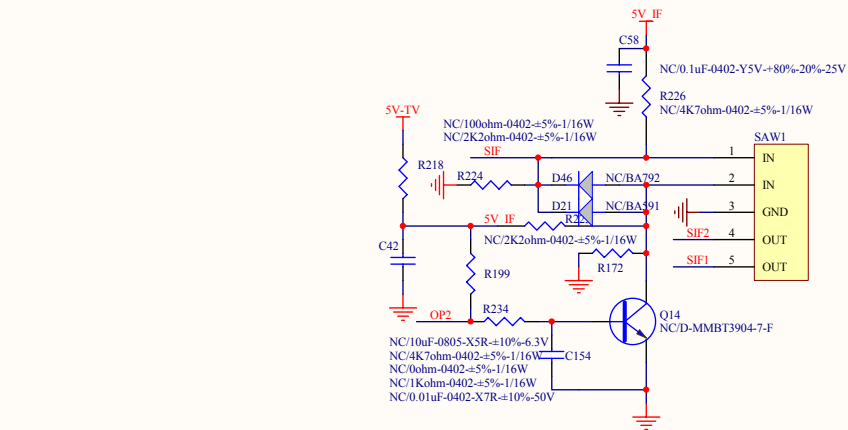
Title			AKAI LTA-1555N1M		
Size B	Number			Revision	
Date:	17-Apr-2009			Sheet	of



