

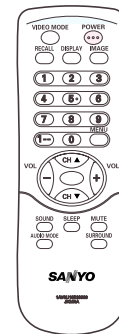
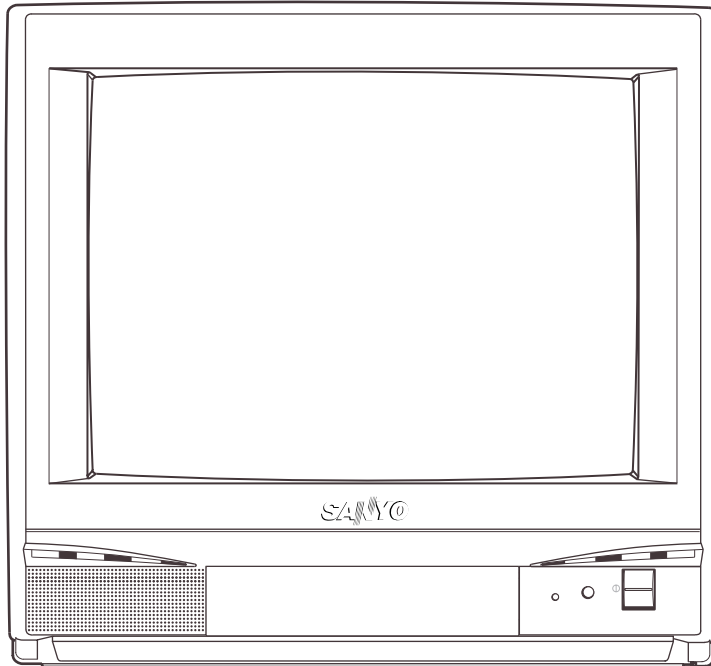
FILE NO.

SERVICE MANUAL Colour Television

Model No. C14LT88M

(Argentina)

Service Ref. No. C14LT88M-00



Specifications

Power Source AC220V, 50Hz / 60Hz
 Receiving System PAL (M/M, N/N), NTSC (M/M)
 Channel Coverage
 Antenna mode VHF: CH02-CH13, UHF: CH14-CH69
 CATV mode VHF band: CH01-CH13, Mid band: CH14-CH22
 Super band: CH23-CH36, Hyper band: CH37-CH64
 Ultra band: CH65-CH94 and CH100-CH125
 Low mid band: CH95-CH99
 Video IF 45.75MHz
 Aerial Input Impedance . . 75Ω
 Ext. Terminals
 Video inputs: Phono jack X 2 (1Vp - p, 75Ω)
 Audio inputs: Phono jack X 2 (436mVrms, more than 40KΩ)
 Sound Output (RMS) 2W
 Speakers 5 cm x 9 cm x 1 pc.
 Dimensions 377 (W) X 355 (H) X 384.5 (D)mm
 Weight approx. 8.7 Kg

Specifications subject to change without notice.

Product Code: 111342015

Original Version

Chassis Series: LA5-A

Give complete "SERVICE REF. NO." for parts order or servicing. It is shown on the rating plate at the cabinet back of the unit.

This T.V. receiver will not work properly in foreign countries where the television transmission system and power source differ from the design specifications. Refer to the specification table.

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Safety Notice

SAFETY PRECAUTIONS




- 1: An isolation transformer should be connected in the power line between the receiver and the AC line when a service is performed on the primary of the converter transformer of the set.

2: Comply with all caution and safety-related notes provided on the cabinet back, inside the cabinet, on the chassis or the picture tube.
- 3: When replacing a chassis in the cabinet, always be certain that all the protective devices are installed properly, such as, control knobs, adjustment covers or shields, barriers, isolation resistor-capacitor networks etc.. Before returning any television to the customer, the service technician must be sure that it is completely safe to operate without danger of electrical shock.

X-RADIATION PRECAUTION

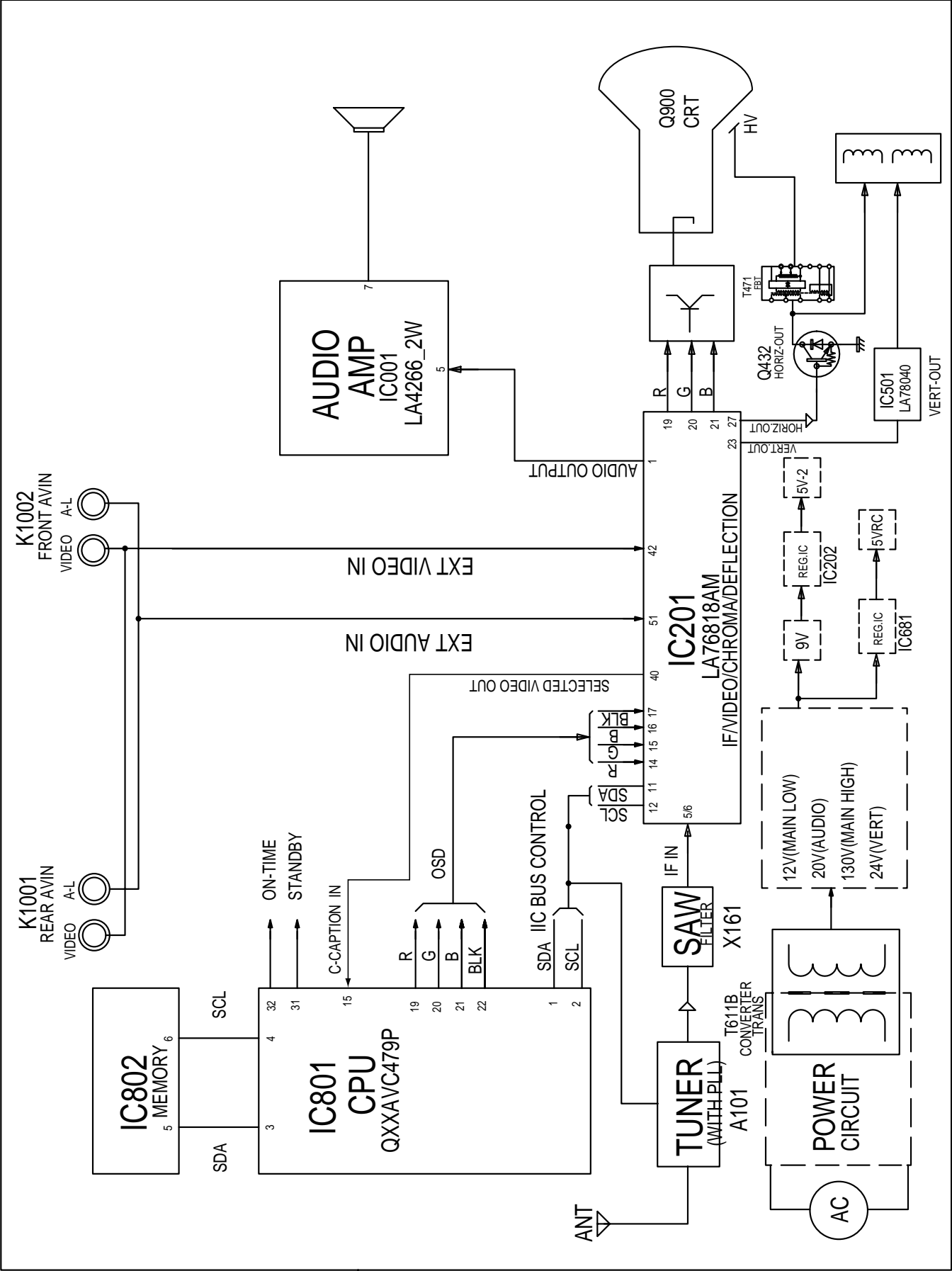
The primary source of X-RADIATION in television receiver is the picture tube. The picture tube is specially constructed to limit X-RADIATION emissions. For continued X-RADIATION protection, the replacement tube must be the same type as the original including suffix letter. Excessive high voltage may produce potentially hazardous X - RADIATION. To avoid such hazards, the high voltage must be maintained within specified limit. Refer to this service manual, high voltage adjustment for specific high voltage limit. If high voltage exceeds specified limits, take necessary corrective action. Carefully follow the instructions for + B1 volt power supply adjustment, and high voltage check to maintain the high voltage within the specified limits.

PRODUCT SAFETY NOTICE

Product safety should be considered when a component replacement is made in any area of a receiver. Components indicated by mark  in the parts list and the schematic diagram designate components in which safety can be of special significance. It is particularly recommended that only parts designated on the parts list in this manual be used for component replacement designated by mark . No deviations from resistance wattage or voltage ratings may be made for replacement items designated by mark .

