

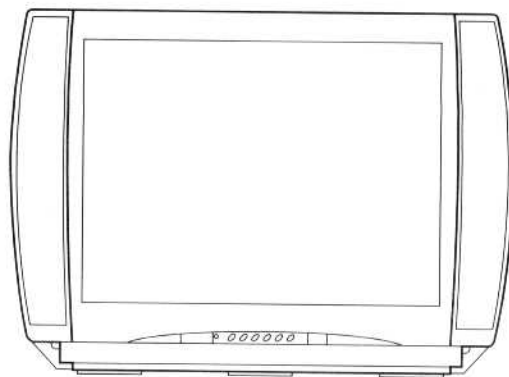
DAEWOO

Service Manual

Color Television

CHASSIS : CM - 865
System : NTSC, PAL-M, PAL-N
(3 SYSTEM)

MODEL : DTH-2970FS



DAEWOO ELECTRONICS CO., LTD.

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■ SPECIFICATIONS

MODEL	DTH-2970FS
Receiving System	NTSC/PAL-M/PAL-N
Mains Voltage	AC 100/220V, 50/60Hz
Power Consumption	140 Watts (Max)
Sound Output	5.0W+5.0W (8 Ω)
Antenna Impedance	75 Ω Unbalanced
Tuning System	Frequency Synthesizer
Number of Memory Channel	181 Channels
Reception Channel	VHF TV LOW:CH2~6 HIGH:CH7~13 CATV CH1~CH125 UHF TV CH14~CH69
Remote Control Unit	R-33F08
Screen Size	29" Diagonal
Color Standard	NTSC/PAL-N,M
Tuner Type	Varactor Type with PLL
Aux. Terminal	Input/Output:Video,Audio L, Audio R
Special Notes	Output Ext. Speaker Jack

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 shatterproofgoggles and keep picture tube away from the body while handling.

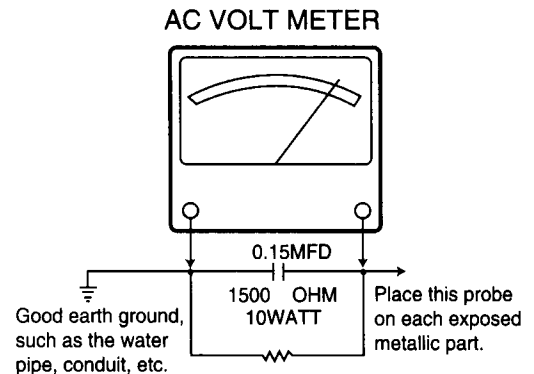
2. When replacing chassis in the cabinet, always be certain that all the protective devices are put back in place, such as; nonmetallic control knobs, insulating covers, shields, isolation resistor-capacitor network, etc

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

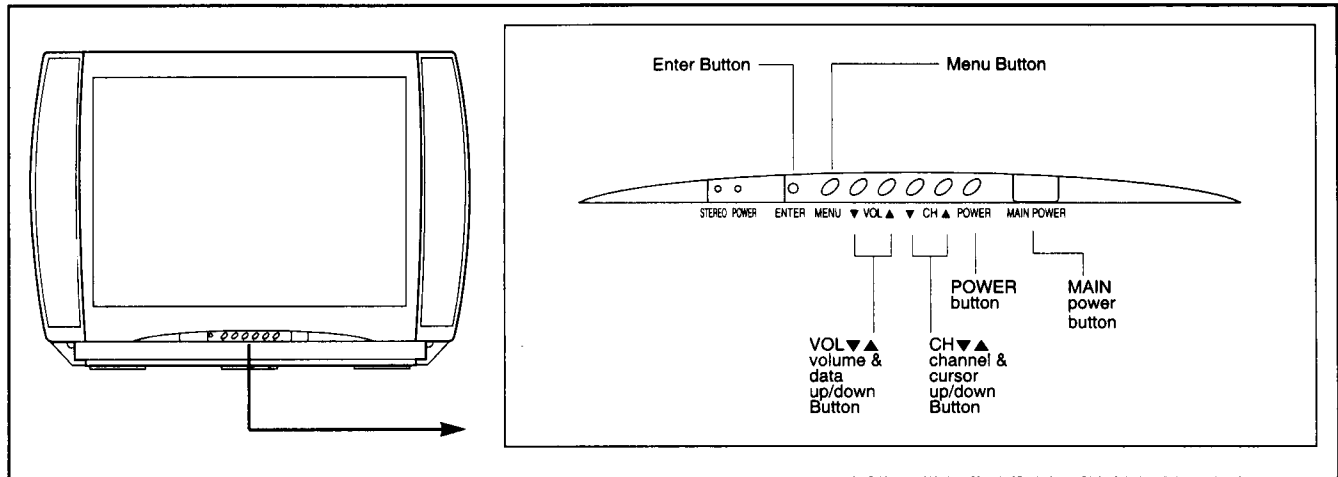
supplements; electrical components having such features are identified by shading on the schematic diagram and the parts list. Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts which do not have the same safety characteristics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

SERVICE NOTES

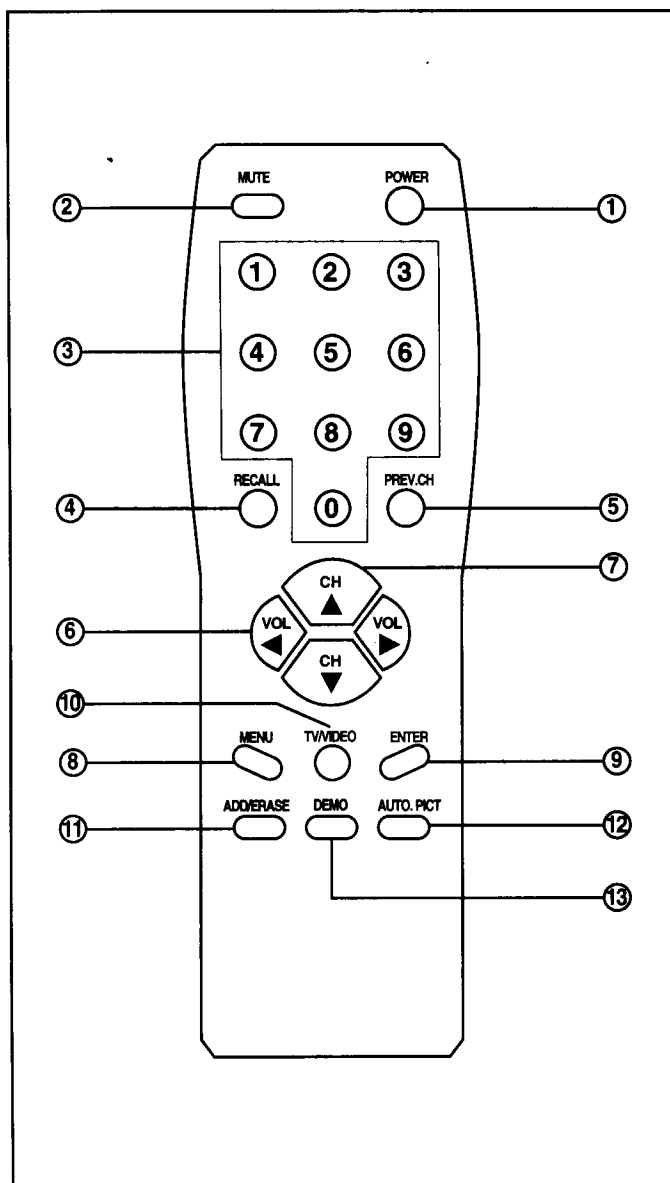
1. When replacing parts or circuit boards, clamp the lead wires to terminal before soldering.
2. When replacing a high wattage resistor (metal oxide film resistor) in the circuit board keep the resistor min 1/2 inch away from circuit board.

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. MUTE

Used to turn off sound while the picture remains. Press again to restore the sound.

3. NUMBERED BUTTONS.

Used to select a TV channel.

4. RECALL

Used to display channel number.

5. PREV.CH

Used to return to the last TV channel you were watching.

6. VOLUME UP/DOWN

Used to adjust the volume level and the option with on-screen menus.

7. CHANNEL UP/DOWN

Used to select a TV channel by going up or down through channels programmed in your favorite and the option with on-screen menus.

8. MENU

Used with on-screen menus to see menu.

9. ENTER

Used to access the selected feature or to remove any on-screen menu or display.

10. TV/VIDEO

Used to select TV or VIDEO mode.

11. ADD/ERASE

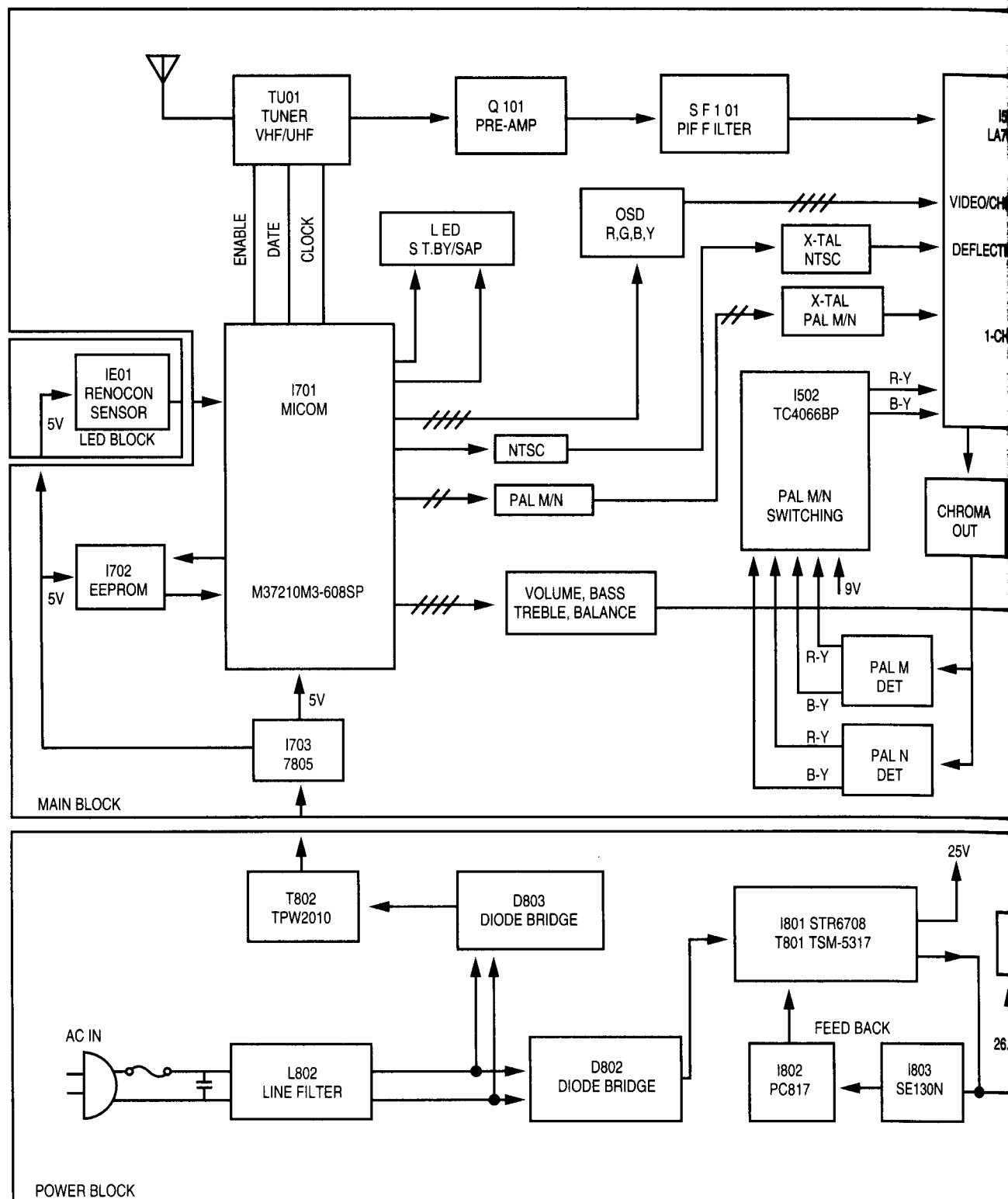
Used to add a channel into a memory or delete a channel from memory.

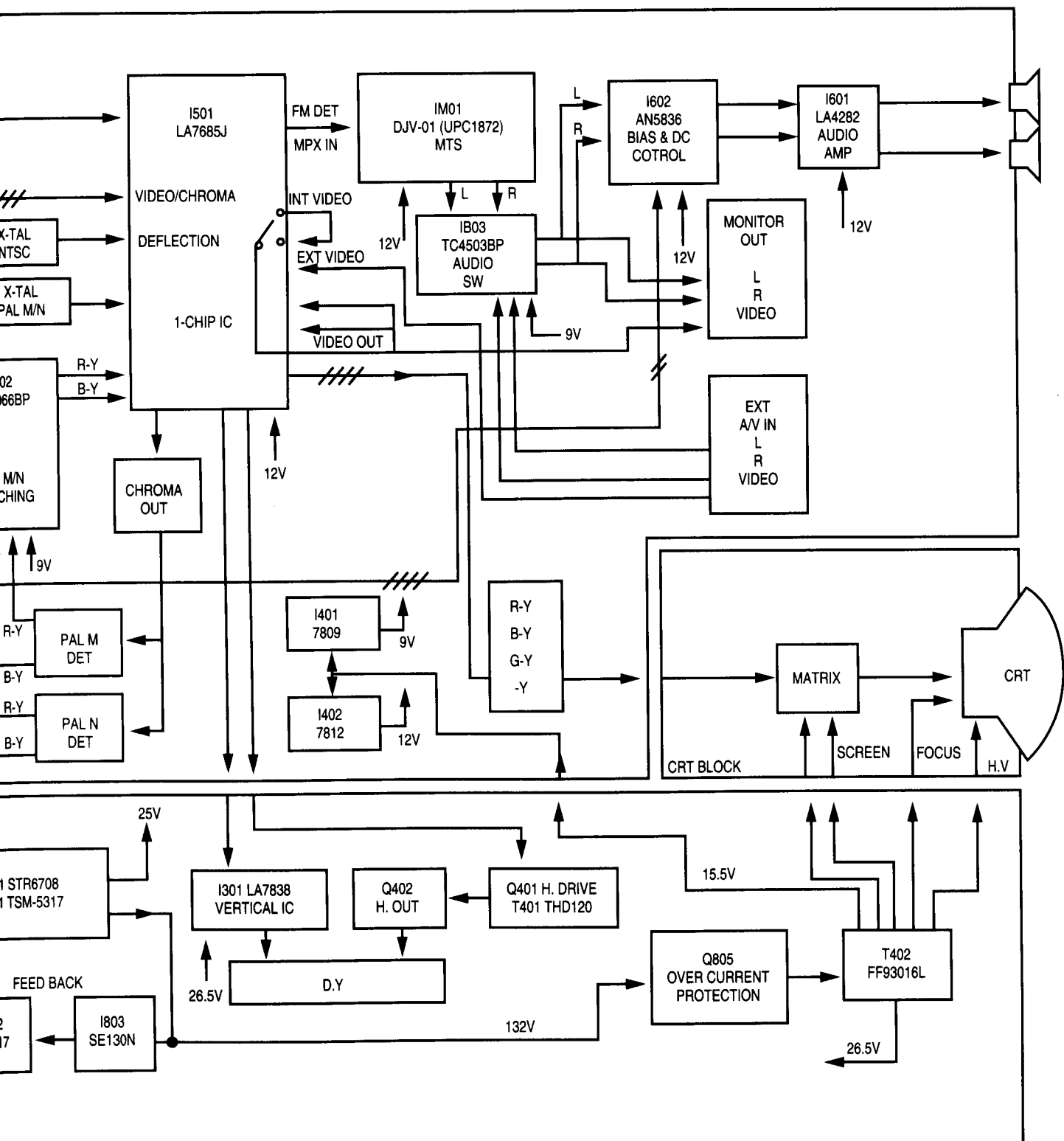
12. AUTO PICTURE

Used to display the stored picture level, automatically (SOFT, STANDARD, STRONG).

13. DEMO

Used to select AUTO-DEMO Function.





GENERAL ALIGNMENT INSTRUCTIONS

THIS RECEIVER IS TRANSISTORIZED. SPECIAL CARE MUST BE TAKEN WHEN SERVICING. READ THE FOLLOWING NOTES BEFORE ATTEMPTING ALIGNMENT.

- Alignment requires an exact procedure and should be undertaken only when necessary.
- The test equipment specified or its equivalent is required to perform the alignment properly. The use of a equipment which does not meet these requirements may result in improper alignment.
- Correct matching of the equipment is essential. Failure to proper matching will result in responses which cannot represent the true operation of the receiver.
- Use of excessive signal from a sweep generator can cause overloading of receiver circuit. Overloading should be avoided to obtain a true response curve. Insertion of markers from the marker generator should not cause distortion of the response.
- The AC Power line voltage should be kept within from 110 to 220 volts while alignment.
- Do not attempt to connect or disconnect any wire while the receiver is in operation.
Make sure the power cord is disconnected before replacing any parts in the receiver.

TEST EQUIPMENTS.

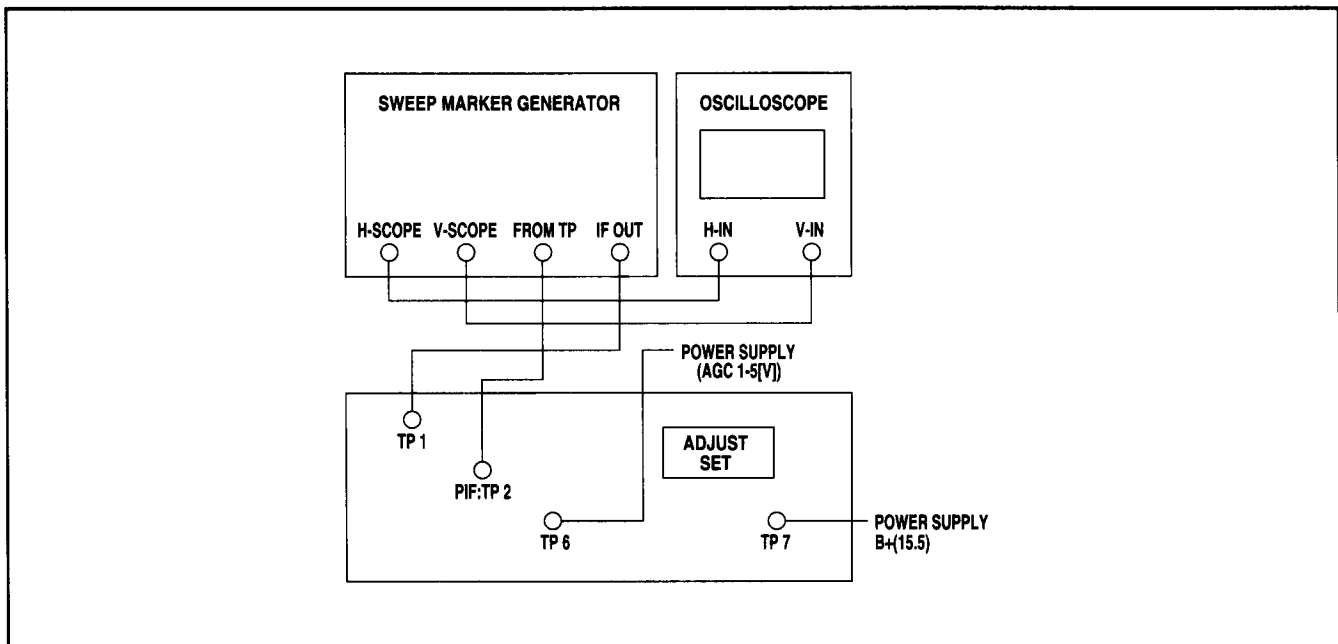
Digital voltmeter	National Model VP-2600A or equivalent.
Oscilloscope.....	Tektronix Model 2215A or equivalent.
Direct/Low-capacity probe	Taktronix Model P6120 or equivalent. (Accessory of oscillocope)
Color Bar/Dot/Crosshatch generator	Tektronix Model 146 or equivalent.
PIF sweep marker generator.....	Nihon Tsushinki Model 4723 or equivalent.
Power supply	Academy Model 150A or equivalent.
PAL M/N DEM/Color-Bar generator	PHILIPS PM 5518 or equivalent.
TV sound Multiplex Modulator	MODE 6244 NIHON TUSHINKI or equivalent.
TV ALL CHANNEL UP CINVERTER	EIDEN 485C-X or equivalent.
Multisystem TV IF Modulator	EIDEN 146F or equivalent.

■ PIF ADJUSTMENT

A.TEST EQUIPMENTS.

- 1.DC POWER SUPPLY 30V 500mA : 1 EACH
10V 10mA : 1 EACH
- 2.PIF SWEEP MARKER GENERATOR : 480- μ 80,LSW-480
- 3.OSCILLOSCOPE : 1EACH

B.CONNECTION OF THE TEST EQUIPMENTS.



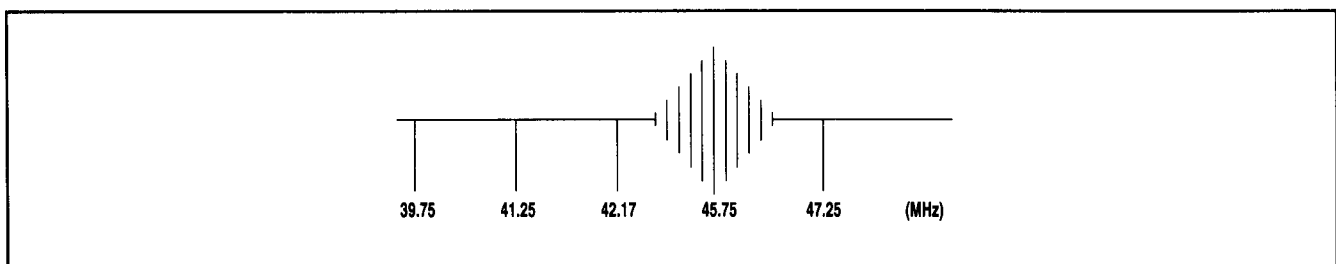
(Fig. 1)

C.ARRANGEMENTS.

- 1.Connect the test equipments as shown in Fig.1.
- 2.Rotate the VR102(RF AGC VOLUME)fully to counterclockwise.
- 3.Set the frequency of the (sweep marker generator at) 39.75MHz(UPPER NEXT CH), 41.25MHz(SOUND), 42.17MHz(CHROMA), 45.75MHz(VIDEO), 47.25MHz(LOWER NEXT CH).

D.ORDER OF THE ADJUSTMENT.

- 1.Connect the 'FROM TP' to TP2.
- 2.Set PIF SWEEP MARKER GENERATOR OUTPUT for 30mVrms.
- 3.Vary the IF AGC Voltage(TP6)for maximum level on scope.
- 4.Adjust L107(PIF VCO COIL)to the point of concordance of P MAKER with BEAT.
(Refer to Fig. 2)



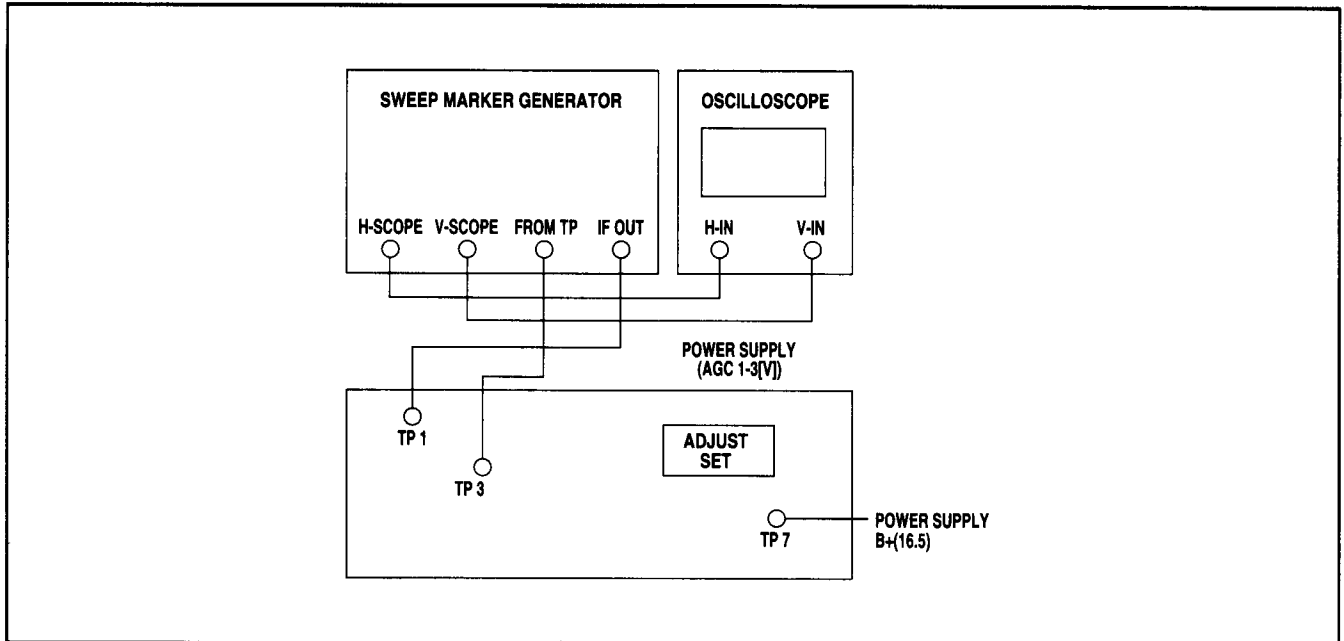
(Fig. 2 PIF ADJUSTMENT WAVEFORM)

■ AFT ADJUSTMENT

A.TEST EQUIPMENTS.

- 1.DC POWER SUPPLY 30V 500mA : 1 EACH
- 2.PIF SWEEP MARKER GENERATOR :480- μ 80.LWS-480
- 3.OSILLOSCOPE : 1EACH

B.CONNECTION OF THE TEST EQUIPMENTS.



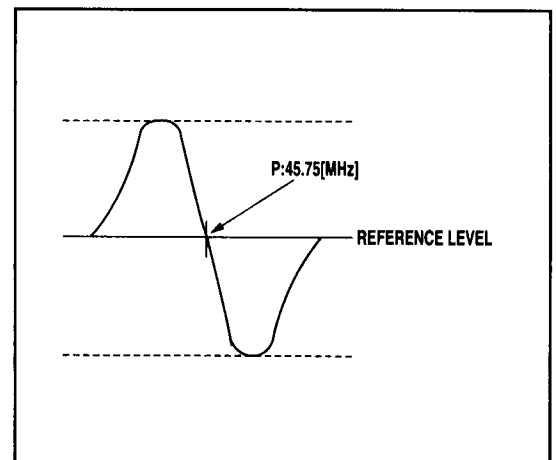
(Fig. 3)

C.ARRANGEMENTS.

- 1.Connect the test equipments as shown in Fig. 3.
- 2.Set the frequency of the SWEEP MARKER GENERATOR at 39.75MHz(UPPER NEXT CH), 41.25MHz(SOUND), 42.17MHz(CHROMA), 45.75MHz(VIDEO), 47.25MHz(LOWER NEXT CH).

