



**Colour TV  
Service Manual**

**Model: 21AFS1/CE**  
**Chassis: UOC**

## CONTENT

GENERAL DESCRIPTION .....	4
SAFETY INSTRUCTION .....	6
CIRCUIT ADJUSTMENT .....	7
FAULT FINDING TREES, DIAGRAMS & OVERVIEWS .....	13
VARIOUS PARAMETERS OF INTEGRATED CIRCUIT .....	21
ELECTRICAL PART LIST .....	25
CIRCUIT DIAGRAM .....	36

## GENERAL DESCRIPTION

AKPH02 chassis series are applied in A14P01/A21P01 respectively which uses mainly Philips' advance UOC ultimate chip TDA935X/6X/8X and I<sup>2</sup>C-bus controlled IC. With combination of microcontroller and small signal processor, the TDA935X/6X/8X series feature high-integration, high performance-to-price ratio and high-reliability and advanced functions with fewer external component, which provide much convenience for manufacturing and technical service.

Figure 1: show the block diagram of AKPH01(A14P01/A21P01).

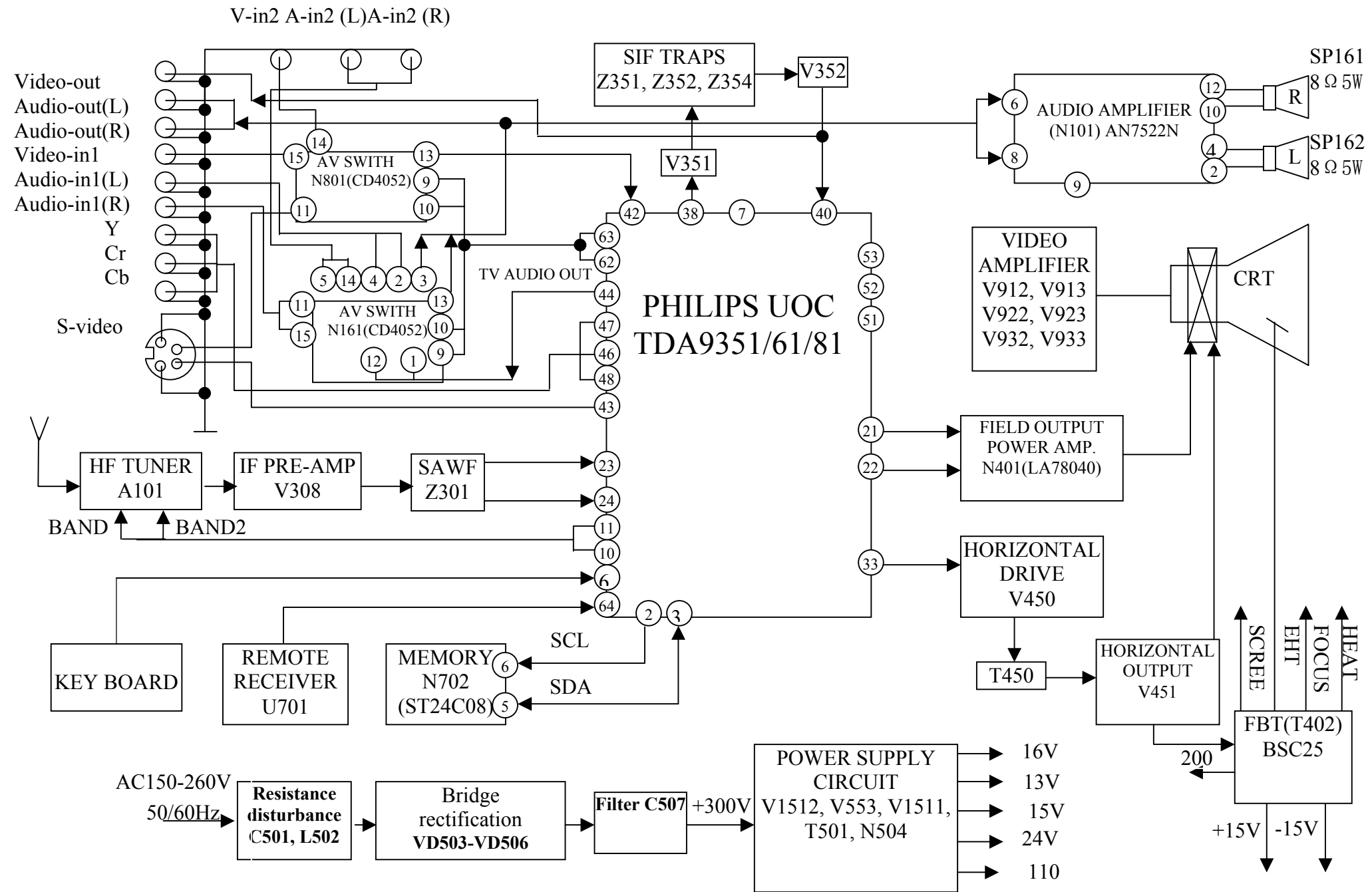
Table 1: Provides A14P01/A21P01 mainly ICs and functions.

Figure 2: Shows the whole set power supply system for AKPH01(A14P01/A21P01).

Figure 3: Shows the system control circuit of AKPH01 (A14P01/A21P01).

Table 1: A14P01/A21P01 mainly ICs and functions.

Position	Type	Function Description
N301	TDA9361/TDA9381	Microcontroller and small signal processor(UOC)
N702	ST24C08-W	EEPROM
N701	AN7522N	Sound power amplifier
N401	LA78040	Vertical scan output stage circuit
N801	LC4052B/CD4052BE	AV1/AV2 Switch
N121	LC4052B/CD4052BE	AV1/AV2 Switch



## **SAFETY INSTRUCTION**

Warning: Before examining and servicing this chassis, read carefully the following safety instruction.

### **X-RAY RADIATION PRECAUTION**

1. The EHT must be checked every time the receiver is serviced to ensure that the CRT does not emit X-ray radiation as result of excessive EHT voltage. The nominal EHT for this receiver is 22KV at zero beam current (minimum brightness) operating at AC 220V. The maximum EHT voltage permissible in any operating circumstances must not exceed 25KV. When checking the EHT, use the High Voltage Check procedure in this manual using an accurate EHT voltmeter.
2. The only source of X-RAY radiation in this receiver is the CRT. To prevent X-ray radiation, you should use the same type of CRT when replacing it.
3. Some components used in this receiver have safety-related characteristics preventing the CRT from emitting X-ray radiation. For continued safety, replacement component should only be made after referring the Product Safety notice below.

### **SAFETY PRECAUTION**

1. The high voltage in the TV reaches to 22KV when the TV is in operation. Be more careful during opening the back cover.
  - a. The high voltage existing in the TV is very dangerous. Refer servicing to qualified personnel only.
  - b. Before removing the high voltage cap. Discharge the anode of the CRT and the chassis in case of electric shock.
  - c. Wear a pair of goggles when handling the CRT to avoid broken pieces damaging your eyes.
  - d. Do not hold the CRT neck in case of causing damage to the CRT.
2. When the power cord needs replacing, use the same one as that provided by AKIRA factory.
3. Voltage exists between the hot and cold ground when TV is in operation. Install a separation transformer during repairing or connecting to any tester for the sake of safety. The power of the separation transformer should be beyond rated overall power.
4. When replacing a burnout fuse, use the one with the same specifications as the original.
5. When replacing old wire, wind new one round the shaft to weld. When replacing components with safety in performance, use the same type as that specified by AKIRA and install it in the former way.
6. Never place wire near high-temperature or high-voltage components.

### **SAFETY CAUTIONS FOR PRODUCTS**

Many electric and mechanical components in AKPH01 chassis have special safety performances, which are always neglected. Even if replacing them with some components with the same voltage and power, you can not get effective protection to X-ray. In the circuit diagram, these special electric components are indicated by the special mark  $\triangle$  and on the shadow. When replacing any of them, use the one with the same specifications as the original's. Otherwise, it may cause X-ray radiation and damage to overall safety.

## CIRCUIT ADJUSTMENTS

### GENERAL INFORMATIONS

All adjustment are thoroughly checked and corrected when the receiver leaves the factory. Therefore the receiver should operate normally and produce proper color and B/W pictures upon installation. However, several minor adjustments may be required depending on the particular location in which the receiver is operated.

This receiver is shipped completely in carton. Carefully draw out the receiver from the carton and remove all packing materials. Power cord into a convenient 220 volts 50 Hz AC two pin power outlet. Turn the receiver ON. Check and adjust all the customer controls such as BRIGHTNESS, CONTRAST and COLOUR Controls to obtain natural color or B/W picture.

### AUTOMATIC DEGAUSSING

A degaussing coil is mounted around the picture tube so that external degaussing after moving the receiver is normally unnecessary, providing the receiver is properly degaussed upon installation. The degaussing coil operates for about 1 second after the power to the receiver is switched ON. If the set is moved or faced in a different direction, the power switch must be switched off at least 30 minutes in order that the automatic degaussing circuit operates properly. Should the chassis or parts of the cabinet become magnetized to cause poor color purity, use an external-degaussing coil. Slowly move the degaussing coil around the faceplate of the picture tube, the side and front of the receiver and slowly withdraw the coil to a distance of about 2m before disconnecting it from AC source. If color shading still persists, perform the COLOUR PURITY ADJUSTMENT and CONVERGENCE ADJUSTMENTS procedures.

### ADJUSTMENT MODE

Item	B+ adjustment, TV signal receiving
	AKPH01 chassis
Measuring Equipment	TV SG (Signal Generator) Digital multi-meter
Preparation Before Adj.	The set is turned on Connect the TV SG to RF input terminal of the set.

Adjustment procedure

1. Turn VR501 potentiometer to adjust B+ to specified voltage.
2. Check voltages for video out, vertical out, circuit work and audio power out as follow

	Voltage (volt)		Tolerance
	14 inch	21 inch	
+B	110	110	±2V
Video Out	188	188	±5V
Vertical Out	26	26	±1V
Circuit Work	13	13	±1V
Audio Power Out	12	12	±1V

3. TV signal receiving
  - a. Press MENU key, to select POS.MEMORY item.  
Press V+ or V- key, to select SEARCH or AUTOMEMORY item, press P+ key to start searching.
  - b. Press P+ or P- key to inspect the set if there is channel skipped, if so, searching again by SEARCH as above described.

Item	TV system adapting & AV in/output inspection
	AKPH01 chassis
Measuring Equipment	SG (with NTSC3.58). User remote controller Dual trace oscilloscope
Preparation Before Adj.	Input TV and AV signal

Inspection procedure

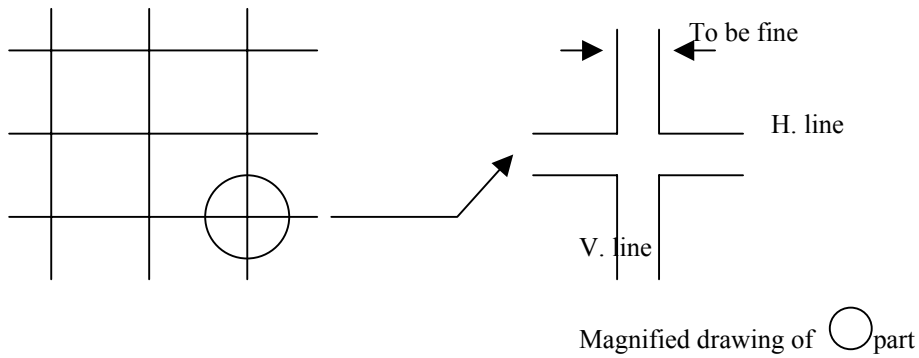
1. Input the TV signal which system is designated in technical specification
2. Switch TV system to the set by pressing SYS key on user remote controller according to the TV system in SG. The picture and sound must be normal.
3. Press TV/AV key, to select AV input. The picture and sound must be normal
4. AV output inspection. Load a 75Ω resistor to VIDEO output terminal, 1Vp-p video output signal that is from TV signal should be observed on the oscilloscope. Load a 10K resistor to AUDIO output terminal, 0.7Vp-p audio output signal that is from TV should be observed on the oscilloscope.



