

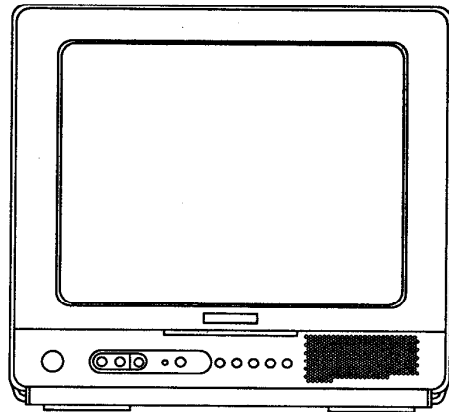
**DAEWOO**

# Service Manual

Color Television

**CHASSIS : CM - 537**  
System : NTSC, PAL-M, PAL-N  
(3 SYSTEM)

MODEL : DTH-14Q1FS/Q2FS/Q3FS/T1AS  
DTH-20Q1FS/Q2FS/Q3FS/T1AS/T2AS/T3AS



**DAEWOO ELECTRONICS CO., LTD.**

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## § SPECIFICATIONS

<b>CHASSIS</b>	<b>CM-537</b>
Receiving System	NTSC/PAL-M/PAL-N
Main Voltage	AC 100/220V, 50/60Hz
Power Consumption	60 Watts (14") / 65 Watts (20")
Sound Output	2.5W (16 $\frac{1}{2}$ )
Antenna Impedance	75 $\frac{1}{2}$ Unbalanced
Tuning System	Frequency Synthesizer
Number of Memory Channel	181 Channels
Reception Channel	VHF TV      LOW:CH2~6 HIGH:CH7~13 UHF TV      CH14~CH69  CATV CH1~CH125
Remote Control Unit	R-25C04
Screen Size	14" / 20"(diagonal)
Color Standard	NTSC/PAL-N,M
Tuner Type	Varactor Type with PLL
Aux. Terminal	Input:Video,Audio

## § SAFETY INSTRUCTIONS

### § SAFETY PRECAUTION

**WARNING:** Service should not be attempted by anyone unfamiliar with the necessary precaution on this receiver.

The following are the necessary precaution to be observed before servicing.

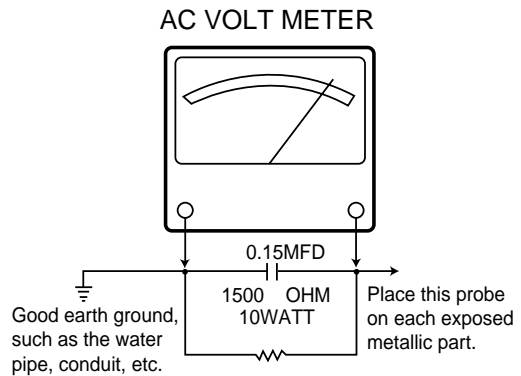
1. Always discharge the picture tube anode to the CRT conductive coating the picture tube. the picture tube is highly evacuated and if broken, glass fragments will be violently expelled. Use shatterproof goggles and keep picture tube away from the body while handling.
2. When replacing chassis in the cabinet, always be certain that all the protective devices are put back in place, such as; nonmetallic control knobs, insulating covers, shields, isolation resistor-capacitor network, etc
3. Before retuning the set to the customer, always perform an AC leakage current check on the exposed metallic parts of the cabinet, such as antennas, terminals, screwheads, metal overlays, control shafts etc, to be sure the set is safe to operate without danger of electrical shock.

Plug the AC line cord directly into a AC outlet. Use an AC voltmeter having 500 ohms per volt or more sensitivity in the following manner.

Connect a 1500 ohm 10 watt resistor, paralleled by a 0.15 mfd, AC type capacitor, between a known good earth ground( water pipe, conduit etc) and the exposed metallic parts, one at a time.

Measure the AC voltage across the combination of 1500 ohm resistor and 0.15 mfd capacitor.

Reverse the ac plug at the ac outlet and repeat AC voltage measurements for each exposed metallic part. Voltage measured must not exceed 0.3 volts RMS. This corresponds to 0.2 milliamp, AC. Any value exceeding this limit constitutes a potential shock hazard and must be corrected immediately.



## § PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in this chassis have special safety-related characteristics. These characteristics are often passed unnoticed by a visual inspection and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this manual and its

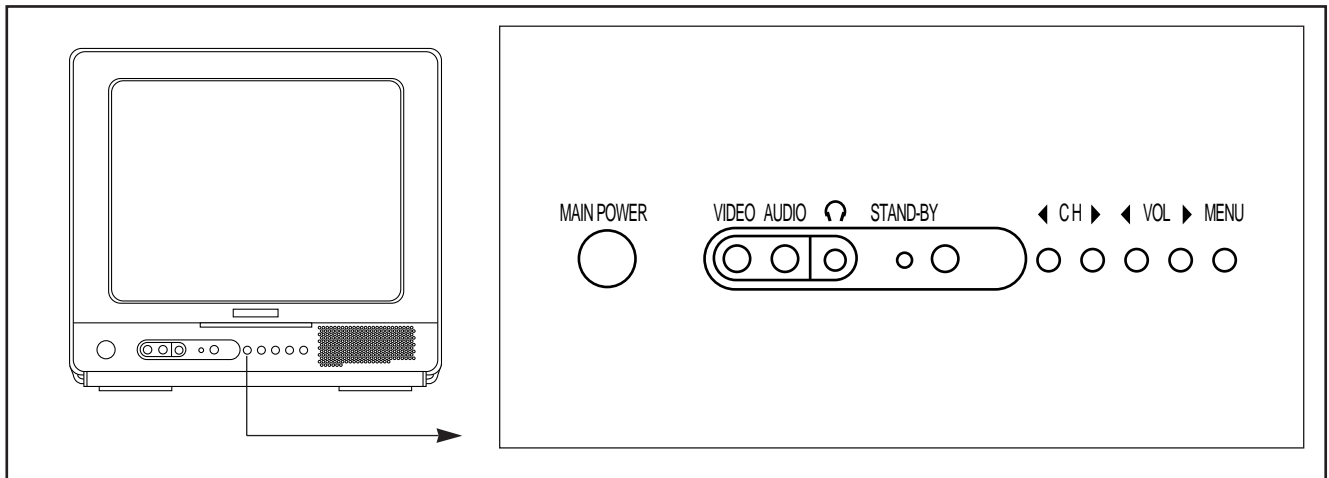
supplements; electrical components having such features are identified by shading on the schematic diagram and the parts list. Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts which do not have the same safety characteristics as specified in the parts list may create shock, fire or other hazards.

## § SERVICE NOTES

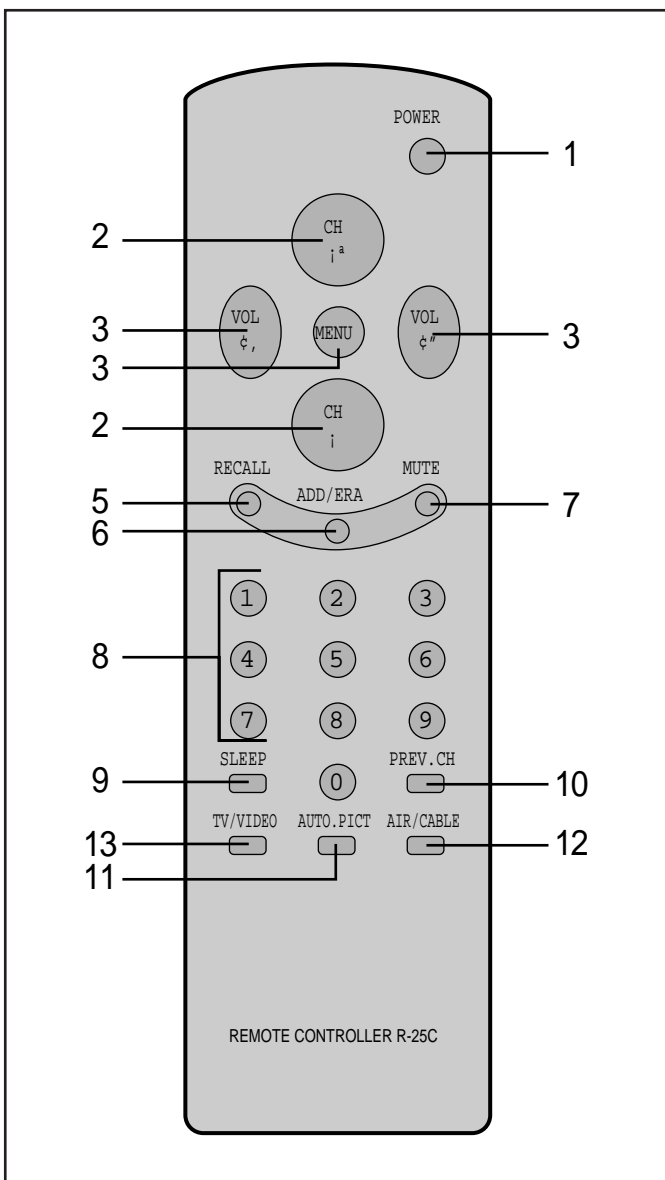
1. When replacing parts or circuit boards, clamp the lead wires to terminal before soldering.
2. When replacing a high wattage resistor (metal oxide film resistor) in the circuit board keep the resistor min 1/2 inch away from the circuit board.

3. Keep wires away from high voltage or high temperature components.

## § LOCATION OF CONTROLS



## § REMOTE CONTROL UNIT



### 1. POWER

Used to turn TV ON or OFF.

### 2. $\uparrow$ CH $\downarrow$

Use these buttons to change channels on your TV, or select items in the menu system.

### 3. $\uparrow$ VOL $\downarrow$

Use these buttons to change your TV's volume, to activate selections in the menu system, or to change audio and video settings.

### 4. MENU

Use this button to turn TV's menu system on and off.

### 5. RECALL

Press this button to display the channel number

### 6. ADD/ERA

Use this button to add a channel to the TV's memory or erase the channel from memory.

### 7. MUTE

Use to turn the TV's sound on and off.

### 8. 0-9

Use these buttons to change channels.

### 9. SLEEP

Use this button to program the TV to turn off after a certain time.

### 10. PREV.CH

Press this button to return to the previous channel you were watching.

### 11. AUTO.PICT.

Press this button to return TV's video settings to their original level.

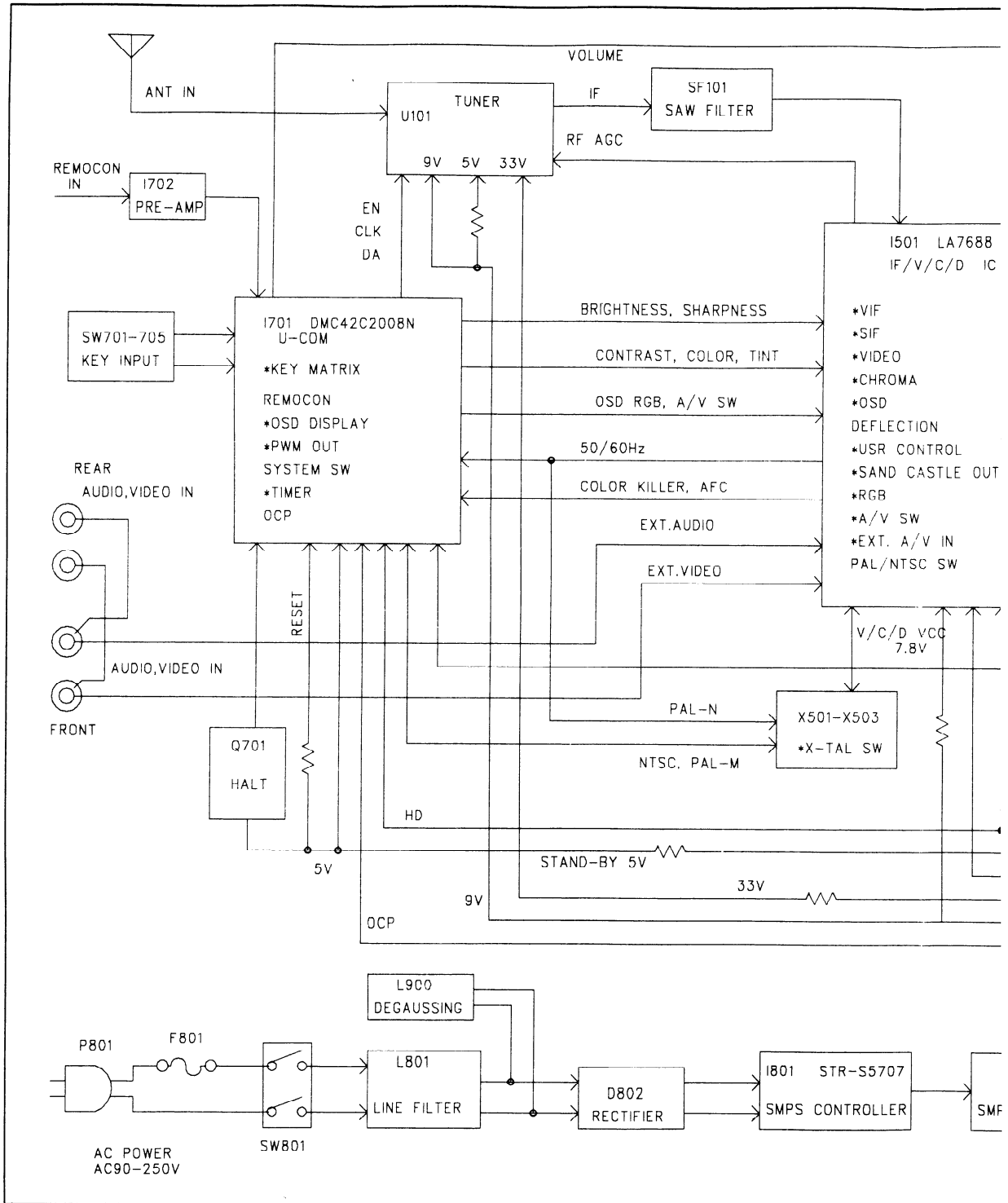
### 12. AIR/CABLE

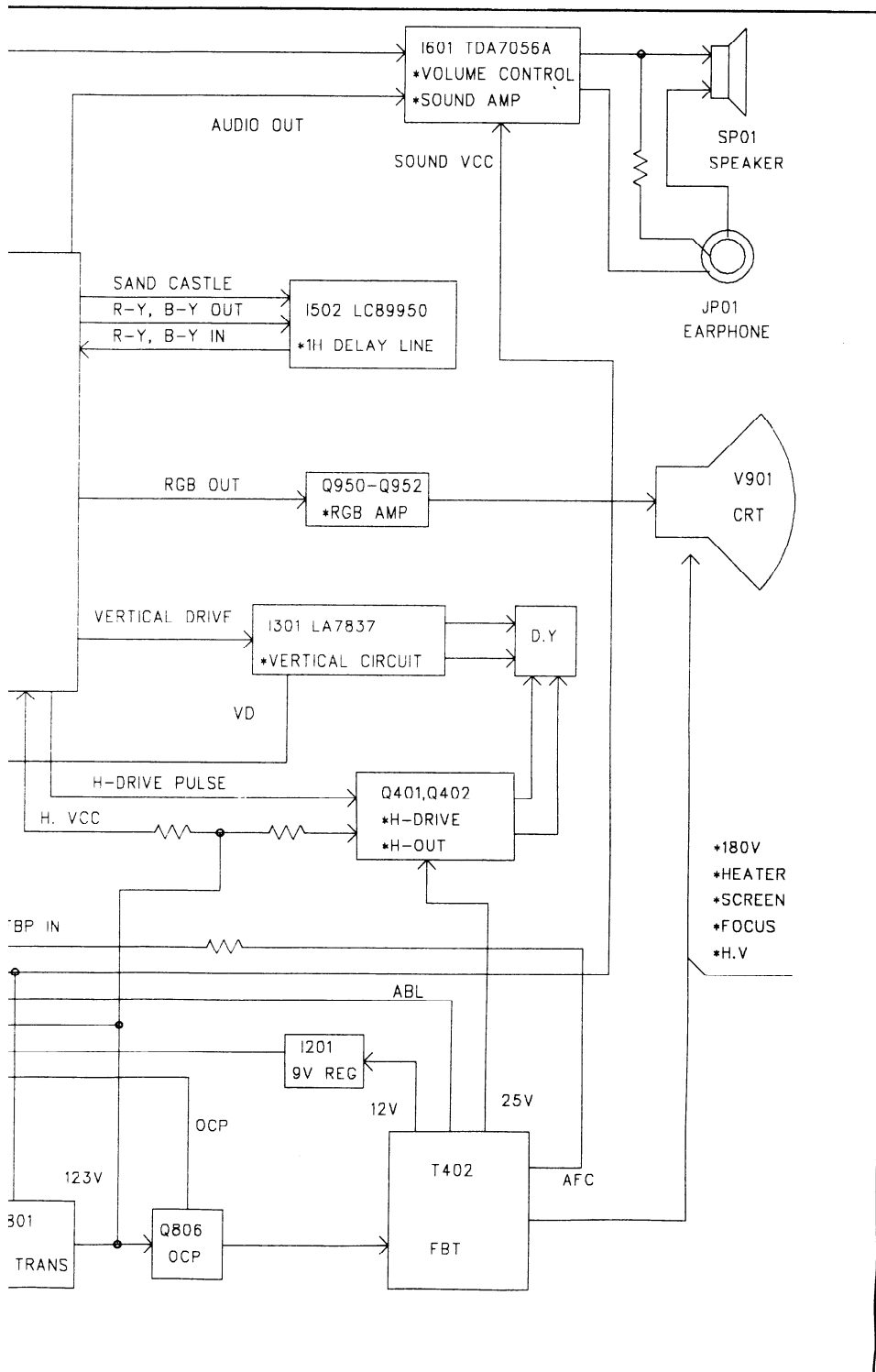
Use the button to set up your TV to receive signals from an antenna (AIR) or a cable system (CABLE)

### 13. TV/VIDEO

Use the button to select TV or VIDEO mode.

# CM-537 BLOCK DIAGRAM



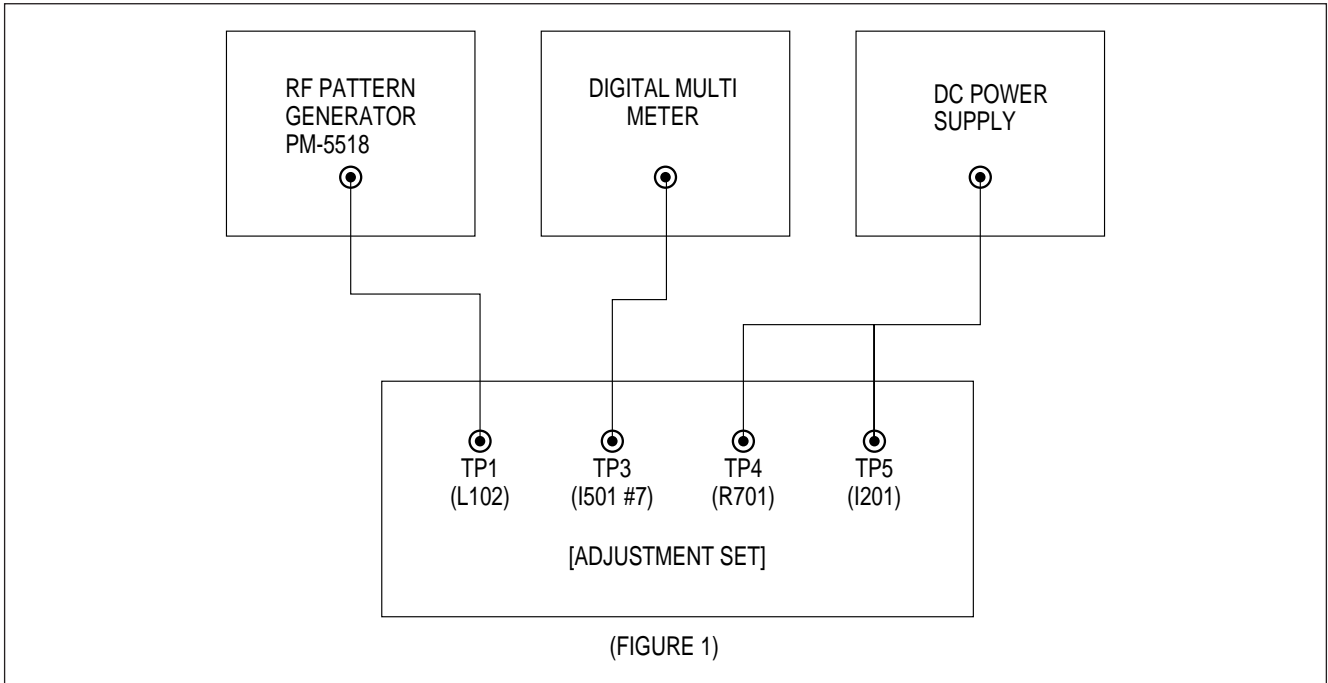




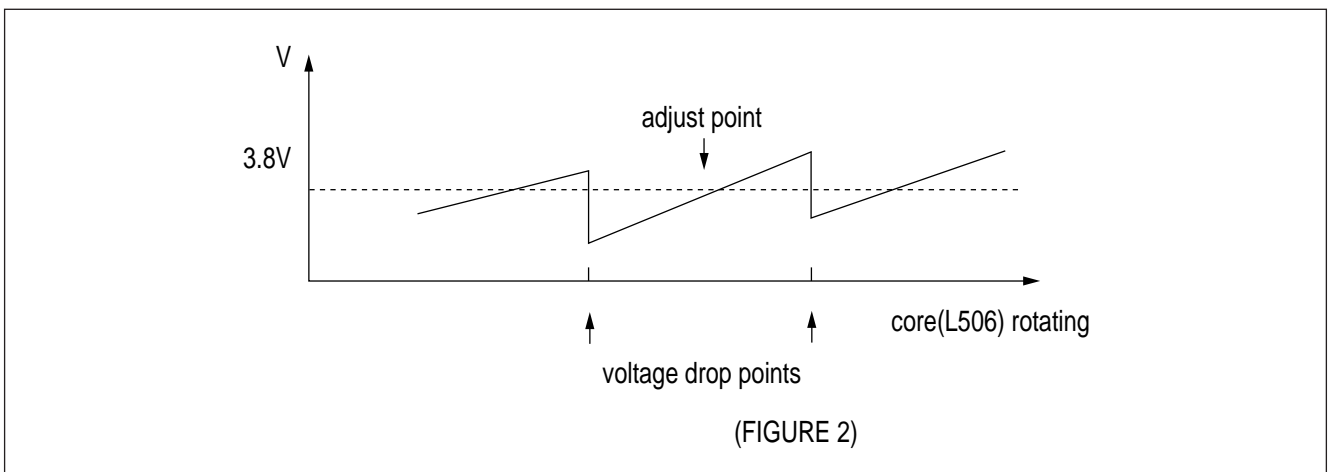


## § PIF VCO ADJUSTMENT

[Measuring Instrument Connection]



1. Connect the 12V DC POWER SUPPLY to TP4 and TP5.
2. Set the frequency of RF PATTERN GENERATOR with COLOR BAR PATTERN signal to 45.75MHz, and connect the RF output to TP1.
3. Connect the DIGITAL MULTI METER to TP3.
4. Adjust L506 so that the voltage of TP3 becomes  $3.8V \pm 0.1 V_{dc}$  within two DROP-POINTS (FIGURE 2).



## § SCREEN ADJUSTMENT

1. Push the 9D.SCR key of SERVICE REMOCON to obtain one line picture of screen.
2. Adjust the R,G,B Bias volume in order that the one line of screen may become white color.

3. Adjust the SCREEN VOLUME of FBT in order that the one line of screen disappear.
4. Push the 9D.SCR key of SERVICE REMOCON again.

### § FOCUS ADJUSTMENT

1. Receive the RETMA pattern.
2. Adjust the FOCUS volume of FBT to obtain the most clear picture.

### § RF AGC ADJUSTMENT

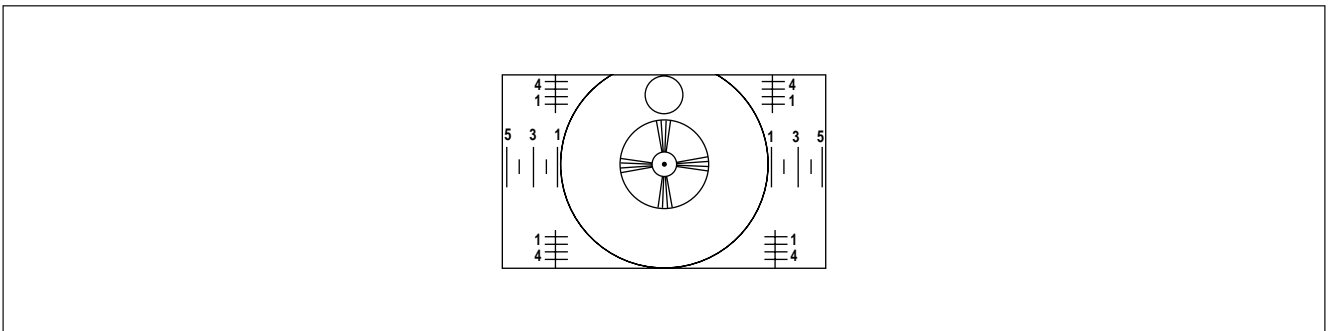
1. Input the COLOR BAR SIGNAL of 65dB to the ANTENNA INPUT of TV SET
2. Set the user control to AUTO PICTURE ON.
3. Turn completely the RF AGC volume R101 counter-clockwise and turn it clockwise until AGC voltage 6.0V is obtained.
4. If there is the BEAT with strong signal(95 dB over), re-adjust it.

### § VERTICAL CENTER ADJUSTMENT

1. Receive the RETMA PATTERN.
3. Set the user control to AUTO PICTURE ON.
4. Adjust the R302 so that the horizontal center of the PATTERN may meet with the mechanical center of CRT.

### § HORIZONTAL CENTER ADJUSTMENT

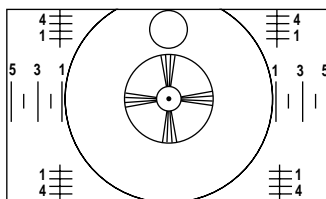
1. Receive the RETMA PATTERN.
2. Set the user control to AUTO PICTURE ON.
3. Adjust the R501 in order that the circle may put in the center position of the screen.



(FIGURE 3) VERTICAL and HORIZONTAL center Adjustmemt

## § VERTICAL HIGHT ADJUSTMENT

1. Receive the RETMA PATTERN.
2. Set the user control to AUTO PICTURE ON.
3. Adjust the R301 so that the CENTER of circumference of big circle may meet with the upper and lower sides of screen.



## § WHITE BALANCE ADJUSTMENT

1. Execute HEAT RUN of the TV SET over 30 minutes with SERVICE REMOCON.
2. Connect the signal output of WHITE BALANCE TESTER (Nitsuki 2840) to the ANTENNA (or VIDEO IN) input of the TV SET. Stick and fix the SENSOR to the center position of CRT.
3. Adjust the R,G,B BIAS and G,B DRIVE VOLUME in order that R,G,B of the HIGH and LOW BEAM may meet with the CENTER LED of each measuring instrument.
4. At this time, the memorized coordinates of the WHITE BALANCE TESTER, unless otherwise specified, use following coordinates and color temperature (PAL:9600K 3~5ftL 265; ;295 , NTSC: 10850K 3~5ftL 274; ;289)

## § SUB-BRIGHT ADJUSTMENT

1. Receive the RETMA PATTERN.
2. Set the user control to AUTO PICTURE ON.
3. Turn the SUB-BRIGHT CONTROL VOLUME (R540) and adjust the gradation pattern as shown.
4. The status that the border between 15% and 20% can be distinguished.

## § DESCRIPTION OF CIRCUIT OPERATION

### § FEATURE OF THE CM-537

- VIDEO, CHROMA, DEFLECTION in one-chip IC.
- Automatic switching of 3-SYSTEM(NTSC, PAL-M, PAL-N).
- FS(Frequency Synthesizer ) Tuning System.
- Function of LAST MEMORY against the electric failure (E<sup>2</sup>PROM:24LC028).
- Separation of PIF and SIF(SAW filter :DSW1013P)
- Minimization of Ringing by applying Ringing-less FBT(2001SPND)
- Auto-compensation of the vertical height level against the frequency change of AC power .
- OVER CURRENT PROTECTION Circuit.
- Elimination Circuit of POP NOISE.

### § OPERATION CHARACTERISTICS OF EACH BLOCK

#### A. ¥-COM BLOCK

##### 1. ¥-COM(DMC42C522N, I701) PIN DESCRIPTION/OPERATION

PIN	NAME/(ABBREV)	FUNCTION	REMARK
1	NTSC-M (RCO/PWM14)	3-SYSTEM SWITCHING	CMOS PUSH PULL
2	PAL-M (R83)	3-SYSTEM SWITCHING	CMOS PUSH PULL
3	AC POWER DOWN (R03/INT3)	MAIN POWER DOWN Detect input:active LOW	CMOS PUSH PULL
4	SD INPUT (R02/INT2)	SYNC. signal INPUT   H: signal detect L: no signal	
5	REMOTE CONTROL INPUT (R01/INT1TIM1)	REMOTE CONTROL signal input REMOTE CONTROL IC : M50560-388GP/M50560-001 (CUSTOM CODE: 14H)	
6	KEY RETURN IN 0 (R00/INT0/TIM0)	·KEY MATRIX COLUMN 0 ·HOLD MODE : WAKE-UP using INT1	PUSH PULL
7 8	Xin Xout	SYSTEM CLOCK : 4.1943 MHz	
9	RESET	SYSTEM RESET	
10	KEY RETURN IN 1 (R82)	KEY MATRIX COLUMN 1	
11	Vss	GND	
12	KEY RETURN IN 2 (R81)	KEY MATRIX COLUMN 2	
13	KEY SCAN OUT 0 & TIMER (R80)	· KEY MATRIX ROW 0 · Active HIGH when ON TIMER is set.	

PIN	NAME/(ABBREV)	FUNCTION	REMARK
14	Vdd	+5V	
15	KEY SCAN OUT 1 & CLOCK (R23)	· KEY MATRIX COLUMN 1 · TUNER CLOCK & EEPROM CLOCK	
16	KEY SCAN OUT 2 & DATA (R22)	· KEY MATRIX COLUMN 2 · TUNER DATA & EEPROM DATA	
17	ENABLE (R20/PCL)	· TUNER ENABLE	CMOS PUSH PULL
18	AFC (R21/AFC IN)	· AFC voltage from MAIN IC(LA7688) : DC 0 ~Vdd CENTER : 2.5V	A/D CONV 4BIT
19	OSC in	· OSD CLOCK	
20	OSC out		
21	/H-Sync (HD)	· SYNC. signal for OSD H. position. · 0~5V PULSE/Active LOW INPUT	
22	/V-Sync (VD)	· SYNC. signal for OSD V. position. · 0~5V PULSE/Active LOW INPUT	
23	R(R60/OSD R)	· Active "HIGH" OUTPUT · Dot pattern OF OSD	
24	G(R61/OSD G)		
25	B(OSD B)		
26	OSD Ys		
27	50/60 IN (R13)		· 3-SYSTEM SWITCHING · 50Hz: LOW(PAL-N) , 60Hz: HIGH (PAL-M, NTSC-M)
28	/C.IDENT IN (R12)	· 3-SYSTEM SWITCHING · "LOW" (INPUT) signal detected with NO-COLOR.	CMOS
29	OCP IN (R11)	· OVER CURRENT PROTECTION INPUT: active HIGH · TV POWER turns OFF when HIGH signal detected for 10ms. · The u-COM observe this pin immediately after POWER ON.	CMOS
30	SCREEN OUT (R10)	· HIGH signal OUTPUT indicating SCREEN adjustment. · Goes HIGH when REMOCON KEY;9DH detected. · Toggled when 9DH detected.	CMOS
31	VIDEO MUTE OUT	· Active LOW, Normal : HIGH	CMOS

PIN	NAME/(ABBREV)	FUNCTION	REMARK
32	POWER	<ul style="list-style-type: none"> <li>· Active HIGH</li> <li>· LOW state at initial condition (RESET).</li> <li>· Toggle LOW/HIGH when POWER KEY input is detected. (LOW ; POWER OFF / HIGH ; POWER ON)</li> <li>· Automatically turns to LOW when SLEEP TIMER (count down) counts "0".</li> <li>· Automatically turns to LOW when the OFF TIMER is set and the clock(TV) indicates OFF-TIME.</li> <li>· Automatically turns to HIGH when the ON TIMER is set and the clock (TV) indicates ON-TIME.</li> </ul>	except HEAT-RUN mode
33	TV/VIDEO (R31)	<ul style="list-style-type: none"> <li>· TV: HIGH / VIDEO: LOW</li> <li>· VIDEO MUTE(#31) is activated for a moment when this pin is toggled. (VIDEO MUTE MODE needs OPTION diodes)</li> </ul>	CMOS PUSH PULL
34	SOUND MUTE (R30)	<ul style="list-style-type: none"> <li>· Active HIGH, Normal : LOW</li> <li>· HIGH out ; MUTE.</li> <li>· Following action make the TV set to be MUTE for a moment.               <ol style="list-style-type: none"> <li>1. Channel selecting direct selecting, sequential channel selecting, AUTO PROGRAM</li> <li>2. POWER ON/OFF</li> </ol> </li> <li>· When MUTE KEY is detected following changes are occurred for a moment.               <ol style="list-style-type: none"> <li>1. VOLUME level ; LOW</li> <li>2. SOUND MUTE(#34) ; HIGH</li> <li>3. Color of OSD : GREEN ; RED</li> </ol> </li> </ul>	CMOS PUSH PULL
35	VOLUME (PWM82)	<ul style="list-style-type: none"> <li>· Active HIGH, PWM OUTPUT</li> <li>· 64 STEP (2bit/step) VOLUME CONTROL</li> <li>· Following action make the VOLUME level to "0" (MUTE) for a moment.               <ol style="list-style-type: none"> <li>1. Channel selecting</li> <li>2. TV/VIDEO selecting</li> </ol> </li> </ul>	CMOS
36	BRIGHTNESS (PWM81)	<ul style="list-style-type: none"> <li>· Active HIGH, PWM OUTPUT</li> <li>· 64 step (2bit/step) BRIGHTNESS CONTROL</li> </ul>	
37	CONTRAST (PWM80)	<ul style="list-style-type: none"> <li>· Active HIGH, PWM OUTPUT</li> <li>· 64 step (2bit/step) CONTRAST CONTROL</li> </ul>	
38	SHARPNESS (RC3/PWM63)	<ul style="list-style-type: none"> <li>· Active HIGH, PWM OUTPUT</li> <li>· 64 step (2bit/step) SHARPNESS CONTROL</li> </ul>	
39	COLOR (RC2/PWM62)	<ul style="list-style-type: none"> <li>· Active HIGH, PWM OUTPUT</li> <li>· 64 step (2bit/step) COLOR CONTROL</li> </ul>	
40	TINT (RC3/PWM63)	<ul style="list-style-type: none"> <li>· Active HIGH, PWM OUTPUT</li> <li>· 64 step (2bit/step) TINT CONTROL</li> </ul>	

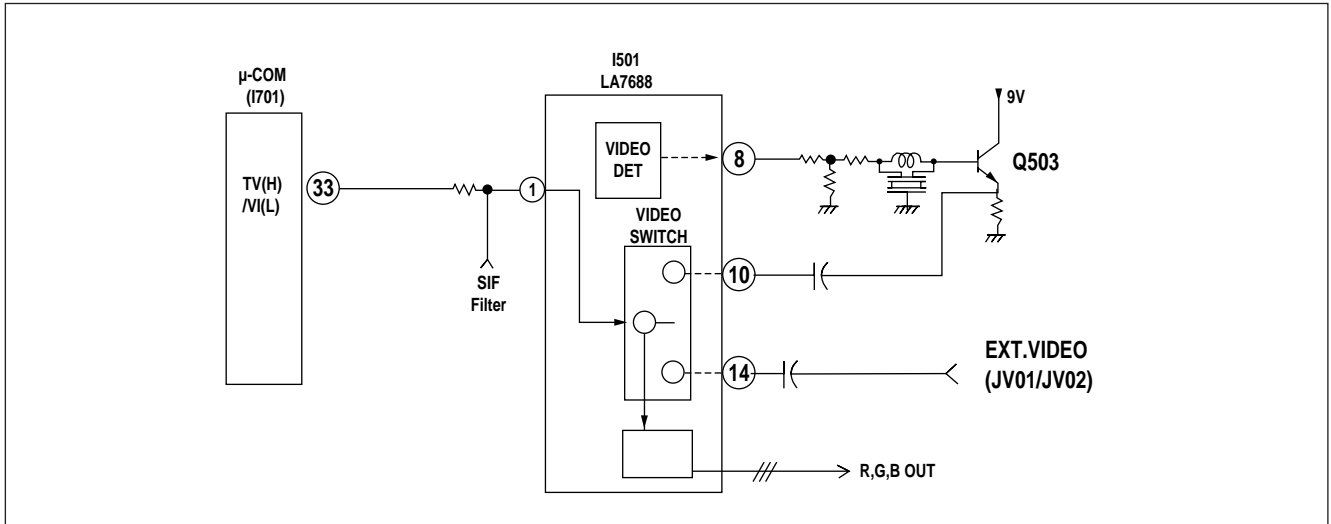
## 2.Function of LAST MEMORY

Always holds a previous DATA by saving the signal of the data,clock,enable on the E2PROM.