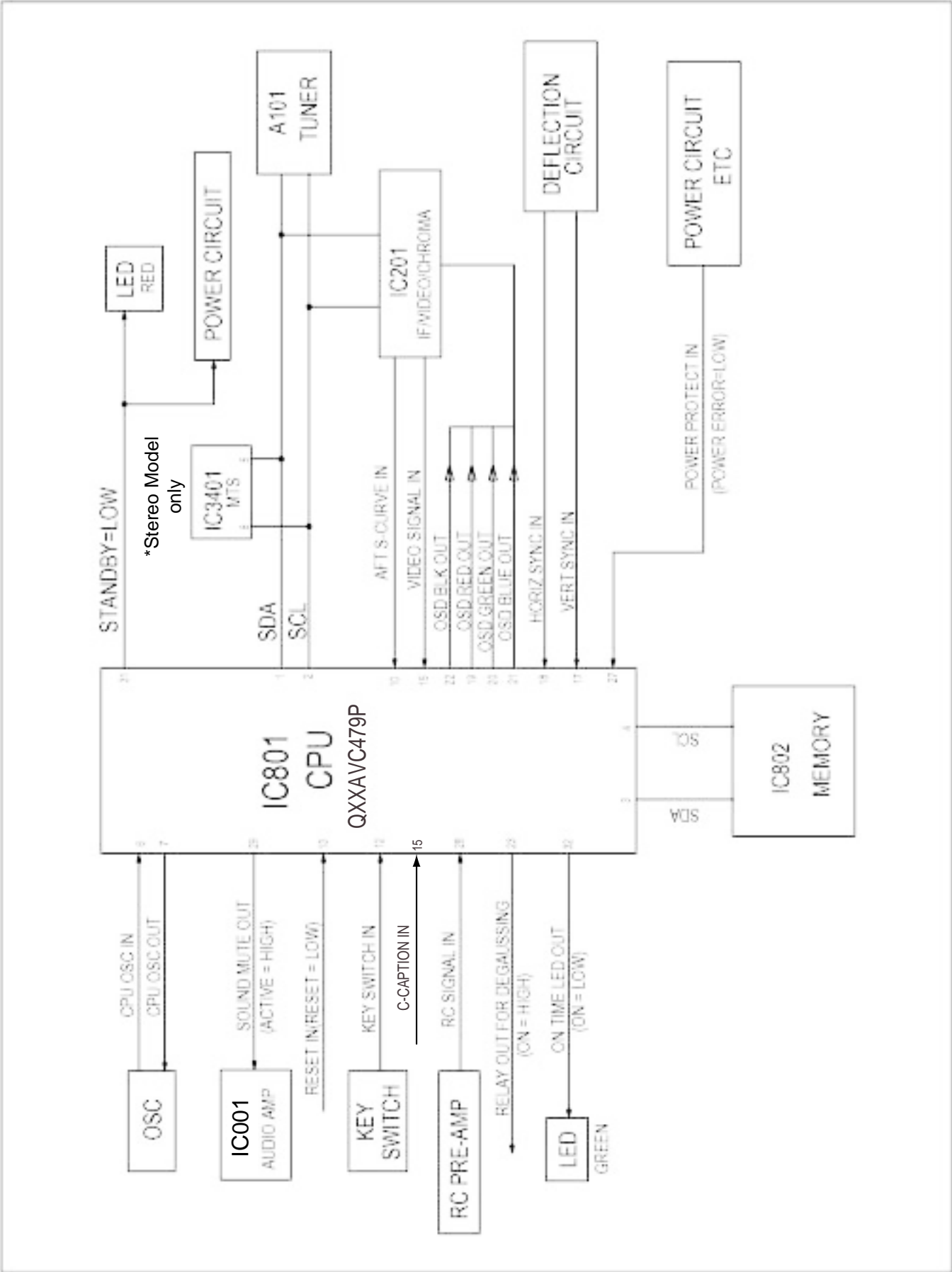
Chassis Block Diagrams

MAIN SIGNAL PROCESSING CIRCUIT



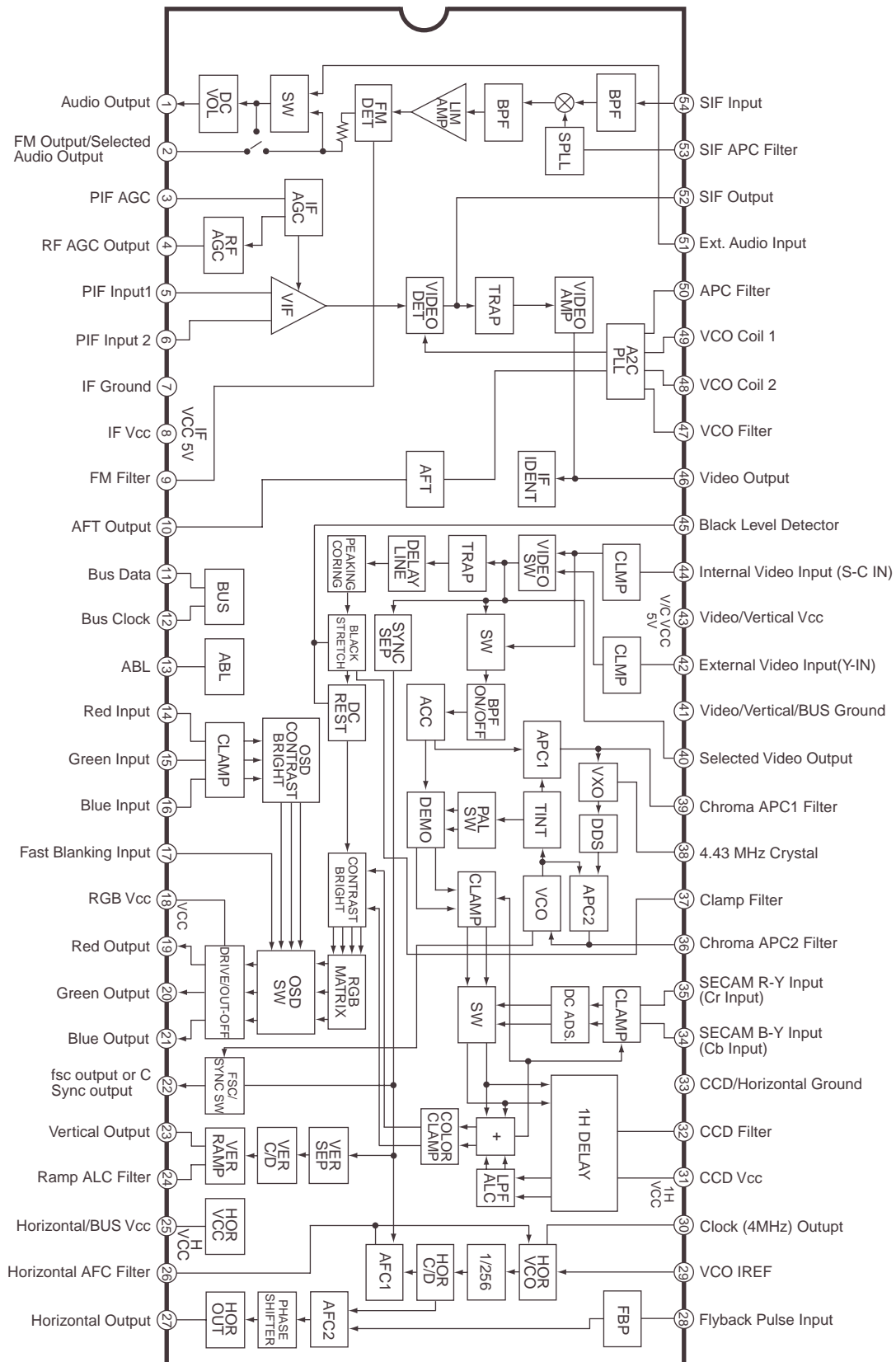
Chassis Block Diagrams

SYSTEM CONTROL

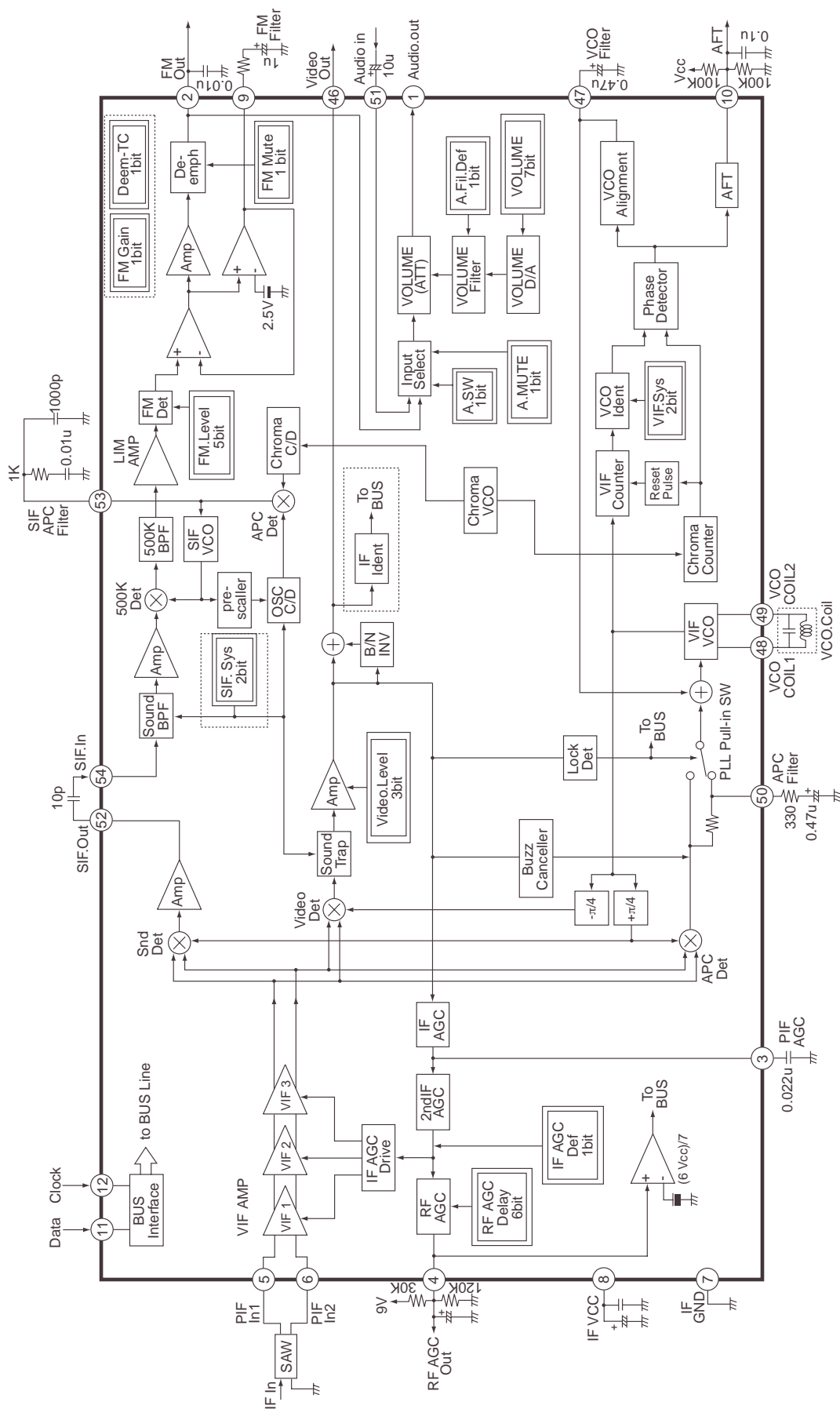


IC Block Diagrams

IC201 < IF/Video/Chroma/Def. > LA76818A

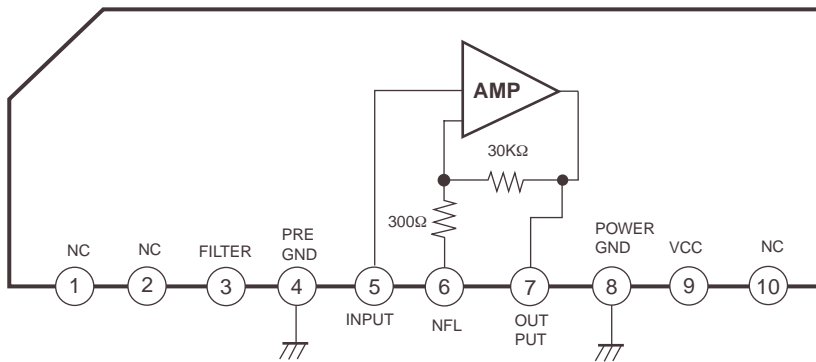


IC201 <IF System Block Diagram> LA76818A

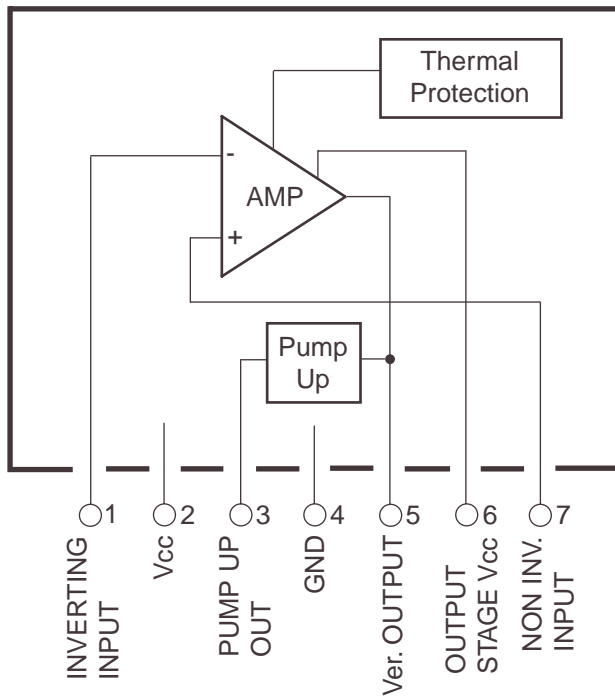


IC Block Diagrams

IC001 < Audio AMP. > LA42052-E



IC501 < Vertical Output > LA78040N, TDA9302H



Service Adjustments

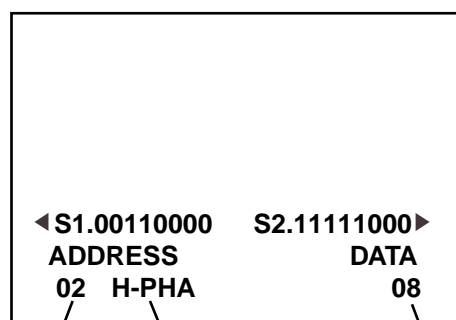
General

This set has an On-screen Service Menu system included in the CPU that allows remote operation for most of the service adjustments.

Service Adjustment-1

1. Enter the Service Menu

While pressing the **MENU** button on the television, press the Number Key **2** on the remote control unit. The Service Menu now appear.

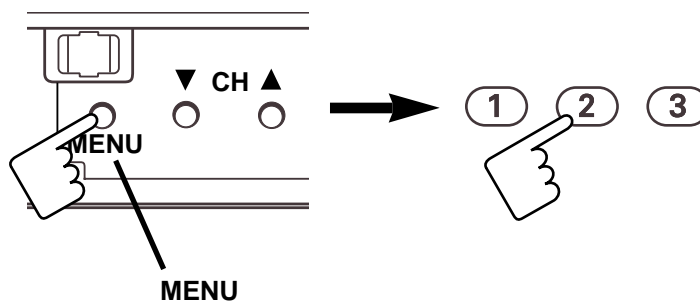


Item No.

Item

Data value

[Service Mode Display]

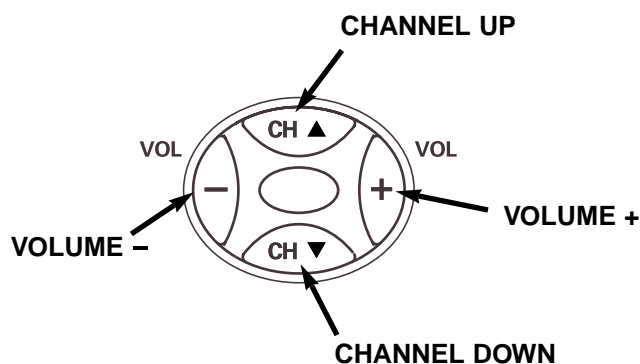


[Entering the Service Menu]

2. Service Adjustments:

Press the **CHANNEL UP** or **CHANNEL DOWN** button on the remote control handset to select the desired service menu item you want to adjust.

Use the **VOLUME +** or **-** to adjust the data. The **+** or **-** button will increase or decrease the data sequentially.

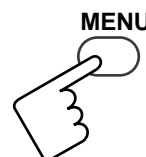


[Service Adjustment]

3. Exit from the Service Menu

Press the **MENU** button to turn off the Service Menu display.

The data which is set in the service mode is stored into the memory IC automatically.



[Exit from the Service Menu]

Service Adjustments

On-screen Service Menu

Following table shows the initial values which have been stored in the CPU ROM, and items for the service adjustments.

No.	Item	Initial value	Range	Description
01	RFAGC	06	00~63	RF AGC adjustment
02	H-PHA	08	00~31	H-PHASE adjustment (50Hz)
03	V-POS	32	00~63	Vertical position adjustment (50Hz)
04	V-SIZ	54	00~127	Vertical size adjustment (50Hz)
05	V-SCO	17	00~31	Vertical-S compensation (50Hz)
06	VLIN	15	00~31	Vertical linearity adjustment (50Hz)
07	H-P60	+4	-16~+15	Difference value of H-PHASE adjustment (60Hz)
08	V-P60	0	-32~+31	Difference value of V-POSITION adjustment (60Hz)
09	V-S60	+1	-64~+63	Difference value of V-SIZE adjustment (60Hz)
10	VSC60	0	-16~+15	Difference value of Vertical-S compensation (60Hz)
11	VLI60	+1	-16~+15	Difference value of Vertical linearity adjustment (60Hz)
12	OSDHP	30	01~255	OSD horizontal remark position
13	OSDC	50	00~127	OSD contrast
14	V-SCP	07	00~07	V-SIZE COMP (50Hz)
15	SBIAS	70	00~127	Sub Bias adjustment
16	RBIAS	00	00~255	Red Bias adjustment
17	GBIAS	00	00~255	Green Bias adjustment
18	BBIAS	00	00~255	Blue Bias adjustment
19	RDRIV	63	00~127	Red Drive adjustment
20	GDRIV	07	00~15	Green Drive adjustment
21	BDRIV	63	00~127	Blue Drive adjustment
22	- -	- -	- -	White balance (a lateral line)
23	DRV	- -	- -	Brightness and dark of White balance adjustment
24	B-YD	10	00~15	B-Y DC Level
25	R-YD	10	00~15	R-Y DC Level
26	B-YND	0	-16~+15	Difference value of NTSC B-Y DC Level
27	R-YND	0	-16~+15	Difference value of NTSC R-Y DC Level
28	G-YA	00	00,01	G-Y Angle
29	RBGB	08	00~15	R-Y/B-Y Gain Balance
30	RBAG	08	00~15	R-Y/B-Y Angle
31	G-YAN	00	00,01	Difference value of NTSC G-Y Angle
32	RBGBN	0	-8~+7	Difference value of NTSC R-Y/B-Y Gain Balance
33	RBABN	0	-8~+7	Difference value of NTSC R-Y/B-Y Angle
34	COGV	01	00~03	Coring gain
35	BLK	03	00~03	BLK. STR. Start (W/Defeat)
36	BLKG	03	00~03	BLK. STR. Gain
37	BRTA	00	00, 01	BRT. ABL Defeat
38	BRST	00	00, 01	Mid. Stp. Defeat
39	BRTH	00	00~07	Bright. ABL. Threshold
40	WPL	00	00~03	WPL Ope. Point (W/Defeat)
41	YGAM	00	00~03	Y Gamma Start
42	PORW	00	00, 01	AV Mode Pre/Over SW
43	PORS	02	00~03	AV Mode Pre/Over-shoot adjustment
44	RFCO	0	00~03	Difference Value of RF Corring Gain
45	PORWN	01	00, 01	RF Pre/Over SW
46	PORSN	03	00~03	RF Pre/Over-shoot adjustment
47	TINT	0	-16~+15	Tint
48	SHRF	0	-16~+15	Difference Value of RF Sharpness
49	TEXC	08	00~127	OSD Text Contrast
50	AUFL	00	00, 01	Auto. Fresh

To be continued.

Service Adjustments

No.	Item	Initial value	Range	Description
51	COOP	07	00~07	Colour Killer
52	Y-APF	01	00, 01	Y-APF Select
53	DEEM	00	00, 01	De-emphasis TC
54	V-LVL	04	00~07	Video Level
55	FMLVL	16	00~31	FM Level
56	TTEST	00	00~07	Trap Test
57	IFOM-S	00	00, 01	Over Mod. SW
58	IFMN-S	00	00, 01	Audio Monitor SW, Monitor/FM
59	IFTRPS	01	00, 01	IC Built-in SIF Trap ON/OFF
60	IFMLVL	136	00~255	Video Level Coarse Adjustment & Mod. Operating Dot Setting
61	VBSW	00	00, 01	VBLK SW
62	FBTS	00	00, 01	FBP Blanking SW
63	HBLKL	06	00~07	H-Blanking Control Left
64	HBLKR	04	00~07	H-Blanking Control Right
65	AFCRF	00	00, 01	Adjustment of AFC Gain & Gate (RF)
66	VSURF	00	00, 01	Adjustment of Vertical Sync. Separation Sensitivity (RF)
67	CDMRF	00	00~07	Vertical Count Down Loop Adjustment (RF)
68	AFCAV	00	00, 01	Adjustment of AFC Gain & Gate (AV)
69	VSUAV	00	00, 01	Adjustment of Vertical Sync. Separation Sensitivity (AV)
70	CDMAV	00	00~07	Vertical Count Down Loop Adjustment (AV)
71	HLK-T	00	00, 01	H-lock, V-Det. (RF)
72	HLK-V	00	00, 01	H-lock, V-Det. (AV)
73	VCO-SW	00	00, 01	C. VCO Adjustment SW
74	VCOADJ	03	00~03	C. VCO Adjustment
75	GRAY	00	00, 01	Gray Mode
76	CROSS	00	00~03	Cross Black/White
77	HL-SW	01	00, 01	Half Tone ON/OFF
78	HL-TON	00	00~03	Half Tone Level
79	AVNCON	64	00~127	Contrast (No Signal in AV)
80	AVNBRI	64	00~127	Brightness (No Signal in AV)
81	POMT	12	00~127	Power Mute Time
82	CHMT	12	00~31	Channel Mute Time
83	SYST	03	00~255	System-N
84	RELAY	80	00~255	Power Relay Time
85	CCD	31	00~31	Horizontal Remark Position Compensation Register
86	TVAVTM	00	00~255	AV/TV Mute Time

Important Notice:

Do not attempt to adjust service adjustments not listed on below otherwise it may cause loss of performance and for correct operation.

Service Adjustments

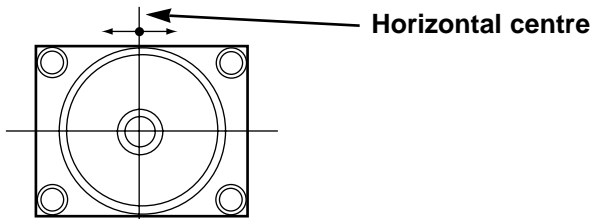
Item 01 [RFAGC] AGC

NOTE: Do not attempt this adjustment with weak signal.
(1) Tune the receiver to most clearest (or strongest) VHF station in your area. Set the brightness and contrast controls to maximum. Set the colour control to minimum.

