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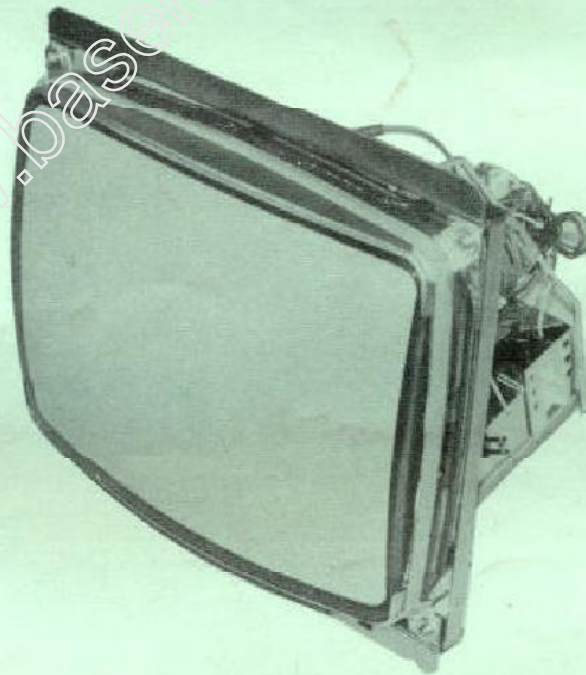
SEGA[®]

DISPLAY MANUAL

200 - 5044

COLOR DISPLAY ASSY

20 TYPE



SEGA ENTERPRISES, LTD.

NOTE

- This chapter provides you with the necessary information for ordering replacement parts for your 20" Color Monitor.
- When ordering parts from your distributor, give the part number, part name, applicable figure number of this manual (420 - 5247) , and serial number of your game.
- This will help to avoid confusion and mistakes in your order.
- We hope the results will be less downtime and more profit from your game.

(Sega part NO. of Monitor)

200 - 5044 Sssy Color Display , 20 Type , 100V

(NA MC - 2030 - S)

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SPECIFICATIONS

- 1.1 Power Input : AC100V \pm 10%
- 1.2 Frequency : 50/60 Hz
- 1.3 Power Consumption : 60W

(If you service this color monitor on a test bench, you must isolate the monitor from AC line voltage! An isolation transformer is mandatory for your own safety. This monitor does not contain an isolation transformer on its chassis. It is mounted instead on the game power supply. It may appear like a regular power transformer, but is really also an isolation transformer.)

1.4 Monitor Input Signals

o Vertical Synchronization Signal

Frequency : 54 Hz - 60 Hz

Pulse Length : 190 μ S (=3H) - 500 μ S (=8H)

o Horizontal Synchronization Signal

Frequency : 15.75 KHz

Pulse Length : 3 μ S - 7 μ S

o Blue Video Signal

o Green Video Signal

o Red Video Signal

+Polarity	{ White Level	Less than 5 VDC
	{ Black Level	More than 0 VDC
		2.5Vp-p - 5Vp-p
-Polarity	{ White Level	More than 0 VDC
	{ Black Level	Less than 5 VDC
		3Vp-p - 5Vp-p

1.5 Temperature and Humidity

o Environmental Temp. : 0°C - 40°C

o Environmental Humidity : 70% Max.