D.ORDER OF THE ADJUSTMENT.

- 1.Connnext the 'FROM TP'to the TP3 under condition that PIF adjustment have done.
- 2.Adjust the DETECTION COIL OF AFT (L106)ad shown in Fig. 4.



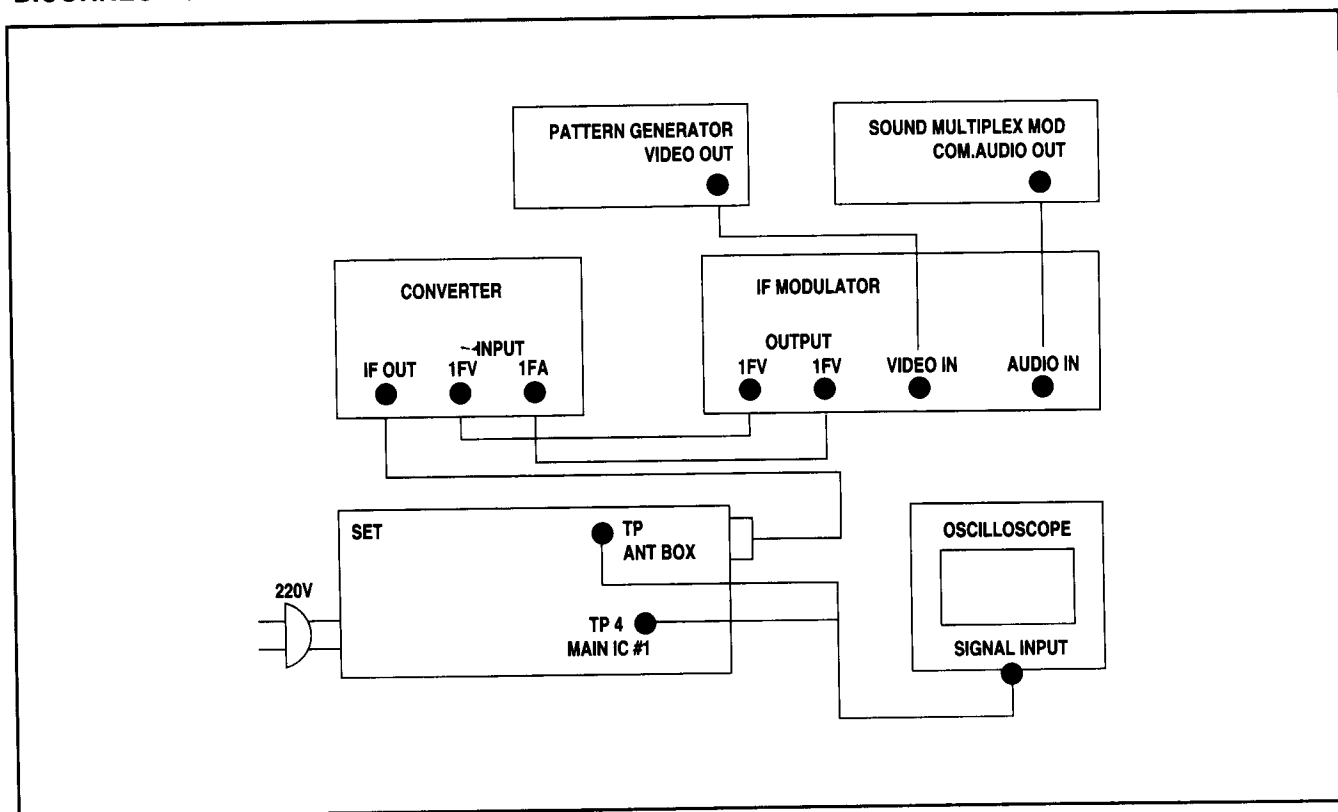
(Fig. 2 AFT OUTOUT WAVEFORM)

■ SIF DET.COIL ADJUSTMENTS

A.TEST EQUIPMENTS

- 1.TV SOUND MULTIPLEX MODULATOR (U.S.A):MODE 6244 NIHON TUSHINKI
- 2.OSCILLOSCOPE : 1EACH
- 3.TV ALL CHANNEL UP CONVERTER EIDEN 458C-X
- 4.MULTISYSTEM TV IF MODULATOR:EIDEN 146F
- 5.PATTERN GENERATOR:PHILLIPS PM 5518-TX

B.CONNECTION OF THE EQUIPMENTS



(Fig. 5)

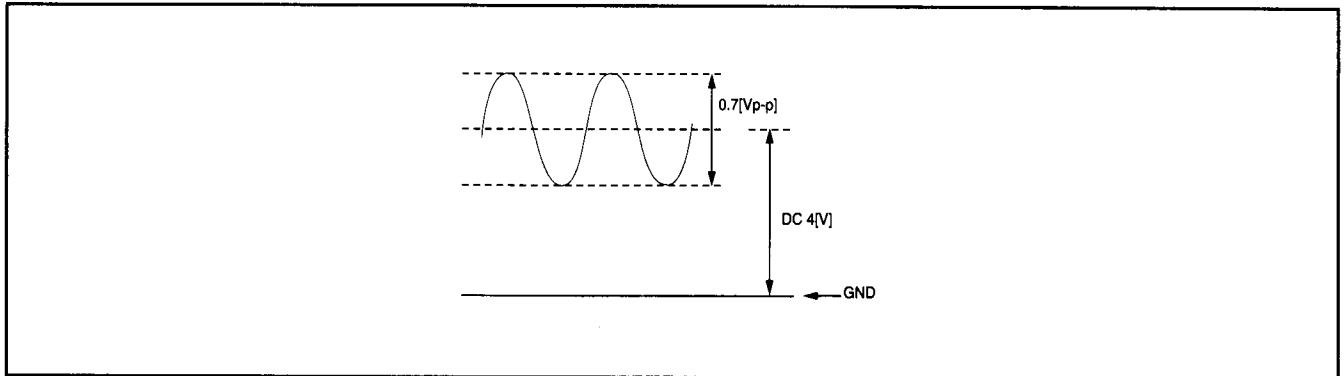
C.ARRANGEMENTS

- 1.Connect the test equipments as shown in Fig.5.
- 2.Setting of the PATTERN GENERATOR
 - Set the system switch of the rear pannel at 6(NTSC).
 - Select the CH2 (55.25 MHz)
 - Select the color bar pattern.
- 3.Setting of the SOUND MULTIPLEX MODULATOR
 - Select the MONO, 1KHz
 - Turn the NR and PRE-EM. off
 - Check that the scope shows MONO 100%

D ORDER OF THE ADJUSTMENT

METHOD 1

1. Connect the probe of OSCILLOSCOPE to the TP4.
2. Adjust the FM DET. COIL(L110) for maximum amplitude of sinewave. (refer to Fig. 6)



(Fig. 6 FM OUTPUT WAVEFORM)

3. Check if DC of the waveform is 4V
4. Repeat 2), 3) if DC is not 4V.
5. Connect the probe of OSCILLOSCOPE to TP5 [TP5 IM 01 (MTS module) #7 MPX IN].
6. Turn on the NR of SOUND MODULATOR and pre-em.
7. And then, Adjust the VR101 so that INPUT LEVEL becomes $0.424[V_{p-p}]$.
8. Check if $L+R=0.424[V_{p-p}]$ and $L-R=0.848[V_{p-p}]$, after the adjustment.
9. If not satisfy item 8), repeat from 3) to 7).

METHOD 2

1. Tune in MONO 100% MOD. CH.
2. Adjust L110 FM DET Coil for TP 4 to be DC 4[V] of sinewave.
3. Turn in the CH of STEREO "L-only".
4. Adjust the VOLUME to be maximum, the BALANCE to be center.
5. Adjust VR101 for R OUT (P602) to be minimum.

■ SCREEN VOLTAGE ADJUSTMENT

- A. Operate the receiver for at least 30 minutes with receiving RETMA PATTERN.
- B. Turn on the S551 of CRT PCB.
- C. Rotate the SCREEN VOLUME to adjust the white peak's disappearing point.
- D. Turn the LEVEL SWITCH(S551) off.

■ FOCUS ADJUSTMENT

- A. Operate the receiver for at least 30 minutes with receiving RETMA PATTERN.
- B. Set the FOCUS VOLUME of the FBT at a most clear viewing level.

■ WHITE BALANCE ADJUSTMENT

- A. Operate the receiver for at least 30 minutes with receiving WINDOW PATTERN<(B-ONLY)+(COLOR BAR)>.
- B. Set the R.G.B BIAS CONTROL VOLUME (VR579,VR580,VR581)of the CRT DRIVE PCB to minimum.
- C. Set the G.B DRIVE CONTROL VOLUME (VR582,VR583)of the CRT DRIVE PCB to the mechanical center.
- D. Adjust the R.G.B BIAS VOLUME to set WHITE in low brightness(5 FOOT LAMBERT).
- E. Adjust the G.B DRIVE VOLUME to set WHITE in high brightness(200 FOOT LAMBERT).
- F. Check the WHITE BALANCE varing CONTRAST,BRIGHTNESS CONTROL in low brightness and high brightness.

■ SUB BRIGHT ADJUSTMENT

- A. Operate the receiver for at least 30 minutes with receiving COLOR BAR PATTERN.
- B. Set the CONTRAST,BRIGHTNESS CONTROL to minimum.
- C. Rotate SUB BRIGHT CONTROL VOLUME(VR201)to the point of disappearance of the second PATTERN to the right.

■ RF AGC ADJUSTMENT

- A. Tune in a COLOR BAR of 63 dBu antenna input.
- B. Set the COLOR CONTROL to minimum.
- C. Set the CONTRAST ,BRIGHTNESS CONTROL to center.
- D. Adjust the AGC DELAY CONTROL VOLUME(VR 102) to set the AGC voltage(TP 101) $6V \pm 0.1V$.

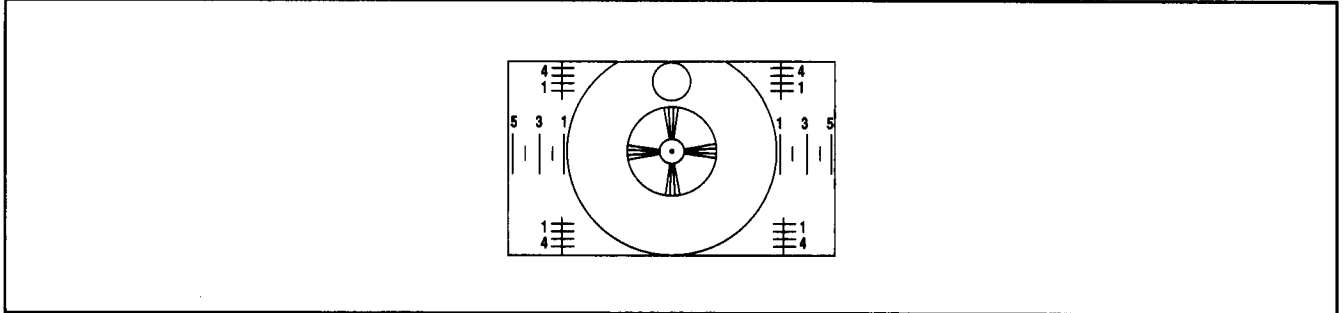
■ VERTICAL CENTER ADJUSTMENT

- A. Adjust the SW301 to accord VERTICAL CENTER LINE with CRT mechanical center.

■ VERTICAL HEIGHT ADJUSTMENT

A. Tune in a RETMA PATTERN.

B. Adjust the V-SIZE VOLUME(VR 301) to make the screen as shown in Fig 7.



(Fig. 7 V-HEIGHT ADJUSTMENT SCREEN)

■ HORIZONTAL CENTER ADJUSTMENT

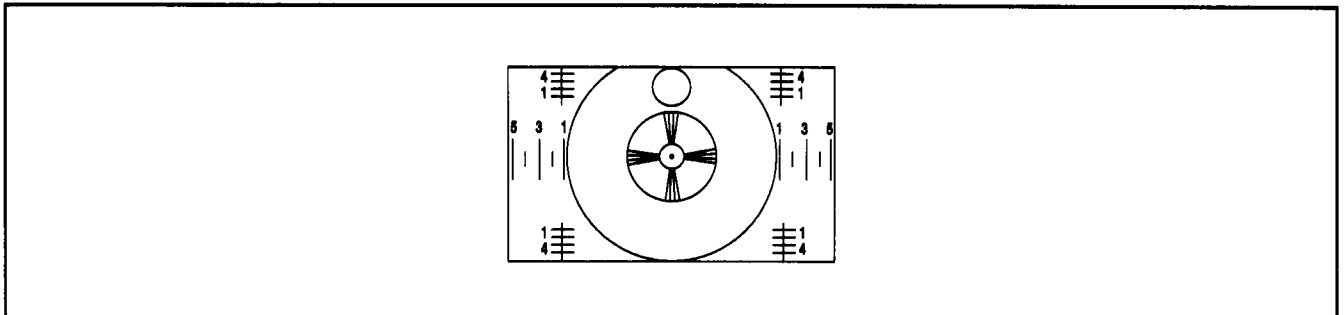
A. Tune in a RETMA PATTERN.

B. Adjust the H-CENTER VOLUME(VR202) to equalize WIDTH of left and right.

■ HORIZONTAL WIDTH ADJUSTMENT

A. Tune in a RETMA PATTERN.

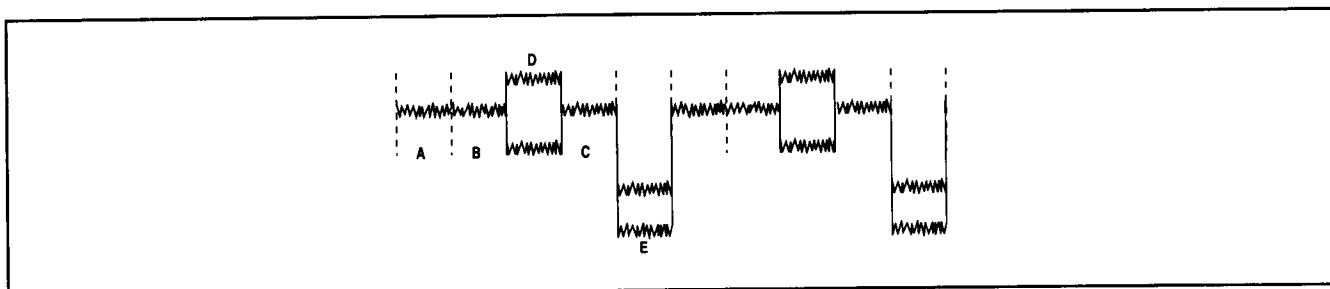
B. Rotate the WIDTH COIL(L402) to adjust HORIZONTAL WIDTH as shown in Fig. 8.



(Fig. 8 HORIZONTAL WIDTH)

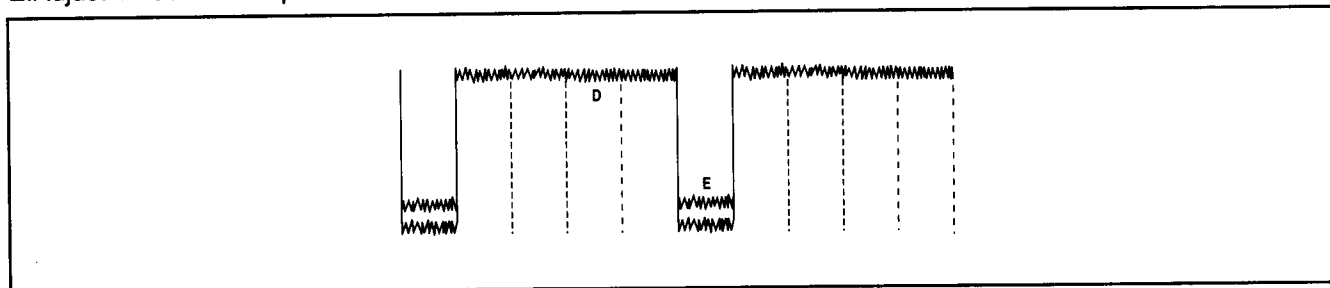
■ PAL M/N ADJUSTMENT

- A.Set VR501,VR502 at the mechanical center.
- B.Set the PATTERN GENERATOR as PAL-N.
- C.Connect the probe to the B-Y out.
- D.Turn in PAL-N DEM PATTERN.



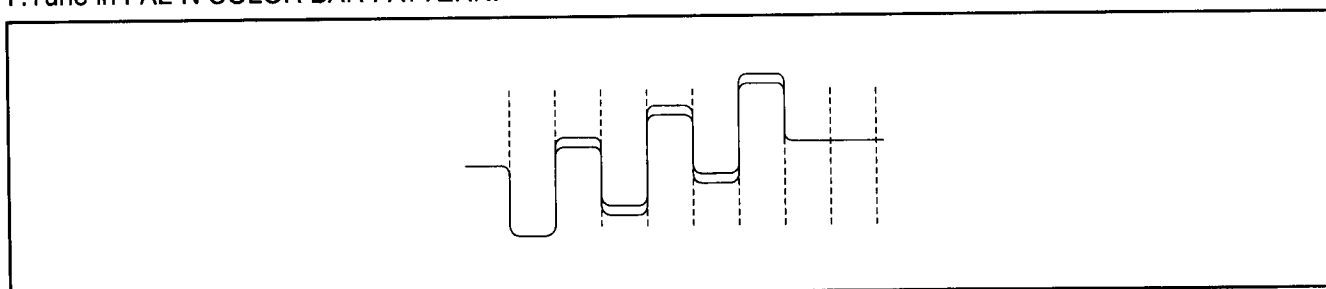
(Fig. 9)

- E.Adjust VR502 for Amplitude Error of D and E to be minimum.



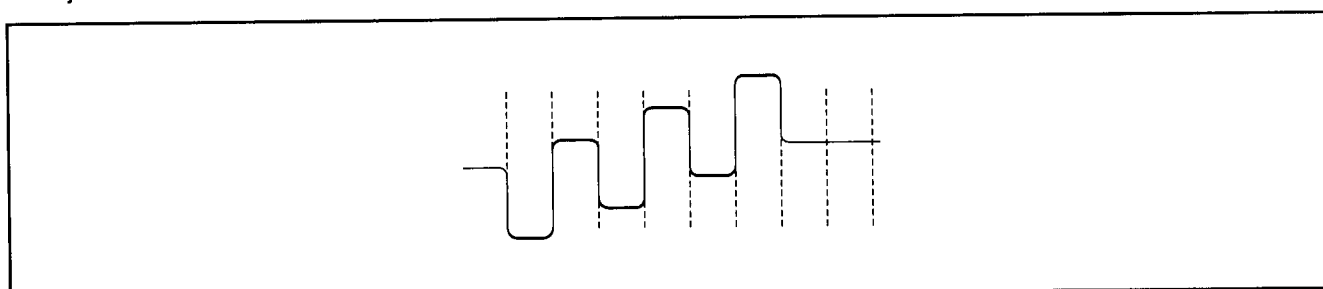
(Fig. 10)

- F.Tune in PAL-N COLOR BAR PATTERN.



(Fig. 11)

- G.Adjust L504 for A,B,C,D to be equal (for minimum PHASE ERROR)



(Fig. 12)

- H.Turn in PAL-N DEM PATTERN. If there is an ERROR, repeat the process of E-G.
- I.Repeat the process of D~H by Adjusting VR501 and L503, with receiving PAL-M DEM / COLOR BAR PATTERN.

■ DESCRIPTION OF THE CIRCUIT OPERATION

■ SUMMARY of CM-865 CHASSIS

This CHASSIS is designed to correspond to the stereo sound broadcasting and the bilingual sound broadcasting and also the 3- system is applied.

Features of the CM-865

- VIDEO, CHROMA, DEFLECTION in 1 chip IC.
- Automatic switching of 3-SYSTEM(NTSC-M, PAL-M, PAL-N)(μ -COM).
- FS(FREQUENCY SYNTHESIZER)TUNNING SYSTEM
- Function of LAST MEMORY against the electric failure(E²PROM:CAT93C56).
- Separation of PIF and SIF(SAW \rightarrow 1802L).
- Minimization of Ringing by applying ringless FBT(FFA94024L).
- Function of maintenance of the fixed vertical height level against the change of AC Power frequency.
- OVER CURRENT PROTECTION CIRCUIT.
- Elimination Circuit of POP Noise.
- High Power SOUND(5.0W+5.0W).
- No adjustment of the sound by applying MTS Module(DJV-01).
- Enhancement of the sound quality by the Buzz canceller(LA-7685J).

■ OPERATION CHARACTERICS OF EACH BLOCK

A. μ -COM BLOCK

1. μ -COM(M37210M3-608SP)PIN

PIN NO	ABBRV	NAME	IN/OUT	FUNCTION		
1	H-SYNC	HD	INPUT	HORIZONTAL SYNCHRONIZED INPUT		
2	V-SYNC	VD	INPUT	VERTICAL SYNCHRONIZED INPUT		
3	PWM0	VOLUME	OUTPUT	PWM OUTPUT OF 63 LEVEL		
4	PWM1	COLOR	OUTPUT	PWM OUTPUT OF 63 LEVEL		
5	PWM2	BRIGHT	OUTPUT	PWM OUTPUT OF 63 LEVEL		
6	PWM3	SHARPNESS	OUTPUT	PWM OUTPUT OF 63 LEVEL		
7	PWM4	CONTRAST	OUTPUT	PWM OUTPUT OF 63 LEVEL		
8	PWM5	BASS	OUTPUT	PWM OUTPUT OF 63 LEVEL		
9	PWM6	TREBLE	OUTPUT	PWM OUTPUT OF 63 LEVEL		
10	PWM7	BALANCE	OUTPUT	PWM OUTPUT OF 63 LEVEL		
11	A-D5	AFT	INPUT	AFT INPUT FROM RF		
12	P41	MPX1	OUTPUT	P41	P40	
				L	L	MONO
13	P40	MPX2	OUTPUT	H	H	STEREO
				H	L	SAP
14	D-A	ON TIMEER	OUTPUT			
15	P35	COLOR KILLER	INPUT			
16	INT 1	REMOTE	INPUT	REMOTE CONTROL SIGNAL INPUT		
17	P33	50/60	INPUT	3-SYSTEM AUTO SWITCHING("L" 50HZ)		
18	TIM2	SD	INPUT	SYNC. DETECTION("L"INPUT)		
19	P24	ENABLE	OUTPUT	TUNING		
20	P25	ST/SAP LED DRIVE	OUTPUT			

PIN NO	ABBRV	NAME	IN/OUT	FUNCTION
21	P26	MUTE	OUTPUT	ACTIVE "H"
22	P27	POWER	OUTPUT	RELAY DRIVE
23	CN	VSS GND	INPUT	
24	XIN	XIN	INPUT	SYSTEM CLOCK
25	X OUT	X OUT	OUTPUT	SYSTEM CLOCK
26	VSS	GND	INPUT	
27	VCC	VCC	INPUT	
28	OSC2	OSC2	OUTPUT	OSILLATOR
29	OSC1	OSC1	OUTPUT	OSILLATOR
30	RESET	RESET	INPUT	SYSTEM RESET
31	P31	KEY IN	INPUT	
32	P30	KEY IN	INPUT	
33	P17	KEYOUT	OUTPUT	
34	P16	KEYOUT	OUTPUT	
35	P15	KEYOUT	OUTPUT	
36	P14	KEYOUT	OUTPUT	
37	P13	X-RAY	INPUT	GND(DO NOT USE)
38	P12	DATA	OUTPUT	
39	P11	VIDEO2	OUTPUT	
40	P10	TV/VIDEO	OUTPUT	
41	P7	NTSC M	OUTPUT	TV : "H" VIDEO L"
42	P6	PAL M	OUTPUT	
43	P5	PAL N	OUTPUT	
44	P4	TINT	OUTPUT	PW/M INPUT OF 63 LEVEL
45	P23	EEPROM	OUTPUT	
46	P22	CAPTION	OUTPUT	
47	P21	CLOCK	OUTPUT	
48				NON CONNECTED
49	OSD Y	Y	OUTPUT	BLANK OSD OUTPUT
50	OSD B	B	OUTPUT	BLUE OSD OUTPUT
51	OSD G	G	OUTPUT	GREEN OSD OUTPUT
52	OSD R	R	OUTPUT	RED OSD OUTPUT

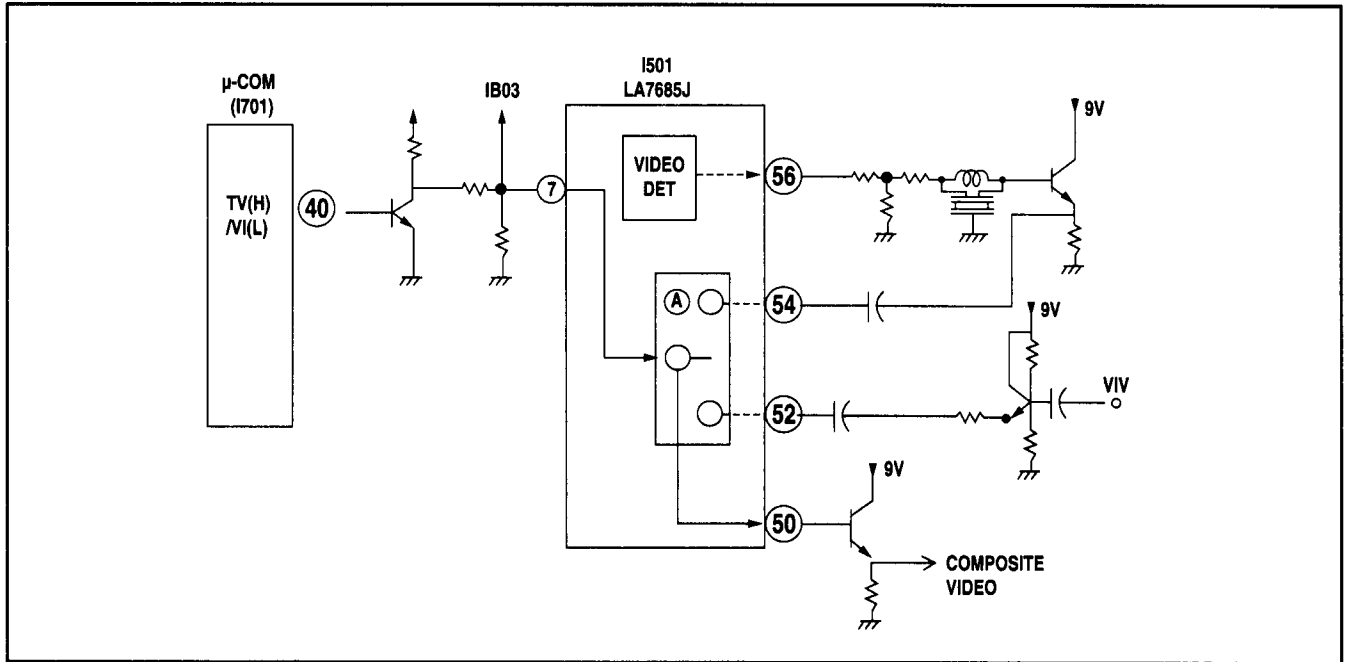
2.FUNCTION OF LAST MEMORY

Always holds a previous DATA by saving the signal of the DATA, CLOCK, ENABLE on the E²PROM.