## B. VIDEO BLOCK

### 1. TV/VIDEO SWITCHING

#### 1) SWITCHING BLOCK DIAGRAM

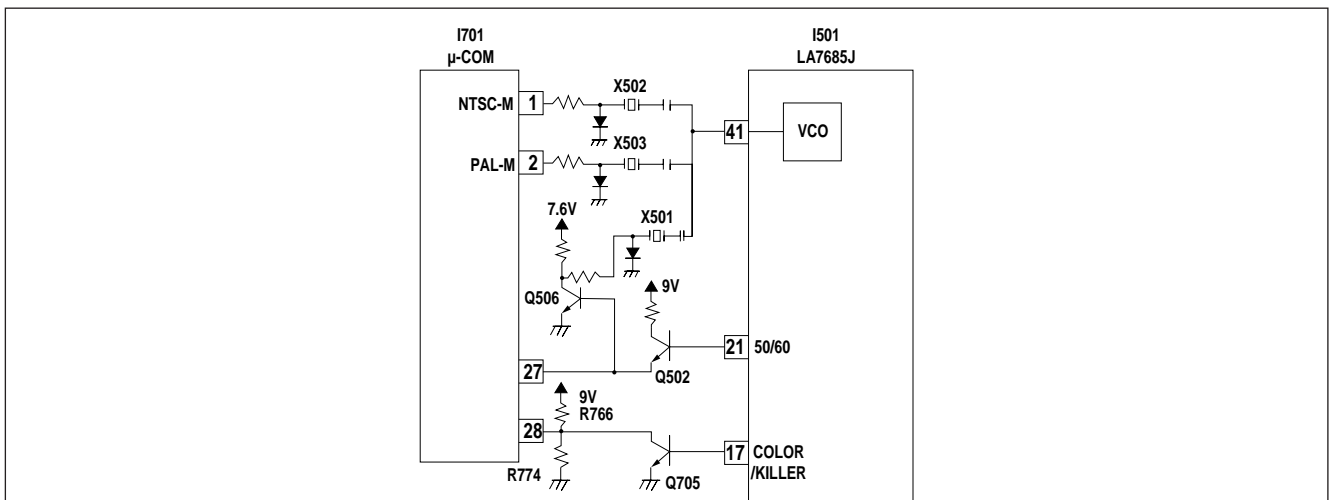


#### 2) CIRCUIT OPERATION

- After going out to the #8 of I501, the detected signals go into the #10 of I501 through 4.5MHz BPF(Band Pass Filter, Z502) : TV SIGNAL.
- The external VIDEO signals from JV01(or JV02) go into the #14 of I501 : VIDEO SIGNAL.
- Output pulse from the #33 of the μ-COM(TV:HIGH, VIDEO:LOW) go into #1 of I501 through a buffer(Q504 and Q507).
- According to the input pulse of the #1, TV/VIDEO switching circuit let out the video signals to the RGB generator block inside I501.

### 2. OUTLINE AND OPERATION OF 3-SYSTEM AUTO SWITCHING

#### 1) SWITCHING BLOCK DIAGRAM



#### 2) CIRCUIT OPERATION

- If 50[Hz] detected. #21 of the I501 goes down to LOW level. This out goes into the Q506 (and #27 of the I701), and then X501 oscillates (#1 and #2 of the I701 are deactivated.).

ç ; PAL-N system

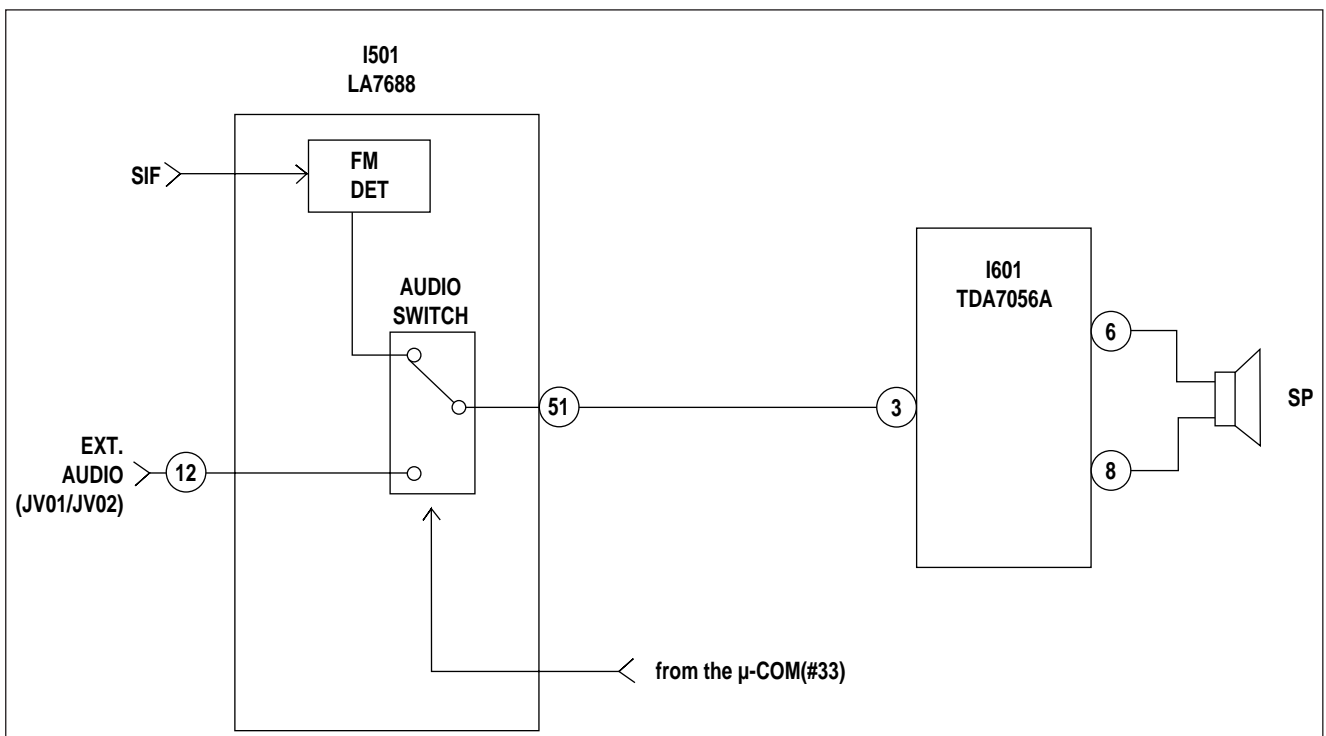
- If 60[Hz] detected, #21 of the I501 goes up to HIGH level and the system operates as PAL-M or NTSC-M.
  - In the case that Base voltage of Q705 is LOW, the voltage driven from R766 and R774 is applied to the #28 of the I701.
  - In the case that Base voltage of Q705 is HIGH, according to the voltage change of the #28 of the I701, the comparator in the I701 switch over the system.  
(PAL-Mç ; NTSC-M, NTSC-Mç ; PAL-M)
- HIGH signal of the #1 of I701 makes X502 oscillates.(NTSC-M)
- HIGH signal of the #2 of I701 makes X503 oscillates.(PAL-M)

### 3) FREQUENCY CHARACTERISTICS OF EACH SYSTEM

COLOR	VHF	UHF	SCANNING NUMBER	LINE FREQUENCY (Fh)	FIELD FREQUENCY	CHROMINANCE SUB CARRIER (Fsc)
NTSC	M	M	525line	15,734[Hz]	60[Hz]	3.579545[MHz]
PAL	M	M	525line	15,734[Hz]	60[Hz]	3.575611[MHz]
PAL	M		625line	15,625[Hz]	50[Hz]	3.582056[MHz]

## C. SOUND BLOCK

### 1. SOUND BLOCK DIAGRAM



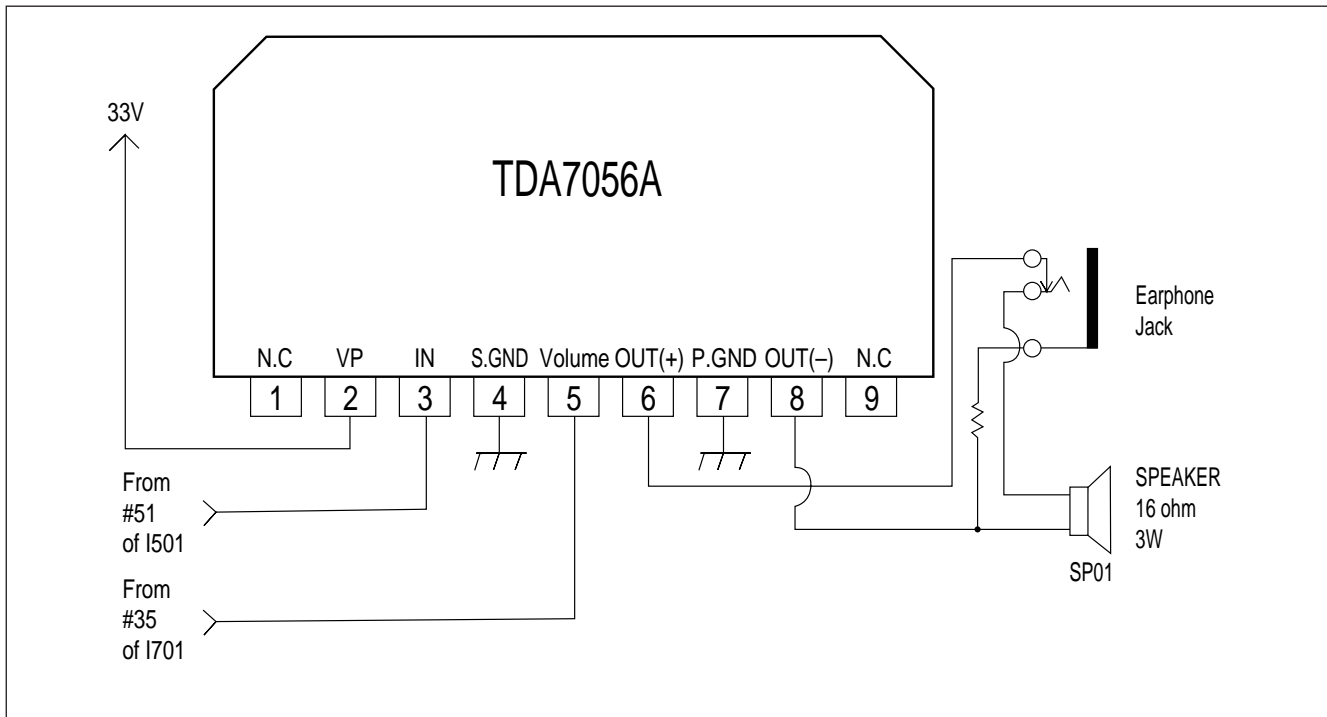
### 2. EXPLANATION OF OPERATION

- 1) The TV audio signal is detected and goes into the audio switch in I501.
- 2) The external audio signal from JV01(or JV02) goes into the #12 of I501.
- 3) The audio switch in I501 alternates audio signals according to the TV/VIDEO control input from the I701.
- 4) The selected audio signal (#51 of I501) go into the #3 of I601.



### 3.SOUND AMP IC

#### 1) BLOCK DIAGRAM



#### 2) EXPLANATION OF THE OPERATION

- The audio signal from the I501 goes into the #3 of the I601.
- I601 amplifies this audio signal correspond to the volume control signal from I701.
- The amplified audio signal from the #6 and #8 drives the speaker (s).

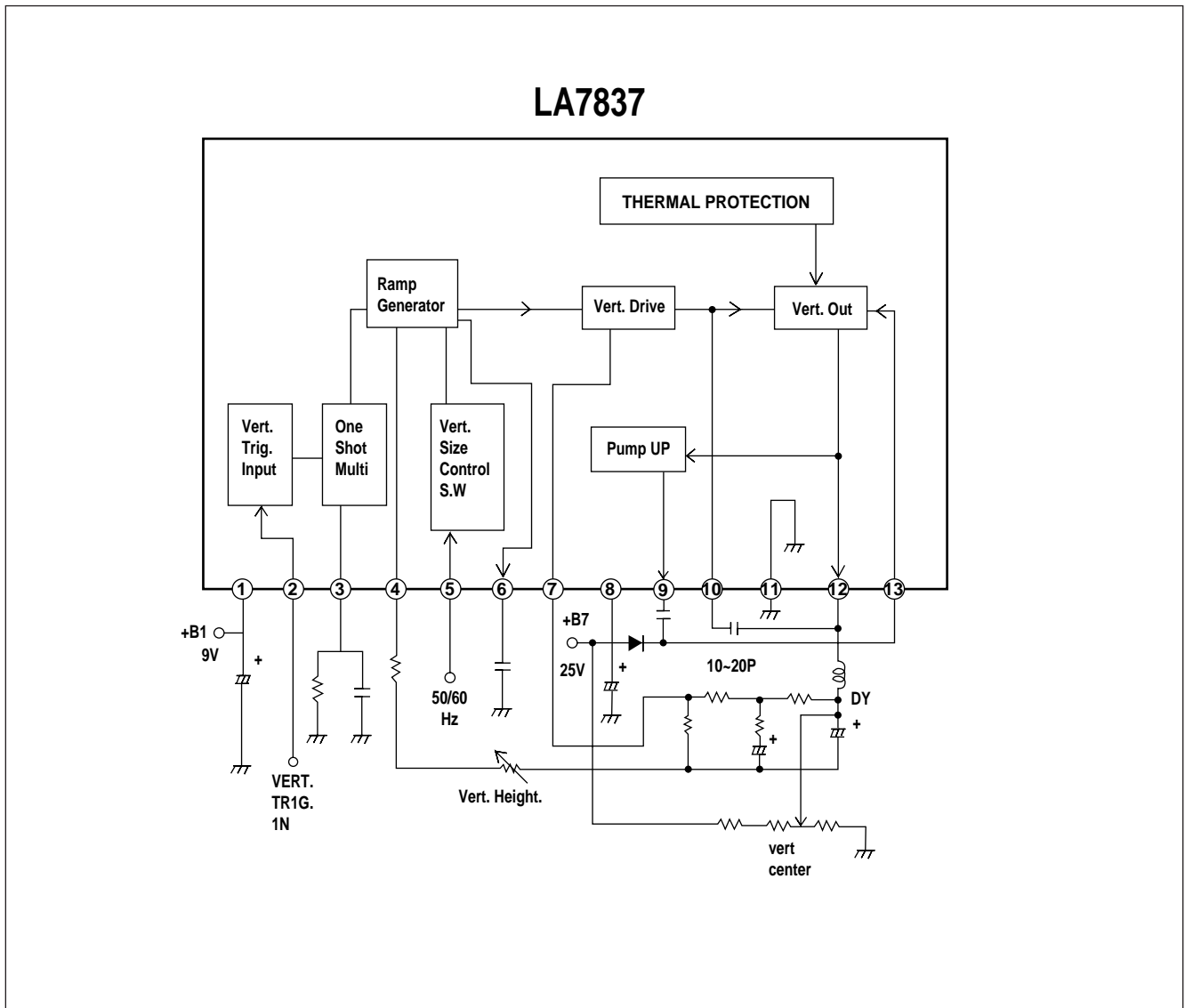
ı AUDIO MUTE function is activated by the I701(SOFTWARE MUTE).

## D. DEFLECTION BLOCK

This block can be separated into two parts, VERTICAL and HORIZONTAL.

Only the VERTICAL circuit is explained here, comprehensibly.

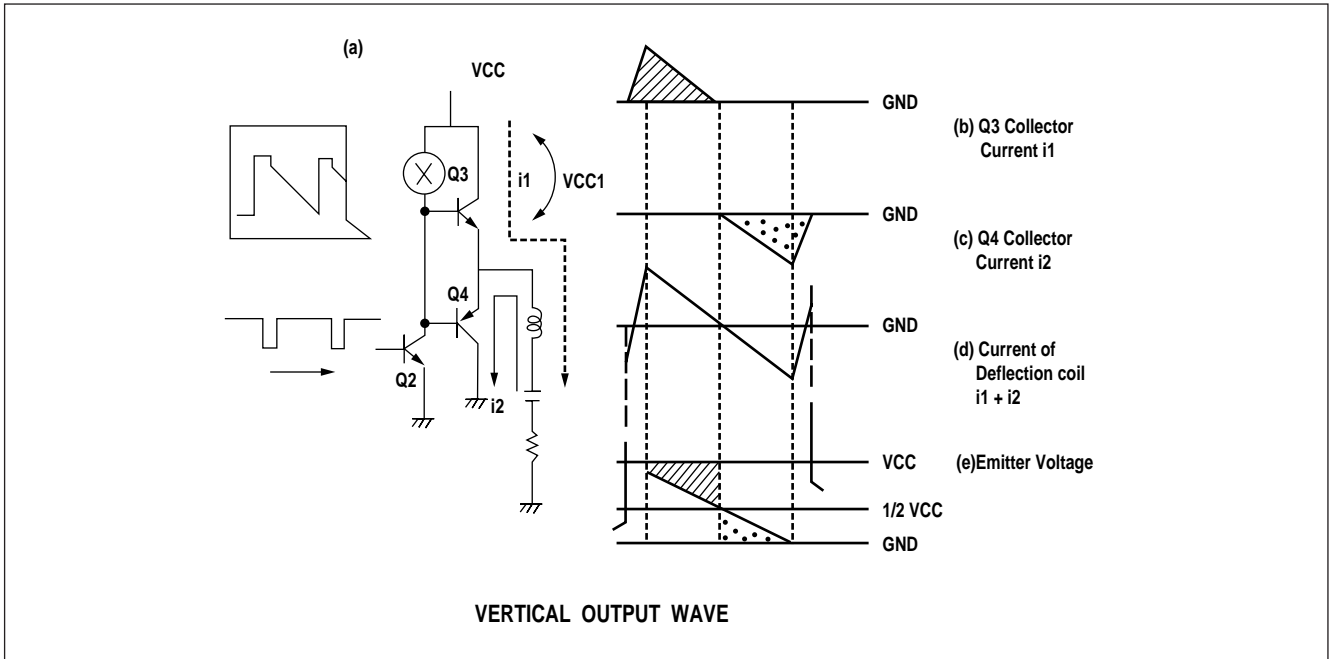
### 1. BLOCK DIAGRAM OF VERTICAL IC



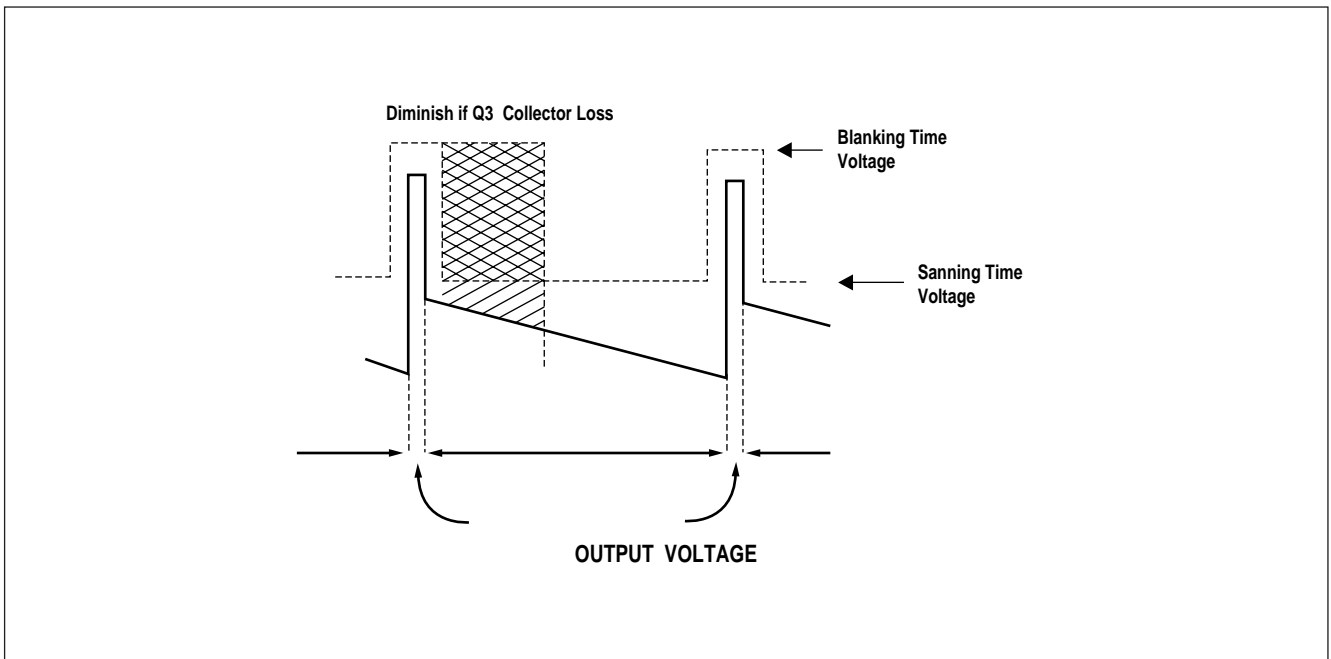
- # 1: B+ (12V)
- # 2: VERTICAL TRIGGER INPUT
- # 3: TIME CONSTANT & MUTE
- # 4: VERTICAL HEIGHT CONTROL
- # 5: 50/60[Hz] VERTICAL SIZE CONTROL SIGNAL INPUT
- # 6: RAMP WAVEFORM GENERATION
- # 7: AC/DC FEEDBACK INPUT TO VERTICAL

- # 8: POWER SUPPLY (VBB): 25V
- # 9: PUMP UP OUTPUT
- # 10: OSC BLOCKING
- # 11: GND
- # 12: VERTICAL OUTPUT
- # 13: POWER SUPPLY FOR VERTICAL OUTPUT

## 2. OPERATION OF VERTICAL



- 1) In the picture above, (a) shows a fixed  $V_{cc}$ , and (+)(-)current of deflection coil is (d) which is sum of (b) and (c), and (e) shows EMITTER voltage of Q3,Q4.
- 2) Collector loss of Q3 is  $i_1 V_{ce1}$  which is the product of oblique region of (b),(e).Collector loss of Q4 is product of dot region of (c),(e).
- 3) To reduce collector loss of Q3,if bring down the voltage during scanning time as shown in the picture (b) ,  $V_{ce1}$  become lower so that the loss diminish.

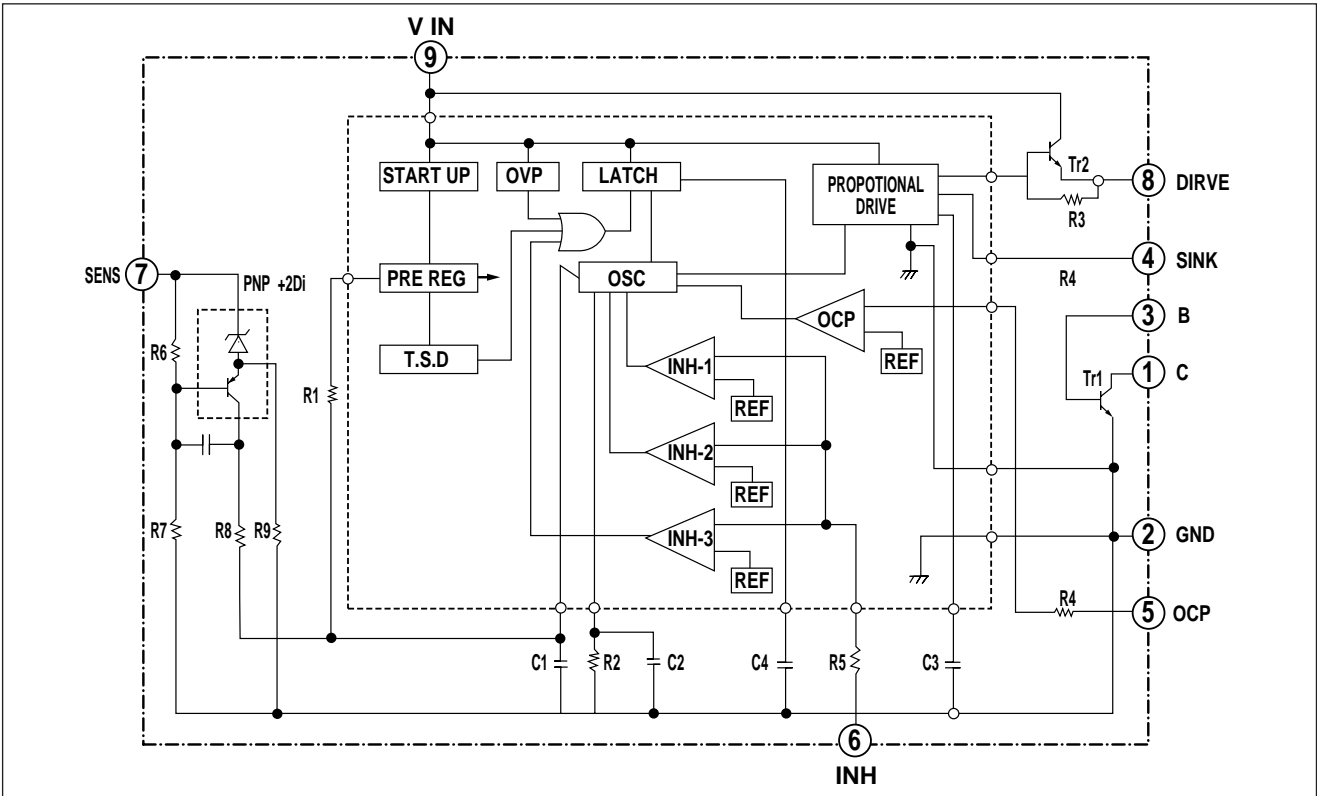


### E. POWER BLOCK

This chassis designed for free voltage(AC 100V ~ AC 220V ) power. power block contains power IC, SMPS transformer and several passive components.

The power IC STR-S5707 has power transistor. oscillator circuit, voltage comparator circuit, thermal protection circuit, OCP(over current protection) circuit insiude.

#### 1.STR-S5707 BLOCK DIAGRAM



#### 2.PIN DESCRIPTION

PIN NO	SYMBOL	NAME	FUNCTION
1	C	COLLECTOR	POWER TRANSISTOR COLLECTOR
2	GND	GROUND	GROUND(POWER TRANSISTOR EMITTER)
3	B	BASE	POWER TRANSISTOR BASE
4	SINK	SINK	BASE CURRENT (Is) INPUT
5	OCP	OVER CURRENT PROTECTION	OVERCURRENT SENSING SIGNAL INPUT
6	INH	INHIBIT / LATCH	SYNC, OFF TIME/LATCH CIRCUIT CONTROL INPUT
7	F/B(SENS)	FEED BACK(SENSING) INPUT	CONSTANT VOLTAGE CONTROL SIGNAL INPUT
8	DRIVE	DRIVE	BASE DRIVE CURRENT (Id) OUTPUT
9	Vin	Vin	SUPPLY VOLTAGR FOR CONTROL CIRCUIT

#### 3. OTHER FUNCTION

Symbol	Function
OVP	Built-in Overvoltage Protection Circuit
TSD	Built-in Thermal Shutdown Circuit

#### 4. EXPLANATION OF CIRCUIT OPERATION

##### 1) $V_{IN}$ terminal, start-up circuit

A start-up circuit is to start and stop a operation of a control IC by detecting a voltage appearing at a  $V_{IN}$  terminal (pin-9). At start up of a power supply, when a voltage at the  $V_{IN}$  terminal reaches to 8V by charging up C806 by the function of a start-up resistor,  $R_s$ , a control circuit starts operating by the function of the start-up circuit. As shown in Fig. 2, since a circuit current is suppressed 200 $\mu$ A, maximum ( at  $V_{IN} = 7.5V$  ) until the control circuit starts its operation.

After the control circuit starts its operation, power source is obtained by smoothing voltage appearing at L1 winding. Once the control circuit starts operating, as its voltage doesn't reach the fixed voltage at once,  $V_{IN}$  terminal voltage starts dropping. However, as a shut-down voltage is set low (at 4.9V), while  $V_{IN}$  terminal voltage reaches a shutdown voltage, L1 winding voltage reaches the fixed voltage earlier so that the control circuit can continue on operating.

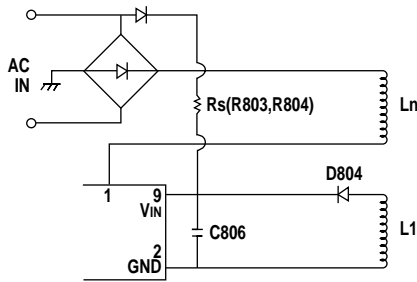


Fig. 1 Start-up Circuit

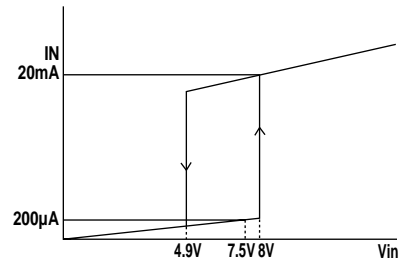


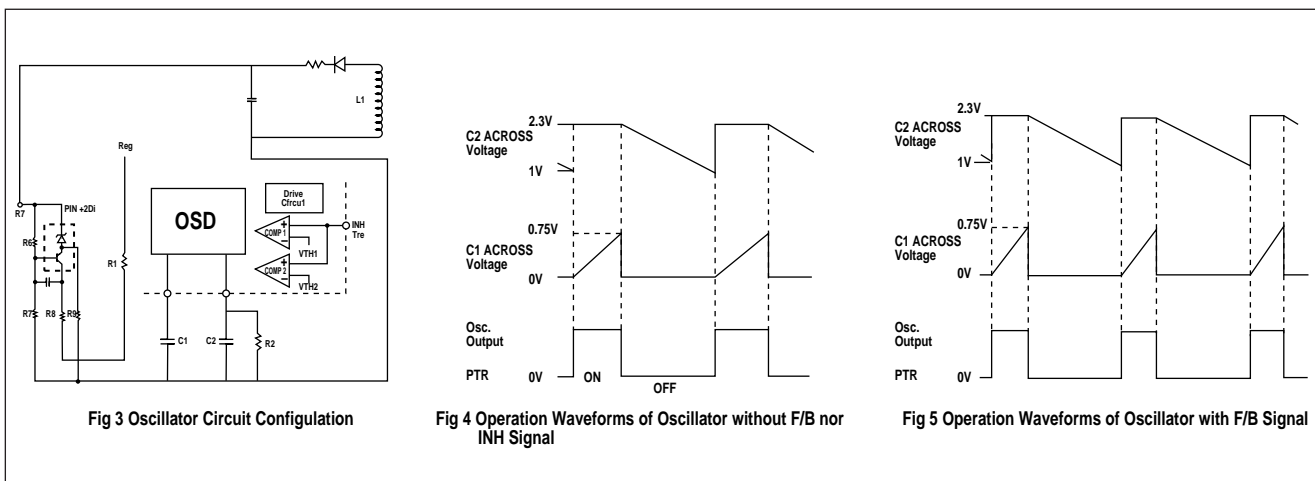
Fig. 2  $V_{IN}$  Terminal Voltage Circuit Current  $V_{IN}$

##### 2) Oscillator, F/B terminal voltage (Pin #7)

An oscillator generates pulse signals which turns a power transistor on and off by making use of charge and discharge of C1 and C2 incorporated in the Hybrid IC.

Constant voltage control of a switch-mode power supply is performed by changing both ON- time and OFF- time except when the load is light (ex. remote control stand-by mode of TVs).

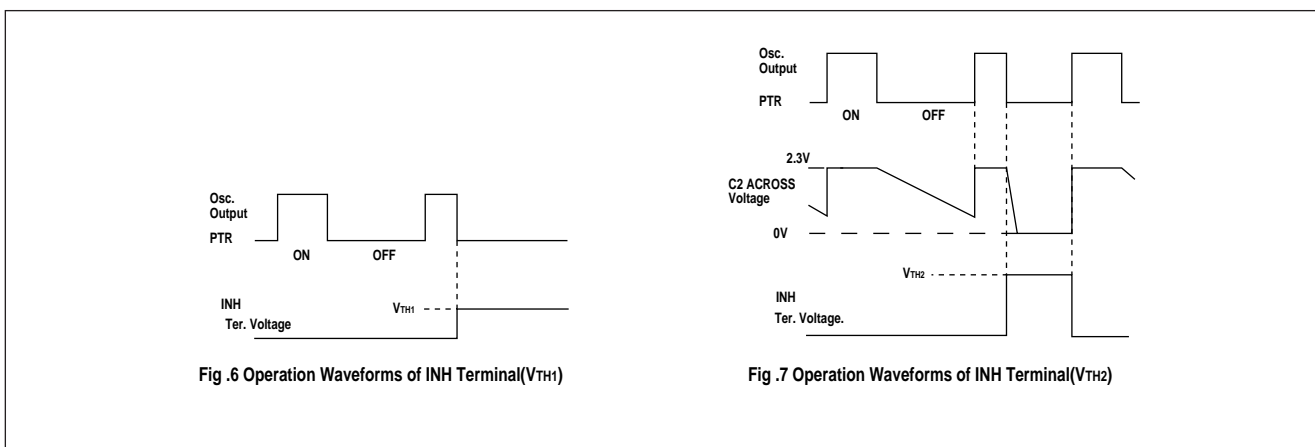
Fig. 4 shows how the oscillator works when the Hybrid IC independently operates (with no F/B nor INH signals). When the power transistor is on, C2 is charged to the set voltage (approx 2.3V at  $T_a = 25^\circ\text{C}$ ). On the other hand, C1 starts charging up through R1 from almost 0V and the voltage across C1 increases in accordance with the inclination determined by the product of C1 and R1. When the voltage across C1 reaches approx. 0.75V ( $T_c = 25^\circ\text{C}$ ), the output from the oscillator is reversed and the power transistor turns off. At the same time C1 is quickly discharged by the function of an internal circuit of the oscillator and the voltage across it decreases to almost 0V. When the power transistor turns off, C2 starts discharging through R2 and the voltage across C2 decreases in accordance with the inclination determined by the product of C2 and R2. When the voltage across C2 decreases to about 1V, the output from the oscillator is reversed again and the transistor consequently turns on. The power transistor continues turning on and off by repeating the above-mentioned operations.



As the circuit in Fig. 3 shows, the ON-time is controlled by changing a current charged by C1, which is as the result of that the detection winding (L1), which detects a change of voltage in a secondary side, connected to the sensing terminal (Pin No. 7) has the current in accordance with an output signal from an output voltage detection circuit (an error amplifier) built in. As an AC input voltage to the power supply gets the higher and a load current the smaller, the current flowing to the SENS terminal gets the larger, and the ON-time gets the shorter.

### 3) Function of INH terminal (Pin #6), control of OFF-time

Signal to the INH terminal is used as inputs to COMP.1 and COMP.2 inside of the control IC. A threshold voltage of COMP.1  $V_{TH1}$  is set at 0.75V ( $T_a=25^\circ\text{C}$ ) and an input signal to a drive circuit becomes almost 0V (the power transistor is in OFF mode) when a voltage at the INH terminal reaches the  $V_{TH1}$ . As long as the INH terminal voltage does not get lower than  $V_{TH1}$ , the power transistor sustains OFF mode. On the other hand, a threshold voltage of COMP.2  $V_{TH2}$ , is set at 1.5V ( $T_a=25^\circ\text{C}$ ). When the INH terminal voltage reaches  $V_{TH2}$ , an output from COMP.2 reverses and, as a result, C2 starts firing and a voltage across C2 drops to almost 0V in a moment. As the result of this immediate discharge of C2, the OFF-time of the oscillator which has been determined by the product of C2 and R2 ( $\approx 55 \mu\text{sec}$ ) can be quicker up to approx.  $2 \mu\text{sec}$ . As long as the INH terminal voltage does not get lower than  $V_{TH2}$ , a voltage across C2 stays at almost 0V and a output from the oscillator keeps the power transistor being on. The relation between the INH terminal voltage and the function of the oscillator described above is shown in Fig. 6 and Fig. 7



#### 4) Quasi-resonant operation

By inputting a voltage signal which is synchronized with the energy discharge time of a secondary winding of a transformer to the INH terminal, quasi-resonant operation can be achieved. As shown in Fig. 8, the voltage of L1 winding which is synchronized with the energy discharge time of a secondary winding. S1 shall be input to the INH terminal through D805 and R807. Since  $V_{TH2}$  is set at 1.5V typical, a voltage at the INH terminal.  $V_{INH}$ , shall be set at 2V.

