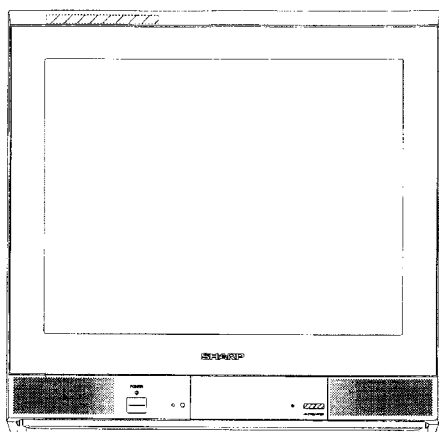


# SHARP SERVICE MANUAL



## COLOUR TELEVISION *Chassis No. GA-2*

MODEL **21YF200**

In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified should be used.

### FEATURE

- PAL B/G
- NTSC (AV THRU)
- Full Auto Channel Preset and Auto Channel Skip
- 100-CH Program Memory
- CATV(Hyper Band) Ready <Used Frequency Synthesizer Tuner>
- Black Stretch Circuit
- On Timer/Sleep Timer/Reminder Timer
- Blue Back Noise Mute
- Front AV IN & Rear AV IN/OUT Terminals
- Favourite Channel
- Front Headphone Jack
- Colour Comb Filter (AV IN)
- High Contrast Picture
- Hotel Mode
- English Language OSD
- White Temperature Adjustment
- Component In
- Surround Sound Effect(With Bass/Treble/Balance)
- AV Stereo

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### WARNING

The chassis in this receiver is partially hot. Use an isolation transformer between the line cord plug and power receptacle, when servicing this chassis. To prevent electric shock, do not remove cover. No user – serviceable parts inside. Refer servicing to qualified service personnel.

**SHARP CORPORATION**

SPECIFICATIONS

Convergence .....	Self Convergence System
Focus .....	Electrostatic Focus High Bi-Potential
Sweep Deflection .....	Magnetic
Intermediate Frequencies	
Picture IF Carrier .....	38.9MHz
Sound IF Carrier Frequency .....	33.16MHz
5.74MHz .....	33.4MHz
5.5MHz .....	34.7MHz
Colour Sub-Carrier Frequency .....	
Power Input .....	AC110 ~ 240V, 50/60 Hz
Power Consumption .....	99W
Audio Power Output Rating .....	4.0W(rms)X2
Speaker	
Size .....	5 x 9 cm Elliptic (2pc)
Voice Coil Impedance .....	16 ohms at 400 Hz
Aerial Input Impedance	
VHF/UHF .....	75 ohms Unbalanced
Receiving Channels (PAL B/G) .....	
VHF-Channels .....	E2(48.25MHz) thru E12(224.25MHz)
UHF-Channels .....	E21(471.25MHz) thru E69(855.25MHz)
Receiving Frequency .....	
VHF-Channels .....	48.25 thru 463.25MHz
UHF-Channels .....	471.25 thru 863.25MHz
Dimensions .....	
Width: 502 mm	
Height: 486 mm	
Depth: 482 mm	
Weight(approx): 22 kg	
Cabinet material .....	All Plastics

Specifications are subject to change without prior notice.

IMPORTANT SERVICE NOTES

Maintenance and repair of this receiver should be done by qualified service personnel only.

SERVICE OF HIGH VOLTAGE SYSTEM AND PICTURE TUBE

When servicing the high voltage system, remove static charge from it by connecting a 10K ohm Resistor in series with an insulated wire(such as a test probe) between picture tube dag and 2nd anode lead. (AC line cord should be disconnected from AC outlet.)

1. Picture tube in this receiver employs integral implosion protection.
2. Replace with tube of the same type number for continued safety.
3. Do not lift picture tube by the neck.
4. Handle the picture tube only when wearing shatterproof goggles and after discharging the high voltage completely.

X-RAY

This receiver is designed so that any X-Ray radiation is kept to an absolute Minimum. Since certain malfunctions or servicing may produce potentially hazardous radiation with prolonged exposure at close range, the following precautions should be observed:

1. When repairing the circuit, be sure not to increase the high voltage to more than 28.6kV (at beam 0 μA) for the set.
2. To keep the set in a normal operation, be sure to make it function on 27.0kV ±1.5kV (at beam 1, 100 μA) in the case of the set. The set has been factory - Adjusted to the above-mentioned high voltage.  
∴ If there is a possibility that the high voltage fluctuates as a result of the repairs, never forget to check for such high voltage after the work.
3. Do not substitute a picture tube with unauthorized types and/or brands which may cause excess X-ray radiation.

BEFORE RETURNING THE RECEIVER

Before returning the receiver to the user, perform the following safety Checks.

1. Inspect all lead dress to make certain that leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the receiver.
2. Inspect all protective devices such as non-metallic control knobs, insulating fishpapers, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacity networks, mechanical insulators etc.

## ADJUSTMENT PRECAUTIONS

This model's setting are adjusted in two different ways: through the I<sup>2</sup>C bus control and in the conventional analog manner. The adjustments via the I<sup>2</sup>C bus control include preset-only items and variable data.

**CAUTION : MAKE SURE TV SET IN "NORMAL CONDITION" BEFORE SWITCH TO SERVICE MODE FOR ADJUSTMENT.**

### 1. Setting the service mode by the microprocessor.

- ①. Short JA 304 & JA 307, then tv set will switch to the service mode position, and the microprocessor is in input mode. (Adjustment through the I<sup>2</sup>C bus control). (Use JWS Key to set as well).
- ②. Press the MENU key on the remote controller to get ready to select the mode (Adjustment mode, Setting mode, Check mode and Option mode) one by one.
- ③. Press the CH DOWN / UP key on the remote controller to select the items in Adjustment mode, Setting mode and Option mode.
- ④. Using the VOLUME UP/ DOWN key on the remote controller, the data can be modified.
- ⑤. In Check mode the data cannot be changed.
- ⑥. Disable the short of JA 304 & JA 307, it will switch to the normal mode (OFF) position, and the microprocessor is out of the service mode.

### 2.Factory Presetting.

- ①. Short JA 304 & JA 307, then turn ON the main power and release the shorted JA304 & JA307 after raster appeared on the screen. Initial values are automatically preset, only when a new EEPROM is used. (Judge with the first 4 bytes.)
- ②. The initial data are preset as listed in page 4-2, 5-1, 5-2 & 6-2.
- ③. Make sure the data need modification or not(initial data).

**Note:** Once the chassis has been assembly together and ready to be **POWER ON for the FIRST TIME**, make sure to short JA304 & JA307 to switch to the service mode position first and then turn on the main power switch (See 2-① above).

Precaution: If haven't done this initiation, it may possibly generate excessive Beam current.

### 3. For reference please check with memory map.

## ADJUSTMENT ITEM

\*\*\*Below is the adjustment items that we should done. PLS FOLLOW THE PROCEDURE.  
Otherwise some adjustment items will not be accurate.

NO ***	ADJUSTMENT ITEM	EFFECTIVE MODEL	REVISION
1	BUS SET UP	ALL	
2	OPTION SET UP	ALL	
3	V-SIZE (50 Hz)	ALL	
4	V-SHIFT (50 Hz)	ALL	
5	H-SHIFT (50 Hz)	ALL	
6	H-VCO	ALL	
7	VIF-VCO	ALL	
8	S-TRAP fo	ALL	
9	RF-AGC	ALL	
10	PURITY ADJ	ALL	
11	CONVERGENCE ADJ	ALL	
12	FOCUS ADJ	ALL	
13	SCREEN	ALL	
14	WHITE BALANCE	ALL	
15	SUB-BRIGHTNESS	ALL	
16	SUB-CONTRAST	ALL	
17	SUB-TINT	ALL	
18	SUB-COLOR	ALL	
19	MAX BEAM CHECK	ALL	
20	BEAM PROTECTOR CHECK	ALL	
21	HV PROTECTOR CHECK	ALL	
22	OTHER PROTECTOR CHECK	ALL	
23	AV OUT CHECK	ALL	
24	AV IN CHECK	ALL	
25	CONTRAST CONTROL CHECK	ALL	
26	COLOR CONTROL CHECK	ALL	
27	BRIGHTNESS CONTROL CHECK	ALL	
28	TINT CONTROL CHECK	ALL	
29	SHARPNESS CONTROL CHECK	ALL	
30	CH DISPLAY COLOR CHECK	ALL	
31	NORMAL DISPLAY CHECK	ALL	
32	WHITE TEMP CONTROL CHECK	ALL	
33	COLOR SYSTEM CHECK	ALL	
34	SOUND SYSTEM CHECK	ALL	
35	NOISE MUTE CHECK	ALL	
36	HEAD PHONE CHECK	ALL	

USER DATA IN SERVICE MODE

\* While SERVICE mode ON, EEPROM DATA will switch to the service data.  
Also, once SERVICE mode OFF, EEPROM will switch back to previous USER DATA.  
\* In the service mode, the user data establish as below.

USER DATA	
CONTRAST	MAX (60)
COLOUR	CENT (0)
BRIGHTNESS	CENT (0)
TINT	CENT (0)
SHARPNESS	CENT (0)
WHITE TEMP	STANDARD
S-VOLUME	MIN
SURROUND	OFF
TREBLE	CENT (0)
BASS	CENT (0)
BALANCE	CENT (0)
BLUE BACK	OFF
C SYSTEM	AUTO
S SYSTEM	*1

\*1: For each CH, data is same as before switch to Service Mode.

The flow of Mode lists as following.

\* Direct Key-In Mode for Service Items in Service Mode

RC (HEX)	SERVICE-ITEM
80	R-CUTOFF UP (IN SERVICE MODE V00)
40	G-CUTOFF UP (IN SERVICE MODE V00)
C0	B-CUTOFF UP (IN SERVICE MODE V00)
20	R-CUTOFF DOWN (IN SERVICE MODE V00)
A0	G-CUTOFF DOWN (IN SERVICE MODE V00)
E0	B-CUTOFF DOWN (IN SERVICE MODE V00)
60	R-DRIVE UP (IN SERVICE MODE V00)
10	B-DRIVE UP (IN SERVICE MODE V00)
50	B-DRIVE DOWN (IN SERVICE MODE V00)
E4	R-DRIVE DOWN (IN SERVICE MODE V00)
E4	Y-MUTE (BESIDES OF SERVICE MODE V00)
F5	RF-AGC (V01)
F5	VIF-VCO (V02)
C2	H-VCO (V03)
8D	SUB-CONTRAST (V04)
D6	SUB-COLOR (V05)
36	SUB-TINT (V07)
46	SUB-SHARPNESS (V08)
C6	SUB COLOR YUV (V09)
26	SUB TINT YUV (V10)
24	V-SIZE (V11), V-SIZE60 (V17)
54	V-SHIFT (V12), V-SHIFT60 (V18)
74	H-SHIFT (V13), H-SHIFT60 (V19)
66	SCM-BR (V14)
E6	SCM-BB (V15)
C4	SUB VOL (V16)
4C	S-TRAP BG (V20)
CC	S-TRAP I (V21)
2C	S-TRAP D/K (V22)
AC	S-TRAP M (V23)
EC	S-TRAP 574 (V24)
C1	AUTO ADJ FOR V01, V02, V03, V20, V21, V22, V23,V24
CA	T-SET
81	SERVICE MODE

\*\* After short JA304 & JA307, and turn on the MAIN POWER switch, read data from EEPROM address 00H ~ 03H. Then compare to the list below. If different, initialize the EEPROM.

Address	: Data	Address	: Data
00H	: 8AH	02H	: 82H
01H	: 84H	03H	: 89H

\*\* There are four stages of Service Mode data;  
First stage data from V00~V24 (ADJUSTMENT MODE).  
To go into second stage of service mode data, press MENU key,Second stage data from F01~F113 (SETTING MODE).  
To go into third stage of service mode data, press MENU key. Third stage data is CHECK MODE.  
To go into fourth stage of service mode data, press MENU key, Fourth stage data from O01~O21. (OPTION MODE)

ADJUSTMENT MODE (FIRST STAGE)				
EEPROM ITEMS	OSD	DATA LENGTH	INITIAL DATA	FIXADJ/AUTO
R-DRIVE	V00	0~127	63	ADJ
B-DRIVE	V00	0~127	63	ADJ
R-CUT	V00	0~255	127	ADJ
G-CUT	V00	0~255	127	ADJ
B-CUT	V00	0~255	127	ADJ
RF-AGC	V01	0~127	50	AUTO
VIF-VCO	V02	0~63	31	AUTO
H-VCO	V03	0~7	3	AUTO
SUB-CONTRAST	V04	0~127	100	ADJ
SUB-COLOR	V05	0~127	63	ADJ
SUB-BRIGHT	V06	0~255	127	ADJ
SUB-TINT	V07	0~127	63	ADJ
SUB-SHARPNESS	V08	0~63	43	FIX
SUB-COLOR-YUV	V09	0~127	90	*FIX
SUB-TINT-YUV	V10	0~127	63	FIX
V-SIZE 50 Hz	V11	0~63	38	ADJ
V-SHIFT 50 Hz	V12	0~7	3	ADJ
H-SHIFT 50 Hz	V13	0~31	9	ADJ
SECAM-BR	V14	0~63	37	ADJ
SECAM-BB	V15	0~63	22	ADJ
SUB-VOL	V16	0~60	60	FIX
V-SIZE 60 Hz	V17	-31~0~+31	0	FIX
V-SHIFT 60 Hz	V18	-7~0~+7	-1	FIX
H-SHIFT 60 Hz	V19	-15~0~+15	+2	FIX
S-TRAP (BG)	V20	0~15	7	AUTO
S-TRAP (I)	V21	0~15	7	AUTO
S-TRAP (DK)	V22	0~15	7	AUTO
S-TRAP (M)	V23	0~15	7	AUTO
S-TRAP (5,74)	V24	0~15	7	AUTO

SETTING MODE (SECOND STAGE)		EEPROM ITEMS		OSD	DATA LENGTH	INITIAL DATA	FIX/ADJ	REMARK
1W-TV		1W-TV	F58	0/1	0	FIX		
1W-AV		1W-AV	F59	0/1	1	FIX		
V-FREE (NO SYNC)		V-FREE (NO SYNC)	F60	0/1	0	FIX		
AFC2 (NO SYNC)		AFC2 (NO SYNC)	F61	0/1	0	FIX		
GAMMA		GAMMA	F62	0-3	0	FIX		
BS-DIC		BS-DIC	F63	0-15	10	FIX		
BS-GAIN		BS-GAIN	F64	0/1	0	FIX		
OM-DET		OM-DET	F65	0/1	0	FIX		
SL-TV		SL-TV	F66	0-7	2	FIX		
SL-AV		SL-AV	F67	0-7	4	FIX		
SL-YUV		SL-YUV	F68	0-7	4	FIX		
VD2VD1/AS/FBP-TV		VD2VD1/AS/FBP-TV	F69	0-15	6	FIX		
VD2VD1/AS/FBP-AV		VD2VD1/AS/FBP-AV	F70	0-15	14	FIX		
VD2VD1/AS/FBP-YUV		VD2VD1/AS/FBP-YUV	F71	0-15	14	FIX		
VDL		VDL	F72	0-3	0	FIX		
UDL		UDL	F73	0-3	0	FIX		
AUTO-SCM-KIL-TV		AUTO-SCM-KIL-TV	F74	0-3	1	FIX		
SCM-YDL		SCM-YDL	F75	0/1	0	FIX		
SECAM-BGP		SECAM-BGP	F76	0-3	0	FIX		
N45		N45	F77	0/1	0	FIX		
DL-REV		DL-REV	F78	0/1	0	FIX		
DL-OUT		DL-OUT	F79	0/1	0	FIX		
TXT-POSH (TELETEXT)		TXT-POSH (TELETEXT)	F80	0-63	30	FIX		
TXT-POSV (TELETEXT)		TXT-POSV (TELETEXT)	F81	0-63	34	FIX		
OSD-POS		OSD-POS	F82	0-127	9	FIX		
CP		CP	F83	0/1	1	FIX		
SMALL-SUPR (S-CTRL)		SMALL-SUPR (S-CTRL)	F84	0/1	0	FIX		BUS SET UP
SUB-BASS (S-CTRL)		SUB-BASS (S-CTRL)	F85	0-7	6	*FIX		BUS SET UP
SUB-TREB (S-CTRL)		SUB-TREB (S-CTRL)	F86	0-7	0	*FIX		BUS SET UP
AGC-ADJ (S-CTRL)		AGC-ADJ (S-CTRL)	F87	0-4	0	*FIX		BUS SET UP
AGC-SW-OFF (NICAM)		AGC-SW-OFF (NICAM)	F88	0(dis)/1(ena)	1	FIX		
AGC-GAIN-ADJ (NICAM)		AGC-GAIN-ADJ (NICAM)	F89	0-31	16	FIX		
FM-LEVEL-ADJ (NICAM)		FM-LEVEL-ADJ (NICAM)	F90	-15-0-+15	0	FIX		
IGR-LEVEL-ADJ (NICAM)		IGR-LEVEL-ADJ (NICAM)	F91	-15-0-+15	+1	FIX		
NICAM-BG-LVL-ADJ (NICAM)		NICAM-BG-LVL-ADJ (NICAM)	F92	-15-0-+15	-2	FIX		
NICAM-I-LVL-ADJ (NICAM)		NICAM-I-LVL-ADJ (NICAM)	F93	-15-0-+15	+3	FIX		
NICAM-DK-LVL-ADJ (NICAM)		NICAM-DK-LVL-ADJ (NICAM)	F94	-15-0-+15	-1	FIX		
NICAM-LOW-ERR-LIM (NICAM)		NICAM-LOW-ERR-LIM (NICAM)	F95	0-255	35	FIX		
NICAM-UPP-ERR-LIM (NICAM)		NICAM-UPP-ERR-LIM (NICAM)	F96	0-255	70	FIX		
IGR-GAIN-ADJ (IGR)		IGR-GAIN-ADJ (IGR)	F97	-6-0-+7	0	FIX		
FM-ID-SPEED (NICAM)		FM-ID-SPEED (NICAM)	F98	0-3	1	FIX		
NICAM-AUTO-MUTE		NICAM-AUTO-MUTE	F99	0/1	0	FIX		
ANA-OSD		ANA-OSD	F100	0(Dig)/1(Ana)	0	FIX		
AUTO-SCM-KIL-AV-YUV		AUTO-SCM-KIL-AV-YUV	F101	0-3	1	FIX		
AFC1-GAIN-TV		AFC1-GAIN-TV	F102	0-3	0	FIX		
AFC1-GAIN-AV		AFC1-GAIN-AV	F103	0-3	3	FIX		
AFC1-GAIN-YUV		AFC1-GAIN-YUV	F104	0-3	3	FIX		
CON-REDUCE		CON-REDUCE	F105	0(0%)~1(25%)~2(50%)	0	FIX		
TAKE-OFF-TV		TAKE-OFF-TV	F106	0/1	1	FIX		
TAKE-OFF-AV		TAKE-OFF-AV	F107	0/1	0	FIX		
TAKE-OFF-YUV		TAKE-OFF-YUV	F108	0/1	0	FIX		
C-ANGLE (103 DEG/ 95 DEG)		C-ANGLE (103 DEG/ 95 DEG)	F109	0 (103deg)/1 (95deg)	1	FIX		
STD-BY-WO-BRIGHT		STD-BY-WO-BRIGHT	F110	0-255	255	*FIX		BUS SET UP
AC-FAIL-WO-BRIGHT		AC-FAIL-WO-BRIGHT	F111	0-255	255	FIX		
FORCED-SCM-KIL-TV		FORCED-SCM-KIL-TV	F112	0-3	2	FIX		
FORCED-SCM-KIL-AV-YUV		FORCED-SCM-KIL-AV-YUV	F113	0-3	2	FIX		

SETTING MODE (SECOND STAGE)		EEPROM ITEMS		OSD	DATA LENGTH	INITIAL DATA	FIX/ADJ	REMARK
STRAPQ-BG		STRAPQ-BG	F01	0/1	0	FIX		
STRAPQ-I		STRAPQ-I	F02	0/1	0	FIX		
STRAPQ-DK		STRAPQ-DK	F03	0/1	0	FIX		
STRAPQ-M		STRAPQ-M	F04	0/1	0	FIX		
STRAPQ-574		STRAPQ-574	F05	0/1	0	FIX		
C-CLIP-LVL		C-CLIP-LVL	F06	0/1	0	FIX		
RGB-CLIP		RGB-CLIP	F07	0/1	0	FIX		
BS		BS	F08	0/1	0	FIX		
ABCL		ABCL	F09	0/1	0	FIX		
ABCL-GAIN		ABCL-GAIN	F10	0/1	0	FIX		
S-OUT-LVL		S-OUT-LVL	F11	0-127	95	FIX		
VIF-G		VIF-G	F12	0-7	4	FIX		
SHPG-P		SHPG-P	F13	0/1	0	FIX		
SHPG-S		SHPG-S	F14	0/1	0	FIX		
SHPG-N4		SHPG-N4	F15	0/1	0	FIX		
SHPG-N3		SHPG-N3	F16	0/1	0	FIX		
YDL		YDL	F17	0/1	1	FIX		
YDL-P		YDL-P	F18	0-7	5	FIX		
YDL-S		YDL-S	F19	0-7	5	FIX		
YDL-N4		YDL-N4	F20	0-7	7	FIX		
YDL-N3		YDL-N3	F21	0-7	5	FIX		
YDL-AV		YDL-AV	F22	0-7	5	FIX		
YDL-AV-P		YDL-AV-P	F23	0-7	6	FIX		
YDL-AV-S		YDL-AV-S	F24	0-7	6	FIX		
YDL-AV-N4		YDL-AV-N4	F25	0-7	7	FIX		
YDL-AV-N3		YDL-AV-N3	F26	0-7	6	FIX		BUS SET UP
YDL-YUV		YDL-YUV	F27	0-7	6	FIX		
COL-AV (OFFSET)		COL-AV (OFFSET)	F28	0-7	6	FIX		BUS SET UP
COL-P (OFFSET)		COL-P (OFFSET)	F29	-31-0-+31	+10	*FIX		BUS SET UP
COL-S (OFFSET)		COL-S (OFFSET)	F30	-30-0-+31	0	FIX		
COL-N4 (OFFSET)		COL-N4 (OFFSET)	F31	-31-0-+31	+9	FIX		
COL-N3 (OFFSET)		COL-N3 (OFFSET)	F32	-31-0-+31	-8	FIX		
COL-ADJ (OFFSET)		COL-ADJ (OFFSET)	F33	-31-0-+31	-7	FIX		BUS SET UP
SHP-AV (OFFSET)		SHP-AV (OFFSET)	F34	-31-0-+31	0	*FIX		
SHP-YUV (OFFSET)		SHP-YUV (OFFSET)	F35	-31-0-+31	+5	FIX		
SHP-P (OFFSET)		SHP-P (OFFSET)	F36	-31-0-+31	0	FIX		
SHP-S (OFFSET)		SHP-S (OFFSET)	F37	-31-0-+31	0	FIX		
SHP-N4 (OFFSET)		SHP-N4 (OFFSET)	F38	-31-0-+31	-5	FIX		
TINT-ADJ (OFFSET)		TINT-ADJ (OFFSET)	F39	-31-0-+31	0	FIX		
TINT-AV (OFFSET)		TINT-AV (OFFSET)	F40	-31-0-+31	0	FIX		BUS SET UP
TINT-YUV-ADJ (OFFSET)		TINT-YUV-ADJ (OFFSET)	F41	-63-0-+63	0	*FIX		BUS SET UP
R-R (OFFSET)		R-R (OFFSET)	F42	-63-0-+63	0	FIX		
B-R (OFFSET)		B-R (OFFSET)	F43	-63-0-+63	0	FIX		
R-B (OFFSET)		R-B (OFFSET)	F44	-63-0-+63	0	FIX		
B-B (OFFSET)		B-B (OFFSET)	F45	-63-0-+63	-9	FIX		
DT		DT	F46	-63-0-+63	-6	FIX		
DT-P		DT-P	F47	-63-0-+63	+8	FIX		
DT-S		DT-S	F48	0/1	0	FIX		
DT-N4		DT-N4	F49	0/1	0	FIX		
DT-N3		DT-N3	F50	0/1	1	FIX		
TRAP		TRAP	F51	0/1	0	FIX		
TRAP-P		TRAP-P	F52	0/1	0	FIX		
TRAP-S		TRAP-S	F53	0-3	2	FIX		
TRAP-N4		TRAP-N4	F54	0-3	2	FIX		
TRAP-N3		TRAP-N3	F55	0-3	2	FIX		
			F56	0-3	2	FIX		
			F57	0-3	2	FIX		

- 1.) Please set the MCL as follows.  
2.) After set the MCL, please set the **INITIAL SETTING** to **INITIAL3**.  
INITIAL3: For English OSD(All Channel Sound System are set to B/G)

MCL Setting		SOUND SYS	
CHNO	Ev/IMHz	Skp (off)	
0	Free	Skp (off)	
1	48.25	B/G	
2	62.25	B/G	
3	196.25	B/G	
4	210.25	B/G	
5	224.25	B/G	
6	238.25	B/G	
7	715.25	B/G	
8	715.25	B/G	
9	83.25	B/G	
10	196.25	B/G	
11	679.25	B/G	
12	683.25	B/G	
13	647.25	B/G	
14	631.25	B/G	
15	659.25	B/G	
16	759.25	B/G	
17	759.25	B/G	
18	471.25	B/G	
19	855.25	B/G	
20	Free	Skp (off)	
21	223.95	B/G	
22	224.55	B/G	
23	224.85	B/G	
24	224.95	B/G	
25	224.95	B/G	
26	224.25	B/G	
27	Free	Skp (off)	
96	Free	Skp (off)	

\*NOTE: BL DATA OF ABOVE FBEO SHOULD TAKE THE ACCOUNT OF PIF SETTING IN SERVICE OPTION 004 (VIF) BEFORE STORING INTO EEPROM.

OPTION MODE (FOURTH STAGE)			
EEPROM ITEMS	OSD	DATA LENGTH	INITIAL DATA
***HOTEL MODE	001	0 (OFF) / 1 (ON)	0
***HTL-POS	002	0-99 —	—
***HTL-VOL	003	0-60 —	—
VIF	004	0 (38.0) / 1 (38.9)	1
SECAM	005	0 (DISABLE) / 1 (ENABLE)	1
N443(RF)	006	0 (DISABLE) / 1 (ENABLE)	1
N358(RF)	007	0 (DISABLE) / 1 (ENABLE)	1
FORCE-COL	008	0 (DISABLE) / 1 (ENABLE)	0
S-SYS	009	1(BG ONLY)-15(ALL)	15
AV	010	0 (DISABLE) / 1 (ENABLE)	1
AV2	011	0 (DISABLE) / 1 (ENABLE)	1
YUV	012	0 (DISABLE) / 1 (ENABLE)	1
S-CTRL	013	0 (DISABLE) / 1 (ENABLE)	1
NICAM	014	0 (DISABLE) / 1 (ENABLE)	0
A2	015	0 (DISABLE) / 1 (ENABLE)	0
TELETEXT	016	0 (DISABLE) / 1 (ENABLE)	0
BILLINGUAL	017	0 (DISABLE) / 1 (ENABLE)	0
LANGUAGE	018	1-255	65
SEARCH-SPEED	019	1(350)-2(450)-3(650)-4(650)-5(750)	3
R/C-MENU	020	0 (ENABLE) / 1 (DISABLE)	0
LED-CONT	021	0 (ONE LED) / 1 (TWO LED)	0

\*\*\* HOTEL MODE  
OPERATION OF HOTEL MODE:  
WHEN CHANGE SERVICE DATA 001 TO 1, HOTEL MODE IS ON  
WHEN HOTEL MODE IS ON,  
1. Max volume data is determined by option setting HTL-VOL (003)  
2. Channel position after POWER ON is determined by option setting HOTEL-POS (002) (if option setting HOTEL-POS is not set, processing is according to last position data).  
3. User data updates of EEPROM regarding the video and audio control is not allowed.  
4. Preset mode is disable.  
5. CH SETTING menu is not available.