■ VIDEO BLOCK

A. TV/VIDEO SWITCHING

1. SWITCHING BLOCK DIAGRAM



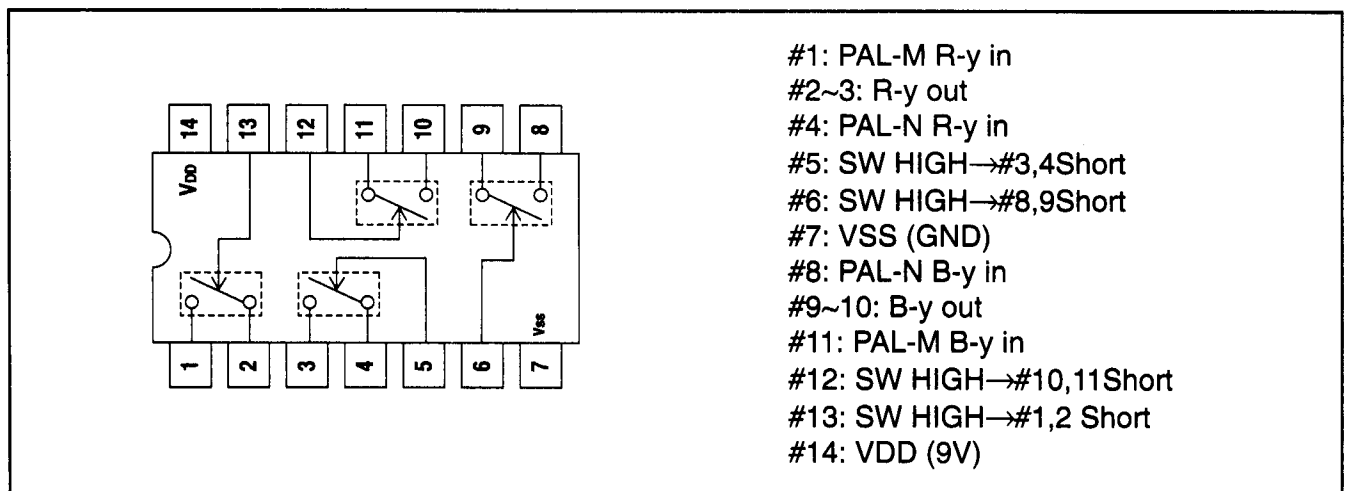
2. EXPLANATION OF THE OPERATION

- After going out to the #56, the video detected TV signals (2Vp-p) go into the #54 (1Vp-p) through 4.5 BPF(Band Pass Filter): TV Signal.
- The Outside Video Signals from the VIV jack go into the #52 (1Vp-p) through buffer. VIDEO signal.
- Output pulse from the μ-com(TV:High VIDEO:Low)go into #7 of I501 after inverting y inverter.
- According to the input pulse of the #7, ①(TV/VIDEO SWITCHING CIRCUIT)let out the video signal to the #50 if the pulse is High, and let out TV signal to the #50 if the pulse is Low.
- Output signal of the #50 is Composite Video signal and is supplied to each pin through a Buffer.

B. PAL M/N SWITCHING CIRCUIT

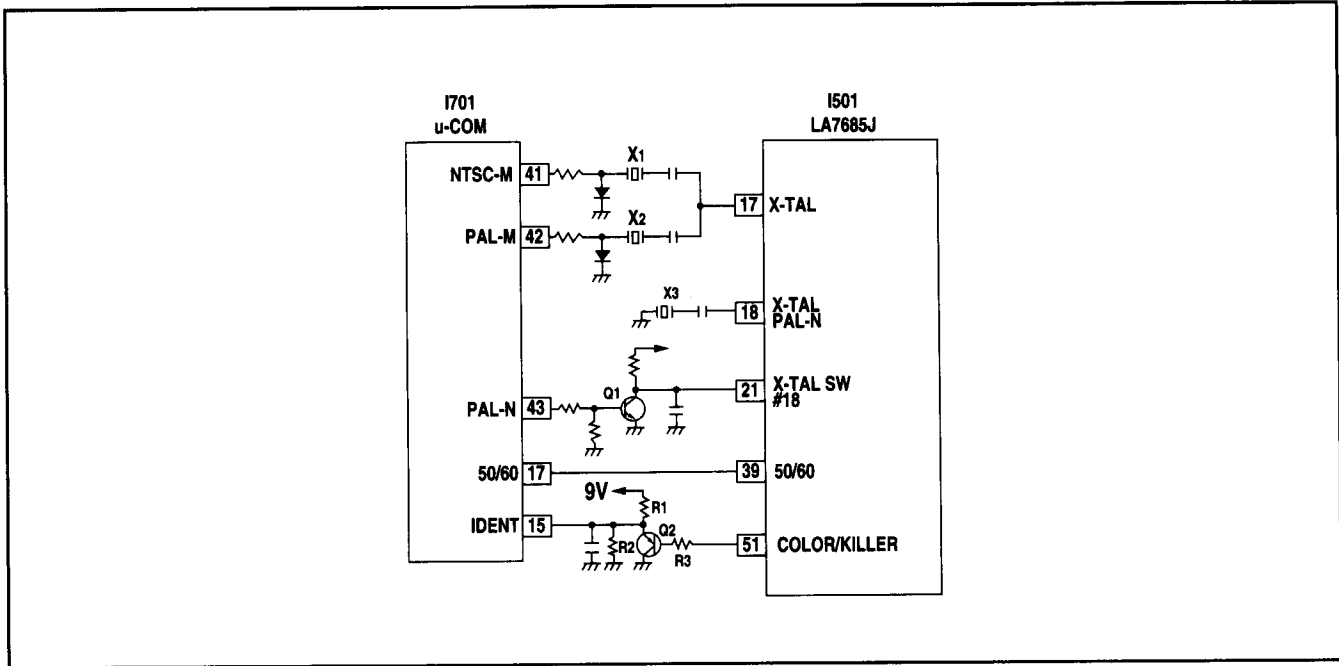
1. Outline and Operation of PAL M/N SWITCHING (TC-4066BP)IC

2. BLOCK DIAGRAM



C. OUTLINE AND OPERATION OF 3-SYSTEM AUTO SWITCHING CIRCUIT.

1.BLOCK DIAGRAM



2 EXPLANATION OF THE OPERATION

- If 50[Hz] of the I501 #39 goes into the #17 of I701, high pulse code out to the #43. This high pulse drives Q1 so that X3(PAL-N CRYSTAL) oscillates \Rightarrow PAL-N SYSTEM.
- If 60[Hz] of I501 #39 goes into the #17 of I701, the system operates as PAL-M or NTSC-M.
 - ① Q2 operates only if Base voltage is Low, so in the case of High, the voltage derived from R1 and R2 is applied to #15 of I701
 - ② In case that Base voltage of Q2 is Low, according to the charge of the voltage of #15, the comparator in the I701 switches over the system. (PAL-M \rightarrow NTSC-M, NTSC-M \rightarrow PAL-M)
- High signal of the #42 makes X2(PAL-M CRYSTAL) oscillate. \Rightarrow PAL-M SYSTEM
- High signal of the #41 makes X1(NTSC-M CRYSTAL) oscillate. \Rightarrow NTSC-M SYSTEM

3.FREQUENCY CHARACTERISTICS OF EACH SYSTEM

CLOR	VHF	UHF	SCANNING NUMBER	LINE FREQ FH	FIELD FREQ	CHOMINANCE FSC SUB CARRIER
NTSC	M	M	525	15,734[Hz]	60[Hz]	3.5795459[MHz]
PAL	M	M	525	15,734[Hz]	60[Hz]	3.575611[MHz]
PAL	N		625	15,625[Hz]	50[Hz]	3.582056[MHz]

■ SOUND BLOCK

A. AMERICAN MTS [ZENITH MTS] SYSTEM

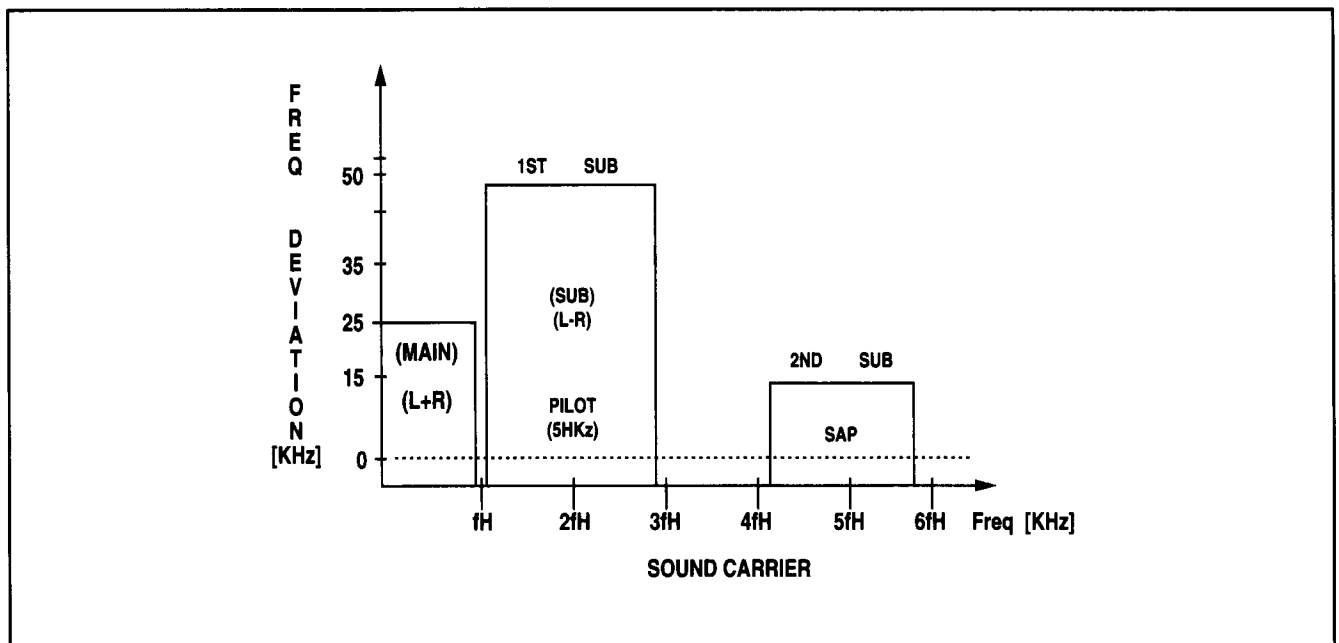
1. SUMMARY

In case of AM modulation, there are less distortion than of FM modulation but dual sound broadcasting is impossible because of the heavy cross talk.

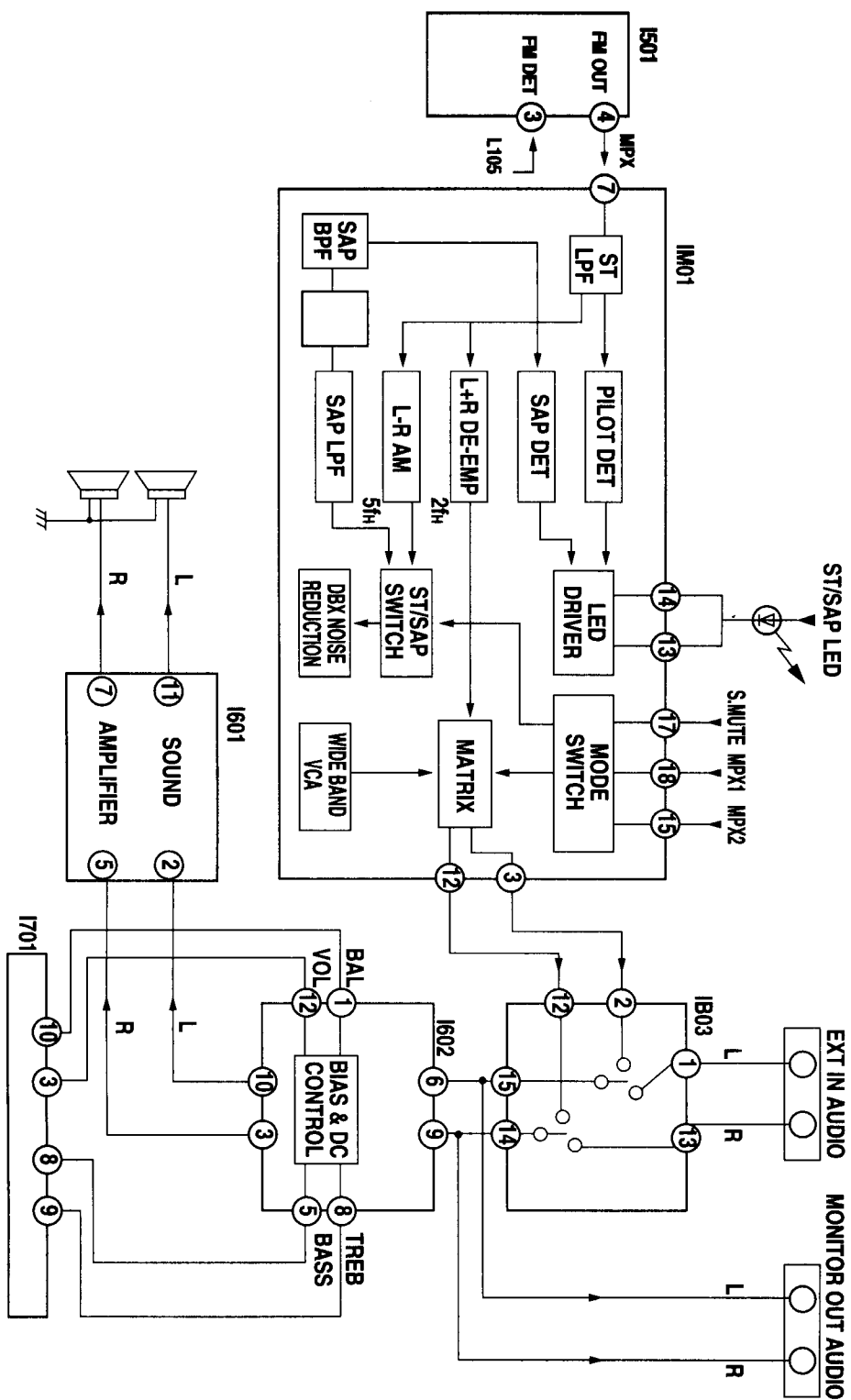
That's why FM modulation using the second sub-carrier is needed for dual sound broadcasting . So American MTS system is AM-FM and FM-FM system.

In case of AM-FM system, Noise Reduction System is needed because same modulation method between video and sub-carrier makes noise, and in the case FM-FM system, Noise Reduction System is also needed because the channel for dual sound(SAP CHANNEL) has bad S/N ratio.

2. FREQUENCY SPECTRUM OF MTS SIGNAL AND FREQUENCY DEVIATION OF CARRIER



B.SOUND BLOCK DIAGRAM



C.OUTLINE

- 1.Audio part of this CHASSIS is composed of IM01(for MTS signal progress),IB03(for EXT Audio switching),I602(for volume control) and I601 (sound AMP IC)as shown in the block diagram.
- 2.TRUTH TABLE FOR EACH MODE.

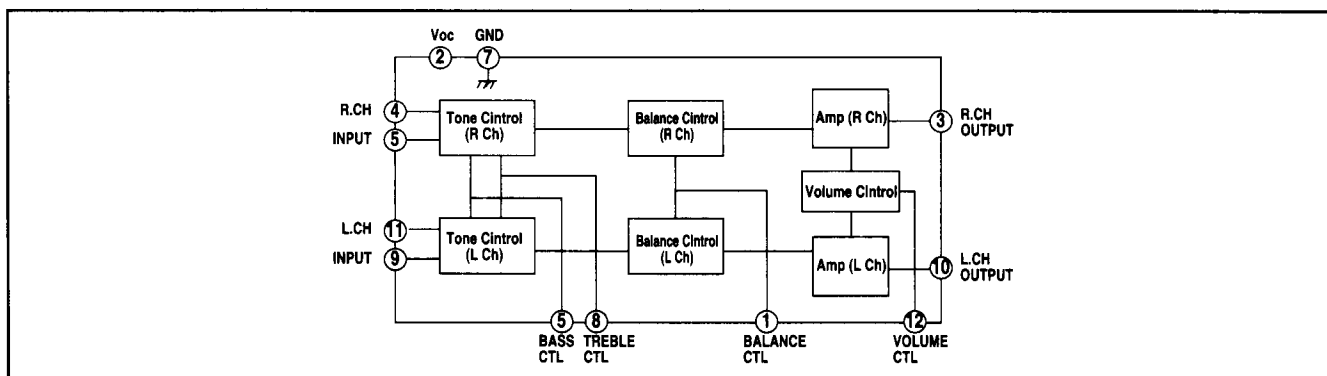
SOUND CHOICE MODE	INPUT OF IM01	
	MPX1(#18)	MPX2(#15)
MONO	L	L
STEREO	H	H
SAP	H	L

D.EXPLANATION OF THE OPERATION

- The composite audio signals detected in I501 go into the #7 of the IM01.
 - Let the input level of composite audio signals (#7) be 0.424[vp-p], in case of 100% modulation and the input of mono, 1[KHz]
- 1.MONO MODE.
 - After filtering through ST.LPF(STEREO LOW PASS FILTER),the input signal of the #7 is L+R DE-EMPHASIZED and then out to the #3(L+R), #12(L+R) through matrix circuit by the mode switch MPX1:L;MPX2:L.
 - 2.ST. MODE
 - Input signal of #7 is filtered through ST.LPF and L-R AM DEMODULATION Signal are switched from ST/SAP to Stereo by the mode switch MPX1:L;MPX2:H.
 - Selected signals go into the matrix circuit through the DBX Noise Reduction and Wide Band VCA circuit.
 - Separated L,R signals in the matrix circuit come out to the #3(L), #12(R)
 - 3.SAP MODE
 - Input signals (#7), after phase detection through SAP BPF go into the ST/SAP SWITCH through SAP LPF (5fH).
 - This signals are selected to SAP Mode by the mode switch MPX1:H MPX2:L And then go into matrix circuit through DBX Noise Reduction and Wide Band VCA
 - Matrixed signals come out to the #3(L+R) #12(L+R)

E.SUMMARY OF INT/EXT AUDIO SWITCHING & VOLUME CONTROL

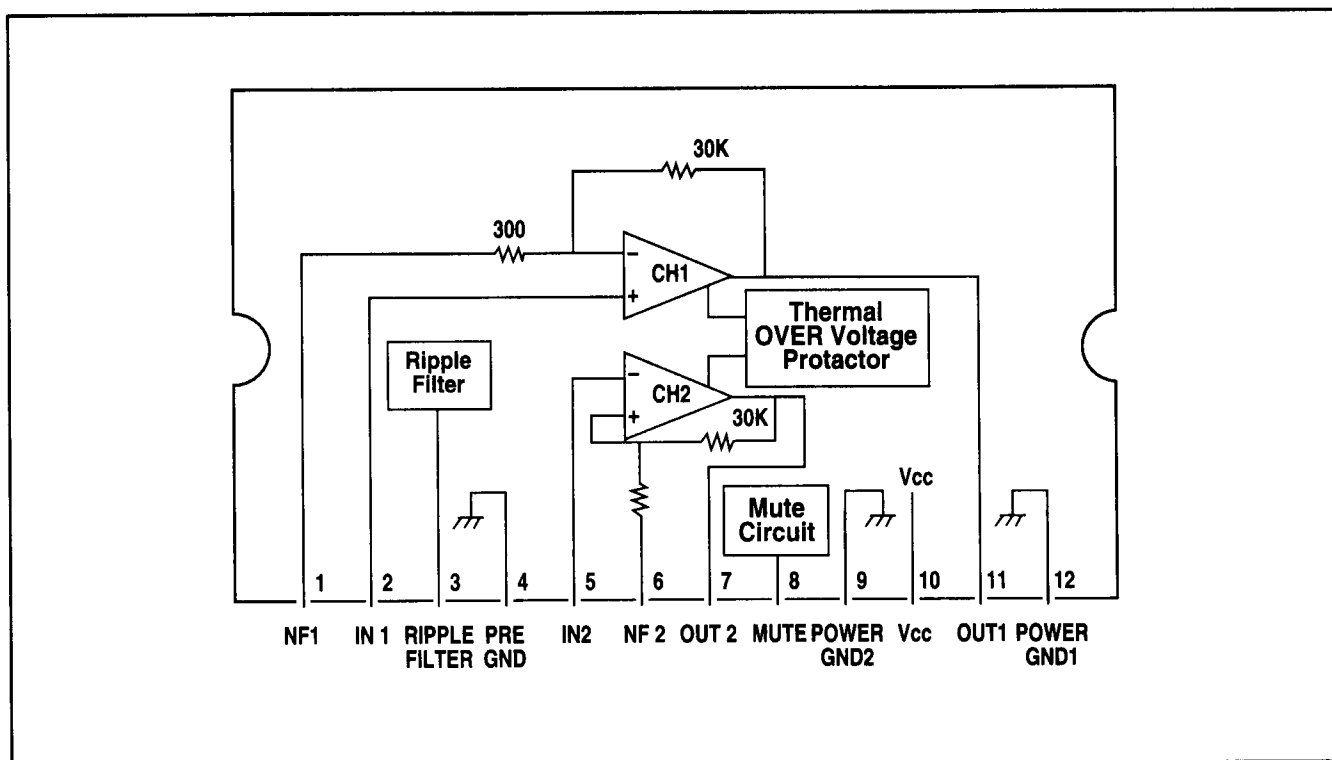
- 1.FUNCTION OF INT/EXT AUDIO SWITCHING
 - INT/EXT AUDIO SWITCHING CIRCUIT is necessary because CM-865 CHASSIS have function of monitor output(VIDIEO,AUDIO R, AUDIO L) and video input(VIDIEO, AUDIO R, AUDIO L)
 - Output signals from MTS module (TV L+R) go into the #2 and #12
 - Input signals form A/V jack (VIDEO L+R) go into #1 and #13 of IB03.
 - If voltage of #9, #10, #11 is High L+R of video signals are out to #15, #14, and if it is Low L,R of TV signals are out to #15 of #14
 - Selected L, R signals by switching go into #2 and #15 of I602
- 2 FUNCTION OF VOLUME CONTROL IC
 - BLOCK DIAGRAM



- Selected L,R signals by switching go into #9 and #6 of I602
- PWM that comes out from #5 (BASS), #9(TREBLE), #10(BALANCE), #3 (VOLUME)of I701 goes into #5 (BASS),#8(TREBLE),#1(BALANCE),#12 (VOLUME) of I602 after DC control.
- INPUT L,R signals of I602 is controlled by CH-L and CH-R and out to 10(L) #3(R) so that go into sound AMP IC I601.

F.SOUND AMP IC

1.BLOCK DIAGRAM



2.ELECTRICAL CHARACTERISTICS : (Ta=25°C)

Item	Symbol	Condition	Rated Level	Unit
Maximum power supply voltage	VCC max	Quiescent	45	V
Maximum output current	10 peak		4	A
Allowable power dissipation	Pd max	with heat sink	25	W
Operating ambient temperature	Topg		-20 to +75	°C
Storage ambient temperature	Tstg		40 to +150	°C

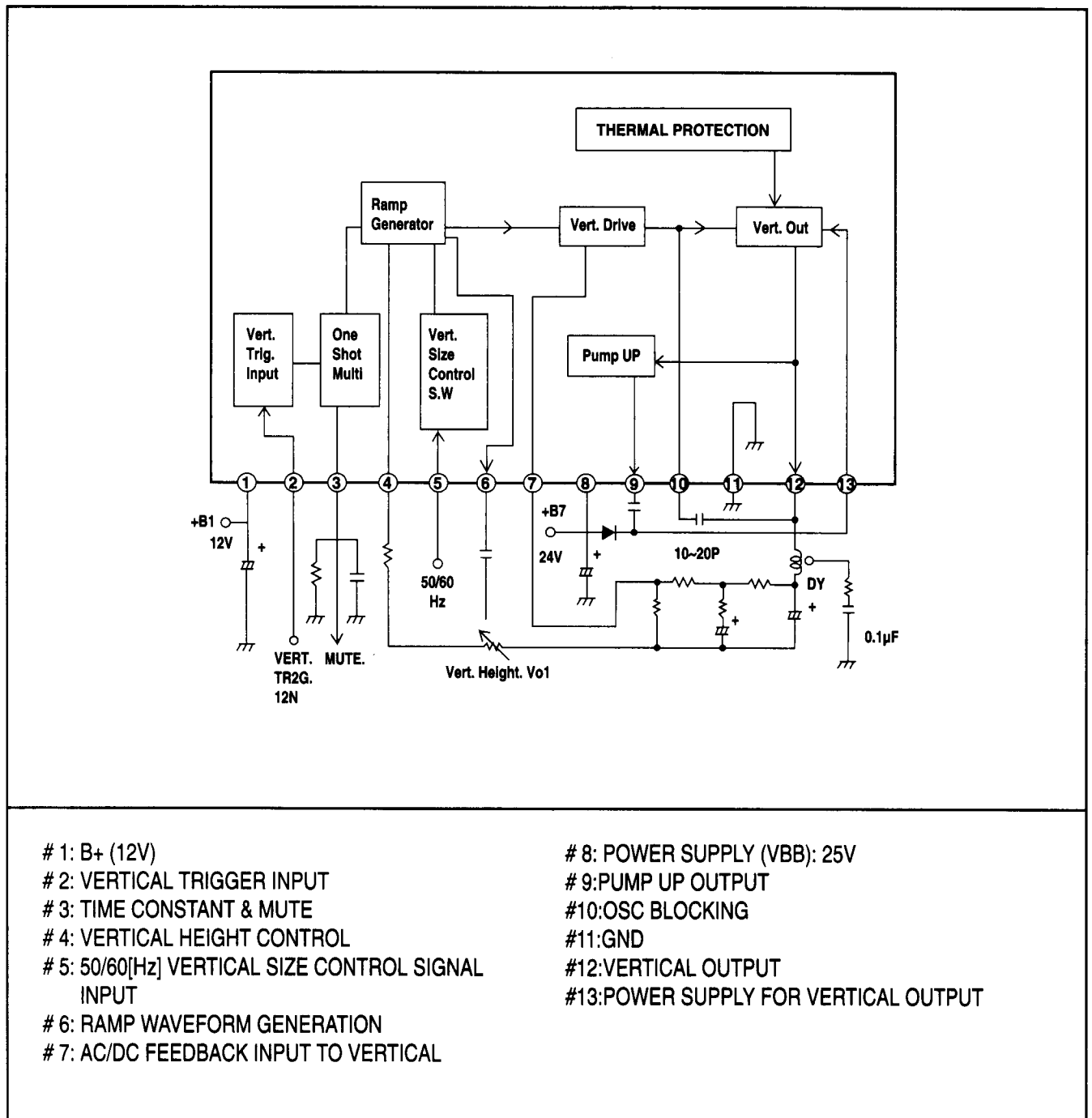
3. EXPLANATION OF THE OPERATION

- Output #3 (R), #10(L) signals go into #2 AND #5 OF I601.
- The gain of this input signals is determined by the value of "R" and "C" of the #1 and #6.
- After going out to the #7 (R) and #11 (L) through OP AMP of CH1 and CH2, L, R signals are out to the each speaker.