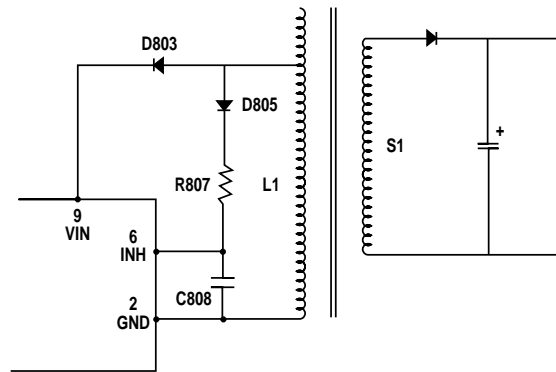


Fig 8 Operation Circuit

Fig. 9 shows waveforms of  $V_{CE}$ ,  $I_c$  and  $V_{INH}$  of the transistor, voltage across C808 in the oscillator as well as an output from the oscillator when operating in quasi-resonant mode.

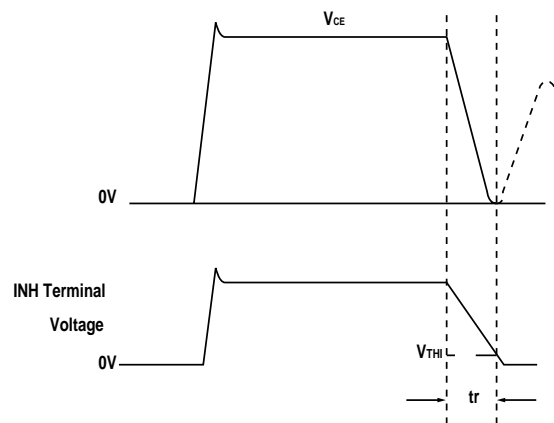


Fig 9 Waveforms of  $V_{CE}$  and  $V_{INH}$  at Quasi-resonant Operation

when the power transistor turns off and a voltage higher than  $V_{TH2}$  is applied to the INH terminal, C808 immediately discharges and then starts charging again. Even after the discharge of energy of a secondary winding is completed,  $V_{INH}$  does not immediately increases. When it gets lower than  $V_{TH2}$  after the time,  $t_r$ , which is determined by the production of internal impedance of the IC and  $C_{INH}$ , has past, the transistor turns on.

### 5) Drive circuit

The STR-S5707 applies the proportional drive system in order to minimize turn-on and saturation loss, and storage time. In the conventional RCC system, turn-on loss and switching noise due to the surge current appearing when the power transistor turns on are high as because the transistor is driven by the drive current shown in Fig. 10-1. In addition, since it decreases linearly when the transistor turns off and a peak value of  $I_{B2}$  is not large, the storage time is long and the  $V_{CE(sat)}$  voltage is high, which results in large turn-off loss. The circuit and the waveforms of the proportional drive system which is applied to the STR-S5707 in order to reduce these switching loss and shorten the storage time are shown in Fig. 10 and Fig. 10-2 respectively.

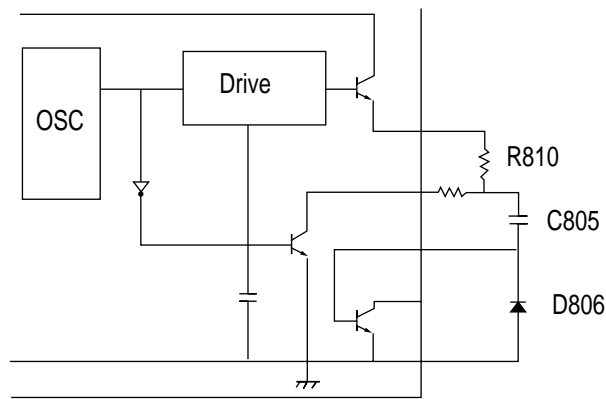


Fig.10 D806 and C805 function to reverse-bias between the base and the emitter of the transistor during its off state.

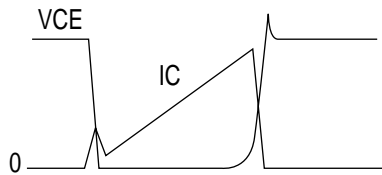


Fig.10-1 Waveforms of Conventional RCC Power Supply

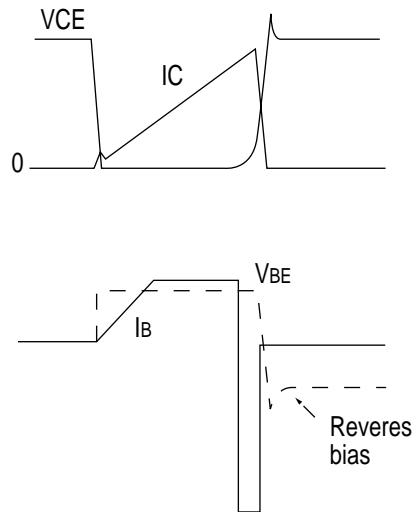


Fig.10-2 Waveforms of power Supply Using STR-S5707



## 6) OCP (overcurrent protection) function

Overcurrent protection is performed pulse by pulse by directly detecting collector current of the power transistor. Configuration of the OCP circuit is shown in . Detecting voltage is set to -1V below a reference point of GND (ground). In addition, since the detecting voltage is set by a comparator, very stable characteristics against temperature is achieved and drift of the detecting voltage against temperature change is almost 0V.

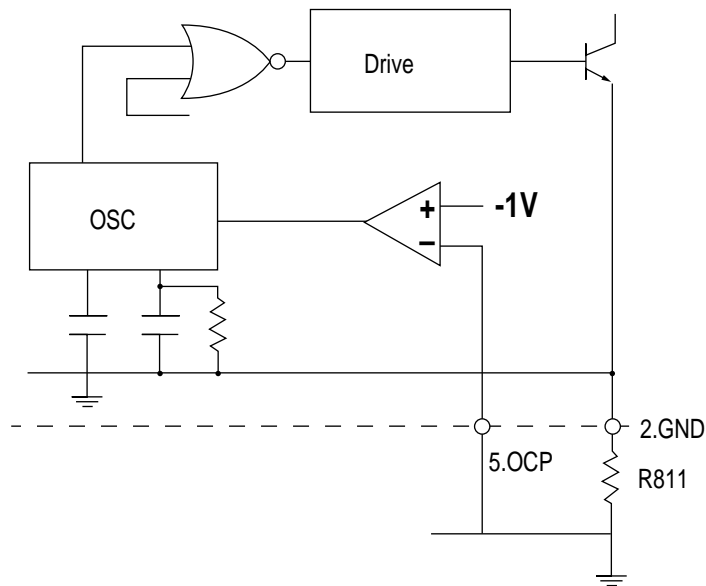


Fig 11 Overcurrent protection Circuit

## 7) Latch circuit

It is a circuit which sustains an output from the oscillator low and stops operation of the power supply when overvoltage protection (OVP) circuit and thermal shutdown (TSD) circuit are in operation. As the sustaining current of the latch circuit is 500mA maximum when  $V_{IN}$  terminal voltage is 4V. the power supply circuit sustains the off state as long as current of 500mA minimum flows to  $V_{IN}$  terminal from a start-up resistor. In order to prevent a malfunction to be caused by a noise and so on, delay time is provided by C1 incorporated in the IC and, therefore, the latch circuit operates when the OVP of TSD circuit is in operation, of an external signal input is provided. for about 10ms or longer. In addition, even after the latch circuit start operating, the constant voltage regulator (Reg) circuit is in operation and the circuit current is at high level. As a result.  $V_{IN}$  terminal voltage rapidly decreases. When  $V_{IN}$  terminal voltage becomes lower than the shutdown voltage,  $V_{IN}(OFF)$ , (4.9V typical), it starts increasing as the circuit current is below 500mA. When it reaches the ON-state voltage.  $V_{IN}(ON)$ , (8V typical),  $V_{IN}$  terminal voltage starts decreasing because the circuit current increases again.

when the latch circuit is on.  $V_{IN}$  terminal voltage increases and decreases within the range from 4.9V typical to 8V typical and is prevented from abnormally rising. Fig. 12 shows an example of  $V_{IN}$  terminal voltage waveform. Cancellation of the latch is done by decreasing  $V_{IN}$  terminal voltage below 3.3V. The power supply can be restarted after disconnecting an AC input to the power supply once.

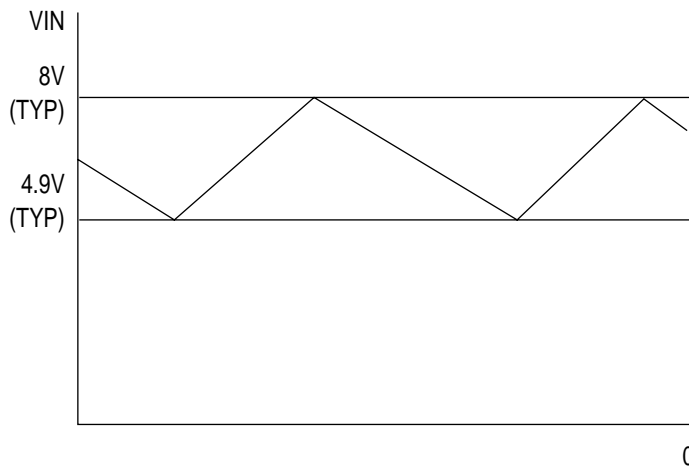


Fig 12 Typical  $V_{IN}$  Terminal Voltage Waveform When Latch Circuit Is Operating

### 8) Thermal shutdown, circuit

It is a circuit to trigger the latch circuit when the frame temperature of the IC exceeds 150°C (typical). Although the temperature is actually sensed at the control chip. It works against overheating of the power transistor as the power transistor and the control IC are mounted on the same lead frame.

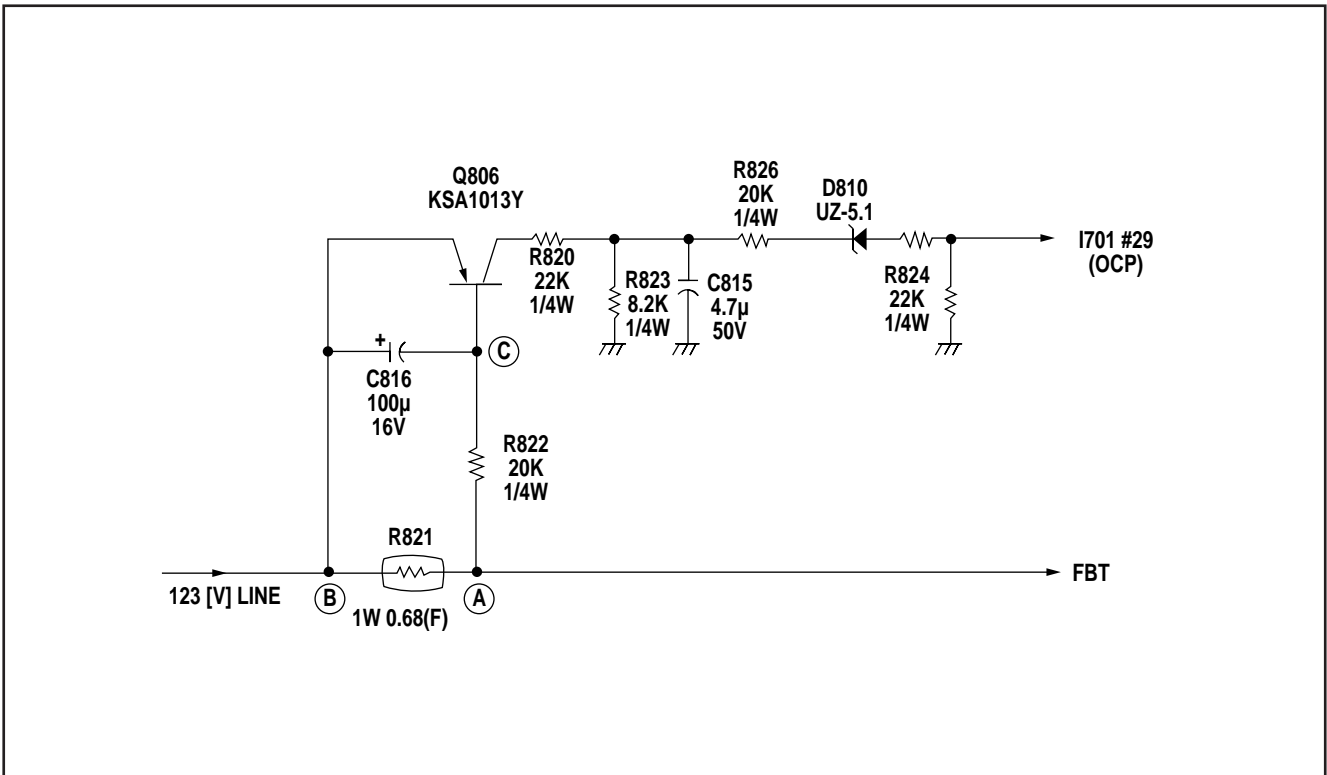
### 9) Overvoltage protection circuit

It is a circuit to trigger the latch circuit when  $V_{IN}$  terminal voltage exceeds 11V (typical). Although it basically functions as protection of  $V_{IN}$  terminal against overvoltage, since  $V_{IN}$  terminal is usually supplied from the drive winding of the transformer and the voltage is proportional to the output voltage, it also functions against the overvoltage of secondary output which causes when the control circuit opens or in some other events.

## 5. OCP (OVER CURRENT PROTECTION) CIRCUIT

This circuit is designed to protect the circuit from over current due to overload occurred at the rear of 132[V] line.

### 1) CONFIGURATION OF OCP CIRCUIT

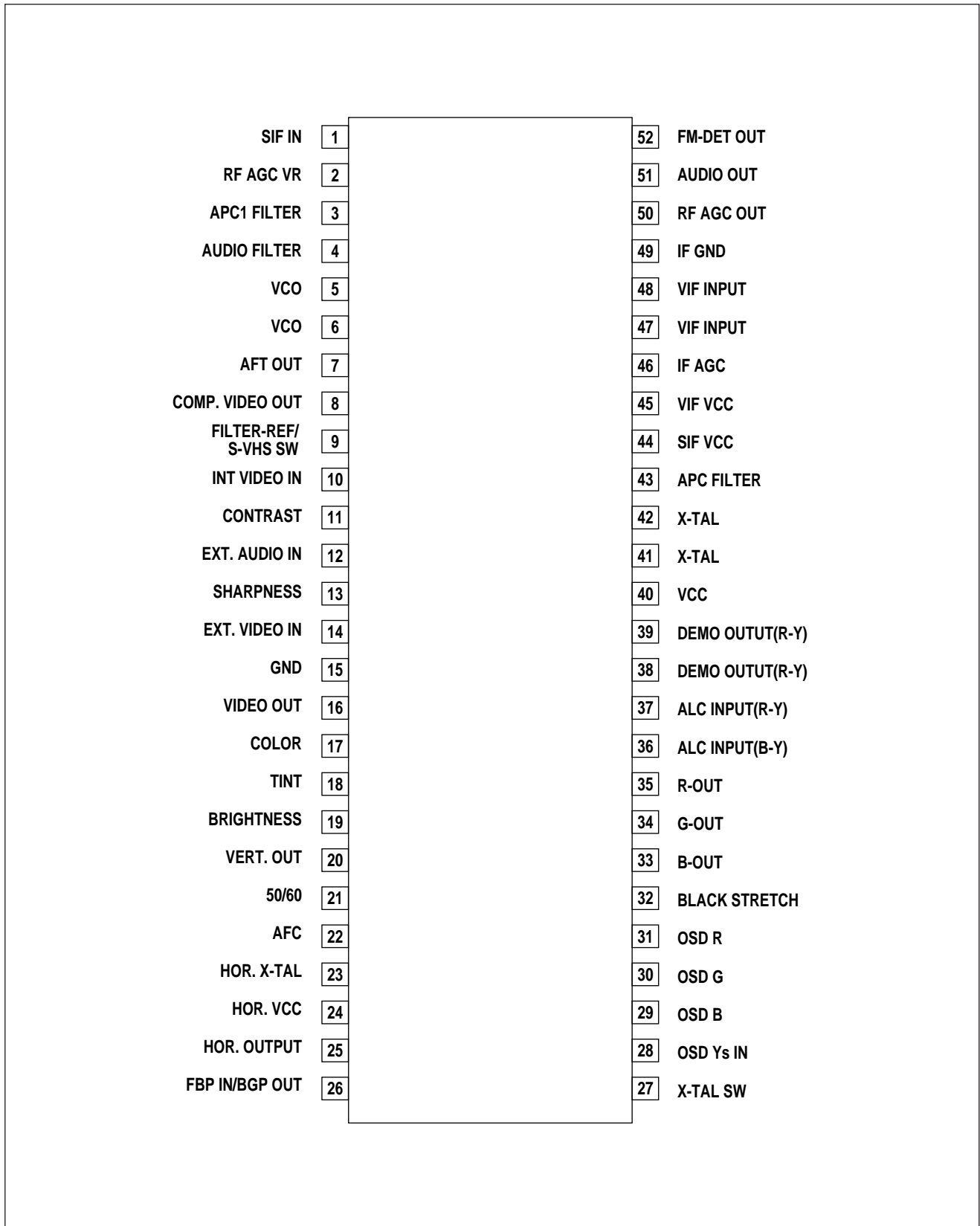


### 2) EXPLANATION OF THE OPERATION

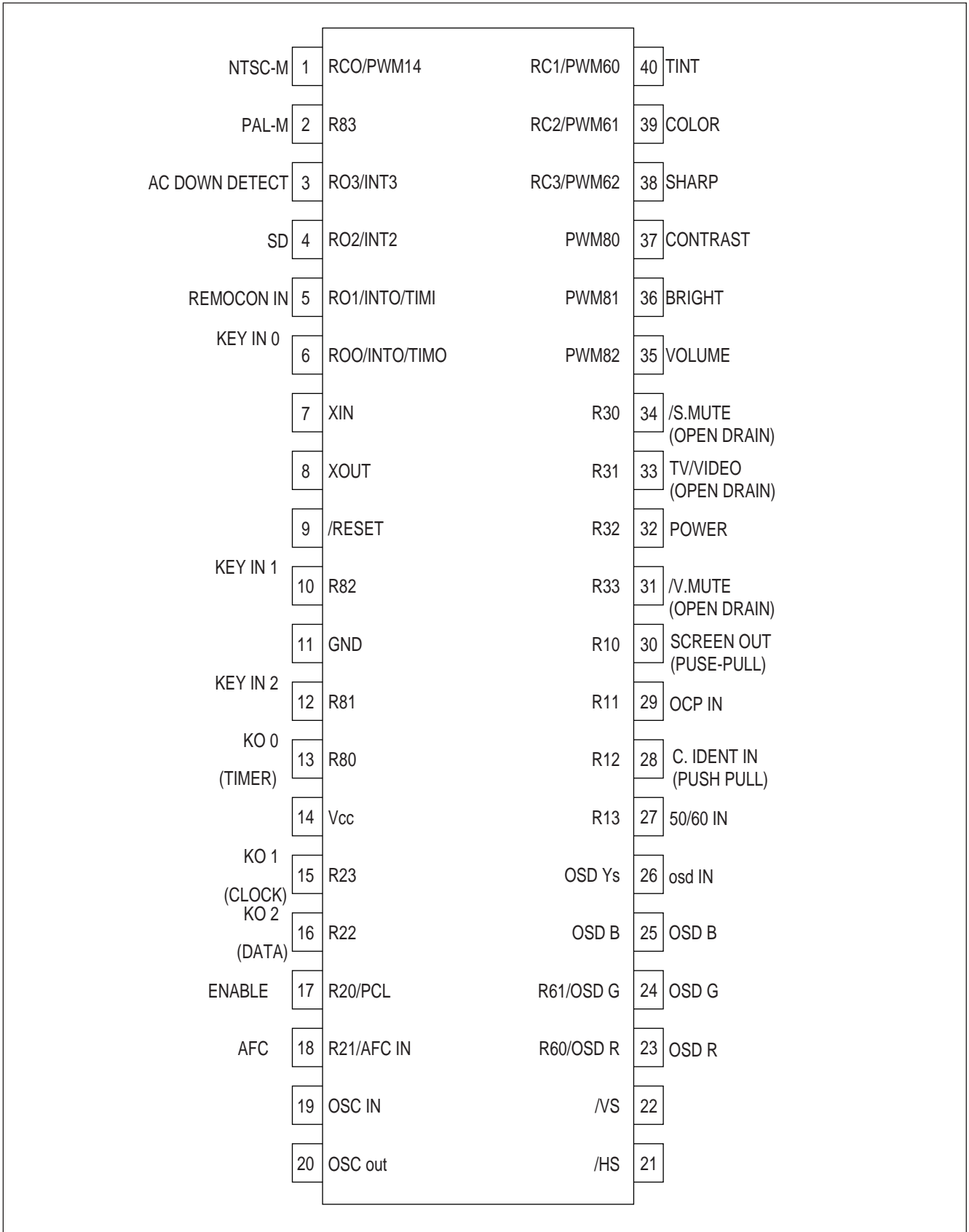
- There is very little voltage drop at  $\epsilon$  R821(1W 0.68) of 123 [V] line.
- $\epsilon$  In case that the overload occurs at the rear of 123[V] line, the increase of the voltage drop at R821 bring down the base voltage of the Q806 so as to drive the Q806
- $\emptyset$  Because of the overload at the rear of the R821, the voltage of the  $\epsilon$  point decreases. And this makes Q806 turn on so that a voltage is applied to the #29 of I701.
- $\epsilon$  In case that OCP operates by the #29 of the I701, the set is protected by power off (#32 of I701 ; LOW).

## F.IC BLOCK DIAGRAM

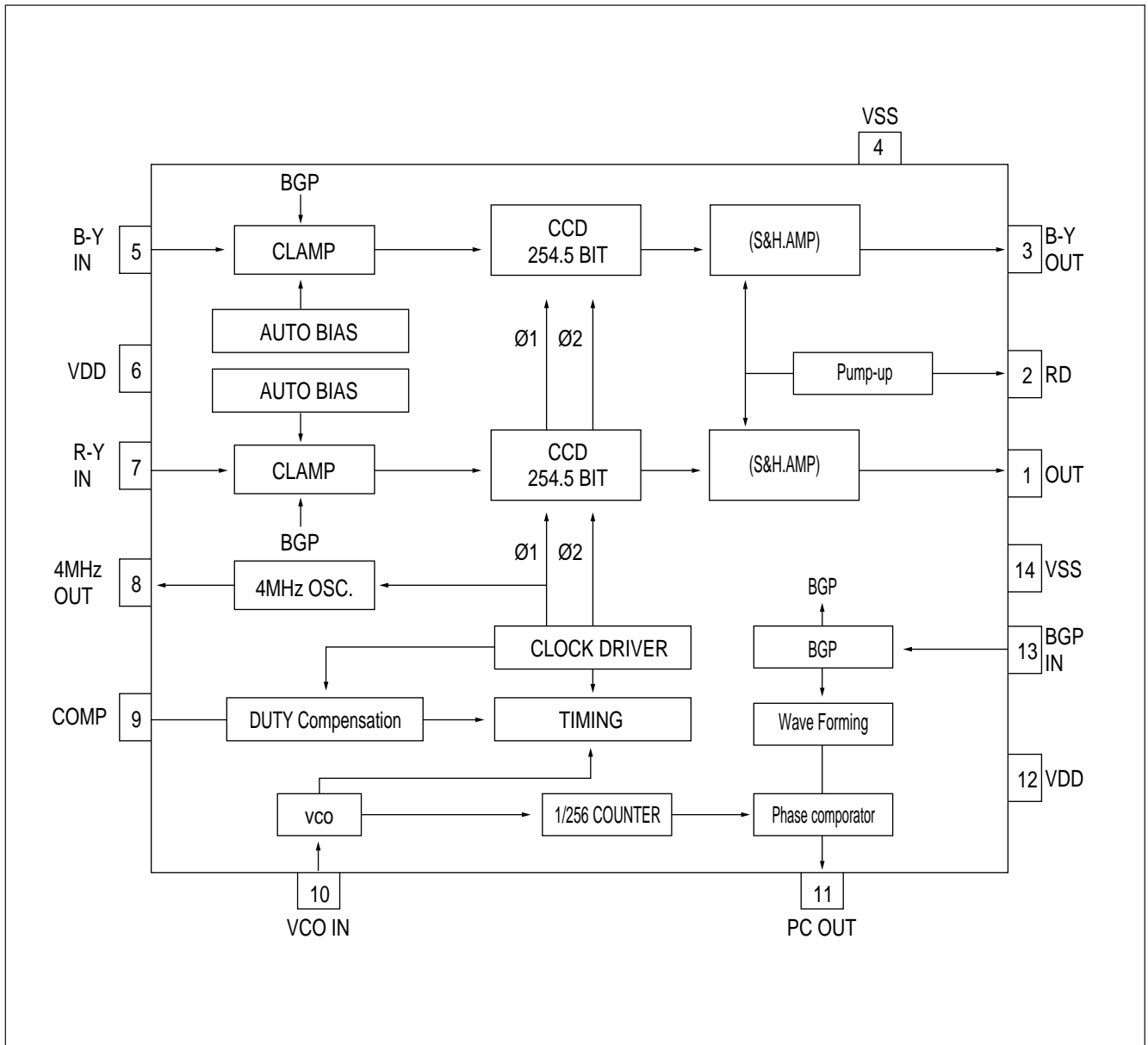
1.LA7688: VIF/SIF/VIDEO/CHROMA/DEFLECTION 1-CHIP IC



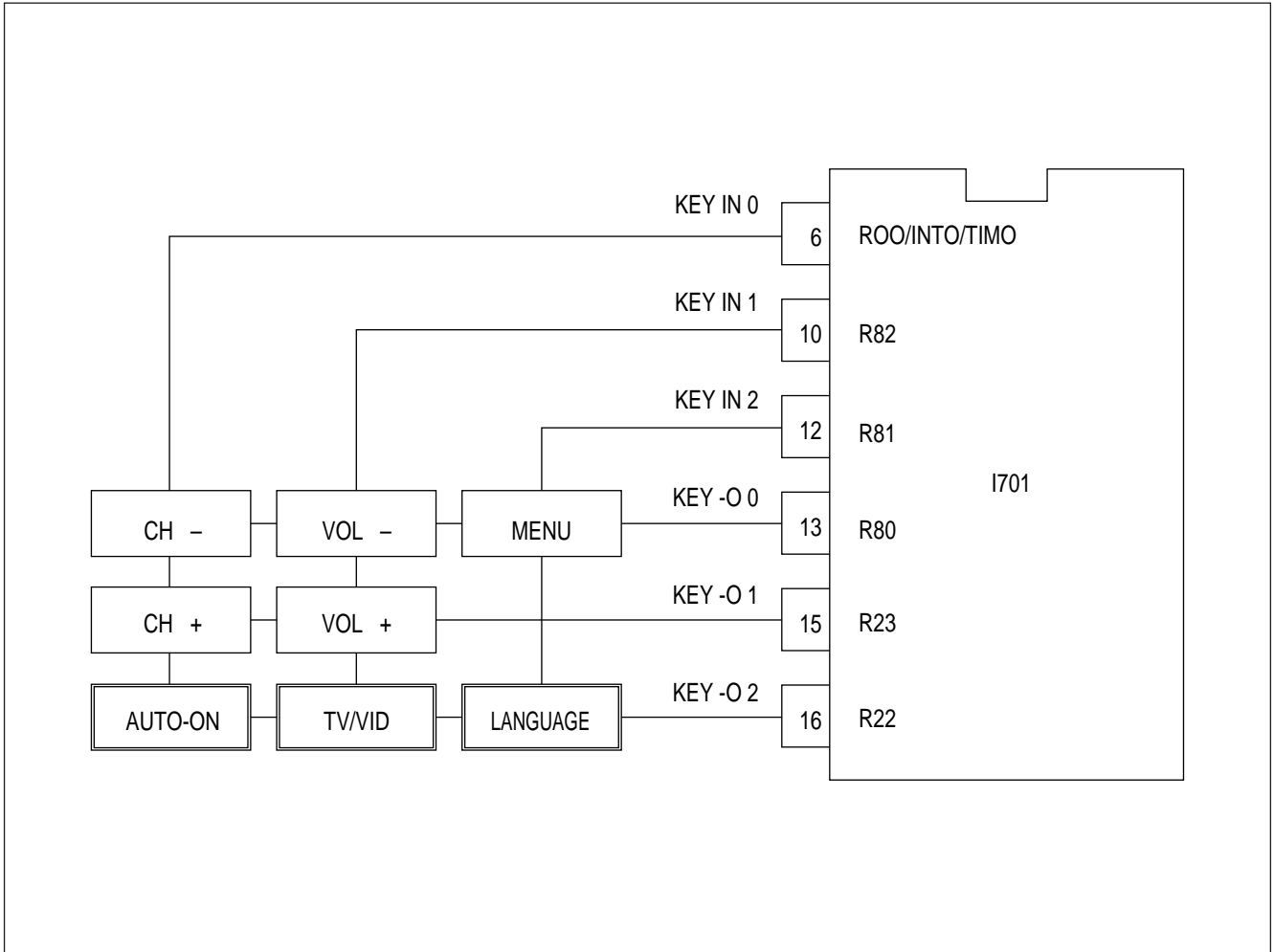
2.μ-COM : DMC42C200N



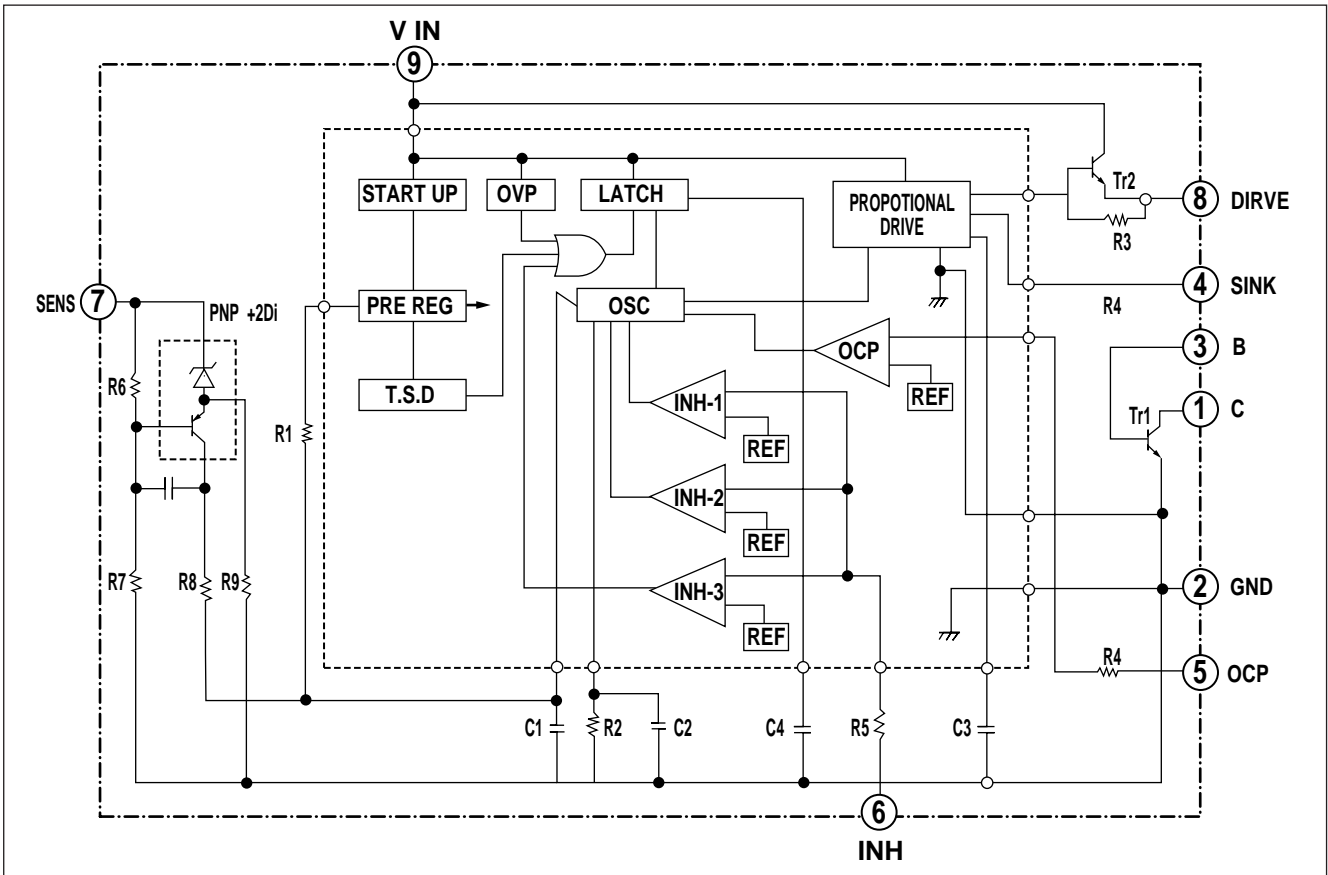
### 3.LC89950 : CCD DELAY LINE



### 3.LOCAL KEY & OPTION SW



4.STR-S5707 : POWER IC

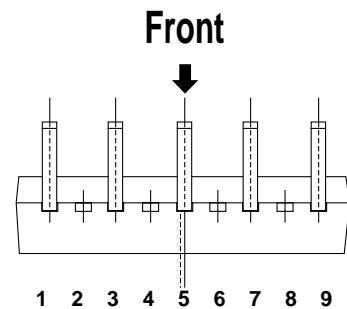


Internal Circuit Constants

R1	TON Adjustment Trimming Resistor	R8	2.5KΩ	C3	820pF
R2	TOFF Adjustment Trimming Resistor	R9	35KΩ	C4	0.01µF
R3	1.0KΩ	C1	3300pF	C5	1500pF
R4	100Ω	C2	0.01µF		
R5	85Ω				
R6	Vs Adjustment Trimming Resistor				
R7	14KΩ				

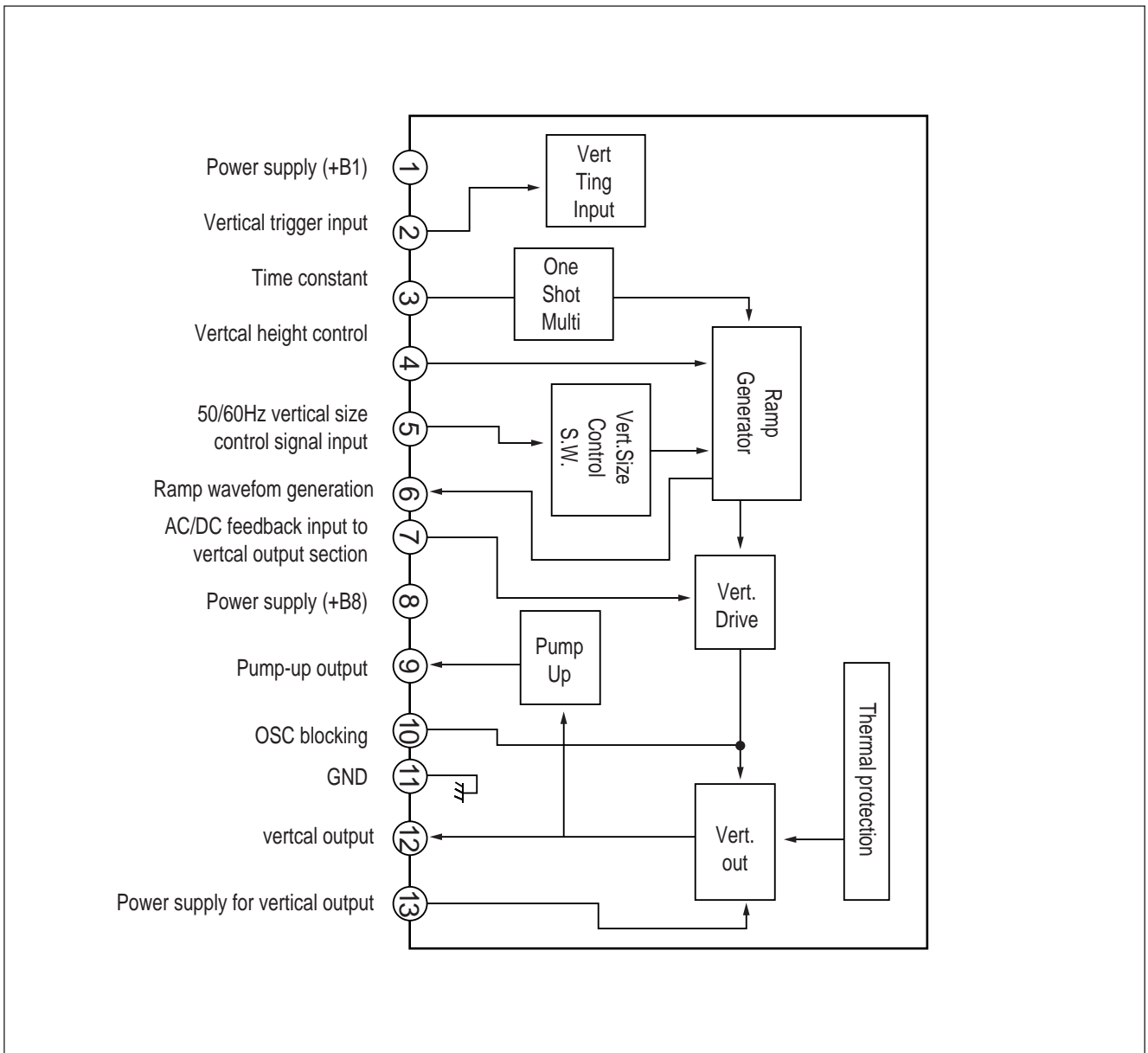
Function of Terminal

Terminal	symbol	Description
1	C	Collector Terminal
2	GND	Ground Terminal
3	B	base Terminal
4	SINK	Sink Terminal
5	OCP	Overcurrent Protection Terminal
6	INH	Inhibit Terminal Latch Terminal
7	SENS	Sensing Terminal
8	DRIVE	Drive Terminal
9	V <sub>IN</sub>	V <sub>IN</sub> Terminal



