



**Colour TV  
Service Manual**

**Model: 14THS3/CE**  
**Chassis: UOC-OM8370**

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## SAFETY NOTICE

<p><b>WARNING: BEFORE EXAMINING AND SERVICING THIS CHASSIS, READ CAREFULLY THE FOLLOWING SAFETY INSTRUCTIONS.</b></p>
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### X-RAY RADIATION PRECAUTION

1. The primary source of X-RADIATION in television receiver is the picture tube. The picture tube is specially constructed to limit X-RADIATION emissions. For continued X-RADIATION protection, the replacement tube must be the same type as the original including suffix letter. Excessive high voltage may produce potentially hazardous X-RADIATION. To avoid such hazards, the high voltage must be maintained within specified limit. Refer to this service manual, high voltage adjustment for specific high voltage limit. If high voltage exceeds specified limits, take necessary corrective action. Carefully follow the instructions for +B1 volt power supply adjustment, and high voltage check to maintain the high voltage within the specified limits.
2. 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.
3. 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.
4. 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.
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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.
7. An isolation transformer should be connected in the power line between the receiver and the AC line when a service is performed on the primary of the converter transformer of the set.
8. Comply with all caution and safety-related notes provided on the cabinet back, inside the cabinet, on the chassis or the picture tube.
9. When replacing a chassis in the cabinet, always be certain that all the protective devices are installed properly, such as, control knobs, adjustment covers or shields, barriers, isolation resistor-capacitor networks etc.. Before returning any television to the customer, the service technician must be sure that it is completely safe to operate without danger of electrical shock.

### **PRODUCT SAFETY NOTICE**

Product safety should be considered when a component replacement is made in any area of a receiver. Components indicated by mark in the parts list and the schematic diagram designate components in which safety can be of special significance. It is particularly recommended that only parts designated on the parts list in this manual be used for component replacement designated by mark. No deviations from resistance wattage or voltage ratings may be made for replacement items designated by mark.

## GENERAL DESCRIPTION

### THE SURVEY

*Table 1, the main IC and functions*

Number	Function	IC	Remark
1	Power supply	KA5Q0765RT	N611
2	CPU + SIGNAL PROCESSER	OM 8370 /TDA9370	N301
3	Field driver	STV9302A	N401
4	Sound driver	AN7522N	N161
5	AV SWITCH	TC4052BP	N801 (Video) N161 (sound)
6	Memory	AT24C08	N702
7	Photo-coupler	PC817B	N504
8	IR-receiver	HS0038A2	U701
9	8V regulator	L7808CV	N503
10	5V regulator	L7805CV	N505

### SIGNAL PROCESS

The TV signal enters into tuner (A201) from cable or antenna. Pin 10 and pin 11 of N301 are combined to select the band. Pin 4 of N301 outputs PWM tuning signal. The 38.9MHz IF signal is coupled to V308 (pre-amplify) and then to SAWF (Z301). After processed in the SAWF, the 38.9MHz signal gets to pin 23 and pin 24 of OM8370. The IF circuit in OM8370 includes such unit as the AGC amplifying circuit, 38.9MHz oscillator, PLL video demodulator, video amplifier, IF identify circuit and AFT circuit. The demodulated signal (CVBS) comes from the pin 38 of OM8370, the sound signal comes from the pin 44.

The internal CVBS signal needs norm identification then outputs from pin 38 of OM8370, via the trap circuit (composed of the V351, Z351, Z354, V352 and so on) feeds back to the pin 40 of OM8370. The RGB signal comes from pin51, Pin52, Pin53 of OM8370, and outputs to the CRT board. The internal sound signal comes from pin 44 of OM8370 and then input to pin 1 and pin 12 of HEF4052BP. The sound signals from RF and AV are selected in it. The selected signal is output from Pin 3 and pin13, then input AN7522N (sound amplifier) or output from AV terminals.

## TECHNICAL SPECIFICATION

Test Item	Conditional	TD171
AC Operating Range	RF&AV signal input with sound loud speaker (volume maximum) & Picture set in Dynamic mode	140Vac ~ 240Vac
Total Power Consumption	Philips or Mono-scope pattern signal with howling sound Contrast & Brightness set in Maximum, sound increase maximum	90Watts
	Standby Mode	14 Watts
EHT	Brightness & contrast set in Maximum	Min: 26.2KVdc
	Typical Design value	Average: 26.5KVdc
	Brightness & contrast Minimum	Max: 27.8KVdc
Anode Current	Brightness & contrast Maximum	$I_{ABL} \leq 1.2\text{mA}$
Heater Voltage	TV operate normally	$V_{\text{Heater}} = 6.2\text{Vac}$
B <sup>+</sup>	Normal operating	$VB^+ = 112\text{Vdc}$
Sound power output	RF signal input broadcasting at 217.25MHz/BG/DK(1KHz) Volume is maximum	V = 6.3Vrms P = 5Watts X 2

## GENERAL SPECIFICATION

Power consumption	14"	70W	MAX
	21"	90W	MAX
Receive system	DK/BG/I		
Color system	PAL/ SECAM/ NTSC		
Vision intermediate frequency	38.9MHz		
Inter-carrier frequency	5.5 MHz(B/G)		
	6.5MHz(D/K)		
Chroma if frequency PAL	34.47/ 35.32MHz		
Antenna type	DIN TYPE 75 Ohm		
Channel receiving	VHF Low channel (VL)	=48.25 to 147.25 MHz	
	VHF high channel (VH)	=154.25 to 463.25 MHz	
	UHF channel (U)	=471.25 to 863.25 MHz	
Tuning system	VS tuning		
AV IN/ OUT	2 AV STEREO IN + 1 AV STEREO OUT		
Component IN	1 YUV-Component IN		
AV IN/ OUT specification	VIDEO IN ----1.0 0.2V <sub>p-p</sub> 75 Ohm		
	AUDIO IN ----0-2V (RMS)		
	VIDEO OUT ----1.0 0.2V <sub>p-p</sub> 75 Ohm		
	AUDIO OUT ---- 0-2V (RMS)		
OSD language	English, Russian, Turkish, French, Spanish, Vietnamese, Indonesian, Arabian, Persian		
Audio output power	> 8W (1KHz, 0.5V INPUT, 10% THD)		
Safety authentication standard	CB		
LED indicator	Power ON		
Hand set type	HS08		
Hans set power supply	Pin AAx2		
Color picture tube	14" 21" 90 degree tube		
Remote control distance	5m		
External input/output	Video/Audio (L/R) 2set input		
	YUV input		
	S-Video input		
	Video/ Audio (L/R) 1 set output		

- I<sup>2</sup>C Bus Control
- Auto Search
- Off/On Timer
- Teletext



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## HORIZONTAL AND VERTICAL CIRCUIT

Through Synchronous separating circuit, the video signal is divided into horizontal-Synchronizing signal and Vertical-Synchronizing signal. The horizontal-Sync pulse coming from pin 33 is transferred to the horizontal-drive transistor.

The cathode driving voltage 180V vertical drive voltage +15V and -15V are all generated from FBT.

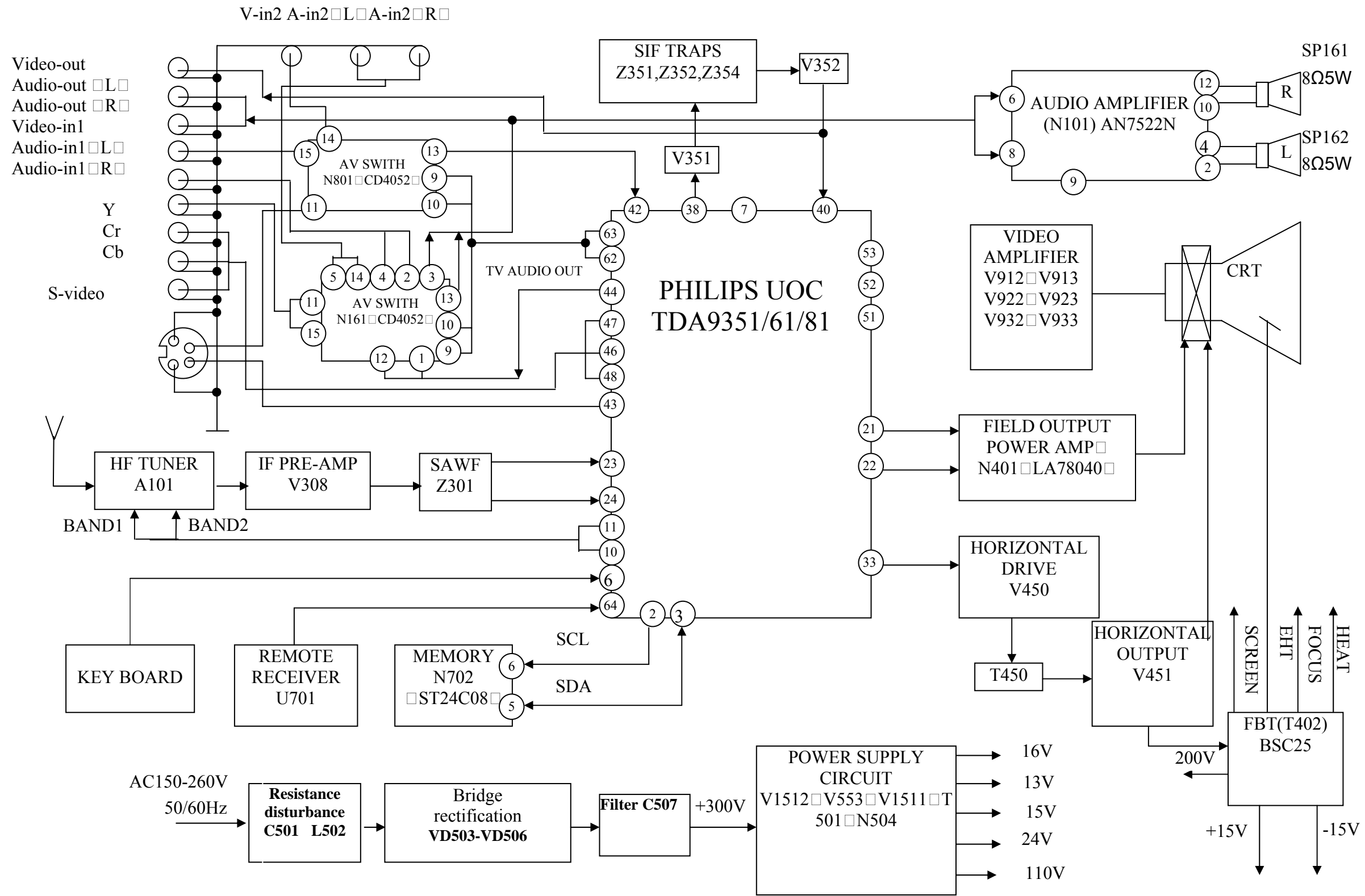
The vertical sawtooth waveform is generated on the pin 21 and 22, and then enters the vertical amplifier STV9302A. STV9302A is a 7 pins vertical deflection circuit (2 Amperes) for DC-coupled 90° or 110° deflection systems with frame frequencies from 50 up to 120 Hz. one supply voltage for the scanning and second voltage supply for the flyback are needed.

The vertical drive currents of OM8370 pins 21 and 22 are connected to input pins 1 and 7 of STV9302A. The vertical scanning output is coming from pin 5 and feed back to pin 1 by R405. The supply voltage is  $\pm 15V$  at pin 2 and pin 4. C406 is the pump capacitor.

## POWER SUPPLY

The IC of KA5Q0765RT is adapted in this chassis; it is the product of Fairchild. It supplies four DC voltages, one is the +B = 110V, another is Hcc = 26V, the third is 13V (the sound drive voltage), the fourth is +16V. The +16V can generate the +8V, +5V and +3.3V by the special generators.