SERVICE ITEMS		DATA	SERVICE ITEMS	DATA
F27	YDL-AV-N3	7	F29	COL-AV (OFFSET)
F85	SUB-BASS	3	F34	COL-ADJ (OFFSET)
F86	SUB-TREB	3	F41	TINT-AV (OFFSET)
F87	AGC-ADJ	3	F42	TINT-ADJ (OFFSET)
F110	STANDBY-WO-BRIGHT	100	V09	SUB-COLOR-YUV

SERVICE ITEMS		DATA	SERVICE ITEMS	DATA
001	HTL MODE 0 (OFF) / 1 (ON)	0	012	YUV 0 (DISABLE) / 1 (ENABLE)
002	HTL-POS 0-99 —	—	013	S-CTRL 0 (DISABLE) / 1 (ENABLE)
003	HTL-VOL 0-60 —	—	014	NICAM 0 (DISABLE) / 1 (ENABLE)
004	VIF 0 (38.0) / 1 (38.9)	1	015	A2 0 (DISABLE) / 1 (ENABLE)
005	SECAM 0 (DISABLE) / 1 (ENABLE)	0	016	TEXT 0 (DISABLE) / 1 (ENABLE)
006	N443(RF) 0 (DISABLE) / 1 (ENABLE)	0	017	BIL 0 (DISABLE) / 1 (ENABLE)
007	N358(RF) 0 (DISABLE) / 1 (ENABLE)	0	018	LANG 1-255
008	FORCE-COL 0 (DISABLE) / 1 (ENABLE)	0	019	SERCH-SP 1(350)-2(450)-3(650)-4(650)-5(750)
009	S-SYS 1 (BG ONLY)-15 (ALL)	1	020	R/C MENU 0 (ENABLE) / 1 (DISABLE)
010	AV 0 (DISABLE) / 1 (ENABLE)	1	021	LED-CONT 0 (ONE LED) / 1 (TWO LED)
011	AV2 0 (DISABLE) / 1 (ENABLE)	1		

OPTION MODE (FOURTH STAGE)

## SHIPPING SETTING & CHECKING

(1)The following default data has been factory-set for the E2PROM follow by INITIAL DATA selected.

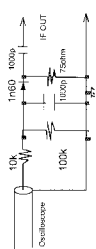
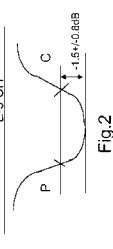
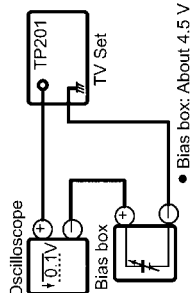
ITEMS	DATA SETTING
	21YF200
LAST POWER	ON
LAST TV/AV MODE	TV MODE
LAST POSITION	CH 1
FLASHBACK CHANNEL	CH 1
FAVOURITE CH A	CH 10
FAVOURITE CH B	CH 20
FAVOURITE CH C	CH 30
FAVOURITE CH D	CH 40
1/2 DIGIT ENTRY	2 DIGIT ENTRY
VOLUME	0 (Min)
BLUE BACK	ON
OFF TIMER	---
ON TIMER	---
ON TIMER POSITION	---
ON TIMER VOLUME	---
REMINDER	---
AFT	ALL CH ON
COLOR SYSTEM	ALL CH AUTO
SKIP	ALL CH OFF
NICAM ON/OFF	N/A
NICAM STEREO MODE	N/A
NICAM BILINGUAL MODE	N/A
NICAM MONO MODE	N/A
A2 ON/OFF	N/A
A2 STEREO MODE	N/A
A2 BIL MODE	N/A
CONTRAST	60
COLOR	0
BRIGHTNESS	0
TINT	0
SHARPNESS	0
WHITE TEMP	0
SURROUND	OFF
TREBLE	0
BASS	0
BALANCE	0 (CENTER)

\*Note: N/A - not Applicable

INITIAL	LANGUAGE	SOUND SYSTEM
3 (332)	ENGLISH	B/G

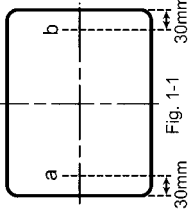
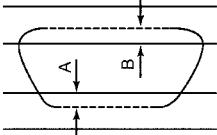
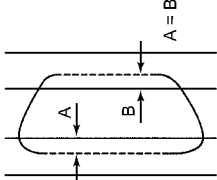
7-1

## ADJUSTMENT PRECAUTION:Make sure TV Set in "NORMAL CONDITION" before switch to Service Mode for Adjustment. PIF ADJUSTMENT

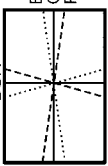
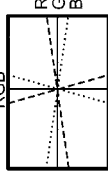
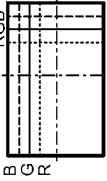
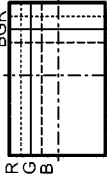
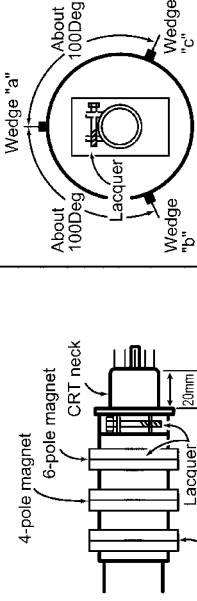
No.	Adjustment point ( PRESET )	Adjustment procedure/conditions	Waveform and others
1	Tuner IFT ( PRESET )	<ol style="list-style-type: none"> <li>Get the tuner ready to receive the Ch. E - 9 signal, but with no signal input. Adjust the PLL data.</li> <li>Connect the sweep generator's output cable to the tuner antenna. ( RF SWEEP )</li> <li>Adjust the sweep generator's to 80dB<math>\mu</math>V.</li> <li>Connect the response lead ( use LOW IMPEDANCE probe with wave detector ; see Fig. 1 ) to the tuner's IF output terminal. ( This terminal must have the probe alone connected ).</li> <li>Set the RF AGC to 0 - 6 V with no saturation with the waveform.</li> <li>Adjust the tuner IF coil to obtain the waveform as shown in Fig. 2.</li> </ol> <p><b>Note: Be sure to keep the tuner cover in position during this adjustment.</b></p>	 <p>Fig. 1</p>  <p>Fig. 2</p>
2	RF-AGC TAKE OVER POINT AD- JUSTMENT (I'C BUS CONTROL) (AUTO & MANUAL ADJ)	<ol style="list-style-type: none"> <li>Receive "PAL COLOUR BAR" signal. • Signal Strength: 56 <math>\pm</math> 1 dB<math>\mu</math>V (75 ohm open)</li> <li>Connect the oscilloscope to TP201 (Tuner's AGC Terminal) as shown in Fig. 3-1.</li> </ol>  <p>Fig. 3-1</p> <ol style="list-style-type: none"> <li>Call "V01" mode in service mode. Adjust the "V01" bus data to obtain the Tuner output pin drop 0.1~1.0V below maximum voltage.</li> <li>Change the antenna input signal to 63~67dB<math>\mu</math>V, and make sure there is no noise.</li> <li>Turn up the input signal to 90~95 dB<math>\mu</math>V to be sure that there is no cross modulation beat.</li> </ol>	<p><b>* for Auto ADJ</b></p> <ol style="list-style-type: none"> <li>Receive "PAL COLOR BAR" signal. signal strength: 56 <math>\pm</math> 1dB<math>\mu</math>V(75 ohm open)</li> <li>Go to service mode.</li> <li>Go to service data V01, press R/C to operate auto key (Hex C1) and confirm the 'OK' display on the screen.</li> <li>If appear NG, increase data some step and pls repeat step 2 again.</li> <li>proceed step 4 &amp; 5 in manual mode.</li> </ol>

7-2

PURITY ADJUSTMENT

No.	Adjustment point	Adjustment procedure/conditions	Waveform and others
1	PURITY ADJ.	<p>1. Receive the GREEN-ONLY signal. Adjust the beam current to ~700 <math>\mu</math>.</p> <p>2. Degauss the CRT enough with the degaussing coil. Note: Follow the Job Instruction Sheet to adjust the magnetic field.</p> <p>Vertical Bv: -0.010 mT (-0.10 gauss) Horizontal Bh: +0.020 mT (0.20 gauss)</p> <p>3. Maintain the purity magnet at the zero magnetic field and keep the static convergence roughly adjusted.</p> <p>4. Observe the points a, b as shown in Fig. 1-1 through the microscope. Adjust the landings to A rank requirement.</p> <p>5. Orient the raster rotation to 0 eastward.</p> <p>6. Tighten up the deflection coil screws.</p> <p>• Tightening torque: 108 N <math>\pm</math> 20 N (11 kgf <math>\pm</math> 2 kgf)</p> <p>7. Make sure the CRT corners landing meet the A rank requirements. If not, stick the magnet sheet to correct it.</p> <p>Note: This adjustment must be done after warming up the unit for 30 minutes or longer with a beam current over 700 <math>\mu</math>A.</p> <p>Note: Set the service mode by JA304 &amp; JA307 (short) then press factory process R/C RGB key to change to RGB mono colour mode.</p> <p>* For the following colours press R/C RGB(Hex 7E) key to change.</p> <div><div>GREEN ONLY</div><div>BLUE ONLY</div><div>RED ONLY</div><div>Signal-colour screen cleared</div></div>	<div><p>Fig. 1-1</p></div> <div><p>Fig. 1-2 Rank "A" (on the right of CRT)</p></div> <div><p>Fig. 1-3 Rank "A" (on the left of CRT)</p></div> <p>* Press R/C RGB key for 1 second in NORMAL MODE, the colour will change to RGB mono colour mode.</p>

CONVERGENCE ADJUSTMENT

No.	Adjustment point	Adjustment procedure/conditions	Waveform and others
1	CONVERGENCE ADJ. (To be done after the purity adjustment.)	<p>1. Receive the "Crosshatch Pattern" signal.</p> <p>2. Using the remote controller, call NORMAL mode.</p> <p><b>Static convergence</b></p> <p>1. Turn the 4-pole magnet to a proper opening angle in order to superpose the blue and red colours.</p> <p>2. Turn the 6-pole magnet to a proper opening angle in order to superpose the green colour over the blue and red colours.</p> <p><b>Dynamic convergence</b></p> <p>1. Adjust the convergence on the fringes of the screen in the following steps.</p> <p>a) Fig. a: Drive the wedge at point "a" and swing the deflection coil upward.</p> <p>b) Fig. b: Drive the wedge at point "b" and "c" and swing the deflection coil downward.</p> <p>c) Fig. c: Drive the "c" wedge deeper and swing the deflection coil rightward.</p> <p>d) Fig. d: Drive the "b" wedge deeper and swing the deflection coil leftward.</p> <p>2. Fix all the wedges on the CRT and apply glass tape over them.</p> <p>3. Apply lacquer to the deflection yoke lock screw, magnet unit (purity, 4-pole, 6-pole magnets) and magnet unit lock screw.</p> <p>Finally received the Red-only and Blue-only signals to make sure there is no other colours on the screen.</p>	<div><p>Fig. a</p></div> <div><p>Fig. b</p></div> <div><p>Fig. c</p></div> <div><p>Fig. d</p></div> <div><p>Wedge "a" About 100Deg Lacquer Wedge "b" Wedge "c" About 100Deg</p></div>

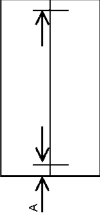


## H-VCO, VIF-VCO & S-TRAP to ADJUSTMENT

No.	Adjustment point	Adjustment procedure/conditions	Waveform and others
1	H-VCO ADJ (I'C BUS CONTROL) (AUTO & MANUAL ADJ)	(MANUAL ADJ) 1) In No signal (RASTER) condition. 2) Go to service mode, choose service data V03. 3) Connect oscilloscope to IC801 pin11, adj V03 until freq become $15.625 \pm 0.15$ KHz (Auto Adj) 1) In No signal (RASTER) condition. 2) Go to service mode. 3) Choose service data V03, by pressing R/C Auto (Hex C1) key, OSD will appear "OK" at screen. 4) If appear "NG" pls repeat step 3.	
2	VIF-VCO ADJ (I'C BUS CONTROL) (AUTO & MANUAL ADJ)	(Manual ADJ) 1) In No signal (RASTER) condition. 2) Go to service mode, choose service data V02. 3) Connect oscilloscope to IC801 pin2, adj V02 until voltage become $2.5 \pm 1$ V. (Auto Adj) 1) In No signal (RASTER) condition. 2) Go to service mode, choose service data V02. 3) Press the R/C Auto (Hex C1) key, OSD will appear "OK" at screen. 4) If appear "NG" pls repeat step 3.	
3	S-TRAP to ADJ (I'C BUS CONTROL) (AUTO & MANUAL ADJ)	(Manual ADJ) 1) In No signal (RASTER) condition. 2) Go to service mode, choose service data V21. 3) Connect oscilloscope to TP 801, adj V21 until voltage become Min (below 5 V). 4) After that pls adj service data V20 & V24 same as "V21", V22 to "V21-1", V23 to "V21+2". (Auto Adj) 1) In No signal (RASTER) condition. 2) Go to service mode, choose service data V21. 3) Press the R/C Auto (Hex C1) key, OSD will appear "OK" at screen. 4) If appear "NG" pls repeat step 3.	

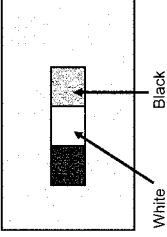
9-1

## HORIZONTAL, VERTICAL, DEFLECTION LOOP and FOCUS ADJUSTMENT

No.	Adjustment point	Adjustment procedure/conditions	Waveform and others
1	H-SHIFT (I'C BUS CONTROL) (to be done after purity adj)	1) Receive Monoscope Pattern Signal (PAL 50 Hz) 2) Choose the service data V13. 3) Adjust the V13 bus data to have a balance position to spec of A=B (as attach drawing) 4) If cannot make it to A=B, adjust from the best point so that B slightly smaller than A.	
2	V-SHIFT (I'C BUS CONTROL) (to be done after purity adj)	1) Receive Monoscope Pattern Signal (PAL 50 Hz) 2) Choose the service data V12. 3) Adjust V12 bus data to have a most acceptable vertical position, the monoscope pattern should be Balance in vertical position.	
3	V-SHIFT (I'C BUS CONTROL) (to be done after purity, V-shift adj)	1) Receive Monoscope Pattern Signal (PAL 50 Hz) 2) Choose the service data V11. 3) Adjust V11 bus data until the overscan become $10 \pm 2.5$ % Caution1: Pls aging TV more than 10 minutes before adjustment. Caution2: for H-shift & V-shift & V-size adj, after adj pls switch to Monoscope pattern signal (NTSC 60 Hz) to confirm all positions are the same.	
4	SUB-SHARPNESS	1) Confirm Service data V08 is 43.	
5	Focus	1) Receive the "Monoscope Pattern" signal. 2) Press R/C to set Picture NORMAL condition. 3) Adjust the focus control to get the best focusing.	

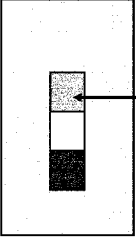

9-2

## SCREEN, WHITE BALANCE, SUB-BRIGHTNESS &amp; SUB-CONTRAST (1) ADJUSTMENT

No.	Adjustment point	Adjustment procedure/conditions	Waveform and others
1	<b>SCREEN ADJUSTMENT</b> (I/C BUS CONTROL)	<p>1) In window pattern signal condition.</p> <p>2) Go to service mode, then select V00.</p> <p>3) By pressing R/C key <b>S-Mute</b>(Hex E8), <b>R-D</b> auto switch to 63, <b>B-D</b> auto switch to 63, <b>R-C</b> auto switch to 127, <b>G-C</b> auto switch to 127, <b>B-C</b> auto switch to 127. <b>Sub-brightness V06</b> auto switch to 127.</p> <p>Y-mute &amp; Vertical off, screen will be in <b>vertical cut-off</b> condition.</p> <p>4) Adjust the Screen so that cut-off line appear in low bright, then judge that whether the cut-off line appear in Red or Green or Blue color, in this condition between R-C &amp; G-C &amp; B-C, fix the data of the <b>color appear in cut-off line</b> and <b>adjust the other two cut-off data (Note 1) so that cut-off line color become white.</b></p> <p>5) Turn the screen VR of FBT so that cut-off line just <b>disappear</b> and use R/C by pressing key <b>S-Mute</b> (Hex E8) to <b>disable</b> the Y-mute &amp; V-cut so that picture appear in normal mode.</p>	<p><b>NOTE 1:</b></p> <p>R-CUTOFF (R-C) UP R/C key "1" (HEX 80) R-CUTOFF (R-C) DOWN R/C key "4" (HEX 20) G-CUTOFF (G-C) UP R/C key "2" (HEX 40) G-CUTOFF (G-C) DOWN R/C key "5" (HEX A0) B-CUTOFF (B-C) UP R/C key "3" (HEX C0) B-CUTOFF (B-C) DOWN R/C key "6" (HEX 60) R-DRIVE (R-D) UP R/C key "7" (HEX E0) R-DRIVE (R-D) DOWN R/C key "FLASHBACK" (HEX E4) B-DRIVE (B-D) UP R/C key "8" (HEX 10) B-DRIVE (B-D) DOWN R/C key "0" (HEX 50)</p>
2	<b>WHITE BALANCE ADJ</b> (to be done after screen adj) (I/C BUS CONTROL)	<p><b>1) WHITE (HIGH BEAM)</b> (In Window Pattern Signal) First use Minolta Color Analyzer CA100, let the gun point at <b>Black</b> position (as drawing attach), adjust <b>V06</b> until <b>BRIGHTNESS Y</b> become <b>5 cd/m<sup>2</sup></b>, then let the gun point at <b>White</b> position (as drawing attach), adjust <b>V04</b> until <b>CONTRAST Y</b> become <b>200 cd/m<sup>2</sup></b>, adjust the <b>R-D &amp; B-D</b> until the axis of color temperature become. X=272, Y=275 12300 K</p> <p><b>2) BLACK (LOW BEAM)</b> (In Window Pattern Signal) Let the gun point at <b>Black</b> position, if the color temperature data shift away from the data adjusted in <b>step 1</b>, adjust <b>R-C, G-C &amp; B-C</b> but <b>between them, first color appears in Screen adj item 1)-4 is fixed</b>, adj the other two so that to obtain the similar axis as above. <b>**Repeat step 1 &amp; 2 to get a regulated position.</b></p>	 <p>WINDOW PATTERN SIGNAL</p>

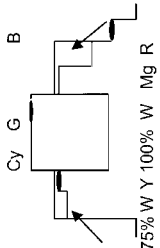
10-1

## SCREEN, WHITE BALANCE, SUB-BRIGHTNESS &amp; SUB-CONTRAST (2) ADJUSTMENT

No.	Adjustment point	Adjustment procedure/conditions	Waveform and others
3	<b>SUB-BRIGHTNESS</b> (to be done after screen, white balance adj) (I/C BUS CONTROL)	<p>1) In window pattern signal condition.</p> <p>2) Using Minolta Color Analyzer CA-100, let the gun point at <b>Black</b> position (as white balance adj) attach drawing), adjust <b>V04</b> Bus data until <b>LUMINANCE Y = 3 ± 0.5 cd/m<sup>2</sup></b>.</p>	 <p>WINDOW PATTERN SIGNAL</p>
4	<b>SUB-CONTRAST</b> (to be done after screen, white balance adj, sub-brightness adj) (I/C BUS CONTROL)	<p>1) In Window Pattern Signal condition.</p> <p>2) Using Minolta Color Analyzer CA-100, let the gun point at <b>White</b> position (as attach drawing), adjust <b>V04</b> Bus data until <b>LUMINANCE Y = 200 ± 10 cd/m<sup>2</sup></b>.</p>	 <p>WINDOW PATTERN SIGNAL</p>
5	<b>MAX Beam Check</b>	<p>1) Receive the "Monoscope Pattern" signal.</p> <p>2) Press R/C to set Picture NORMAL condition.</p> <p>3) Connect the DC millimeter between TP 603 (+) &amp; TP 602 (-).</p> <p>(Full Scale: 3mA Range)</p> <p>4) Beam current must be within <b>1100 ± 100μA</b>.</p>	

10-2

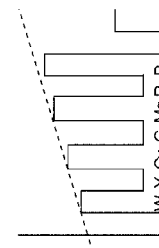
## PAL CHROMA ADJUSTMENT

No.	Adjustment point	Adjustment procedure/conditions	Waveform and others
1	<b>SUB COLOUR</b> (I <sup>2</sup> C BUS CONTROL) (to be done after sub- picture, sub- tint adj)	<ol style="list-style-type: none"> <li>1) Receive the "PAL Color Bar" signal.</li> <li>2) Press R/C to set Picture Normal condition.</li> <li>3) Connect the oscilloscope to R-Amp Transistor Base (TP851). Range : 100 mV/Div (AC) (Using 10:1 Probe) Sweep Time : 10 <math>\mu</math> sec/Div</li> <li>4) Using the R/C call V05 in SERVICE mode. Adjust V05 bus data, so that the 75% White &amp; Red portions of PAL Color Bar be at the <b>same level</b> shown as Fig 1-1.</li> <li>5) Clear the SERVICE mode.</li> </ol>	 <p>Fig. 1-1</p>

## PROTECTOR OPERATION CHECKING

No.	Adjustment point	Adjustment procedure/conditions	Waveform and others
1	<b>BEAM PROTECTOR</b>	<ol style="list-style-type: none"> <li>1) Receive "Monoscope Pattern" signal.</li> <li>2) Set CONTRAST MAX.</li> <li>3) Set BRIGHT MAX.</li> <li>4) During the Collector &amp; Emitter of Q853/4/5 short, make sure the protector ON and switch to standby mode.</li> </ol>	* Select one of Q853/4/5 to do each short.
2	<b>H, V PROTECTOR</b>	<ol style="list-style-type: none"> <li>1) Receive "Monoscope Pattern" signal.</li> <li>2) Connect output of Bias Box to D602 cathode (C602 positive).</li> <li>3) Set voltage of Bias Box to 18V and make sure the protector is not working.</li> <li>4) Set voltage of Bias Box to 23.5V, and make sure the protector is working.</li> </ol>	
3	<b>OTHER PROTECTOR</b>	1) Once finish rectified Electrolytic Capacitor short testing in +B line, check all possible damaged components on +B line. (Use random selected set for inspection)	

## NTSC CHROMA ADJUSTMENT

No.	Adjustment point	Adjustment procedure/conditions	Waveform and others
1	<b>SUB-TINT (I<sup>2</sup>C BUS CONTROL)</b>	<ol style="list-style-type: none"> <li>1) Receive the "NTSC3.58 Color Bar" signal thru AV In.</li> <li>2) Connect the oscilloscope to B-Amp Transistor Base (TP853 ). • Range : 100mV/Div. (AC)(Use Probe 10:1) • Sweep time : 10 <math>\mu</math>sec/Div.</li> <li>3) In Service mode, go to V07 then press R/C Y-mute (Hex E4) or FLASHBACK key.</li> <li>4) Call the "V07" mode in service mode. Adjust the "V07" bus data to obtain the waveform shown as Fig. 1-1.</li> <li>5) Disable Y-Mute by pressing key(Hex E4) or FLASHBACK key, then Clear the SERVICE mode.</li> </ol>	 <p>Fig. 1-1</p>

## AV INPUT, OUTPUT & COMPONENT IN CHECKING

No.	Adjustment point	Adjustment procedure/conditions	Waveform and others
1	<b>VIDEO AND AUDIO OUTPUT CHECK</b>	<ol style="list-style-type: none"> <li>1) Receive the "PAL Color Bar" signal (100% White Color Bar, Sound 400 Hz 100% Mod.)</li> <li>2) Terminate the Video output with a 75 ohm impedance. Make sure the output is as specified (1.0 Vp-p <math>\pm</math>3 dB).</li> <li>3) Terminate the Audio output with a 75 ohm impedance. Make sure the output is as specified (1.2 Vp-p <math>\pm</math>3 dB).</li> </ol>	
2	<b>VIDEO AND AUDIO INPUT CHECK</b>	1) Using the TV/VIDEO key on the remote controller, make sure that the modes change in order of TV, AV1, AV2 & TV again and the video & audio output are according to the input terminal for each mode.	
3	<b>COMPONENT IN CHECK</b>	<ol style="list-style-type: none"> <li>1) Connect YUV &amp; Audio signal to Component In terminal and Audio terminal.</li> <li>2) Using the TV/VIDEO key on the remote controller, press it until the mode change to COMPONENT. confirm output is appear.</li> </ol>	

FUNCTION OPERATION CHECKING (VIDEO AND AUDIO)

No.	Adjustment point	Adjustment procedure/conditions	Waveform and others
1	CONTRAST key	1) Receive "Monoscope Pattern" signal. 2) Set MENU, then go into PICTURE mode to select CONTRAST. 3) Press Volume Up/Down key to check whether the CONTRAST effect is OK or not.	
2	COLOUR key	1) Receive "Color Bar" signal. 2) Set MENU, then go into PICTURE mode to select COLOUR. 3) Press Volume Up/Down key to check whether the COLOUR effect is OK or not.	
3	BRIGHTNESS key	1) Receive "Monoscope Pattern" signal. 2) Set MENU, then go into PICTURE mode to select BRIGHTNESS. 3) Press Volume Up/Down key to check whether the BRIGHTNESS effect is OK or not.	
4	TINT key	1) Receive the "NTSC Colour Bar" signal thru AV In. 2) Set MENU, then go into PICTURE mode to select TINT. 3) Press Volume Up/Down key to check TINT, UP for GREEN direction and DOWN for PURPLE direction whether is OK or not.	
5	SHARPNESS Key	1) Receive "Monoscope Pattern" signal. 2) Set MENU, then go into PICTURE mode to select SHARPNESS. 3) Press Volume Up/Down key to check whether the SHARPNESS effect is OK or not.	
6	CH DISPLAY COLOUR	1) All Ch (1~99) will have an OSD display of the channel number in green colour under AFT ON condition.	
7	NORMAL Key	1) Once in PICTURE Mode, and the NORMAL key is pressed, all the settings will be present to normal setting. (Normal setting value for every mode). ● CONTRAST : MAX ● COLOUR : CENTER ● BRIGHTNESS : CENTER ● TINT : CENTER ● SHARPNESS : CENTER	Notes: If nothing is displayed means contrast, colour, brightness, tint, sharpness are all in normal setting.
8	WHITE TEMP	1) Receive "Monoscope Pattern" signal. 2) Set MENU, then go into PICTURE mode to select WHITE TEMP. 3) Press Volume Up/Down key to check WHITE TEMP function. The background will change to (shift right) bluish and (shift left) reddish.	

12-1

FUNCTION OPERATION CHECKING (VIDEO AND AUDIO) CONTINUED

No.	Adjustment point	Adjustment procedure/conditions	Waveform and others						
9	COLOUR SYSTEM	1) Receive the "PAL COLOUR BAR" signal, press MENU, choose CH-SETTING to select COLOUR modes except PAL, check the colour is not working. Then, select the "PAL" mode. Check again its colour so that it is working properly. 2) Receive "NTSC 3.58 COLOUR BAR" signal thru AV, press MENU, choose CH-SETTING to select COLOUR modes except N358, check the COLOUR is not working properly. Then, select the N358 mode. Check again its colour so that it is working properly.							
10	SURROUND	1) Receive "music" sound signal. 2) Set MENU, then go into SOUND MENU to select SURROUND. 3) Press VOLUME UP/DOWN key to check SURROUND 1, 2 and OFF effect.							
11	TREBLE	1) Receive "music" sound signal. 2) Set MENU, then go into SOUND MENU to select TREBLE. 3) Press VOLUME UP/DOWN key to check whether the TREBLE effect is OK or not.							
12	BASS	1) Receive "music" sound signal. 2) Set MENU, then go into SOUND MENU to select BASS. 3) Press VOLUME UP/DOWN key to check whether the BASS effect is OK or not.							
13	BALANCE	1) Receive mono-tone signal. 2) Set MENU, then go into SOUND MENU to select BALANCE. 3) Press VOLUME UP/DOWN key to check whether the left to right BALANCE effect is OK or not.							
14	SOUND SYSTEM	1) Receive "PAL-B/G" signal, press MENU, choose CH-SETTING to make sure there is NO sound system selection and check the sound output is working properly.							
15	NOISE MUTE CHECKING	1) Receive "PAL COLOUR BAR" signal. 2) Turn up the volume control to maximum, make sure the sound is heard from the speakers. Then put the unit in no signal state. 3) Check the sound mute is effective. 4) Finally turn sound level of CTV to minimum.							
16	OSD LANGUAGE QUANTITY CHECK	Check OSD LANGUAGE quantity and type for respect mode.	<table><tr><td>MODEL</td><td>QUANTITY</td><td>ENGLISH</td></tr><tr><td>21YF200</td><td>1</td><td>0</td></tr></table>	MODEL	QUANTITY	ENGLISH	21YF200	1	0
MODEL	QUANTITY	ENGLISH							
21YF200	1	0							

12-2

HEADPHONE JACK CHECKING

No.	Adjustment point	Adjustment procedure/conditions	Waveform and others
1	HEADPHONE OUTPUT CHECKING	1) Receive PAL COLOUR BAR with SOUND 400Hz, 100% MODULATION (±50kHz Dev). 2) Maximum volume, and check the headphone output with 400Hz sound and no sound out from speaker.	

SHOCK TEST CHECKING

No.	Adjustment point	Adjustment procedure/conditions	Waveform and others
1	SHOCK TEST	1) Hit at the top of TV set for two time. 2) Check TV set not damage and TV operation op- erate correctly.	