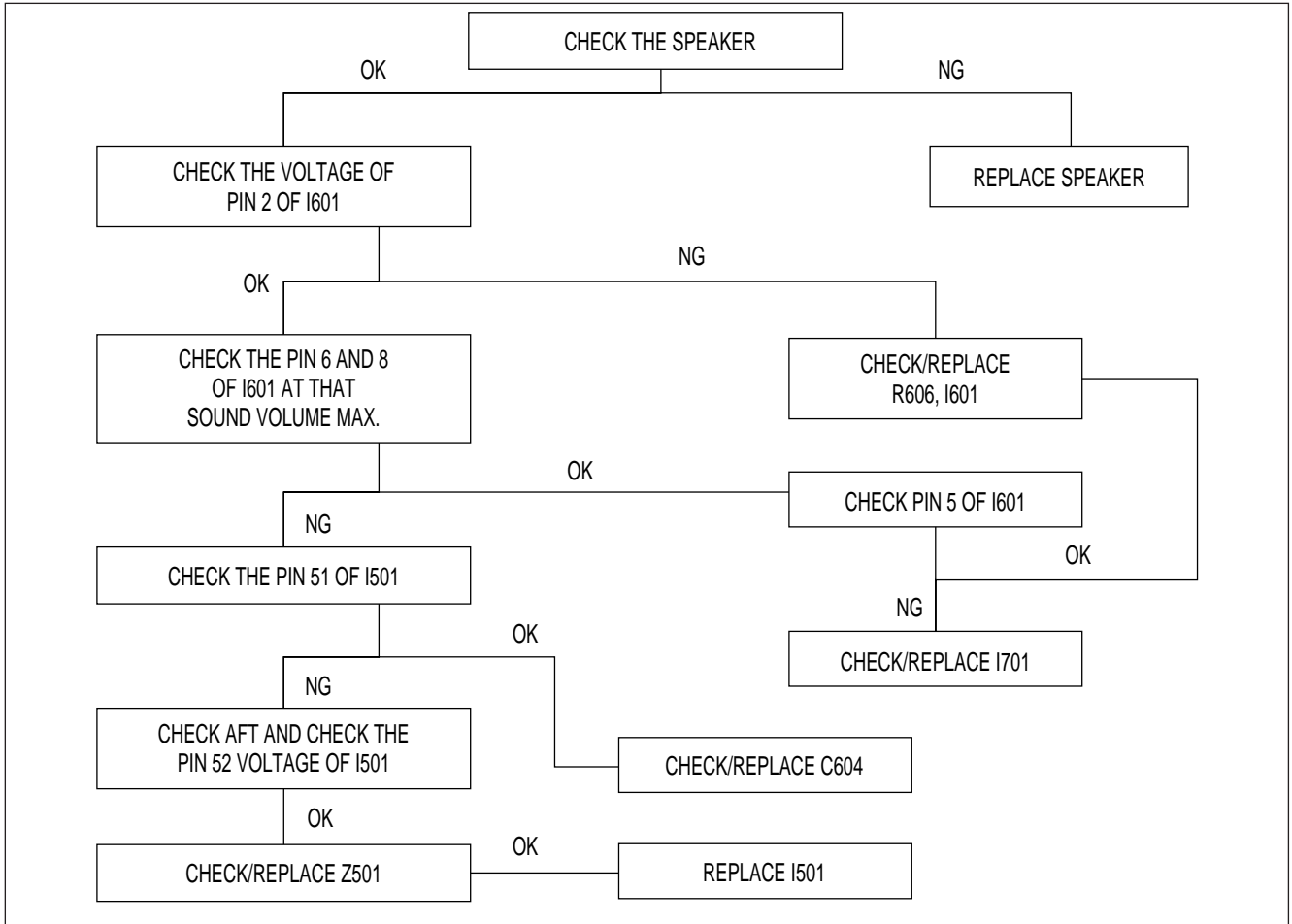


5.LA7837 : VERTICAL IC

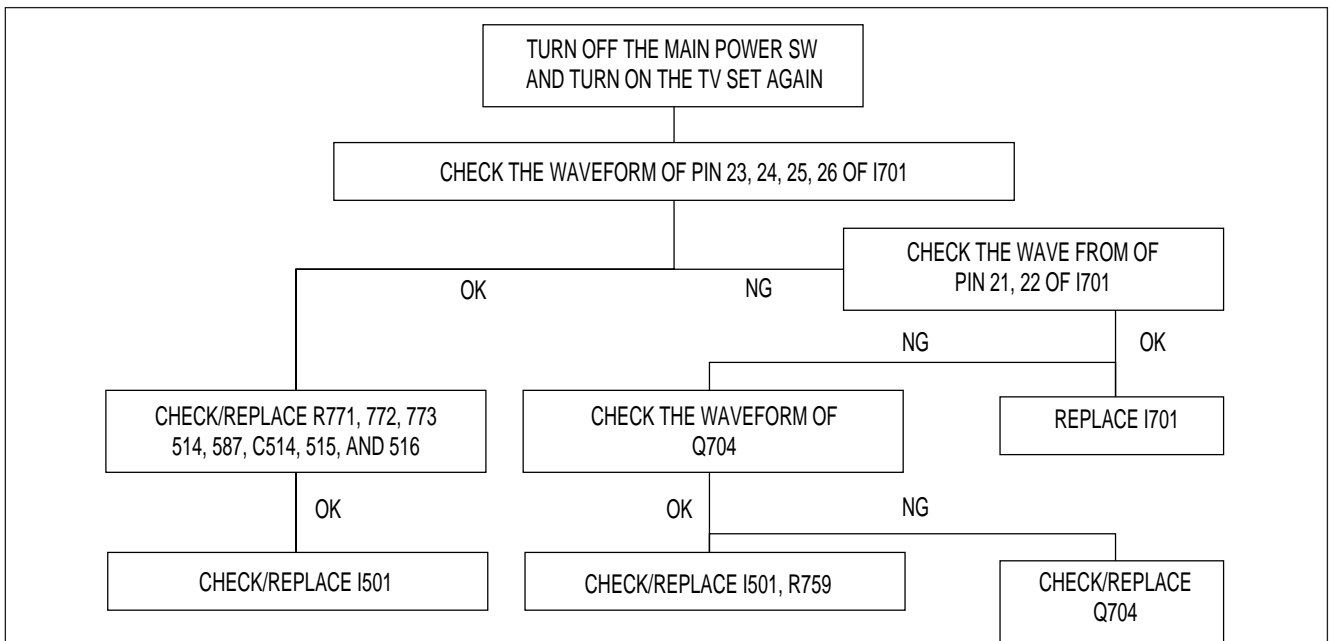


# § TROUBLE SHOOTING CHARTS

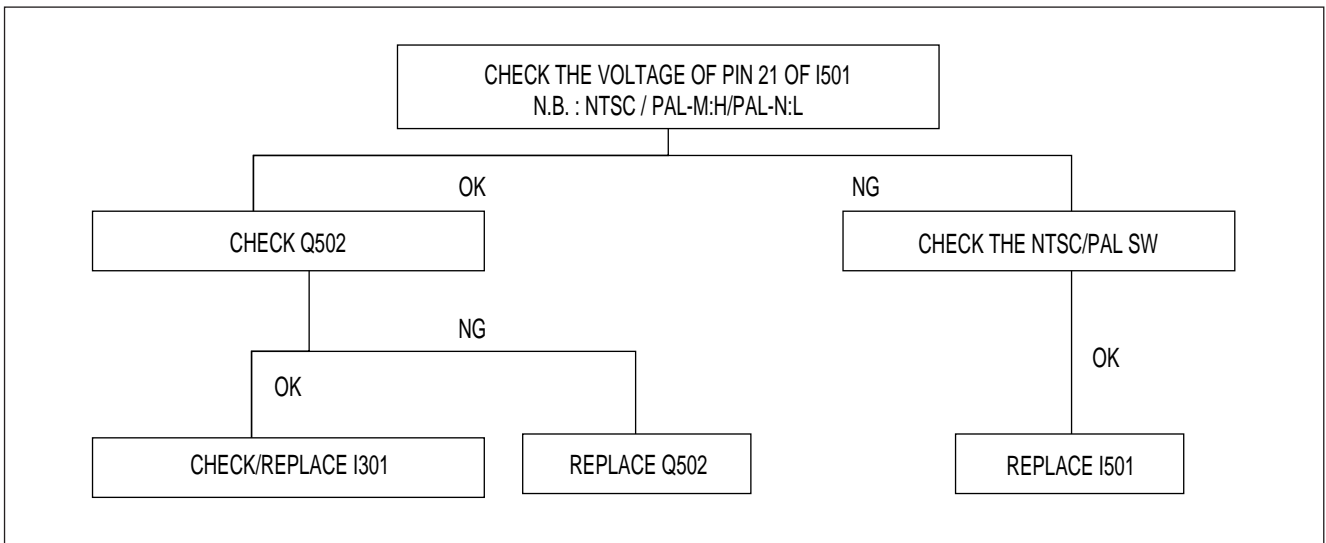
## i ~~A~~ NO SOUND



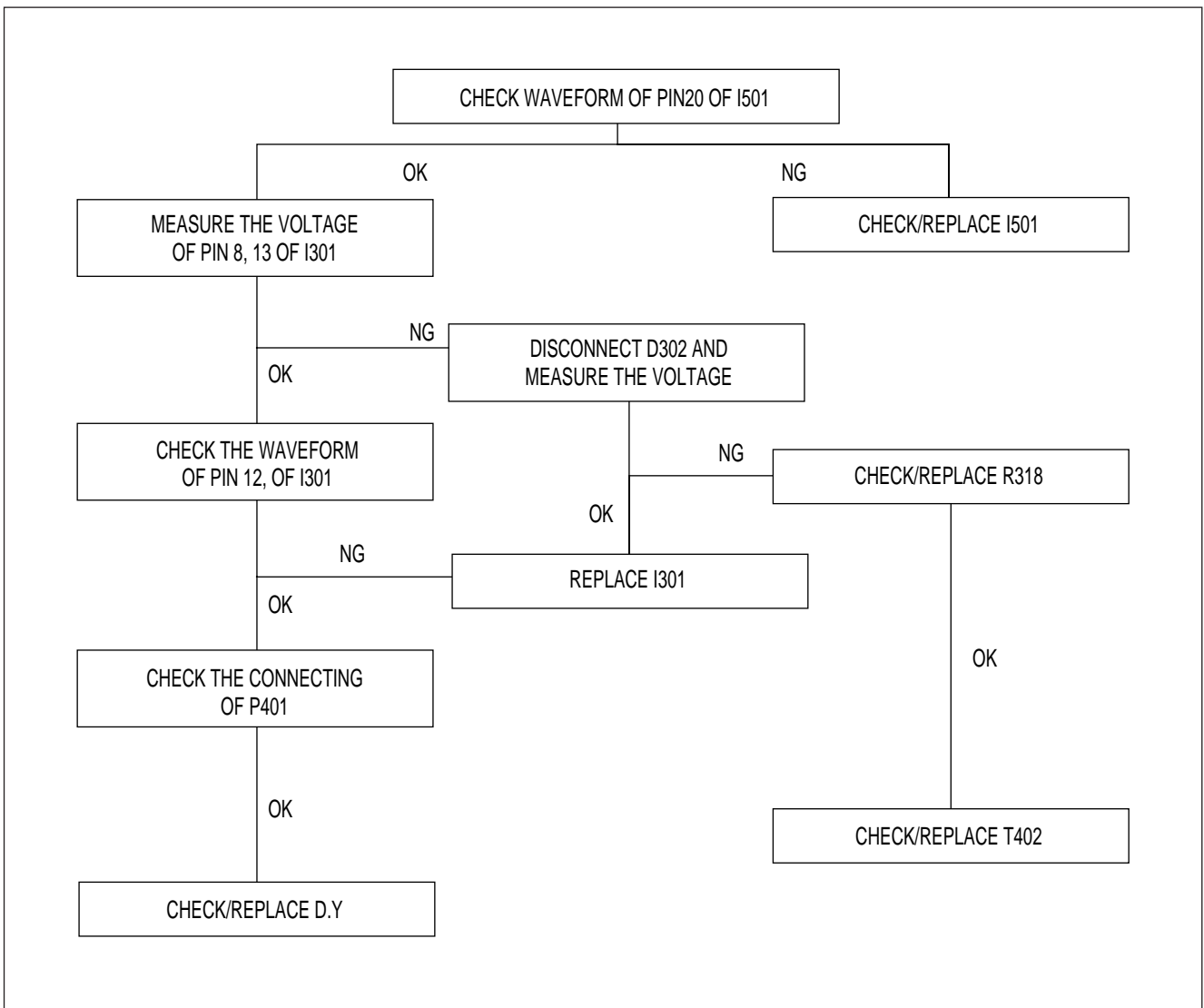
## i ~~A~~ NO NO-SCREEN DISPLAY



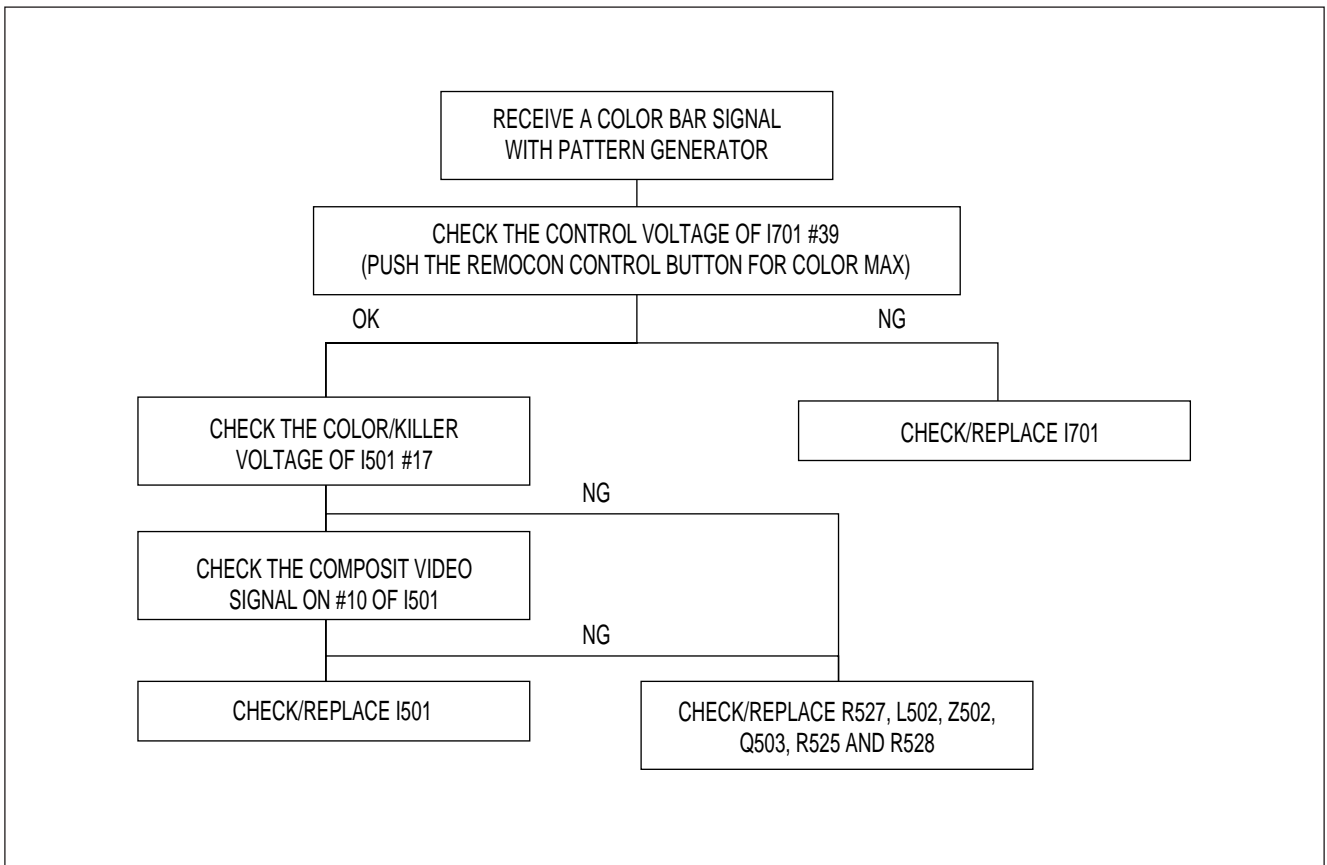
§ **OUT OF VERTICAL SIZE**



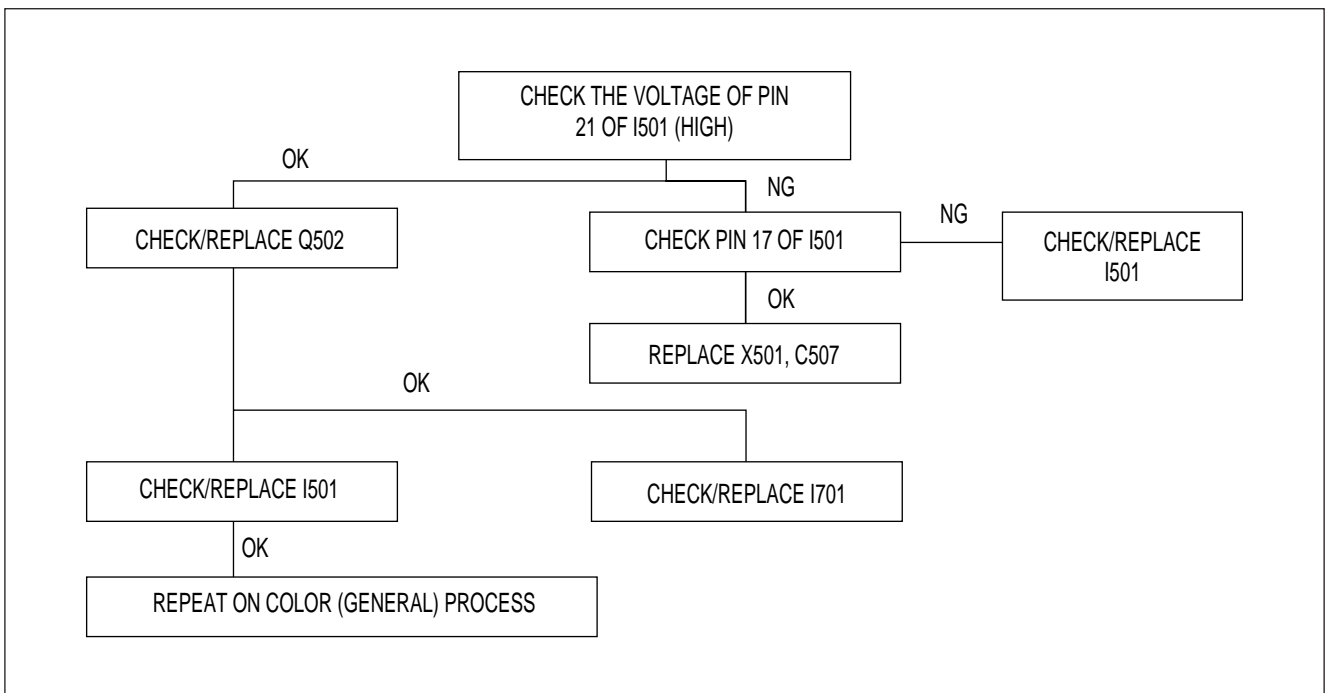
§ **NO VERTICAL SCAN (ONE HORIZ. LINE RASTER)**



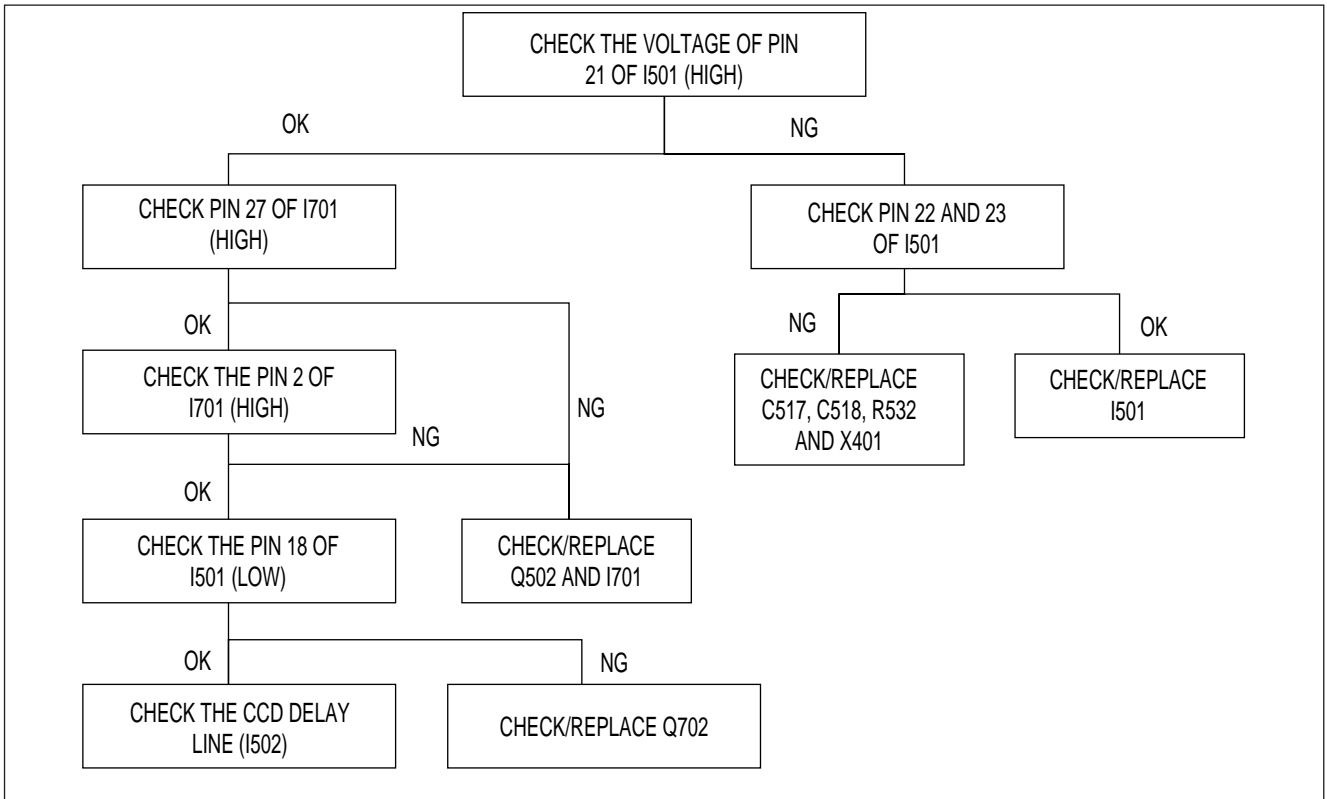
§ **NO COLOR (GENERAL)**



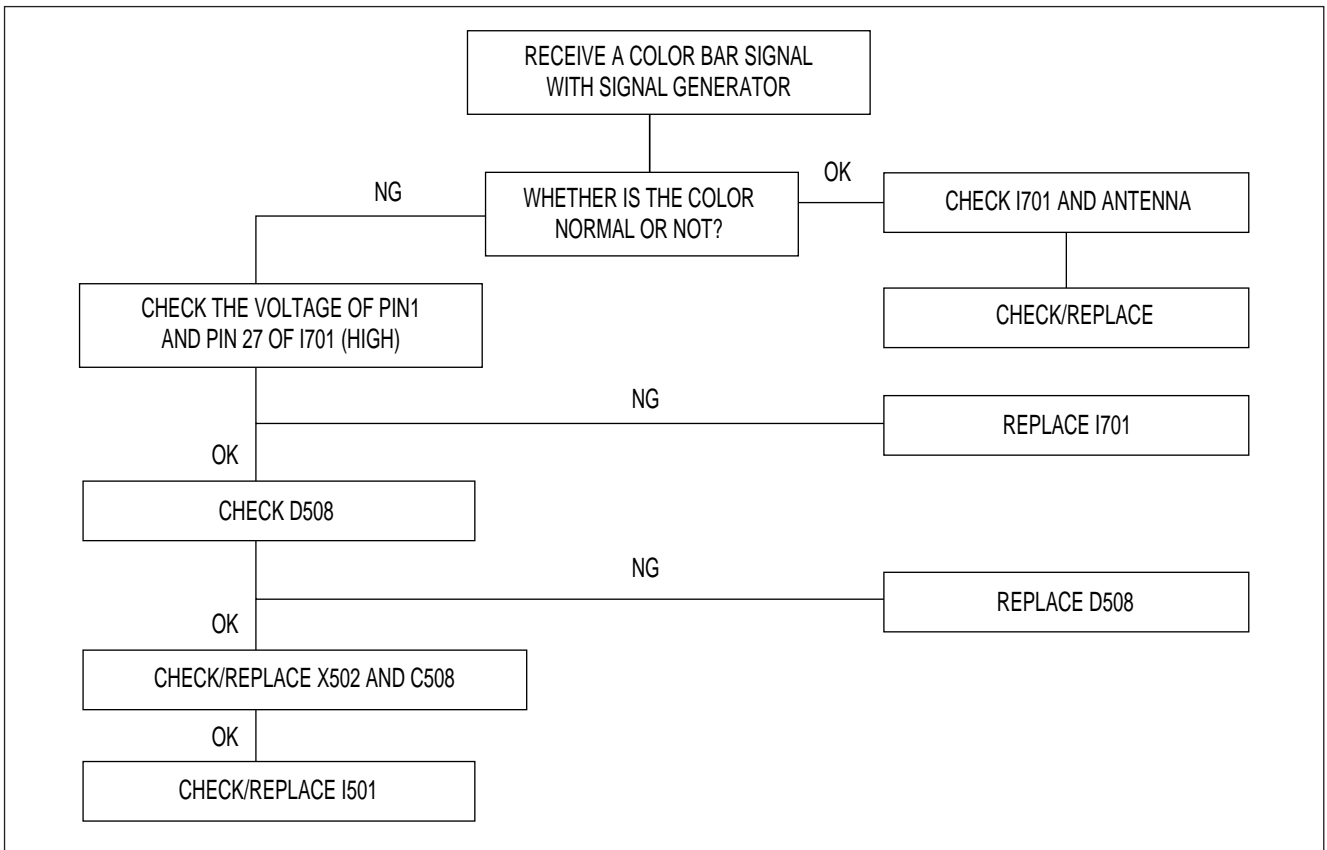
§ **NO COLOR (AT PAL-N ONLY)**



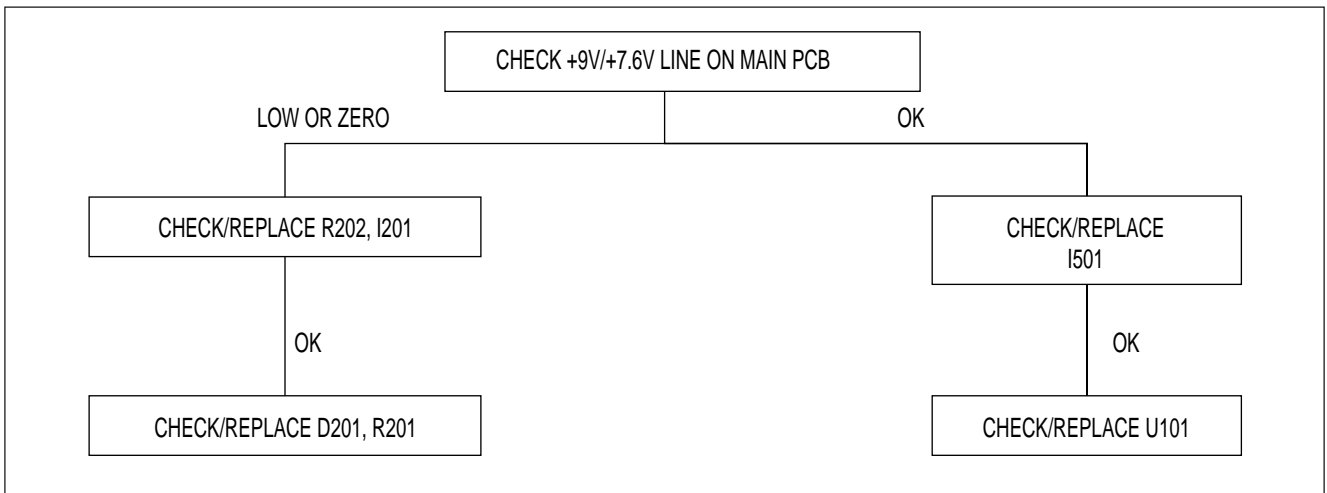
§ ON COLOR (AT PAL-M ONLY)



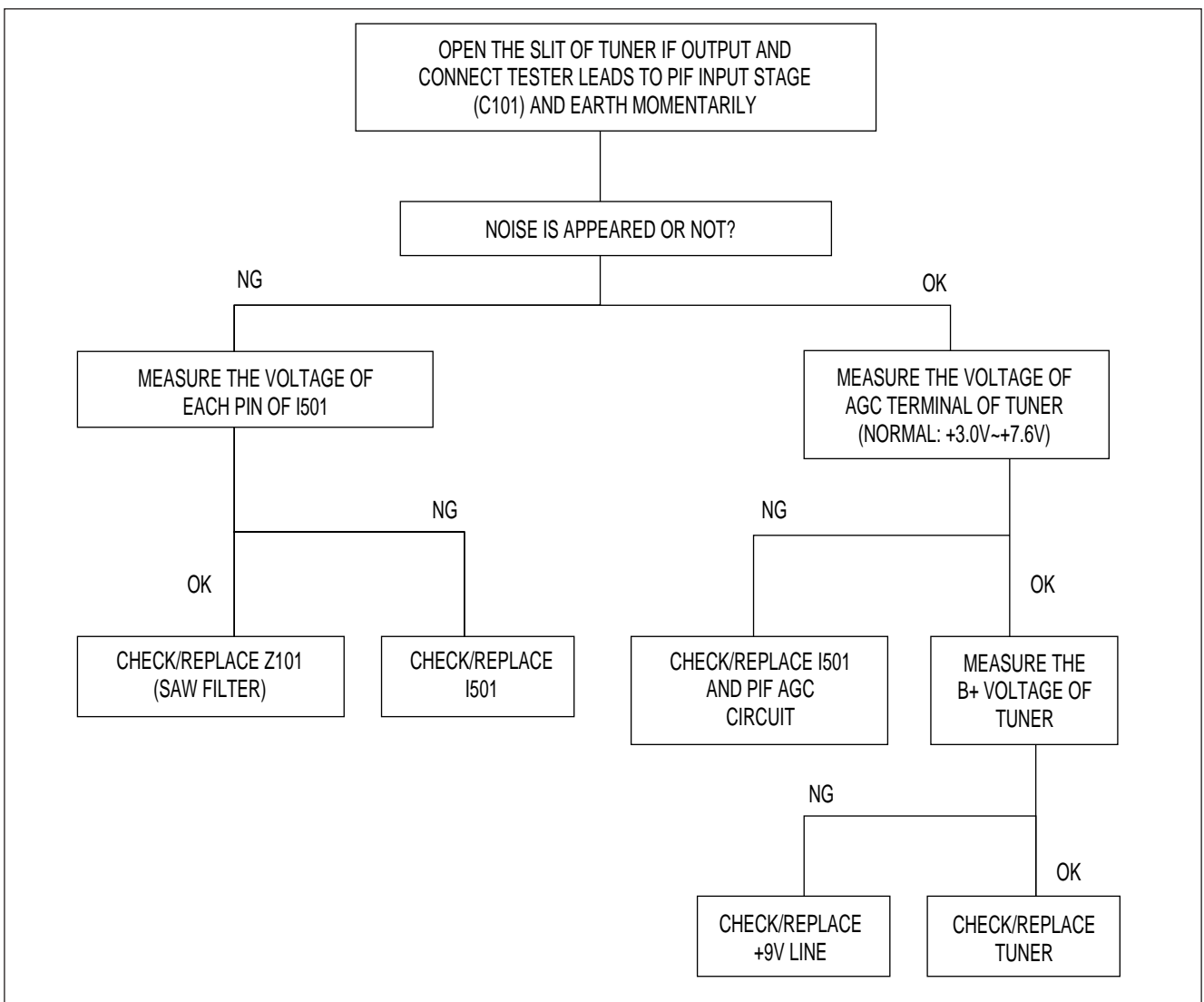
§ ON COLOR (AT NTSC ONLY)



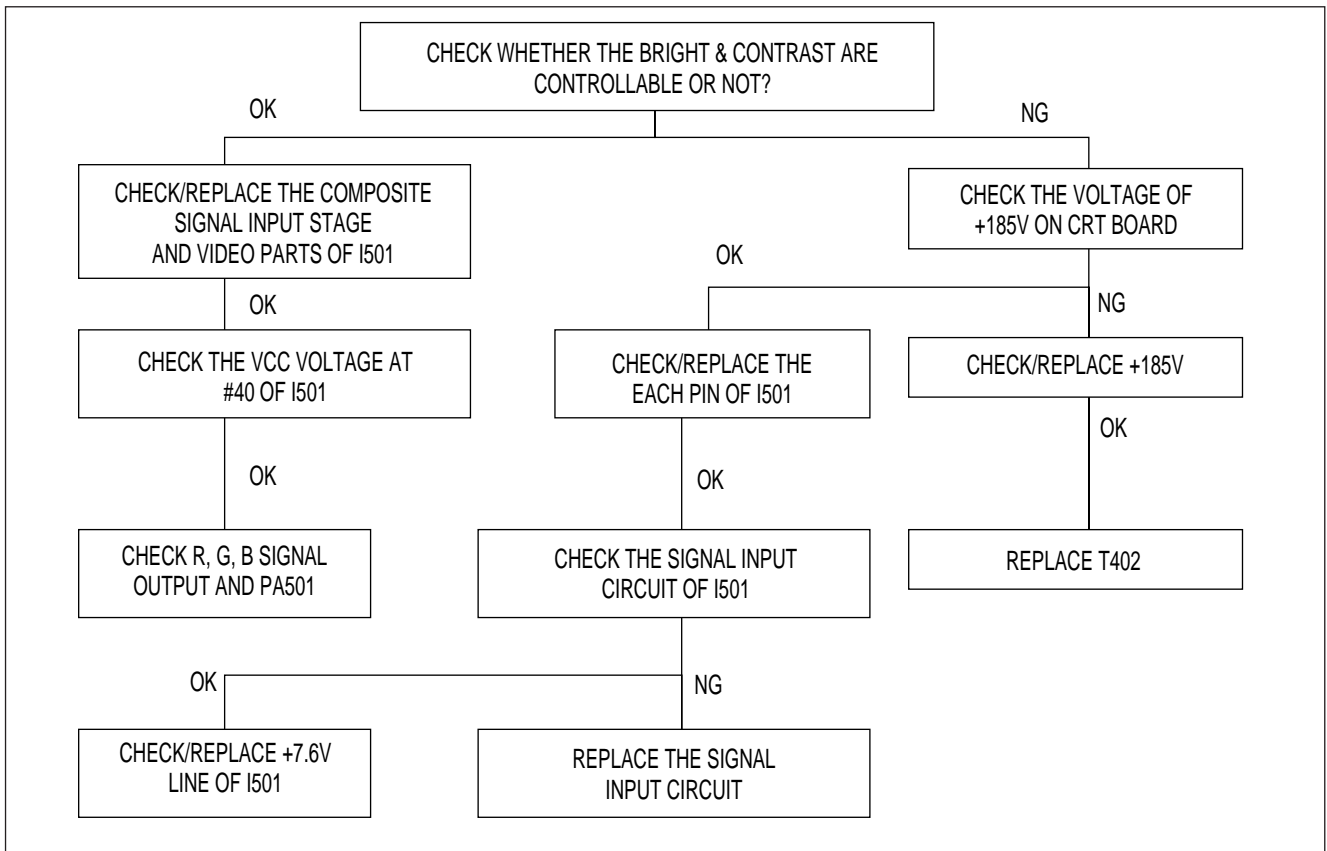
§ **NO RASTER (NOISE OR WEAK SOUND)**



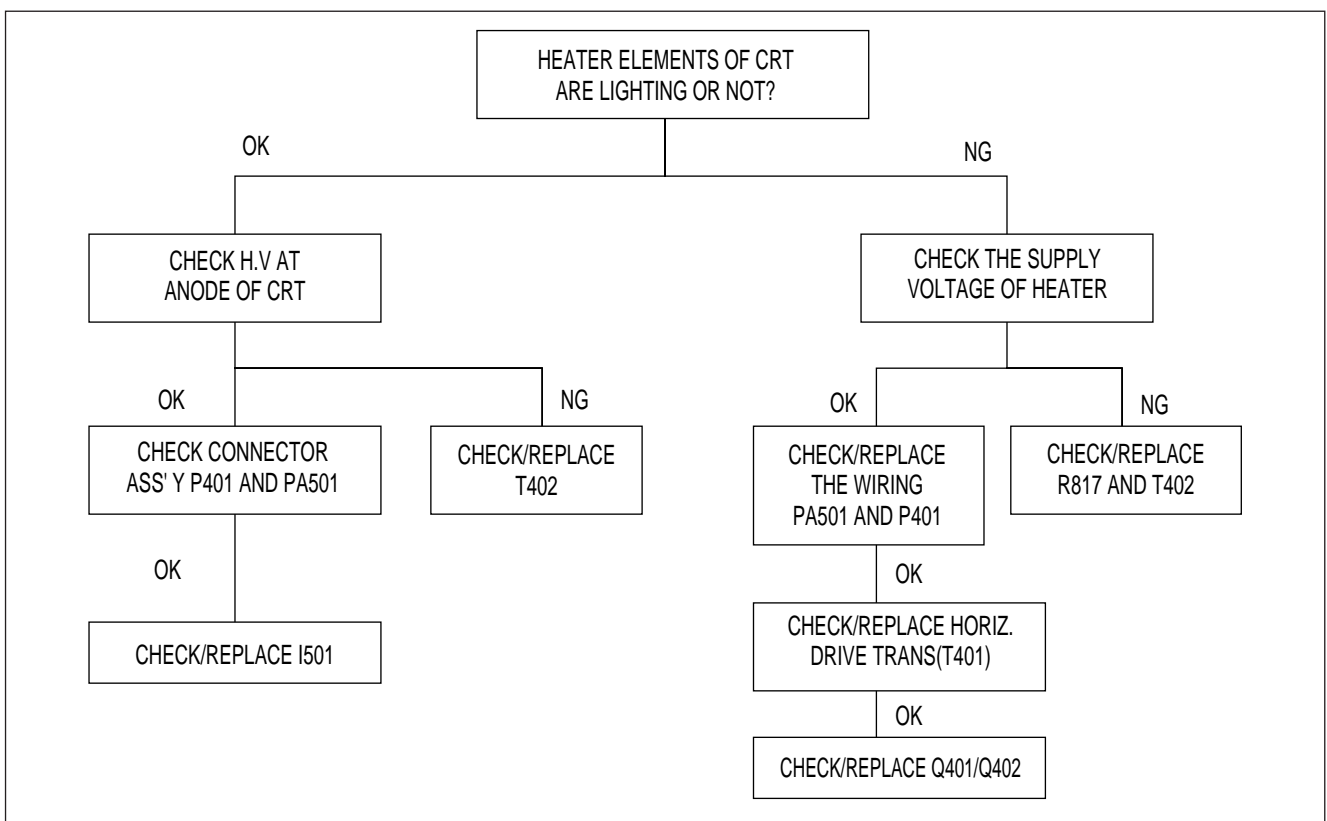
§ **NO PICTURE (RASTER REMAINS AND NO SOUND)**



