

SERVICE MANUAL



COLOR TELEVISION

Chassis No. GB-3U

MODELS

29FL91M

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.

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ELECTRICAL SPECIFICATIONS

POWER INPUT	120V AC, 60 Hz
POWER RATING	135W
PICTURE SIZE	2,193.5 cm ² (339sq inch)
CONVERGENCE	Magnetic
SWEEP DEFLECTION	Magnetic
FOCUS	Hi-Bi-Potential Electrostatic
INTERMEDIATE FREQUENCIES	
Picture IF Carrier Frequency	45.75 MHz
Sound IF Carrier Frequency	41.25 MHz
Color Sub-Carrier Frequency	42.17 MHz
	(Nominal)
AUDIO POWER	
OUTPUT RATING	5.0W + 5.0W (at 10% distortion and
	Dual CH Operate)

SPEAKER
 SIZE 12 x 6 cm oval (2 pcs.)
 VOICE COIL IMPEDANCE 8 ohm at 400 Hz

ANTENNA INPUT IMPEDANCE
 VHF/UHF 75 ohm Unbalanced

TUNING RANGES
 VHF-Channels 2 thru 13
 UHF-Channels 14 thru 69
 CATV Channels 1 thru 125

(EIA, Channel Plan U.S.A.)

Specifications are subject to change without prior notice.

SHARP CORPORATION

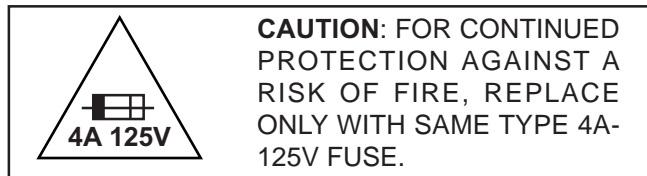
This document has been published to be used for after sales service only.
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IMPORTANT SERVICE SAFETY PRECAUTION

■ Service work should be performed only by qualified service technicians who are thoroughly familiar with all safety checks and the servicing guidelines which follow:

WARNING

1. For continued safety, no modification of any circuit should be attempted.
2. Disconnect AC power before servicing.
3. Semiconductor heat sinks are potential shock hazards when the chassis is operating.
4. The chassis in this receiver has two ground systems which are separated by insulating material. The non-isolated (hot) ground system is for the B+ voltage regulator circuit. The isolated ground system is for the low B+ DC voltages and the secondary circuit of the high voltage transformer.
To prevent electrical shock use an isolation transformer between the line cord and power receptacle, when servicing this chassis.



SERVICING OF HIGH VOLTAGE SYSTEM AND PICTURE TUBE

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

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

X-RADIATION AND HIGH VOLTAGE LIMITS

1. Be sure all service personnel are aware of the procedures and instructions covering X-radiation. The only potential source of X-ray in current solid state TV receivers is the picture tube. However, the picture tube does not emit measurable X-Ray radiation, if the high voltage is as specified in the "High Voltage Check" instructions.
It is only when high voltage is excessive that X-radiation is capable of penetrating the shell of the picture tube including the lead in the glass material. The important precaution is to keep the high voltage below the maximum level specified.
2. It is essential that servicemen have available at all times an accurate high voltage meter.
The calibration of this meter should be checked periodically.
3. High voltage should always be kept at the rated value –no higher. Operation at higher voltages may cause a failure of the picture tube or high voltage circuitry and;also, under certain conditions, may produce radiation in exceeding of desirable levels.
4. When the high voltage regulator is operating properly there is no possibility of an X-radiation problem. Every time a color chassis is serviced, the brightness should be tested while monitoring the high voltage with a meter to be certain that the high voltage does not exceed the specified value and that it is regulating correctly.
5. Do not use a picture tube other than that specified or make unrecommended circuit modifications to the high voltage circuitry.
6. When trouble shooting and taking test measurements on a receiver with excessive high voltage, avoid being unnecessarily close to the receiver.
Do not operate the receiver longer than is necessary to locate the cause of excessive voltage.

IMPORTANT SERVICE SAFETY PRECAUTION

(Continued)

BEFORE RETURNING THE RECEIVER

(Fire & Shock Hazard)

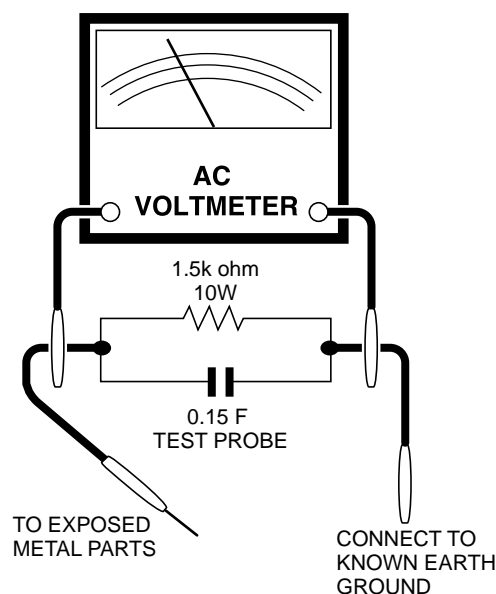
Before returning the receiver to the user, perform the following safety checks.

1. Inspect all lead dress to make certain that leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the receiver.
2. Inspect all protective devices such as non-metallic control knobs, insulating materials, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacity networks, mechanical insulators, etc.
3. To be sure that no shock hazard exists, check for leakage current in the following manner.
 - Plug the AC cord directly into a 120 volt AC outlet, (Do not use an isolation transformer for this test).
 - Using two clip leads, connect a 1.5k ohm, 10 watt resistor paralleled by a 0.15 μ F capacitor in series with all exposed metal cabinet parts and a known earth ground, such as electrical conduit or electrical ground connected to earth ground.
 - Use an AC voltmeter having with 5000 ohm per volt, or higher, sensitivity to measure the AC voltage drop across the resistor.

- Connect the resistor connection to all exposed metal parts having a return to the chassis (antenna, metal cabinet, screw heads, knobs and control shafts, escutcheon, etc.) and measure the AC voltage drop across the resistor.

All checks must be repeated with the AC line cord plug connection reversed. (If necessary, a non-polarized adapter plug must be used only for the purpose of completing these check.)

Any current measured must not exceed 0.5 milliamp. Any measurements not within the limits outlined above indicate of a potential shock hazard and corrective action must be taken before returning the instrument to the customer.



SAFETY NOTICE

Many electrical and mechanical parts in television receivers have special safety-related characteristics. These characteristics are often not evident from visual inspection, nor can protection afforded by them be necessarily increased by using replacement components rated for higher voltage, wattage, etc.

Replacement parts which have these special safety characteristics are identified in this manual; electrical components having such features are identified by "⚠" and shaded areas in the Replacement Parts Lists and Schematic Diagrams.

For continued protection, replacement parts must be identical to those used in the original circuit. The use of substitute replacement parts which do not have the same safety characteristics as the factory recommended replacement parts shown in this service manual, may create shock, fire, X-radiation or other hazards.

LOCATION OF USER'S CONTROL

Front Panel

POWER
Press → On.
Press again → Off.

**REMOTE CONTROL
SENSOR**

MENU
Press → Accesses MAIN MENU.
Press again → Exits MAIN MENU.

VOLUME UP/DOWN
(+) Increases sound.
(-) Decreases sound.

INSIDE DOOR

**VIDEO/AUDIO IN 2
TERMINALS**

CHANNEL UP/DOWN

(▲) Selects next higher channel.
(▼) Selects next lower channel.

Basic Remote Control Functions

POWER
Press → On.
Press again → Off.

REMOTE KEYPAD
Accesses any channel from keypad.

FLASHBACK
Returns to previous channel.

PERSONAL PREFERENCE
With the Personal Preference buttons, you can program your favorite programs by using the 4 categories A, B, C and D. The channels can be accessed quickly by using these buttons.

VOLUME UP/DOWN
(+) Increases sound.
(-) Decreases sound.
• Changes or selects the TV adjustments on On-Screen Display.

MENU
Press → Accesses MAIN MENU.
Press again → Exits MAIN MENU.

MUTE
Press → Mutes sound.
Press again → Restores sound.
• When sound is muted, **CLOSED CAPTION** appears if available.

POWER (DVD/VCR)
Press → On.
Press again → Off.

DVD/VCR CONTROL

Infrared Transmitter Window

CATV/DVD-TV/VCR MODE buttons
Press TV/VCR → Signals sent will be for TV and VCR control.
Press CATV/DVD → Signals sent will be for cable TV converter and DVD control.

DISPLAY

Press → Displays receiving channel for 4 seconds.
Press again → Removes display.
• Temporarily displays receiving channel when in Closed Caption mode.

INPUT

Press → Switches to external video INPUT 1 mode.
Press twice → Switches to external video INPUT 2 mode.
Press 3 times → Switches to external video INPUT 3 mode or COMPONENT mode.
Press 4 times → Switches back to the original TV mode.

ENTER

Used in some instances where a Cable Converter Box requires an "enter" command after selecting channels, when using the REMOTE KEYPAD button.

CHANNEL UP/DOWN

(▲) Selects next higher channel.
(▼) Selects next lower channel.
• Moves the "■" mark on the MENU screens.

SKIP/VCR-CH

REC

Note:

- The above shaded buttons on the Remote Control glow in the dark. To use the glow-in-the-dark display on the remote control, place it under a fluorescent light or other lighting.
- The phosphorescent material contains no radioactive or toxic material, so it is safe to use.
- The degree of illumination will vary depending on the strength of lighting used.
- The degree of illumination will decrease with time and depending on the temperature.
- The time needed to charge the phosphorescent display will vary depending on the surrounding lighting.
- Sunlight and fluorescent lighting are the most effective when charging the display.

INSTALLATION AND SERVICE INSTRUCTIONS

- Note:** (1) When performing any adjustments to resistor controls and transformers use non-metallic screwdrivers or TV alignment tools.
 (2) Before performing adjustments, the TV set must be on at least 15 minutes.

CIRCUIT PROTECTION

The receiver is protected by a 4.0A fuse (F701), mounted on PWB-A, wired into one side of the AC line input.

X-RADIATION PROTECTOR CIRCUIT TEST

After service has been performed on the horizontal deflection system, high voltage system, B+ system, test the X-Radiation protection circuit to ascertain proper operation as follows:

1. Apply 120V AC using a variac transformer for accurate input voltage.
2. Allow for warm up and adjust all customer controls for normal picture and sound.
3. Receive a good local channel.
4. Connect a digital voltmeter to TP651 (Pin 3) and make sure that the voltmeter reads $13.85 \pm 0.6V$ DC.
5. Apply external 17.3V DC at TP651 by using an external DC supply, TV must be shut off.
6. To reset the protector, unplug the AC cord and plug the AC cord power on. Now make sure that normal picture appears on the screen.
7. If the operation of the horizontal oscillator does not stop in step 5, the circuit must be repaired before the set is returned to the customer.

HIGH VOLTAGE CHECK

High voltage is not adjustable but must be checked to verify that the receiver is operating within safe and efficient design limitations as specified checks should be as follows:

1. Connect an accurate high voltage meter between ground and anode of picture tube.
2. Operate receiver for at least 15 minutes at 120V AC line voltage, with a strong air signal or a properly tuned in test signal.
3. Enter the service mode and select the service adjustment "V11" and Bus data "01" (Y-mute on, CRT Cut Off).
4. The voltage should be below 31.5kV (at zero beam). If a correct reading cannot be obtained, check circuitry for malfunctioning components. After the voltage test, make Y-mute off to the normal mode.

For adjustments of this model, the bus data is converted to various analog signals by the D/A converter circuit.

Note: There are still a few analog adjustments in this series such as focus and master screen voltage. Follow the steps below whenever the service adjustment is required. See "Table-B" to determine, if service adjustments are required.

1. Service mode

Before putting unit into the service mode, check that customer adjustments are in the normal mode. Use the reset function in the video adjustment menu to ensure customer controls are in their proper (reset) position.

2. Service number selection

Once in the service mode, press the Ch-up or Ch-down button on the remote controller or at the set. The service adjustment number will vary in increments of one, from "V01" to "P08". Select the item you wish to adjust.

3. Data number selection

Press the Vol-up or Vol-down button to adjust the data number.

To enter the service mode and exit service mode.

To enter the service mode manually just press and hold the Vol-down and Ch-up buttons at the same time, plug the AC cord into a wall socket.

Now the TV set is switched on and enters the service mode.

To exit the service mode, turn the television off by pressing the power button.

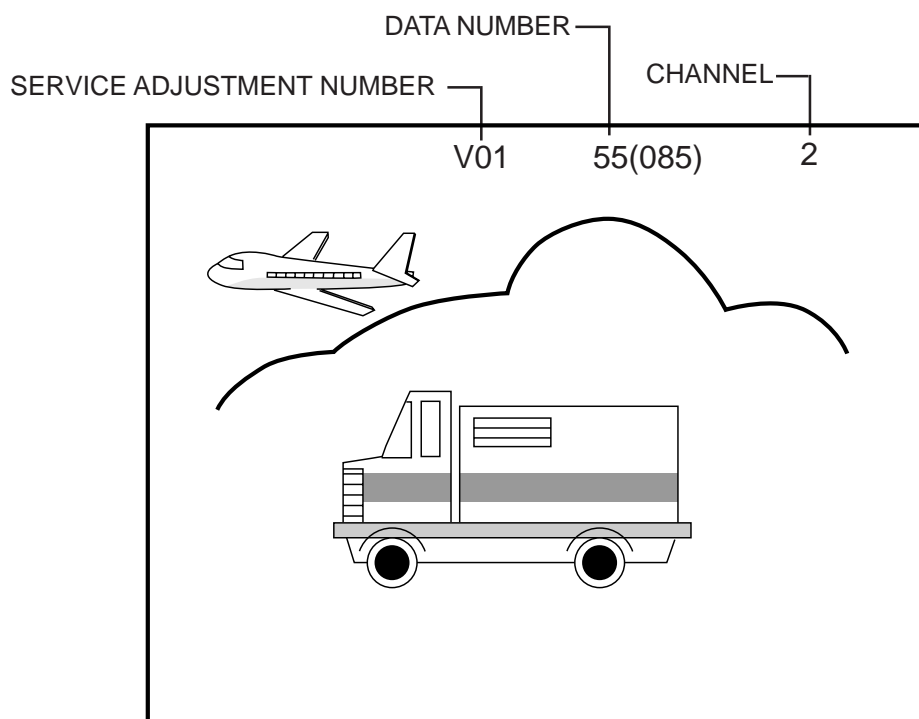


Figure A.

A. VCJ IC ADJUSTMENT

SERVICE NUMBER	ADJUSTMENT ITEM	DATA		NOTES	FIXED VALUE (HEX)
		RANGE	INITIAL VALUE		
V01	PICTURE	0-15 (00h-0Fh)	8 (08h)		
V02	TINT	0-127 (00h-7Fh)	66 (42h)		
V03	COLOR	0-127 (00h-7Fh)	56 (38h)		
V05	BRIGHT	0-127 (00h-7Fh)	64 (40h)		
V06	R CUT-OFF	64-255 (40h-FFh)	64 (40h)		
V07	G CUT-OFF	64-255 (40h-FFh)	64 (40h)		
V08	B CUT-OFF	64-255 (40h-FFh)	64 (40h)		
V09	G/R DRIVE	0-127 (00h-7Fh)	64 (40h)		
V10	B DRIVE	0-127 (00h-7Fh)	64 (40h)		
V11	Y-MUTE/V-STOP	0-2	0 (00h)	Y-Mute / Horizontal "—"	
V12	SHARP	0-63 (00h-3Fh)	50 (32h)		32
V13	DC RESTORATION	0-3 (00h-03h)	2 (02h)		02
V14	BLACK STRETCH	0-3 (00h-03h)	2 (02h)		02
V15	ABL START POINT	0-3 (00h-03h)	3 (03h)		03
V16	ABL GAIN	0-3 (00h-03h)	2 (02h)		02
V17	γ POINT	0-3 (00h-03h)	0 (00h)		00
V19	ENERGY SAVE	0-63 (00h-3Fh)	63 (3Fh)	Offset	3F
V24	LOW-G	0-255 (00h-FFh)	12 (0Ch)	Color Temp.	F4
V25	LOW-B	0-255 (00h-FFh)	241 (F1h)	Color Temp.	E6
V26	ML-G	0-255 (00h-FFh)	0 (00h)	Color Temp.	FD
V27	ML-B	0-255 (00h-FFh)	247 (F7h)	Color Temp.	F8
V28	HIGH-G	0-255 (00h-FFh)	2 (02h)	Color Temp.	01
V29	HIGH-B	0-255 (00h-FFh)	8 (08h)	Color Temp.	06
V30	WPL	0-1	1 (01h)		01
V31	RGB CONTRAST	0-63 (00h-3Fh)	59 (3Bh)		3B
V34	VSM GAIN	0-3 (00h-03h)	1 (01h)		01
V36	BPF/TOF-INPUT	0-1	0 (00h)	External Input	00
V37	CORING	0-1	0 (00h)		00
V38	VSM PHASE	0-1	0 (00h)		00
V39	COLOR γ	0-1	0 (00h)		00
V40	SHARP-INPUT	0-63 (00h-3Fh)	44 (2Ch)	External Input	2C
V41	TINT-INPUT	0-127 (00h-7Fh)	62 (3Eh)	External Input	3E
V42	PICTURE-COMPONENT	0-15 (00h-0Fh)	6 (06h)	Component Input	
V43	TINT-COMPONENT	0-127 (00h-7Fh)	62 (3Eh)	Component Input	3E
V44	COLOR-COMPONENT	0-127 (00h-7Fh)	72 (48h)	Component Input	48
V45	BRIGHT-COMPONENT	0-127 (00h-7Fh)	84 (54h)	Component Input	
V46	R CUT OFF-COMPONENT	64-255 (00h-FFh)	64 (40h)	Component Input	
V47	G CUT OFF-COMPONENT	64-255 (00h-FFh)	64 (40h)	Component Input	
V48	B CUT OFF-COMPONENT	64-255 (00h-FFh)	64 (40h)	Component Input	
V49	G/R DRIVE-COMPONENT	0-127 (00h-7Fh)	64 (40h)	Component Input	
V50	B DRIVE-COMPONENT	0-127 (00h-7Fh)	64 (40h)	Component Input	
V51	SHARP-COMPONENT	0-63 (00h-3Fh)	44 (2Ch)	Component Input	2C
V52	TINT-S	0-127 (00h-7Fh)	62 (3Eh)	Component Input	3E
V53	C-TRAP	0-1 (00h-01h)	0 (00h)		00
V59	AUTO FRESH	0-1 (00h-01h)	0 (00h)		00
V60	SHARP P F	0-1 (00h-01h)	1 (01h)		01
V61	CD MATRIX	0-3 (00h-03h)	2 (02h)		02
V62	B-Y ATT	0-1 (00h-01h)	0 (00h)		00
V63	R-Y ATT	0-1 (00h-01h)	0 (00h)		00
V64	CD MATRIX COMPONENT	0-3 (00h-03h)	0 (00h)	Component Input	00
V65	B-Y ATT-COMPONENT	0-1 (00h-01h)	0 (00h)	Component Input	00
V66	R-Y ATT-COMPONENT	0-1 (00h-01h)	0 (00h)	Component Input	00
V67	BUZZ	0-1 (00h-01h)	1 (01h)		01
V68	RGB ABCL	0-1 (00h-01h)	1 (01h)		01
V69	PICTURE-VCOMP	0-100 (00h-64h)	47 (2Fh)	16:9 Format (Offset)	2F
V70	COLOR-VCOMP	0-100 (00h-64h)	50 (32h)	16:9 Format (Offset)	32
V71	BRIGHT-VCOMP	0-100 (00h-64h)	51 (33h)	16:9 Format (Offset)	33
R01	RF-AGC	0-63 (00h-3Fh)	36 (24h)		
R03	RF-AGC REF	0-255 (00h-FFh)	170 (AAh)	Standard value for the self-adjustment	AA
D01	V POSITION	0-7 (00h-07h)	0 (00h)		00
D02	H POSITION	0-31 (00h-1Fh)	15 (0Fh)		
D03	V SIZE	0-127 (00h-7Fh)	89 (59h)		
D04	H SIZE	0-63 (00h-3Fh)	36 (24h)		
D05	V-LINEARITY	0-15 (00h-0Fh)	8 (08h)		
D06	V-S CORRECTION	0-15 (00h-0Fh)	12 (0Ch)		0C
D07	EW PARABOLA	0-63 (00h-3Fh)	43 (2Bh)		
D08	EW TRAPEZIUM	0-63 (00h-3Fh)	36 (24h)		
D10	AFC GAIN	0-3 (00h-03h)	2 (02h)		02
D11	V EHT	0-7 (00h-07h)	6 (06h)		06
D12	H EHT	0-7 (00h-07h)	6 (06h)		06
D13	EW CORNER	0-31 (00h-1Fh)	8(08h)		08