# MEMORY MAP

ADDRESS (HEX)	DATA								MICON DEFAULT	EEPROM RANGE	EEPROM WRITE(CPU)	CHASSIS		CTV FINAL		LAST INITIAL SETTING DATA	REMARK
	D7	D6	D5	D4	D3	D2	D1	D0				CHECK DATA	CHECK TYPE	CHECK DATA	CHECK TYPE		
00	EEPROM INITIALIZATION JUDGEMENT BYTE-0								8A	00-FF							
01	EEPROM INITIALIZATION JUDGEMENT BYTE-1								84	00-FF							
02	EEPROM INITIALIZATION JUDGEMENT BYTE-2								82	00-FF							
03	EEPROM INITIALIZATION JUDGEMENT BYTE-3								89	00-FF							
04	ROM VERSION								00	00-FF							
05	SOFTWARE VERSION (HIGH BYTE)								01	00-FF							
06	SOFTWARE VERSION (LOW BYTE)								0D	00-FF							
07																	
08	TUNING FREQUENCY (LOW BYTE)									00-FF							POS 0
09	TUNING FREQUENCY (HIGH BYTE)									00-FF							
0A	TUNING FREQUENCY (LOW BYTE)									00-FF							POS 1
0B	TUNING FREQUENCY (HIGH BYTE)									00-FF							
0C	TUNING FREQUENCY (LOW BYTE)									00-FF							POS 2
0D	TUNING FREQUENCY (HIGH BYTE)									00-FF							
0E	TUNING FREQUENCY (LOW BYTE)									00-FF							POS 3
0F	TUNING FREQUENCY (HIGH BYTE)									00-FF							
10	TUNING FREQUENCY (LOW BYTE)									00-FF							POS 4
11	TUNING FREQUENCY (HIGH BYTE)									00-FF							
12	TUNING FREQUENCY (LOW BYTE)									00-FF							POS 5
13	TUNING FREQUENCY (HIGH BYTE)									00-FF							
14	TUNING FREQUENCY (LOW BYTE)									00-FF							POS 6
15	TUNING FREQUENCY (HIGH BYTE)									00-FF							
16	TUNING FREQUENCY (LOW BYTE)									00-FF							POS 7
17	TUNING FREQUENCY (HIGH BYTE)									00-FF							
18	TUNING FREQUENCY (LOW BYTE)									00-FF							POS 8
19	TUNING FREQUENCY (HIGH BYTE)									00-FF							
1A	TUNING FREQUENCY (LOW BYTE)									00-FF							POS 9
1B	TUNING FREQUENCY (HIGH BYTE)									00-FF							
1C	TUNING FREQUENCY (LOW BYTE)									00-FF							POS 10
1D	TUNING FREQUENCY (HIGH BYTE)									00-FF							
1E	TUNING FREQUENCY (LOW BYTE)									00-FF							POS 11
1F	TUNING FREQUENCY (HIGH BYTE)									00-FF							
20	TUNING FREQUENCY (LOW BYTE)									00-FF							POS 12
21	TUNING FREQUENCY (HIGH BYTE)									00-FF							
22	TUNING FREQUENCY (LOW BYTE)									00-FF							POS 13
23	TUNING FREQUENCY (HIGH BYTE)									00-FF							
24	TUNING FREQUENCY (LOW BYTE)									00-FF							POS 14
25	TUNING FREQUENCY (HIGH BYTE)									00-FF							
26	TUNING FREQUENCY (LOW BYTE)									00-FF							POS 15
27	TUNING FREQUENCY (HIGH BYTE)									00-FF							
28	TUNING FREQUENCY (LOW BYTE)									00-FF							POS 16
29	TUNING FREQUENCY (HIGH BYTE)									00-FF							
2A	TUNING FREQUENCY (LOW BYTE)									00-FF							POS 17
2B	TUNING FREQUENCY (HIGH BYTE)									00-FF							
2C	TUNING FREQUENCY (LOW BYTE)									00-FF							POS 18
2D	TUNING FREQUENCY (HIGH BYTE)									00-FF							
2E	TUNING FREQUENCY (LOW BYTE)									00-FF							POS 19
2F	TUNING FREQUENCY (HIGH BYTE)									00-FF							
30	TUNING FREQUENCY (LOW BYTE)									00-FF							POS 20
31	TUNING FREQUENCY (HIGH BYTE)									00-FF							
32	TUNING FREQUENCY (LOW BYTE)									00-FF							POS 21
33	TUNING FREQUENCY (HIGH BYTE)									00-FF							
34	TUNING FREQUENCY (LOW BYTE)									00-FF							POS 22
35	TUNING FREQUENCY (HIGH BYTE)									00-FF							
36	TUNING FREQUENCY (LOW BYTE)									00-FF							POS 23
37	TUNING FREQUENCY (HIGH BYTE)									00-FF							
38	TUNING FREQUENCY (LOW BYTE)									00-FF							POS 24
39	TUNING FREQUENCY (HIGH BYTE)									00-FF							
3A	TUNING FREQUENCY (LOW BYTE)									00-FF							POS 25
3B	TUNING FREQUENCY (HIGH BYTE)									00-FF							
3C	TUNING FREQUENCY (LOW BYTE)									00-FF							POS 26
3D	TUNING FREQUENCY (HIGH BYTE)									00-FF							
3E	TUNING FREQUENCY (LOW BYTE)									00-FF							POS 27
3F	TUNING FREQUENCY (HIGH BYTE)									00-FF							
MODEL									MODEL								
LETTER NO.									LETTER NO.								

## MEMORY MAP (Continued)

ADDRESS (HEX)	DATA								MICON DEFAULT	EEPROM RANGE	EEPROM WRITE(PLUS)	CHASSIS		CTV FINAL		LAST INITIAL	REMARK
	D7	D6	D5	D4	D3	D2	D1	D0				CHECK DATA	CHECK TYPE	CHECK DATA	CHECK TYPE	SETTING DATA	
40										00-FF							POS 28
41										00-FF							
42										00-FF							POS 29
43										00-FF							
44										00-FF							POS 30
45										00-FF							
46										00-FF							POS 31
47										00-FF							
48										00-FF							POS 32
49										00-FF							
4A										00-FF							POS 33
4B										00-FF							
4C										00-FF							POS 34
4D										00-FF							
4E										00-FF							POS 35
4F										00-FF							
50										00-FF							POS 36
51										00-FF							
52										00-FF							POS 37
53										00-FF							
54										00-FF							POS 38
55										00-FF							
56										00-FF							POS 39
57										00-FF							
58										00-FF							POS 40
59										00-FF							
5A										00-FF							POS 41
5B										00-FF							
5C										00-FF							POS 42
5D										00-FF							
5E										00-FF							POS 43
5F										00-FF							
60										00-FF							POS 44
61										00-FF							
62										00-FF							POS 45
63										00-FF							
64										00-FF							POS 46
65										00-FF							
66										00-FF							POS 47
67										00-FF							
68										00-FF							POS 48
69										00-FF							
6A										00-FF							POS 49
6B										00-FF							
6C										00-FF							POS 50
6D										00-FF							
6E										00-FF							POS 51
6F										00-FF							
70										00-FF							POS 52
71										00-FF							
72										00-FF							POS 53
73										00-FF							
74										00-FF							POS 54
75										00-FF							
76										00-FF							POS 55
77										00-FF							
78										00-FF							POS 56
79										00-FF							
7A										00-FF							POS 57
7B										00-FF							
7C										00-FF							POS 58
7D										00-FF							
7E										00-FF							POS 59
7F										00-FF							
MODEL								MODEL									
LETTER NO.								LETTER NO.									

## MEMORY MAP (Continued)

ADDRESS (HEX)	DATA							MCON DEFAULT	EEPROM RANGE	EEPROM WRITE(CPU)	CHASSIS		CTV FINAL		LAST INITIAL SETTING DATA	REMARK
	D7	D6	D5	D4	D3	D2	D1	D0			CHECK DATA	CHECK TYPE	CHECK DATA	CHECK TYPE		
80									00-FF							POS 60
81									00-FF							
82									00-FF							POS 61
83									00-FF							
84									00-FF							POS 62
85									00-FF							
86									00-FF							POS 63
87									00-FF							
88									00-FF							POS 64
89									00-FF							
8A									00-FF							POS 65
8B									00-FF							
8C									00-FF							POS 66
8D									00-FF							
8E									00-FF							POS 67
8F									00-FF							
90									00-FF							POS 68
91									00-FF							
92									00-FF							POS 69
93									00-FF							
94									00-FF							POS 70
95									00-FF							
96									00-FF							POS 71
97									00-FF							
98									00-FF							POS 72
99									00-FF							
9A									00-FF							POS 73
9B									00-FF							
9C									00-FF							POS 74
9D									00-FF							
9E									00-FF							POS 75
9F									00-FF							
A0									00-FF							POS 76
A1									00-FF							
A2									00-FF							POS 77
A3									00-FF							
A4									00-FF							POS 78
A5									00-FF							
A6									00-FF							POS 79
A7									00-FF							
A8									00-FF							POS 80
A9									00-FF							
AA									00-FF							POS 81
AB									00-FF							
AC									00-FF							POS 82
AD									00-FF							
AE									00-FF							POS 83
AF									00-FF							
B0									00-FF							POS 84
B1									00-FF							
B2									00-FF							POS 85
B3									00-FF							
B4									00-FF							POS 86
B5									00-FF							
B6									00-FF							POS 87
B7									00-FF							
B8									00-FF							POS 88
B9									00-FF							
BA									00-FF							POS 89
BB									00-FF							
BC									00-FF							POS 90
BD									00-FF							
BE									00-FF							POS 91
BF									00-FF							
MODEL								MODEL								
LETTER NO.								LETTER NO.								



# MEMORY MAP

## (Continued)

ADDRESS (HEX)	DATA								MICON DEFAULT	EEPROM RANGE	EEPROM WRITE(CPL)	CHASSIS		CTV FINAL		LAST INITIAL SETTING DATA	REMARK
	D7	D6	D5	D4	D3	D2	D1	D0				CHECK DATA	CHECK TYPE	CHECK DATA	CHECK TYPE		
C0	TUNING FREQUENCY (LOW BYTE)									00-FF							
C1	TUNING FREQUENCY (HIGH BYTE)									00-FF							POS 92
C2	TUNING FREQUENCY (LOW BYTE)									00-FF							
C3	TUNING FREQUENCY (HIGH BYTE)									00-FF							POS 93
C4	TUNING FREQUENCY (LOW BYTE)									00-FF							
C5	TUNING FREQUENCY (HIGH BYTE)									00-FF							POS 94
C6	TUNING FREQUENCY (LOW BYTE)									00-FF							
C7	TUNING FREQUENCY (HIGH BYTE)									00-FF							POS 95
C8	TUNING FREQUENCY (LOW BYTE)									00-FF							
C9	TUNING FREQUENCY (HIGH BYTE)									00-FF							POS 96
CA	TUNING FREQUENCY (LOW BYTE)									00-FF							
CB	TUNING FREQUENCY (HIGH BYTE)									00-FF							POS 97
CC	TUNING FREQUENCY (LOW BYTE)									00-FF							
CD	TUNING FREQUENCY (HIGH BYTE)									00-FF							POS 98
CE	TUNING FREQUENCY (LOW BYTE)									00-FF							
CF	TUNING FREQUENCY (HIGH BYTE)									00-FF							POS 99
D0			FAVORITE CHANNEL 1						0A	00-65							POS 10
D1			FAVORITE CHANNEL 2						14	00-65							POS 20
D2			FAVORITE CHANNEL 3						1E	00-65							POS 30
D3			FAVORITE CHANNEL 4						28	00-65							POS 40
D4				LAST CONTRAST					3C	00-3C							
D5				LAST COLOUR					1E	00-3C							
D6				LAST BRIGHTNESS					1E	00-3C							
D7				LAST TINT					1E	00-3C							
D8				LAST SHARPNESS					1E	00-3C							
D9							LAST WHITE TEMP.		01	00-02							
DA							LAST SURROUND MODE		00	00-02							
DB				LAST TREBLE					1E	00-3C							
DC				LAST BASS					1E	00-3C							
DD				LAST BALANCE					1E	00-3C							
DE																	
DF																	
E0	POS 7	POS 6	POS 5	POS4	POS 3	POS 2	POS 1	POS 0	FF	00-FF							
E1	POS15	POS14	POS13	POS12	POS11	POS10	POS 9	POS 8	FF	00-FF							
E2	POS23	POS22	POS21	POS20	POS19	POS18	POS17	POS16	FF	00-FF							
E3	POS31	POS30	POS29	POS28	POS27	POS26	POS25	POS24	FF	00-FF							
E4	POS39	POS38	POS37	POS36	POS35	POS34	POS33	POS32	FF	00-FF							
E5	POS47	POS46	POS45	POS44	POS43	POS42	POS41	POS40	FF	00-FF							
E6	POS55	POS54	POS53	POS52	POS51	POS50	POS49	POS48	FF	00-FF							
E7	POS63	POS62	POS61	POS60	POS59	POS58	POS57	POS56	FF	00-FF							
E8	POS71	POS70	POS69	POS68	POS67	POS66	POS65	POS64	FF	00-FF							
E9	POS79	POS78	POS77	POS76	POS75	POS74	POS73	POS72	FF	00-FF							
EA	POS87	POS86	POS85	POS84	POS83	POS82	POS81	POS80	FF	00-FF							
EB	POS95	POS94	POS93	POS92	POS91	POS90	POS89	POS88	FF	00-FF							
EC					POS99	POS98	POS97	POS96	FF	00-0F							
ED																	
EE	Blue Back	1/2 digit	TEXT				LANGUAGE		48	00-FF							
EF			LAST VOLUME								00	00-3C					
F0	POS 7	POS 6	POS 5	POS4	POS 3	POS 2	POS 1	POS 0	01	00-FF							
F1	POS15	POS14	POS13	POS12	POS11	POS10	POS 9	POS 8	00	00-FF							
F2	POS23	POS22	POS21	POS20	POS19	POS18	POS17	POS16	00	00-FF							
F3	POS31	POS30	POS29	POS28	POS27	POS26	POS25	POS24	00	00-FF							
F4	POS39	POS38	POS37	POS36	POS35	POS34	POS33	POS32	00	00-FF							
F5	POS47	POS46	POS45	POS44	POS43	POS42	POS41	POS40	00	00-FF							
F6	POS55	POS54	POS53	POS52	POS51	POS50	POS49	POS48	00	00-FF							
F7	POS63	POS62	POS61	POS60	POS59	POS58	POS57	POS56	00	00-FF							
F8	POS71	POS70	POS69	POS68	POS67	POS66	POS65	POS64	00	00-FF							
F9	POS79	POS78	POS77	POS76	POS75	POS74	POS73	POS72	00	00-FF							
FA	POS87	POS86	POS85	POS84	POS83	POS82	POS81	POS80	00	00-FF							
FB	POS95	POS94	POS93	POS92	POS91	POS90	POS89	POS88	00	00-FF							
FC					POS99	POS98	POS97	POS96	00	00-0F							
FD	POWER								AA	AA(On), 55(Off)							
FE	ON TIMER VOLUME								FF	00-3C, FF							
FF	ON TIMER CHANNEL								FF	00-65, FF							
MODEL								MODEL									
LETTER NO.								LETTER NO.									

1= AFT ON,  
0=AFT OFF1= SKIP ON,  
0=SKIP OFF

## MEMORY MAP (Continued)

ADDRESS (HEX)	DATA								MICON DEFAULT	EEPROM RANGE	EEPROM WRITE(CPU)	CHASSIS		CTV/FINAL		LAST INITN	REMARK
	D7	D6	D5	D4	D3	D2	D1	D0				CHECK DATA	CHECK TYPE	CHECK DATA	CHECK TYPE	SETTING DATA	
100			S-SYSTEM (POS0)			C-SYSTEM (POS0)			00	00-34							
101			S-SYSTEM (POS1)			C-SYSTEM (POS1)			00	00-34							S-SYSTEM
102			S-SYSTEM (POS2)			C-SYSTEM (POS2)			00	00-34							0: BIG
103			S-SYSTEM (POS3)			C-SYSTEM (POS3)			00	00-34							1: I
104			S-SYSTEM (POS4)			C-SYSTEM (POS4)			00	00-34							2: D/K
105			S-SYSTEM (POS5)			C-SYSTEM (POS5)			00	00-34							3: M
106			S-SYSTEM (POS6)			C-SYSTEM (POS6)			00	00-34							
107			S-SYSTEM (POS7)			C-SYSTEM (POS7)			00	00-34							C-SYSTEM
108			S-SYSTEM (POS8)			C-SYSTEM (POS8)			00	00-34							0: AUTO
109			S-SYSTEM (POS9)			C-SYSTEM (POS9)			00	00-34							1: PAL
10A			S-SYSTEM (POS10)			C-SYSTEM (POS10)			00	00-34							2: SECAM
10B			S-SYSTEM (POS11)			C-SYSTEM (POS11)			00	00-34							3: N443
10C			S-SYSTEM (POS12)			C-SYSTEM (POS12)			00	00-34							4: N358
10D			S-SYSTEM (POS13)			C-SYSTEM (POS13)			00	00-34							
10E			S-SYSTEM (POS14)			C-SYSTEM (POS14)			00	00-34							
10F			S-SYSTEM (POS15)			C-SYSTEM (POS15)			00	00-34							
110			S-SYSTEM (POS16)			C-SYSTEM (POS16)			00	00-34							
111			S-SYSTEM (POS17)			C-SYSTEM (POS17)			00	00-34							
112			S-SYSTEM (POS18)			C-SYSTEM (POS18)			00	00-34							
113			S-SYSTEM (POS19)			C-SYSTEM (POS19)			00	00-34							
114			S-SYSTEM (POS20)			C-SYSTEM (POS20)			00	00-34							
115			S-SYSTEM (POS21)			C-SYSTEM (POS21)			00	00-34							
116			S-SYSTEM (POS22)			C-SYSTEM (POS22)			00	00-34							
117			S-SYSTEM (POS23)			C-SYSTEM (POS23)			00	00-34							
118			S-SYSTEM (POS24)			C-SYSTEM (POS24)			00	00-34							
119			S-SYSTEM (POS25)			C-SYSTEM (POS25)			00	00-34							
11A			S-SYSTEM (POS26)			C-SYSTEM (POS26)			00	00-34							
11B			S-SYSTEM (POS27)			C-SYSTEM (POS27)			00	00-34							
11C			S-SYSTEM (POS28)			C-SYSTEM (POS28)			00	00-34							
11D			S-SYSTEM (POS29)			C-SYSTEM (POS29)			00	00-34							
11E			S-SYSTEM (POS30)			C-SYSTEM (POS30)			00	00-34							
11F			S-SYSTEM (POS31)			C-SYSTEM (POS31)			00	00-34							
120			S-SYSTEM (POS32)			C-SYSTEM (POS32)			00	00-34							
121			S-SYSTEM (POS33)			C-SYSTEM (POS33)			00	00-34							
122			S-SYSTEM (POS34)			C-SYSTEM (POS34)			00	00-34							
123			S-SYSTEM (POS35)			C-SYSTEM (POS35)			00	00-34							
124			S-SYSTEM (POS36)			C-SYSTEM (POS36)			00	00-34							
125			S-SYSTEM (POS37)			C-SYSTEM (POS37)			00	00-34							
126			S-SYSTEM (POS38)			C-SYSTEM (POS38)			00	00-34							
127			S-SYSTEM (POS39)			C-SYSTEM (POS39)			00	00-34							
128			S-SYSTEM (POS40)			C-SYSTEM (POS40)			00	00-34							
129			S-SYSTEM (POS41)			C-SYSTEM (POS41)			00	00-34							
12A			S-SYSTEM (POS42)			C-SYSTEM (POS42)			00	00-34							
12B			S-SYSTEM (POS43)			C-SYSTEM (POS43)			00	00-34							
12C			S-SYSTEM (POS44)			C-SYSTEM (POS44)			00	00-34							
12D			S-SYSTEM (POS45)			C-SYSTEM (POS45)			00	00-34							
12E			S-SYSTEM (POS46)			C-SYSTEM (POS46)			00	00-34							
12F			S-SYSTEM (POS47)			C-SYSTEM (POS47)			00	00-34							
130			S-SYSTEM (POS48)			C-SYSTEM (POS48)			00	00-34							
131			S-SYSTEM (POS49)			C-SYSTEM (POS49)			00	00-34							
132			S-SYSTEM (POS50)			C-SYSTEM (POS50)			00	00-34							
133			S-SYSTEM (POS51)			C-SYSTEM (POS51)			00	00-34							
134			S-SYSTEM (POS52)			C-SYSTEM (POS52)			00	00-34							
135			S-SYSTEM (POS53)			C-SYSTEM (POS53)			00	00-34							
136			S-SYSTEM (POS54)			C-SYSTEM (POS54)			00	00-34							
137			S-SYSTEM (POS55)			C-SYSTEM (POS55)			00	00-34							
138			S-SYSTEM (POS56)			C-SYSTEM (POS56)			00	00-34							
139			S-SYSTEM (POS57)			C-SYSTEM (POS57)			00	00-34							
13A			S-SYSTEM (POS58)			C-SYSTEM (POS58)			00	00-34							
13B			S-SYSTEM (POS59)			C-SYSTEM (POS59)			00	00-34							
13C			S-SYSTEM (POS60)			C-SYSTEM (POS60)			00	00-34							
13D			S-SYSTEM (POS61)			C-SYSTEM (POS61)			00	00-34							
13E			S-SYSTEM (POS62)			C-SYSTEM (POS62)			00	00-34							
13F			S-SYSTEM (POS63)			C-SYSTEM (POS63)			00	00-34							
MODEL									MODEL								
LETTER NO.									LETTER NO.								

# MEMORY MAP

## (Continued)

ADDRESS (HEX)	DATA								MICON DEFAULT	EEPROM RANGE	CEPR0M WRITE(CPU)	CHASSIS		CTV FINAL		LAST INITIAL SETTING DATA	REMARK
	D7	D6	D5	D4	D3	D2	D1	D0				CHFK DATA	CHFK TYFF	CHFK DATA	CHFK TYFF		
140			S-SYSTEM (POS64)			C-SYSTEM (POS64)			00	00-34							
141			S-SYSTEM (POS65)			C-SYSTEM (POS65)			00	00-34							
142			S-SYSTEM (POS66)			C-SYSTEM (POS66)			00	00-34							
143			S-SYSTEM (POS67)			C-SYSTEM (POS67)			00	00-34							
144			S-SYSTEM (POS68)			C-SYSTEM (POS68)			00	00-34							
145			S-SYSTEM (POS69)			C-SYSTEM (POS69)			00	00-34							
146			S-SYSTEM (POS70)			C-SYSTEM (POS70)			00	00-34							
147			S-SYSTEM (POS71)			C-SYSTEM (POS71)			00	00-34							
148			S-SYSTEM (POS72)			C-SYSTEM (POS72)			00	00-34							
149			S-SYSTEM (POS73)			C-SYSTEM (POS73)			00	00-34							
14A			S-SYSTEM (POS74)			C-SYSTEM (POS74)			00	00-34							
14B			S-SYSTEM (POS75)			C-SYSTEM (POS75)			00	00-34							
14C			S-SYSTEM (POS76)			C-SYSTEM (POS76)			00	00-34							
14D			S-SYSTEM (POS77)			C-SYSTEM (POS77)			00	00-34							
14E			S-SYSTEM (POS78)			C-SYSTEM (POS78)			00	00-34							
14F			S-SYSTEM (POS79)			C-SYSTEM (POS79)			00	00-34							
150			S-SYSTEM (POS80)			C-SYSTEM (POS80)			00	00-34							
151			S-SYSTEM (POS81)			C-SYSTEM (POS81)			00	00-34							
152			S-SYSTEM (POS82)			C-SYSTEM (POS82)			00	00-34							
153			S-SYSTEM (POS83)			C-SYSTEM (POS83)			00	00-34							
154			S-SYSTEM (POS84)			C-SYSTEM (POS84)			00	00-34							
155			S-SYSTEM (POS85)			C-SYSTEM (POS85)			00	00-34							
156			S-SYSTEM (POS86)			C-SYSTEM (POS86)			00	00-34							
157			S-SYSTEM (POS87)			C-SYSTEM (POS87)			00	00-34							
158			S-SYSTEM (POS88)			C-SYSTEM (POS88)			00	00-34							
159			S-SYSTEM (POS89)			C-SYSTEM (POS89)			00	00-34							
15A			S-SYSTEM (POS90)			C-SYSTEM (POS90)			00	00-34							
15B			S-SYSTEM (POS91)			C-SYSTEM (POS91)			00	00-34							
15C			S-SYSTEM (POS92)			C-SYSTEM (POS92)			00	00-34							
15D			S-SYSTEM (POS93)			C-SYSTEM (POS93)			00	00-34							
15E			S-SYSTEM (POS94)			C-SYSTEM (POS94)			00	00-34							
15F			S-SYSTEM (POS95)			C-SYSTEM (POS95)			00	00-34							
160			S-SYSTEM (POS96)			C-SYSTEM (POS96)			00	00-34							
161			S-SYSTEM (POS97)			C-SYSTEM (POS97)			00	00-34							
162			S-SYSTEM (POS98)			C-SYSTEM (POS98)			00	00-34							
163			S-SYSTEM (POS99)			C-SYSTEM (POS99)			00	00-34							
164			C-SYSTEM (AV2)			C-SYSTEM (AV1)			00	00-44							
165																	
166			SLV 1 (HIGH)						00	00-FF							
167			SLV 1 (LOW)						00	00-FF							
168			SLV 2 (HIGH)						00	00-FF							
169			SLV 2 (LOW)						00	00-FF							
16A			SLV 3 (HIGH)						00	00-FF							
16B			SLV 3 (LOW)						00	00-FF							
16C			SLV 4 (HIGH)						00	00-FF							
16D			SLV 4 (LOW)						00	00-FF							
16E			SLV 5 (HIGH)						00	00-FF							
16F			SLV 5 (LOW)						00	00-FF							
170			SLV 6 (HIGH)						00	00-FF							
171			SLV 6 (LOW)						00	00-FF							
172																	
173								TV/AV	00	0(TV), 1(AV1), 2(AV2)							
174			LAST CHANNEL POSITION						01	00-63							
175			FLASH BACK POSITION						01	00-FF							
176			ROM CORRECTION-1 ID							00-FF							
177			ROM CORRECTION-1 HIGH BYTE ADDRESS							00-FF							
178			ROM CORRECTION-1 LOW BYTE ADDRESS							00-FF							
179			ROM CORRECTION-1 DATA LENGTH							00-FF							
17A			ROM CORRECTION-1 CHECKSUM							00-FF							
17B			ROM CORRECTION-2 ID							00-FF							
17C			ROM CORRECTION-2 HIGH BYTE ADDRESS							00-FF							
17D			ROM CORRECTION-2 LOW BYTE ADDRESS							00-FF							
17E			ROM CORRECTION-2 DATA LENGTH							00-FF							
17F			ROM CORRECTION-2 CHECKSUM							00-FF							
MODEL									MODEL								
LETTER NO.									LETTER NO.								

MEMORY MAP  
(Continued)

ADDRESS (HEX)	DATA								MICON DEFAULT	EEPROM RANGE	EEPROM WRITE (CPU)	CHASSIS		CTV FINAL		LAST INITIAL SETTING DATA	REMARK
	D7	D6	D5	D4	D3	D2	D1	D0				CHECK DATA	CHECK TYPE	CHECK DATA	CHECK TYPE		
180										00-FF							
181										00-FF							
182										00-FF							
183										00-FF							
184										00-FF							
185										00-FF							
186										00-FF							
187										00-FF							
188										00-FF							
189										00-FF							
18A										00-FF							
18B										00-FF							
18C										00-FF							
18D										00-FF							
18E										00-FF							
18F										00-FF							
190										00-FF							
191										00-FF							
192										00-FF							
193										00-FF							
194										00-FF							
195										00-FF							
196										00-FF							
197										00-FF							
198										00-FF							
199										00-FF							
19A										00-FF							
19B										00-FF							
19C										00-FF							
19D										00-FF							
19E										00-FF							
19F										00-FF							
1A0										00-FF							
1A1										00-FF							
1A2										00-FF							
1A3										00-FF							
1A4										00-FF							
1A5										00-FF							
1A6										00-FF							
1A7										00-FF							
1A8										00-FF							
1A9										00-FF							
1AA										00-FF							
1AB										00-FF							
1AC										00-FF							
1AD										00-FF							
1AE										00-FF							
1AF										00-FF							
1B0										00-FF							
1B1										00-FF							
1B2										00-FF							
1B3										00-FF							
1B4										00-FF							
1B5										00-FF							
1B6										00-FF							
1B7										00-FF							
1B8										00-FF							
1B9										00-FF							
1BA										00-FF							
1BB										00-FF							
1BC										00-FF							
1BD										00-FF							
1BE										00-FF							
1BF										00-FF							
MODEL									MODEL								
LETTER NO.									LETTER NO.								