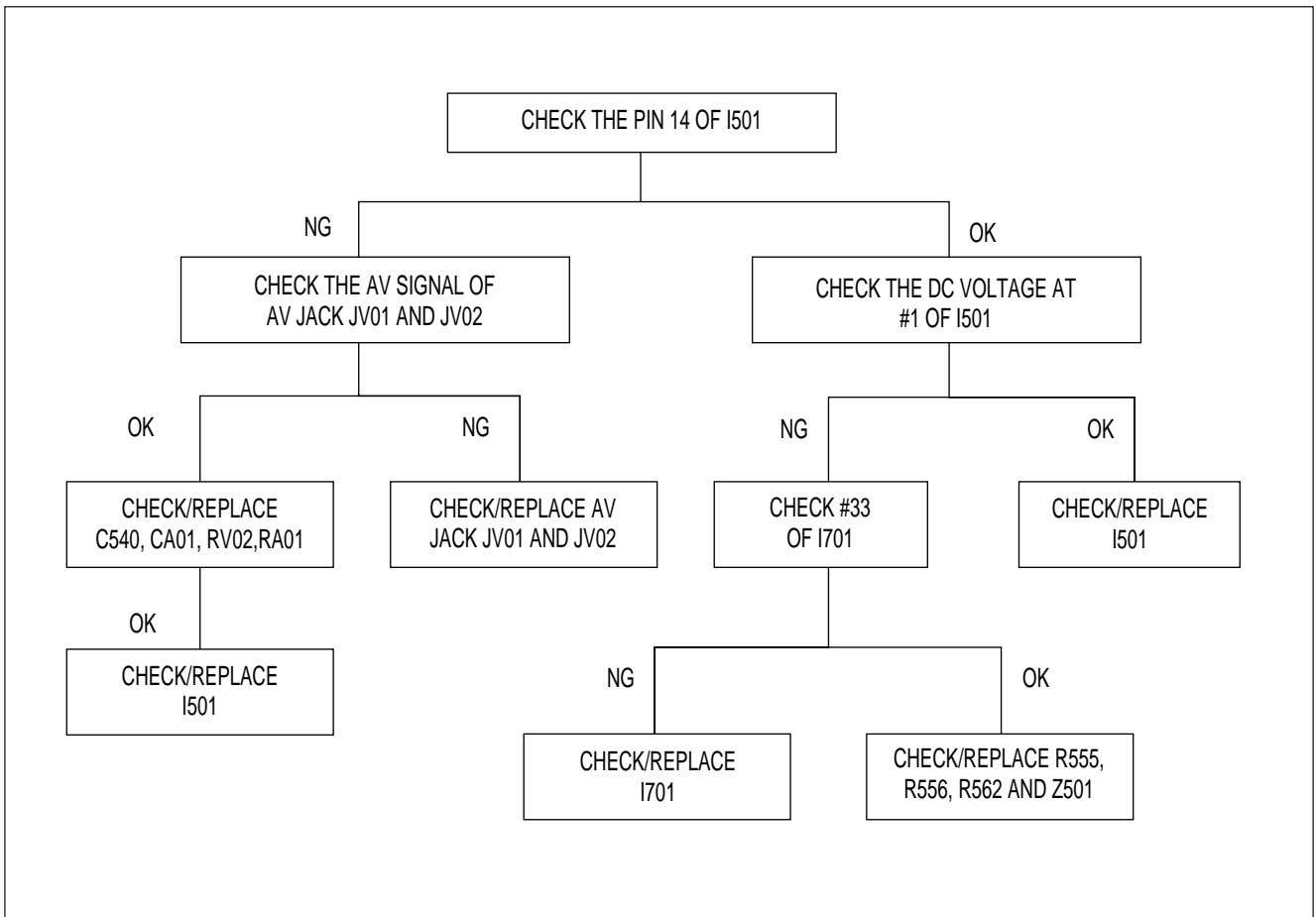
§ **NO PICTURE (RASTER AND SOUND OK)**



§ **NO RASTER (SOUND OK)**

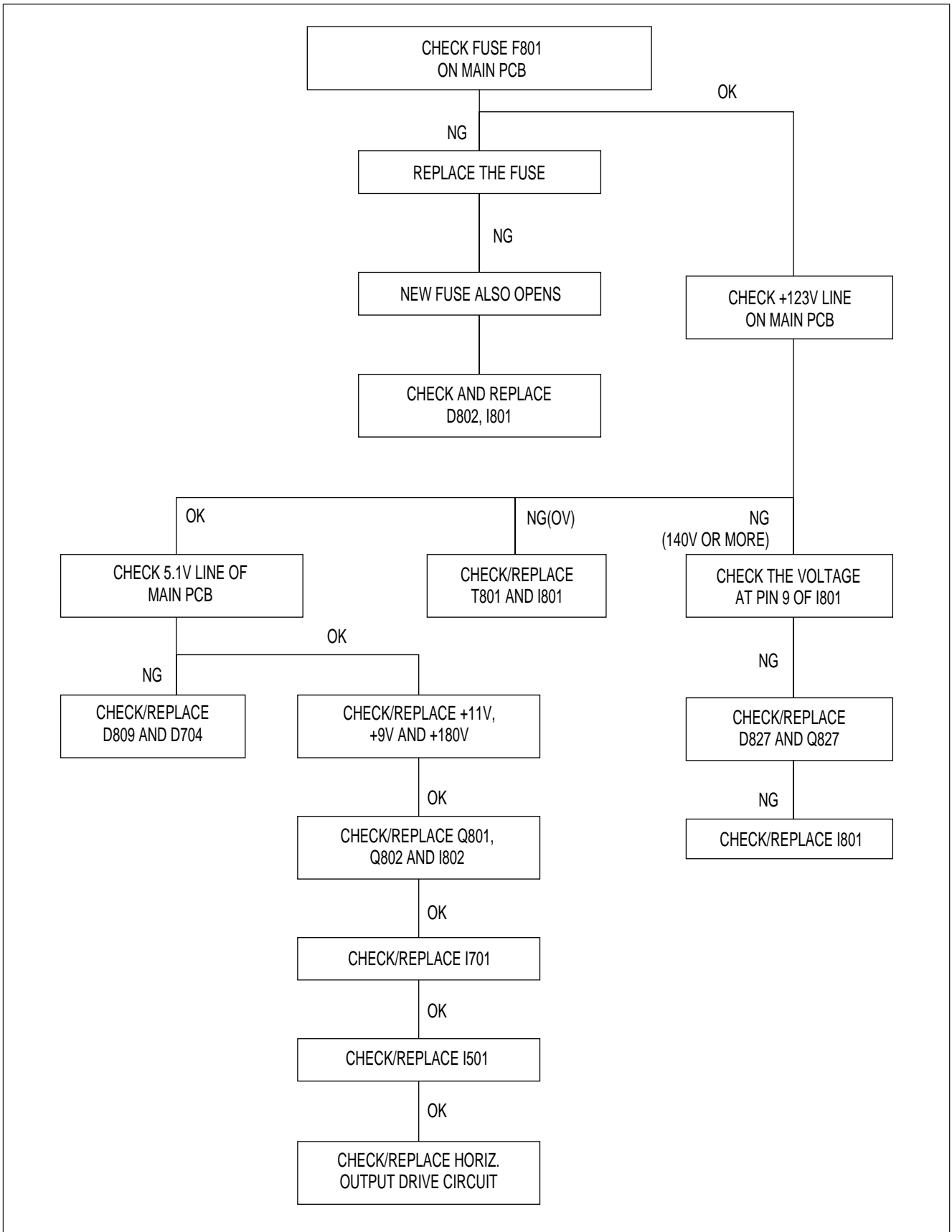


§ AV DOES NOT OPERATE (TV SIGNAL IS OK)





§ POWER FAILS TO TURN ON (NO RASTER, NO SOUND DOES NOT TURN ON)



## § Replacement Parts List

LOC	ITEM	PARTS CODE	DESCRIPTION	NUMBER	REMARK
A000	CORD POWER	4859901111	KKP-419CKLCE-2F(2.1ME)	1	
A001	PCB MAIN	4859802096	330X246(330X246)	1	
C101	C CERA	CCZF1E103Z	25V F 0.01MF Z (AXIAL)	1	
C103	C CERA	CCZF1E103Z	25V F 0.01MF Z (AXIAL)	1	
C106	C ELECTRO	CEXF1H479V	50V RSS 4.7MF (5X11) TP	1	
C107	C ELECTRO	CEXF1H109V	50V RSS 1MF (5X11) TP	1	
C108	C ELECTRO	CEXF1E470V	25V RSS 47MF (5X11) TP	1	
C112	C CERA	CCZF1E103Z	25V F 0.01MF Z (AXIAL)	1	
C116	C ELECTRO	CEXF1E101V	25V RSS 100MF (6.3X11) TP	1	
C117	C CERA	CCZF1E103Z	25V F 0.01MF Z (AXIAL)	1	
C121	C CERA	CCZB1H102K	50V B 1000PF K (AXIAL)	1	
C201	C CERA	CCXB2H102K	500V B 1000PF K (TAPPING)	1	
C202	C ELECTRO	CEXF1C102V	16V RSS 1000MF (10X20) TP	1	
C203	C ELECTRO	CEXF1C102V	16V RSS 1000MF (10X20) TP	1	
C204	C ELECTRO	CEXF1C102V	16V RSS 1000MF (10X20) TP	1	
C207	C ELECTRO	CEXF1H109V	50V RSS 1MF (5X11) TP	1	
C208	C ELECTRO	CEXF1E221V	25V RSS 220MF (8X11.5) TP	1	
C301	C ELECTRO	CEXF1H100V	50V RSS 10MF (5X11) TP	1	
C302	C MYLAR	CMXM2A103J	100V 0.01MF J (TP)	1	
C303	C MYLAR	CMXL1H105J	50V MEU 1MF J	1	
C304	C ELECTRO	CEXD1H109Q	50V RT 1MF (6.3X11) TP	1	
C305	C CERA	CZCH1H100J	50V CH 10PF J (AXIAL)	1	
C306	C ELECTRO	CEXF1H101V	50V RSS 100MF (8X11.5) TP	1	
C307	C ELECTRO	CEXF1E102V	25V RSS 1000MF (13X20) TP	1	
C308	C MYLAR	CMXM2A104J	100V 0.1MF J (TP)	1	
C309	C CERA	CCXB2H102K	500V B 1000PF K (TAPPING)	1	
C310	C ELECTRO	CEXF1V471V	35V RSS 470MF (10X20) TP	1	
C401	C MYLAR	CMYH3C602J	1.6KV BUP 6000PF J	1	14i-ONLY
		CMYH3C752J	1.6KV BUP 7500PF J	1	20i-ONLY
C402	C CERA	CCXB2H222K	500V B 2200PF K (TAPPING)	1	
C403	C ELECTRO	CEXF2C109V	160V RSS 1MF (6.3X11) TP	1	
C404	C CERA	CBZR1C152M	16V Y5R 1500PF M (AXIAL)	1	
C405	C CERA	CCXB3D271K	2KV B 270PF K (T)	1	
C406	C ELECTRO	CEXF2C109V	160V RSS 1MF (6.3X11) TP	1	
C407	C MYLAR	CMYE2D474J	200V PU 0.47MF J	1	
C409	C MYLAR	CMXM2A104J	100V 0.1MF J (TP)	1	
C504	C ELECTRO	CEXF1H338V	50V RSS 0.33MF (5X11) TP	1	
C505	C CERA	CCZF1E103Z	25V F 0.01MF Z (AXIAL)	1	
C506	C ELECTRO	CEXF1H478V	50V RSS 0.47MF (5X11) TP	1	
C507	C CERA	CZCH1H160J	50V CH 16PF J (AXIAL)	1	
C508	C CERA	CZCH1H160J	50V CH 16PF J (AXIAL)	1	
C509	C CERA	CZCH1H160J	50V CH 16PF J (AXIAL)	1	
C510	C MYLAR	CMXM2A103J	100V 0.01MF J (TP)	1	
C511	C MYLAR	CMXM2A103J	100V 0.01MF J (TP)	1	
C512	C ELECTRO	CEXF1H109V	50V RSS 1MF (5X11) TP	1	
C513	C ELECTRO	CEXF1H109V	50V RSS 1MF (5X11) TP	1	
C514	C CERA	CCZF1E103Z	25V F 0.01MF Z (AXIAL)	1	
C515	C CERA	CCZF1E103Z	25V F 0.01MF Z (AXIAL)	1	
C516	C CERA	CCZF1E103Z	25V F 0.01MF Z (AXIAL)	1	
C517	C ELECTRO	CEXF1H109V	50V RSS 1MF (5X11) TP	1	
C518	C MYLAR	CMXM2A333J	100V 0.033MF J (TP)	1	
C519	C ELECTRO	CEXF1E470V	25V RSS 47MF (5X11) TP	1	
C520	C ELECTRO	CEXF1H109V	50V RSS 1MF (5X11) TP	1	
C522	C CERA	CCZF1E103Z	25V F 0.01MF Z (AXIAL)	1	

LOC	ITEM	PARTS CODE	DESCRIPTION	NUMBER	REMARK
C523	C ELECTRO	CEXF1H339V	50V RSS 3.3MF (5X11) TP	1	
C524	C ELECTRO	CEXF1H478V	50V RSS 0.47MF (5X11) TP	1	
C525	C ELECTRO	CEXF1H109V	50V RSS 1MF (5X11) TP	1	
C526	C CERA	CCZB1H561K	50V B 560PF K (AXIAL)	1	
C527	C CERA	CCZB1H102K	50V B 1000PF K (AXIAL)	1	
C528	C CERA	CZSL1H510J	50V SL 51PF J (AXIAL)	1	
C529	C CERA	CZSL1H330J	50V SL 33PF J (AXIAL)	1	
C530	C CERA	CCZB1H561K	50V B 560PF K (AXIAL)	1	
C533	C MYLAR	CMXM2A104J	100V 0.1MF J (TP)	1	
C534	C ELECTRO	CEXF1H109V	50V RSS 1MF (5X11) TP	1	
C536	C ELECTRO	CEXF1E470V	25V RSS 47MF (5X11) TP	1	
C537	C ELECTRO	CEXF1E470V	25V RSS 47MF (5X11) TP	1	
C538	C CERA SEMI	CBZF1H104Z	50V F 0.1MF Z (AXIAL)	1	
C539	C CERA	CCZB1H102K	50V B 1000PF K (AXIAL)	1	
C540	C ELECTRO	CEXF1H339V	50V RSS 3.3MF (5X11) TP	1	
C542	C CERA	CCZF1E103Z	25V F 0.01MF Z (AXIAL)	1	
C543	C CERA	CCZF1E103Z	25V F 0.01MF Z (AXIAL)	1	
C544	C CERA	CCZF1E103Z	25V F 0.01MF Z (AXIAL)	1	
C546	C CERA	CCZB1H121K	50V B 120PF K (AXIAL)	1	
C547	C ELECTRO	CEXF1H479V	50V RSS 4.7MF (5X11) TP	1	
C551	C CERA	CCZF1E103Z	25V F 0.01MF Z (AXIAL)	1	
C552	C CERA	CCZF1E103Z	25V F 0.01MF Z (AXIAL)	1	
C553	C CERA	CCZF1E103Z	25V F 0.01MF Z (AXIAL)	1	
C580	C ELECTRO	CEXF1H100V	50V RSS 10MF (5X11) TP	1	
C603	C MYLAR	CMXM2A123J	100V 0.012MF J (TP)	1	
C604	C ELECTRO	CEXF1H109V	50V RSS 1MF (5X11) TP	1	
C606	C ELECTRO	CEXF1C102V	16V RSS 1000MF (10X20) TP	1	
C607	C MYLAR	CMXM2A103J	100V 0.01MF J (TP)	1	
C608	C CERA	CCZF1H473Z	50V F 0.047MF Z (AXIAL)	1	
C702	C ELECTRO	CEXF1E101V	25V RSS 100MF (6.3X11) TP	1	
C703	C CERA SEMI	CBZF1H104Z	50V F 0.1MF Z (AXIAL)	1	
C704	C ELECTRO	CEXF1C102V	16V RSS 1000MF (10X20) TP	1	
C705	C CERA SEMI	CBZF1H104Z	50V F 0.1MF Z (AXIAL)	1	
C706	C CERA	CZCH1H160J	50V CH 16PF J (AXIAL)	1	
C707	C CERA	CZCH1H160J	50V CH 16PF J (AXIAL)	1	
C708	C CERA	CZSL1H300J	50V SL 30PF J (AXIAL)	1	
C709	C CERA	CZCH1H160J	50V CH 16PF J (AXIAL)	1	
C710	C ELECTRO	CEXF1H109V	50V RSS 1MF (5X11) TP	1	
C711	C ELECTRO	CEXF1H100V	50V RSS 10MF (5X11) TP	1	
C712	C CERA SEMI	CBZF1H104Z	50V F 0.1MF Z (AXIAL)	1	
C713	C ELECTRO	CEXF1H479V	50V RSS 4.7MF (5X11) TP	1	
C714	C ELECTRO	CEXF1H100V	50V RSS 10MF (5X11) TP	1	
C715	C ELECTRO	CEXF1H100V	50V RSS 10MF (5X11) TP	1	
C716	C ELECTRO	CEXF1H100V	50V RSS 10MF (5X11) TP	1	
C717	C CERA	CCZB1H102K	50V B 1000PF K (AXIAL)	1	
C720	C ELECTRO	CEXF1H100V	50V RSS 10MF (5X11) TP	1	
C722	C CERA	CCZB1H471K	50V B 470PF K (AXIAL)	1	
C723	C CERA SEMI	CBZF1H104Z	50V F 0.1MF Z (AXIAL)	1	
C725	C CERA	CCZB1H471K	50V B 470PF K (AXIAL)	1	
C726	C CERA	CCZB1H471K	50V B 470PF K (AXIAL)	1	
C727	C CERA SEMI	CBZF1H104Z	50V F 0.1MF Z (AXIAL)	1	
C801	C LINE ACROSS	CL1UC3104M	WORLD AC250V 0.1UF M R.47	1	
C802	C CERA	CCYB3A472K	1KV B 4700PF K	1	
C803	C CERA	CCYB3A472K	1KV B 4700PF K	1	

LOC	ITEM	PARTS CODE	DESCRIPTION	NUMBER	REMARK
C804	C ELECTRO	CEYN2G181P	400V LHS 180MF (25X35)	1	
C805	C ELECTRO	CEXF1E221V	25V RSS 220MF (8X11.5) TP	1	
C806	C ELECTRO	CEXF1E221V	25V RSS 220MF (8X11.5) TP	1	
C807	C ELECTRO	CEXF1H479V	50V RSS 4.7MF (5X11) TP	1	
C808	C CERA	CCZB1H102K	50V B 1000PF K (AXIAL)	1	
C809	C ELECTRO	CEXF2A100V	100V RSS 10MF (6.3X11) TP	1	
C810	C ELECTRO	CEXF2C101V	160V RSS 100MF (16X25) TP	1	
C811	C ELECTRO	CEXF1C102V	16V RSS 1000MF (10X20) TP	1	
C812	C CERA	CBYB3D102K	2KV BL(N) 1000PF K	1	
C813	C ELECTRO	CEXF2C330V	160V RSS 33MF (13X20) TP	1	
C814	C ELECTRO	CEYF2C221V	160V RSS 220MF (18X35.5)	1	
C815	C ELECTRO	CEXF1H479V	50V RSS 4.7MF (5X11) TP	1	
C816	C ELECTRO	CEXF1E101V	25V RSS 100MF (6.3X11) TP	1	
C817	C CERA	CCXB2H102K	500V B 1000PF K (TAPPING)	1	
C818	C ELECTRO	CEXF1H100V	50V RSS 10MF (5X11) TP	1	
C819	C ELECTRO	CEXF2E470V	250V RSS 47MF (16X25) TP	1	
C820	C CERA AC	CH1FFF472M	AC400V 4700PF F DE7150F	1	
C822	C CERA AC	CH1FFF472M	AC400V 4700PF F DE7150F	1	
C825	C CERA	CCXB2H331K	500V B 330PF K (TAPPING)	1	
C830	C CERA	CBXB3D471K	2KV BL(N) 470PF K (T)	1	
C950	C CERA	CCXB3D102K	2KV B 1000PF K (TAPPING)	1	
C951	C ELECTRO	CEXF1H100V	50V RSS 10MF (5X11) TP	1	
C953	C CERA	CCZB1H221K	50V B 220PF K (AXIAL)	1	
C954	C CERA	CCZB1H271K	50V B 270PF K (AXIAL)	1	
C955	C CERA	CCZB1H221K	50V B 220PF K (AXIAL)	1	
C956	C CERA	CCZB1H271K	50V B 270PF K (AXIAL)	1	
C957	C CERA	CCZB1H221K	50V B 220PF K (AXIAL)	1	
C958	C CERA	CCZB1H271K	50V B 270PF K (AXIAL)	1	
CA01	C ELECTRO	CEXF1H109V	50V RSS 1MF (5X11) TP	1	
D102	DIODE ZENER	DMTZ5R1B--	MTZ 5.1-B (TAPPING)	1	
D201	DIODE	D1N4937GP-	1N4937GP (TAPPING)	1	
D205	IC	1UPC574J--	UPC574J	1	
D301	DIODE	D1N4003---	1N4003 (TAPPING)	1	
D302	DIODE	D1N4937GP-	1N4937GP (TAPPING)	1	
D401	DIODE	D1N4937GP-	1N4937GP (TAPPING)	1	
D403	DIODE	D1N4148---	1N4148 (TAPPING)	1	
D503	DIODE ZENER	DUZ5R1BM--	UZ-5.1BM	1	
D504	DIODE	D1N4148---	1N4148 (TAPPING)	1	
D505	DIODE	D1N4148---	1N4148 (TAPPING)	1	
D508	DIODE	D1N4148---	1N4148 (TAPPING)	1	
D509	DIODE	D1N4148---	1N4148 (TAPPING)	1	
D510	DIODE	D1N4148---	1N4148 (TAPPING)	1	
D511	DIODE	D1N4148---	1N4148 (TAPPING)	1	
D512	DIODE	D1N4148---	1N4148 (TAPPING)	1	
D582	DIODE	D1N4148---	1N4148 (TAPPING)	1	
D703	DIODE ZENER	DUZ3R9B---	UZ-3.9B	1	
D704	DIODE ZENER	DUZ5R1BM--	UZ-5.1BM	1	
D707	DIODE	D1N4148---	1N4148 (TAPPING)	1	
D708	DIODE	D1N4148---	1N4148 (TAPPING)	1	
D710	DIODE	D1N4148---	1N4148 (TAPPING)	1	
D711	DIODE	D1N4148---	1N4148 (TAPPING)	1	
D712	DIODE	D1N4148---	1N4148 (TAPPING)	1	
D713	DIODE	D1N4148---	1N4148 (TAPPING)	1	
D715	DIODE	D1N4148---	1N4148 (TAPPING)	1	

LOC	ITEM	PARTS CODE	DESCRIPTION	NUMBER	REMARK
D716	DIODE	D1N4148---	1N4148 (TAPPING)	1	
D717	DIODE	D1N4148---	1N4148 (TAPPING)	1	
D718	DIODE ZENER	DUZ5R1BM--	UZ-5.1BM	1	
D719	DIODE ZENER	DUZ5R1BM--	UZ-5.1BM	1	
D720	DIODE ZENER	DUZ5R1BM--	UZ-5.1BM	1	
D721	DIODE	D1N4148---	1N4148 (TAPPING)	1	
D801	VARISTOR	DSVC471D14	SVC471D14A	1	
D802	DIODE BRIDGE	DPBS208GU-	PBS208GU-CA	1	
D803	DIODE	D1N4937GP-	1N4937GP (TAPPING)	1	
D804	DIODE	D1N4937GP-	1N4937GP (TAPPING)	1	
D805	DIODE	D1N4937GP-	1N4937GP (TAPPING)	1	
D806	DIODE	D1N4937GP-	1N4937GP (TAPPING)	1	
D807	DIODE	D1N4003---	1N4003 (TAPPING)	1	
D808	DIODE	DBYW95C---	BYW95C (TAPPING)	1	
D809	DIODE	DBYV95C---	BYV95C (TAPPING)	1	
D810	DIODE ZENER	DUZ5R1BM--	UZ-5.1BM	1	
D812	DIODE	D1N4937GP-	1N4937GP (TAPPING)	1	
D827	DIODE ZENER	DUZ7R5BM--	UZ-7.5BM 7.5V	1	
D828	DIODE	D1N4148---	1N4148 (TAPPING)	1	
DL01	LED	DKLR114L--	KLR114L	1	
F801	FUSE GLASS TUBE	5FSGB4022L	SEMKO TL 4A 250V MF51	1	
F801A	CLIP FUSE	4857415001	PFC5000-0702	1	
F801B	CLIP FUSE	4857415001	PFC5000-0702	1	
I201	IC REGULATOR	1KA7809---	KA7809	1	
I301	IC	1LA7837---	LA7837	1	
I301A	HEAT SINK	4857027101	SPCC T1.0+SN	1	
I301B	SCREW TAPPTITE	7174301011	TT2 RND 3X10 MFZN	1	
I501	IC VIDEO	1LA7688---	LA7688	1	
I502	IC DELAY	1LC89950--	LC89950	1	
I601	IC AUDIO	1TDA7056A-	TDA7056A	1	
I601A	HEAT SINK	4857025400	A1050P-H24 T2.0	1	
I601B	SCREW TAPPTITE	7174301011	TT2 RND 3X10 MFZN	1	
I701	IC MICOM	1DMC42C204	DMC42C2008-204	1	
I703	IC MEMORY	124LC02B--	24LC02B	1	
I801	IC POWER	1STRS5707-	STR-S5707	1	
I801A	HEAT SINK	4857024607	AL EX DG	1	
I801B	SCREW TAPPTITE	7174301011	TT2 RND 3X10 MFZN	1	
I802	IC PHOTO COUPLER	1LTV817C--	LTV-817C	1	
IL701	IC PREAMP	1TFMW5380-	TFMW5380	1	
J001	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J002	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J003	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J004	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J005	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J006	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J007	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J008	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J009	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J010	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J011	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J012	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J013	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J014	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J015	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		



LOC	ITEM	PARTS CODE	DESCRIPTION	NUMBER	REMARK
J070	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J071	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J072	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J073	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J074	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J075	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J076	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J077	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J078	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J079	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J080	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J081	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J082	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J083	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J084	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J085	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J086	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J087	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J088	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J089	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J090	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J091	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J092	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J093	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J094	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J095	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J096	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J097	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J098	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J099	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J100	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J101	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J102	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J103	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J104	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J105	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J106	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J107	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J108	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J109	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J110	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J111	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J112	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J113	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		14; ONLY
J114	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J115	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J116	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J117	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J118	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J119	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J120	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
J121	WIRE COPPER	85801065GY	AWG22 1/0.65 TIN COATING		
JP01	JACK EARPHONE	4859102130	YSC-1537	1	
JV01	JACK PIN BOARD	4859109150	PH-JB-9615C	1	

LOC	ITEM	PARTS CODE	DESCRIPTION	NUMBER	REMARK
JV02	JACK PIN BOARD	4859108350	YSC02P-4100-14A	1	
L102	COIL CHOKE	58C9780027	TRF-1201B (0.97 UH)	1	
L201	COIL PEAKING	5CPZ560K04	56UH K (AXIAL 10.5MM)	1	
L402	COIL H-LINEARITY	58H0000020	L-76(76.5UH)	1	20; ONLY
L501	COIL PEAKING	5CPZ220K02	22UH K (AXIAL 3.5MM)	1	
L502	COIL PEAKING	5CPZ150K02	15UH K (AXIAL 3.5MM)	1	
L506	COIL VCO	58N0000S36	TRF-V003	1	
L607	COIL BEAD	5MC0000100	MD-5 (HC-3550)	1	
L701	COIL PEAKING	5CPZ560K02	56UH K (AXIAL 3.5MM)	1	
L702	COIL PEAKING	5CPZ220K02	22UH K (AXIAL 3.5MM)	1	
L801	FILTER LINE	5PLF302---	LF-302-801	1	
L802	COIL BEAD	5MC0000100	MD-5 (HC-3550)	1	
L804	COIL CHOKE	58C0000107	L-680	1	
L805	COIL CHOKE	58C9430599	AZ-9004Y(94MH)	1	
L901	COIL PEAKING	5CPZ820K02	82UH K (AXIAL 3.5MM)	1	
P401	CONN WAFER	4859240020	YFW500-05	1	
P601	CONN WAFER	485923162S	YW025-03 (STICK)	1	
P801	TERM PIN	4857417500	DA-IB0214(D2.3/DY PIN)	1	
P802	CONN WAFER	4859242220	YFW800-02	1	
P90	TERM PIN	4857417500	DA-IB0214(D2.3/DY PIN)	1	
PA501	CONN AS	4850708N08	BIC-08T-25T+C-20T+ULW=400	1	
PA601	CONN AS	4850703S11	YH025-03+YST025+USW=200	1	
PA602	CONN AS	4850703S13	YH025-03+YST025+USW=500	1	T-SERIES ONLY
PA802	CONN AS	4850701S09	YFH800-01+YPT018+ULW=400	1	
PWC1	CORD POWER AS	4859902910	KKP419C+BL102NG+TUBE=2100	1	
PWC1A	CONN WAFER	4859242220	YFW800-02	1	
Q301	TR	TKTC3198Y-	KTC3198Y	1	
Q401	TR	TKTC3207--	KTC3207 (TP)	1	
Q402	TR	T2SD2499--	2SD2499	1	
Q502	TR	TKTC3198Y-	KTC3198Y	1	
Q503	TR	TKTC3198Y-	KTC3198Y	1	
Q504	TR	TKTC3198Y-	KTC3198Y	1	
Q505	TR	TKTC3198Y-	KTC3198Y	1	
Q506	TR	TKTC3198Y-	KTC3198Y	1	
Q507	TR	TKTC3198Y-	KTC3198Y	1	
Q508	TR	TKTC3198Y-	KTC3198Y	1	
Q701	TR	TKTA1266Y-	KTA1266Y (TP)	1	
Q702	TR	TKTC3198Y-	KTC3198Y	1	
Q704	TR	TKTC3198Y-	KTC3198Y	1	
Q705	TR	TKTC3198Y-	KTC3198Y	1	
Q801	TR	TKTC3198Y-	KTC3198Y	1	
Q802	TR	TKTC3198Y-	KTC3198Y	1	
Q806	TR	TKSA1013Y-	KSA1013Y (TP)	1	
Q807	TR	TKTC3203Y-	KTC3203-Y	1	
Q808	TR	TKTC3207--	KTC3207 (TP)	1	
Q809	TR	TKTC3198Y-	KTC3198Y	1	
Q810	TR	TKTC3198Y-	KTC3198Y	1	
Q827	TR	TKTD1414--	KTD1414	1	
Q950	TR	TKTC3229--	KTC 3229	1	
Q951	TR	TKTC3229--	KTC 3229	1	
Q952	TR	TKTC3229--	KTC 3229	1	
R100	R CARBON FILM	RD-AZ303J-	1/6 30K OHM J	1	
R101	R SEMI FIXED	RV5426223P	RH0638C 22K OHM	1	
R102	R CARBON FILM	RD-AZ512J-	1/6 5.1K OHM J	1	



LOC	ITEM	PARTS CODE	DESCRIPTION	NUMBER	REMARK
R108	R CARBON FILM	RD-AZ823J-	1/6 82K OHM J	1	
R109	R CARBON FILM	RD-2Z820J-	1/2 82 OHM J	1	
R111	R CARBON FILM	RD-AZ331J-	1/6 330 OHM J	1	
R113	R CARBON FILM	RD-AZ102J-	1/6 1K OHM J	1	
R201	R FUSIBLE	RF01Z229J-	1W 2.2 OHM J (TAPPING)	1	
R202	R M-OXIDE FILM	RS01Z479J-	1W 4.7 OHM J (TAPPING)	1	
R203	R M-OXIDE FILM	RS02Z240JS	2W 24 OHM J SMALL	1	
R206	R M-OXIDE FILM	RS02Z273JS	2W 27K OHM J SMALL	1	
R301	R SEMI FIXED	RV5426223P	RH0638C 22K OHM	1	
R302	R SEMI FIXED	RV5426472P	RH0638C 4.7K OHM B	1	
R303	R CARBON FILM	RD-AZ683J-	1/6 68K OHM J	1	
R304	R CARBON FILM	RD-AZ393J-	1/6 39K OHM J	1	
R305	R CARBON FILM	RD-AZ273J-	1/6 27K OHM J	1	
R306	R CARBON FILM	RD-AZ183J-	1/6 18K OHM J	1	
R307	R CARBON FILM	RD-AZ562J-	1/6 5.6K OHM J	1	
R308	R CARBON FILM	RD-AZ473J-	1/6 47K OHM J	1	
R309	R CARBON FILM	RD-AZ561J-	1/6 560 OHM J	1	
R310	R CARBON FILM	RD-2Z331J-	1/2 330 OHM J	1	
R312	R M-OXIDE FILM	RS01Z331J-	1W 330 OHM J (TAPPING)	1	
R313	R CARBON FILM	RD-2Z229J-	1/2 2.2 OHM J	1	
R315	R CARBON FILM	RD-AZ222J-	1/6 2.2K OHM J	1	
R316	R CARBON FILM	RD-AZ202J-	1/6 2K OHM J	1	
R317	R CARBON FILM	RD-AZ243J-	1/6 24K OHM J	1	
R318	R FUSIBLE	RF01Z309J-	1W 3 OHM J (TAPPING)	1	
R401	R CARBON FILM	RD-AZ561J-	1/6 560 OHM J	1	
R402	R M-OXIDE FILM	RS02Z153JS	2W 15K OHM J SMALL	1	
R404	R CARBON FILM	RD-4Z272J-	1/4 2.7K OHM J	1	
R405	R M-OXIDE FILM	RS02Z512JS	2W 5.1K OHM J SMALL	1	
R406	R CARBON FILM	RD-2Z154J-	1/2 150K OHM J	1	14; ONLY
		RD-2Z124J-	1/2 120K OHM J	1	20; ONLY
R407	R CARBON FILM	RD-AZ102J-	1/6 1K OHM J	1	
R408	R M-OXIDE FILM	RS01Z102J-	1W 1K OHM J (TAPPING)	1	20; ONLY
R409	R CARBON FILM	RD-2Z153J-	1/2 15K OHM J	1	
R410	R M-OXIDE FILM	RS02Z512JS	2W 5.1K OHM J SMALL	1	
R411	R CARBON FILM	RD-4Z303J-	1/4 30K OHM J	1	
R413	R M-OXIDE FILM	RS02Z153JS	2W 15K OHM J SMALL	1	
R414	R M-OXIDE FILM	RS02Z153JS	2W 15K OHM J SMALL	1	
R420	R CARBON FILM	RD-4Z392J-	1/4 3.9K OHM J	1	
R501	R SEMI FIXED	RV5426103P	RH0638C 10K OHM B	1	
R503	R CARBON FILM	RD-AZ103J-	1/6 10K OHM J	1	
R504	R CARBON FILM	RD-AZ752J-	1/6 7.5K OHM J	1	
R505	R CARBON FILM	RD-AZ103J-	1/6 10K OHM J	1	
R506	R CARBON FILM	RD-AZ472J-	1/6 4.7K OHM J	1	
R507	R CARBON FILM	RD-AZ472J-	1/6 4.7K OHM J	1	
R514	R CARBON FILM	RD-AZ102J-	1/6 1K OHM J	1	
R517	R CARBON FILM	RD-AZ391J-	1/6 390 OHM J	1	
R519	R CARBON FILM	RD-AZ433J-	1/6 43K OHM J	1	
R520	R CARBON FILM	RD-AZ154J-	1/6 150K OHM J	1	
R525	R CARBON FILM	RD-AZ471J-	1/6 470 OHM J	1	
R527	R CARBON FILM	RD-AZ331J-	1/6 330 OHM J	1	
R528	R CARBON FILM	RD-AZ561J-	1/6 560 OHM J	1	
R531	R CARBON FILM	RD-AZ102J-	1/6 1K OHM J	1	
R532	R CARBON FILM	RD-AZ332J-	1/6 3.3K OHM J	1	
R533	R CARBON FILM	RD-AZ103J-	1/6 10K OHM J	1	