SERVICE NUMBER	ADJUSTMENT ITEM	DATA		NOTES	FIXED VALUE (HEX)
		RANGE	INITIAL VALUE		
D14	EW CORNER BOTTOM	19-81 (13h-51h)	50 (32h)	Offset toward D13.	32
D15	NOISE DET LEVEL	0-3 (00h-03h)	0 (00h)		00
D18	V CENTERING	0-63 (00-3Fh)	36 (24h)		
D19	V-AGC	0-1 (00h-01h)	0 (00h)		00

B. SPECIAL SETTING

SERVICE NUMBER	ADJUSTMENT ITEM	DATA		NOTES	FIXED VALUE (HEX)
		RANGE	INITIAL VALUE		
EX1	FAO VOLUME	0-50 (00h-32h)	36 (24h)	Interrupt period adjustment.	24
EX2	CC-POSITION	0-127 (00h-7Fh)	27 (1Bh)		1C
EX3	INT	0-255 (00h-FFh)	122 (7Ah)		7A
EX4	A-ATT	0-127 (00h-7Fh)	90 (5Ah)		5A
EX5	TUNER data	0-3 (00h-03h)	0 (00h)	For the power control For the power control	00
EX6	Think chip-Slice LEVEL	0-255 (00h-FFh)	54 (36h)		12
EX7	RLY DELAY TIME	0-255 (00h-FFh)	0 (00h)		00
EX8	ADG ON TIME	0-255 (00h-FFh)	10 (0Ah)		0A

C. OPTION SETTING

SERVICE NUMBER	ADJUSTMENT ITEM	DATA		NOTES	FIXED VALUE (HEX)
		RANGE	INITIAL VALUE		
OP1	OPTION1	0-255 (00h-FFh)	245 (F5h)		F5
OP2	OPTION2	0-255 (00h-FFh)	188 (BCh)		BC
OP3	OPTION3	0-255 (00h-FFh)	15 (0Fh)		0F

D. SOUND ADJUSTMENT

SERVICE NUMBER	ADJUSTMENT ITEM	DATA		NOTES	FIXED VALUE (HEX)
		RANGE	INITIAL VALUE		
M01	INPUT LEVEL	0-15 (00h-0Fh)	7 (07h)		
M02	MTS VCO	0-63 (00h-3Fh)	38 (26h)		
M03	FILTER	0-63 (00h-3Fh)	36 (24h)		
M04	WIDEBAND	0-63 (00h-3Fh)	28 (1Ch)		
M05	SPECTRAL	0-63 (00h-3Fh)	23 (17h)		
M09	SRS LEVEL	0-255 (00h-FFh)	224 (E0h)		E0
M10	BBE LEVEL	0-255 (00h-FFh)	217 (D9h)		D9
M11	SRS&BBE LEVEL	0-255 (00h-FFh)	208 (D0h)		D0
M12	SRS&BBE OFF LEVEL	0-255 (00h-FFh)	228 (E4h)		E4
M13	SRS Effect	2-3 (02h-03h)	2 (02h)		02
M14	BBE-L Effect	0-15 (00h-0Fh)	15 (0Fh)		0F
M15	BBE-H Effect	0-15 (00h-0Fh)	15 (0Fh)		0F
M16	AGC Level	0-7 (00h-07h)	1 (01h)		01
M17	BASS Offset	0-31 (00h-1Fh)	15 (0Fh)		0F
M18	TREBLE Offset	0-31 (00h-1Fh)	15 (0Fh)		0F
M19	BASS Offset-BBE	0-31 (00h-1Fh)	17 (11h)		11
M20	TREBLE Offset-BBE	0-31 (00h-1Fh)	16 (10h)		10

Holding down both the VOL-up and CH-up buttons on the TV set at service mode for more than 2 seconds will automatically write the above initial values into IC2101.

PART REPLACED	ADJUSTMENT		NOTES
	NECESSARY	UNNECESSARY	
IC2001		X	Data is stored in IC2101.
IC201	X		The adjustment is needed to compensate for characteristics of parts including IC201 and MTS level (M01).
IC2101	X		Holding down both the VOL-up and CH-up buttons on the TV set in the service mode for more than 2 seconds will automatically write the above initial values into IC2101 Then perform a complete adjustment.
CRT	X		Adjust items related to picture tube only.
IC3001	X		Adjust items related to MTS only (M01~M20).
IC1801	X		Adjust items related to P-IN-P only (P01~P08).

SERVICE ADJUSTMENT

RF AGC Adjustment

1. Receive a good local channel.
2. Enter the service mode and select the service adjustment "R01".
3. Set the data value to point where no noise or beat appears.
4. Select another channel to confirm that no noise or beat appears.

Note 1 : You will have to come out of the service mode to select another channel.

Note 2 : Setting the data to "00" will produce a black raster.

Screen Adjustment

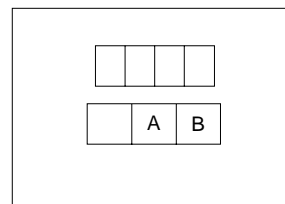
1. Receive a good local channel.
2. Enter the service mode and select the service adjustment "V03" and set the data value to "00" to set the color level to minimum. (Record original data code under adjustment "V03" before changing) You may skip this step, if you selected a B/W picture or monoscope pattern.
3. Select the service adjustment "V11" and adjust the data value to "01", this turn off the luminance signal (Y-mute).
4. Adjust the master screen control until the raster darkens to the point where raster is barely seen.
5. Adjust the service adjustments "V06" red, "V07" green and "V08" blue to obtain a good grey scale with normal whites at low brightness level.
6. Select the service adjustment "V11" and reset data to "00". Select the service adjustment "V03" and reset data to obtain normal color level.
7. For component input, the data value of "V46" red, "V47" green and "V48" blue is adjusted to follow the data value of "V06", "V07" and "V08" respectively.
8. Reset the master screen control to obtain normal brightness range.

White Balance Adjustment

1. Receive a good local channel.
2. Enter the service mode and select the service adjustment "V03" and set to "00" (minimum color)(Record original data code under adjustment "V03" before changing). "V03" does not have to be adjusted, if you selected a B/W picture or monoscope pattern.
3. Alternately adjust the service adjustment data of "V09" and "V10" until a good grey scale with normal whites is obtained. (RF Input)
4. For component input, the data value of "V49" and "V50" is adjusted to follow the data value of "V09" and "V10" respectively.
5. Select the service adjustment "V03" and reset data to obtain normal color level.

Sub-picture and Sub-Bright Adjustments

1. Receive the window pattern signal.
 - RF INPUT (TU51)
2. Get into service adjustment data "V01" and "V05" and set the luminance as shown in figure "A" and "B" as below respectively.
- COMPONENT INPUT
3. Get in service adjustment data "V42" and "V45" and set the luminance as shown in figure "A" and "B" as below respectively.



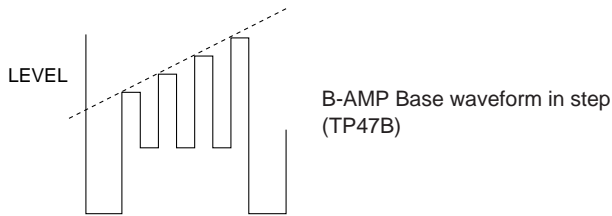
LUMINESCENCE CONFIRMATION

A: $120 \pm 10 \text{ cd/m}^2$

B: $1.5 \pm 0.5 \text{ cd/m}^2$

Sub-Tint Adjustment

1. Receive the half color bar signal.
- RF INPUT (TU51)
2. Get into Y-Mute by R/C, or by setting the "V11" bus data to "01".
3. Vary the "V02" bus data until the waveform becomes as stated below.



Sub-Color Adjustment

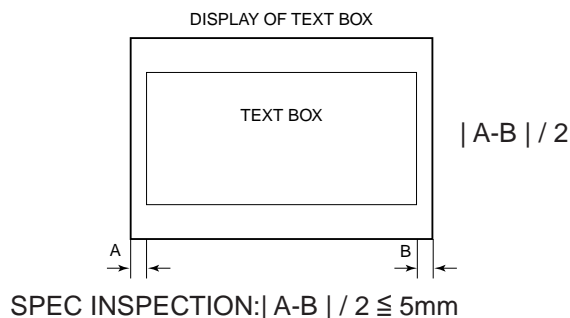
1. Receive a good local channel.
2. Make sure the customer color control is set to center position.
- RF INPUT (TU51)
3. Enter the service mode and select service adjustment "V03".
4. Adjust "V03" data value to obtain a normal color level.

Focus Adjustment

1. Receive a good local channel.
2. Adjust the FOCUS VR of the flyback transformer to make the image as fine as possible.

C. C Display Position Adjustment

1. Receive the lion head pattern signal.
2. Select "EX2" to display the text box.
3. Adjust the "EX2" bus data to let the text box displayed in the center.



Vertical-Size and Linearity Adjustments

1. Receive a good local channel.
(SCREEN FORMAT 4:3)
2. Enter the service mode and select the service adjustment "D03" for V-size.
3. Adjust the "D03" bus data to get the proper V-size.
4. For V-linearity adjustment, select data bus "D05" and adjust to get the proper vertical linearity.
(SCREEN FORMAT 16:9)
5. Input data of "D22" to mines 38 step from "D03" data.
(V-SIZE)
6. Input data of "D24" same as "D05" data. (V-LIN)

Note: Aging for 10 min before adjustment. After the adjustment of V-center and V-size, re-adjustment for this V-line.

Vertical Phase Adjustment

(SCREEN FORMAT 4:3)

1. Enter the service mode and input data of "00h" on "D01".
2. Adjust "D18" data value so that picture is centered.
(SCREEN FORMAT 16:9)
3. Input data of "00h" on "D20".
4. Input data of "D34" same as "D18" data.

Horizontal Position Adjustment

1. Receive a good local channel.

(SCREEN FORMAT 4:3)

2. Enter the service mode and select the service adjustment "D02".
3. Adjust "D02" data value so that picture is centered.
(SCREEN FORMAT 16:9)
4. Input data of "D21" same as "D02" data.

Horizontal-Size Adjustment

1. Receive a good local channel.

(SCREEN FORMAT 4:3)

2. Enter the service mode and select the service adjustment "D04" for H-size.
3. Adjust the "D04" bus data to get the proper H-size.
(SCREEN FORMAT 16:9)
4. Input data of "D23" same as "D04" data.

EW-Parabola

1. Receive a good local channel.

(SCREEN FORMAT 4:3)

2. Enter the service mode and select the service adjustment "D07" for EW parabola.
3. Adjust the "D07" bus data to get the proper vertical straight line for both left and right side.
(SCREEN FORMAT 16:9)
4. Input data of "D26" to mines 21 step from "D07" data.

EW-Trapezium

1. Receive a good local channel.

(SCREEN FORMAT 4:3)

2. Enter the service mode and select the service adjustment "D08" for EW-Trapezium.
3. Adjust the "D08" bus data to get the best position display.
(SCREEN FORMAT 16:9)
4. Input data of "D27" same as "D08" data.

■ MTS ADJUSTMENT

MTS Level Adjustment

1. Set the sound volume above 1.
Monoral signal: 400Hz, 100% modulation
2. Confirm "EX4" data is "5Ah".
3. Vary the "M01" bus data until the voltage to pin (39) of IC3001 to become the value as stated below.

SETTING VOLTAGE

ADJ spec : $490 \pm 10 \text{mVrms}$

CHK spec: $490 \pm 20 \text{mVrms}$

MTS VCO Adjustment

1. Keep the unit in no-signal state.
2. Connect the frequency counter to pin (39) of IC3001.
3. Connect a capacitor ($100\mu\text{F}$, 50V) in between positive(+) side of C3005 and ground.
4. Enter the service mode and select the service adjustment "M02"
5. Adjust the data so that the frequency counter reads $62.94 \pm 0.75 \text{kHz}$.

Filter Adjustment

1. Feed the following stereo pilot signal to pin (14) of IC3001 at C3005 open.
Stereo pilot signal: 9.4kHz, 600mVrms.
2. Enter the service mode and select the service adjustment "M03".
3. Adjust the data until "OK" appears in position on the screen. Make sure the "OK" is displayed almost at the center of the data range.

Separation Adjustment

1. Input "SIGNAL 1" and vary the "M04" bus data to get the minimum AC voltage to pin (39) of IC3001.
2. Input "SIGNAL 2" and vary the "M05" bus data to get the minimum AC voltage to pin (39) of IC3001.
SIGNAL 1: 300Hz, 30% modulation, Lch only, NR-ON
SIGNAL 2: 3kHz, 30% modulation, Lch only, NR-ON

Note: SIGNAL 1 Adj. for wideband

SIGNAL 2 Adj. for spectral

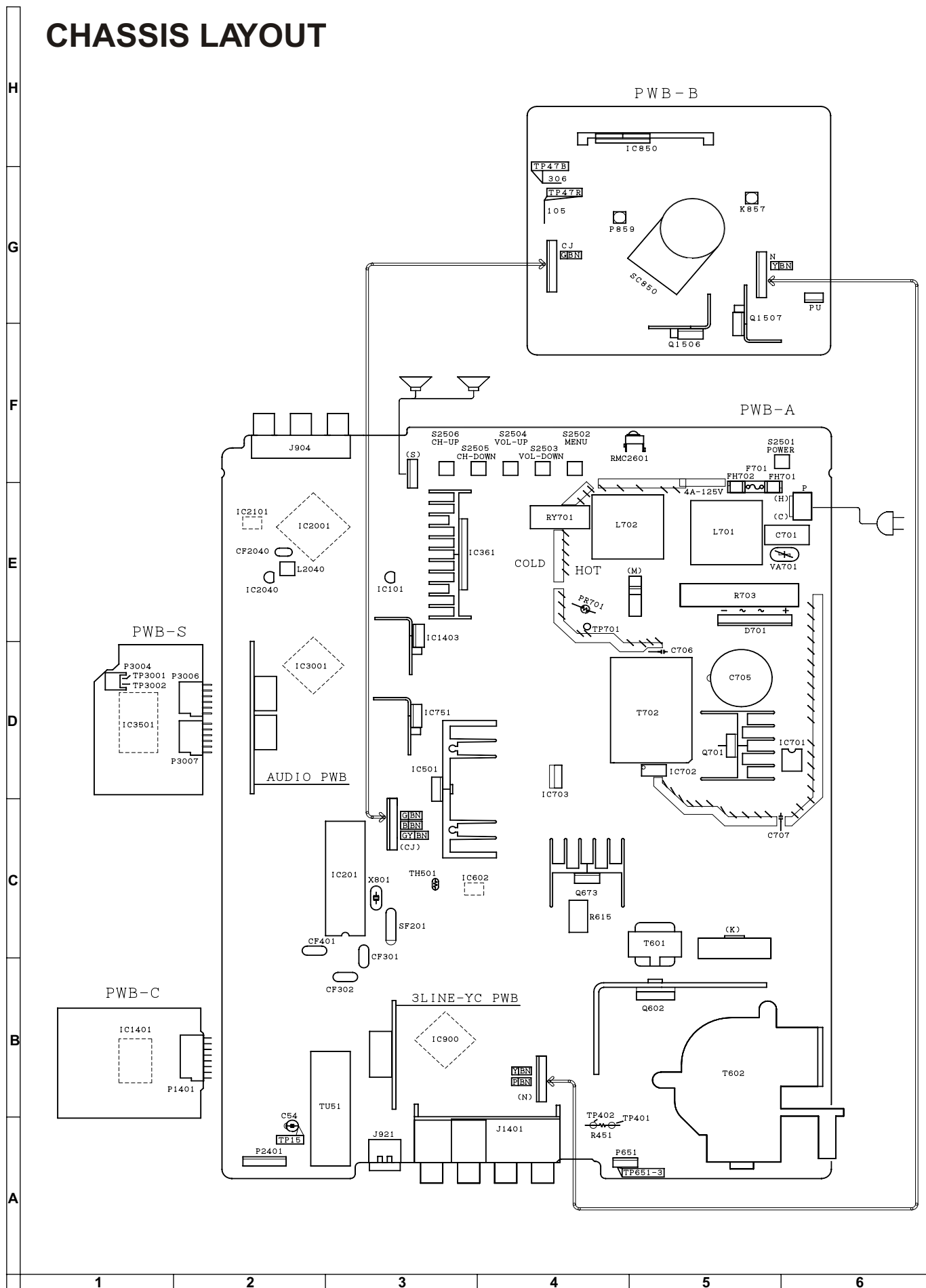
Check the output of the speaker at the maximum volume as stated below.

Confirmation spec:

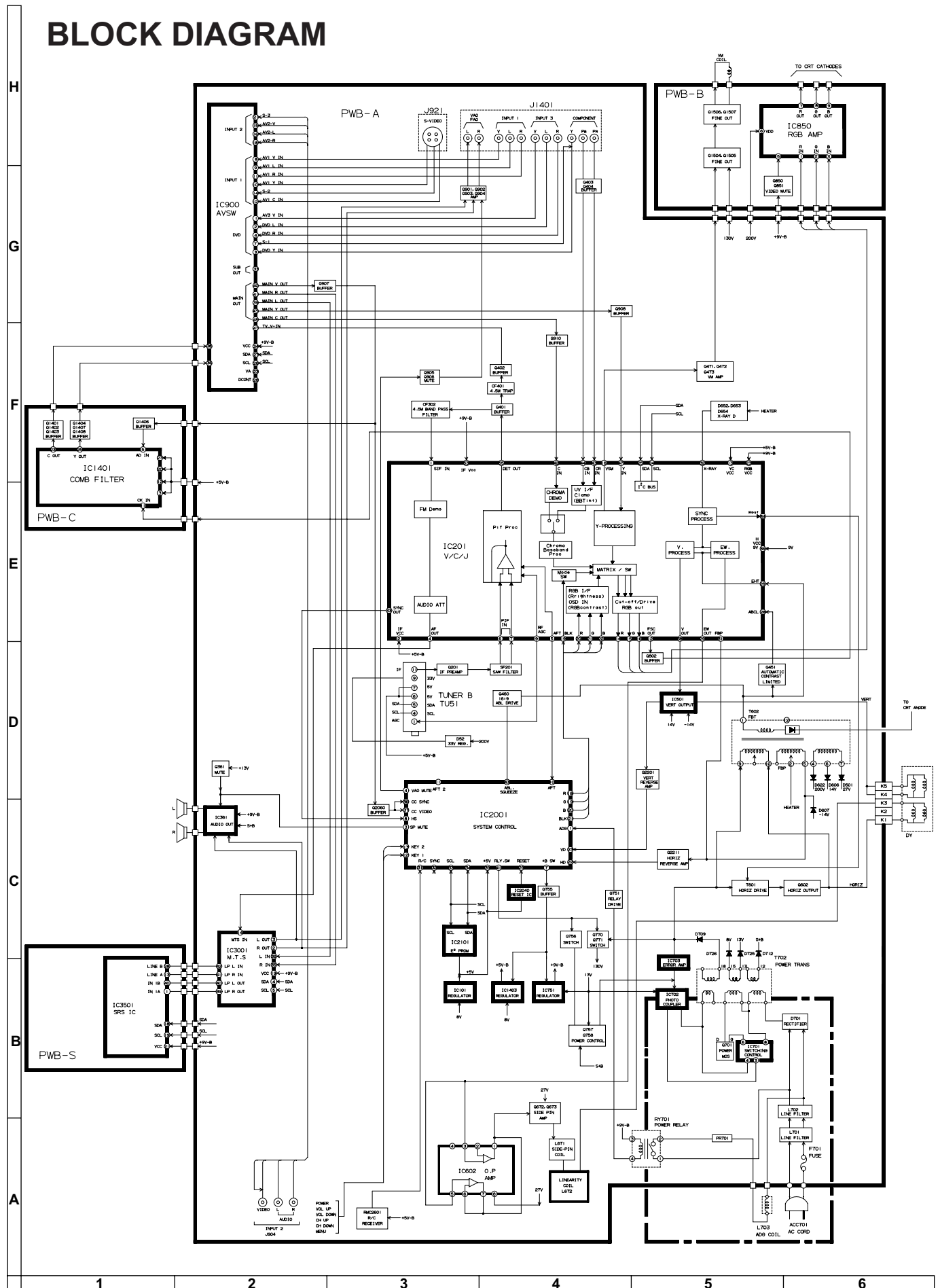
ADJ spec: above 25 dB

CHK spec: above 20 dB

CHASSIS LAYOUT



BLOCK DIAGRAM



DESCRIPTION OF SCHEMATIC DIAGRAM

NOTES:

1. The unit of resistance "ohm" is omitted.
($K=k\Omega=1000\Omega$, $M=M\Omega$)
2. All resistors are 1/16 watt, unless otherwise noted.
3. All capacitors are μF , unless otherwise noted.
($P=pF=\mu\mu F$)
4. (G) indicates $\pm 2\%$ tolerance may be used.
5. ⏏ indicates line isolated ground.