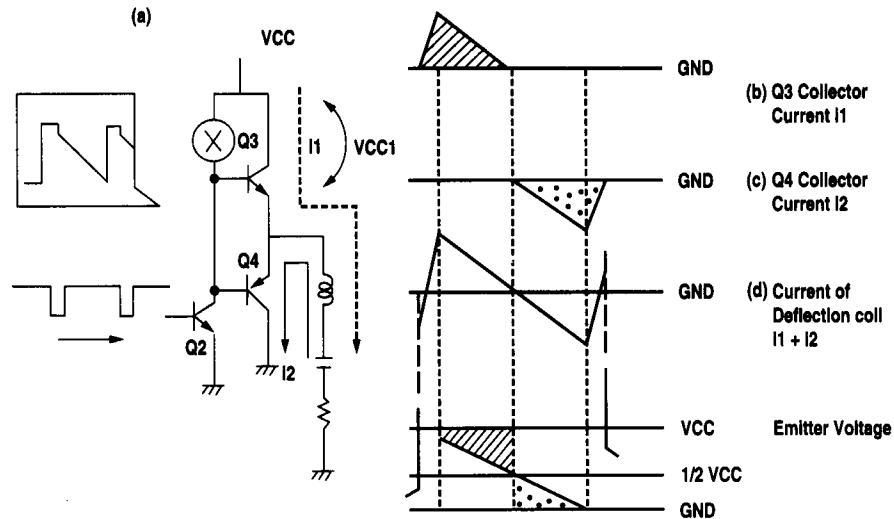
■ DEFLECTION BLOCK

This block can be separated into two part, vertical and horizontal.
Only the vertical circuit is explained here, comprehensively.

A.BLOCK DIAGRAM OF VERTICAL IC

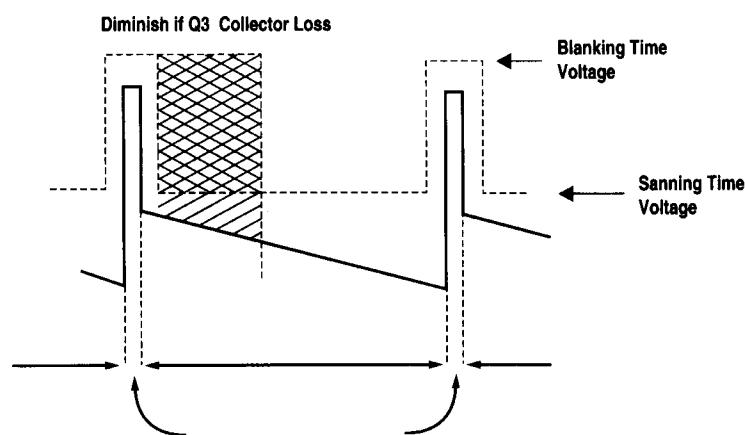


B. OPERATION OF VERTICAL



A: VERTICAL OUTPUT WAVE

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.



B: OUTPUT VOLTAGE

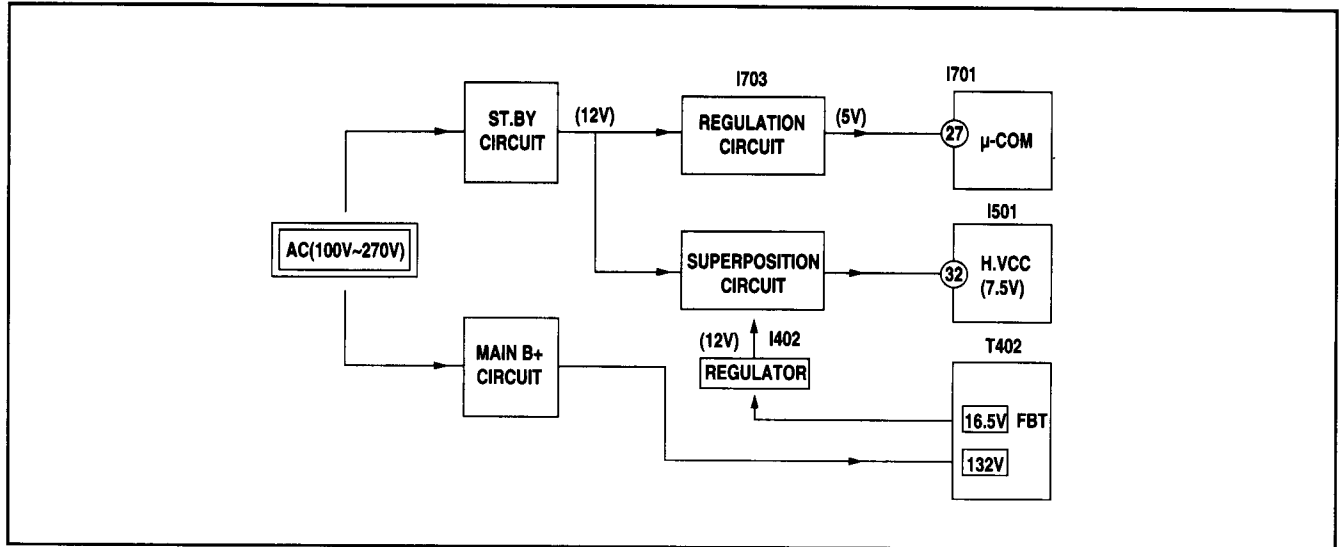
■ POWER BLOCK

The system used in power block is well-known so we don't explain the power system (refer to CH-610 CH-165 CH-120), but explain superposition circuit sufficiently.

SUPERPOSITION CIRCUIT is used for H.Vcc is for stable operation in the case of cold start.

A. H.VCC SUPERPOSITION CIRCUIT

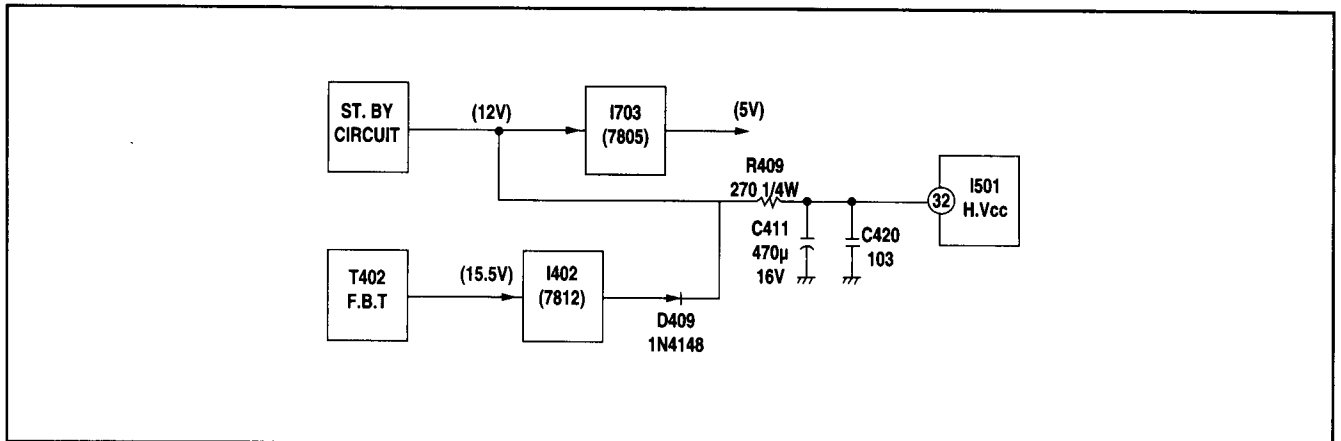
1.H.Vcc SUPPLY BLOCK DIAGRAM



2.PRINCIPLES OF SUPERPOSITION

- H.Vcc is supplied from the SMPS only in the previous circuit but this make some problem in case of cold start and non-stable B+
- When power off in the superposition circuit, H.Vcc is supplied under stand-by mode. And then after if power on, H.Vcc is supplied from the stable 15.5V line

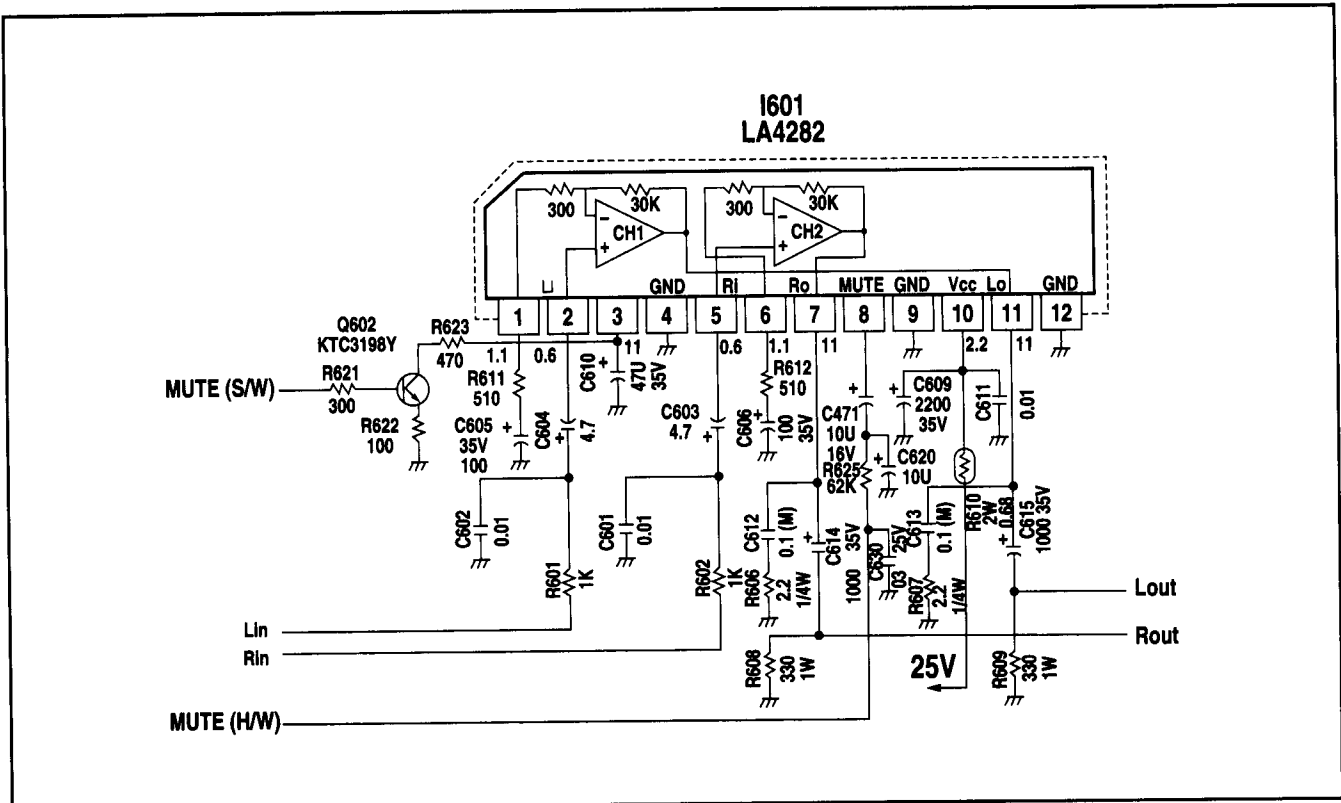
3.H.Vcc CURCUIT APPLIED TO CM-865



■ SOUND MUTE CIRCUIT

This Mute circuit is connected to the ripple filter pin (#3) of the sound AMP IC to control DC level so that may reduce POP-Noise.

A.CONFIGURATION OF THE MUTE CIRCUIT



1.MUTE (S/W)

This mute circuit is controlled by μ -com and active : 'HIGH'

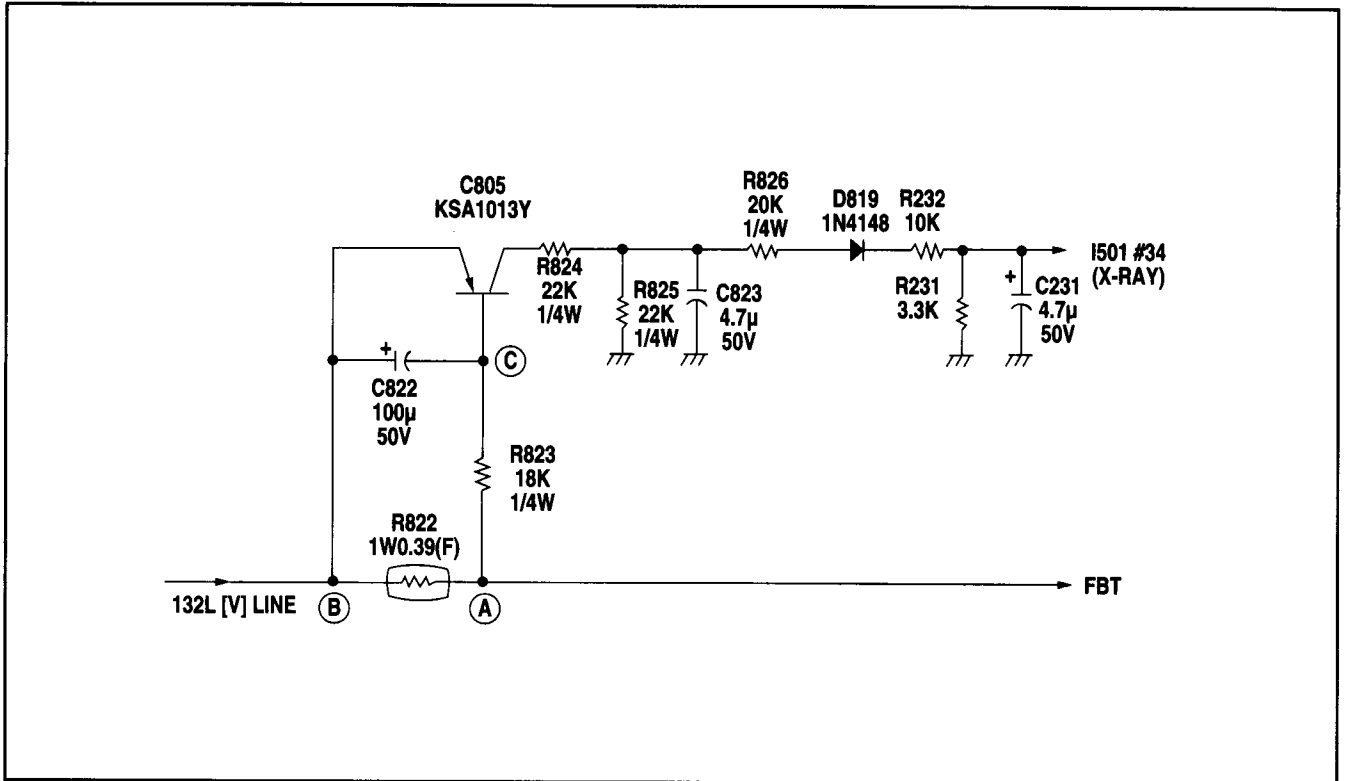
2.MUTE (H/W)

This circuit is designed to reduce POP-noise when POWER OFF

■ 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.

A.CONFIGURATION OF OCP CIRCUIT



B.EXPLANATION OF THE OPERATION

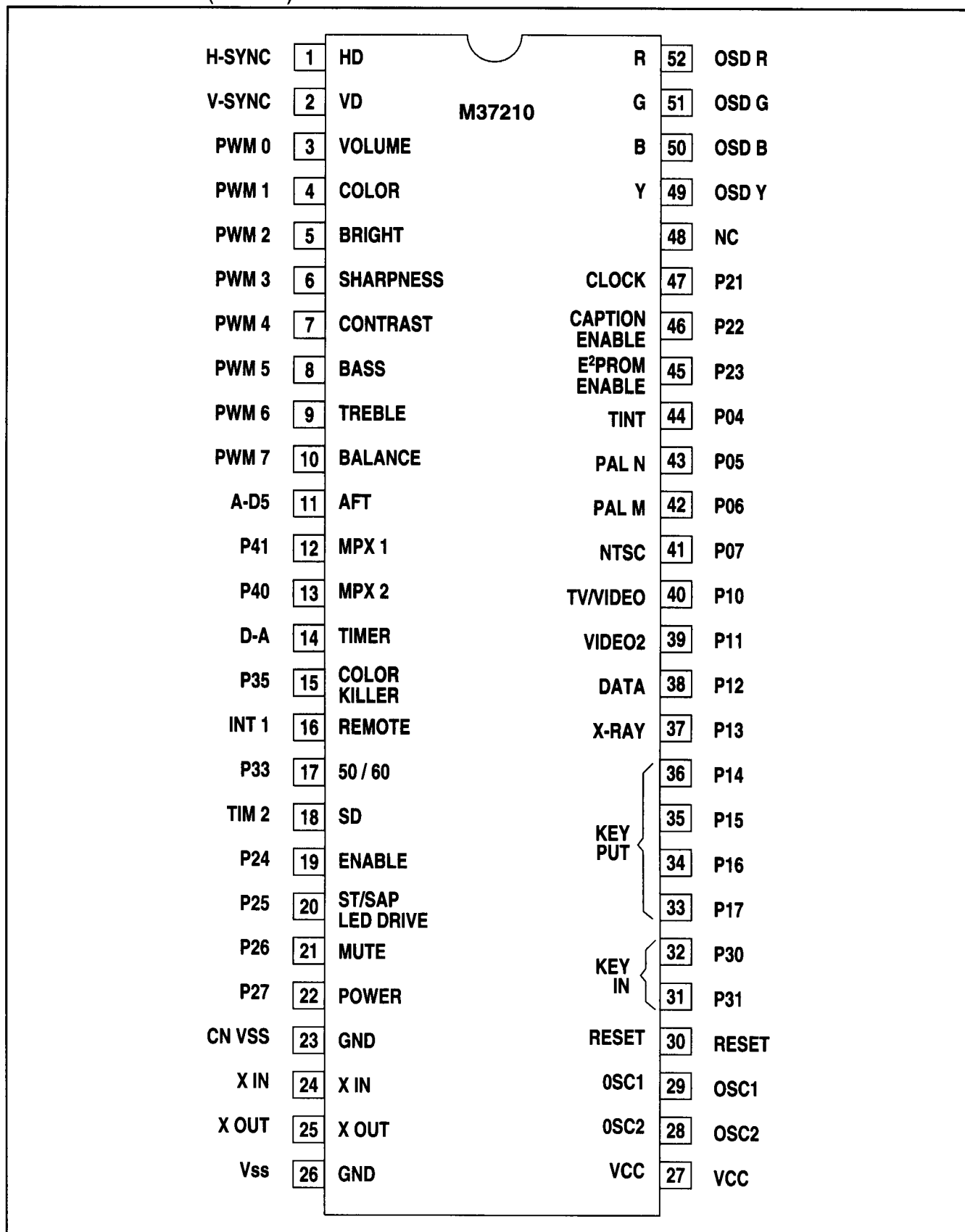
1. There is very little voltage drop at A R822 (1W 0.39) of 132 [V] line.
2. In case that the overload occurs at the rear of 132[V] line, the increase of the voltage drop at R822 bring down the base voltage of the Q805 so as to drive the Q805.
3. Because of the overload at the rear of the R822, the voltage of the C point decreases. And this makes Q805 turn on so that a voltage is applied to the #34 of I501.
4. In case that X-RAY operates by the #34 of the I501, the set is protected by stopping H.OUT of the #35.

• LA7685J: VIF/SIF/VIDEO/CHROMA/DEFLECTION 1-CHIP IC



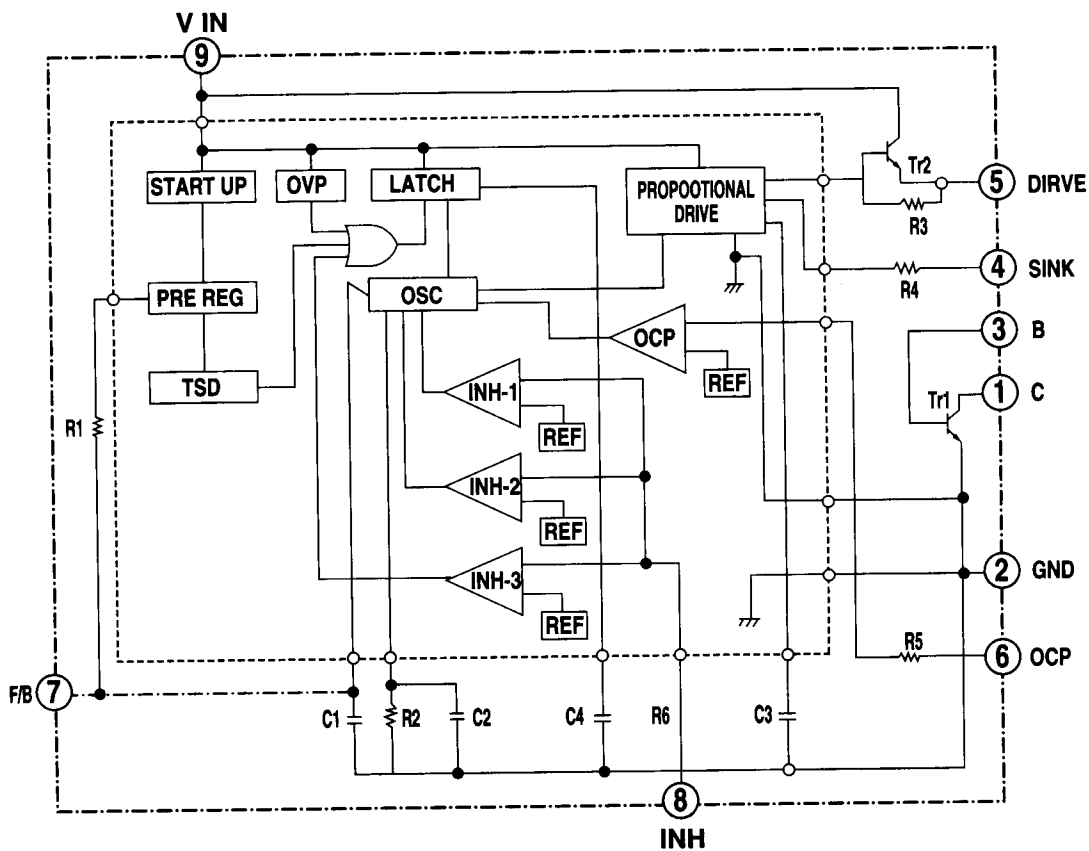
■ PIN CONFIGURATION

• M37210M3-608SP (MICOM)



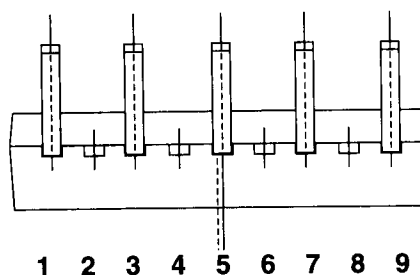
■ IC BLOCK DIAGRAM

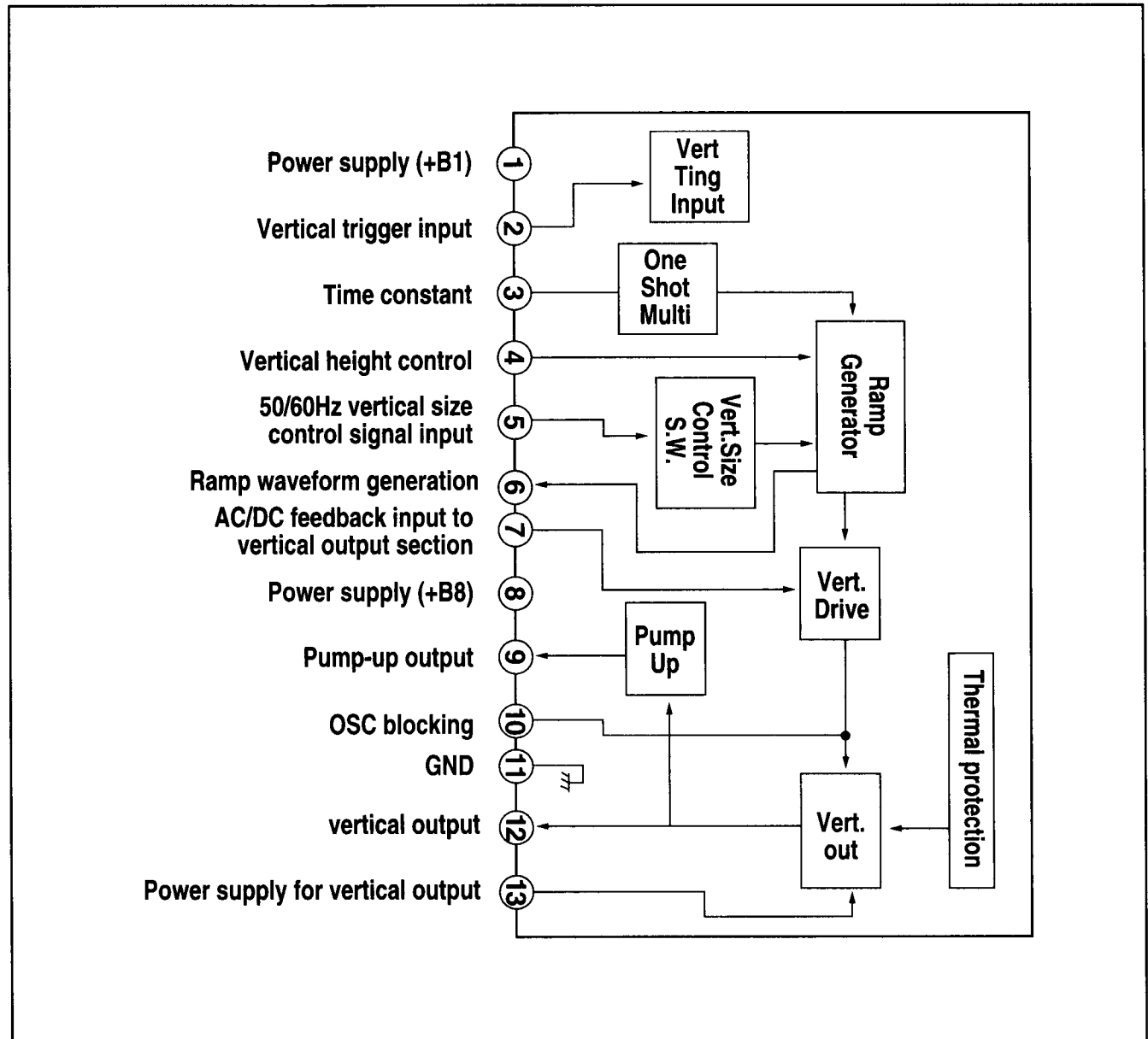
•STR6708 (POWER IC)



■ PIN IDENTIFICATION

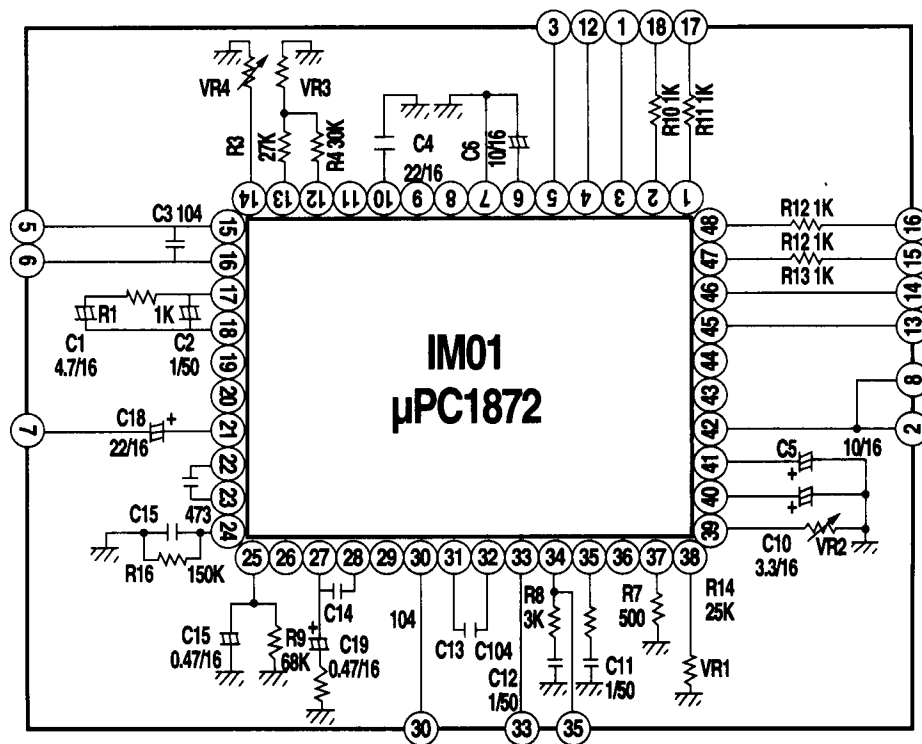
PIN NO.	NAME	FUNCTION
1	C	COLLECTOR
2	GND	GROUND
3	B	BASE
4	SINK	SINK
5	DRIVE	DRIVE
6	OCP	OVER CURRENT PROTEC.
7	F/B	FEED BACK
8	INH	INHIBIT
9	Vin	V INPUT





■ DJV-01 (μ PC 1872)

- U.S.A MULTI CHANNEL Television Sound Hybrid IC.