1.6 Type of CRT

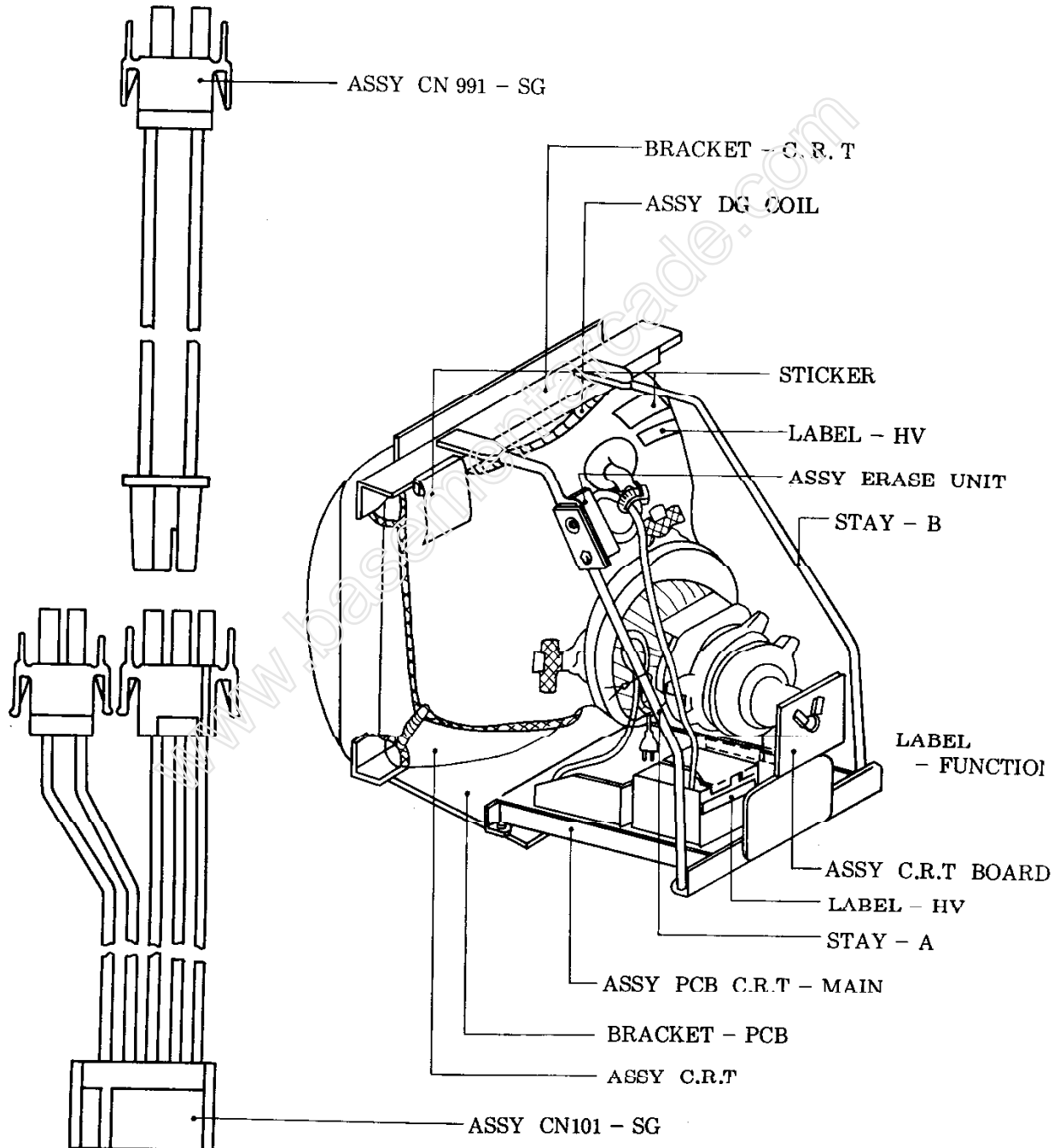
20" 90° color

510WUB22

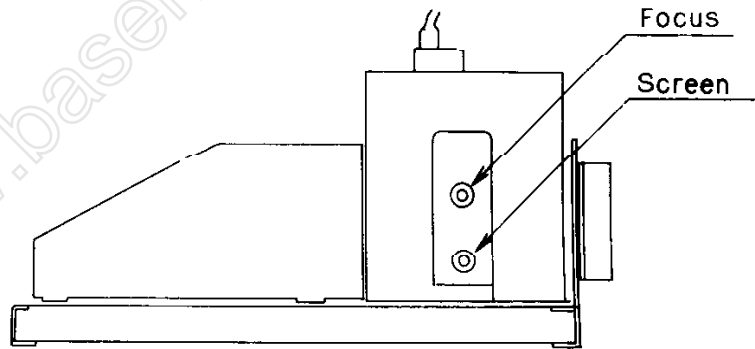
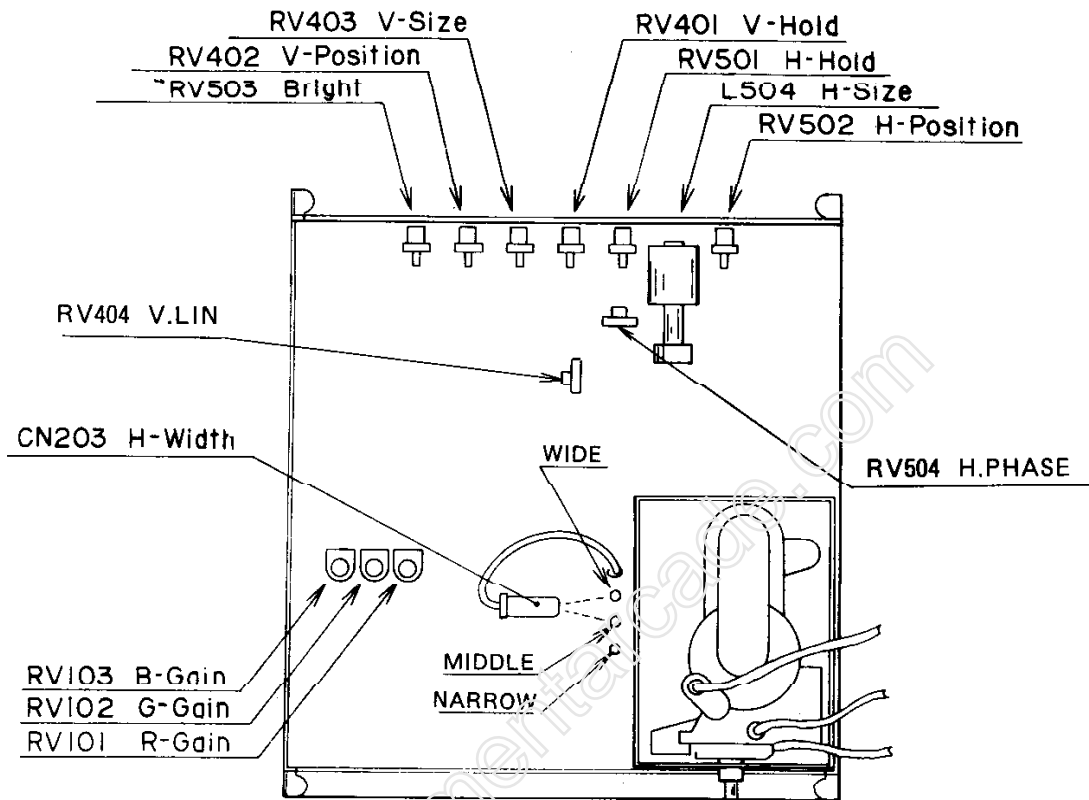
1.7 Indication Method