- (2) Select Item No. 01 [RFAGC] in the service mode.
- (3) Change value until the snow noise just disappears.
- (4) Exit from the service mode.

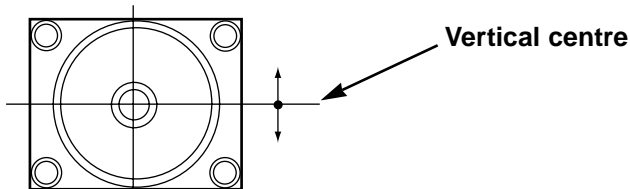
Item 02 [H-PHA] HORIZONTAL CENTRE

- (1) Receive a monochrome circular pattern.
- (2) Set the brightness and contrast to normal.
- (3) Select Item No. 02 [H-PHA] in the service mode.
- (4) Change value to be optimum horizontal centre position.
- (5) Exit from the service mode.



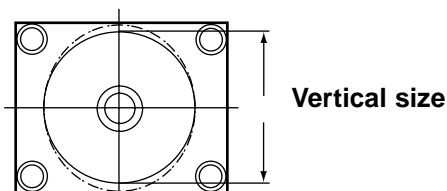
Item 03 [V-POS] VERTICAL CENTRE

- (1) Receive a monochrome circular pattern.
- (2) Set the brightness and contrast to maximum.
- (3) Select Item No. 03 [V-POS] in the service mode.
- (4) Change value to be optimum vertical centre position.
- (5) Exit from the service mode.



Item 04 [V-SIZ] VERTICAL SIZE

- (1) Receive a monochrome circular pattern.
- (2) Set the brightness and contrast to maximum.
- (3) Select Item No. 04 [V-SIZ] in the service mode.
- (4) Change value to be optimum vertical size.
- (5) Exit from the service mode.



Item 12 [OSDHP] OSD POSITION

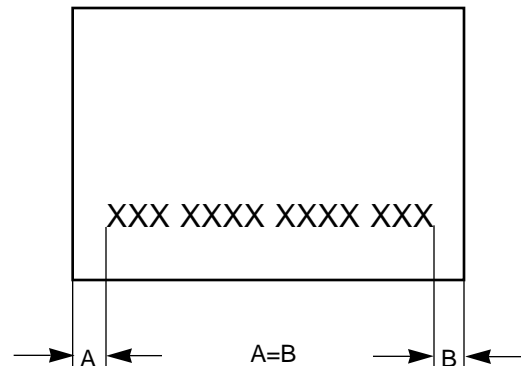
- (1) Receive a monochrome circular pattern.
- (2) Set the brightness and contrast to normal.
- (3) Select Item No. 12 [OSDHP] in the service mode.
- (4) Change value to be proper OSD position.
- (5) Exit from the service mode.

Item 65 [AFCRF] AFC GAIN

- (1) Switch on the TV.
- (2) Select Item No. 65 [AFCRF] in service mode.
- (3) Change data value to "01".
- (4) Exit from the service mode.

Item 85 [CCD] CAPTION H-POSITION ADJ.

- (1) Tune receiver to a caption channel.
- (2) Check that CAPTION position is in the horizontal center of the screen. If CAPTION center is too right or left, perform steps 3-6. (See figure below.)
- (3) Select Item No. 85 [CCD] in the service mode.
- (4) Adjust data with + or - key for proper horizontal center.
- (5) Exit from the service mode



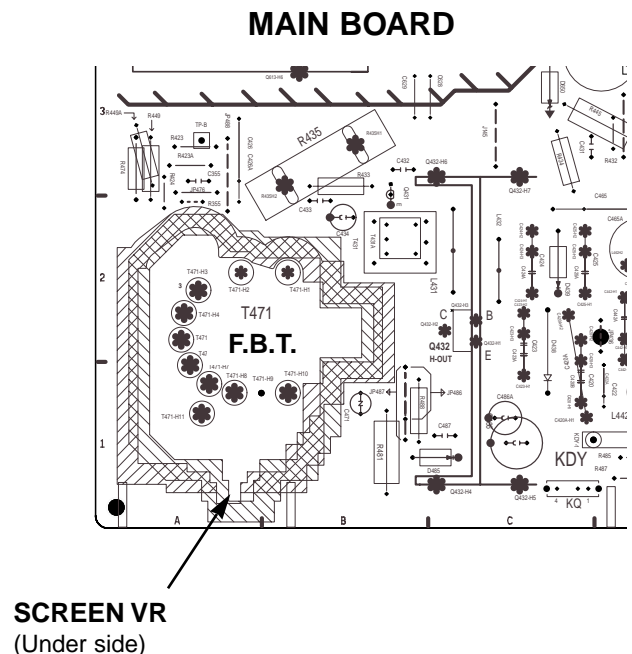
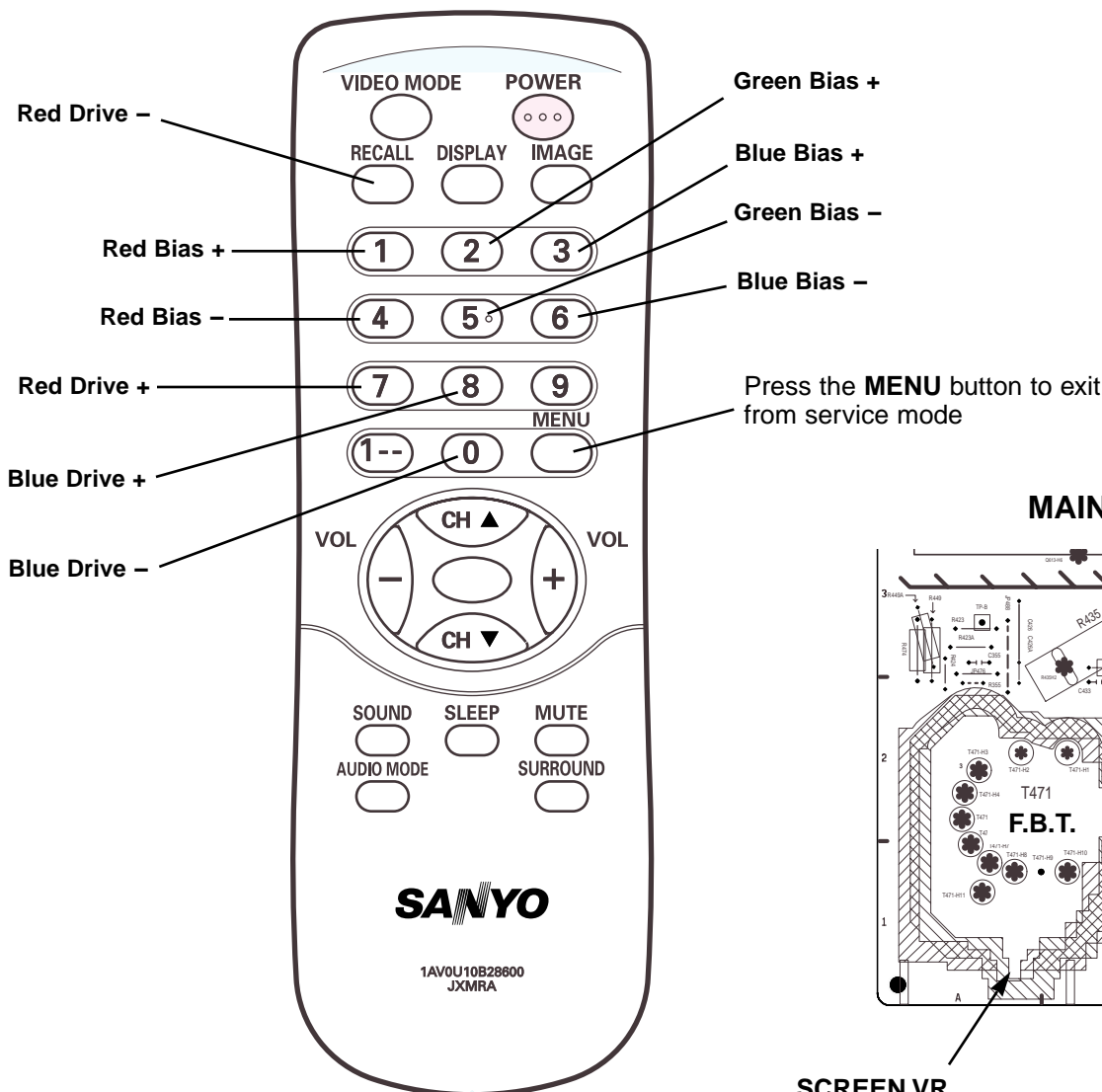
Caption H-position Adj.

Service Adjustments

Items 16-23 GREY SCALE

- (1) Receive a monochrome circular pattern.
- (2) Set the brightness and colour to normal, contrast to maximum.
- (3) Enter to the service mode.
- (4) Set each value of Item-16 **RBIAS**, 17 **GBIAS**, 18 **BBIAS** mode to 00. Set each value of Item-19 **RDRIV**, 21 **BDRIV** mode to 63, 20 **GDRIV** to 07.
- (5) Select Item-22 mode to be one horizontal scanning line and turn the screen volume on the FBT to obtain just visible one coloured line.
- (6) Press the **1 (Red Bias +)**, **4 (Red Bias -)**, **2 (Green Bias +)**, **5 (Green Bias -)**, **3 (Blue Bias +)** or **6 (Blue Bias -)** button to adjust the brightness of each colour until a dim white line produced. Please see the control button allocations in this mode.
- (7) Select Item-23 **DRV** mode to enter the white balance adjusting mode.
- (8) Press the **7 (Red Drive +)**, **RECALL (Red Drive -)**, **8 (Blue Drive +)** or **0 (Blue Drive -)** button alternately to produce normal black and white picture.
- (9) Exit from the service mode.
- (10) Check for proper grey scale tracking at all brightness levels.

NOTE: If the grey scale adjustment is made after picture tube replacement, check the high voltage.



Service Adjustments

Service Adjustment-2

FINE TUNING

This adjustment is used to do a fine tuning of the channels with poor reception after they have been stored by the automatic tuning.

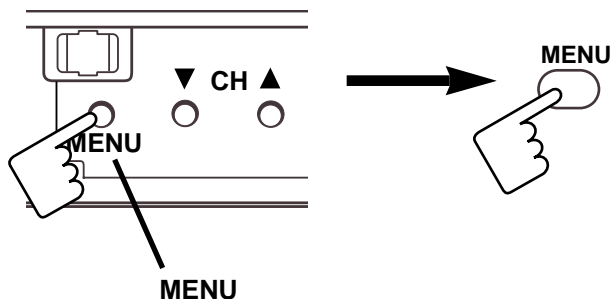
This function is available for one channel only and the fine-tuned channel is memorized into IC802 (EEPROM).

1. Enter the Service Menu

While pressing the **MENU** button on the television, press the "4" or **MENU** button on the remote control unit. The Service Menu now appear.



Fine tuning service mode

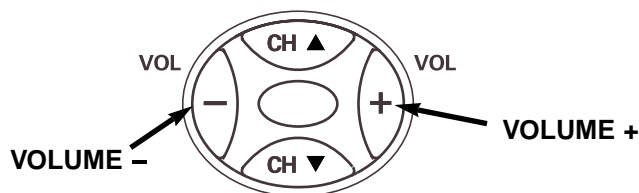


[Entering the Service Menu]

2. Service Adjustments:

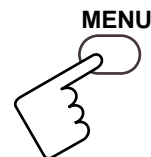
Press and hold the **VOLUME +** or **VOLUME -** button on the remote control handset or TV set to make fine tuning adjustment. Press and hold the **VOLUME +** button for higher frequency tuning, and press and hold the **VOLUME -** for lower frequency tuning.

Fine tuning data value will be automatically stored in memory.



[Service Adjustment]

To return to normal TV mode, press the **MENU** button on the TV set or remote control handset. (Or will automatically return to normal TV mode after 5 seconds.)



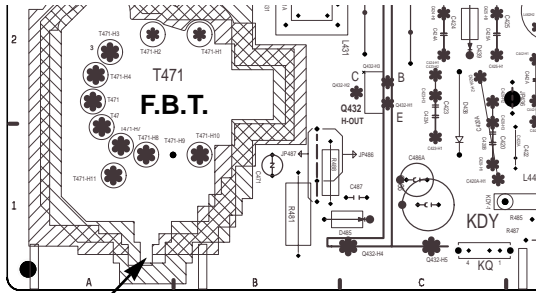
[Exit from the Service Menu]

Service Adjustments

Service Adjustment-3

FOCUS ADJUSTMENT

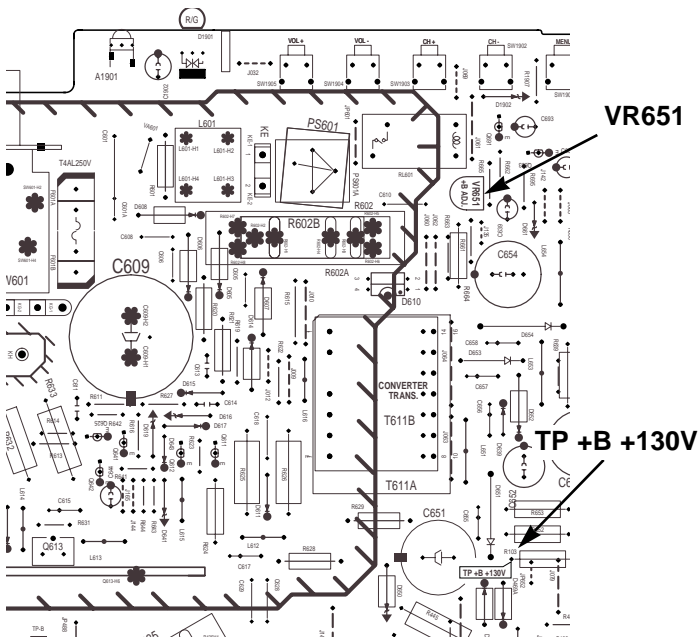
- (1) Receive the monochrome circular pattern.
- (2) Set the brightness to normal and contrast to maximum.
- (3) Adjust the focus control on the F.B.T. for the best focus on the screen centre.



FOCUS VR (Upper side)

+B POWER SUPPLY ADJUSTMENT

1. Connect a DC voltmeter to TP-" +B +130V" and the ground. Set the +B adjustment control (VR651) to middle range.
2. Set the brightness to normal and contrast to maximum.
3. Tune the receiver to an active channel and synchronized picture.
4. Adjust +B voltage to 130 ± 1.0 volt DC by using VR651.



HIGH VOLTAGE CHECK

Note: +B (+130V) Voltage Check and Grayscale Adjustment must be completed before attempting High Voltage Check.

- (1) Connect high voltage voltmeter negative lead to ground, and connect + lead to anode of picture tube.
- (2) Tune receiver to an active channel and confirm TV is operating properly.
- (3) The high voltage must be 14"=21KV \pm 1KV, 20"/21"=25KV \pm 1KV, 29"=26.5KV \pm 1KV and less than 14"=25KV, 20"/21"=27.5KV, 29"=29.5KV at 0 beam current (Brightness and contrast minimum setting).

Note: If the picture tube is replaced, check the high voltage. The horiz. width adjustment affects the high voltage. Therefore, re-check the high voltage.

Protection Circuit

This TV set has a built-in power supply protection circuit. It is provided to protect the TV set in case of a power supply circuit malfunctions. When something abnormality occurs during TV reception, the TV set goes to the stand-by mode.

When an abnormality occurs during TV reception, it causes pin 27 of the CPU to go continually Low voltage for about one second. The CPU detects that this has occurred and outputs the signal from pin 31 to switch off the power supply lines.

Releasing the protective circuit and restoring power supply

To release the protective circuit and restore power supply, turn the power to the TV set OFF and then ON again via either the main power switch or the ON-OFF button on the remote control. This will work only if the power supply trouble was temporary. If there is permanent trouble such as a damaged circuit, power cannot be restored and the circuit will have to be repaired.

