

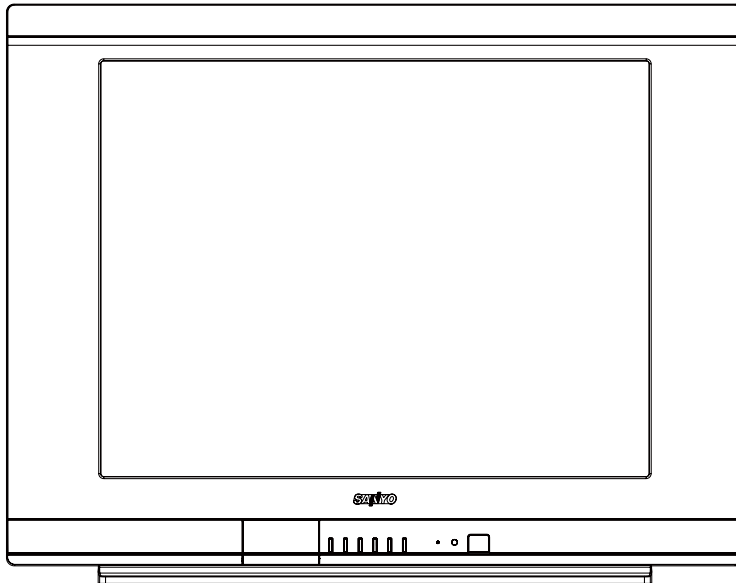
FILE NO.

## SERVICE MANUAL Colour Television

Model No. C29FS51

(Argentina)

Service Ref. No.



### 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

#### Input Terminals

AV1 (Video): Composite Video Input (Phone Jack) x 1  
 S-Video Input (Separated Y/C) DIN 4-pin Jack x 1  
 AV1 (Audio): L/R Stereo Input (Phone Jack) x 1 set  
 AV2 (Video): Composite Video Input (Phone Jack) x 1  
 AV2 (Audio): L/R Stereo Input (Phone Jack) x 1 set  
 DVD (Video): Component Y, Cb, Cr Input (Phone Jack) x 1 set  
 DVD (Audio): L/R Stereo Input (Phone Jack) x 1 set

#### Output Terminals

Video Monitor Output: Phono jack x 1  
 Audio Monitor Output: L/R Stereo Output (Phone Jack) x 1 set  
 Headphone Jack: Mini stereo jack x 1

**Sound Output (RMS)** . . . 5W + 5W

**Speaker** . . . . . 6cm x 12cm x 2 pcs.

**Dimensions** . . . . . 750(W) x 590(H) x 416.5(D) mm

**Weight** . . . . . approx. 36.5 Kg

**Product Code: 113020204**

**Original Version**

**Chassis Series: LB6-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.

*Specifications subject to change without notice.*

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## Safety Notice

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### 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