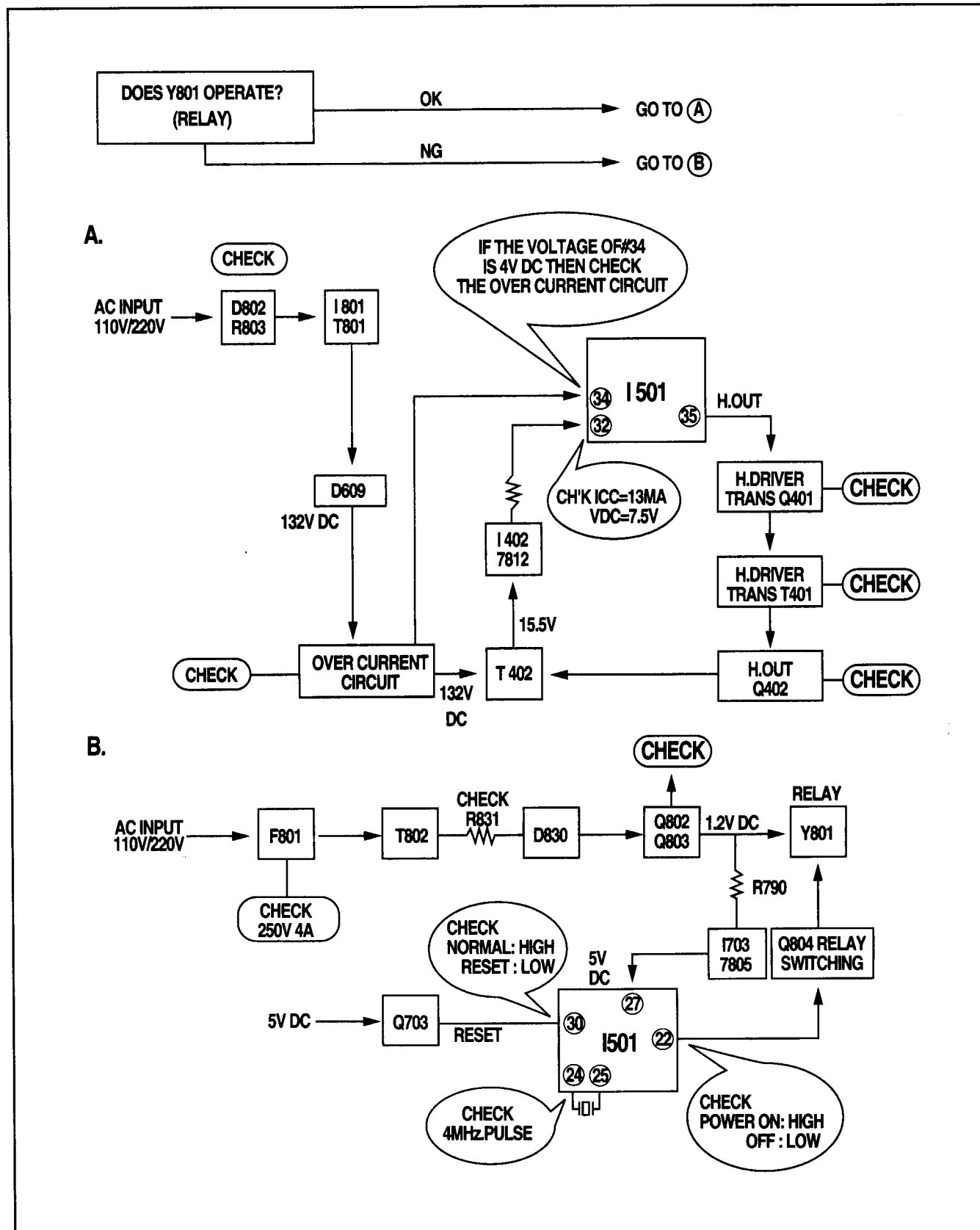


Terminal Description

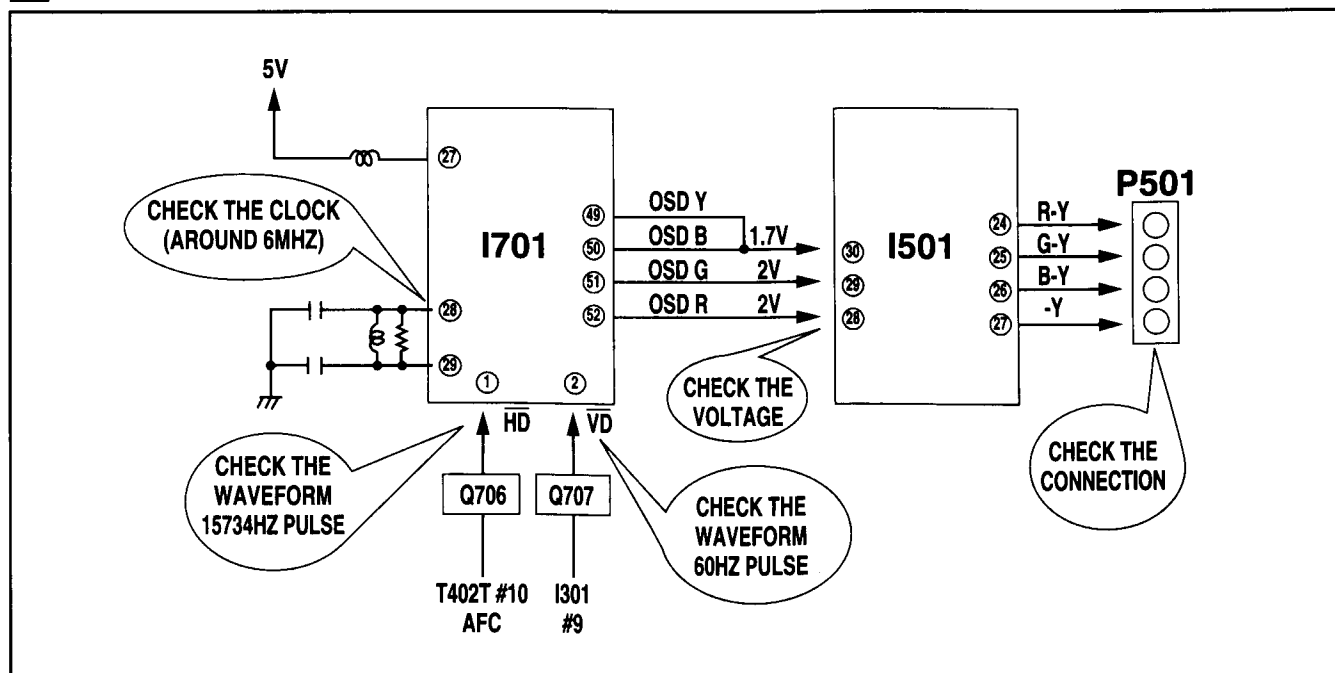
Terminal No.	Function	Terminal No.	Function
1	NC	10	RMS OFFSET ABSORPTION
2	LET GND	11	VCO FREE RUN MONITOR SW
3	L-CH OUT	12	R-CH OUT
4	NC	13	SAP LED
5	PILOT DISCRIMINATION (FILTER ADJ)	14	ST LED/FH MONITOR
6	PILOT DISCRIMINATION (FILTER ADJ)	15	ST/SAP CTL
7	COMPOSITE IN	16	SAP 1/2 CTL
8	GND	17	MATRIX MUTE
9	VCC (9V)	18	F-MONO SW

TROUBLE SHOOTING CHARTS

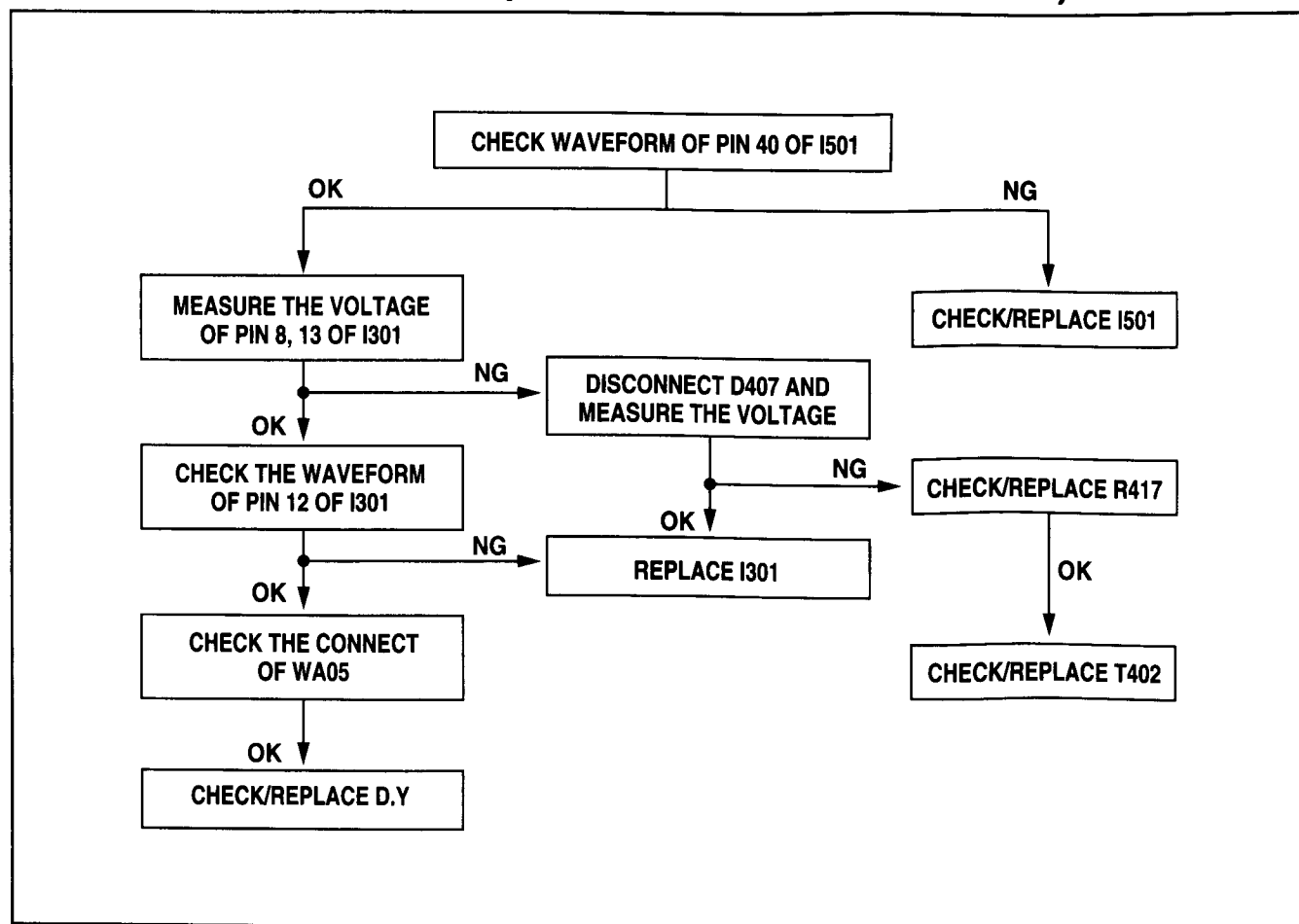
NO POWER



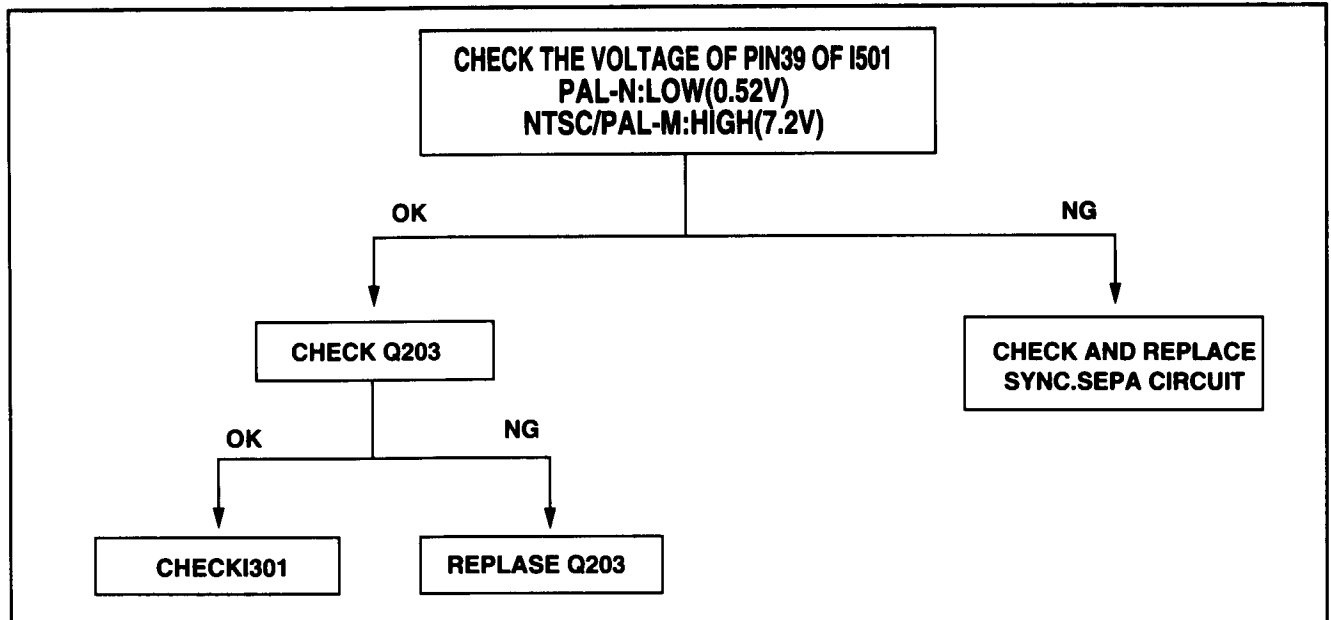
■ NO ON-SCREEN DISPLAY



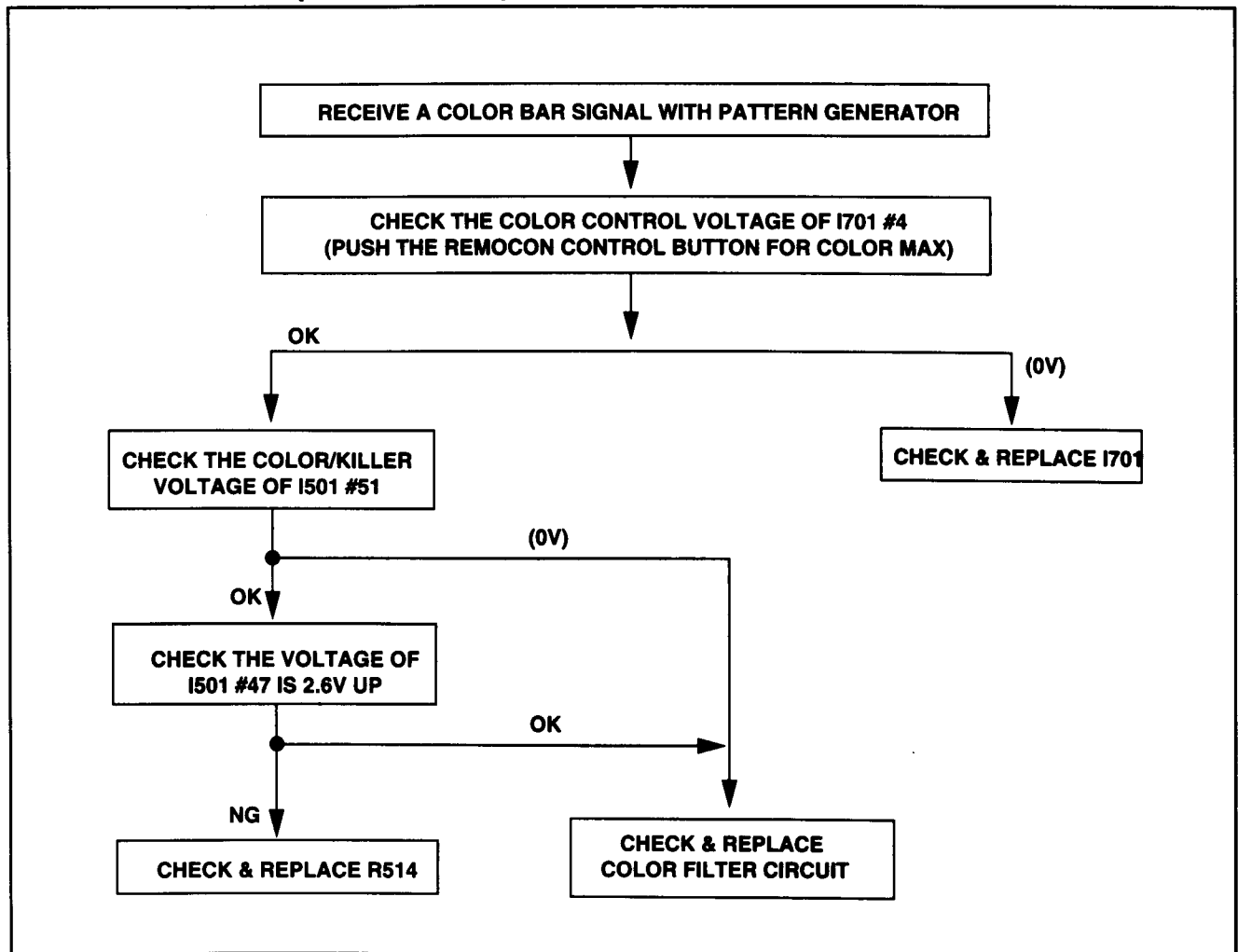
■ NO VERTICAL SCAN (ONE HORIZ. LINE RASTER)



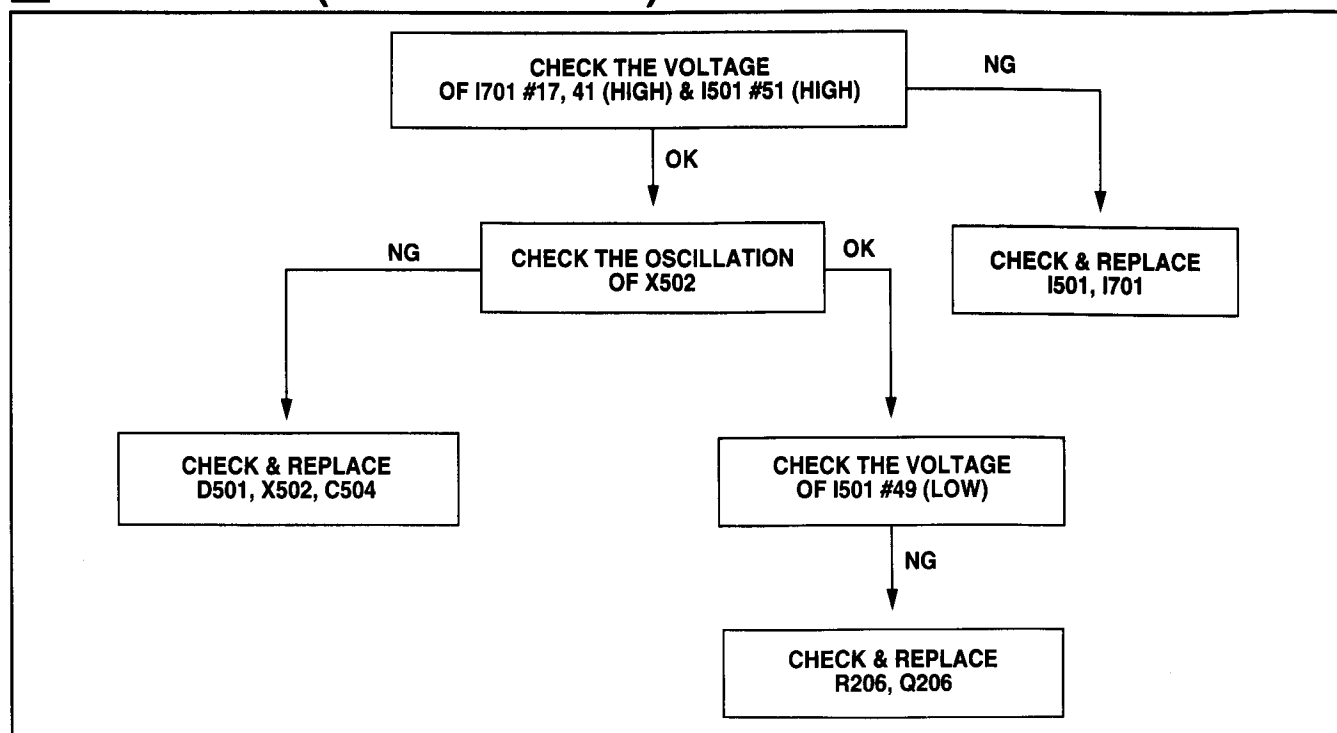
■ OUT OF VERTICAL SIZE



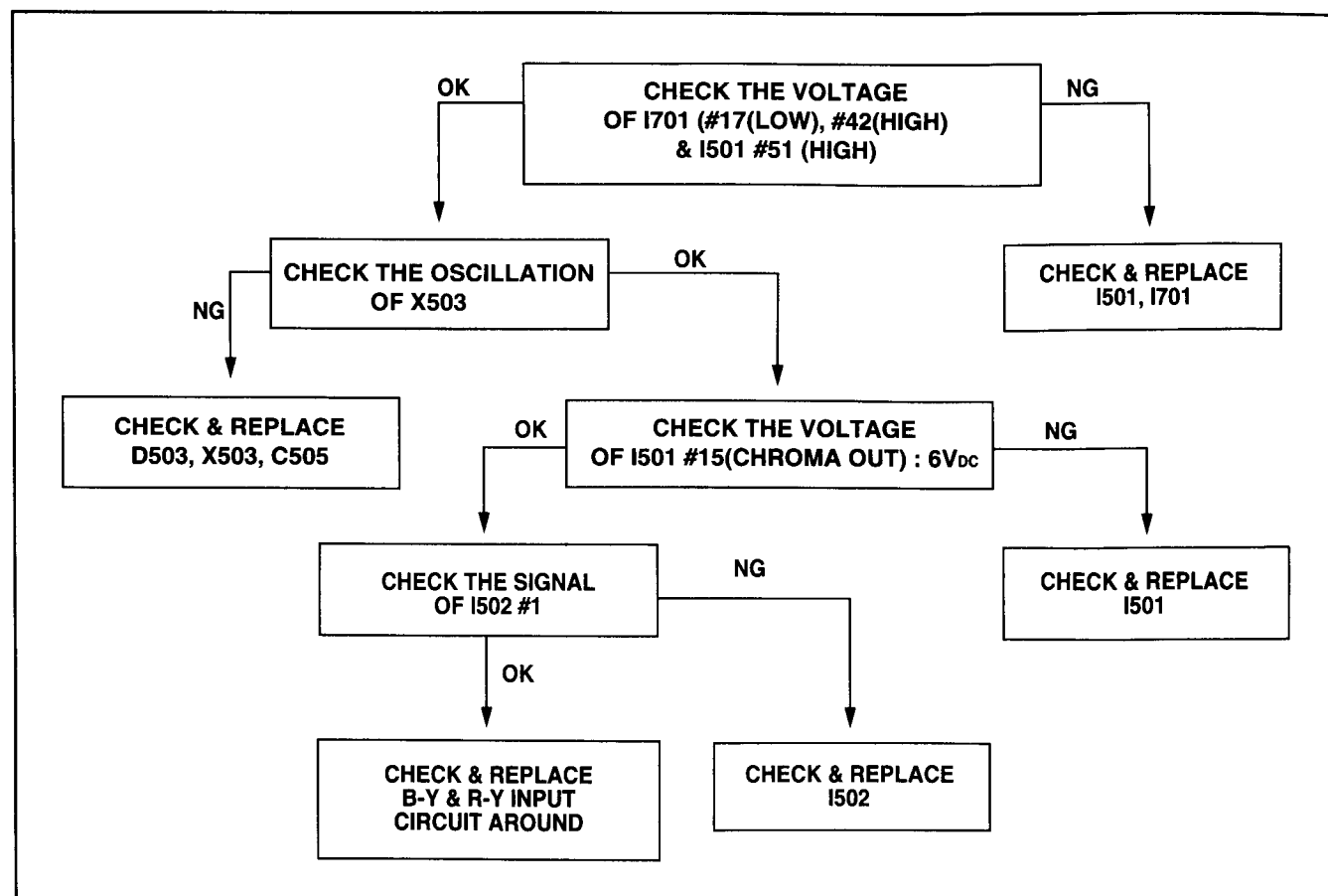
■ NO COLOR (GENERAL)