# MEMORY MAP

## (Continued)

ADDRESS (HEX)	DATA								MICRON DEFAULT	EEPROM RANGE	EEPROM WRITE(CPU)	CHASSIS		CTV FINAL		LAST INITIAL	REMARK
	D7	D6	D5	D4	D3	D2	D1	D0			CHECK DATA	CHECK TYPE	CHECK DATA	CHECK TYPE	SETTING DATA		
1C0																	
1C1																	
1C2																	
1C3																	
1C4																	
1C5																	
1C6																	
1C7																	
1C8																	
1C9																	
1CA																	
1CB																	
1CC																	
1CD																	
1CE																	
1CF																	
1D0																	
1D1																	
1D2																	
1D3																	
1D4																	
1D5																	
1D6																	
1D7																	
1D8																	
1D9																	
1DA																	
1DB																	
1DC																	
1DD																	
1DE																	
1DF																	
1E0																	
1E1																	
1E2																	
1E3																	
1E4																	
1E5																	
1E6																	
1E7																	
1E8																	
1E9																	
1EA																	
1EB																	
1EC																	
1ED																	
1EE																	
1EF																	
1F0																	
1F1																	
1F2																	
1F3																	
1F4																	
1F5																	
1F6																	
1F7																	
1F8																	
1F9																	
1FA																	
1FB																	
1FC																	
1FD																	
1FE																	
1FF																	
MODEL									MODEL								
LETTER NO.									LETTER NO.								

## MEMORY MAP (Continued)

ADDRESS (HEX)	DATA								MICON DEFAULT	EEPROM RANGE	EEPROM WRITE(CPU)	CHASSIS		CTV FINAL		LAST INITIAL SETTING DATA	REMARK
	D7	D6	D5	D4	D3	D2	D1	D0				CHECK DATA	CHECK TYPE	CHECK DATA	CHECK TYPE		
200									3F	00-7F							
201									3F	00-7F							
202									7F	00-FF							
203									7F	00-FF							
204									7F	00-FF							
205									32	00-7F							
206									1F	00-3F							
207									03	00-07							
208									64	00-7F							
209									3F	00-7F							
20A									7F	00-FF							
20B									3F	00-7F							
20C									2B	00-3F							
20D									5A	00-7F							
20E									3F	00-7F							
20F									26	00-3F							
210									03	00-07							
211									09	00-1F							
212									25	00-3F							
213									16	00-3F							
214									3C	00-3C							
215									1F	00-3E							
216									06	00-0E							
217									11	00-1E							
218									07	00-0F							
219									07	00-0F							
21A									07	00-0F							
21B									07	00-0F							
21C									07	00-0F							
21D																	
21E																	
21F																	
220																	
221																	
222																	
223																	
224																	
225																	
226																	
227																	
228																	
229																	
22A																	
22B																	
22C																	
22D																	
22E																	
22F																	
230									95	00-7F							
231									04	00-07							
232									05	00-07							
233									05	00-07							
234									07	00-07							
235									05	00-07							
236									05	00-07							
237									06	00-07							
238									06	00-07							
239									07	00-07							
23A									06	00-07							
23B									06	00-07							
23C									06	00-07							
23D									29	00-3E							
23E									1F	00-3E							
23F									28	00-3E							
MODEL									MODEL								
LETTER NO.									LETTER NO.								

# MEMORY MAP

## (Continued)

ADDRESS (HEX)	DATA								MICON DEFAULT	EEPROM RANGE	EEPROM WRITE(CPU)	CHASSIS		CTV FINAL		LAST INITIAL SETTING DATA	REMARK
	D7	D6	D5	D4	D3	D2	D1	D0				CHECK DATA	CHECK TYPE	CHECK DATA	CHECK TYPE		
240									17	00-3E							
241									18	00-3E							
242									1F	00-3E							
243									24	00-3E							
244									1F	00-3E							
245									1F	00-3E							
246									1A	00-3E							
247									1F	00-3E							
248									1F	00-3E							
249									3F	00-7E							
24A									3F	00-7E							
24B									3F	00-7E							
24C									3F	00-7E							
24D									36	00-7E							
24E									39	00-7E							
24F									47	00-7E							
250									02	00-03							
251									02	00-03							
252									02	00-03							
253									02	00-03							
254									02	00-03							
255									00	00-03							
256									0A	00-0F							
257									02	00-07							
258									04	00-07							
259									04	00-07							
25A									06	00-0F							
25B									0E	00-0F							
25C									0E	00-0F							
25D									00	00-03							
25E									00	00-03							
25F									01	00-03							
260									00	00-03							
261									1E	00-3F							
262									22	00-3F							
263									09	00-7F							
264									06	00-07							
265									00	00-07							
266									00	00-04							
267									10	00-1F							
268									0F	00-1E							
269									10	00-1E							
26A									0D	00-1E							
26B									12	00-1E							
26C									0E	00-1E							
26D									23	00-FF							
26E									46	00-FF							
26F									06	00-0D							
270									01	00-03							
271									01	00-03							
272									00	00-03							
273									03	00-03							
274									03	00-03							
275									00	00-02							
276									FF	00-FF							
277									FF	00-FF							
278									02	00-03							
279									02	00-03							
27A																	
27B																	
27C																	
27D																	
27E																	
27F																	
MODEL									MODEL								
LETTER NO.									LETTER NO.								

MEMORY MAP  
(Continued)

ADDRESS (HEX)	DATA								MICON DEFAULT	EEPROM RANGE	EEPROM WRITE (CPU)	CHASSIS		CTV FINAL		LAST INITIAL SETTING DATA	REMARK
	D7	D6	D5	D4	D3	D2	D1	D0				CHECK DATA	CHECK TYPE	CHECK DATA	CHECK TYPE		
280	BS OFF (F08)	RGB CLIP (F07)	C-CLIP- LVL (F06)	STrapQ- 574 (F05)	STrapQ-M (F04)	STrapQ- DK (F03)	STrapQ-I (F02)	STrapQ- BG (F01)	00	00-FF							
281	Ana-OSD (F100)	ABCL-G (F10)	ABCL (F09)	SHP-G- N3 (F17)	SHP-G- N4 (F16)	SHP-G- SCM (F15)	SHP-G- PAL (F14)	SHP-G (F13)	10	00-FF							
282	V-FREE (F60)	1W-AV (F59)	1W-TV (F58)	DT-N3 (F52)	DT-N4 (F51)	DT-S (F50)	DT-P (F49)	DT (F48)	44	00-FF							
283	PLL-CP (F83)	DL-Vout (F79)	DL-REV (F78)	N45 (F77)	SCM-YOL (F75)	OM DET (F65)	BS GAIN (F64)	AFC2 (F61)	80	00-FF							
284	AV2 (O11)	AV (O10)	Forced- Col (O08)	N358-TV (O07)	N443-TV (O06)	SECAM (O05)	VIF (O04)	HOTEL (O01)	DE	00-FF							
285	LED- CONT (O21)	R/C MENU (O20)	BIL (O17)	TEXT (O16)	A2 (O15)	NICAM (O14)	S-CTR (O13)	YUV (O12)	03	00-FF							
286					M (O08)	D/K (O09)	I (O09)	B/G (O09)	0F	01-0F							
287		Thai (O18)						English (O18)	41	01, 40, 41							
288						SEARCH SPEED (O18)			03	01-05							
289						HOTEL CHANNEL POSITION (O02)			FF	00-63, FF							
28A						HOTEL VOLUME (O03)			FF	00-3C, FF							
28B						NICAM- AUTO- MUTE (F99)	AGC-SW- OFF (F88)	SMALL- SURR (F84)	02	00-07							
28C					C-ANGLE (F109)	TAKE- OFF-YUV (F108)	TAKE- OFF-AV (F107)	TAKE- OFF-TV (F106)	09	00-0F							
28D																	
28E																	
28F																	
290																	
291																	
292																	
293																	
294																	
295																	
296																	
297																	
298																	
299																	
29A																	
29B																	
29C																	
29D																	
29E																	
29F																	
2A0																	
2A1																	
2A2																	
2A3																	
2A4																	
2A5																	
2A6																	
2A7																	
2A8																	
2A9																	
2AA																	
2AB																	
2AC																	
2AD																	
2AE																	
2AF																	
2B0																	
2B1																	
2B2																	
2B3																	
2B4																	
2B5																	
2B6																	
2B7																	
2B8																	
2B9																	
2BA																	
2BB																	
2BC																	
2BD																	
2BE																	
2BF																	
MODEL									MODEL								
LETTER NO.									LETTER NO.								



# MEMORY MAP

## (Continued)

ADDRESS (HEX)	DATA								MICON	EEPROM	EEPROM	CHASSIS		CTV FINAL		LAST INITIAL	REMARK		
	D7	D6	D5	D4	D3	D2	D1	D0	DEFAULT	RANGE	WRITE(CPU)	CHECK DATA	CHECK TYPE	CHECK DATA	CHECK TYPE	SETTING DATA			
2C0																			
2C1																			
2C2																			
2C3																			
2C4																			
2C5																			
2C6																			
2C7																			
2C8																			
2C9																			
2CA																			
2CB																			
2CC																			
2CD																			
2CE																			
2CF																			
2D0																			
2D1																			
2D2																			
2D3																			
2D4																			
2D5																			
2D6																			
2D7																			
2D8																			
2D9																			
2DA																			
2DB																			
2DC																			
2DD																			
2DE																			
2DF																			
2E0																			
2E1																			
2E2																			
2E3																			
2E4																			
2E5																			
2E6																			
2E7																			
2E8																			
2E9																			
2EA																			
2EB																			
2EC																			
2ED																			
2EE																			
2EF																			
2F0																			
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2F2																			
2F3																			
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2F5																			
2F6																			
2F7																			
2F8																			
2F9																			
2FA																			
2FB																			
2FC																			
2FD																			
2FE																			
2FF																			
MODEL									MODEL										
LETTER NO.									LETTER NO.										

\*1 0 : individually selectable rating system 1 : threshold selectable rating system

\*2 0 : CATEGORY bit mask with (01,05) 1st character 1 : CATEGORY bit mask with (01,05) 2nd character

## MEMORY MAP

(Continued)

ADDRESS (HEX)	DATA								MCON DEFAULT	EEPROM RANGE	EEPROM WRITE(CPU)	CHASSIS		CTV FINAL		LAST INITIAL SETTING DATA	REMARK
	D7	D6	D5	D4	D3	D2	D1	D0				CHECK DATA	CHECK TYPE	CHECK DATA	CHECK TYPE		
300	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 0	
301	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 1	
302	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 2	
303	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 3	
304	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 4	
305	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 5	
306	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 6	
307	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 7	
308	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 8	
309	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 9	
30A	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 10	
30B	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 11	
30C	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 12	
30D	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 13	
30E	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 14	
30F	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 15	
310	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 16	
311	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 17	
312	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 18	
313	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 19	
314	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 20	
315	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 21	
316	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 22	
317	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 23	
318	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 24	
319	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 25	
31A	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 26	
31B	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 27	
31C	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 28	
31D	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 29	
31E	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 30	
31F	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 31	
320	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 32	
321	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 33	
322	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 34	
323	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 35	
324	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 36	
325	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 37	
326	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 38	
327	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 39	
328	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 40	
329	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 41	
32A	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 42	
32B	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 43	
32C	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 44	
32D	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 45	
32E	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 46	
32F	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 47	
330	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 48	
331	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 49	
332	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 50	
333	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 51	
334	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 52	
335	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 53	
336	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 54	
337	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 55	
338	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 56	
339	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 57	
33A	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 58	
33B	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 59	
33C	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 60	
33D	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 61	
33E	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 62	
33F	A2 FM	A2 ST	A2 BIL1	NCM FM	NCM MONO	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF						POS 63	
MODEL										MODEL							

# MEMORY MAP

## (Continued)

ADDRESS (HEX)	DATA								MICON DEFAULT	EEPROM RANGE	EEPROM WRITE(CPU)	CHASSIS		CTV FINAL		LAST INITIAL SETTING DATA	REMARK
	D7	D6	D5	D4	D3	D2	D1	D0				CHECK DATA	CHECK TYPE	CHECK DATA	CHECK TYPE		
340	A2 FM	A2 ST	A2 BIL1	NCM FM	MONO NCM	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF							POS 64
341	A2 FM	A2 ST	A2 BIL1	NCM FM	MONO NCM	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF							POS 65
342	A2 FM	A2 ST	A2 BIL1	NCM FM	MONO NCM	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF							POS 66
343	A2 FM	A2 ST	A2 BIL1	NCM FM	MONO NCM	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF							POS 67
344	A2 FM	A2 ST	A2 BIL1	NCM FM	MONO NCM	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF							POS 68
345	A2 FM	A2 ST	A2 BIL1	NCM FM	MONO NCM	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF							POS 69
346	A2 FM	A2 ST	A2 BIL1	NCM FM	MONO NCM	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF							POS 70
347	A2 FM	A2 ST	A2 BIL1	NCM FM	MONO NCM	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF							POS 71
348	A2 FM	A2 ST	A2 BIL1	NCM FM	MONO NCM	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF							POS 72
349	A2 FM	A2 ST	A2 BIL1	NCM FM	MONO NCM	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF							POS 73
34A	A2 FM	A2 ST	A2 BIL1	NCM FM	MONO NCM	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF							POS 74
34B	A2 FM	A2 ST	A2 BIL1	NCM FM	MONO NCM	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF							POS 75
34C	A2 FM	A2 ST	A2 BIL1	NCM FM	MONO NCM	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF							POS 76
34D	A2 FM	A2 ST	A2 BIL1	NCM FM	MONO NCM	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF							POS 77
34E	A2 FM	A2 ST	A2 BIL1	NCM FM	MONO NCM	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF							POS 78
34F	A2 FM	A2 ST	A2 BIL1	NCM FM	MONO NCM	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF							POS 79
350	A2 FM	A2 ST	A2 BIL1	NCM FM	MONO NCM	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF							POS 80
351	A2 FM	A2 ST	A2 BIL1	NCM FM	MONO NCM	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF							POS 81
352	A2 FM	A2 ST	A2 BIL1	NCM FM	MONO NCM	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF							POS 82
353	A2 FM	A2 ST	A2 BIL1	NCM FM	MONO NCM	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF							POS 83
354	A2 FM	A2 ST	A2 BIL1	NCM FM	MONO NCM	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF							POS 84
355	A2 FM	A2 ST	A2 BIL1	NCM FM	MONO NCM	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF							POS 85
356	A2 FM	A2 ST	A2 BIL1	NCM FM	MONO NCM	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF							POS 86
357	A2 FM	A2 ST	A2 BIL1	NCM FM	MONO NCM	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF							POS 87
358	A2 FM	A2 ST	A2 BIL1	NCM FM	MONO NCM	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF							POS 88
359	A2 FM	A2 ST	A2 BIL1	NCM FM	MONO NCM	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF							POS 89
35A	A2 FM	A2 ST	A2 BIL1	NCM FM	MONO NCM	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF							POS 90
35B	A2 FM	A2 ST	A2 BIL1	NCM FM	MONO NCM	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF							POS 91
35C	A2 FM	A2 ST	A2 BIL1	NCM FM	MONO NCM	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF							POS 92
35D	A2 FM	A2 ST	A2 BIL1	NCM FM	MONO NCM	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF							POS 93
35E	A2 FM	A2 ST	A2 BIL1	NCM FM	MONO NCM	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF							POS 94
35F	A2 FM	A2 ST	A2 BIL1	NCM FM	MONO NCM	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF							POS 95
360	A2 FM	A2 ST	A2 BIL1	NCM FM	MONO NCM	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF							POS 96
361	A2 FM	A2 ST	A2 BIL1	NCM FM	MONO NCM	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF							POS 97
362	A2 FM	A2 ST	A2 BIL1	NCM FM	MONO NCM	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF							POS 98
363	A2 FM	A2 ST	A2 BIL1	NCM FM	MONO NCM	NCM ST	NCM BIL2	NCM BIL1	4C	00-FF							POS 99
364																	
365																	
366																	
367																	
368																	
369																	
36A																	
36B																	
36C																	
36D																	
36E																	
36F																	
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371																	
372																	
373																	
374																	
375																	
376																	
377																	
378																	
379																	
37A																	
37B																	
37C																	
37D																	
37E																	
37F																	
MODEL								MODEL									
LETTER NO.								LETTER NO.									

MEMORY MAP  
(Continued)

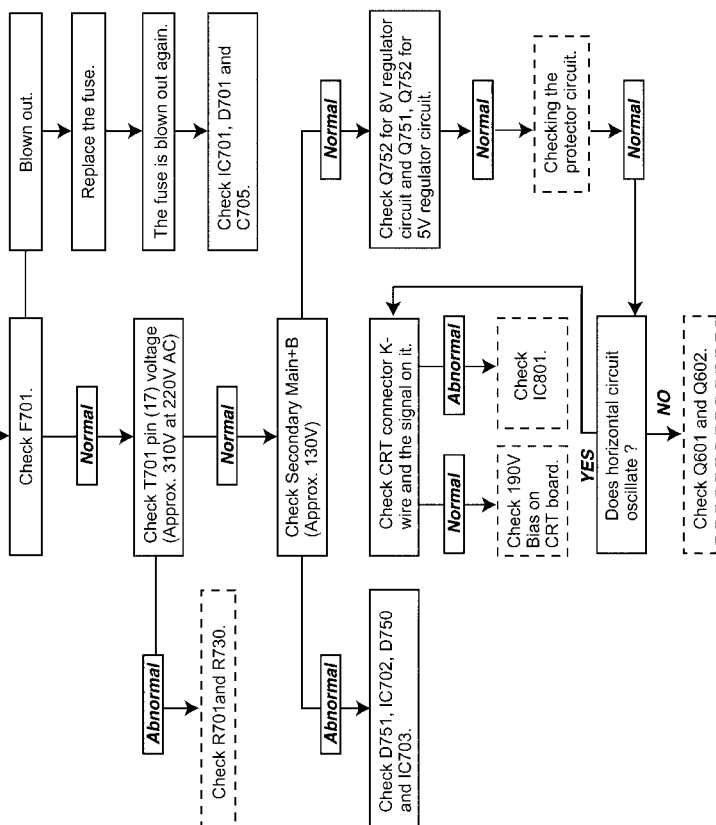
ADDRESS (HEX)	DATA								MICON DEFAULT	EEPROM RANGE	EEPROM WRITE(CPU)	CHASSIS		CTV FINAL		LAST INITIAL SETTING DATA	REMARK
	D7	D6	D5	D4	D3	D2	D1	D0				CHCK DATA	CHCK TYPE	CHCK DATA	CHCK TYPE		
380																	
381																	
382																	
383																	
384																	
385																	
386																	
387																	
388																	
389																	
38A																	
38B																	
38C																	
38D																	
38E																	
38F																	
390																	
391																	
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394																	
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396																	
397																	
398																	
399																	
39A																	
39B																	
39C																	
39D																	
39E																	
39F																	
3A0																	
3A1																	
3A2																	
3A3																	
3A4																	
3A5																	
3A6																	
3A7																	
3A8																	
3A9																	
3AA																	
3AB																	
3AC																	
3AD																	
3AE																	
3AF																	
3B0																	
3B1																	
3B2																	
3B3																	
3B4																	
3B5																	
3B6																	
3B7																	
3B8																	
3B9																	
3BA																	
3BB																	
3BC																	
3BD																	
3BE																	
3BF																	
MODEL										MODEL							
LETTER NO.										LETTER NO.							

# MEMORY MAP

## (Continued)

ADDRESS (HEX)	DATA								MICON DEFAULT	EEPROM RANGE	EEPROM WRITE(CPU)	CHASSIS		CTV/FINAL		LAST INITIAL SETTING DATA	REMARK
	D7	D6	D5	D4	D3	D2	D1	D0				CHECK DATA	CHECK TYPE	CHECK DATA	CHECK TYPE		
3C0																	
3C1																	
3C2																	
3C3																	
3C4																	
3C5																	
3C6																	
3C7																	
3C8																	
3C9																	
3CA																	
3CB																	
3CC																	
3CD																	
3CE																	
3CF																	
3D0																	
3D1																	
3D2																	
3D3																	
3D4																	
3D5																	
3D6																	
3D7																	
3D8																	
3D9																	
3DA																	
3DB																	
3DC																	
3DD																	
3DE																	
3DF																	
3E0																	
3E1																	
3E2																	
3E3																	
3E4																	
3E5																	
3E6																	
3E7																	
3E8																	
3E9																	
3EA																	
3EB																	
3EC																	
3ED																	
3EE																	
3EF																	
3F0																	
3F1																	
3F2																	
3F3																	
3F4																	
3F5																	
3F6																	
3F7																	
3F8																	
3F9																	
3FA																	
3FB																	
3FC																	
3FD																	
3FE																	
3FF																	
MODEL									MODEL								
LETTER NO.									LETTER NO.								

## TROUBLE SHOOTING TABLE

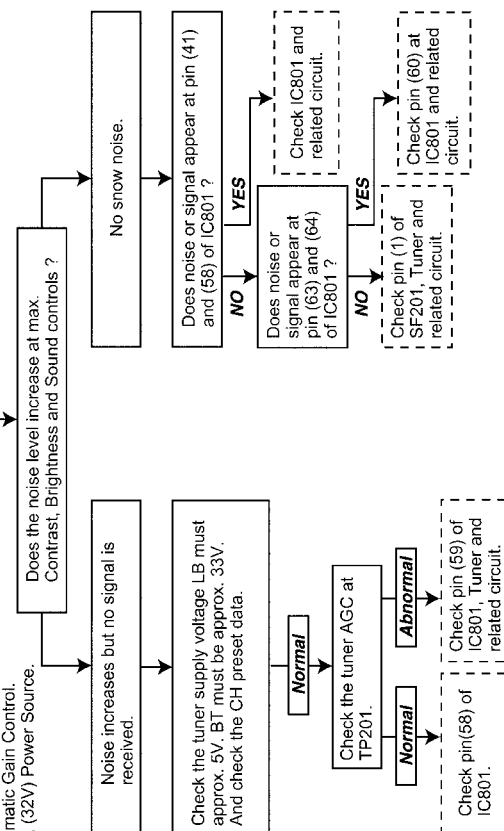
**NO RASTER**

## TROUBLE SHOOTING TABLE (Continued)

**NO PICTURE, NO SOUND**

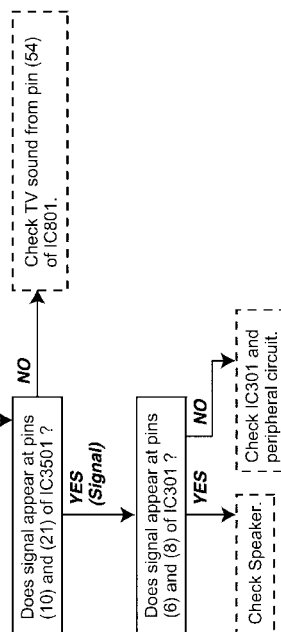
## CIRCUITS TO BE CHECKED:

- Tuner.
- PIF.
- Automatic Gain Control.
- (5V), (32V) Power Source.



## CIRCUITS TO BE CHECKED:

- Sound Detector Circuit.
- Sound Switch and Att. Control.
- Audio Output Circuit.

**NO SOUND**

## TROUBLE SHOOTING TABLE (Continued)

NEITHER VERTICAL NOR  
HORIZONTAL SYNCHRONIZATION

CIRCUIT TO BE CHECKED:

- Sync. Separator Circuit.

Check pins(5), (6), (10) and (11) of IC801.

DEFECTIVE VERTICAL AMP.  
AND VERTICAL LINEARITY

Re-adjust vertical size.  
(Bas Data)

Vertical linearity and size are  
abnormal.

Check R503, R506, R513,  
R520 and C515.

## NO VERTICAL SCAN

Check IC501 bias.

Normal

Check C511.

Abnormal

Check IC501.

## TROUBLE SHOOTING TABLE (Continued)

## NO SPECIFIC COLOUR

Is some colour produced in  
B/W broadcast reception ?

YES

Check IC801.

NO

Is the white balance properly  
adjusted ?

YES

Re-adjust the white balance.

NO

The picture colour is cyan.

Check Q855 and its adjacent  
circuits.

The picture colour is magenta.

Check Q854 and its adjacent  
circuits.

The picture colour is yellow.

Check Q853 and its adjacent  
circuits.

NO SPECIFICATION COLOUR  
"PAL"  
(NO COLOUR SYNCHRONIZATION)

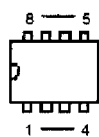
Check IC801 and bias  
control circuit.

Normal

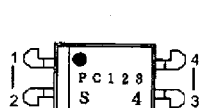
Check X801 (4.43MHz)

# SOLID STATE DEVICE BASE DIAGRAM

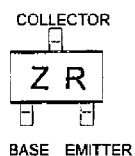
## TOP VIEW



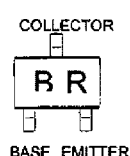
AT24W08



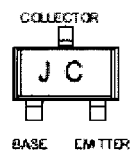
FX0008G



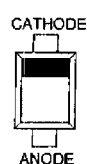
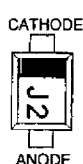
D601A



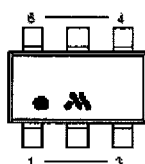
B709A



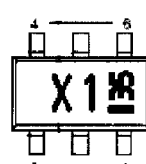
2SC2735

EX1393CE  
EX1399CE

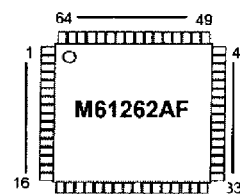
EX0867CE



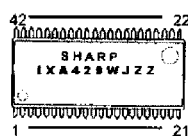
M1501XN



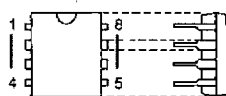
MX1C/C



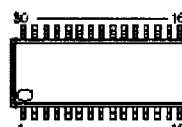
M61262AF



IXA429W

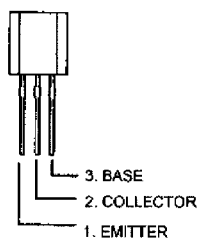


TEA1507

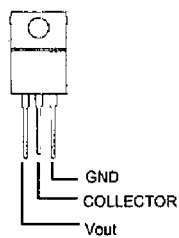


NJW1142

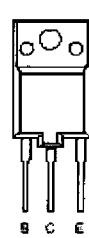
## SIDE VIEW

2PC1815Y  
2PC1815G  
2PA1015Y

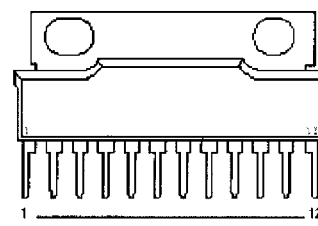
2SC2236



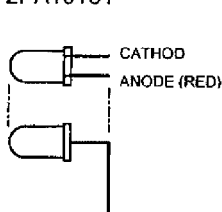
SE130N



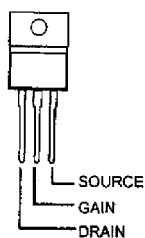
2SD2539



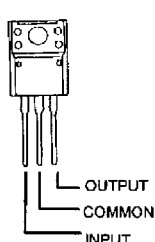
AN7522



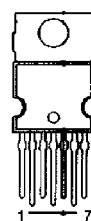
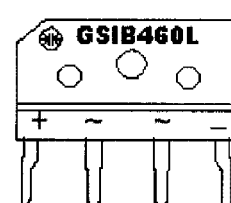
PX0013



MFS7KM16



KA7809A

TDA9302H  
(STV9302A)