TV Scanning Method

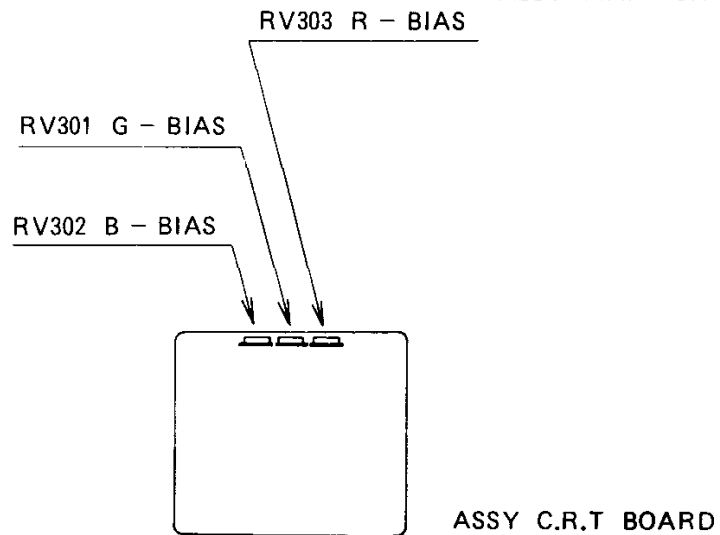
2. OVERVIEW OF MONITOR



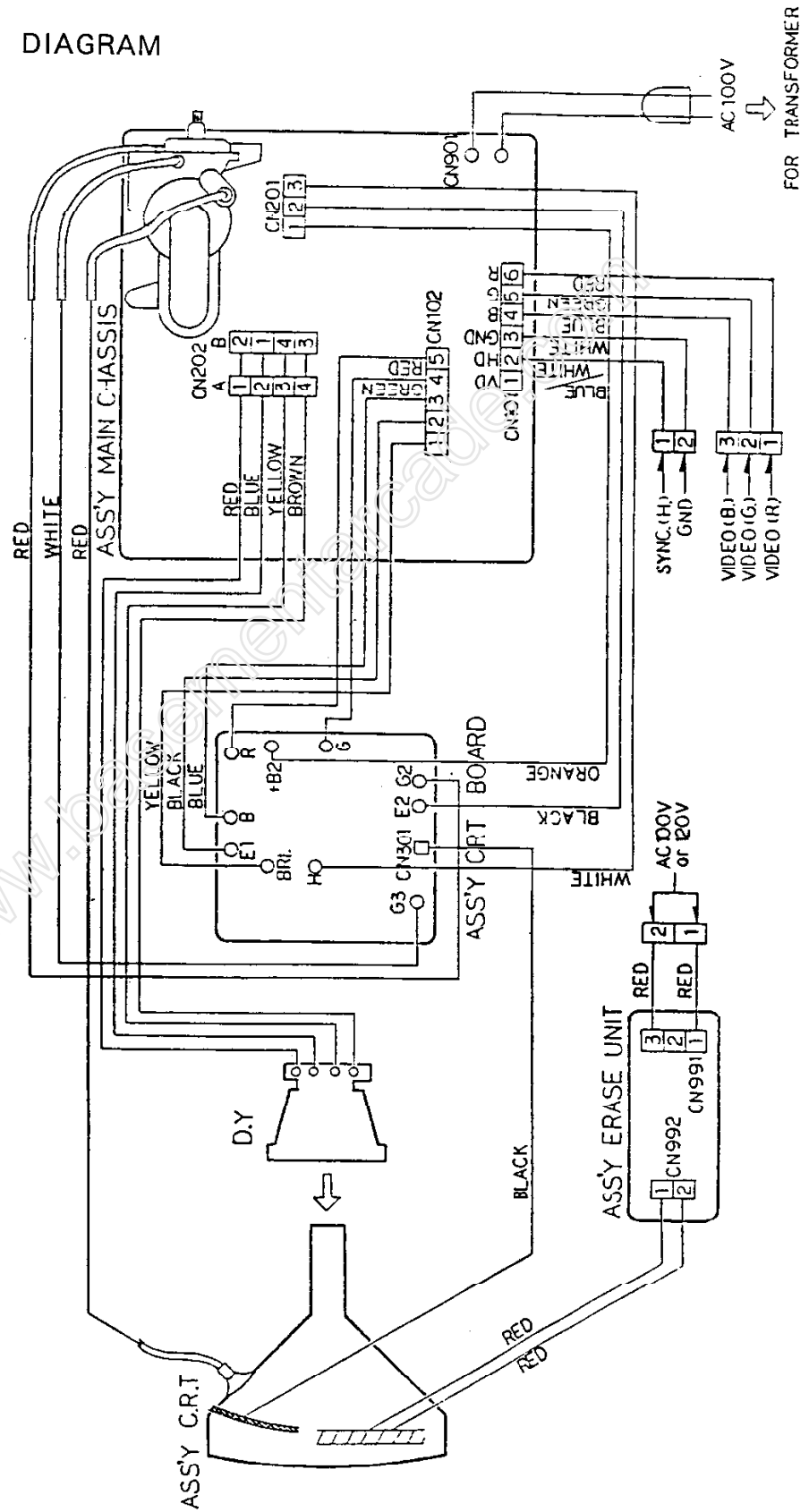
3. OUTLINE OF ASSY PCB UNITS



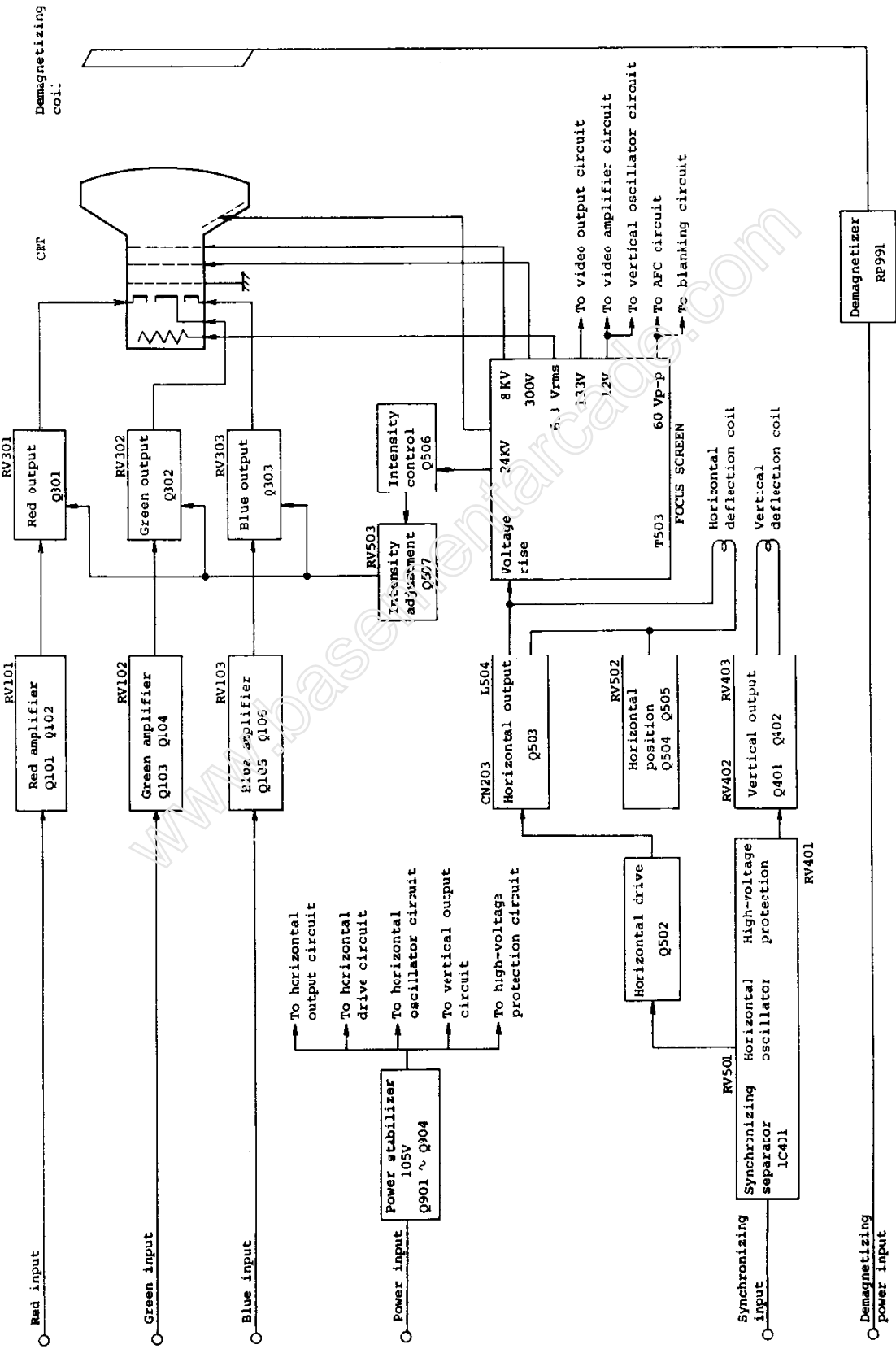
ASSY MAIN CHASSIS



4. BLOCK DIAGRAM



5. SYSTEM DIAGRAM



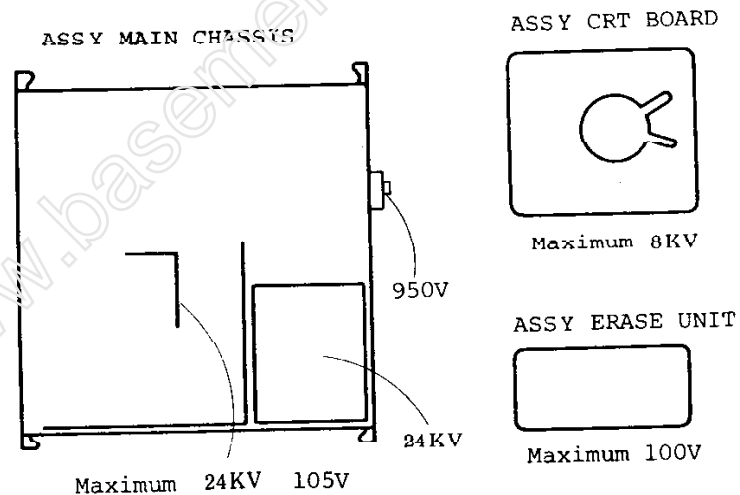
6. CAUTION

6.1 Shock

Be careful not to cause shocks when carrying the monitor because they may cause a defect. The packing for transportation tolerates a drop from a height of 500 mm; if dropped through a greater distance, the monitor may be damaged.

6.2 High Voltage

Inside the color monitor, a high voltage of over 20 KV is generated at some places. Be careful not to touch these parts. When you must make contact with these parts, first disconnect the plug from the receptacle.

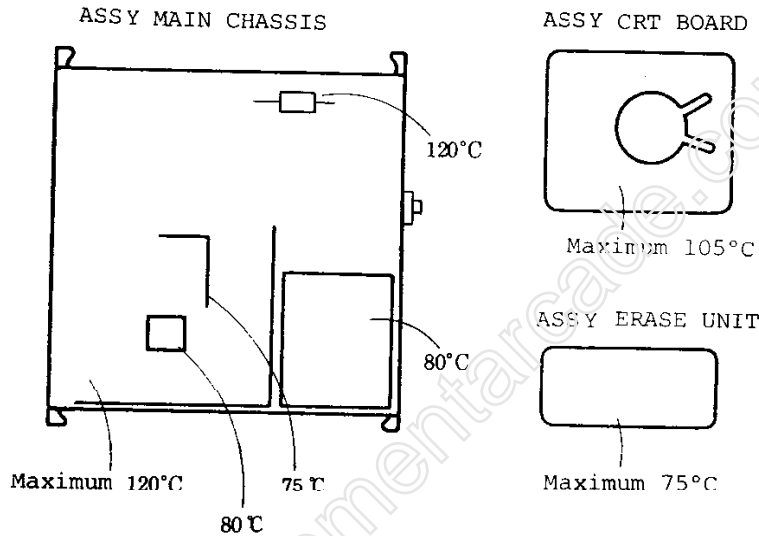


6.3 Adjusting Knobs

The adjusting knobs should not be manipulated by laymen; adjustment must be done by an expert only. Over a long period, the setting may need adjustment again. For the details of adjustment, refer to the Adjustment Guide.

6.4 High-Temperature Parts

Be careful not to leave stray bits of solder or paper inside the color monitor; they may cause malfunction, electrocution, or fire. Take special precautions to prevent tampering by customers.



6.5 Handling of Malfunctions

When an abnormal noise, smoke, or odor occurs, turn off the power switch, and at the same time disconnect the plug from the receptacle. If the monitor is used in such a condition, it may cause unexpected trouble.

6.6 Magnetism

Magnetism causes color disturbance; keep the monitor away from magnets and speakers which will cause undesired coloring of the screen or distortion, but no serious trouble.

6.7 Static Electricity

When you touch the surface of the CRT, you may feel a slight charge of static electricity, which is harmless to humans.

6.8 Wire Binding

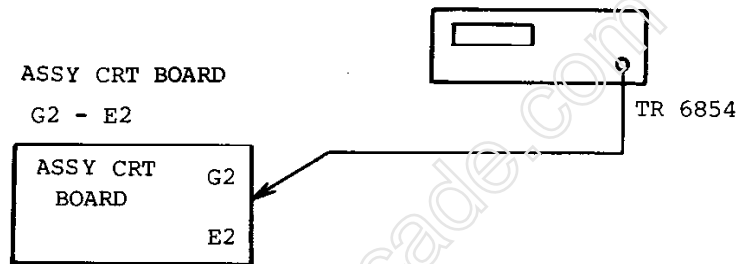
The wires (2) from the flyback transformer (T503) to the CRT board must be bound separate from other wires because of the high voltage they carry.

7. SCREEN VOLTAGE

7.1 Instrument

Digital voltmeter: YHP TR 6854

7.2 Connection Diagram



7.3 Adjustment Method

- o Connect the digital voltmeter between G2 and E2 on the assembly CRT board, and adjust the screen control to obtain 210V.

7.4 Specification

- o $210V \pm 10V$

7.5 Adjustment Conditions

- o Power voltage : Rated voltage $\pm 2\%$
- o RV503 : Maximum (Fully turn clockwise)

(When a separate Adjustment Guide is provided, it has priority over this.)

8. CONTROL ADJUSTMENT

8.1 Adjustment Conditions

- o Power voltage : Rated Voltage \pm 2%
- o RV101-3, RV301-3 : Center approximately (white raster)
- o RV503 : 1K = 600 μ A

8.2 RV401

- o Vertical hold control
- o Turn in both directions and set at the mid point of rise (approximate center of the lock-in range of synchronization)
- o Step-out should not occur at power on/off.

