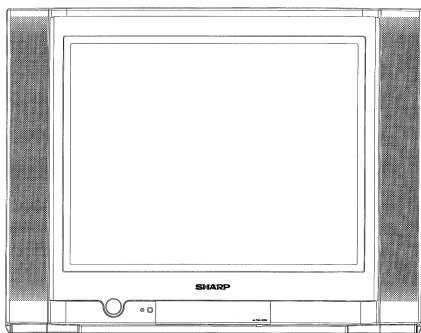


SHARP SERVICE MANUAL

No. S95O521JF2-RU



COLOUR TELEVISION *Chassis No. GA-4M*

21JF2-RU

21JF2-GA

21JF2-SA

21JF2-SF

MODELS 21JF2-SS

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.

FEATURES

- Multi 18 Systems
- 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 / Off Timer / Reminder Timer
- Blue Back Function
- Front AV IN & Rear AV IN / OUT Terminals
- Front Headphone Jack
- Aperture Control Circuit
- Auto Fine Tuning
- NTSC Colour Comb Filter (AV THRU)
- High Contrast Picture
- Hotel Mode
- White Temperature Select
- Multi Languages OSD
(ENG / CHI / FRE / MAL / ARA / RUS)
for Model 21JF2-SF / SS Only.
(ENG / CHI / FRE / MAL / ARA)
for Model 21JF2-GA / SA Only.
(ENG / RUS)
for Model 21JF2-RU Only.
- MONO

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Parts Guide

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.

CHAPTER 2. IMPORTANT SERVICE NOTES

[1] IMPORTANT SERVICE NOTES

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

1. 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 the same type number of picture tube 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.

2. 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, please make sure do not increase the high voltage of the set to more than 30.0kV (at beam 0 μ A).
- 2) To keep the set in a normal operation, please make sure it's function at 26.5kV \pm 0.5kV (at beam 1000 μ A). 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 excessive X-ray radiation.

3. 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-metal control knobs, insulating materials, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacity networks, mechanical insulators etc.

CHAPTER 3. ADJUSTMENT PRECAUTIONS

[1] ADJUSTMENT PRECAUTIONS

This model's settings are adjusted in two different ways: through the I2C bus control and in the conventional analog manner. The adjustments via the I2C 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.

- i) Press SERVICE key on the remote controller to set the TV set to SERVICE mode position, and the microprocessor is in input mode. (Adjustment through the I2C bus control).
- ii) 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.
- iii) Press the CH DOWN / UP key on the remote controller to select the item in Adjustment mode, Setting mode or Option mode.
- iv) Using the VOLUME UP/ DOWN key on the remote controller, the data can be modified. Please wait approximately 200 msec for data storage in EEPROM before select to another mode.
- v) In Check mode the data cannot be changed.
- vi) Press the SERVICE key again, it will switch to the NORMAL mode position, and the microprocessor is out of the SERVICE mode.

2. Factory Presetting.

- i) Power ON the TV set, press the SERVICE key on the remote controller, then press both the CH UP and VOL UP button on the set simultaneously for 5secs. Initial values are automatically preset, only when a new EEPROM is used.
- ii) The initial data are preset as listed in page 3-7 to 3-13.
- iii) Make sure the data need modification or not (Initial data).

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

3. For reference please check with memory map RH-IXB226WJZZ. (See Page 4-1 ~ 4-16)

1. ADJUSTMENT ITEM

***Below are the adjustment items that should be done, PLS FOLLOW THE PROCEDURE. Otherwise some adjustment items will not be accurate.

NO ***	ADJUSTMENT ITEM	EFFECTIVE MODEL	REVISION
1	BUS SET UP	ALL MODELS	
2	OPTION SET UP		
3	H-VCO		
4	VIF-VCO		
5	S-TRAP f_0		
6	RF-AGC		
7	PURITY ADJ		
8	CONVERGENCE ADJ		
9	FOCUS ADJ		
10	V-SHIFT (50 Hz)		
11	H-SHIFT (50 Hz)		
12	V-SIZE (50 Hz)		
13	SCREEN		
14	WHITE BALANCE		
15	SUB-BRIGHTNESS		
16	SUB-CONTRAST		
17	SUB-TINT		
18	SUB-COLOR		
19	SECAM-OFFSET		
20	SIF VCO ADJ		
21	BEAM CURRENT CHECK		
22	BEAM PROTECTOR CHECK		
23	HV PROTECTOR CHECK		
24	OTHER PROTECTOR CHECK		
25	AV OUT CHECK		
26	AV IN CHECK		
27	CONTRAST CONTROL CHECK		
28	COLOR CONTROL CHECK		
29	BRIGHTNESS CONTROL CHECK		
30	TINT CONTROL CHECK		
31	SHARPNESS CONTROL CHECK		
32	CH DISPLAY COLOR CHECK		
33	NORMAL DISPLAY CHECK		
34	WHITE TEMP CONTROL CHECK		
35	COLOR SYSTEM CHECK		
36	SOUND SYSTEM CHECK		
37	NOISE MUTE CHECK		
38	OSD LANGUAGE QUANTITY CHECK		
39	HEAD PHONE CHECK		
40	SHOCK TEST CHECK		
41	ROM CORRECTION CHECK		

2. USER DATA IN SERVICE MODE

- 1) 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.
- 2) 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
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 list as following.

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

RC CODE (HEX)	R/C KEY NAME	SERVICE-ITEM
80	POS 1	R-C UP (IN SERVICE MODE V00)
40	POS 2	G-C UP (IN SERVICE MODE V00)
C0	POS 3	B-C UP (IN SERVICE MODE V00)
20	POS 4	R-C DOWN (IN SERVICE MODE V00)
A0	POS 5	G-C DOWN (IN SERVICE MODE V00)
60	POS 6	B-C DOWN (IN SERVICE MODE V00)
E0	POS 7	R-D UP (IN SERVICE MODE V00)
10	POS 8	B-D UP (IN SERVICE MODE V00)
50	POS 0	B-D DOWN (IN SERVICE MODE V00)
E4	FLASHBACK	R-D DOWN (IN SERVICE MODE V00)
E4	FLASHBACK	Y-MUTE (BESIDES OF SERVICE MODE V00)
75	WHITE TEMP UP	RF-AGC (V01)
F5	WHITE TEMP DOWN	VIF-VC0 (V02)
C2	TUNE DOWN	H-VCO (V03)
8D	SHARPNESS DOWN	SUB-CON (V04)
D6	BALANCE LEFT	SUB-COL (V05)
0D	SHARPNESS UP	SUB-BRIGHT (V06)
36	BALANCE RIGHT	SUB-TINT (V07)
46	TREBLE UP	SUB-SHP (V08)
C6	TREBLE DOWN	SUB-COL-YUV (V09)
26	BASS UP	SUB-TINT-YUV (V10)
24	COLOUR UP	V-SIZE (V11), V-SIZE60 (V17)
54	BRIGHTNESS DOWN	V-SHIFT (V12), V-SHIFT60 (V18)
74	TINT DOWN	H-SHIFT (V13), H-SHIFT60 (V19)
66	SURROUND UP	SCM-BR (V14)
E6	SURROUND DOWN	SCM-BB (V15)
C4	CONTRAST DOWN	SUB-VOL (V16)
4C	PICTURE	S-TRAP-BG (V20)
CC	HOLD	S-TRAP-I (V21)
2C	TEXT	S-TRAP-DK (V22)
AC	CANCEL	S-TRAP-M (V23)
EC	SIZE	S-TRAP-574 (V24)
80	POS 1	R-C UP YUV (IN SERVICE MODE V25)
40	POS 2	G-C UP YUV (IN SERVICE MODE V25)
C0	POS 3	B-C UP YUV (IN SERVICE MODE V25)
20	POS 4	R-C DOWN YUV (IN SERVICE MODE V25)
A0	POS 5	G-C DOWN YUV (IN SERVICE MODE V25)
60	POS 6	B-C DOWN YUV (IN SERVICE MODE V25)
E0	POS 7	R-D UP YUV (IN SERVICE MODE V25)
10	POS 8	B-D UP YUV (IN SERVICE MODE V25)
50	POS 0	B-D DOWN YUV (IN SERVICE MODE V25)

RC CODE (HEX)	R/C KEY NAME	SERVICE-ITEM
E4	FLASHBACK	R-D DOWN YUV (IN SERVICE MODE V25)
C1		AUTO ADJ FOR V01, V02, V03, V20, V21, V22, V23, V24
CA		T-SET
81		SERVICE MODE

- 1) Please set the MCL to MCL1 as below:
- 2) After set the MCL, please set the INITIAL SETTING for each models.
 INITIAL 3 : For Singapore and Africa (All Channel Sound System are set to B/G)
 INITIAL 4 : For Middle-East (All Channel Sound System are set to B/G)
 INITIAL 5 : For Russia (All Channel Sound System are set to D/K)

MCL1 (HEX AE)		
CH-No	Fv (MHz)	Sound Sys
0		
1	48.25	B/G
2	62.25	B/G
3	77.25	D/K
4	175.25	B/G
5	182.25	B/G
6	183.25	D/K
7	191.25	D/K
8	196.25	B/G
9	199.25	M
10	210.25	B/G
11	224.25	B/G
12	471.25	B/G
13	487.25	I
14	503.25	B/G
15	575.25	B/G
16	583.25	B/G
17	599.25	B/G
18	621.25	M
19	639.25	D/K
20	703.25	B/G
21	735.25	I
22	767.25	B/G
23	815.25	B/G
24	855.25	I
25	855.25	B/G
26	55.25	M
27	83.25	M
28	183.25	M
29	193.25	M
30	217.25	M
31	471.25	M
32	477.25	M
33	693.25	M
34	885.25	M
35	112.25	B/G
36	168.25	B/G
37		
38	294.25	B/G
39	463.25	B/G
40		
41	647.25	B/G
42	663.25	B/G
43	679.25	B/G
44	174.95	B/G
45	175.55	B/G
46		
47		
48		
49		

MCL1 (HEX AE)		
CH-No	Fv (MHz)	Sound Sys
50		
51		
52		
53		
54		
55		
56		
57		
58		
59		
60		
61		
62		
63		
64		
65		
66		
67		
68		
69		
70		

NOTE: PLL DATA OF ABOVE FREQ SHOULD TAKE THE ACCOUNT OF PIF SETTING IN SERVICE OPTION 004 (VIF) BEFORE STORING INTO EEPROM.

3. SHIPPING SETTING & CHECKING

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

ITEMS	DATA SETTING
LAST POWER	ON
LAST TV/AV MODE	TV MODE
LAST POSITION	CH 1
FLASHBACK CHANNEL	CH 1
1/2 DIGIT ENTRY	2 DIGIT ENTRY
VOLUME	0 (Min)
BLUE BACK	OFF
OFF TIMER	--:--
ON TIMER	--:--
ON TIMER POSITION	--
ON TIMER VOLUME	--
REMINDER	--:--
AFT	ALL CH ON
COLOR SYSTEM	ALL CH AUTO
SKIP	ALL CH OFF
CONTRAST	60
COLOR	0
BRIGHTNESS	0
TINT	0
SHARPNESS	0
WHITE TEMP	0

INITIAL	LANGUAGE	SOUND SYSTEM
1	CHINESE	D/K
2	CHINESE	I
3	ENGLISH	B/G
4	ARABIC	B/G
5	RUSSIAN	D/K
6	MALAY	B/G
7	FRENCH	D/K

(Reference: Geomagnetism Adjustment)

MODEL	MAGNETIC FIELD(V, H) nT		BACKGROUND	LANG.	S-SYS	LANG QTY
SINGAPORE	-10000	40000	12300°K	ENGLISH	B/G	5
AFRICA	-10000	40000	12300°K	ENGLISH	B/G	5
MID-EAST	30000	20000	18000°K	ARABIC	B/G	6
RUSSIA	45000	20000	7500°K	RUSSIAN	D/K	2

www.DataSheet4U.com
*NOTE FOR OSD TYPE:

- 2: ENGLISH/RUSSIAN
- 5: ENGLISH/CHINESE/FRENCH/ARABIC/MALAY
- 6: ENGLISH/CHINESE/FRENCH/ARABIC/MALAY/RUSSIAN

21JF2-RU/GA/SA/SF/SS

**AFTER INITIALIZED THE EEPROM (REFER TO FACTORY PRESETTING), READ DATA FROM EEPROM ADDRESS 00H~03H AND COMPARE TO THE LIST BELOW, IF DIFFERENT, INITIALIZE THE EEPROM.

ADDRESS	DATA	ADDRESS	DATA
00H:	7BH	02H:	72H
01H:	72H	03H:	76H

*** There are four stages of service mode data. First stage data from V00 ~ V31 (Adjustment Mode).

To go into second stage of service mode data, press MENU key. Second stage data from F01 ~ F142 (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 ~ O31 (Option Mode).

ADJUSTMENT MODE (FIRST STAGE)					
EEPROM ITEMS	OSD	DATA LENGTH	INITIAL DATA	FIX/ADJ/AUTO	REMARK
R-DRIVE	V00	0~127	63	ADJ	PLS REFER TO ADJ ITEM FOR SCREEN AND WHITE BALANCE
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	BUS SETUP
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	IF NECESSARY, ADJ
V-SHIFT 60 Hz	V18	-7~0~+7	-1	FIX	IF NECESSARY, ADJ
H-SHIFT 60 Hz	V19	-15~0~+15	+2	FIX	IF NECESSARY, ADJ
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	
CUTOFF/BKGD YUV	V25				
R-DRI YUV	V25	0~127	63	FIX	
B-DRI YUV	V25	0~127	63	FIX	
R-CUT YUV	V25	0~255	127	FIX	
G-CUT YUV	V25	0~255	127	FIX	
B-CUT YUV	V25	0~255	127	FIX	
SUB-CON YUV	V26	0~127	100	FIX	
SUB-BRGHT YUV	V27	0~255	127	FIX	
VS-CORRECT	V28	0~63	32	FIX	ONLY FOR M61266
VC-CORRECT OFFSET	V29	-13~+13	0	FIX	ONLY FOR M61266
V LINEARITY	V30	0~63	32	FIX	ONLY FOR M61266
V LINEARITY OFFSET	V31	-13~+13	0	FIX	ONLY FOR M61266

SETTING MODE (SECOND STAGE)						
EEPROM ITEMS	FUNCTION	OSD	DATA LENGTH	INITIAL DATA	FIX/ADJ/AUTO	REMARK
C.CLIP-LVL	CLIP LEVEL CONTRAST CONTROL OF RGB INPUT	F01	0(20H) / 1(40H)	0	FIX	
RGB-CLIP	CLIPPING OF RGB CONTRAST CONTROL	F02	0 (CLIP OFF) / 1(CLIP ON)	0	FIX	
BS	BLACK STRETCH	F03	0(ON) / 1(OFF)	0	FIX	
ABCL	ABCL PROCESSING (ACL PROCESSING)	F04	0(OFF) / 1(ON)	0	FIX	
ABCL-GAIN	ABCL PROCESSING GAIN	F05	0(LOW) / 1(HIGH)	0	FIX	
S-OUT-LVL	AUDIO OUTPUT GAIN CONTROL	F06	0~127	95	*FIX	BUS SETUP
VIF-G	P-IF DETECTION GAIN OUTPUT	F07	0~7	4	FIX	
SHPG	SHARPNESS GAIN	F08	0(NORMAL) / 1(HIGH)	0	FIX	
SHPG-P	SHARPNESS GAIN PAL	F09	0(NORMAL) / 1(HIGH)	0	FIX	
SHPG-S	SHARPNESS GAIN SECAM	F10	0(NORMAL) / 1(HIGH)	0	FIX	
SHPG-N4	SHARPNESS GAIN N443	F11	0(NORMAL) / 1(HIGH)	0	FIX	
SHPG-N3	SHARPNESS GAIN N358	F12	0(NORMAL) / 1(HIGH)	1	FIX	
YDL	Y SIGNAL DELAY	F13	0~7	5	FIX	
YDL-P	Y SIGNAL DELAY PAL	F14	0~7	5	FIX	
YDL-S	Y SIGNAL DELAY SECAM	F15	0~7	7	FIX	
YDL-N4	Y SIGNAL DELAY N443	F16	0~7	5	FIX	
YDL-N3	Y SIGNAL DELAY N358	F17	0~7	5	FIX	
YDL-AV	Y SIGNAL DELAY AV	F18	0~7	6	FIX	
YDL-AV-P	Y SIGNAL DELAY PAL (AV)	F19	0~7	6	FIX	
YDL-AV-S	Y SIGNAL DELAY SECAM (AV)	F20	0~7	7	FIX	
YDL-AV-N4	Y SIGNAL DELAY N443 (AV)	F21	0~7	6	FIX	
YDL-AV-N3	Y SIGNAL DELAY N358 (AV)	F22	0~7	6	FIX	
YDL-YUV	Y SIGNAL DELAY YUV	F23	0~7	6	FIX	
COL-AV (OFFSET)	COLOUR OFFSET AV	F24	-31~0~+31	+10	*FIX	BUS SETUP
COL-P (OFFSET)	COLOUR OFFSET PAL	F25	-31~0~+31	0	FIX	
COL-S (OFFSET)	COLOUR OFFSET SECAM	F26	-31~0~+31	+9	FIX	
COL-N4 (OFFSET)	COLOUR OFFSET N443	F27	-31~0~+31	-8	FIX	
COL-N3 (OFFSET)	COLOUR OFFSET N358	F28	-31~0~+31	-7	FIX	
COL-ADJ (OFFSET)	COLOUR OFFSET ADJUST	F29	-31~0~+31	0	*FIX	BUS SETUP
SHP-AV (OFFSET)	SHARPNESS OFFSET AV	F30	-31~0~+31	+5	*FIX	BUS SETUP
SHP-YUV (OFFSET)	SHARPNESS OFFSET YUV	F31	-31~0~+31	0	FIX	
SHP-P (OFFSET)	SHARPNESS OFFSET PAL	F32	-31~0~+31	0	FIX	
SHP-S (OFFSET)	SHARPNESS OFFSET SECAM	F33	-31~0~+31	-5	FIX	
SHP-N4 (OFFSET)	SHARPNESS OFFSET N443	F34	-31~0~+31	0	FIX	
SHP-N3 (OFFSET)	SHARPNESS OFFSET N358	F35	-31~0~+31	0	FIX	
TINT-AV (OFFSET)	TINT OFFSET AV	F36	-63~0~+63	0	*FIX	BUS SETUP
TINT-ADJ (OFFSET)	TINT OFFSET ADJUST	F37	-63~0~+63	0	*FIX	BUS SETUP
TINT-YUV-ADJ (OFFSET)	TINT YUV OFFSET ADJUST	F38	-63~0~+63	0	FIX	
R-R (OFFSET)	R-DRIVE OFFSET WHEN WHITE TEMP IS RED	F39	-63~0~+63	+8	*FIX	BUS SETUP
B-R (OFFSET)	B-DRIVE OFFSET WHEN WHITE TEMP IS RED	F40	-63~0~+63	-10	*FIX	BUS SETUP
R-B (OFFSET)	R-DRIVE OFFSET WHEN WHITE TEMP IS BLUE	F41	-63~0~+63	-3	*FIX	BUS SETUP
B-B (OFFSET)	B-DRIVE OFFSET WHEN WHITE TEMP IS BLUE	F42	-63~0~+63	+13	*FIX	BUS SETUP
TRAP	CENTER VALUE OF CHROMA TRAP	F43	0~3	2	FIX	
TRAP-P	CENTER VALUE OF CHROMA TRAP PAL	F44	0~3	2	FIX	
TRAP-S	CENTER VALUE OF CHROMA TRAP SECAM	F45	0~3	2	FIX	
TRAP-N4	CENTER VALUE OF CHROMA TRAP N443	F46	0~3	2	FIX	
TRAP-N3	CENTER VALUE OF CHROMA TRAP N358	F47	0~3	2	FIX	
1W-TV	VERT SYNC DETECTION MODE FOR AV (1 WINDOW/2 WINDOW)	F48	ACCEPTABLE PERIOD: 0(AUTOMATIC CHANGE) / 1(FIX (WIDE))	0	FIX	
1W-AV	VERT SYNC DETECTION MODE FOR TV (1 WINDOW/2 WINDOW)	F49	ACCEPTABLE PERIOD: 0(AUTOMATIC CHANGE) / 1(FIX (WIDE))	1	FIX	
V-FREE (NO SYNC)	SET VERTICAL TO FORCED FREE RUN MODE	F50	0(NORMAL) / 1(FREERUN)	0	FIX	

SETTING MODE (SECOND STAGE)						
EEPROM ITEMS	FUNCTION	OSD	DATA LENGTH	INITIAL DATA	FIX/ADJ/AUTO	REMARK
AFC2 (NO SYNC)	HORIZONTAL AFC2 GAIN	F51	0(NORMAL) / 1(DOWN)	0	FIX	
GAMMA	GAMMA CORRECTION QTY	F52	0~3	0	FIX	
BS-D/C	BLACK STRETCH CONTROL LEVEL	F53	0~15	10	FIX	
BS-GAIN	BLACK STRETCH LEVEL	F54	0(NORMAL) / 1(DOWN)	0	FIX	
OM-DET	OVER MODULATION DETECT	F55	0(OFF) / 1(ON)	0	FIX	
SL-TV	SLICE LEVEL OF SYNC DETECTION TV	F56	0~7	2	FIX	
SL-AV	SLICE LEVEL OF SYNC DETECTION AV	F57	0~7	4	FIX	
SL-YUV	SLICE LEVEL OF SYNC DETECTION YUV	F58	0~7	4	FIX	
VD2/VD1/AS/FBP-TV	VD2 & VD1-VERT SYNC DETECT MIN WIDTH MSB & LSB RESPECTIVELY, AS-TV/AV/YUV SWITCH & CH CHANGE, FBP-FLYBACK PULSE SLICE LEVEL (TV)	F59	0~15	6	FIX	
VD2/VD1/AS/FBP-AV	VD2 & VD1-VERT SYNC DETECT MIN WIDTH MSB & LSB RESPECTIVELY, AS-TV/AV/YUV SWITCH & CH CHANGE, FBP-FLYBACK PULSE SLICE LEVEL (AV)	F60	0~15	14	FIX	
VD2/VD1/AS/FBP-YUV	VD2 & VD1-VERT SYNC DETECT MIN WIDTH MSB & LSB RESPECTIVELY, AS-TV/AV/YUV SWITCH & CH CHANGE, FBP-FLYBACK PULSE SLICE LEVEL (YUV)	F61	0~15	14	FIX	
VDL	COLOUR DIFF. INPUT PHASE ADJ	F62	0~3	0	FIX	
UDL	COLOUR DIFF. INPUT PHASE ADJ	F63	0~3	0	FIX	
AUTO-SCM-KIL-TV	SECAM COLOUR KILLER SENSITIVITY (TV)	F64	0~3	1	FIX	
SECAM-BGP	INTERNAL SECAM BGP TIMING	F65	0~3	0	FIX	
N45	INHIBIT 50Hz NTSC 4.43	F66	0(NORMAL) / 1(INHIBIT)	0	FIX	
TXT-POS-H (TELE-TEXT)	TELETEXT HORIZONTAL POSITION	F67	0~63	30	FIX	
TXT-POS-V (TELE-TEXT)	TELETEXT VERTICAL POSITION	F68	0~63	34	FIX	
OSD-POS	OSD POSITION	F69	0~127	9	FIX	
CP	CHARGE PUMP	F70	0(FAST TUNING) / 1(MODERATE SPEED TUNING)	1	FIX	
SMALL-SURR (S-CTRL)	SURROUND MODE SELECT	F71	0(EALA EFFECT LARGE) / 1(EALA EFFECT SMALL)	0	FIX	
SUB-BASS (S-CTRL)	SUB BASS CONTROL	F72	0(0dB), 1(-1dB), 2(-2dB), 3(-3dB), 4(0dB), 5(+1dB), 6(+2dB), 7(+3dB)	6	FIX	
SUB-TREB (S-CTRL)	SUB TREBLE CONTROL	F73	0(0dB), 1(-1dB), 2(-2dB), 3(-3dB), 4(0dB), 5(+1dB), 6(+2dB), 7(+3dB)	0	*FIX	
AGC-ADJ (S-CTRL)	AGC LEVEL ADJUST	F74	0(AGC Off), 1(300mVrms), 2(400mVrms), 3(500Vrms), 4(600mVrms)	0	*FIX	
AGC-SW-OFF (NICAM)	NICAM AGC SWITCH OFF	F75	0(DISABLE, FIX GAIN), 1(ENABLE)	1	FIX	
AGC-GAIN-ADJ (NICAM)	NICAM AGC GAIN ADJUST	F76	0~31	16	FIX	
FM-LEVEL-ADJ (NICAM)	FM LEVEL ADJUST	F77	-15~0~+15	0	FIX	
IGR-LEVEL-ADJ (NICAM)	IGR LEVEL ADJUST	F78	-15~0~+15	+1	FIX	
NICAM-BG-LVL-ADJ (NICAM)	NICAM B/G LEVEL ADJUST	F79	-15~0~+15	-2	FIX	
NICAM-I-LVL-ADJ (NICAM)	NICAM I LEVEL ADJUST	F80	-15~0~+15	+3	FIX	
NICAM-DK-LVL-ADJ (NICAM)	NICAM D/K LEVEL ADJUST	F81	-15~0~+15	-1	FIX	
NICAM-LOW-ERR-LIM (NICAM)	NICAM LOWER ERROR LIMIT	F82	0~255	35	FIX	
NICAM-UPP-ERR-LIM (NICAM)	NICAM UPPER ERROR LIMIT	F83	0~255	70	FIX	
IGR-GAIN-ADJ (IGR)	IGR GAIN ADJUST	F84	-6~0~+7	0	FIX	

SETTING MODE (SECOND STAGE)						
EEPROM ITEMS	FUNCTION	OSD	DATA LENGTH	INITIAL DATA	FIX/ADJ/AUTO	REMARK
FM-ID-SPEED (NICAM)	FM SOUND IDENTIFICATION MODE	F85	0(SLOW) / 1(MEDIUM) / 2(FAST) / 3(OFF)	1	FIX	
NICAM-AUTO-MUTE	NICAM AUTO DETECTION	F86	0(MUTE) / 1(DEMUTE)	0	FIX	
AUTO-SCM-KIL-AV-YUV	SECAM COLOUR KILLER SENSITIVITY (AV/YUV)	F87	0~3	1	FIX	
AFC1-GAIN-TV	MSB OF HORIZONTAL AFC GAIN1 (TV)	F88	0(NORMAL) / 1(x2) / 2(x1.5) / 3(3.5)	0	FIX	
AFC1-GAIN-AV	MSB OF HORIZONTAL AFC GAIN1 (AV)	F89	0(NORMAL) / 1(x2) / 2(x1.5) / 3(3.5)	3	FIX	
AFC1-GAIN-YUV	MSB OF HORIZONTAL AFC GAIN1 (YUV)	F90	0(NORMAL) / 1(x2) / 2(x1.5) / 3(3.5)	3	FIX	
CON-REDUCE	CONTRAST (PICTURE LEVEL) CONTROL	F91	0(0%)~1(25%)~2(50%)	0	FIX	
TAKE-OFF-TV	TAKEOFF/BPF OF CHROMA BPF PROCESSING TV	F92	0(BPF) / 1(TAKEOFF)	1	FIX	
TAKE-OFF-AV	TAKEOFF/BPF OF CHROMA BPF PROCESSING AV	F93	0(BPF) / 1(TAKEOFF)	0	FIX	
TAKE-OFF-YUV	TAKEOFF/BPF OF CHROMA BPF PROCESSING YUV	F94	0(BPF) / 1(TAKEOFF)	0	FIX	
C-ANGLE (103 DEG/ 95 DEG)	CHROMA MODULATION ANGLE	F95	0(103DEG) / 1(95DEG)	1	FIX	
AC-FAIL-WO-BRIGHT	PICTURE BLACK LEVEL (BRIGHT) CONTROL - AC FAILURE	F96	0~255	255	FIX	
FORCED-SCM-KIL-TV	FORCED SECAM COLOUR KILLER SENSITIVITY (TV)	F97	0~3	2	FIX	
FORCED-SCM-KIL-AV-YUV	FORCED SECAM COLOUR KILLER SENSITIVITY (AV/YUV)	F98	0~3	2	FIX	
R-Y ADJ.	COLOUR EDGE IMPROVEMENT	F99	0(DISABLE) / 1(ENABLE)	1	FIX	
V-DEMUTE-DELAY	VIDEO DEMUTE DELAY	F100	0~255	0	*FIX	BUS SETUP
S-DEMUTE-DELAY	SOUND DEMUTE DELAY	F101	0~255	0	*FIX	BUS SETUP
MER	S-BOOSTER FREQ. CHARACTERISTIC CONTROL	F102	0~255	70	FIX	
MEL1	S-BOOSTER LEVEL1	F103	0~255	150	FIX	
MEL2	S-BOOSTER LEVEL2	F104	0~255	156	FIX	
MEL3	S-BOOSTER LEVEL3	F105	0~255	163	FIX	
MEL4	S-BOOSTER LEVEL4	F106	0~255	165	FIX	
MEL5	S-BOOSTER LEVEL5	F107	0~255	170	FIX	
MEL6	S-BOOSTER LEVEL6	F108	0~255	180	FIX	
S-ST-POINT	S-BOOSTER START POINT	F109	0~60	21	FIX	
S-SP-POINT	S-BOOSTER STOP POINT	F110	0~60	60	FIX	
S-STEP	S-BOOSTER STEP	F111	0~60	7	FIX	
POW-STORAGE	CONTRAST/BRIGHTNESS INCREASE GRADUALLY	F112	0(DISABLE) / 1(ENABLE)	1	FIX	
S-B-BASS	S-BOOSTER BASS LIMITER (WHEN S-BOOSTER ON)	F113	-30~0~+30	+15	FIX	
S-B-TREB	S-BOOSTER TREBLE LIMITER (WHEN S-BOOSTER ON)	F114	-30~0~+30	+15	FIX	
S-BASS	S-BOOSTER BASS LIMITER (WHEN S-BOOSTER OFF)	F115	-30~0~+30	+30	FIX	
S-TREB	S-BOOSTER TREBLE LIMITER (WHEN S-BOOSTER OFF)	F116	-30~0~+30	+30	FIX	
V-STD-TV	VERTICAL STANDARD SIGNAL DETECTOR SWITCH (TV)	F117	0(DISABLE) / 1(ENABLE)	0	FIX	
V-STD-AV	VERTICAL STANDARD SIGNAL DETECTOR SWITCH (AV)	F118	0(DISABLE) / 1(ENABLE)	0	FIX	
V-STD-YUV	VERTICAL STANDARD SIGNAL DETECTOR SWITCH (YUV)	F119	0(DISABLE) / 1(ENABLE)	0	FIX	
WO-Bright-after-WO-TIME	WHITE OUT BRIGHT AFTER WHITE OUT TIME	F120	0~255	255	FIX	
WO-Contrast-after-WO-TIME	WHITE OUT CONTRAST AFTER WHITE OUT TIME	F121	0~127	127	FIX	
WO-Bright-before-WO-TIME	WHITE OUT BRIGHT BEFORE WHITE OUT TIME	F122	0~255	255	FIX	
WO-Contrast-before-WO-TIME	WHITE OUT CONTRAST BEFORE WHITE OUT TIME	F123	0~127	127	FIX	
WO-TIME	WHITE OUT	F124	0~31	0	FIX	