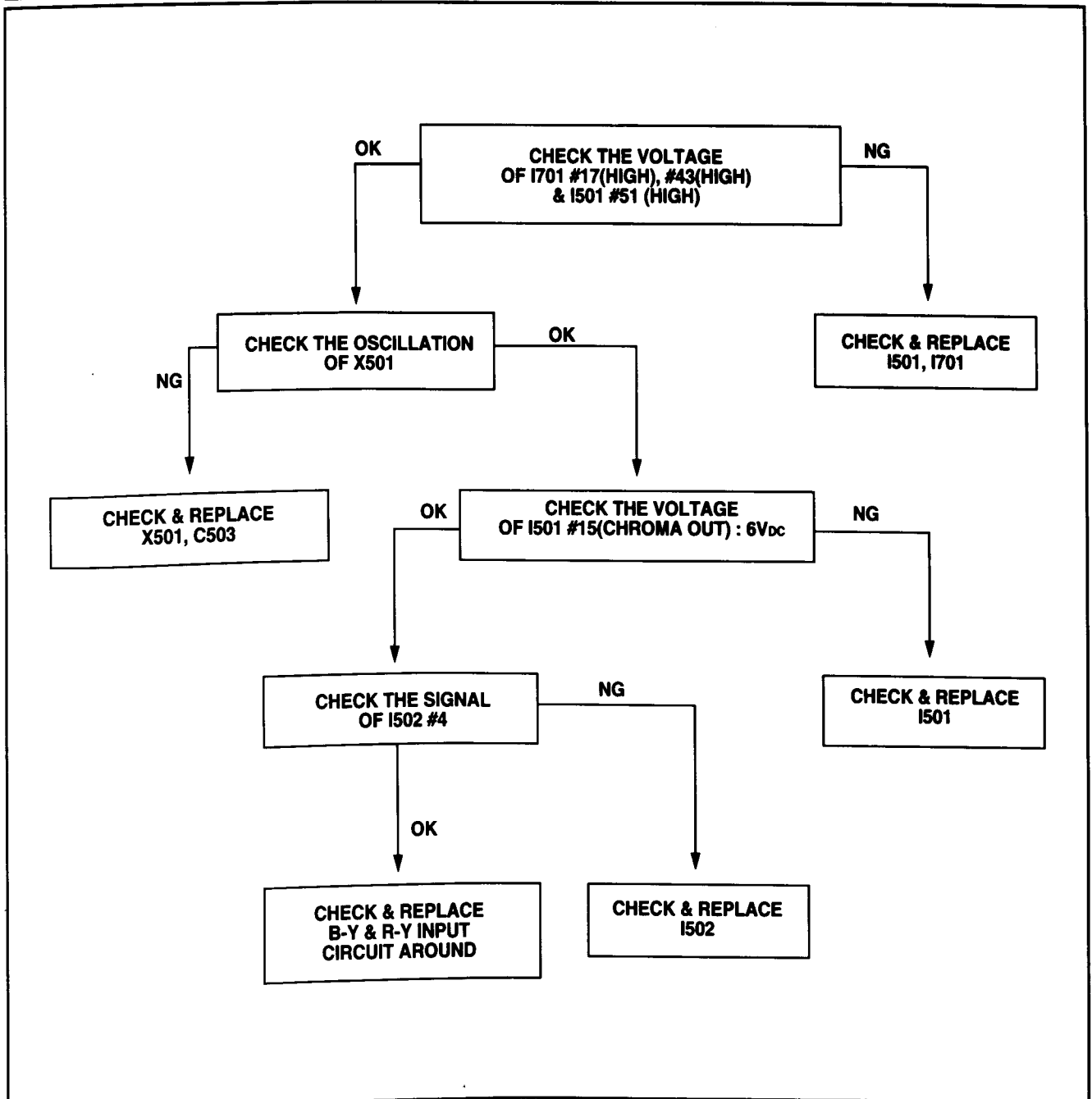
■ NO COLOR (AT NTSC ONLY)



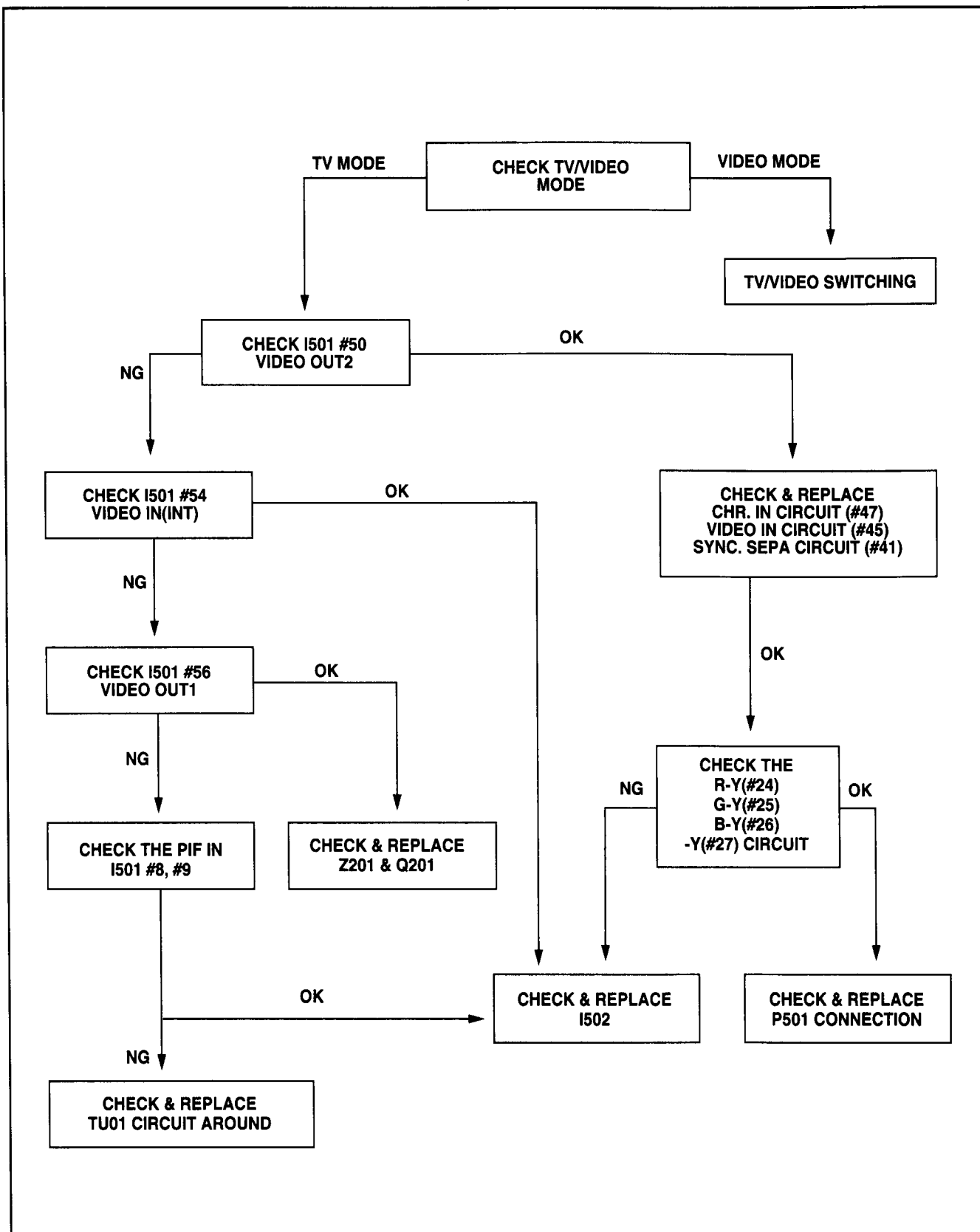
■ NO COLOR (AT PAL-M)



■ NO COLOR (AT PAL-N)

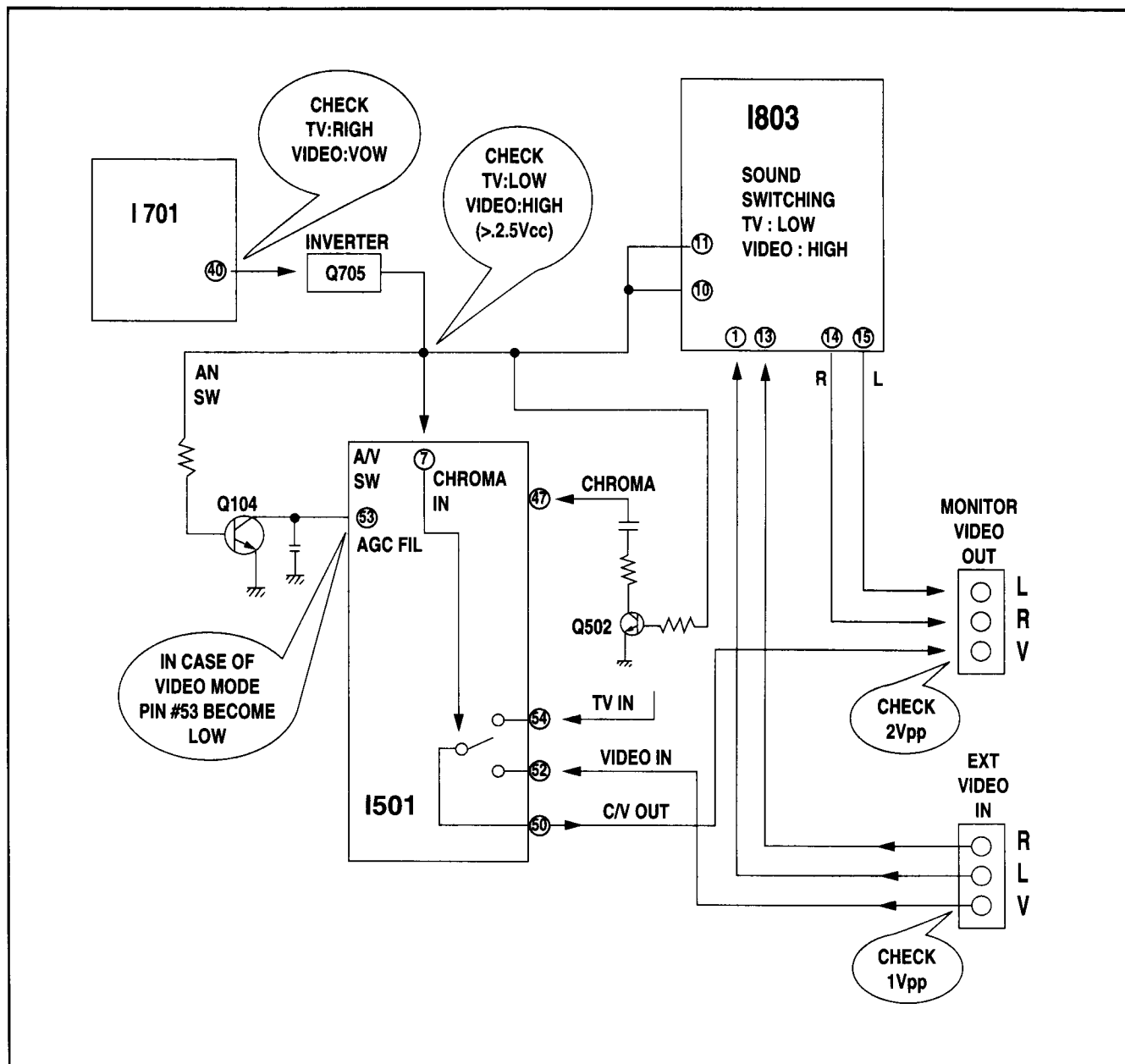


■ NO PICTURE

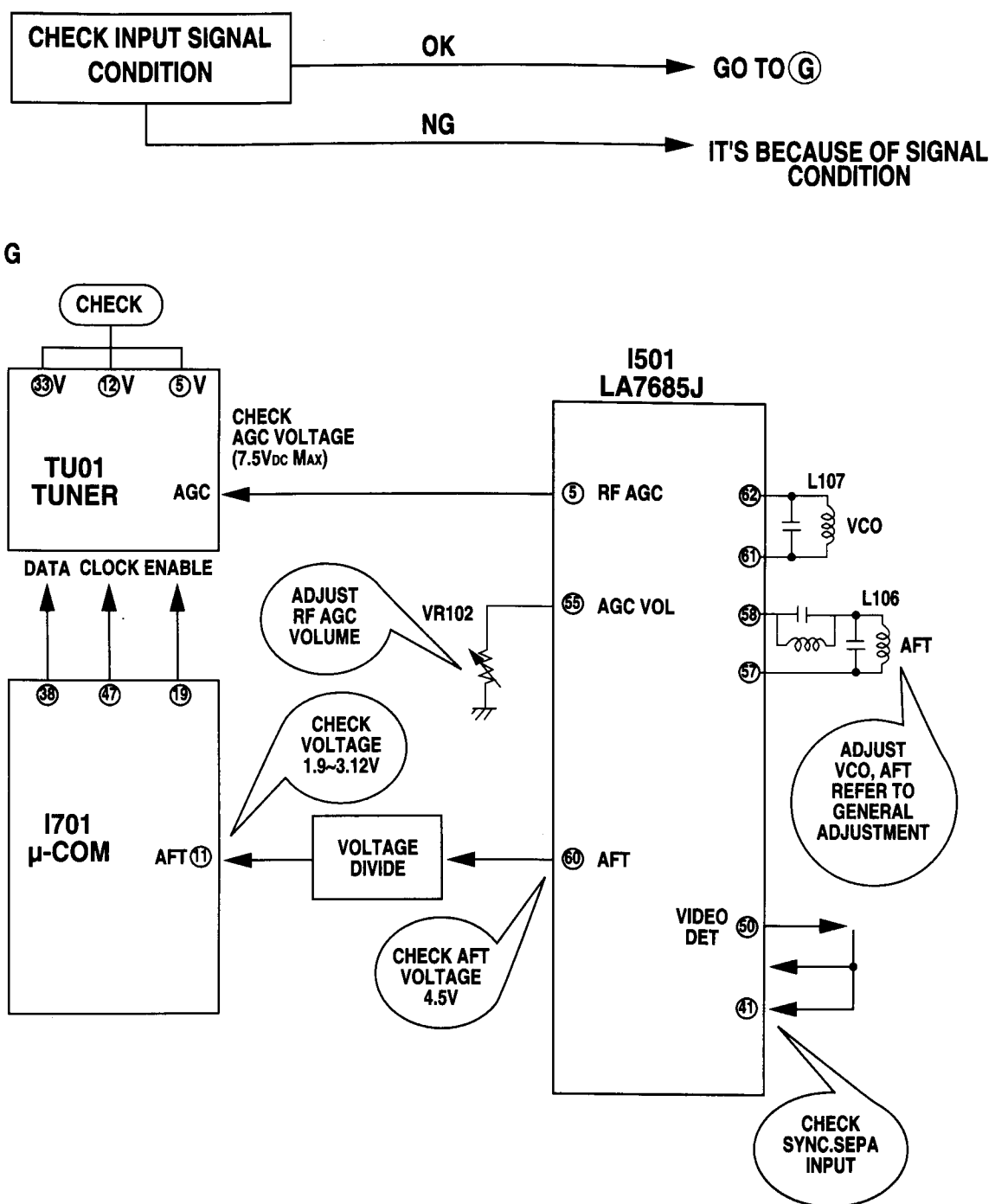


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■ AV DOES NOT OPERATE

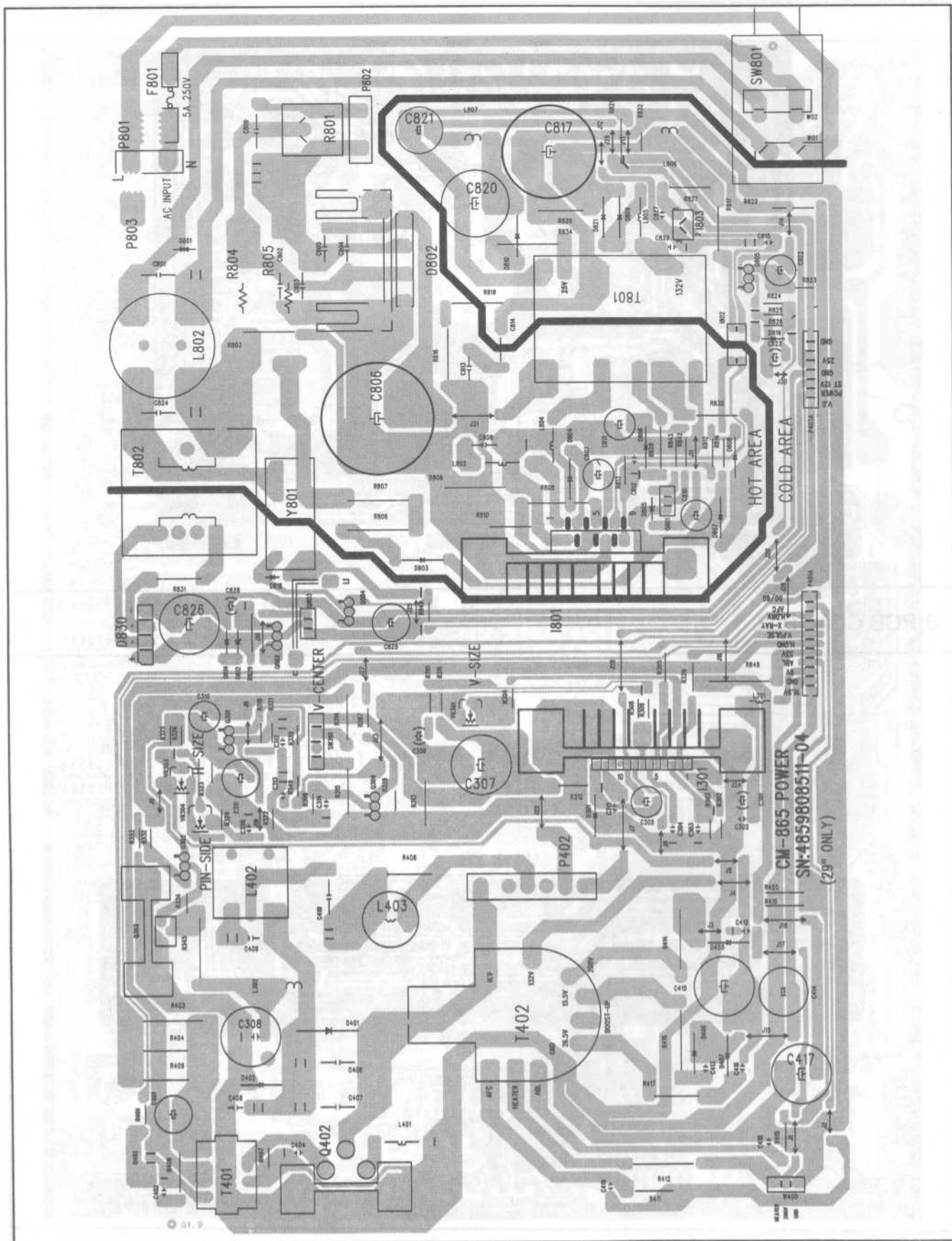


■ CH DOES NOT STOP





4)PCB POWER



REPLACEMENT PARTS LIST

LOC	PART-CODE	PART-NAME	PART-DESC
C100	CBZF1H104Z	C CERA SEMI	50V F 0.1MF Z (AXIAL)
C101	CCZF1E103Z	C CERA	25V F 0.01MF Z (AXIAL)
C102	CCZF1E103Z	C CERA	25V F 0.01MF Z (AXIAL)
C103	CCZF1E103Z	C CERA	25V F 0.01MF Z (AXIAL)
C105	CCZF1E103Z	C CERA	25V F 0.01MF Z (AXIAL)
C106	CEXF1C102V	C ELECTRO	16V RSS 1000MF (10X20) TP
C107	CCZF1E103Z	C CERA	25V F 0.01MF Z (AXIAL)
C108	CEXF1C470V	C ELECTRO	16V RSS 47MF (5X11) TP
C109	CEXF1H109V	C ELECTRO	50V RSS 1MF (5X11) TP
C110	CEXF1H479V	C ELECTRO	50V RSS 4.7MF (5X11) TP
C111	CCZF1E103Z	C CERA	25V F 0.01MF Z (AXIAL)
C113	CCZF1E103Z	C CERA	25V F 0.01MF Z (AXIAL)
C114	CEXF1C101V	C ELECTRO	16V RSS 100MF (6.3X11) TP
C115	CCZF1E103Z	C CERA	25V F 0.01MF Z (AXIAL)
C116	CCZF1E103Z	C CERA	25V F 0.01MF Z (AXIAL)
C117	CZCH1H200J	C CERA	50V CH 20PF J (AXIAL)
C118	CEXF1H478V	C ELECTRO	50V RSS 0.47MF (5X11) TP
C119	CCZB1H102K	C CERA	50V B 1000PF K (AXIAL)
C120	CZSL1H240J	C CERA	50V SL 24PF J (AXIAL)
C121	CEXF1H478V	C ELECTRO	50V RSS 0.47MF (5X11) TP
C122	CZSL1H330J	C CERA	50V SL 33PF J (AXIAL)
C123	CZSL1H220J	C CERA	50V SL 22PF J (AXIAL)
C124	CCZF1E103Z	C CERA	25V F 0.01MF Z (AXIAL)
C125	CEXF1H228V	C ELECTRO	50V RSS 0.22MF (5X11) TP
C127	CCZF1E103Z	C CERA	25V F 0.01MF Z (AXIAL)
C128	CCZF1E103Z	C CERA	25V F 0.01MF Z (AXIAL)
C132	CCZB1H101K	C CERA	50V B 100PF K (AXIAL)
C156	CXCH1H330J	C CERA	50V CH 33PF J (TAPPING)
C201	CEXF1C101V	C ELECTRO	16V RSS 100MF (6.3X11) TP
C202	CCZF1E103Z	C CERA	25V F 0.01MF Z (AXIAL)
C203	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP
C204	CEXE1C220C	C ELECTRO	16V RU 22MF (5X11) TP
C205	CCZF1E103Z	C CERA	25V F 0.01MF Z (AXIAL)
C206	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP
C208	CEXF1H478V	C ELECTRO	50V RSS 0.47MF (5X11) TP
C209	CEXF1H108V	C ELECTRO	50V RSS 0.1MF (5X11) TP
C210	CEXF1H109V	C ELECTRO	50V RSS 1MF (5X11) TP
C211	CZSL1H220J	C CERA	50V SL 22PF J (AXIAL)
C212	CCZF1E103Z	C CERA	25V F 0.01MF Z (AXIAL)

LOC	PART-CODE	PART-NAME	PART-DESC
C214	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP
C215	CEXF1H109V	C ELECTRO	50V RSS 1MF (5X11) TP
C216	CCZB1H561K	C CERA	50V B 560PF K (AXIAL)
C217	CEXF1H479V	C ELECTRO	50V RSS 4.7MF (5X11) TP
C218	CEXF1H228V	C ELECTRO	50V RSS 0.22MF (5X11) TP
C219	CEXF1H109V	C ELECTRO	50V RSS 1MF (5X11) TP
C220	CMXM2A333J	C MYLAR	100V 0.033MF J TP
C221	CEXF1H228V	C ELECTRO	50V RSS 0.22MF (5X11) TP
C222	CCZB1H271K	C CERA	50V B 270PF K (AXIAL)
C223	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP
C224	CBZF1H104Z	C CERA SEMI	50V F 0.1MF Z (AXIAL)
C225	CBZF1H104Z	C CERA SEMI	50V F 0.1MF Z (AXIAL)
C226	CEXF1C471V	C ELECTRO	16V RSS 470MF (10X12.5)TP
C227	CBZF1H104Z	C CERA SEMI	50V F 0.1MF Z (AXIAL)
C228	CBXF1H104Z	C CERA SEMI	50V F 0.1MF Z (TAPPING)
C229	CEXF1C471V	C ELECTRO	16V RSS 470MF (10X12.5)TP
C230	CMXM2A562J	C MYLAR	100V 5600PF J TP
C231	CEXF1H479V	C ELECTRO	50V RSS 4.7MF (5X11) TP
C245	CCZB1H221K	C CERA	50V B 220PF K (AXIAL)
C301	CEXF1C101V	C ELECTRO	16V RSS 100MF (6.3X11) TP
C302	CMXM2A103J	C MYLAR	100V 0.01MF J (TP)
C303	CMXM2A103J	C MYLAR	100V 0.01MF J (TP)
C304	CMXL1H105J	C MYLAR	50V MEU 1MF J
C305	CEXF1H101V	C ELECTRO	50V RSS 100MF (8X11.5) TP
C306	CEXD1H109Q	C ELECTRO	50V RT 1MF (6.3X11) TP
C307	CEXF1E222V	C ELECTRO	25V RSS 2200MF (16X25) TP
C308	CEYD1H689W	C ELECTRO	50V RHD 6.8MF (16X35.5)
C310	CEXF1H470V	C ELECTRO	50V RSS 47MF (6.3X11) TP
C311	CEXF1C471V	C ELECTRO	16V RSS 470MF (10X12.5)TP
C312	CMXM2A104J	C MYLAR	100V 0.1MF J (TP)
C313	CMXM2A104J	C MYLAR	100V 0.1MF J (TP)
C314	CMXM2A393J	C MYLAR	100V 0.039MF J (TP)
C315	CMXM2A104J	C MYLAR	100V 0.1MF J (TP)
C320	CCZB1H101K	C CERA	50V B 100PF K (AXIAL)
C401	CEXF2C229V	C ELECTRO	160V RSS 2.2MF (8X11.5)TP
C402	CCXB2H102K	C CERA	500V B 1000PF K (TAPPING)
C404	CCXB2H471K	C CERA	500V B 470PF K (TAPPING)
C406	CMYH3C822J	C MYLAR	1.6KV BUP 8200PF J
C407	CMYH3C822J	C MYLAR	1.6KV BUP 8200PF J

LOC	PART-CODE	PART-NAME	PART-DESC
C408	CMYE2G273J	C MYLAR	400V PU 0.027MF J
C409	CMYE2D683K	C MYLAR	200V PU 0.068MF K
C410	CMYF2D514J	C MYLAR	200V MPP 0.51MF J
C411	CEXF1C471V	C ELECTRO	16V RSS 470MF (10X12.5)TP
C412	CCXB2H221K	C CERA	500V B 220PF K (TAPPING)
C413	CCXB2H102K	C CERA	500V B 1000PF K (TAPPING)
C414	CEXF1E102V	C ELECTRO	25V RSS 1000MF (13X20) TP
C415	CEYF1V222V	C ELECTRO	35V RSS 2200MF (16X31.5)
C416	CCXB2H102K	C CERA	500V B 1000PF K (TAPPING)
C417	CEXF2C101V	C ELECTRO	160V RSS 100MF (16X25) TP
C418	CMXM2A104K	C MYLAR	100V 0.1MF K (TP)
C419	CCXB2H181K	C CERA	500V B 180PF K (TAPPING)
C420	CCZF1E103Z	C CERA	25V F 0.01MF Z (AXIAL)
C501	CCZF1H473Z	C CERA	50V F 0.047MF Z (AXIAL)
C501	CCYB3D102K	C CERA	2KV B 1000PF K
C502	CCZF1E103Z	C CERA	25V F 0.01MF Z (AXIAL)
C503	CZCH1H160J	C CERA	50V CH 16PF J (AXIAL)
C504	CZCH1H160J	C CERA	50V CH 16PF J (AXIAL)
C505	CZCH1H160J	C CERA	50V CH 16PF J (AXIAL)
C506	CCZF1E103Z	C CERA	25V F 0.01MF Z (AXIAL)
C507	CEXF1H478V	C ELECTRO	50V RSS 0.47MF (5X11) TP
C508	CCZF1E103Z	C CERA	25V F 0.01MF Z (AXIAL)
C510	CCZF1E103Z	C CERA	25V F 0.01MF Z (AXIAL)
C511	CCZF1E103Z	C CERA	25V F 0.01MF Z (AXIAL)
C512	CCZF1E103Z	C CERA	25V F 0.01MF Z (AXIAL)
C513	CCZB1H151K	C CERA	50V B 150PF K (AXIAL)
C514	CCZB1H151K	C CERA	50V B 150PF K (AXIAL)
C515	CCZF1E103Z	C CERA	25V F 0.01MF Z (AXIAL)
C517	CXCH1H330J	C CERA	50V CH 33PF J (TAPPING)
C518	CZSL1H330J	C CERA	50V SL 33PF J (AXIAL)
C519	CCZF1E103Z	C CERA	25V F 0.01MF Z (AXIAL)
C520	CCZF1E103Z	C CERA	25V F 0.01MF Z (AXIAL)
C521	CCZB1H820K	C CERA	50V B 82PF K (AXIAL)
C536	CEXF1H220V	C ELECTRO	50V RSS 22MF (5X11) TP
C537	CEXF1C101V	C ELECTRO	16V RSS 100MF (6.3X11) TP
C538	CCZF1E103Z	C CERA	25V F 0.01MF Z (AXIAL)
C539	CEXF1H220V	C ELECTRO	50V RSS 22MF (5X11) TP
C540	CZSL1H220J	C CERA	50V SL 22PF J (AXIAL)
C550	CEXF1C470V	C ELECTRO	16V RSS 47MF (5X11) TP
C552	4SG0D00103	SPARK GAP	S-23 900V-1.5KV
C553	4SG0D00103	SPARK GAP	S-23 900V-1.5KV