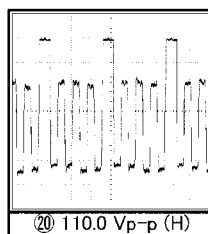
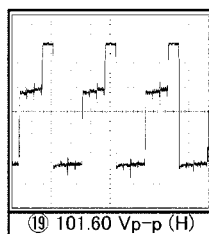
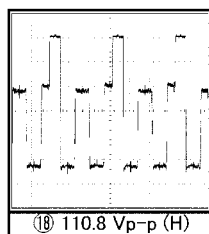
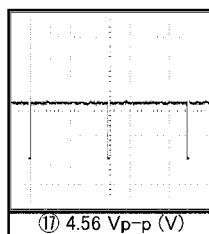
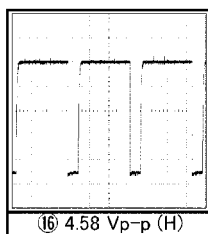
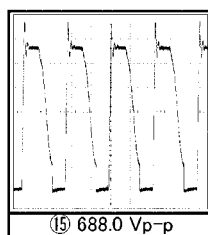
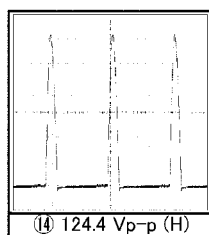
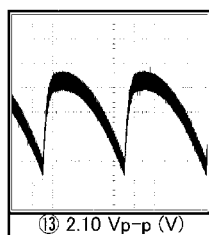
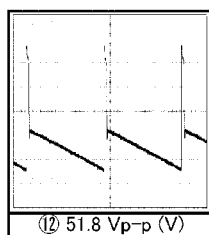
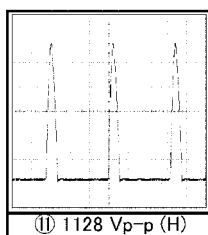
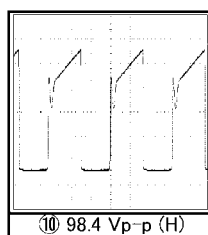
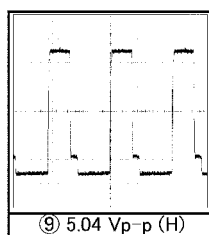
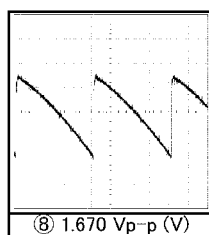
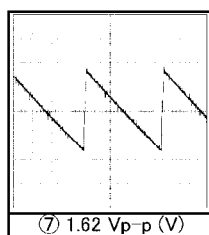
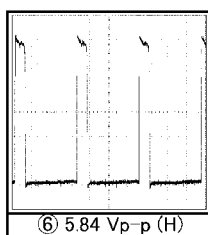
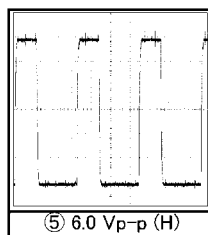
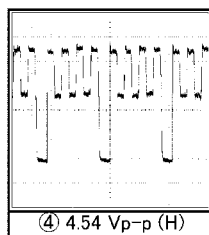
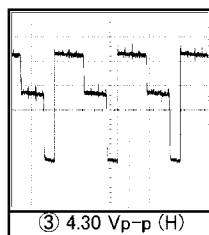
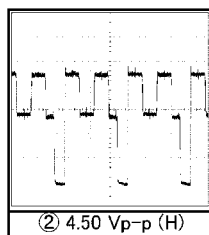
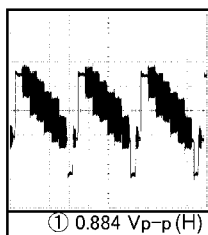
DX0111PE



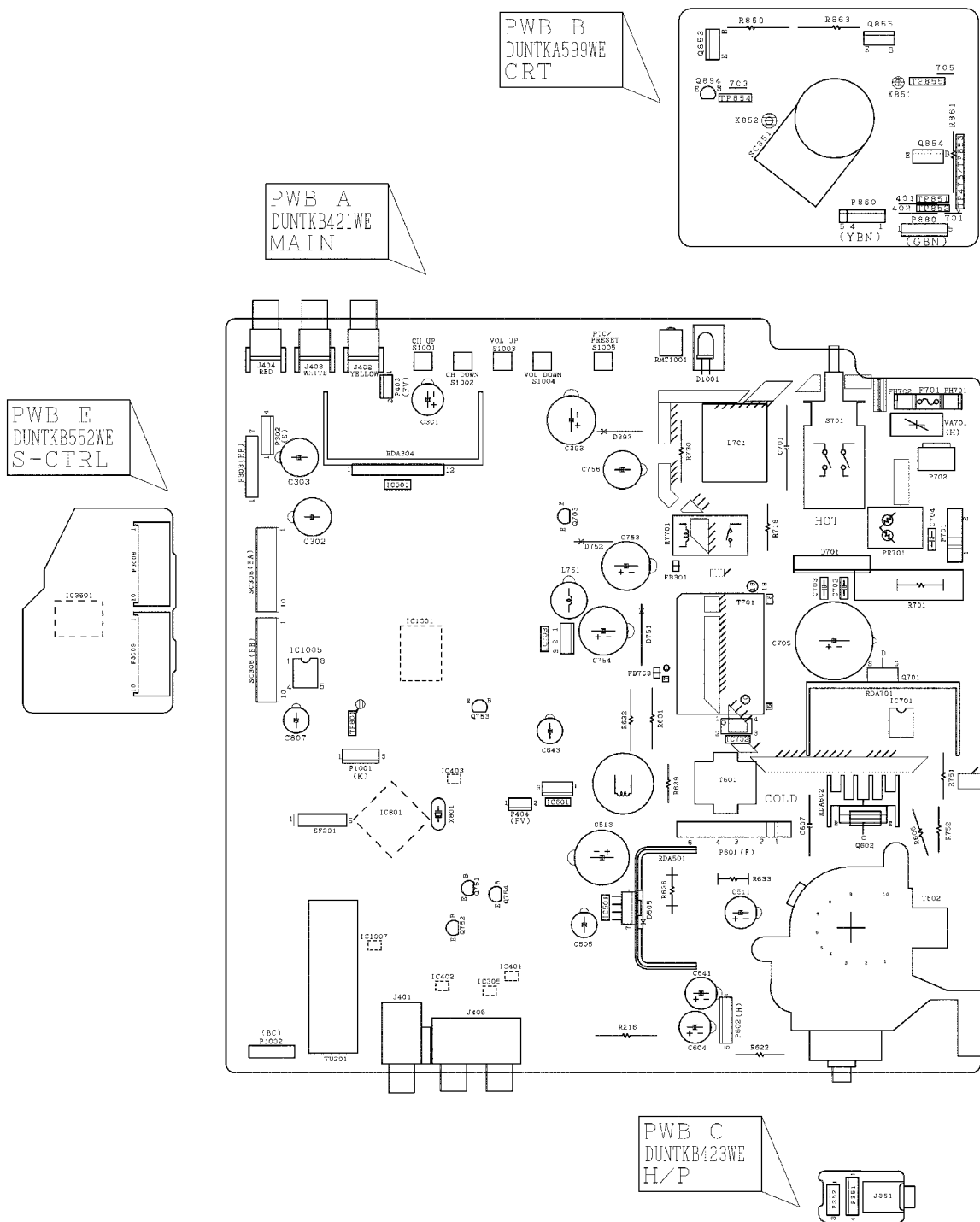
- M E M O -

This image shows a full page of white paper with horizontal dashed lines, typical of primary-ruled notebook paper. The lines are evenly spaced and run across the width of the page. There is no handwriting or other markings on the paper.

## WAVEFORMS

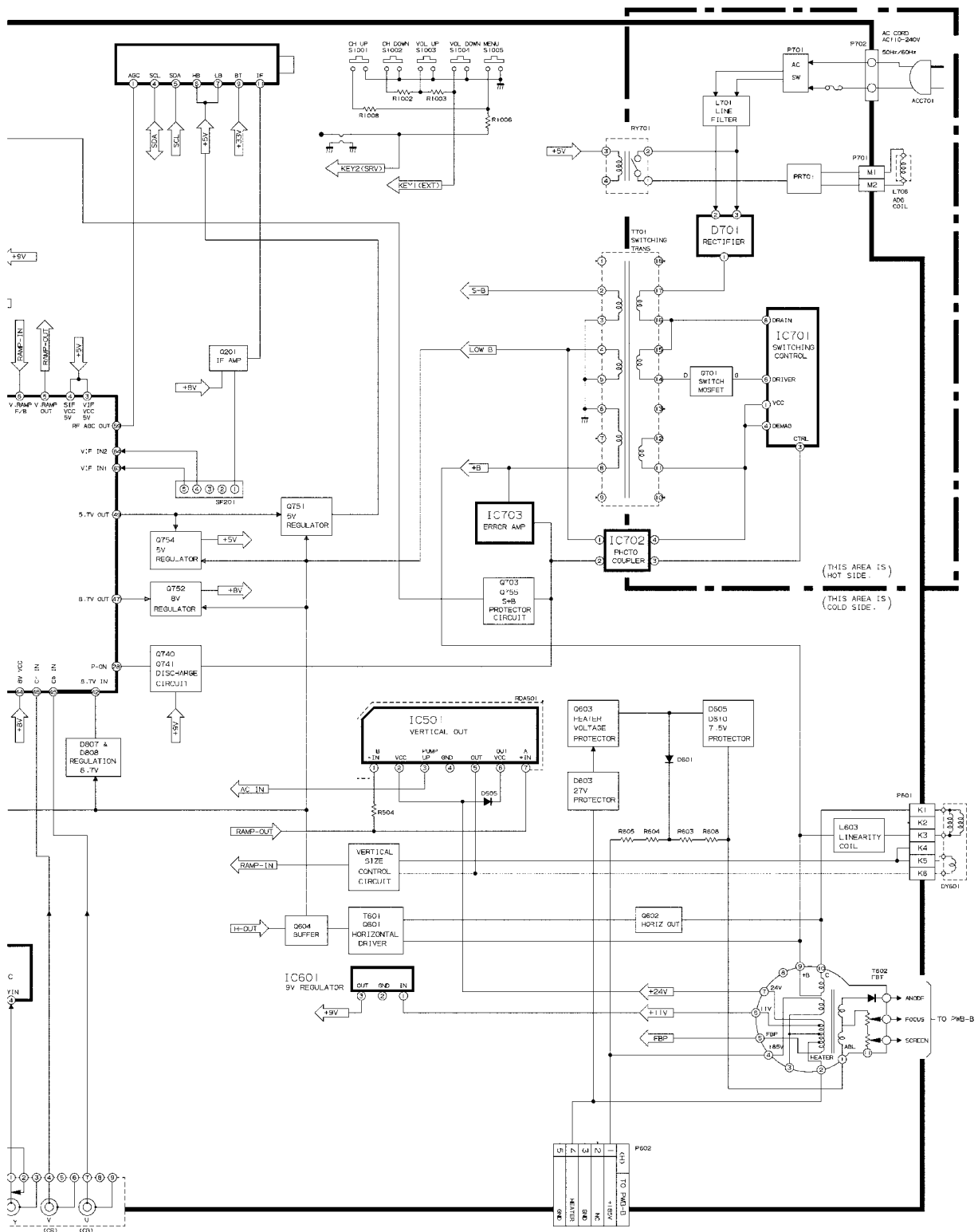


## CHASSIS LAYOUT



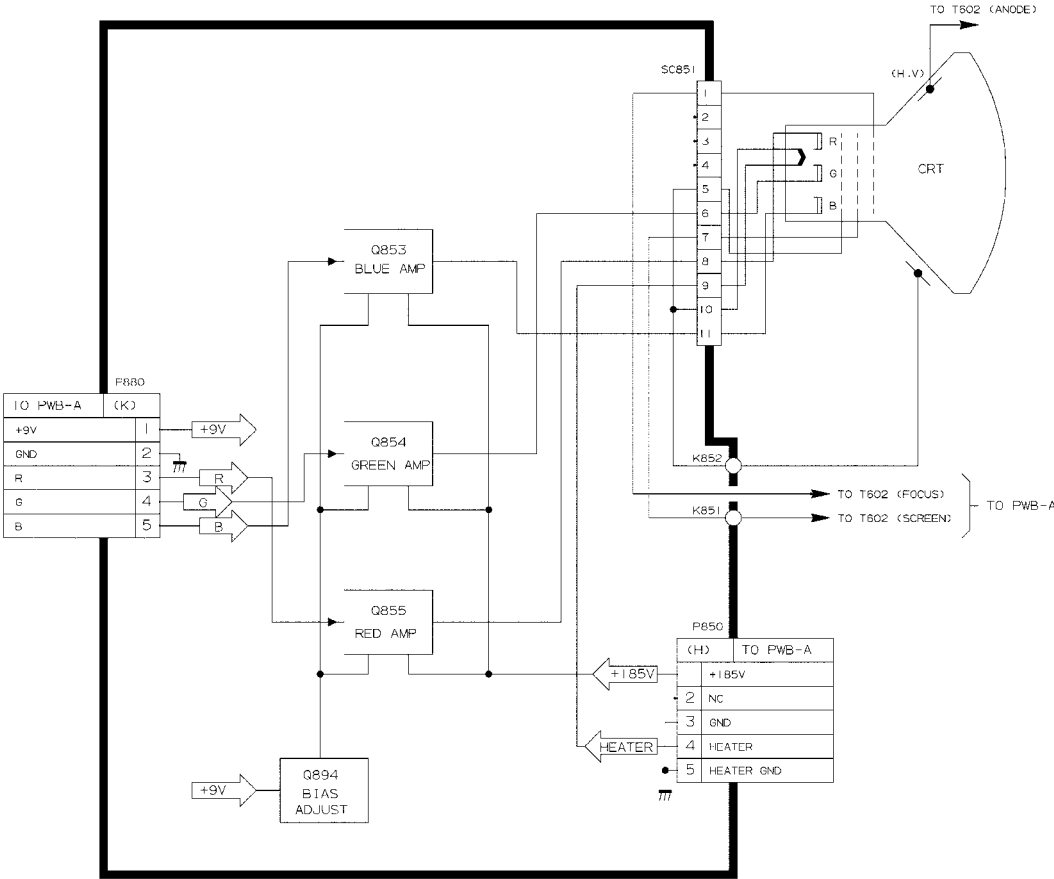
## PWB-A MAIN BLOCK



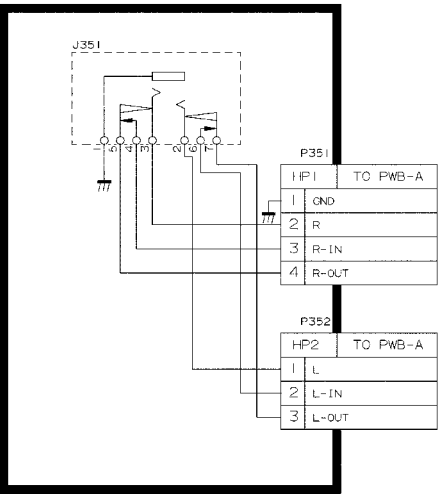


10	11	12	13	14	15	16	17	18	19
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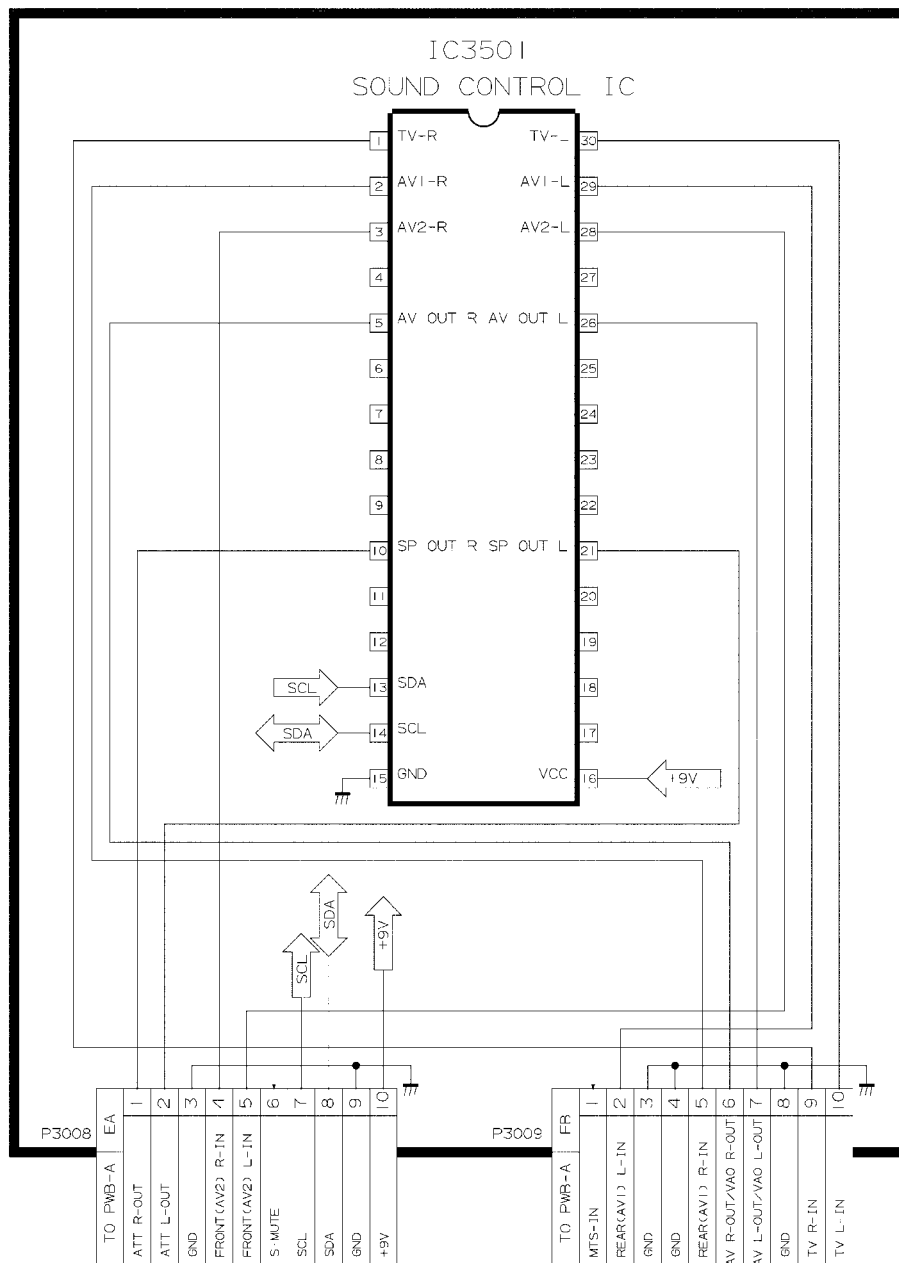
BLOCK DIAGRAM  
PWB-B CRT BLOCK



PWB-C HEADPHONE BLOCK



# PWB-E S-CONTROL BLOCK



## DESCRIPTION OF SCHEMATIC DIAGRAM

### SAFETY NOTES:

1. DISCONNECT THE AC PLUG FROM THE AC OUTLET BEFORE REPLACING PARTS.
2. SEMICONDUCTOR HEAT SINKS SHOULD BE REGARDED AS POTENTIAL SHOCK HAZARDS WHEN THE CHASSIS IS OPERATING.

### IMPORTANT SAFETY NOTICE:

PARTS MARKED WITH "⚠" ( ) ARE IMPOTANT FOR MAINTAINING THE SAFETY OF THE SET. BE SURE TO REPLACE THESE PARTS WITH SPECIFIED ONES FOR MAINTAINING THE SAFETY AND PERFORMANCE OF THE SET.

### SERVICE PRECAUTION:

THE AREA ENCLOSED BY THIS LINE ( — - — ) IS DIRECTLY CONNECTED WITH AC MAINS VOLTAGE. WHEN SERVICING THE AREA, CONNECT AN ISOLATING TRANSFORMER BETWEEN TV RECEIVER AND AC LINE TO ELIMINATE HAZARD OF ELECTRIC SHOCK.

### NOTES:

1. The unit of resistance "ohm" is omitted.  
(K = 1000 ohms, M = Mega ohm).
2. All resistors are 1/16 watt, unless otherwise noted.
3. All capacitors are  $\mu F$ , unless otherwise noted. (P =  $\mu\mu F$ ).

### VOLTAGE MEASUREMENT CONDITIONS:

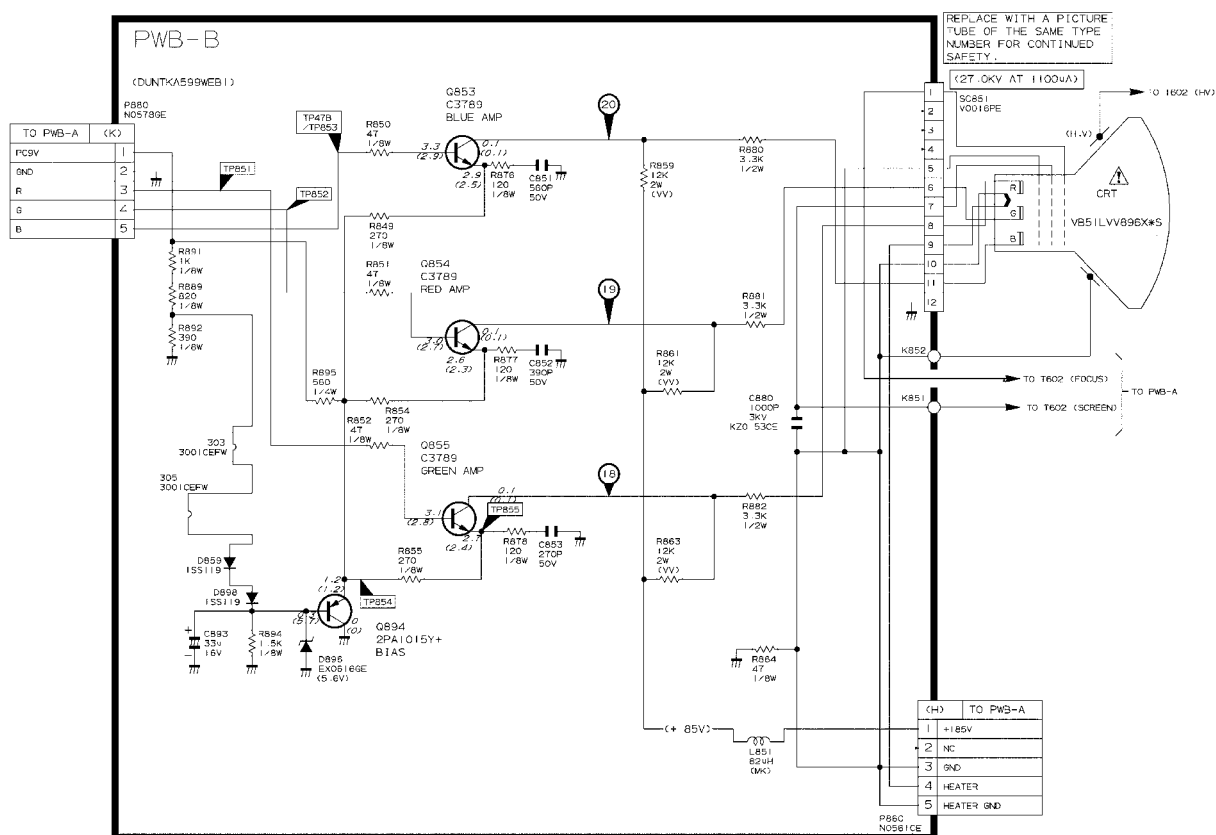
1. Voltages in parenthesis measured with no signal.
2. Voltages without parenthesis measured with 3mV B & W or Colour signal.
3. All the voltages in each point are measured with VTVM.

### WAVEFORM MEASUREMENT CONDITIONS:

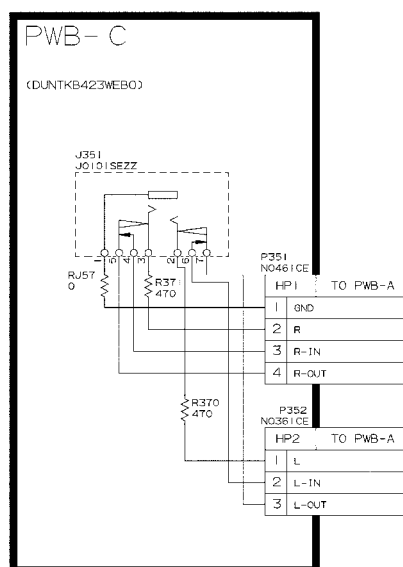
1. The colour bar generator signal of 1.0V peak applied at pin (6) of IC401.
2. Approximately 4V AGC bias .