LOC	ITEM	PARTS CODE	DESCRIPTION	NUMBER	REMARK
R535	R CARBON FILM	RD-AZ823J-	1/6 82K OHM J	1	
R538	R CARBON FILM	RD-AZ331J-	1/6 330 OHM J	1	
R539	R CARBON FILM	RD-AZ332J-	1/6 3.3K OHM J	1	
R540	R SEMI FIXED	RV5426103P	RH0638C 10K OHM B	1	
R541	R CARBON FILM	RD-AZ102J-	1/6 1K OHM J	1	
R543	R CARBON FILM	RD-AZ203J-	1/6 20K OHM J	1	
R544	R CARBON FILM	RD-AZ103J-	1/6 10K OHM J	1	
R546	R CARBON FILM	RD-AZ103J-	1/6 10K OHM J	1	
R547	R CARBON FILM	RD-AZ684J-	1/6 680K OHM J	1	
R548	R CARBON FILM	RD-AZ202J-	1/6 2K OHM J	1	
R549	R CARBON FILM	RD-AZ222J-	1/6 2.2K OHM J	1	
R551	R CARBON FILM	RD-AZ103J-	1/6 10K OHM J	1	
R552	R CARBON FILM	RD-AZ223J-	1/6 22K OHM J	1	
R553	R CARBON FILM	RD-AZ473J-	1/6 47K OHM J	1	
R554	R CARBON FILM	RD-AZ473J-	1/6 47K OHM J	1	
R555	R CARBON FILM	RD-AZ332J-	1/6 3.3K OHM J	1	
R556	R CARBON FILM	RD-AZ133J-	1/6 13K OHM J	1	
R557	R CARBON FILM	RD-AZ243J-	1/6 24K OHM J	1	
R558	R CARBON FILM	RD-AZ335J-	1/6 3.3M OHM J	1	
R559	R CARBON FILM	RD-AZ335J-	1/6 3.3M OHM J	1	
R560	R CARBON FILM	RD-AZ102J-	1/6 1K OHM J	1	
R561	R CARBON FILM	RD-AZ473J-	1/6 47K OHM J	1	
R562	R CARBON FILM	RD-AZ223J-	1/6 22K OHM J	1	
R563	R CARBON FILM	RD-AZ103J-	1/6 10K OHM J	1	
R565	R CARBON FILM	RD-AZ151J-	1/6 150 OHM J	1	
R566	R CARBON FILM	RD-AZ151J-	1/6 150 OHM J	1	
R567	R CARBON FILM	RD-AZ151J-	1/6 150 OHM J	1	
R580	R CARBON FILM	RD-AZ202J-	1/6 2K OHM J	1	
R581	R CARBON FILM	RD-AZ472J-	1/6 4.7K OHM J	1	
R582	R CARBON FILM	RD-AZ103J-	1/6 10K OHM J	1	
R583	R CARBON FILM	RD-AZ103J-	1/6 10K OHM J	1	
R584	R CARBON FILM	RD-AZ473J-	1/6 47K OHM J	1	
R585	R CARBON FILM	RD-4Z241J-	1/4 240 OHM J	1	
R587	R CARBON FILM	RD-AZ561J-	1/6 560 OHM J	1	
R602	R CARBON FILM	RD-AZ512J-	1/6 5.1K OHM J	1	
R603	R CARBON FILM	RD-AZ512J-	1/6 5.1K OHM J	1	
R605	R CARBON FILM	RD-2Z271J-	1/2 270 OHM J	1	
R606	R FUSIBLE	RF01Z109J-	1W 1 OHM J (TAPPING)	1	
R701	R CARBON FILM	RD-2Z241J-	1/2 240 OHM J	1	
R702	R CARBON FILM	RD-AZ473J-	1/6 47K OHM J	1	
R703	R CARBON FILM	RD-AZ473J-	1/6 47K OHM J	1	
R704	R CARBON FILM	RD-AZ473J-	1/6 47K OHM J	1	
R705	R CARBON FILM	RD-AZ101J-	1/6 100 OHM J	1	
R706	R CARBON FILM	RD-AZ103J-	1/6 10K OHM J	1	
R707	R CARBON FILM	RD-AZ101J-	1/6 100 OHM J	1	
R708	R CARBON FILM	RD-AZ102J-	1/6 1K OHM J	1	
R709	R CARBON FILM	RD-AZ102J-	1/6 1K OHM J	1	
R711	R CARBON FILM	RD-AZ103J-	1/6 10K OHM J	1	
R712	R CARBON FILM	RD-AZ103J-	1/6 10K OHM J	1	
R713	R CARBON FILM	RD-AZ103J-	1/6 10K OHM J	1	
R714	R CARBON FILM	RD-AZ471J-	1/6 470 OHM J	1	
R715	R CARBON FILM	RD-AZ392J-	1/6 3.9K OHM J	1	
R716	R CARBON FILM	RD-AZ102J-	1/6 1K OHM J	1	
R717	R CARBON FILM	RD-AZ472J-	1/6 4.7K OHM J	1	

LOC	ITEM	PARTS CODE	DESCRIPTION	NUMBER	REMARK
R719	R CARBON FILM	RD-AZ753J-	1/6 75K OHM J	1	
R722	R CARBON FILM	RD-AZ102J-	1/6 1K OHM J	1	
R723	R CARBON FILM	RD-AZ512J-	1/6 5.1K OHM J	1	
R724	R CARBON FILM	RD-AZ432J-	1/6 4.3K OHM J	1	
R725	R CARBON FILM	RD-AZ223J-	1/6 22K OHM J	1	
R726	R CARBON FILM	RD-AZ562J-	1/6 5.6K OHM J	1	
R727	R CARBON FILM	RD-AZ223J-	1/6 22K OHM J	1	
R728	R CARBON FILM	RD-AZ472J-	1/6 4.7K OHM J	1	
R729	R CARBON FILM	RD-AZ103J-	1/6 10K OHM J	1	
R730	R CARBON FILM	RD-AZ392J-	1/6 3.9K OHM J	1	
R731	R CARBON FILM	RD-AZ202J-	1/6 2K OHM J	1	
R732	R CARBON FILM	RD-AZ204J-	1/6 200K OHM J	1	
R734	R CARBON FILM	RD-AZ622J-	1/6 6.2K OHM J	1	
R735	R CARBON FILM	RD-AZ753J-	1/6 75K OHM J	1	
R737	R CARBON FILM	RD-AZ202J-	1/6 2K OHM J	1	
R738	R CARBON FILM	RD-AZ363J-	1/6 36K OHM J	1	
R739	R CARBON FILM	RD-AZ682J-	1/6 6.8K OHM J	1	
R740	R CARBON FILM	RD-AZ623J-	1/6 62K OHM J	1	
R743	R CARBON FILM	RD-AZ102J-	1/6 1K OHM J	1	
R744	R CARBON FILM	RD-AZ102J-	1/6 1K OHM J	1	
R750	R CARBON FILM	RD-AZ912J-	1/6 9.1K OHM J	1	
R754	R CARBON FILM	RD-AZ202J-	1/6 2K OHM J	1	
R755	R CARBON FILM	RD-AZ133J-	1/6 13K OHM J	1	
R756	R CARBON FILM	RD-AZ912J-	1/6 9.1K OHM J	1	
R759	R CARBON FILM	RD-AZ473J-	1/6 47K OHM J	1	
R761	R CARBON FILM	RD-AZ103J-	1/6 10K OHM J	1	
R766	R CARBON FILM	RD-AZ103J-	1/6 10K OHM J	1	
R767	R CARBON FILM	RD-AZ103J-	1/6 10K OHM J	1	
R768	R CARBON FILM	RD-AZ473J-	1/6 47K OHM J	1	
R769	R CARBON FILM	RD-AZ104J-	1/6 100K OHM J	1	
R770	R CARBON FILM	RD-AZ432J-	1/6 4.3K OHM J	1	
R771	R CARBON FILM	RD-AZ102J-	1/6 1K OHM J	1	
R772	R CARBON FILM	RD-AZ102J-	1/6 1K OHM J	1	
R773	R CARBON FILM	RD-AZ102J-	1/6 1K OHM J	1	
R774	R CARBON FILM	RD-AZ103J-	1/6 10K OHM J	1	
R775	R CARBON FILM	RD-AZ161J-	1/6 160 OHM J	1	
R776	R CARBON FILM	RD-AZ161J-	1/6 160 OHM J	1	
R777	R CARBON FILM	RD-AZ161J-	1/6 160 OHM J	1	
R801	POSISTOR	DJ140M290L	J503P53D140M290L	1	
R802	R CEMENT	RX10B339JE	10W 3.3 OHM J BENCH 12.5M	1	
R803	R M-OXIDE FILM	RS02Z822JS	2W 8.2K OHM J SMALL	1	
R804	R M-OXIDE FILM	RS02Z822JS	2W 8.2K OHM J SMALL	1	
R805	R CARBON FILM	RD-4Z104J-	1/4 100K OHM J	1	
R806	R CARBON FILM	RD-4Z330J-	1/4 33 OHM J	1	
R807	R CARBON FILM	RD-4Z182J-	1/4 1.8K OHM J	1	
R808	R CARBON FILM	RD-4Z102J-	1/4 1K OHM J	1	
R809	R CARBON FILM	RD-AZ103J-	1/6 10K OHM J	1	
R810	R M-OXIDE FILM	RS02Z180JS	2W 18 OHM J SMALL	1	
R811	R FUSIBLE	RF02Z398J-	2W 0.39 OHM J (TAPPING)	1	
R812	R FUSIBLE	RF01Z688J-	1W 0.68 OHM J (TAPPING)	1	
R813	R CARBON FILM	RD-4Z222J-	1/4 2.2K OHM J	1	
R814	R CARBON FILM	RD-AZ472J-	1/6 4.7K OHM J	1	
R815	R CARBON FILM	RD-AZ103J-	1/6 10K OHM J	1	
R816	R FUSIBLE	RF01Z309J-	1W 3 OHM J (TAPPING)	1	

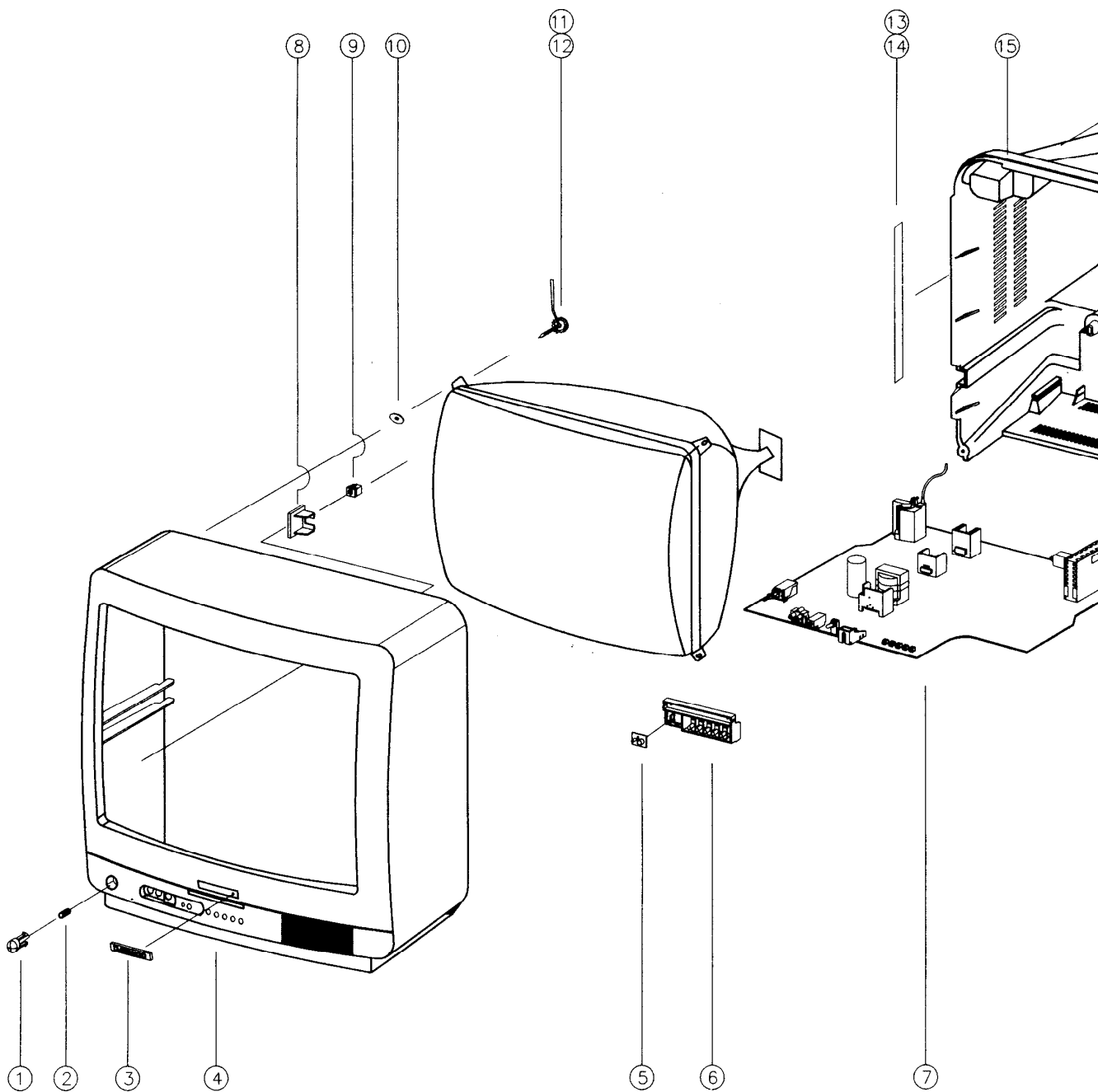
LOC	ITEM	PARTS CODE	DESCRIPTION	NUMBER	REMARK
R817	R FUSIBLE	RF01Z369J-	1W 3.6 OHM J (TAPPING)	1	14 <sub>i</sub> -ONLY
		RF01Z399J-	1W 3.9 OHM J (TAPPING)	1	20 <sub>i</sub> -ONLY
R818	R CARBON FILM	RD-AZ472J-	1/6 4.7K OHM J	1	
R820	R CARBON FILM	RD-4Z223J-	1/4 22K OHM J	1	
R821	R FUSIBLE	RF01Z688J-	1W 0.68 OHM J (TAPPING)	1	
R822	R CARBON FILM	RD-4Z203J-	1/4 20K OHM J	1	
R823	R CARBON FILM	RD-AZ822J-	1/6 8.2K OHM J	1	
R824	R CARBON FILM	RD-4Z223J-	1/4 22K OHM J	1	
R825	R CARBON COMP	RC-2Z275J-	1/2 2.7M OHM J	1	
R826	R CARBON COMP	RC-2Z275J-	1/2 2.7M OHM J	1	
R827	R CARBON FILM	RD-4Z103J-	1/4 10K OHM J	1	
R828	R CARBON FILM	RD-4Z470J-	1/4 47 OHM J	1	
R829	R CARBON FILM	RD-AZ103J-	1/6 10K OHM J	1	
R830	R CARBON FILM	RD-AZ102J-	1/6 1K OHM J	1	
R831	R CARBON FILM	RD-AZ103J-	1/6 10K OHM J	1	
R832	R CARBON FILM	RD-4Z680J-	1/4 68 OHM J	1	
R833	R CARBON FILM	RD-4Z101J-	1/4 100 OHM J	1	
R834	R CARBON FILM	RD-4Z102J-	1/4 1K OHM J	1	
R835	R CARBON FILM	RD-AZ152J-	1/6 1.5K OHM J	1	
R836	R CARBON FILM	RD-AZ102J-	1/6 1K OHM J	1	
R950	R CARBON FILM	RD-AZ151J-	1/6 150 OHM J	1	
R951	R M-OXIDE FILM	RS02Z123JS	2W 12K OHM J SMALL	1	
R952	R M-OXIDE FILM	RS02Z123JS	2W 12K OHM J SMALL	1	
R953	R M-OXIDE FILM	RS02Z123JS	2W 12K OHM J SMALL	1	
R954	R CARBON FILM	RD-AZ151J-	1/6 150 OHM J	1	
R955	R CARBON FILM	RD-AZ151J-	1/6 150 OHM J	1	
R956	R CARBON FILM	RD-AZ151J-	1/6 150 OHM J	1	
R957	R CARBON FILM	RD-2Z332J-	1/2 3.3K OHM J	1	
R958	R CARBON FILM	RD-2Z332J-	1/2 3.3K OHM J	1	
R959	R CARBON FILM	RD-2Z332J-	1/2 3.3K OHM J	1	
R961	R CARBON FILM	RD-AZ152J-	1/6 1.5K OHM J	1	
R962	R CARBON FILM	RD-AZ241J-	1/6 240 OHM J	1	
R963	R CARBON FILM	RD-AZ560J-	1/6 56 OHM J	1	
R964	R CARBON FILM	RD-AZ101J-	1/6 100 OHM J	1	
R965	R CARBON FILM	RD-AZ152J-	1/6 1.5K OHM J	1	
R966	R CARBON FILM	RD-AZ241J-	1/6 240 OHM J	1	
R967	R CARBON FILM	RD-AZ560J-	1/6 56 OHM J	1	
R968	R CARBON FILM	RD-AZ101J-	1/6 100 OHM J	1	
R969	R CARBON FILM	RD-AZ152J-	1/6 1.5K OHM J	1	
R970	R CARBON FILM	RD-AZ241J-	1/6 240 OHM J	1	
R971	R CARBON FILM	RD-AZ560J-	1/6 56 OHM J	1	
R972	R CARBON FILM	RD-AZ201J-	1/6 200 OHM J	1	
R981	R SEMI FIXED	RV4121103P	NVZ6THT 10K OHM	1	
R982	R SEMI FIXED	RV4121103P	NVZ6THT 10K OHM	1	
R983	R SEMI FIXED	RV4121103P	NVZ6THT 10K OHM	1	
R984	R SEMI FIXED	RV4121201P	NVZ6THT 200 OHM	1	
R985	R SEMI FIXED	RV4121201P	NVZ6THT 200 OHM	1	
RA01	R CARBON FILM	RD-AZ102J-	1/6 1K OHM J	1	
RA02	R CARBON FILM	RD-AZ822J-	1/6 8.2K OHM J	1	
RL01	SW RELAY	5SC0101003	DG12D1-0(M)-II 1C-1P	1	
RV01	R CARBON FILM	RD-AZ750J-	1/6 75 OHM J	1	
RV02	R CARBON FILM	RD-AZ101J-	1/6 100 OHM J	1	
SCT1	SOCKET CRT	4859302730	1SM-01S	1	14 <sub>i</sub> -ONLY
		4859302530	1SM-03S	1	20 <sub>i</sub> -ONLY

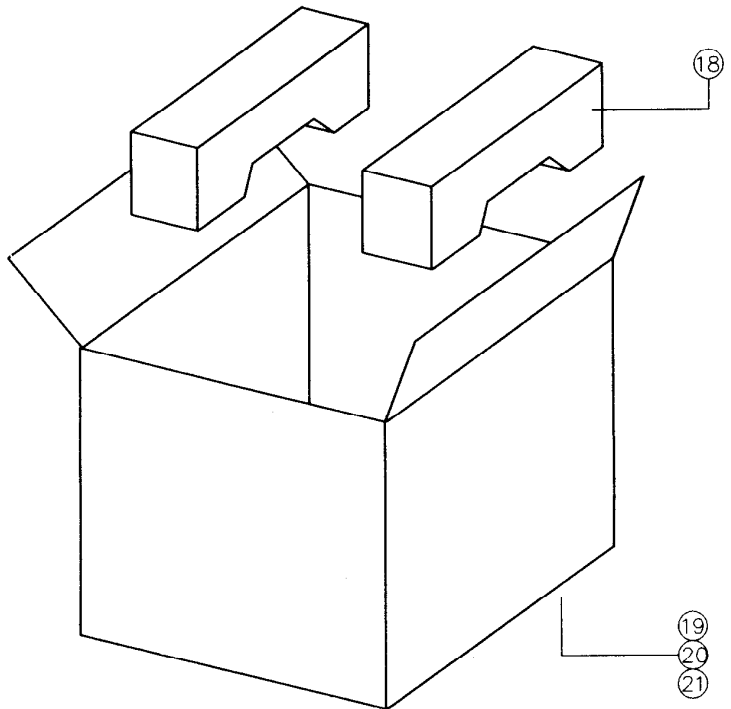
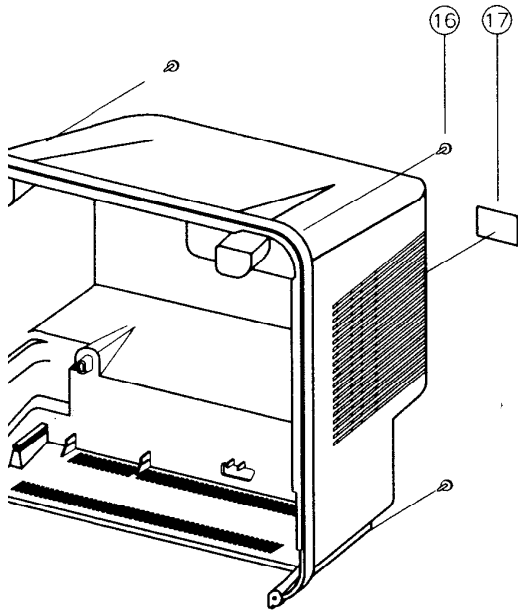
LOC	ITEM	PARTS CODE	DESCRIPTION	NUMBER	REMARK
SF101	FILTER SAW	5PDSW1013P	DSW1013P	1	
SP01	SPEAKER	4858306810	3W 16 OHM F2035C03-3	1	Q-SERIES ONLY
		4858305220	3W 8 OHM MSF-2030	1	T-SERIES ONLY
SP01A	SCREW TAPPING	7128301011	T2S WAS 3X10 MFZN	4	
SP02	SPEAKER	4858306810	3W 8 OHM MSF-2030	1	T-SERIES ONLY
SP02A	SCREW TAPPING	7128301011	T2S WAS 3X10 MFZN	4	T-SERIES ONLY
SW701	SW TACT	5S50101090	SKHV17910A	1	
SW702	SW TACT	5S50101090	SKHV17910A	1	
SW703	SW TACT	5S50101090	SKHV17910A	1	
SW704	SW TACT	5S50101090	SKHV17910A	1	
SW705	SW TACT	5S50101090	SKHV17910A	1	
SW801	SW PUSH	5S40202080	PS3-22 (PCB)	1	
T401	TRANS DRIVE	50D0000022	HD-15D	1	
T402	FBT	50H0000176	1401SPND	1	14; ONLY
		50H0000175	2002SPND	1	20; ONLY
T801	TRANS SMPS	50M3541A1-	TSM-3541A1	1	
U101	TUNER VARACTOR	4859716630	DT9-NF07D	1	
V901	CRT	4859605243	A34JLL91X01 M16	1	14; ONLY
		4859604263	A48JLL91X02 M16	1	20; ONLY
WA01	CONN WAFER	4859231620	YW025-03	1	
X401	RESONATOR CERA	4850L02810	CSB500F55	1	
X501	CRYSTAL QUARTZ	5XE3R5820C	HC-49/U 3.582056MHZ 20PPM	1	
X502	CRYSTAL QUARTZ	5XE3R5795C	HC-49/U 3.579545MHZ 20PPM	1	
X503	CRYSTAL QUARTZ	5XE3R5756C	HC-49/U 3.575611MHZ 20PPM	1	
X701	CRYSTAL QUARTZ	5XE4R1943C	HC-49/U 4.194304MHZ 20PPM	1	
Z501	FILTER CERA	5PXF5H4R5M	SFSH 4.5MCB-TF21(TP)	1	
Z502	FILTER CERA	5PXPS45MB-	TPS-4.5MB TRAP (TAPPING)	1	
ZZ100	TRANSMITTER REMOCON	48B3225C04	R-25C04	1	
ZZ131	COIL DEGAUSSING	58G0000084	DC-1450	1	14; ONLY
		58G0000086	DC-2050	1	20; ONLY
ZZ132	CRT GROUND AS	48519A4610	1401H-1015-1P	1	14; ONLY
		48519A5010	2001H-1015-1P	1	20; ONLY
M191A	SCREW TAPPING				
M201	MASK FRONT			1	
M201A	SCREW CRT FIXING AS	4856013302	30X190 BK	2	
M201B	WASHER RUBBER	4856215402	CR	4	
M201C	SCREW CRT FIXING AS	4856013300	30X80 BK	2	
M211	COVER BACK			1	
M211A	SCREW TAPPING				
M211B	SCREW TAPPING				
M351	HOLDER LED	4853530901	HIPS BK	1	
M481	BUTTON POWER				
M482	SPRING				
M491	BUTTON CTRL AS				
M541	SPEC PLATE				
M561	MARK BRAND				
M591	DECO TERM				
M641	STAPLE PIN	6520010100	18M/M JDO	4	
M681	TIE CABLE				
M682	TAPE ACETATE				
M781	CLOTH BLACK				
M801	BOX CARTON				
M811	PAD				

LOC	ITEM	PARTS CODE	DESCRIPTION	NUMBER	REMARK
M822	BAG P.E				
00010	BAG INSTRUCTION	4858213800	L.D.P.E T0.05X250X400	1	
00020	BATTERY	486A716200	AAA	2	
00030	MANUAL INSTRUCTION	48586537S1		1	
00040	ANT ROD	4850A02510	S3BW216B (L=600 MM)	1	
00050	TRANS ANT MATCHING	4850A00150	MT-02	1	

# EXPLODED VIEW

## 14Q1

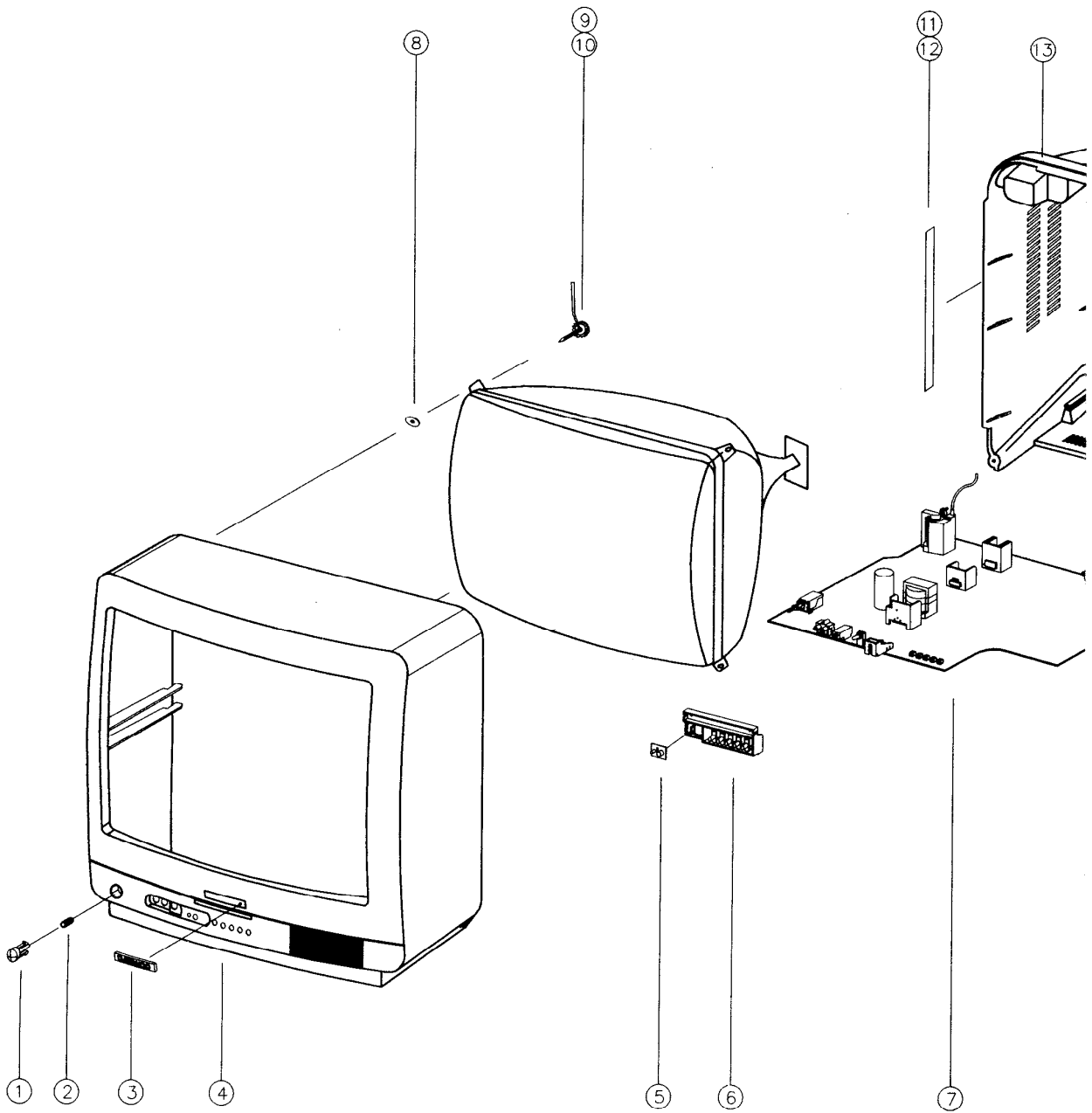


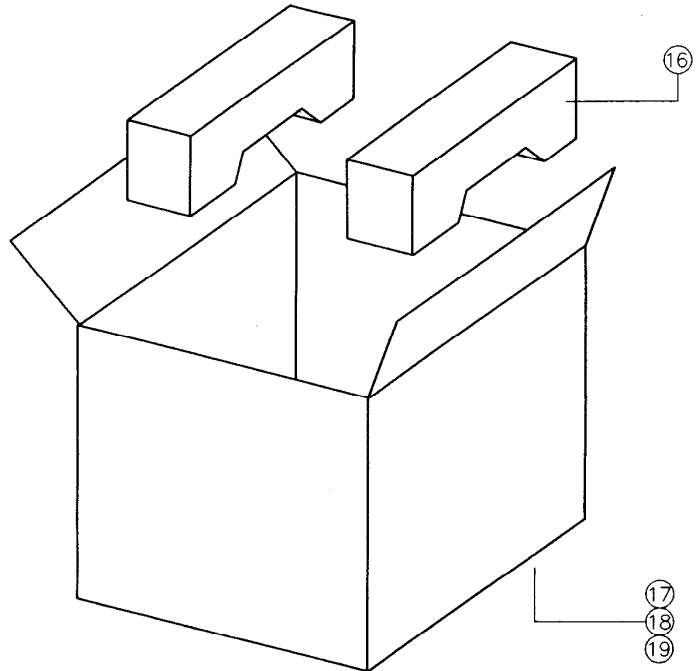
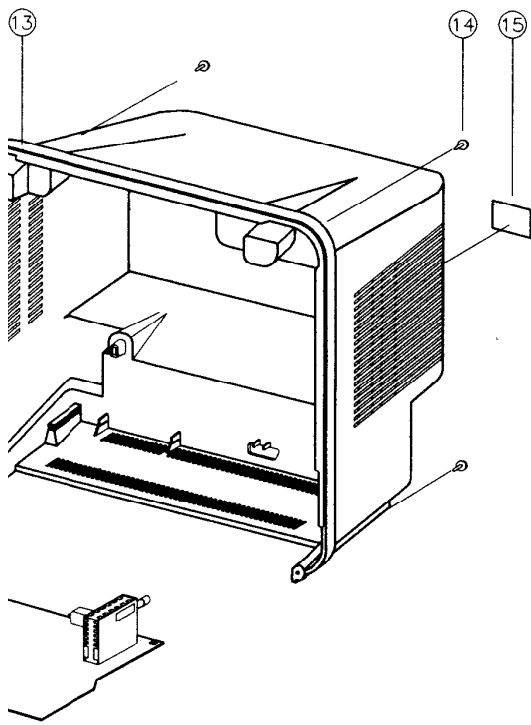


21	6520010100	STAPLE PIN	1	18M/M JDO	
20	4858211400	POLY BAG	1	P.E. FILM	T0.03X600X550
19	4858038700	BOX CARTON	1	SW-2	
18	4858179200	PAD	1	EPS	
17	4855415800	SPEC PLATE	1	150 ART	P/E FILM
16	7122401412	SCREW TAPPING	1	T2S TRS	4X14 MFZN BK
15	4852147201	COVER BACK	1	HIPS BK	
14	4857817640	CLOTH BLACK	1	FELT T0.7	L=100
13	4857817611	CLOTH BLACK	1	FELT T0.7	L=200
12	4856013300	SCREW CRT FIXING AS.	2	L=70mm	
11	4856013301	SCREW CRT FIXING AS.	2	L=140mm	
10	4852148500	WASHER RUBBER	4	CR T2.0	
9	97P231601	HODER AC CORD	1	NYLON66	(VCR-32DAV(JB))
8	4853533200	HOLDER BRKT	1	HIPS BK	
7		MAIN PCB	1	CP-375	
6	4854933000	BUTTON	1	ABS BK	
5	4855530400	DECO SENSOR	1	PMMA	
4	4852060501	MASK FRONT	1	HIPS BK	
3	4855613600	MARK BRAND	1	A1050P-H24	T0.4
2	4856717900	SPRING	1	SWPA	
1	4854848201	POWER BUTTON	1	ABS BK	