Purity and Convergence Adjustment

CAUTION: The Convergence and Purity adjustments have been made at the factory. Readjustment should be made only after picture tube or deflection yoke replacement, following the steps below:

PURITY ADJUSTMENT

1. Demagnetize the picture tube and receiver using an external degaussing coil. When replacing picture tube or deflection yoke, mount deflection yoke and purity-convergence magnets assembly properly, see figures 1 and 4.
2. Turn Red and Blue guns on and provide only Green raster. Rotate Screen control to fully counterclockwise. Rotate Red and Blue Bias controls fully counterclockwise. Slowly rotate Green Bias control clockwise to produce Green raster.
3. Loosen the screw holding the Deflection Yoke and remove the 3 Rubber Wedges, and slide the Deflection Yoke fully forward.
4. Rotate and spread the Tabs of the two Purity Magnets to centre the vertical green belt in the picture screen. The Purity Magnets are also adjusted to obtain vertical centring of the raster.
5. Slowly slide the Deflection Yoke backward until a uniform green screen is obtained.
6. Check the purity of the red and blue screens for uniformity, turn off other colours to check this (use bias controls). Readjust the yoke position if necessary until all screens are pure.
7. Adjust each Bias control and screen control to obtain white raster. Refer to Gray Scale Adjustment. If part of the picture screen is coloured, adjust the Deflection Yoke position forward or backward slightly.

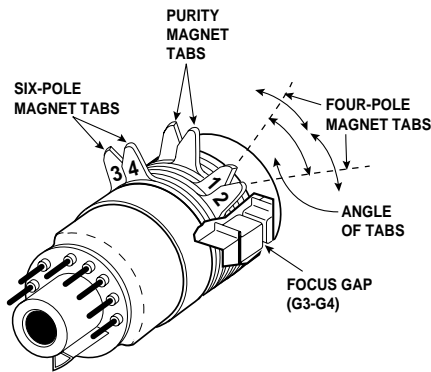


Figure 1. Purity and Convergence Magnets

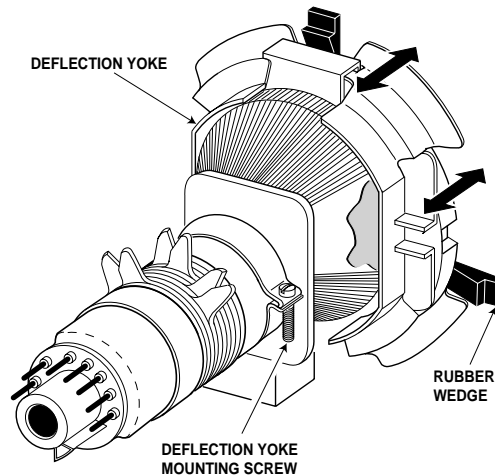


Figure 4. Deflection Yoke Movement

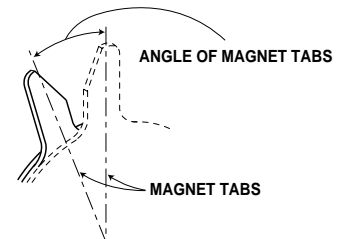


Figure 5. Adjusting Magnet

8. Tighten the mounting screw of the Deflection Yoke. Adjust Convergence next.

CENTRE CONVERGENCE ADJUSTMENT

1. Use a dot crosshatch pattern signal.
2. Turn Red and Blue guns on and turn off Green gun. Adjust the angle between the Tabs of the Four Pole Magnet 1 and 2, and superimpose the Red and Blue vertical lines in the centre area of the picture screen. Refer to figure 2.
3. Keeping the mutual angle of the Tabs of the Four Pole Magnet turn them together to superimpose the Blue and Red horizontal lines in the centre area of the picture screen. Refer to figure 2.
4. Turn Green gun on and adjust Six Pole Magnet 3 and 4 that the Green line superimposed on the Red/Blue lines. This is the same procedure used in steps 2 and 3. Refer to figure 3.

OUTER AREA CONVERGENCE ADJUSTMENT

Slightly loosen the screw holding the Deflection Yoke. Adjust the Deflection Yoke to converge the detail in the outer area (left side and right side) of the picture screen by orbital movement of the front of the Yoke, then secure the Deflection Yoke in appropriate position by putting the wedges as illustrated. Tighten screw holding the Deflection Yoke.

Adjust tabs angle to superimpose blue and red vertical line.

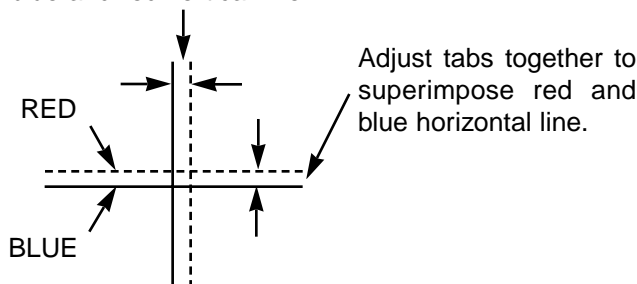


Figure- 2 BLUE AND RED LINE MOVEMENT

Adjust tabs angle to superimpose red/blue and green vertical line.

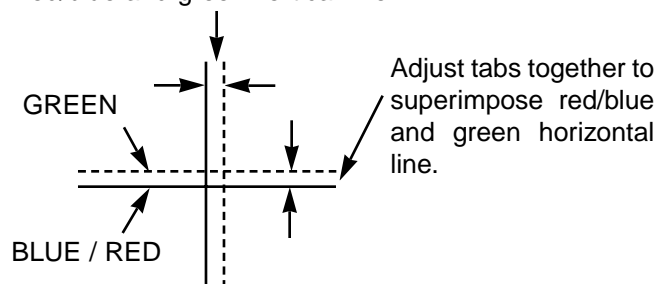
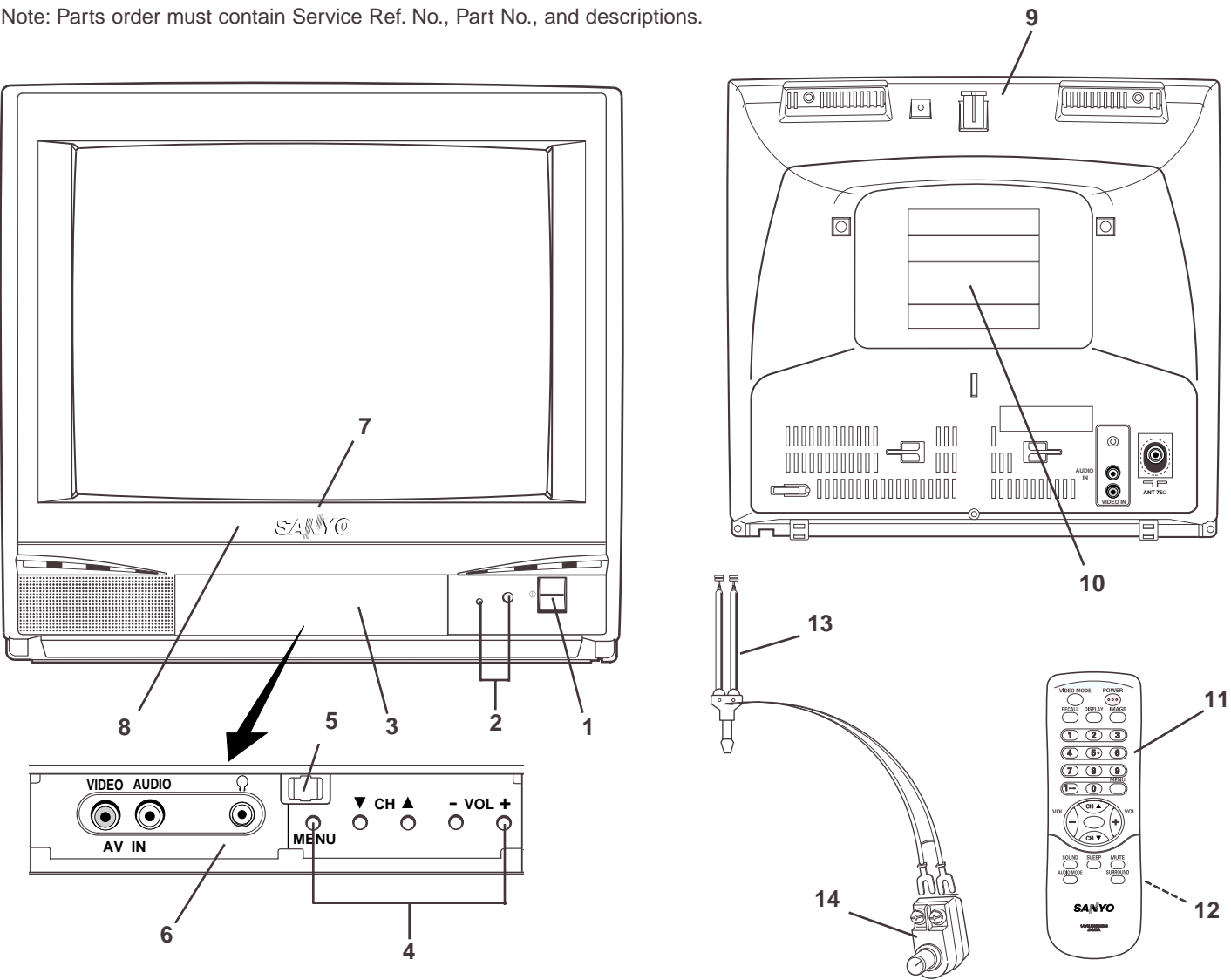


Figure- 3 BLUE/RED AND GREEN MOVEMENT

Cabinet Parts List

Note: Parts order must contain Service Ref. No., Part No., and descriptions.



Key No.	Part No.	Description	Key No.	Part No.	Description
1	610 278 1489	BUTTON POWER F8FF			
	610 270 5591	SPRING-HKG-S6KL			
2	610 278 1595	DEC IND F8FF			
3	610 278 1571	DOOR F8FF			
4	610 277 8403	BUTTON UNITED F8FE			
5	610 104 2505	LATCH PUSH,7.9X6.9BK			
or	655 000 6936	LATCH PUSH,7.9X6.9BK			
6	610 277 9455	DEC CONTROL SHEET-F8FE			
7	645 030 7348	BADGE,SANYO			
or	645 039 1866	BADGE,SANYO			
8	610 278 1526	CABINET FRONT F8FG			
9	610 277 7352	CABINET BACK F8FE			
10	610 318 1394	LABEL RATING F8FT			
11	645 051 8904	ASSY,REMOCON JXMRA			
12	610 297 3723	RC-BATTERY LID-JXMRA			
13	610 217 1006	ROD ANTENNA ASSY			
OR	645 012 0428	ROD ANTENNA ASSY			
14	645 004 3925	ANT MATCHING BOX			
	645 005 0251	ANT MATCHING BOX			
	610 317 9407	INSTRUCTIONS MANUAL F8FT			

Chassis Electrical Parts List

F8FT

Product safety should be considered when a component replacement is made in any area of a receiver. Components indicated by a Δ mark in this parts list and the circuit diagram show components whose value have special significance to product safety. It is particularly recommended that only parts specified on the following parts list be used for components replacement pointed out by the mark.

Note: Parts order must contain Service Ref. No., Part No., and descriptions. The main PCB unit will be supplied without tuner and flyback transformer. They should be ordered separately.

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
NOTES: Read description in the Capacitor and Resistor as follows: CAPACITOR CERAMIC 100P K 50V <div style="margin-left: 100px;"> _____ Rated Voltage _____ Tolerance Symbols: Less than 10pF A : Not specified B : $\pm 0.1\text{pF}$ C : $\pm 0.25\text{pF}$ D : $\pm 0.5\text{pF}$ F : $\pm 1\text{pF}$ G : $\pm 2\text{pF}$ R : $\pm 0.25\text{-}0\text{pF}$ S : $\pm 0\text{-}0.25\text{pF}$ E : $\pm 0\text{-}1\text{pF}$ More than 10pF A : Not specified B : $\pm 0.1\%$ C : $\pm 0.25\%$ D : $\pm 0.5\%$ F : $\pm 1\%$ G : $\pm 2\%$ H : $\pm 3\%$ J : $\pm 5\%$ K : $\pm 10\%$ L : $\pm 15\%$ M : $\pm 20\%$ N : $\pm 30\%$ P : $\pm 100\text{-}0\%$ Q : $\pm 30\text{-}10\%$ T : $\pm 50\text{-}10\%$ U : $\pm 75\text{-}10\%$ V : $\pm 20\text{-}10\%$ W : $\pm 100\text{-}10\%$ X : $\pm 40\text{-}20\%$ Y : $\pm 150\text{-}10\%$ Z : $\pm 80\text{-}20\%$ _____ Rated value: P=pico farad, U=micro farad </div> Material: CERAMIC..... Ceramic MT-PAPER..... Metallized Paper POLYESTER..... Polyester MT-POLYEST.....Metallized Polyester POLYPRO..... Polypropylene MT-POLYPRO.....Metallized Polypropylene COMPO FILM.....Composite film MT-COMPO.....Metallized Composite STYRENE.....Styrene TA-SOLID..... Tantalum Solid AL-SOLID..... Aluminium Solid ELECT..... Electrolytic NP-ELECT.....Non-polarised Electrolytic OS-SOLID..... Aluminium Solid with Organic Semiconductive Electrolytic DL-ELECT..... Double Layered Electrolytic			OUT OF CIRCUIT BOARD PICTURE TUBE Δ Q901 414 010 4505 CRT A34EJL01X21 COIL L901 652 001 4428 COIL,DEGAUSSING MISCELLANEOUS SP901 652 000 0650 SPEAKER, 8 652 001 3476 SPEAKER, 8 Δ W901 645 037 2490 CORD, POWER-2.4MK-A5102 W902 652 001 4527 ASSY,WIRE GND CONNECTOR F		
RESISTOR CARBON 4.7K J A 1/4W <div style="margin-left: 100px;"> _____ Rated Wattage _____ Performance Symbols: A: General B: Non flammable Z: Low noise Other: Temperature coefficient _____ Tolerance Symbols: A: $\pm 0.05\%$ B: $\pm 0.1\%$ C: $\pm 0.25\%$ D: $\pm 0.5\%$ F: $\pm 1\%$ G: $\pm 2\%$ J: $\pm 5\%$ K: $\pm 10\%$ M: $\pm 20\%$ P: $\pm 5\text{-}15\%$ _____ Rated value, ohms: K: 1,000, M: 1,000,000 </div> Material: CARBON..... Carbon MT-FILM..... Metal Film OXIDE-MT..... Oxide Metal Film SOLID..... Composition MT-GLAZE..... Metal Glaze WIRE WOUND... Wire Wound CERAMIC RES.. Ceramic FUSIBLE RES.... Fusible			610 315 1311 ASSY,PWB,MAIN F8FP 1AA0B10E695AA TRANSISTOR Q111 405 015 9701 TR 2SC2814-F4-TB Q171 405 134 5905 TR 2SA1037AK-T146-R 405 147 2205 TR 2SA1037AK-S-T146 405 002 0308 TR 2SA1037K T146 R 405 002 0407 TR 2SA1037K T146 S 405 002 6706 TR 2SA1179-M6-TB 405 002 6904 TR 2SA1179-M7-TB 405 163 1503 TR 2SA1179N-M6-TB 405 163 2708 TR 2SA1179N-M7-TB 405 173 9605 TR 2SA1235A1E 405 173 9704 TR 2SA1235A1F Q261 405 134 5905 TR 2SA1037AK-T146-R 405 147 2205 TR 2SA1037AK-S-T146 405 002 0308 TR 2SA1037K T146 R 405 002 0407 TR 2SA1037K T146 S 405 002 6706 TR 2SA1179-M6-TB 405 002 6904 TR 2SA1179-M7-TB 405 163 1503 TR 2SA1179N-M6-TB 405 163 2708 TR 2SA1179N-M7-TB 405 173 9605 TR 2SA1235A1E 405 173 9704 TR 2SA1235A1F Q431 405 018 0507 TR 2SC3332-R 405 018 0606 TR 2SC3332-S Q432 406 017 1908 TR TT2140LS-YB11 Q527 405 014 4509 TR 2SC2412K T146 R 405 014 4608 TR 2SC2412K T146 S 405 015 8704 TR 2SC2812-L6-TB 405 015 8902 TR 2SC2812-L7-TB 405 163 1602 TR 2SC2812N-L6-TB0 405 163 1701 TR 2SC2812N-L7-TB0 405 173 9803 TR 2SC3928A1R 405 173 9902 TR 2SC3928A1S Q611 405 013 6801 TR 2SC2274-E 405 013 7006 TR 2SC2274-F Q612 405 006 6504 TR 2SA984-E 405 006 6702 TR 2SA984-F Q613 405 171 4107 TR 2SK2647 Q625 405 013 6801 TR 2SC2274-E		