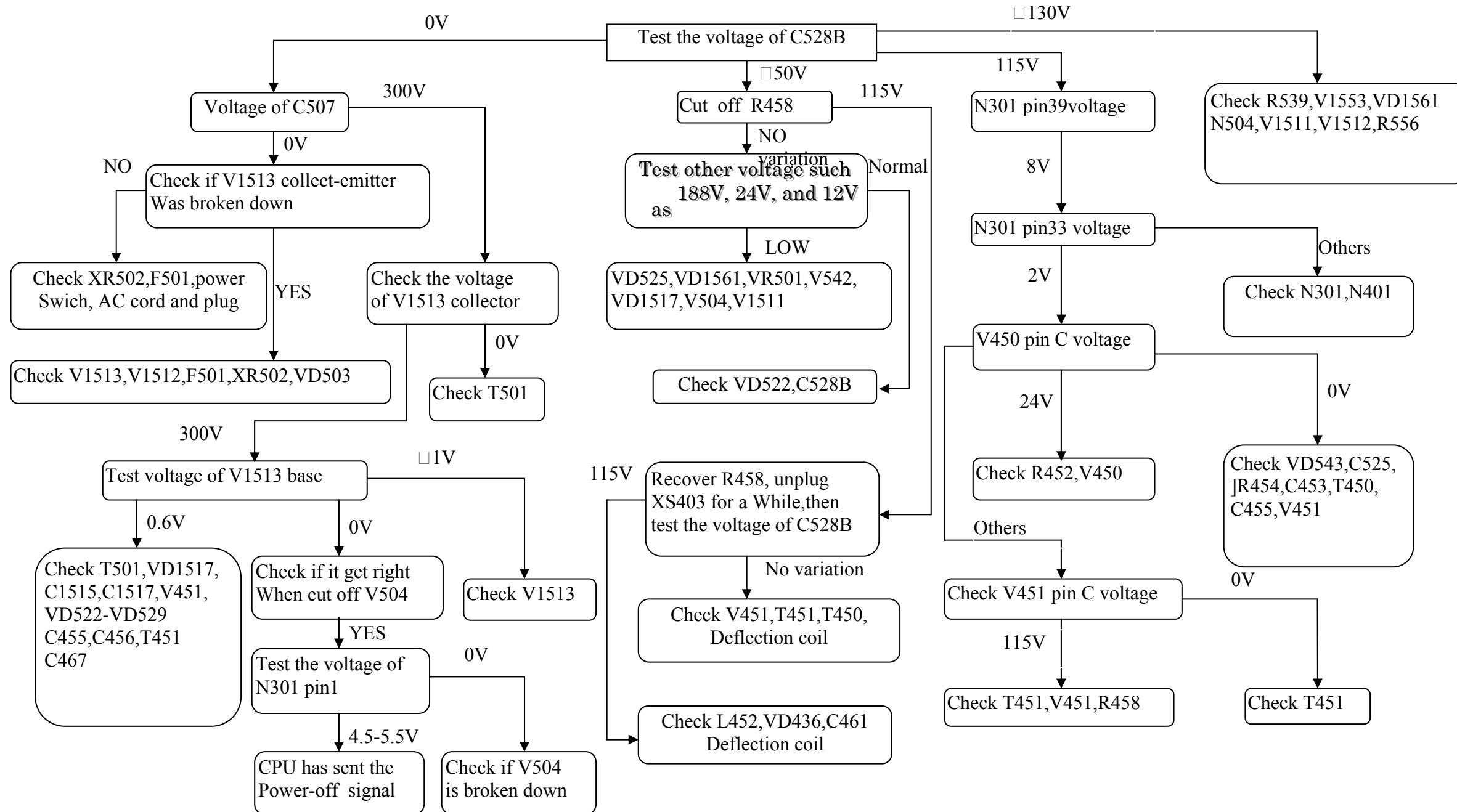
**CHASSIS BLOCK DIAGRAM**



## FAULT FINDING TREES

### A 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.



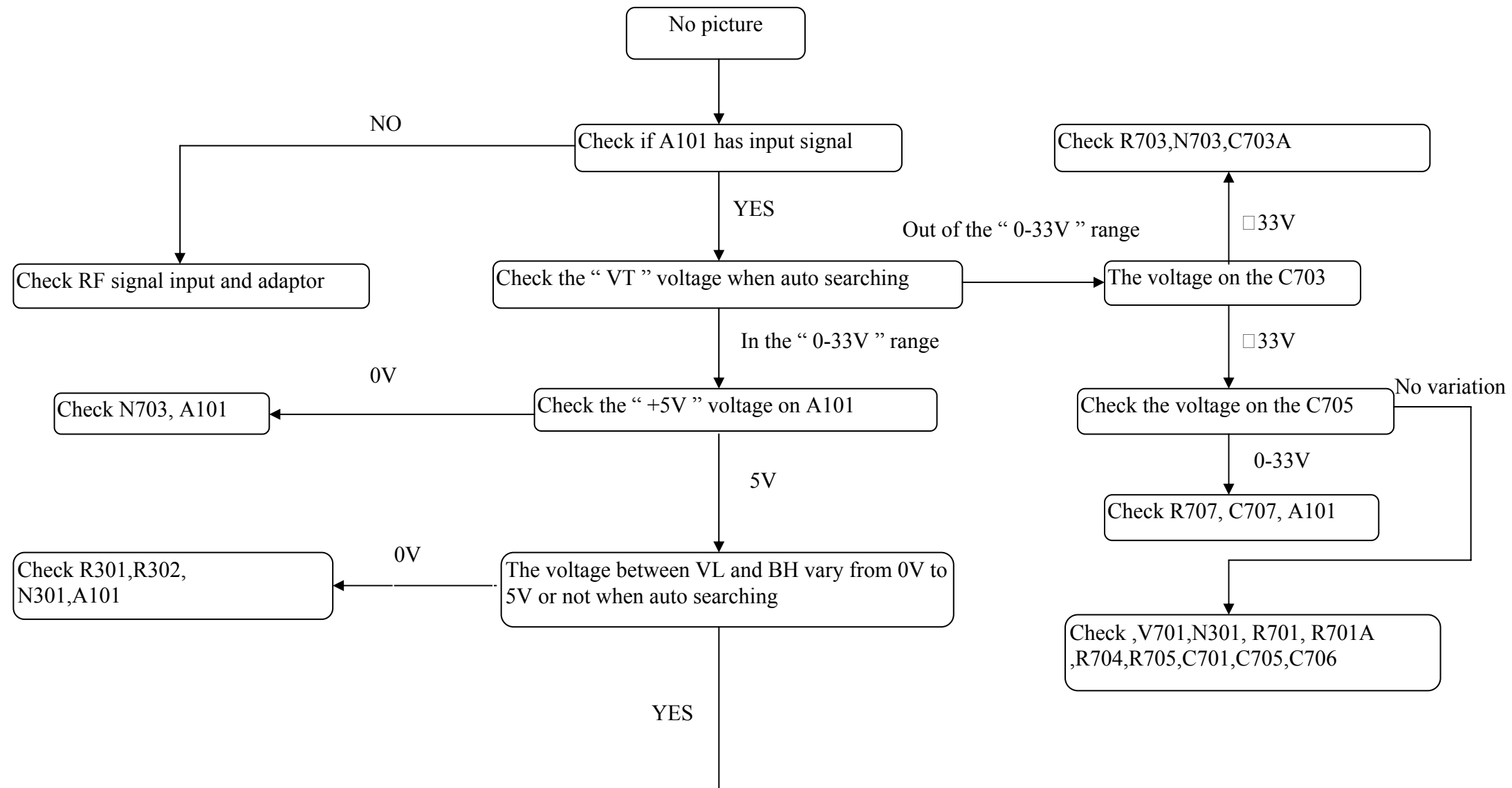
**B Two-None (no picture, no sound)**

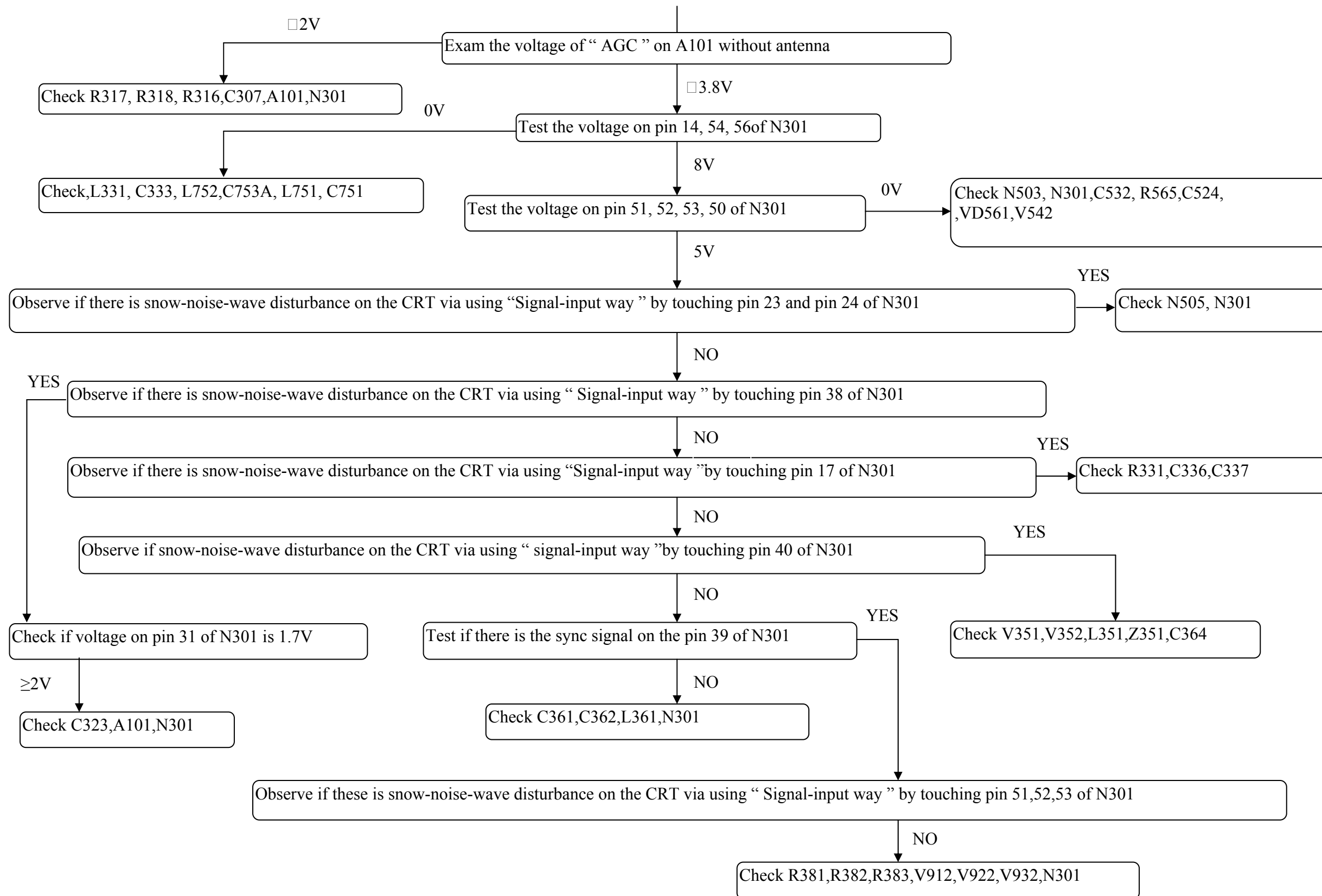
The failure shows that the set does not display the picture but it has noise wave or blue background or OSD on the screen. This means that the circuits of power supply, horizontal scanning, vertical scanning and video amplification are normal and they are not considered in the repairing. The failures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

**1. No picture**



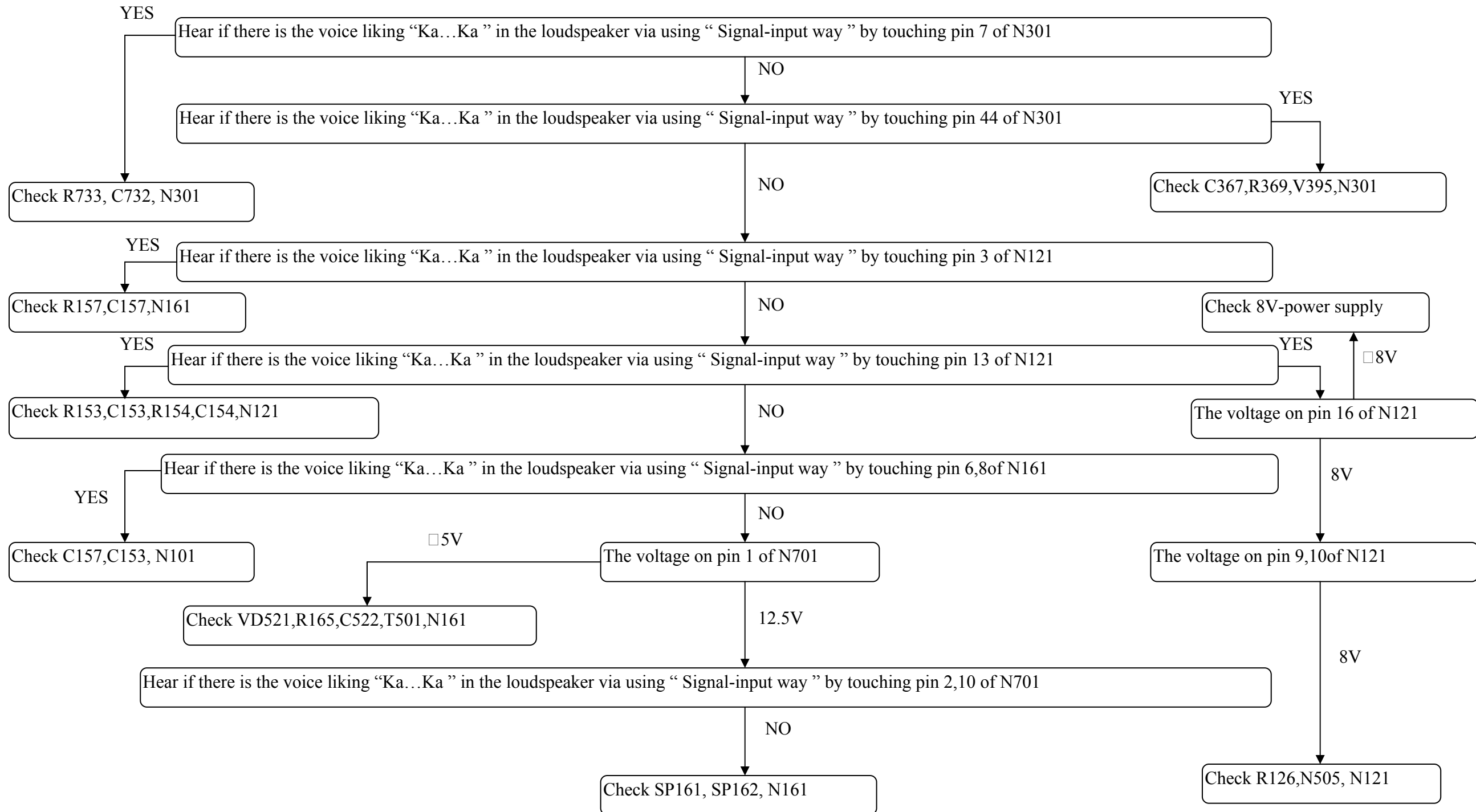


5. No sound

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:

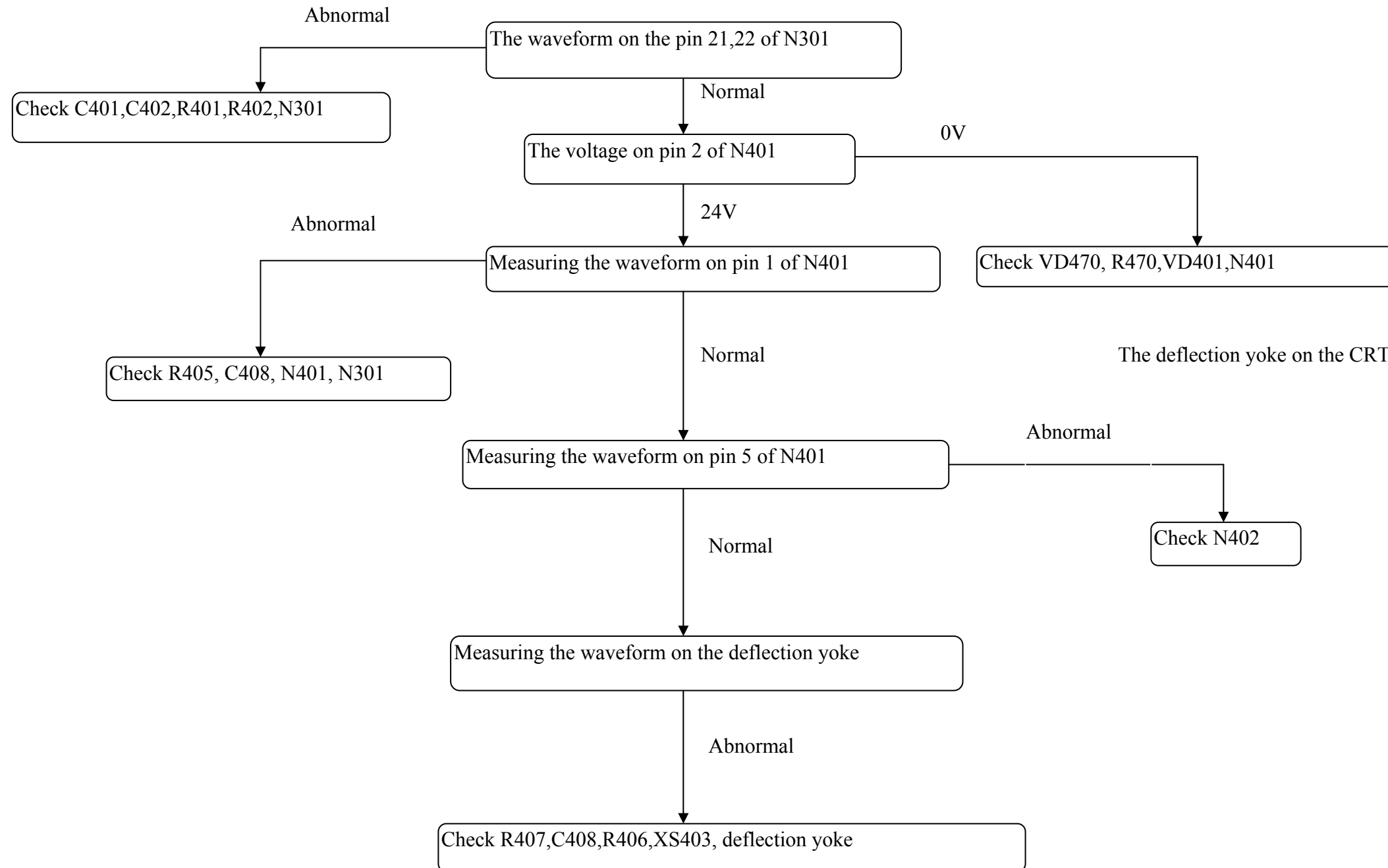
Before repairing, assure that the volume is on and the state of set is in "TV" .



C Only horizontal line in the middle of the screen:

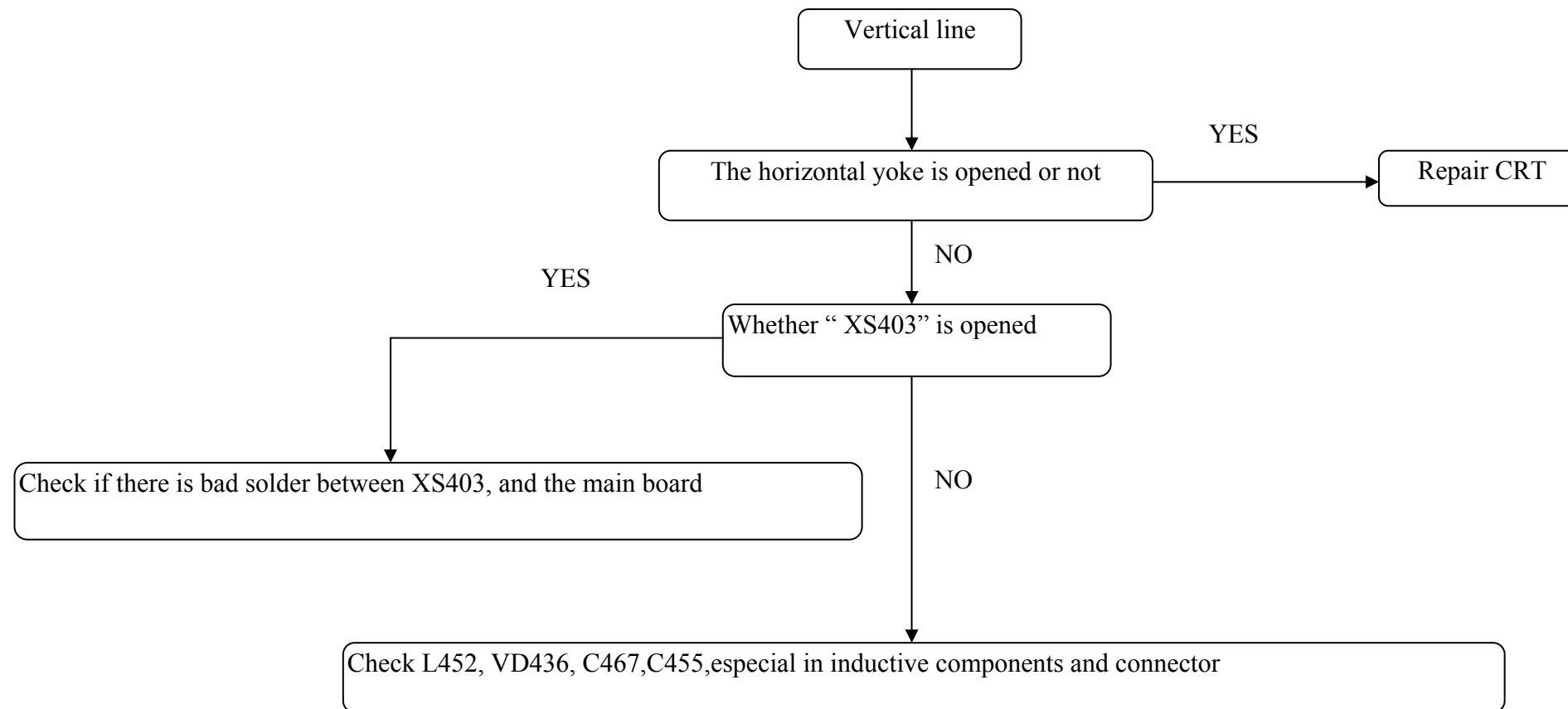
If vertical deflection circuit does not work, this kind of failure will happen. In deflection yoke, there only has horizontal sweeping, the electron beam in the CRT only moves in the horizontal orientation, so form this failure.

(While checking horizontal and vertical deflection circuit's failure, we have better to use an oscilloscope.)