Item	Focus adjustment
	AKPH01 chassis
Measuring Equipment	SG
Preparation before Adj.	Brightness, contrast and color should be set in standard

Adjustment procedure

1. Receive the cross-hatch pattern signal
2. Turn the focus adjusting VR watching the screen and adjust the vertical line of mark to make the most thin. Then the focus adj. VR is set as close low voltage side as possible.  
Stop the focus adj. VR at the point that focus is a bit worse at once, turn back to the left and then turn back to the right a little again.



Item	White balance adjustment
	AKPH01 chassis
Measuring Equipment	SG and white balance meter service remote controller
Preparation before Adj.	Warm up the set for more than 30 min. Brightness, contrast and color should be set in standard

**MENU9 CRT cut-off and white balance and sub-brightness adjustment.**

Receive gray and white 2 steps signal.

1. CRT cut off adjustment.
  - a. Push [P+][P-] key to select “SC”, push [V+][V-] key then automatically vertical scan will be stopped.
  - b. Adjust SCREEN control on Flyback transformer to get the darkest single horizontal line (red, green, or blue, sometimes shows more yellow, more purple or more white).
  - c. Push [V+][V-] key again, vertical scan work repeat.
2. White balance adjustment.
  - a. Select RD/BD menu.
  - b. Adjustment RD/BD to get color temperature as x=282, y=292.
3. Sub-brightness adjustment (use stair case signal)
  - a. Select SB MENU.
  - b. Adjust SB to get the darkest step being out off.

Item	RF. AGC adjustment
	AKPH01 chassis
Measuring Equipment	SG and digital multi meter service remote controller
Preparation Before Adj.	Connect a digital multi meter to AGC point on the chassis

Adjustment procedure

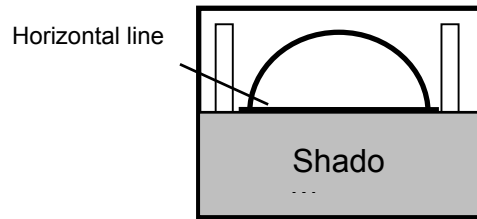
1. Receive the color bar signal that is 87.5% modulation and 60dBu level
2. Press AGC-TOP on service remote controller to select AGC-TOP adjustment, press + or – key to adjust the voltage of AGC-TOP to  $6.2 \pm 0.05V$  that is read on the digital multi meter.

Item	Vertical height, linearity and Hor. position adjustment
	AKPH01 chassis
Measuring Equipment	SG service remote controllers
Preparation Before Adj.	Brightness, contrast and color should be set in standard

**MENU8 Geometrical adjustment .**

Receive standard Crosshatch pattern signal for PAL system.

1. Adjust VSLOPE value to the horizontal line just appear from half bottom shadow.
2. Adjust VSHIFT value the center horizontal line correspond to CRT vertical center.
3. Adjust Vamp value to get 90% of vertical picture contents would be displayed on CRT.
4. Adjust HSHIFT value to get the picture horizontal center correspond to CRT horizontal center.
5. Receive standard Crosshatch pattern signal for NTSC system, and again adjust.




Item	OSD position adjustment
	AKPH01 chassis
Measuring Equipment	Service remote controller
Preparation Before Adj.	Brightness, contrast and color should be set in standard

Adjustment procedure

1. Press 5 key on service remote controller to set the set into design mode adjustment.
2. Press  $\uparrow$  or  $\downarrow$  key to select OSD VPOS item, press  $\rightarrow$  or  $\leftarrow$  key to adjust the OSD to the center position on the screen or press OSD HPOS on service remote controller and press + or – key to adjust the OSD position.
3. Press M key again to quit design mode adjustment.

Item	The functions of the set inspection
	AKPH01 chassis
Measuring Equipment	SG User remote controller
Preparation Before Adj.	The set is turned on

#### Inspection procedure

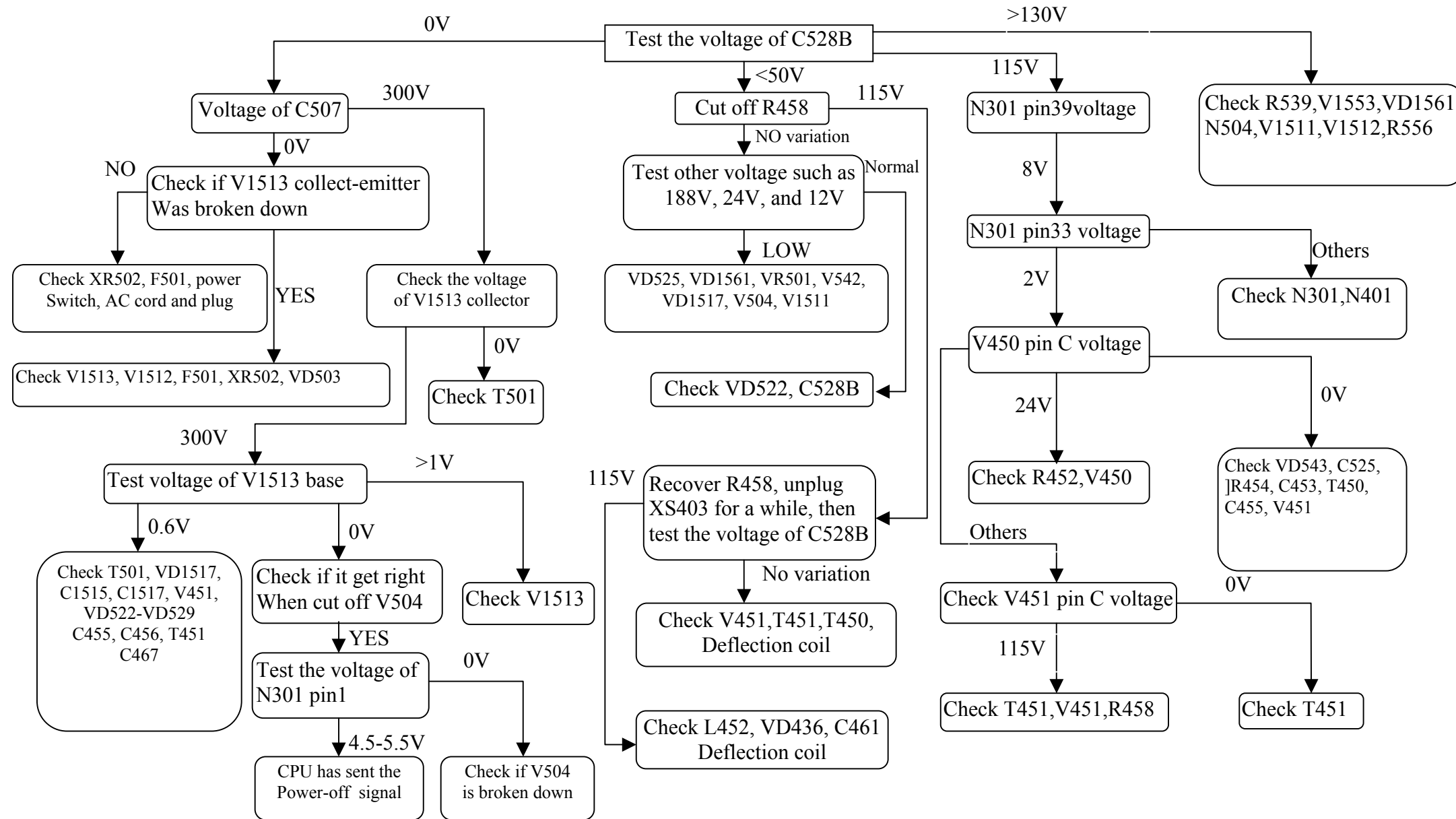
1. Receive the Philips pattern signal
2. Press PIC key on user remote controller to call the menu as adjusting picture quality. Adjust color, brightness, contrast, sharpness and tint (in NTSC) respectively and all adjustment should be right.
3. Press V+ key to increase the sound volume, no distortion heard at maximum level, press V- key to decrease the sound volume, no sound heard at minimum level
4. Press POWER key to switch the set into standby status, at mean time the manufactory adjustment mode is cancelled.
5. Press POWER key again, the set should work in normal receiving mode.
6. Press  (mute), QV (display), PP and TIMER key respectively, the relevant function should be normal

### **ENTER SERVICE MODE BY USER REMOTE**

1. Press "MENU" key on remote control.
2. Press "8" "5" "0" "0". "M" will be display on the screen.
3. Press "2" IF frequency appear.

## FAULT FINDING TREES, DIAGRAMS AND OVERVIEWS

- Three-None (no raster, no picture, no sound)  
This failure is mainly caused by big-power circuit such as power supply, horizontal scanning, vertical scanning.  
The detail checking and repairing steps are as follow.



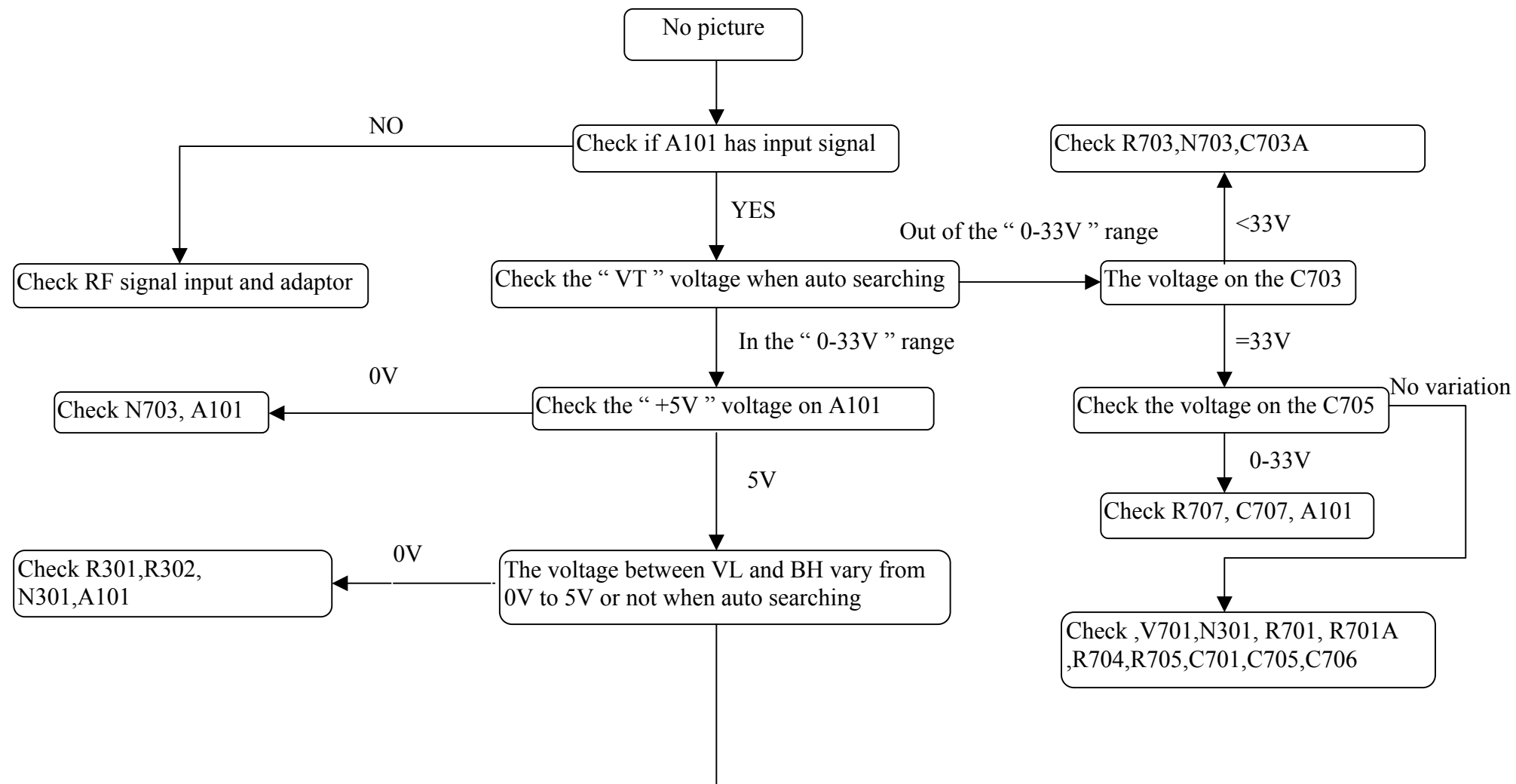
2. Two-None (no picture, no sound)