SETTING MODE (SECOND STAGE)						
EEPROM ITEMS	FUNCTION	OSD	DATA LENGTH	INITIAL DATA	FIX/ADJ/AUTO	REMARK
A2-ID-Response	SETTING IDENTIFICATION RESPONSE TIME	F125	0(NORMAL) / 1(FAST)	1	FIX	
R-DRI YUV OFFSET	RGB OUTPUT RED GAIN OFFSET (YUV)	F126	-63~0~+63	0	FIX	
B-DRI YUV OFFSET	RGB OUTPUT BLUE GAIN OFFSET (YUV)	F127	-63~0~+63	0	FIX	
R-CUT YUV OFFSET	RGB OUTPUT-RED BIAS LEVEL OFFSET (YUV)	F128	-63~0~+63	0	FIX	
G-CUT YUV OFFSET	RGB OUTPUT-GREEN BIAS LEVEL OFFSET (YUV)	F129	-63~0~+63	0	FIX	
B-CUT YUV OFFSET	RGB OUTPUT-BLUE BIAS LEVEL OFFSET (YUV)	F130	-63~0~+63	0	FIX	
CON YUV OFFSET	SUB-CONTRAS OFFSET (YUV)	F131	-63~0~+63	0	FIX	
BRT YUV OFFSET	SUB-BRIGHT OFFSET (YUV)	F132	-63~0~+63	0	FIX	
SHP ANT-ONII OFFSET	SHARP ANT-ON II OFFSET FOR VIDEO TONE	F133	-31~0~+31	0	FIX	
WAIT MD TIME	SETTING CYCLE PROCESS TIME AT LOW POWER	F134	0~4	2	FIX	
Contrast OFFSET	CONTRAST (PICTURE LEVEL) OFFSET	F135	-63~0~+63	0	FIX	
Bright OFFSET	PICTURE BLACK LEVEL (BRIGHT) OFFSET	F136	-63~0~+63	0	FIX	
CR-PEDESTEL-ADJ	Cr SIGNAL LEVEL ADJUSTMENT	F137	0~15	8	FIX	ONLY FOR M62166
CB-PEDESTEL-ADJ	Cb SIGNAL LEVEL ADJUSTMENT	F138	0~15	8	FIX	ONLY FOR M62166
SIF-PAL	SOUND S/N SWITCH FOR PAL	F139	0(DISABLE) / 1(ENABLE)	0	FIX	ONLY FOR M62166
AV2 BRIGHTNESS OFFSET	AV2 BRIGHT OFFSET	F140	-15~0~+15	+7	FIX	
BASS OFFSET	BASS OFFSET	F141	-30~0~+30	0	FIX	
TREBLE OFFSET	TREBLE OFFSET	F142	-30~0~+30	0	FIX	

OPTION MODE (FOURTH STAGE)				
EEPROM ITEMS	OSD	DATA LENGTH	INITIAL DATA	REMARK
***HOTEL MODE	O01	0 (OFF) / 1 (ON)	0	OPTION SET UP
***HTL-POS	O02	0~99,--	--	OPTION SET UP
***HTL-VOL	O03	0~60,--	--	OPTION SET UP
VIF	O04	0 (38.0) / 1 (38.9)	1	OPTION SET UP
SECAM	O05	0 (DISABLE) / 1 (ENABLE)	1	OPTION SET UP
N443(RF)	O06	0 (DISABLE) / 1 (ENABLE)	1	OPTION SET UP
N358(RF)	O07	0 (DISABLE) / 1 (ENABLE)	1	OPTION SET UP
FORCE-COL	O08	0 (DISABLE) / 1 (ENABLE)	0	OPTION SET UP
S-SYS	O09	1(BG ONLY)~15(ALL)	15	OPTION SET UP
AV	O10	0 (DISABLE) / 1 (ENABLE)	1	OPTION SET UP
AV2	O11	0 (DISABLE) / 1 (ENABLE)	1	OPTION SET UP
YUV	O12	0 (DISABLE) / 1 (ENABLE)	1	OPTION SET UP
S-CTRL	O13	0 (DISABLE) / 1 (ENABLE)	1	OPTION SET UP
NICAM	O14	0 (DISABLE) / 1 (ENABLE)	0	OPTION SET UP
A2	O15	0 (DISABLE) / 1 (ENABLE)	0	OPTION SET UP
TELETEXT	O16	0 (DISABLE) / 1 (ENABLE)	0	OPTION SET UP
BILINGUAL	O17	0 (DISABLE) / 1 (ENABLE)	0	OPTION SET UP
LANGUAGE	O18	1~255	63	OPTION SET UP
SEARCH-SPEED	O19	1(350)~2(450)~3(550)~4(650)~5(750)	3	OPTION SET UP
R/C-MENU	O20	0 (ENABLE) / 1 (DISABLE)	0	OPTION SET UP
LED-CONT	O21	0 (ONE LED) / 1 (TWO LED)	0	OPTION SET UP
S-BOOSTER	O22	0 (DISABLE) / 1 (ENABLE)	0	OPTION SET UP
SHARP-LOGO	O23	0 (DISABLE) / 1 (ENABLE)	0	OPTION SET UP
YUV BKGD ADJ	O24	0 (DISABLE) / 1 (ENABLE)	0	OPTION SET UP
WHITE BACK	O25	0 (DISABLE) / 1 (ENABLE)	1	OPTION SET UP
BOOSTER	O26	0 (DISABLE) / 1 (ENABLE)	0	OPTION SET UP
****MESSAGE	O27	0 (DISABLE) / 1 (ENABLE)	0	OPTION SET UP
****MESSAGE SCROLL TIME	O28	Message Display Timing	0	OPTION SET UP
LNA TUNER	O29	0(Alps) / 1(Matsushita)	0	OPTION SET UP
ONE CHIP IC	O30	0(M61260 & M61262) / 1(M61266)	0	OPTION SET UP
MESSAGE INPUT TIMMING	O31	0~4	2	OPTION SET UP

*** HOTEL MODE

OPERATION OF HOTEL MODE:

WHEN CHANGE SERVICE DATA O01 TO 1, HOTEL MODE IS ON

WHEN HOTEL MODE IS ON,

1. Max volume data is determined by option setting HTL-VOL (O03)
2. Channel position after POWER ON is determined by option setting HOTEL-POS (O02) (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.

4. ADJ ITEM: BUS SET UP (1 ST & 2ND STAGE SERVICE DATA)

SERVICE ITEMS		21JF2-RU	21JF2-GA/SA	21JF2-SF	21JF2-SS
V08	SUB-SHARPNESS	46	46	46	46
F06	S-OUT-LVL	105	105	105	105
F24	COL-AV	+10	0	0	0
F29	COL-ADJ	0	+5	+5	+5
F30	SHP-AV	+1	+1	+1	+1
F36	TINT-AV	0	-3	-3	-3
F37	TINT-ADJ	0	-8	-8	-8
F39	R-R	+8	0	0	0
F40	B-R	-10	-9	-9	-9
F41	R-B	-3	-6	-6	-6
F42	B-B (OFFSET)	+16	+8	+8	+8

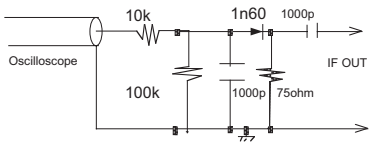
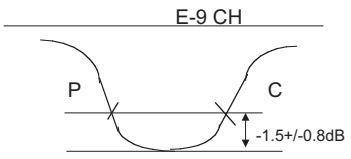
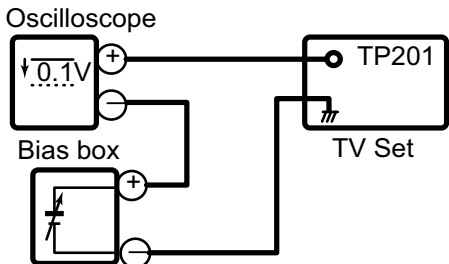
5. ADJ ITEM: OPTION SET UP (4TH STAGE SERVICE DATA)

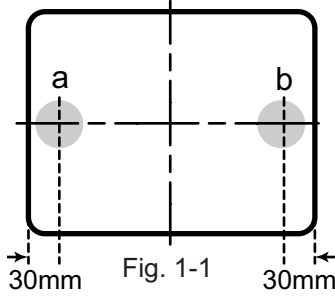
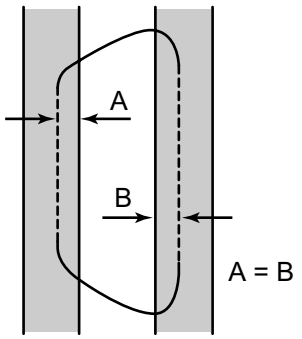
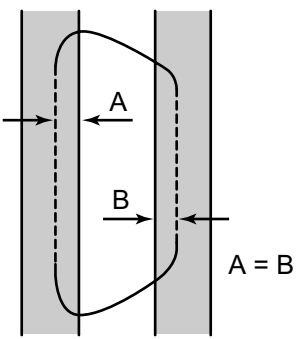
SERVICE ITEMS		21JF2-RU	21JF2-GA/SA	21JF2-SF	21JF2-SS
O01	HTL MODE 0 (OFF) / 1 (ON)	0	0	0	0
O02	HTL-POS 0~99,--	--	--	--	--
O03	HTL-VOL 0~60,--	--	--	--	--
O04	VIF 0 (38.0) / 1 (38.9)	1	1	1	1
O05	SECAM 0 (DISABLE) / 1 (ENABLE)	1	1	1	1
O06	N443(RF) 0 (DISABLE) / 1 (ENABLE)	1	1	1	1
O07	N358(RF) 0 (DISABLE) / 1 (ENABLE)	0	0	0	0
O08	FORCE-COL 0 (DISABLE) / 1 (ENABLE)	0	0	0	0
O09	S-SYS 1(BG ONLY)~15(ALL)	7	7	7	7
O10	AV 0 (DISABLE) / 1 (ENABLE)	1	1	1	1
O11	AV2 0 (DISABLE) / 1 (ENABLE)	1	1	1	1
O12	YUV 0 (DISABLE) / 1 (ENABLE)	0	0	0	0
O13	S-CTRL 0 (DISABLE) / 1 (ENABLE)	0	0	0	0
O14	NICAM 0 (DISABLE) / 1 (ENABLE)	0	0	0	0
O15	A2 0 (DISABLE) / 1 (ENABLE)	0	0	0	0
O16	TEXT 0 (DISABLE) / 1 (ENABLE)	0	0	0	0
O17	BIL 0 (DISABLE) / 1 (ENABLE)	0	0	0	0
O18	LANG 1~255	9	55	63	63
O19	SEARCH-SP 1(350)~2(450)~3(550)~4(650)~5(750)	3	3	3	3
O20	R/C MENU 0 (ENABLE) / 1 (DISABLE)	1	1	1	1
O21	LED-CONT 0 (ONE LED) / 1 (TWO LED)	0	0	0	0
O22	S-BOOSTER 0 (DISABLE) / 1 (ENABLE)	0	0	0	0
O23	SHARP-LOGO 0 (DISABLE) / 1 (ENABLE)	0	0	0	0
O24	YUV BKGD ADJ 0 (DISABLE) / 1 (ENABLE)	0	0	0	0
O25	WHITE BACK 0 (DISABLE) / 1 (ENABLE)	0	0	0	0
O26	BOOSTER 0 (DISABLE) / 1 (ENABLE)	0	0	0	0
O27	MESSAGE 0 (DISABLE) / 1 (ENABLE)	0	0	0	0
O28	MESSAGE SCROLL TIME 0 ~ 20	0	0	0	0
O29	LNA TUNER 0(AIps) / 1(Matsushita)	0	0	0	0
O30	ONE CHIP IC 0(M61260 & M61262) / 1(M61266)	0	0	0	0
O31	MSG IN TM	2	2	2	2

[2] ADJUSTMENT

ADJUSTMENT PRECAUTION: Makesure TV Set is in "Normal Condition" before switch to Service Mode for Adjustment.

1. PIF ADJUSTMENT

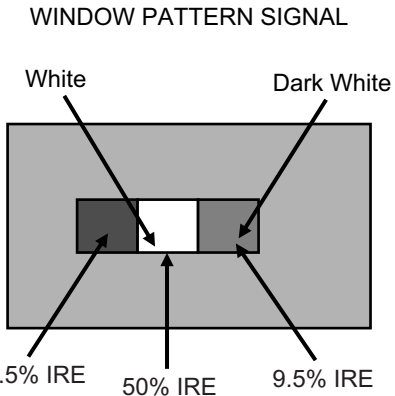
No.	Adjustment point	Adjustment procedure/conditions	Waveform and others
1	<p>Tuner IFT (PRESET)</p>	<ol style="list-style-type: none"> 1. Get the tuner ready to receive the CH. E - 9 signal, but with no signal input. Adjust the PLL data. 2. Connect the sweep generator's output cable to the tuner antenna. (RF SWEEP) 3. Adjust the sweep generator's to 80dBμV. 4. 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). 5. Set the RF AGC to 0 - 6 V with no saturation with the waveform. 6. Adjust the tuner IF coil to obtain the waveform as shown in Fig. 2. <p>Note: Be sure to keep the tuner cover in position during this adjustment.</p>	 <p>Fig.1</p>  <p>Fig.2</p>
2	<p>RF-AGC TAKE OVER POINT ADJUSTMENT (I²C BUS CONTROL)</p> <p>(AUTO & MANUAL ADJ)</p>	<ol style="list-style-type: none"> 1. Receive "PAL COLOUR BAR" signal. <ul style="list-style-type: none"> • Signal Strength: 56 ± 1 dBμV (75 ohm open) 2. Connect the oscilloscope to TP201 (Tuner's AGC Terminal) as shown in Fig. 3-1.  <p>Fig. 3-1</p> <ul style="list-style-type: none"> • Bias box: About 4.5 V <ol style="list-style-type: none"> 3. 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. 4. Change the antenna input signal to 63~67dBμV, and make sure there is no noise. 5. Turn up the input signal to 90~95 dBμV to be sure that there is no cross modulation beat. 	<p>* for Auto ADJ</p> <ol style="list-style-type: none"> 1)Receive "PAL COLOUR BAR" signal. signal strength: 56 ± 1dBμV(75 ohm open) 1)Go to service mode. 2)Go to service data V01, press R/C to operate auto key (Hex C1) and confirm the 'OK' display on the screen. 3)If appear NG, increase data some step and pls repeat step 2. 4)Proceed step 4 & 5 in manual mode.

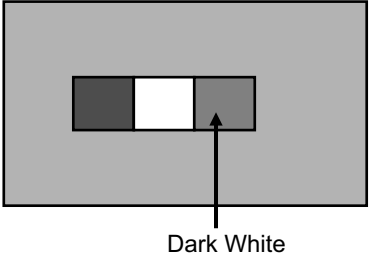
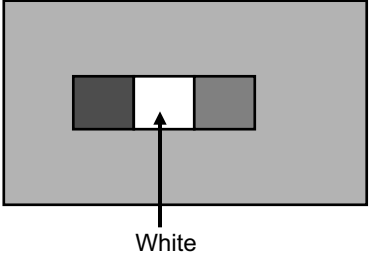
No.	Adjustment point	Adjustment procedure/conditions	Waveform and others
1	<p>PURITY ADJ.</p>	<ol style="list-style-type: none"> 1. Receive the GREEN-ONLY signal. Adjust the beam current to $\sim 700 \mu\text{A}$. 2. Degauss the CRT enough with the degaussing coil. Note: Follow the Job Instruction Sheet to adjust the magnetic field. (Reference: page 3-6) 3. Maintain the purity magnet at the zero magnetic field and keep the static convergence roughly adjusted. 4. Observe the points a, b, as shown in Fig. 1-1 through the microscope. Adjust the landings to A rank requirement. 5. Orient the raster rotation to 0 eastward. 6. Tighten up the deflection coil screws. • Tightening torque: $108 \pm 20 \text{ N}$ ($11 \pm 2 \text{ kgf}$) 7. Make sure the CRT corners landing meet the A rank requirements. If not, stick the magnet sheet to correct it. <p>Note: This adjustment must be done after warming up the unit for 30 minutes or longer with a beam current over $700 \mu\text{A}$.</p> <p>Note: Set to service mode by remote controller 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> <pre> graph LR A[GREEN ONLY] --> B[BLUE ONLY] B --> C[RED ONLY] C --> D[Signal-colour screen cleared] D --> A </pre>	 <p>Fig. 1-1</p>  <p>Fig. 1-2 Rank "A" (on the right of the CRT)</p>  <p>Fig. 1-3 Rank "A" (on the left of the CRT)</p> <p>* Press R/C RGB key for 1 second in NORMAL MODE, the colour will change to RGB mono colour mode.</p>

3. CONVERGENCE ADJUSTMENT

No.	Adjustment point	Adjustment procedure/conditions	Waveform and others
1	<p>CONVERGENCE ADJ. (To be done after the purity adjustment.)</p>	<p>1. Receive the "Crosshatch Pattern" signal. 2. Using the remote controller, call NORMAL mode.</p> <p>Static convergence</p> <p>1. Turn the 4-pole magnet to a proper opening angle in order to superpose the blue and red colours. 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>Dynamic convergence</p> <p>1. Adjust the convergence on the fringes of the screen in the following steps. a) Fig. a: Drive the wedge at point "a" and swing the deflection coil upward. b) Fig. b: Drive the wedge at point "b" and "c" and swing the deflection coil downward. c) Fig. c: Drive the "c" wedge deeper and swing the deflection coil rightward. 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. 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 data-bbox="597 1234 998 1549" data-label="Diagram"> </div>	<div data-bbox="1198 247 1469 436" data-label="Diagram"> <p>Fig. a</p> </div> <div data-bbox="1198 489 1469 678" data-label="Diagram"> <p>Fig. b</p> </div> <div data-bbox="1166 730 1445 919" data-label="Diagram"> <p>Fig. c</p> </div> <div data-bbox="1166 951 1445 1140" data-label="Diagram"> <p>Fig. d</p> </div> <div data-bbox="1125 1213 1526 1518" data-label="Diagram"> </div>

No.	Adjustment point	Adjustment procedure/conditions	Waveform and others
1	H-VCO ADJ (I²C 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 ± 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 (I²C 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 ± 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.	This adjustment must be done after aging at least 3 minutes.
3	S-TRAP fo ADJ (I²C 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.	

No.	Adjustment point	Adjustment procedure/conditions	Waveform and others																				
1	SCREEN ADJUSTMENT (I²C 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 S-Mute (Hex E8), R-D auto switch to 63, B-D auto switch to 63, R-C auto switch to 127, G-C auto switch to 127, B-C auto switch to 127, Sub-brightness V06 auto switch to 127. Y-mute & Vertical off, screen will be in vertical cut-off 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 & G-C & B-C, fix the data of the color appear in cut-off line and adj the other two cut-off data (Note 1) so that cut-off line color become white.</p> <p>5) Turn the screen VR of FBT so that cut-off line just disappear and use R/C by pressing key S-Mute (Hex E8) to disable the Y-mute & V-cut so that picture appear in normal mode.</p>	<table border="0"> <tr> <td>R-CUTOFF (R-C) UP</td> <td>RC key "1" (HEX 80)</td> </tr> <tr> <td>R-CUTOFF (R-C) DOWN</td> <td>RC key "4" (HEX 20)</td> </tr> <tr> <td>G-CUTOFF (G-C) UP</td> <td>RC key "2" (HEX 40)</td> </tr> <tr> <td>G-CUTOFF (G-C) DOWN</td> <td>RC key "5" (HEX A0)</td> </tr> <tr> <td>B-CUTOFF (B-C) UP</td> <td>RC key "3" (HEX C0)</td> </tr> <tr> <td>B-CUTOFF (B-C) DOWN</td> <td>RC key "6" (HEX 60)</td> </tr> <tr> <td>R-DRIVE (R-D) UP</td> <td>RC key "7" (HEX E0)</td> </tr> <tr> <td>R-DRIVE (R-D) DOWN</td> <td>RC key "Flashback" (HEX E4)</td> </tr> <tr> <td>B-DRIVE (B-D) UP</td> <td>RC key "8" (HEX 10)</td> </tr> <tr> <td>B-DRIVE (B-D) DOWN</td> <td>RC key "0" (HEX 50)</td> </tr> </table>	R-CUTOFF (R-C) UP	RC key "1" (HEX 80)	R-CUTOFF (R-C) DOWN	RC key "4" (HEX 20)	G-CUTOFF (G-C) UP	RC key "2" (HEX 40)	G-CUTOFF (G-C) DOWN	RC key "5" (HEX A0)	B-CUTOFF (B-C) UP	RC key "3" (HEX C0)	B-CUTOFF (B-C) DOWN	RC key "6" (HEX 60)	R-DRIVE (R-D) UP	RC key "7" (HEX E0)	R-DRIVE (R-D) DOWN	RC key "Flashback" (HEX E4)	B-DRIVE (B-D) UP	RC key "8" (HEX 10)	B-DRIVE (B-D) DOWN	RC key "0" (HEX 50)
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B-DRIVE (B-D) DOWN	RC key "0" (HEX 50)																						
2	WHITE BALANCE ADJ (to be done after screen adj) (I²C BUS CONTROL)	<p>1) WHITE (HIGH BEAM) (In Window Pattern Signal) First use Minolta Color Analyzer CA100, let the gun point at Dark White position (as drawing attach), Adj V06 until LUMINANCE Y become 5 cd/m², then let the gun point at White position (as drawing attach), Adj V04 until LUMINANCE Y become: 160 cd/m². Adj the R-D & B-D until the axis of color temperature become</p> <table border="0"> <tr> <td>7500°K</td> <td>X : 300</td> </tr> <tr> <td></td> <td>Y : 310</td> </tr> <tr> <td>12300°K</td> <td>X : 272</td> </tr> <tr> <td></td> <td>Y : 275</td> </tr> <tr> <td>18000°K</td> <td>X : 255</td> </tr> <tr> <td></td> <td>Y : 255</td> </tr> </table> <p>2) DARK WHITE (LOW BEAM) (In Window Pattern Signal) Let the gun point at Dark White position, if the color temperature data shift away from the data adjusted in step 1, adjust R-C, G-C & B-C but between them, first color appears in Screen adj item 1)-4 is fixed, adj the other two so that to obtain the similar axis as above. ** Repeat step 1 & 2 to get a regulated position</p>	7500°K	X : 300		Y : 310	12300°K	X : 272		Y : 275	18000°K	X : 255		Y : 255	<p>WINDOW PATTERN SIGNAL</p>  <p>*Note : Signal using W/B Pattern Generator SX-1006 (IWATSU) or equivalent. Window Pattern Signal output level are as above:</p>								
7500°K	X : 300																						
	Y : 310																						
12300°K	X : 272																						
	Y : 275																						
18000°K	X : 255																						
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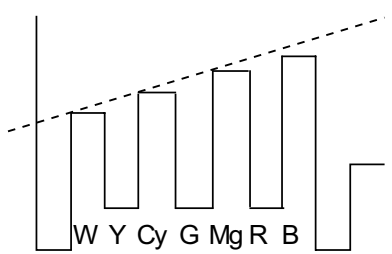
No.	Adjustment point	Adjustment procedure/conditions	Waveform and others
3	SUB-BRIGHTNESS (to be done after screen, white balance adj) (I ² C BUS CONTROL)	1) In Window Pattern Signal condition. 2) Using Minolta Color Analyzer CA-100, let the gun point at Dark White position (as attach drawing), adjust V06 Bus data until LUMINANCE Y = 3 ± 0.5 cd/m² .	WINDOW PATTERN SIGNAL 
4	SUB-CONTRAST (to be done after screen, white balance adj, sub-brightness adj) (I ² C BUS CONTROL)	1) In Window Pattern Signal condition. 2) Using Minolta Color Analyzer CA-100, let the gun point at White position (as attach drawing), adjust V04 Bus data until LUMINANCE Y = 160 ± 10cd/m²	WINDOW PATTERN SIGNAL 
5	Beam Current Check	1) Receive the "Monoscope Pattern" signal. 2) Press R/C to set Picture NORMAL condition. 3) Connect the DC miliammeter between TP 603 (+) & TP 602 (-). (Full Scale: 3mA Range) 4) Beam current must be within 1000 ± 100 μA .	

6. HORIZONTAL, VERTICAL, DEFLECTION LOOP and FOCUS ADJUSTMENT

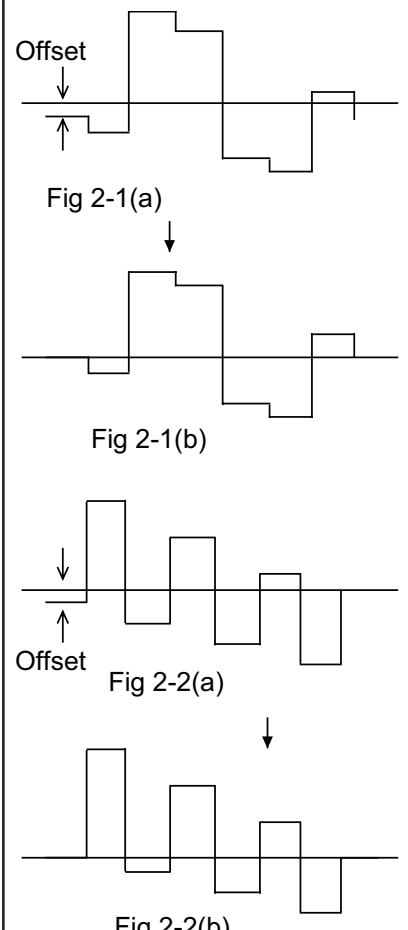
No.	Adjustment point	Adjustment procedure/conditions	Waveform and others
1	H-SHIFT (I ² C BUS CONTROL) (to be done after purity adj)	1) Receive Monoscope Pattern Signal (PAL 50 Hz) 2) Choose the service data V13 . 3) Adjust the V13 bus data to have a balance position to spec of A=B (as attach drawing) 4) If cannot make it to A=B , adjust from the best point so that B slightly smaller than A .	
2	V-SHIFT (I ² 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. Note: B line (Monoscope middle line) must same or nearest higher position to the A mark (Tube middle mark), refer to the attach drawing.	Figure:
3	V-SIZE (I ² 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 ± 1.5 % Caution1: Pls aging TV more than 10 minutes before adjustment.	
4	SUB-SHARPNESS	1) Confirm Service data V08 is 46 .	
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.	

7. PAL CHROMA ADJUSTMENT

No.	Adjustment point	Adjustment procedure/conditions	Waveform and others
1	SUB COLOUR (I ² C BUS CONTROL) (to be done after sub-picture, sub-tint adj)	1) Receive the "PAL Colour Bar" signal. 2) Press R/C to set Picture Normal condition. 3) Connect the oscilloscope to R-Amp Transistor Base(TP 851). Range : 100mV/Div (AC) (Using 10:1 Probe) Sweep Time : 10 μ sec/Div 4) Using the R/C call V05 in SERVICE mode. Adjust V05 bus data, so that the 75% White & Red portions of PAL Colour Bar be at the same level shown as Fig 1-1. 5) Clear the SERVICE mode.	<p>Fig. 1-1</p>

No.	Adjustment point	Adjustment procedure/conditions	Waveform and others
1	SUB-TINT (I²C BUS CONTROL)	1) Receive the "NTSC3.58 Colour Bar" signal thru AV in. 2) Connect the oscilloscope to B-Amp Transistor Base (TP853). ● Range : 100mV/Div. (AC)(Use Probe 10:1) ● Sweep time : 10 μsec/Div. 3) In Service mode, go to V07 , press R/C Y-mute(Hex E4) or FLASHBACK Key . 4) Call the " V07 " data in service mode. Adjust the " V07 " bus data to obtain the waveform shown as Fig. 1-1. 5) Disable Y-Mute by pressing key(Hex E4) or FLASHBACK , then clear the SERVICE mode.	 <p style="text-align: center;">Fig. 1-1</p>

9. SECAM CHROMA ADJUSTMENT

No.	Adjustment point	Adjustment procedure/conditions	Waveform and others
1	SECAM BLACK LEVEL R-Y/B-Y (I²C BUS CONTROL)	1) Receive "SECAM COLOUR BAR" signal. 2) In the service mode, select service data V14 . 3) Connect oscilloscope to TP 801 . ● Range : 20mV/Div. (AC)(Use Probe 10:1) ● Sweep time : 20 μsec/Div. 4) Adjust the V14 so that the offset of R-Y is minimum, shown in Fig 2-1(b) , it means adjust the offset of between No signal line and Signal line to minimum. 5) In the service mode, select service data V15 . 6) Connect oscilloscope to TP 801 . ● Range : 20mV/Div. (AC)(Use Probe 10:1) ● Sweep time : 20 μsec/Div. 7) Adjust the V15 so that the offset of B-Y to minimum, shown in Fig 2-2(b) , it means adjust the offset of between No signal line and Signal line to minimum.	 <p style="text-align: center;">Offset</p> <p style="text-align: center;">Fig 2-1(a)</p> <p style="text-align: center;">Fig 2-1(b)</p> <p style="text-align: center;">Offset</p> <p style="text-align: center;">Fig 2-2(a)</p> <p style="text-align: center;">Fig 2-2(b)</p>

10. PROTECTOR OPERATION CHECKING

No.	Adjustment point	Adjustment procedure/conditions	Waveform and others
1	BEAM PROTECTOR	1) Receive "Monoscope Pattern" signal. 2) Set CONTRAST MAX. 3) Set BRIGHT MAX. 4) During the Collector & Emitter of Q853/4/5 short, make sure the protector ON and switch to standby mode.	* Select one of Q853/4/5 to do each short.
2	H, V PROTECTOR	1) Receive "Monoscope Pattern" signal. 2) Connect output of Bias Box to D602 cathode (C602 positive). 3) Set voltage of Bias Box to 18V and make sure the protector is not working. 4) Set voltage of Bias Box to 27V , and make sure the protector is working.	
3	OTHER PROTECTOR	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)	

11. A/V INPUT, OUTPUT CHECKING

No.	Adjustment point	Adjustment procedure/conditions	Waveform and others
1	VIDEO AND AUDIO OUTPUT CHECK	1) Receive the "PAL Color Bar" signal (100% White Color Bar, Sound 400 Hz 100% Mod). 2) Terminate the Video output with a 75 ohm impedance. Make sure the output is as specified (1.0 Vp-p ± 3 dB). 3) Terminate the Audio output with a 10K ohm impedance. Make sure the O/P is as specified (1.5 Vp-p ± 3 dB).	
2	VIDEO AND AUDIO INPUT CHECK	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.	