**D 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:



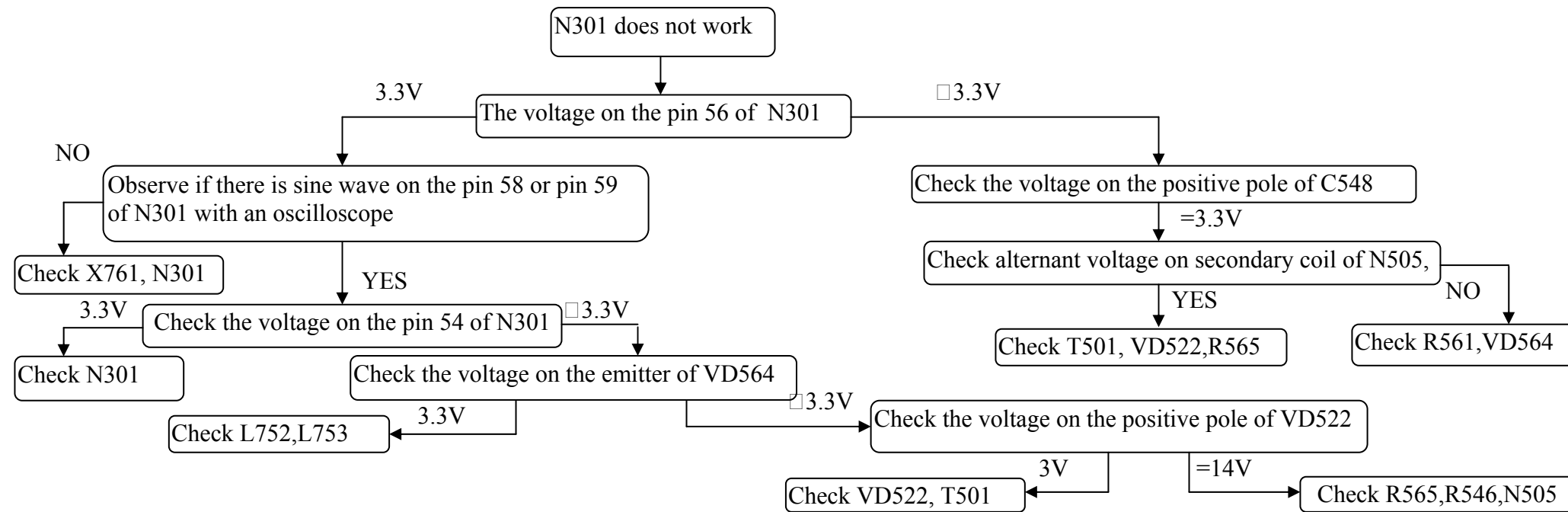
**E UOC does not work**

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

- 1) The power supply: In general, it is 5V, the error is not above 10% and the disturbance pulse is as small as possible.
- 2) 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.



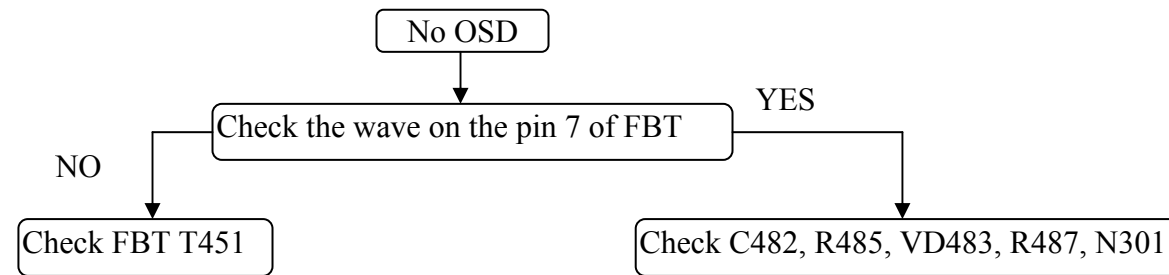
The detail checking and repairing steps are as follow:



**F No OSD (On Screen Display)**

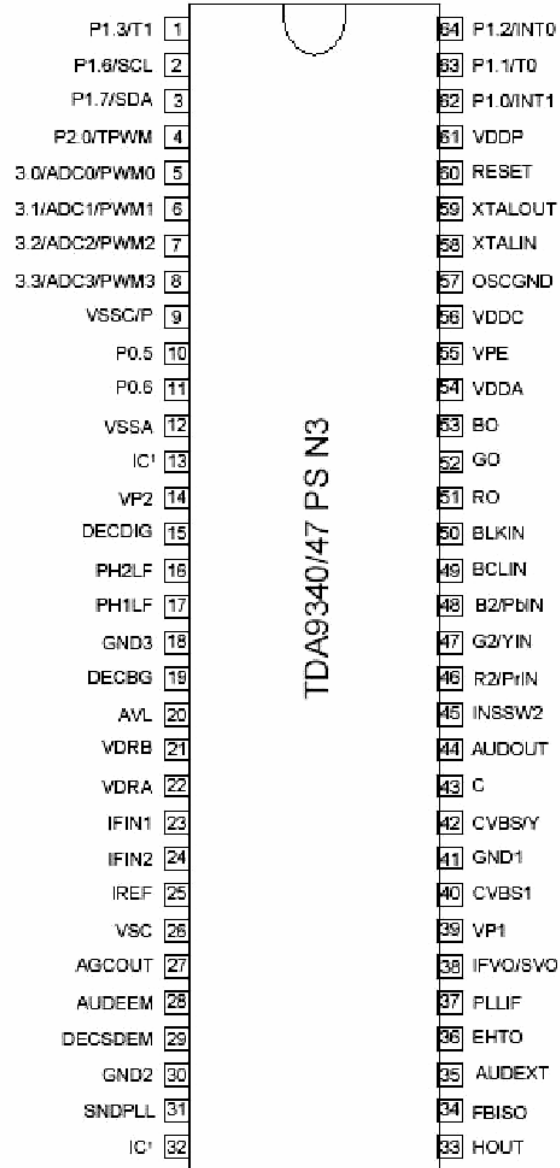
This failure is usually cause by the circuit of character generated and located. Most of reasons are that the horizontal and vertical flyback pulse signals do not come to UOC. We can judge this failure by measuring the wave of the character in an oscilloscope.

The detail checking and repairing steps are as follow:



## IC BLOCK DIAGRAM

**Fig 1: OM8370 Illustration**



## MAIN CHIP INSTRUCTION

Pin 1	Standby control, "1" is on, "0" is off.
Pin 2	SCL
Pin 3	SDA
Pin 4	Tuning PWM output
Pin 5	Auto AV control SW, connected with the SCART 8 <sup>th</sup> pin. Input. The rising edge or the falling edge operates.
Pin 6	Key board input.
Pin 7	Volume
Pin 8	Mute control, "1" is mute, "0" is off.
Pin 9, Pin 12, Pin 18, Pin 30, Pin 35, Pin 41, Pin 55	GND
Pin 10	BAND 1 control output.
Pin 11	BAND 2
Pin 13	SECAM PLL, connected with a capacitance (no use in this type).
Pin 14	+8V power source supply
Pin 15	Using a capacitor of 220n in series to GND. This pin decouples the internal digital supply voltage of the video process and minimizes the disturbance to the sensitive analogue parts.
Pin 16	Phase-2 control loop, this pin requires a capacitor at 2.2nF © in series to GND.
Pin 17	Phase-1 control loop filter connected to pin 17 is suitable for various signal conditions like strong /weak and VCR signal. This is achieved by switching of the loop filter time constant by changing the Phase-1 output current.
Pin 18	GND
Pin 19	Bandgap decoupling, the bandgap circuit provides a very stable and temperature independent reference voltage. This reference voltage (4.0V) ensures optimal performance of the analogue video processor part of the OM8370 and is used in almost all functional circuit blocks.
Pin 20	East-west pillow signal output.
Pin 21, Pin 22	Vertical drive output.
Pin 23, Pin 24	IF input.
Pin 25	Reference current/ This pin requires a resistor to ground. The optimal reference current is 100mA which is determined by this resistor. The 100mA reference current should not be changed because the geometry processor is optimized for this current. Furthermore the output current of vertical drive and EW are proportional to this current.
Pin 26	Vertical sawtooth. This pin requires a capacitor to ground of 100nF.
Pin 27	AGC output. This output is used to control (reduce) the tuner gain for strong RF signals.
Pin 28	Audio de-emphasis.
Pin 29	Sound decoupling. This pin requires a capacitor connected to ground. The pin acts as a low pass filter needed for the DC feedback loop.
Pin 30	GND
Pin 31	Sound loop filter.
Pin 32	AVL filter
Pin 33	Horizontal drive signal output, needs a resistor in series to +8V.
Pin 34	Sandcastle output /flyback input.
Pin 35	External audio input, this pin should be grounded in this chassis.

Pin 36	EHT tracking /over voltage protection. If something is wrong, the anode high voltage rise the heater voltage will rise too. When the rising voltage arrive some limit, the V406 works, the voltage of pin 36 will exceed 3.9V. The OM8370 will stop working.
Pin 37	PLL loop filter.
Pin 38	CVBS output. Monitor or RF videos can be selected.
Pin 39	+8V supply source
Pin 40	CVBS input
Pin 42	Y signal input
Pin 43	C signal input
Pin 44	Main audio output. This pin is connected to the TDA9859.
Pin 45	RGB signal input blanking.
Pin 46, Pin 47, Pin 48	RGB signal input.
Pin 49	ABL. It means been current limiter input. R410 is the control resistor.
Pin 50	Black current input from the CRT board.
Pin 51, Pin 52, Pin 53	RGB drive signal output to the CRT board.
Pin 54	+3.3V
Pin 55	GND
Pin 56	+3.3V
Pin 57, Pin 58, Pin 59	12MHz crystal
Pin 60	Reset. NC in this chassis
Pin 61	+3.3V
Pin 62	NC
Pin 63	This pin is connected to the HEF4094. Functions expending.
Pin 64	IR signal input.

**Fig 2: HEF4052BP Illustration**

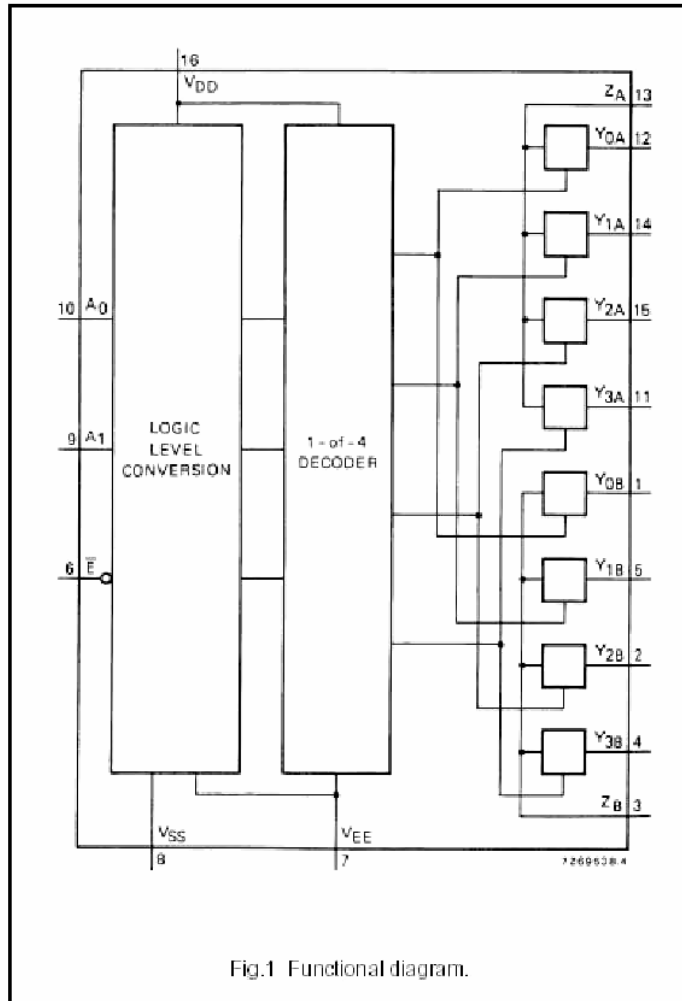


Fig.1 Functional diagram.

## FUNCTION TABLE OF N4052

Input			Channel On
$\bar{E}$	$A_1$	$A_0$	
L	L	L	$Y_{0A} - Z_{A1}; Y_{0B} - Z_{B1}$
L	L	H	$Y_{1A} - Z_{A1}; Y_{1B} - Z_{B1}$
L	H	L	$Y_{2A} - Z_{A2}; Y_{2B} - Z_{B2}$
L	H	H	$Y_{3A} - Z_{A2}; Y_{3B} - Z_{B2}$
H	X	X	NONE

Notes:

H = HIGH state (the more positive voltage)

L = LOW state (the less positive voltage)

X = state is immaterial

## IC N402 <VERTICAL OUTPUT> LA78040 (or STV9302)



### STV9302A

Vertical Deflection Booster  
for 2-App TV/Monitor Applications with 70-V Flyback Generator

#### Main Features

- n Power Amplifier
- n Flyback Generator
- n Output Current up to 2 App
- n Thermal Protection
- n Stand-by Control



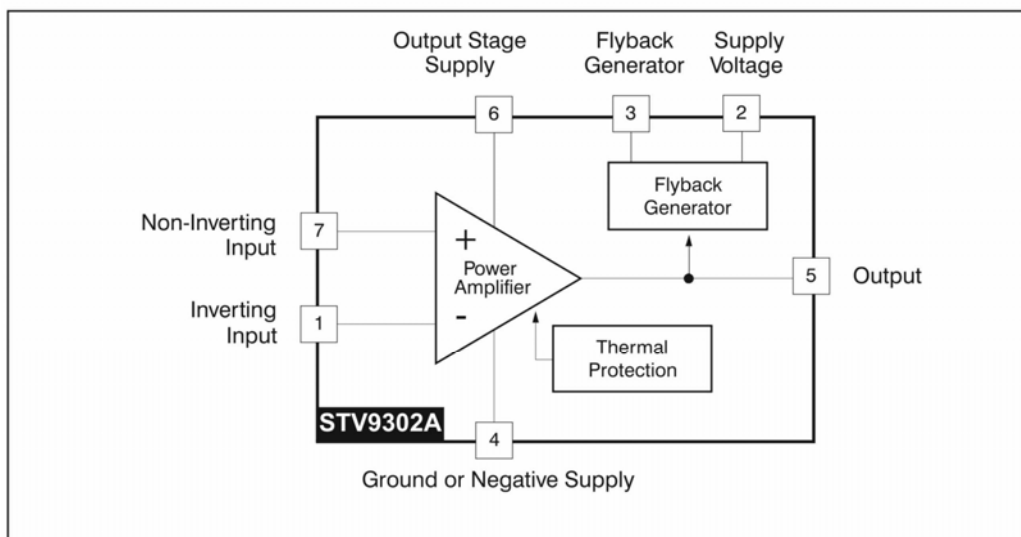
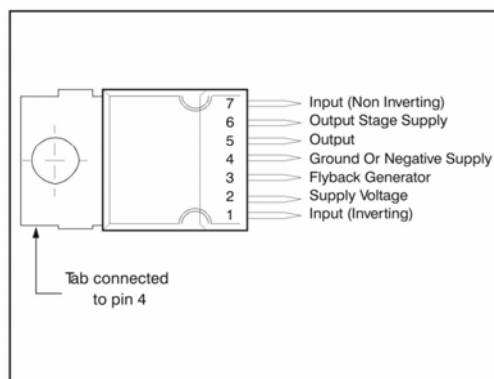
#### Description

The STV9302A is a vertical deflection booster designed for TV and monitor applications.

This device, supplied with up to 35 V, provides up to 2 App output current to drive the vertical deflection yoke.

The internal flyback generator delivers flyback voltages up to 70 V.

In double-supply applications, a stand-by state will be reached by stopping the (+) supply alone.



## 1 Absolute Maximum Ratings

Symbol	Parameter	Value	Unit
<b>Voltage</b>			
$V_S$	Supply Voltage (pin 2) - Note 1 and Note 2	40	V
$V_5, V_6$	Flyback Peak Voltage - Note 2	70	V
$V_3$	Voltage at Pin 3 - Note 2, Note 3 and Note 6	-0.4 to ( $V_S + 3$ )	V
$V_1, V_7$	Amplifier Input Voltage - Note 2, Note 6 and Note 7	- 0.4 to ( $V_S + 2$ ) or +40	V
<b>Current</b>			
$I_0$ (1)	Output Peak Current at $f = 50$ to 200 Hz, $t \leq 10\mu s$ - Note 4	-5	A
$I_0$ (2)	Output Peak Current non-repetitive - Note 5	-2	A
$I_3$ Sink	Sink Current, $t < 1ms$ -Note 3	1.5	A
$I_3$ Source	Source Current, $t < 1ms$	1.5	A
$I_3$	Flyback pulse current at $f=50$ to 200 Hz, $t \leq 10ms$ - Note 4	-5	A
<b>ESD Susceptibility</b>			
ESD1	Human body model (100 pF discharged through 1.5 $\Omega$ )	2	kV
ESD2	EIAJ Standard (200 pF discharged through 0 $\Omega$ )	300	V
<b>Temperature</b>			
$T_s$	Storage Temperature	-40 to 150	$^{\circ}C$
$T_j$	Junction Temperature	+150	$^{\circ}C$

Note:1. Usually the flyback voltage is slightly more than  $2 \times V_S$ . This must be taken into consideration when setting  $V_S$ .

2. Versus pin 4

3.  $V_3$  is higher than  $V_S$  during the first half of the flyback pulse.

4. Such repetitive output peak currents are usually observed just before and after the flyback pulse.

5. This non-repetitive output peak current can be observed, for example, during the Switch-On/Switch-Off phases. This peak current is acceptable providing the SOA is respected (Figure 8 and Figure 9).