8.3 RV501

- o Horizontal hold control
- o Turn in both directions and set at the mid point of rise (approximate center of lock-in range of synchronization)
- o Step-out should not occur at power on/off.

8.4 RV402

- o Vertical centering control
- o Turn in both directions and set the video information size to the center of the CRT screen.
(When a separate Adjustment Guide is provided, it has priority over this.)

8.5 RV502

- o Horizontal centering control
- o Turn in both directions and set the video information size to the center of CRT screen.
(When a separate Adjustment Guide is provided, it has priority over this.)

8.6 RV403

- o Vertical size control
- o Set scan to 104% (overscan 4%).
(When a separate Adjustment Guide is provided, it has priority over this.)

8.7 Focus

- o Focusing control
- o Adjust as required.

8.8 L504

- o Horizontal size control coil
- o Scan 104% (overscan 4%)
(When a separate Adjustment Guide is provided, it has priority over this.)

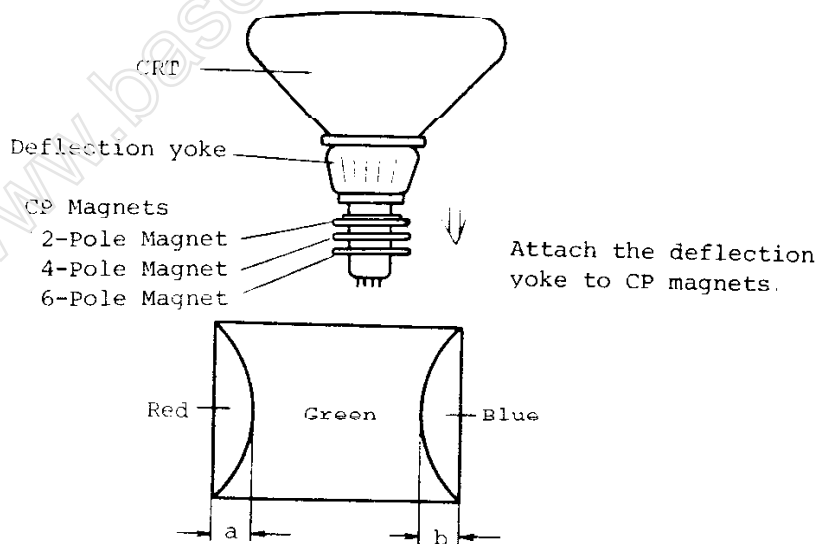
9. ITC ADJUSTMENT

9.1 Adjustment Conditions

- o Power voltage : Rated voltage $\pm 2\%$
- o RV503 : Center
- o RV101 - 3 : Center
- o Other controls : Adjusted
- o Demagnetize the CRT brackets, shadow mask, and other metal parts with the demagnetizing coil (HOZAN HC-21).

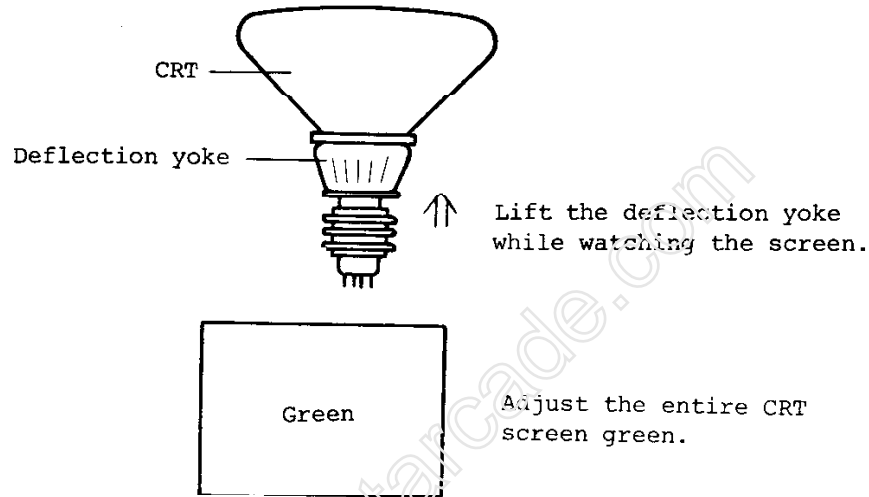
9.2 Purity Adjustment

- o Attach the deflection yoke to the CP magnet and adjust RV301 to minimum (fully rotate counterclockwise)
- RV302 to maximum (fully rotate clockwise)
- RV303 to minimum (fully rotate counterclockwise)
- to obtain a green screen.

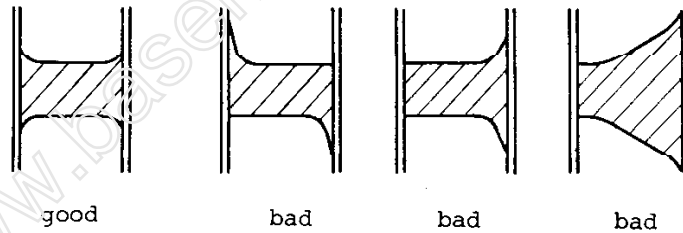


- o Adjust the 2-pole magnet to obtain the same intensity of red and blue ($a=b$).

- o Gradually lift the deflection yoke until the color shading at the four corners of the screen disappears, then temporarily fix it.



- o Obtain the optimum beam landing state by observing through a microscope.

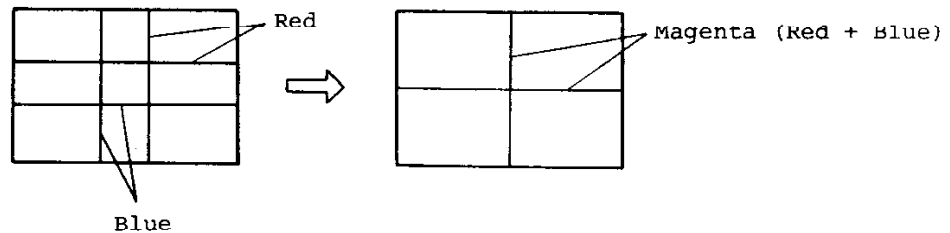


- o Check that the above conditions are satisfied, and then fix in that condition.

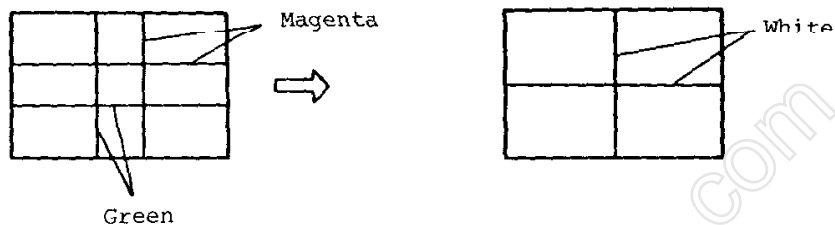
9.3 Static Convergence Adjustment

- o Select the crosshatch pattern
- o Obtain a magenta screen by the following setting:

RV301: Maximum (fully turn clockwise)
 RV302: Minimum (fully turn counterclockwise)
 RV303: Maximum (fully turn clockwise)



- o Adjust the 4-pole magnet to match the red and blue levels.
- o Turn RV302 to maximum (fully turn clockwise) to emit green.



- o Adjust the 6-pole magnet to match the green and magenta (red + blue) levels.

9.4 Dynamic Convergence Adjustment

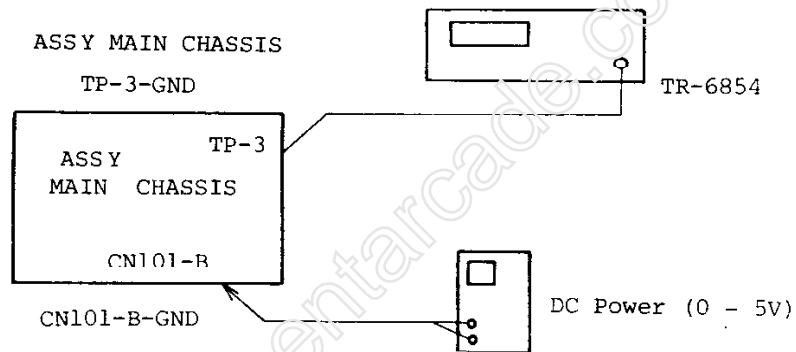
- o Check that the static convergence is adjusted.
- o Oscillate and adjust the deflection yoke so the cross hatches at the four corners of the CRT cross.
- o Fix the deflection yoke with three wedges.
- o Fix the wedges with silicon adhesives, dual-sided adhesive tape, and glass-cloth tape.