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 "Colour 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 or SOUND Mode, and the NORMAL key is pressed, all the settings will be preset to normal setting accordingly. (Normal setting value for every mode) PICTURE MODE CONTRAST : MAX COLOUR : CENTER BRIGHTNESS : CENTER TINT : CENTER SHARPNESS : CENTER WHITE TEMP : CENTER	In NORMAL Mode, when press NORMAL key, will appear NORMAL OSD and all setting PICTURE, functions set to NORMAL.
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 back ground will change to (shift right) bluish and (shift left) reddish.	

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 COLOR modes except PAL, check the COLOUR is not working properly. Then, select the "PAL" mode. Check again its colour so that it is working properly. 2)Receive "SECAM COLOUR BAR" signal, press MENU, choose CH-SETTING to select COLOR modes except SECAM, check the COLOUR is not working properly. Then, select the "SECAM" mode. Check again its colour so that it is working properly. 3)Receive "NTSC 4.43" signal, press MENU, choose CH-SETTING to select COLOR modes except N443, check the COLOUR is not working properly. Then, select the N443 mode. Check again its colour so that it is working properly. 4)Receive "NTSC 3.58" signal thru AV, press MENU, choose CH-SETTING to select COLOR 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	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.																																																	
11	SOUND SYSTEM	1)Receive "PAL-D/K" signal, press MENU, choose CH-SETTING then go into SOUND mode to select B/G, I, M. Check the sound output is not working properly. Select D/K and check the sound output to make sure it is working properly. 2)Receive "PAL-I" signal, press MENU, choose CH-SETTING then go into SOUND mode to select B/G, D/K, M. Check the sound output is not working properly. Select I and check the sound output to make sure it is working properly. 3)Receive "PAL-B/G" signal, press MENU, choose CH-SETTING then go into SOUND mode to select I, D/K, M. Check the sound output is not working properly. Select B/G and check the sound output to make sure it is working properly.																																																	
12	OSD LANGUAGE QUANTITY CHECK	1)Check OSD LANGUAGE quantity and type for respect model. <table border="1" data-bbox="456 1619 1386 1824"> <thead> <tr> <th>MODEL</th> <th>QUANTITY</th> <th>ENGLISH</th> <th>RUSSIAN</th> <th>CHINESE</th> <th>FRENCH</th> <th>ARABIC</th> <th>MALAY</th> </tr> </thead> <tbody> <tr> <td>21JF2-RU</td> <td>2</td> <td>○</td> <td>○</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>21JF2-GA</td> <td>5</td> <td>○</td> <td>-</td> <td>○</td> <td>○</td> <td>○</td> <td>○</td> </tr> <tr> <td>21JF2-SA</td> <td>5</td> <td>○</td> <td>-</td> <td>○</td> <td>○</td> <td>○</td> <td>○</td> </tr> <tr> <td>21JF2-SF</td> <td>6</td> <td>○</td> <td>○</td> <td>○</td> <td>○</td> <td>○</td> <td>○</td> </tr> <tr> <td>21JF2-SS</td> <td>6</td> <td>○</td> <td>○</td> <td>○</td> <td>○</td> <td>○</td> <td>○</td> </tr> </tbody> </table>	MODEL	QUANTITY	ENGLISH	RUSSIAN	CHINESE	FRENCH	ARABIC	MALAY	21JF2-RU	2	○	○	-	-	-	-	21JF2-GA	5	○	-	○	○	○	○	21JF2-SA	5	○	-	○	○	○	○	21JF2-SF	6	○	○	○	○	○	○	21JF2-SS	6	○	○	○	○	○	○	
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21JF2-SA	5	○	-	○	○	○	○																																												
21JF2-SF	6	○	○	○	○	○	○																																												
21JF2-SS	6	○	○	○	○	○	○																																												

13. 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 ($\pm 50\text{kHz}$ Dev). 2) Maximum volume, and check the headphone output with 400Hz sound and no sound output from speaker.	

14. 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 operate correctly.	

15. ROM CORRECTION CHECKING

No.	Adjustment point	Adjustment procedure/conditions	Waveform and others																																																			
1	ROM CORRECTION CHECK	<p>1) Go to SERVICE mode, press "MENU" key until the SERVICE mode display as in Figure 1 appeared.*</p> <p>2) Check the ROM CORRECTION status by monitoring the screen, follow the model's setting.</p> <table border="1"> <thead> <tr> <th>MODEL</th> <th>Micon Version</th> <th>CHK1</th> <th>CHK2</th> <th>FIGURE</th> </tr> </thead> <tbody> <tr> <td>21JF2-RU</td> <td>RH-IXB226WJZZ(Software Ver. 1.0)</td> <td>ACT</td> <td>ACT</td> <td></td> </tr> <tr> <td>21JF2-GA</td> <td>RH-IXB226WJZZ(Software Ver. 1.0)</td> <td>ACT</td> <td>ACT</td> <td></td> </tr> <tr> <td>21JF2-SA</td> <td>RH-IXB226WJZZ(Software Ver. 1.0)</td> <td>ACT</td> <td>ACT</td> <td></td> </tr> <tr> <td>21JF2-SF</td> <td>RH-IXB226WJZZ(Software Ver. 1.0)</td> <td>ACT</td> <td>ACT</td> <td></td> </tr> <tr> <td>21JF2-SS</td> <td>RH-IXB226WJZZ(Software Ver. 1.0)</td> <td>ACT</td> <td>ACT</td> <td></td> </tr> </tbody> </table> <p>CHK1: AC-DET protection loop is to be exited when AD3 (Prot) is detected HIGH so that protection mode can perform properly</p> <p>CHK2: During OSD interrupt, OSD vertical position is adjusted.</p>	MODEL	Micon Version	CHK1	CHK2	FIGURE	21JF2-RU	RH-IXB226WJZZ(Software Ver. 1.0)	ACT	ACT		21JF2-GA	RH-IXB226WJZZ(Software Ver. 1.0)	ACT	ACT		21JF2-SA	RH-IXB226WJZZ(Software Ver. 1.0)	ACT	ACT		21JF2-SF	RH-IXB226WJZZ(Software Ver. 1.0)	ACT	ACT		21JF2-SS	RH-IXB226WJZZ(Software Ver. 1.0)	ACT	ACT		<p>* OTHERS:</p> <table border="1"> <thead> <tr> <th colspan="3">INFO</th> </tr> </thead> <tbody> <tr> <td>SLV1</td> <td>0</td> <td>0</td> </tr> <tr> <td>SLV2</td> <td>0</td> <td>0</td> </tr> <tr> <td>SLV4</td> <td>0</td> <td>0</td> </tr> <tr> <td>SLV7</td> <td>0</td> <td>0</td> </tr> <tr> <td>MICON : ZZ</td> <td>CHK1 : ACT</td> <td></td> </tr> <tr> <td>SOFT : 1.0</td> <td>CHK2 : ACT</td> <td></td> </tr> </tbody> </table> <p>Figure 1</p>	INFO			SLV1	0	0	SLV2	0	0	SLV4	0	0	SLV7	0	0	MICON : ZZ	CHK1 : ACT		SOFT : 1.0	CHK2 : ACT	
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21JF2-RU	RH-IXB226WJZZ(Software Ver. 1.0)	ACT	ACT																																																			
21JF2-GA	RH-IXB226WJZZ(Software Ver. 1.0)	ACT	ACT																																																			
21JF2-SA	RH-IXB226WJZZ(Software Ver. 1.0)	ACT	ACT																																																			
21JF2-SF	RH-IXB226WJZZ(Software Ver. 1.0)	ACT	ACT																																																			
21JF2-SS	RH-IXB226WJZZ(Software Ver. 1.0)	ACT	ACT																																																			
INFO																																																						
SLV1	0	0																																																				
SLV2	0	0																																																				
SLV4	0	0																																																				
SLV7	0	0																																																				
MICON : ZZ	CHK1 : ACT																																																					
SOFT : 1.0	CHK2 : ACT																																																					

16. ROM CORRECTION DATA

MCU:	M37160MAH-052FP		
Soft Ver.	V1.00H		
ROMCORRECT1...	AC-DET protection loop is to be exited when AD3(Prot) is detected HIGH so that protection mode can perform properly		
ROMCORRECT2...	During OSD interrupt, OSD vertical position is adjusted.		
EEPROM Data			
Slave	Sub.	Data	Comment
\$A2	\$76	A0	ROMCORRECT1 Permission
\$A2	\$77	92	ROMCORRECT1 Address(H)
\$A2	\$78	14	ROMCORRECT1 Address(L)
\$A2	\$79	0F	ROMCORRECT1 Code length
\$A2	\$7A	07	ROMCORRECT1 Checksum
\$A2	\$7B	A0	ROMCORRECT2 Permission
\$A2	\$7C	73	ROMCORRECT2 Address(H)
\$A2	\$7D	9A	ROMCORRECT2 Address(L)
\$A2	\$7E	1F	ROMCORRECT2 Code length
\$A2	\$7F	47	ROMCORRECT2 Checksum
\$A2	\$80-\$87	A2 40 A9 02 20 D2 F3 90	ROMCORRECT1 Data
\$A2	\$88-\$8F	03 4C CD 91 4C 17 92 FF	ROMCORRECT1 Data
\$A2	\$90-\$97	FF FF FF FF FF FF FF FF	ROMCORRECT1 Data
\$A2	\$98-\$9F	FF FF FF FF FF FF FF FF	ROMCORRECT1 Data
\$A2	\$A0-\$A7	86 BF 85 8E A6 82 E0 0F	ROMCORRECT2 Data
\$A2	\$A8-\$AF	F0 0E 18 69 0A 47 03 08	ROMCORRECT2 Data
\$A2	\$B0-\$B7	B0 04 C9 D8 90 02 A5 8E	ROMCORRECT2 Data
\$A2	\$B8-\$BF	A6 BF 95 D4 4C 9C 73 FF	ROMCORRECT2 Data

NOTE: Add ROM Correction for countermeasure for data change when AGING and AC POWER OFF. There is possibility of changing background color if no implement ROM Correction when AGING and AC power OFF.

CHAPTER 4. MEMORY MAP

[1] MEMORY MAP

SLAVE ADDRESS : A0(00-FF) A2(100-1FF) A4(200-2FF) A6(300-3FF) A8(400-4FF)

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								7B	00-FF							
01	EEPROM INITIALIZATION JUDGEMENT BYTE-1								72	00-FF							
02	EEPROM INITIALIZATION JUDGEMENT BYTE-2								72	00-FF							
03	EEPROM INITIALIZATION JUDGEMENT BYTE-3								76	00-FF							
04	ROM VERSION								00	00-FF							
05	SOFTWARE VERSION (HIGH BYTE)								00	00-FF							
06	SOFTWARE VERSION (LOW BYTE)								46	00-FF							
07																	
08	TUNING FREQUENCY (LOW BYTE)									00-FF							
09	TUNING FREQUENCY (HIGH BYTE)									00-FF							POS 0
0A	TUNING FREQUENCY (LOW BYTE)									00-FF							
0B	TUNING FREQUENCY (HIGH BYTE)									00-FF							POS 1
0C	TUNING FREQUENCY (LOW BYTE)									00-FF							
0D	TUNING FREQUENCY (HIGH BYTE)									00-FF							POS 2
0E	TUNING FREQUENCY (LOW BYTE)									00-FF							
0F	TUNING FREQUENCY (HIGH BYTE)									00-FF							POS 3
10	TUNING FREQUENCY (LOW BYTE)									00-FF							
11	TUNING FREQUENCY (HIGH BYTE)									00-FF							POS 4
12	TUNING FREQUENCY (LOW BYTE)									00-FF							
13	TUNING FREQUENCY (HIGH BYTE)									00-FF							POS 5
14	TUNING FREQUENCY (LOW BYTE)									00-FF							
15	TUNING FREQUENCY (HIGH BYTE)									00-FF							POS 6
16	TUNING FREQUENCY (LOW BYTE)									00-FF							
17	TUNING FREQUENCY (HIGH BYTE)									00-FF							POS 7
18	TUNING FREQUENCY (LOW BYTE)									00-FF							
19	TUNING FREQUENCY (HIGH BYTE)									00-FF							POS 8
1A	TUNING FREQUENCY (LOW BYTE)									00-FF							
1B	TUNING FREQUENCY (HIGH BYTE)									00-FF							POS 9
1C	TUNING FREQUENCY (LOW BYTE)									00-FF							
1D	TUNING FREQUENCY (HIGH BYTE)									00-FF							POS 10
1E	TUNING FREQUENCY (LOW BYTE)									00-FF							
1F	TUNING FREQUENCY (HIGH BYTE)									00-FF							POS 11
20	TUNING FREQUENCY (LOW BYTE)									00-FF							
21	TUNING FREQUENCY (HIGH BYTE)									00-FF							POS 12
22	TUNING FREQUENCY (LOW BYTE)									00-FF							
23	TUNING FREQUENCY (HIGH BYTE)									00-FF							POS 13
24	TUNING FREQUENCY (LOW BYTE)									00-FF							
25	TUNING FREQUENCY (HIGH BYTE)									00-FF							POS 14
26	TUNING FREQUENCY (LOW BYTE)									00-FF							
27	TUNING FREQUENCY (HIGH BYTE)									00-FF							POS 15
28	TUNING FREQUENCY (LOW BYTE)									00-FF							
29	TUNING FREQUENCY (HIGH BYTE)									00-FF							POS 16
2A	TUNING FREQUENCY (LOW BYTE)									00-FF							
2B	TUNING FREQUENCY (HIGH BYTE)									00-FF							POS 17
2C	TUNING FREQUENCY (LOW BYTE)									00-FF							
2D	TUNING FREQUENCY (HIGH BYTE)									00-FF							POS 18
2E	TUNING FREQUENCY (LOW BYTE)									00-FF							
2F	TUNING FREQUENCY (HIGH BYTE)									00-FF							POS 19
30	TUNING FREQUENCY (LOW BYTE)									00-FF							
31	TUNING FREQUENCY (HIGH BYTE)									00-FF							POS 20
32	TUNING FREQUENCY (LOW BYTE)									00-FF							
33	TUNING FREQUENCY (HIGH BYTE)									00-FF							POS 21
34	TUNING FREQUENCY (LOW BYTE)									00-FF							
35	TUNING FREQUENCY (HIGH BYTE)									00-FF							POS 22
36	TUNING FREQUENCY (LOW BYTE)									00-FF							
37	TUNING FREQUENCY (HIGH BYTE)									00-FF							POS 23
38	TUNING FREQUENCY (LOW BYTE)									00-FF							
39	TUNING FREQUENCY (HIGH BYTE)									00-FF							POS 24
3A	TUNING FREQUENCY (LOW BYTE)									00-FF							
3B	TUNING FREQUENCY (HIGH BYTE)									00-FF							POS 25
3C	TUNING FREQUENCY (LOW BYTE)									00-FF							
3D	TUNING FREQUENCY (HIGH BYTE)									00-FF							POS 26
3E	TUNING FREQUENCY (LOW BYTE)									00-FF							
3F	TUNING FREQUENCY (HIGH BYTE)									00-FF							POS 27
MODEL									MODEL								
LETTER NO.									LETTER NO.								

MEMORY MAP (Continued)

SLAVE ADDRESS : A0(00-FF) A2(100-1FF) A4(200-2FF) A6(300-3FF) A8(400-4FF)

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
40	TUNING FREQUENCY (LOW BYTE)								00-FF								
41	TUNING FREQUENCY (HIGH BYTE)								00-FF								POS 28
42	TUNING FREQUENCY (LOW BYTE)								00-FF								
43	TUNING FREQUENCY (HIGH BYTE)								00-FF								POS 29
44	TUNING FREQUENCY (LOW BYTE)								00-FF								
45	TUNING FREQUENCY (HIGH BYTE)								00-FF								POS 30
46	TUNING FREQUENCY (LOW BYTE)								00-FF								
47	TUNING FREQUENCY (HIGH BYTE)								00-FF								POS 31
48	TUNING FREQUENCY (LOW BYTE)								00-FF								
49	TUNING FREQUENCY (HIGH BYTE)								00-FF								POS 32
4A	TUNING FREQUENCY (LOW BYTE)								00-FF								
4B	TUNING FREQUENCY (HIGH BYTE)								00-FF								POS 33
4C	TUNING FREQUENCY (LOW BYTE)								00-FF								
4D	TUNING FREQUENCY (HIGH BYTE)								00-FF								POS 34
4E	TUNING FREQUENCY (LOW BYTE)								00-FF								
4F	TUNING FREQUENCY (HIGH BYTE)								00-FF								POS 35
50	TUNING FREQUENCY (LOW BYTE)								00-FF								
51	TUNING FREQUENCY (HIGH BYTE)								00-FF								POS 36
52	TUNING FREQUENCY (LOW BYTE)								00-FF								
53	TUNING FREQUENCY (HIGH BYTE)								00-FF								POS 37
54	TUNING FREQUENCY (LOW BYTE)								00-FF								
55	TUNING FREQUENCY (HIGH BYTE)								00-FF								POS 38
56	TUNING FREQUENCY (LOW BYTE)								00-FF								
57	TUNING FREQUENCY (HIGH BYTE)								00-FF								POS 39
58	TUNING FREQUENCY (LOW BYTE)								00-FF								
59	TUNING FREQUENCY (HIGH BYTE)								00-FF								POS 40
5A	TUNING FREQUENCY (LOW BYTE)								00-FF								
5B	TUNING FREQUENCY (HIGH BYTE)								00-FF								POS 41
5C	TUNING FREQUENCY (LOW BYTE)								00-FF								
5D	TUNING FREQUENCY (HIGH BYTE)								00-FF								POS 42
5E	TUNING FREQUENCY (LOW BYTE)								00-FF								
5F	TUNING FREQUENCY (HIGH BYTE)								00-FF								POS 43
60	TUNING FREQUENCY (LOW BYTE)								00-FF								
61	TUNING FREQUENCY (HIGH BYTE)								00-FF								POS 44
62	TUNING FREQUENCY (LOW BYTE)								00-FF								
63	TUNING FREQUENCY (HIGH BYTE)								00-FF								POS 45
64	TUNING FREQUENCY (LOW BYTE)								00-FF								
65	TUNING FREQUENCY (HIGH BYTE)								00-FF								POS 46
66	TUNING FREQUENCY (LOW BYTE)								00-FF								
67	TUNING FREQUENCY (HIGH BYTE)								00-FF								POS 47
68	TUNING FREQUENCY (LOW BYTE)								00-FF								
69	TUNING FREQUENCY (HIGH BYTE)								00-FF								POS 48
6A	TUNING FREQUENCY (LOW BYTE)								00-FF								
6B	TUNING FREQUENCY (HIGH BYTE)								00-FF								POS 49
6C	TUNING FREQUENCY (LOW BYTE)								00-FF								
6D	TUNING FREQUENCY (HIGH BYTE)								00-FF								POS 50
6E	TUNING FREQUENCY (LOW BYTE)								00-FF								
6F	TUNING FREQUENCY (HIGH BYTE)								00-FF								POS 51
70	TUNING FREQUENCY (LOW BYTE)								00-FF								
71	TUNING FREQUENCY (HIGH BYTE)								00-FF								POS 52
72	TUNING FREQUENCY (LOW BYTE)								00-FF								
73	TUNING FREQUENCY (HIGH BYTE)								00-FF								POS 53
74	TUNING FREQUENCY (LOW BYTE)								00-FF								
75	TUNING FREQUENCY (HIGH BYTE)								00-FF								POS 54
76	TUNING FREQUENCY (LOW BYTE)								00-FF								
77	TUNING FREQUENCY (HIGH BYTE)								00-FF								POS 55
78	TUNING FREQUENCY (LOW BYTE)								00-FF								
79	TUNING FREQUENCY (HIGH BYTE)								00-FF								POS 56
7A	TUNING FREQUENCY (LOW BYTE)								00-FF								
7B	TUNING FREQUENCY (HIGH BYTE)								00-FF								POS 57
7C	TUNING FREQUENCY (LOW BYTE)								00-FF								
7D	TUNING FREQUENCY (HIGH BYTE)								00-FF								POS 58
7E	TUNING FREQUENCY (LOW BYTE)								00-FF								
7F	TUNING FREQUENCY (HIGH BYTE)								00-FF								POS 59
MODEL								MODEL									
LETTER NO.								LETTER NO.									

SLAVE ADDRESS : A0(00-FF) A2(100-1FF) A4(200-2FF) A6(300-3FF) A8(400-4FF)

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
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)

SLAVE ADDRESS : A0(00-FF) A2(100-1FF) A4(200-2FF) A6(300-3FF) A8(400-4FF)

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						
C0	TUNING FREQUENCY (LOW BYTE)									00-FF							POS 92				
C1	TUNING FREQUENCY (HIGH BYTE)									00-FF											
C2	TUNING FREQUENCY (LOW BYTE)									00-FF							POS 93				
C3	TUNING FREQUENCY (HIGH BYTE)									00-FF											
C4	TUNING FREQUENCY (LOW BYTE)									00-FF							POS 94				
C5	TUNING FREQUENCY (HIGH BYTE)									00-FF											
C6	TUNING FREQUENCY (LOW BYTE)									00-FF							POS 95				
C7	TUNING FREQUENCY (HIGH BYTE)									00-FF											
C8	TUNING FREQUENCY (LOW BYTE)									00-FF							POS 96				
C9	TUNING FREQUENCY (HIGH BYTE)									00-FF											
CA	TUNING FREQUENCY (LOW BYTE)									00-FF							POS 97				
CB	TUNING FREQUENCY (HIGH BYTE)									00-FF											
CC	TUNING FREQUENCY (LOW BYTE)									00-FF							POS 98				
CD	TUNING FREQUENCY (HIGH BYTE)									00-FF											
CE	TUNING FREQUENCY (LOW BYTE)									00-FF							POS 99				
CF	TUNING FREQUENCY (HIGH BYTE)									00-FF											
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	Message Screen								01	00-01							(1) Add Message Display ON/OFF setting.				
DF	Message Display																				
E0	POS 7	POS 6	POS 5	POS 4	POS 3	POS 2	POS 1	POS 0	FF	00-FF						1= AFT ON, 0=AFT OFF					
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	POS 4	POS 3	POS 2	POS 1	POS 0	01	00-FF						1= SKIP ON, 0=SKIP OFF					
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.													

SLAVE ADDRESS : A0(00-FF) A2(100-1FF) A4(200-2FF) A6(300-3FF) A8(400-4FF)

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

SLAVE ADDRESS : A0(00-FF) A2(100-1FF) A4(200-2FF) A6(300-3FF) A8(400-4FF)

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		
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)

SLAVE ADDRESS : A0(00-FF) A2(100-1FF) A4(200-2FF) A6(300-3FF) A8(400-4FF)

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		
1C0									FF	00-FF							
1C1									FF	00-FF							
1C2									FF	00-FF							
1C3									FF	00-FF							
1C4									FF	00-FF							
1C5									FF	00-FF							
1C6									FF	00-FF							
1C7									FF	00-FF							
1C8									FF	00-FF							
1C9									FF	00-FF							
1CA									FF	00-FF							
1CB									FF	00-FF							
1CC									FF	00-FF							
1CD									FF	00-FF							
1CE									FF	0-FF							
1CF									FF	0-FF							
1D0									FF	0-FF							
1D1									FF	0-FF							
1D2									FF	0-FF							
1D3									FF	0-FF							
1D4									FF	0-FF							
1D5									FF	0-FF							
1D6									FF	0-FF							
1D7									FF	0-FF							
1D8									FF	0-FF							
1D9									FF	0-FF							
1DA									FF	0-FF							
1DB									FF	0-FF							
1DC									FF	0-FF							
1DD									FF	0-FF							
1DE									FF	0-FF							
1DF									FF	0-FF							
1E0									FF	0-FF							
1E1									FF	0-FF							
1E2									FF	0-FF							
1E3									FF	0-FF							
1E4									FF	0-FF							
1E5									FF	0-FF							
1E6									FF	0-FF							
1E7									FF	0-FF							
1E8									FF	0-FF							
1E9									FF	0-FF							
1EA									FF	0-FF							
1EB									FF	0-FF							
1EC									FF	0-FF							
1ED									FF	0-FF							
1EE									FF	0-FF							
1EF									FF	0-FF							
1F0									FF	0-FF							
1F1									FF	0-FF							
1F2									FF	0-FF							
1F3									FF	0-FF							
1F4									FF	0-FF							
1F5									FF	0-FF							
1F6									FF	0-FF							
1F7									FF	0-FF							
1F8									FF	0-FF							
1F9									FF	0-FF							
1FA									FF	0-FF							
1FB									FF	0-FF							
1FC									FF	0-FF							
1FD									FF	0-FF							
1FE									FF	0-FF							
1FF									FF	0-FF							
MODEL								MODEL									
LETTER NO.								LETTER NO.									

1) Add new area for Message Data for Favorite Message Three.

21JF2-RU/GA/SA/SF/SS
MEMORY MAP (Continued)

SLAVE ADDRESS : A0(00-FF) A2(100-1FF) A4(200-2FF) A6(300-3FF) A8(400-4FF)

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									3F	00-7F						(1) New item V25	
21E									3F	00-7F						(1) New item V25	
21F									7F	00-FF						(1) New item V25	
220									7F	00-FF						(1) New item V25	
221									7F	00-FF						(1) New item V25	
222									64	00-7F						(1) New item V26	
223									7F	00-FF						(1) New item V27	
224									20	00-3F							
225									0D	00-1A							
226									20	00-3F							
227									0D	00-1A							
228																	
229																	
22A																	
22B																	
22C									5F	00-7F							
22D									04	00-07							
22E									05	00-07							
22F									05	00-07							
230									07	00-07							
231									05	00-07							
232									05	00-07							
233									06	00-07							
234									06	00-07							
235									07	00-07							
236									06	00-07							
237									06	00-07							
238									06	00-07							
239									29	00-3E							
23A									1F	00-3E							
23B									28	00-3E							
23C									17	00-3E							
23D									18	00-3E							
23E									1F	00-3E							
23F									24	00-3E							
MODEL									MODEL								
LETTER NO.									LETTER NO.								

MEMORY MAP (Continued)

SLAVE ADDRESS : A0(00-FF) A2(100-1FF) A4(200-2FF) A6(300-3FF) A8(400-4FF)

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		
240								SHARPNES-YUV (F31)	1F	00-3E					
241								SHARPNES-PAL (F32)	1F	00-3E					
242								SHARPNES-SECAM (F33)	1A	00-3E					
243								SHARPNES-N443 (F34)	1F	00-3E					
244								SHARPNES-N358 (F35)	1F	00-3E					
245								TINT-AV (F36)	3F	00-7E					
246								TINT-ADJ (F37)	3F	00-7E					
247								TINT-YUV-ADJ (F38)	3F	00-7E					
248								R-R DRIVE (F39)	47	00-7E					
249								B-R DRIVE (F40)	35	00-7E					
24A								R-B DRIVE (F41)	3C	00-7E					
24B								B-B DRIVE (F42)	4C	00-7E					
24C								TRAP (F43)	02	00-03					
24D								TRAP-PAL (F44)	02	00-03					
24E								TRAP-SECAM (F45)	02	00-03					
24F								TRAP-N443 (F46)	02	00-03					
250								TRAP-N358 (F47)	02	00-03					
251								GAMMA (F52)	00	00-03					
252								BS-D/C (F53)	0A	00-0F					
253								SL-TV (F56)	02	00-07					
254								SL-AV (F57)	04	00-07					
255								SL-YUV (F58)	04	00-07					
256								VD2/VD1/AS/FPB-TV (F59)	06	00-0F					
257								VD2/VD1/AS/FPB-AV (F60)	0E	00-0F					
258								VD2/VD1/AS/FPB-YUV (F61)	0E	00-0F					
259								VDL (F62)	00	00-03					
25A								UDL (F63)	00	00-03					
25B								AUTO-SCM-KIL-TV (F64)	01	00-03					
25C								SECAM-BGP (F65)	00	00-03					
25D								TEXT POS-H (F67)	1E	00-3F					
25E								TEXT POS-V (F68)	22	00-3F					(1) No teletext function
25F								OSD-POS (F69)	09	00-7F					
260								SUB-BASS (F72)	06	00-07					
261								SUB-TREBLE (F73)	00	00-07					
262								AGC-ADJ (F74)	00	00-04					
263								AGC-GAIN-ADJUST (F76)	10	00-1F					
264								FM-LEVEL-ADJUST (F77)	0F	00-1E					
265								IGR-LEVEL-ADJUST (F78)	10	00-1E					
266								NICAM-BG-LEVEL-ADJUST (F79)	0D	00-1E					
267								NICAM-I-LEVEL-ADJUST (F80)	12	00-1E					
268								NICAM-DK-LEVEL-ADJUST (F81)	0E	00-1E					
269								NICAM-LOWER-ERROR-LIMIT (F82)	23	00-FF					
26A								NICAM-UPPER-ERROR-LIMIT (F83)	46	00-FF					
26B								IGR-GAIN-ADJUST (F84)	06	00-0D					
26C								FM-ID-SPEED (F85)	01	00-03					
26D								AUTO-SCM-KIL-AV-YUV (F87)	01	00-03					
26E								AFC1-GAIN-TV (F88)	00	00-03					
26F								AFC1-GAIN-AV (F89)	03	00-03					
270								AFC1-GAIN-YUV (F90)	03	00-03					
271								CON-REDUCE (F91)	00	00-02					1. Keep but no use
272								AC-FAIL-WO-BRIGHT (F96)	FF	00-FF					
273								FORCED-SCM-KIL-TV (F97)	02	00-03					
274								FORCED-SCM-KIL-AV-YUV (F98)	02	00-03					
275								VIDEO-DEMUTE-DELAY (F100)	00	00-FF					
276								SOUND-DEMUTE-DELAY (F101)	00	00-FF					
277								MEL1 (F102)	46	00-FF					
278								MEL1 (F103)	96	00-FF					
279								MEL1 (F104)	9C	00-FF					
27A								MEL1 (F105)	A3	00-FF					
27B								MEL1 (F106)	A5	00-FF					
27C								MEL1 (F107)	AA	00-FF					
27D								MEL6 (F108)	B4	1-FF					
27E								S-Start Point (F109)	15	00-3C					
27F								S-Stop Point (F110)	3C	00-3C					
MODEL						MODEL									
LETTER NO.						LETTER NO.									