6. All pins have a reverse diode towards pin 4, these diodes should never be forward-biased.

7. Input voltages must not exceed the lower value of either  $V_S + 2$  or 40 volts.

## 2 Thermal Data

Symbol	Parameter	Value	Unit
$R_{thJC}$	Junction-to-Case Thermal Resistance	3	$^{\circ}C/W$
$T_T$	Temperature for Thermal Shutdown	150	$^{\circ}C$
$T_J$	Recommended Max. Junction Temperature	120	$^{\circ}C$



### 3 Electrical Characteristics

( $V_S = 32\text{ V}$ ,  $T_{\text{AMB}} = 25^\circ\text{C}$ , unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit	Fig.
<b>Supply</b>							
$V_S$	Operating Supply Voltage Range ( $V_2$ - $V_4$ )	Note 8	10		35	V	
$I_2$	Pin 2 Quiescent Current	$I_3 = 0$ , $I_5 = 0$		5	20	mA	1
$I_6$	Pin 6 Quiescent Current	$I_3 = 0$ , $I_5 = 0$ , $V_6 = 35\text{v}$	8	19	50	mA	1
<b>Input</b>							
$I_1$	Input Bias Current	$V_1 = 1\text{ V}$ , $V_7 = 2.2\text{ V}$		-0.6	-1.5	$\mu\text{A}$	1
$I_7$	Input Bias Current	$V_1 = 2.2\text{ V}$ , $V_7 = 1\text{ V}$		-0.6	-1.5	$\mu\text{A}$	
$V_{\text{IR}}$	Operating Input Voltage Range		0		$V_S - 2$	V	
$V_{\text{IO}}$	Offset Voltage			2		mV	
$DV_{\text{IO}}/dt$	Offset Drift versus Temperature			10		$\mu\text{V}/^\circ\text{C}$	
<b>Output</b>							
$I_O$	Operating Peak Output Current				-1	A	
$V_{\text{5L}}$	Output Saturation Voltage to pin 4	$I_5 = 1\text{ A}$		1	1.7	V	3
$V_{\text{5H}}$	Output Saturation Voltage to pin 6	$I_5 = -1\text{ A}$		1.8	2.3	V	2
<b>Stand-by</b>							
$V_{\text{5STBY}}$	Output Voltage in Stand-by	$V_1 = V_7 = V_S = 0$ See Note 9	$V_S - 2$			V	
<b>Miscellaneous</b>							
G	Voltage Gain		80			dB	
$V_{\text{D5-6}}$	Diode Forward Voltage Between pins 5-6	$I_5 = 1\text{ A}$		1.4	2	V	
$V_{\text{D3-2}}$	Diode Forward Voltage between pins 3-2	$I_3 = 1\text{ A}$		1.3	2	V	
$V_{\text{3SL}}$	Saturation Voltage on pin 3	$I_3 = 20\text{ mA}$		0.4	1	V	3
$V_{\text{3SH}}$	Saturation Voltage to pin 2 (2nd part of flyback)	$I_3 = -1\text{ A}$		2.1		V	

8. In normal applications, the peak flyback voltage is slightly greater than  $2 \times (V_S - V_4)$ . Therefore, ( $V_S - V_4$ ) = 35 V is not allowed without special circuitry.

9. Refer to Figure 4, Stand-by condition.

Figure 1: Measurement of  $I_1$ ,  $I_2$  and  $I_6$

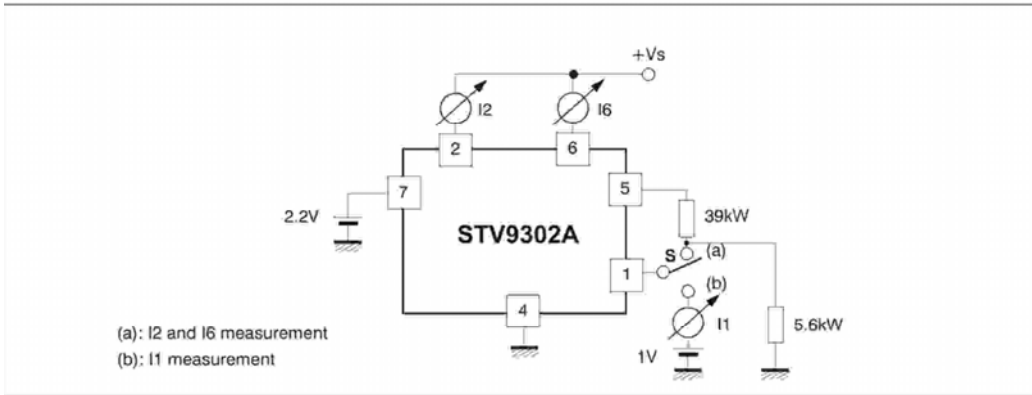


Figure 2: Measurement of  $V_{5H}$

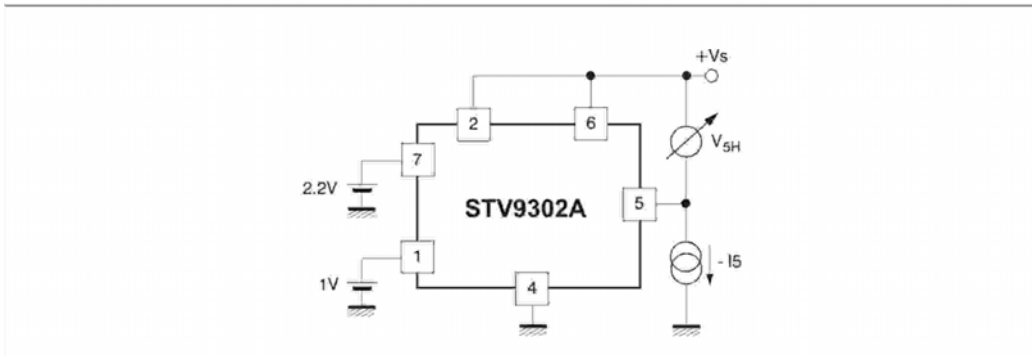
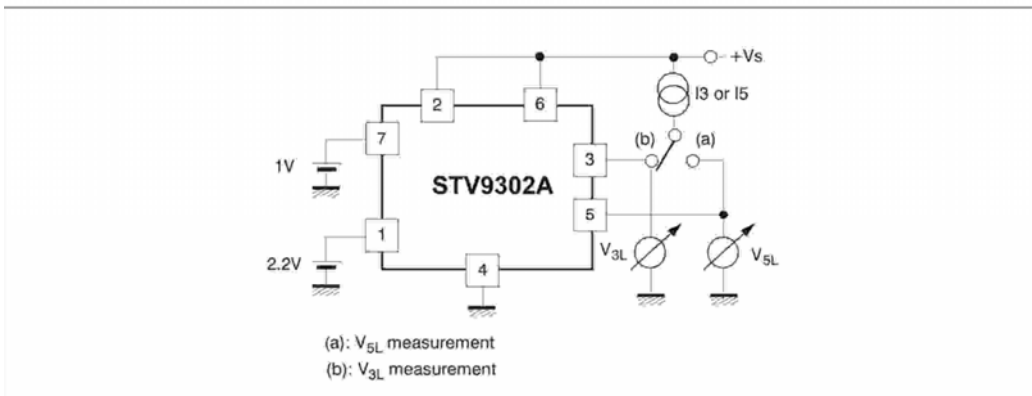


Figure 3: Measurement of  $V_{3L}$  and  $V_{5L}$



## 4 Application Hints

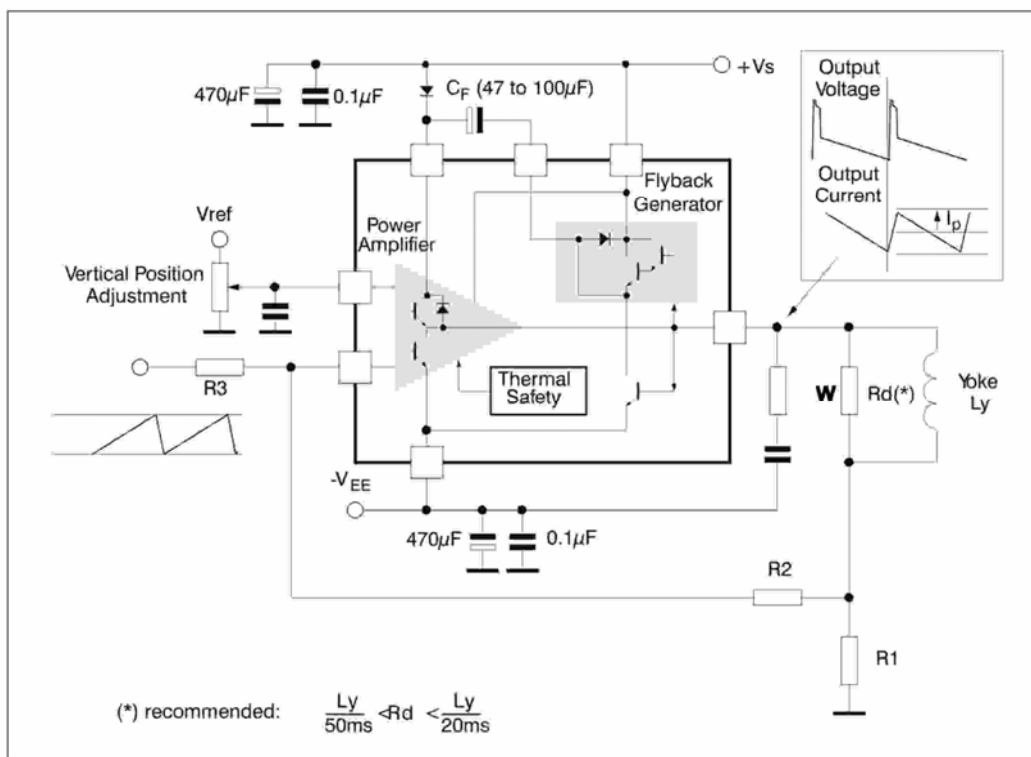
The yoke can be coupled either in AC or DC.

### 4.1 DC-coupled Application

When DC coupled (see Figure 4), the display vertical position can be adjusted with input bias. On the other hand, 2 supply sources ( $V_S$  and  $-V_{EE}$ ) are required.

A Stand-by state will be reached by switching OFF the positive supply alone. In this state, where both inputs are the same voltage as pin 2 or higher, the output will sink negligible current from the deviation coil.

Figure 4: DC-coupled Application



#### 4.1.1 Application Hints

For calculations, treat the IC as an op-amp, where the feedback loop maintains  $V_1 = V_7$ .

4.1.1.1 Centering

Display will be centered (null mean current in yoke) when voltage on pin 7 is ( $R_1$  is negligible):

$$V_7 = \frac{V_M + V_m}{2} \cdot \frac{R_2}{R_2 + R_3 \beta}$$

4.1.1.2 Peak Current

$$I_P = \frac{(V_M - V_m)}{2} \cdot \frac{R_2}{R_1 \times R_3}$$

Example: for  $V_m = 2V$   $V_M = 5V$  and  $\beta = 1A$

Choose  $R_1$  in the 1W range, for instance  $R_1 = 1W$

From equation of peak current: 
$$\frac{R_2}{R_3} = \frac{2 \cdot I_P \cdot R_1}{V_M - V_m} = \frac{2}{3}$$

Then choose  $R_2$  or  $R_3$ . For instance, if  $R_2 = 10W$ , then  $R_3 = 15W$

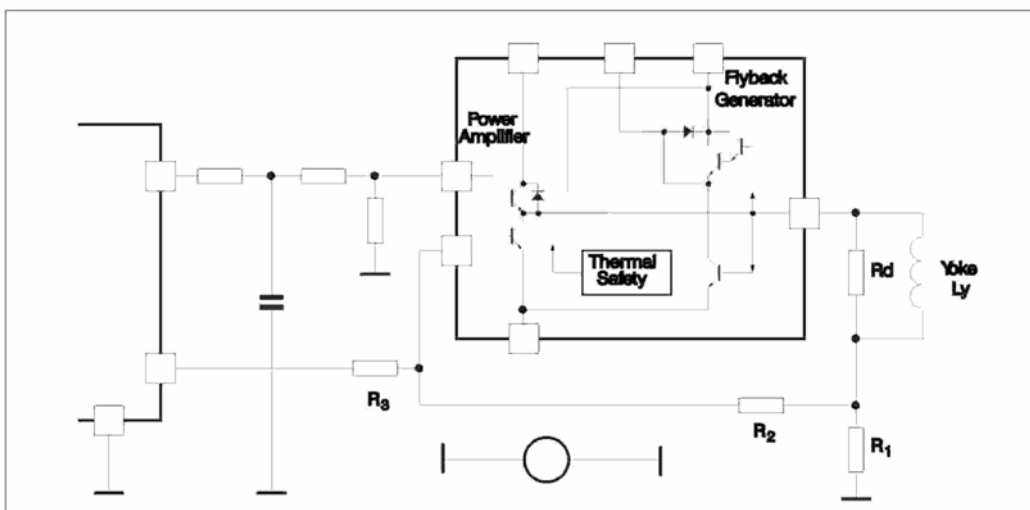
Finally, the bias voltage on pin 7 should be:

$$V_7 = \frac{V_M + V_m}{2} \cdot \frac{1}{1 + \frac{R_2}{R_3}} = \frac{7}{2} \cdot \frac{1}{2.5} = 1.4V$$

4.1.2 Ripple Rejection

When both ramp signal and bias are provided by the same driver IC, you can gain natural rejection of any ripple caused by a voltage drop in the ground (see Figure 5). If you manage to apply the same fraction of ripple voltage to both booster inputs. For that purpose, arrange an intermediate point in the bias resistor bridge, such that  $(R_3 / R_7) = (R_3 / R_2)$ , and connect the bias filtering capacitor between the intermediate point and the local driver ground. Of course,  $R_7$  should be connected to the booster reference point, which is the ground side of  $R_1$ .

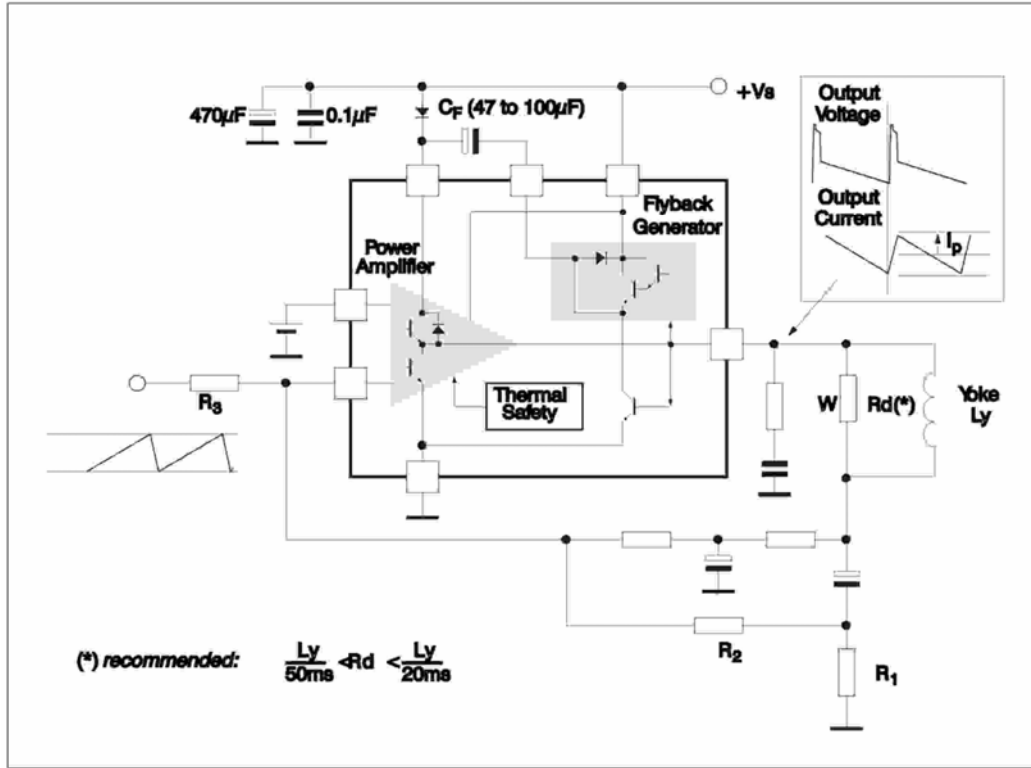
Figure 5: Ripple Rejection



## 4.2 AC-Coupled Applications

In AC-coupled applications (See Figure 6), only one supply ( $V_S$ ) is needed. The vertical position of the scanning cannot be adjusted with input bias (for that purpose, usually some current is injected or sunk with a resistor in the low side of the yoke).

Figure 6: AC-coupled Application



### 4.2.1 Application Hints

Gain is defined as in the previous case:

$$I_p = \frac{V_M - V_m}{2} \cdot \frac{R_2}{R_1 \cdot R_3}$$

Choose  $R_1$  then either  $R_2$  or  $R_3$ . For good output centering,  $V_7$  must fulfill the following equation:

$$\frac{\frac{V_S}{2} - V_7}{R_4 + R_5} = \frac{V_7 - \frac{V_M + V_m}{2}}{R_3} + \frac{V_7}{R_2}$$

or

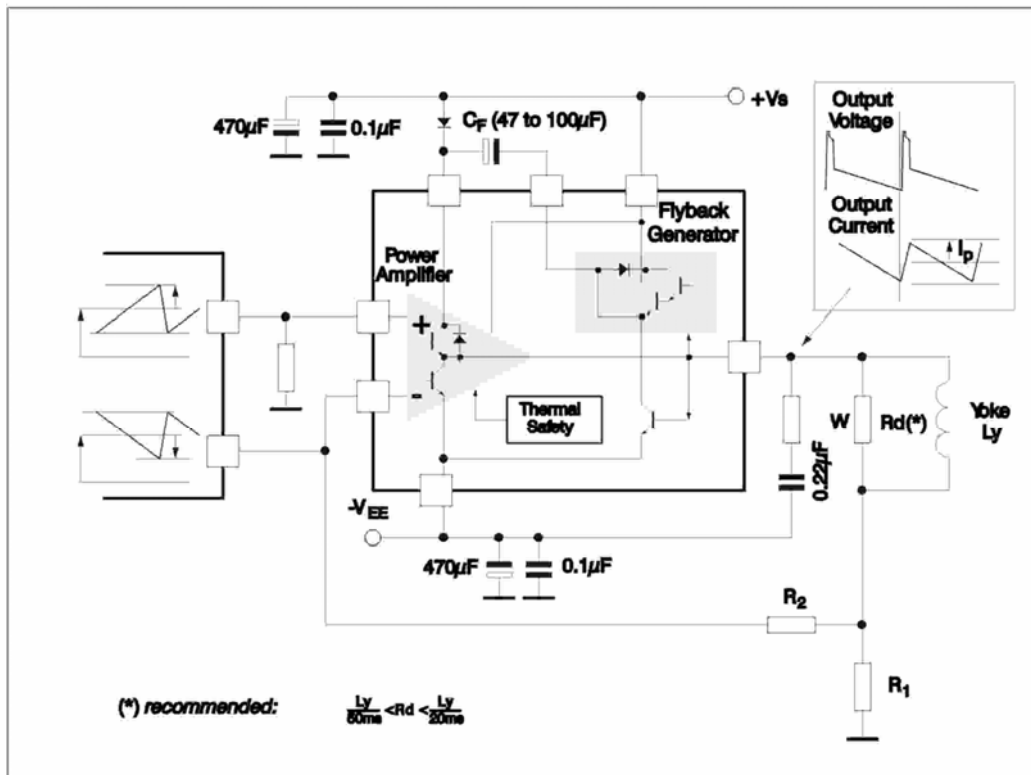
$$V_7 \cdot \left( \frac{1}{R_3} + \frac{1}{R_2} + \frac{1}{R_4 + R_5} \right) = \frac{V_S}{2(R_4 + R_5)} + \frac{V_M + V_m}{2 \cdot R_3}$$

$C_g$  performs an integration of the parabolic signal on  $Q_L$ , therefore the amount of S correction is set by the combination of  $Q_L$  and  $C_g$ .