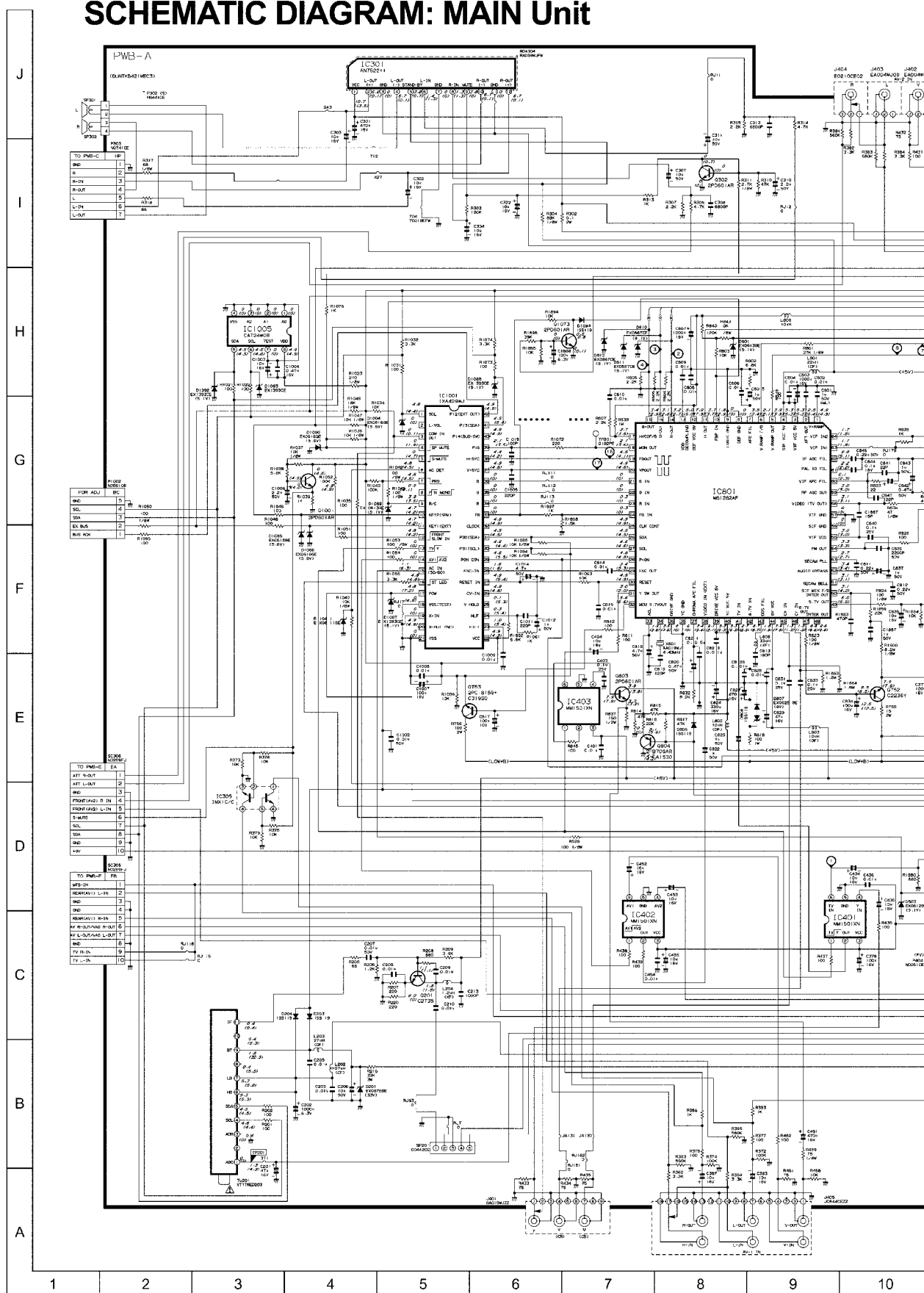
### SCHEMATIC DIAGRAM: CRT Unit

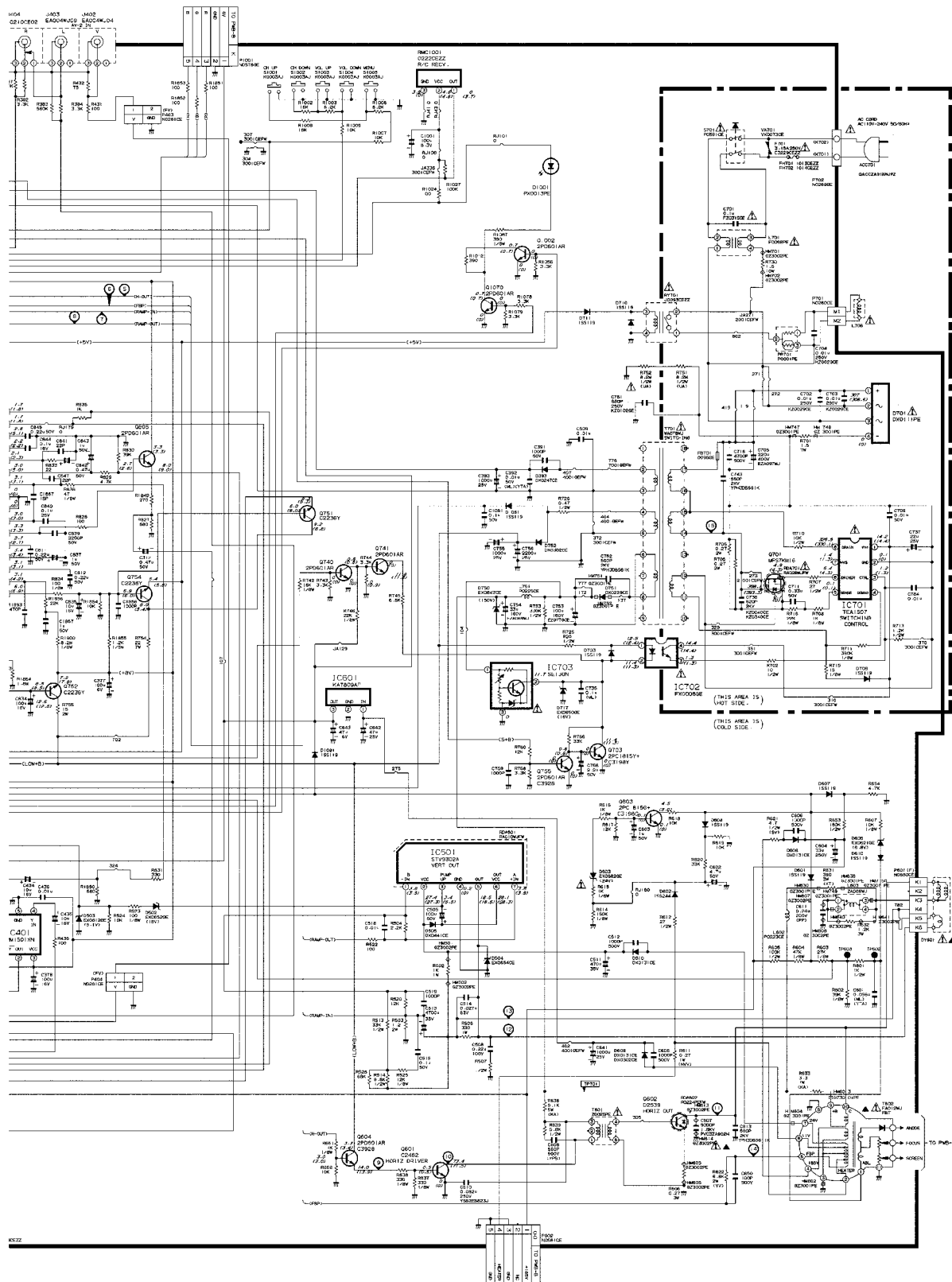


### SCHEMATIC DIAGRAM: HEADPHONE Unit



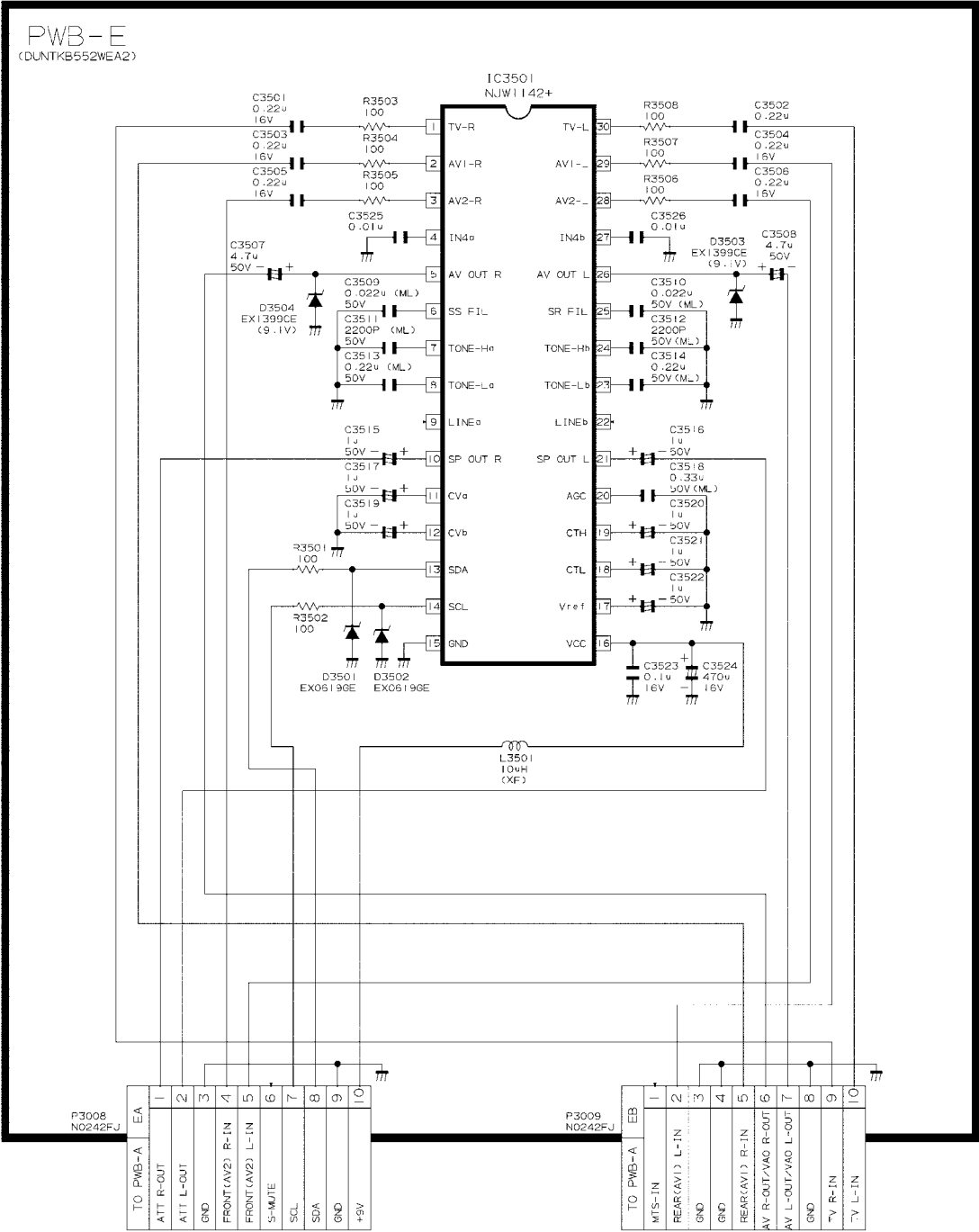
## SCHEMATIC DIAGRAM: MAIN Unit





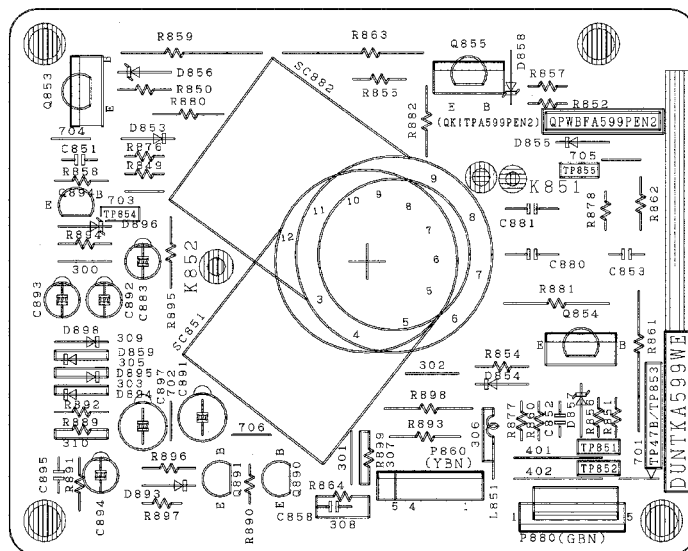
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SCHEMATIC DIAGRAM: S-CONTROL Unit

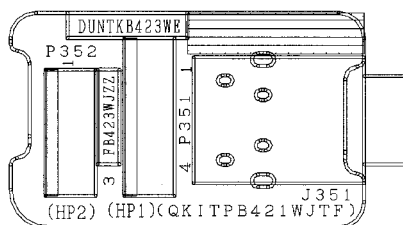


# PRINTED WIRING BOARD ASSEMBLIES

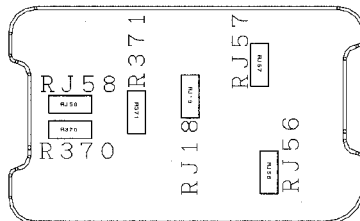
## PWB-B: CRT Unit (Component Side)



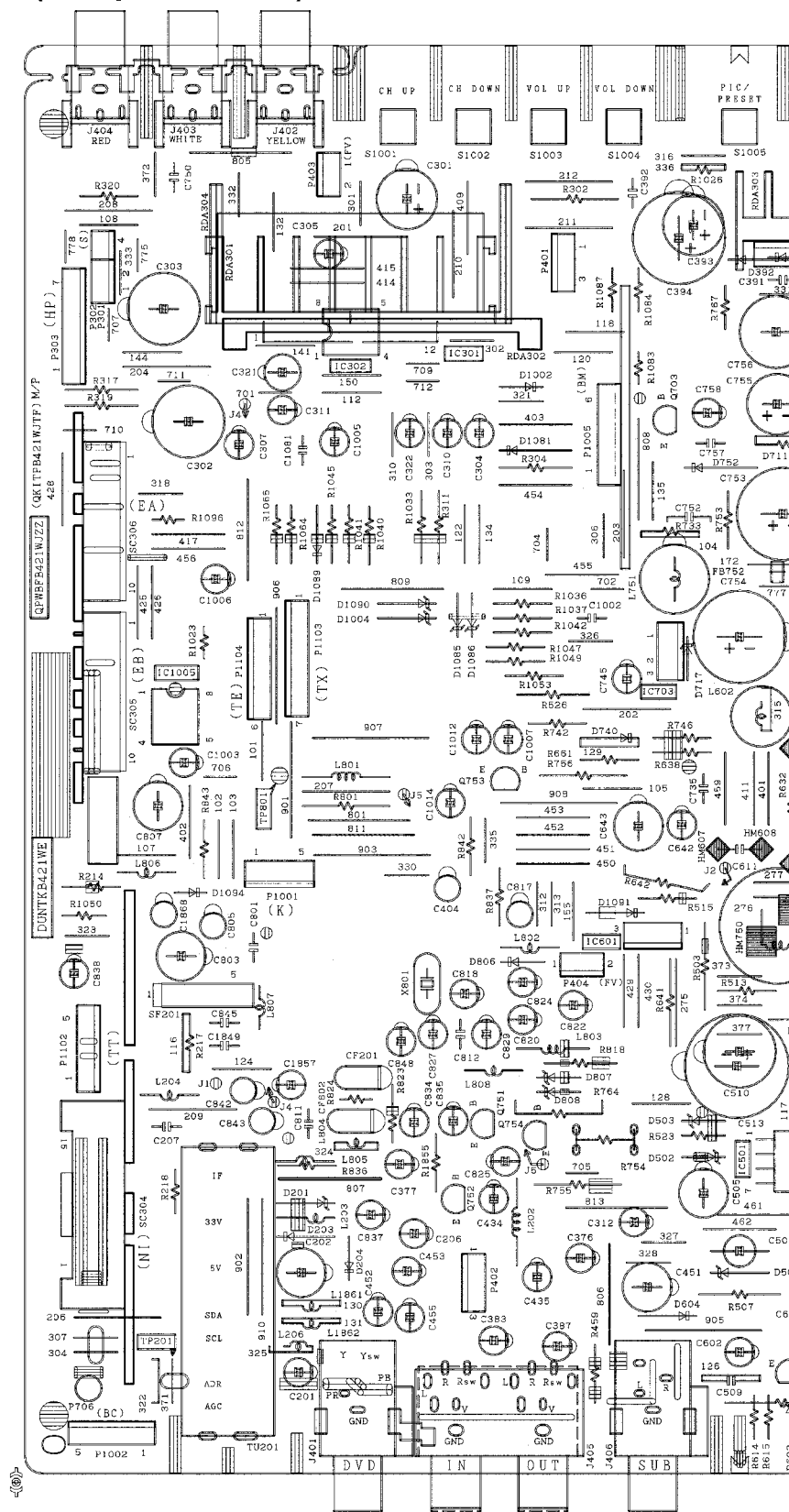
## PWB-C: HEADPHONE Unit (Component Side)

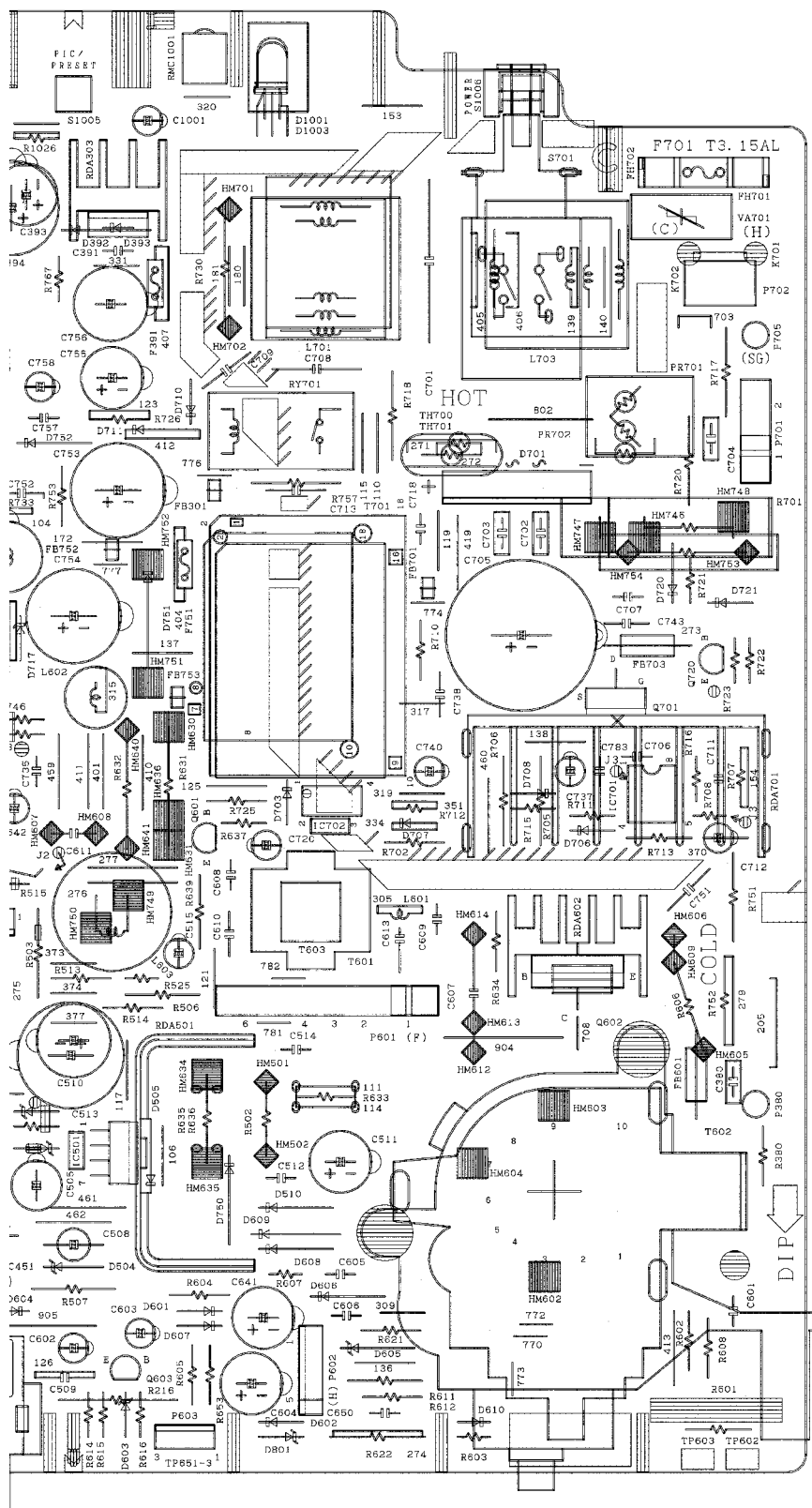


## PWB-C: HEADPHONE Unit (Wiring Side)



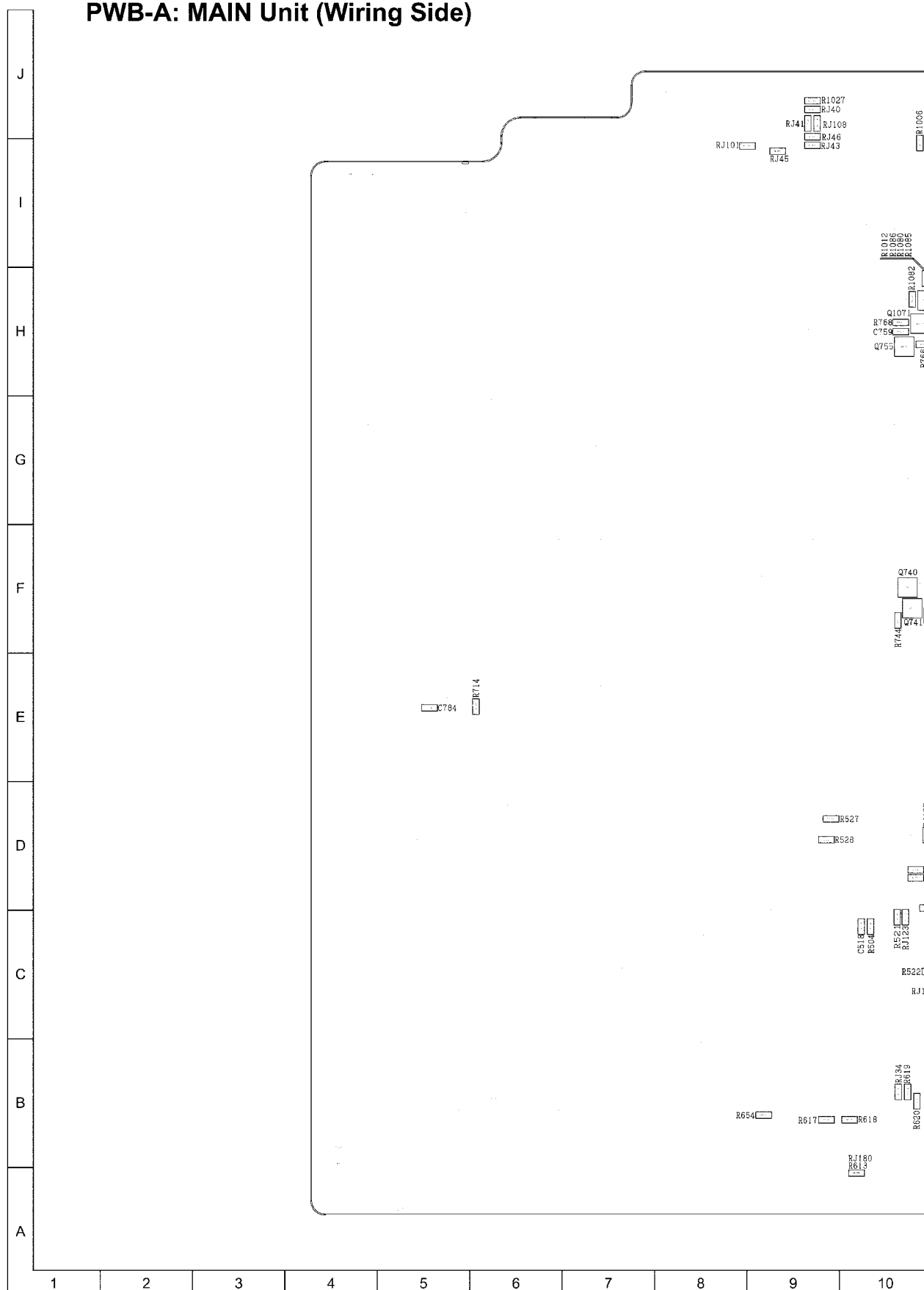
## PWB-A: MAIN Unit (Component Side)



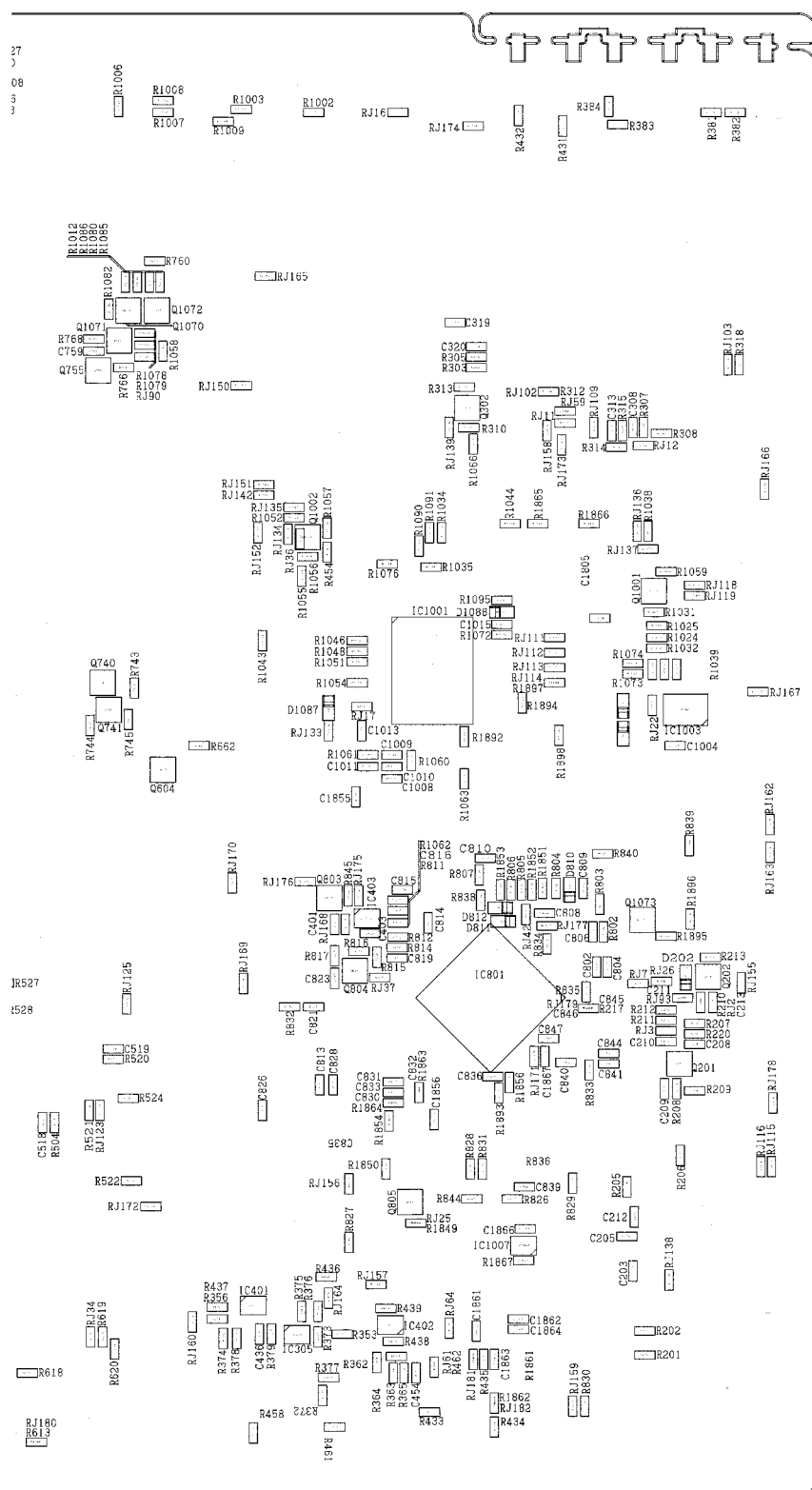


10	11	12	13	14	15	16	17	18	19
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### PWB-A: MAIN Unit (Wiring Side)

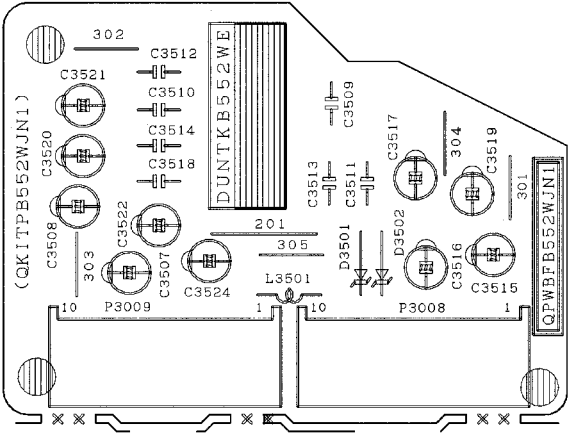




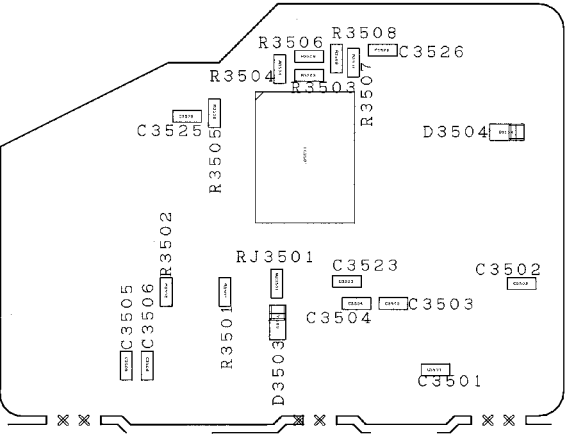


10	11	12	13	14	15	16	17	18	19
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PWB-E: S-CONTROL Unit (Component Side)



PWB-E: S-CONTROL Unit (Wiring Side)



# PARTS LIST

## PARTS REPLACEMENT

ReplaCement parts which have these special safety characteristics are identified in this manual; electrical components having such features are identified by "△" in the ReplaCement Parts Lists. The use of a substitute replaCement part which does not have the same safety characteristics as the factory recommended replaCement parts shown in this service manual may create shock, fire or other hazards.

### "HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following informations.

- |                 |                |
|-----------------|----------------|
| 1. MODEL NUMBER | 2. REF. NO.    |
| 3. PART NO.     | 4. DESCRIPTION |

MARK ★ : SPARE PARTS-DELIVERY SECTION.

Ref. No.	Part No.	★	Description	Code
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## PICTURE TUBE

△	VB51LVV896X*S	R	Picture Tube	CF
△ L706	RCiLG0069PEZZ	R	Degaussing Coil	AR
▲△DY601	RCiLHA068WJZZ		Deflection Yoke	
	PMAGF3046CEZZ	R	Magnet	AF
	QEARCA012WJZZ	R	Grounding Strap	AG
	MSPRC0005PEFW	R	Spring, Grounding Strap	AB
	PSPAG0003PEZZ	R	Wedge, x3	AD

## PRINTED WIRING BOARD ASSEMBLY (NOT REPLACEMENT ITEM)

PWB-A DUNTKB421WEJ0	- Main Unit	—
PWB-B DUNTKA599WEB1	- CRT Unit	—
PWB-C DUNTKB423WEB0	- Headphone Unit	—
PWB-E DUNTKB552WEA2	- S-Control Unit	—

Ref. No.	Part No.	★	Description	Code
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## DUNTKB421WEJ0 PWB-A MAIN UNIT

### TUNER

**NOTE: THE PARTS HERE SHOWN ARE SUPPLIED AS AN ASSEMBLY BUT INDEPENDENTLY.**

△ TU201	VTUVT1T5ED203	R	VHF Tuner	AX
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### INTEGRATED CIRCUITS

IC301	VHiAN7522+-1	R	AN7522	AL
IC305	VSiMX1C/C/-1Y	R	iMX1C	AC
IC401	VHiMM1501XN-1*	R	MM1501XNRE	AE
IC402	VHiMM1501XN-1*	R	MM1501XNRE	AE
IC403	VHiMM1501XN-1*	R	MM1501XNRE	AE
IC501	VHiSTV9302A-1	R	I.C.	AH
IC601	VHiKA7809AP-1	R	KIA7809API	AE
△ IC701	VHiTEA1507/-1	R	TEA1507P/N1	AL
△ IC702	RH-FX0008GEZZ	R	PC123FY8	AE
△ IC703	VHiSE130N/-1	R	SE130N	AF
IC801	VHiM61262AF1EQ	R	I.C.	AZ
IC1001	RH-IXA429WJZZ		I.C.	
IC1005	VHiCAT24W08-1		I.C.	