VOLTAGE MEASUREMENT CONDITIONS:

1. All DC voltages are measured with DVM connected between points indicated and chassis ground, line voltage set at 120V AC and all controls set for normal picture unless otherwise indicated.
2. All voltages measured with 1000 μ V B & W or Color signal.

WAVEFORM MEASUREMENT CONDITIONS:

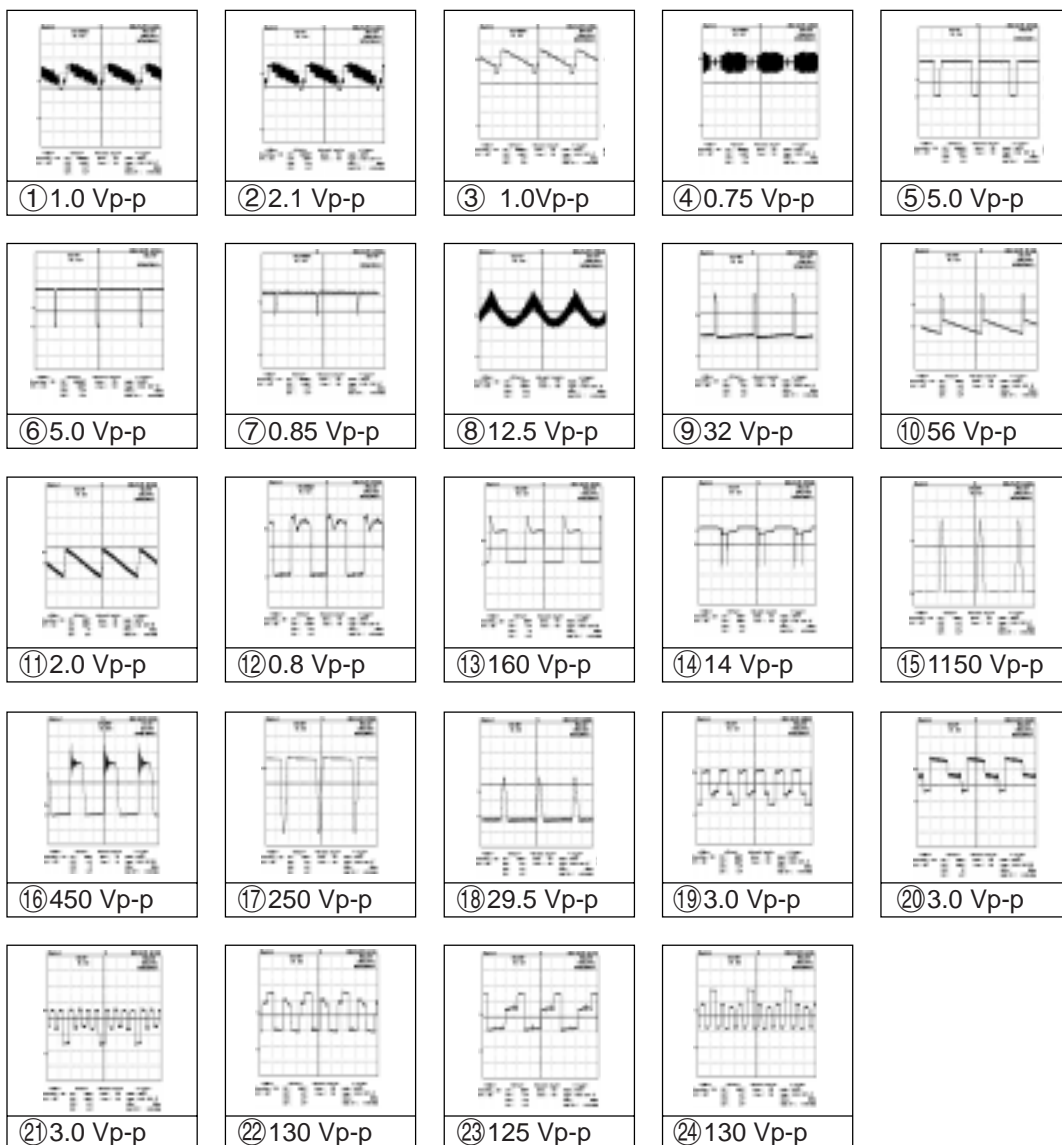
1. Photographs taken on a standard gated color bar signal, the tint setting adjusted for proper color. The wave shapes at the red, green and blue cathodes of the picture tube depend on the tint, color level and picture control.
2. \bullet indicates waveform check points (See chart, waveforms are measured from point indicated to chassis ground.)

\triangle AND SHADED () COMPONENTS
= SAFETY RELATED PARTS.

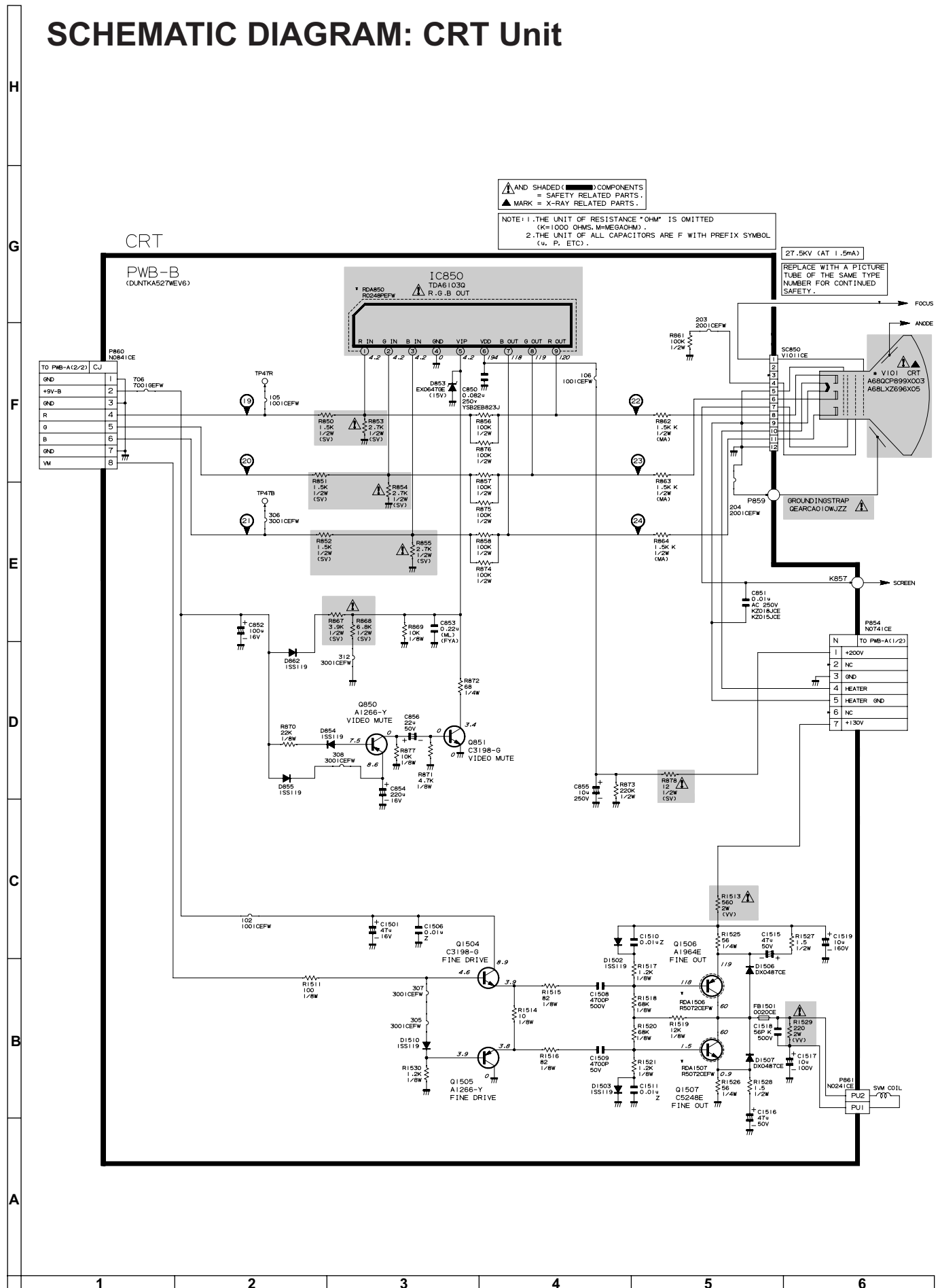
\blacktriangle MARK= X-RAY RELATED PARTS.

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

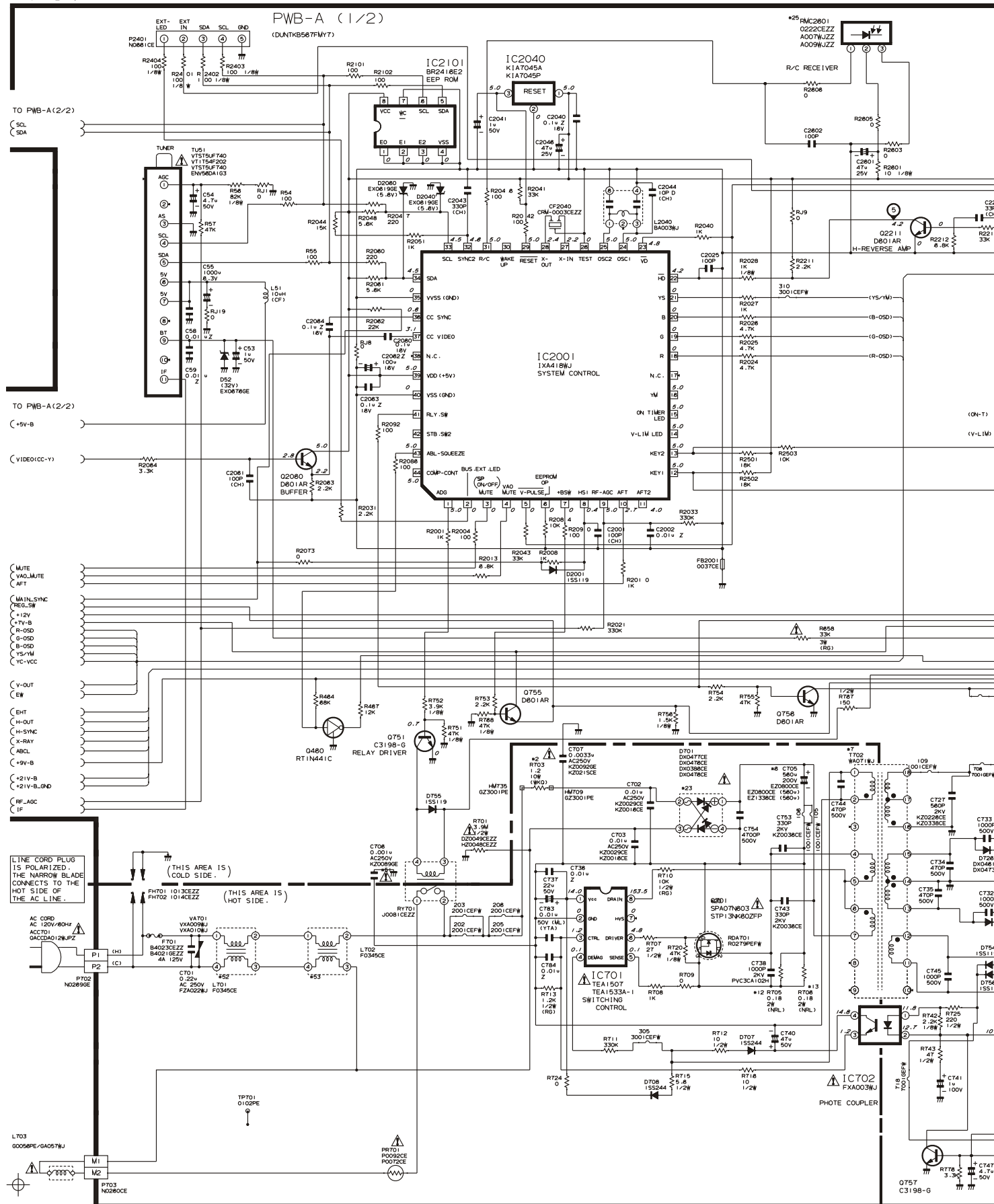
WAVEFORMS



SCHEMATIC DIAGRAM: CRT Unit



MAIN I



2. ALL RESISTORS ARE 1/8 WATT UNLESS OTHERWISE NOTED
3. UNIT OF ALL CAPACITORS ARE F WITH PREFIX SYMBOL
(u, P, ETC).

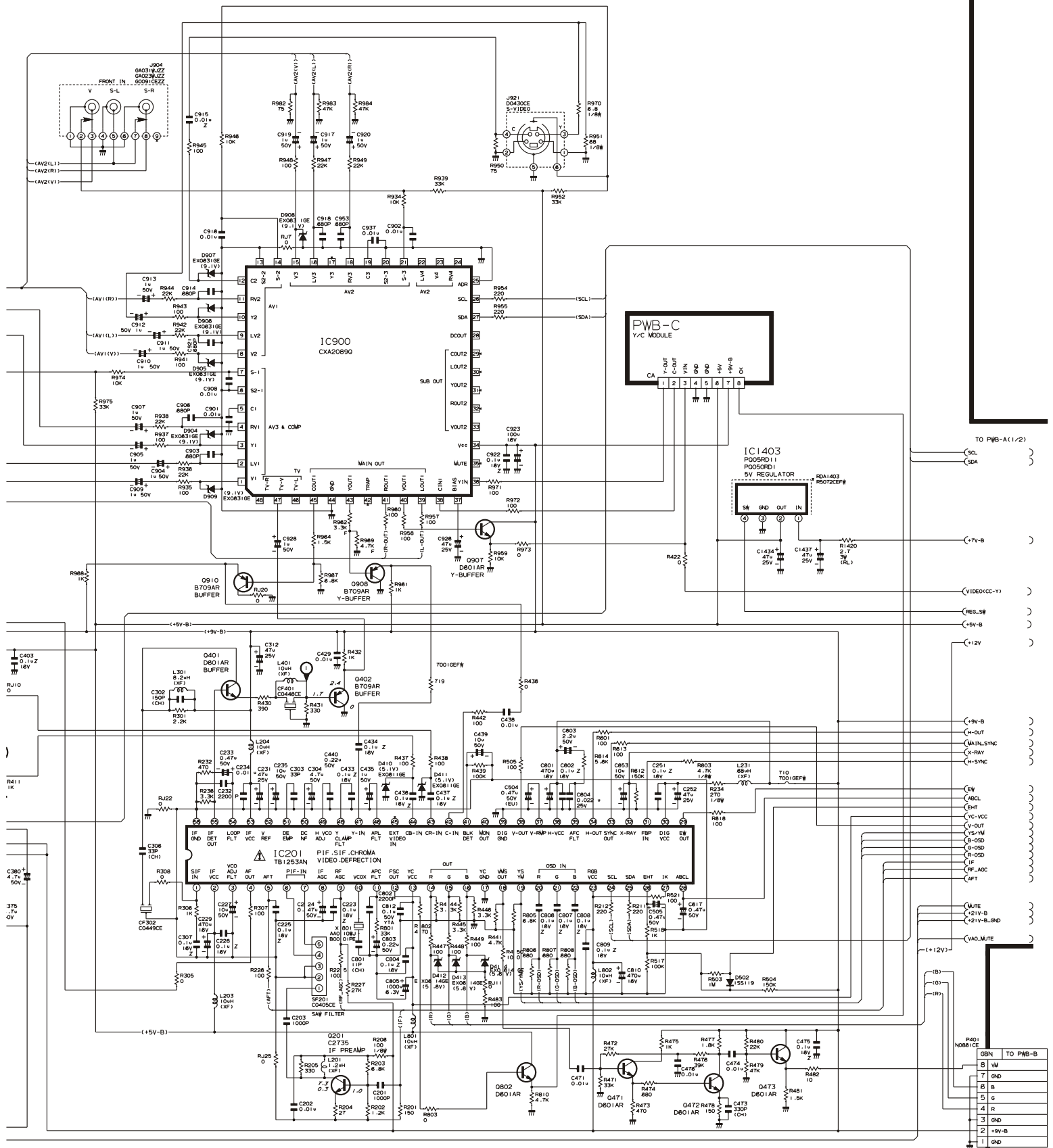


PWB-A(2/2)
(DUNTKB587MYT)



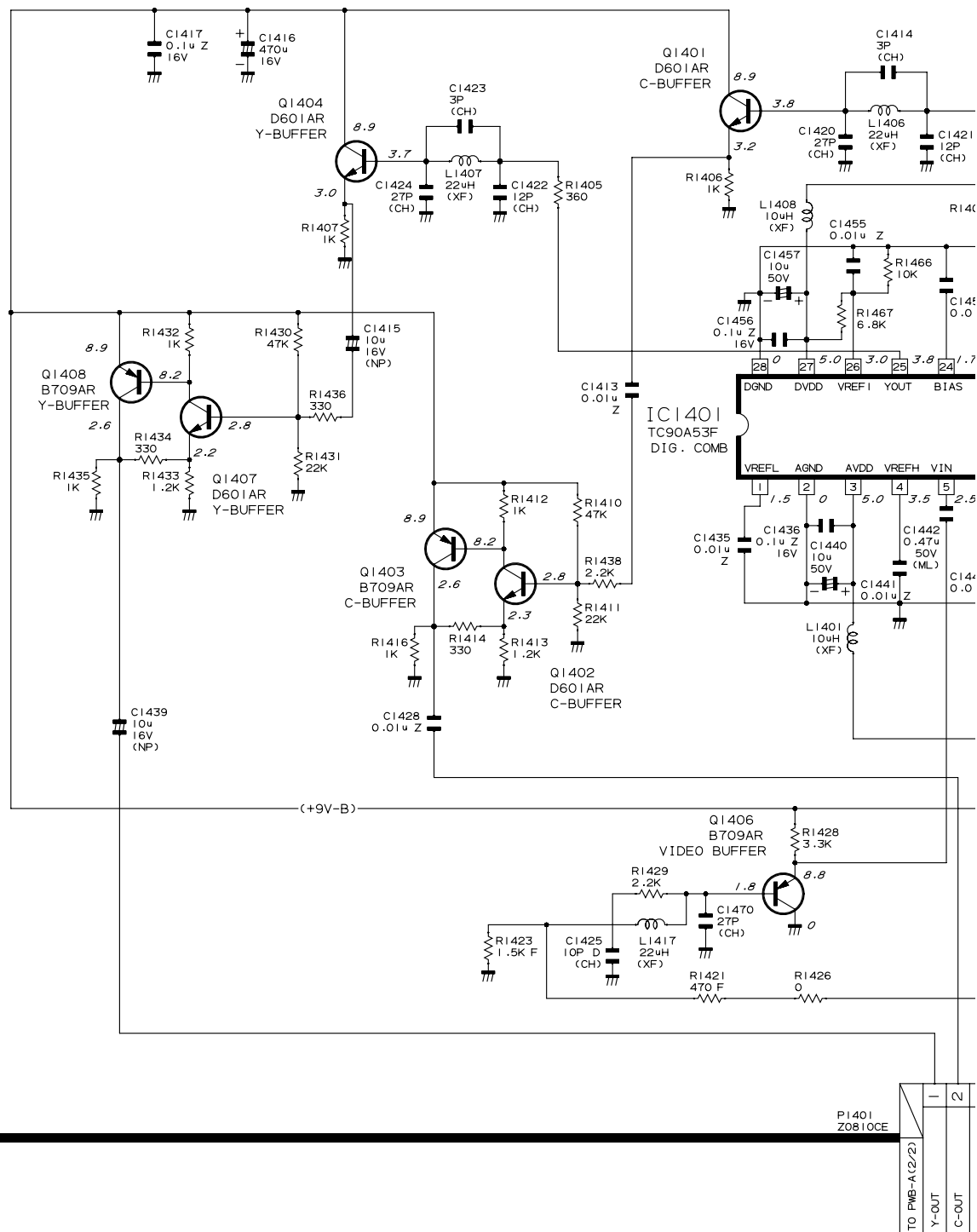
▲ AND SHADED COMPONENTS
= SAFETY RELATED PARTS.
▲ MARK = X-RAY RELATED PARTS.