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
Q641	405 013 7006	TR 2SC2274-F	Q693	405 020 7709	TR 2SC945A-QA
	406 000 6804	TR 2SA1015-GR(SAN)		405 020 7907	TR 2SC945A-RA
	405 001 7605	TR 2SA1015-Y(SAN)		405 011 8401	TR 2SC1740S-Q
	405 004 3208	TR 2SA564A-R(CU)		405 011 8500	TR 2SC1740S-R
Q642	405 151 3304	TR 2SA608NF-NPA		405 011 8609	TR 2SC1740S-S
	405 006 1806	TR 2SA933S-R		405 012 2002	TR 2SC1815-GR
	405 011 8401	TR 2SC1740S-Q		405 012 2309	TR 2SC1815-Y
	405 011 8500	TR 2SC1740S-R	Q818	405 157 0505	TR 2SC536NF-NPA
Q651	405 011 8609	TR 2SC1740S-S		405 151 8705	TR 2SC536NG-NPA
	405 012 2002	TR 2SC1815-GR		405 020 7501	TR 2SC945A-PA
	405 012 2309	TR 2SC1815-Y		405 020 7709	TR 2SC945A-QA
Q652	405 157 0505	TR 2SC536NF-NPA	Q861	405 014 4509	TR 2SC2412K T146 R
	405 151 8705	TR 2SC536NG-NPA		405 014 4608	TR 2SC2412K T146 S
	405 020 7501	TR 2SC945A-PA		405 015 8704	TR 2SC2812-L6-TB
	405 020 7709	TR 2SC945A-QA		405 015 8902	TR 2SC2812-L7-TB
Q654	405 020 7907	TR 2SC945A-RA	Q871	405 163 1602	TR 2SC2812N-L6-TB0
	405 089 0000	TR 2SA1707-S		405 163 1701	TR 2SC2812N-L7-TB0
	405 089 0109	TR 2SA1707-T		405 173 9803	TR 2SC3928A1R
	405 009 6907	TR 2SB985-S		405 173 9902	TR 2SC3928A1S
Q661	405 009 7003	TR 2SB985-T	Q881	405 134 5905	TR 2SA1037AK-T146-R
	405 059 9804	TR 2SD1913-Q-RA		405 147 2205	TR 2SA1037AK-S-T146
	405 059 9903	TR 2SD1913-R-RA		405 002 0308	TR 2SA1037K T146 R
	405 014 4509	TR 2SC2412K T146 R		405 002 0407	TR 2SA1037K T146 S
Q662	405 014 4608	TR 2SC2412K T146 S	Q886	405 002 6706	TR 2SA1179-M6-TB
	405 015 8704	TR 2SC2812-L6-TB		405 002 6904	TR 2SA1179-M7-TB
	405 015 8902	TR 2SC2812-L7-TB		405 163 1503	TR 2SA1179N-M6-TB
	405 163 1602	TR 2SC2812N-L6-TB0		405 163 2708	TR 2SA1179N-M7-TB
Q663	405 163 1701	TR 2SC2812N-L7-TB0	Q681	405 173 9605	TR 2SA1235A1E
	405 173 9803	TR 2SC3928A1R		405 173 9704	TR 2SA1235A1F
	405 173 9902	TR 2SC3928A1S		405 014 4509	TR 2SC2412K T146 R
	405 134 5905	TR 2SA1037AK-T146-R		405 014 4608	TR 2SC2412K T146 S
Q681	405 147 2205	TR 2SA1037AK-S-T146	Q681	405 015 8902	TR 2SC2812-L6-TB
	405 002 0308	TR 2SA1037K T146 R		405 015 8902	TR 2SC2812-L7-TB
	405 002 0407	TR 2SA1037K T146 S		405 163 1602	TR 2SC2812N-L6-TB0
	405 002 6706	TR 2SA1179-M6-TB		405 163 1701	TR 2SC2812N-L7-TB0
Q681	405 002 6904	TR 2SA1179-M7-TB	Q681	405 173 9803	TR 2SC3928A1R
	405 163 1503	TR 2SA1179N-M6-TB		405 173 9902	TR 2SC3928A1S
	405 163 2708	TR 2SA1179N-M7-TB		INTEGRATED CIRCUIT	
	405 173 9605	TR 2SA1235A1E		IC001	409 472 4408 IC LA4266-E
Q681	405 173 9704	TR 2SA1235A1F		IC201	409 517 5902 IC LA76818A
	405 014 4509	TR 2SC2412K T146 R		IC202	409 241 5407 IC BA178M05T
	405 014 4608	TR 2SC2412K T146 S			409 265 4806 IC L78M05CV
	405 015 8704	TR 2SC2812-L6-TB			409 172 1509 IC MC78M05CT
Q681	405 015 8902	TR 2SC2812-L7-TB			409 320 5700 IC UPC78M05AHF
	405 163 1602	TR 2SC2812N-L6-TB0		IC501	409 507 0900 IC LA78040N
	405 163 1701	TR 2SC2812N-L7-TB0			409 510 1109 IC TDA9302H
	405 173 9803	TR 2SC3928A1R		IC681	409 241 5407 IC BA178M05T
Q681	405 173 9902	TR 2SC3928A1S			409 265 4806 IC L78M05CV
	405 011 8401	TR 2SC1740S-Q			409 172 1509 IC MC78M05CT
	405 011 8500	TR 2SC1740S-R			409 320 5700 IC UPC78M05AHF
	405 011 8609	TR 2SC1740S-S			
Q681	405 012 2002	TR 2SC1815-GR			
	405 012 2101	TR 2SC1815-O			
	405 012 2309	TR 2SC1815-Y			
	405 157 0505	TR 2SC536NF-NPA			
Q681	405 151 8705	TR 2SC536NG-NPA			
	405 020 7501	TR 2SC945A-PA			

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
IC801	410 527 1907	IC LC863440W-53Z0-TLM	C442	403 346 6901	MT-POLYPRO 0.22U J 250V
IC802	409 495 7004	IC CAT24WC04P	C469	403 049 4204	ELECT 10U M 50V
	409 470 3403	IC KS24C041C	C471	404 056 5208	NP-ELECT 2.2U M 100V
	409 427 4705	IC M24C04-BN6		404 056 5307	NP-ELECT 2.2U M 100V
	410 499 0908	IC AT24C04-10PI-2.7		404 045 6605	NP-ELECT 2.2U M 50V
CAPACITOR			C486	403 055 8401	ELECT 22U M 250V
C004	404 084 4204	ELECT 4.7U M 50V	C510	404 084 4204	ELECT 4.7U M 50V
C005	404 089 2700	ELECT 100U M 25V		403 051 0607	ELECT 4.7U M 50V
C007	403 342 3300	CERAMIC 0.1U K 25V	C514	403 049 4204	ELECT 10U M 50V
C008	403 342 3300	CERAMIC 0.1U K 25V	C515	403 045 9807	ELECT 2200U M 25V
C031	404 089 2700	ELECT 100U M 25V	C517	403 053 2104	ELECT 220U M 35V
C035	403 045 1504	ELECT 1000U M 25V	C518	403 069 0507	CERAMIC 1000P K 50V
C041	403 047 5005	ELECT 470U M 25V	C520	403 064 1202	POLYESTER 0.1U K 100V
C101	403 044 1703	ELECT 470U M 16V		403 276 9706	POLYESTER 0.1U K 100V
C106	403 051 3103	ELECT 47U M 50V	C521	403 054 1502	ELECT 470U M 35V
C107	404 084 4303	ELECT 47U M 50V	C524	403 219 4904	MT-COMPO 0.27U J 50V
	403 051 3103	ELECT 47U M 50V	C527	403 049 4204	ELECT 10U M 50V
C111	403 215 2201	CERAMIC 0.01U K 50V	△C601	404 072 7705	MT-POLYEST 0.068U M 250V
C112	403 215 2201	CERAMIC 0.01U K 50V		404 079 6503	MT-POLYEST 0.068U M 250V
C113	403 215 2201	CERAMIC 0.01U K 50V		404 073 7506	MT-POLYEST 0.068U M 275V
C120	403 224 6603	CERAMIC 0.022U Z 50V		404 092 0700	MT-POLYEST 0.068U M 275
C121	403 215 2201	CERAMIC 0.01U K 50V	C608	403 076 6707	CERAMIC 1000P K 1K
C122	403 042 2405	ELECT 100U M 16V		403 312 8205	CERAMIC 1000P K 1K
C132	403 048 6308	ELECT 0.47U M 50V	C609	404 038 1600	ELECT 100U M 400V
C134	404 084 3900	ELECT 10U M 50V		404 067 4009	ELECT 100U M 400V
C135	403 048 6308	ELECT 0.47U M 50V		404 069 5707	ELECT 100U M 400V
C138	403 284 4304	CERAMIC 0.022U K 50V	△C610	404 073 3904	CERAMIC 1000P K 250V
C171	403 155 2101	CERAMIC 1500P K 50V		404 073 2105	CERAMIC 1000P M 250V
C172	403 215 2201	CERAMIC 0.01U K 50V		404 071 3302	CERAMIC 1000P M 400V
C178	404 084 3801	ELECT 1U M 50V		404 086 0907	CERAMIC 1000P M 400V
C1902	403 050 2800	ELECT 22U M 50V	C611	403 056 9704	POLYESTER 0.01U J 50V
C201	403 086 2300	NP-ELECT 1U M 50V		403 178 9309	POLYESTER 0.01U J 50V
C202	403 058 2604	POLYESTER 0.015U J 50V	C613	403 181 8207	POLYESTER 0.1U K 50V
	403 179 3207	POLYESTER 0.015U J 50V	C614	403 237 7901	MT-COMPO 0.22U J 50V
C203	403 215 2201	CERAMIC 0.01U K 50V	C615	403 325 5109	CERAMIC 220P K 1K
C204	403 049 4204	ELECT 10U M 50V	C617	403 325 5109	CERAMIC 220P K 1K
C205	403 049 4204	ELECT 10U M 50V	C618	403 083 8107	POLYPRO 0.01U J 630V
C209	403 048 6308	ELECT 0.47U M 50V	△C628	404 073 5106	CERAMIC 470P K 250V
C210	403 047 5005	ELECT 470U M 25V		404 073 3300	CERAMIC 470P M 250V
C212	403 155 4204	CERAMIC 15P J 50V		404 071 4507	CERAMIC 470P K 400V
C221	403 342 3300	CERAMIC 0.1U K 25V	△C629	404 087 0302	CERAMIC 470P M 400V
C222	403 342 3300	CERAMIC 0.1U K 25V		404 073 4505	CERAMIC 2200P K 250V
C223	403 342 3300	CERAMIC 0.1U K 25V		404 073 2907	CERAMIC 2200P M 250V
C224	403 342 3300	CERAMIC 0.1U K 25V		404 071 4101	CERAMIC 2200P M 400V
C225	403 049 0008	ELECT 1U M 50V		404 084 5904	CERAMIC 2200P M 400V
C226	403 086 2300	NP-ELECT 1U M 50V	C639	403 049 0008	ELECT 1U M 50V
C227	403 049 4204	ELECT 10U M 50V	C643	403 043 7409	ELECT 3300U M 16V
C230	403 215 2201	CERAMIC 0.01U K 50V	C644	404 084 4105	ELECT 3.3U M 50V
C231	403 260 2904	MT-COMPO 0.33U J 50V		403 046 1602	ELECT 3.3U M 25V
C232	403 260 2904	MT-COMPO 0.33U J 50V	C651	404 073 9005	ELECT 220U M 160V
C233	403 045 1504	ELECT 1000U M 25V	C652	404 087 3402	ELECT 1000U M 35V
C240	403 215 2201	CERAMIC 0.01U K 50V		403 052 8503	ELECT 1000U M 35V
C243	403 215 2201	CERAMIC 0.01U K 50V	C654	403 045 9807	ELECT 2200U M 25V
C244	403 051 3103	ELECT 47U M 50V	C655	403 247 5003	CERAMIC 470P K 1K
C245	403 086 2300	NP-ELECT 1U M 50V		403 269 1809	CERAMIC 470P K 1K
C246	403 049 0008	ELECT 1U M 50V	C656	403 222 1303	CERAMIC 1000P K 1K
C247	403 049 9803	ELECT 2.2U M 50V		403 271 9602	CERAMIC 1000P K 1K
C273	403 342 3300	CERAMIC 0.1U K 25V	C657	403 247 5003	CERAMIC 470P K 1K
C358	403 049 0008	ELECT 1U M 50V		403 269 1809	CERAMIC 470P K 1K
C423	404 080 6608	MT-POLYPRO 6800P H 1.5K	C658	403 247 5003	CERAMIC 470P K 1K
	403 348 0600	MT-POLYPRO 6800P H 1.5K		403 269 1809	CERAMIC 470P K 1K
C426	403 066 6106	MT-POLYEST 0.47U J 250V	C663	404 084 3801	ELECT 1U M 50V
C432	403 075 7101	CERAMIC 1000P K 500V		403 049 0008	ELECT 1U M 50V
C433	403 076 3102	CERAMIC 3900P K 500V	C664	404 084 2705	ELECT 10U M 16V
C434	403 051 3103	ELECT 47U M 50V		403 041 8804	ELECT 10U M 16V
C441	403 346 6901	MT-POLYPRO 0.22U J 250V	C665	403 043 0202	ELECT 220U M 16V
			C681	403 040 5408	ELECT 2200U M 10V