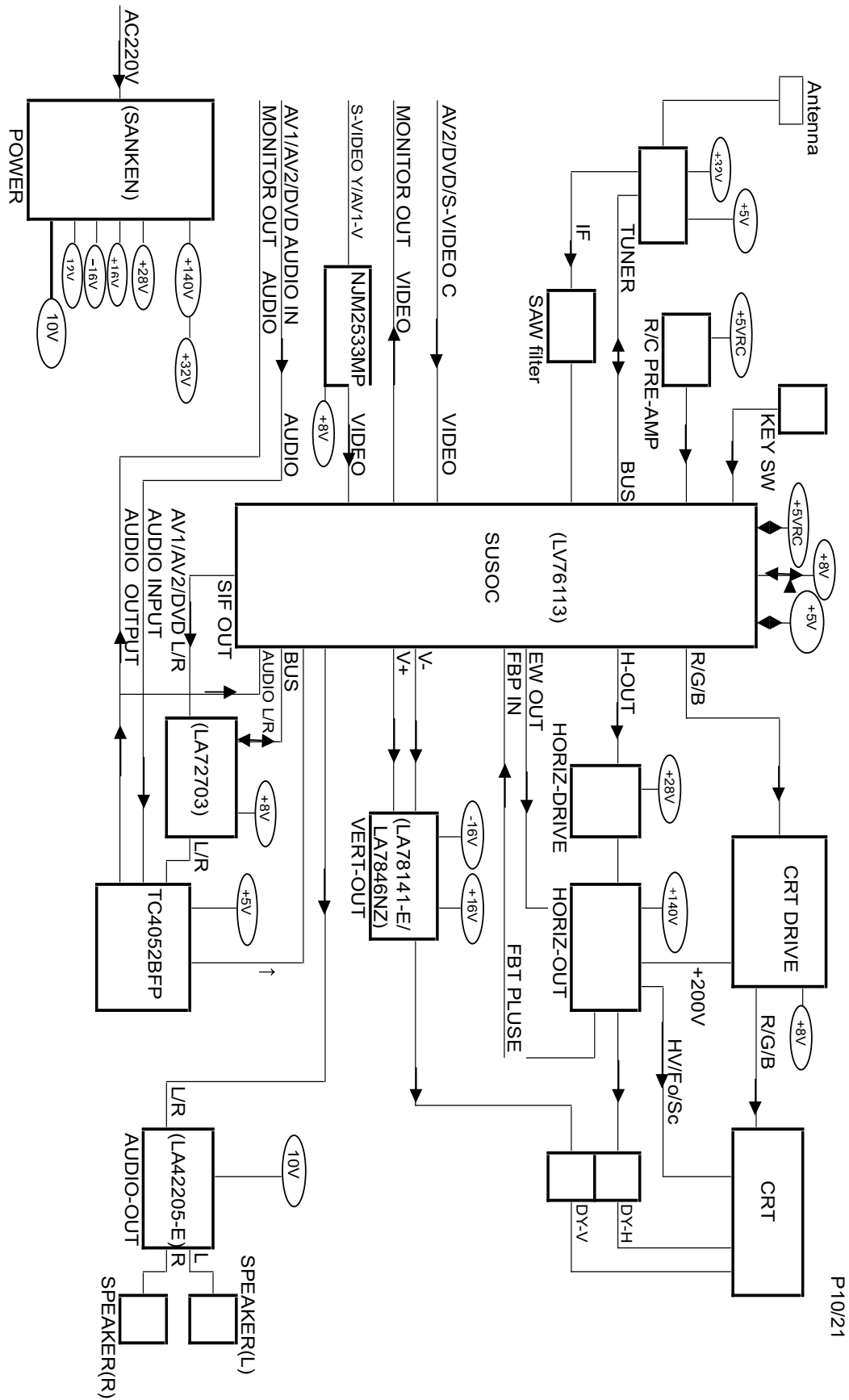
The primary source of X-RADIATION in television receiver is the picture tube. The picture tube is specially constructed to limit X-RADIATION emissions. For continued X-RADIATION protection, the replacement tube must be the same type as the original including suffix letter. Excessive high voltage may 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