NOTE: 1. THE UNIT OF RESISTANCE "OHM" IS OMITTED.
(K=1000 OHMS, M=MEGAOHM).
2. ALL RESISTORS ARE 1/8 WATT UNLESS OTHERWISE NOTED.
3. UNIT OF ALL CAPACITORS IS F WITH PREFIX SYMBOL.
(u, p, ETC.).

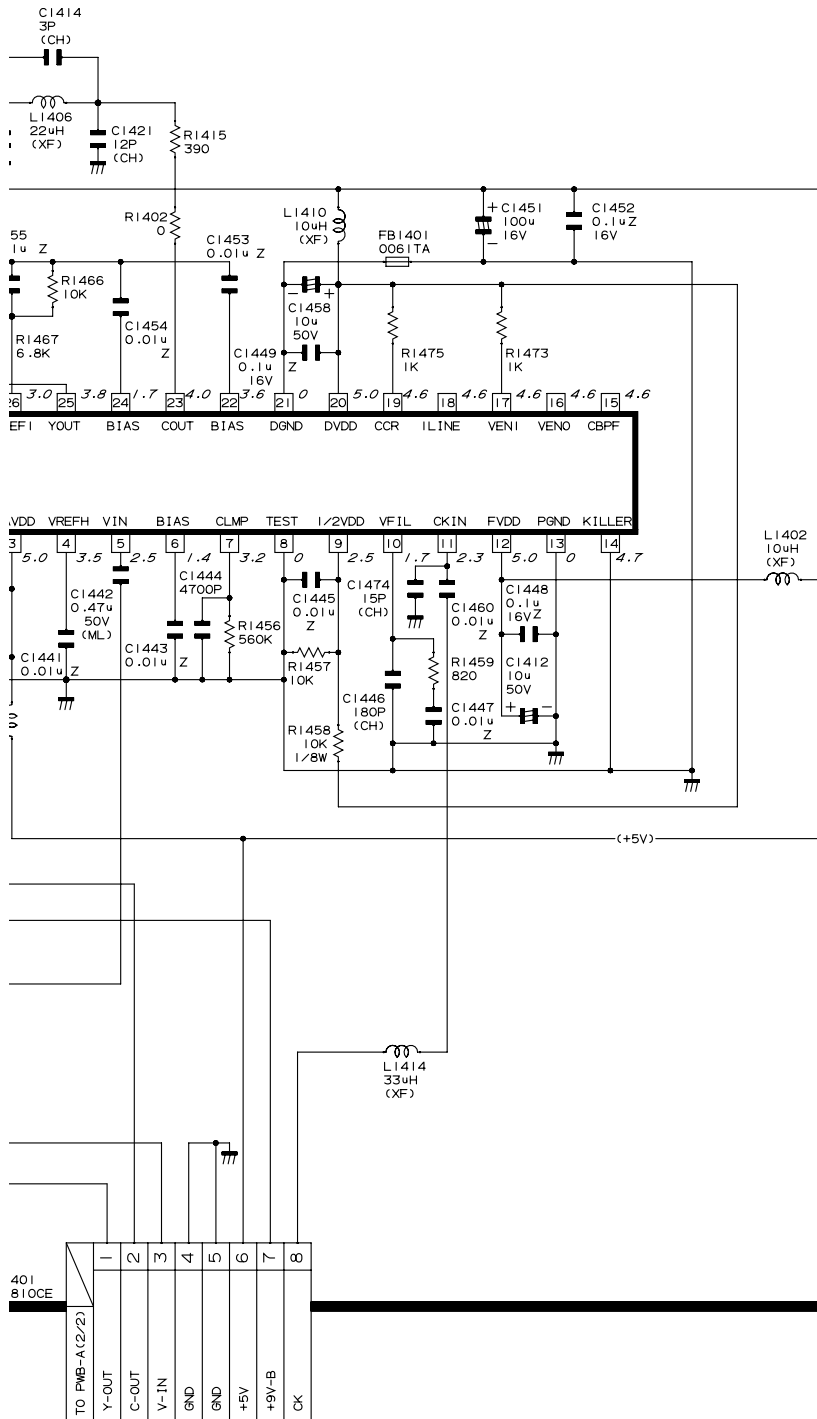


SCHEMATIC DIAGRAM: 3-LINE Y/C Unit

3-LINE Y/C

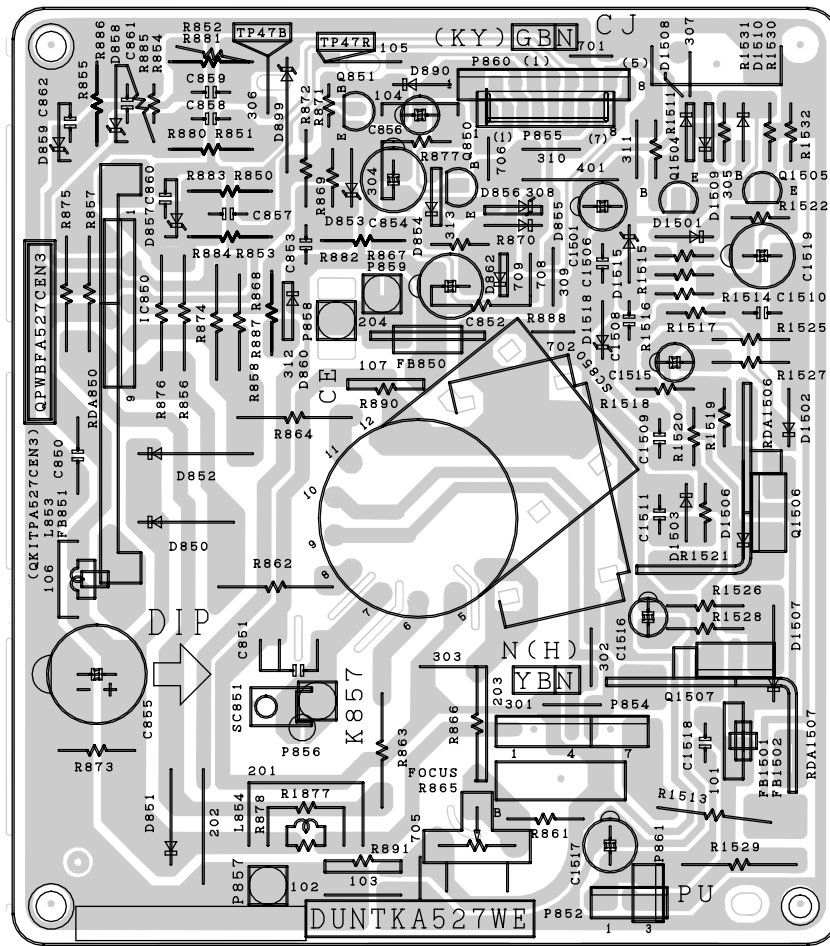
PWB-C
(DUNTKB573WEV0)

NOTE: 1. THE UNIT OF RESISTANCE "OHM" IS OMITTED
(K=1000 OHMS, M=MEGAOHM).
2. ALL RESISTORS ARE 1/16 WATT, UNLESS OTHERWISE NOTED.
3. UNIT OF ALL CAPACITORS ARE F WITH PREFIX SYMBOL
(u, P, ETC).

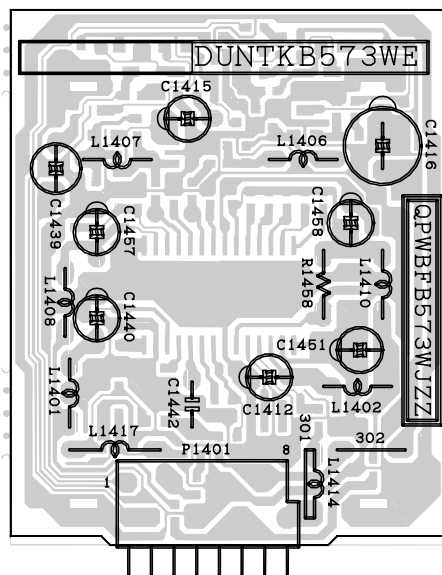


10	11	12	13	14	15	16	17	18	19
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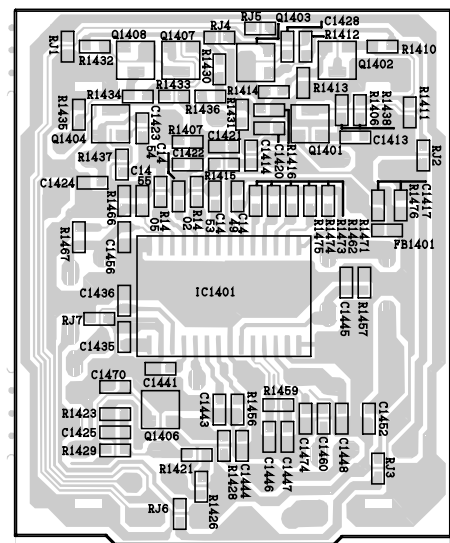
PRINTED WIRING BOARD ASSEMBLIES

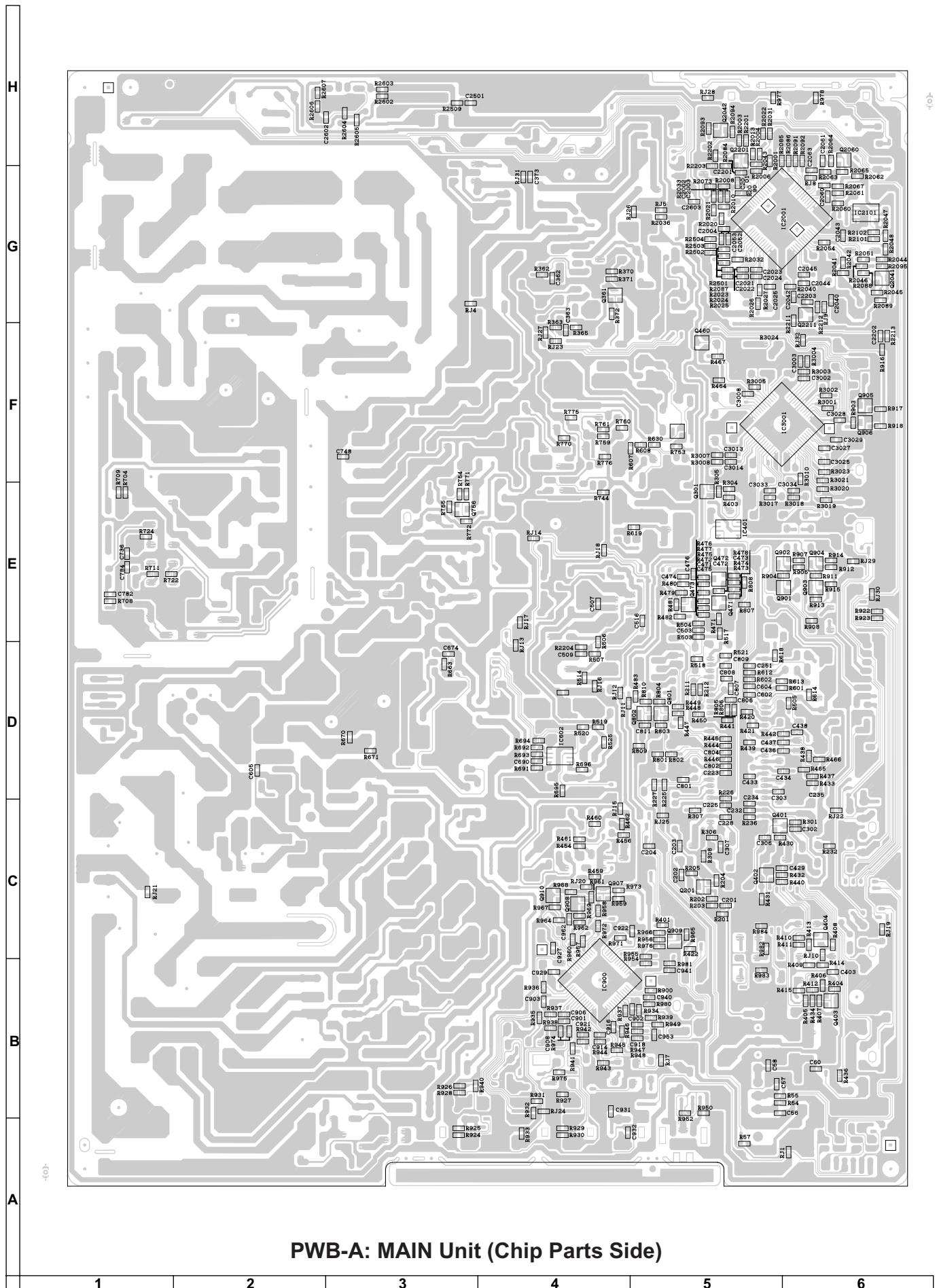


PWB-B: CRT Unit (Wiring Side)



PWB-C: 3-LINE Y/C Unit (Wiring Side)







PARTS LIST

PARTS REPLACEMENT

Replacement parts which have these special safety characteristics identified in this manual ; electrical components having such features are identified by Δ and shaded areas in the Replacement Parts Lists and Schematic Diagrams. The use of a substitute replacement part which does not have the same safety characteristic as the factory recommended replacement parts shown in this service manual may create shock, fire or other hazards.

"HOW TO ORDER REPLACEMENT PARTS"

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

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

in **USA**: Contact your nearest SHARP Parts Distributor to order. For location of SHARP Parts Distributor, Please call Toll-Free; 1-800-BE-SHARP

★ MARK: SPARE PARTS-DELIVERY SECTION

▲ MARK: X-RAY RELATED PARTS

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

▲ Δ V101	VB68QCN899X9E	X	Picture Tube	CF
Δ L703	RCILG0056PEZZ	X	Degaussing Coil	AS
Δ	QEARCA010WJZZ	X	Grounding Strap	AD

PRINTED WIRING BOARD ASSEMBLIES (NOT REPLACEMENT ITEM)

PWB-A DUNTKB567WEV7	—	MAIN Unit	—
PWB-B DUNTKA527WEV6	—	CRT Unit	—
PWB-C DUNTKA573WEV0	—	3-LINE Y/C Unit	—
PWB-S DUNTKB571WEV1	—	AUDIO Unit	—

Ref. No.	Part No.	★	Description	Code
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PWB-A: DUNTKB567WEV7

MAIN UNIT

TUNER

NOTE: THE PARTS HERES SHOWN ARE SUPPLIED AS AN ASSEMBLY BUT NOT INDEPENDENTLY.

Δ TU51	VTUVT1T5UF202	X	Tuner	AR
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INTEGRATED CIRCUITS

IC101	VHiPQ050ES1-1+	X	PQ050ES1MXP	AB
▲ Δ IC201	VHiTB1253AN-1	X	TB1253AN	AP
Δ IC361	VHiAN5277/-1	X	AN5277	AG
Δ IC501	VHiLA78041+-1	X	LA78041	AF
IC602	VHiBA15218F2E*	X	BA15218F	AB
Δ IC701	VHiTEA1507/-1	X	TEA1507P/N1	AE
Δ IC702	RH-FXA003WJZZ	X	PC123Y82	AB
▲ Δ IC703	VHiSE130N/-1	X	SE130N	AF
IC751	VHiPQ09RD11-1	X	PQ09RD11	AD
IC900	VHiCXA2089Q-2Y	X	CXA2089Q	AK
IC1403	VHiPQ05RD11-1	X	PQ05RD11	AD
IC2001	RH-iXA418WJZZQ	X	I.C.	AN
IC2040	VHiKIA7045A-1+	X	KIA7045AP	AB
IC2101	VHiBR2416E2-1+	X	BR24C16F	AD
IC3001	VHiCXA2074Q-1*	X	CXA2074Q	AP

TRANSISTORS

Q201	VS2SC2735//1E*	X	2SC2735	AB
Q361	VS2SB709AR/-1*	X	2SB709AR	AA
Q401	VS2SD601AR/-1*	X	2SD601AR	AA
Q402	VS2SB709AR/-1*	X	2SB709AR	AA
Q403	VS2SD601AR/-1*	X	2SD601AR	AA
Q404	VS2SD601AR/-1*	X	2SD601AR	AA
Q451	VS2SA1266-Y-1+	X	2SA1266-Y	AB
Q460	VSRT1N441C/-1*	X	RT1N441C	AA
Q471	VS2SD601AR/-1*	X	2SD601AR	AA
Q472	VS2SD601AR/-1*	X	2SD601AR	AA
Q473	VS2SD601AR/-1*	X	2SD601AR	AA
Q601	VS2SC2482/-1+	X	2SC2482	AB
▲ Q602	VS2SD2581++2E	X	2SD2581	AG
Q672	VS2SA1266-Y-1+	X	2SA1266	AB
Q673	VS2SD1830//1E	X	2SD1830	AD
▲ Q701	VSSPA07N603-1	X	SPA07N603	AG
Q751	VS2SC3198-G-1+	X	2SC3198-G	AB
Q755	VS2SD601AR/-1*	X	2SD601AR	AA
Q756	VS2SD601AR/-1*	X	2SD601AR	AA
Q757	VS2SC3198-G-1+	X	2SC3198-G	AB
Q758	VS2SA1266-Y-1+	X	2SA1266-Y	AB
Q770	VS2SC3333/-1+	X	2SC3333	AB
Q771	VS2SA1091-O1A+	X	2SA1091-O1A	AC
Q802	VS2SD601AR/-1*	X	2SD601AR	AA
Q901	VS2SD601AR/-1*	X	2SD601AR	AA
Q902	VS2SD601AR/-1*	X	2SD601AR	AA
Q903	VS2SD601AR/-1*	X	2SD601AR	AA
Q904	VS2SD601AR/-1*	X	2SD601AR	AA
Q905	VS2SD601AR/-1*	X	2SD601AR	AA
Q906	VS2SD601AR/-1*	X	2SD601AR	AA
Q907	VS2SD601AR/-1*	X	2SD601AR	AA
Q908	VS2SB709AR/-1*	X	2SB709AR	AA
Q910	VS2SB709AR/-1*	X	2SB709AR	AA
Q2060	VS2SD601AR/-1*	X	2SD601AR	AA
Q2201	VS2SD601AR/-1*	X	2SD601AR	AA
Q2211	VS2SD601AR/-1*	X	2SD601AR	AA