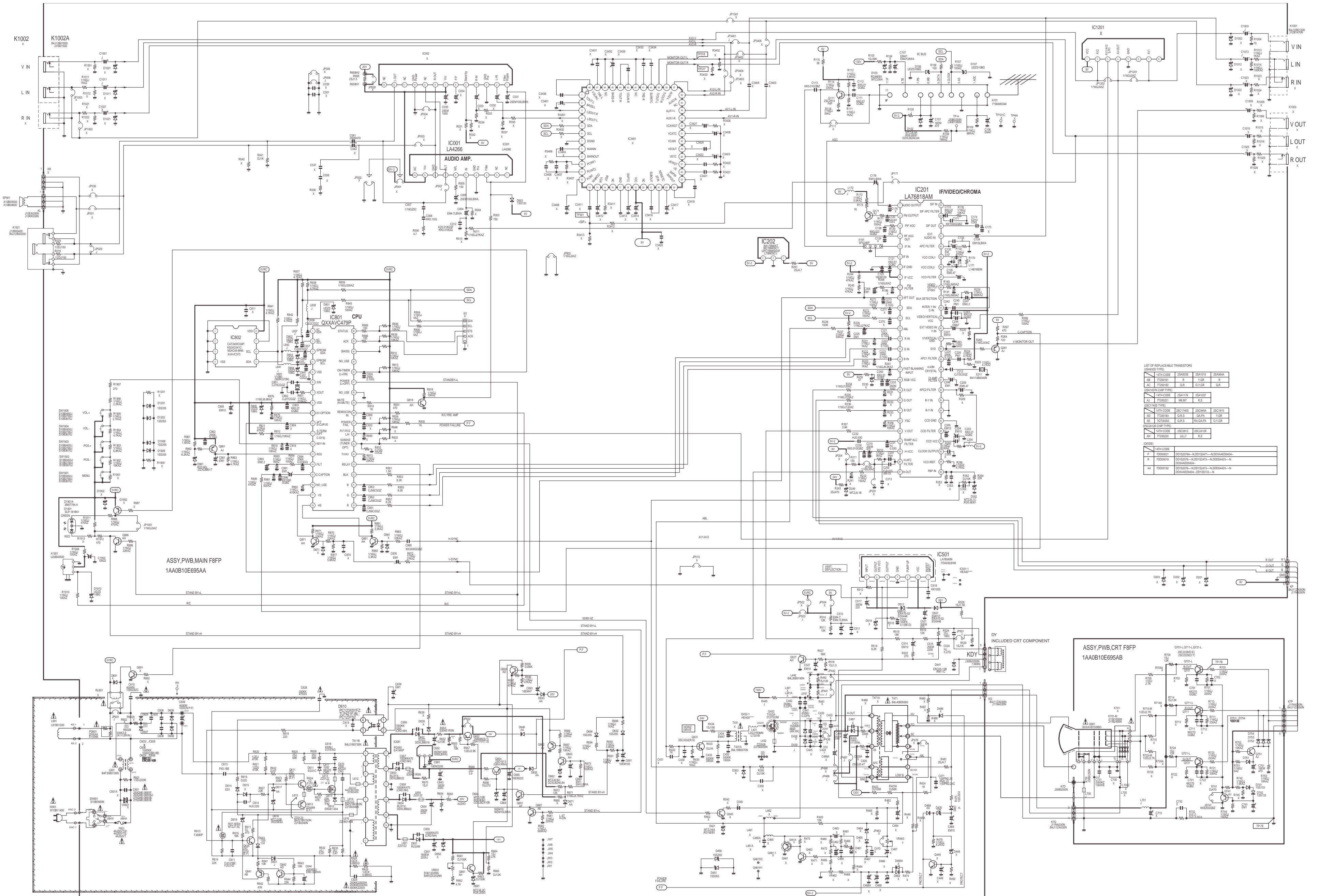
Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
C691	403 039 6508	ELECT 100U M 10V	R223	401 105 0504	MT-GLAZE 1K JA 1/16W
C693	403 043 9106	ELECT 47U M 16V	R224	401 105 5301	MT-GLAZE 4.7K JA 1/16W
C801	403 155 4204	CERAMIC 15P J 50V	R225	401 105 5301	MT-GLAZE 4.7K JA 1/16W
C802	403 157 2505	CERAMIC 27P J 50V	R226	401 105 3406	MT-GLAZE 27K JA 1/16W
C803	403 215 2201	CERAMIC 0.01U K 50V	R227	401 105 4205	MT-GLAZE 33K JA 1/16W
C805	403 049 4204	ELECT 10U M 50V	R228	401 024 7707	CARBON 100K JA 1/6W
C824	403 342 3300	CERAMIC 0.1U K 25V	R229	401 105 6704	MT-GLAZE 680K JA 1/16W
C835	403 049 0008	ELECT 1U M 50V	R230	401 026 9303	CARBON 47 JA 1/6W
C837	403 145 9905	CERAMIC 22P J 50V	R234	401 105 0900	MT-GLAZE 120 JA 1/16W
C838	403 145 9905	CERAMIC 22P J 50V	R235	401 105 0900	MT-GLAZE 120 JA 1/16W
C841	403 145 9905	CERAMIC 22P J 50V	R236	401 105 0900	MT-GLAZE 120 JA 1/16W
C842	403 145 9905	CERAMIC 22P J 50V	R243	401 068 3703	OXIDE-MT 470 JA 2W
C851	403 157 3106	CERAMIC 56P J 50V	R244	401 105 5400	MT-GLAZE 47K JA 1/16W
C852	403 157 3106	CERAMIC 56P J 50V	R245	401 105 5400	MT-GLAZE 47K JA 1/16W
C853	403 157 3106	CERAMIC 56P J 50V	R263	401 105 0603	MT-GLAZE 10K JA 1/16W
C861	403 049 0008	ELECT 1U M 50V	R264	401 024 9008	CARBON 120 JA 1/6W
C862	403 342 3300	CERAMIC 0.1U K 25V	R265	401 105 3901	MT-GLAZE 33 JA 1/16W
C880	403 155 2200	CERAMIC 3300P K 50V	R267	401 026 9600	CARBON 470 JA 1/6W
C891	403 049 0008	ELECT 1U M 50V	R271	401 105 0405	MT-GLAZE 100 JA 1/16W
C893	403 049 9803	ELECT 2.2U M 50V	R272	401 105 0405	MT-GLAZE 100 JA 1/16W
C894	403 281 5007	CERAMIC 0.033U K 25V	R280	401 105 0405	MT-GLAZE 100 JA 1/16W
C896	403 113 3805	CERAMIC 1000P K 50V	R286	401 203 9904	MT-GLAZE 4.7K FA 1/16W
RESISTOR			R289	401 105 0405	MT-GLAZE 100 JA 1/16W
R003	401 027 6905	CARBON 750 JA 1/6W	R291	401 068 1600	OXIDE-MT 4.7 JA 2W
R005	401 025 1308	CARBON 150 JA 1/6W	R351	401 105 7404	MT-GLAZE 8.2K JA 1/16W
R006	401 026 8108	CARBON 4.7 JA 1/6W	R352	401 012 7009	CARBON 10K JA 1/4W
R011	401 105 3406	MT-GLAZE 27K JA 1/16W	R354	401 025 8208	CARBON 22K JA 1/6W
R019	401 007 7601	CARBON 150 JA 1/2W	R355	401 012 7009	CARBON 10K JA 1/4W
R029	401 007 7601	CARBON 150 JA 1/2W	R356	401 105 0603	MT-GLAZE 10K JA 1/16W
R041	401 012 5708	CARBON 1K JA 1/4W	R357	401 026 7002	CARBON 3.9K JA 1/6W
R1004	401 027 6608	CARBON 75 JA 1/6W	R358	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1011	401 105 0504	MT-GLAZE 1K JA 1/16W	R423	401 012 8105	CARBON 100K JA 1/4W
R1013	401 105 0504	MT-GLAZE 1K JA 1/16W	R423A	401 021 4105	CARBON 56K JA 1/4W
R1014	401 105 0702	MT-GLAZE 100K JA 1/16W	R424	401 024 7004	CARBON 1K JA 1/6W
R103	401 061 8101	OXIDE-MT 39K JA 1W	R426	401 024 7400	CARBON 10K JA 1/6W
R106	401 024 6700	CARBON 100 JA 1/6W	R430	401 105 0504	MT-GLAZE 1K JA 1/16W
R107	401 105 0405	MT-GLAZE 100 JA 1/16W	R432	401 024 7004	CARBON 1K JA 1/6W
R108	401 105 2102	MT-GLAZE 18K JA 1/16W	R433	401 058 3706	OXIDE-MT 1K JA 1W
R109	401 105 8203	MT-GLAZE 68K JA 1/16W	R434	401 059 6706	OXIDE-MT 180 JA 1W
R111	401 105 0504	MT-GLAZE 1K JA 1/16W	R435	402 069 8704	WIRE WOUND 8.2 KA 7W
R112	401 105 6001	MT-GLAZE 5.6K JA 1/16W		402 074 5309	WIRE WOUND 8.2 KA 7W
R114	401 105 4007	MT-GLAZE 330 JA 1/16W		402 098 0700	WIRE WOUND 8.2 KA 7W
R115	401 027 2105	CARBON 56 JA 1/6W	R442	401 058 9807	OXIDE-MT 12K JA 1W
R116	401 105 4403	MT-GLAZE 39 JA 1/16W	R475	401 009 5803	CARBON 330 JA 1/2W
R130	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R479	401 105 7404	MT-GLAZE 8.2K JA 1/16W
R132	401 105 5202	MT-GLAZE 470 JA 1/16W	R481	401 068 1600	OXIDE-MT 4.7 JA 2W
R140	401 105 5905	MT-GLAZE 560 JA 1/16W	R510	401 024 7400	CARBON 10K JA 1/6W
R141	401 105 5905	MT-GLAZE 560 JA 1/16W	R511	401 024 7400	CARBON 10K JA 1/6W
R171	401 105 1402	MT-GLAZE 150 JA 1/16W	R514	401 027 8602	CARBON 8.2K JA 1/6W
R172	401 105 4601	MT-GLAZE 3.9K JA 1/16W	R515	401 025 4606	CARBON 18K JA 1/6W
R173	401 024 7004	CARBON 1K JA 1/6W	R516	401 024 9701	CARBON 12K JA 1/6W
R176	401 105 0603	MT-GLAZE 10K JA 1/16W	R518	401 057 9907	OXIDE-MT 1.5 JA 1W
R1902	401 105 2102	MT-GLAZE 18K JA 1/16W	R519	401 024 5604	CARBON 1 JA 1/6W
R1903	401 105 6605	MT-GLAZE 6.8K JA 1/16W	R522	401 026 0607	CARBON 270 JA 1/6W
R1904	401 105 5301	MT-GLAZE 4.7K JA 1/16W	R524	401 066 0308	OXIDE-MT 180 JA 2W
R1905	401 105 3307	MT-GLAZE 2.7K JA 1/16W	R527	401 027 3003	CARBON 56K JA 1/6W
R1906	401 105 2805	MT-GLAZE 2.2K JA 1/16W	R528	401 059 3903	OXIDE-MT 1.5K JA 1W
R1907	401 026 0607	CARBON 270 JA 1/6W	R529	401 058 3706	OXIDE-MT 1K JA 1W
R1908	401 105 0405	MT-GLAZE 100 JA 1/16W	△R601	401 008 8607	CARBON 220K JA 1/2W
R1910	401 105 0405	MT-GLAZE 100 JA 1/16W	R602B	402 060 8109	WIRE WOUND 3.9 KA 5W
R1911	401 105 5202	MT-GLAZE 470 JA 1/16W		402 072 4205	WIRE WOUND 3.9 KA 5W
R1912	401 026 9600	CARBON 470 JA 1/6W		402 097 9902	WIRE WOUND 3R9 KA 5W
R211	401 025 1308	CARBON 150 JA 1/6W	R611	401 020 0801	CARBON 470 JA 1/4W
R212	401 105 1402	MT-GLAZE 150 JA 1/16W	△R613	402 001 8106	FUSIBLE RES 680 J- 1/4W
R221	401 105 0504	MT-GLAZE 1K JA 1/16W	R614	401 025 8208	CARBON 22K JA 1/6W
R222	401 105 0504	MT-GLAZE 1K JA 1/16W	R615	401 025 7409	CARBON 220 JA 1/6W
			R616	401 025 4606	CARBON 18K JA 1/6W

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
R619	401 016 1508	CARBON 22 JA 1/4W	R851	401 025 1605	CARBON 1.5K JA 1/6W
R620	401 010 4802	CARBON 470K JA 1/2W	R853	401 027 8602	CARBON 8.2K JA 1/6W
R621	401 010 4802	CARBON 470K JA 1/2W	R855	401 027 8602	CARBON 8.2K JA 1/6W
R622	401 019 9600	CARBON 47 JA 1/4W	R857	401 027 8602	CARBON 8.2K JA 1/6W
R623	401 026 4902	CARBON 330K JA 1/6W	R861	401 105 1501	MT-GLAZE 1.5K JA 1/16W
△R624	402 001 8502	FUSIBLE RES 10 J- 1/2W	R862	401 105 7404	MT-GLAZE 8.2K JA 1/16W
R625	401 069 4501	OXIDE-MT 68K JA 2W	R863	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R626	401 069 4501	OXIDE-MT 68K JA 2W	R866	401 024 6700	CARBON 100 JA 1/6W
R627	401 025 8208	CARBON 22K JA 1/6W	R869	401 024 6700	CARBON 100 JA 1/6W
△R628	402 000 8305	SOLID 5.6M KA 1/2W	R870	401 105 2904	MT-GLAZE 22K JA 1/16W
△R629	402 000 8305	SOLID 5.6M KA 1/2W	R871	401 105 0603	MT-GLAZE 10K JA 1/16W
R631	401 027 0309	CARBON 47K JA 1/6W	R872	401 105 3406	MT-GLAZE 27K JA 1/16W
R632	401 180 8402	OXIDE-MT 0.47 JA 2W	R873	401 105 4205	MT-GLAZE 33K JA 1/16W
R633	401 180 8402	OXIDE-MT 0.47 JA 2W	R875	401 105 0603	MT-GLAZE 10K JA 1/16W
R641	401 024 7400	CARBON 10K JA 1/6W	R876	401 105 6605	MT-GLAZE 6.8K JA 1/16W
R642	401 027 0309	CARBON 47K JA 1/6W	R877	401 105 6001	MT-GLAZE 5.6K JA 1/16W
R643	401 025 4606	CARBON 18K JA 1/6W	R881	401 105 4106	MT-GLAZE 3.3K JA 1/16W
R644	401 025 8208	CARBON 22K JA 1/6W	R882	401 105 4106	MT-GLAZE 3.3K JA 1/16W
R652	401 012 7009	CARBON 10K JA 1/4W	R883	401 105 4205	MT-GLAZE 33K JA 1/16W
△R653	645 017 6944	PROTECTOR, 1.5A 125V	R886	401 105 2904	MT-GLAZE 22K JA 1/16W
R655	401 012 7009	CARBON 10K JA 1/4W	R888	401 105 5202	MT-GLAZE 470 JA 1/16W
R656	401 060 7402	OXIDE-MT 270 JA 1W	R891	401 105 7305	MT-GLAZE 820 JA 1/16W
R657	401 009 9801	CARBON 3.9K JA 1/2W	R892	401 105 5509	MT-GLAZE 470K JA 1/16W
R658	401 064 5305	OXIDE-MT 1.5 JA 2W	R893	401 105 8005	MT-GLAZE 1M JA 1/16W
R661	401 012 8105	CARBON 100K JA 1/4W	R894	401 105 0405	MT-GLAZE 100 JA 1/16W
R662	401 026 9907	CARBON 4.7K JA 1/6W	R895	401 105 5202	MT-GLAZE 470 JA 1/16W
R663	401 014 6109	CARBON 150K JA 1/4W	VARIABLE RESISTOR		
R664	401 060 9307	OXIDE-MT 27K JA 1W	VR651	645 006 5125	VR, SEMI, 2K N
R665	401 013 6407	CARBON 12K JA 1/4W		652 000 0100	VR, SEMI, 2K N
R666	401 105 2904	MT-GLAZE 22K JA 1/16W	TRANSFORMER		
R667	401 105 0603	MT-GLAZE 10K JA 1/16W	T431A	652 001 1144	TRANS, DRIVE
R669	401 067 3100	OXIDE-MT 3.9 JA 2W	△T471	652 001 4251	TRANS, FLYBACK
R670	401 057 8009	OXIDE-MT 1 JA 1W	△T611B	652 001 4381	TRANS, POWER, PULSE
R671	401 105 5301	MT-GLAZE 4.7K JA 1/16W	COIL		
R672	401 024 9701	CARBON 12K JA 1/6W	L171	645 053 9015	TRANS, OSC, 45.75MHZ
R673	401 105 0702	MT-GLAZE 100K JA 1/16W	L431	610 032 5821	FILTER COIL
R681	401 105 2904	MT-GLAZE 22K JA 1/16W		645 008 5628	INDUCTOR, 1U M
R682	401 105 6100	MT-GLAZE 560K JA 1/16W	L432	645 002 2364	CORE, PIPE
R691	401 105 0603	MT-GLAZE 10K JA 1/16W	L442	652 001 0338	INDUCTOR, 665UH
R693	401 105 4601	MT-GLAZE 3.9K JA 1/16W	△L601	652 001 3162	LINE FILTER
R694	401 105 0504	MT-GLAZE 1K JA 1/16W	L612	645 018 9722	CORE, PIPE
R695	401 021 4105	CARBON 56K JA 1/4W		652 001 0147	CORE, PIPE
R696	401 105 5400	MT-GLAZE 47K JA 1/16W	L614	645 018 9722	CORE, PIPE
R697	401 105 5400	MT-GLAZE 47K JA 1/16W		652 001 0147	CORE, PIPE
R698	401 105 0504	MT-GLAZE 1K JA 1/16W	L615	645 018 9722	CORE, PIPE
R801	401 105 3505	MT-GLAZE 270K JA 1/16W		652 001 0147	CORE, PIPE
R804	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	L616	645 005 0763	CORE, PIPE
R805	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	△L653	645 017 6944	PROTECTOR, 1.5A 125V
R811	401 105 5400	MT-GLAZE 47K JA 1/16W	DIODE		
R812	401 105 0603	MT-GLAZE 10K JA 1/16W	D003	407 012 4406	DIODE 1SS133
R813	401 105 0603	MT-GLAZE 10K JA 1/16W	D102	407 099 5600	ZENER DIODE MTZJ6.8A
R814	401 105 0603	MT-GLAZE 10K JA 1/16W		407 057 4003	ZENER DIODE RD6.8EB1
R816	401 105 0603	MT-GLAZE 10K JA 1/16W		408 047 8605	ZENER DIODE MTZJ6.8A
R818	401 024 7004	CARBON 1K JA 1/6W	D103	407 100 0204	ZENER DIODE MTZJ36A
R819	401 105 0603	MT-GLAZE 10K JA 1/16W		407 056 2307	ZENER DIODE RD36EB1
R830	401 024 7004	CARBON 1K JA 1/6W	D106	407 206 5608	ZENER DIODE UDZS-TE-1710B
R831	401 026 9600	CARBON 470 JA 1/6W	D107	407 206 5608	ZENER DIODE UDZS-TE-1710B
R832	403 157 3601	CERAMIC 100P J 50V	D1201	407 149 0807	DIODE 1SS355-TE-17
R834	401 105 0603	MT-GLAZE 10K JA 1/16W	D1202	407 149 0807	DIODE 1SS355-TE-17
R835	401 105 0603	MT-GLAZE 10K JA 1/16W	D1901	407 116 6504	LED SLP-181B-51
R836	401 105 0603	MT-GLAZE 10K JA 1/16W	D1908	407 149 0807	DIODE 1SS355-TE-17
R837	401 105 5301	MT-GLAZE 4.7K JA 1/16W	D1909	407 149 0807	DIODE 1SS355-TE-17
R838	401 105 5301	MT-GLAZE 4.7K JA 1/16W	D1910	407 206 5608	ZENER DIODE UDZS-TE-1710B
R839	401 105 4007	MT-GLAZE 330 JA 1/16W			
R840	401 105 4007	MT-GLAZE 330 JA 1/16W			
R841	401 105 5301	MT-GLAZE 4.7K JA 1/16W			
R842	401 105 5301	MT-GLAZE 4.7K JA 1/16W			