### 4.3 Application with Differential-output Drivers

Certain driver ICs provide the ramp signal in differential form, as two current sources  $I_+$  and  $I_-$  with opposite variations.

Figure 7: Using a Differential-output Driver



Let us set some definitions:

- $I_{cm}$  is the common-mode current:  $I_{cm} = \frac{1}{2}(I_+ + I_-)$
- at peak of signal,  $I_+ = I_{cm} + I_p$  and  $I_- = I_{cm} - I_p$  therefore the peak differential signal is  $I_p - (-I_p) = 2 I_p$  and the peak-peak differential signal,  $4 I_p$ .

The application is described in Figure 7 with DC yoke coupling. The calculations still rely on the fact that  $V_1$  remains equal to  $V_7$ .

#### 4.3.1 Centring

When idle, both driver outputs provide  $I_{cm}$  and the yoke current should be null ( $R_1$  is negligible), hence:

$$I_{cm} \times R_7 = I_{cm} \times R_2 \text{ therefore } R_7 = R_2$$

#### 4.3.2 Peak Current

Scanning current should be  $I_p$  when positive and negative driver outputs provide respectively

$I_{cm} - I_p$  and  $I_{cm} + I_p$  therefore

$$(I_{cm} - I) \times R_7 = I_p \times R_1 + (I_{cm} + I) \times R_2 \text{ and since } R_7 = R_2: \quad \frac{I_p}{I} = \frac{2R_7}{R_1}$$

Choose  $R_1$  in the 1W range, the value of  $R_2 = R_7$  follows. Remember that  $I$  is one-quarter of driver peak-peak differential signal! Also check that the voltages on the driver outputs remain inside allowed range.

- Example: for  $I_{cm} = 0.4\text{mA}$ ,  $I = 0.2\text{mA}$  (corresponding to 0.8mA of peak-peak differential current),  $I_p = 1\text{A}$

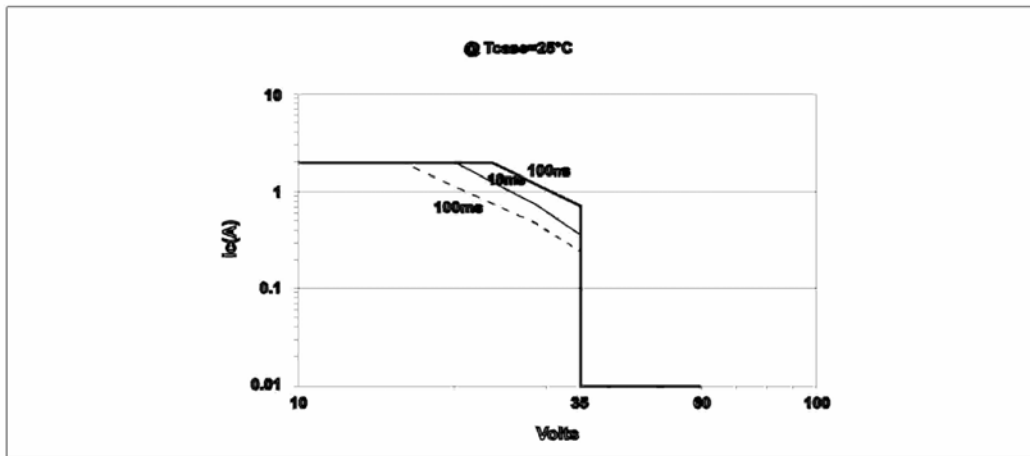
Choose  $R_1 = 0.75\text{W}$  it follows  $R_2 = R_7 = 1.875\text{k}\Omega$ .

#### 4.3.3 Ripple Rejection

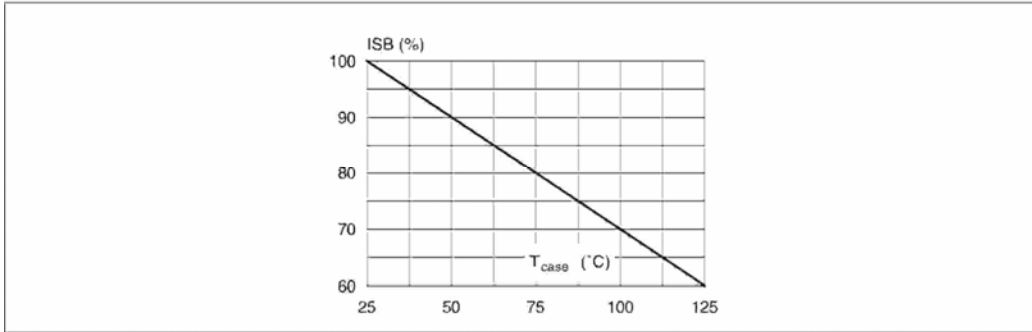
Make sure to connect  $R_7$  directly to the ground side of  $R_1$ .

#### 4.3.4 Secondary Breakdown Diagrams

Figure 8: Output Transistor Safe Operating Area (SOA) for Secondary Breakdown



**Figure 9: Secondary Breakdown Temperature Derating Curve (ISB = Secondary Breakdown Current)**

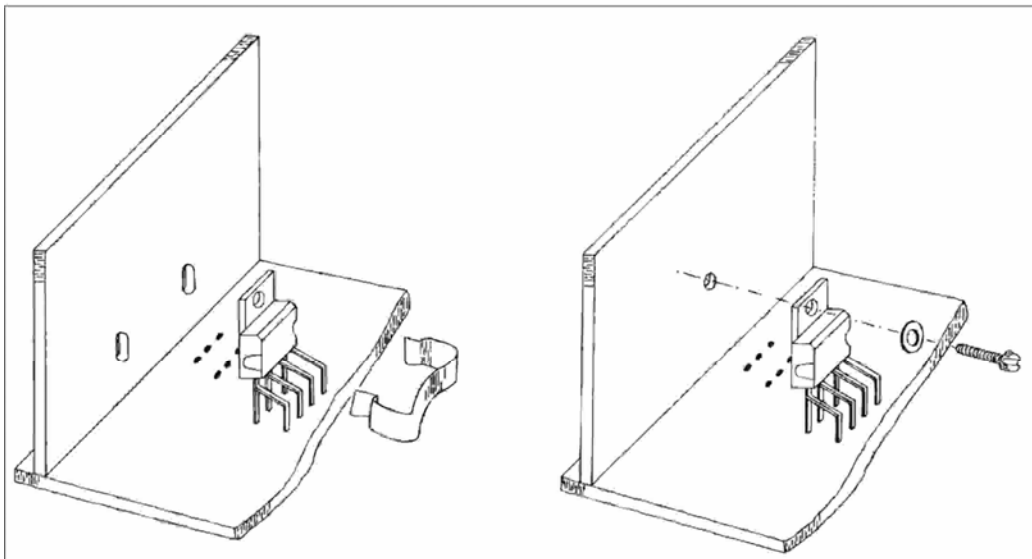


## 5 Mounting Instructions

The power dissipated in the circuit is removed by adding an external heatsink. With the HEPTAWATT™ package, the heatsink is simply attached with a screw or a compression spring (clip).

A layer of silicon grease inserted between heatsink and package optimizes thermal contact. In DC-coupled applications we recommend to use a silicone tape between the device tab and the heatsink to electrically isolate the tab.

**Figure 10: Mounting Examples**





## 6 Pin Configuration

Figure 11: Pins 1 and 7

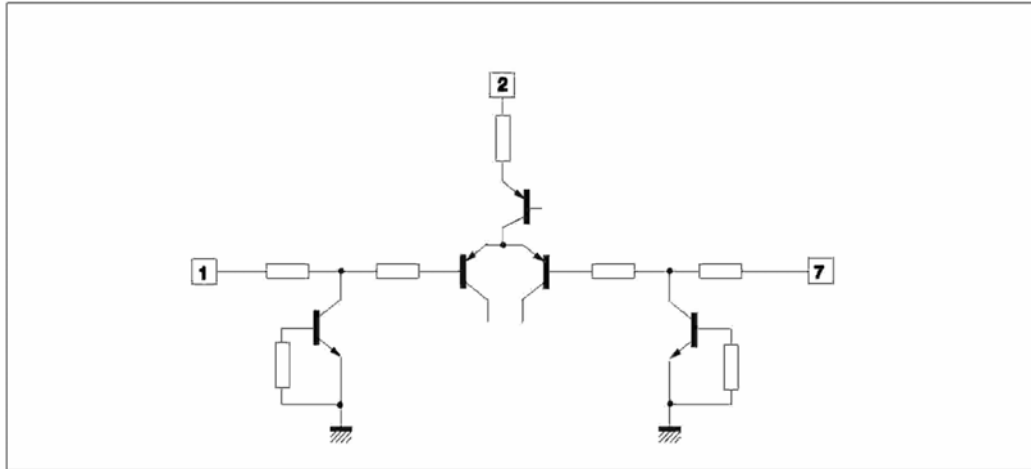
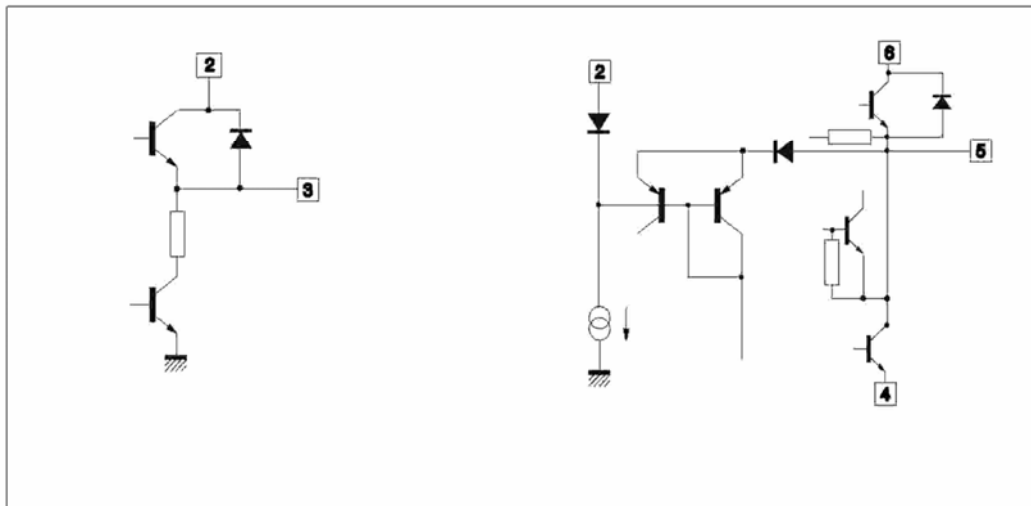
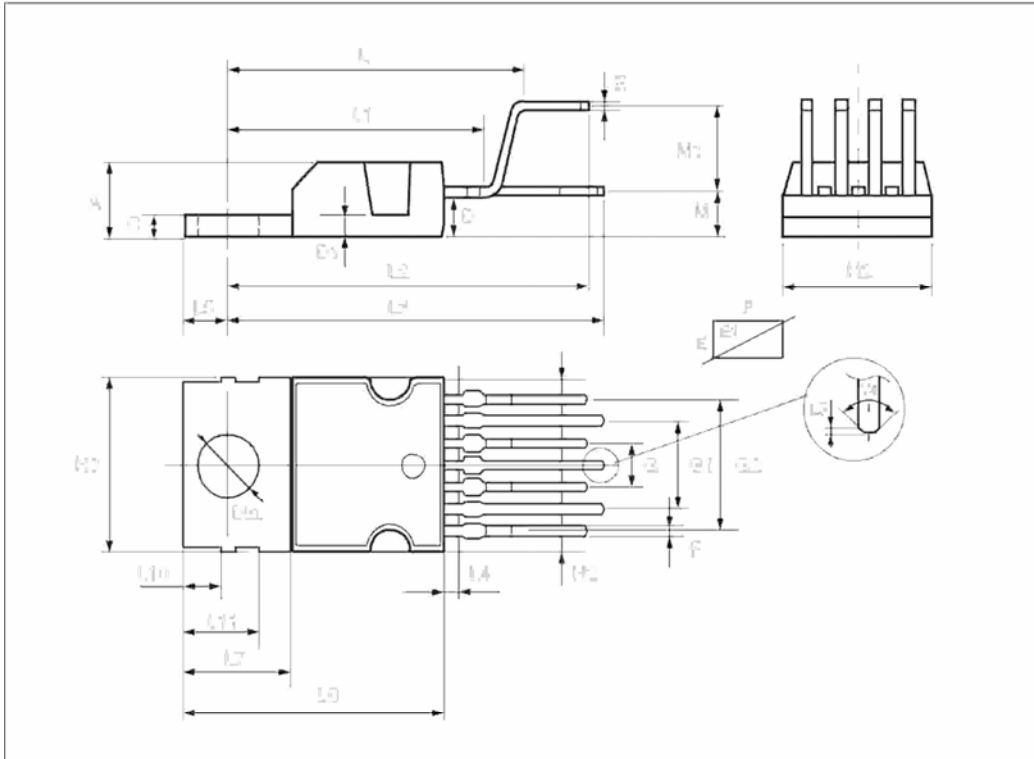


Figure 12: Pin 3 & Pins 5 and 6



## 7 Package Mechanical Data

**Figure 13: 7-pin Heptawatt Package**



**Table 1: Heptawatt Package**

Dim.	mm			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A			4.8			0.189
C			1.37			0.054
D	2.40		2.80	0.094		0.110
D1	1.20		1.35	0.047		0.053
E	0.35		0.55	0.014		0.022
E1	0.70		0.97	0.028		0.038
F	0.60		0.80	0.024		0.031
G	2.34	2.54	2.74	0.095	0.100	0.105
G1	4.88	5.08	5.28	0.193	0.200	0.205
G2	7.42	7.62	7.82	0.295	0.300	0.307
H2			10.40			0.409
H3	10.05		10.40	0.396		0.409
L	16.70	16.90	17.10	0.657	0.668	0.673

**Table 1: Heptawatt Package (Continued)**

Dim.	mm			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
L1		14.92			0.587	
L2	21.24	21.54	21.84	0.836	0.848	0.860
L3	22.27	22.52	22.77	0.877	0.891	0.896
L4			1.29			0.051
L5	2.60	2.80	3.00	0.102	0.110	0.118
L6	15.10	15.50	15.80	0.594	0.610	0.622
L7	6.00	6.35	6.60	0.236	0.250	0.260
L9		0.20			0.008	
L10	2.10		2.70	0.082		0.106
L11	4.30		4.80	0.169		0.190
H1	2.55	2.80	3.05	0.100	0.110	0.120
H1	4.83	5.08	5.33	0.190	0.200	0.210
V4	40 (Typ.)					
Dim.	3.65		3.85	0.144		0.152

## 8 Revision History

**Table 2: Summary of Modifications**

Version	Date	Description
2.0	January 2002	First Issue.
2.1	November 2002	Addition of Stand-by Control Information, Section 8: Revision History.
2.2	April 2003	Correction to Section 4.1.1.2: Peak Current. Creation of new title, Section 4.3.4: Secondary Breakdown Diagrams.

1	Inverting input
2	V <sub>cc</sub>
3	Pump up out
4	GND
5	VER output
6	Output stage V <sub>cc</sub>
7	Non inv. Put

## Fig 4 AN7522N Illustration

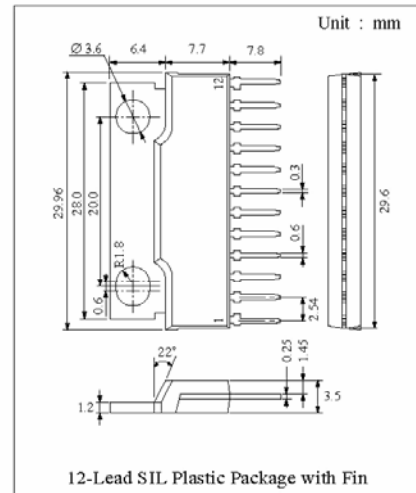
### Dual 3W BTL Audio Power Amplifier

#### ■ Description

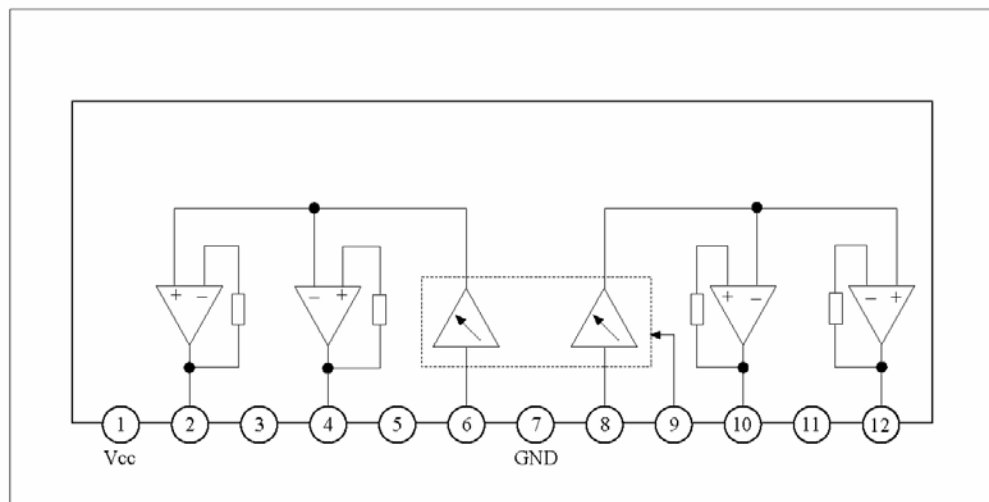
The AN7522 is a monolithic integrated circuits designed for 3.0W x 2 channel BTL (8V, 8Ω) output audio power amplifier.