LOC	PART-CODE	PART-NAME	PART-DESC
C554	4SG0D00103	SPARK GAP	S-23 900V-1.5KV
C555	CCXB1H152K	C CERA	50V B 1500PF K (TAPPING)
C557	CCXB1H152K	C CERA	50V B 1500PF K (TAPPING)
C559	CCXB1H152K	C CERA	50V B 1500PF K (TAPPING)
C563	CEXF2E470V	C ELECTRO	250V RSS 47MF (16X25) TP
C601	CCZF1E103Z	C CERA	25V F 0.01MF Z (AXIAL)
C602	CCZF1E103Z	C CERA	25V F 0.01MF Z (AXIAL)
C603	CEXF1H479V	C ELECTRO	50V RSS 4.7MF (5X11) TP
C604	CEXF1H479V	C ELECTRO	50V RSS 4.7MF (5X11) TP
C605	CEXF1C101V	C ELECTRO	16V RSS 100MF (6.3X11) TP
C606	CEXF1V101V	C ELECTRO	35V RSS 100MF (8X11.5) TP
C609	CEYF1V222V	C ELECTRO	35V RSS 2200MF (16X31.5)
C610	CEXF1C470V	C ELECTRO	16V RSS 47MF (5X11) TP
C611	CCZF1E103Z	C CERA	25V F 0.01MF Z (AXIAL)
C612	CMXM2A104J	C MYLAR	100V 0.1MF J TP
C613	CMXM2A104J	C MYLAR	100V 0.1MF J TP
C614	CEXF1E471V	C ELECTRO	25V RSS 470MF (10X16) TP
C615	CEXF1E471V	C ELECTRO	25V RSS 470MF (10X16) TP
C620	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP
C621	CEXF1C101V	C ELECTRO	16V RSS 100MF (6.3X11) TP
C624	CEXF1C101V	C ELECTRO	16V RSS 100MF (6.3X11) TP
C625	CCZF1E103Z	C CERA	25V F 0.01MF Z (AXIAL)
C627	CEXF1H228V	C ELECTRO	50V RSS 0.22MF (5X11) TP
C629	CEXF1H339V	C ELECTRO	50V RSS 3.3MF (5X11) TP
C630	CCZF1E103Z	C CERA	25V F 0.01MF Z (AXIAL)
C631	CEXF1H339V	C ELECTRO	50V RSS 3.3MF (5X11) TP
C632	CCZF1E103Z	C CERA	25V F 0.01MF Z (AXIAL)
C633	CEXF1H228V	C ELECTRO	50V RSS 0.22MF (5X11) TP
C635	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP
C636	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP
C637	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP
C638	CCZF1E103Z	C CERA	25V F 0.01MF Z (AXIAL)
C640	CEXF1C101V	C ELECTRO	16V RSS 100MF (6.3X11) TP
C641	CCZF1E103Z	C CERA	25V F 0.01MF Z (AXIAL)
C643	CCZF1E103Z	C CERA	25V F 0.01MF Z (AXIAL)
C644	CEXF1H109V	C ELECTRO	50V RSS 1MF (5X11) TP
C701	CBXF1H104Z	C CERA SEMI	50V F 0.1MF Z (TAPPING)
C702	CZSL1H220J	C CERA	50V SL 22PF J (AXIAL)
C703	CZSL1H220J	C CERA	50V SL 22PF J (AXIAL)
C704	CZSL1H620J	C CERA	50V SL 62PF J (AXIAL)
C705	CZSL1H620J	C CERA	50V SL 62PF J (AXIAL)

LOC	PART-CODE	PART-NAME	PART-DESC
C706	CBZF1H104Z	C CERA SEMI	50V F 0.1MF Z (AXIAL)
C707	CEXF1C470V	C ELECTRO	16V RSS 47MF (5X11) TP
C708	CBZF1H104Z	C CERA SEMI	50V F 0.1MF Z (AXIAL)
C709	CEXF1C102V	C ELECTRO	16V RSS 1000MF (10X20) TP
C711	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP
C712	CBZF1H104Z	C CERA SEMI	50V F 0.1MF Z (AXIAL)
C713	CCZB1H101K	C CERA	50V B 100PF K (AXIAL)
C714	CCZB1H101K	C CERA	50V B 100PF K (AXIAL)
C715	CMXM2A472J	C MYLAR	100V 4700PF J TP
C716	CCZF1E103Z	C CERA	25V F 0.01MF Z (AXIAL)
C717	CEXF1H229V	C ELECTRO	50V RSS 2.2MF (5X11) TP
C718	CEXF1H479V	C ELECTRO	50V RSS 4.7MF (5X11) TP
C719	CEXF1H339V	C ELECTRO	50V RSS 3.3MF (5X11) TP
C720	CEXF1H479V	C ELECTRO	50V RSS 4.7MF (5X11) TP
C721	CEXF1H339V	C ELECTRO	50V RSS 3.3MF (5X11) TP
C722	CEXF1H479V	C ELECTRO	50V RSS 4.7MF (5X11) TP
C723	CEXF1H479V	C ELECTRO	50V RSS 4.7MF (5X11) TP
C724	CEXF1H479V	C ELECTRO	50V RSS 4.7MF (5X11) TP
C725	CN4XB-101K	C ARRAY	5P(4) 100PF K 50V 2.54MM
C730	CCZF1E103Z	C CERA	25V F 0.01MF Z (AXIAL)
C731	CCZB1H561K	C CERA	50V B 560PF K (AXIAL)
C735	CBZF1H104Z	C CERA SEMI	50V F 0.1MF Z (AXIAL)
C740	CCZB1H101K	C CERA	50V B 100PF K (AXIAL)
C741	CCZF1E103Z	C CERA	25V F 0.01MF Z (AXIAL)
C742	CEXF1C471V	C ELECTRO	16V RSS 470MF (10X12.5)TP
C770	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP
C778	CCZB1H561K	C CERA	50V B 560PF K (AXIAL)
C780	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP
C781	CCZF1E103Z	C CERA	25V F 0.01MF Z (AXIAL)
C782	CMXM2A104J	C MYLAR	100V 0.1MF J TP
C801	CL1JB3104M	C LINE ACROSS	AC250V 0.1MF MECQ-UV WRL
C802	CH1BEE472M	C CERA AC	U/CV 2.5KV SDE2G472M20BS
C803	CH1BEE472M	C CERA AC	U/CV 2.5KV SDE2G472M20BS
C804	CH1BEE472M	C CERA AC	U/CV 2.5KV SDE2G472M20BS
C806	CEYN2W471P	C ELECTRO	450V LHS 470MF (35X50)
C807	CEXF1C221C	C ELECTRO	16V RUS 220MF (8X11.5) TP
C808	CMYH3C152J	C MYLAR	1.6KV 1500PF J (BUP)
C809	CL1JB3104M	C LINE ACROSS	AC250V 0.1MF MECQ-UV WRL
C810	CEXF1H101V	C ELECTRO	50V RSS 100MF (8X11.5) TP
C811	CEXF2A100V	C ELECTRO	100V RSS 10MF (6.3X11) TP
C812	CCXB2H102K	C CERA	500V B 1000PF K (TAPPING)

LOC	PART-CODE	PART-NAME	PART-DESC
C813	CH1BEE472M	C CERA AC	U/CV 2.5KV SDE2G472M20BS
C814	CH1BEE472M	C CERA AC	U/CV 2.5KV SDE2G472M20BS
C815	CMYB2D223J	C MYLAR	200V EU 0.022MF J
C817	CEYN2D221T	C ELECTRO	200V FWS 220MF (22X30)
C820	CEYF1V222C	C ELECTRO	35V RUS 2200MF (16X31.5)
C821	CEXF1V102V	C ELECTRO	35V RSS 1000MF (13X25) TP
C822	CEXF1H101V	C ELECTRO	50V RSS 100MF (8X11.5) TP
C823	CEXF1H479V	C ELECTRO	50V RSS 4.7MF (5X11) TP
C824	CL1JB3104M	C LINE ACROSS	AC250V 0.1MF MECQ-UV WRL
C825	CEXF1C471C	C ELECTRO	16V RUS 470MF (10X12.5)TP
C826	CEXF2A331V	C ELECTRO	100V RSS 330MF (16X25) TP
C827	CCXB2H102K	C CERA	500V B 1000PF K (TAPPING)
C828	CEXF1C470V	C ELECTRO	16V RSS 47MF (5X11) TP
C829	CCYR3D471K	C CERA	HIKR 2KV 470PF K 125C
CA01	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP
CA02	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP
CA03	CEXF1C221V	C ELECTRO	16V RSS 220MF (8X11.5) TP
CA04	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP
CA05	CEXF1H220V	C ELECTRO	50V RSS 22MF (5X11) TP
CA06	CEXF1H220V	C ELECTRO	50V RSS 22MF (5X11) TP
CA07	CEXF1H339V	C ELECTRO	50V RSS 3.3MF (5X11) TP
CA08	CEXF1H339V	C ELECTRO	50V RSS 3.3MF (5X11) TP
CA09	CEXF1H339V	C ELECTRO	50V RSS 3.3MF (5X11) TP
CA10	CEXF1H339V	C ELECTRO	50V RSS 3.3MF (5X11) TP
CA11	CEXF1C101V	C ELECTRO	16V RSS 100MF (6.3X11) TP
CA12	CCZF1E103Z	C CERA	25V F 0.01MF Z (AXIAL)
CA14	CCZF1E103Z	C CERA	25V F 0.01MF Z (AXIAL)
CA15	CEXF1C101V	C ELECTRO	16V RSS 100MF (6.3X11) TP
CN101	4850707S02	CONN AS	YH025-07+YST025+ULW=400
CN102	4850703S20	CONN AS	YH025-03+YST025+ULW=400
CN103	4859238620	CONN WAFER	YPW500-02
D101	DUZ5R1BM	DIODE ZENER	UZ-5.1BM
D102	DUZ5R6BM	DIODE ZENER	UZ-5.6BM(TAPPING)
D103	DUZ5R6BM	DIODE ZENER	UZ-5.6BM(TAPPING)
D104	DUZ5R6BM	DIODE ZENER	UZ-5.6BM(TAPPING)
D201	D1N4148-	DIODE	1N4148(TAPPING)
D202	DUZ12BM-	DIODE ZENER	UZ-12BM (UNIZON)
D203	DUZ12BM-	DIODE ZENER	UZ-12BM (UNIZON)
D204	D1N4148-	DIODE	1N4148 (TAPPING)
D205	D1N4148-	DIODE	1N4148 (TAPPING)
D206	D1N4148-	DIODE	1N4148 (TAPPING)

LOC	PART-CODE	PART-NAME	PART-DESC
D207	D1N4148-	DIODE	1N4148 (TAPPING)
D301	D1N4937GP-	DIODE	1N4937GP (TAPPING)
D401	DBY228-	DIODE	BY228 (TAPPING)
D402	DBYW95C-	DIODE	BYW95C (TAPPING)
D405	DBYV95C-	DIODE	BYV95C (TAPPING)
D406	DBYV95C-	DIODE	BYV95C (TAPPING)
D407	DBYV95C-	DIODE	BYV95C (TAPPING)
D409	D1N4148-	DIODE	1N4148 (TAPPING)
D501	D1N4148-	DIODE	1N4148 (TAPPING)
D502	D1N4148-	DIODE	1N4148 (TAPPING)
D503	D1N4148-	DIODE	1N4148 (TAPPING)
D504	D1N4148-	DIODE	1N4148 (TAPPING)
D602	D1N4148-	DIODE	1N4148 (TAPPING)
D603	DUZ12BM-	DIODE ZENER	UZ-12BM (UNIZON)
D604	DUZ12BM-	DIODE ZENER	UZ-12BM (UNIZON)
D701	DMTZ3R9B-	DIODE ZENER	MTZ 3.9-B (TAPPING)
D702	D1N4148-	DIODE	1N4148 (TAPPING)
D705	RD-AZ274J-	R CARBON FILM	1/6 270K OHM J
D707	D1N4148-	DIODE	1N4148 (TAPPING)
D709	D1N4148-	DIODE	1N4148 (TAPPING)
D710	DUZ5R6BM	DIODE ZENER	UZ-5.6BM(TAPPING)
D711	D1N4148-	DIODE	1N4148 (TAPPING)
D712	DUZ5R6BM	DIODE ZENER	UZ-5.6BM(TAPPING)
D713	DUZ5R6BM	DIODE ZENER	UZ-5.6BM(TAPPING)
D715	D1N4148-	DIODE	1N4148 (TAPPING)
D716	D1N4148-	DIODE	1N4148 (TAPPING)
D725	D1N4148-	DIODE	1N4148 (TAPPING)
D726	D1N4148-	DIODE	1N4148 (TAPPING)
D791	D1N4148-	DIODE	1N4148 (TAPPING)
D792	D1N4148-	DIODE	1N4148 (TAPPING)
D793	D1N4148-	DIODE	1N4148 (TAPPING)
D794	D1N4148-	DIODE	1N4148 (TAPPING)
D796	D1N4148-	DIODE	1N4148 (TAPPING)
D797	D1N4148-	DIODE	1N4148 (TAPPING)
D798	D1N4148-	DIODE	1N4148 (TAPPING)
D801	DSVC471D14	VARISTOR	SVC471D14A
D802	DPBS408GU-	DIODE	PBS408GU-CA
D802A	4857024610	HEAT SINK	AL EX
D802B	7128301212	SCREW TAPPING	T2S WAS 3X12 MFZN BK
D802C	4856215200	WASHER	SPCC
D803	D1S1888-	DIODE	1S1888 (TAPPING)

LOC	PART-CODE	PART-NAME	PART-DESC
D804	D1N4936GP-	DIODE	1N4936GP (TAPPING)
D805	DUZ7R5BM	DIODE ZENER	UZ-7.5BM 7.5V
D806	D1N4937GP-	DIODE	1N4937GP (TAPPING)
D807	D1N4937GP-	DIODE	1N4937GP (TAPPING)
D808	D1N4937GP-	DIODE	1N4937GP (TAPPING)
D809	DBYW95C-	DIODE	BYW95C (TAPPING)
D810	DBYW95C-	DIODE	BYW95C (TAPPING)
D812	DUZ12BM-	DIODE ZENER	UZ-12BM (UNIZON)
D814	D1N4148-	DIODE	1N4148 (TAPPING)
D818	D1N4148-	DIODE	1N4148 (TAPPING)
D819	D1N4148-	DIODE	1N4148 (TAPPING)
D821	DBYW95C-	DIODE	BYW95C (TAPPING)
DE01	DKLR114L	LED	KLR114L
DE02	DKLG114L	LED	KLG-114L
DL01	58Q3570048	COIL DELAY LINE	SD-11P1CM-A
DL02	58Q0000080	COIL DELAY LINE	DL720
F801	5FKGB5022R	FUSE GLASS TUBE	KS MF51 5A 250V NR
F801A	4857415001	CLIP FUSE	PFC5000-0702
F801B	4857415001	CLIP FUSE	PFC5000-0702
I101	1UPC574J	IC	UPC574J
I301	1LA7838-	IC	LA7838
I301A	4857026510	HEAT SINK	AL EX
I301B	7174301011	SCREW TAPPTITE	TT2 RND 3X10 MFZN
I401	1KA7809-	IC REGULATOR	KA7809
I401A	4857013300	HEAT SINK C	SPCC T1.0 SN-3
I401B	7174300811	SCREW TAPPTITE	TT2 RND 3X8 MFZN
I401D	4856215200	WASHER	SPCC
I402	1MC7812-	IC REGULATOR	MC7812 12V 1A (KA7812)
I402A	4857013300	HEAT SINK C	SPCC T1.0 SN-3
I402B	7174300811	SCREW TAPPTITE	TT2 RND 3X8 MFZN
I402D	4856215200	WASHER	SPCC
I501	1LA7685J	IC	LA7685J
I502	1TC4066BP-	IC	TC 4066BP
I601	1LA4282-	IC	LA4282
I601A	4857027904	HEAT SINK	AL EX (ANODIZE)
I601B	7174301011	SCREW TAPPTITE	TT2 RND 3X10 MFZN
I602	1AN5836---	IC	AN5836
I701	1M37210608	IC MICOM	M37210M3-608SP
I702	14JN93C56-	IC EEPROM	AT93C56-10PC
I703	1KA7805-	IC REGULATOR	KA7805
I801	1STRS6708-	IC POWER	STR-S6708

LOC	PART-CODE	PART-NAME	PART-DESC
I8011	4857026510	HEAT SINK	AL EX
I801B	7174301211	SCREW TAPPTITE	TT2 RND 3X12 MFZN
I802	1PC817----	IC PHOTO COUPLER	PC817
I803	1SE130N---	IC	SE130N
IB03	1TC4053BP-	IC	TC4053BP
IE01	1SR5HP----	IC PREAMP	SR-5HP
IM01	4850M00910	MODULATOR MTS MYS	DJV-01
IT01	1BU247830Q	IC REMOCON CHIP	BU2478-30
JA01	4859105650	JACK PIN BOARD	PH-JB-9501
JA601	4859100260	TERM EXTE SPAEKER SPAEKER	AU4-2042 4P
L101	58C5580019	COIL CHOKE	TRF-9225 (0.55UH)
L102	58C115K042	COIL CHOKE	TRF-1201K
L103	58B25R2S60	COIL PIF	TRF-0082(STICK)
L104	58S45R7038	COIL SIF	TRF-1708A
L105	5CPZ330K02	COIL PEAKING	33UH K (AXIAL 3.5MM)
L106	58B49R3S41	COIL PIF	TRF-1066 (STICK)
L107	58B0000081	COIL PIF	TRF-4524
L108	5CPZ220K02	COIL PEAKING	22UH K (AXIAL 3.5MM)
L109	5CPZ680K02	COIL PEAKING	68UH K (AXIAL 3.5MM)
L110	58M0000001	COIL DET	TRF-DT1A
L120	5CPZ560K03	COIL PEAKING	56UH K (AXIAL 7MM)
L130	5CPZ680K02	COIL PEAKING	68UH K (AXIAL 3.5MM)
L201	5CPZ560K04	COIL PEAKING	56UH K (AXIAL 10.5MM)
L202	5CPZ120K02	COIL PEAKING	12UH K (AXIAL 3.5MM)
L203	5CPZ101K02	COIL PEAKING	100UH K (AXIAL 3.5MM)
L301	5CPZ121K02	COIL PEAKING	120UH K (AXIAL 3.5MM)
L302	58C7070085	COIL CHOKE	TLN-3062A
L401	58C0000026	COIL BEAD	HC-4035
L402	58W0000018	COIL WIDTH	TLN-2092
L403	58H0000039	COIL H-LINEARITY	TRL-200D
L501	5CPZ829K02	COIL PEAKING	8.2UH K (AXIAL 3.5MM)
L502	5CPZ829K02	COIL PEAKING	8.2UH K (AXIAL 3.5MM)
L503	58F3R58040	COIL FILTER	TRF-3581
L504	58F3R58040	COIL FILTER	TRF-3581
L506	5CPZ560K02	COIL PEAKING	56UH K (AXIAL 3.5MM)
L507	5CPZ330K02	COIL PEAKING	33UH K (AXIAL 3.5MM)
L508	5CPZ560K02	COIL PEAKING	56UH K (AXIAL 3.5MM)
L551	5CPX181J	COIL PEAKING	180UH J (RADIAL)
L552	5CPX181J	COIL PEAKING	180UH J (RADIAL)

LOC	PART-CODE	PART-NAME	PART-DESC
L553	5CPX181J	COIL PEAKING	180UH J (RADIAL)
L554	5CPX470J	COIL PEAKING	47UH J (RADIAL)
L555	5CPX470J	COIL PEAKING	47UH J (RADIAL)
L556	5CPX470J	COIL PEAKING	47UH J (RADIAL)
L701	5CPZ100K02	COIL PEAKING	10UH K (AXIAL 3.5MM)
L702	5CPZ100K02	COIL PEAKING	10UH K (AXIAL 3.5MM)
L802	5PLF501-	FILTER LINE	LF-501
L803	5MC0000100	COIL BEAD	MD-5 (HC-3550)
L804	5MC0000100	COIL BEAD	MD-5 (HC-3550)
L805	5MC0000100	COIL BEAD	MD-5 (HC-3550)
L806	58C4500079	COIL CHOKE	L-45
L807	58C4500079	COIL CHOKE	L-45
M201	4852056901	MASK FRONT	HIPS BK
M211	4852143301	COVER BACK	HIPS BK
M2111	7122401612	SCREW TAPPING	T2S TRS 4X16 MFZN BK
M2112	7128301212	SCREW TAPPING	T2S WAS 3X12 MFZN BK
M251	4852531300	GRILL	PS SHEET
M381	4853811300	FRAME MAIN PCB	FR HIPS BK
M381A	7128301212	SCREW TAPPING	T2S WAS 3X12 MFZN BK
M381B	7128301212	SCREW TAPPING	T2S WAS 3X12 MFZN BK
M481	4854845401	BUTTON POWER	ABS BK
M481A	7128301212	SCREW TAPPING	T2S WAS 3X12 MFZN BK
M541	4855415800	SPEC PLATE	150ART P/E FILM (C/TV)
M551	4855527501	DECO SENSOR	PC SMOG
M561	4855617400	MARK BRAND	CU AU+ABS BK
M591	4855923706	DECO TERM	PVC CL T0.25
M641	6520010100	STAPLE PIN	18MM
M681	4856816300	CLAMP WIRE	NYLON 6 (V0)
M681	4856812001	TIE CABLE	NYLON66 DA100
M682	4856812001	TIE CABLE	NYLON66 DA100
M684	4856812001	TIE CABLE	NYLON66 DA100
M685	4856815800	CLAMP WIRE	DAMCT-450
M721	4857236500	SHIELD COVER	ET(DG) T0.25
M781	4857817610	CLOTH BLACK	FELT T0.7 L=300
M781	4857821201	CLOTH BLACK	FELT 415X12XT2
M782	4857821200	CLOTH BLACK	FELT 544X12XT2
M801	4858044300	BOX CARTON	DW-3
M811	4858175400	PAD	EPS
M821	4858213800	BAG POLY	PE FILM T0.06X250X350
M822	4858215600	BAG P.E	PE FOAM 1500X1250X0.5
M841	4858511300	BAND STOPPER	NYLON 66

LOC	PART-CODE	PART-NAME	PART-DESC
P101	4857417500	TERM PIN	DA-IB0214(D2.3/DY PIN)
P401	4859267520	CONN WAFER	BMW250-11
P401A	4859241910	CONN HOUSING	YJN250-11
P402	4859240120	CONN WAFER	YFW500-06
P403	4859267220	CONN WAFER	BMW250-08
P403A	4859241610	CONN HOUSING	YJN250-08
P501	485923202S	CONN WAFER	YW025-07 (STICK)
P601	485923162S	CONN WAFER	YW025-03 (STICK)
P601A	4850703S07	CONN AS	YH025-03+YST025+ULW=700
P602	485923162S	CONN WAFER	YW025-03 (STICK)
P701	485923202S	CONN WAFER	YW025-07 (STICK)
P703A	4850706S12	CONN AS	YH025-06+YST025+ULW=300
P801	4859905010	CORD POWER AS	KKP560N+BL102NG+TUBE=2600
P801A	4857417500	TERM PIN	DA-IB0214(D2.3/DY PIN)
P802	4857417500	TERM PIN	DA-IB0214(D2.3/DY PIN)
P803	4850701S08	CONN AS	YFH800-01+YPT018+ULW=700
Q101	TKTC3197	C3197 (TP)	
Q102	TKTC3198Y-	C3198Y	
Q103	TKTC3198Y-	C3198Y	
Q104	TKTC3198Y-	C3198Y	
Q201	TKTC3198Y-	C3198Y	
Q202	TKTC3198Y-	C3198Y	
Q203	TKTC3198Y-	C3198Y	
Q204	TKTC3198Y-	C3198Y	
Q205	TKTC3198Y-	C3198Y	
Q206	TKTC3198Y-	C3198Y	
Q207	TKTC3198Y-	C3198Y	
Q208	TKTC3198Y-	C3198Y	
Q209	TKTA1270Y-	A1270Y (TP)	
Q245	TKTC3198Y-	C3198Y	
Q301	TKTC3198Y-	C3198Y	
Q302	TKTA1266Y-	A1266Y (TP)	
Q303	TKTD2058Y-	D 2058-Y	
Q303A	4857024510	HEAT SINK	AL EX
Q303B	7174300811	SCREW TAPPTITE	TT2 RND 3X8 MFZN
Q303D	4856215200	WASHER	SPCC
Q304	TKTC3198Y-	C3198Y	
Q401	TKTC3208	C3208	
Q402	T2SD2253F-	TR	2SD 2253 (LBDAEW)
Q402A	4857024501	HEAT SINK	AL EX
Q402B	7174301011	SCREW TAPPTITE	TT2 RND 3X10 MFZN