DIODES

D52	RH-EX0676GEZZ*	X	Zener Diode, 32V	AB
D103	RH-DX0441CEZZ*	X	Diode	AA
D361	VHD1SS119//1*	X	1SS119	AA
D362	VHD1SS119//1*	X	1SS119	AA
D410	RH-EX0611GEZZ*	X	Zener Diode, 5.1V	AB
D411	RH-EX0611GEZZ*	X	Zener Diode, 5.1V	AB
D412	RH-EX0614GEZZ*	X	Zener Diode, 5.6V	AB
D413	RH-EX0614GEZZ*	X	Zener Diode, 5.6V	AB
D414	RH-EX0614GEZZ*	X	Zener Diode, 5.6V	AB
D454	RH-EX0628GEZZ*	X	Zener Diode, 8.2V	AB

Ref. No.	Part No.	★	Description	Code
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PWB-A: DUNTKB567WEV7**MAIN UNIT (Continued)**

D455	VHD1SS119//1*	X	1SS119	AA
D501	RH-DX0302CEZZ*	X	Diode	AB
D502	VHD1SS119//1*	X	1SS119	AA
D510	RH-DX0441CEZZ*	X	Diode	AA
△ D605	RH-DX0255CEZZ	X	Diode	AD
△ D606	RH-DX0302CEZZ*	X	Diode	AB
D607	RH-DX0471CEZZ*	X	Diode	AB
D621	RH-EX0631GEZZ*	X	Zener Diode, 9.1V	AB
△ D622	RH-DX0131CEZZ*	X	Diode	AB
▲△ D651	VHD1SS244//1*	X	1SS244	AA
▲△ D652	RH-EX0641GEZZ*	X	Zener Diode, 12V	AB
▲△ D653	VHD1SS119//1*	X	1SS119	AA
▲△ D654	VHD1SS119//1*	X	1SS119	AA
△ D673	RH-DXA006WJZZ	X	Diode	AB
△ D701	RH-DX0477CEZZ	X	Diode	AE
D707	VHD1SS244//1*	X	1SS244	AA
D708	VHD1SS244//1*	X	1SS244	AA
△ D709	RH-DXA006WJZZ	X	Diode	AB
D712	RH-DX0468CEZZ	X	Diode	AB
D725	RH-DX0302CEZZ*	X	Diode	AB
D726	RH-DX0461CEZZ	X	Diode	AB
D751	VHD1SS119//1*	X	1SS119	AA
D752	VHD1SS119//1*	X	1SS119	AA
D753	VHD1SS119//1*	X	1SS119	AA
D754	VHD1SS119//1*	X	1SS119	AA
D755	VHD1SS119//1*	X	1SS119	AA
D756	VHD1SS119//1*	X	1SS119	AA
D757	RH-EX0619GEZZ*	X	Zener Diode, 6.2V	AB
D904	RH-EX0631GEZZ*	X	Zener Diode, 9.1V	AB
D905	RH-EX0631GEZZ*	X	Zener Diode, 9.1V	AB
D906	RH-EX0631GEZZ*	X	Zener Diode, 9.1V	AB
D907	RH-EX0631GEZZ*	X	Zener Diode, 9.1V	AB
D908	RH-EX0631GEZZ*	X	Zener Diode, 9.1V	AB
D909	RH-EX0631GEZZ*	X	Zener Diode, 9.1V	AB
D2001	VHD1SS119//1*	X	1SS119	AA
D2040	RH-EX0619GEZZ*	X	Zener Diode, 6.2V	AB
D2060	RH-EX0619GEZZ*	X	Zener Diode, 6.2V	AB

PACKAGED CIRCUITS

TH501	RH-HZ0004GEZZ+	X	Thermistor	AB
△ VA701	RH-VXA009WJZZ	X	Varistor	AB
△ PR701	RMPTP0092CEZZ	X	Packaged Circuit	AD
X801	RCR5AA010WJZZ	X	Crystal	AC

FILTERS AND COILS

CF302	RFILC0449CEZZ+	X	Filter	AB
CF401	RFILC0446CEZZ+	X	Filter	AB
L51	VP-CF100K0000*	X	Peaking 10μH	AB
L201	VP-XF1R2K0000*	X	Peaking 1.2μH	AA
L203	VP-XF100K0000*	X	Peaking 10μH	AA
L204	VP-XF100K0000*	X	Peaking 10μH	AA
L231	VP-XF680K0000*	X	Peaking 68μH	AA
L301	VP-XF8R2K0000*	X	Peaking 8.2μH	AA
L401	VP-XF100K0000*	X	Peaking 10μH	AA
L671	RCILZ1005CEZZ	X	Coil	AD
L672	RCILZA046WJZZ	X	Coil	AD
L701	RCILF0345CEZZ	X	Coil	AD
L702	RCILF0345CEZZ	X	Coil	AD
L705	RCILP0179CEZZ+	X	Coil, 47μF	AB
L728	RCILP0179CEZZ+	X	Coil, 47μF	AB
L729	RCILP0179CEZZ+	X	Coil, 47μF	AB
L801	VP-XF100K0000*	X	Peaking 10μH	AA
L802	VP-XF100K0000*	X	Peaking 10μH	AA
L2040	RCILBA003WJZZ	X	OSCILLATION COIL	AB
SF201	RFILC0405CEZZ	X	Filter	AD

TRANSFORMERS

△ T601	RTRNZ0057PEZZ	X	Transformer	AD
▲△ T602	RTRNFA040WJZZ	X	H-Volt Transformer	AU
△ T702	RTRNWA071WJZZ	X	Transformer	AG

Ref. No.	Part No.	★	Description	Code
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CAPACITORS

C53	VCEA0A1HW105M+X	1	50V	Electrolytic	AA
C54	VCEA0A1HW475M+X	4.7	50V	Electrolytic	AA
C55	VCEA0A0JW108M+X	1000	6.3V	Electrolytic	AB
C58	VCKYCY1HF103Z* X	0.01	50V	Ceramic	AA
C59	VCKYPA1HF103Z+ X	0.01	50V	Ceramic	AA
C101	VCEA0A0JW108M+X	1000	6.3V	Electrolytic	AB
C103	VCEA0A1CW108M+X	1000	16V	Electrolytic	AB
C201	VCKYCY1HB102K* X	1000p	50V	Ceramic	AA
C202	VCKYCY1HB103K* X	0.01	50V	Ceramic	AA
C203	VCKYCY1HB102K* X	1000p	50V	Ceramic	AA
C223	VCKYCY1CF104Z* X	0.1	16V	Ceramic	AA
C224	VCEA0A1HW474M+X	0.47	50V	Electrolytic	AA
C225	VCKYCY1CF104Z* X	0.1	16V	Ceramic	AA
C227	VCEA0A1HW106M+X	10	50V	Electrolytic	AA
C228	VCKYCY1CF104Z* X	0.1	16V	Ceramic	AA
C229	VCEA0A1CW477M+X	470	16V	Electrolytic	AB
C231	VCEA0A1EW476M+X	47	25V	Electrolytic	AA
C232	VCKYCY1HB222K* X	2200p	50V	Ceramic	AA
C233	VCEA0A1HW474M+X	0.47	50V	Electrolytic	AA
C234	VCKYCY1HB103K* X	0.01	50V	Ceramic	AA
C235	VCEA0A1HW106M+X	10	50V	Electrolytic	AA
C251	VCKYCY1CF104Z* X	0.1	16V	Ceramic	AA
C252	VCEA0A1EW476M+X	47	25V	Electrolytic	AA
C302	VCCCCY1HH151J* X	150p	50V	Ceramic	AA
C303	VCCCCY1HH330J* X	33p	50V	Ceramic	AA
C304	VCEA0A1HW475M+X	4.7	50V	Electrolytic	AA
C306	VCCCCY1HH330J* X	33p	50V	Ceramic	AA
C307	VCKYCY1CF104Z* X	0.1	16V	Ceramic	AA
C312	VCEA0A1EW476M+X	47	25V	Electrolytic	AA
C360	VCEA0A1HW475M+X	4.7	50V	Electrolytic	AA
C361	VCEA0A1HW105M+X	1	50V	Electrolytic	AA
C362	VCKYCY1EB223K* X	0.022	25V	Ceramic	AA
C363	VCKYCY1EB223K* X	0.022	25V	Ceramic	AA
C364	VCEA0A1EW227M+X	220	25V	Electrolytic	AB
C365	VCEA0A1HW105M+X	1	50V	Electrolytic	AA
C366	VCEA0A1HW106M+X	10	50V	Electrolytic	AA
C367	VCEA0A1VW108M+X	1000	35V	Electrolytic	AB
C368	VCKYPA1HF103Z+ X	0.01	50V	Ceramic	AA
C369	VCEA0A1CW227M+X	220	16V	Electrolytic	AB
C370	VCEA0A1CW227M+X	220	16V	Electrolytic	AB
C371	VCEA0A1EW108M+X	1000	25V	Electrolytic	AB
C372	VCEA0A1EW108M+X	1000	25V	Electrolytic	AB
C373	VCKYCY1HF103Z* X	0.01	50V	Ceramic	AA
C375	VCEA0A1HW475M+X	4.7	50V	Electrolytic	AA
C401	VCEA0A1HW106M+X	10	50V	Electrolytic	AA
C402	VCEA0A1HW106M+X	10	50V	Electrolytic	AA
C403	VCKYCY1CF104Z* X	0.1	16V	Ceramic	AA
C429	VCKYCY1HB103K* X	0.01	50V	Ceramic	AA
C433	VCKYCY1CF104Z* X	0.1	16V	Ceramic	AA
C434	VCKYCY1CF104Z* X	0.1	16V	Ceramic	AA
C435	VCEA0A1HW105M+X	1	50V	Electrolytic	AA
C436	VCKYCY1CF104Z* X	0.1	16V	Ceramic	AA
C437	VCKYCY1CF104Z* X	0.1	16V	Ceramic	AA
C438	VCKYCY1HB103K* X	0.01	50V	Ceramic	AA
C439	VCEA0A1HW106M+X	10	50V	Electrolytic	AA
C440	VCFYFA1HA224J+ X	0.22	50V	Mylar	AB
C451	VCQYTA2AA104K+ X	0.1	100V	Mylar	AB
C452	VCEA0A1EW336M+X	33	25V	Electrolytic	AA
C471	VCKYCY1HB103K* X	0.01	50V	Ceramic	AA
C473	VCCCCY1HH331J* X	330p	50V	Ceramic	AA
C474	VCKYCY1HB103K* X	0.01	50V	Ceramic	AA
C475	VCKYCY1CF104Z* X	0.1	16V	Ceramic	AA
C476	VCKYCY1HB103K* X	0.01	50V	Ceramic	AA
C502	VCEA0A1VW477M+X	470	35V	Electrolytic	AB
C504	VCEACA1HC474M+X	0.47	50V	Electrolytic	AB
C505	VCEA0A1HW474M+X	0.47	50V	Electrolytic	AA
C506	VCKYCY1HB103K* X	0.01	50V	Ceramic	AA
C507	VCKYCY1HB103K* X	0.01	50V	Ceramic	AA
C510	RC-FZ0272CEZZ+ X	0.39	100V	Mylar	AB
C512	VCEA0A1EW476M+X	47	25V	Electrolytic	AA
C514	VCEA0A1VW107M+X	100	35V	Electrolytic	AB
C516	VCKYCY1HB472K* X	4700p	50V	Ceramic	AA
C518	VCQYTA2AA473J+ X	0.047	100V	Mylar	AB
C522	VCFYFA1HA334J+ X	0.33	50V	Mylar	AB
C523	VCEA0A1HW105M+X	1	50V	Electrolytic	AA

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code		
PWB-A: DUNTKB567WEV7											
MAIN UNIT (Continued)											
C601	VCEA0A1CW477M+X	470	16V	Electrolytic	AA	C903	VCKYCY1HB681K* X	680p	50V	Ceramic	AA
C602	VCKYCY1CF104Z* X	0.1	16V	Ceramic	AA	C904	VCEA0A1HW105M+X	1	50V	Electrolytic	AA
C603	VCEA0A1HW225M+X	2.2	50V	Electrolytic	AA	C905	VCEA0A1HW105M+X	1	50V	Electrolytic	AA
C604	VCKYCY1EB223K* X	0.022	25V	Ceramic	AA	C906	VCKYCY1HB681K* X	680p	50V	Ceramic	AA
C606	VCKYPA2HB561K+ X	560p	500V	Ceramic	AB	C907	VCEA0A1HW105M+X	1	50V	Electrolytic	AA
C607	VCKYPA1HB472K+ X	4700p	50V	Ceramic	AA	C908	VCKYCY1HB103K* X	0.01	50V	Ceramic	AA
C608	RC-KZ0033CEZZ X	150p	2kV	Ceramic	AB	C909	VCEA0A1HW105M+X	1	50V	Electrolytic	AA
▲ ▲ C609	VCFPVC3ZA143H X	0.014	180V	M.Polypro	AB	C910	VCEA0A1HW105M+X	1	50V	Electrolytic	AA
C610	RC-KZ0036CEZZ X	0.036	180V	M.Polypro	AB	C911	VCEA0A1HW105M+X	1	50V	Electrolytic	AA
C611	VCEA0A1EW477M+X	470	25V	Electrolytic	AB	C912	VCEA0A1HW105M+X	1	50V	Electrolytic	AA
C614	VCEA0A1EW108M+X	1000	25V	Electrolytic	AB	C913	VCEA0A1HW105M+X	1	50V	Electrolytic	AA
C615	VCFYSB2EB823J X	0.082	250V	Mylar	AB	C914	VCKYCY1HB681K* X	680p	50V	Ceramic	AA
C616	VCKYPA2HB471K+ X	470p	500V	Ceramic	AB	C915	VCKYPA1HF103Z+ X	0.01	50V	Ceramic	AA
C617	VCEA0A1HW474M+X	0.47	50V	Electrolytic	AA	C916	VCKYCY1HB103K* X	0.01	50V	Ceramic	AA
C622	VCKYPA2HB102K+ X	1000p	500V	Ceramic	AB	C917	VCEA0A1HW105M+X	1	50V	Electrolytic	AA
C623	VCEA4A2EN106M+ X	10	250V	Electrolytic	AB	C918	VCKYCY1HB681K* X	680p	50V	Ceramic	AA
C652	VCEA0A1HW476M+X	47	50V	Electrolytic	AB	C919	VCEA0A1HW105M+X	1	50V	Electrolytic	AA
C653	VCEA0A1HW106M+X	10	50V	Electrolytic	AA	C920	VCEA0A1HW105M+X	1	50V	Electrolytic	AA
C674	VCKYCY1HB391K* X	390p	50V	Ceramic	AA	C921	VCKYCY1HB681K* X	680p	50V	Ceramic	AA
C675	VCEA0A1HW106M+X	10	50V	Electrolytic	AA	C922	VCKYCY1CF104Z* X	0.1	16V	Ceramic	AA
C677	RC-FZ0377CEZZ X	4.7	50V	Mylar	AD	C923	VCEA0A1CW107M+X	100	16V	Electrolytic	AA
▲ ▲ C678	VCQPPC2GB563J X	0.056	400V	Mylar	AB	C926	VCEA0A1EW476M+X	47	25V	Electrolytic	AA
C681	VCFPFA2EB334J X	0.33	250V	M.Polypro	AB	C928	VCEA0A1HW105M+X	1	50V	Electrolytic	AA
C682	VCKYPA2HB102K+ X	1000p	500V	Ceramic	AB	C930	VCEA0A1HW475M+X	4.7	50V	Electrolytic	AA
C685	VQYTA1HM333J+ X	0.033	50V	Mylar	AA	C931	VCKYCY1HB183K* X	0.018	50V	Ceramic	AA
▲ C701	RC-FZA022WJZZ X	0.22	AC250V		AB	C932	VCKYCY1HB183K* X	0.018	50V	Ceramic	AA
C702	RC-KZ0029CEZZ+ X	0.01	AC250V	Ceramic	AB	C933	VCEA0A1HW475M+X	4.7	50V	Electrolytic	AA
C703	RC-KZ0029CEZZ+ X	0.01	AC250V	Ceramic	AB	C934	VCEA0A1EW476M+X	47	25V	Electrolytic	AA
▲ C705	RC-EZ0719CEZZ X	560	200V	Electrolytic	AF	C935	VCEA0A1HW475M+X	4.7	50V	Electrolytic	AA
▲ C706	RC-KZ0089GEZZA X	1000p	AC250V	Ceramic	AB	C936	VCEA0A1HW475M+X	4.7	50V	Electrolytic	AA
▲ C707	RC-KZ0092GEZZA X	3300p	AC250V	Ceramic	AB	C937	VCKYCY1HB103K* X	0.01	50V	Ceramic	AA
▲ C723	RC-EZ0724CEZZ X	100	160V	Electrolytic	AC	C953	VCKYCY1HB681K* X	680p	50V	Ceramic	AA
▲ C725	RC-EZA064WJZZ X	220	160V	Electrolytic	AD	C956	VCEA0A1CW477M+X	470	16V	Electrolytic	AB
C726	RC-KZ0226CEZZ+ X	560p	2kV	Ceramic	AB	C1434	VCEA0A1EW476M+X	47	25V	Electrolytic	AA
C727	RC-KZ0226CEZZ+ X	560p	2kV	Ceramic	AB	C1437	VCEA0A1EW476M+X	47	25V	Electrolytic	AA
C729	VCEA0A1HW106M+X	10	50V	Electrolytic	AA	C2001	VCCCCY1HH101J* X	100p	50V	Ceramic	AA
C730	VCEA4A1VN108M+ X	1000	35V	Electrolytic	AC	C2002	VCKYCY1HF103Z* X	0.01	50V	Ceramic	AA
C731	RC-EZ0385CEZZ+ X	1000	16V	Electrolytic	AB	C2025	VCCCCY1HH101J* X	100p	50V	Ceramic	AA
C732	VCKYPA2HB102K+ X	1000p	500V	Ceramic	AB	C2040	VCKYCY1CF104Z* X	0.1	16V	Ceramic	AA
C733	VCKYPA2HB102K+ X	1000p	500V	Ceramic	AB	C2041	VCEA0A1HW105M+X	1	50V	Electrolytic	AA
C734	VCKYPA2HB471K+ X	470p	500V	Ceramic	AB	C2043	VCCCCY1HH331J* X	330p	50V	Ceramic	AA
C735	VCKYPA2HB471K+ X	470p	500V	Ceramic	AB	C2044	VCCCCY1HH100D* X	10p	50V	Ceramic	AA
C736	VCKYCY1HF103Z* X	0.01	50V	Ceramic	AA	C2046	VCEA0A1EW476M+X	47	25V	Electrolytic	AA
C737	VCEA0A1HW226M+X	22	50V	Electrolytic	AA	C2060	VCKYCY1CF104Z* X	0.1	16V	Ceramic	AA
C738	VCFPVC3CA102H X	1000p	1250V	M.Polypro	AB	C2061	VCCCCY1HH101J* X	100p	50V	Ceramic	AA
C739	RC-EZ0385CEZZ+ X	1000	16V	Electrolytic	AB	C2062	VCEA0A1CW107M+X	100	16V	Electrolytic	AA
C740	VCEA0A1HW476M+X	47	50V	Electrolytic	AB	C2063	VCKYCY1CF104Z* X	0.1	16V	Ceramic	AA
C741	VCEA4A2AN105M+X	1	100V	Electrolytic	AB	C2064	VCKYCY1CF104Z* X	0.1	16V	Ceramic	AA
C743	RC-KZ0036CEZZ+ X	330p	2kV	Ceramic	AB	C2201	VCKYCY1HB681K* X	680p	50V	Ceramic	AA
C744	VCKYPA2HB471K+ X	470p	500V	Ceramic	AB	C2202	VCCCCY1HH330J* X	33p	50V	Ceramic	AA
C745	VCKYPA2HB102K+ X	1000p	500V	Ceramic	AB	C2601	VCEA0A1EW476M+X	47	25V	Electrolytic	AA
C746	VCKYPA2HB102K+ X	1000p	500V	Ceramic	AB	C2602	VCCCCY1HH101J* X	100p	50V	Ceramic	AA
C747	VCEA0A1HW475M+X	4.7	50V	Electrolytic	AA	C3001	VCEA0A1HW475M+X	4.7	50V	Electrolytic	AA
C749	VCEA0A1HW105M+X	1	50V	Electrolytic	AA	C3002	VCKYCY1HB562K* X	5600p	50V	Ceramic	AA
C753	RC-KZ0036CEZZ+ X	330p	2kV	Ceramic	AB	C3003	VCKYCY1EB123K* X	0.012	25V	Ceramic	AA
C754	VCKYPA2HB472K+ X	4700p	500V	Ceramic	AB	C3004	VCEA0A1HW105M+X	1	50V	Electrolytic	AA
C755	VCEA0A1EW476M+X	47	25V	Electrolytic	AA	C3005	VCEA0A1HW475M+X	4.7	50V	Electrolytic	AA
C783	VQYTA1HM103J+ X	0.01	50V	Mylar	AA	C3006	VCEA0A1HW106M+X	10	50V	Electrolytic	AA
C784	VCKYCY1HF103Z* X	0.01	50V	Ceramic	AA	C3007	VCEA0A1HW475M+X	4.7	50V	Electrolytic	AA
C801	VCCCCY1HH110J* X	11p	50V	Ceramic	AA	C3008	VCKYCY1CF104Z* X	0.1	16V	Ceramic	AA
C802	VCKYCY1HB222K* X	2200p	50V	Ceramic	AA	C3009	VCEA0A1CW477M+X	470	16V	Electrolytic	AB
C803	VCEA0A1HW224M+X	0.22	50V	Electrolytic	AA	C3010	VCE9GA1HW475M+X	4.7	50V	Elect.(N,P)	AB
C804	VCKYCY1CF104Z* X	0.1	16V	Ceramic	AA	C3011	VCEA0A1HW475M+X	4.7	50V	Electrolytic	AA
C805	VCEA0A0JW108M+ X	1000	6.3V	Electrolytic	AB	C3012	VCEA0A1HW475M+X	4.7	50V	Electrolytic	AA
C806	VCKYCY1CF104Z* X	0.1	16V	Ceramic	AA	C3013	VCKYCY1HB272K* X	2700p	50V	Ceramic	AA
C807	VCKYCY1CF104Z* X	0.1	16V	Ceramic	AA	C3014	VCKYCY1CB473K* X	0.047	16V	Ceramic	AA
C808	VCKYCY1CF104Z* X	0.1	16V	Ceramic	AA	C3015	VCEACA1HC335K+ X	3.3	50V	Electrolytic	AB
C809	VCKYCY1CF104Z* X	0.1	16V	Ceramic	AA	C3016	VCE9GA1HW475M+X	4.7	50V	Elect.(N,P)	AB
C810	VCEA0A1CW477M+X	470	16V	Electrolytic	AB	C3017	VCEACA1CC106K+ X	10	16V	Electrolytic	AB
C812	VQYTA1HM104J+ X	0.1	50V	Mylar	AB	C3018	VCEA0A1HW105M+X	1	50V	Electrolytic	AA
C901	VCKYCY1HB103K* X	0.01	50V	Ceramic	AA	C3021	VCEA0A1HW475M+X	4.7	50V	Electrolytic	AA
C902	VCKYCY1HB103K* X	0.01	50V	Ceramic	AA	C3022	VCEA0A1HW475M+X	4.7	50V	Electrolytic	AA
						C3025	VCKYCY1CB473K* X	0.047	16V	Ceramic	AA
						C3027	VCKYCY1CB473K* X	0.047	16V	Ceramic	AA
						C3028	VCKYCY1HB682K* X	6800p	50V	Ceramic	AA