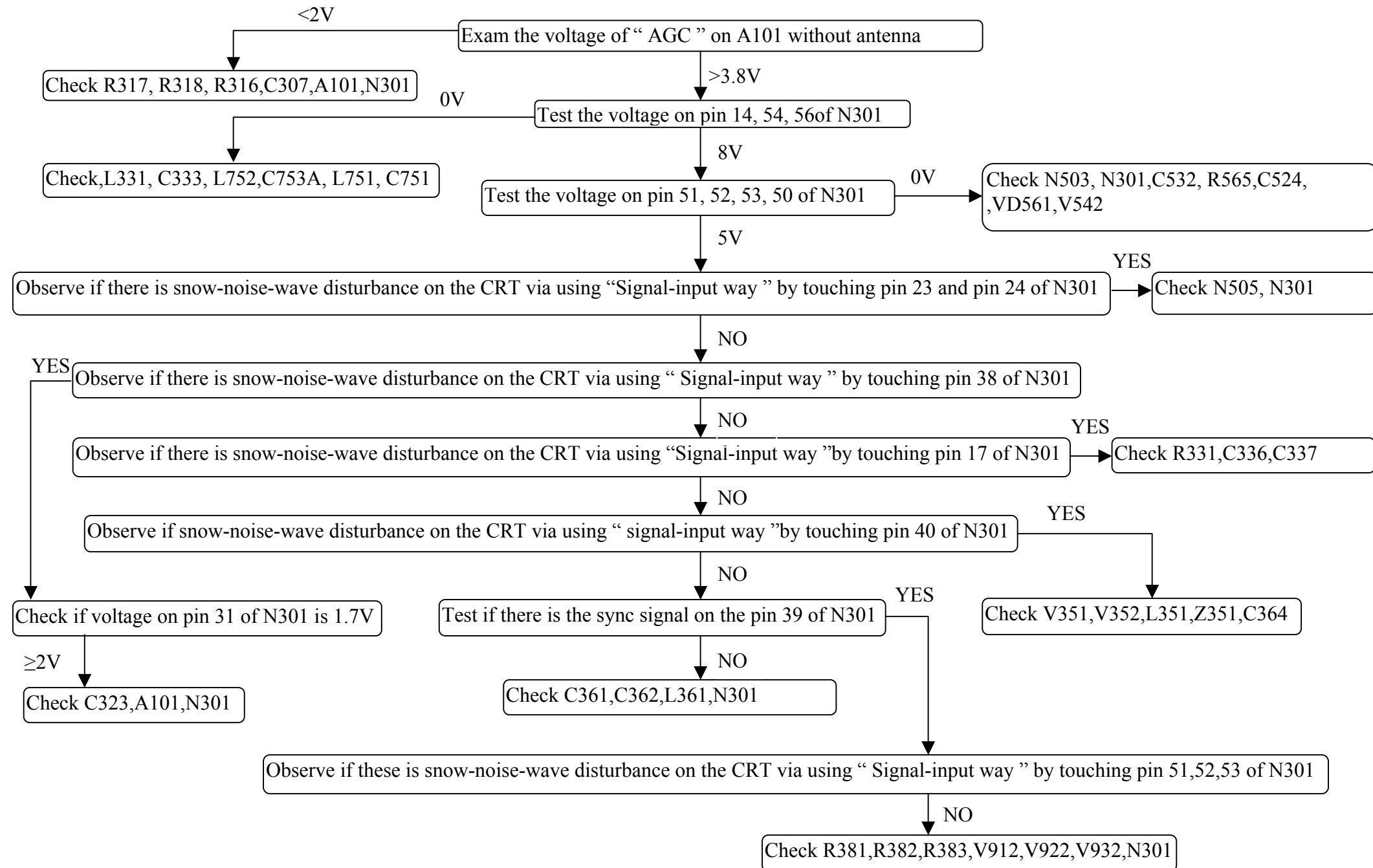
The failure shows that the set does not display the picture but it has noise wave or blue background or OSD on the screen. This means that the circuits of power supply, horizontal scanning, vertical scanning and video amplification are normal and they are not considered in the repairing. The failures are mainly in the small signal processing circuits.

Before checking these circuits, a kind of practical test method is introduced. It is called "Signal-input way". The detail is described as follow: We can use the resistance function of an analog multimeter, connect the red pole (negative in ohm scope) on the circuit board ground, then touch softly the test point with another pole (black pole) in ohm scope meanwhile observe the reactivity on the output device.

Note: In the TV test, we mainly observe the noise wave on the CRT and listen to the noise voice liking as "Ka.....Ka" from the loudspeakers.

a. No picture

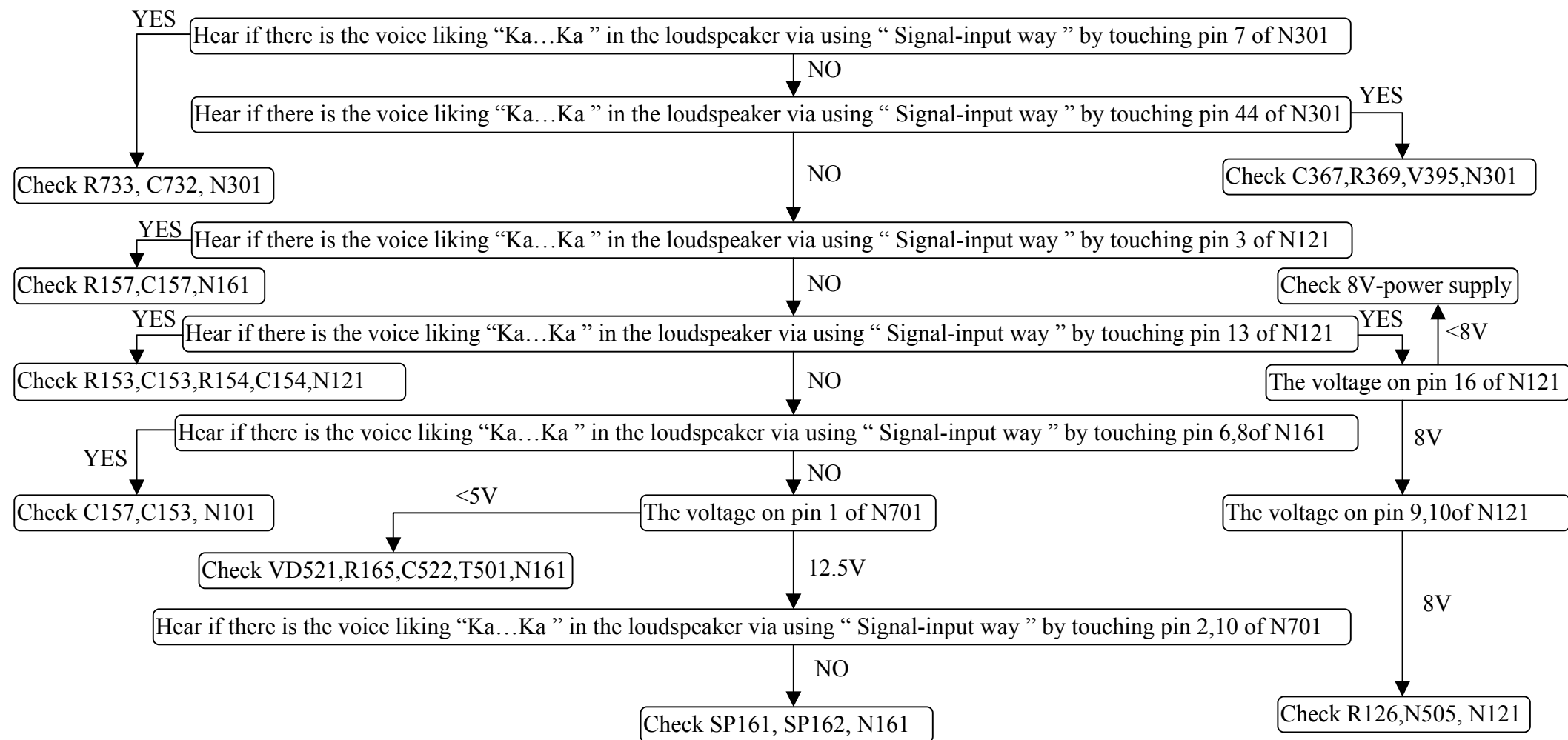




b. No sound

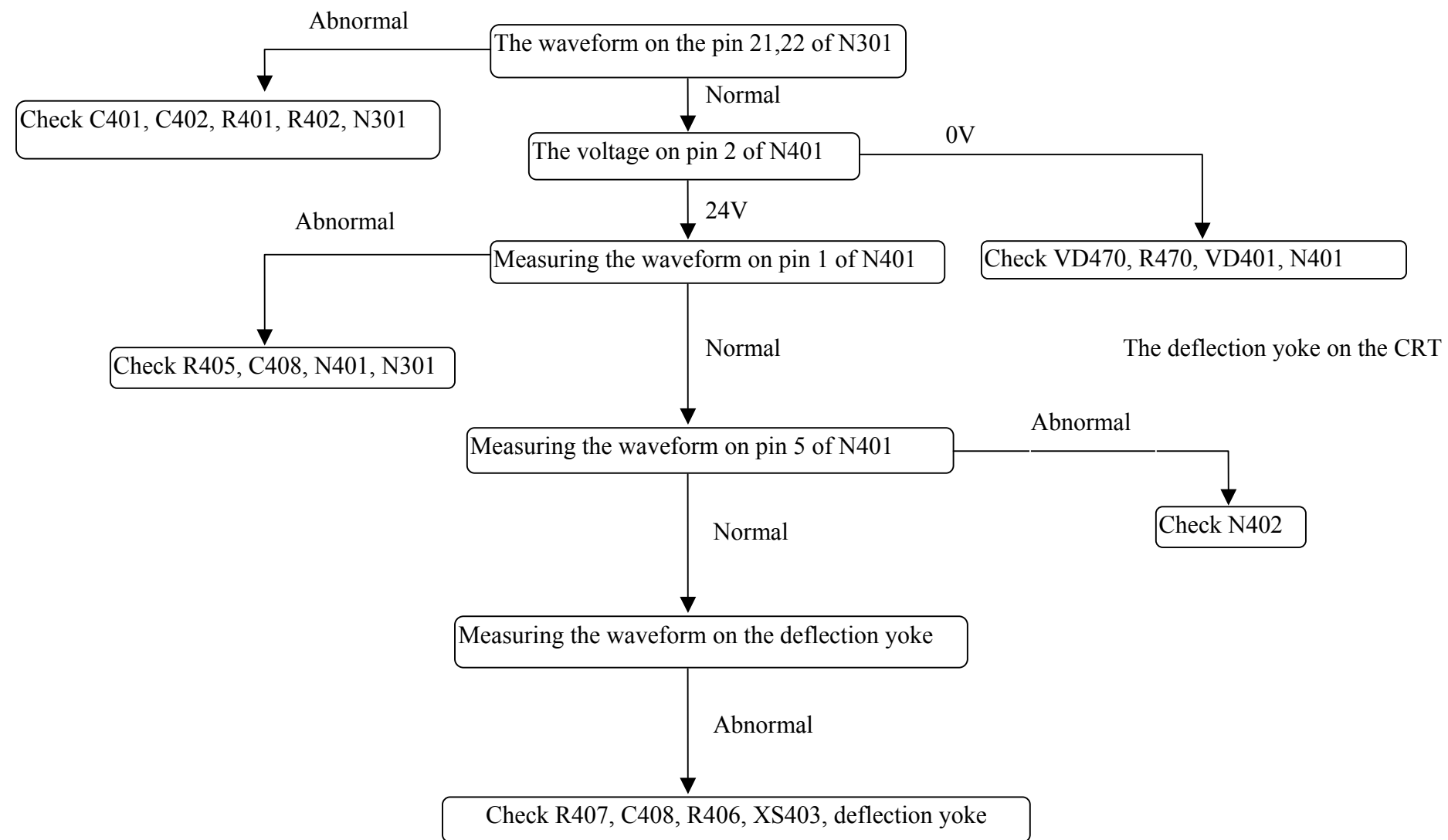
In this kind of failure, first of all we should observe if there is the picture on the CRT. It proves the small signal circuit to work correctly with the picture on the CRT and we only check the sound signal processing and sound amplification circuit. The repairing method (B1) may be referred without picture. The detail checking and repairing steps are as follow.