### TRANSISTORS

Q201	VS2SC2735//1E*	R	2SC2735	AC
Q302	VS2PD601AR/-1*	R	2PD601AR	AB
Q601	VS2SC2482//1+	R	2SC2482	AD
Q602	VS2SD2539//1E	R	2SD2539	AP
Q603	VS2SC3198-G-1+	R	2SC3198-G	AA
Q604	VS2PD601AR/-1*	R	2PD601AR	AB
△ Q701	VHiMFS7KM16A1		I.C.	
Q703	VS2PC1815Y+-1+	R	2PC1815Y	AC
Q740	VS2PD601AR/-1*	R	2PD601AR	AB
Q741	VS2PD601AR/-1*	R	2PD601AR	AB
Q751	VS2SC2236Y/-1+	R	2SC2236Y	AD
Q752	VS2SC2236Y/-1+	R	2SC2236Y	AD
Q753	VS2SC3198-G-1+	R	2SC3198-G	AA
Q754	VS2SC2236Y/-1+	R	2SC2236Y	AD
Q755	VS2PD601AR/-1*	R	2PD601AR	AB
Q803	VS2PD601AR/-1*	R	2PD601AR	AB
Q804	VS2PB709AR/-1*	R	2PB709AR	AB
Q805	VS2PD601AR/-1*	R	2PD601AR	AB
Q1001	VS2PD601AR/-1*	R	2PD601AR	AB
Q1002	VS2PD601AR/-1*	R	2PD601AR	AB
Q1070	VS2PD601AR/-1*	R	2PD601AR	AB
Q1073	VS2PD601AR/-1*	R	2PD601AR	AB

### DIODES

D201	RH-EX0676GEZZ*	R	Zener Diode, 33V	AA
D203	VHD1SS119//1*	R	1SS119	AA
D204	VHD1SS119//1*	R	1SS119	AA
D393	RH-DX0247CEZZ	R	DX0247CE	AE
D502	RH-EX0652GEZZ*	R	Zener Diode, 18V	AB
D503	RH-EX0612GEZZY	R	Zener Diode, 5.1V	AB
D504	RH-EX0654CEZZ*	R	Zener Diode	AD
D505	RH-DX0441CEZZ*	R	DX0441CE	AC
D510	RH-DX0131CEZZ*	R	DX0131CE	AC
D601	VHD1SS119//1*	R	1SS119	AA
D602	VHD1SS244//1*	R	1SS244	AB
△ D603	RH-EX0662GEZZ*	R	Zener Diode, 24V	AB
D604	VHD1SS119//1*	R	1SS119	AA
D605	RH-EX0621GEZZ*	R	Zener Diode, 6.8V	AB
D606	RH-DX0131CEZZ*	R	DX0131CE	AC
D607	VHD1SS119//1*	R	1SS119	AA
D608	RH-DX0131CEZZ*	R	DX0131CE	AC
D610	VHD1SS119//1*	R	1SS119	AA
△ D701	RH-DX0111PEZZ	R	DX0111PE	AG
D703	VHD1SS119//1*	R	1SS119	AA
D708	VHD1SS119//1*	R	1SS119	AA
D710	VHD1SS119//1*	R	1SS119	AA
D711	VHD1SS119//1*	R	1SS119	AA
D717	RH-EX0650GEZZ*	R	Zener Diode, 16V	AB
D750	RH-EX0647CEZZ*	R	Zener Diode, 150V	AH
D751	RH-DX0229CEZZ	R	DX0229CE	AF

Ref. No.	Part No.	★	Description	Code
D752	RH-DX0302CEZZ*	R	DX0302CE	AC
D801	RH-EX0613GEZZY	R	Zener Diode, 5.1V	AB
D806	VHD1SS119//1*	R	1SS119	AA
D807	RH-EX0625GEZZY	R	Zener Diode, 8V	AB
D808	VHD1SS119//1*	R	1SS119	AA
D810	RH-EX0867CEZZ*	R	Zener Diode, 8.1V	AC
D811	RH-EX0867CEZZ*	R	Zener Diode, 8.1V	AC
D812	RH-EX0867CEZZ*	R	Zener Diode, 8.1V	AC
D1001	RH-PX0013PEZZ	R	PhotoDiode	AC
D1004	RH-EX0616GEZZ*	R	Zener Diode, 5.6V	AA
D1081	VHD1SS119//1*	R	1SS119	AA
D1085	RH-EX0616GEZZ*	R	Zener Diode, 5.6V	AA
D1086	RH-EX0616GEZZ*	R	Zener Diode, 5.6V	AA
D1087	RH-EX1393CEZZ*	R	Zener Diode, 5.1V	AB
D1088	RH-EX1393CEZZ*	R	Zener Diode, 5.1V	AB
D1089	RH-EX0613GEZZY	R	Zener Diode, 5.1V	AB
D1090	RH-EX0616GEZZ*	R	Zener Diode, 5.6V	AA
D1091	VHD1SS119//1*	R	1SS119	AA
D1092	RH-EX1393CEZZ*	R	Zener Diode, 5.1V	AB
D1093	RH-EX1393CEZZ*	R	Zener Diode, 5.1V	AB
D1094	VHD1SS119//1*	R	1SS119	AA

**PACKAGED CIRCUITS**

△ VA701	RH-VX0073CEZZ	R	Varistor	AD
PR701	RMPTP0001PEZZ	R	Packaged Circuit	AN
X801	RCRSAA019WJZZ	R	Crystal	AF

**COILS**

L202	VP-CF270K0000*	R	Peaking, 27μH	AB
L203	VP-DF270K0000*	R	Peaking, 27μH	AB
L204	VP-XF1R2K0000*	R	Peaking, 1.2μH	AB
L602	RCILP0223CEZZ	R	Coil	AE
L603	RCILZA006WJZZ	R	Coil	AH
△ L701	RCILF0096PEZZ	R	Coil	AF
L751	RCILP0225CEZZ	R	Coil	AF
L801	VP-CF220K0000*	R	Peaking, 22μH	AB
L802	VP-DF100K0000*	R	Peaking, 10μH	AB
L803	VP-DF100K0000*	R	Peaking, 10μH	AB
L806	VP-DF100K0000*	R	Peaking, 10μH	AB
L808	VP-XF330K0000*	R	Peaking, 33μH	AB

**FILTER**

SF201	RFILC0442CEZZ	R	Filter	AL
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**TRANSFORMERS**

△ T601	RTRNZ0026PEZZ	R	Transformer	AH
△△ T602	RTRNFA012WJZZ	R	H-Volt Transformer	BB
△ T701	RTRNWA076WJZZ	R	Transformer	AM

**CAPACITORS**

C201	VCEA0A1CW476M+R	47	16V	Electrolytic	AB
C202	VCEA0A0JW108M+R	1000	6.3V	Electrolytic	AC
C203	VCKYCY1HF103Z* R	0.01	50V	Ceramic	AA
C205	VCKYCY1HF103Z* R	0.01	50V	Ceramic	AA
C206	VCEA0A1HW106M+R	10	50V	Electrolytic	AB
C207	VCKYPA1HB103K+ R	0.01	50V	Ceramic	AA
C208	VCKYCY1HF103Z* R	0.01	50V	Ceramic	AA
C209	VCKYCY1HF103Z* R	0.01	50V	Ceramic	AA
C210	VCKYCY1HF103Z* R	0.01	50V	Ceramic	AA
C213	VCKYCY1HB102K* R	1000p	50V	Ceramic	AA
C301	VCEA0A1CW477M+R	470	16V	Electrolytic	AC
C302	VCEA0A1CW106M+R	10	16V	Electrolytic	AB
C303	VCEA0A1CW106M+R	10	16V	Electrolytic	AB
C304	VCEA0A1CW106M+R	10	16V	Electrolytic	AB
C307	VCEA0A1HW106M+R	10	50V	Electrolytic	AB
C308	VCKYCY1HB682K* R	6800p	50V	Ceramic	AA
C310	VCEA0A1HW225M+R	2.2	50V	Electrolytic	AB
C311	VCEA0A1HW106M+R	10	50V	Electrolytic	AB
C312	VCEA0A1HW474M+R	0.47	50V	Electrolytic	AB
C313	VCKYCY1HB682K* R	6800p	50V	Ceramic	AA
C322	VCEA0A1CW106M+R	10	16V	Electrolytic	AB
C376	VCEA0A1CW107M+R	100	16V	Electrolytic	AC
C377	VCEA0A1CW107M+R	100	16V	Electrolytic	AC
C383	VCEA0A1CW106M+R	10	16V	Electrolytic	AB
C387	VCEA0A1CW106M+R	10	16V	Electrolytic	AB

Ref. No.	Part No.	★	Description	Code
C391	VCKYPA1HB102K+ R	1000p	50V Ceramic	AA
C392	VCQYTA1HM103J+ R	0.01	50V Mylar	AB
C393	VCEA0A1EW108M R	1000	25V Electrolytic	AD
C401	VCKYCY1HB103K* R	0.01	50V Ceramic	AA
C403	VCKYCY1EF104Z* R	0.1	25V Ceramic	AA
C404	VCEA9M1CW106M+R	10	16V Electrolytic	AB
C434	VCEA0A1CW106M+R	10	16V Electrolytic	AB
C435	VCE9GA1CW106M+R	10	16V Electrolytic	AB
C436	VCKYCY1HF103Z* R	0.01	50V Ceramic	AA
C451	VCEA0A1CW477M+R	470	16V Electrolytic	AC
C452	VCEA0A1CW106M+R	10	16V Electrolytic	AB
C453	VCEA0A1CW106M+R	10	16V Electrolytic	AB
C454	VCKYCY1HF103Z* R	0.01	50V Ceramic	AA
C455	VCEA0A1CW106M+R	10	16V Electrolytic	AB
C505	VCEA0A1HW107M+R	100	50V Electrolytic	AB
C508	VCFYAA2AA224J+ R	0.22	100V	AD
Metalized Polypro Film				
C509	VCKYD41CY103N* R	0.01	16V Ceramic	AB
C511	VCEA0A1VW477M R	470	35V Electrolytic	AB
C512	VCKYPA2HB102K+ R	1000p	500V Ceramic	AA
C513	VCEA0A1VW478M	4700	35V Electrolytic	
C514	VCFYSA1JB273J+ R	0.027	63V	AC
Metalized Polypro Film				
C515	VCQYTA1HM104J+ R	0.1	50V Mylar	AB
C518	VCKYCY1HF103Z* R	0.01	50V Ceramic	AA
C519	VCKYCY1HB102K* R	1000p	50V Ceramic	AA
C601	VCKYTA1HM563J+ R	0.056	50V Mylar	AB
C602	VCEA0A1HW475M+R	4.7	50V Electrolytic	AB
C603	VCEA0A1HW105M+R	1	50V Electrolytic	AB
C604	VCEA0A2EW336M R	33	250V Electrolytic	AF
C605	VCKYPA2HB102K+ R	1000p	500V Ceramic	AA
C606	VCKYPA2HB102K+ R	1000p	500V Ceramic	AA
▲▲ C607	VCFPVC3ZA902H R	9000p	1800V	AD
Metalized Polypro Film				
C608	VCKYPA2HB561K+ R	560p	500V Ceramic	AA
C610	VCFYSB2EB823J R	0.082	250V	AD
C611	VCFPVC2DB244J R	0.24	200V	AD
Metalized Polypro Film				
C613	VCKYPH3DB561K R	560p	2000V Ceramic	AC
C641	VCEA0A1EW108M R	1000	25V Electrolytic	AD
C642	VCEA0A1EW476M+R	47	25V Electrolytic	AB
C643	VCEA0A1CW476M+R	47	16V Electrolytic	AB
C650	VCKYPA2HB101K+ R	100p	500V Ceramic	AB
▲ C701	RC-FZ031SCEZZ R	0.1		AD
C702	RC-KZ0029CEZZ+ R	0.01	250V Ceramic	AC
C703	RC-KZ0029CEZZ+ R	0.01	250V Ceramic	AC
C704	RC-KZ0029CEZZ+ R	0.01	250V Ceramic	AC
C705	RC-EZA097WJZZ R	220	400V Electrolytic	AM
C706	VCQYTA1HM103J+ R	0.01	50V Mylar	AB
▲ C711	VCFYFA1HA334J+ R	0.33	50V	AB
Metalized Polypro Film				
C718	VCKYPA2HB472K+ R	4700p	500V Ceramic	AB
C735	VCQYTA1HM104J+ R	0.1	50V Mylar	AB
C737	VCEA0A1EW226M+R	22	25V Electrolytic	AB
C738	RC-KZ0040CEZZ R	820p	2kV Ceramic	AD
C743	VCKYPH3DB561K R	560p	2000V Ceramic	AC
▲ C751	RC-KZ0102GEZZ R	680p	250V Ceramic	AE
C752	VCKYPH3DB561K R	560p	2000V Ceramic	AC
C753	RC-EZ0776CEZZ R	100	160V Electrolytic	AF
C754	RC-EZA069WJZZ R	33	160V Electrolytic	AE
C755	VCEA0A1EW108M R	1000	25V Electrolytic	AD
C756	VCEA0A1EW228M R	2200	25V Electrolytic	AF
C758	VCEA0A1HW225M+R	2.2	50V Electrolytic	AB
C759	VCKYCY1HB102K* R	1000p	50V Ceramic	AA
C784	VCKYCY1HB103K* R	0.01	50V Ceramic	AA
C801	VCFYFA1HA105J+ R	1	50V Mylar	AE
C802	VCKYCY1HF103Z* R	0.01	50V Ceramic	AA
C803	VCEA0A1CW108M+R	1000	16V Electrolytic	AD
C804	VCKYCY1HF103Z* R	0.01	50V Ceramic	AA
C805	VCEA9M1HW105M+R	1	50V Electrolytic	AB
C806	VCKYCY1HF103Z* R	0.01	50V Ceramic	AA
C807	VCEA0A1CW108M+R	1000	16V Electrolytic	AD
C808	VCKYCY1HF103Z* R	0.01	50V Ceramic	AA
C809	VCKYCY1HF103Z* R	0.01	50V Ceramic	AA
C810	VCKYCY1HF103Z* R	0.01	50V Ceramic	AA
C811	VCFYFA1HA224J+ R	0.22	50V	AB

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
C812	VCFYFA1HA224J+	R	0.22 50V Metallized Polypro Film	AB	RJ133	VRS-CY1JF000J*	R 0	1/16W Metal Oxide	AA
C813	VCCCCY1HH181J*	R	180p 50V Ceramic	AA	RJ134	VRS-CY1JF000J*	R 0	1/16W Metal Oxide	AA
C814	VCKYCY1HF103Z*	R	0.01 50V Ceramic	AA	RJ135	VRS-CY1JF000J*	R 0	1/16W Metal Oxide	AA
C815	VCKYCY1HF103Z*	R	0.01 50V Ceramic	AA	RJ136	VRS-CY1JF000J*	R 0	1/16W Metal Oxide	AA
C817	VCEA9M1AW107M+R	100	10V Electrolytic	AB	RJ137	VRS-CY1JF000J*	R 0	1/16W Metal Oxide	AA
C818	VCEA0A1HW475M+R	4.7	50V Electrolytic	AB	RJ138	VRS-CY1JF000J*	R 0	1/16W Metal Oxide	AA
C819	VCCCCY1HH121J*	R	120p 50V Ceramic	AA	RJ150	VRS-CY1JF000J*	R 0	1/16W Metal Oxide	AA
C820	VCEA0A1HW474M+R	0.47	50V Electrolytic	AB	RJ151	VRS-CY1JF000J*	R 0	1/16W Metal Oxide	AA
C821	VCKYCY1HF153Z*	R	0.015 50V Ceramic	AB	RJ152	VRS-CY1JF000J*	R 0	1/16W Metal Oxide	AA
C822	VCE9GA1HW105M+R	1	50V Electrolytic	AB	RJ155	VRS-CY1JF000J*	R 0	1/16W Metal Oxide	AA
C823	VCKYCY1HF103Z*	R	0.01 50V Ceramic	AA	RJ158	VRS-CY1JF000J*	R 0	1/16W Metal Oxide	AA
C824	VCEA0A1CW337M+R	330	16V Electrolytic	AC	RJ160	VRS-CY1JF000J*	R 0	1/16W Metal Oxide	AA
C825	VCE9GA1HW105M+R	1	50V Electrolytic	AB	RJ162	VRS-CY1JF000J*	R 0	1/16W Metal Oxide	AA
C826	VCKYCY1HF103Z*	R	0.01 50V Ceramic	AA	RJ163	VRS-CY1JF000J*	R 0	1/16W Metal Oxide	AA
C827	VCEA0A1CW477M+R	470	16V Electrolytic	AC	RJ164	VRS-CY1JF000J*	R 0	1/16W Metal Oxide	AA
C828	VCKYCY1HF103Z*	R	0.01 50V Ceramic	AA	RJ165	VRS-CY1JF000J*	R 0	1/16W Metal Oxide	AA
C829	VCEA0A1CW476M+R	47	16V Electrolytic	AB	RJ168	VRS-CY1JF000J*	R 0	1/16W Metal Oxide	AA
C831	VCKYCY1EF104Z*	R	0.1 25V Ceramic	AA	RJ171	VRS-CY1JF000J*	R 0	1/16W Metal Oxide	AA
C833	VCKYCY1EF104Z*	R	0.1 25V Ceramic	AA	RJ176	VRS-CY1JF000J*	R 0	1/16W Metal Oxide	AA
C834	VCEA0A1CW107M+R	100	16V Electrolytic	AC	RJ177	VRS-CY1JF000J*	R 0	1/16W Metal Oxide	AA
C835	VCEA0A1CW106M+R	10	16V Electrolytic	AB	RJ179	VRS-CY1JF000J*	R 0	1/16W Metal Oxide	AA
C837	VCEA0A1HW105M+R	1	50V Electrolytic	AB	RJ180	VRS-CY1JF000J*	R 0	1/16W Metal Oxide	AA
C839	VCKYCY1HB222KY	R	2200p 50V Ceramic	AA	RJ181	VRS-CY1JF000J*	R 0	1/16W Metal Oxide	AA
C840	VCKYCY1EF104Z*	R	0.1 25V Ceramic	AA	RJ182	VRS-CY1JF000J*	R 0	1/16W Metal Oxide	AA
C841	VCCCCY1HH220J*	R	22p 50V Ceramic	AA	R201	VRS-CY1JF101J*	R 100	1/16W Metal Oxide	AA
C842	VCEA9M1HW474M+R	0.47	50V Electrolytic	AB	R202	VRS-CY1JF101J*	R 100	1/16W Metal Oxide	AA
C843	VCEA9M1HW105M+R	1	50V Electrolytic	AB	R205	VRS-CY1JF680J*	R 68	1/16W Metal Oxide	AA
C844	VCKYCY1CF104Z*	R	0.1 16V Ceramic	AA	R206	VRS-CY1JF122J*	R 1.2k	1/16W Metal Oxide	AA
C845	VCFYFA1HA224J+	R	0.22 50V Metallized Polypro Film	AB	R207	VRS-CY1JF221J*	R 220	1/16W Metal Oxide	AA
C847	VCCCCY1HH220J*	R	22p 50V Ceramic	AA	R208	VRS-CY1JF681J*	R 680	1/16W Metal Oxide	AA
C1001	VCEA0A0JW107M+R	100	6.3V Electrolytic	AB	R209	VRS-CY1JF392J*	R 3.9k	1/16W Metal Oxide	AA
C1002	VCFYFA1HA103J+	R	0.01 50V Metallized Polypro Film	AB	R216	VRS-VU3LE333J	33k	3W Metal Oxide	AA
C1003	VCEA0A1CW106M+R	10	16V Electrolytic	AB	R220	VRS-CY1JF221J*	R 220	1/16W Metal Oxide	AA
C1004	VCKYCY1CF474Z*	R	0.47 16V Ceramic	AB	R302	VRS-VU3DER10J	0.1	2W Metal Oxide	AA
C1006	VCEA0A1HW225M+R	2.2	50V Electrolytic	AB	R303	VRS-CY1JF124J*	R 120k	1/16W Metal Oxide	AA
C1007	VCEA0A1CW107M+R	100	16V Electrolytic	AC	R304	VRD-RA2BE683J*	R 68k	1/8W Carbon	AA
C1008	VCKYCY1HF103Z*	R	0.01 50V Ceramic	AA	R307	VRS-CY1JF222J*	R 2.2k	1/16W Metal Oxide	AA
C1009	VCKYCY1HF103Z*	R	0.01 50V Ceramic	AA	R308	VRS-CY1JF472J*	R 4.7k	1/16W Metal Oxide	AA
C1011	VCKYCY1HB221K*	R	220p 50V Ceramic	AA	R310	VRS-CY1JF473J*	R 47k	1/16W Metal Oxide	AA
C1012	VCEA0A1HW105M+R	1	50V Electrolytic	AB	R311	VRD-RA2BE272J*	R 2.7k	1/8W Carbon	AA
C1014	VCEA0A1HW475M+R	4.7	50V Electrolytic	AB	R313	VRS-CY1JF102J*	R 1k	1/16W Metal Oxide	AA
C1015	VCCCCY1HH101J*	R	100p 50V Ceramic	AA	R314	VRS-CY1JF472J*	R 4.7k	1/16W Metal Oxide	AA
C1081	VCQYTA1HM104J+	R	0.1 50V Mylar	AB	R315	VRS-CY1JF222J*	R 2.2k	1/16W Metal Oxide	AA
C1805	VCCCCY1HH221J*	R	220p 50V Ceramic	AA	R317	VRD-RA2BE680J*	R 68	1/8W Carbon	AA
C1856	VCKYCY1HB102K*	R	1000p 50V Ceramic	AA	R318	VRS-CY1JF680J*	R 68	1/16W Metal Oxide	AA
C1857	VCFYFA1HA105J+	R	1 50V Metallized Polypro Film	AE	R353	VRS-CY1JF102J*	R 1k	1/16W Metal Oxide	AA
C1867	VCCCCY1HH150J*	R	15p 50V Ceramic	AA	R356	VRS-CY1JF102J*	R 1k	1/16W Metal Oxide	AA
C1868	VCEA9M0JW107M+R	100	6.3V Electrolytic	AB	R362	VRS-CY1JF332J*	R 3.3k	1/16W Metal Oxide	AA
<b>RESISTORS</b>					R363	VRS-CY1JF564J*	R 560k	1/16W Metal Oxide	AA
RJ7	VRS-CY1JF000J*	R 0	1/16W Metal Oxide	AA	R364	VRS-CY1JF332J*	R 3.3k	1/16W Metal Oxide	AA
RJ11	VRS-CY1JF000J*	R 0	1/16W Metal Oxide	AA	R365	VRS-CY1JF564J*	R 560k	1/16W Metal Oxide	AA
RJ12	VRS-CY1JF000J*	R 0	1/16W Metal Oxide	AA	R372	VRS-CY1JF104J*	R 100k	1/16W Metal Oxide	AA
RJ17	VRS-CY1JF000J*	R 0	1/16W Metal Oxide	AA	R373	VRS-CY1JF103J*	R 10k	1/16W Metal Oxide	AA
RJ22	VRS-CY1JF000J*	R 0	1/16W Metal Oxide	AA	R374	VRS-CY1JF104J*	R 100k	1/16W Metal Oxide	AA
RJ34	VRS-CY1JF000J*	R 0	1/16W Metal Oxide	AA	R375	VRS-CY1JF103J*	R 10k	1/16W Metal Oxide	AA
RJ37	VRS-CY1JF000J*	R 0	1/16W Metal Oxide	AA	R376	VRS-CY1JF103J*	R 10k	1/16W Metal Oxide	AA
RJ41	VRS-CY1JF000J*	R 0	1/16W Metal Oxide	AA	R377	VRS-CY1JF101J*	R 100	1/16W Metal Oxide	AA
RJ43	VRS-CY1JF000J*	R 0	1/16W Metal Oxide	AA	R378	VRS-CY1JF101J*	R 100	1/16W Metal Oxide	AA
RJ93	VRS-CY1JF000J*	R 0	1/16W Metal Oxide	AA	R379	VRS-CY1JF103J*	R 10k	1/16W Metal Oxide	AA
RJ101	VRS-CY1JF000J*	R 0	1/16W Metal Oxide	AA	R381	VRS-CY1JF564J*	R 560k	1/16W Metal Oxide	AA
RJ108	VRS-CY1JF000J*	R 0	1/16W Metal Oxide	AA	R382	VRS-CY1JF332J*	R 3.3k	1/16W Metal Oxide	AA
RJ111	VRS-CY1JF000J*	R 0	1/16W Metal Oxide	AA	R383	VRS-CY1JF564J*	R 560k	1/16W Metal Oxide	AA
RJ112	VRS-CY1JF000J*	R 0	1/16W Metal Oxide	AA	R384	VRS-CY1JF332J*	R 3.3k	1/16W Metal Oxide	AA
RJ113	VRS-CY1JF000J*	R 0	1/16W Metal Oxide	AA	R431	VRS-CY1JF101J*	R 100	1/16W Metal Oxide	AA
RJ115	VRS-CY1JF000J*	R 0	1/16W Metal Oxide	AA	R432	VRS-CY1JF750J*	R 75	1/16W Metal Oxide	AA
RJ116	VRS-CY1JF000J*	R 0	1/16W Metal Oxide	AA	R433	VRS-CY1JF750J*	R 75	1/16W Metal Oxide	AA
RJ118	VRS-CY1JF000J*	R 0	1/16W Metal Oxide	AA	R434	VRS-CY1JF750J*	R 75	1/16W Metal Oxide	AA
RJ119	VRS-CY1JF000J*	R 0	1/16W Metal Oxide	AA	R435	VRS-CY1JF750J*	R 75	1/16W Metal Oxide	AA
RJ123	VRS-CY1JF000J*	R 0	1/16W Metal Oxide	AA	R436	VRS-CY1JF101J*	R 100	1/16W Metal Oxide	AA
RJ125	VRS-CY1JF000J*	R 0	1/16W Metal Oxide	AA	R437	VRS-CY1JF101J*	R 100	1/16W Metal Oxide	AA
					R438	VRS-CY1JF101J*	R 100	1/16W Metal Oxide	AA
					R439	VRS-CY1JF101J*	R 100	1/16W Metal Oxide	AA
					R458	VRS-CY1JF103J*	R 10k	1/16W Metal Oxide	AA
					R459	VRD-RA2EE750JY	R 75	1/4W Carbon	AA
					R461	VRS-CY1JF750J*	R 75	1/16W Metal Oxide	AA
					R462	VRS-CY1JF101J*	R 100	1/16W Metal Oxide	AA

Ref. No.	Part No.	★	Description	Code
R502	VRS-VU3AE102J	R 1k	1W Metal Oxide	AB
R503	VRN-VV3DB1R2J	R 1.2	2W Metal Film	AA
R504	VRS-CY1JF222J*	R 2.2k	1/16W Metal Oxide	AA
R506	VRS-VU3AE331J	R 330	1W Metal Oxide	AB
R507	VRD-RM2HD1R0J*	R 1	1/2W Carbon	AA
R513	VRD-RM2HD333JY	R 33k	1/2W Carbon	AB
R514	VRD-RM2HD682J*	R 6.8k	1/2W Carbon	AA
R520	VRS-CY1JF123J*	R 12k	1/16W Metal Oxide	AA
R522	VRS-CY1JF101J*	R 100	1/16W Metal Oxide	AA
R523	VRD-RA2BE101J*	R 100	1/8W Carbon	AA
R524	VRS-CY1JF103J*	R 10k	1/16W Metal Oxide	AA
R525	VRD-RA2BE123J*	R 12k	1/8W Carbon	AA
R526	VRD-RA2BE101J*	R 100	1/8W Carbon	AA
R528	VRS-CY1JF683J*	R 68k	1/16W Metal Oxide	AA
R601	VRD-RM2HD102J*	R 1k	1/2W Carbon	AA
R602	VRD-RA2BE393J*	R 39k	1/8W Carbon	AA
R603	VRD-RA2BE273J*	R 27k	1/8W Carbon	AA
R604	VRD-RA2BE473J*	R 47k	1/8W Carbon	AA
R605	VRD-RM2HD104J*	R 100k	1/2W Carbon	AA
R606	VRS-VU3LER27J	0.27	3W Metal Oxide	
R607	VRD-RA2BE103J*	R 10k	1/8W Carbon	AA
R611	VRS-VU3AER27J	0.27	1W Metal Oxide	
R612	VRD-RM2HD270J*	R 27	1/2W Carbon	AA
R614	VRD-RA2BE154J*	R 150k	1/8W Carbon	AA
△ R615	VRD-RA2BE102J*	R 1k	1/8W Carbon	AA
R616	VRD-RA2BE102J*	R 1k	1/8W Carbon	AA
R617	VRS-CY1JF123J*	R 12k	1/16W Metal Oxide	AA
R618	VRS-CY1JF103J*	R 10k	1/16W Metal Oxide	AA
R619	VRS-CY1JF103J*	R 10k	1/16W Metal Oxide	AA
R620	VRS-CY1JF333J*	R 33k	1/16W Metal Oxide	AA
R621	VRS-VU2HE4R7J	4.7	1/2W Metal Oxide	
R622	VRS-VU3DE682J	R 6.8k	2W Metal Oxide	AB
R631	VRS-KT3LB391J	R 390	3W Metal Oxide	AD
R632	VRS-VU3LE122J	1.2k	3W Metal Oxide	
R633	VRS-KA3NG3R3K	R 3.3	7W Metal Oxide	AD
R636	VRS-KA3HG912J	R 9.1k	5W Metal Oxide	AD
R637	VRD-RA2BE331J*	R 330	1/8W Carbon	AA
R638	VRD-RA2BE331J*	R 330	1/8W Carbon	AA
R639	VRD-RM2HD562JY	R 5.6k	1/2W Carbon	AA
R653	VRD-RM2HD184J*	R 180k	1/2W Carbon	AA
R654	VRS-CY1JF472J*	R 4.7k	1/16W Metal Oxide	AA
R661	VRD-RA2BE102J*	R 1k	1/8W Carbon	AA
R662	VRS-CY1JF103J*	R 10k	1/16W Metal Oxide	AA
R701	VRW-KQ3NC1R5K	R 1.5	7W Cement	AE
R702	VRD-RM2HD100JY	R 10	1/2W Carbon	AA
R705	VRS-VU3DER27J	0.27	2W Metal Oxide	
R706	VRS-VU3DER27J	0.27	2W Metal Oxide	
R707	VRD-RM2HD270J*	R 27	1/2W Carbon	AA
R708	VRD-RA2BE102J*	R 1k	1/8W Carbon	AA
R710	VRS-VU2HE103J	10k	1/2W Metal Oxide	
R711	VRD-RA2BE394J*	R 390k	1/8W Carbon	AA
R713	VRD-RM2HD122JY	R 1.2k	1/2W Carbon	AA
R715	VRD-RA2BE150J*	R 15	1/8W Carbon	AA
R716	VRD-RA2BE223J*	R 22k	1/8W Carbon	AA
R725	VRD-RM2HD821JY	R 820	1/2W Carbon	AA
R726	VRS-VU2HER47J	0.47	1/2W Metal Oxide	
R730	VRW-GA4AB1R5K	R 1.5	10W Cement	AE
R742	VRD-RA2BE183J*	R 18k	1/8W Carbon	AA
R743	VRS-CY1JF332J*	R 3.3k	1/16W Metal Oxide	AA
R744	VRS-CY1JF332J*	R 3.3k	1/16W Metal Oxide	AA
R745	VRS-CY1JF682J*	R 6.8k	1/16W Metal Oxide	AA
R746	VRD-RA2BE223J*	R 22k	1/8W Carbon	AA
△ R751	VRC-UA2HG825K*	R 8.2M	1/2W Solid	AA
△ R752	VRC-UA2HG825K*	R 8.2M	1/2W Solid	AA
R753	VRD-RM2HD334J*	R 330k	1/2W Carbon	AA
R754	VRS-KA3NG220J	R 22	7W Metal Oxide	AD
R755	VRS-VU3DE150J	R 15	2W Metal Oxide	AB
R756	VRS-VU3DE101J	100	2W Metal Oxide	
R760	VRS-CY1JF123J*	R 12k	1/16W Metal Oxide	AA
R766	VRS-CY1JF333J*	R 33k	1/16W Metal Oxide	AA
R768	VRS-CY1JF332J*	R 3.3k	1/16W Metal Oxide	AA
R801	VRD-RA2BE273J*	R 27k	1/8W Carbon	AA
R802	VRS-CY1JF682J*	R 6.8k	1/16W Metal Oxide	AA
R803	VRS-CY1JF103J*	R 10k	1/16W Metal Oxide	AA
R804	VRS-CY1JF222J*	R 2.2k	1/16W Metal Oxide	AA
R805	VRS-CY1JF222J*	R 2.2k	1/16W Metal Oxide	AA