SLAVE ADDRESS : A0(00-FF) A2(100-1FF) A4(200-2FF) A6(300-3FF) A8(400-4FF)

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					S-Step (F111)			07	00-3C								
281					S-B-BASS (F113)			2D	00-3C								
282					S-B-TREB (F114)			2D	00-3C								
283					S-BASS (F115)			3C	00-3C								
284					S-TREB (F116)			3C	00-3C								
285					WO-Bright-After-WO-TIME (F120)			FF	00-FF								
286					WO-Contrast-After-WO-TIME (F121)			7F	00-7F								
287					WO-Bright-Before-WO-TIME(F122)			FF	00-FF								
288					WO-Contrast-Before-WO-TIME (F123)			7F	00-7F								
289					WO-TIME (F124)			00	00-1F								
28A					R-DRI YUV OFFSET (F126)			3F	00-7E								
28B					B-DRI YUV OFFSET (F127)			3F	00-7E								
28C					R-CUT OFF YUV OFFSET (F128)			3F	00-7E								
28D					G-CUT OFF YUV OFFSET (F129)			3F	00-7E								
28E					B-CUT OFF YUV OFFSET (F130)			3F	00-7E								
28F					CONTRAST YUV OFFSET (F131)			3F	00-7E								
290					BRIGHT YUV OFFSET (F132)			3F	00-7E								
291					SHP ANT ON II OFFSET (F133)			1F	00-3E								
292					WAIT MODE TIME (F134)			02	00-04								
293					CONTRAST OFFSET (F135)			3F	00-7E								
294					BRIGHT OFFSET (F136)			3F	00-7E								
295					CR-PEDESTEL ADJ (F137)			08	00-0F								
296					CB-PEDESTEL ADJ (F138)			08	00-0F								
297					AV-BRIGHTNESS OFFSET (F140)			16	00-1E								
298					BASS OFFSET (F141)			1E	00-1F								
299					TREBLE OFFSET (F142)			1E	00-1F							1) New item for IXB226	
29A																	
29B																	
29C																	
29D																	
29E																	
29F																	
2A0					ABCL-G (F05)	ABCL (F04)	BS OFF (F03)	RGB CLIP (F02)	C.CLIP-LVL (F01)	00	00-1F						
2A1					SHP-G-N3 (F12)	SHP-G-N4 (F11)	SHP-G-SCM (F10)	SHP-G-PAL (F09)	SHP-G (F08)	10	00-1F						
2A2	PLL-CP (F70)	N45 (F66)	OM DET (F55)	BS GAIN (F54)	AFC2 (F51)	V-FREE (F50)	1W-AV (F49)	1W-TV (F48)		82	00-FF						
2A3			Pow-Storage (F112)	R-Y Adj. (F99)	C-ANGLE (F95)	TAKE-OFF-YUV (F94)	TAKE-OFF-AV (F93)	TAKE-OFF-TV (F92)		39	00-3F						
2A4				SIF-PAL (F139)	A2-ID-Response (F125)	V-STD YUV (F119)	V-STD-AV (F118)	V-STD-TV (F117)		08	00-1F						
2A5						NICAM-AUTO-MUTE (F98)	AGC-SW-OFF (F75)	SMALL-SURR (F71)		02	00-07						
2A6	AV2 (O11)	AV (O10)	Forced-Col (O08)	N358-TV (O07)	N443-TV (O06)	SECAM (O05)	VIF (O04)	HOTEL (O01)		DE	00-FF						
2A7	LED-CONT (O21)	R/C MENU (O20)	BIL (O17)	TEXT (O16)	A2 (O15)	NICAM (O14)	S-CTR (O13)	YUV (O12)		03	00-FF						
2A8	LED-Cont Chip (O30)	LNA-TUNER (O29)	MESSAGE (O27)	ANT-BOOSTER (O26)	WHITE BACK (O25)	YUV BKGD (O24)	Sharp-Logo (O23)	S-Booster (O22)		08	00-FF						
2A9					M (O09)	D/K (O09)	I (O09)	B/G (O09)		0F	01-0F						
2AA		Thai (O18)	Malay (O18)	Arabic (O18)	Russian (O18)	France (O18)	Chinese (O18)	English (O18)		3F	01-3F						
2AB						SEARCH SPEED (O19)				03	01-05						
2AC						HOTEL CHANNEL POSITION (O02)				FF	00-63, FF						
2AD						HOTEL VOLUME (O03)				FF	00-3C, FF						
2AE						MESSAGE SCROLL TIME (O28)				00	00-14						
2AF																	
2B0																	
2B1																	
2B2																	
2B3																	
2B4																	
2B5																	
2B6																	
2B7																	
2B8						Inbox Message - Character 65				FF	00-FF						
2B9						Inbox Message - Character 66				FF	00-FF						
2BA						Inbox Message - Character 67				FF	00-FF						
2BB						Inbox Message - Character 68				FF	00-FF						
2BC						Inbox Message - Character 69				FF	00-FF						
2BD						Inbox Message - Character 70				FF	00-FF						
2BE						Inbox Message - Character 71				FF	00-FF						
2BF						Inbox Message - Character 72				FF	00-FF						
MODEL							MODEL										
LETTER NO.										LETTER NO.							

MEMORY MAP (Continued)

SLAVE ADDRESS : A0(00-FF) A2(100-1FF) A4(200-2FF) A6(300-3FF) A8(400-4FF)

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
2C0								FF	0-FF								
2C1								FF	0-FF								
2C2								FF	0-FF								
2C3								FF	0-FF								
2C4								FF	0-FF								
2C5								FF	0-FF								
2C6								FF	0-FF								
2C7								FF	0-FF								
2C8								FF	0-FF								
2C9								FF	0-FF								
2CA								FF	0-FF								
2CB								FF	0-FF								
2CC								FF	0-FF								
2CD								FF	0-FF								
2CE								FF	0-FF								
2CF								FF	0-FF								
2D0								FF	0-FF								
2D1								FF	0-FF								
2D2								FF	0-FF								
2D3								FF	0-FF								
2D4								FF	0-FF								
2D5								FF	0-FF								
2D6								FF	0-FF								
2D7								FF	0-FF								
2D8								FF	0-FF								
2D9								FF	0-FF								
2DA								FF	0-FF								
2DB								FF	0-FF								
2DC								FF	0-FF								
2DD								FF	0-FF								
2DE								FF	0-FF								
2DF								FF	0-FF								
2E0								FF	0-FF								
2E1								FF	0-FF								
2E2								FF	0-FF								
2E3								FF	0-FF								
2E4								FF	0-FF								
2E5								FF	0-FF								
2E6								FF	0-FF								
2E7								FF	0-FF								
2E8								FF	0-FF								
2E9								FF	0-FF								
2EA								FF	0-FF								
2EB								FF	0-FF								
2EC								FF	0-FF								
2ED								FF	0-FF								
2EE								FF	0-FF								
2EF								FF	0-FF								
2F0								FF	0-FF								
2F1								FF	0-FF								
2F2								FF	0-FF								
2F3								FF	0-FF								
2F4								FF	0-FF								
2F5								FF	0-FF								
2F6								FF	0-FF								
2F7								FF	0-FF								
2F8								FF	0-FF								
2F9								FF	0-FF								
2FA								FF	0-FF								
2FB								FF	0-FF								
2FC								FF	0-FF								
2FD								FF	0-FF								
2FE								FF	0-FF								
2FF								FF	0-FF								
MODEL							MODEL										
LETTER NO.							LETTER NO.										

1) Add new area for Message Data for Inbox Message .

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*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

21JF2-RU/GA/SA/SF/SS
 MEMORY MAP (Continued)

SLAVE ADDRESS : A0(00-FF) A2(100-1FF) A4(200-2FF) A6(300-3FF) A8(400-4FF)

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		
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								
LETTER NO.									LETTER NO.								

SLAVE ADDRESS : A0(00-FF) A2(100-1FF) A4(200-2FF) A6(300-3FF) A8(400-4FF)

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		
380								FF	00-FF							
381								FF	00-FF							
382								FF	0-FF							
383								FF	0-FF							
384								FF	0-FF							
385								FF	0-FF							
386								FF	0-FF							
387								FF	0-FF							
388								FF	0-FF							
389								FF	0-FF							
38A								FF	0-FF							
38B								FF	0-FF							
38C								FF	0-FF							
38D								FF	0-FF							
38E								FF	0-FF							
38F								FF	0-FF							
390								FF	0-FF							
391								FF	0-FF							
392								FF	0-FF							
393								FF	0-FF							
394								FF	0-FF							
395								FF	0-FF							
396								FF	0-FF							
397								FF	0-FF							
398								FF	0-FF							
399								FF	0-FF							
39A								FF	0-FF							
39B								FF	0-FF							
39C								FF	0-FF							
39D								FF	0-FF							
39E								FF	0-FF							
39F								FF	0-FF							
3A0								FF	0-FF							
3A1								FF	0-FF							
3A2								FF	0-FF							
3A3								FF	0-FF							
3A4								FF	0-FF							
3A5								FF	0-FF							
3A6								FF	0-FF							
3A7								FF	0-FF							
3A8								FF	0-FF							
3A9								FF	0-FF							
3AA								FF	0-FF							
3AB								FF	0-FF							
3AC								FF	0-FF							
3AD								FF	0-FF							
3AE								FF	0-FF							
3AF								FF	0-FF							
3B0								FF	0-FF							
3B1								FF	0-FF							
3B2								FF	0-FF							
3B3								FF	0-FF							
3B4								FF	0-FF							
3B5								FF	0-FF							
3B6								FF	0-FF							
3B7								FF	0-FF							
3B8								FF	0-FF							
3B9								FF	0-FF							
3BA								FF	0-FF							
3BB								FF	0-FF							
3BC								FF	0-FF							
3BD								FF	0-FF							
3BE								FF	0-FF							
3BF								FF	0-FF							
MODEL								MODEL								
LETTER NO.								LETTER NO.								

1) Add new area for Message Data for Favorite Message One.

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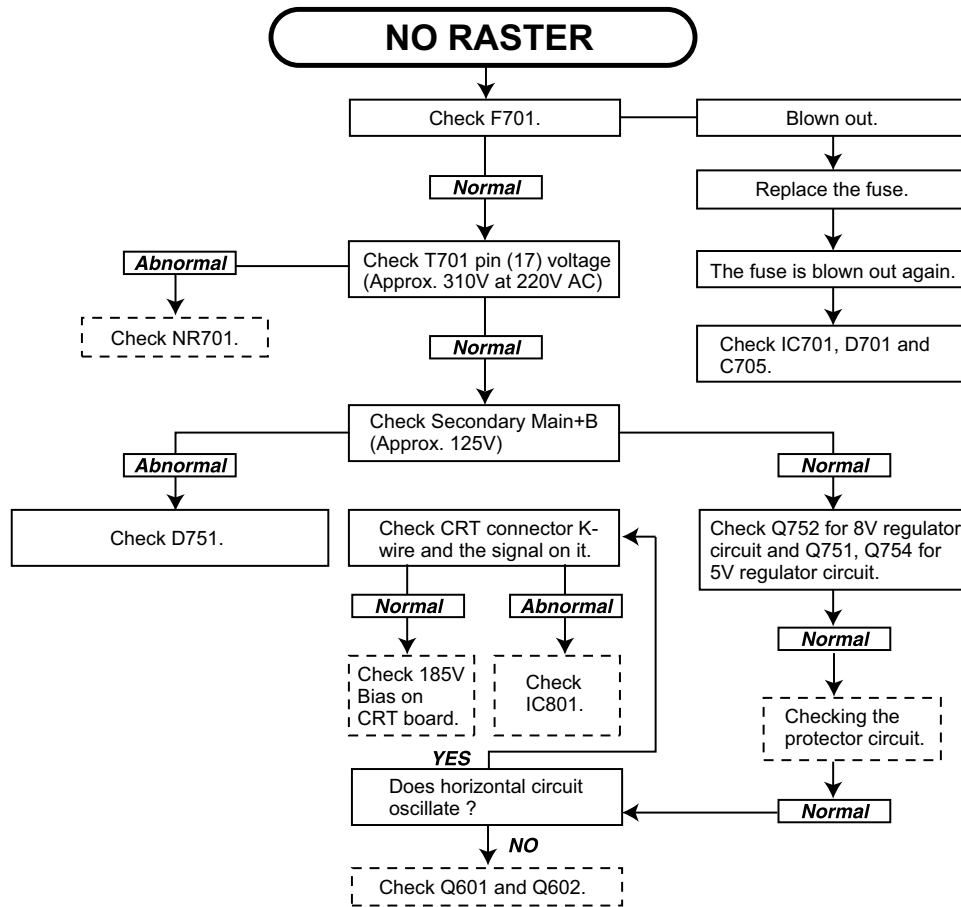
MEMORY MAP (Continued)

SLAVE ADDRESS : A0(00-FF) A2(100-1FF) A4(200-2FF) A6(300-3FF) A8(400-4FF)

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									FF	0-FF							
3C1									FF	0-FF							
3C2									FF	0-FF							
3C3									FF	0-FF							
3C4									FF	0-FF							
3C5									FF	0-FF							
3C6									FF	0-FF							
3C7									FF	0-FF							
3C8									FF	0-FF							
3C9									FF	0-FF							
3CA									FF	0-FF							
3CB									FF	0-FF							
3CC									FF	0-FF							
3CD									FF	0-FF							
3CE									FF	0-FF							
3CF									FF	0-FF							
3D0									FF	0-FF							
3D1									FF	0-FF							
3D2									FF	0-FF							
3D3									FF	0-FF							
3D4									FF	0-FF							
3D5									FF	0-FF							
3D6									FF	0-FF							
3D7									FF	0-FF							
3D8									FF	0-FF							
3D9									FF	0-FF							
3DA									FF	0-FF							
3DB									FF	0-FF							
3DC									FF	0-FF							
3DD									FF	0-FF							
3DE									FF	0-FF							
3DF									FF	0-FF							
3E0									FF	0-FF							
3E1									FF	0-FF							
3E2									FF	0-FF							
3E3									FF	0-FF							
3E4									FF	0-FF							
3E5									FF	0-FF							
3E6									FF	0-FF							
3E7									FF	0-FF							
3E8									FF	0-FF							
3E9									FF	0-FF							
3EA									FF	0-FF							
3EB									FF	0-FF							
3EC									FF	0-FF							
3ED									FF	0-FF							
3EE									FF	0-FF							
3EF									FF	0-FF							
3F0									FF	0-FF							
3F1									FF	0-FF							
3F2									FF	0-FF							
3F3									FF	0-FF							
3F4									FF	0-FF							
3F5									FF	0-FF							
3F6									FF	0-FF							
3F7									FF	0-FF							
3F8									FF	0-FF							
3F9									FF	0-FF							
3FA									FF	0-FF							
3FB									FF	0-FF							
3FC									FF	0-FF							
3FD									FF	0-FF							
3FE									FF	0-FF							
3FF									FF	0-FF							
MODEL								MODEL									
LETTER NO.								LETTER NO.									

1) Add new area for Message Data for Favorite Message Two.

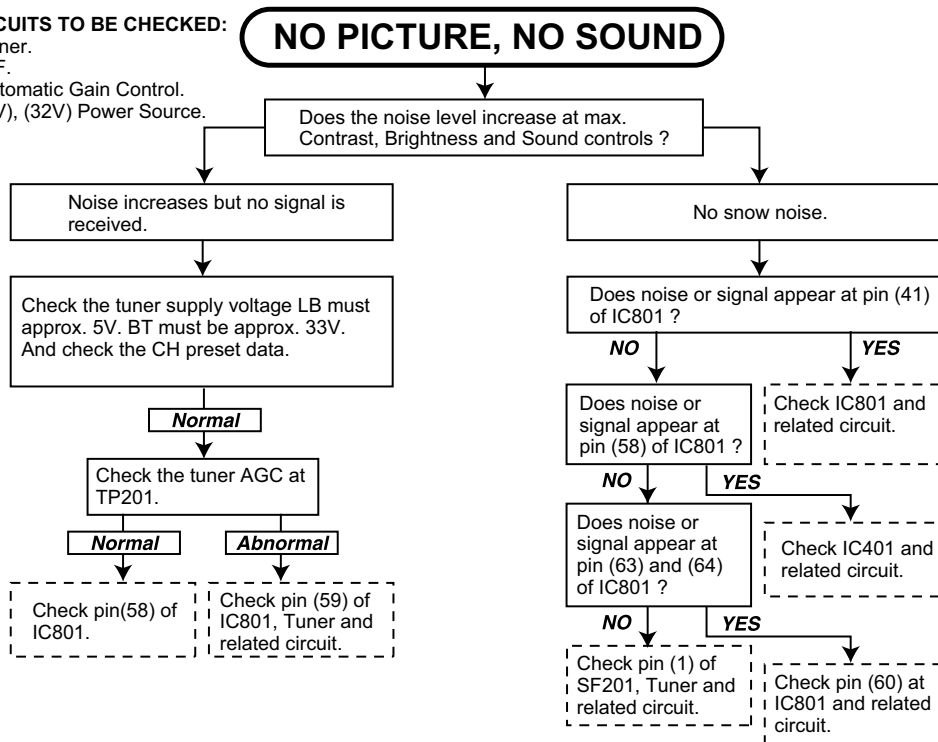
[1] TROUBLE SHOOTING FLOWCHART



CIRCUITS TO BE CHECKED:

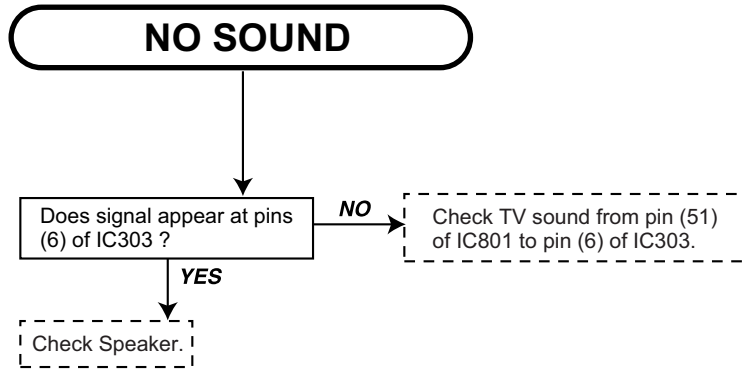
- Tuner.
- PIF.
- Automatic Gain Control.
- (5V), (32V) Power Source.

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CIRCUITS TO BE CHECKED:

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



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. (Bus Data)

Vertical linearity and size are abnormal.

Check R503, R506, R513, R520 and C515.

NO VERTICAL SCAN

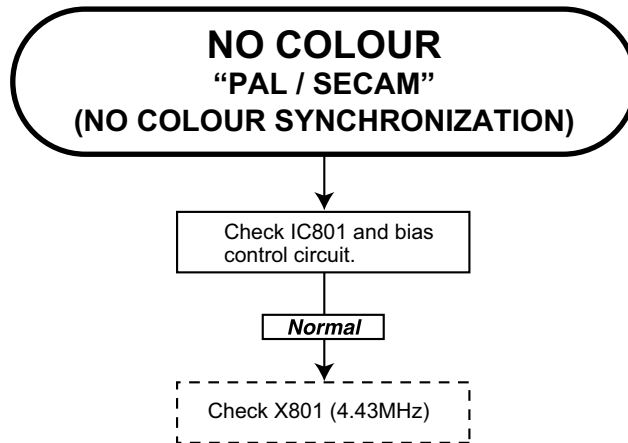
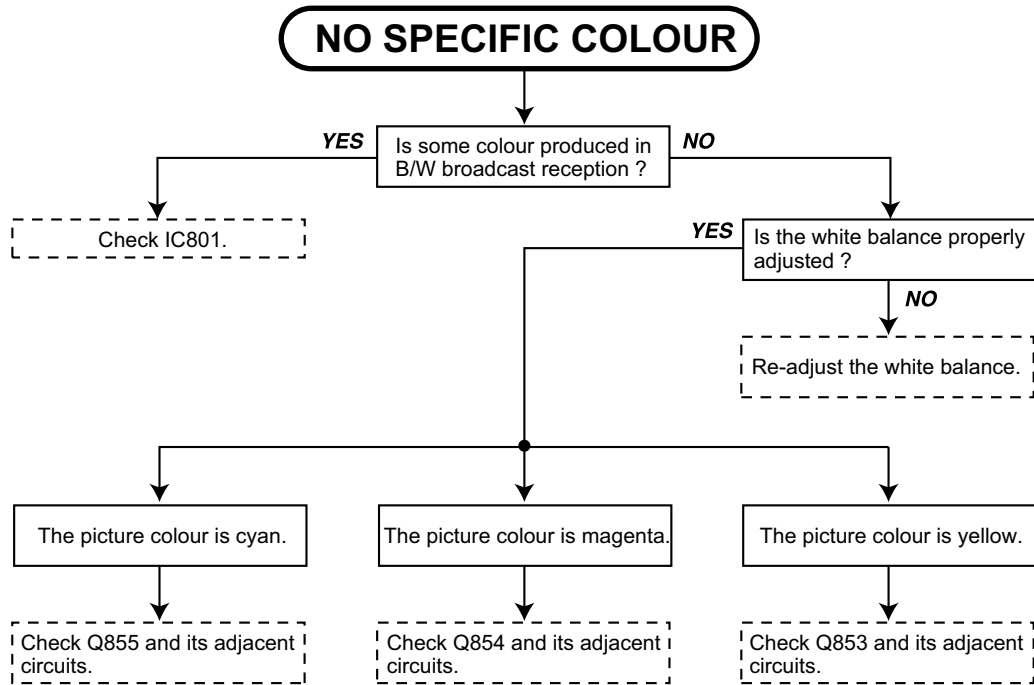
Check IC501 bias.

Normal

Check C511.

Abnormal

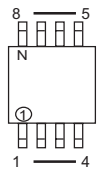
Check IC501.



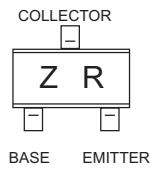
CHAPTER 6. SOLID STATE DEVICE BASE DIAGRAM