Ref. No.	Part No.	★	Description	Code
PWB-A: DUNTKB567WEV7				
MAIN UNIT (Continued)				
C3029	VCKYCY1HB682K*	X	6800p 50V Ceramic	AA

RESISTORS

RJ3	VRS-CY1JF000J*	X	0	1/16W	Metal Oxide	AA
RJ5	VRS-CY1JF000J*	X	0	1/16W	Metal Oxide	AA
RJ10	VRS-CY1JF000J*	X	0	1/16W	Metal Oxide	AA
RJ16	VRS-CY1JF000J*	X	0	1/16W	Metal Oxide	AA
RJ19	VRS-CY1JF000J*	X	0	1/16W	Metal Oxide	AA
RJ20	VRS-CY1JF000J*	X	0	1/16W	Metal Oxide	AA
RJ22	VRS-CY1JF000J*	X	0	1/16W	Metal Oxide	AA
RJ23	VRS-CY1JF000J*	X	0	1/16W	Metal Oxide	AA
RJ25	VRS-CY1JF000J*	X	0	1/16W	Metal Oxide	AA
R54	VRS-CY1JF101J*	X	100	1/16W	Metal Oxide	AA
R55	VRS-CY1JF101J*	X	100	1/16W	Metal Oxide	AA
R56	VRD-RA2BE823J*	X	82k	1/8W	Carbon	AA
R57	VRS-CY1JF473J*	X	47k	1/16W	Metal Oxide	AA
R201	VRS-CY1JF151J*	X	150	1/16W	Metal Oxide	AA
R202	VRS-CY1JF122J*	X	1.2k	1/16W	Metal Oxide	AA
R203	VRS-CY1JF682J*	X	6.8k	1/16W	Metal Oxide	AA
R204	VRS-CY1JF270J*	X	27	1/16W	Metal Oxide	AA
R205	VRS-CY1JF331J*	X	330	1/16W	Metal Oxide	AA
R206	VRD-RA2BE101J*	X	100	1/8W	Carbon	AA
R211	VRS-CY1JF221J*	X	220	1/16W	Metal Oxide	AA
R212	VRS-CY1JF221J*	X	220	1/16W	Metal Oxide	AA
R225	VRS-CY1JF101J*	X	100	1/16W	Metal Oxide	AA
R226	VRS-CY1JF101J*	X	100	1/16W	Metal Oxide	AA
R227	VRS-CY1JF273J*	X	27k	1/16W	Metal Oxide	AA
R232	VRS-CY1JF471J*	X	470	1/16W	Metal Oxide	AA
R234	VRD-RA2BE271J*	X	270	1/8W	Carbon	AA
R236	VRS-CY1JF332J*	X	3.3k	1/16W	Metal Oxide	AA
R301	VRS-CY1JF222J*	X	2.2k	1/16W	Metal Oxide	AA
R305	VRS-CY1JF000J*	X	0	1/16W	Metal Oxide	AA
R306	VRS-CY1JF102J*	X	1k	1/16W	Metal Oxide	AA
R307	VRS-CY1JF101J*	X	100	1/16W	Metal Oxide	AA
R308	VRS-CY1JF000J*	X	0	1/16W	Metal Oxide	AA
R361	VRD-RA2BE224J*	X	220k	1/8W	Carbon	AA
R362	VRS-CY1JF182J*	X	1.8k	1/16W	Metal Oxide	AA
R363	VRS-CY1JF182J*	X	1.8k	1/16W	Metal Oxide	AA
R364	VRD-RA2BE152J*	X	1.5k	1/8W	Carbon	AA
R365	VRS-CY1JF152J*	X	1.5k	1/16W	Metal Oxide	AA
▲ R367	VRN-RL3DB1R2J+	X	1.2	2W	Metal Film	AB
R368	VRD-RA2BE222J*	X	2.2k	1/8W	Carbon	AA
R369	VRD-RA2BE822J*	X	8.2k	1/8W	Carbon	AA
R371	VRS-CY1JF102J*	X	1k	1/16W	Metal Oxide	AA
R372	VRS-CY1JF223J*	X	22k	1/16W	Metal Oxide	AA
R403	VRS-CY1JF000J*	X	0	1/16W	Metal Oxide	AA
R404	VRS-CY1JF683J*	X	68k	1/16W	Metal Oxide	AA
R406	VRS-CY1JF473J*	X	47k	1/16W	Metal Oxide	AA
R407	VRS-CY1JF102J*	X	1k	1/16W	Metal Oxide	AA
R408	VRS-CY1JF683J*	X	68k	1/16W	Metal Oxide	AA
R410	VRS-CY1JF473J*	X	47k	1/16W	Metal Oxide	AA
R411	VRS-CY1JF102J*	X	1k	1/16W	Metal Oxide	AA
R412	VRS-CY1JF101J*	X	100	1/16W	Metal Oxide	AA
R413	VRS-CY1JF101J*	X	100	1/16W	Metal Oxide	AA
R414	VRS-CY1JF000J*	X	0	1/16W	Metal Oxide	AA
R415	VRS-CY1JF000J*	X	0	1/16W	Metal Oxide	AA
R422	VRS-CY1JF000J*	X	0	1/16W	Metal Oxide	AA
R430	VRS-CY1JF391J*	X	390	1/16W	Metal Oxide	AA
R431	VRS-CY1JF331J*	X	330	1/16W	Metal Oxide	AA
R432	VRS-CY1JF102J*	X	1k	1/16W	Metal Oxide	AA
R437	VRS-CY1JF101J*	X	100	1/16W	Metal Oxide	AA
R438	VRS-CY1JF101J*	X	100	1/16W	Metal Oxide	AA
R439	VRS-CY1JF104J*	X	100k	1/16W	Metal Oxide	AA
R440	VRS-CY1JF000J*	X	0	1/16W	Metal Oxide	AA
R441	VRS-CY1JF472J*	X	4.7k	1/16W	Metal Oxide	AA
R442	VRS-CY1JF101J*	X	100	1/16W	Metal Oxide	AA
R444	VRS-CY1JF332J*	X	3.3k	1/16W	Metal Oxide	AA
R445	VRS-CY1JF332J*	X	3.3k	1/16W	Metal Oxide	AA
R446	VRS-CY1JF332J*	X	3.3k	1/16W	Metal Oxide	AA
R447	VRS-CY1JF101J*	X	100	1/16W	Metal Oxide	AA
R448	VRS-CY1JF101J*	X	100	1/16W	Metal Oxide	AA

Ref. No.	Part No.	★			Description	Code	
	R449	VRS-CY1JF101J*	X	100	1/16W	Metal Oxide	AA
	R450	VRS-CY1JF101J*	X	100	1/16W	Metal Oxide	AA
△	R451	VRS-RG3AB103J+	X	10k	1W	Metal Oxide	AB
	R452	VRD-RM2HD823J*	X	82k	1/2W	Carbon	AA
	R453	VRD-RM2HD823J*	X	82k	1/2W	Carbon	AA
	R454	VRS-CY1JF471J*	X	470	1/16W	Metal Oxide	AA
	R455	VRD-RM2HD473J*	X	47k	1/2W	Carbon	AA
	R456	VRS-CY1JF103J*	X	10k	1/16W	Metal Oxide	AA
	R460	VRS-CY1JF471J*	X	470	1/16W	Metal Oxide	AA
	R461	VRS-CY1JF562J*	X	5.6k	1/16W	Metal Oxide	AA
	R462	VRS-CY1JF223J*	X	22k	1/16W	Metal Oxide	AA
	R463	VRD-RA2EE680J*	X	68	1/4W	Carbon	AA
	R464	VRS-CY1JF683J*	X	68k	1/16W	Metal Oxide	AA
	R467	VRS-CY1JF123J*	X	12k	1/16W	Metal Oxide	AA
	R471	VRS-CY1JF333J*	X	33k	1/16W	Metal Oxide	AA
	R472	VRS-CY1JF273J*	X	27k	1/16W	Metal Oxide	AA
	R473	VRS-CY1JF471J*	X	470	1/16W	Metal Oxide	AA
	R474	VRS-CY1JF681J*	X	680	1/16W	Metal Oxide	AA
	R475	VRS-CY1JF102J*	X	1k	1/16W	Metal Oxide	AA
	R476	VRS-CY1JF393J*	X	39k	1/16W	Metal Oxide	AA
	R477	VRS-CY1JF182J*	X	1.8k	1/16W	Metal Oxide	AA
	R478	VRS-CY1JF151J*	X	150	1/16W	Metal Oxide	AA
	R479	VRS-CY1JF473J*	X	47k	1/16W	Metal Oxide	AA
	R480	VRS-CY1JF223J*	X	22k	1/16W	Metal Oxide	AA
	R481	VRS-CY1JF152J*	X	1.5k	1/16W	Metal Oxide	AA
	R482	VRS-CY1JF100J*	X	10	1/16W	Metal Oxide	AA
	R483	VRS-CY1JF101J*	X	100	1/16W	Metal Oxide	AA
△	R501	VRN-RL3ABR47J+	X	0.47	1W	Metal Film	AB
	R502	VRN-RA2BK822F*	X	8.2k	1/8W	Metal Film	AA
	R503	VRS-CY1JF105J*	X	1M	1/16W	Metal Oxide	AA
	R504	VRS-CY1JF154J*	X	150k	1/16W	Metal Oxide	AA
	R505	VRS-CY1JF101J*	X	100	1/16W	Metal Oxide	AA
	R510	VRN-RA2BK103F*	X	10k	1/8W	Metal Film	AA
	R511	VRN-RA2BK222F*	X	2.2k	1/8W	Metal Film	AA
	R512	VRN-RA2BK272F*	X	2.7k	1/8W	Metal Film	AA
	R513	VRD-RM2HD1R0J*	X	1	1/2W	Carbon	AA
	R517	VRS-CY1JF104J*	X	100k	1/16W	Metal Oxide	AA
	R518	VRS-CY1JF102J*	X	1k	1/16W	Metal Oxide	AA
	R521	VRS-CY1JF101J*	X	100	1/16W	Metal Oxide	AA
△	R523	VRN-RL3DB1R0J+	X	1	2W	Metal Film	AB
△	R524	VRS-RG3AB391J+	X	390	1W	Metal Oxide	AB
	R601	VRS-CY1JF101J*	X	100	1/16W	Metal Oxide	AA
	R603	VRD-RA2BE472J*	X	4.7k	1/8W	Carbon	AA
△	R604	VRS-KA3NG562J	X	5.6k	7.0W	Metal Oxide	AB
	R605	VRD-RM2HD331J*	X	330	1/2W	Carbon	AA
	R606	VRD-RM2HD331J*	X	330	1/2W	Carbon	AA
△	R609	VRS-RG3AB562J+	X	5.6k	1W	Metal Oxide	AB
	R610	VRD-RM2HD220J*	X	22	1/2W	Carbon	AA
	R612	VRS-CY1JF154J*	X	150k	1/16W	Metal Oxide	AA
	R613	VRS-CY1JF101J*	X	100k	1/16W	Metal Oxide	AA
	R614	VRS-CY1JF562J*	X	5.6k	1/16W	Metal Oxide	AA
△	R615	VRS-KA3NG3R3K	X	3.3	7.0W	Metal Oxide	AB
	R618	VRS-CY1JF101J*	X	100	1/16W	Metal Oxide	AA
△	R621	VRN-RL3AB3R3J+	X	3.3	1W	Metal Film	AB
△	R623	VRN-RL3AB4R7J+	X	4.7	1W	Metal Film	AB
△	R624	VRS-RG3DB332J+	X	3.3k	2W	Metal Oxide	AB
	R625	VRD-RA2BE102J*	X	1k	1/8W	Carbon	AA
△	R627	VRN-RL3ABR47J+	X	0.47	1W	Metal Film	AB
△	R628	VRN-RL3ABR47J+	X	0.47	1W	Metal Film	AB
▲△	R651	VRS-RG2HC270J+	X	27	1/2W	Metal Oxide	AB
▲△	R652	VRD-RA2EE103G*	X	10k	1/4W	2% Carbon	AA
▲△	R653	VRD-RA2EE562G*	X	5.6k	1/4W	2% Carbon	AA
△	R658	VRS-RG3LB333J+	X	33k	3.0W	Metal Oxide	AB
	R663	VRS-CY1JF102J*	X	1k	1/16W	Metal Oxide	AA
	R670	VRS-CY1JF000J*	X	0	1/16W	Metal Oxide	AA
	R684	VRD-RA2BE472J*	X	4.7k	1/8W	Carbon	AA
	R685	VRD-RA2BE822J*	X	8.2k	1/8W	Carbon	AA
	R686	VRD-RA2EE332J*	X	3.3k	1/4W	Carbon	AA
	R687	VRD-RA2BE103J*	X	10k	1/8W	Carbon	AA
△	R688	VRN-RL3DB3R3J+	X	3.3	2W	Metal Film	AB
	R689	VRD-RM2HD824J*	X	820k	1/2W	Carbon	AA
△	R690	VRS-RG3LB471J+	X	470	3.0W	Metal Oxide	AB
	R691	VRS-CY1JF394J*	X	390k	1/16W	Metal Oxide	AA
	R692	VRS-CY1JF223J*	X	22k	1/16W	Metal Oxide	AA