Ref. No.	Part No.	★	Description	Code
R806	VRS-CY1JF222J*	R 2.2k	1/16W Metal Oxide	AA
R807	VRS-CY1JF222J*	R 2.2k	1/16W Metal Oxide	AA
R811	VRS-CY1JF101J*	R 100	1/16W Metal Oxide	AA
R812	VRS-CY1JF101J*	R 100	1/16W Metal Oxide	AA
R814	VRS-CY1JF473J*	R 47k	1/16W Metal Oxide	AA
R815	VRS-CY1JF473J*	R 47k	1/16W Metal Oxide	AA
R816	VRS-CY1JF223J*	R 22k	1/16W Metal Oxide	AA
R817	VRS-CY1JF473J*	R 47k	1/16W Metal Oxide	AA
R818	VRS-VU3AE101J	R 100	1W Metal Oxide	AB
R823	VRD-RA2BE101J*	R 100	1/8W Carbon	AA
R824	VRD-RA2BE101J*	R 100	1/8W Carbon	AA
R826	VRS-CY1JF101J*	R 100	1/16W Metal Oxide	AA
R827	VRS-CY1JF681J*	R 680	1/16W Metal Oxide	AA
R829	VRS-CY1JF472J*	R 4.7k	1/16W Metal Oxide	AA
R830	VRS-CY1JF393J*	R 39k	1/16W Metal Oxide	AA
R831	VRS-CY1JF331J*	R 330	1/16W Metal Oxide	AA
R832	VRS-CY1JF822J*	R 8.2k	1/16W Metal Oxide	AA
R833	VRS-CY1JF220JY	R 22	1/16W Metal Oxide	AA
R835	VRS-CY1JF102J*	R 1k	1/16W Metal Oxide	AA
R836	VRD-RA2BE470J*	R 47	1/8W Carbon	AA
R837	VRD-RM2HD151J*	R 150	1/2W Carbon	AA
R838	VRS-CY1JF105J*	R 1M	1/16W Metal Oxide	AA
R839	VRS-CY1JF101J*	R 100	1/16W Metal Oxide	AA
R840	VRS-CY1JF124J*	R 120k	1/16W Metal Oxide	AA
R843	VRD-RA2BE103J*	R 10k	1/8W Carbon	AA
R845	VRS-CY1JF101J*	R 100	1/16W Metal Oxide	AA
R1002	VRS-CY1JF183J*	R 18k	1/16W Metal Oxide	AA
R1003	VRS-CY1JF822J*	R 8.2k	1/16W Metal Oxide	AA
R1006	VRS-CY1JF822J*	R 8.2k	1/16W Metal Oxide	AA
R1007	VRS-CY1JF103J*	R 10k	1/16W Metal Oxide	AA
R1008	VRS-CY1JF183J*	R 18k	1/16W Metal Oxide	AA
R1009	VRS-CY1JF103J*	R 10k	1/16W Metal Oxide	AA
R1010	VRS-CY1JF391J*	R 390	1/16W Metal Oxide	AA
R1021	VRS-CY1JF101J*	R 100	1/16W Metal Oxide	AA
R1022	VRS-CY1JF101J*	R 100	1/16W Metal Oxide	AA
R1023	VRD-RA2BE271J*	R 270	1/8W Carbon	AA
R1024	VRS-CY1JF101J*	R 100	1/16W Metal Oxide	AA
R1027	VRS-CY1JF104J*	R 100k	1/16W Metal Oxide	AA
R1031	VRS-CY1JF101J*	R 100	1/16W Metal Oxide	AA
R1032	VRS-CY1JF332J*	R 3.3k	1/16W Metal Oxide	AA
R1034	VRS-CY1JF103J*	R 10k	1/16W Metal Oxide	AA
R1035	VRS-CY1JF101J*	R 100	1/16W Metal Oxide	AA
R1036	VRD-RA2BE103J*	R 10k	1/8W Carbon	AA
R1037	VRD-RA2BE103J*	R 10k	1/8W Carbon	AA
R1038	VRS-CY1JF562J*	R 5.6k	1/16W Metal Oxide	AA
R1039	VRS-CY1JF102J*	R 1k	1/16W Metal Oxide	AA
R1040	VRD-RA2BE103J*	R 10k	1/8W Carbon	AA
R1041	RH-EX0611GEZZ*	R	Zener Diode	AA
R1042	VRD-RA2BE101J*	R 100	1/8W Carbon	AA
R1043	VRS-CY1JF104J*	R 100k	1/16W Metal Oxide	AA
R1045	VRD-RA2BE101J*	R 100	1/8W Carbon	AA
R1046	VRS-CY1JF101J*	R 100	1/16W Metal Oxide	AA
R1047	VRD-RA2BE183J*	R 18k	1/8W Carbon	AA
R1048	VRS-CY1JF101J*	R 100	1/16W Metal Oxide	AA
R1049	VRD-RA2BE183J*	R 18k	1/8W Carbon	AA
R1050	VRD-RA2BE101J*	R 100	1/8W Carbon	AA
R1051	VRS-CY1JF101J*	R 100	1/16W Metal Oxide	AA
R1052	VRS-CY1JF104J*	R 100k	1/16W Metal Oxide	AA
R1053	VRD-RA2BE101J*	R 100	1/8W Carbon	AA
R1054	VRS-CY1JF101J*	R 100	1/16W Metal Oxide	AA
R1055	VRS-CY1JF332J*	R 3.3k	1/16W Metal Oxide	AA
R1056	VRS-CY1JF332J*	R 3.3k	1/16W Metal Oxide	AA
R1059	VRS-CY1JF103J*	R 10k	1/16W Metal Oxide	AA
R1061	VRS-CY1JF102J*	R 1k	1/16W Metal Oxide	AA
R1063	VRS-CY1JF103J*	R 10k	1/16W Metal Oxide	AA
R1064	VRD-RA2BE103J*	R 10k	1/8W Carbon	AA
R1065	VRD-RA2BE103J*	R 10k	1/8W Carbon	AA
R1072	VRS-CY1JF221J*	R 220	1/16W Metal Oxide	AA
R1073	VRS-CY1JF101J*	R 100	1/16W Metal Oxide	AA
R1074	VRS-CY1JF332J*	R 3.3k	1/16W Metal Oxide	AA
R1076	VRS-CY1JF102J*	R 1k	1/16W Metal Oxide	AA
R1078	VRS-CY1JF332J*	R 3.3k	1/16W Metal Oxide	AA
R1079	VRS-CY1JF332J*	R 3.3k	1/16W Metal Oxide	AA
R1087	VRD-RA2BE391JY	R 390	1/8W Carbon	AA
R1095	VRS-CY1JF101J*	R 100	1/16W Metal Oxide	AA
R1849	VRS-CY1JF271J*	R 270	1/16W Metal Oxide	AA

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
R1850	VRS-CY1JF681J*	R	680 1/16W Metal Oxide	AA	<b>CAPACITORS</b>				
R1851	VRS-CY1JF101J*	R	100 1/16W Metal Oxide	AA	C851	VCKYPA1HB561K+	R	560p 50V Ceramic	AA
R1852	VRS-CY1JF101J*	R	100 1/16W Metal Oxide	AA	C852	VCKYPA1HB391K+	R	390p 50V Ceramic	AA
R1853	VRS-CY1JF101J*	R	100 1/16W Metal Oxide	AA	C853	VCKYPA1HB271K+	R	270p 50V Ceramic	AB
R1854	VRS-CY1JF103J*	R	10k 1/16W Metal Oxide	AA	C880	RC-KZ0153CEZZ	R	100p 3kV	AB
R1855	VRD-RA2BE122J*	R	1.2k 1/8W Carbon	AA	C893	VCEA0A1CW336M+	R	33 16V Electrolytic	AB
R1856	VRS-CY1JF223J*	R	22k 1/16W Metal Oxide	AA	<b>RESISTORS</b>				
R1863	VRS-CY1JF185J*	R	1.8M 1/16W Metal Oxide	AA	R849	VRD-RA2BE271J*	R	270 1/8W Carbon	AA
R1864	VRS-CY1JF185J*	R	1.8M 1/16W Metal Oxide	AA	R850	VRD-RA2BE470J*	R	47 1/8W Carbon	AA
R1892	VRS-CY1JF562J*	R	5.6k 1/16W Metal Oxide	AA	R851	VRD-RA2BE470J*	R	47 1/8W Carbon	AA
R1893	VCKYCY1HB471K*	R	470PF D50 MIC	AB	R852	VRD-RA2BE470J*	R	47 1/8W Carbon	AA
R1894	VRS-CY1JF103J*	R	10k 1/16W Metal Oxide	AA	R854	VRD-RA2BE271J*	R	270 1/8W Carbon	AA
R1895	VRS-CY1JF103J*	R	10k 1/16W Metal Oxide	AA	R855	VRD-RA2BE271J*	R	270 1/8W Carbon	AA
R1896	VRS-CY1JF393J*	R	39k 1/16W Metal Oxide	AA	R859	VRS-VU3DE123J	R	12k 2W Metal Oxide	AB
R1897	VRS-CY1JF102J*	R	1k 1/16W Metal Oxide	AA	R861	VRS-VU3DE123J	R	12k 2W Metal Oxide	AB
R1898	VRS-CY1JF152J*	R	1.5k 1/16W Metal Oxide	AA	R863	VRS-VU3DE123J	R	12k 2W Metal Oxide	AB
R1900	VRD-RA2BE825J*	R	8.2M 1/8W Carbon	AA	R864	VRD-RA2BE470J*	R	47 1/8W Carbon	AA
<b>SWITCHES</b>					R876	VRD-RA2BE121JY	R	120 1/8W Carbon	AA
△ S701	QSW-P0591CEZZ	R	Switch, POWER	AQ	R877	VRD-RA2BE121JY	R	120 1/8W Carbon	AA
S1001	QSW-K0003AJZZ+	R	Switch, CH-UP	AB	R878	VRD-RA2BE121JY	R	120 1/8W Carbon	AA
S1002	QSW-K0003AJZZ+	R	Switch, CH-DOWN	AB	R880	VRD-RM2HD332J*	R	3.3k 1/2W Carbon	AA
S1003	QSW-K0003AJZZ+	R	Switch, VOL.-UP	AB	R881	VRD-RM2HD332J*	R	3.3k 1/2W Carbon	AA
S1004	QSW-K0003AJZZ+	R	Switch, VOL.-DOWN	AB	R882	VRD-RM2HD332J*	R	3.3k 1/2W Carbon	AA
S1005	QSW-K0003AJZZ+	R	Switch, MENU	AB	R889	VRD-RA2BE821J*	R	820 1/8W Carbon	AA
<b>BALUN</b>					R891	VRD-RA2BE102J*	R	1k 1/8W Carbon	AA
FB701	RBLN-0095GEZZ+	R	Balun	AC	R892	VRD-RA2BE391JY	R	390 1/8W Carbon	AA
<b>MISCELLANEOUS PARTS</b>					R894	VRD-RA2BE152J*	R	1.5k 1/8W Carbon	AA
△ F701	QFS-C3229CEZZ	R	Fuse, 3.15A/250V	AD	R895	VRD-RA2EE561J*	R	560 1/4W Carbon	AA
FH701	QFSDH1013CEZZ+	R	Fuse Holder	AC	<b>MISCELLANEOUS PARTS</b>				
FH702	QFSDH1014CEZZ+	R	Fuse Holder	AC	P860	QPLGN0561CEZZ	R	Plug, 5Pin(H)	AB
J401	QJAKGA015WJZZ	R	Jack, 9Pin	AH	P880	QPLGN0578GEZZ	R	Plug, 5Pin(K)	AB
J402	QJAKEA004WJ04	R	AV-2 In Jack(V)	AD	SC851	QSOCV0016PEZZ	R	Socket, 12Pin	AF
J403	QJAKEA004WJ09	R	AV-2 In Jack(L)	AD	<b>DUNTKB423WEB0 PWB-C HEADPHONE UNIT</b>				
J404	QJAKE0210CE02	R	AV-2 In Jack(R)	AC	<b>RESISTORS</b>				
J405	QTANJ0644CEZZ	R	AV-1 In Jack	AM	RJ57	VRS-CY1JF000J*	R	0 1/16W Metal Oxide	AA
P302	QPLGN0441CEZZ	R	Plug, 4pin(S)	AB	R370	VRS-CY1JF471J*	R	470 1/16W Metal Oxide	AA
P303	QPLGN0741CEZZ	R	Plug, 7Pin(HP)	AC	R371	VRS-CY1JF471J*	R	470 1/16W Metal Oxide	AA
P601	QPLGN0660CEZZ	R	Plug, 6Pin(K1-6)	AC	<b>MISCELLANEOUS PARTS</b>				
P602	QPLGN0561CEZZ	R	Plug, 5Pin(H)	AB	J351	QJAKJ0101SEZZ	R	Jack	AE
P701	QPLGN0260CEZZ	R	Plug, 2Pin(M1-2)	AC	P351	QPLGN0461CEZZ	R	Plug, 4Pin(HP1)	AB
P702	QPLGN0269GEZZ	R	Plug, 2Pin	AB	P352	QPLGN0361CEZZ	R	Plug, 3Pin(HP2)	AB
P1001	QPLGN0578GEZZ	R	Plug, 5Pin(K)	AB	<b>DUNTKB552WEA2 PWB-E S-CONTROL UNIT</b>				
P1002	QPLGN0561CEZZ	R	Plug, 5Pin(BC)	AB	<b>INTEGRATED CIRCUIT</b>				
RDA304	PRDARA059WJFW		Heat Sink for IC301		IC3501	VHiNJW1142+-1*	R	I.C.	AQ
RDA501	PRDARA010WJFW	R	Heat Sink for IC501	AD	<b>DIODES</b>				
RDA602	PRDAR0224PEFW	R	Heat Sink for Q602	AF	D3501	RH-EX0619GEZZ*	R	Zener Diode	AA
RDA701	PRDARA026WJFW	R	Heat Sink for Q701	AE	D3502	RH-EX0619GEZZ*	R	Zener Diode	AA
RMC1001	RRMCU0222CEZZ	R	Remote Receiver	AL	D3503	RH-EX1399CEZZ*	R	Zener Diode, 9.1V	AB
△ RY701	RRLYJ0093CEZZ	R	Relay	AG	D3504	RH-EX1399CEZZ*	R	Zener Diode, 9.1V	AB
SC305	QSOCN0259FJ00	R	Socket, 10Pin(EB)	AE	<b>COIL</b>				
SC306	QSOCN0259FJ00	R	Socket, 10Pin(EA)	AE	L3501	VP-XF100K0000*	R	Peaking, 10μH	AB
<b>DUNTKA599WEB1 PWB-B CRT UNIT</b>					<b>CAPACITORS</b>				
<b>TRANSISTORS</b>					C3501	VCKYCY1CF224Z*	R	0.22 16V Ceramic	AB
Q853	VS2SC3789//2E	R	2SC3789	AF	C3502	VCKYCY1HF224ZY	R	0.22 50V Ceramic	AA
Q854	VS2SC3789//2E	R	2SC3789	AF					
Q855	VS2SC3789//2E	R	2SC3789	AF					
Q894	VS2PA1015Y+-1+	R	2PA1015Y	AC					
<b>DIODES</b>									
D859	VHD1SS119//1*	R	1SS119	AA					
D896	RH-EX0616GEZZ*	R	Zener Diode, 5.6V	AA					
D898	VHD1SS119//1*	R	1SS119	AA					
<b>COIL</b>									
L851	VP-MK820K0000+	R	Peaking, 82μH	AB					

Ref. No.	Part No.	★	Description	Code
C3503	VCKYCY1CF224Z*	R 0.22	16V Ceramic	AB
C3504	VCKYCY1CF224Z*	R 0.22	16V Ceramic	AB
C3505	VCKYCY1CF224Z*	R 0.22	16V Ceramic	AB
C3506	VCKYCY1CF224Z*	R 0.22	16V Ceramic	AB
C3507	VCEA0A1HW475M+R	4.7	50V Electrolytic	AB
C3508	VCEA0A1HW475M+R	4.7	50V Electrolytic	AB
C3509	VCQYTA1HM223J+	R 0.022	50V Mylar	AB
C3510	VCQYTA1HM223J+	R 0.022	50V Mylar	AB
C3511	VCQYTA1HM222J+	R 2200p	50V Mylar	AA
C3512	VCQYTA1HM222J+	R 2200p	50V Mylar	AA
C3513	VCFYFA1HA224J+	R 0.2	50V Mylar	AB
C3514	VCFYFA1HA224J+	R 0.22	50V Mylar	AB
C3515	VCEA0A1HW105M+R	1	50V Electrolytic	AB
C3516	VCEA0A1HW105M+R	1	50V Electrolytic	AB
C3517	VCEA0A1HW105M+R	1	50V Electrolytic	AB
C3518	VCFYFA1HA334J+	R 0.33	50V Mylar	AB
C3519	VCEA0A1HW105M+R	1	50V Electrolytic	AB
C3520	VCEA0A1HW105M+R	1	50V Electrolytic	AB
C3521	VCEA0A1HW105M+R	1	50V Electrolytic	AB
C3522	VCEA0A1HW105M+R	1	50V Electrolytic	AB
C3523	VCKYCY1CF104Z*	R 0.1	16V Ceramic	AA
C3524	VCEA0A1CW477M+R	470	16V Electrolytic	AC
C3525	VCKYCY1HF103Z*	R 0.01	50V Ceramic	AA
C3526	VCKYCY1HF103Z*	R 0.01	50V Ceramic	AA

**RESISTORS**

RJ3501	VRS-CY1JF000J*	R 0	1/16W Metal Oxide	AA
R3501	VRS-CY1JF101J*	R 100	1/16W Metal Oxide	AA
R3502	VRS-CY1JF101J*	R 100	1/16W Metal Oxide	AA
R3503	VRS-CY1JF101J*	R 100	1/16W Metal Oxide	AA
R3504	VRS-CY1JF101J*	R 100	1/16W Metal Oxide	AA
R3505	VRS-CY1JF101J*	R 100	1/16W Metal Oxide	AA
R3506	VRS-CY1JF101J*	R 100	1/16W Metal Oxide	AA
R3507	VRS-CY1JF101J*	R 100	1/16W Metal Oxide	AA
R3508	VRS-CY1JF101J*	R 100	1/16W Metal Oxide	AA

**MISCELLANEOUS PARTS**

P3008	QPLGN0242FJ00	R	Plug, 10Pin(EA)	AE
P3009	QPLGN0242FJ00	R	Plug, 10Pin(EB)	AE

Ref. No.	Part No.	★	Description	Code
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**MISCELLANEOUS PARTS**

△ ACC701	QACCZA019WJPZ		AC Cord	
SP301	VSP9050PB35WA	R	Speaker(L)	AK
SP302	VSP9050PB35WA	R	Speaker(R)	AK
	QCNW-A922WJZZ	R	Connecting Cord (K)	AF
	QCNW-A923WJZZ	R	Connecting Cord (H)	AE
	QCNW-B266WJZZ		Connecting Cord (HP)	
	QCNW-B267WJZZ		Connecting Cord (FV)	
	QCNW-B316WJZZ		Connecting Cord (S)	

**SUPPLIED ACCESSORIES**

RRMCG0029KJSF	Infrared Remote Control Unit
TINS-B145WJZZ	Operation Manual
UBATU0247AJZZ	Manganese Battery

**PACKING PARTS****< NOT REPLACEMENT ITEM >**

SPAKCA523WJZZ	- Packing Case	—
SPAKPA162WJZZ	- Polyethylene Sheet	—
SPAKXA198WJZZ	- Packing Add.(Top)	—
SPAKXA199WJZZ	- Packing Add.(Bottom)	—

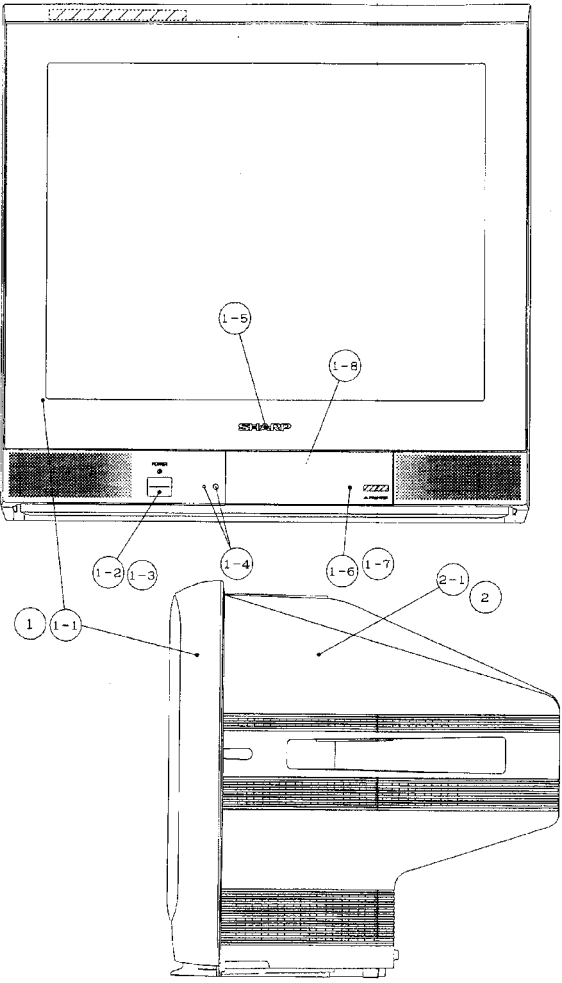


Ref. No.      Part No.      ★      Description      Code

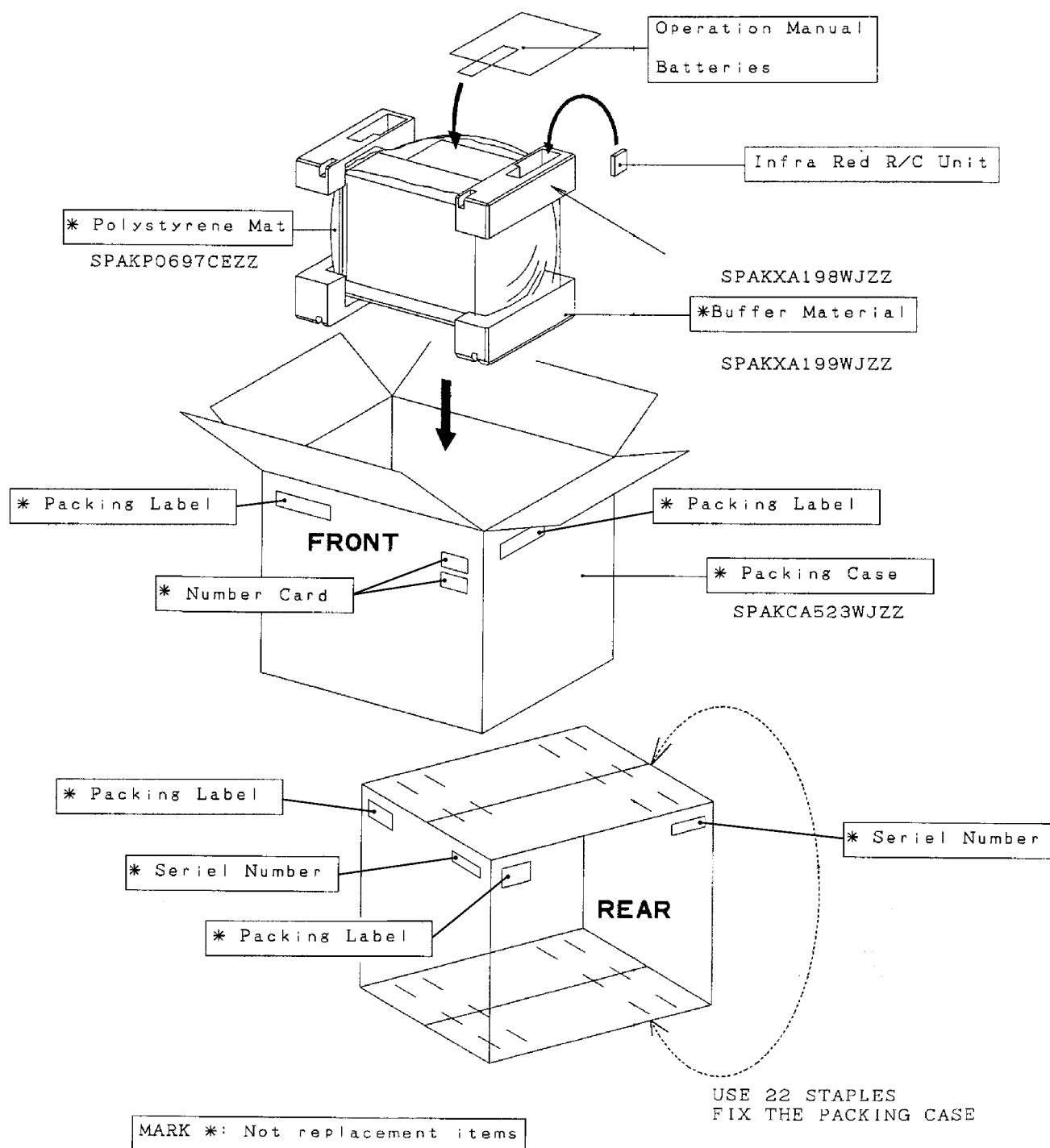
Ref. No.      Part No.      ★      Description      Code

**CABINET PARTS**

1	CCABAA261WEA1		Front Cabinet Ass'y	
1-1	GCABAA261WJSA	-	Front Cabinet	—
1-2	JBTN-A140WJSA		Power Button	
1-3	MSPRC0005PEFW	R	Power Button Spring	AB
1-4	GCOVAA361WJSA		R/C Cover	
1-5	HBDGB0001KJSC	R	SHARP Badge	AE
1-6	GDORFA085WJSA		Door	
1-7	MSPRPA025WJFW		Door Spring	
1-8	HiNDPA343WJZZ		Indication Plate	
2	CCABBA160WEA0		Rear Cabinet Ass'y	
2-1	GCABBA160WJKA	-	Rear Cabinet	—



## PACKING OF THE SET





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Design and Production Information	
Design	:
Production : STTM	