[1] SOLID STATE DEVICE BASE DIAGRAM

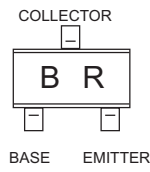
TOP VIEW



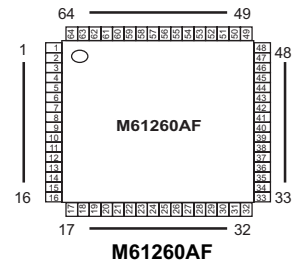
BR24L08



D601A



B709A



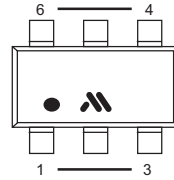
M61260AF



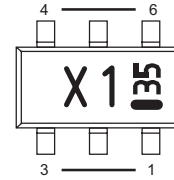
EX1393C



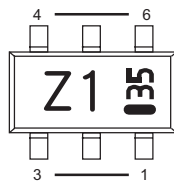
EX0263T



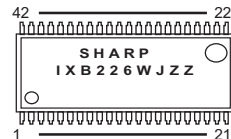
M1501XN



IMX1C/C

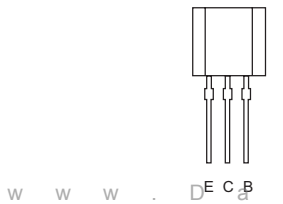


IMZ1A

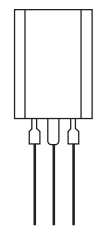


IXB226W

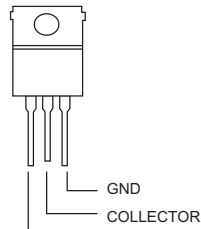
SIDE VIEW



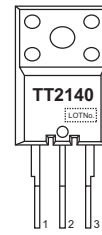
TX0110BM



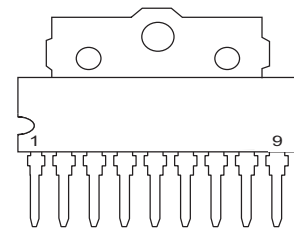
**2SD468-C
2SC2235**



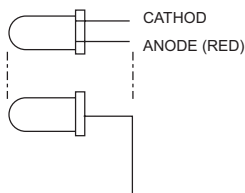
SE125N



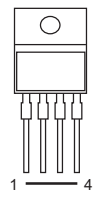
TT2140



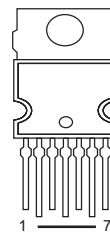
AN17823A



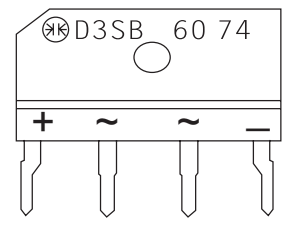
PX0013



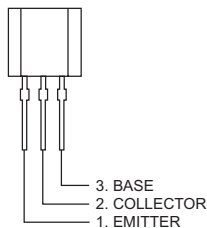
PQ09RDA



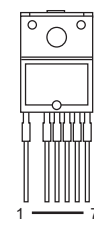
STV9302A



DX0476CE



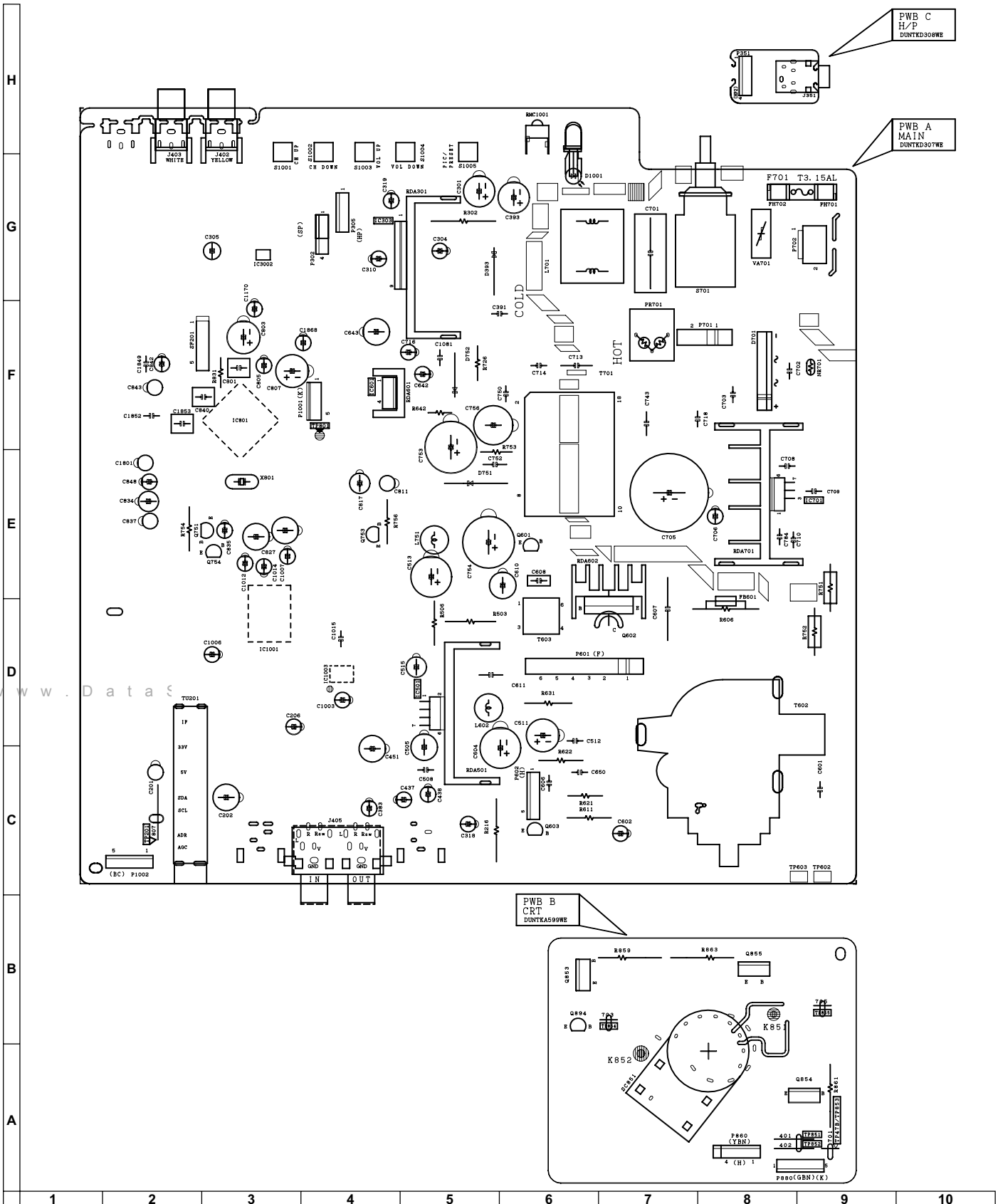
TX0110BM



STRW5453

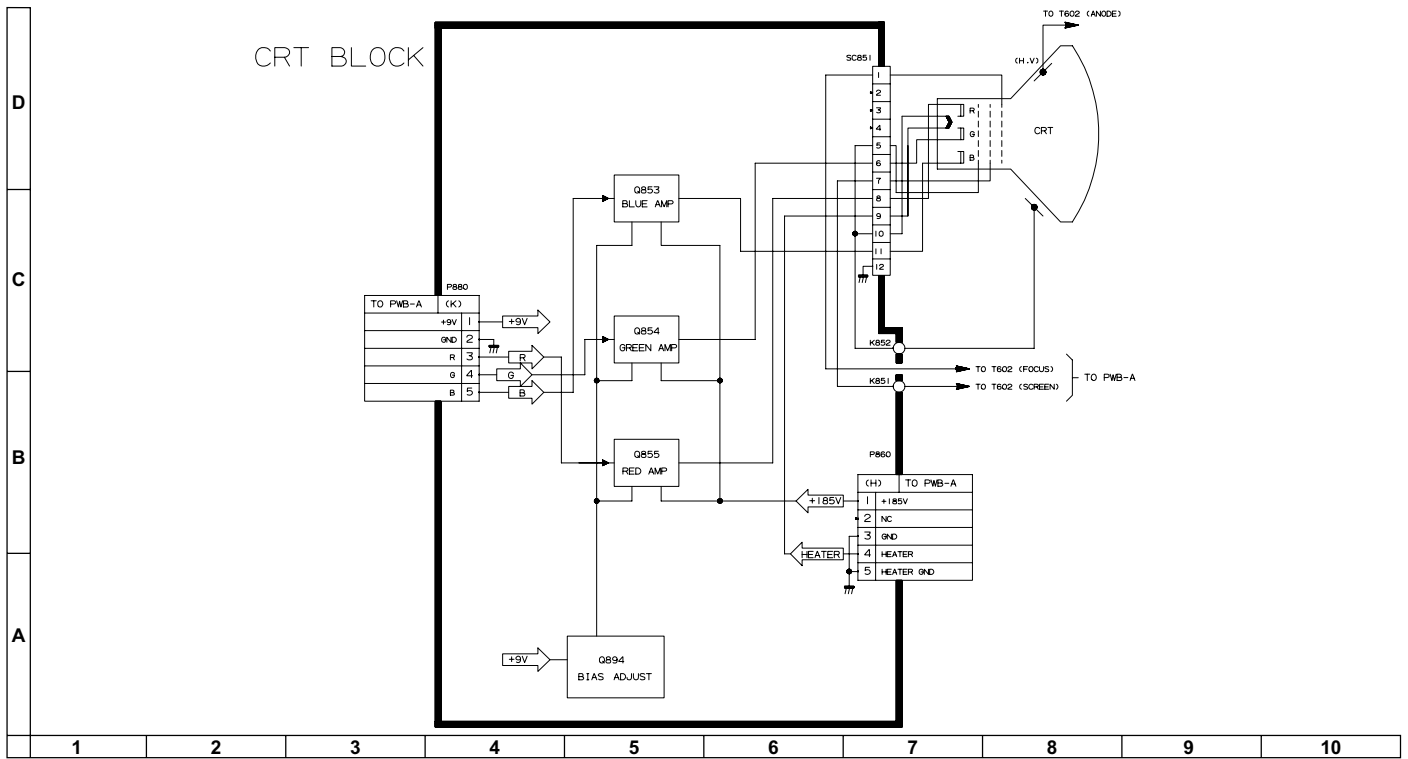
CHAPTER 7. CHASSIS LAYOUT

[1] CHASSIS LAYOUT

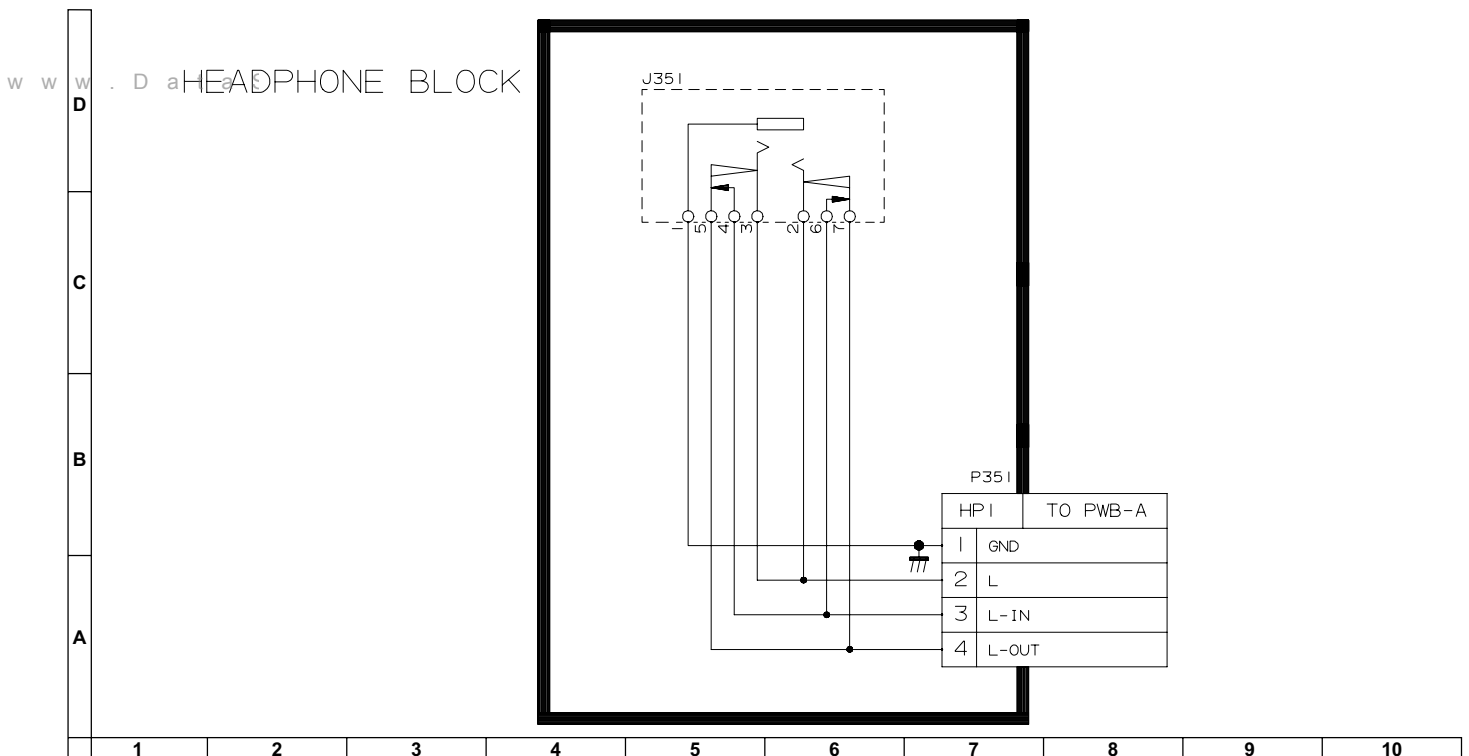


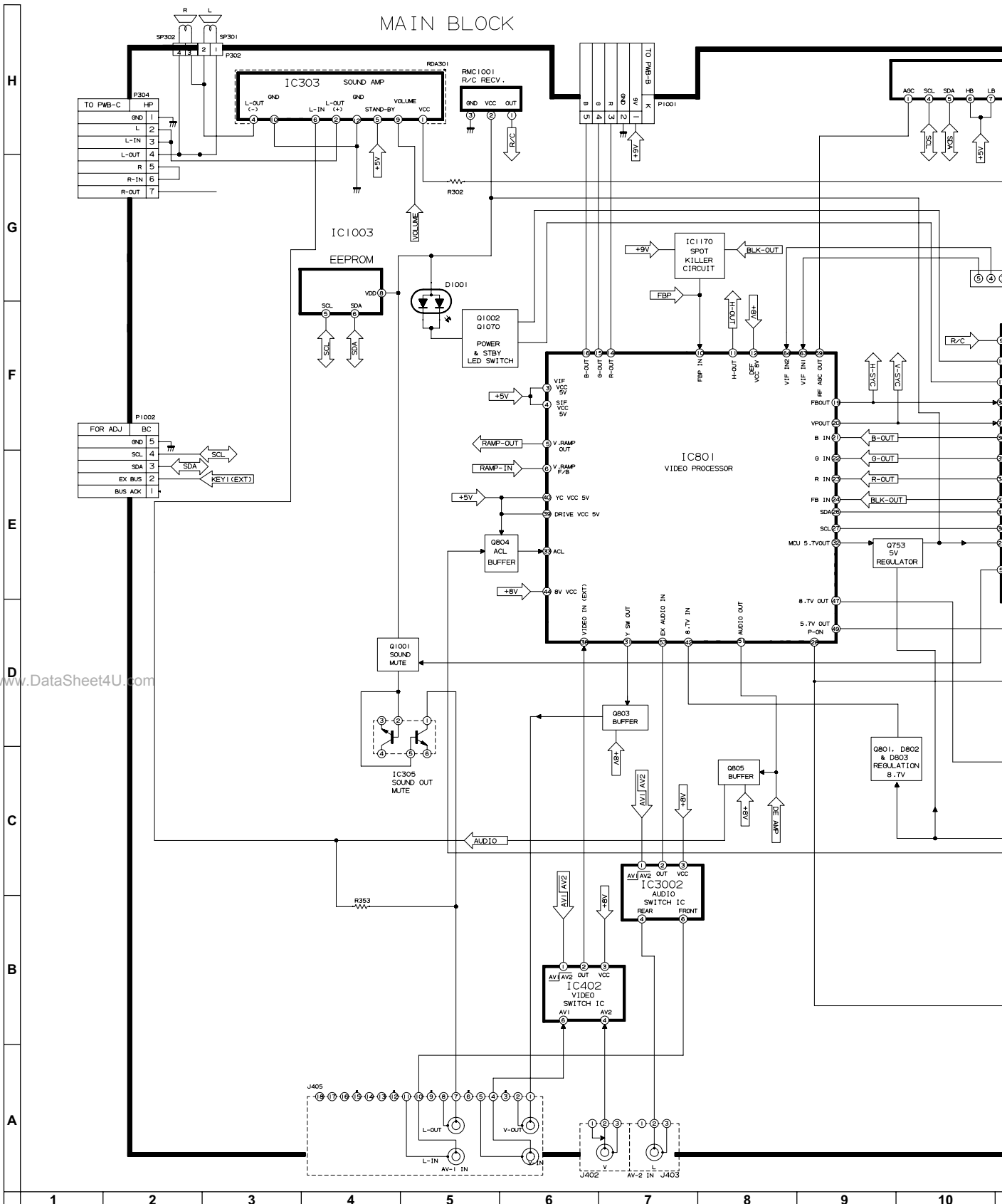
CHAPTER 8. BLOCK DIAGRAM

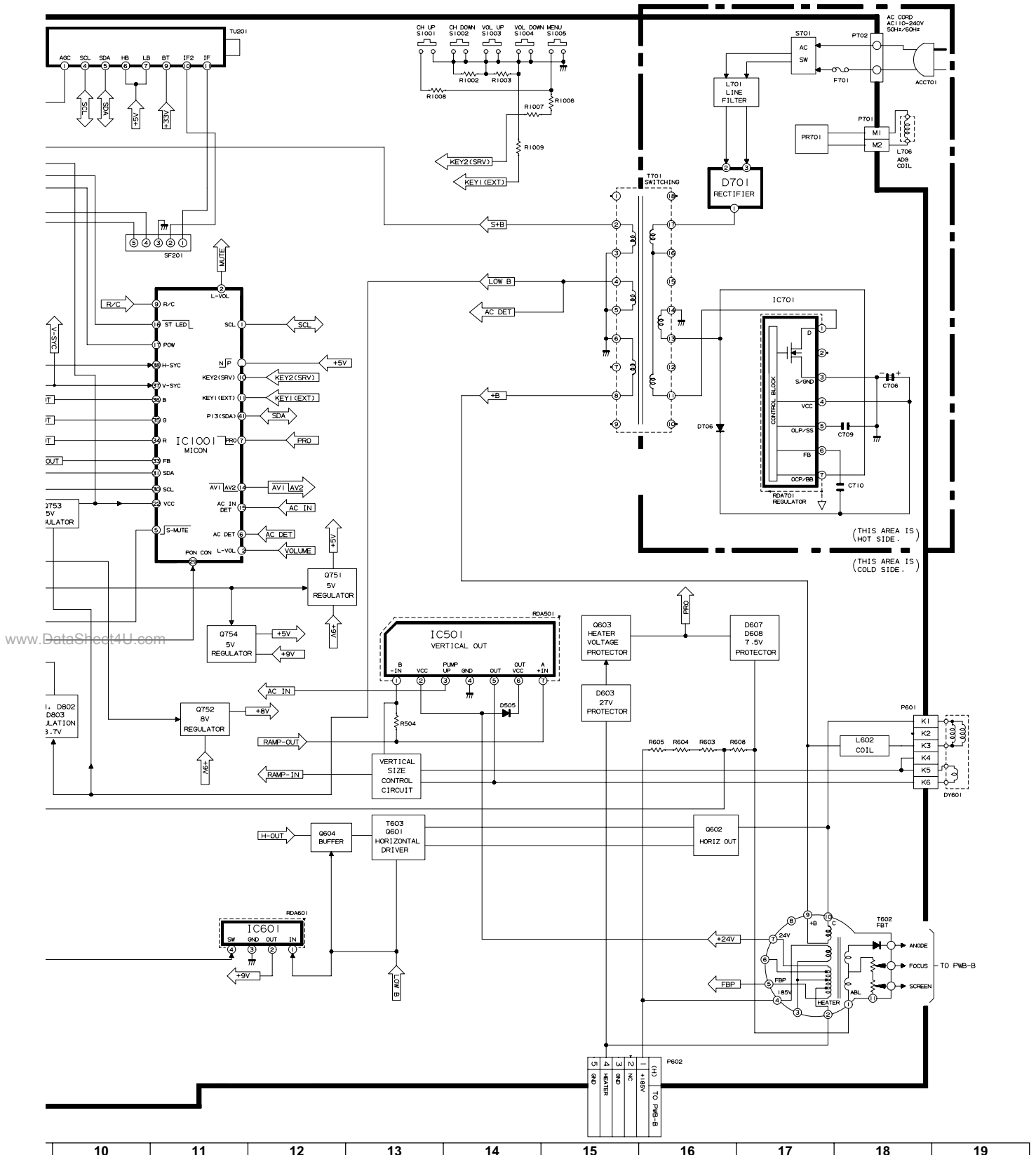
[1] BLOCK DIAGRAM: CRT UNIT



[2] BLOCK DIAGRAM: HEADPHONE UNIT









[1] 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 IMPORTANT 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.

CAUTION:

This circuit diagram is a standard one, prited circuits may be subject to change for product improvement without prior notice.

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 μF , unless otherwise noted. (P = $\mu\mu\text{F}$).

VOLTAGE MEASUREMENT CONDITIONS:

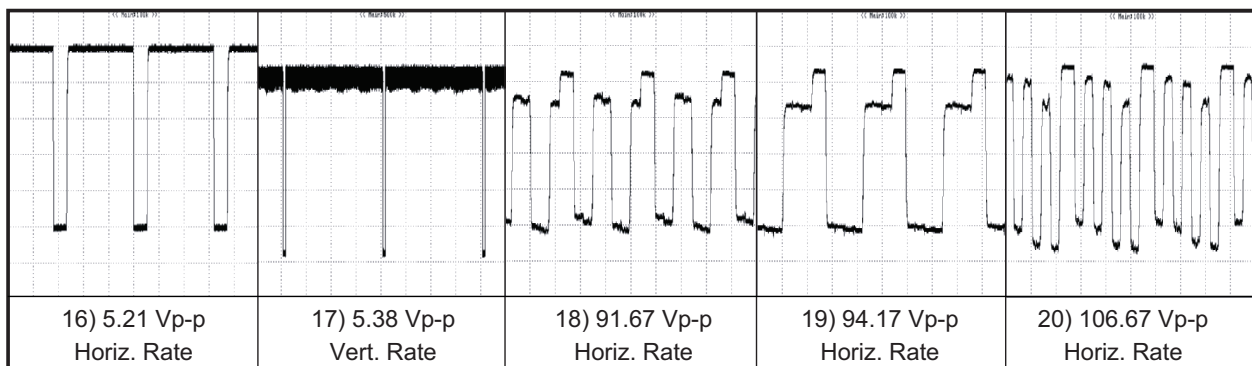
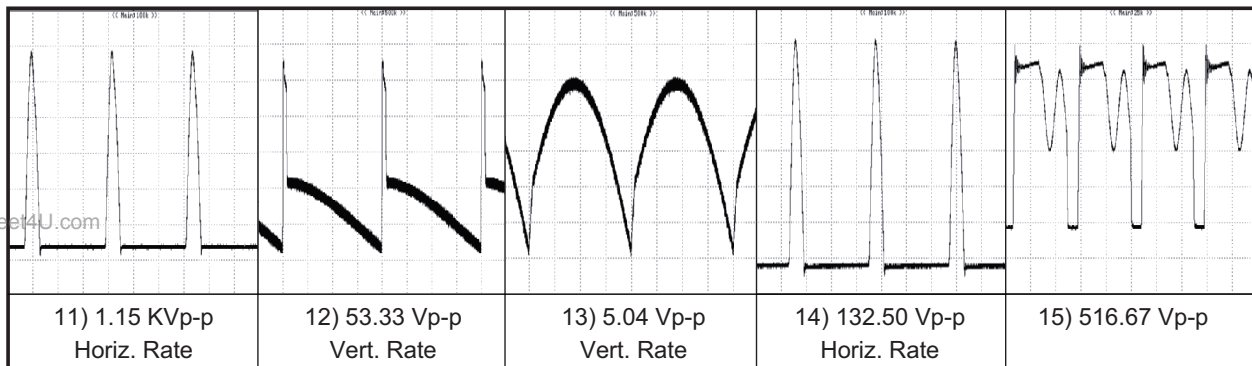
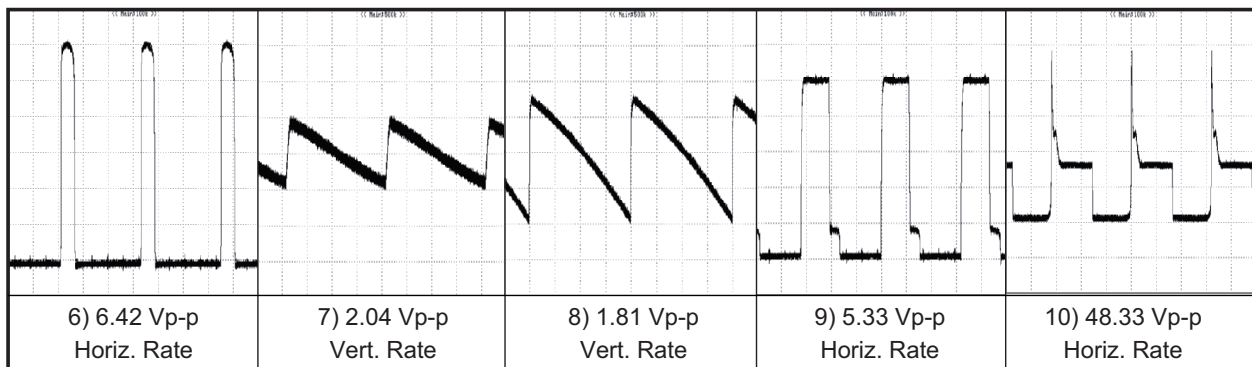
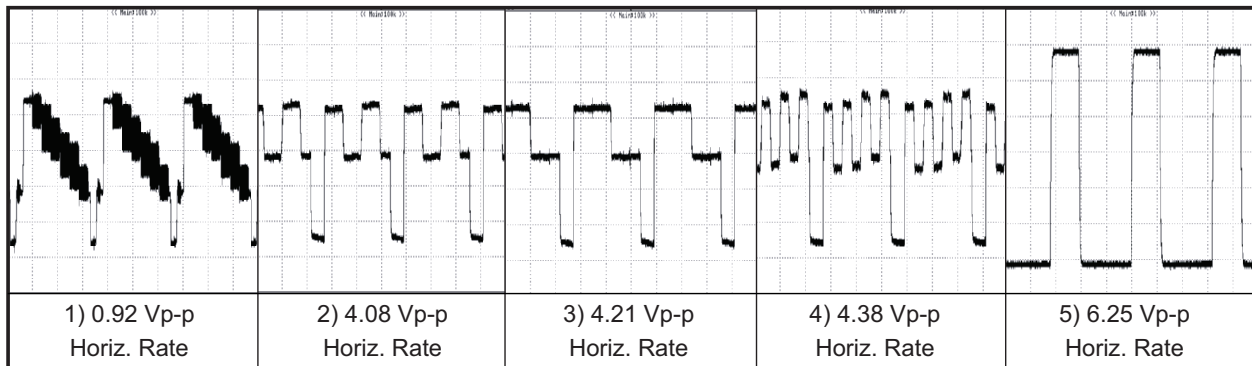
1. Voltages in parenthesis measured with no signal.
2. Voltages without parenthesis measured with 3mV B & W or Colour signal.
3. All the voltages in each point are measured with VTVM.

WAVEFORM MEASUREMENT CONDITIONS:

1. The colour bar generator signal of 1.0V peak applied at pin (41) of IC801.
2. Approximately 4V AGC bias.

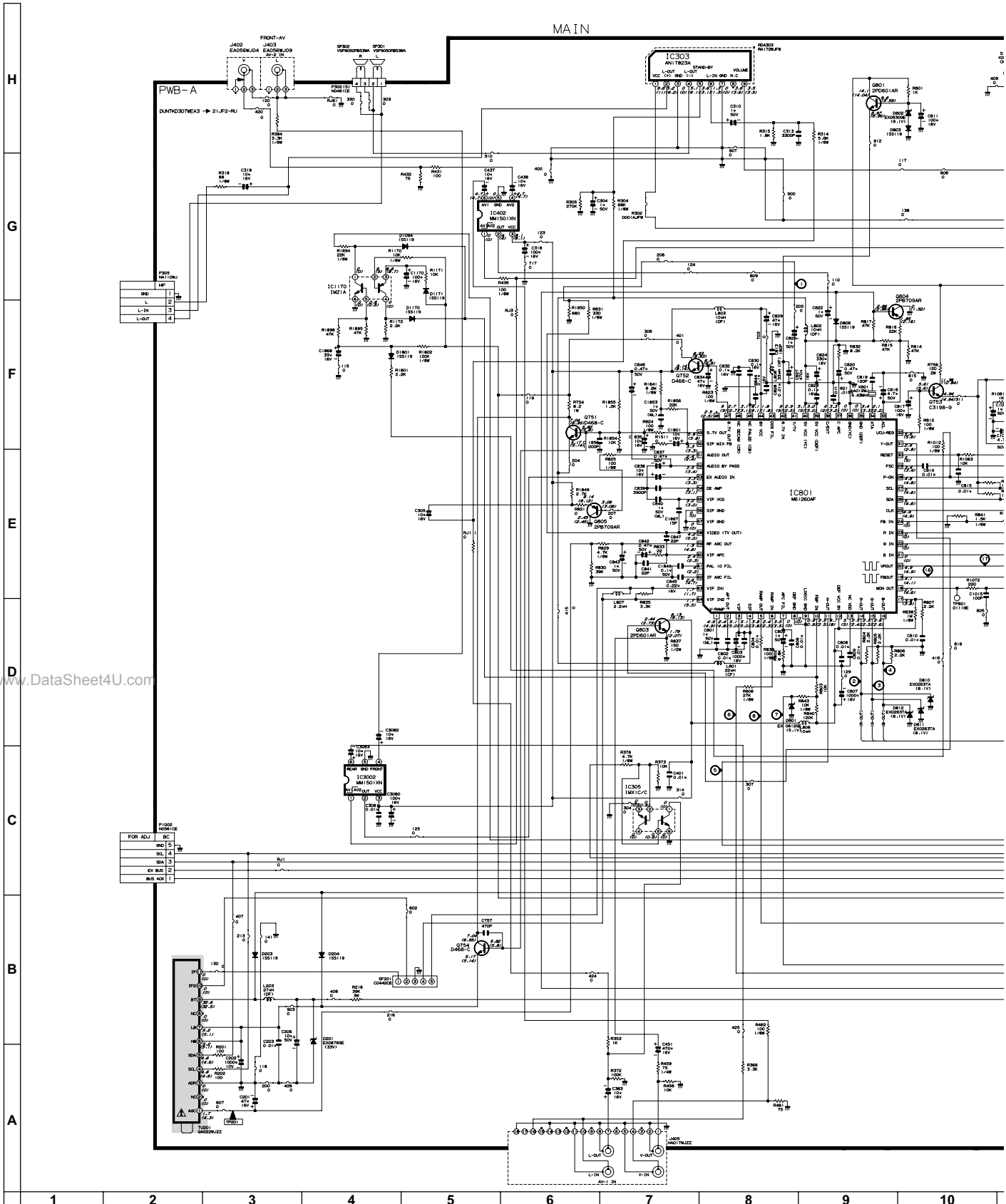
CHAPTER 10. WAVEFORMS

[1] WAVEFORMS



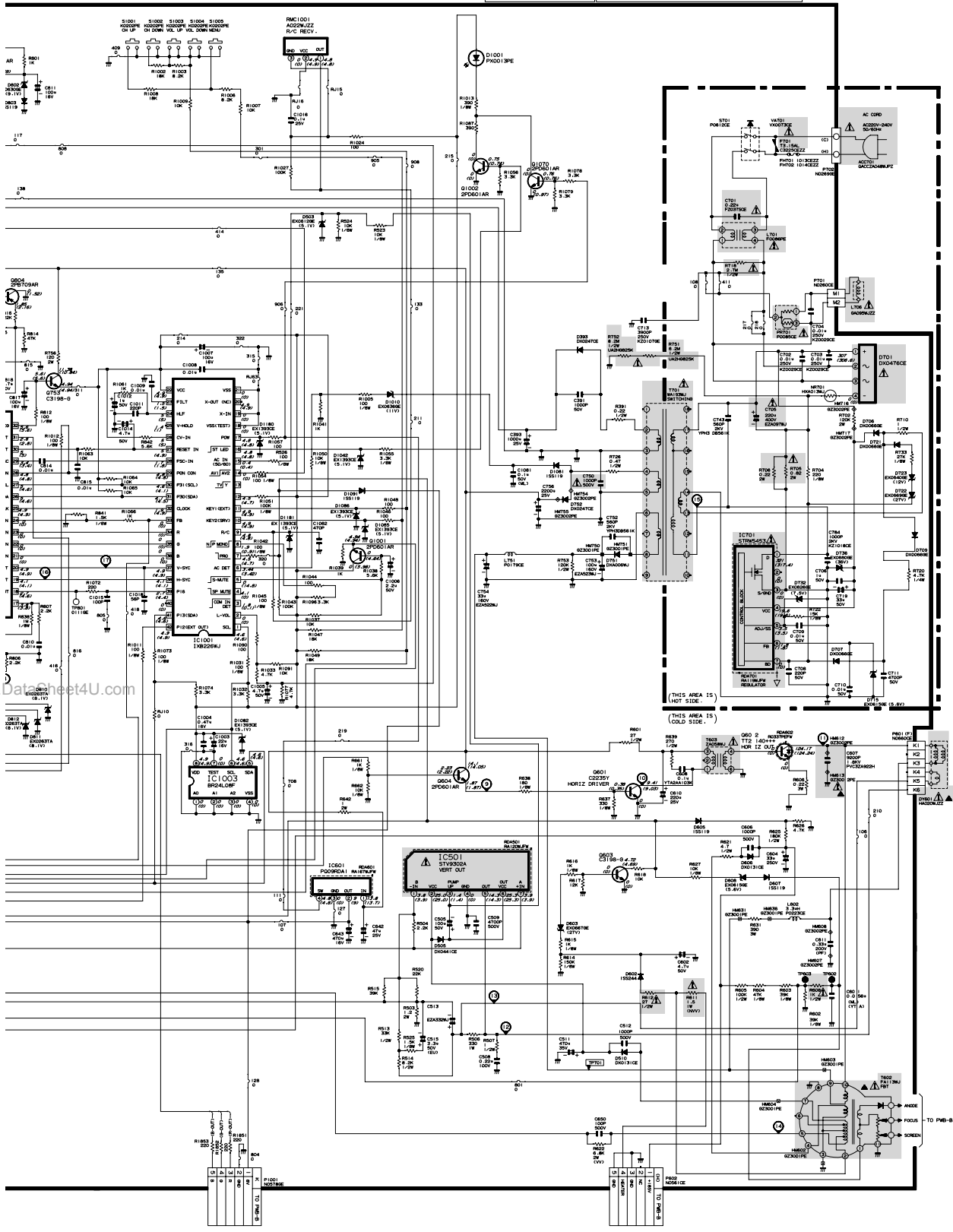
[1] SCHEMATIC DIAGRAM: MAIN UNIT

1. (21JF2-RU)



NOTE 1: THE UNIT OF RESISTANCE "OHM" IS OMITTED
 (1K=1000 OHMS, M=1000000)
 2. ALL RESISTORS ARE 1/10W WATT UNLESS OTHERWISE NOTED.
 3. LIST OF ALL CAPACITORS ARE E WITH PREFIX SYMBOL.
 (% P, ETC.).

▲ AND SHADING COMPONENTS = SAFETY RELATED PARTS.
 ▲ MARK = X-RAY RELATED PARTS.