#### ■ Features

- Fewer external parts - no boucherot cells (output C, R), no bootstrap capacitors, no negative feedback capacitors, no ripple filter capacitor
- Built-in electronic volume function
- Built-in standby circuit
- Operating voltage range :  $V_{CC} = 3.5V \sim 13.5V$



#### ■ Block Diagram



■ Absolute Maximum Ratings (Ta=25°C)

Item	Symbol	Rating	Unit
Supply Voltage (at no signal)	V <sub>CC</sub>	14	V
Supply Current	I <sub>CC</sub>	2.0	A
Power Dissipation	P <sub>D</sub>	1.92	W
Operating Ambient Temperature	Topr	-25 ~ +70	°C
Storage Temperature	Tstg	-55 ~ +150	°C

Operating Supply Voltage Range: V<sub>CC</sub> = 3.5V ~ 13.5V

■ Electrical Characteristics (V<sub>CC</sub>=8.0V, R<sub>L</sub>=8Ω, f=1kHz, Ta=25±2°C)

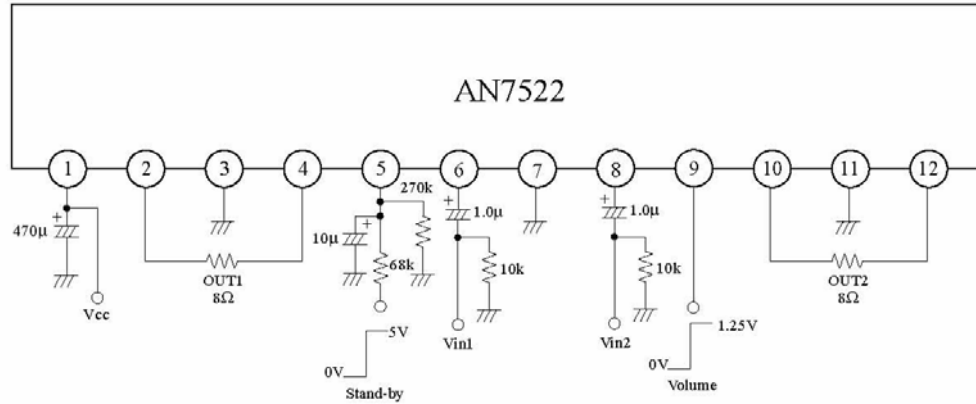
Item	Symbol	Condition	min.	typ.	max.	Unit
Quiescent Current	I <sub>CCQ</sub>	V <sub>in</sub> =0mV, Vol=0V		45	100	mA
Standby Current	I <sub>STB</sub>	V <sub>in</sub> =0mV, Vol=0V		1	10	μA
Output Noise Voltage (Note 1)	V <sub>NO</sub>	R <sub>g</sub> =10kΩ, Vol=0V		0.10	0.4	mVrms
Voltage Gain	G <sub>V</sub>	Po=0.5W, Vol=1.25V	31	33	35	dB
Total Harmonic Distortion	THD	Po=0.5W, Vol=1.25V		0.10	0.5	%
Maximum Power Output	P <sub>O</sub>	THD=10%, Vol=1.25V	2.4	3.0		W
Ripple Rejection Ratio (Note 1)	RR	R <sub>g</sub> =10kΩ, Vol=0V, V <sub>r</sub> =0.5Vrms, f <sub>r</sub> =120Hz	30	50		dB
Output Offset Voltage	V <sub>OFF</sub>	R <sub>g</sub> =10kΩ, Vol=0V	-250	0	250	mV
Volume Attenuation Ratio (Note 1)	Att	Po=0.5W, Vol=0V	70	85		dB
Channel Balance 1	CB1	Po=0.5W, Vol=1.25V	-1	0	1	dB
Channel Balance 2	CB2	Po=0.5W, Vol=0.6V	-3	0	3	dB
Middle Voltage Gain	G <sub>Vm</sub>	Po=0.5W, Vol=0.6V	20.5	23.5	26.5	dB
Crosstalk	CT	Po=0.5W, Vol=1.25V	40	55		dB

Note 1) With a filter band 15Hz ~ 30kHz (12dB/OCT) used.

■ Pin

Pin No	Pin Name	Pin No	Pin Name
1	N.C.	9	GND (Input)
2	Ch.1 Output (+)	10	Ch.2 Input
3	GND (Ch.1 Output)	11	Volume
4	Ch.1 Output (-)	12	Ch.2 Output (-)
5	Stand-by	13	GND (Ch.2 Output)
6	Ch.1 Input	14	Ch.2 Output (+)

Test Circuit



Note) If the standby pin is open or 0V, the IC is on standby state.  
 The IC is in the state of volume minimum if the Volume pin is ground.  
 The IC is in the state of volume maximum if the Volume pin is open.

■ Supplementary Explanation

● Application's Precaution

- 1) Make sure that the IC is free of any pin short-circuiting, ground fault, and load short-circuiting.
- 2) Ground the radiation fin so that there will be no difference in electric potential between the radiation fin and ground.
- 3) The thermal protection circuit operates at a  $T_j$  of approximately 150°C. The thermal protection circuit is reset automatically when the temperature drops.
- 4) Make sure that the heat radiation design is effective enough if the Vcc is comparatively high or the IC operates high output power.
- 5) Connect only ground pin for signal sources to the signal GND pin of the amplifier on the previous stage.
- 6) The electric surge voltage for this IC low, therefore be extra careful when using the following pin (at 200pF): Pin 5=+140V, Pin 6=+140V, Pin 9=+130V, Pin 8=+150V

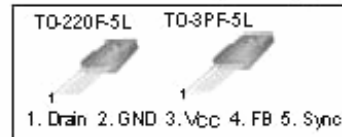
**Fig 5: KA5Q0765RT Illustration**

**Features**

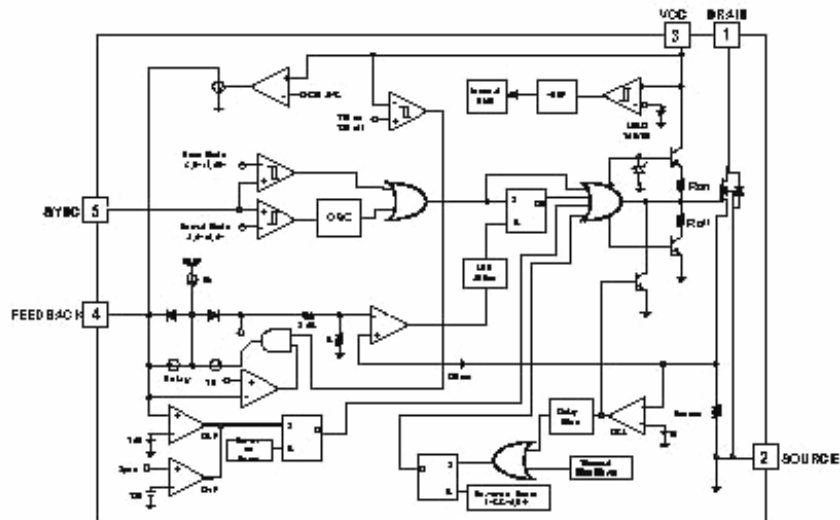
- Quasi Resonant Converter Controller
- Internal Burst Mode Controller for Stand-by Mode
- Pulse by Pulse Current Limiting
- Over Current Latch Protection
- Over Voltage Protection (V<sub>sync</sub> : Min. 11V)
- Internal Thermal Shutdown Function
- Under Voltage Lockout
- Internal High Voltage Sense FET
- Auto-Restart Mode

**Description**

The Fairchild Power Switch(FPS) product family is specially designed for an off-line SMPS with minimal external components. The Fairchild Power Switch(FPS) consist of high voltage power Sense FET and current mode PWM controller IC. PWM controller features integrated fixed oscillator, under voltage lock out, leading edge blanking, optimized gate turn-on/turn-off driver, thermal shut down protection, over voltage protection, temperature compensated precision current sources for loop compensation and fault protection circuit. compared to discrete MOSFET and controller or RCC switching converter solution, a Fairchild Power Switch(FPS) can reduce total component count, design size, and weight and at the same time increase efficiency, productivity, and system reliability. It has a basic platform well suited for cost-effective design in quasi resonant converter as C-TV power supply.



**Internal Block Diagram**



## FACTORY MENU

### Main power +B setting

Receive standard color pattern RF signal. Set picture to "Standard Mode". Adjust VR501, to get +B (VD542 -) voltage =110V.

### I<sup>2</sup>C bus control adjustment method

#### How to enter and exit factory mode (with customer's remote controller)

1. Press [menu] key → display picture menu
2. Press digital key "6" "4" "8" "3" → display "M"
3. Push [standby] key one time to exit factory mode and return to normal.

#### How to select menus in factory mode

In factory mode {"M" mode) there are ten menus totally. Menu 1 to Menu 4 can be selected directly but Menu 5 to Menu 0 must be select by these steps:

1. Press "CALL" key, to call "M".
2. Press "LOCK" key, then press any one numeric key from 5 to 0.

For example, to select Menu 7, you should press "call" key and LOCK key in turns, then press the numeric key 7.

### Menu function introduction

#### Menu 1

Item	Preset value		Definition
	50Hz	60Hz	
V SLOPE	32	32	Vertical linearity
V SHIFT	32	32	Vertical position
V SIZE	32	32	Vertical size
V SC	32	32	Vertical S correction
H SHIFT	32	32	Horizontal position

#### Menu 2

Item	Preset value	Definition
RF AGC	20	RF AGC adjust, when the signal is poor, you can decrease the value to increase the gain
Shipping		For factory use

#### Menu 3

Item	Preset value	Definition
BT	75	Bright in W/B mode
CT	75	Contrast in W/B mode
SC		Screen mode (press Vol +/- or CH +/- key to enter or exit). Adjust screen knob on FBT to adjust the bright of the line.
RB	32	Red bias adjust
GB	32	Green bias adjust
RD	32	Red drive adjust
GD	32	Green drive adjust
BD	32	Blue drive adjust
SB	40	Sub-bright adjust

Note:

1. BT /CT can not be remembered.
2. RB /GB /RD /GD /BD /SB can be remembered.



**Menu 4**

Item	Preset value		Definition
	50Hz	60Hz	
OSD V	32	32	OSD vertical position
OSD H	32	32	OSD horizontal position

**Menu 5**

Item	Preset value	Definition
MODE	STANDARD	Picture mode selection. You can select four modes: STANDARD, VIVID, MILD and USER.
BRIGHT	75	Preset bright value for the mode you have selected above.
CONTRAST	75	Preset contrast value.
COLOR	50	Preset color value.
SHARP	50	Preset sharpness value f.
SC BRIGHT	20	Preset bright value for screen mode.
COOL	10	The off set in cool mode.
WARM	10	The off set in bright mode.
Y DELAY PAL	8	Y signal delay in PAL system.
Y DELAY NTSC	8	Y signal delay in NTSC system.
Y DELAY AV	8	Y signal delay in AV mode.

**Menu 3**

Item	Preset value	Definition
OSO	1	Over scan switch Off. 0: not available 1: available
AGC SPEED	1	0: Slow AGC action. IF –AGC capacitor is 3.1uF. 1: Normal. IF –AGC capacitor is 2.2uF. 2: Fast AGC action. 3 times speed than normal. 3: Fast AGC action. 6 times speed than normal.
FFI	0	Fast filter IFPLL. 0: Normal 1: Fast
FSL	0	
FMWS	0	FM search window width 0: ±225KHz 1: ±450KHz
RPO	1	
NTSC MATRIX	0	0: JAPAN 1: USA
IFS REDUCE	0	0: Decrease the sensitivity of IF while search. 1: Not decrease the sensitivity of IF while search.
VOL PIN	0	0: OC gate output 1: PULL-PUSH output
SOFT CLIP	0	
PEAK WHITE	0	
CORING	0	

**Menu 7**

Item	Preset value	Definition
IFFS	38.9MHz	IF Frequency selection
DK	OFF	DK system selection
I	OFF	I system selection
BG	ON	BG system selection
M	OFF	M system selection
SIF PRI	ON	SIF Priority
AV2	ON	AV2 selection
S-VIDEO	ON	S-video selection
YUV	ON	YUV selection
VOL ADJ POINT	1	VOL curve point selection
VOL ADJ VALUE	10	VOL curve value adjusting on the selected point

**Menu 8**

Item	Preset value	Definition
CATHODE	4	Cathode adjusting From 0 to 15
UOC VOL	0	Must be 0. When set 1, AV volume will be abnormal
FM ATT	45	UOC output volume adjusting. From 0-63
CHINESE	1	Chinese OSD selection

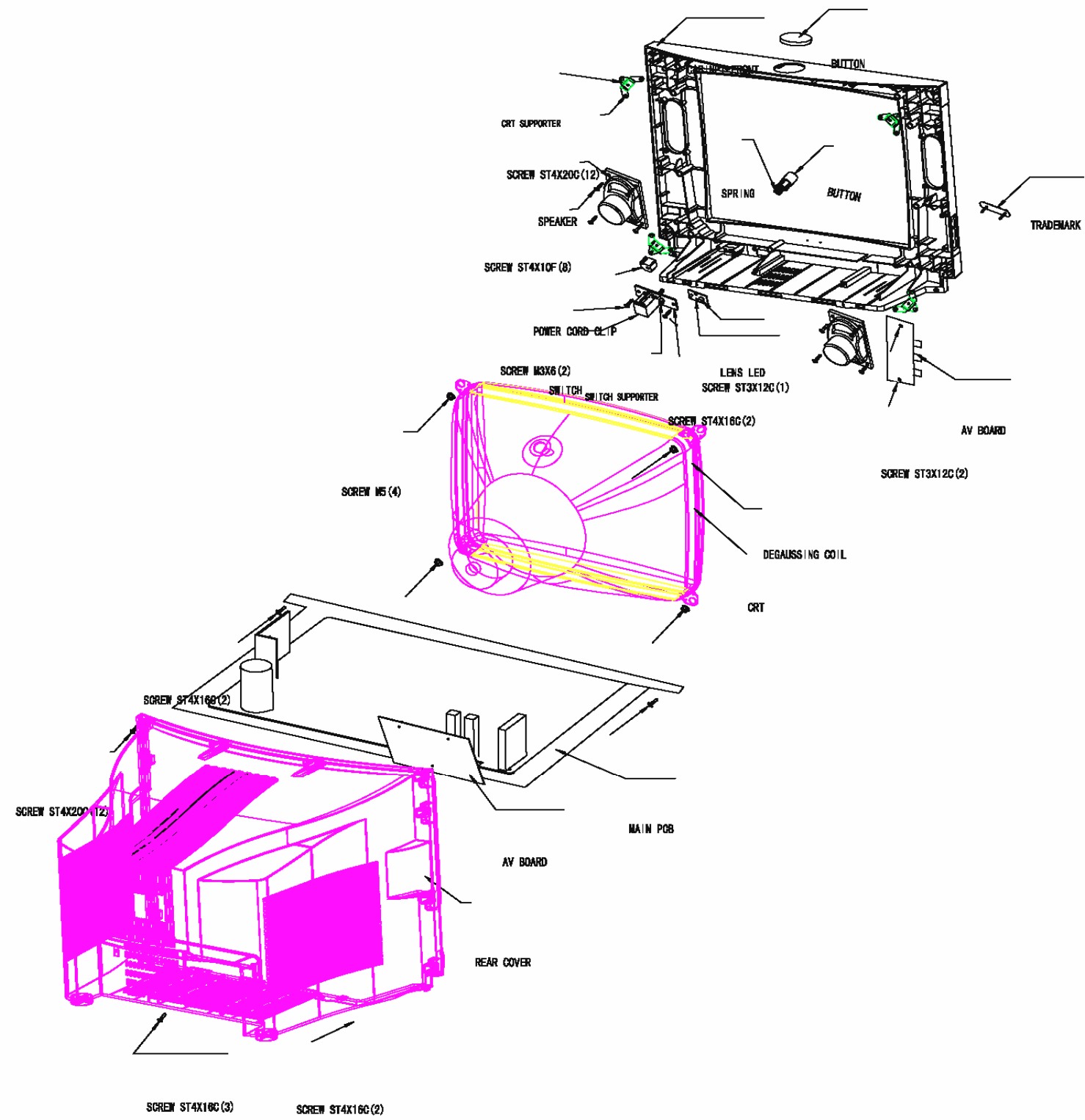
**Menu 9**

Item	Preset value	Definition
BAND	2	Must be 2 according to be TUNER
START ON	0	0: Last memory mode: TV mode 1: Power on standby mode.
LOGO	OFF	No use
ON DELAY	10	Power on delay time adjust
ON DELAY M	5	Preset on delay time
CURTAIN	OFF	
OSD FORM	0	From 0 to 3
AV MEM	ON	AV memory
BLUE SCREEN	ON	Off: Black screen On: Blue screen
S_VHS SW	1/0	S-VHS switch 0: S-VHS is independent 1: S-VHS is paralleled to AV1
OFF-SET	32	IF demodulator OFF-SET value. The default value is 32.