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
PWB-A: DUNTKB567WEV7									
MAIN UNIT (Continued)									
R693	VRS-CY1JF683J*	X	68k 1/16W	Metal Oxide AA	R926	VRS-CY1JF680J*	X	68 1/16W	Metal Oxide AA
R694	VRS-CY1JF102J*	X	1k 1/16W	Metal Oxide AA	R927	VRS-CY1JF750J*	X	75 1/16W	Metal Oxide AA
R695	VRS-CY1JF683J*	X	68k 1/16W	Metal Oxide AA	R929	VRS-CY1JF473J*	X	47k 1/16W	Metal Oxide AA
R696	VRS-CY1JF000J*	X	0 1/16W	Metal Oxide AA	R930	VRS-CY1JF473J*	X	47k 1/16W	Metal Oxide AA
△ R701	RR-DZ0049CEZZ*	X	3.9M 1/2W	Solid AB	R931	VRS-CY1JF750J*	X	75 1/16W	Metal Oxide AA
△ R703	VRW-KQ4AC1R2K	X	1.2 10W	Cement AB	R932	VRS-CY1JF473J*	X	47k 1/16W	Metal Oxide AA
△ R705	VRN-RL3DBR18J+	X	0.18 2W	Metal Film AB	R933	VRS-CY1JF473J*	X	47k 1/16W	Metal Oxide AA
△ R706	VRN-RL3DBR18J+	X	0.18 2W	Metal Film AB	R934	VRS-CY1JF103J*	X	10k 1/16W	Metal Oxide AA
R707	VRD-RM2HD270J*	X	27 1/2W	Carbon AA	R935	VRS-CY1JF101J*	X	100 1/16W	Metal Oxide AA
R708	VRS-CY1JF102J*	X	1k 1/16W	Metal Oxide AA	R936	VRS-CY1JF223J*	X	22k 1/16W	Metal Oxide AA
R709	VRS-CY1JF000J*	X	0 1/16W	Metal Oxide AA	R937	VRS-CY1JF101J*	X	100 1/16W	Metal Oxide AA
△ R710	VRS-RG2HC103J+	X	10k 1/2W	Metal Oxide AB	R938	VRS-CY1JF223J*	X	22k 1/16W	Metal Oxide AA
R711	VRS-CY1JF334J*	X	330k 1/16W	Metal Oxide AA	R939	VRS-CY1JF333J*	X	33k 1/16W	Metal Oxide AA
R712	VRD-RM2HD100J*	X	10 1/2W	Carbon AA	R940	VRS-CY1JF8R2J*	X	8.2 1/16W	Metal Oxide AA
△ R713	VRS-RG2HC122J+	X	1.2k 1/2W	Metal Oxide AB	R941	VRS-CY1JF101J*	X	100 1/16W	Metal Oxide AA
R715	VRD-RM2HD5R6J*	X	5.6 1/2W	Carbon AA	R942	VRS-CY1JF223J*	X	22k 1/16W	Metal Oxide AA
R716	VRD-RM2HD100J*	X	10 1/2W	Carbon AA	R943	VRS-CY1JF101J*	X	100 1/16W	Metal Oxide AA
R720	VRD-RA2BE473J*	X	47k 1/8W	Carbon AA	R944	VRS-CY1JF223J*	X	22k 1/16W	Metal Oxide AA
R724	VRS-CY1JF000J*	X	0 1/16W	Metal Oxide AA	R945	VRS-CY1JF101J*	X	100 1/16W	Metal Oxide AA
R725	VRD-RM2HD221J*	X	220 1/2W	Carbon AA	R946	VRS-CY1JF103J*	X	10k 1/16W	Metal Oxide AA
R734	VRD-RM2HD124J*	X	120k 1/2W	Carbon AA	R947	VRS-CY1JF223J*	X	22k 1/16W	Metal Oxide AA
△ R737	VRN-RL3LBR82J+	X	0.82 3.0W	Metal Film AB	R948	VRS-CY1JF101J*	X	100 1/16W	Metal Oxide AA
R742	VRD-RA2BE222J*	X	2.2k 1/8W	Carbon AA	R949	VRS-CY1JF223J*	X	22k 1/16W	Metal Oxide AA
R743	VRD-RM2HD470J*	X	47 1/2W	Carbon AA	R950	VRS-CY1JF750J*	X	75 1/16W	Metal Oxide AA
R751	VRD-RA2BE473J*	X	47k 1/8W	Carbon AA	R951	VRD-RA2BE680J*	X	68 1/8W	Carbon AA
R752	VRD-RA2BE392J*	X	3.9k 1/8W	Carbon AA	R952	VRS-CY1JF333J*	X	33k 1/16W	Metal Oxide AA
R753	VRS-CY1JF222J*	X	2.2k 1/16W	Metal Oxide AA	R954	VRS-CY1JF221J*	X	220 1/16W	Metal Oxide AA
R754	VRS-CY1JF222J*	X	2.2k 1/16W	Metal Oxide AA	R955	VRS-CY1JF221J*	X	220 1/16W	Metal Oxide AA
R755	VRS-CY1JF473J*	X	47k 1/16W	Metal Oxide AA	R957	VRS-CY1JF101J*	X	100 1/16W	Metal Oxide AA
R756	VRD-RA2BE152J*	X	1.5k 1/8W	Carbon AA	R958	VRS-CY1JF101J*	X	100 1/16W	Metal Oxide AA
△ R757	VRN-RL3DB4R7J+	X	4.7 2W	Metal Film AB	R959	VRS-CY1JF103J*	X	10k 1/16W	Metal Oxide AA
R759	VRS-CY1JF101J*	X	10k 1/16W	Metal Oxide AA	R960	VRS-CY1JF101J*	X	100 1/16W	Metal Oxide AA
R761	VRS-CY1JF332J*	X	3.3k 1/16W	Metal Oxide AA	R961	VRS-CY1JF102J*	X	1k 1/16W	Metal Oxide AA
R762	VRD-RA2BE103J*	X	10k 1/8W	Carbon AA	R962	VRS-CY1JF332F*	X	3.3k 1/16W	Metal Oxide AA
R764	VRD-RM2HD562J*	X	5.6k 1/2W	Carbon AA	R963	VRD-RA2BE101J*	X	100 1/8W	Carbon AA
R767	VRD-RM2HD151J*	X	150 1/2W	Carbon AA	R964	VRS-CY1JF152J*	X	1.5k 1/16W	Metal Oxide AA
R768	VRD-RA2BE473J*	X	47k 1/8W	Carbon AA	R967	VRS-CY1JF682J*	X	6.8k 1/16W	Metal Oxide AA
R770	VRS-CY1JF102J*	X	1k 1/16W	Metal Oxide AA	R968	VRS-CY1JF102J*	X	1k 1/16W	Metal Oxide AA
R771	VRS-CY1JF103J*	X	10k 1/16W	Metal Oxide AA	R969	VRS-CY1JF472F*	X	4.7k 1/16W	Metal Oxide AA
R772	VRS-CY1JF103J*	X	10k 1/16W	Metal Oxide AA	R970	VRD-RA2BE6R8J*	X	6.8 1/8W	Carbon AA
R773	VRD-RM2HD823J*	X	82k 1/2W	Carbon AA	R971	VRS-CY1JF101J*	X	100 1/16W	Metal Oxide AA
R774	VRD-RA2BE272J*	X	2.7k 1/8W	Carbon AA	R972	VRS-CY1JF101J*	X	100 1/16W	Metal Oxide AA
R775	VRS-CY1JF332J*	X	3.3k 1/16W	Metal Oxide AA	R973	VRS-CY1JF000J*	X	0 1/16W	Metal Oxide AA
R776	VRS-CY1JF332J*	X	3.3k 1/16W	Metal Oxide AA	R974	VRS-CY1JF103J*	X	10k 1/16W	Metal Oxide AA
R801	VRS-CY1JF333J*	X	33k 1/16W	Metal Oxide AA	R975	VRS-CY1JF333J*	X	33k 1/16W	Metal Oxide AA
R802	VRS-CY1JF471J*	X	470 1/16W	Metal Oxide AA	R982	VRS-CY1JF750J*	X	75 1/16W	Metal Oxide AA
R803	VRS-CY1JF000J*	X	0 1/16W	Metal Oxide AA	R983	VRS-CY1JF473J*	X	47k 1/16W	Metal Oxide AA
R805	VRS-CY1JF682J*	X	6.8k 1/16W	Metal Oxide AA	R984	VRS-CY1JF473J*	X	47k 1/16W	Metal Oxide AA
R806	VRS-CY1JF681J*	X	680 1/16W	Metal Oxide AA	△ R1420	VRN-RL3LBR27J+	X	2.7 3.0W	Metal Film AB
R807	VRS-CY1JF681J*	X	680 1/16W	Metal Oxide AA	R2001	VRS-CY1JF102J*	X	1k 1/16W	Metal Oxide AA
R808	VRS-CY1JF681J*	X	680 1/16W	Metal Oxide AA	R2004	VRS-CY1JF101J*	X	100 1/16W	Metal Oxide AA
R810	VRS-CY1JF472J*	X	4.7k 1/16W	Metal Oxide AA	R2008	VRS-CY1JF102J*	X	1k 1/16W	Metal Oxide AA
R903	VRS-CY1JF102J*	X	1k 1/16W	Metal Oxide AA	R2010	VRS-CY1JF102J*	X	1k 1/16W	Metal Oxide AA
R904	VRS-CY1JF683J*	X	68k 1/16W	Metal Oxide AA	R2013	VRS-CY1JF682J*	X	6.8k 1/16W	Metal Oxide AA
R905	VRS-CY1JF223J*	X	22k 1/16W	Metal Oxide AA	R2021	VRS-CY1JF334J*	X	330k 1/16W	Metal Oxide AA
R906	VRD-RA2BE332J*	X	3.3k 1/8W	Carbon AA	R2024	VRS-CY1JF472J*	X	4.7k 1/16W	Metal Oxide AA
R907	VRS-CY1JF152J*	X	1.5k 1/16W	Metal Oxide AA	R2025	VRS-CY1JF472J*	X	4.7k 1/16W	Metal Oxide AA
R908	VRS-CY1JF102J*	X	1k 1/16W	Metal Oxide AA	R2026	VRS-CY1JF472J*	X	4.7k 1/16W	Metal Oxide AA
R910	VRD-RA2BE102J*	X	1k 1/8W	Carbon AA	R2027	VRS-CY1JF102J*	X	1k 1/16W	Metal Oxide AA
R911	VRS-CY1JF683J*	X	68k 1/16W	Metal Oxide AA	R2028	VRD-RA2BE102J*	X	1k 1/8W	Carbon AA
R912	VRS-CY1JF223J*	X	22k 1/16W	Metal Oxide AA	R2031	VRS-CY1JF222J*	X	2.2k 1/16W	Metal Oxide AA
R913	VRS-CY1JF332J*	X	3.3k 1/16W	Metal Oxide AA	R2033	VRS-CY1JF334J*	X	330k 1/16W	Metal Oxide AA
R914	VRS-CY1JF152J*	X	1.5k 1/16W	Metal Oxide AA	R2040	VRS-CY1JF102J*	X	1k 1/16W	Metal Oxide AA
R915	VRS-CY1JF102J*	X	1k 1/16W	Metal Oxide AA	R2041	VRS-CY1JF333J*	X	33k 1/16W	Metal Oxide AA
R916	VRS-CY1JF683J*	X	68k 1/16W	Metal Oxide AA	R2042	VRS-CY1JF101J*	X	100 1/16W	Metal Oxide AA
R917	VRS-CY1JF332J*	X	3.3k 1/16W	Metal Oxide AA	R2043	VRS-CY1JF333J*	X	33k 1/16W	Metal Oxide AA
R918	VRS-CY1JF332J*	X	3.3k 1/16W	Metal Oxide AA	R2044	VRS-CY1JF153J*	X	15k 1/16W	Metal Oxide AA
R922	VRS-CY1JF102J*	X	1k 1/16W	Metal Oxide AA	R2046	VRS-CY1JF101J*	X	100 1/16W	Metal Oxide AA
R923	VRS-CY1JF102J*	X	1k 1/16W	Metal Oxide AA	R2047	VRS-CY1JF221J*	X	220 1/16W	Metal Oxide AA
R924	VRS-CY1JF750J*	X	75 1/16W	Metal Oxide AA	R2048	VRS-CY1JF562J*	X	5.6k 1/16W	Metal Oxide AA
R925	VRS-CY1JF750J*	X	75 1/16W	Metal Oxide AA	R2051	VRS-CY1JF102J*	X	1k 1/16W	Metal Oxide AA
					R2060	VRS-CY1JF221J*	X	220 1/16W	Metal Oxide AA
					R2061	VRS-CY1JF562J*	X	5.6k 1/16W	Metal Oxide AA
					R2062	VRS-CY1JF223J*	X	22k 1/16W	Metal Oxide AA
					R2063	VRS-CY1JF222J*	X	2.2k 1/16W	Metal Oxide AA

Ref. No.	Part No.	★	Description	Code
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PWB-A: DUNTKB567WEV7**MAIN UNIT (Continued)**

R2064	VRS-CY1JF332J*	X	3.3k 1/16W	Metal Oxide	AA
R2073	VRS-CY1JF000J*	X	0 1/16W	Metal Oxide	AA
R2084	VRS-CY1JF103J*	X	10k 1/16W	Metal Oxide	AA
R2086	VRS-CY1JF101J*	X	100 1/16W	Metal Oxide	AA
R2090	VRS-CY1JF101J*	X	100 1/16W	Metal Oxide	AA
R2092	VRS-CY1JF101J*	X	100 1/16W	Metal Oxide	AA
R2101	VRS-CY1JF101J*	X	100 1/16W	Metal Oxide	AA
R2102	VRS-CY1JF101J*	X	100 1/16W	Metal Oxide	AA
R2201	VRS-CY1JF222J*	X	2.2k 1/16W	Metal Oxide	AA
R2202	VRS-CY1JF103J*	X	10k 1/16W	Metal Oxide	AA
R2203	VRS-CY1JF473J*	X	47k 1/16W	Metal Oxide	AA
R2211	VRS-CY1JF222J*	X	2.2k 1/16W	Metal Oxide	AA
R2212	VRS-CY1JF682J*	X	6.8k 1/16W	Metal Oxide	AA
R2213	VRS-CY1JF333J*	X	33k 1/16W	Metal Oxide	AA
R2401	VRD-RA2BE101J*	X	100 1/8W	Carbon	AA
R2402	VRD-RA2BE101J*	X	100 1/8W	Carbon	AA
R2403	VRD-RA2BE101J*	X	100 1/8W	Carbon	AA
R2404	VRD-RA2BE101J*	X	100 1/8W	Carbon	AA
R2501	VRS-CY1JF183J*	X	18k 1/16W	Metal Oxide	AA
R2502	VRS-CY1JF183J*	X	18k 1/16W	Metal Oxide	AA
R2503	VRS-CY1JF103J*	X	10k 1/16W	Metal Oxide	AA
R2504	VRS-CY1JF103J*	X	10k 1/16W	Metal Oxide	AA
R2505	VRD-RA2BE822J*	X	8.2k 1/8W	Carbon	AA
R2506	VRD-RA2BE822J*	X	8.2k 1/8W	Carbon	AA
R2507	VRD-RA2BE183J*	X	18k 1/8W	Carbon	AA
R2508	VRD-RA2BE183J*	X	18k 1/8W	Carbon	AA
R2509	VRS-CY1JF000J*	X	0 1/16W	Metal Oxide	AA
R2601	VRD-RA2BE100J*	X	10 1/8W	Carbon	AA
R2603	VRS-CY1JF000J*	X	0 1/16W	Metal Oxide	AA
R2605	VRS-CY1JF000J*	X	0 1/16W	Metal Oxide	AA
R2606	VRS-CY1JF000J*	X	0 1/16W	Metal Oxide	AA
R3001	VRS-CY1JF221J*	X	220 1/16W	Metal Oxide	AA
R3002	VRS-CY1JF221J*	X	220 1/16W	Metal Oxide	AA
R3003	VRS-CY1JF105J*	X	1M 1/16W	Metal Oxide	AA
R3004	VRS-CY1JF104J*	X	100k 1/16W	Metal Oxide	AA
R3005	VRS-CY1JF623J*	X	62k 1/16W	Metal Oxide	AA
R3007	VRS-CY1JF332J*	X	3.3k 1/16W	Metal Oxide	AA
R3008	VRS-CY1JF302J*	X	3k 1/16W	Metal Oxide	AA
R3010	VRS-CY1JF392J*	X	3.9k 1/16W	Metal Oxide	AA
R3017	VRS-CY1JF102J*	X	1k 1/16W	Metal Oxide	AA
R3018	VRS-CY1JF102J*	X	1k 1/16W	Metal Oxide	AA
R3019	VRS-CY1JF101J*	X	100 1/16W	Metal Oxide	AA
R3020	VRS-CY1JF101J*	X	100 1/16W	Metal Oxide	AA
R3021	VRS-CY1JF101J*	X	100 1/16W	Metal Oxide	AA
R3023	VRS-CY1JF101J*	X	100 1/16W	Metal Oxide	AA
R3024	VRD-RA2BE102J*	X	1k 1/8W	Carbon	AA

SWITCHES

S2501	QSW-KA003WJZZ+	X	Switch, POWER	AB
S2502	QSW-KA003WJZZ+	X	Switch, MENU	AB
S2503	QSW-KA003WJZZ+	X	Switch, VOL.-DOWN	AB
S2504	QSW-KA003WJZZ+	X	Switch, VOL.-UP	AB
S2505	QSW-KA003WJZZ+	X	Switch, CH-DOWN	AB
S2506	QSW-KA003WJZZ+	X	Switch, CH-UP	AB

MISCELLANEOUS PARTS

△ ACC701	QACCD012WJPZ	X	AC Cord	AE
CF2040	RCRM-0003CEZZ+	X	Ceramic Vibrator	AC
FB601	RBLN-0047CEZZ*	X	Ferrite Bead	AB
FB706	RBLN-0037CEZZ*	X	Ferrite Bead	AA
FB2001	RBLN-0037CEZZ*	X	Ferrite Bead	AA
△ F701	QFS-B4023CEZZ	X	Fuse, 4A/125V	AB
FH701	QFSDH1013CEZZ+	X	Fuse Holder	AA
FH702	QFSDH1014CEZZ+	X	Fuse Holder	AA
J904	QJAKGA031WJZZ	X	Front AV In Jack	AC
J921	QSOCD0430CEZZ	X	S-Video terminal	AC
J1401	QTANJ1101SEZZ	X	AV In/Out Terminal	AF
P361	QPLGN0461CEZZA	X	Plug, 4pin(S1-4)	AB
P401	QPLGN0861CEZZA	X	Plug, 8pin(CJ)	AB
P605	QPLGN0160FJZZ	X	Plug, 5pin(K1-5)	AB
P621	QPLGN0761CEZZA	X	Plug, 7pin(N)	AB

Ref. No.	Part No.	★	Description	Code
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P651	QPLGN0361CEZZA	X	Plug, 3pin(TP651-3)	AB
P702	QPLGN0269GEZZ	X	Plug, 2pin(P1-2)	AB
P703	QPLGN0260CEZZ	X	Plug, 2pin(M1-2)	AB
P2401	QPLGN0661CEZZA	X	Plug, 6pin	AB
RMC2601	RRMCU0222CEZZ	X	Remote Receiver	AD
RY701	RRLYJ0081CEZZ	X	Relay	AD
TP701	QLUGP0102PEZZ	X	Lug	AA
RDA361	PRDAR0258PEFW	X	Heat Sink for IC361	AC
RDA501	PRDARA039WJFW	X	Heat Sink for IC501	AD
RDA601	PRDAR0150PEFW	X	Heat Sink for Q602	AD
RDA671	PRDARA057WJFW	X	Heat Sink for Q673	AC
RDA701	PRDAR0279PEFW	X	Heat Sink for Q701	AB
RDA750	PRDAR5072CEFW	X	Heat Sink for IC751	AB
RDA1403	PRDAR5072CEFW	X	Heat Sink for IC1403	AB

PWB-B: DUNTKA527WEV6**CRT UNIT****INTEGRATED CIRCUIT**

△ IC850	VHiTDA6103Q-1	X	TDA6103Q/N3	AG
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TRANSISTORS

Q850	VS2SA1266-Y-1+	X	2SA1266	AB
Q851	VS2SC3198-G-1+	X	2SC3198	AB
Q1504	VS2SC3198-G-1+	X	2SC3198	AB
Q1505	VS2SA1266-Y-1+	X	2SA1266	AB
Q1506	VS2SA1964E/-1	X	2SA1964E	AC
Q1507	VS2SC5248E/-1	X	2SC5248E	AC

DIODES

D853	RH-EX0647GEZZ*	X	Zener Diode, 15V	AB
D854	VHD1SS119/-1*	X	1SS119	AA
D855	VHD1SS119/-1*	X	1SS119	AA
D862	VHD1SS119/-1*	X	1SS119	AA
D1502	VHD1SS119/-1*	X	1SS119	AA
D1503	VHD1SS119/-1*	X	1SS119	AA
D1506	RH-DX0487CEZZ*	X	Diode	AB
D1507	RH-DX0487CEZZ*	X	Diode	AB
D1510	VHD1SS119/-1*	X	1SS119	AA

CAPACITORS

C850	VCFYSB2EB823J	X	0.082 250V	AB
C851	RC-KZ018JCEZZ	X	0.01 AC250V Ceramic	AB
C852	VCEA0A1CW107M+X	100	16V Electrolytic	AA
C853	VCFYFA1HA224J+	X	0.22 50V Mylar	AB
C854	VCEA0A1CW227M+X	220	16V Electrolytic	AB
C855	VCEA0A2EW106M+X	10	250V Electrolytic	AB
C856	VCEA0A1HW226M+X	22	50V Electrolytic	AA
C1501	VCEA0A1CW476M+X	47	16V Electrolytic	AA
C1506	VCKYPA1HF103Z+	X	0.01 50V Ceramic	AA
C1508	VCKYPA2HB472K+	X	4700p 500V Ceramic	AB
C1509	VCKYPA1HB472K+	X	4700p 50V Ceramic	AA
C1510	VCKYPA1HF103Z+	X	0.01 50V Ceramic	AA
C1511	VCKYPA1HF103Z+	X	0.01 50V Ceramic	AA
C1515	VCEA0A1HW476M+X	47	50V Electrolytic	AB
C1516	VCEA0A1HW476M+X	47	50V Electrolytic	AB
C1517	VCEA0A2AW106M+X	10	100V Electrolytic	AB
C1518	VCCSPA2HL560K+	X	56p 500V Ceramic	AB
C1519	VCEA0A2CW106M+X	10	160V Electrolytic	AB

RESISTORS

△ R850	VRS-SV2HC152J	X	1.5k 1/2W	Metal Oxide	AA
△ R851	VRS-SV2HC152J	X	1.5k 1/2W	Metal Oxide	AA
△ R852	VRS-SV2HC152J	X	1.5k 1/2W	Metal Oxide	AA
△ R853	VRS-SV2HC272J	X	2.7k 1/2W	Metal Oxide	AA
△ R854	VRS-SV2HC272J	X	2.7k 1/2W	Metal Oxide	AA
△ R855	VRS-SV2HC272J	X	2.7k 1/2W	Metal Oxide	AA
R856	VRD-RM2HD104J*	X	100k 1/2W	Carbon	AA
R857	VRD-RM2HD104J*	X	100k 1/2W	Carbon	AA
R858	VRD-RM2HD104J*	X	100k 1/2W	Carbon	AA
R861	VRD-RM2HD104J*	X	100k 1/2W	Carbon	AA
R862	VRC-MA2HG152K*	X	1.5k 1/2W	Solid	AB

Ref. No.	Part No.	★	Description	Code
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PWB-B: DUNTKA527WEV6

CRT UNIT (Continued)