10. VIDEO BIAS ADJUSTMENT

10.1 Jig and Instrument

- o Digital voltmeter : YHP TR 6854
- o DC power : Output 0 - 5V

10.2 Connection Diagram



10.3 Adjustment Method

With RV103 and RV104, adjust the voltage at TP3 to 6V when a black-level signal is input, and 10V when a white-level signal is input.

10.4 Adjustment Conditions

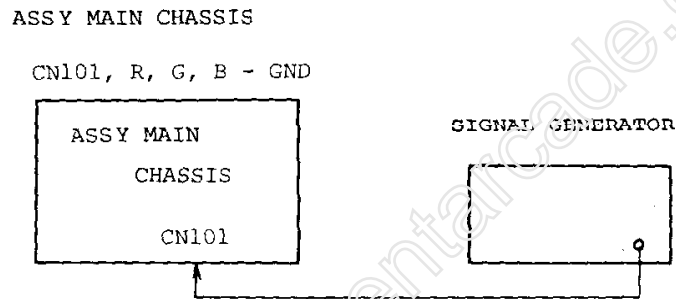
- o Power voltage : Rated voltage \pm 2%
- o RV503 : Center setting

11. WHITE BALANCE ADJUSTMENT

11.1 Jig and Instrument

- o Use the staircase signal with the same white or black level as the signal used.

11.2 Connection Diagram

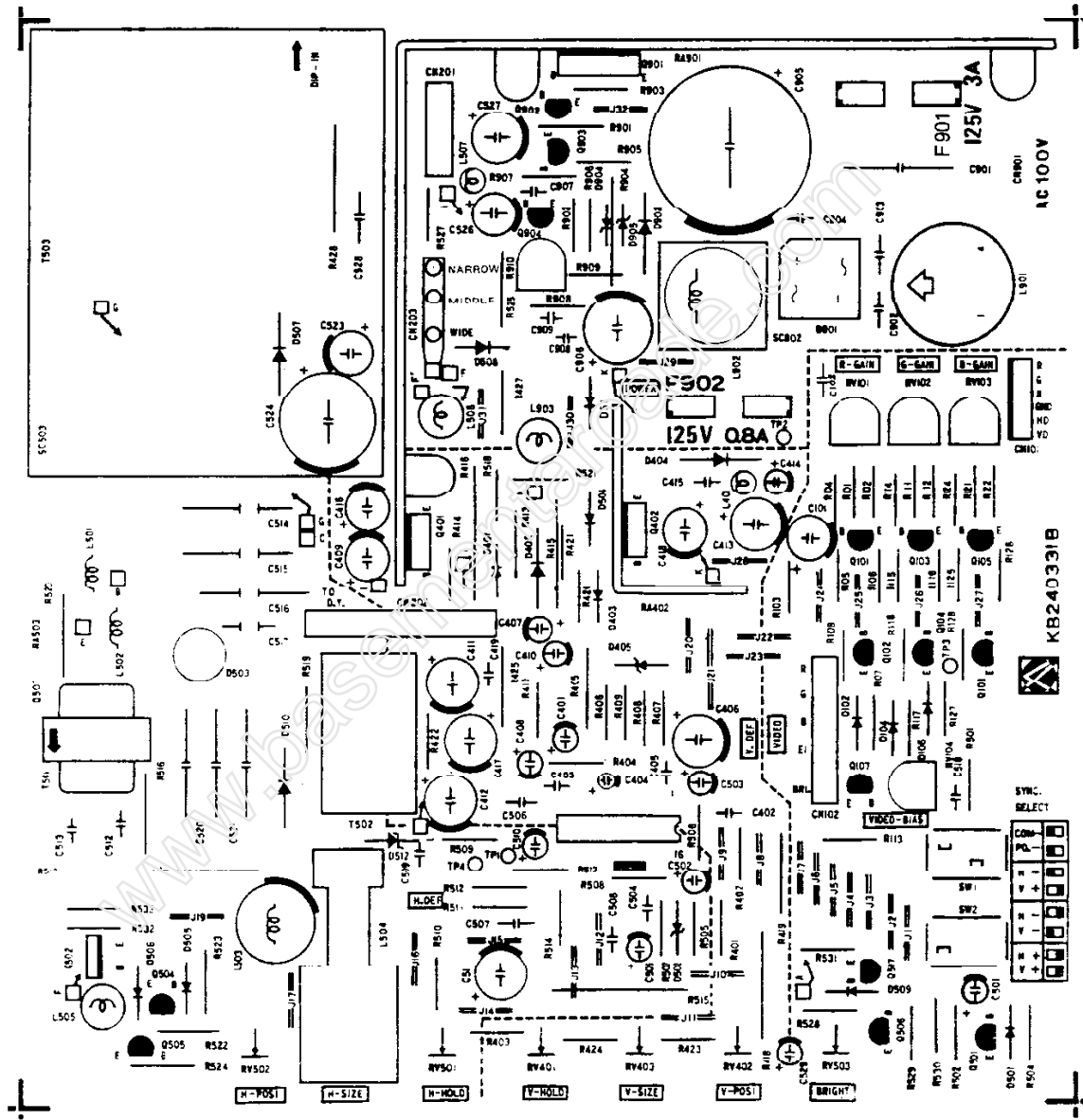


11.3 Adjustment Method

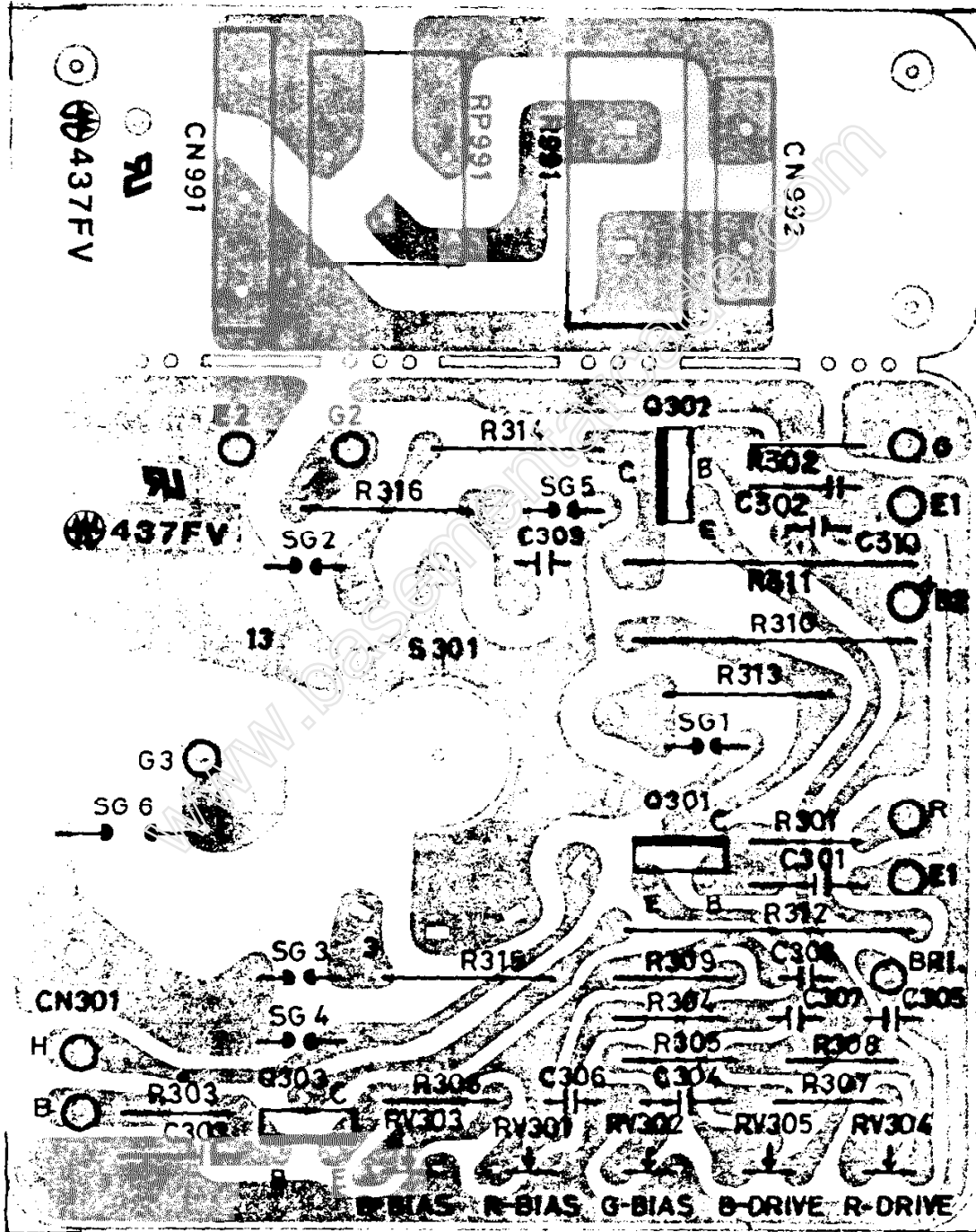
- o Turn RV101, 102, 301 and 302 to minimum (fully counterclockwise).
- o Adjust the white or black level of the blue signal by turning RV503 and RV303.
- o Adjust RV503 to the state just before the black level of signal B prevails.
- o Adjust the white and black levels of the red and green signals to obtain white balance of those levels by manipulating RV101 and RV301, and RV102 and RV302.
- o Adjust the white level by turning RV503.