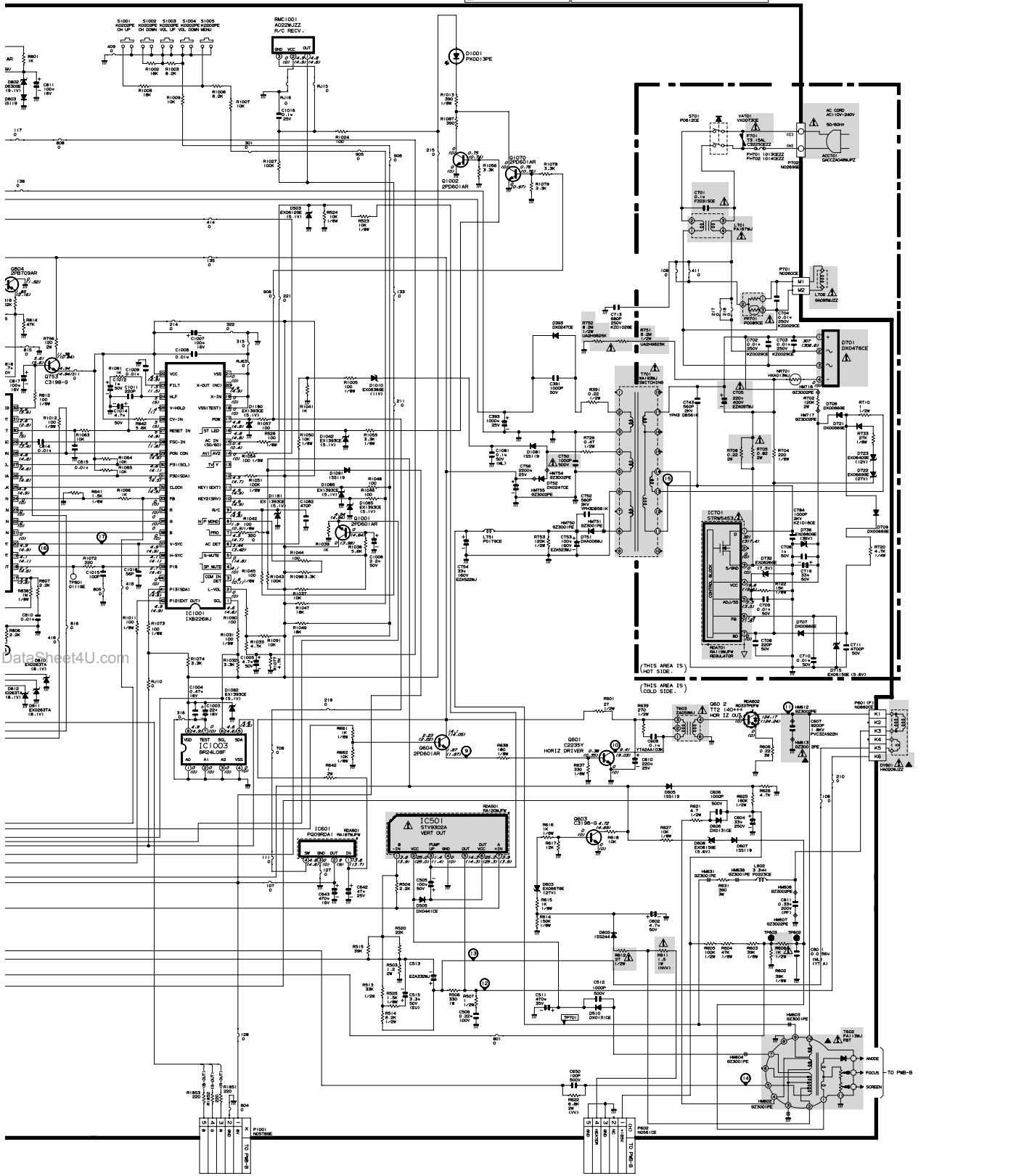


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NOTE 1. THE UNIT OF RESISTANCE "OHM" IS OMITTED
 (OHM, 100, 1K, 10K, 100K, 1M, 10M, 100M, 1G)

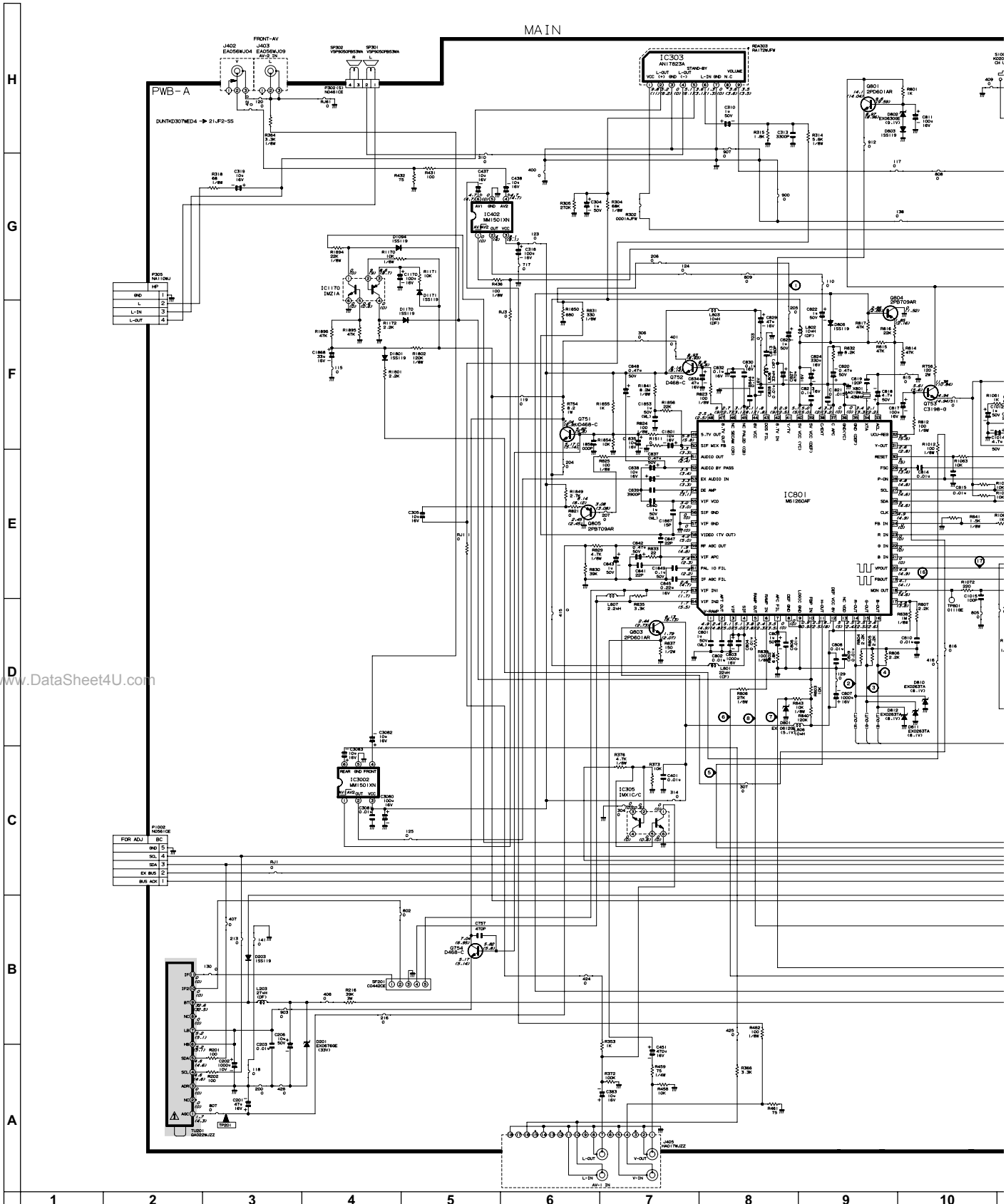
▲ AND SHAD. COMPONENTS = SAFETY RELATED PARTS.
 ▲ MARK = X-RAY RELATED PARTS.

NOTE 2. ALL RESISTORS ARE 1/8W UNLESS OTHERWISE NOTED.
 3. UNIT OF ALL CAPACITORS ARE P WITH PREFIX SYMBOL.
 (u, n, p, etc.)



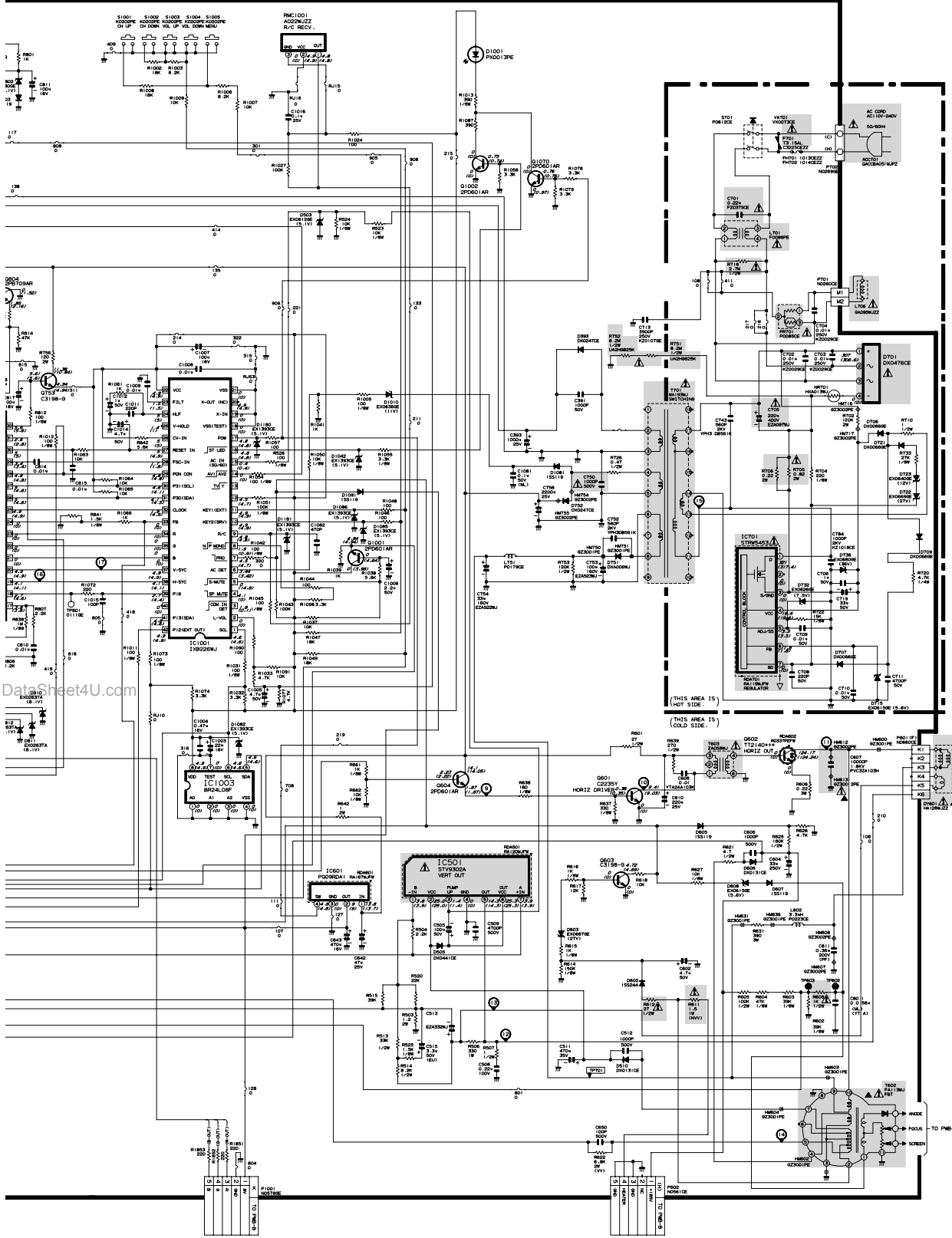
www.DataSheet4U.com

10	11	12	13	14	15	16	17	18	19
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NOTE 1: THE UNIT OF RESISTANCE "OHM" IS OMITTED.
 (10K=100 OHMS, 100K=10,000 OHMS)
 2. ALL RESISTORS ARE 1/8WATT UNLESS OTHERWISE NOTED.
 3. UNIT OF ALL CAPACITORS ARE P WITH PREFIX SYMBOL.
 (K, P, ETC.).

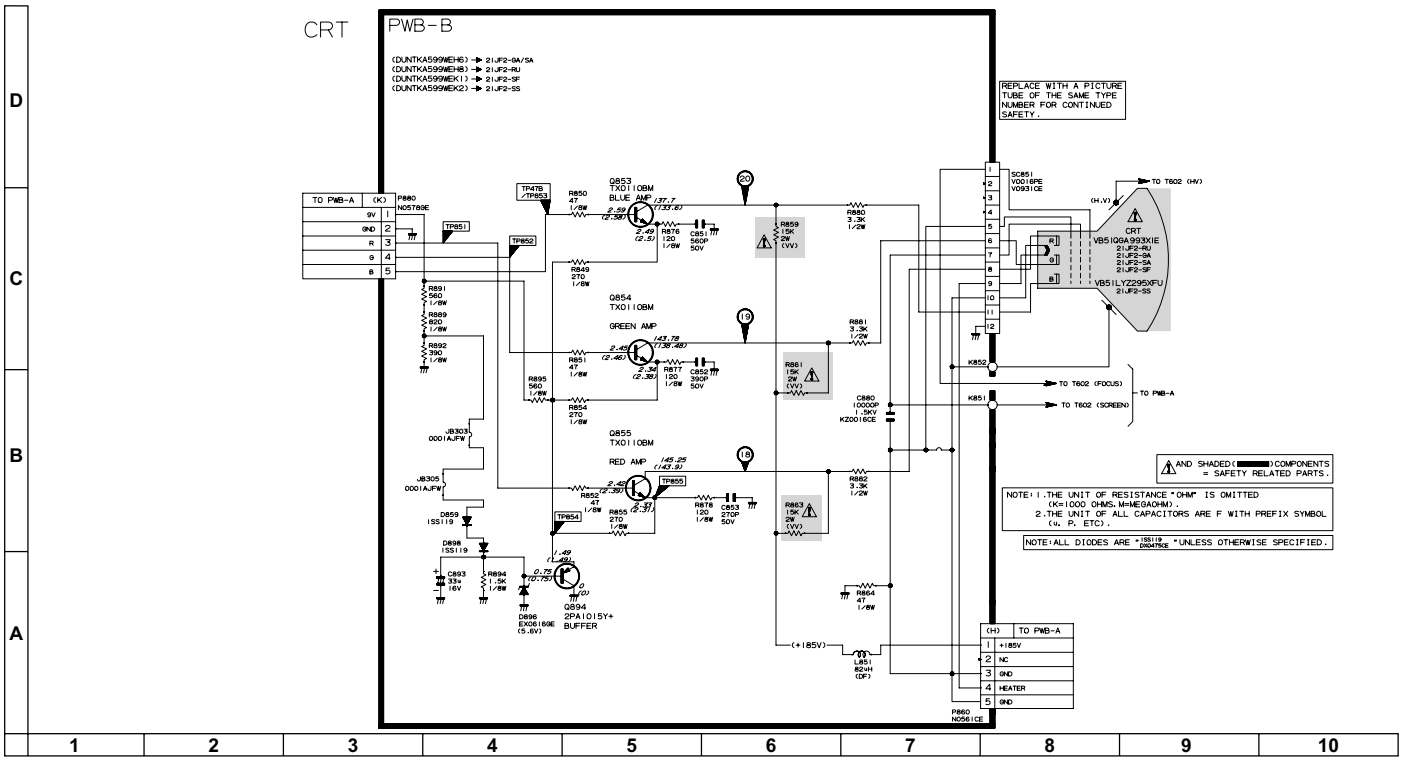
▲ AND SHADED (■) COMPONENTS
 = SAFETY RELATED PARTS.
 ▲ MARK = X-RAY RELATED PARTS.



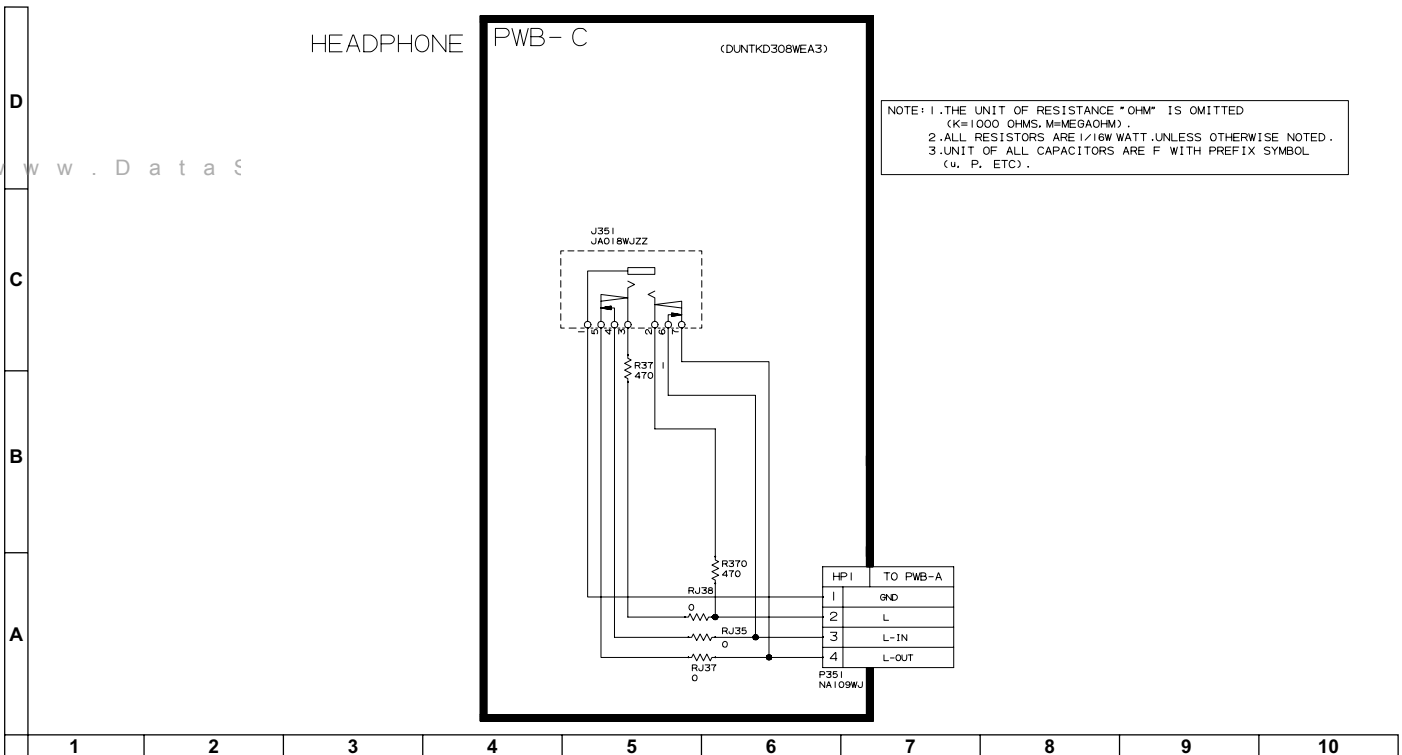
www.DataSheet4U.com

10	11	12	13	14	15	16	17	18	19
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[2] SCHEMATIC DIAGRAM: CRT UNIT



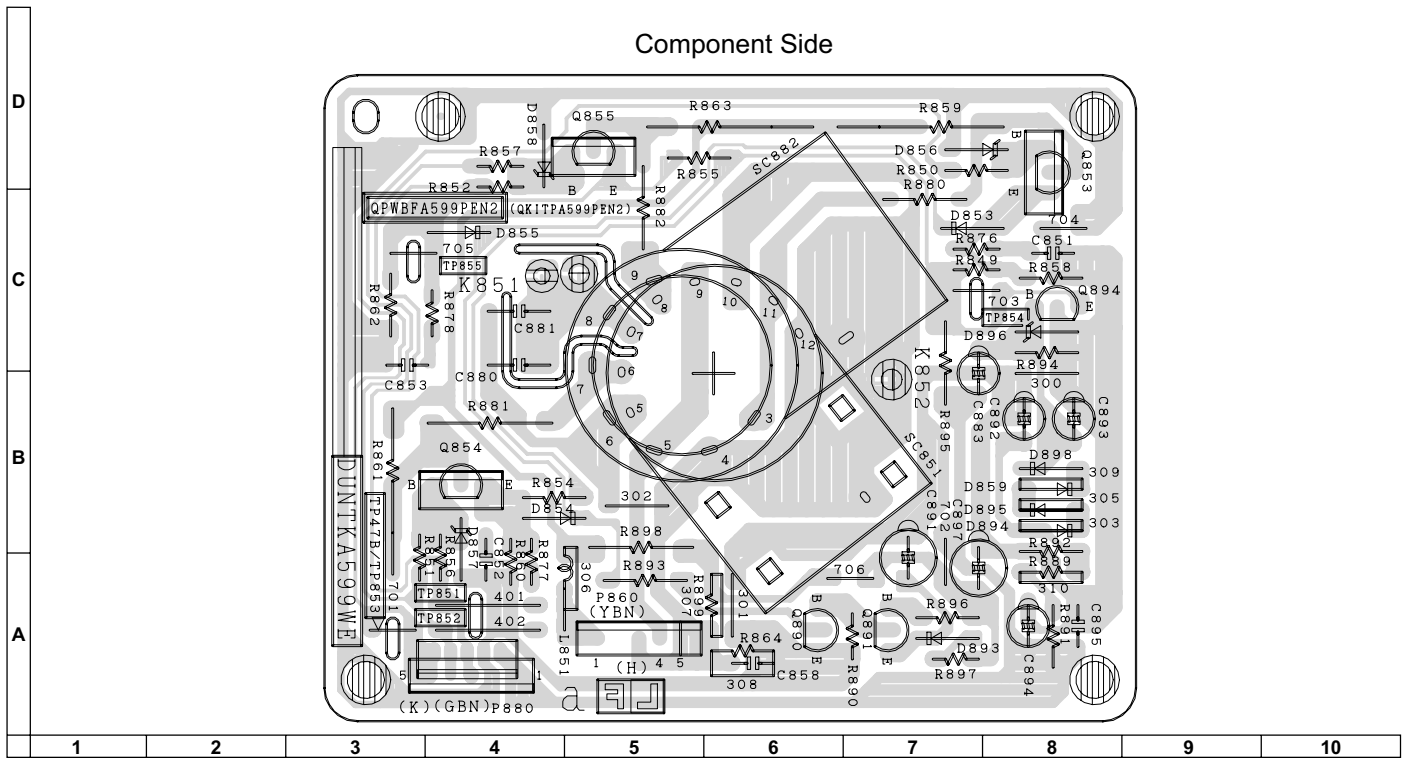
[3] SCHEMATIC DIAGRAM: HEADPHONE UNIT



CHAPTER 12. PRINTED WIRING BOARD ASSEMBLIES

[1] PWB-B: CRT UNIT

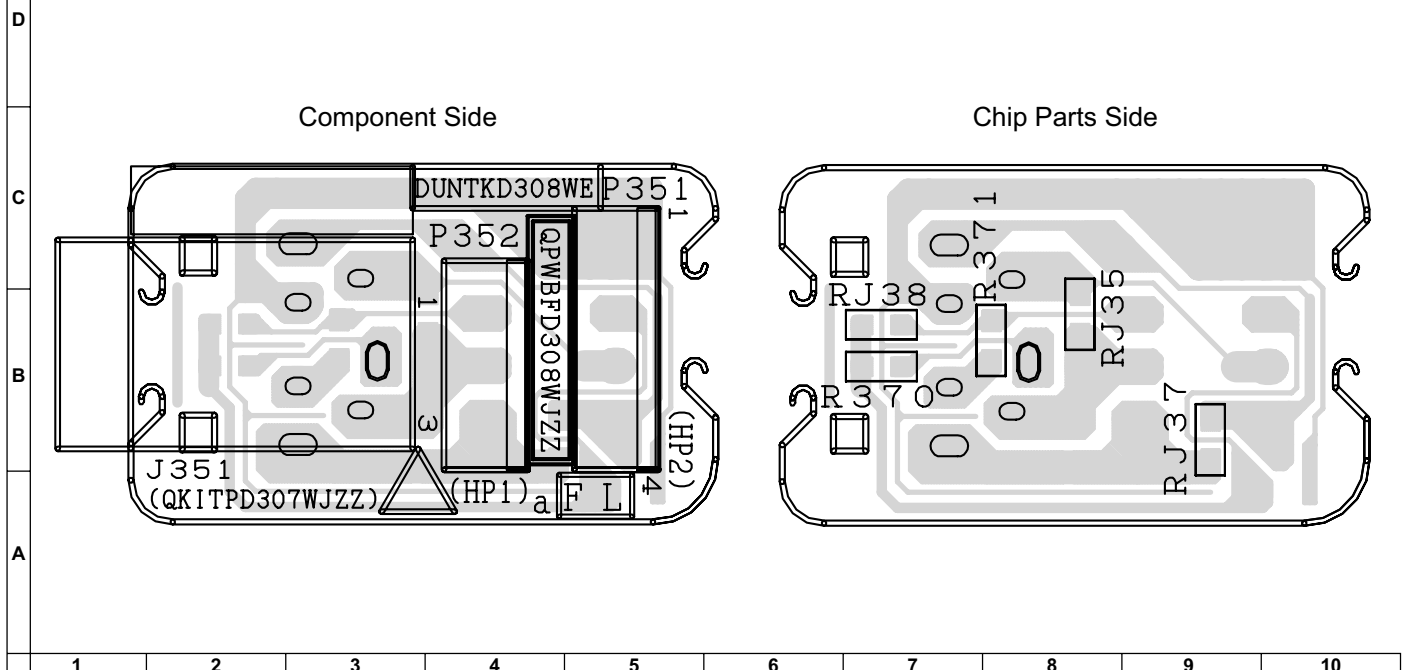
1. CRT UNIT (Component Side)



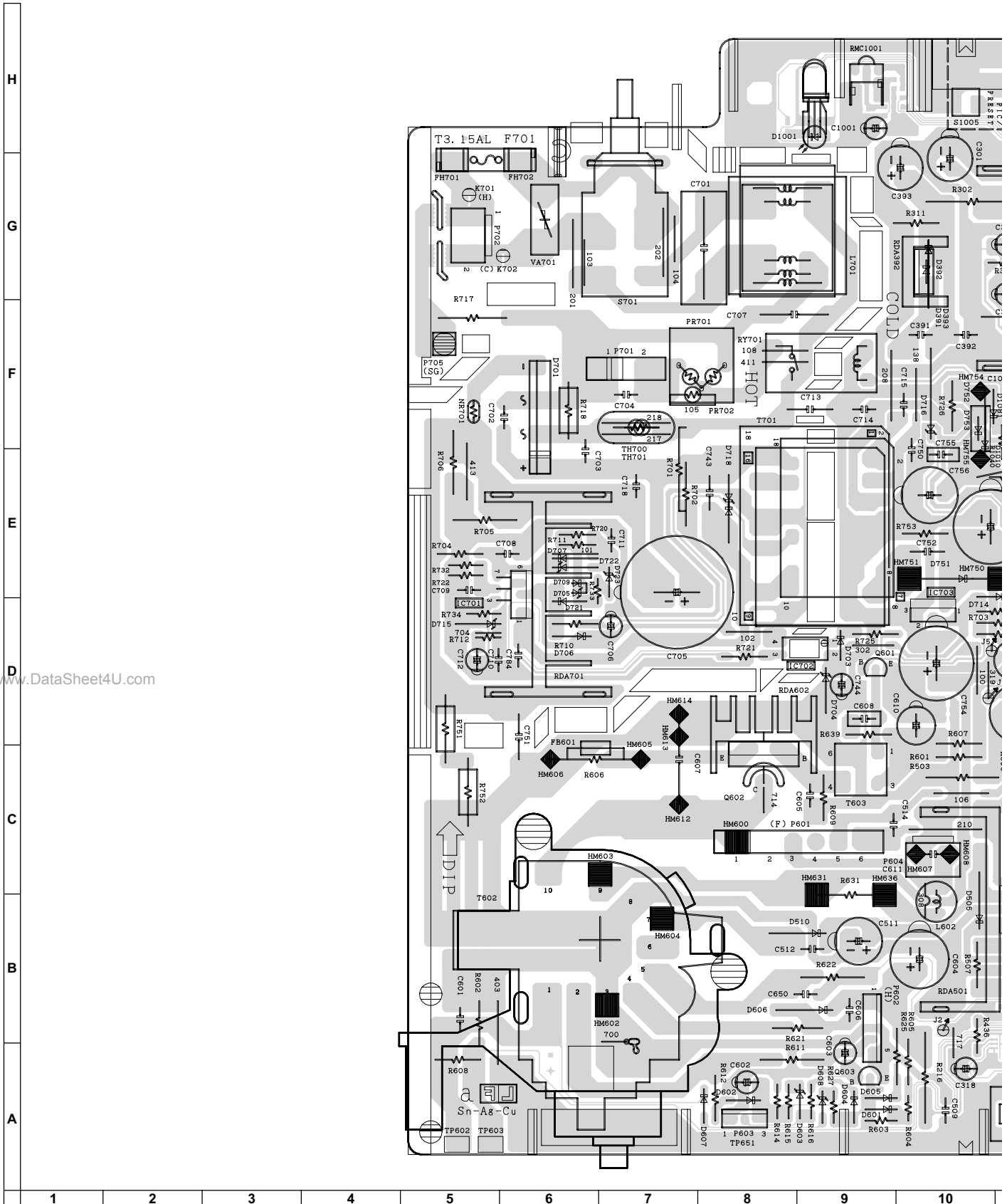
[2] PWB-C: HEADPHONE UNIT

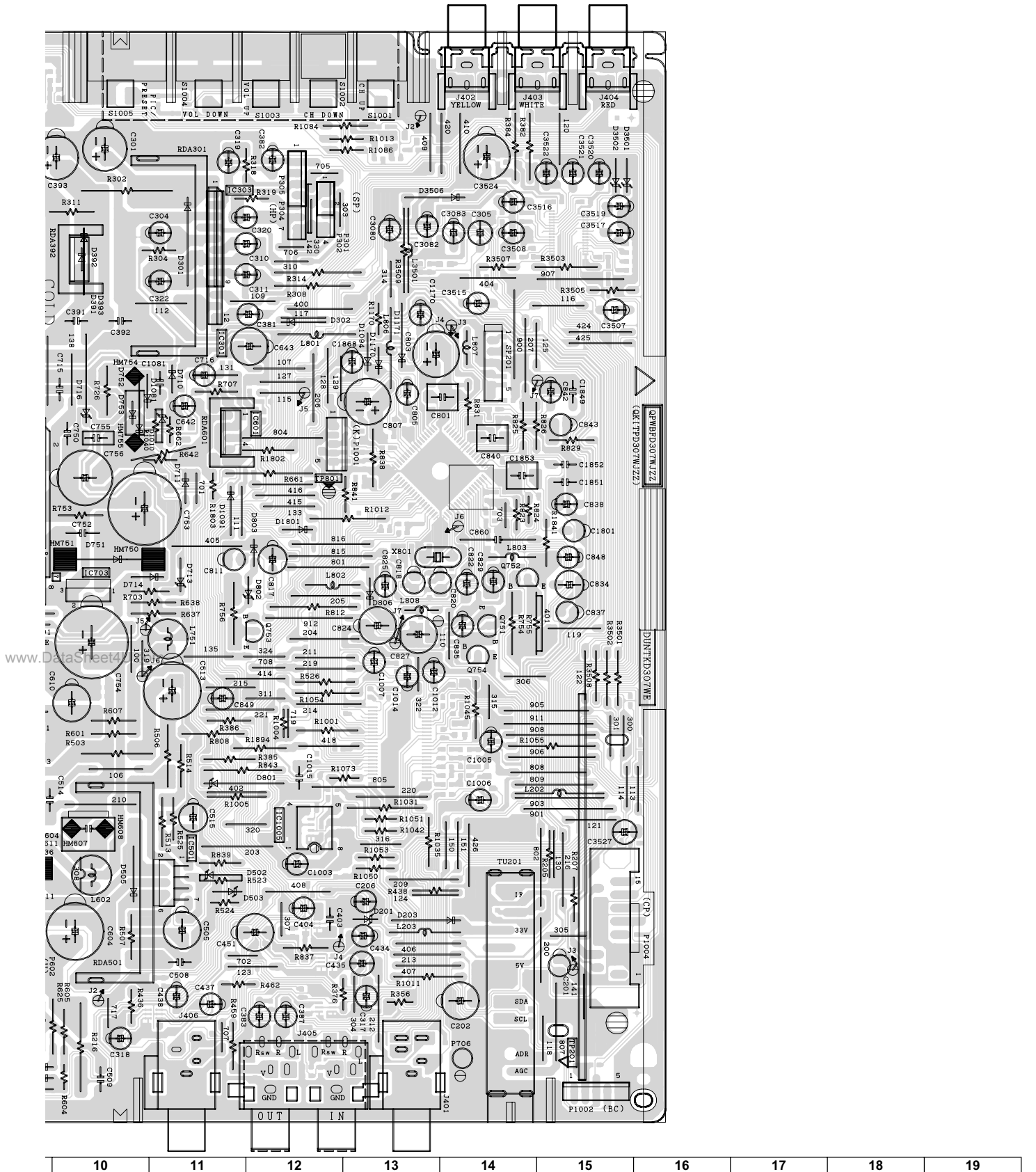
1. HEADPHONE UNIT (Component Side) (Chip Parts Side)