Note: Before repairing, assure that the volume is on and the state of set is in "TV".



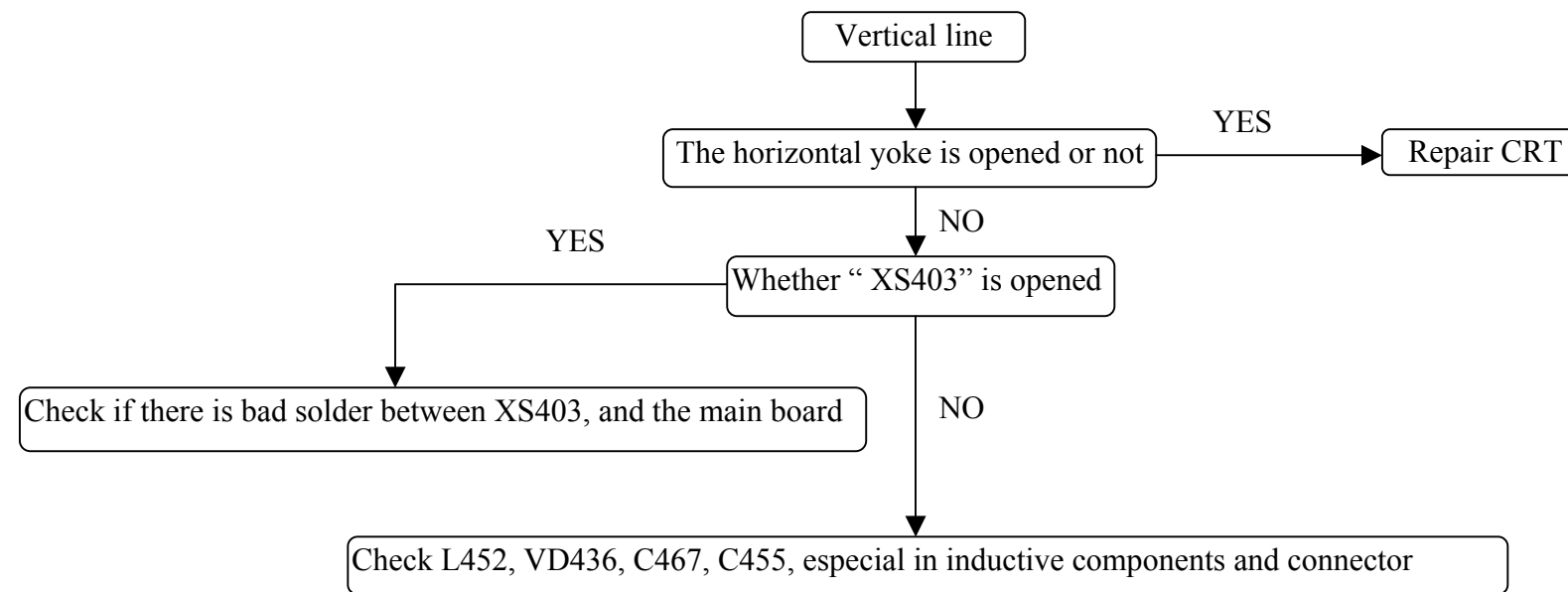


3. Only horizontal line in the middle of the screen:  
If vertical deflection circuit does not work, this kind of failure will happen. In deflection yoke, there only has horizontal sweeping, the electron beam in the CRT only moves in the horizontal orientation, so form this failure. (While checking horizontal and vertical deflection circuit's failure, we have better to use an oscilloscope.)



4. Only vertical line in the middle of the screen

This is a dangerous failure. It probably causes flashover and smoking inside the set. Don't let your TV work for a long time as this failure appears. Because the electron beam can not move in the horizontal orientation, the failure should be in the horizontal deflection circuit. We mainly check the open-circuit fault in horizontal deflection circuit. The detail checking and repairing steps are as follow:



5. UOC does not work

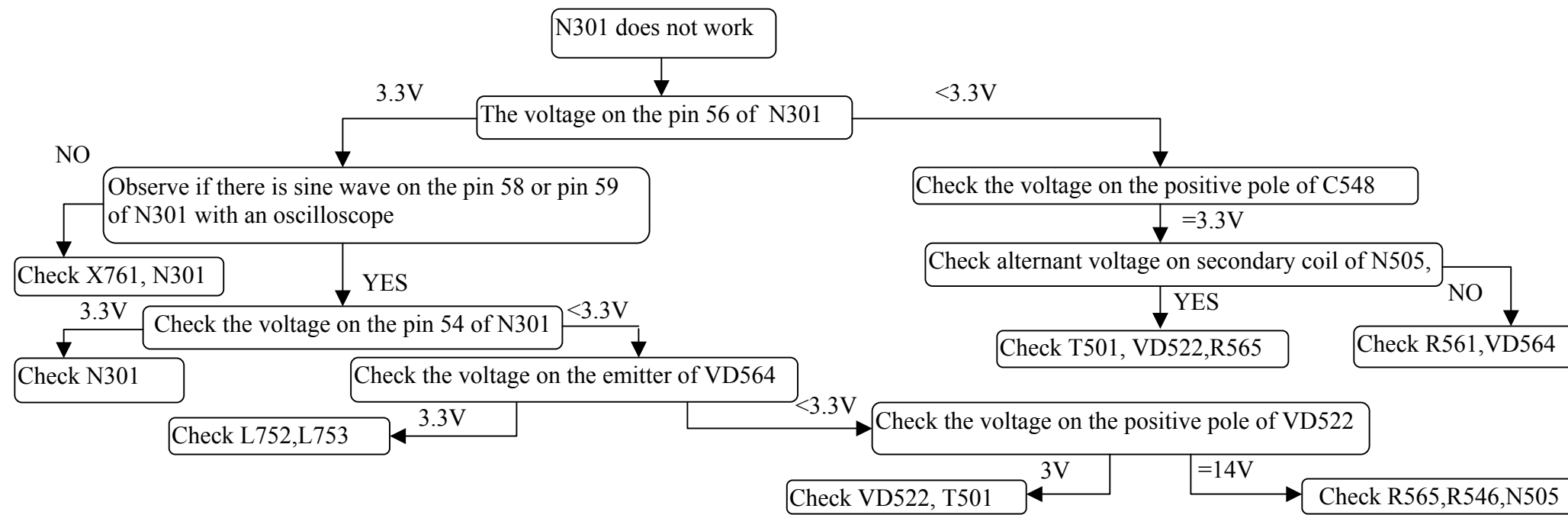
In television, remote-control system is similar with the computer system. In theory, it can work if it holds two conditions as follow:

The power supply: In general, it is 5V, the error is not above 10% and the disturbance pulse is as small as possible.

The clock pulse: In TDA93XX circuit, the clock pulse is generated by pin58 / pin59 of N301 and 12M crystal oscillator.

Television's remote-control system also needs reset circuit that can preset the values in internal register. The circuit around pin57 of N204 is called auto-reset circuit. If UOC detects errors in resetting, it will come to the state of programme protected.

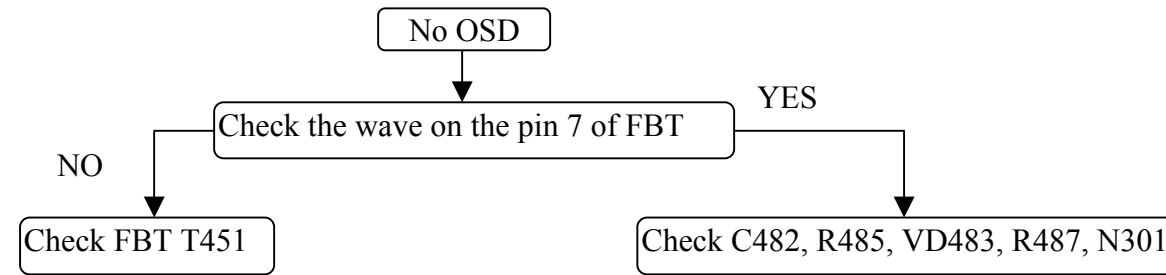
The detail checking and repairing steps are as follow:



6. No OSD (On Screen Display)

This failure is usually caused by the circuit of character generated and located. Most of the reasons are that the horizontal and vertical flyback pulse signals do not come to UOC. We can judge this failure by measuring the wave of the character in an oscilloscope.

The detail checking and repairing steps are as follows:



## VARIOUS PARAMETERS OF INTEGRATED CIRCUIT

A: Pin functions of N301 ( TDA9351/61/81 )

Pin	Symbol	I/O	Function
1	STAND BY	I/O	Power control & Check, On=Hi-Z(input),Off=L(output)
2	SCL	I/O	IIC-BUS SCL1
3	SDA	I/O	IIC-BUS SDA1
4	TUNING	Out	VT output
5	NTSC SW/AC TEST	Out	System
6	KEY	In	Key input
7	VOL	Out	VOLUME OUTPUT
8	MUTE	Out	Mute Output
9	Vss C/P		GND connection
10	BAND1	Out	BAND data output 1
11	BAND2	Out	BAND data output 2
12	VSSA		GND connection
13	SECPLL		<b>SECAM PLL decoupling</b>
14	VP2	In	8V power supply
15	DECDIG		Digital Decoupling
16	PHL2LF		Phase -2 filter
17	PHL1LF		Phase -1 filter
18	GND3		GND connection
19	DECBG		Bandgap decoupling
20	AVL/EWD	Out	Automatic volume leveling/East-West drive output
21	VDRB	Out	Vertical drive B output
22	VDRA	Out	Vertical drive A output
23	IF1	In	Input terminals for IF signals.
24	IF2	In	Input terminals for IF signals.
25	IREF		Reference current input
26	VSC		Vertical sawtooth capacitor
27	TUNER AGC		Tuner AGC output
28	AUDEEM/SIF1		Audio deemphasis or SIF input 1
29	DECSDEM/SIF2		Decoupling sound demodulator or SIF input 2
30	GND2		Ground 2 for TV processor
31	SNDPLL/SIF AGC		Narrow band PLL filter/AGC sound IF
32	AVL/REFO		Automatic Volume Levelling / Subcarrier reference output
33	H OUT	Out	Horizontal output
34	FBISO		Flyback input / sand castle output
35	AUDEXT/QSSO		External audio input / QSS output
36	EHTO		EHT/overvoltage protection input
37	PLLIF		IF-PLL loop filter
38	IFVO/SVO	Out	IF video output / selected CVBS output
39	VP1		Main supply voltage TV-processor(+8V)
40	CVBSINT	In	Internal CVBS input
41	GND1		Ground 1 for TV-processor
42	CVBS/Y		External CVBS / Y input
43	CHROMA	In	Chrominance input (SVHS)
44	AUDOUT/AMOUT	Out	Audio output /AM audio output (volume controlled)
45	INSSW2	In	2 <sup>nd</sup> RGB/YUV insertion input
46	R2/VIN	In	2 <sup>nd</sup> R input/ V (R-Y)input