(When a separate Adjustment Guide is provided, it has priority over this.)

12. ASSY PCB MAIN PARTS LOCATION



13. ASSY PCB CRT PARTS LOCATION



14. PARTS LIST OF MONITOR

14.1 Assy PCB Main Parts List

Symbol	Description			Part No.
	Assy PCB-MAIN			KB 240331-B
R 102	R-CARBON	1/4W	680 Ω-J	
R 103	R-CARBON	1/4W	2.2K Ω-J	
R 104	R-CARBON	1/4W	390 Ω-J	
R 105	R-CARBON	1/4W	2.2K Ω-J	
R 106	R-CARBON	1/4W	390 Ω-J	
R 107	R-CARBON	1/4W	1K Ω-J	
R 108	R-CARBON	1/4W	220 Ω-J	
R 112	R-CARBON	1/4W	680 Ω-J	
R 114	R-CARBON	1/4W	390 Ω-J	
R 115	R-CARBON	1/4W	2.2K Ω-J	
R 116	R-CARBON	1/4W	390 Ω-J	
R 117	R-CARBON	1/4W	1K Ω-J	
R 118	R-CARBON	1/4W	220 Ω-J	
R 122	R-CARBON	1/4W	680 Ω-J	
R 123	R-CARBON	1/4W	390 Ω-J	
R 124	R-CARBON	1/4W	390 Ω-J	
R 125	R-CARBON	1/4W	2.2K Ω-J	
R 126	R-CARBON	1/4W	390 Ω-J	
R 127	R-CARBON	1/4W	1K Ω-J	
R 128	R-CARBON	1/4W	220 Ω-J	
R 401	R-CARBON	1/4W	10K Ω-J	
R 402	R-CARBON	1/4W	8.2K Ω-J	
R 403	R-CARBON	1/4W	1.8K Ω-J	
R 404	R-CARBON	1/4W	8.2K Ω-J	
R 405	R-CARBON	1/2W	270 Ω-J	
R 406	R-CARBON	1/4W	8.2K Ω-J	
R 407	R-CARBON	1/4W	680 Ω-J	
R 408	R-CARBON	1/4W	1.5K Ω-J	
R 409	R-CARBON	1/4W	8.2K Ω-J	
R 410	R-CARBON	1/4W	10K Ω-J	
R 411	R-CARBON	1/4W	1.8K Ω-J	
R 413	R-CARBON	1/4W	100 Ω-J	
R 414	R-CARBON	1/4W	2.2K Ω-J	

Symbol	Description	Part No.
R 415	R-METAL 1W	10K Ω -J
R 416	R-METAL 1W	22 Ω -J
R 417	R-CEMENT RGB 10H (V)	220 Ω -J
R 418	R-METAL 1W	4.7K Ω -J
R 419	R-CARBON 1/2W	2.2K Ω -J
R 421	R-CARBON 1/4W	68K Ω -J
R 423	R-CARBON 1/4W	390 Ω -J
R 424	R-CARBON 1/2W	5.6 Ω -J
R 425	R-CARBON 1/2W	390 Ω -J
R 426	R-CARBON 1/4	6.8K Ω -J
R 427	R-FUSABLE 1/2W	1.2 Ω -J
R 428	R-FUSABLE 2W	1.2 Ω -J
R 501	R-CARBON 1/4W	330 Ω -J
R 502	R-CARBON 1/4W	10K Ω -J
R 504	R-CARBON 1/4W	10K Ω -J
R 505	R-CARBON 1/4W	27K Ω -J
R 506	R-CARBON 1/4W	390K Ω -J
R 507	R-CARBON 1/4W	18K Ω -J
R 508	R-CARBON 1/4W	68K Ω -J
R 509	R-CARBON 1/4W	6.8K Ω -J
R 510	R-CARBON 1/4W	10K Ω -J
R 511	R-CARBON 1/4W	1.2K Ω -J
R 512	R-CARBON 1/4W	470 Ω -J
R 513	R-METAL 1/4W	3.3K Ω -J
R 514	R-METAL 1/4W	560K Ω -J
R 515	R-METAL 2W	6.8K Ω -J
R 516	R-CARBON 1/2W	8.2K Ω -J
R 517	R-METAL 3W	3.3K Ω -J
R 518	R-CARBON 1/4W	8.2K Ω -J
R 519	R-CARBON 1/2W	4.7K Ω -J
R 520	R-CARBON 1/2W	33 Ω -J
R 521	R-CARBON 1/4W	10K Ω -J
R 522	R-FUSABLE 1/4W	330 Ω -J
R 523	R-FUSABLE 1/4W	330 Ω -J
R 524	R-FUSABLE 1/4W	330 Ω -J
R 525	R-FUSABLE 1/2W	4.7 Ω -J
R 526	R-CARBON 1/4W	100 Ω -J
R 527	R-CARBON 1/4W	22K Ω -J
R 528	R-CARBON 1/4W	22K Ω -J

Symbol	Description	Part No
R 529	R-CARBON 1/4W	390 Ω-J
R 530	R-CARBON 1/4W	4.7K Ω-J
R 531	R-CARBON 1/4W	470 Ω-J
R 532	R-CARBON 1/4W	680 Ω-J
R 533	R-CARBON 1/4W	47 Ω-J
R 901	R-FUSABLE 1/4W	330 Ω-J
R 902	R-CARBON 1/4W	150K Ω-J
R 903	R-FUSABLE 1/4W	68 Ω-J
R 904	R-METAL 1W	15K Ω-J
R 905	R-CARBON 1/4W	1M Ω-J
R 906	R-CARBON 1/4W	27K Ω-J
R 907	R-CARBON 1/4W	68K Ω-J
R 908	R-CARBON 1/4W	33K Ω-J
R 909	R-CARBON 1/4W	4.7K Ω-J
R 910	R-CARBON	V8K4-1 3K Ω
R 911	R-CARBON 1/4W	6.8K Ω-J
RV 101	R-VARIABLE	V8K4-1 5K Ω
RV 102	R-VARIABLE	V8K4-1 5K Ω
RV 103	R-VARIABLE	V8K4-1 5K Ω
RV 401	R-VARIABLE	RVA0911H320-7-502M
RV 402	R-VARIABLE	RVG0911H320-7-303M
RV 403	R-VARIABLE	RVA0911H320-7-501M
RV 404	R-VARIABLE	V8K1-1 2K Ω
RV 501	R-VARIABLE	RVA0911H320-7-302M
RV 502	R-VARIABLE	RVG0911H320-7-303M
RV 503	R-VARIABLE	RVG0911H320-7-303M
RV 504	R-VARIABLE	V8K1-1 5K Ω
C101	C-ELECTRO.	100 μ-M 16V
C102	C-CERAMIC	510K 50V
C103	C-CERAMIC	510K 50V
C104	C-CERAMIC	510K 50V
C401	C-ELECTRO.	1 μ-μ 50V
C402	C-POLYESTER	DEP 50V 333K
C403	C-POLYESTER	DEP 50V 333K
C404	C-TANTAL	SCF1 16V 2.2 μF-K
C405	C-CERAMIC	DD104-63B 561K 50V
C406	C-ELECTRO.	SM 16VB-470(M)
C407	C-ELECTRO.	SM 25VB-10(M)
C408	C-TANTAL	25V 10 μF-K