LOC	PART-CODE	PART-NAME	PART-DESC
Q402D	4856215201	WASHER	
Q501	TKTC3198Y-	C3198Y	
Q502	TKTC3198Y-	C3198Y	
Q551	TKTC3229	C 3229	
Q551A	4857025200	HEAT SINK	SPCC T1.0 DG
Q551B	7174300811	SCREW TAPPTITE	TT2 RND 3X8 MFZN
Q551D	4856215200	WASHER	SPCC
Q552	TKTC3229	C 3229	
Q552A	4857025200	HEAT SINK	SPCC T1.0 DG
Q552B	7174300811	SCREW TAPPTITE	TT2 RND 3X8 MFZN
Q552D	4856215200	WASHER	SPCC
Q553	TKTC3229	C 3229	
Q553A	4857025200	HEAT SINK	SPCC T1.0 DG
Q553B	7174300811	SCREW TAPPTITE	TT2 RND 3X8 MFZN
Q553D	4856215200	WASHER	SPCC
Q554	TKTC3198Y-	C3198Y	
Q555	TKTC3198Y-	C3198Y	
Q556	TKTC3198Y-	C3198Y	
Q601	TKTA1266Y-	A1266Y (TP)	
Q602	TKTC3198Y-	C3198Y	
Q701	TKTA1266Y-	A1266Y (TP)	
Q705	TKTC3198Y-	C3198Y	
Q706	TKTC3198Y-	C3198Y	
Q707	TKTC3198Y-	C3198Y	
Q801	TKTD1414	D1414	
Q802	TKTC3203Y-	C3203-Y	
Q803	TKTD2058Y-	D 2058-Y	
Q803A	4857013300	HEAT SINK C	SPCC T1.0 SN-3
Q803B	7174300811	SCREW TAPPTITE	TT2 RND 3X8 MFZN
Q803D	4856215200	WASHER	SPCC
Q804	TKTC3203Y-	C3203-Y	
Q805	TKSA1013Y-	TR	KSA1013Y (TP)
QA01	TKTC3198Y-	C3198Y	
QA02	TKTC3198Y-	C3198Y	
QA03	TKTC3198Y-	C3198Y	
QA04	TKTC3198Y-	C3198Y	
QA05	TKTC3198Y-	C3198Y	
QA06	TKTC3198Y-	C3198Y	
R101	RD-AZ562J-	R CARBON FILM	1/6 5.6K OHM J
R102	RD-AZ331J-	R CARBON FILM	1/6 330 OHM J
R103	RD-AZ152J-	R CARBON FILM	1/6 1.5K OHM J

LOC	PART-CODE	PART-NAME	PART-DESC
R104	RD-AZ270J-	R CARBON FILM	1/6 27 OHM J
R105	RD-AZ101J-	R CARBON FILM	1/6 100 OHM J
R106	RD-4Z361J-	R CARBON FILM	1/4 360 OHM J
R107	RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R108	RS01Z151J-	R M-OXIDE FILM	1W 150 OHM J (TAPPING)
R109	RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J
R110	RD-AZ563J-	R CARBON FILM	1/6 56K OHM J
R111	RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J
R112	RD-AZ432J-	R CARBON FILM	1/6 4.3K OHM J
R113	RD-AZ162J-	R CARBON FILM	1/6 1.6K OHM J
R114	RD-AZ154J-	R CARBON FILM	1/6 150K OHM J
R115	RD-AZ154J-	R CARBON FILM	1/6 150K OHM J
R116	RD-AZ302J-	R CARBON FILM	1/6 3K OHM J
R117	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R118	RD-AZ682J-	R CARBON FILM	1/6 6.8K OHM J
R119	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R120	RD-AZ151J-	R CARBON FILM	1/6 150 OHM J
R121	RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R122	RD-AZ331J-	R CARBON FILM	1/6 330 OHM J
R123	RD-AZ104J-	R CARBON FILM	1/6 100K OHM J
R124	RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R125	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R126	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R129	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R147	RD-AZ221J-	R CARBON FILM	1/6 220 OHM J
R151	RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J
R201	RD-AZ431J-	R CARBON FILM	1/6 430 OHM J
R202	RD-AZ471J-	R CARBON FILM	1/6 470 OHM J
R203	RD-AZ680J-	R CARBON FILM	1/6 68 OHM J
R204	RD-AZ222J-	R CARBON FILM	1/6 2.2K OHM J
R206	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R207	RD-AZ564J-	R CARBON FILM	1/6 560K OHM J
R208	RD-AZ392J-	R CARBON FILM	1/6 3.9K OHM J
R209	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R210	RD-AZ753J-	R CARBON FILM	1/6 75K OHM J
R211	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R212	RD-AZ394J-	R CARBON FILM	1/6 390K OHM J
R213	RD-AZ561J-	R CARBON FILM	1/6 560 OHM J
R214	RD-AZ822J-	R CARBON FILM	1/6 8.2K OHM J
R216	RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J
R217	RD-AZ242J-	R CARBON FILM	1/6 2.4K OHM J

LOC	PART-CODE	PART-NAME	PART-DESC
R218	RD-AZ104J-	R CARBON FILM	1/6 100K OHM J
R219	RD-AZ221J-	R CARBON FILM	1/6 220 OHM J
R220	RD-AZ222J-	R CARBON FILM	1/6 2.2K OHM J
R221	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R222	RD-AZ681J-	R CARBON FILM	1/6 680 OHM J
R223	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R224	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R225	RD-AZ392J-	R CARBON FILM	1/6 3.9K OHM J
R226	RD-AZ202J-	R CARBON FILM	1/6 2K OHM J
R228	RD-AZ242J-	R CARBON FILM	1/6 2.4K OHM J
R229	RD-AZ362J-	R CARBON FILM	1/6 3.6K OHM J
R230	RD-AZ333J-	R CARBON FILM	1/6 33K OHM J
R231	RD-AZ332J-	R CARBON FILM	1/6 3.3K OHM J
R232	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R235	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R236	RD-AZ152J-	R CARBON FILM	1/6 1.5K OHM J
R237	RD-AZ331J-	R CARBON FILM	1/6 330 OHM J
R238	RD-AZ471J-	R CARBON FILM	1/6 470 OHM J
R239	RS02Z101J-	R M-OXIDE FILM	2W 100 OHM J (TAPPING)
R240	RS01Z750J-	R M-OXIDE FILM	1W 75 OHM J (TAPPING)
R241	RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R245	RD-AZ152J-	R CARBON FILM	1/6 1.5K OHM J
R246	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R247	RD-AZ153J-	R CARBON FILM	1/6 15K OHM J
R252	RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R302	RD-4Z243J-	R CARBON FILM	1/4 24K OHM J
R303	RD-4Z683J-	R CARBON FILM	1/4 68K OHM J
R304	RD-4Z363J-	R CARBON FILM	1/4 36K OHM J
R305	RD-4Z222J-	R CARBON FILM	1/4 2.2K OHM J
R306	RD-4Z563J-	R CARBON FILM	1/4 56K OHM J
R307	RD-4Z153J-	R CARBON FILM	1/4 15K OHM J
R308	RD-AZ273J-	R CARBON FILM	1/6 27K OHM J
R310	RD-4Z202J-	R CARBON FILM	1/4 2K OHM J
R311	RD-4Z153J-	R CARBON FILM	1/4 15K OHM J
R312	RS01Z681J-	R M-OXIDE FILM	1W 680 OHM J (TAPPING)
R313	RS01Z109J-	R M-OXIDE FILM	1W 1 OHM J (TAPPING)
R314	RS01Z102J-	R M-OXIDE FILM	1W 1K OHM J (TAPPING)
R315	RS01Z122J-	R M-OXIDE FILM	1W 1.2K OHM J (TAPPING)
R319	RD-4Z823J-	R CARBON FILM	1/4 82K OHM J
R320	RD-4Z364J-	R CARBON FILM	1/4 360K OHM J
R321	RD-4Z103J-	R CARBON FILM	1/4 10K OHM J

LOC	PART-CODE	PART-NAME	PART-DESC
R322	RD-4Z433J-	R CARBON FILM	1/4 43K OHM J
R323	RD-4Z102J-	R CARBON FILM	1/4 1K OHM J
R324	RD-4Z152J-	R CARBON FILM	1/4 1.5K OHM J
R325	RD-4Z203J-	R CARBON FILM	1/4 20K OHM J
R326	RD-4Z822J-	R CARBON FILM	1/4 8.2K OHM J
R328	RD-4Z103J-	R CARBON FILM	1/4 10K OHM J
R329	RD-4Z202J-	R CARBON FILM	1/4 2K OHM J
R332	RD-4Z562J-	R CARBON FILM	1/4 5.6K OHM J
R333	RD-4Z332J-	R CARBON FILM	1/4 3.3K OHM J
R334	RD-4Z272J-	R CARBON FILM	1/4 2.7K OHM J
R345	RS02Z100J-	R M-OXIDE FILM	2W 10 OHM J (TAPPING)
R349	RD-4Z752J-	R CARBON FILM	1/4 7.5K OHM J
R401	RD-4Z331J-	R CARBON FILM	1/4 330 OHM J
R403	RS02Z163J-	R M-OXIDE FILM	2W 16K OHM J (TAPPING)
R404	RS02Z163J-	R M-OXIDE FILM	2W 16K OHM J (TAPPING)
R405	RS02Z163J-	R M-OXIDE FILM	2W 16K OHM J (TAPPING)
R406	RS01Z472J-	R M-OXIDE FILM	1W 4.7K OHM J (TAPPING)
R407	RD-4Z330J-	R CARBON FILM	1/4 33 OHM J
R408	RS01Z102J-	R M-OXIDE FILM	1W 1K OHM J (TAPPING)
R409	RD-4Z271J-	R CARBON FILM	1/4 270 OHM J
R411	RD-2Z102J-	R CARBON FILM	1/2 1K OHM J
R412	RF02Z479J-	R FUSIBLE	2W 4.7 OHM J (TAPPING)
R414	RS02Z100J-	R M-OXIDE FILM	2W 10 OHM J (TAPPING)
R415	RD-4Z102J-	R CARBON FILM	1/4 1K OHM J
R416	RF02Z159J-	R FUSIBLE	2W 1.5 OHM J (TAPPING)
R417	RS01Z229J-	R M-OXIDE FILM	1W 2.2 OHM J (TAPPING)
R419	RD-2Z184J-	R CARBON FILM	1/2 180K OHM J
R420	RD-2Z184J-	R CARBON FILM	1/2 180K OHM J
R501	RD-AZ334J-	R CARBON FILM	1/6 330K OHM J
R502	RD-AZ123J-	R CARBON FILM	1/6 12K OHM J
R503	RD-AZ123J-	R CARBON FILM	1/6 12K OHM J
R504	RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R505	RD-AZ681J-	R CARBON FILM	1/6 680 OHM J
R506	RD-AZ681J-	R CARBON FILM	1/6 680 OHM J
R507	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R508	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R509	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R510	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R512	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R513	RD-AZ221J-	R CARBON FILM	1/6 220 OHM J
R514	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J

LOC	PART-CODE	PART-NAME	PART-DESC
R515	RD-AZ561J-	R CARBON FILM	1/6 560 OHM J
R516	RD-AZ561J-	R CARBON FILM	1/6 560 OHM J
R517	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R518	RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R519	RD-AZ151J-	R CARBON FILM	1/6 150 OHM J
R520	RD-AZ151J-	R CARBON FILM	1/6 150 OHM J
R521	RD-AZ151J-	R CARBON FILM	1/6 150 OHM J
R522	RD-AZ151J-	R CARBON FILM	1/6 150 OHM J
R523	RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R524	RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R525	RD-AZ152J-	R CARBON FILM	1/6 1.5K OHM J
R526	RD-AZ392J-	R CARBON FILM	1/6 3.9K OHM J
R527	RD-AZ392J-	R CARBON FILM	1/6 3.9K OHM J
R528	RD-AZ392J-	R CARBON FILM	1/6 3.9K OHM J
R529	RD-AZ392J-	R CARBON FILM	1/6 3.9K OHM J
R531	RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R532	RD-AZ681J-	R CARBON FILM	1/6 680 OHM J
R533	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R540	RD-AZ302J-	R CARBON FILM	1/6 3K OHM J
R541	RD-AZ561J-	R CARBON FILM	1/6 560 OHM J
R544	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R545	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R553	RD-4Z561J-	R CARBON FILM	1/4 560 OHM J
R554	RD-4Z561J-	R CARBON FILM	1/4 560 OHM J
R555	RD-4Z561J-	R CARBON FILM	1/4 560 OHM J
R556	RD-4Z151J-	R CARBON FILM	1/4 150 OHM J
R557	RD-4Z561J-	R CARBON FILM	1/4 560 OHM J
R558	RD-4Z561J-	R CARBON FILM	1/4 560 OHM J
R559	RD-4Z101J-	R CARBON FILM	1/4 100 OHM J
R560	RS02Y123J-	R M-OXIDE FILM	2W 12K OHM J
R561	RS02Y123J-	R M-OXIDE FILM	2W 12K OHM J
R562	RS02Y123J-	R M-OXIDE FILM	2W 12K OHM J
R563	RD-4Z182J-	R CARBON FILM	1/4 1.8K OHM J
R564	RD-4Z182J-	R CARBON FILM	1/4 1.8K OHM J
R565	RD-4Z182J-	R CARBON FILM	1/4 1.8K OHM J
R566	RD-4Z333J-	R CARBON FILM	1/4 33K OHM J
R567	RD-4Z333J-	R CARBON FILM	1/4 33K OHM J
R568	RD-4Z333J-	R CARBON FILM	1/4 33K OHM J
R569	RD-2Z332J-	R CARBON FILM	1/2 3.3K OHM J
R570	RD-2Z332J-	R CARBON FILM	1/2 3.3K OHM J
R571	RD-2Z332J-	R CARBON FILM	1/2 3.3K OHM J

LOC	PART-CODE	PART-NAME	PART-DESC
R572	RD-4Z202J-	R CARBON FILM	1/4 2K OHM J
R573	RD-4Z202J-	R CARBON FILM	1/4 2K OHM J
R574	RD-4Z202J-	R CARBON FILM	1/4 2K OHM J
R575	RD-4Z101J-	R CARBON FILM	1/4 100 OHM J
R576	RD-4Z101J-	R CARBON FILM	1/4 100 OHM J
R577	RD-4Z101J-	R CARBON FILM	1/4 100 OHM J
R578	RD-4Z101J-	R CARBON FILM	1/4 100 OHM J
R579	RV5221502-	R SEMI FIXED	V5K-5X2.5-6Y-PC-RP
R580	RV5221502-	R SEMI FIXED	V5K-5X2.5-6Y-PC-RP
R581	RV5221502-	R SEMI FIXED	V5K-5X2.5-6Y-PC-RP
R582	RV5221301-	R SEMI FIXED	EVN D2A A03 300 OHM B
R583	RV5221301-	R SEMI FIXED	EVN D2A A03 300 OHM B
R601	RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R602	RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R606	RD-4Z229J-	R CARBON FILM	1/4 2.2 OHM J
R607	RD-4Z229J-	R CARBON FILM	1/4 2.2 OHM J
R608	RS01Z331J-	R M-OXIDE FILM	1W 330 OHM J (TAPPING)
R609	RS01Z331J-	R M-OXIDE FILM	1W 330 OHM J (TAPPING)
R610	RS02Z109J-	R M-OXIDE FILM	2W 1 OHM J (TAPPING)
R611	RD-AZ511J-	R CARBON FILM	1/6 510 OHM J
R612	RD-AZ511J-	R CARBON FILM	1/6 510 OHM J
R620	RD-AZ561J-	R CARBON FILM	1/6 560 OHM J
R621	RD-AZ301J-	R CARBON FILM	1/6 300 OHM J
R622	RD-AZ101J-	R CARBON FILM	1/6 100 OHM J
R623	RD-AZ471J-	R CARBON FILM	1/6 470 OHM J
R625	RD-AZ623J-	R CARBON FILM	1/6 62K OHM J
R630	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R631	RD-AZ562J-	R CARBON FILM	1/6 5.6K OHM J
R633	RD-AZ562J-	R CARBON FILM	1/6 5.6K OHM J
R636	RD-4Z279J-	R CARBON FILM	1/4 2.7 OHM J
R637	RD-AZ182J-	R CARBON FILM	1/6 1.8K OHM J
R638	RD-AZ182J-	R CARBON FILM	1/6 1.8K OHM J
R640	RD-4Z111J-	R CARBON FILM	1/4 110 OHM J
R645	RD-AZ151J-	R CARBON FILM	1/6 150 OHM J
R646	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R647	RD-AZ394J-	R CARBON FILM	1/6 390K OHM J
R648	RD-AZ151J-	R CARBON FILM	1/6 150 OHM J
R649	RD-AZ151J-	R CARBON FILM	1/6 150 OHM J
R700	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R701	RD-4Z105J-	R CARBON FILM	1/4 1M OHM J
R702	RD-4Z105J-	R CARBON FILM	1/4 1M OHM J

LOC	PART-CODE	PART-NAME	PART-DESC
R703	RD-AZ471J-	R CARBON FILM	1/6 470 OHM J
R704	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R705	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R706	RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R707	RD-AZ101J-	R CARBON FILM	1/6 100 OHM J
R708	RD-AZ101J-	R CARBON FILM	1/6 100 OHM J
R709	RD-AZ101J-	R CARBON FILM	1/6 100 OHM J
R710	RD-AZ101J-	R CARBON FILM	1/6 100 OHM J
R712	RD-AZ101J-	R CARBON FILM	1/6 100 OHM J
R713	RD-AZ101J-	R CARBON FILM	1/6 100 OHM J
R720	RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J
R721	RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J
R722	RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J
R726	RD-AZ204J-	R CARBON FILM	1/6 200K OHM J
R727	RD-AZ204J-	R CARBON FILM	1/6 200K OHM J
R728	RD-AZ204J-	R CARBON FILM	1/6 200K OHM J
R729	RD-AZ204J-	R CARBON FILM	1/6 200K OHM J
R730	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R731	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R732	RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R733	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R734	RD-AZ473J-	R CARBON FILM	1/6 47K OHM J
R735	RD-AZ203J-	R CARBON FILM	1/6 20K OHM J
R736	RD-AZ473J-	R CARBON FILM	1/6 47K OHM J
R737	RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R739	RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J
R740	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R741	RD-AZ123J-	R CARBON FILM	1/6 12K OHM J
R742	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R743	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R744	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R745	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R746	RD-AZ123J-	R CARBON FILM	1/6 12K OHM J
R747	RD-AZ123J-	R CARBON FILM	1/6 12K OHM J
R748	RD-AZ123J-	R CARBON FILM	1/6 12K OHM J
R749	RD-AZ113J-	R CARBON FILM	1/6 11K OHM J
R750	RD-AZ512J-	R CARBON FILM	1/6 5.1K OHM J
R751	RD-AZ203J-	R CARBON FILM	1/6 20K OHM J
R752	RD-AZ203J-	R CARBON FILM	1/6 20K OHM J
R753	RD-AZ123J-	R CARBON FILM	1/6 12K OHM J
R754	RD-AZ473J-	R CARBON FILM	1/6 47K OHM J

LOC	PART-CODE	PART-NAME	PART-DESC
R755	RD-AZ473J-	R CARBON FILM	1/6 47K OHM J
R756	RD-AZ473J-	R CARBON FILM	1/6 47K OHM J
R757	RD-AZ682J-	R CARBON FILM	1/6 6.8K OHM J
R759	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R760	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R761	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R762	RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R763	RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R775	RD-AZ623J-	R CARBON FILM	1/6 62K OHM J
R776	RD-AZ122J-	R CARBON FILM	1/6 1.2K OHM J
R777	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R778	RD-AZ203J-	R CARBON FILM	1/6 20K OHM J
R779	RD-AZ153J-	R CARBON FILM	1/6 15K OHM J
R780	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R781	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R782	RD-AZ912J-	R CARBON FILM	1/6 9.1K OHM J
R783	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R784	RD-AZ113J-	R CARBON FILM	1/6 11K OHM J
R785	RD-AZ682J-	R CARBON FILM	1/6 6.8K OHM J
R790	RS02Z560J-	R M-OXIDE FILM	2W 56 OHM J (TAPPING)
R795	RD-AZ511J-	R CARBON FILM	1/6 510 OHM J
R798	RD-AZ471J-	R CARBON FILM	1/6 470 OHM J
R801	DJ140M290L	POSISTOR	J503P53D140M290L
R803	RC-2Z225J-	R CARBON COMP	1/2 2.2M OHM J
R804	RX10B109JN	R CEMENT	10W 1 OHM J BENCH 4P
R805	RX10B109JN	R CEMENT	10W 1 OHM J BENCH 4P
R806	RS02Z123J-	R M-OXIDE FILM	2W 12K OHM J (TAPPING)
R807	RS02Z123J-	R M-OXIDE FILM	2W 12K OHM J (TAPPING)
R808	RS02Z150J-	R M-OXIDE FILM	2W 15 OHM J (TAPPING)
R809	RF02Z338J-	R FUSIBLE	2W 0.33 OHM J (TAPPING)
R810	RF01Z688J-	R FUSIBLE	1W 0.68 OHM J (TAPPING)
R812	RD-4Z222J-	R CARBON FILM	1/4 2.2K OHM J
R813	RD-4Z102J-	R CARBON FILM	1/4 1K OHM J
R814	RD-4Z102J-	R CARBON FILM	1/4 1K OHM J
R816	RC-2Z275J-	R CARBON COMP	1/2 2.7M OHM J
R817	RS01Z203J-	R M-OXIDE FILM	1W 20K OHM J (TAPPING)
R818	RC-2Z275J-	R CARBON COMP	1/2 2.7M OHM J
R820	RS01Z363J-	R M-OXIDE FILM	1W 36K OHM J (TAPPING)
R821	RS01Z332J-	R M-OXIDE FILM	1W 3.3K OHM J (TAPPING)
R822	RF01Z398J-	R FUSIBLE	1W 0.39 OHM J (TAPPING)
R823	RD-4Z183J-	R CARBON FILM	1/4 18K OHM J

LOC	PART-CODE	PART-NAME	PART-DESC
R824	RD-4Z223J-	R CARBON FILM	1/4 22K OHM J
R825	RD-4Z223J-	R CARBON FILM	1/4 22K OHM J
R826	RD-4Z203J-	R CARBON FILM	1/4 20K OHM J
R827	RS01Z751J-	R M-OXIDE FILM	1W 750 OHM J (TAPPING)
R828	RS01Z390J-	R M-OXIDE FILM	1W 39 OHM J (TAPPING)
R829	RD-2Z222J-	R CARBON FILM	1/2 2.2K OHM J
R831	RS01Z229J-	R M-OXIDE FILM	1W 2.2 OHM J (TAPPING)
R832	RD-4Z399J-	R CARBON FILM	1/4 3.9 OHM J
R834	RF02Z338J-	R FUSIBLE	2W 0.33 OHM J (TAPPING)
R839	RF01Z688J-	R FUSIBLE	1W 0.68 OHM J (TAPPING)
R840	RD-4Z103J-	R CARBON FILM	1/4 10K OHM J
R842	RD-4Z330J-	R CARBON FILM	1/4 33 OHM J
R843	RD-4Z103J-	R CARBON FILM	1/4 10K OHM J
R848	RS02Z183J-	R M-OXIDE FILM	2W 18K OHM J (TAPPING)
RA01	RD-AZ104J-	R CARBON FILM	1/6 100K OHM J
RA02	RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
RA03	RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J
RA04	RD-AZ153J-	R CARBON FILM	1/6 15K OHM J
RA05	RD-AZ913J-	R CARBON FILM	1/6 91K OHM J
RA06	RD-AZ104J-	R CARBON FILM	1/6 100K OHM J
RA07	RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
RA08	RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J
RA09	RD-AZ153J-	R CARBON FILM	1/6 15K OHM J
RA10	RD-AZ913J-	R CARBON FILM	1/6 91K OHM J
RA11	RD-AZ750J-	R CARBON FILM	1/6 75 OHM J
RA12	RD-AZ104J-	R CARBON FILM	1/6 100K OHM J
RA13	RD-AZ561J-	R CARBON FILM	1/6 560 OHM J
RA14	RD-AZ622J-	R CARBON FILM	1/6 6.2K OHM J
RA15	RD-AZ182J-	R CARBON FILM	1/6 1.8K OHM J
RA16	RD-AZ561J-	R CARBON FILM	1/6 560 OHM J
RA17	RD-AZ221J-	R CARBON FILM	1/6 220 OHM J
RA18	RD-AZ221J-	R CARBON FILM	1/6 220 OHM J
RA19	RD-AZ221J-	R CARBON FILM	1/6 220 OHM J
RA20	RD-AZ303J-	R CARBON FILM	1/6 30K OHM J
RA21	RD-AZ153J-	R CARBON FILM	1/6 15K OHM J
RA22	RD-AZ750J-	R CARBON FILM	1/6 75 OHM J
RA23	RD-AZ822J-	R CARBON FILM	1/6 8.2K OHM J
RA24	RD-AZ182J-	R CARBON FILM	1/6 1.8K OHM J
RA26	RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
RA27	RD-AZ561J-	R CARBON FILM	1/6 560 OHM J
RA29	RD-AZ561J-	R CARBON FILM	1/6 560 OHM J

LOC	PART-CODE	PART-NAME	PART-DESC
RA30	RD-AZ913J-	R CARBON FILM	1/6 91K OHM J
RA31	RD-AZ104J-	R CARBON FILM	1/6 100K OHM J
RA32	RD-AZ104J-	R CARBON FILM	1/6 100K OHM J
RA33	RD-AZ913J-	R CARBON FILM	1/6 91K OHM J
RA34	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN
RA35	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN
RA36	RD-AZ101J-	R CARBON FILM	1/6 100 OHM J
RE02	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
RE03	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
S551	5S40202140	SW PUSH	KPT-2201H
SF101	5PF1802L	FILTER SAW	F1802L
T401	5TD0000018	TRANS DRIVE	THD-120
T402	50H0000168	FBT	FFA94024L
T402A	7128301212	SCREW TAPPING	T2S WAS 3X12 MFZN BK
T801	50M0000093	TRANS SMPS	TSM-5317
T802	50P0000191	TRANS POWER	TPW-2010
TP101	4859262420	CONN WAFER	YFW050-02
TU01	4859712730	TUNER VARACTOR	VTSH7USZFD1
TU01A	4859101820	JACK ANT	JACK-D1
V550	4859301930	SOCKET CRT	CVT3240-0501
V901	4859618263	CRT	A68KTB191X006 M16

LOC	PART-CODE	PART-NAME	PART-DESC
VR101	RV5426472P	R SEMI FIXED	RH0638C 4.7K OHM B
VR102	RV5426103P	R SEMI FIXED	RH0638C 10K OHM B
VR201	RV5426103P	R SEMI FIXED	RH0638C 10K OHM B
VR202	RV5426103P	R SEMI FIXED	RH0638C 10K OHM B
VR301	RV5426223P	R SEMI FIXED	RH0638C 22K OHM
VR303	RV5426223P	R SEMI FIXED	RH0638C 22K OHM
VR304	RV5426223P	R SEMI FIXED	RH0638C 22K OHM
VR501	RV5426222P	R SEMI FIXED	RH 0638C-2.2K OHM
VR502	RV5426222P	R SEMI FIXED	RH 0638C-2.2K OHM
WA01	4850702S09	CONN AS	BL102NG+MXH40058-02=300
X501	5XEX3R582C	CRYSTAL QUARTZ	HC-49U 3.582056M 20PPM TA
X502	5XEX3R579C	CRYSTAL QUARTZ	HC-49U 3.579545M (TP)
X503	5XEX3R575C	CRYSTAL QUARTZ	HC-49U 3.575611M 20PPM TA
X701	5XEX4R194C	CRYSTAL QUARTZ	HC-49U 4.194304MH (TP)
Y801	5SC0101328	SW RELAY	SDT-SS-112DM
Z101	5PXFSH4R5D	FILTER CERA	SFSH4.5MDB
Z201	5PXPS45MB-	FILTER CERA	TPS-4.5MB TRAP (TAPPING)
Z202	4850L02810	RESONATOR CERA	CSB500F55
ZZ131	58G0000094	COIL DEGAUSSING	DC-2901
ZZ132	48519A4210	CRT GROUND AS	2901H-1015-2P

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