47	G2/YIN	In	2 <sup>nd</sup> G input/ U input
48	B2/UIIN	In	2 <sup>nd</sup> B input/ U (B-Y)input
49	BCLIN		Beam current limiter input/(V-guard input, note2)
50	BLANKING		Blank current input / (V-guard input, note2)
51	R OUT	Out	Red output
52	G OUT	Out	Green output
53	B OUT	Out	Blue output
54	VDDA		Analog supply of Teletext decoder and digital supply of TV-processor (3.3V)
55	VPE		OPT programming voltage
56	VDDC		Digital supply to core (3.3V)
57	OSCGND		Oscillator ground supply
58	XTAL IN	In	Crystal oscillator input
59	XTAL OUT	Out	Crystal oscillator output
60	RESET		Reset
61	VDDP		Digital supply to periphery(+3.3V)
62	AV1	Out	AV switch control signal 1 output
63	AV2	Out	AV switch control signal 2 output
64	IRIN	In	Remote controller signal input

**B: Pin functions of N161 ( AN7522N )**

Pin	Symbol	I/O	Function
1			Vcc
2	Out1(+)	Out	Ch.1 Output
3	GND		GND (Ch.1 Output)
4	Out1(-)	Out	Ch.1 Output
5			Standby
6	In 1	In	Ch.1 Input
7	GND		GND(Input)
8	In 2	In	Ch.2 Input
9			Volume
10	Out 2(-)	Out	Ch.2 Output
11	GND		GND (Ch.2 Output)
12	Out 2(+)	Out	Ch.2 Output

**C: Pin functions of N402 ( LA78040 )**

Pin	Symbol	I/O	Function
1	V.IN	In	Inverting input
2	VCC1		Power supply
3	PUMP UP		Pump up out
4	VCC1		Power supply
5	V.OUT	Out	Vertical output
6	VCC2		Output stage VCC
7	NON INV IN	In	Non inv input

The BUS DATA for TDA9381

MI	Items	Variable	Preset	MI	Items	Variable	Preset	
M0	AVL	ON/OFF	ON	M4	SUBCON	0~63	63	
	FSL	ON/OFF	ON		SUBCOL	0~63	63	
	FMWS	ON/OFF	OFF		SUBSHP	0~63	63	
	FFI	ON/OFF	OFF		SUBTINT	0~15	15	
	OSO	ON/OFF	ON		YDLY PAL	0~15	12	
	FCO	ON/OFF	OFF		YDLY NTSC	0~15	12	
	WOOFER	ON/OFF	OFF		YDLY SEC	0~15	12	
	DUAL OUT	0~1	0		YDLY AV	0~15	12	
	Volume mode	0~1	1		UOC VOL	ON/OFF	Off	
					CATHODE	0~15	15	
M1	BAND	0~2	2		SC BRI	0~63	10	
	AV CFG*	0~8	3					
	NTSC MX		USA	M5	OSD VPOS	0~63	53	
	VIDEO OUT		CVBS		OSD HPOS	0~59	15	
	PIN5		NTSC		WIDE	0~63	15	
	PRO	0~3	0		ZOOM	0~63	59	
					NENU TITLE	0~6	3	
M2	VISION IF		38.9M		E2PROM ADDRESS	0~33		
	DK	ON/OFF	OFF		E2PROM VALUE	0~95		
	BG	ON/OFF	ON		E2PROM WRITE			
	I	ON/OFF	OFF					
	M	ON/OFF	OFF	M8	FREQUENCY		50HZ	60HZ
	SIF PREFER		BG		VSLOPE	0~63	30	30
	AUTO SOUND	ON/OFF	ON		VSHIFT	0~63	42	42
					VAMP	0~63	37	37
M3	START ON	0~2	0		VSCOR	0~63	19	19
	ENGLISH	ON/OFF	ON		HSHIFT	0~63	39	39
	ARABIC	ON/OFF	OFF					
	PERSIAN	ON/OFF	OFF	M9	BT	0~63	48	
	TURKISH	ON/OFF	OFF		CT	0~63	48	
	FRANCE	ON/OFF	OFF		SC		OFF	
	RUSSIA	ON/OFF	OFF		RB	0~63	32	
					GB	0~63	32	
M6	SHIPMODE				RD	0~63	32	
	SEARCH SPEED	0~3	0		GD	0~63	32	
M7	AGC-TOP	0~63	25		BD	0~63	32	
	AGC-SPEED	0~3	2		SB	0~63	40	

NOTE:

The data provided in the form provides to consult only!

Directions for use

1. M1/AV CFG

Mode	Function select
0	TV→AV
1	TV→AV1→AV2
2	TV→AV1→AV2→S-VIDEO
3	TV→AV1→AV2→S-VIDEO→YUV
4	TV→AV→S-VIDEO
5	TV→AV→S-VIDEO→YUV
6	TV→AV→YUV
7	TV-EURO
8	TV-AV-EURO

2. Method of LOGO input:

- when E2PROM ADDRESS = 0, to adjust E2PROM VALUE may be changed horizontal position of LOGO.  
It's range is from 10 to 20.
- when E2PROM ADDRESS =1, to adjust E2PROM VALUE may be changed vertical position of LOGO.  
It's range is from 1 to 30.
- when E2PROM ADDRESS =2, to adjust E2PROM VALUE may be changed color of LOGO.  
It's range is from 0 to 7.

VALUE	0	1	2	3	4	5	6	7
COLOR	RED	BLUE	GREEN	CYAN	ORANGE	PINK	YELLOW	WHITE

- when E2PROM ADDRESS =3, to adjust E2PROM VALUE may be changed size of LOGO.  
It's range is from 0 to 3.
- when E2PROM ADDRESS =4~33, to adjust E2PROM VALUE may be changed character of LOGO.  
It's range is from 0 to 95.



## ELECTRICAL PARTS LIST

**PRODUCT SAFETY NOTE:** products marked with a ! have special characteristics important to safety. Before replacing any of these components, read carefully the product safety notice in this service manual. Don't degrade the safety of the product through improper servicing.

**NOTE:** parts that not assigned part numbers( ) are not available.

Tolerance of Capacitors and Resistors are noted with the following symbols.

C.....±0.25% D.....±0.5% F.....±1% G..... ±2%

J..... ±5% K..... ±10% M..... ±20% N..... ±30%

Z.....+80/-20%

Ref. No	Part No.	Name	Specification
R411	RJB393F-NAAF	Resistor metal	Rj13-1/6W-39KΩ-F
R312	D10B683J-T	Carbon resistor	RT13-1/6W-10Ω-J
R871	D10B4R7J-T	Carbon resistor	RT13-1/6W-10Ω-J
R914	D10B4R7J-T	Carbon resistor	RT13-1/6W-22Ω-J
R924	D10B330J-T	Carbon resistor	RT13-1/6W-22Ω-J
R934	D10B101J-T	Carbon resistor	RT13-1/6W-22Ω-J
R398	D10B101J-T	Carbon resistor	RT13-1/6W-33Ω-J
R806	D10B101J-T	Carbon resistor	RT13-1/6W-33Ω-J
R368	D10B101J-T	Carbon resistor	RT13-1/6W-47Ω-J
R708	D10B101J-T	Carbon resistor	RT13-1/6W-47Ω-J
R911	D10B101J-T	Carbon resistor	RT13-1/6W-47Ω-J
R921	D10B101J-T	Carbon resistor	RT13-1/6W-47Ω-J
R931	D10B101J-T	Carbon resistor	RT13-1/6W-47Ω-J
R354	D10B101J-T	Carbon resistor	RT13-1/6W-56Ω-J
R355	D10B101J-T	Carbon resistor	RT13-1/6W-56Ω-J
R304	D10B101J-T	Carbon resistor	RT13-1/6W-68Ω-J
R801	D10B101J-T	Carbon resistor	RT13-1/6W-75Ω-J
R313	D10B101J-T	Carbon resistor	RT13-1/6W-82Ω-J
R301	D10B101J-T	Carbon resistor	RT13-1/6W-100Ω±5%
R302	D10B101J-T	Carbon resistor	RT13-1/6W-100Ω±5%
R363	D10B101J-T	Carbon resistor	RT13-1/6W-100Ω±5%
R365	D10B101J-T	Carbon resistor	RT13-1/6W-100Ω±5%
R366	D10B101J-T	Carbon resistor	RT13-1/6W-100Ω±5%
R381	D10B101J-T	Carbon resistor	RT13-1/6W-100Ω±5%
R382	D10B101J-T	Carbon resistor	RT13-1/6W-100Ω±5%
R383	D10B101J-T	Carbon resistor	RT13-1/6W-100Ω±5%
R401	D10B101J-T	Carbon resistor	RT13-1/6W-100Ω±5%
R402	D10B101J-T	Carbon resistor	RT13-1/6W-100Ω±5%
R452	D10B101J-T	Carbon resistor	RT13-1/6W-100Ω±5%
R723	D10B101J-T	Carbon resistor	RT13-1/6W-100Ω±5%
R724	D10B101J-T	Carbon resistor	RT13-1/6W-100Ω±5%
R743	D10B101J-T	Carbon resistor	RT13-1/6W-100Ω±5%
R815	D10B101J-T	Carbon resistor	RT13-1/6W-100Ω±5%
R824	D10B101J-T	Carbon resistor	RT13-1/6W-100Ω±5%
R861	D10B101J-T	Carbon resistor	RT13-1/6W-100Ω±5%
R862	D10B101J-T	Carbon resistor	RT13-1/6W-100Ω±5%
R815A	D10B151J-T	Carbon resistor	RT13-1/6W-150Ω±5%
R848	D10B151J-T	Carbon resistor	RT13-1/6W-150Ω±5%
R852	D10B151J-T	Carbon resistor	RT13-1/6W-150Ω±5%