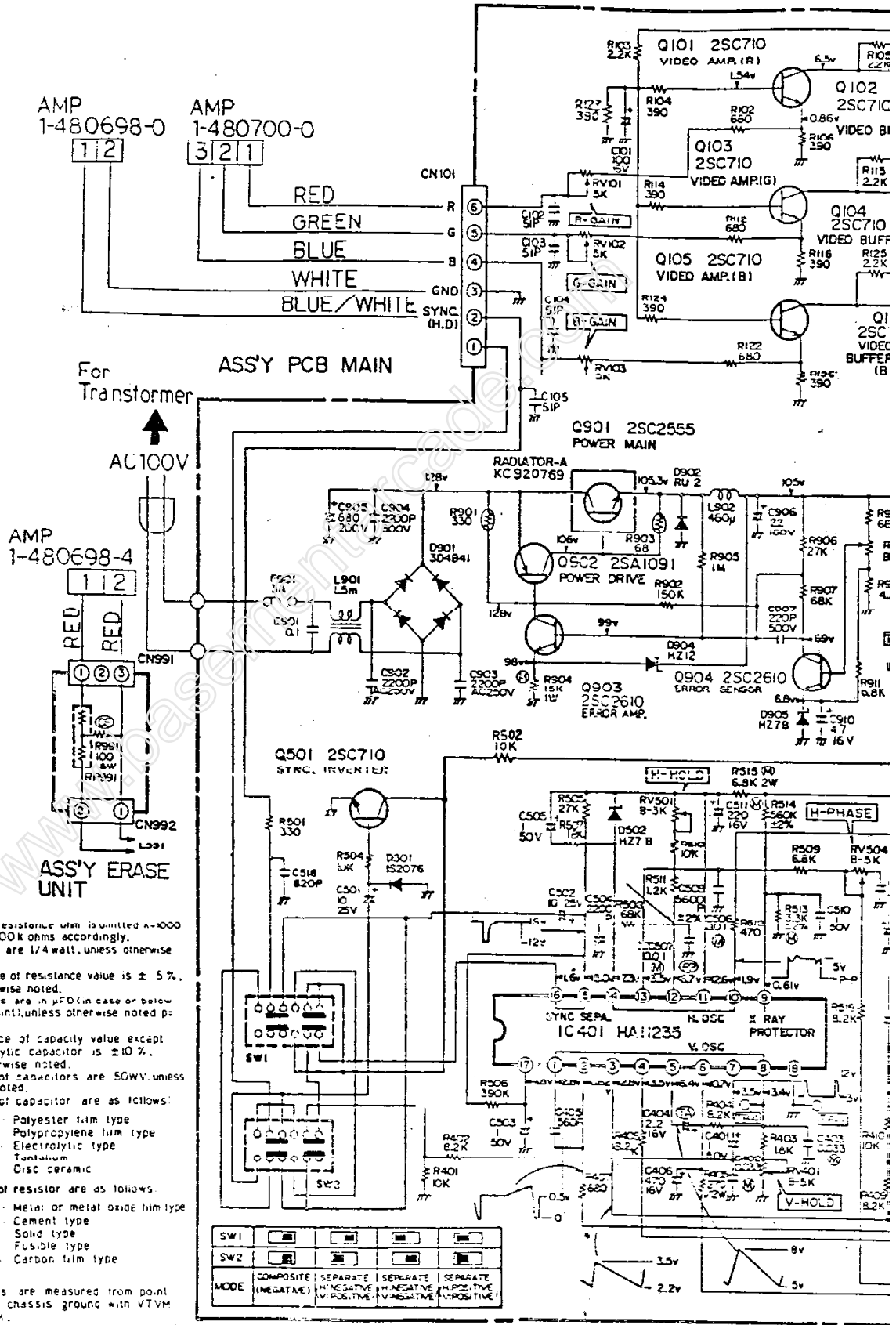
Symbol	Description	Part No.
C409	C-ELECTRO.	100VB-10(M)
C410	C-ELECTRO.	SM 50VB-1(M)
C411	C-ELECTRO.	SM 35VB-220(M)
C413	C-ELECTRO.	470 μ -M 1.6V
C414	C-ELECTRO.	SM 25VB-10(M)
C415	C-CERAMIC	DD09-63B 222K 500V
C416	C-ELECTRO.	10 μ -M 100V
C417	C-ELECTRO.	SM 35VB-220(M)
C418	C-ELECTRO.	SM 160VB-2.2(M)
C419	C-CERAMIC	DD09-63B 222K 500V
C501	C-ELECTRO.	SM 25VB-10(M)
C502	C-ELECTRO.	SM 25VB-10(M)
C503	C-ELECTRO.	SM 50VB-1(M)
C504	C-CERAMIC	DD105-63B 222K 50V
C505	C-ELECTRO.	SM 50VB-1(M)
C506	C-POLYESTER.	DEP50V 103K
C507	C-POLYESTER.	DEP50V 103K
C508	C-POLYPRO.	DTW100V 562-G
C509	C-CERAMIC	220K 50V
C510	C-ELECTRO.	SM 50VB-1(M)
C511	C-ELECTRO.	SM 16VB-220(M)
C512	C-CERAMIC	DD05-63B 561K 500V
C513	C-CERAMIC	DD12-63B 472K 500V
C514	C-CERAMIC	DE1510R 222K DKB1.6KV 222J
C515	C-CERAMIC	DE1510R 222K 2KV DKB 222J 1.6KV
C516	C-CERAMIC	DE1510R 222K 2KV DKB1.6KV 222J 1.6KV
C517	C-CERAMIC	DE1110R 821K 2KV
C518	C-CERAMIC	DD104-63B 821K 50V
C520	C-POLYPRO.	DTW 200VDC 0.47 μ F(M)
C523	C-ELECTRO.	100 μ -M 50V
C524	C-ELECTRO.	47 μ -M 160V
C526	C-ELECTRO.	1 μ -M 160V
C527	C-ELECTRO.	10 μ -M 160V
C528	C-POLYPRO.	DTW 630VDC 0.01 μ F(M)
C529	C-ELECTRO.	SM 25VB-10(M)
C901	C-POLYPRO.	LHX 125VAC 0.1 μ F
C902	C-CERAMIC	MV DE0807E 222Z AC250V

Symbol	Description	Part No.
C903	C-CERAMIC MV DE0807E 222Z AC250V	
C904	C-CERAMIC DD09-63B 222K 500V	
C905	C-ELECTRO. NM 180NVSN 680(M)	
C906	C-ELECTRO. SM 160VB-22(M)	
C907	C-CERAMIC DD05-63B 221K 500V	
C908	C-CERAMIC DD05-63B 561K 500V	
C910	C-ELECTRO 47 μ -M 16V	
L401	L-CHOKE FL7H 101K	
L501	L-CHOKE 0.47 μ H	2F16125AA
L502	L-CHOKE 0.47 μ H	2F16125AA
L503	L-LINEAR LH13P04 A (WLH-28A)	4F16076AA
L504	L-SIZE	4F16077AA
L505	L-CHOKE FL9H 332J	
L506	L-CHOKE (300 μ H)	4F16078AA
L507	L-CHOKE FL5H 561K	
L901	L-CHOKE FKOB 160MH24 1.5mH	
L902	L-CHOKE 460 μ H	4F13070AA
L903	L-CHOKE 300 μ H	4F16078AA
T501	T-H-DRIVE P33611301	2F13113AA
T503	T-FET MSH1FAC02	
D102	D-SILICON HZ12-B or C,	
D104	D-SILICON HZ12-B or C,	
D106	D-SILICON HZ12-B or C,	
D401	SILICON 1S2076, 1S1588,	
D402	SILICON RM1Z,	
D403	SILICON 1S2076A, 1S1553,	
D404	SILICON RU2,	
D405	SILICON HZ24,	
D501	SILICON 1S2076, 1S2473,	
D502	D-ZENER HZ7-B,	
D504	SILICON 1S2076,	
D505	SILICON 1S2067A, 1S2471,	
D506	SILICON 1S2076A, 1S2471,	
D507	SILICON RU2	
D508	SILICON RH1, ERB28-04	
D509	SILICON 1S2076, 1S2473,	
D510	SILICON RH1, ERB28-04,	
D511	SILICON 1S2076, 1S2473,	
D901	D-BRIDGE 3D4B41,	