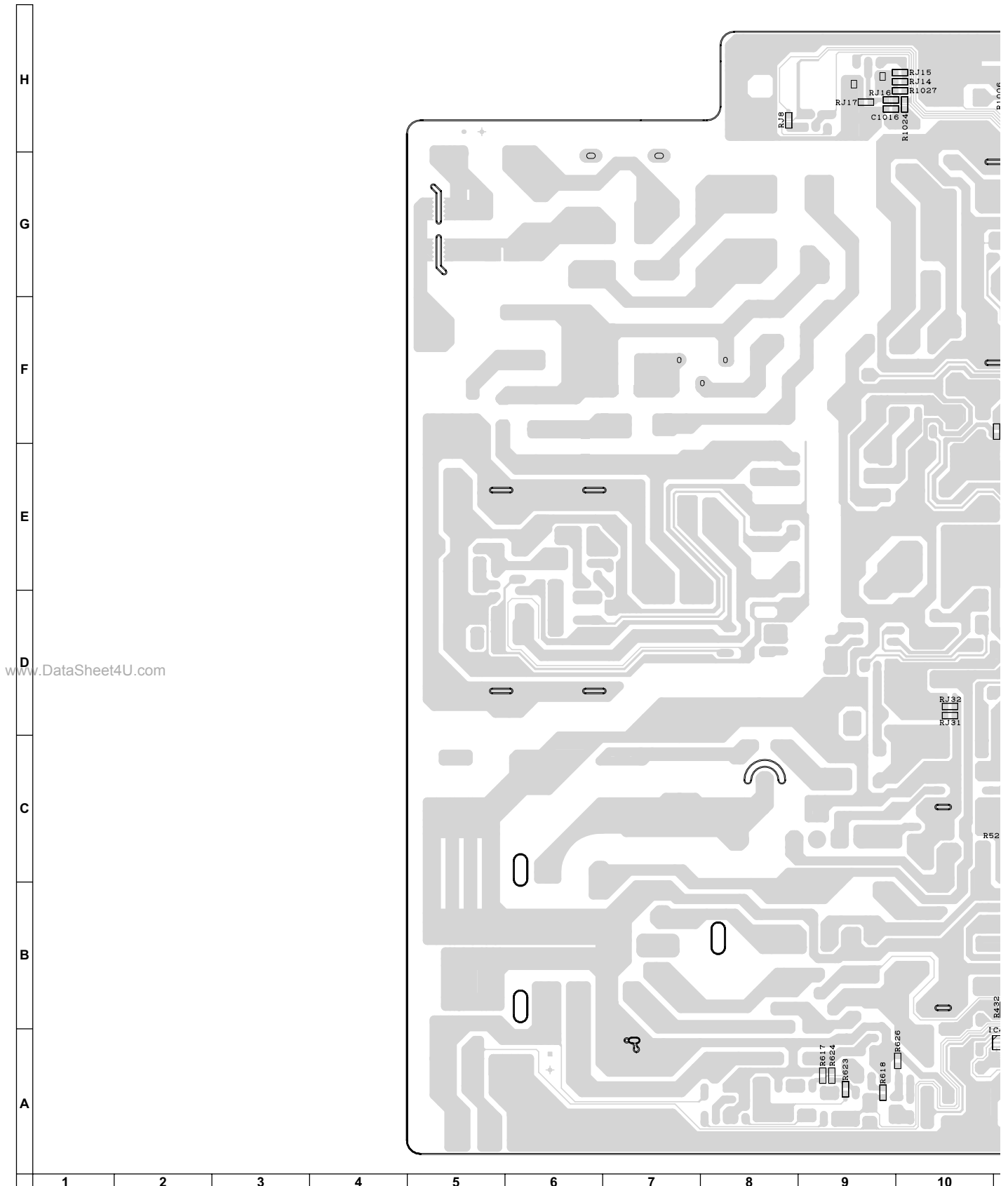
www.DataSheet4U.com

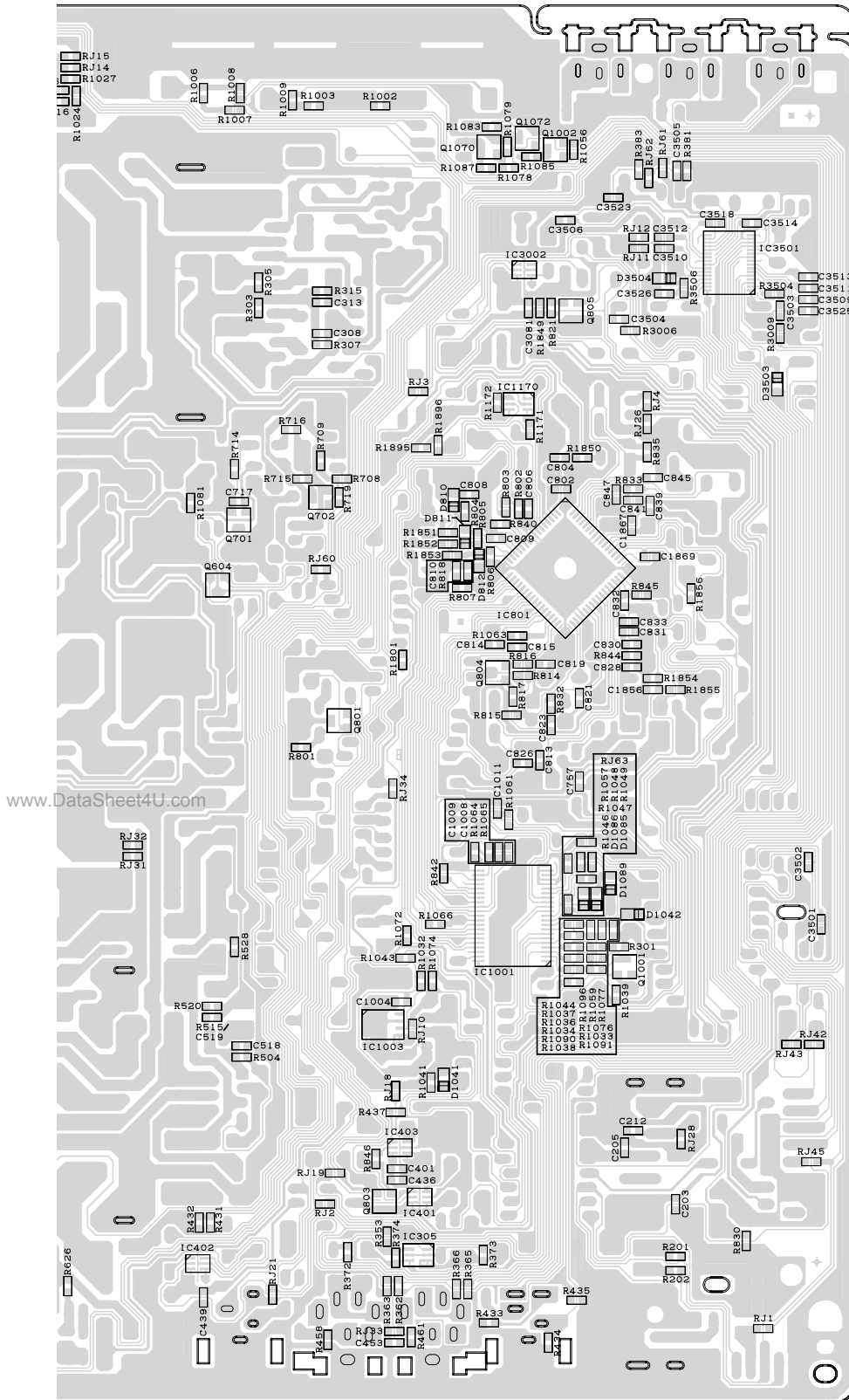


1. MAIN UNIT (Component Side)









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10	11	12	13	14	15	16	17	18	19
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SHARP PARTS GUIDE

No. S95O521JF2-RU

21JF2-RU**21JF2-GA****21JF2-SA****21JF2-SF****MODELS 21JF2-SS**

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| [1] PICTURE TUBE | [6] MISCELLANEOUS PARTS |
| [2] PRINTED WIRING BOARD
ASSEMBLIES | [7] CABINET PARTS |
| [3] MAIN UNIT | [8] SUPPLIED ACCESSORIES |
| [4] CRT UNIT | [9] PACKING PARTS |
| [5] HEADPHONE UNIT | |

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Parts marked with "△" are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
[1] PICTURE TUBE						
	VB51QGA993X1E			R	Picture Tube	[21JF2-RU/GA/SA/SF]
	VB51LY2295XFU	CB		R	Picture Tube	[21JF2-SS]
	L706	RCiLGA095WJZZ	AM	R	Degaussing Coil	
	DY601	RCiLHA128WJZZ	AY	R	Deflection Yoke	[21JF2-SS]
		QEARCA012WJZZ	AG	R	Ground-Part	
		PMAGF3046CEZZ	AF	R	Magnet	
[2] PRINTED WIRING BOARD ASSEMBLIES						
					(NOT REPLACEMENT ITEM)	
	DUNTKD307WEA3	-		-	MAIN Unit	[21JF2-RU]
	DUNTKD307WEA4	-		-	MAIN Unit	[21JF2-GA/SA]
	DUNTKD307WED3	-		-	MAIN Unit	[21JF2-SF]
	DUNTKD307WED4	-		-	MAIN Unit	[21JF2-SS]
	DUNTKA599WEH8	-		-	CRT Unit	[21JF2-RU]
	DUNTKA599WEH6	-		-	CRT Unit	[21JF2-GA/SA]
	DUNTKA599WEK1	-		-	CRT Unit	[21JF2-SF]
	DUNTKA599WEK2	-		-	CRT Unit	[21JF2-SS]
	DUNTKD308WEA3	-		-	HEADPHONE Unit	
[3] MAIN UNIT						
					PWB-A: DUNTKD307WEA3 (21JF2-RU)	
					PWB-A: DUNTKD307WEA4 (21JF2-GA)(21JF2-SA)	
					PWB-A: DUNTKD307WED3 (21JF2-SF)	
					PWB-A: DUNTKD307WED4 (21JF2-SS)	
	TU201	RTUNQA022WJZZ	AT	R	TUNER	
	IC303	VHiAN17823A-1	AG	R	AN17823A	
	IC305	VSiMX1C/C//--1Y	AC	R	IMX1T110	
	IC402	VHiMM1501XN-1Y	AE	R	MM1501XNRE	
	IC501	VHiSTV9302A-1	AH	R	STV9302A	
	IC601	VHiPQ09RDA1-1	AF	R	PQ090RDA1SZ	
	IC701	VHiSTRW5453-1	AM	R	Power I.C.	
	IC801	VHiM61260AF1EQ	AZ	R	I.C.	
	IC1001	RH-iXB226WJZZ	AP	R	I.C.	
	IC1003	VHiBR24L08F-1Y	AE	R	BR24L08F-WE2	
	IC1170	VSiMZ1A////-1Y	AC	R	iMZ1A	
	IC3002	VHiMM1501XN-1Y	AE	R	MM1501XNRE	
	Q601	VS2SC2235Y/1E+	AE	R	2SC2235	
	Q602	VSTT2140+---F	AG	R	TT2140	
	Q603	VS2SC3198-G-1+	AA	R	2SC3198	
	Q604	VS2PD601AR/-1Y	AB	R	2PD601AR	
	Q751	VS2SD468-C/-1+	AD	R	2SD468	
	Q752	VS2SD468-C/-1+	AD	R	2SD468	
	Q753	VS2SC3198-G-1+	AA	R	2SC3198	
	Q754	VS2SD468-C/-1+	AD	R	2SD468	
	Q801	VS2PD601AR/-1Y	AB	R	2PD601AR	
	Q803	VS2PD601AR/-1Y	AB	R	2PD601AR	
	Q804	VS2PB709AR/-1Y	AB	R	2PB709AR	
	Q805	VS2PB709AR/-1Y	AB	R	2PB709AR	
	Q1001	VS2PD601AR/-1Y	AB	R	2PD601AR	
	Q1002	VS2PD601AR/-1Y	AB	R	2PD601AR	
	Q1070	VS2PD601AR/-1Y	AB	R	2PD601AR	
	D201	RH-EX0676GEZZY	AA	R	Zener Diode, 33V	
	D203	VHD1SS119//--1Y	AA	R	Diode, 1SS119	
	D204	VHD1SS119//--1Y	AA	R	Diode, 1SS119	
	D393	RH-DX0247CEZZ	AE	R	Diode, DX0247CE	
	D503	RH-EX0612GEZZY	AB	R	Zener Diode, 5.1V	
	D505	RH-DX0441CEZZY	AC	R	Diode, DX0441CE	
	D510	RH-DX0131CEZZY	AC	R	Diode, DX0131CE	
	D602	VHD1SS244//--1Y	AB	R	Diode, 1SS244	
	D603	RH-EX0667GEZZY	AA	R	Zener Diode, 27V	
	D605	VHD1SS119//--1Y	AA	R	Diode, 1SS119	
	D606	RH-DX0131CEZZY	AC	R	Diode, DX0131CE	
	D607	VHD1SS119//--1Y	AA	R	Diode, 1SS119	
	D608	RH-EX0615GEZZY	AA	R	Zener Diode, 5.6V	
	D701	RH-DX0476CEZZ	AG	R	Diode, DX0476CE	
	D706	RH-DX0066GEZZY	AC	R	Diode, DX0066GE	
	D707	RH-DX0066GEZZY	AC	R	Diode, DX0066GE	
	D709	RH-DX0066GEZZY	AC	R	Diode, DX0066GE	
	D715	RH-EX0615GEZZY	AA	R	Zener Diode, 5.6V	
	D721	RH-DX0066GEZZY	AC	R	Diode, DX0066GE	
	D722	RH-EX0669GEZZY	AB	R	Zener Diode, 27V	
	D723	RH-EX0640GEZZY	AA	R	Zener Diode, 12V	
	D732	RH-EX0626GEZZY	AB	R	Zener Diode, 7.5V	
	D736	RH-EX0680GEZZY	AB	R	Zener Diode, 36V	
	D751	RH-DXA006WJZZ	AD	R	Diode, DXA006WJ	
	D752	RH-DX0247CEZZ	AE	R	Diode, DX0247CE	
	D801	RH-EX0612GEZZY	AB	R	Zener Diode, 5.1V	
	D802	RH-EX0630GEZZY	AA	R	Zener Diode, 9.1V	
	D803	VHD1SS119//--1Y	AA	R	Diode, 1SS119	
	D806	VHD1SS119//--1Y	AA	R	Diode, 1SS119	
	D810	RH-EX0263TAZZY	AC	R	Zener Diode, 8.1V	
	D811	RH-EX0263TAZZY	AC	R	Zener Diode, 8.1V	
	D812	RH-EX0263TAZZY	AC	R	Zener Diode, 8.1V	
	D1001	RH-PX0013PEZZ	AC	R	Photodiode	

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[3] MAIN UNIT					
	D1010	RH-EX0636GEZZY	AC	R	Zener Diode, 11V
	D1042	RH-EX1393CEZZY	AB	R	Zener Diode, 5.1V
	D1081	VHD1SS119//--1Y	AA	R	Diode, 1SS119
	D1082	RH-EX1393CEZZY	AB	R	Zener Diode, 5.1V
	D1085	RH-EX1393CEZZY	AB	R	Zener Diode, 5.1V
	D1086	RH-EX1393CEZZY	AB	R	Zener Diode, 5.1V
	D1091	VHD1SS119//--1Y	AA	R	Diode, 1SS119
	D1094	VHD1SS119//--1Y	AA	R	Diode, 1SS119
	D1170	VHD1SS119//--1Y	AA	R	Diode, 1SS119
	D1171	VHD1SS119//--1Y	AA	R	Diode, 1SS119
	D1180	RH-EX1393CEZZY	AB	R	Zener Diode, 5.1V
	D1181	RH-EX1393CEZZY	AB	R	Zener Diode, 5.1V
	D1801	VHD1SS119//--1Y	AA	R	Diode, 1SS119
△	VA701	RH-VX0073CEZZ	AD	R	Varistor
△	PR701	RMPTP0085CEZZ	AL	R	Packaged Circuit
	X801	RCRCAA019WJZZ	AF	R	Crystal
	L203	VP-DF270K0000Y	AB	R	Peaking 27μH
	L602	RCiLP0223CEZZ+	AD	R	Coil
△	L701	RCiLF0086PEN1	AF	R	Coil
△	L701	RCiLFA187WJZZ		R	Coil
	L751	RCiLP0179CEZZ+	AD	R	Coil
	L801	VP-CF220K0000Y	AB	R	Peaking 22μH
	L802	VP-DF100K0000Y	AB	R	Peaking 10μH
	L803	VP-DF100K0000Y	AB	R	Peaking 10μH
	L806	VP-DF100K0000Y	AB	R	Peaking 10μH
	L807	VP-XF2R2K0000Y	AB	R	Peaking 2.2μH
	L808	VP-XF330K0000Y	AB	R	Peaking 33μH
	SF201	RFiLC0442CEZZ	AL	R	Filter
△	T602	RTRNFA113WJZZ	AV	R	H-Volt Transformer
△	T603	RTRNZA058WJZZ	AD	R	Transformer
△	T701	RTRNWA193WJZZ		R	Transformer
	C201	VCEA9M1CW476M+	AB	R	47 16V Electrolytic
	C202	VCEA0A1AW108M+	AC	R	1000 10V Electrolytic
	C203	VCKYCY1HF103ZY	AA	R	0.01 50V Ceramic
	C206	VCEA0A1HW106M+	AB	R	10 50V Electrolytic
	C304	VCEA0A1HW105M+	AB	R	1 50V Electrolytic
	C305	VCE9GA1CW106M+	AB	R	10 16V Electrolytic (N.P)
	C310	VCEA0A1HW105M+	AB	R	1 50V Electrolytic
	C313	VCKYCY1HB332KY	AA	R	3300p 50V Ceramic
	C318	VCEA0A1CW107M+	AC	R	100 16V Electrolytic
	C319	VCEA0A1CW106M+	AB	R	10 16V Electrolytic
	C383	VCEA0A1CW106M+	AB	R	10 16V Electrolytic
	C391	VCKYPA1HB102K+	AA	R	1000p 50V Ceramic
	C393	VCEA0A1EW108M+	AD	R	1000 25V Electrolytic
	C401	VCKYCY1HF103ZY	AA	R	0.01 50V Ceramic
	C437	VCEA0A1CW106M+	AB	R	10 16V Electrolytic
	C438	VCEA0A1CW106M+	AB	R	10 16V Electrolytic
	C451	VCEA0A1CW477M+	AC	R	470 16V Electrolytic
	C505	VCEA0A1HW107M+	AB	R	100 50V Electrolytic
	C508	VCFYAA2AA224J+	AD	R	0.22 100V Mylar
	C509	VCKYPA2HB472K+	AB	R	4700p 500V Ceramic
	C511	VCEA0A1VW477M+	AB	R	470 35V Electrolytic
	C512	VCKYPA2HB102K+	AA	R	1000p 500V Ceramic
	C513	RC-EZA332WJZZ+	AD	R	Capacitor
	C515	VCEACA1HC335J+	AC	R	3.3 50V Electrolytic
	C601	VCQYTA1HM563J+	AB	R	0.056 50V Mylar
	C602	VCEA0A1HW475M+	AB	R	4.7 50V Electrolytic
	C604	VCEA0A2EW336M+	AD	R	33 250V Electrolytic
	C606	VCKYPA2HB102K+	AA	R	1000p 500V Ceramic
△	C607	VCFPVC3ZA922H		R	9200p 1.8kV Metalized Polypro Film
△	C607	VCFPVC3ZA103H	AD	R	10000p 1.8kV Metalized Polypro Film
	C608	VCQYTA2AA103K+	AC	R	0.01 100V Mylar
	C610	VCEA0A1EW227M+	AB	R	220 25V Electrolytic
	C611	VCFPVC2DB334J	AD	R	0.33 200V Metalized Polypro Film
	C611	VCFPVC2DB364J	AC	R	0.36 200V Metalized Polypro Film
	C642	VCEA0A1EW476M+	AB	R	47 25V Electrolytic
	C643	VCEA0A1CW477M+	AC	R	470 16V Electrolytic
	C650	VCKYPA2HB101K+	AB	R	100p 500V Ceramic
△	C701	RC-FZ037SCEZZ	AD	R	0.22 275V Metalized Polypro Film
△	C701	RC-FZ031SCEZZ	AD	R	0.1 275V Metalized Polypro Film
	C702	RC-KZ0029CEZZ+	AC	R	0.01 250V Ceramic
	C703	RC-KZ0029CEZZ+	AC	R	0.01 250V Ceramic
	C704	RC-KZ0029CEZZ+	AC	R	0.01 250V Ceramic
△	C705	RC-EZA097WJZZ	AM	R	220 400V Electrolytic
	C706	VCFYFA1HA105J+	AE	R	1 50V Mylar
	C708	VCKYPA1HB221K+	AA	R	220p 50V Ceramic
	C709	VCQYTA1HM103J+	AB	R	0.01 50V Mylar
	C710	VCQYTA1HM103J+	AB	R	0.01 50V Mylar
	C711	VCKYPA1HB472K+	AB	R	4700p 50V Ceramic
	C713	RC-KZ0107GEZZ	AE	R	3900p 250V Ceramic
	C713	RC-KZ0102GEZZ	AE	R	680p 250V Ceramic
	C719	VCEA0A1HW336M+	AA	R	33 50V Electrolytic
	C743	VCKYPH3DB561K	AC	R	560p 2kV Ceramic
△	C750	VCKYPA2HB102K+	AA	R	1000p 500V Ceramic

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[3] MAIN UNIT					
C752	VCKYPH3DB561K	AC		R	560p 2kV Ceramic
C753	RC-EZA523WJZZ	AD		R	100 160V Electrolytic
C754	RC-EZA522WJZZ	AD		R	33 160V Electrolytic
C756	VCEA0A1EW228M+	AE		R	2200 25V Electrolytic
C757	VCKYCY1HB471KY	AA		R	470p 50V Ceramic
C784	RC-KZ1018CEZZ+	AC		R	1000p 2kV Ceramic
C801	VCFYFA1HA1051+	AE		R	1 50V Mylar
C802	VCKYCY1HF103ZY	AA		R	0.01 50V Ceramic
C803	VCEA0A1CW108M+	AD		R	1000 16V Electrolytic
C804	VCKYCY1HF103ZY	AA		R	0.01 50V Ceramic
C805	VCEA0A1HW105M+	AB		R	1 50V Electrolytic
C806	VCKYCY1HF103ZY	AA		R	0.01 50V Ceramic
C807	VCEA0A1CW108M+	AD		R	1000 16V Electrolytic
C808	VCKYCY1HF103ZY	AA		R	0.01 50V Ceramic
C809	VCKYCY1HF103ZY	AA		R	0.01 50V Ceramic
C810	VCKYCY1HF103ZY	AA		R	0.01 50V Ceramic
C811	VCEA9M1CW107M+	AB		R	100 16V Electrolytic
C813	VCCCCY1HH181JY	AA		R	180p 50V Ceramic
C814	VCKYCY1HF103ZY	AA		R	0.01 50V Ceramic
C815	VCKYCY1HF103ZY	AA		R	0.01 50V Ceramic
C817	VCEA0A1CW107M+	AC		R	100 16V Electrolytic
C818	VCEA9M1HW475M+	AB		R	4.7 50V Electrolytic
C819	VCCCCY1HH121JY	AA		R	120p 50V Ceramic
C820	VCEA9M1HW474M+	AB		R	0.47 50V Electrolytic
C821	VCKYCY1HF153ZY	AA		R	0.015 50V Ceramic
C822	VCEA0A1HW105M+	AB		R	1 50V Electrolytic
C823	VCKYCY1CB104KY	AB		R	0.1 16V Ceramic
C824	VCEA0A1CW337M+	AC		R	330 16V Electrolytic
C825	VCE9GA1HW105M+	AB		R	1 50V Electrolytic (N.P)
C827	VCEA0A1CW477M+	AC		R	470 16V Electrolytic
C828	VCKYCY1HF103ZY	AA		R	0.01 50V Ceramic
C829	VCEA0A1CW476M+	AB		R	47 16V Electrolytic
C830	VCKYCY1CB104KY	AB		R	0.1 16V Ceramic
C832	VCKYCY1CB104KY	AB		R	0.1 16V Ceramic
C834	VCEA0A1CW476M+	AB		R	47 16V Electrolytic
C835	VCEA0A1CW106M+	AB		R	10 16V Electrolytic
C837	VCEA9M1HW474M+	AB		R	0.47 50V Electrolytic
C838	VCEA0A1CW106M+	AB		R	10 16V Electrolytic
C839	VCKYCY1HB392KY	AA		R	3900p 50V Ceramic
C840	VCFYFA1HA1051+	AE		R	1 50V Mylar
C841	VCCCCY1HH220JY	AA		R	22p 50V Ceramic
C842	VCEA0A1HW474M+	AB		R	0.47 50V Electrolytic
C843	VCEA9M1HW105M+	AB		R	1 50V Electrolytic
C845	VCKYCY1CF224ZY	AB		R	0.22 16V Ceramic
C847	VCCCCY1HH220JY	AA		R	22p 50V Ceramic
C848	VCEA0A1HW474M+	AB		R	0.47 50V Electrolytic
C1003	VCEA0A1CW226M+	AB		R	22 16V Electrolytic
C1004	VCKYCY1CF474ZY	AB		R	0.47 16V Ceramic
C1005	VCEA0A1HW475M+	AB		R	4.7 50V Electrolytic
C1006	VCEA0A1HW225M+	AB		R	2.2 50V Electrolytic
C1007	VCEA0A1CW107M+	AC		R	100 16V Electrolytic
C1008	VCKYCY1HF103ZY	AA		R	0.01 50V Ceramic
C1009	VCKYCY1HF103ZY	AA		R	0.01 50V Ceramic
C1011	VCKYCY1HB221KY	AA		R	220p 50V Ceramic
C1012	VCEA0A1HW105M+	AB		R	1 50V Electrolytic
C1014	VCEA0A1HW475M+	AB		R	4.7 50V Electrolytic
C1015	VCCCPA1HH101J+	AA		R	100p 50V Ceramic
C1016	VCKYCY1EF104ZY	AA		R	0.1 25V Ceramic
C1018	VCCCCY1HH560JY	AB		R	56p 50V Ceramic
C1081	VCQYTA1HM104J+	AB		R	0.1 50V Mylar
C1082	VCKYCY1HB471KY	AA		R	470p 50V Ceramic
C1170	VCEA0A1CW107M+	AC		R	100 16V Electrolytic
C1801	VCEA9M1CW106M+	AB		R	10 16V Electrolytic
C1849	VCFYFA1HA1041+	AA		R	0.1 50V Mylar
C1853	VCFYFA1HA1051+	AE		R	1 50V Mylar
C1856	VCKYCY1HB102KY	AA		R	1000p 50V Ceramic
C1867	VCCCCY1HH150JY	AA		R	15p 50V Ceramic
C1868	VCEA0A1CW336M+	AB		R	33 16V Electrolytic
C3080	VCEA0A1CW107M+	AC		R	100 16V Electrolytic
C3081	VCKYCY1HF103ZY	AA		R	0.01 50V Ceramic
C3082	VCEA0A1CW106M+	AB		R	10 16V Electrolytic
C3083	VCEA0A1CW106M+	AB		R	10 16V Electrolytic
RJ1	VRS-CY1JF000JY	AA		R	0 1/16W Metal Oxide
RJ3	VRS-CY1JF000JY	AA		R	0 1/16W Metal Oxide
RJ10	VRS-CY1JF000JY	AA		R	0 1/16W Metal Oxide
RJ11	VRS-CY1JF000JY	AA		R	0 1/16W Metal Oxide
RJ15	VRS-CY1JF000JY	AA		R	0 1/16W Metal Oxide
RJ16	VRS-CY1JF000JY	AA		R	0 1/16W Metal Oxide
RJ61	VRS-CY1JF000JY	AA		R	0 1/16W Metal Oxide
RJ63	VRS-CY1JF000JY	AA		R	0 1/16W Metal Oxide
R201	VRS-CY1JF101JY	AA		R	100 1/16W Metal Oxide
R202	VRS-CY1JF101JY	AA		R	100 1/16W Metal Oxide
R216	VRS-RG3LB393J+	AC		R	39k 3W Metal Oxide
R304	VRD-RA2BE683JY	AA		R	68k 1/8W Carbon
R305	VRS-CY1JF274JY	AA		R	270k 1/16W Metal Oxide