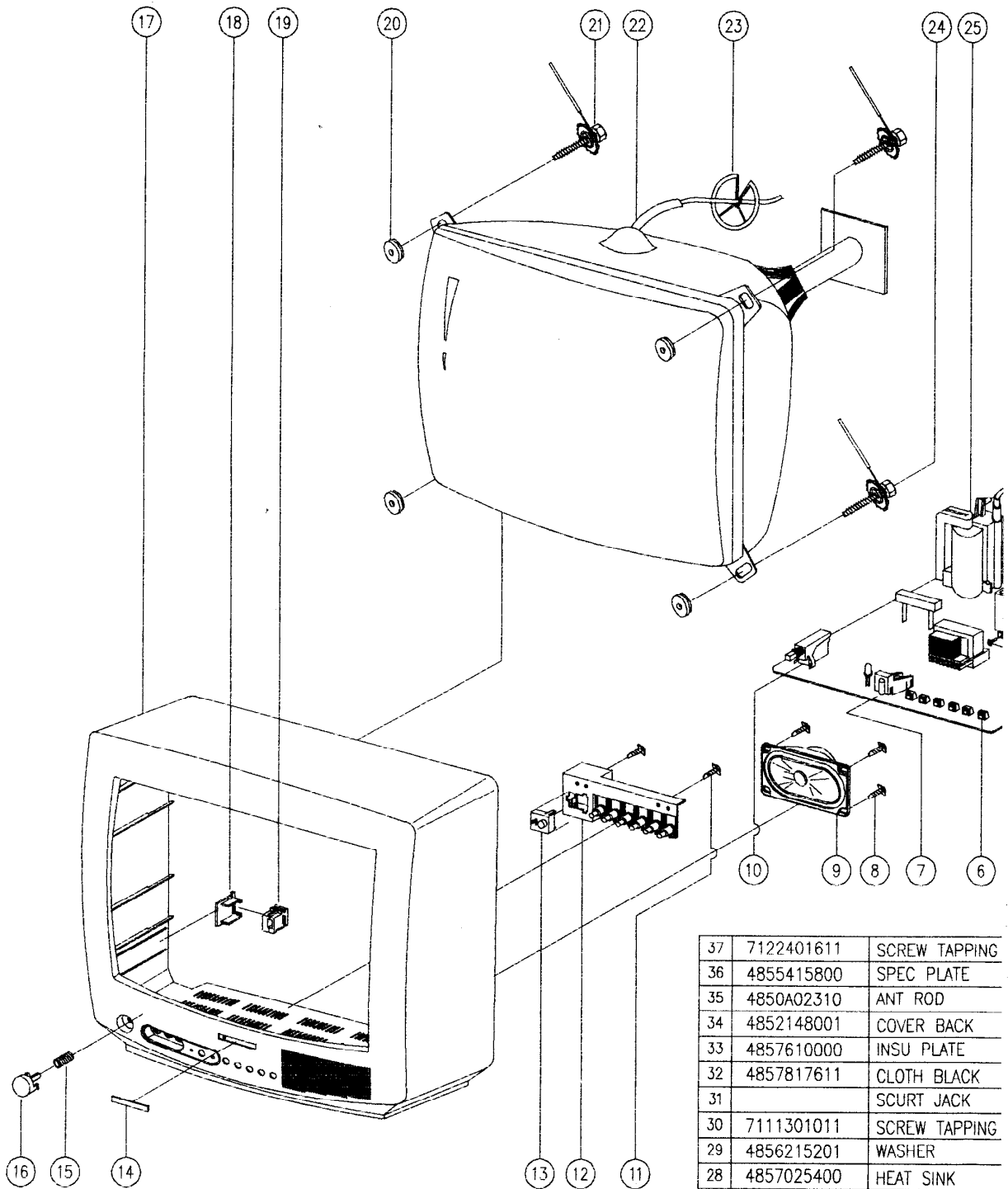
■ 20Q1



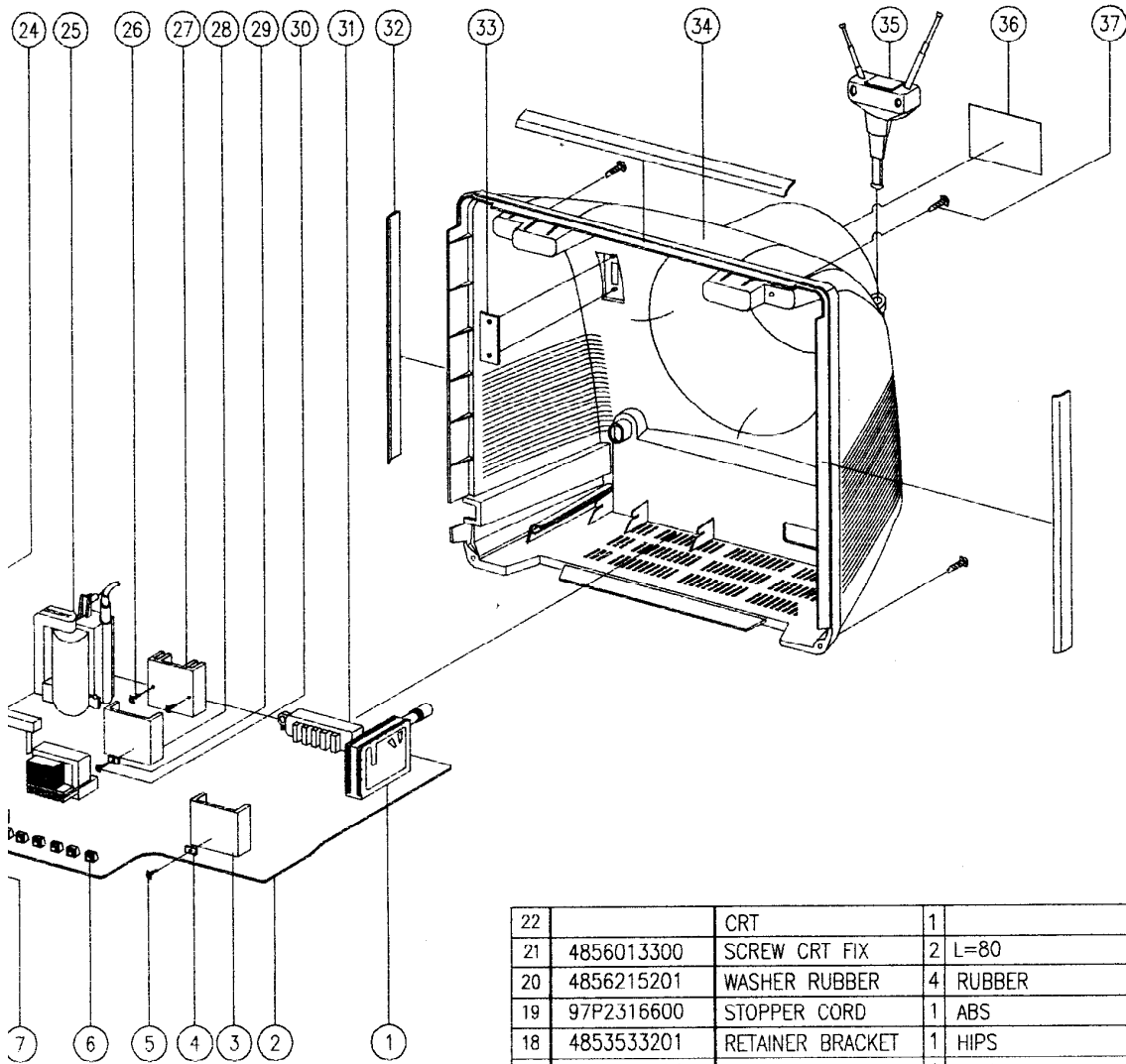


19	6520010100	STAPLE PIN	1	18M/M JDO	
18	4858211400	POLY BAG	1	P.E. FILM T0.03X600X550	
17	4858045200	BOX CARTON	1	SW-2	
16	4858179300	PAD	1	EPS	
15	4855415800	SPEC PLATE	1	150 ART P/E FILM	
14	7122401412	SCREW TAPPING	1	T2S TRS 4X14 MFZN BK	
13	4852147301	COVER BACK	1	HIPS BK	
12	4857817640	CLOTH BLACK	1	FELT TO.7 L=100	
11	4857817611	CLOTH BLACK	1	FELT TO.7 L=200	
10	4856013300	SCREW CRT FIXING AS.	2	L=70mm	
9	4856013301	SCREW CRT FIXING AS.	2	L=140mm	
8	4852148500	WASHER RUBBER	4	CR T2.0	
7		MAIN PCB	1	CP-375	
6	4854933000	BUTTON	1	ABS BK	
5	4855530400	DECO SENSOR	1	PMMA	
4	4852060700	MASK FRONT	1	HIPS BK	
3	4855613600	MARK BRAND	1	A1050P-H24 T0.4	
2	4856717900	SPRING	1	SWPA	
1	4854848201	POWER BUTTON	1	ABS BK	

# 14Q2



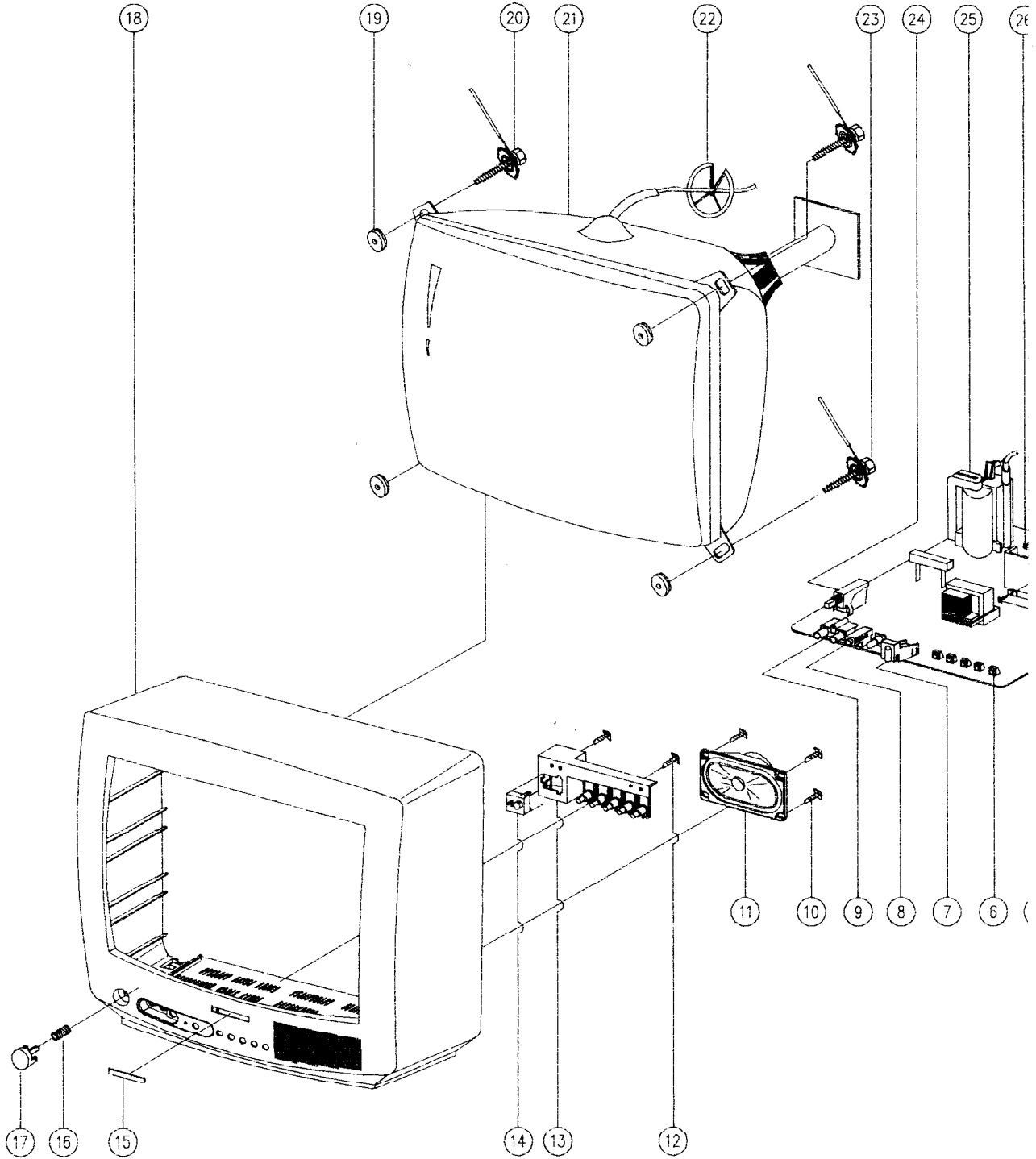
37	7122401611	SCREW TAPPING
36	4855415800	SPEC PLATE
35	4850A02310	ANT ROD
34	4852148001	COVER BACK
33	4857610000	INSU PLATE
32	4857817611	CLOTH BLACK
31		SCURT JACK
30	7111301011	SCREW TAPPING
29	4856215201	WASHER
28	4857025400	HEAT SINK
27	4857024601	HEAT SINK
26	7111301011	SCREW TAPPING
25		FBT
24	4856013301	SCREW CRT FIX
23	4856814300	CLAMP WIRE

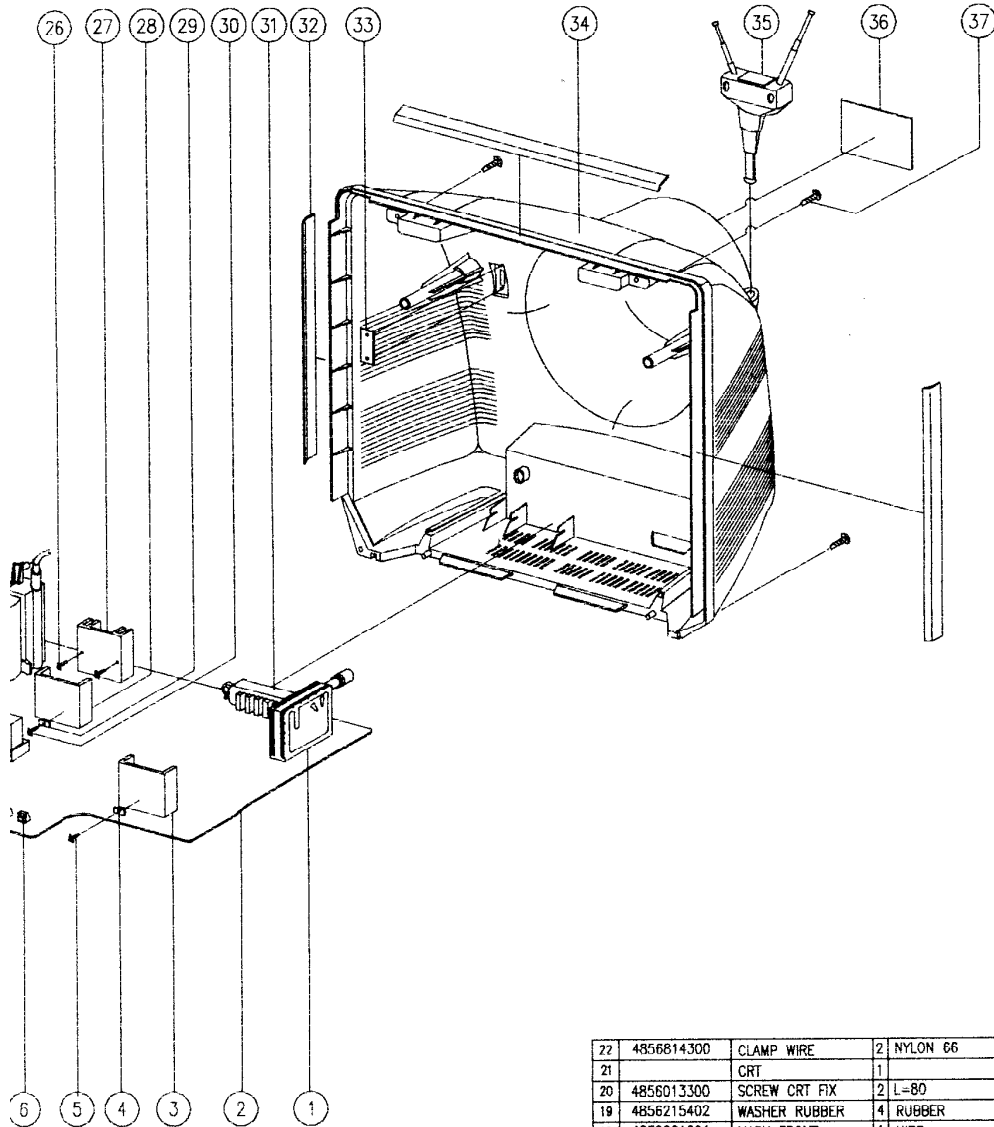


EW TAPPING	4	T2S IRS 4X16 MFZN
PLATE	1	150ART P/E FIRM(C/TV)
ROD	1	S3BW276B (L=400)
ER BACK	1	HIPS
I PLATE	1	PVC T1.0
TH BLACK	3	FELT T0.7 L=200
RT JACK	1	
EW TAPPING	1	T2S PAN 3x10 MFZN
HER	1	SPCC
Γ SINK	1	AL T2.0
Γ SINK	1	AL EX
EW TAPPING	2	T2S PAN 3x10 MFZN
	1	
EW CRT FIX	2	L=140
MP WIRE	2	NYLON 66

22		CRT	1		
21	4856013300	SCREW CRT FIX	2	L=80	
20	4856215201	WASHER RUBBER	4	RUBBER	
19	97P2316600	STOPPER CORD	1	ABS	
18	4853533201	RETAINER BRACKET	1	HIPS	
17	4852061400	MASK FRONT	1	HIPS	
16	4854848701	BUTTON POWER	1	ABS	
15	4856716000	COIL SPRING	1	SWPA Ø0.5	
14	4857023323	MARK BRAND	1	AL	
13	4855530900	DECO SENSOR	1	ACRYL	
12	4854933301	BUTTON CH	1	ABS	
11	7128301211	SCREW TAPPING	3	T2S WAS 3X12 MFZN	
10		S.W PUSH	1		
9		SPEAKER	1		
8	7128301211	SCREW TAPPING	4	T2S WAS 3X12 MFZN	
7		PREE AMP	1		
6		S.W TACT	5		
5	7111301011	SCREW TAPPING	1	T2S PAN 3X10 MFZN	
4	4856215201	WASHER	1	SPCC T1.5	
3	4857025401	HEAT SINK	1	A1050P-H24 T2.0	
2		PCB MAIN	1		
1		TUNER	1		

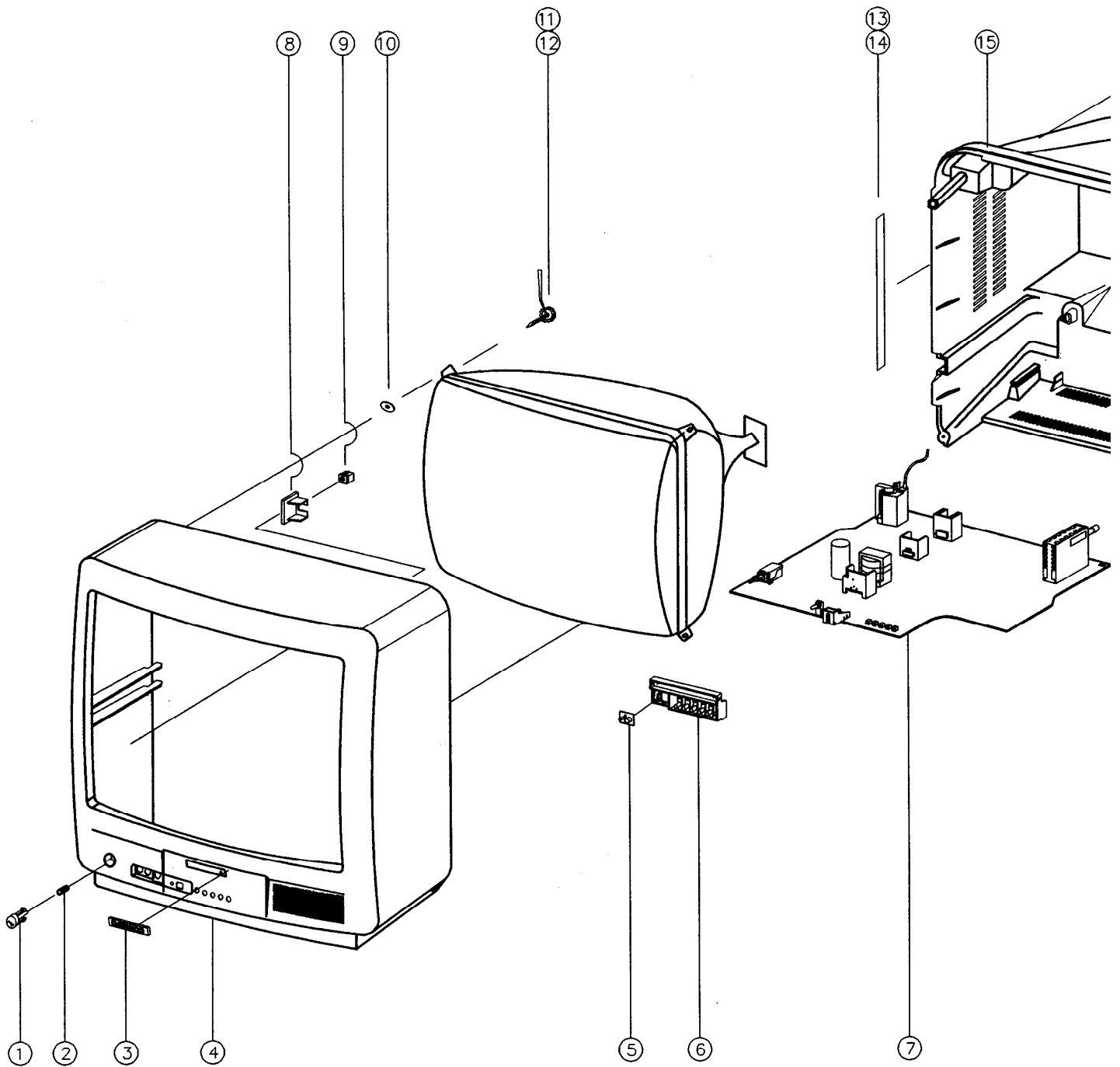
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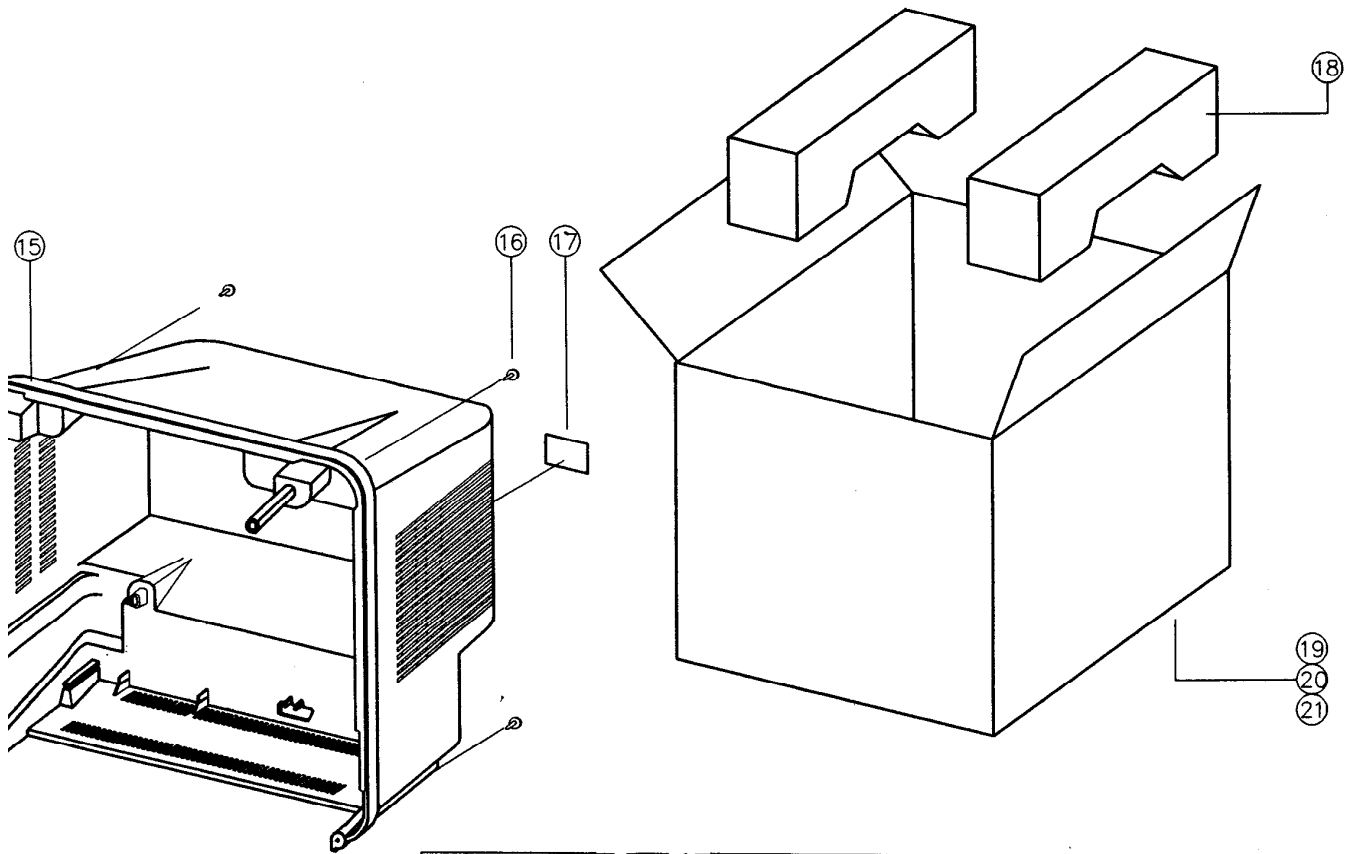




37	7122401611	SCREW TAPPING	4	T2S TRS 4x16 MFZN	15	4857023323	MARK BRAND	1	AL
36	4855415800	SPEC PLATE	1	150ART P/E FIRM(C/TV)	14	4855530900	DECO SENSOR	1	ACRYL
35	4850A02310	ANT ROD	1	S3BW276B (L=400)	13	4854933310	BUTTON CH	1	ABS
34	48521-7800	COVER BACK	1	FR HIPS	12	7128301211	SCREW TAPPING	2	T2S WAS 3x12 MFZN
33	4857610000	INSUJ PLATE	1	PVC T1.0	11		SPEAKER	1	
32	4857817611	CLOTH BLACK	3	FELT T0.7 L=200	10	7128301211	SCREW TAPPING	4	T2S WAS 3x12 MFZN
31		A/V JACK	1		9		A/V JACK	1	
30	7111301011	SCREW TAPPING	1	T2S PAN 3x10 MFZN	8		EARPHONE	1	
29	4856215201	WASHER	1	SPCC	7		PREE AMP	1	
28	4857025400	HEAT SINK	1	AL T2.0	6		S.W TACT	5	
27	4857024601	HEAT SINK	1	AL EX	5	7111301011	SCREW TAPPING	1	T2S PAN 3x10 MFZN
26	7111301011	SCREW TAPPING	2	T2S PAN 3x10 MFZN	4	4856215201	WASHER	1	SPCC T1.5
25		FBT	1		3	4857025401	HEAT SINK	1	A1050P-H24 T2.0
24		S.W PUSH	1		2		PCB MAIN	1	
23	4856013302	SCREW CRT FIX	2	L=190	1		TUNER	1	
22	4856814300	CLAMP WIRE	2	NYLON 66					
21		CRT	1						
20	4856013300	SCREW CRT FIX	2	L=80					
19	4856215402	WASHER RUBBER	4	RUBBER					
18	4852061201	MASK FRONT	1	HIPS					
17	4854848701	BUTTON POWER	1	ABS					
16	4856716000	COIL SPRING	1	SWPA #0.5					

■14Q3

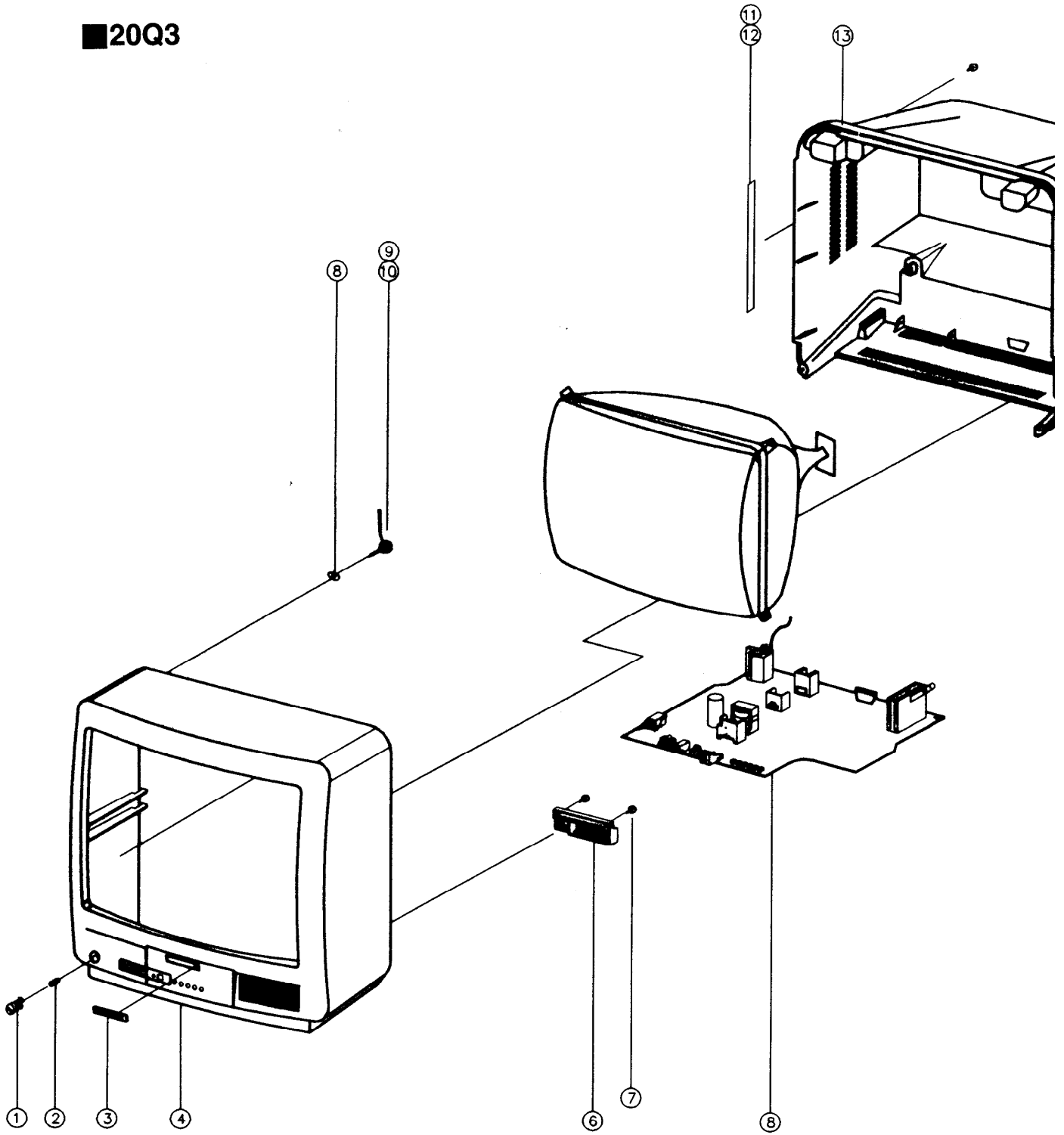


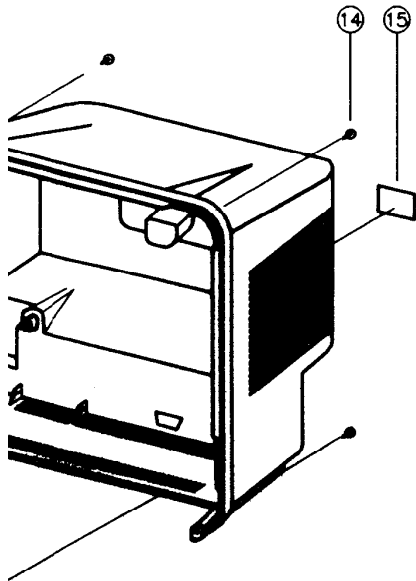


21	6520010100	STAPLE PIN	1	18M/M JDO	
20	4858211400	POLY BAG	1	P.E. FILM T0.03X600X550	
19	4858038700	BOX CARTON	1	SW-2	
18	4858179200	PAD	1	EPS	
17	4855415800	SPEC PLATE	1	150 ART P/E FILM	
16	7122401412	SCREW TAPPING	1	T2S TRS 4X14 MFZN BK	
15	4852147201	COVER BACK	1	HIPS BK	
14	4857817640	CLOTH BLACK	1	FELT T0.7 L=100	
13	4857817611	CLOTH BLACK	1	FELT T0.7 L=200	
12	4856013300	SCREW CRT FIXING AS.	2	L=70mm	
11	4856013301	SCREW CRT FIXING AS.	2	L=140mm	
10	4852148500	WASHER RUBBER	4	CR T2.0	
9	97P231601	HODER AC CORD	1	NYLON66(VCR-32DAV(JB))	
8	4853533200	HOLDER BRKT	1	HIPS BK	
7		MAIN PCB	1	CP-370	
6	4854934701	BUTTON	1	ABS BK	
5	4855532301	DECO SENSOR	1	PMMA	
4	4852063201	MASK FRONT	1	HIPS BK	
3	4855613600	MARK BRAND	1	A1050P-H24 T0.4	
2	4856717900	SPRING	1	SWPA	
1	4854850601	POWER BUTTON	1	ABS BK	



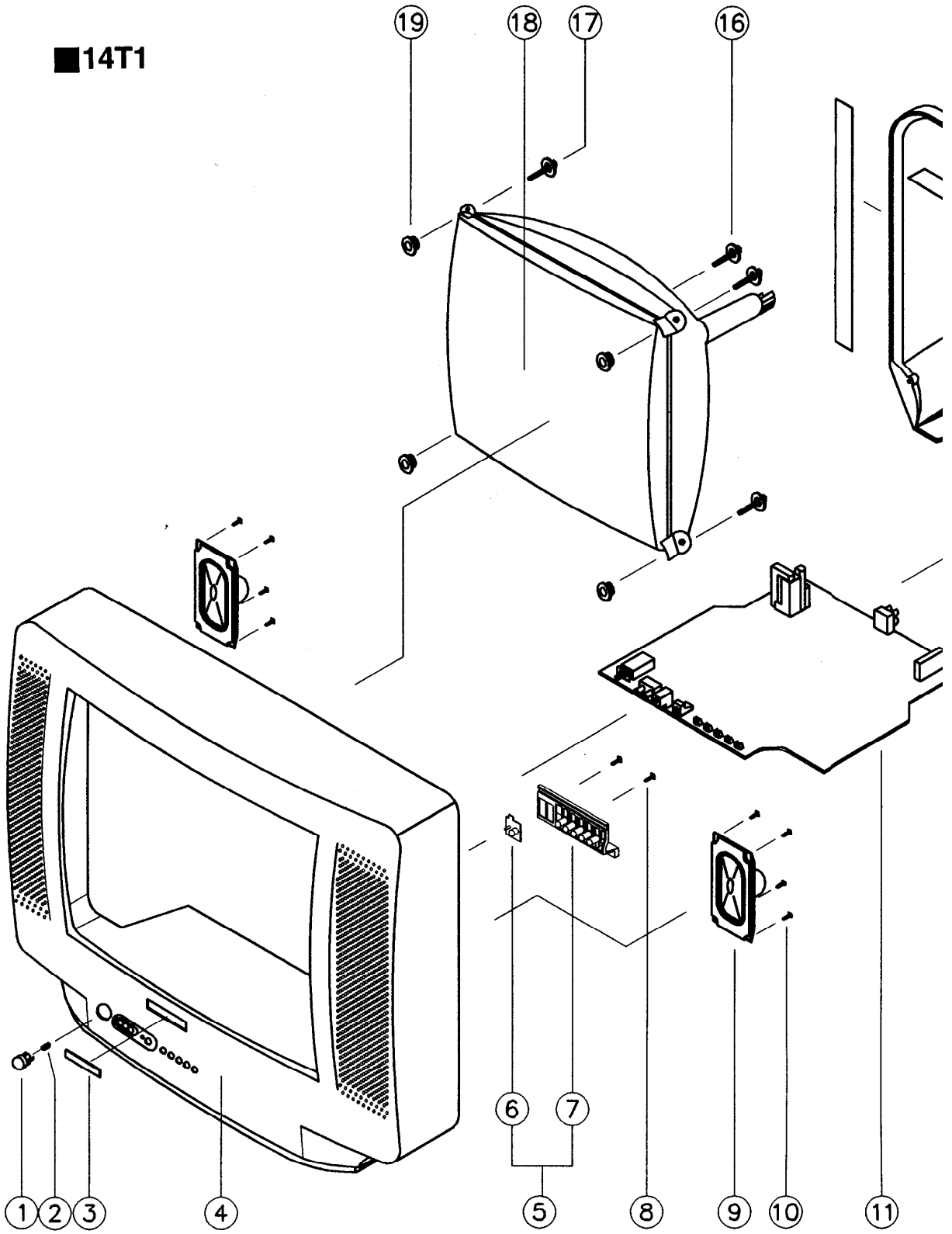
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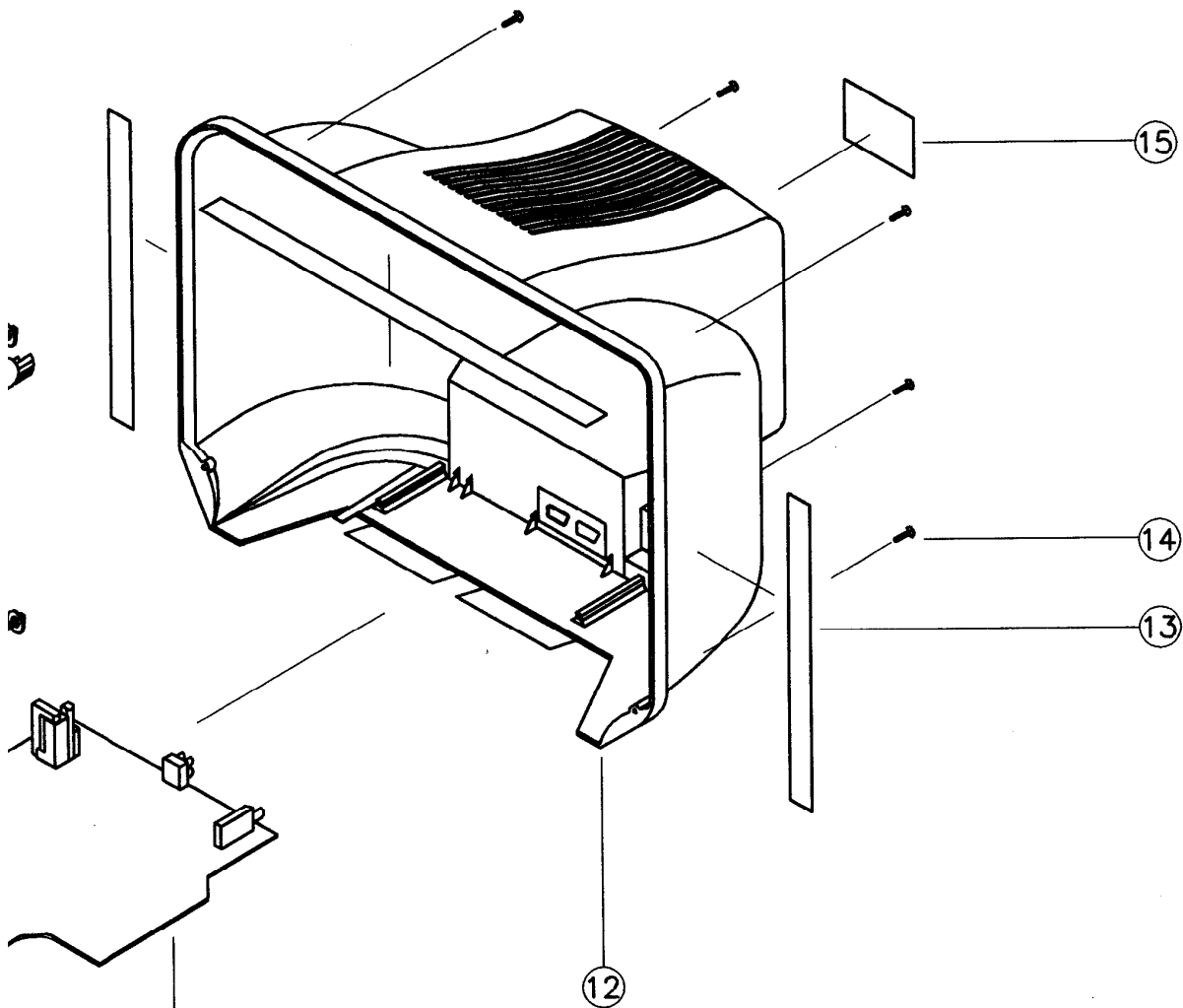