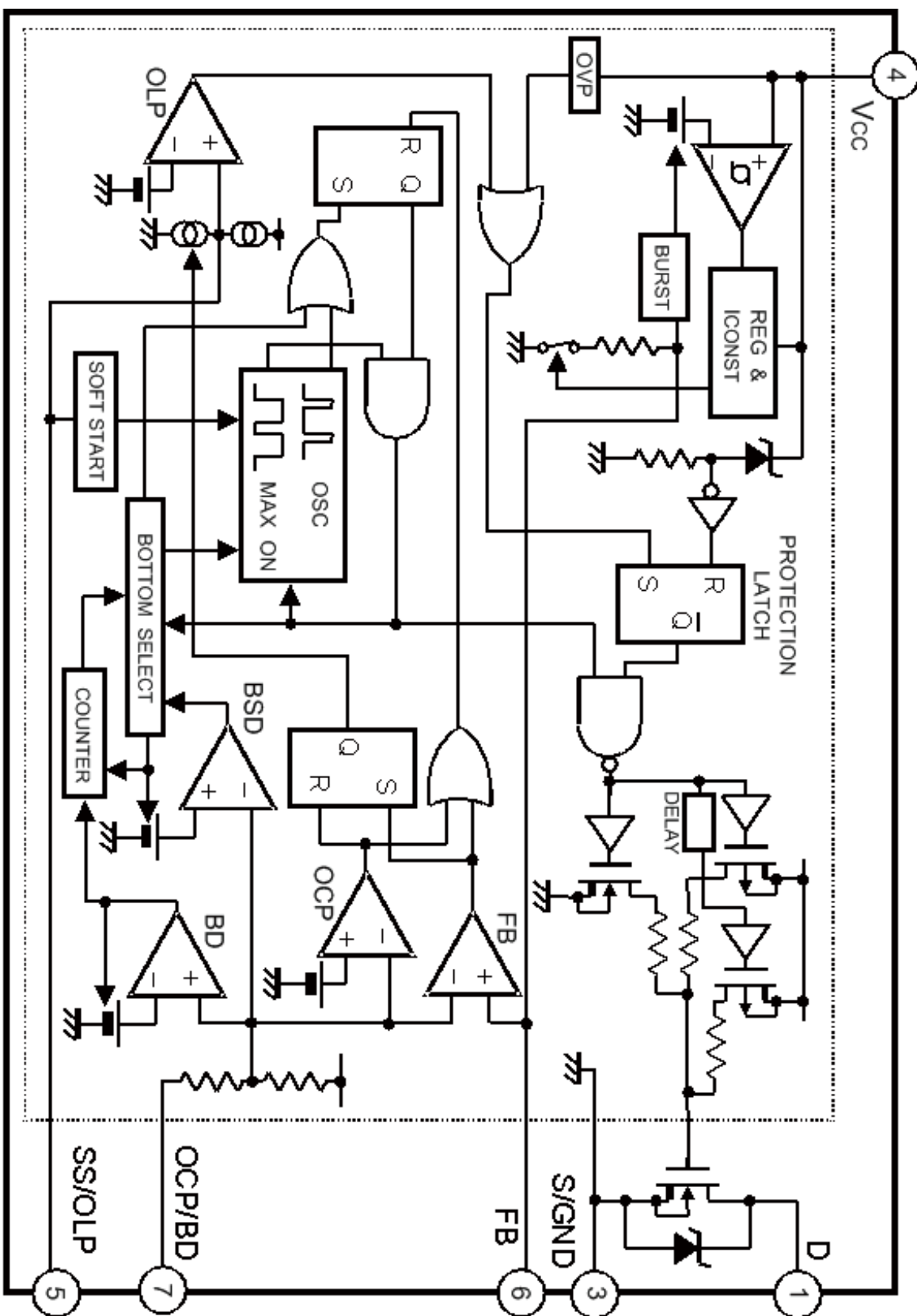
## SIGNAL PROCESSING CIRCUIT



P10/21

# IC Block Diagrams

## IC601 POWER SUPPLY IC (STRW6754)

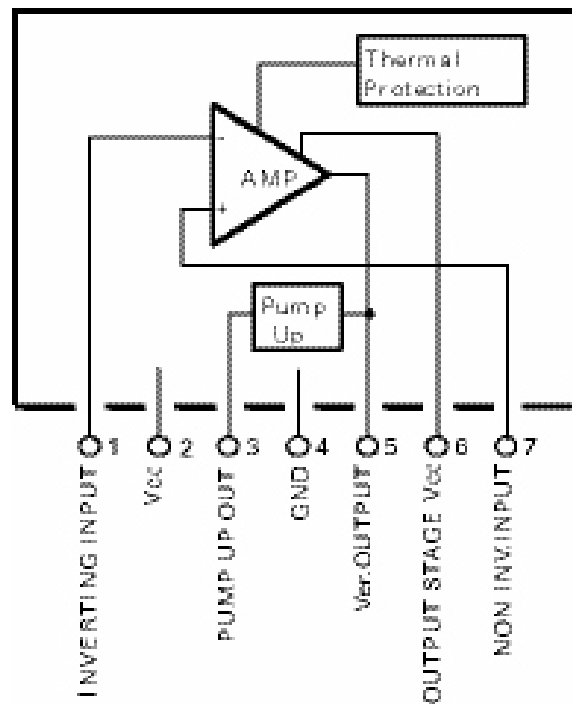


**IC201** < IF/Video/Chroma/Def./CPU > LA76113

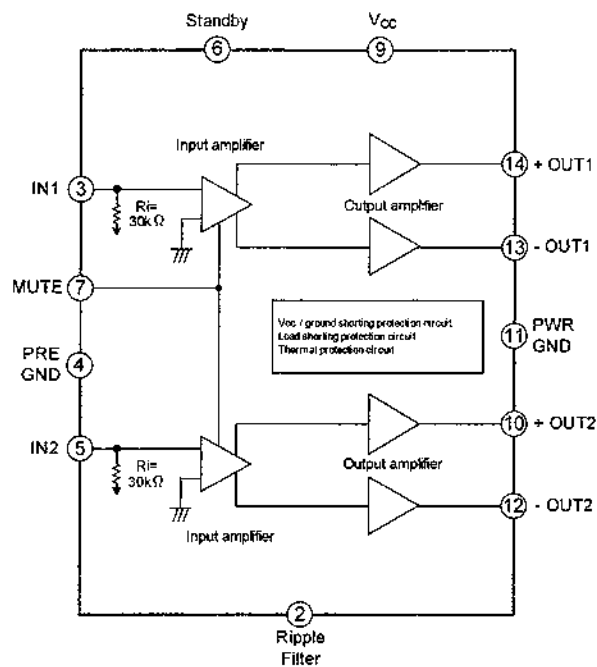


# IC Block Diagrams

## IC501<Vertical.Output> LA78141

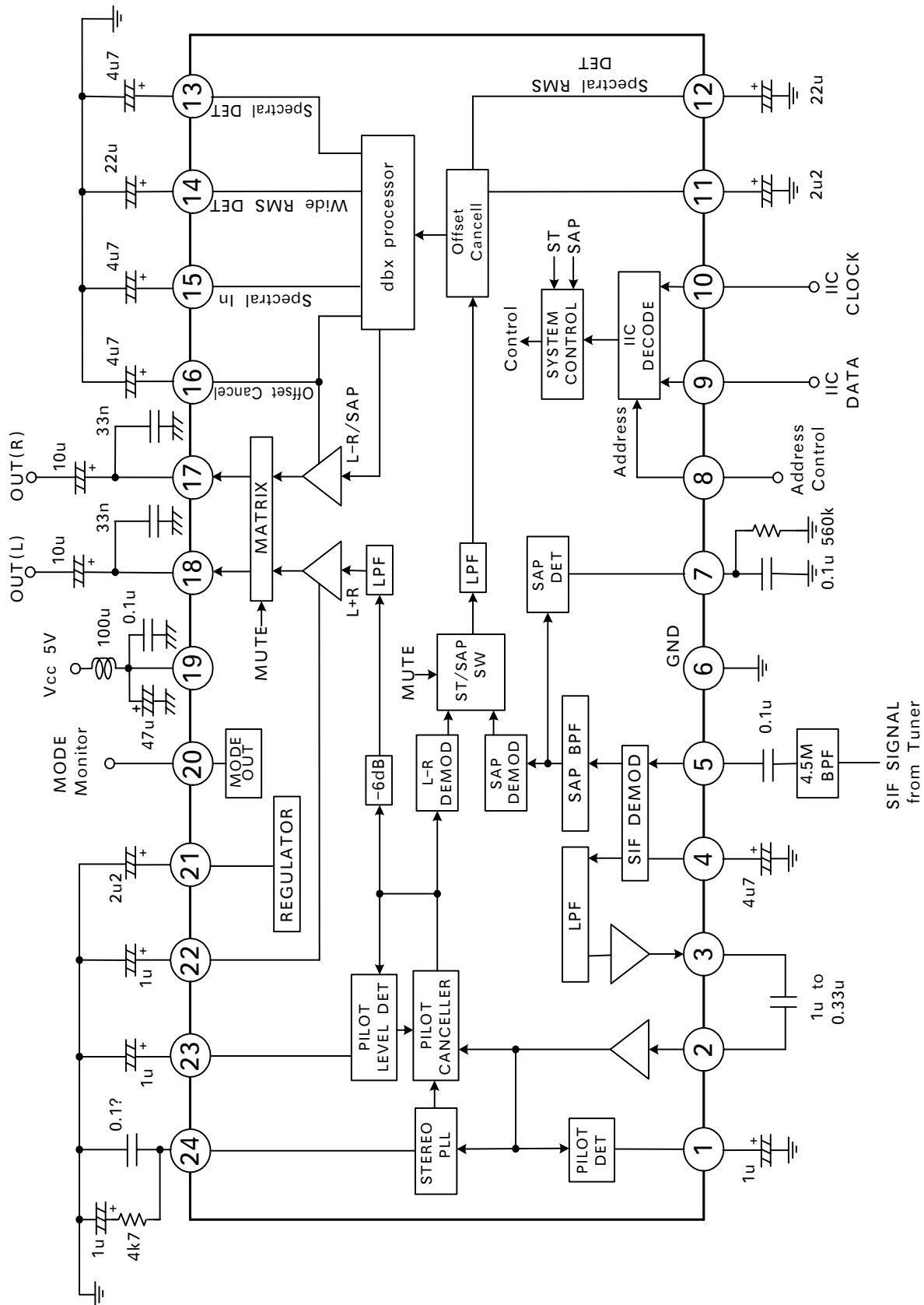


## IC001<AUDIO AMP> LA42205



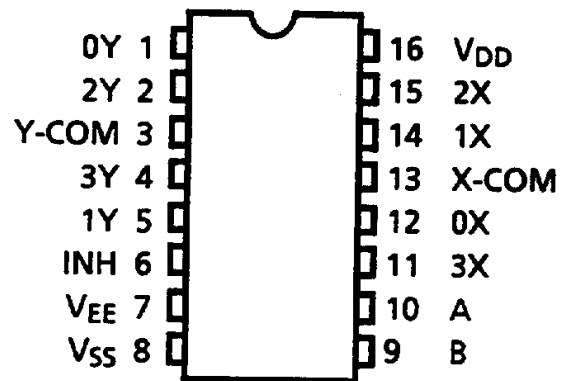
# IC Block Diagrams

IC3401 LA72703

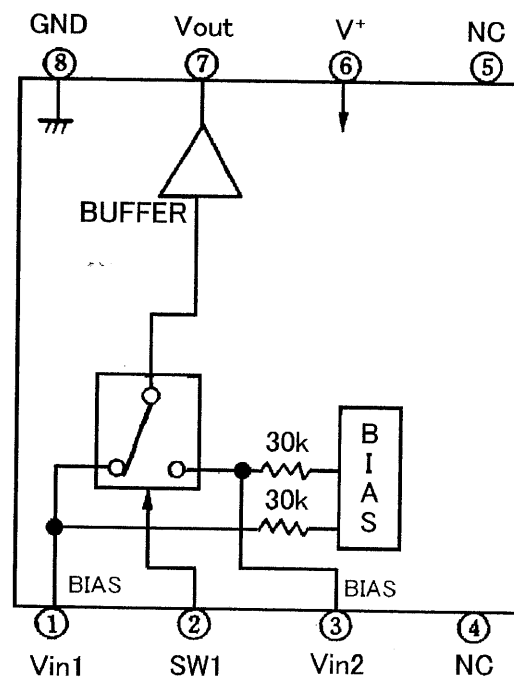