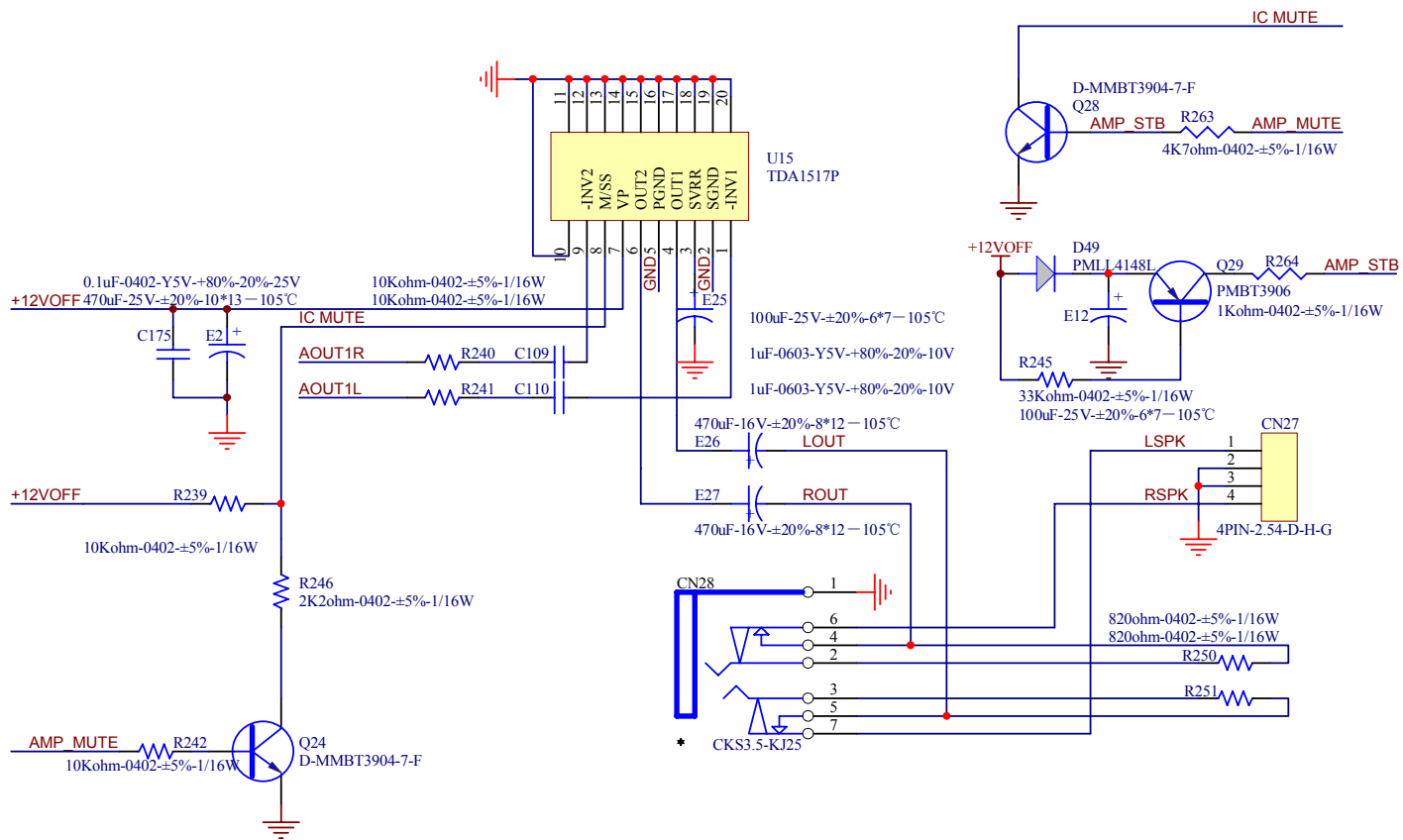
AKAI LTA-15S5N1M





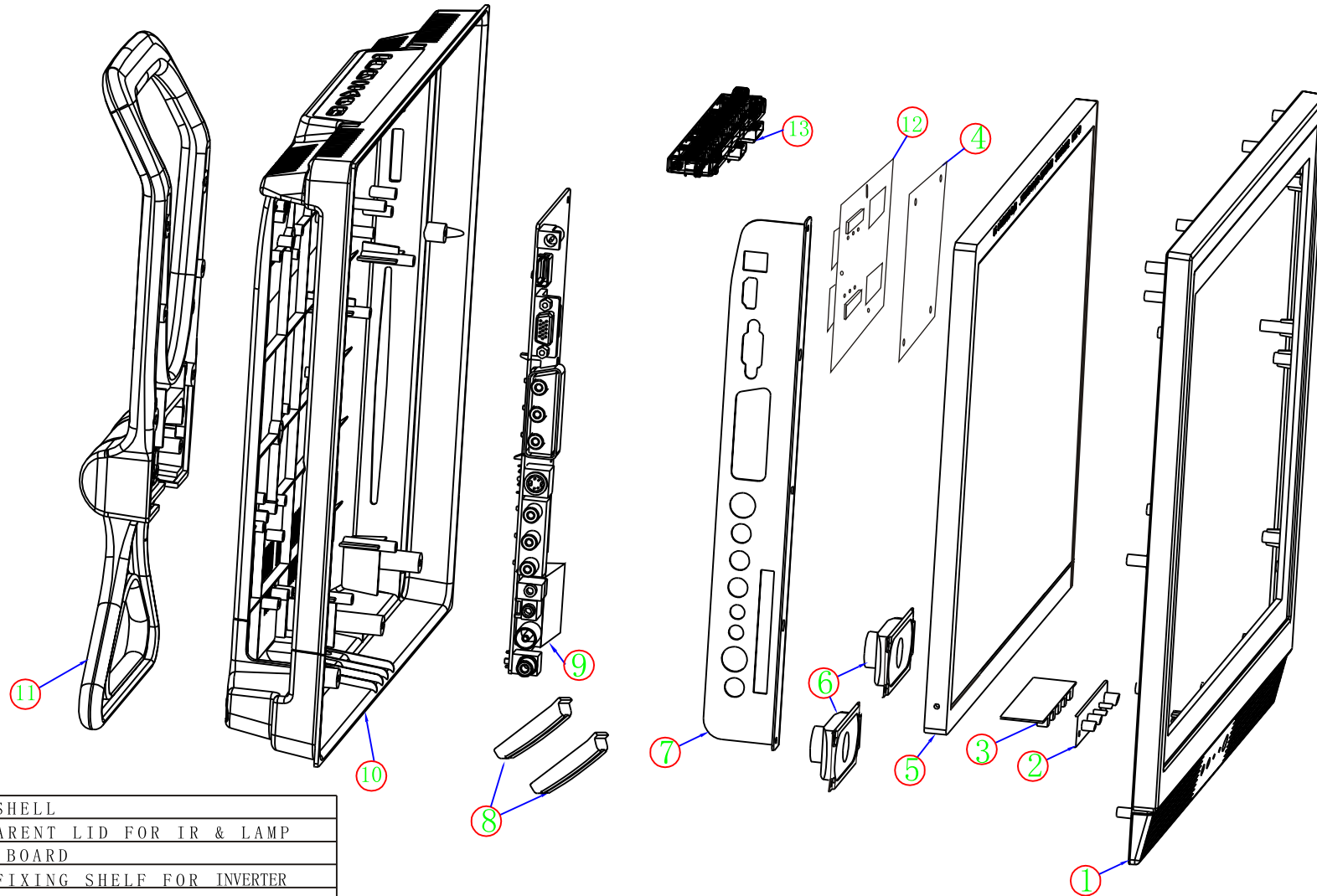


AKAI LTA-1555N1M



AKAI LTA-15SSN1M

Exploded view LTA-15SS5N1M



1	FRONT SHELL
2	TRANSPARENT LID FOR IR & LAMP
3	SENSOR BOARD
4	METAL FIXING SHELF FOR INVERTER
5	LCD MODULE
6	SPEAKER
7	PANEL FOR JACK & SOCKET
8	RUBBER FOOT CUSHION
9	TV MAIN BOARD
10	BACK SHELL
11	HANDLE
12	BACK LIGHT INVERTER
13	KEY ANG KEY SWITCH BOARD