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
D249	407 099 6003	ZENER DIODE MTZJ9.1B	D671	408 008 2406	DIODE 1N4148
D352	407 063 8705	ZENER DIODE MTZJ5.1C		407 012 4406	DIODE 1SS133
	407 056 9801	ZENER DIODE RD5.6EB1		407 013 4306	DIODE 1S2076A
D421	407 099 7208	ZENER DIODE MTZJ16A		407 013 7109	DIODE 1S2473
	407 054 7007	ZENER DIODE RD16EB1	D692	407 149 0807	DIODE 1SS355-TE-17
D441	407 006 6300	DIODE ERC05-10B	D693	408 008 2406	DIODE 1N4148
	407 009 6901	DIODE RM11C		407 012 4406	DIODE 1SS133
D450	407 149 0807	DIODE 1SS355-TE-17		407 013 4306	DIODE 1S2076A
D451	407 149 0807	DIODE 1SS355-TE-17		407 013 7109	DIODE 1S2473
D467	408 008 2406	DIODE 1N4148	D694	407 149 0807	DIODE 1SS355-TE-17
	407 013 4306	DIODE 1S2076A	D801	407 206 5608	ZENER DIODE UDZS-TE-1710B
D468	408 008 2406	DIODE 1N4148	D802	407 206 5608	ZENER DIODE UDZS-TE-1710B
	407 012 4406	DIODE 1SS133	D803	407 206 5608	ZENER DIODE UDZS-TE-1710B
	407 013 4306	DIODE 1S2076A	D804	407 206 5608	ZENER DIODE UDZS-TE-1710B
	407 013 7109	DIODE 1S2473	D805	407 206 5608	ZENER DIODE UDZS-TE-1710B
D476	401 024 7400	CARBON 10K JA 1/6W	D861	407 055 7907	ZENER DIODE RD3.6EL
D501	407 005 7308	DIODE EM01Z		408 041 2005	ZENER DIODE RD3.6EL
	407 005 8602	DIODE ERA15-02	MISCELLANEOUS		
	408 009 9008	DIODE BYD33D	△F601	423 028 8603	FUSE 250V 4A
D512	407 005 7308	DIODE EM01Z		423 024 8409	FUSE 250V 4A
	407 005 8602	DIODE ERA15-02		423 007 2103	FUSE 250V 4A
	408 009 9008	DIODE BYD33D	F601A	645 000 5077	HOLDER,FUSE
D605	407 006 6300	DIODE ERC05-10B		645 016 0479	HOLDER,FUSE
	407 009 6901	DIODE RM11C	F601B	645 000 5077	HOLDER,FUSE
D606	407 006 6300	DIODE ERC05-10B		645 016 0479	HOLDER,FUSE
	407 009 6901	DIODE RM11C	A101	645 064 2777	TUNER,U/V
D607	407 006 6300	DIODE ERC05-10B	A1901	645 047 6228	UNIT,REMOCON RECEIVER
	407 009 6901	DIODE RM11C	K1001	645 015 7462	JACK,RCA-2(3-1)
D608	407 006 6300	DIODE ERC05-10B		652 000 1602	JACK,RCA-2
	407 009 6901	DIODE RM11C	K1002A	645 002 1817	TERMINAL,BOARD
△D610	407 234 8701	PHOTO COUPLE PC123X5YFZ		652 000 2098	JACK,RCA-2
	407 230 3908	PHOTO COUPLE PC123Y52	K1921	645 006 4708	JACK,PHONE D3.6
	407 231 7707	PC TLP421F(D4-BL)		652 000 0155	JACK,PHONE D3.5
D611	407 146 8103	DIODE EG01C	△PS601	408 046 4400	TH PTDAALBF9R0Q200
D612	407 005 9807	DIODE ERA81-004	SW1901	645 003 4701	SWITCH,PUSH 1P-1TX1
D614	407 007 6606	DIODE ES1		645 019 4887	SWITCH,PUSH 1P-1TX1
D616	407 099 7901	ZENER DIODE MTZJ20B		645 027 7382	SWITCH,PUSH 1P-1TX1
	407 055 1806	ZENER DIODE RD20EB2	SW1902	645 003 4701	SWITCH,PUSH 1P-1TX1
D617	408 008 2406	DIODE 1N4148		645 019 4887	SWITCH,PUSH 1P-1TX1
	407 012 4406	DIODE 1SS133		645 027 7382	SWITCH,PUSH 1P-1TX1
	407 013 4306	DIODE 1S2076A	SW1903	645 003 4701	SWITCH,PUSH 1P-1TX1
	407 013 7109	DIODE 1S2473		645 019 4887	SWITCH,PUSH 1P-1TX1
D619	407 063 9306	ZENER DIODE MTZJ7.5C		645 027 7382	SWITCH,PUSH 1P-1TX1
	407 057 6502	ZENER DIODE RD7.5EB3	SW1904	645 003 4701	SWITCH,PUSH 1P-1TX1
D643	407 012 4406	DIODE 1SS133		645 019 4887	SWITCH,PUSH 1P-1TX1
D646	408 008 2406	DIODE 1N4148		645 027 7382	SWITCH,PUSH 1P-1TX1
	407 012 4406	DIODE 1SS133	SW1905	645 003 4701	SWITCH,PUSH 1P-1TX1
	407 013 4306	DIODE 1S2076A		645 019 4887	SWITCH,PUSH 1P-1TX1
	407 013 7109	DIODE 1S2473		645 027 7382	SWITCH,PUSH 1P-1TX1
D651	407 009 8806	DIODE RU3AM	△SW601	645 050 4129	SWITCH,PUSH POWER 2P-2T
D652	407 007 7801	DIODE EU2Z		652 001 4565	SWITCH,PUSH POWER 2P-2T
	408 045 7907	DIODE EU2	X161	421 009 9403	SAW F TSF5246P
D653	407 106 2806	DIODE RU3YX	X211	652 001 0154	OSC,CRYSTAL 4.433619MHZ
	408 045 8508	DIODE RU3YX	X801	645 004 1938	OSC,CRYSTAL 32.768KHZ
D654	407 106 2806	DIODE RU3YX		645 004 1945	OSC,CRYSTAL 32.768KHZ
	408 045 8508	DIODE RU3YX	610 315 1328 ASSY,PWB,CRT F8FP 1AA0B10E695AB		
D655	408 008 2406	DIODE 1N4148	TRANSISTOR		
	407 012 4406	DIODE 1SS133	Q741	405 134 5905	TR 2SA1037AK-T146-R
	407 013 4306	DIODE 1S2076A		405 147 2205	TR 2SA1037AK-S-T146
	407 013 7109	DIODE 1S2473		405 002 0308	TR 2SA1037K T146 R
D661	407 099 5501	ZENER DIODE MTZJ6.2C		405 002 0407	TR 2SA1037K T146 S
	407 057 2801	ZENER DIODE RD6.2EB3		405 002 6706	TR 2SA1179-M6-TB
D662	407 099 5600	ZENER DIODE MTZJ6.8A			
	408 047 8605	ZENER DIODE MTZJ6.8A			
D664	407 099 6102	ZENER DIODE MTZJ10B			
	407 054 0008	ZENER DIODE RD10EB2			
	408 047 2306	ZENER DIODE MTZJ10B			

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
Q751	405 002 6904	TR 2SA1179-M7-TB			
	405 163 1503	TR 2SA1179N-M6-TB			
	405 163 2708	TR 2SA1179N-M7-TB			
	405 173 9605	TR 2SA1235A1E			
	405 173 9704	TR 2SA1235A1F			
	405 134 5905	TR 2SA1037AK-T146-R			
	405 147 2205	TR 2SA1037AK-S-T146			
	405 002 0308	TR 2SA1037K T146 R			
	405 002 0407	TR 2SA1037K T146 S			
	405 002 6706	TR 2SA1179-M6-TB			
	405 002 6904	TR 2SA1179-M7-TB			
	405 163 1503	TR 2SA1179N-M6-TB			
	405 163 2708	TR 2SA1179N-M7-TB			
	405 173 9605	TR 2SA1235A1E			
	405 173 9704	TR 2SA1235A1F			
CAPACITOR					
C701	403 157 6305	CERAMIC 270P K 50V			
C711	403 157 6305	CERAMIC 270P K 50V			
C721	403 157 6305	CERAMIC 270P K 50V			
C731	403 077 2807	CERAMIC 1000P Z 2K			
C741	403 049 0008	ELECT 1U M 50V			
C751	403 044 1703	ELECT 470U M 16V			
RESISTOR					
R701	401 105 4007	MT-GLAZE 330 JA 1/16W			
R703	401 105 2706	MT-GLAZE 220 JA 1/16W			
R704	401 058 9807	OXIDE-MT 12K JA 1W			
R705	401 009 1508	CARBON 2.7K JA 1/2W			
R711	401 105 4007	MT-GLAZE 330 JA 1/16W			
R713	401 105 2706	MT-GLAZE 220 JA 1/16W			
R714	401 058 9807	OXIDE-MT 12K JA 1W			
R715-M	401 009 1508	CARBON 2.7K JA 1/2W			
R721	401 105 4007	MT-GLAZE 330 JA 1/16W			
R723	401 105 2706	MT-GLAZE 220 JA 1/16W			
R724	401 058 9807	OXIDE-MT 12K JA 1W			
R725-M	401 009 1508	CARBON 2.7K JA 1/2W			
R732	401 015 6504	CARBON 2.2 JA 1/4W			
	402 086 3904	CARBON 2.2 JA 1/4W			
R741	401 020 0801	CARBON 470 JA 1/4W			
R742	401 105 1501	MT-GLAZE 1.5K JA 1/16W			
R744	401 105 1402	MT-GLAZE 150 JA 1/16W			
R751	401 105 7909	MT-GLAZE 0.000 ZA 1/16W			
R752	401 105 0603	MT-GLAZE 10K JA 1/16W			
R753	401 105 0603	MT-GLAZE 10K JA 1/16W			
DIODE					
D741	407 012 4406	DIODE 1SS133			
D742	407 012 4406	DIODE 1SS133			
D751	407 012 4406	DIODE 1SS133			
D752	407 012 4406	DIODE 1SS133			
D753	407 012 4406	DIODE 1SS133			
D754	407 012 4406	DIODE 1SS133			
MISCELLANEOUS					
△K701-M	645 025 6097	SOCKET,CRT 8P			





LIST OF REPLACEABLE TRANSISTORS (SAMSUNG TYPE)

TRANSISTOR TYPE	REPLACEABLE TYPE	REPLACEABLE TYPE	REPLACEABLE TYPE
Q1	2SD1603	2SD1603	2SD1603
Q2	2SD1603	2SD1603	2SD1603
Q3	2SD1603	2SD1603	2SD1603
Q4	2SD1603	2SD1603	2SD1603
Q5	2SD1603	2SD1603	2SD1603
Q6	2SD1603	2SD1603	2SD1603
Q7	2SD1603	2SD1603	2SD1603
Q8	2SD1603	2SD1603	2SD1603
Q9	2SD1603	2SD1603	2SD1603
Q10	2SD1603	2SD1603	2SD1603
Q11	2SD1603	2SD1603	2SD1603
Q12	2SD1603	2SD1603	2SD1603
Q13	2SD1603	2SD1603	2SD1603
Q14	2SD1603	2SD1603	2SD1603
Q15	2SD1603	2SD1603	2SD1603
Q16	2SD1603	2SD1603	2SD1603
Q17	2SD1603	2SD1603	2SD1603
Q18	2SD1603	2SD1603	2SD1603
Q19	2SD1603	2SD1603	2SD1603
Q20	2SD1603	2SD1603	2SD1603
Q21	2SD1603	2SD1603	2SD1603
Q22	2SD1603	2SD1603	2SD1603
Q23	2SD1603	2SD1603	2SD1603
Q24	2SD1603	2SD1603	2SD1603
Q25	2SD1603	2SD1603	2SD1603
Q26	2SD1603	2SD1603	2SD1603
Q27	2SD1603	2SD1603	2SD1603
Q28	2SD1603	2SD1603	2SD1603
Q29	2SD1603	2SD1603	2SD1603
Q30	2SD1603	2SD1603	2SD1603
Q31	2SD1603	2SD1603	2SD1603
Q32	2SD1603	2SD1603	2SD1603
Q33	2SD1603	2SD1603	2SD1603
Q34	2SD1603	2SD1603	2SD1603
Q35	2SD1603	2SD1603	2SD1603
Q36	2SD1603	2SD1603	2SD1603
Q37	2SD1603	2SD1603	2SD1603
Q38	2SD1603	2SD1603	2SD1603
Q39	2SD1603	2SD1603	2SD1603
Q40	2SD1603	2SD1603	2SD1603
Q41	2SD1603	2SD1603	2SD1603
Q42	2SD1603	2SD1603	2SD1603
Q43	2SD1603	2SD1603	2SD1603
Q44	2SD1603	2SD1603	2SD1603
Q45	2SD1603	2SD1603	2SD1603
Q46	2SD1603	2SD1603	2SD1603
Q47	2SD1603	2SD1603	2SD1603
Q48	2SD1603	2SD1603	2SD1603
Q49	2SD1603	2SD1603	2SD1603
Q50	2SD1603	2SD1603	2SD1603
Q51	2SD1603	2SD1603	2SD1603
Q52	2SD1603	2SD1603	2SD1603
Q53	2SD1603	2SD1603	2SD1603
Q54	2SD1603	2SD1603	2SD1603
Q55	2SD1603	2SD1603	2SD1603
Q56	2SD1603	2SD1603	2SD1603
Q57	2SD1603	2SD1603	2SD1603
Q58	2SD1603	2SD1603	2SD1603
Q59	2SD1603	2SD1603	2SD1603
Q60	2SD1603	2SD1603	2SD1603
Q61	2SD1603	2SD1603	2SD1603
Q62	2SD1603	2SD1603	2SD1603
Q63	2SD1603	2SD1603	2SD1603
Q64	2SD1603	2SD1603	2SD1603
Q65	2SD1603	2SD1603	2SD1603
Q66	2SD1603	2SD1603	2SD1603
Q67	2SD1603	2SD1603	2SD1603
Q68	2SD1603	2SD1603	2SD1603
Q69	2SD1603	2SD1603	2SD1603
Q70	2SD1603	2SD1603	2SD1603
Q71	2SD1603	2SD1603	2SD1603
Q72	2SD1603	2SD1603	2SD1603
Q73	2SD1603	2SD1603	2SD1603
Q74	2SD1603	2SD1603	2SD1603
Q75	2SD1603	2SD1603	2SD1603
Q76	2SD1603	2SD1603	2SD1603
Q77	2SD1603	2SD1603	2SD1603
Q78	2SD1603	2SD1603	2SD1603
Q79	2SD1603	2SD1603	2SD1603
Q80	2SD1603	2SD1603	2SD1603
Q81	2SD1603	2SD1603	2SD1603
Q82	2SD1603	2SD1603	2SD1603
Q83	2SD1603	2SD1603	2SD1603
Q84	2SD1603	2SD1603	2SD1603
Q85	2SD1603	2SD1603	2SD1603
Q86	2SD1603	2SD1603	2SD1603
Q87	2SD1603	2SD1603	2SD1603
Q88	2SD1603	2SD1603	2SD1603
Q89	2SD1603	2SD1603	2SD1603
Q90	2SD1603	2SD1603	2SD1603
Q91	2SD1603	2SD1603	2SD1603
Q92	2SD1603	2SD1603	2SD1603
Q93	2SD1603	2SD1603	2SD1603
Q94	2SD1603	2SD1603	2SD1603
Q95	2SD1603	2SD1603	2SD1603
Q96	2SD1603	2SD1603	2SD1603
Q97	2SD1603	2SD1603	2SD1603
Q98	2SD1603	2SD1603	2SD1603
Q99	2SD1603	2SD1603	2SD1603
Q100	2SD1603	2SD1603	2SD1603

THE SERVICE PRECAUTION:
The area enclosed by this line() is directly connected with AC mains voltage. When servicing the area, connect an isolating transformer between TV receiver and AC line to eliminate hazard of electric shock.