# IC Block Diagrams

IC1001      TC4052BF



IC1002      NJM2533M





# 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.

### IC802 (EEPROM) Replacement

When IC802 (EEPROM) is replaced, IC201 (CPU) will automatically write the initial reference data into IC802 for basic TV operation. However, the bus data should be checked and some bus data should be set up before attempting the service adjustments. (See pages 9 ~ 11 for detailed information.)

## Service Adjustment-1

### 1. Enter the Service Menu

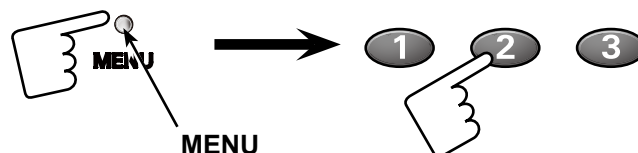
While pressing the **MENU** button on the television, press the Number Key **2** on the remote control unit.

The Service Menu now appear.

	<b>LB6A</b>	<b>VER1.14</b>		
	<b>NO.</b>	<b>NAME</b>	<b>DATA</b>	
Item No.	<b>00</b>	<b>RFAGC</b>	<b>17H XX010111</b>	
	<b>1.11101111</b>	<b>2.11111000</b>		

Status Register Bit Allocations      Item Name      Data value

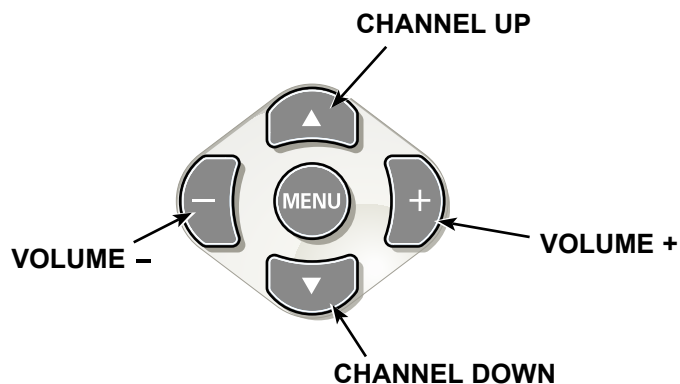
[ Service Mode Display ]



### 2. Service Adjustments:

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

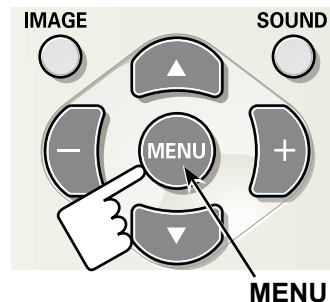
Use the **VOLUME + / -** button to adjust the data. The **+** or **-** button will increase or decrease the data sequentially.



### 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.



# 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. When IC802 (EEPROM) is replaced, check the bus data to confirm they are the same as below. The shaded menu should be checked and be set up or readjusted according to the procedures described in the following pages. Initial Setup Data marked with an \* should be changed from Initial Value Data.