Ref. No	Part No.	Name	Specification
R353	D10B151J-T	Carbon resistor	RT13-1/6W-180Ω±5%
R311	D10B151J-T	Carbon resistor	RT13-1/6W-220Ω±5%
R917	D10B221J-T	Carbon resistor	RT13-1/6W-220Ω±5%
R927	D10B221J-T	Carbon resistor	RT13-1/6W-220Ω±5%
R937	D10B221J-T	Carbon resistor	RT13-1/6W-220Ω±5%
R913	D10B301J-T	Carbon resistor	RT13-1/6W-300Ω±5%
R923	D10B301J-T	Carbon resistor	RT13-1/6W-300Ω±5%
R933	D10B301J-T	Carbon resistor	RT13-1/6W-300Ω±5%
R805	D10B331J-T	Carbon resistor	RT13-1/6W-330Ω±5%
R916	D10B331J-T	Carbon resistor	RT13-1/6W-330Ω±5%
R926	D10B331J-T	Carbon resistor	RT13-1/6W-330Ω±5%
R936	D10B331J-T	Carbon resistor	RT13-1/6W-330Ω±5%
R322	D10B391J-T	Carbon resistor	RT13-1/6W-390Ω±5%
R308	D10B471J-T	Carbon resistor	RT13-1/6W-470Ω±5%
R1517	D10B471J-T	Carbon resistor	RT13-1/6W-470Ω±5%
R316	D10B681J-T	Carbon resistor	RT13-1/6W-680Ω±5%
R482	D10B681J-T	Carbon resistor	RT13-1/6W-680Ω±5%
R128	D10B102J-T	Carbon resistor	RT13-1/6W-1KΩ±5%
R129	D10B102J-T	Carbon resistor	RT13-1/6W-1KΩ±5%
R369	D10B102J-T	Carbon resistor	RT13-1/6W-1KΩ±5%
R460	D10B102J-T	Carbon resistor	RT13-1/6W-1KΩ±5%
R464	D10B102J-T	Carbon resistor	RT13-1/6W-1KΩ±5%
R481	D10B102J-T	Carbon resistor	RT13-1/6W-1KΩ±5%
R734	D10B102J-T	Carbon resistor	RT13-1/6W-1KΩ±5%
R802	D10B102J-T	Carbon resistor	RT13-1/6W-1KΩ±5%
R803	D10B102J-T	Carbon resistor	RT13-1/6W-1KΩ±5%
R816	D10B102J-T	Carbon resistor	RT13-1/6W-1KΩ±5%
R818	D10B102J-T	Carbon resistor	RT13-1/6W-1KΩ±5%
R825	D10B102J-T	Carbon resistor	RT13-1/6W-1KΩ±5%
R827	D10B102J-T	Carbon resistor	RT13-1/6W-1KΩ±5%
R305	D10B122J-T	Carbon resistor	RT13-1/6W-1.2KΩ±5%
R560	D10B122J-T	Carbon resistor	RT13-1/6W-1.2KΩ±5%
R397	D10B152J-T	Carbon resistor	RT13-1/6W-1.5KΩ±5%
R732	D10B152J-T	Carbon resistor	RT13-1/6W-1.5KΩ±5%
R430	D10B182J-T	Carbon resistor	RT13-1/6W-1.8KΩ±5%
R405	D10B182J-T	Carbon resistor	RT13-1/6W-1.8KΩ±5%
R1523	D10B182J-T	Carbon resistor	RT13-1/6W-1.8KΩ±5%
R351	D10B222J-T	Carbon resistor	RT13-1/6W-2.2KΩ±5%
R371	D10B222J-T	Carbon resistor	RT13-1/6W-2.2KΩ±5%
R451	D10B222J-T	Carbon resistor	RT13-1/6W-2.2KΩ±5%
R463	D10B222J-T	Carbon resistor	RT13-1/6W-2.2KΩ±5%
R701A	D10B222J-T	Carbon resistor	RT13-1/6W-2.2KΩ±5%
R321	D10B272J-T	Carbon resistor	RT13-1/6W-2.7KΩ±5%
R702	D10B332J-T	Carbon resistor	RT13-1/6W-3.3KΩ±5%
R721	D10B332J-T	Carbon resistor	RT13-1/6W-3.3KΩ±5%
R722	D10B332J-T	Carbon resistor	RT13-1/6W-3.3KΩ±5%
R728	D10B332J-T	Carbon resistor	RT13-1/6W-3.3KΩ±5%
R735	D10B332J-T	Carbon resistor	RT13-1/6W-3.3KΩ±5%
R736	D10B332J-T	Carbon resistor	RT13-1/6W-3.3KΩ±5%
R737	D10B332J-T	Carbon resistor	RT13-1/6W-3.3KΩ±5%

Ref. No	Part No.	Name	Specification
R741	D10B332J-T	Carbon resistor	RT13-1/6W-3.3KΩ±5%
R742	D10B332J-T	Carbon resistor	RT13-1/6W-3.3KΩ±5%
R455	D10B392J-T	Carbon resistor	RT13-1/6W-3.9KΩ±5%
R462	D10B392J-T	Carbon resistor	RT13-1/6W-3.9KΩ±5%
R131	D10B472J-T	Carbon resistor	RT13-1/6W-4.7KΩ±5%
R133	D10B472J-T	Carbon resistor	RT13-1/6W-4.7KΩ±5%
R154	D10B472J-T	Carbon resistor	RT13-1/6W-4.7KΩ±5%
R158	D10B472J-T	Carbon resistor	RT13-1/6W-4.7KΩ±5%
R306	D10B472J-T	Carbon resistor	RT13-1/6W-4.7KΩ±5%
R733	D10B472J-T	Carbon resistor	RT13-1/6W-4.7KΩ±5%
R370	D10B562J-T	Carbon resistor	RT13-1/6W-5.6KΩ±5%
R540	D10B562J-T	Carbon resistor	RT13-1/6W-5.6KΩ±5%
R701	D10B562J-T	Carbon resistor	RT13-1/6W-5.6KΩ±5%
R1511	D10B562J-T	Carbon resistor	RT13-1/6W-5.6KΩ±5%
R153A	D10B822J-T	Carbon resistor	RT13-1/6W-8.2KΩ±5%
R157A	D10B822J-T	Carbon resistor	RT13-1/6W-8.2KΩ±5%
R126	D10B103J-T	Carbon resistor	RT13-1/6W-10KΩ±5%
R127	D10B103J-T	Carbon resistor	RT13-1/6W-10KΩ±5%
R163	D10B103J-T	Carbon resistor	RT13-1/6W-10KΩ±5%
R380	D10B103J-T	Carbon resistor	RT13-1/6W-10KΩ±5%
R395	D10B103J-T	Carbon resistor	RT13-1/6W-10KΩ±5%
R396	D10B103J-T	Carbon resistor	RT13-1/6W-10KΩ±5%
R434	D10B103J-T	Carbon resistor	RT13-1/6W-10KΩ±5%
R461	D10B103J-T	Carbon resistor	RT13-1/6W-10KΩ±5%
R548	D10B103J-T	Carbon resistor	RT13-1/6W-10KΩ±5%
R551	D10B103J-T	Carbon resistor	RT13-1/6W-10KΩ±5%
R704	D10B103J-T	Carbon resistor	RT13-1/6W-10KΩ±5%
R705	D10B103J-T	Carbon resistor	RT13-1/6W-10KΩ±5%
R706	D10B103J-T	Carbon resistor	RT13-1/6W-10KΩ±5%
R707	D10B103J-T	Carbon resistor	RT13-1/6W-10KΩ±5%
R709	D10B103J-T	Carbon resistor	RT13-1/6W-10KΩ±5%
R816A	D10B103J-T	Carbon resistor	RT13-1/6W-10KΩ±5%
R818A	D10B103J-T	Carbon resistor	RT13-1/6W-10KΩ±5%
R825A	D10B103J-T	Carbon resistor	RT13-1/6W-10KΩ±5%
R827A	D10B103J-T	Carbon resistor	RT13-1/6W-10KΩ±5%
R851A	D10B103J-T	Carbon resistor	RT13-1/6W-10KΩ±5%
R852A	D10B103J-T	Carbon resistor	RT13-1/6W-10KΩ±5%
R912	D10B103J-T	Carbon resistor	RT13-1/6W-10KΩ±5%
R922	D10B103J-T	Carbon resistor	RT13-1/6W-10KΩ±5%
R932	D10B103J-T	Carbon resistor	RT13-1/6W-10KΩ±5%
R331	D10B153J-T	Carbon resistor	RT13-1/6W-15KΩ±5%
R162	D10B223J-T	Carbon resistor	RT13-1/6W-22KΩ±5%
R384	D10B223J-T	Carbon resistor	RT13-1/6W-22KΩ±5%
R804	D10B223J-T	Carbon resistor	RT13-1/6W-22KΩ±5%
R1515	D10B223J-T	Carbon resistor	RT13-1/6W-22KΩ±5%
R1556	D10B223J-T	Carbon resistor	RT13-1/6W-22KΩ±5%
R484	D10B223J-T	Carbon resistor	RT13-1/6W-27KΩ±5%
R487	D10B223J-T	Carbon resistor	RT13-1/6W-27KΩ±5%
R171	D10B333J-T	Carbon resistor	RT13-1/6W-33KΩ±5%
R175	D10B333J-T	Carbon resistor	RT13-1/6W-33KΩ±5%

Ref. No	Part No.	Name	Specification
R317	D10B333J-T	Carbon resistor	RT13-1/6W-33KΩ±5%
R385	D10B333J-T	Carbon resistor	RT13-1/6W-33KΩ±5%
R172	D10B473J-T	Carbon resistor	RT13-1/6W-47KΩ±5%
R732A	D10B473J-T	Carbon resistor	RT13-1/6W-47KΩ±5%
R745	D10B473J-T	Carbon resistor	RT13-1/6W-47KΩ±5%
R173	D10B683J-T	Carbon resistor	RT13-1/6W-68KΩ±5%
R483	D10B104J-T	Carbon resistor	RT13-1/6W-100KΩ±5%
R802A	D10B104J-T	Carbon resistor	RT13-1/6W-100KΩ±5%
R803A	D10B104J-T	Carbon resistor	RT13-1/6W-100KΩ±5%
R807	D10B104J-T	Carbon resistor	RT13-1/6W-100KΩ±5%
R318	D10B154J-T	Carbon resistor	RT13-1/6W-150KΩ±5%
R174	D10B274J-T	Carbon resistor	RT13-1/6W-270KΩ±5%
R465	D10B564J-T	Carbon resistor	RT13-1/6W-560KΩ±5%
R404	D10C1R0J-T	Carbon resistor	RT14-1/4W-1Ω±5%
R468	D10C2R7J-T	Carbon resistor	RT14-1/4W-2.7Ω±5%
R513	D10C220J-T	Carbon resistor	RT14-1/4W-22Ω±5%
R561	D10C270J-T	Carbon resistor	RT14-1/4W-27Ω±5%
R486	D10C101J-T	Carbon resistor	RT14-1/4W-100Ω±5%
R161	D10C222J-T	Carbon resistor	RT14-1/4W-2.2KΩ±5%
R1526	D10C222J-T	Carbon resistor	RT14-1/4W-2.2KΩ±5%
R485	D10C103J-T	Carbon resistor	RT14-1/4W-10KΩ±5%
R1522	D10C153J-T	Carbon resistor	RT14-1/4W-15KΩ±5%
R539	D10C513J-T	Carbon resistor	RT14-1/4W-51KΩ±5%
R539A	D10C513J-T	Carbon resistor	RT14-1/4W-51KΩ±5%
R1554	D10C154J-T	Carbon resistor	RT14-1/4W-150KΩ±5%
R942	D10C334J-T	Carbon resistor	RT14-1/4W-330KΩ±5%
R407	D10D271J-T	Carbon resistor	RT15-1/2W-270Ω±5%
R453	D10D102J-T	Carbon resistor	RT15-1/2W-1KΩ±5%
R1555	D10D473J-T	Carbon resistor	RT15-1/2W-47KΩ±5%
R507	D10D124J-T	Carbon resistor	RT15-1/2W-120KΩ±5%
R1520	D10D124J-T	Carbon resistor	RT15-1/2W-120KΩ±5%
R406	S10E1R2J-C	Metal oxide resistor	RY16/RY21-1W-1.2Ω±5%
R300A	S10E220J-C	Metal oxide resistor	RY17/RY21-1W-22Ω±5%
R466	S10E102J-C	Metal oxide resistor	RY16/RY21-1W-1KΩ±5%
R941	S10F5R6J-C	Metal oxide resistor	RY17/RY21-2W-5.6Ω±5%
R530	S10F560J-C	Metal oxide resistor	RY17/RY21-2W-56Ω±5%
R454	S10E271J-C	Metal oxide resistor	RY17/RY21-2W-270Ω±5%
R546	S10F271J-C	Metal oxide resistor	RY17/RY21-2W-270Ω±5%
R467	S10F103J-C	Metal oxide resistor	RY17/RY21-2W-10KΩ±5%
R703	S10F103J-C	Metal oxide resistor	RY17/RY21-2W-10KΩ±5%
R915	S10F123J-C	Metal oxide resistor	RY17/RY21-2W-12KΩ±5%
R925	S10F123J-C	Metal oxide resistor	RY17/RY21-2W-12KΩ±5%
R935	S10F123J-C	Metal oxide resistor	RY17/RY21-2W-12KΩ±5%
R556	S10F223J-C	Metal oxide resistor	RY17/RY21-2W-22KΩ±5%
R519!		Glass-Glazed Fixed RES	RI40-1/2W-24MΩ±5%
R918		Glass-Glazed Fixed RES	RI40-1/2W-1.5KΩ±5%
<b>R928</b>		Glass-Glazed Fixed RES	RI40-1/2W-1.5KΩ±5%