Symbol	Description	Part No.
D 902	SILICON	RU2, ERC24-06
D 904	D-ZENER	HZ 12, EQA01-12S
D 905	D-ZENER	HZ7-B, EQA01-07S,
Q 101	TRANSISTOR	2SC1815, 2SC1740,
Q 102	TRANSISTOR	2SC1815, 2SC2410, 2SC2724
Q 103	TRANSISTOR	2SC1815, 2SC2410, 2SC2724,
Q 104	TRANSISTOR	2SC1815, 2SC2410, 2SC2724
Q 105	TRANSISTOR	2SC1815, 2SC2410, 2SC2724
Q 106	TRANSISTOR	2SC1815, 2SC2410, 2SC2724,
Q 401	TRANSISTOR	2SD1138, 2SC2073,
Q 402	TRANSISTOR	2SD1138, 2SC2073,
Q 501	TRANSISTOR	2SC1815, 2SC1740,
Q 502	TRANSISTOR	2SC1749, 2SC2456,
Q 503	TRANSISTOR	2SC969B, 2SD870,
Q 504	TRANSISTOR	2SD763, 2SD974,
Q 505	TRANSISTOR	2SD763, 2SD974,
Q 506	TRANSISTOR	2SA673, 2SA933,
Q 507	TRANSISTOR	2SA673, 2SA933,
Q 901	TRANSISTOR	2SC2555,
Q 902	TRANSISTOR	2SA1019,
Q 903	TRANSISTOR	2SC2482,
Q 904	TRANSISTOR	2SC2428,
SW 1	SWITCH	SSA042
SW 2	SWITCH	SSA042
IC 401	IC	HA11235
F 901	FUSE	(UL) TSC (B) 3A 5 ϕ x 20mm
F 902	FUSE	(UL) TSC (B) 0.8A 5 ϕ x 20mm
	ASSY TR. (V-OUT)	KD920768
	ASSY TR. (H-OUT)	KD920870
	ASSY RADIATOR-A	KC920672

14. 2 Assy PCB C.R.T.

Symbol	Description	Part No.
R 304	R-CARBON 1/4W 1.2K Ω -J	
R 305	R-CARBON 1/4W 1.2K Ω -J	
R 306	R-CARBON 1/4W 1.2K Ω -J	
R 307	R-CARBON 1/4W 330 Ω -J	
R 308	R-CARBON 1/4W 330 Ω -J	
R 309	R-CARBON 1/4W 330 Ω -J	
R 310	R-METAL 2W 8.2K Ω -J	
R 311	R-METAL 2W 8.2K Ω -J	
R 312	R-METAL 2W 8.2K Ω -J	
R 313	R-SOLID 1/2W 2.2K Ω -J	
R 314	R-SOLID 1/2W 2.2K Ω -J	
R 315	R-SOLID 1/2W 2.2K Ω -J	
R 316	R-SOLID 1/2W 1M Ω -J	
RV 301	R-VARIABLE RVA0911H-306-1B 5K Ω	
RV 302	R-VARIABLE RVA0911H-306-2B 5K Ω	
RV 303	R-VARIABLE RVA0911H-306-3B 5K Ω	
RV 304	R-VARIABLE RVA0911H-306-7B 220 Ω	
RV 305	R-VARIABLE RVA0911H-306-7B 220 Ω	
C 304	C-CERAMIC DD104-63B 271K 50V	
C 305	C-CERAMIC DD104-63B 271K 50V	
C 306	C-CERAMIC DD104-63B 271K 50V	
C 308	C-CERAMIC DE0705-B 102K 1KV	
Q 301	TRANSISTOR 2SC2611, 2SC2456, 2SC2688, 2SC1749,	
Q 302	TRANSISTOR 2SC2611, 2SC2456, 2SC2688, 2SC1749,	
Q 303	TRANSISTOR 2SC2611, 2SC2456, 2SC2688, 2SC1749,	
S 301	SOCKET-CRT 1398 OSHIMA	
R 991	R-CEMENT RGB5PH 100 Ω -K	
RP 991	POSISTOR PTH451B02	



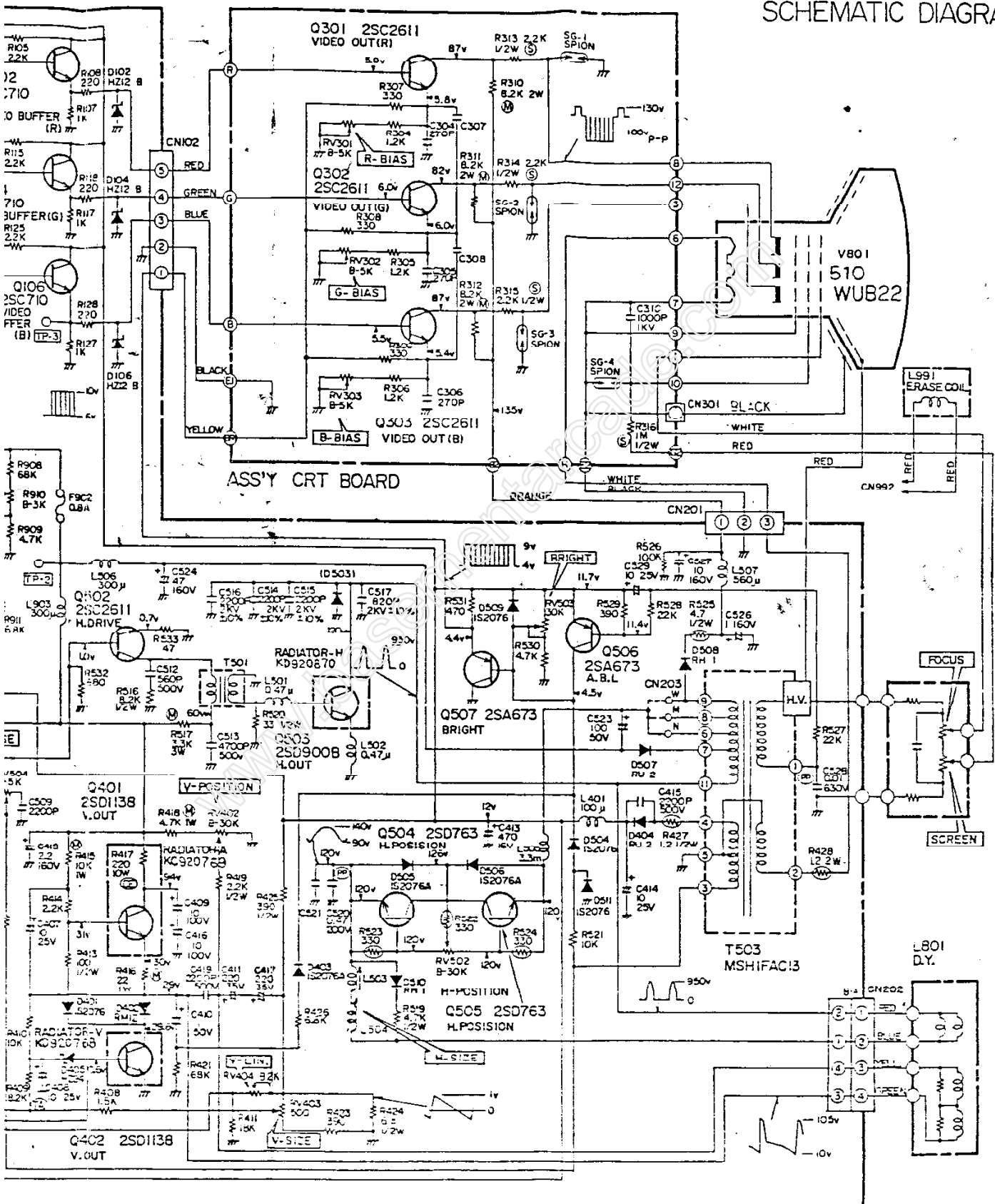
NOTE 1:

- The unit of resistance when denominated K=1000 ohms, M=1000K ohms accordingly.
- All resistors are 1/4 watt, unless otherwise noted.
- The tolerance of resistance value is $\pm 5\%$, unless otherwise noted.
- All capacitors are in μFD in case or below a decimal point, unless otherwise noted in μFD .
- The tolerance of capacity value except the electrolytic capacitor is $\pm 10\%$, unless otherwise noted.
- The rating of capacitors are 50 WV, unless otherwise noted.
- The marks of capacitor are as follows:
 - ⊗ Polyester film type
 - ⊕ Polypropylene film type
 - ⊖ Electrolytic type
 - ⊕ Tantalum
 - No mark Disc ceramic
- The marks of resistor are as follows:
 - ⊗ Metal or metal oxide film type
 - ⊕ Cement type
 - ⊖ Solid type
 - ⊕ Fusible type
 - No mark Carbon film type

NOTE 2:

- DC voltages are measured from point indicated to chassis ground with VTVM or digital VM.
- Waveforms were taken with controls set for normal picture condition.

20" COLOR MONITOR
SCHEMATIC DIAGRAM



15. SCHEMATIC DIAGRAM

www.basementarcade.com

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PRINTED IN JAPAN