R863	VRC-MA2HG152K*	X	1.5k 1/2W	Solid	AB
R864	VRC-MA2HG152K*	X	1.5k 1/2W	Solid	AB
△ R867	VRS-SV2HC392J	X	3.9k 1/2W	Metal Oxide	AA
△ R868	VRS-SV2HC682J	X	6.8k 1/2W	Metal Oxide	AA
R869	VRD-RA2BE103J*	X	10k 1/8W	Carbon	AA
R870	VRD-RA2BE223J*	X	22k 1/8W	Carbon	AA
R871	VRD-RA2BE472J*	X	4.7k 1/8W	Carbon	AA
R872	VRD-RA2EE680J*	X	68 1/4W	Carbon	AA
R873	VRD-RM2HD224J*	X	220k 1/2W	Carbon	AA
R874	VRD-RM2HD104J*	X	100k 1/2W	Carbon	AA
R875	VRD-RM2HD104J*	X	100k 1/2W	Carbon	AA
R876	VRD-RM2HD104J*	X	100k 1/2W	Carbon	AA
R877	VRD-RA2BE103J*	X	10k 1/8W	Carbon	AA
△ R878	VRS-SV2HC120J	X	12 1/2W	Metal Oxide	AA
R1511	VRD-RA2BE101J*	X	100 1/8W	Carbon	AA
△ R1513	VRD-VV3DB51J*	X	560 2W	Metal Oxide	AB
R1514	VRD-RA2BE100J*	X	10 1/8W	Carbon	AA
R1515	VRD-RA2BE820J*	X	82 1/8W	Carbon	AA
R1516	VRD-RA2BE820J*	X	82 1/8W	Carbon	AA
R1517	VRD-RA2BE122J*	X	1.2k 1/8W	Carbon	AA
R1518	VRD-RA2BE683J*	X	68k 1/8W	Carbon	AA
R1519	VRD-RA2BE123J*	X	12k 1/8W	Carbon	AA
R1520	VRD-RA2BE683J*	X	68k 1/8W	Carbon	AA
R1521	VRD-RA2BE122J*	X	1.2k 1/8W	Carbon	AA
R1525	VRD-RA2EE560J*	X	56 1/4W	Carbon	AA
R1526	VRD-RA2EE560J*	X	56 1/4W	Carbon	AA
R1527	VRD-RM2HD1R5J*	X	1.5 1/2W	Carbon	AA
R1528	VRD-RM2HD1R5J*	X	1.5 1/2W	Carbon	AA
△ R1529	VRS-VV3DB221J	X	220 2W	Metal Oxide	AB
R1530	VRD-RA2BE122J*	X	1.2k 1/8W	Carbon	AA

MISCELLANEOUS PARTS

FB1501	RBLN-0020CEZZ+	X	Ferrite Bead	AB
P854	QPLGN0741CEZZ	X	Plug, 7pin(N)	AB
P860	QPLGN0841CEZZ	X	Plug, 8pin(CJ)	AB
△ P861	QPLGN0241CEZZ	X	Plug, 2pin(PU1-2)	AA
SC850	QSOCV1011CEZZ	X	CRT Socket	AC
RDA850	PRDAR0248PEFW	X	Heat Sink for IC850	AB
RDA1506	PRDAR5072CEFW	X	Heat Sink for Q1506	AB
RDA1507	PRDAR5072CEFW	X	Heat Sink for Q1507	AB

PWB-C: DUNTKA573WEV0

3-LINE Y/C UNIT

INTEGRATED CIRCUITS

IC1401	VHITC90A53F-1*	X	TC90A53F	AP
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TRANSISTORS

Q1403	VS2SB709AR/-1*	X	2SB709AR	AA
Q1406	VS2SB709AR/-1*	X	2SB709AR	AA
Q1408	VS2SB709AR/-1*	X	2SB709AR	AA
Q1401	VS2SD601AR/-1*	X	2SD601AR	AA
Q1402	VS2SD601AR/-1*	X	2SD601AR	AA
Q1404	VS2SD601AR/-1*	X	2SD601AR	AA
Q1407	VS2SD601AR/-1*	X	2SD601AR	AA

COILS

L1401	VP-XF100K0000*	X	Peaking 10μH	AA
L1402	VP-XF100K0000*	X	Peaking 10μH	AA
L1406	VP-XF220K0000*	X	Peaking 22μH	AA
L1407	VP-XF220K0000*	X	Peaking 22μH	AA
L1408	VP-XF100K0000*	X	Peaking 10μH	AA
L1410	VP-XF100K0000*	X	Peaking 10μH	AA
L1414	VP-XF330K0000*	X	Peaking 33μH	AA
L1417	VP-XF220K0000*	X	Peaking 22μH	AA

CAPACITORS

C1412	VCEA0A1HW106M+X	10	50V	Electrolytic	AA
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Ref. No.	Part No.	★	Description	Code
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C1413	VCKYCY1HF103Z*	X	0.01 50V	Ceramic	AA
C1414	VCCCCY1HH3R0C*X	3.0p	50V	Ceramic	AA
C1415	VCE9GA1CW106M+X	10	16V	Elect.(N,P)	AB
C1416	VCEA0A1CW477M+X	470	16V	Electrolytic	AB
C1417	VCKYCY1CF104Z*	X	0.1 16V	Ceramic	AA
C1420	VCCCCY1HH270J*	X	27p 50V	Ceramic	AA
C1421	VCCCCY1HH120J*	X	12p 50V	Ceramic	AA
C1422	VCCCCY1HH120J*	X	12p 50V	Ceramic	AA
C1423	VCCCCY1HH3R0C*X	3.0p	50V	Ceramic	AA
C1424	VCCCCY1HH270J*	X	27p 50V	Ceramic	AA
C1425	VCCCCY1HH100D*X	X	10p 50V	Ceramic	AA
C1428	VCKYCY1HF103Z*	X	0.01 50V	Ceramic	AA
C1435	VCKYCY1HF103Z*	X	0.01 50V	Ceramic	AA
C1436	VCKYCY1CF104Z*	X	0.1 16V	Ceramic	AA
C1439	VCE9GA1CW106M+X	10	16V	Elect.(N,P)	AB
C1440	VCEA0A1HW106M+X	10	50V	Electrolytic	AA
C1441	VCKYCY1HF103Z*	X	0.01 50V	Ceramic	AA
C1442	VCFYFA1HA474J+	X	0.47 50V	Mylar	AB
C1443	VCKYCY1HF103Z*	X	0.01 50V	Ceramic	AA
C1444	VCKYCY1HB472K*	X	4700p 50V	Ceramic	AA
C1445	VCKYCY1HF103Z*	X	0.01 50V	Ceramic	AA
C1446	VCCCCY1HH181J*	X	180p 50V	Ceramic	AA
C1447	VCKYCY1HF103Z*	X	0.01 50V	Ceramic	AA
C1448	VCKYCY1CF104Z*	X	0.1 16V	Ceramic	AA
C1449	VCKYCY1CF104Z*	X	0.1 16V	Ceramic	AA
C1451	VCEA0A1CW107M+X	100	16V	Electrolytic	AA
C1452	VCKYCY1CF104Z*	X	0.1 16V	Ceramic	AA
C1453	VCKYCY1HF103Z*	X	0.01 50V	Ceramic	AA
C1454	VCKYCY1HF103Z*	X	0.01 50V	Ceramic	AA
C1455	VCKYCY1HF103Z*	X	0.01 50V	Ceramic	AA
C1456	VCKYCY1CF104Z*	X	0.1 16V	Ceramic	AA
C1457	VCEA0A1HW106M+X	10	50V	Electrolytic	AA
C1458	VCEA0A1HW106M+X	10	50V	Electrolytic	AA
C1460	VCKYCY1HF103Z*	X	0.01 50V	Ceramic	AA
C1470	VCCCCY1HH270J*	X	27p 50V	Ceramic	AA
C1474	VCCCCY1HH150J*	X	15p 50V	Ceramic	AA

RESISTORS

R1402	VRS-CY1JF000J*	X	0 1/16W	Metal Oxide	AA
R1405	VRS-CY1JF361J*	X	360 1/16W	Metal Oxide	AA
R1406	VRS-CY1JF102J*	X	1k 1/16W	Metal Oxide	AA
R1407	VRS-CY1JF102J*	X	1k 1/16W	Metal Oxide	AA
R1410	VRS-CY1JF473J*	X	47k 1/16W	Metal Oxide	AA
R1411	VRS-CY1JF223J*	X	22k 1/16W	Metal Oxide	AA
R1412	VRS-CY1JF102J*	X	1k 1/16W	Metal Oxide	AA
R1413	VRS-CY1JF122J*	X	1.2k 1/16W	Metal Oxide	AA
R1414	VRS-CY1JF331J*	X	330 1/16W	Metal Oxide	AA
R1415	VRS-CY1JF391J*	X	390 1/16W	Metal Oxide	AA
R1416	VRS-CY1JF102J*	X	1k 1/16W	Metal Oxide	AA
R1421	VRS-CY1JF471F*	X	470 1/16W	Metal Oxide	AA
R1423	VRS-CY1JF152F*	X	1.5k 1/16W	Metal Oxide	AA
R1426	VRS-CY1JF000J*	X	0 1/16W	Metal Oxide	AA
R1428	VRS-CY1JF332J*	X	3.3k 1/16W	Metal Oxide	AA
R1429	VRS-CY1JF222J*	X	2.2k 1/16W	Metal Oxide	AA
R1430	VRS-CY1JF473J*	X	47k 1/16W	Metal Oxide	AA
R1431	VRS-CY1JF223J*	X	22k 1/16W	Metal Oxide	AA
R1432	VRS-CY1JF102J*	X	1k 1/16W	Metal Oxide	AA
R1433	VRS-CY1JF122J*	X	1.2k 1/16W	Metal Oxide	AA
R1434	VRS-CY1JF331J*	X	330 1/16W	Metal Oxide	AA
R1435	VRS-CY1JF102J*	X	1k 1/16W	Metal Oxide	AA
R1436	VRS-CY1JF331J*	X	330 1/16W	Metal Oxide	AA
R1438	VRS-CY1JF222J*	X	2.2k 1/16W	Metal Oxide	AA
R1456	VRS-CY1JF564J*	X	560k 1/16W	Metal Oxide	AA
R1457	VRS-CY1JF103J*	X	10k 1/16W	Metal Oxide	AA
R1458	VRD-RA2BE103J*	X	10k 1/8W	Carbon	AA
R1459	VRS-CY1JF821J*	X	820 1/16W	Metal Oxide	AA
R1466	VRS-CY1JF103J*	X	10k 1/16W	Metal Oxide	AA
R1467	VRS-CY1JF682J*	X	6.8k 1/16W	Metal Oxide	AA
R1473	VRS-CY1JF102J*	X	1k 1/16W	Metal Oxide	AA
R1475	VRS-CY1JF102J*	X	1k 1/16W	Metal Oxide	AA

MISCELLANEOUS PARTS

FB1401	RBLN-0061TAZZ*	X	Ferrite Bead	AA
P1401	QPLGZ0810CEZZ	X	Plug, 8pin	AB

Ref. No.	Part No.	★	Description	Code
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PWB-S: DUNTKB571WEV1 AUDIO UNIT

INTEGRATED CIRCUITS

IC3501	VHiNJW1140G-1Y	X	NJW1140GK1	AM
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DIODES

D3501	RH-EX0619GEZZ*	X	Zener Diode, 33V	AB
D3502	RH-EX0619GEZZ*	X	Zener Diode, 33V	AB

CAPACITORS

C3501	VCQYTA1HM104J+	X	0.1 50V Mylar	AB
C3502	VCFYFA1HA334J+	X	0.33 50V	AB
C3503	VCKYCY1HB822K*	X	8200p 50V Ceramic	AA
C3509	VCEA0A1HW105M+X	1	50V Electrolytic	AA
C3510	VCEA0A1HW105M+X	1	50V Electrolytic	AA
C3511	VCEA0A1HW105M+X	1	50V Electrolytic	AA
C3512	VCEA0A1HW105M+X	1	50V Electrolytic	AA
C3513	VCEA0A1HW105M+X	1	50V Electrolytic	AA
C3514	VCEA0A1CW476M+X	47	16V Electrolytic	AA
C3515	VCKYCY1HB103K*	X	0.01 50V Ceramic	AA
C3531	VCQYTA1HM104J+	X	0.1 50V Mylar	AB
C3533	VCKYCY1EB223K*	X	0.022 25V Ceramic	AA
C3539	VCFYFA1HA334J+	X	0.33 50V Mylar	AB
C3540	VCEA0A1HW105M+X	1	50V Electrolytic	AA
C3541	VCEA0A1HW105M+X	1	50V Electrolytic	AA
C3694	VCE9GA1HW475M+X	4.7	50V Elect.(N,P)	AB
C3695	VCE9GA1HW475M+X	4.7	50V Elect.(N,P)	AB

RESISTORS

R3501	VRS-CY1JF472J*	X	4.7k 1/16W Metal Oxide	AA
R3502	VRS-CY1JF221J*	X	220 1/16W Metal Oxide	AA
R3531	VRS-CY1JF221J*	X	220 1/16W Metal Oxide	AA
R3532	VRS-CY1JF221J*	X	220 1/16W Metal Oxide	AA
R3533	VRS-CY1JF221J*	X	220 1/16W Metal Oxide	AA

MISCELLANEOUS PARTS

P3004	QPLGN0242CEZZ	X	Plug, 2pin(TP3001-2)	AA
P3006	QPLGZ0610CEZZ	X	Plug, 6pin	AB
P3007	QPLGZ0610CEZZ	X	Plug, 6pin	AB

MISCELLANEOUS PARTS

SP1	VSP1206PB708A	X	Speaker (L)	AH
SP2	VSP1206PB708A	X	Speaker (R)	AH
	QCNW-B020WJZZ	X	Connecting Cord	AC
	QCNW-B021WJZZ	X	Connecting Cord	AC
	QCNW-B022WJZZ	X	Connecting Cord	AC
	QCNW-0190MEZZ	X	Connecting Cord	AC

SUPPLIED ACCESSORIES

RRMCGA108WJSA	X	Infrared R-C Unit	AT
TINS-A720WJZZ	X	Operation Manual (29FL91M) (Including Warranty)	AE

Ref. No.	Part No.	★	Description	Code
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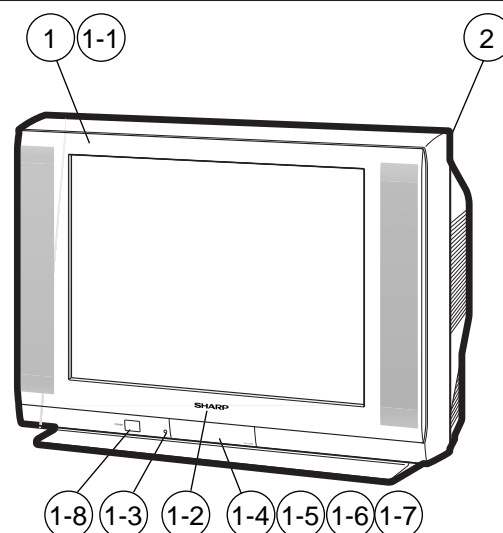
PACKING PARTS (NOT REPLACEMENT ITEM)

SPAKCA797WJZZ	-	Packing Case	—
SPAKP0109GJZZ	-	Wrapping Paper	—
SPAKXA180WJZZ	-	Buffer Material	—
SSAKA0101GJZZ	-	Polyethylene Bag	—

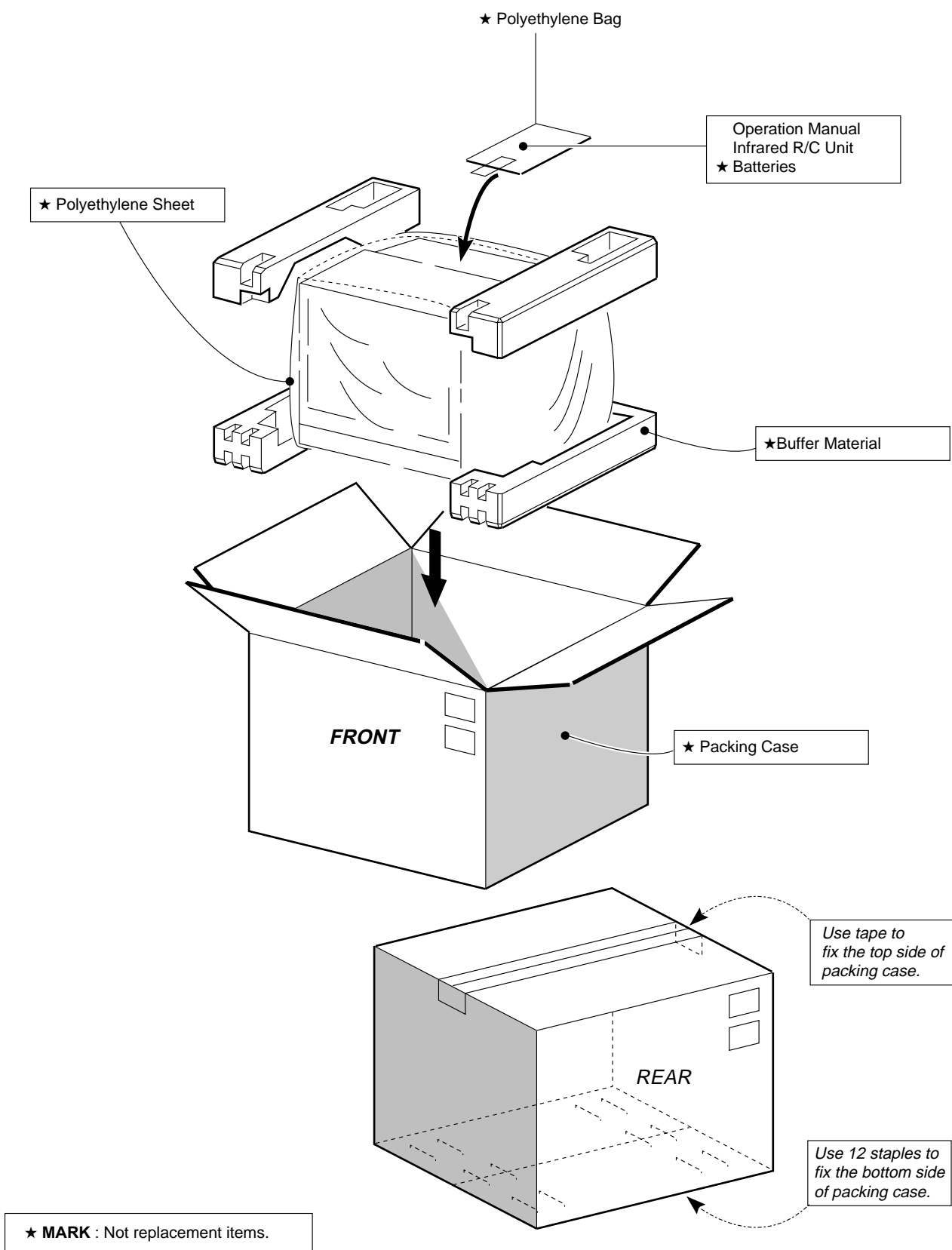
CABINET PARTS

1	CCABAA243WEH0	X	Front Cabinet Ass'y (29FL91M)	BE
1-1	—	-	Front Cabinet	—
1-2	HBDBG3141CESA	X	SHARP Badge	AD
1-3	GCOVAA282WJKA	X	LED/RC Cover	AC
1-4	GCOVHA017WJKZ	X	Cover	AD
1-5	GDORFA027WJKA	X	Door	AF
1-6	HINDPA278WJSA	X	Indication Plate	AC
1-7	MSPRPA012WJFW	X	Spring	AB
1-8	JBTN-A106WJKA	X	Power Button	AE
2	GCABBA153WJKA	X	Rear Cabinet	AZ

CABINET PARTS LOCATION



PACKING OF THE SET





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May. 2003
Modify : SEMEX

Design and Production Information
Design base : JAPAN
Production : SEMEX

J B

SHARP ELECTRONICA MEXICO S. A. DE C. V.
Quality & Reliability Control Center
Bld. SHARP No. 3510 Parque Industrial Rosarito
Playas de Rosarito, México B. C. 22710