15	4855415800	SPEC PLATE	1	150 ART	P/E FILM	
14	7122401412	SCREW TAPPING	5	T2S TRS	4X16 MFZN BK	
13	4852147300	COVER BACK	1	FR HIPS	BK	
12	4857817610	CLOTH BLACK	2	FELT TO.7	L=300	
11	4857817610	CLOTH BLACK	1	FELT TO.7	L=300	
10	4856013300	SCREW CRT FIXING AS.	1	L=70mm		
9	4856013301	SCREW CRT FIXING AS.	1	L=140mm		
8	4852148500	WASHER RUBBER	1	CR T2.0		
7		MAIN PCB	1	CN-537		
6	7128301011	SCREW TAPPING	2	T2S WAS	3X10 MFZN	
5	4851925900	BUTTON CTRL AS	1	4934700	5532300	
4	4852063301	MASK FRONT	1	HIPS BK		
3	4855615900	MARK BRAND	1	A1050P-	124 TO.4	
2	4856717900	SPRING	1	SWPA		
1	4854850001	POWER BUTTON	1	ABS BK		

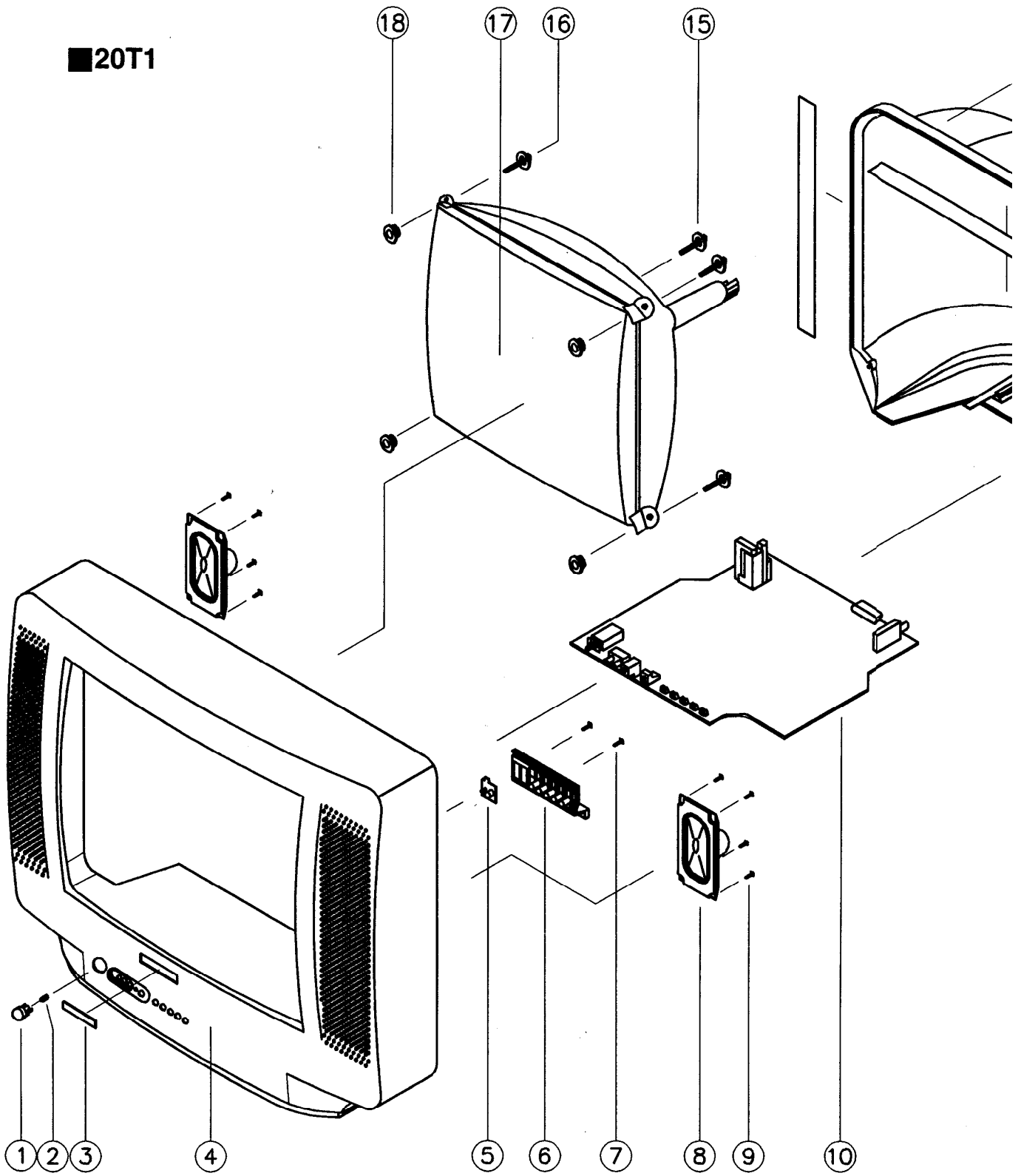
■ 14T1





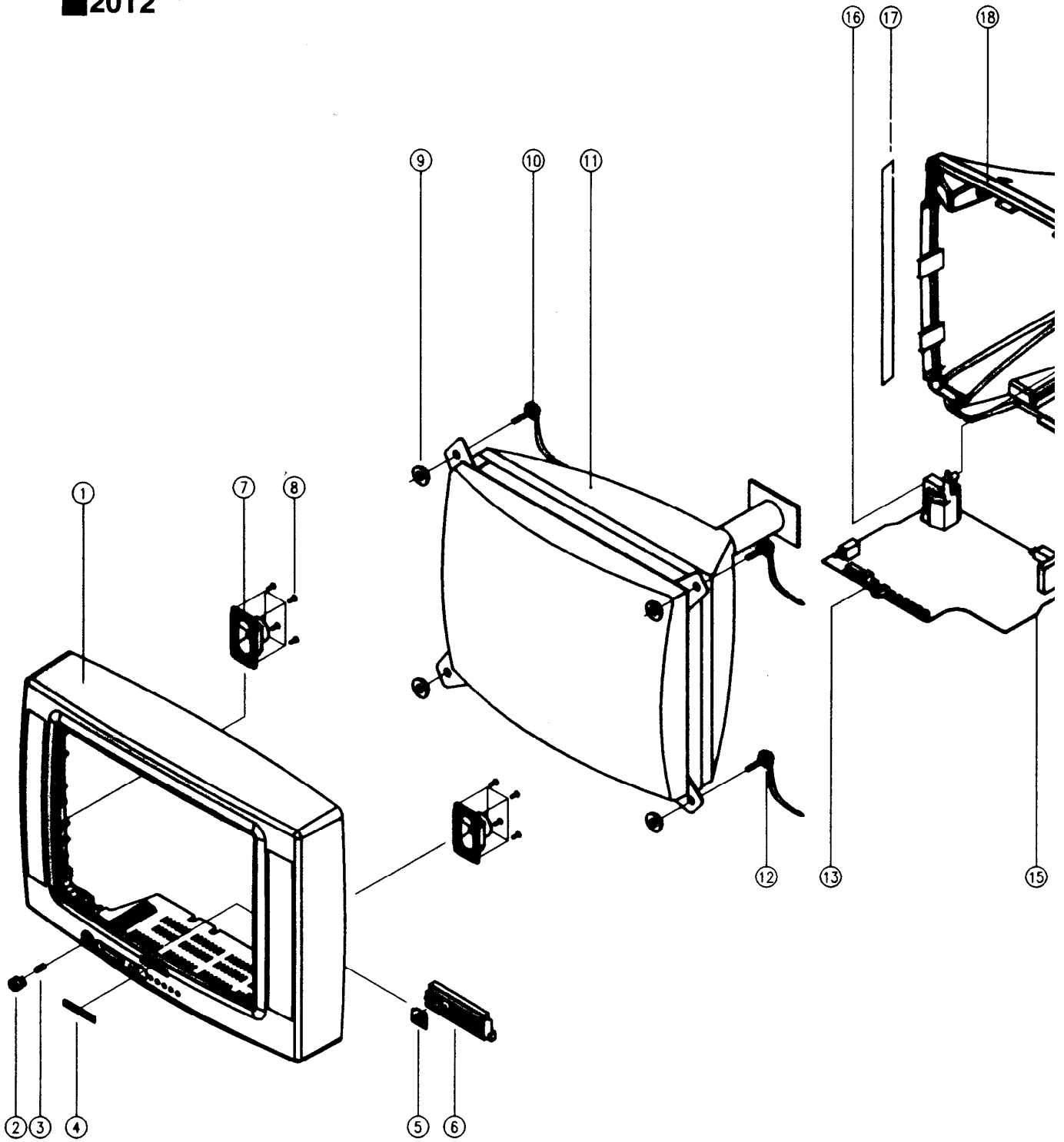
20					
19	4856214901	WASHER RUBBER	4	CR T1.0	
18		CRT	1	TUBE A'SSY	
17	4856013300	SCREW CRT FIXING AS.	2	30X80 YL	
16	4856013301	SCREW CRT FIXING AS.	2	30X140 YL	
15	4855415800	SPEC PLATE	1	150ART P/E FILM	
14	7122401411	SCREW TAPPING	5	T2S TRS 4X14 MFZN	
13	4857817611	CLOTH BLACK	3	FELT T0.7 L=200	
12	4852149001	COVER BACK	1	HIPS BK	
11		MAIN PCB A'SSY	1	PCB A'SSY	CM-537
10	7128301011	SCREW TAPPING	8	T2S WAS 3X10 MFZN	
9		SPEAKER	2		
8	7128301011	SCREW TAPPING	2	T2S WAS 3X10 MFZN	
7	4854934101	BUTTON	1	ABS BK	
6	4855531700	DECO SENSOR	1	PMMA	
5	4851926700	BUTTON CTRL AS	1	493410+5531700	
4	4852062511	MASK FRONT	1	HIPS BK	
3	4855671600	MARK BRAND	1	COPPER TO.4	
2	4856716000	SPRING	1	SWPA	
1	4854849501	BUTTON POWER	1	ABS BK	
No	PART CODE	PART NAME	Q'ty	MATERIAL	REMARKS

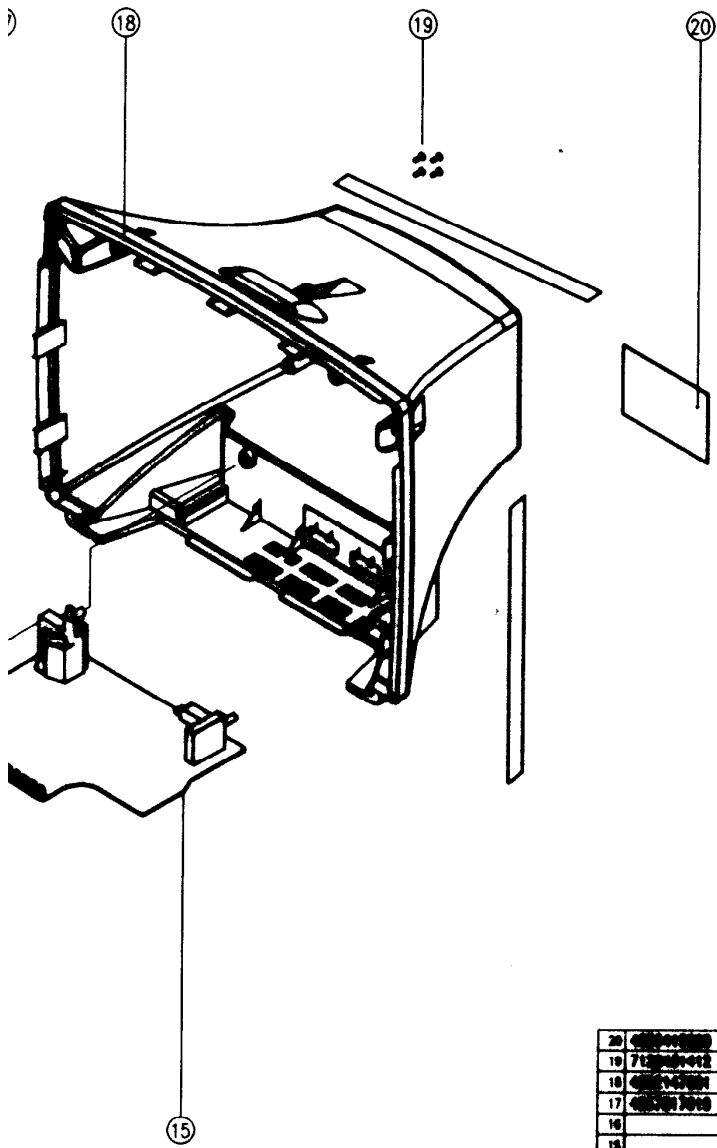
■20T1





■20T2

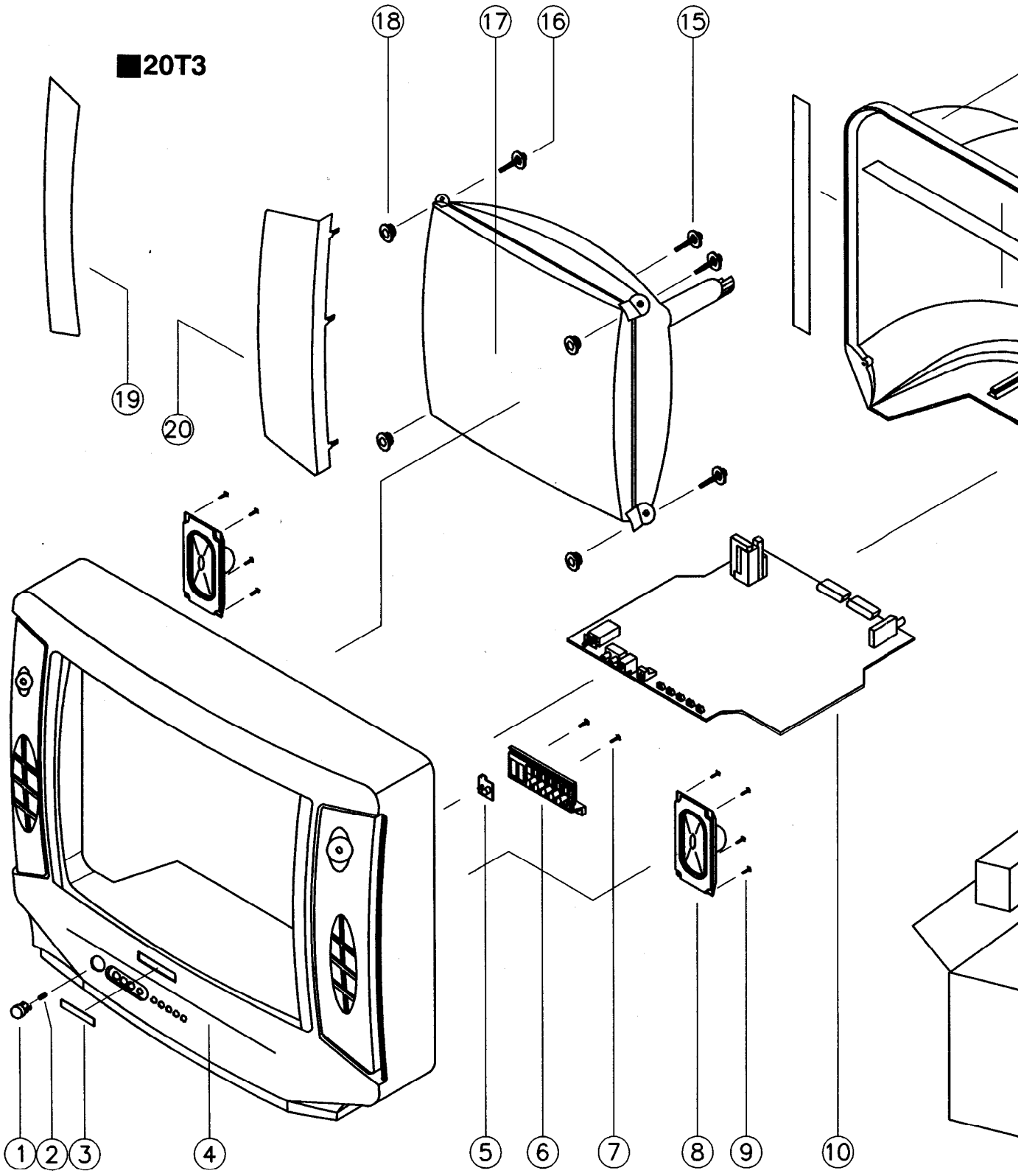


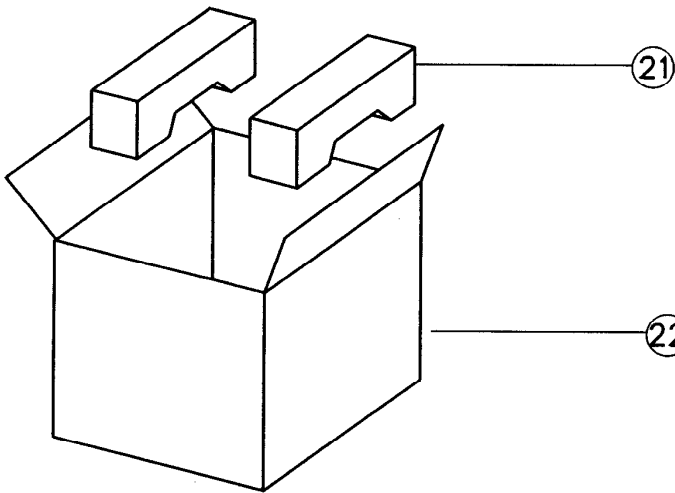
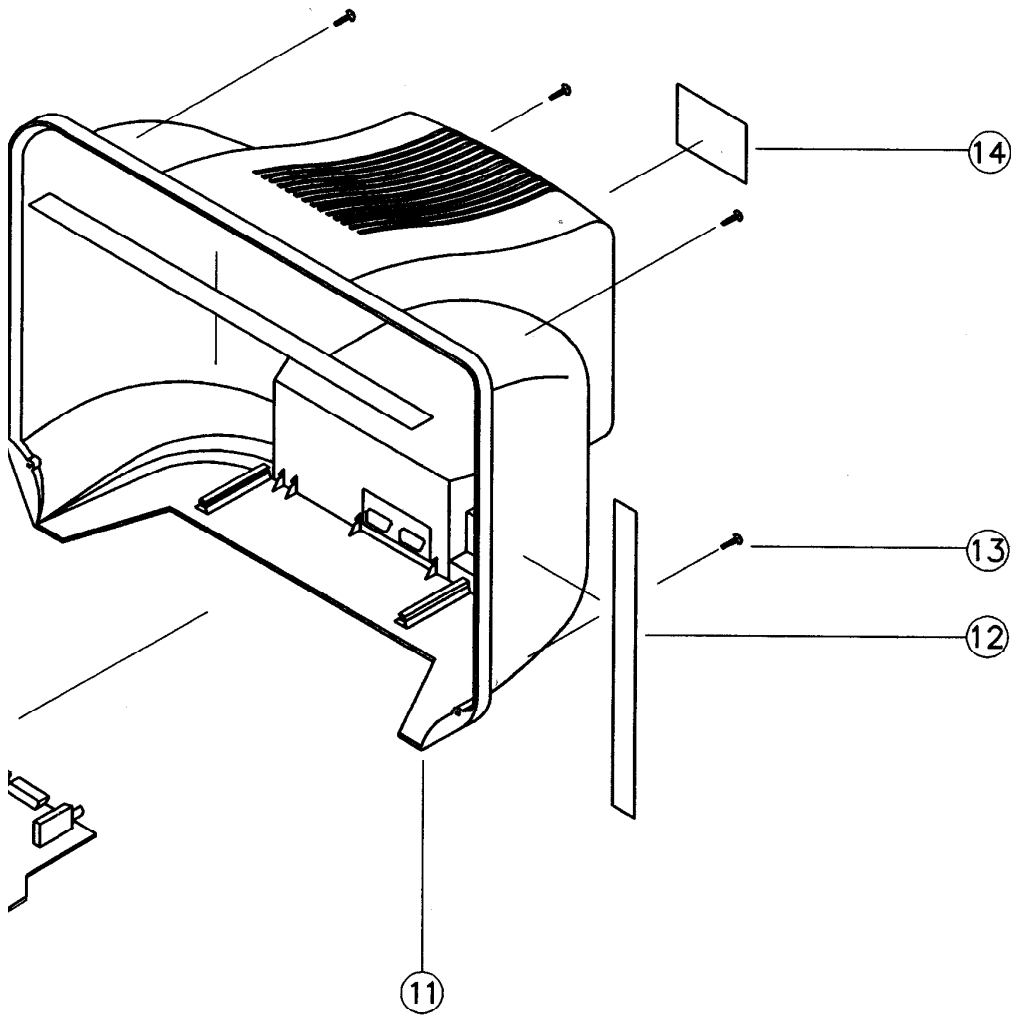


20	48200000	SPEC PLATE	1	STEEL P/E PLATE/IN	
19	712504412	SCREW TAPPING	4	T20 TOR 4X14 MP2H BK	
18	482147001	COVER BACK	1	MPS BK	
17	482017010	CLASH BACK	3	PLJ TOL L=300	
16		F. & T			
15		MAIN PCB			GP-378
14	482000001	HEAT SHK	1	ANODP-NH T2	
13	482000001	HOLDER LAD	1	FR MPS BK	
12	482001300	SCREW GR FERR AS	2	L=100MM	
11		CR1	1		
10	482001300	SCREW GR FERR AS	2	L=70MM	
9	482014000	WINDUP BLASTER	4	CR TLA	
8	712504211	SCREW TAPPING	8	T20 TOR 3X12 MP2H	
7	482000000	SPINNER	2		
6	482403001	BUTTON	1	ABS BK	
5	482003001	SECC SHIELD	1	PERM CL	
4	482001000	MARK SPRING	1	ANODP-NH TLA	
3	482010000	SPRING	1	SUPA FERR.S	
2	482400001	BUTTON POWER	1	ABS BK	
1	482001001	MARK FRONT	1	MPS BK	
No	PART CORD	PART NAME	Q'ty	MATERIAL	REMARKS



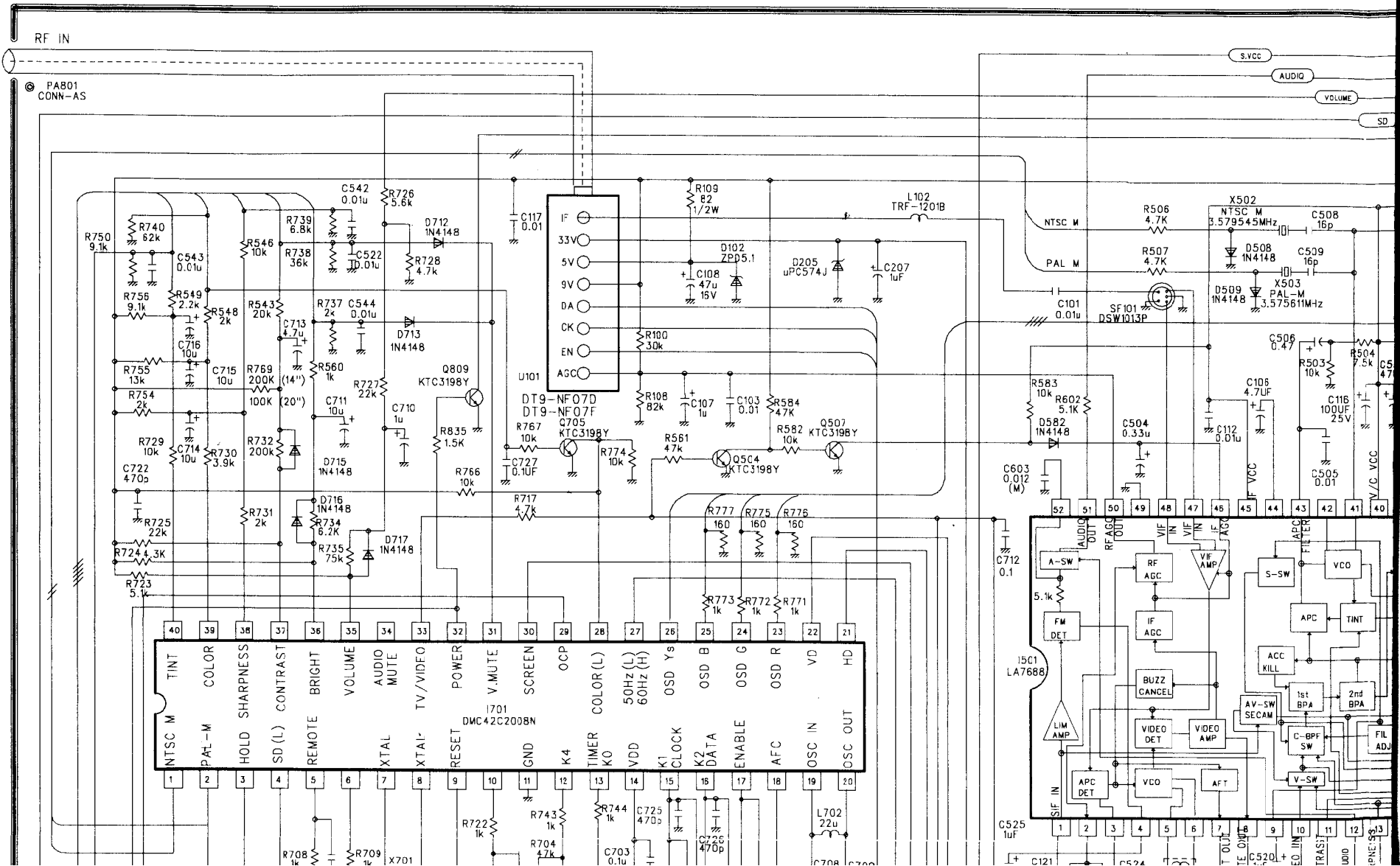
■ 20T3



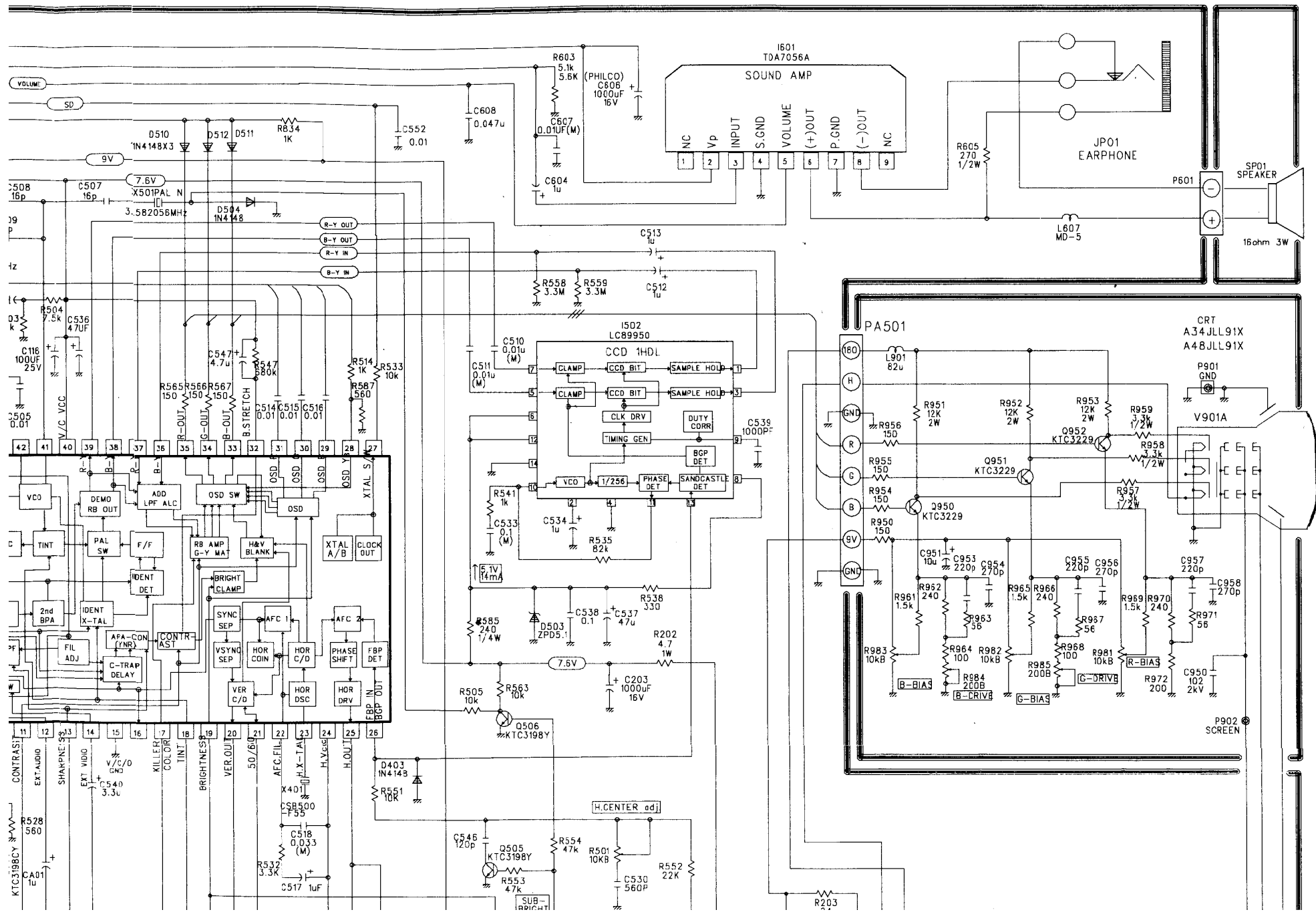


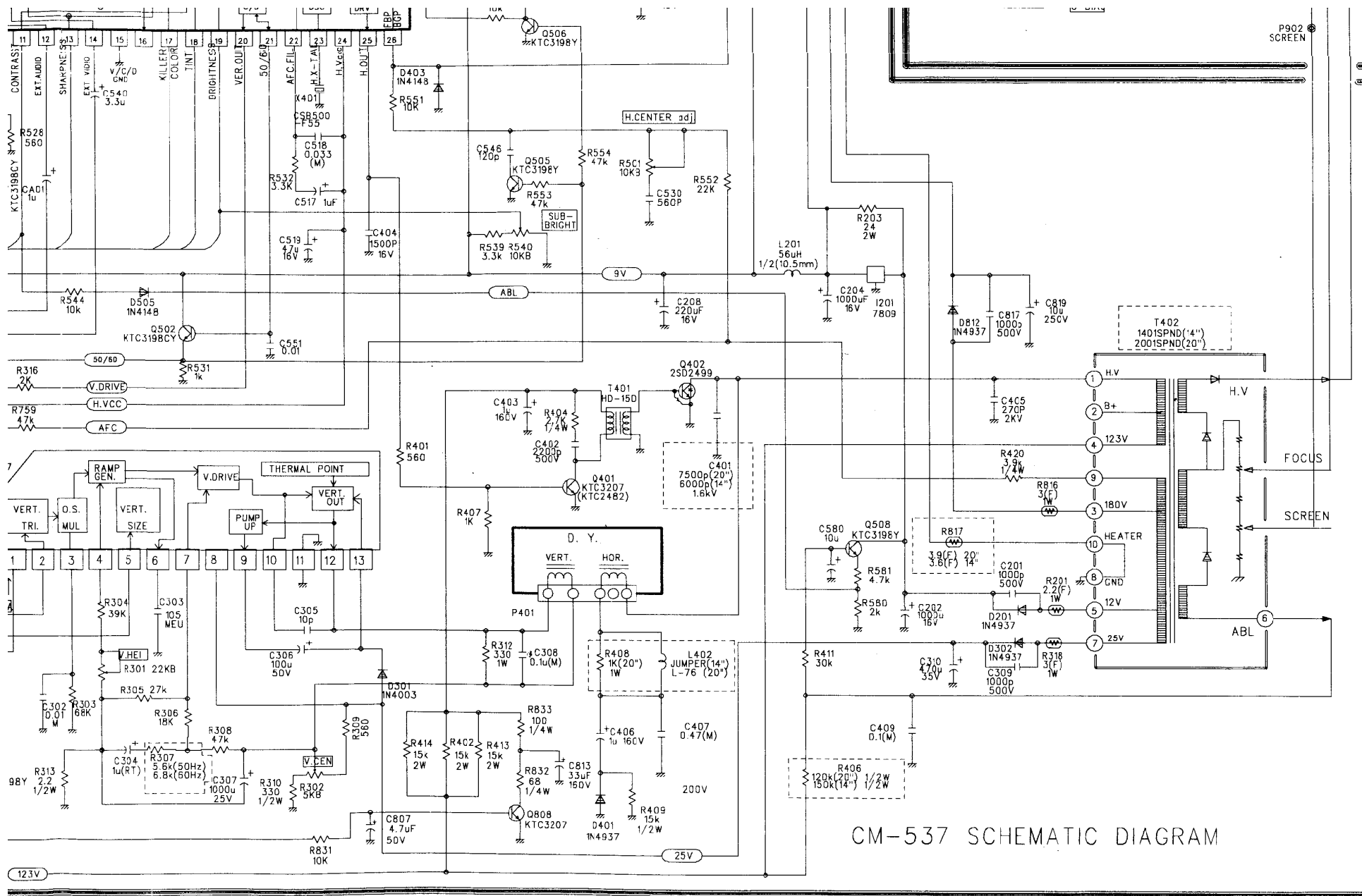
22	4858050700	BOX CARTON	1	DW-2
21	4858182001	PAD	1	EPS
20	4852535500	GRILL SPKR R	1	EGI T0.5
19	4852535400	GRILL SPKR L	1	EGI T0.5
18	4856214902	WASHER RUBBER	4	CR T2.0
17		CRT	1	TUBE A'SSY
16	4856013300	SCREW CRT FIXING AS.	2	L=70mm
15	4856013303	SCREW CRT FIXING AS.	2	L=240mm
14	4855415800	SPEC PLATE	1	150ART P/E FILM
13	7122401411	SCREW TAPPING	5	T2S TRS 4X14 MFZN
12	4857821101	CLOTH BLACK	3	CLOTH L=300
11	4852147100	COVER BACK	1	HIPS BK
10		MAIN PCB A'SSY	1	PCB A'SSY
9	7128301011	SCREW TAPPING	8	T2S WAS 3X10 MFZN
8		SPEAKER	2	
7	7128301011	SCREW TAPPING	2	T2S WAS 3X10 MFZN
6	4854934901	BUTTON	1	ABS BK
5	4855532501	DECO SENSOR	1	PMMA CL
4	4852063500	MASK FRONT	1	FR HIPS BK
3	4855615900	MARK BRAND	1	AL0509-H24
2	4856716000	SPRING	1	SWPA
1	4854850301	BUTTON POWER	1	ABS BK
No	PART CODE	PART NAME	Qty	MATERIAL

# CIRCUIT DIAGRAM









CM-537 SCHEMATIC DIAGRAM