Ref. No	Part No.	Name	Specification
R938		Glass-Glazed Fixed RES	RI40-1/2W-1.5KΩ±5%
R555 !	F10DR27J-C	Fuse resistor	RF10-1/2W-0.27Ω±5%
R565 !	F10DR27J-C	Fuse resistor	RF10-1/2W-0.27Ω±5%
R566 !	F10DR27J-C	Fuse resistor	RF10-1/2W-0.27Ω±5%
R165 !	F10DR47J-C	Fuse resistor	RF10-1/2W-0.47Ω±5%
R470 !	F10DR47J-C	Fuse resistor	RF10-1/2W-0.47Ω±5%
R472 !	F10DR47J-C	Fuse resistor	RF10-1/2W-0.47Ω±5%
R480 !	F10F3R9J-C	Fuse resistor	RF10-2W-3.9Ω±5%
R458	W11H3R9K	Wire-wound resistor	RXG6-5W-3.9Ω-J
R502 !	W10J1R8K	Wire-wound resistor	RXG6-6W-1.8Ω-J
R1524	W11H270K	Wire-wound resistor	RX27-5W-27Ω-K
R504	W11H680K	Wire-wound resistor	RX27-5W-68Ω-K
PS501	P10X180J-C	Thermistor	PTC-180HM
VR501	V11D202B	Potentiometer	WI06-2AA2KΩ
C761	C2CF330J-T	Ceramic capacitor	CC1-06A-CH-50/63V-33pF-J
C762	C2CF330J-T	Ceramic capacitor	CC1-06A-CH-50/63V-33pF-J
C701	C2CF121J-T	Ceramic capacitor	CC1-06A-CH-50/63V-120pF-J
C701A	C2CF121J-T	Ceramic capacitor	CC1-06A-CH-50/63V-120pF-J
C911	C2BF331K-T	Ceramic capacitor	CC1-06A-RH-50/63V-330pF-J
C921	C2BF331K-T	Ceramic capacitor	CC1-06A-RH-50/63V-330pF-J
C931	C2BF331K-T	Ceramic capacitor	CC1-06A-RH-50/63V-330pF-J
C803	C2BF471K-T	Ceramic capacitor	CC1-06A-RH-50/63V-470pF-J
C805	C2BF471K-T	Ceramic capacitor	CC1-06A-RH-50/63V-470pF-J
C812	C2BF471K-T	Ceramic capacitor	CC1-06A-RH-50/63V-470pF-J
C814	C2BF471K-T	Ceramic capacitor	CC1-06A-RH-50/63V-470pF-J
C824	C2BF471K-T	Ceramic capacitor	CC1-06A-RH-50/63V-470pF-J
C826	C2BF471K-T	Ceramic capacitor	CC1-06A-RH-50/63V-470pF-J
C732	C2BF471K-T	Ceramic capacitor	CC1-06A-RH-50/63V-470pF-J
C381	C2BF561K-T	Ceramic capacitor	CC1-06A-RH-50/63V-560pF-J
C323	C2BF821K-T	Ceramic capacitor	CC1-06A-RH-50/63V-820pF-J
C308	C2BF102K-T	Ceramic capacitor	CC1-06A-RH-50/63V-1000pF-J
C311	C2BF102K-T	Ceramic capacitor	CT1-06A-2B4-50/63V-1000pF-K
C340	C2BF102K-T	Ceramic capacitor	CT1-06A-2B4-50/63V-1000pF-K
C401	C2BF102K-T	Ceramic capacitor	CT1-06A-2B4-50/63V-1000pF-K
C402	C2BF102K-T	Ceramic capacitor	CT1-06A-2B4-50/63V-1000pF-K
C481	C2BF102K-T	Ceramic capacitor	CT1-06A-2B4-50/63V-1000pF-K
C721	C2BF102K-T	Ceramic capacitor	CT1-06A-2B4-50/63V-1000pF-K
C861	C2BF102K-T	Ceramic capacitor	CT1-06A-2B4-50/63V-1000pF-K
C335	C2BF222K-T	Ceramic capacitor	CT1-06A-2B4-50/63V-2200pF-K
C324	C2BF472K-T	Ceramic capacitor	CT1-06A-2B4-50/63V-4700pF-K
C336	C2BF472K-T	Ceramic capacitor	CT1-06A-2B4-50/63V-4700pF-K
C162	C2FF103Z-T	Ceramic capacitor	CT1-08A-2F4-50/63V-0.01uF-Z
C302	C2FF103Z-T	Ceramic capacitor	CT1-08A-2F4-50/63V-0.01uF-Z
C309	C2FF103Z-T	Ceramic capacitor	CT1-08A-2F4-50/63V-0.01uF-Z
C312	C2FF103Z-T	Ceramic capacitor	CT1-08A-2F4-50/63V-0.01uF-Z
C313	C2FF103Z-T	Ceramic capacitor	CT1-08A-2F4-50/63V-0.01uF-Z
C332	C2FF103Z-T	Ceramic capacitor	CT1-08A-2F4-50/63V-0.01uF-Z
C362	C2FF103Z-T	Ceramic capacitor	CT1-08A-2F4-50/63V-0.01uF-Z

Ref. No	Part No.	Name	Specification
C472	C2FF103Z-T	Ceramic capacitor	CT1-08A-2F4-50/63V-0.01uF-Z
C475	C2FF103Z-T	Ceramic capacitor	CT1-08A-2F4-50/63V-0.01uF-Z
C535	C2FF103Z-T	Ceramic capacitor	CT1-08A-2F4-50/63V-0.01uF-Z
C703A	C2FF103Z-T	Ceramic capacitor	CT1-08A-2F4-50/63V-0.01uF-Z
C723	C2FF103Z-T	Ceramic capacitor	CT1-08A-2F4-50/63V-0.01uF-Z
C744	C2FF103Z-T	Ceramic capacitor	CT1-08A-2F4-50/63V-0.01uF-Z
C752	C2FF103Z-T	Ceramic capacitor	CT1-08A-2F4-50/63V-0.01uF-Z
C756	C2FF103Z-T	Ceramic capacitor	CT1-08A-2F4-50/63V-0.01uF-Z
C482	C2BP101K-T	Ceramic capacitor	CT1-08C-2B4-500V-100PF-Z
C405	C2BP221K-T	Ceramic capacitor	CT1-08C-2B4-500V-220F-Z
C452	C2BP102K-T	Ceramic capacitor	CT1-08C-2B4-500V-1000pF-K
C451	C2BP392K-T	Ceramic capacitor	CT1-08C-2B4-500V-3900pF-K
C503	C2BW102K-O	Ceramic capacitor	CT81-08C-2R-1KV-1000pF-K
C504	C2BW102K-O	Ceramic capacitor	CT81-08C-2R-1KV-1000pF-K
C505	C2BW102K-O	Ceramic capacitor	CT81-08C-2R-1KV-1000pF-K
C506	C2BW102K-O	Ceramic capacitor	CT81-08C-2R-1KV-1000pF-K
C529	C2BW471K-O	Ceramic capacitor	CT81-08C-2R-1KV-470pF-K
C543	C2RX471K-O	Ceramic capacitor	CT81-08C-2R-2KV-470pF-K
C509	C2RX681K-O	Ceramic capacitor	CT81-08C-2R-2KV-680pF-K
C527	C2RX681K-O	Ceramic capacitor	CT81-08C-2R-2KV-680pF-K
C456	C2EX102Z-O	Ceramic capacitor	CT81-08C-2R-2KV-1000pF-K
C943	C2EX102Z-O	Ceramic capacitor	CT81-08C-2R-2KV-1000pF-K
C515A !	C2EM102M-O	Ceramic capacitor	CTJ1-AC250V-470PF-±20%
C598!	C2EM102M-O	Ceramic capacitor	CTJ1-AC250V-470PF-±20%
C515 !	C2EM102M-O	Ceramic capacitor	CTJ1-AC250V-1000PF-±20%
C548	E10C101M-T	Electrolytic Capacitor	CD110-10V-100uF -M
C163A	E20C100M-T	Electrolytic Capacitor	CD110-16V-10uF -M
C172	E20C100M-T	Electrolytic Capacitor	CD110-16V-10uF -M
C301	E20C100M-T	Electrolytic Capacitor	CD110-16V-10uF -M
C307	E20C100M-T	Electrolytic Capacitor	CD110-16V-10uF -M
C322	E20C100M-T	Electrolytic Capacitor	CD110-16V-10uF -M
C363	E20C100M-T	Electrolytic Capacitor	CD110-16V-10uF -M
C364	E20C100M-T	Electrolytic Capacitor	CD110-16V-10uF -M
C367	E20C100M-T	Electrolytic Capacitor	CD110-16V-10uF -M
C751	E20C100M-T	Electrolytic Capacitor	CD110-16V-10uF -M
C807	E20C100M-T	Electrolytic Capacitor	CD110-16V-10uF -M
C841	E20C100M-T	Electrolytic Capacitor	CD110-16V-10uF -M
C871	E20C100M-T	Electrolytic Capacitor	CD110-16V-10uF -M
C745	E20C220M-T	Electrolytic Capacitor	CD110-16V-22uF -M
C116	E20C470M-T	Electrolytic Capacitor	CD110-16V-47uF -M
C171	E20C470M-T	Electrolytic Capacitor	CD110-16V-47uF -M
C333	E20C470M-T	Electrolytic Capacitor	CD110-16V-47uF -M
C352	E20C470M-T	Electrolytic Capacitor	CD110-16V-47uF -M
C561	E20C470M-T	Electrolytic Capacitor	CD110-16V-47uF -M
C723A	E20C470M-T	Electrolytic Capacitor	CD110-16V-47uF -M
C811	E20C470M-T	Electrolytic Capacitor	CD110-16V-47uF -M
C823	E20C470M-T	Electrolytic Capacitor	CD110-16V-47uF -M
C361	E20C101M-T	Electrolytic Capacitor	CD110-16V-100uF -M
C743	E20C101M-T	Electrolytic Capacitor	CD110-16V-100uF -M
C525	E20C471M-T	Electrolytic Capacitor	CD110-16V-470uF -M
C532	E20C471M-T	Electrolytic Capacitor	CD110-16V-470uF -M