COLOUR TELEVISION
LA5-A CHASSIS SERIES
SERVICE REF. NO. C14LT88M-00

PRODUCT SAFETY NOTICE:
Product safety should be considered when a component replacement is made in any area of a receiver.
Components indicated by a mark in this circuit diagram show components whose values have special significance to product safety. It is particularly recommended that only parts specified on the part service manual be used for components replacement pointed out by the mark.

- CIRCUIT DIAGRAM NOTICE:**
1. All resistance value are in ohms, K=1,000, M=1,000,000.
 2. All resistance rated wattages are 1/6W unless otherwise noted.
 3. Excepting electrolytic capacitors, all capacitance values of less than 1 are expressed in μ F and more than 1 are pF.
 4. All capacitance rated voltages are 50V unless otherwise noted.
 5. All inductance values are in μ H.
 6. Voltage readings take with a "VTVM" are from point indicated chassis ground. Voltage readings taken by using NTSC colour bar signal are with all controls at normal position. Some voltage may vary with signal strength.
 7. Waveform were taken with NTSC colour bar and controls adjusted for normal picture. Waveforms were taken by using a wide band oscilloscope and a low capacity probe.
 8. This circuit diagram covers a basic or representative chassis only. There may be some components or partial circuit differences between the actual chassis and the circuit diagram.
 9. Parts specified with "X" are not installed in this model.
 10. Parts specified with "J" are just jumper wires.

11. Expression of capacitance and resistance in circuit diagram.

Capacitance (Example)
1000 C M 2000 D

Resistance (Example)
1/2 N J 1.2

Characteristic
Capacitance value (220pF)
Allowable error (\pm 20%)
Kind (Ceramic)
Rated voltage (1,000V)

Resistance value (1.2 Ω)
Allowable error (\pm 5%)
Kind (M carbon)
Rated wattage (1/2W)

J = \pm 5%
K = \pm 10%
M = \pm 20%
T, A, U, D:
T: Electrolytic
C, K, B: Ceramic
F: Mylar film
M, N: Polypropylene
Z: Metalized paper

D: Carbon
N: Metalized carbon
S: Oxidized metalized
W: Wire winding
C: Solid

TRANSISTOR, DIODE AND INTEGRATED CIRCUIT TERMINAL GUIDE

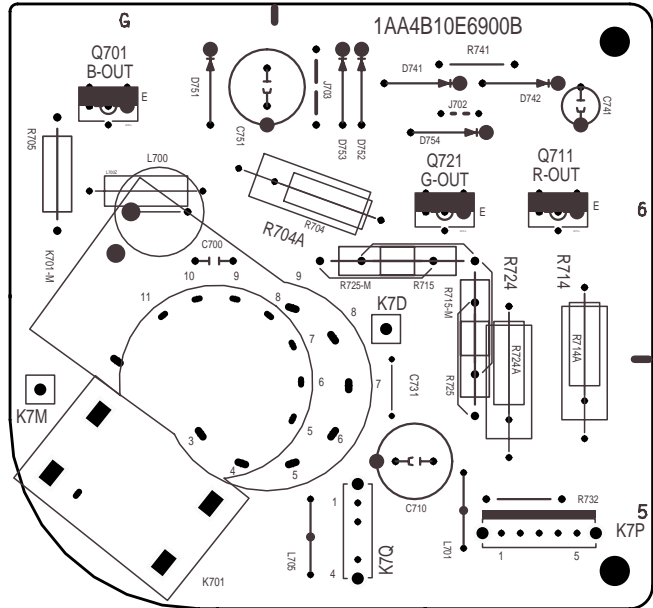
C: COLLECTOR
B: BASE
E: EMITTER

A: ANODE
K: KATHODE

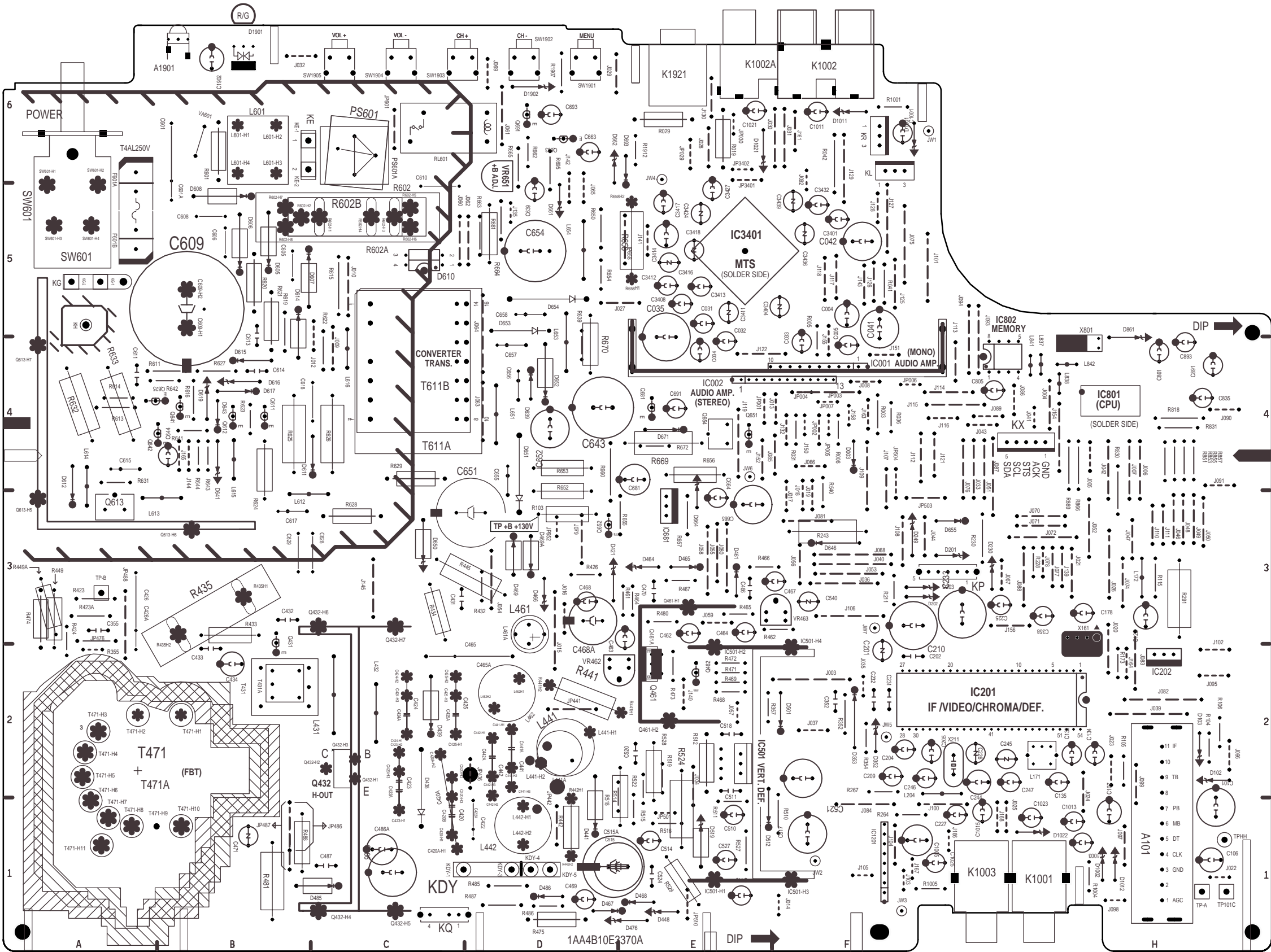
CHIP COMPONENTS
TRANSISTOR
DIODE
RESISTOR

PARTICULAR PARTS SYMBOL
FUSIBLE RESISTOR
NON POLE ELECTRIC CAPACITOR
POSISTER

CRT BOARD (Component Location)



MAIN BOARD (Component Location)



Waverforms & voltages

(On the Main Board)

IC001 (AUDIO AMP.)																	
Pin-1	NC	2	NCV	3	1.1V	4	GND	5	0.7V	6	1.1V	7	7.3V	8	NC	9	14.8V
10	NC																

IC201 (IF/VIDEO/CHROMA)																	
Pin-1	2.3V	2	2.3V	3	2.7V	4	1.6V	5	2.9V	6	2.9V	7	GND	8	5.0V	9	2.3V
10	2.5V	11	4.7V	12	4.6V	13	3.6V	14	1.6V	15	1.6V	16	1.6V	17	0V	18	8.3V
19	2.6V	20	2.9V	21	2.8V	22	2.0V	23	2.4V	24	2.6V	25	5.1V	26	2.7V	27	0.9V
28	1.2V	29	1.7V	30	0.9V	31	4.5V	32	8.3V	33	GND	34	GND	35	GND	36	3.3V
37	1.8V	38	2.8V	39	3.5V	40	2.4V	41	GND	42	2.6V	43	5.0V	44	2.8V	45	2.6V
46	2.5V	47	3.7V	48	4.1V	49	4.1V	50	2.4V	51	2.2V	52	1.9V	53	2.4V	54	3.2V

IC202 (REG.)				IC681 (REG.)							
Pin-1	7.7V	2	GND	3	5.0V	Pin-1	11.0V	2	GND	3	5.1V

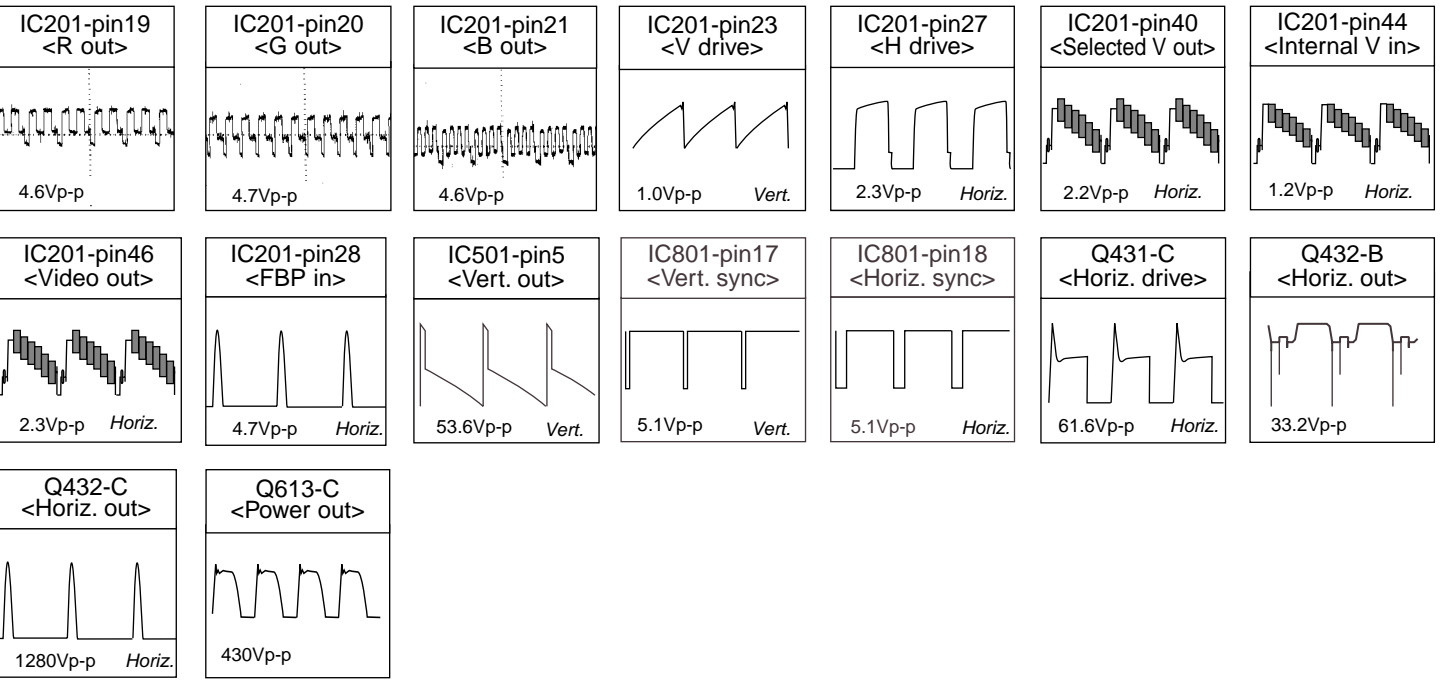
IC501 (VERT. OUT)													
Pin-1	2.5V	2	25.9V	3	2.1V	4	GND	5	12.3V	6	26.2V	7	2.5V

IC801 (CPU)																	
Pin-1	4.7V	2	4.6V	3	5.0V	4	5.0V	5	GND	6	2.0V	7	2.7V	8	5.0V	9	3.0V
10	3.6V	11	0.9V	12	0V	13	5.0V	14	3.4V	15	2.8V	16	0V	17	4.8V	18	4.2V
19	0V	20	0V	21	0V	22	0V	23	0V	24	0V	25	0V	26	0V	27	5.0V
28	4.9V	29	0V	30	GND	31	4.8V	32	4.9V	33	NC	34	0.1V	35	5.0V	36	5.0V

IC802 (MEMORY)															
Pin-1	GND	2	GND	3	GND	4	GND	5	5.0V	6	5.0V	7	GND	8	5.0V

Q111		Q171		Q261		Q431		Q432		Q527		Q613		Q651		Q681		Q654		Q818		Q861	
B	1.2V	B	2.3V	B	2.4V	B	0.3V	B	-0.1V	B	0V	G	4.3V	B	0V	B	0.7V	B	9.8V	B	0V	B	4.4V
C	4.5V	C	0V	C	0V	C	0V	C	14.5V	C	5.0V	D	0V	C	9.9V	C	0.1V	C	9.6V	C	7.3V	C	5.0V
E	0.5V	E	2.9V	E	3.1V	E	0V	E	0V	E	0V	S	0V	E	0V	E	0V	E	9.1V	E	0V	E	5.0V

Q871		Q881		Q886	
B	-0.1V	B	-0.4V	B	0.7V
C	4.8V	C	4.2V	C	0.1V
E	0V	E	0V	E	0V



(On the CRT Board)