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[3] MAIN UNIT					
R314	VRD-RA2BE562JY	AA		R	5.6k 1/8W Carbon
R315	VRS-CY1JF182JY	AA		R	1.8k 1/16W Metal Oxide
R318	VRD-RA2BE680JY	AA		R	68 1/8W Carbon
R353	VRS-CY1JF102JY	AA		R	1k 1/16W Metal Oxide
R366	VRS-CY1JF332JY	AA		R	3.3k 1/16W Metal Oxide
R372	VRS-CY1JF104JY	AA		R	100k 1/16W Metal Oxide
R373	VRS-CY1JF103JY	AA		R	10k 1/16W Metal Oxide
R376	VRD-RA2BE472JY	AA		R	4.7k 1/8W Carbon
R384	VRD-RA2BE332JY	AA		R	3.3k 1/8W Carbon
R391	VRN-RL2HCR22J+			R	0.22 1/2W Metal Film
R431	VRS-CY1JF101JY	AA		R	100 1/16W Metal Oxide
R432	VRS-CY1JF750JY	AA		R	75 1/16W Metal Oxide
R436	VRD-RA2BE101JY	AA		R	100 1/8W Carbon
R458	VRS-CY1JF103JY	AA		R	10k 1/16W Metal Oxide
R459	VRD-RA2EE750JY	AA		R	75 1/4W Carbon
R461	VRS-CY1JF750JY	AA		R	75 1/16W Metal Oxide
R462	VRD-RA2BE101JY	AA		R	100 1/8W Carbon
R503	VRN-RL3DB1R2J+	AB		R	1.2 2W Metal Film
R504	VRS-CY1JF222JY	AA		R	2.2k 1/16W Metal Oxide
R506	VRS-RG3AB331J+	AB		R	330 1W Metal Oxide
R507	VRD-RM2HD1R0JY	AA		R	1 1/2W Carbon
R513	VRD-RM2HD333JY	AB		R	33k 1/2W Carbon
R514	VRD-RM2HD822JY	AA		R	8.2k 1/2W Carbon
R515	VRS-CY1JF393JY	AA		R	39k 1/16W Metal Oxide
R520	VRS-CY1JF223JY	AA		R	22k 1/16W Metal Oxide
R523	VRD-RA2BE103JY	AA		R	10k 1/8W Carbon
R524	VRD-RA2BE103JY	AA		R	10k 1/8W Carbon
R525	VRD-RA2BE152JY	AA		R	1.5k 1/8W Carbon
R526	VRD-RA2BE101JY	AA		R	100 1/8W Carbon
R601	VRD-RM2HD270JY	AA		R	27 1/2W Carbon
R602	VRD-RA2BE393JY	AA		R	39k 1/8W Carbon
R603	VRD-RA2BE393JY	AA		R	39k 1/8W Carbon
R604	VRD-RA2BE473JY	AA		R	47k 1/8W Carbon
R605	VRD-RM2HD104JY	AA		R	100k 1/2W Carbon
R606	VRN-RL3LBR22J+	AD		R	0.22 3W Metal Film
R608	VRD-RM2HD102JY	AA		R	1k 1/2W Carbon
R611	VRN-RL3AB1R5J+	AB		R	1.5 1W Metal Film
R612	VRD-RM2HD270JY	AA		R	27 1/2W Carbon
R614	VRD-RA2BE154JY	AA		R	150k 1/8W Carbon
R615	VRD-RA2BE102JY	AA		R	1k 1/8W Carbon
R616	VRD-RA2BE102JY	AA		R	1k 1/8W Carbon
R617	VRS-CY1JF123JY	AA		R	12k 1/16W Metal Oxide
R618	VRS-CY1JF103JY	AA		R	10k 1/16W Metal Oxide
R621	VRN-RL2HC4R7J+	AB		R	4.7 1/2W Metal Film
R622	VRS-VV3DB682JY	AA		R	6.8k 2W Metal Oxide
R625	VRD-RM2HD184JY	AA		R	180k 1/2W Carbon
R626	VRS-CY1JF472JY	AA		R	4.7k 1/16W Metal Oxide
R627	VRD-RA2BE103JY	AA		R	10k 1/8W Carbon
R631	VRS-KT3LB391J	AD		R	390 3W Metal Oxide
R637	VRD-RA2BE331JY	AA		R	330 1/8W Carbon
R638	VRD-RA2BE181JY	AA		R	180 1/8W Carbon
R639	VRD-RM2HD271JY	AA		R	270 1/2W Carbon
R642	VRN-RL3DB1R0J+	AB		R	1 2W Metal Film
R661	VRD-RA2BE102JY	AA		R	1k 1/8W Carbon
R662	VRD-RA2BE103JY	AA		R	10k 1/8W Carbon
R702	VRS-VV3DB124J	AB		R	120k 2W Metal Oxide
R704	VRD-RA2BE221JY	AA		R	220 1/8W Carbon
R705	VRN-RL3DBR82J+	AB		R	0.82 2W Metal Film
R706	VRN-RL3DBR22J+	AA		R	0.22 2W Metal Film
R710	VRD-RM2HD1R0JY	AA		R	1 1/2W Carbon
R718	VRC-UA2HG275KY	AC		R	2.7M 1/2W Solid
R720	VRD-RA2EE472JY	AA		R	4.7k 1/4W Carbon
R722	VRD-RA2BE153JY	AA		R	15k 1/8W Carbon
R726	VRN-RL2HCR47J+	AB		R	0.47 1/2W Metal Film
R733	VRD-RA2BE273JY	AA		R	27k 1/8W Carbon
R751	VRC-UA2HG825KY	AA		R	8.2M 1/2W Solid
R752	VRC-UA2HG825KY	AA		R	8.2M 1/2W Solid
R753	VRD-RM2HD124JY	AA		R	120k 1/2W Carbon
R754	VRN-RL3AB8R2J+	AB		R	8.2 1W Metal Film
R756	VRS-RG3DB121J+	AB		R	120 2W Metal Oxide
R801	VRS-CY1JF102JY	AA		R	1k 1/16W Metal Oxide
R802	VRS-CY1JF682JY	AA		R	6.8k 1/16W Metal Oxide
R803	VRS-CY1JF103JY	AA		R	10k 1/16W Metal Oxide
R804	VRS-CY1JF222JY	AA		R	2.2k 1/16W Metal Oxide
R805	VRS-CY1JF222JY	AA		R	2.2k 1/16W Metal Oxide
R806	VRS-CY1JF222JY	AA		R	2.2k 1/16W Metal Oxide
R807	VRS-CY1JF222JY	AA		R	2.2k 1/16W Metal Oxide
R808	VRD-RA2BE273JY	AA		R	27k 1/8W Carbon
R812	VRD-RA2BE101JY	AA		R	100 1/8W Carbon
R814	VRS-CY1JF473JY	AA		R	47k 1/16W Metal Oxide
R815	VRS-CY1JF473JY	AA		R	47k 1/16W Metal Oxide
R816	VRS-CY1JF223JY	AA		R	22k 1/16W Metal Oxide
R817	VRS-CY1JF473JY	AA		R	47k 1/16W Metal Oxide
R821	VRS-CY1JF000JY	AA		R	0 1/16W Metal Oxide
R823	VRD-RA2BE101JY	AA		R	100 1/8W Carbon

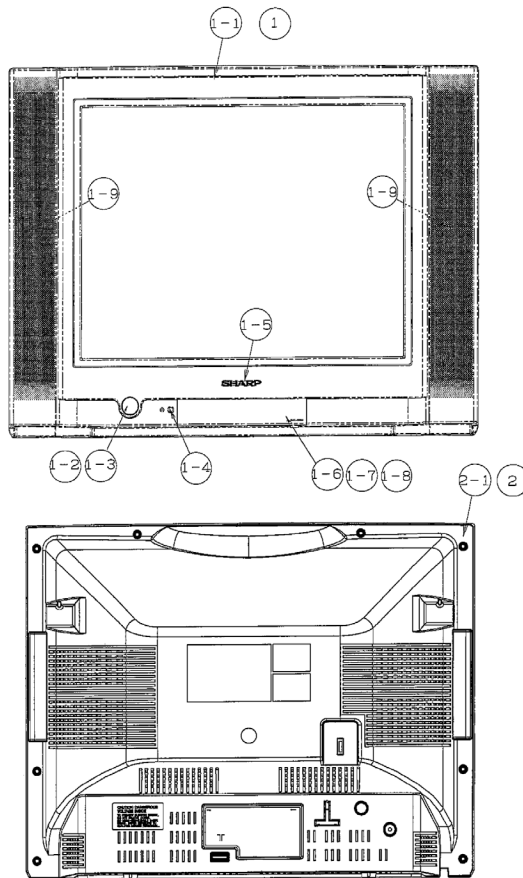
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NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[3] MAIN UNIT					
R824	VRD-RA2BE101JY	AA		R	100 1/8W Carbon
R825	VRD-RA2BE101JY	AA		R	100 1/8W Carbon
R829	VRD-RA2BE472JY	AA		R	4.7k 1/8W Carbon
R830	VRS-CY1JF393JY	AA		R	39k 1/16W Metal Oxide
R831	VRD-RA2BE331JY	AA		R	330 1/8W Carbon
R832	VRS-CY1JF822JY	AA		R	8.2k 1/16W Metal Oxide
R833	VRS-CY1JF220JY	AA		R	22 1/16W Metal Oxide
R835	VRS-CY1JF332JY	AA		R	3.3k 1/16W Metal Oxide
R837	VRD-RM2HD151JY	AA		R	150 1/2W Carbon
R838	VRD-RA2BE105JY	AA		R	1M 1/8W Carbon
R839	VRD-RA2BE101JY	AA		R	100 1/8W Carbon
R840	VRS-CY1JF124JY	AA		R	120k 1/16W Metal Oxide
R841	VRD-RA2BE152JY	AA		R	1.5k 1/8W Carbon
R842	VRS-CY1JF562JY	AA		R	5.6k 1/16W Metal Oxide
R843	VRD-RA2BE103JY	AA		R	10k 1/8W Carbon
R844	VCKYCY1CB104KY	AB		R	0.1 16V Ceramic
R1002	VRS-CY1JF183JY	AA		R	18k 1/16W Metal Oxide
R1003	VRS-CY1JF822JY	AA		R	8.2k 1/16W Metal Oxide
R1005	VRD-RA2BE101JY	AA		R	100 1/8W Carbon
R1006	VRS-CY1JF822JY	AA		R	8.2k 1/16W Metal Oxide
R1007	VRS-CY1JF103JY	AA		R	10k 1/16W Metal Oxide
R1008	VRS-CY1JF183JY	AA		R	18k 1/16W Metal Oxide
R1009	VRS-CY1JF103JY	AA		R	10k 1/16W Metal Oxide
R1011	VRD-RA2BE101JY	AA		R	100 1/8W Carbon
R1012	VRD-RA2BE101JY	AA		R	100 1/8W Carbon
R1013	VRD-RA2BE391JY	AA		R	390 1/8W Carbon
R1024	VRS-CY1JF101JY	AA		R	100 1/16W Metal Oxide
R1027	VRS-CY1JF104JY	AA		R	100k 1/16W Metal Oxide
R1031	VRD-RA2BE101JY	AA		R	100 1/8W Carbon
R1032	VRS-CY1JF332JY	AA		R	3.3k 1/16W Metal Oxide
R1033	VRS-CY1JF472JY	AA		R	4.7k 1/16W Metal Oxide
R1037	VRS-CY1JF103JY	AA		R	10k 1/16W Metal Oxide
R1038	VRS-CY1JF562JY	AA		R	5.6k 1/16W Metal Oxide
R1039	VRS-CY1JF102JY	AA		R	1k 1/16W Metal Oxide
R1041	VRS-CY1JF102JY	AA		R	1k 1/16W Metal Oxide
R1042	VRD-RA2BE101JY	AA		R	100 1/8W Carbon
R1043	VRS-CY1JF104JY	AA		R	100k 1/16W Metal Oxide
R1044	VRS-CY1JF101JY	AA		R	100 1/16W Metal Oxide
R1045	VRD-RA2BE101JY	AA		R	100 1/8W Carbon
R1046	VRS-CY1JF101JY	AA		R	100 1/16W Metal Oxide
R1047	VRS-CY1JF183JY	AA		R	18k 1/16W Metal Oxide
R1048	VRS-CY1JF101JY	AA		R	100 1/16W Metal Oxide
R1049	VRS-CY1JF183JY	AA		R	18k 1/16W Metal Oxide
R1050	VRD-RA2BE103JY	AA		R	10k 1/8W Carbon
R1051	VRD-RA2BE104JY	AA		R	100k 1/8W Carbon
R1054	VRD-RA2BE101JY	AA		R	100 1/8W Carbon
R1055	VRD-RA2BE332JY	AA		R	3.3k 1/8W Carbon
R1056	VRS-CY1JF332JY	AA		R	3.3k 1/16W Metal Oxide
R1057	VRS-CY1JF101JY	AA		R	100 1/16W Metal Oxide
R1061	VRS-CY1JF102JY	AA		R	1k 1/16W Metal Oxide
R1063	VRS-CY1JF103JY	AA		R	10k 1/16W Metal Oxide
R1064	VRS-CY1JF103JY	AA		R	10k 1/16W Metal Oxide
R1065	VRS-CY1JF103JY	AA		R	10k 1/16W Metal Oxide
R1066	VRS-CY1JF102JY	AA		R	1k 1/16W Metal Oxide
R1072	VRS-CY1JF221JY	AA		R	220 1/16W Metal Oxide
R1073	VRD-RA2BE101JY	AA		R	100 1/8W Carbon
R1074	VRS-CY1JF332JY	AA		R	3.3k 1/16W Metal Oxide
R1077	VRS-CY1JF472JY	AA		R	4.7k 1/16W Metal Oxide
R1078	VRS-CY1JF332JY	AA		R	3.3k 1/16W Metal Oxide
R1079	VRS-CY1JF332JY	AA		R	3.3k 1/16W Metal Oxide
R1087	VRS-CY1JF391JY	AA		R	390 1/16W Metal Oxide
R1090	VRS-CY1JF101JY	AA		R	100 1/16W Metal Oxide
R1091	VRS-CY1JF103JY	AA		R	10k 1/16W Metal Oxide
R1096	VRS-CY1JF332JY	AA		R	3.3k 1/16W Metal Oxide
R1170	VRD-RA2BE103JY	AA		R	10k 1/8W Carbon
R1171	VRS-CY1JF103JY	AA		R	10k 1/16W Metal Oxide
R1172	VRS-CY1JF222JY	AA		R	2.2k 1/16W Metal Oxide
R1511	VRS-CY1JF000JY	AA		R	0 1/16W Metal Oxide
R1801	VRS-CY1JF222JY	AA		R	2.2k 1/16W Metal Oxide
R1802	VRD-RA2BE124JY	AA		R	120k 1/8W Carbon
R1841	VRD-RA2BE825JY	AA		R	8.2M 1/8W Carbon
R1849	VRS-CY1JF272JY	AA		R	2.7k 1/16W Metal Oxide
R1850	VRS-CY1JF681JY	AA		R	680 1/16W Metal Oxide
R1851	VRS-CY1JF221JY	AA		R	220 1/16W Metal Oxide
R1852	VRS-CY1JF221JY	AA		R	220 1/16W Metal Oxide
R1853	VRS-CY1JF221JY	AA		R	220 1/16W Metal Oxide
R1854	VRS-CY1JF103JY	AA		R	10k 1/16W Metal Oxide
R1855	VRS-CY1JF122JY	AA		R	1.2k 1/16W Metal Oxide
R1856	VRS-CY1JF223JY	AA		R	22k 1/16W Metal Oxide
R1894	VRD-RA2BE223JY	AA		R	22k 1/8W Carbon
R1895	VRS-CY1JF473JY	AA		R	47k 1/16W Metal Oxide
R1896	VRS-CY1JF473JY	AA		R	47k 1/16W Metal Oxide
S701	QSW-P0612CEZZ	AG		R	Switch, POWER
S1001	QSW-K0202PEZZ+	AC		R	Switch, CH UP
S1002	QSW-K0202PEZZ+	AC		R	Switch, CH DOWN

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[3] MAIN UNIT					
S1003	QSW-K0202PEZZ+	AC		R	Switch, VOL UP
S1004	QSW-K0202PEZZ+	AC		R	Switch, VOL DOWN
S1005	QSW-K0202PEZZ+	AC		R	Switch, MENU
F701	QFS-C3225CEZZ	AC		R	Fuse, 3.15A 250V
FH701	QFSDH1013CEZZ+	AC		R	Fuse Holder
FH702	QFSDH1014CEZZ+	AC		R	Fuse Holder
J402	QJAKEA056WJ04	AB		R	Jack
J403	QJAKEA056WJ09	AB		R	Jack
J405	QJAKHA017WJZZ	AD		R	Jack
P302	QPLGN0461CEZZA	AB		R	Plug, 4Pin (S)
P305	QPLGNA110WJZZ	AB		R	Plug, 4Pin (HP)
P601	QPLGN0660CEZZ	AC		R	Plug, 6Pin (F)
P602	QPLGN0561CEZZA	AB		R	Plug, 5Pin (H)
P701	QPLGN0260CEZZ	AC		R	Plug, 2Pin (M)
P702	QPLGN0269GEZZ	AB		R	Plug, 2Pin
P1001	QPLGN0578GEZZ	AB		R	Plug, 5Pin (K)
P1002	QPLGN0561CEZZ	AB		R	Plug, 5Pin (BC)
RMC1001	RRMCUA022WJZZ	AG		R	Remote Receiver
RDA303	PRDARA172WJFW	AC		R	Heat Sink for IC303
RDA501	PRDARA120WJFW	AD		R	Heat Sink for IC501
RDA601	PRDARA167WJFW	AD		R	Heat Sink for IC601
RDA602	PRDAR0337PEFW	AD		R	Heat Sink for Q602
RDA701	PRDARA119WJFW	AF		R	Heat Sink for IC701
NR701	RH-HXA013WJZZ+	AD		R	Thermistor
TP801	QLUGP0111GEFW	AA		R	Lug
	LHLDP1066PE00	AC		R	Holder
[4] CRT UNIT					
					PWB-B: DUNTKA599WEH8 (21JF2-RU)
					PWB-B: DUNTKA599WEH6 (21JF2-GA)(21JF2-SA)
					PWB-B: DUNTKA599WEK1 (21JF2-SF)
					PWB-B: DUNTKA599WEK2 (21JF2-SS)
Q853	RH-TX0110BMZZ+	AC		R	TX0110
Q854	RH-TX0110BMZZ+	AC		R	TX0110
Q855	RH-TX0110BMZZ+	AC		R	TX0110
Q894	VS2PA1015Y+-1+	AC		R	2PA1015Y
D859	VHD1SS119// -1Y	AA		R	Diode, 1SS119
D896	RH-EX0616GEZZY	AA		R	Zener Diode, 5.6V
D898	VHD1SS119// -1Y	AA		R	Diode, 1SS119
L851	VP-MK820K0000+	AB		R	Peaking 82µH
C851	VCKYPA1HB561K+	AA		R	560p 50V Ceramic
C852	VCKYPA1HB391K+	AA		R	390p 50V Ceramic
C853	VCKYPA1HB271K+	AB		R	270p 50V Ceramic
C880	RC-KZ0016CEZZ	AC		R	10000p 1.5kV Ceramic
C893	VCEA0A1CW336M+	AB		R	33 16V Electrolytic
R849	VRD-RA2BE271JY	AA		R	270 1/8W Carbon
R850	VRD-RA2BE470JY	AA		R	47 1/8W Carbon
R851	VRD-RA2BE470JY	AA		R	47 1/8W Carbon
R852	VRD-RA2BE470JY	AA		R	47 1/8W Carbon
R854	VRD-RA2BE271JY	AA		R	270 1/8W Carbon
R855	VRD-RA2BE271JY	AA		R	270 1/8W Carbon
R859	VRS-VV3DB153J	AA		R	15k 2W Metal Oxide
R861	VRS-VV3DB153J	AA		R	15k 2W Metal Oxide
R863	VRS-VV3DB153J	AA		R	15k 2W Metal Oxide
R864	VRD-RA2BE470JY	AA		R	47 1/8W Carbon
R876	VRD-RA2BE121JY	AA		R	120 1/8W Carbon
R877	VRD-RA2BE121JY	AA		R	120 1/8W Carbon
R878	VRD-RA2BE121JY	AA		R	120 1/8W Carbon
R880	VRD-RM2HD332JY	AA		R	3.3k 1/2W Carbon
R881	VRD-RM2HD332JY	AA		R	3.3k 1/2W Carbon
R882	VRD-RM2HD332JY	AA		R	3.3k 1/2W Carbon
R889	VRD-RA2BE821JY	AA		R	820 1/8W Carbon
R891	VRD-RA2BE561JY	AA		R	560 1/8W Carbon
R892	VRD-RA2BE391JY	AA		R	390 1/8W Carbon
R894	VRD-RA2BE152JY	AA		R	1.5k 1/8W Carbon
R895	VRD-RA2BE561JY	AA		R	560 1/8W Carbon
P860	QPLGN0561CEZZ	AB		R	Plug, 5Pin (H)
P880	QPLGN0578GEZZ	AB		R	Plug, 5Pin (K)
SC851	QSOCV0016PEZZ	AF		R	Socket, 12Pin
[5] HEADPHONE UNIT					
					PWB-C: DUNTKD308WEA3
RJ35	VRS-CY1JF000JY	AA		R	0 1/16W Metal Oxide
RJ37	VRS-CY1JF000JY	AA		R	0 1/16W Metal Oxide
RJ38	VRS-CY1JF000JY	AA		R	0 1/16W Metal Oxide
R370	VRS-CY1JF471JY	AA		R	470 1/16W Metal Oxide
R371	VRS-CY1JF471JY	AA		R	470 1/16W Metal Oxide
J351	QJAKJA018WJZZ	AD		R	Jack
P351	QPLGNA109WJZZ	AB		R	Plug, 4Pin (HP1)

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
[6] MISCELLANEOUS PARTS						
△ ACC701	QACCZA048WJPZ	AG		R	Ac Cord	[21JF2-RU/GA/SA/SF]
△ ACC701	QACCBAA051WJPZ			R	Ac Cord	[21JF2-SS]
SP301	VSP9050PB53WA	AH		R	Speaker (L)	
SP302	VSP9050PB53WA	AH		R	Speaker (R)	
	QCNW-A922WJZZ	AF		R	Connecting Cord	
	QCNW-A923WJZZ	AE		R	Connecting Cord	
	QCNW-2452PEZZ	AE		R	Connecting Cord	
	QCNW-D818WJPZ	AF		R	Connecting Cord	

[7] CABINET PARTS

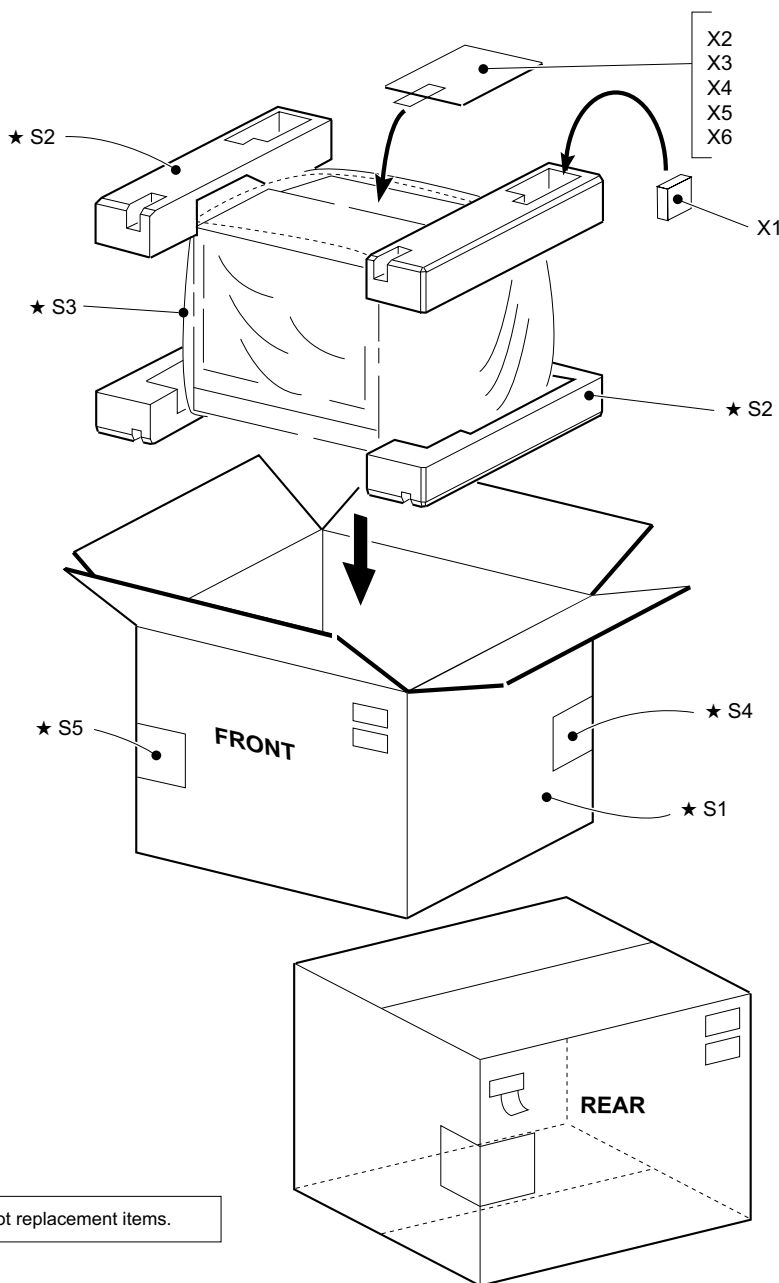


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NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
[7] CABINET PARTS						
1	CCABAB102WEV0	BK		R	Front Cabinet Ass'y	[21JF2-RU]
1	CCABAB119WEV0			R	Front Cabinet Ass'y	[21JF2-GA]
1	CCABAB114WEV0			R	Front Cabinet Ass'y	[21JF2-SA]
1	CCABAB222WEV0			R	Front Cabinet Ass'y	[21JF2-SF]
1	CCABAB224WEV0			R	Front Cabinet Ass'y	[21JF2-SS]
1-1	Not Available	-		-	Front Cabinet	
1-2	JBTN-A485WJSA	AF		R	Power Button	
1-3	MSPRC0005PEFW	AB		R	Power Button Spring	
1-4	GCOVAB345WJSA	AD		R	R/C Cover	
1-5	HBDGB3155CESA	AF		R	SHARP Badge	
1-6	GDORFA158WJSA			R	Door	[21JF2-RU/SA]
1-6	GDORFA158WJSB			R	Door	[21JF2-GA]
1-6	GDORFA158WJSC			R	Door	[21JF2-SF/SS]
1-7	MSPRPA031WJFW	AB		R	Door Spring	
1-8	HiNDPB393WJZZ	AB		R	Indication Plate	[21JF2-RU/SA/SF/SS]
1-8	HiNDPB469WJZZ			R	Indication Plate	[21JF2-GA]
1-9	LHLDZA651WJZZ	AD		R	Speaker Holder	
2	CCABBA631WEV0	BE		R	Rear Cabinet Ass'y	[21JF2-RU/SA/SS]
2	CCABBA631WEV1			R	Rear Cabinet Ass'y	[21JF2-GA]
2	CCABBA624WEV0			R	Rear Cabinet Ass'y	[21JF2-SF]
2-1	Not Available	-		-	Rear Cabinet	

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
[8] SUPPLIED ACCESSORIES						
X1	RRMCGA307WJSB	AN		R	Infrared Remote Control Unit	[21JF2-RU/SA/SF/SS]
X1	RRMCGA307WJSA	AN		R	Infrared Remote Control Unit	[21JF2-GA]
X2	TiNS-B981WJZZ	AM		R	Operation Manual	[21JF2-RU]
X2	TiNS-B996WJZZ			R	Operation Manual	[21JF2-GA/SA]
X3	TiNS-C042WJZZ			R	Operation Manual	[21JF2-GA/SA]
X3	TiNS-C140WJZZ			R	Operation Manual	[21JF2-SF/SS]
X4	TiNS-C043WJZZ			R	Operation Manual	[21JF2-GA/SA]
X4	TiNS-C141WJZZ			R	Operation Manual	[21JF2-SF/SS]
X5	TGAN-A101WJZZ	AC		R	Guarantee Card	[21JF2-RU]
X6	TCAUAA005WJZZ	AA		R	Caution Card	

[9] PACKING PARTS



NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[9] PACKING PARTS					
					(NOT REPLACEMENT ITEM)
S1	SPAKCC260WJZZ	-		-	Packing Case [21JF2-RU]
S1	SPAKCC112WJZZ	-		-	Packing Case [21JF2-GA/SA/SF/SS]
S2	SPAKXA822WJZZ	-		-	Packing Foam (Top/Bottom)
S3	SPAKPA771WJZZ	-		-	Wrapping Paper [21JF2-RU]
S3	SSAKH0016PEZZ	-		-	Wrapping Paper [21JF2-GA/SA/SF/SS]
S4	TLABMB751WJZZ	-		-	Model Label [21JF2-RU]
S4	TLABMB848WJZZ	-		-	Model Label [21JF2-GA]
S4	TLABMB757WJZZ	-		-	Model Label [21JF2-SA]
S4	TLABMB933WJZZ	-		-	Model Label [21JF2-SF]
S4	TLABMB935WJZZ	-		-	Model Label [21JF2-SS]
S5	TLABZB001WJZZ	-		-	Packing Label [21JF2-RU]
S5	TLABZB037WJZZ	-		-	Packing Label [21JF2-GA]
S5	TLABZB017WJZZ	-		-	Packing Label [21JF2-SA]
S5	TLABZB086WJZZ	-		-	Packing Label [21JF2-SF]
S5	TLABZB088WJZZ	-		-	Packing Label [21JF2-SS]

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