Ref. No	Part No.	Name	Specification
C801	E20C471M-T	Electrolytic Capacitor	CD110-16V-470uF -M
C406	E20D101M-T	Electrolytic Capacitor	CD110-25V-100uF -M
C471	E20D101M-T	Electrolytic Capacitor	CD110-25V-100uF -M
C471A	E20D101M-T	Electrolytic Capacitor	CD110-25V-100uF -M
C474	E20D101M-T	Electrolytic Capacitor	CD110-25V-100uF -M
C474A	E20D101M-T	Electrolytic Capacitor	CD110-25V-100uF -M
C161	E20D471M	Electrolytic Capacitor	CD110-25V-470uF -M
C522	E20D102M	Electrolytic Capacitor	CD110-25V-1000uF -M
C524	E20D222M	Electrolytic Capacitor	CD110-25V-2200uF -M
C453	E20E470M-T	Electrolytic Capacitor	CD110-35V-47uF -M
C530	E20E331M-T	Electrolytic Capacitor	CD110-35V-330uF -M
C121	E20FR47M-T	Electrolytic Capacitor	CD110-50V-0.47uF -M
C123	E20FR47M-T	Electrolytic Capacitor	CD110-50V-0.47uF -M
C372	E20FR47M-T	Electrolytic Capacitor	CD110-50V-0.47uF -M
C374	E20FR47M-T	Electrolytic Capacitor	CD110-50V-0.47uF -M
C153	E20F1R0M-T	Electrolytic Capacitor	CD110-50V-1uF -M
C157	E20F1R0M-T	Electrolytic Capacitor	CD110-50V-1uF -M
C163	E20F1R0M-T	Electrolytic Capacitor	CD110-50V-1uF -M
C337	E20F1R0M-T	Electrolytic Capacitor	CD110-50V-1uF -M
C804	E20F1R0M-T	Electrolytic Capacitor	CD110-50V-1uF -M
C806	E20F1R0M-T	Electrolytic Capacitor	CD110-50V-1uF -M
C813	E20F1R0M-T	Electrolytic Capacitor	CD110-50V-1uF -M
C815	E20F1R0M-T	Electrolytic Capacitor	CD110-50V-1uF -M
C825	E20F1R0M-T	Electrolytic Capacitor	CD110-50V-1uF -M
C837	E20F1R0M-T	Electrolytic Capacitor	CD110-50V-1uF -M
C339	E20F2R2M-T	Electrolytic Capacitor	CD110-50V-2.2uF -M
C755	E20F2R2M-T	Electrolytic Capacitor	CD110-50V-2.2uF -M
C303	E20F4R7M-T	Electrolytic Capacitor	CD110-50V-4.7uF -M
C304	E20F4R7M-T	Electrolytic Capacitor	CD110-50V-4.7uF -M
C325	E20F4R7M-T	Electrolytic Capacitor	CD110-50V-4.7uF -M
C464	E20F4R7M-T	Electrolytic Capacitor	CD110-50V-4.7uF -M
C703	E20F220M-T	Electrolytic Capacitor	CD110-50V-22uF -M
C462	E20F470M-T	Electrolytic Capacitor	CD110-50V-47uF -M
C466	E21H4R7M-T	Electrolytic Capacitor	CD110-160V-4.7uF -M
C528B	E20H101M	Electrolytic Capacitor	CD110-160V-100uF-M
C477	E21K100M-T	Electrolytic Capacitor	CD110-250V-10uF -M
C941	E21K100M-T	Electrolytic Capacitor	CD110-250V-10uF -M
C458	E20H100M	Electrolytic Capacitor	CD110-160V-10uF -M
C507	E20M101M	Electrolytic Capacitor	CD293-400V-100uF-±10%
C326	F20F104J-T	Mylar capacitor	CL11-50V/63V-0.1uF-K
C338	F20F104J-T	Mylar capacitor	CL11-50V/63V-0.1uF-K
C365	F20F104J-T	Mylar capacitor	CL11-50V/63V-0.1uF-K
C411	F20F104J-T	Mylar capacitor	CL11-50V/63V-0.1uF-K
C331	F20F224J-T	Mylar capacitor	CL11-50V/63V-0.22uF-K
C334	F20F224J-T	Mylar capacitor	CL11-50V/63V-0.22uF-K
C404	F20F224J-T	Mylar capacitor	CL11-50V/63V-0.22uF-K
C461	F20F474J-T	Mylar capacitor	CL21-50V/63V-0.47uF-K
C321	F20G332J-T	Mylar capacitor	CL11-100V-3300PF-K
C154	F20G562J-T	Mylar capacitor	CL11-100V-5600PF-K
C158	F20G562J-T	Mylar capacitor	CL11-100V-5600PF-K
C1515	F22G123J-T	Mylar capacitor	CL21X-100V-0.012uF-K

Ref. No	Part No.	Name	Specification
C1517	F20G223K-T	Mylar capacitor	CL11-100V-0.022uF-K
C403	F20G333K-T	Mylar capacitor	CL11-100V-0.033uF-K
C408	F20G333K-T	Mylar capacitor	CL11-100V-0.033uF-K
C1513	F20G473K-T	Mylar capacitor	CL11-100V-0.047uF-K
C427	F20G473K-T	Mylar capacitor	CL11-100V-0.047uF-K
C1514	F20G104K-T	Mylar capacitor	CL11-100V-0.1uF-K
C460	F20G104K-T	Mylar capacitor	CL11-100V-0.1uF-K
C705	F20G104K-T	Mylar capacitor	CL11-100V-0.1uF-K
C706	F20G104K-T	Mylar capacitor	CL11-100V-0.1uF-K
C707	F20G104K-T	Mylar capacitor	CL11-100V-0.1uF-K
C467	F20J394J	Polypropylene capacitor	CBB21-200V-0.3*9uF±5%
C415 !	F20Z822J	Polypropylene capacitor	CBB81-1.6KV-8200PF-J
C501 !	F20R224M	Polypropylene capacitor	CBB62-250VAC-0.22uF
L414	LXXX0001	H-linear	LH01
L351	L2X239K-T	Inductor	LGA0204-3.9uH-K
L302	L3X210K-T	Inductor	LGA0204-1uH-K
L331	L3X2100K-T	Inductor	LGA0307-10uH-K
L361	L3X2100K-T	Inductor	LGA0307-10uH-K
L751	L3X2100K-T	Inductor	LGA0307-10uH-K
L752	L3X2100K-T	Inductor	LGA0307-10uH-K
L753	L3X2100K-T	Inductor	LGA0307-10uH-K
L401	L3X2220K-T	Inductor	LGA0307-22uH-K
L911	L3X2820K-T	Inductor	LGA0307-82uH-K
L912	L3X2820K-T	Inductor	LGA0307-82uH-K
L913	L3X2820K-T	Inductor	LGA0307-82uH-K
L501 !	LMXX0002	Degaussing coil	
N504 !	RX0001XX	Photoelectricity coupler	PC817B/C
VD1001	DL0008XX	LED	RED 5mm
VD171	DR0001XX-T	Diode	IS1555/IN4148A
VD461	DR0001XX-T	Diode	IS1555/IN4148A
VD462	DR0001XX-T	Diode	IS1555/IN4148A
VD482	DR0001XX-T	Diode	IS1555/IN4148A
VD561	DR0001XX-T	Diode	IS1555/IN4148A
VD734	DR0001XX-T	Diode	IS1555/IN4148A
VD911	DR0001XX-T	Diode	IS1555/IN4148A
VD921	DR0001XX-T	Diode	IS1555/IN4148A
VD931	DR0001XX-T	Diode	IS1555/IN4148A
VD1514	DR0001XX-T	Diode	IS1555/IN4148A
VD1516	DR0001XX-T	Diode	IS1555/IN4148A
VD1518	DR0001XX-T	Diode	IS1555/IN4148A
VD912	DR0002XX-T	Diode	BAV21
VD922	DR0002XX-T	Diode	BAV21
VD932	DR0002XX-T	Diode	BAV21
VD401	DR0003XX-T	Diode	FR105
VD470	DR0003XX-T	Diode	FR105
VD471	DR0003XX-T	Diode	FR105
VD525	DR0003XX-T	Diode	FR105
VD1517	DR0003XX-T	Diode	FR105
VD503	DR0015XX-T	Diode	TVR4N/TRM11C
VD504	DR0015XX-T	Diode	TVR4N/TRM11C
VD505	DR0015XX-T	Diode	TVR4N/TRM11C



Ref. No	Part No.	Name	Specification
VD506	DR0015XX-T	Diode	TVR4N/TRM11C
VD436	DR0017XX	Diode	RGP10J
VD472	DR0017XX	Diode	RGP10J
VD524	DR0017XX	Diode	RGP10J
VD521	DR0018XX	Diode	RGP15D
VD543	DR0018XX	Diode	RGP15D
VD300A	DZ0001XX-T	Diode	RD5.1EB3/HZ5C1
VD481	DZ0002XX-T	Diode	HZ22-2
VD564	DZ0006XX-T	Diode	RD3.3L/HZ3C3
VD1561	DZ0006XX-T	Diode	RD6.4L/HZ6C2
VD381	DZ0011XX-T	Diode	RD7.1EB2/HZ7C1
VD382	DZ0011XX-T	Diode	RD7.1EB2/HZ7C1
VD383	DZ0011XX-T	Diode	RD7.1EB2/HZ7C1
VD1519	DZ0011XX-T	Diode	RD7.1EB2/HZ7C1
VD460	DZ0010XX-T	Diode	HZ9A3
VD483	DZ0010XX-T	Diode	HZ9A3
VD822	DZ0010XX-T	Diode	HZ9A3
VD861A	DZ0010XX-T	Diode	HZ9A3
VD941	DZ0010XX-T	Diode	HZ9A3
N703	IXXX0080	IC	upc574J/CW574
N161	IXXX0180	IC	AN7522N
N505	IXXX0118	IC	TA78M05 5V稳压
N121	IXXX0120	IC	LC4052B/CD4052B
N801	IXXX0120	IC	LC4052B/CD4052B
N301		IC	TDA9381
N401	IXXX0142	IC	LA78040
N702	IXXX0173	IC	BR ST24C08-W
N503	IXXX0118	IC	TA78M08 8V稳压
V1511	RXA1015X-T	Audion	2SA1015Y/2SA608/2SA733Q
V171	RXA1015X-T	Audion	2SA1015Y/2SA608/2SA733Q
V542	RXB892XX-T	Audion	2SB892/2SB985T
V308	RXC1674X-T	Audion	2SC1674
V911	RXC2482X	Audion	2SC2482
V921	RXC2482X	Audion	2SC2482
V931	RXC2482X	Audion	2SC2482
V913	RXC421X	Audion	BF421/BF423
V923	RXC421X	Audion	BF421/BF423
V933	RXC421X	Audion	BF421/BF423
V912	RXC422X	Audion	BF422/BF420
V922	RXC422X	Audion	BF422/BF420
V932	RXC422X	Audion	BF422/BF420
V450	RXC2383X-T	Audion	2SC2383-O
V1512	RXC3807X	Audion	2SC3807/2SC5070
V1513	RXC5287X	Audion	2SD1710/2SC4584/C5586
V121	RXC945XX-T	Audion	2SC945/2SC1815/2SC536E
V122	RXC945XX-T	Audion	2SC945/2SC1815/2SC536E
V173	RXC945XX-T	Audion	2SC945/2SC1815/2SC536E
V351	RXC945XX-T	Audion	2SC945/2SC1815/2SC536E
V352	RXC945XX-T	Audion	2SC945/2SC1815/2SC536E
V354	RXC945XX-T	Audion	2SC945/2SC1815/2SC536E
V395	RXC945XX-T	Audion	2SC945/2SC1815/2SC536E
V504	RXC945XX-T	Audion	2SC945/2SC1815/2SC536E

Ref. No	Part No.	Name	Specification
V801	RXC945XX-T	Audion	2SC945/2SC1815/2SC536E
V1553	RXC945XX-T	Audion	2SC945/2SC1815/2SC536E
V451	RXD2140X	Audion	TT2190LS
V701	RXC2369XX-T	Audion	PH2369
Z352	FC0007XX	Ceramic trap filter	XT6.0M
Z354	FC0008XX	Ceramic trap filter	XT5.5M
Z351	FC0006XX	Ceramic trap filter	XT6.5M
Z301		SAWF	K2966 38.9M
F501 !	FXXX0020	FUSE	3.15A 250V
A1001	RXXX0016	Remote receiver	HS0038
A101	BXATB066	Tuner	ET-5G1E-EV100
SW1001	KXXX0101	Touch switch	PUSH SW.(L:5mm)
SW1002	KXXX0101	Touch switch	PUSH SW.(L:5mm)
SW1003	KXXX0101	Touch switch	PUSH SW.(L:5mm)
SW1004	KXXX0101	Touch switch	PUSH SW.(L:5mm)
SW1005	KXXX0101	Touch switch	PUSH SW.(L:5mm)
SW1006	KXXX0101	Touch switch	PUSH SW.(L:5mm)
Z761	XC0004XX-A	XTLO	12.0MHz(18P)

# CIRCUIT DIAGRAM