**Menu 0**

Item	Preset value	Definition
SUB CON	63	SUB CONTRAST
SUB COLOR	63	
SUB SHARP	63	
SUB TINT	63	
FS MODE	0	FS TUNER (No use)
FS-VL-H	0	Frequency point setting in FS MODE (No use)
FS-VL-L	0	Frequency point setting in FS MODE (No use)
FS-VH-H	0	Frequency point setting is FS MODE (No use)
FS-VH-L	0	Frequency point setting in FS MODE (No use)

**EXPLODED VIEW AND PART NAME**



## BOM LIST

Ref.No	Components		EASTKIT	EAST KIT	Q'TY	Parts Location
	Name	Specification	Parts Code	Parts Code		
1	CARBON RES	RT13-1/6W-10Ω-J	D10B100J-T	RDB100J-NAAT	2	R312、 871
2	CARBON RES	RT13-1/6W-22Ω-J	D10B220J-T	RDB220J-NAAT	3	R914、 924、 934
3	CARBON RES	RT13-1/6W-33Ω-J	D10B330J-T	RDB330J-NAAT	2	R398、 806
4	CARBON RES	RT13-1/6W-47Ω-J	D10B470J-T	RDB470J-NAAT	5	R368、 708、 911、 921、 931
5	CARBON RES	RT13-1/6W-56Ω-J	D10B560J-T	RDB560J-NAAT	2	R354、 355
6	CARBON RES	RT13-1/6W-68Ω-J	D10B680J-T	RDB680J-NAAT	1	R304
7	CARBON RES	RT13-1/6W-75Ω-J	D10B750J-T	RDB750J-NAAT	1	R801
8	CARBON RES	RT13-1/6W-82Ω-J	D10B820J-T	RDB820J-NAAT	1	R313
9	CARBON RES	RT13-1/6W-100Ω-J	D10B101J-T	RDB101J-NAAT	19	R301、 302、 359、 363、 365
						R366、 381、 382、 383、 401
						R402、 452、 723、 724、 743
						R815、 824、 861、 862
10	CARBON RES	RT13-1/6W-150Ω-J	D10B151J-T	RDB151J-NAAT	3	R815A、 848、 852
11	CARBON RES	RT13-1/6W-180Ω-J	D10B181J-T	RDB181J-NAAT	1	R353
12	CARBON RES	RT13-1/6W-220Ω-J	D10B221J-T	RDB221J-NAAT	4	R311、 917、 927、 937
13	CARBON RES	RT13-1/6W-300Ω-J	D10B301J-T	RDB301J-NAAT	3	R913、 923、 933
14	CARBON RES	RT13-1/6W-330Ω-J	D10B331J-T	RDB331J-NAAT	4	R805、 916、 926、 936

Ref.No	Components		EASTKIT	EAST KIT	Q'TY	Parts Location
	Name	Specification	Parts Code	Parts Code		
16	CARBON RES	RT13-1/6W-470Ω-J	D10B471J-T	RDB471J-NAAT	2	R308、 1517
17	CARBON RES	RT13-1/6W-680Ω-J	D10B681J-T	RDB681J-NAAT	2	R316、 482
18	CARBON RES	RT13-1/6W-1KΩ-J	D10B102J-T	RDB102J-NAAT	14	R128、 129、 369、 460、 464
						R481、 701、 734、 802、 803
						R816、 818、 825、 827、
19	CARBON RES	RT13-1/6W-1.2KΩ-J	D10B122J-T	RDB122J-NAAT	2	R305、 560
20	CARBON RES	RT13-1/6W-1.5KΩ-J	D10B152J-T	RDB152J-NAAT	2	R397、 732
21	CARBON RES	RT13-1/6W-1.8KΩ-J	D10B182J-T	RDB182J-NAAT	3	R403、 405、 1523
22	CARBON RES	RT13-1/6W-2.2KΩ-J	D10B222J-T	RDB222J-NAAT	6	R315、 351、 361、 371、 451 R463
23	CARBON RES	RT13-1/6W-2.7KΩ-J	D10B272J-T	RDB272J-NAAT	1	R321
24	CARBON RES	RT13-1/6W-3.3KΩ-J	D10B332J-T	RDB332J-NAAT	9	R310、 721、 722、 728、 735 R736、 737、 741、 742
25	CARBON RES	RT13-1/6W-3.9KΩ-J	D10B392J-T	RDB392J-NAAT	2	R455、 462
26	CARBON RES	RT13-1/6W-4.7KΩ-J	D10B472J-T	RDB472J-NAAT	10	R131、 133、 154、 158、 306 R309、 360、 362、 733、 731
27	CARBON RES	RT13-1/6W-5.6KΩ-J	D10B562J-T	RDB562J-NAAT	3	R370、 540、 1511
28	CARBON RES	RT13-1/6W-8.2KΩ-J	D10B822J-T	RDB822J-NAAT	2	R153A、 157A

Ref.No	Components		EASTKIT	EAST KIT	Q'TY	Parts Location
	Name	Specification	Parts Code	Parts Code		
29	CARBON RES	RT13-1/6W-10KΩ-J	D10B103J-T	RDB103J-NAAT	24	R126、127、163、380、395 R396、434、461、548、551 R704、705、706、707、709 R816A、818A、825A、827A R851A、852A、912、922、932
30	CARBON RES	RT13-1/6W-15KΩ-J	D10B153J-T	RDB153J-NAAT	1	R331
31	CARBON RES	RT13-1/6W-22KΩ-J	D10B223J-T	RDB223J-NAAT	5	R162、384、804 R1515、1556、
32	CARBON RES	RT13-1/6W-27KΩ-J	D10B223J-T	RDB273J-NAAT	2	R484、487
33	CARBON RES	RT13-1/6W-33KΩ-J	D10B333J-T	RDB333J-NAAT	4	R171、175、317、385
34	CARBON RES	RT13-1/6W-47KΩ-J	D10B473J-T	RDB473J-NAAT	3	R172、732A、745
	CARBON RES	RT13-1/6W-56KΩ-J	D10B563J-T	RDB563J-NAAT	1	R319
35	CARBON RES	RT13-1/6W-68KΩ-J	D10B683J-T	RDB683J-NAAT	1	R173
36	CARBON RES	RT13-1/6W-82KΩ-J	D10B823J-T	RDB823J-NAAT	1	R314
37	CARBON RES	RT13-1/6W-100KΩ-J	D10B104J-T	RDB104J-NAAT	5	R350、483、802A、803A、807
38	CARBON RES	RT13-1/6W-150KΩ-J	D10B154J-T	RDB154J-NAAT	1	R318
39	CARBON RES	RT13-1/6W-270KΩ-J	D10B274J-T	RDB274J-NAAT	1	R174
40	CARBON RES	RT13-1/6W-560KΩ-J	D10B564J-T	RDB564J-NAAT	1	R465
41	CARBON RES	RT14-1/4W-1.0Ω-J	D10C1R0J-T	RDC1R0J-NABT	1	R404

Ref.No	Components		EASTKIT	EAST KIT	Q'TY	Parts Location
	Name	Specification	Parts Code	Parts Code		
42	CARBON RES	RT14-1/4W-2.7Ω-J	D10C2R7J-T	RDC2R7J-NABTD	1	R468
43	CARBON RES	RT14-1/4W-22Ω-J	D10C220J-T	RDC220J-NABTD	1	R513
44	CARBON RES	RT14-1/4W-27Ω-J	D10C270J-T	RDC270J-NABTD	1	R561
45	CARBON RES	RT14-1/4W-2.2KΩ-J	D10C222J-T	RDC222J-NABT	2	R161、1526、
46	CARBON RES	RT14-1/4W-10KΩ-J	D10C103J-T	RDC103J-NABT	1	R485
47	CARBON RES	RT14-1/4W-15KΩ-J	D10C153J-T	RDC153J-NABTD	1	R1522
48	CARBON RES	RT14-1/4W-51KΩ-J	D10C513J-T	RDC513J-NABT	2	R539、539A
49	CARBON RES	RT14-1/4W-150KΩ-J	D10C154J-T	RDC154J-NABTD	1	R1554
50	CARBON RES	RT14-1/4W-330KΩ-J	D10C334J-T	RDC334J-NABTO	1	R942
51	CARBON RES	RT15-1/2W-270Ω-J	D10D271J-T	RDD271J-NACT	1	R407
52	CARBON RES	RT15-1/2W-1KΩ-J	D10D102J-T	RDD102J-NACT	1	R453
53	CARBON RES	RT15-1/2W-47KΩ-J	D10D473J-T	RDD473J-NACTD	1	R1555
54	CARBON RES	RT15-1/2W-120KΩ-J	D10D124J-T	RDD124J-NACTD	2	R507、1520、
55	FUSE RES	RF10-1/2W-1.0Ω-J	F10D1R0J-C	RFD1R0J4ACCN	1	R473B
56	FUSE RES	RF10-1W-0.27Ω-J			1	R165、
	FUSE RES	RF10-1W-0.47Ω-J			4	R470、472、555、565
	FUSE RES	RF10-1W-1Ω-J			1	R566

Ref.No	Components		EASTKIT	EAST KIT	Q'TY	Parts Location
	Name	Specification	Parts Code	Parts Code		
58	FUSE RES	RF10-2W-3.9Ω-J			1	R480
59	OXIDE FILM RES	RY16-1W-1.5Ω-J	S10E1R5J-C	RSE1R5J5DCCN	1	R406
60	OXIDE FILM RES	RY16-1W-22Ω-J	S10E220J-C	RSE220J5ACCN	1	R300A
61	OXIDE FILM RES	RY16-1W-1KΩ-J	S10E102J-C	RSE102J4ACCN	1	R466
62	OXIDE FILM RES	RY17-2W-5.6Ω-J	S10F5R6J-C	RSF5R6J5ACDN	1	R941
63	OXIDE FILM RES	RY17-2W-56Ω-J	S10F560J-C	RSF560J5ACDN	1	R530
64	OXIDE FILM RES	RY17-2W-270Ω-J	S10F271J-C	RSF271J7ACDN	2	R454, 546
65	OXIDE FILM RES	RY17-2W-10KΩ-J	S10F103J-C	RSF103J5ACDN	1	R467
	OXIDE FILM RES	RY17-2W-12KΩ-J			1	R703
66	OXIDE FILM RES	RY17-2W-12KΩ-J	S10F123J-C	RSF123J7ACDN	3	R915, 925, 935
67	OXIDE FILM RES	RY17-2W-22KΩ-J	S10F223J-C	RSF223J7ACDN	1	R556
68	RESISTOR METAL	RJ13-1/6W-39KΩ-F		RJB393F-NAAF	1	R411
69	Glass-Glazed RES	RI40-1/2W-1.5KΩ-J	C10D152K-T	RGDX152K-03N	3	R918, 928, 938
70	Glass-Glazed RES	RI40-1/2W-24MΩ-K	C10D246K-T	RGDX246K-03N	1	R519
71	Thermal RES	PTC MZ72 180HM	P10X180J-C	DH1180M001-NC	1	PS501
72	WIRE RES	RX27-3A-5W-1.8Ω-K	W10J1R8K	RWH1R8K5AF-N	1	XR502
73	WIRE RES	RXG6-5W-3.9Ω-K	W11H3R9K	RWH3R9K4AK-N	1	R458
74	WIRE RES	RX27-5W-27Ω-K	W11H270K	RWH270K7AJ-NF	1	R1524
75	WIRE RES	RX27-3A-5W-68Ω-K	W11H680K	RWH680K4AK-N	1	R504



Ref.No	Components		EASTKIT	EAST KIT	Q'TY	Parts Location
	Name	Specification	Parts Code	Parts Code		
76	VARIABLE RES	WI06-2AA-2KΩ	V11D202B	VDAAA202A001C	1	VR501
77	CERAMIC CAPA.	CC1-06A-CH-63V-33pF-J	C2CF330J-T	CCF330JICA-F	2	C761, 762
78						
79	CERAMIC CAPA.	CT1-06A-2B4-63V-330pF-K	C2BF331K-T		3	C911, 921, 931
80	CERAMIC CAPA.	CT1-06A-2B4-63V-470pF-K	C2BF471K-T		7	C803, 805, 812, 814
						C824, 826
						C732,
81	CERAMIC CAPA.	CT1-06A-2B4-63V-560pF-K	C2BF561K-T		1	C381
82	CERAMIC CAPA.	CT1-06A-2B4-63V-820pF-K	C2BF821K-T		1	C323
83	CERAMIC CAPA.	CT1-06A-2B4-63V-1000pF-K	C2BF102K-T	CKF102K1BA-F	7	C308, 311, 401
						C402, 481, 721, 861
84	CERAMIC CAPA.	CT1-06A-2B4-63V-2200pF-K	C2BF222K-T	CKF222K1BA-F	1	C335
85	CERAMIC CAPA.	CT1-06A-2B4-63V-4700pF-K	C2BF472K-T	CKF472K1BA-F	2	C324, 336
86	CERAMIC CAPA.	CT1-08A-2F4-63V-0.01uF-Z	C2FF103Z-T	CKF103Z1FA-F	15	C162, 302, 309, 312, 313
						C332, 362, 472, 475, 535
						C703A, 723, 744, 752, 756
87	CERAMIC CAPA.	CT1-08C-2B4-500V-220pF-K	C2BP221K-T	CKP221K1BA-N	1	C405
88	CERAMIC CAPA.	CT1-08C-2B4-500V-1000pF-K	C2BP102K-T	CKP102K1BA-F	1	C452
89	CERAMIC CAPA.	CT1-08C-2B4-500V-3900pF-K	C2BP392K-T	CKP392K1BA-F	1	C451

Ref.No	Components		EASTKIT	EAST KIT	Q'TY	Parts Location
	Name	Specification	Parts Code	Parts Code		
90	CERAMIC CAPA.	CT81-08C-2R-1KV-470pF-K	C2RW471K-O	CKW471K2RA-N	1	C529
91	CERAMIC CAPA.	CT81-08C-2R-1KV-1000pF-K	C2BW102K-O	CKW102K2BJ-N	4	C503, 504, 505, 506
92	CERAMIC CAPA.	CT81-08C-2R-2KV-220pF-K	C2RX221K-O	CKX221K2RA-N	1	C527
93	CERAMIC CAPA.	CT81-08C-2R-2KV-470pF-K	C2RX471K-O	CKX471K2RA-N	2	C456, 543
94	CERAMIC CAPA.	CT81-08C-2R-2KV-680pF-K	C2RX681K-O	CKX681K2RA-N	1	C509
95	CERAMIC CAPA.	CT81-08C-2R-2KV-1000pF-K	C2RX102K-O	CKX102P2EJ-N	1	C943
96	CERAMIC CAPA.	CK-400V-470PF-±20%	C2EM471M-O	CKMX471K301N	2	C515A, 598
97	CERAMIC CAPA.	CK-400V-1000PF-±20%	C2EM102M-O	CKMX102M301N	1	C515
98	CERAMIC CAPA.	CD110-10V-100uF -M	E10C100M-T	CEB101MYACBN	1	C548
99	Electrolytic CAPA.	CD110-16V-10uF -M	E20C100M-T		12	C163A, 172, 301, 307, 322
						C363, 364, 367, 751, 807
						C841, 871
100	Electrolytic Capa.	CD110-16V-22uF -M	E20C220M-T	CEC220MYACAN	1	C745
101	Electrolytic Capa.	CD110-16V-47uF -M	E20C470M-T	CEC470MYACAN	8	C116, 171, 333, 352, 561,
						C723A, 811, 823
102	Electrolytic Capa.	CD110-16V-100uF -M	E20C101M-T	CEC101MYACBN	2	C361, 743
103	Electrolytic Capa.	CD110-16V-470uF -M	E20C471M-T	CEC471MYACCN	3	C525, 532, 801
104	Electrolytic Capa.	CD110-25V-100uF -M	E20D101M	CED101MYACBN	5	C406, 471, 471A, 474, 474A
105	Electrolytic Capa.	CD110-25V-470uF -M	E20D471M	CED471MYACBN	1	C161

Ref.No	Components		EASTKIT	EAST KIT	Q'TY	Parts Location
	Name	Specification	Parts Code	Parts Code		
106	Electrolytic Capa.	CD110-25V-1000uF -M	E20D102M	CED102M1ACHN	1	C522
107	Electrolytic Capa.	CD110-25V-2200uF -M	E20D222M	CED222M1ACKN	1	C524
108	Electrolytic Capa.	CD110-35V-47uF -M	E20E470M-T	CEE470MYACCN	1	C453
109	Electrolytic Capa.	CD110-35V-330uF -M	E20E331M	CEE331M1ACFN	1	C530
110	Electrolytic Capa.	CD110-50V-0.47uF -M	E20FR47M-T	CEFR47MYACAN	5	C121, 123, 340(MI), 372, 374
111	Electrolytic Capa.	CD110-50V-1uF -M	E20F1R0M-T	CEF1R0MYACAN	11	C153, 157, 163, 337, 804,
						C806, 813, 815, 825, 827
						C862
112	Electrolytic Capa.	CD110-50V-2.2uF -M	E20F2R2M-T	CEF2R2MYACAN	2	C339, 755
113	Electrolytic Capa.	CD110-50V-4.7uF -M	E20F4R7M-T	CEF4R7MYACAN	5	C303, 304, 325, 353, 464
114	Electrolytic Capa.	CD110-50V-22uF -M	E20F220M-T	CEF220MYACBN	1	C703
115	Electrolytic Capa.	CD110-50V-47uF -M	E20F470M-T	CEF470MYACBN	1	C462
116	Electrolytic Capa.	CD112A-160V-4.7uF -M	E20H4R7M	CEH4R7MYBCCN	1	C466
117	Electrolytic Capa.	CD110-160V-10uF -M	E20H100M	CEH100M1ACEN	1	C458
118	Electrolytic Capa.	CD288-160V-100uF -M	E20H101M	CEH101M2ECKN	1	C528B
119	Electrolytic Capa.	CD288H-250V-10uF-M	E21K100M	CEK100M1ACHN	2	C477, 941
120	Electrolytic Capa.	CD293-400V-150uF-±10%			1	C507
121	FILM CAPA	CL11-50V/63V-0.1uF-K	F20F104K-T	CAY104K1-H-F	4	C326, 338, 365, 411
122	FILM CAPA	CL11-50V/63V-0.22uF-K	F20F224K-T	CAY224K1-H-F	3	C331(MI), 334, 404

Ref.No	Components		EASTKIT	EAST KIT	Q'TY	Parts Location
	Name	Specification	Parts Code	Parts Code		
123	FILM CAPA	CL21X-50V-0.47u-K	F22F474K-T	CAY474K1-H-F	1	C461
124	FILM CAPA	CL11-100V-3300pF-K	F20G332K-T	CFG332K1-H-N	1	C321
125	FILM CAPA	CL11-100V-5600PF-J	F20G562J-T	CFG562J1-H-N	2	C154、 158
126	FILM CAPA	CL11-100V-0.012uF-J	F20G123J-T	CFG123J1-H-NW	1	C1515
127	FILM CAPA	CL11-100V-0.022uF-J	F20G223J-T	CFG223J1-H-NW	1	C1517
128	FILM CAPA	CL11-100V-0.033uF-K	F20G333K-T	CFG333K1-H-N	1	C403
129	FILM CAPA	CL11-100V-0.047uF-K	F20G473K-T	CFG473K1-H-N	1	C1513
130	FILM CAPA	CL11-100V-0.1uF-K	F20G104K-T	CFG104K2-H-N	5	C1514、 460、 705、 706、 707
131	FILM CAPA	CBB21-2 0 0V-0.39uF±5%	F20J394J	CNJ394J9-H-N	1	C467
132	FILM CAPA	CBB62-250VAC-0.22uF-M	F20R224M	CMLX224M901N	1	C501
133	FILM CAPA	CBB81-1.6KV-7500PF-J			1	C455
134	Coil And Inductance	北塔LX036,利通LX36			1	L452
135	INDUCTOR	LGA0204-3.9uH-K	L2X239K-T	LBA3R9K----T	1	L351
136	INDUCTOR	LGA0204-1uH-K	L2X210K-T	LBA1R0K----T	1	L302
137	INDUCTOR	LGA0307-10uH-K	L3X2100K-T	LBB100K----T	5	L331、 361、 751、 752、 753
138	INDUCTOR	LGA0307-22uH-K	L3X2220K-T	LBB220K----T	1	L401
139	INDUCTOR	LGA0307-82uH-K	L3X2820K-T	LBB820K----T	3	L911、 912、 913
140	INDUCTOR	Magnetic Coil		LEA001-5----N	1	L450
141	PHOTO COUPLE	PC817B/C	RX0001XX	NLTV817B----N	1	N504

Ref.No	Components		EASTKIT	EAST KIT	Q'TY	Parts Location
	Name	Specification	Parts Code	Parts Code		
142	DIODE	1S1555/IN4148	DR0001XX-T	DRIN4148---T	13	VD171, 301, 461, 462, 482
						VD561, 734, 911, 921, 931
						VD1514, 1516, 1518
143	DIODE	BAV21		DRBAV21----BP	3	VD912, 922, 932
144	RECTIFIER DIODE	FR105/RGP10D	DR0003XX-T	DRRGP10D---T	5	VD401, 470, 471, 525, 1517
145	DIODE	TVR4N	DR0015XX-T	DRTTVR4N---NZ	4	VD503, 504, 505, 506
146	RECTIFIER DIODE	RGP10J	DR0017XX	DRRGP10J---T	3	VD436, 472
						VD524
147	RECTIFIER DIODE	RGP15D		DRRGP15D----N	2	VD521, 543
148	DIODE ZENER	HZ5C1	DZ0002XX-T	DZHZ5C1----T	1	VD300A
149	DIODE ZENER	HZ22-2		DZHZ22-2---T	1	VD481
150	DIODE ZENER	HZ3C3		DZHZ3C3----T	1	VD564
151	DIODE ZENER	HZ6C2		DZHZ6C2----TD	1	VD1561
152	DIODE ZENER	HZ7C1		DZHZ7C1----T	4	VD381, 382, 383, 1519
153	DIODE ZENER	HZ9A3		DZHZ9A3----T	5	VD460, 483, 822
154	IC	AN7522N		NAN7522N---N	1	VD861A, 941
						N161
155	IC	TDA9370		NTDA9381---N	1	N301
156	IC	MC7805CT/L7805		NMC7805CT---N	1	N505

Ref.No	Components		EASTKIT	EAST KIT	Q'TY	Parts Location
	Name	Specification	Parts Code	Parts Code		
157	IC	TC4052BP/CD4052BE/HEF4052BP	IXXX0026	NHEF4052---BP	2	N121、 801
158	IC	LA78040/STV9302	IXXX0142	NLA78040---N	1	N401
159	EEPROM IC	AT24C08( 8K)/TL24C08	IXXX0079	NAT24C08---N	1	N702
160	Voltage-stabilizer	uPC574J/CW574CS/KA33V	IXXX0080-T	NCW574CS---N	1	N703
161	IC	TA7808/L7808/MC7808CT	IXXX0090	NMC7808CT--N	1	N503
162	TRANSISTOR	2SA1015Y/2SA608/KTA1266-Y	RXA1015X-T	Q2PA1015-GNF	2	V1511、 171
163	TRANSISTOR	2SC945/2SC1815/KTC3198-Y	RXC945XX-T	Q2PC1815-GNF	13	V121、 122、 173、 301、 350 V351、 352、 353、 354、 395 V504、 801、 1553
164	TRANSISTOR	2SB1443TV2Q/2SB985T/2SB892 KTA1281-Y	RXB892XX-T	Q2SB1443--NN	1	V542
165	TRANSISTOR	BF421/BF423		QBF421----NF	3	V913、 923、 933
166	TRANSISTOR	BF422/BF420		QBF422----NN	3	V912、 922、 932
167	TRANSISTOR	KSC1674C/KTC3192	RXC1674X-T	QKSC1674C- NN	1	V308
168	TRANSISTOR	2SC2383-O/KTC3228-O	RXC2383X-T	QKSC2383- ONN	1	V450
169	TRANSISTOR	2SC2330/2SC2482	RXC2482X	QKSC2330-YNN	3	V911、 921、 931
170	TRANSISTOR	2SC3807-CTV-YA	RXC3807X	Q2SC3807-CBN	1	V1512
171	TRANSISTOR	2SC2498/5586			1	V1513
172	TRANSISTOR	TT2140/2SC5885/TT2190LS	RXC2140X	QTT2140---BN	1	V451
173	TRANSISTOR	PH2369/KTN2369	PXC2369X	QPH2369---NN	1	V701

TRAP FILTER						
174	TRAP FILTER	T 6.0M (X6.0B)	FC0007XX	XTC007-----N	1	Z352
175	TRAP FILTER	T 5.5M (X5.5B)	FC0008XX	XTC008-----N	1	Z354
176	SAW FITER	2966 38.9MHz	FS0043XX	XFS043-----NB	1	Z301
177	FUSE	3.15A 250V	FXXX0020	FBA3154S02C	1	F501
178	POWER SW	KDC-A11			1	K501
179	TUNER	5V 38.9M 470M		BXATB066---- X	1	A101
180	Crystal Oscillator	12.0MHz ( 18P )		XX-021-----N	1	X761
181	REMOTE RECEIVER	HS0038A2/AT138A			1	U701
	DIODE	LED (Red)Φ5			1	VD775
182	Connector	TJC3-5P-5P-400mm	LXXX0132		1	XS402---XS902A

Ref.No	Components		EASTKIT	EAST KIT	Q'TY	Parts Location
	Name	Specification	Parts Code	Parts Code		
183	Connector	TJC3-5P-5P-450mm(3脚和4脚对调)			1	XS301---XS903
184	CRT SOCKETII	GZS8-6-5	NXXX0020		1	XS901
185	A/V SOCKET	AV9-8.4-04		GBBB9-03-----	1	XS801
186	S-VIDEO	SW-4-103			1	XS861
187	AC SOCKET	TJC1-2A	NXXX0070	GAAV2001---- -	1	XS501
188	2S SOCKET	TJC2-2A	NXXX0230		1	XS502
189	SPEAKER SOCKET	TJC3-2A	NXXX0210		1	XS702
190	4S SOCKET	TJC3-4A	NXXX0234		1	XS161
191	5 S SOCKET	TJC3-5A	NXXX0235		1	XS895
192	DY SOCKET	TJC2-5A	NXXX0250		1	XS403
193	LINE FILTER	A-LF0011	LFXX0011	LG-011----N	1	L501
194	H FBT	21"BSC24-0103Q 西联		TF-0070----0U	1	T451
195	SW-TRANS	利通:TM-0076--0L			1	T501
196	H-DRIVER	A-TX0040	TXXX0040	TD-0004---0L	1	T450
197	MAIN PCB	PX2--0030----1C		PX20030---- 1C	1	
198	FUSE SOCKET		FGXX0011G	MB0X0011-- G8	2	F501a、F501b
199	Radiator	HEATSINK FOR H.V		MB1X0196--- B	1	H-V451



200	Radiator	HEATSINK FOR 8V		MB1X0040---- B	1	H-N505
201	Radiator	HEATSINK FOR 5V		MB1X0114---- B	1	H-N503
202	Radiator	HEATSINK FOR POWER		MB1X0154---- B	1	H-N501
203	Radiator	HEATSINK FOR SOUND		MB1X0113---- B	1	H-N161
204	TESTING POINT	TJC2-1A	PTSX0010		1	XS904A
205	SCREW	ST3* 8			1	N505
206	SCREW	M2.5*12			1	N401
207	SCREW	M3*10	SCXX0020		5	N161a、 N161b
						V451、 V1513、 N503
	NUT	M3 NUT		SXN1A30--FF	6	N401、 161a、 161b、 503、 V451、 1513

Ref.No	Components		EASTKIT	EAST KIT	Q'TY	Parts Location
	Name	Specification	Parts Code	Parts Code		
208	Mica Slice				1	
209	Isolate The Washer				2	
210	JUMPER	5 mm	LXXX0101		7	W011, 265, 266, 391, 486, W791, 929,
211	JUMPER	6mm	LXXX0110		3	W582, 683, 684
212	JUMPER	7.5 mm	LXXX0102		59	W021 , 051 , 131, 168, 231 W242, 243, 244, 245, 264 W311*, 356, 358, 368, 373 W381, 385, 442, 443, 466 W467, 471, 493, 501, 531 W532, 552, 553, 554, 555 W562, 563, 564, 581, 652 W662, 663, 721, 760, 762 W763, 764, 771, 773, 774 W786, 821, 841, 861, 862 W863, 875, 876, 881, 902 W491, 685, 675 R358

Ref.No	Components		EASTKIT	EAST KIT	Q'TY	Parts Location
	Name	Specification	Parts Code	Parts Code		
213	JUMPER	10 mm	LXXX0103		36	W121, 148, 152, 153, 154
						W159, 166, 171, 213*, 214*
						W241, 251, 263, 312*, 313*
						W341, 342, 343, 361, 421
						W435, 472, 484, 485, 571
						W535, 643, 650, 653, 655
						W741, 751, 752, 900, 921
W922						
214	JUMPER	12.5 mm	LXXX0104		16	W142, 253, 432, 454, 551
						W621, 665, 673, 674, 681
						W682, 731, 781, 872, 873
						W930
215	JUMPER	15 mm	LXXX0105		24	W162, 163, 164, 221, 331
						W355, 369, 411, 434, 451
						W452, 453, 463, 464, 465
						W641, 642, 644, 656, 672
						W840, 492
R520, R508						
216	JUMPER	17.5 mm	LXXX0106		10	W362, 363, 364, 365, 366
						W367, 461, 462, 671, 761

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217	JUMPER	20 mm	LXXX0107		5	W156、481、561、661、664
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**COMPONENT PARTS LIST Key Board)**

REF.No	Components		EASTKIT	EAST KIT	Q'TY	Parts Location
	Name	Specification	Parts Code	Parts Code		
1	JUMPER	5mm			1	W1003
2	JUMPER	7.5mm			1	W1001
3	CARBON RES	RT13-1/6W-1.2KΩ-J	D10B122J-T	RDB122J-NAAT	1	R1006
4	CARBON RES	RT13-1/6W-2KΩ-J	D10B202J-T	RDB202J-NAAT	1	R1007
5	CARBON RES	RT13-1/6W-2.7KΩ-J	D10B272J-T	RDB272J-NAAT	1	R1004
6	CARBON RES	RT13-1/6W-5.1KΩ-J	D10B512J-T	RDB512J-NAAT	1	R1003
7	CARBON RES	RT13-1/6W-6.8KΩ-J	D10B682J-T	RDB682J-NAAT	1	R1010
8	PUSH SW.l(stand )	KFC-A06-C-1-L(9.5mm)			6	SW1001、 SW1002
						SW1003、 SW1004、
						SW1005、 SW1006
9						
10						

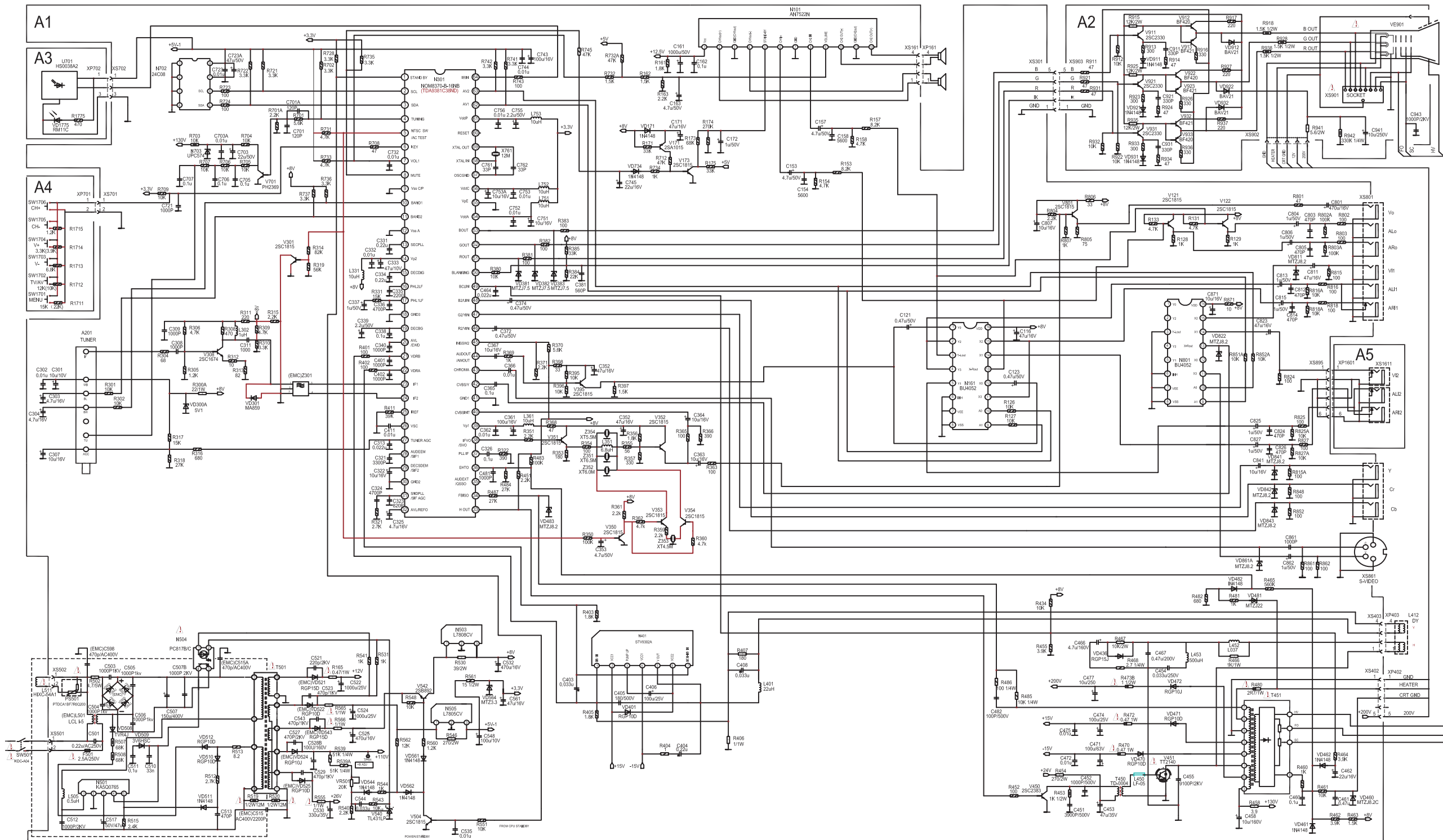
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11	Connector	TJC3-2P-2Y-800mm			1	XZ1001
12						
13	21" KEY PCB	AKPA21005-K			1	

**COMPONENT PARTS LIST (AV Board )**

	Components		EASTKIT	EAST KIT	Q'TY	Parts Location
	Name	Specification	Parts Code	Parts Code		
1	AV SOCKET	TX2--ZA2 ( 不带开关 ) 黄色			1	XZ1002
2	AV SOCKET	TX2--ZA2 ( 不带开关 ) 红色			1	XZ1003
3	AV SOCKET	TX2--ZA2 ( 不带开关 ) 白色			1	XZ1004
4	Connector	TJC3-5P-5Y-350mm			1	XZ1005
5	21"AV-PCB	AKPA14/21005-AV			1	

# CIRCUIT DIAGRAM



**NOTICE:**

1. All resistance values are in ohms. K represents K Ω, M represents M Ω.
2. The rated power of all resistance is 1/6W unless otherwise noted.
3. All capacitance values without unit is Pf, μ represents μ f.
4. The rated voltage of all capacitances is 50V unless otherwise noted.

5. The components indicated by a mark  $\triangle$  in this circuit diagram is very important to product safety. It is particularly recommended that only the same type components supplied by the producer can be used for components replacement pointed by this mark.
6. This circuit diagram covers a basic or representative chassis only. There may be some component or partial circuit differences between the actual chassis and the circuit diagram.

CIRCUIT DIAGRAM