No	Item	Description	Initial Data	Range
0	RFAGC	Align RF AGC threshold	17	00 ~ 3F
1	H PHA	Align sync to fly back phase	10	00 ~ 1F
2	V SIZE	Align vertical amplitude	72	00 ~ 7F
3	V DC	Align vertical DC bias	22	00 ~ 3F
4	VSIFT	Align vertical position	08	00 ~ 0F
5	V LIN	Align vertical linearity	0F	00 ~ 1F
6	V SC	Align vertical S-correction	16	00 ~ 1F
7	VCOMP	Align vertical size compensation	07	00 ~ 07
8	EWDC	Align East/West DC bias	33	00 ~ 3F
9	EWAMP	Align East/West amplitude	06	00 ~ 3F
10	EWTIL	Align East/West Trapezoid	32	00 ~ 3F
11	EWTOP	Align East/West Top corner correction	01	00 ~ 0F
12	EWBOT	Align East/West Bottom corner correction	02	00 ~ 0F
13	EWCSW	Select control range for Corner correction	01	00 ~ 01
14	HSCMP	Align horizontal size compensation	07	00 ~ 07
15	HL	Left H-Blanking Control	04	00 ~ 07
16	HBR	Right H-Blanking Control	05	00 ~ 07
17	HPH60	Align sync to fly back phase (60Hz data)	03	00 ~ 3F
18	VSZ60	Align vertical amplitude (60Hz)	FF	00 ~ FF
19	VDC60	Align vertical DC bias (60Hz)	00	00 ~ 7F
20	VSF60	Align vertical position (60Hz)	1D	00 ~ 1F
21	VLI60	Align vertical linearity (60Hz)	00	00 ~ 3F
22	VSC60	Align vertical S-correction (60Hz)	00	00 ~ 3F
23	VCO60	Align vertical size compensation (60Hz)	00	00 ~ 0F
24	EWD60	Align East/West DC bias (60Hz)	01	00 ~ 7F
25	EWA60	Align East/West amplitude (60Hz)	7F	00 ~ 7F
26	EWT60	Align East/West trapezoid (60Hz)	01	00 ~ 7F
27	EWB60	Align East/West Bottom corner correction (60Hz)	02	00 ~ 1F
28	EWP60	Align East/West Top corner correction (60Hz)	03	00 ~ 1F
29	CSW60	Select control range for Corner correction	00	00 ~ 01
30	CMP60	Align horizontal size compensation	03	00 ~ 0F
31	T DIS	Disable the Test SW & enable Audio / Video Mute SW	01	00 ~ 01
32	HFREQ	Align ES Sample horizontal frequency (MP is adjusted in the wafer line.)	40	00 ~ 7F
33	AFC G	Select horizontal first loop gain & H-sync gating on/off	00	00 ~ 01
34	AMUTE	Disable audio outputs	00	00 ~ 01
35	VMUTE	Disable video outputs	00	00 ~ 01
36	VSZ75	Enable 75% vertical size mode	00	00 ~ 01
37	SKILL	Force free-run mode	00	00 ~ 01
38	VKILL	Disable vertical mode	00	00 ~ 01

# Service Adjustments

No	Item	Description	Initial Data	Range
39	V SEP	Select vertical sync. Separation sensitivity	00	00 ~ 01
40	V RES	Select Vertical Reset Timing	00	00 ~ 01
41	HLOCK	Select Vertical sync system	00	00 ~ 01
42	VNSYN	Enable IC Test Mode	00	00 ~ 01
43	VTEST	Select vertical DAC test mode	00	00 ~ 03
44	CDMOD	Select vertical countdown mode	00	00 ~ 07
45	VIL T	Vertical deinterlace SW	00	00 ~ 01
46	VILT2	Vertical deinterlace SW2	00	00 ~ 01
47	VBLKS	V blanking control SW	01	00 ~ 01
48	FBPSW	Select Horizontal blanking operation	01	00 ~ 01
49	AFCNG	Enable AFC Low gain mode	00	00 ~ 01
50	AFC2S	Select FBP storage-timer tolerance level	00	00 ~ 01
51	CRSBW	Service Test Mode (normal/Cross/Black/White)	00	00 ~ 03
52	DEINT	Deinterlace	00	00 ~ 01
53	OETST	O/E.TEST	00	00 ~ 01
54	RBIAS	Align Red OUT DC level	03	00 ~ FF
55	GBIAS	Align Green OUT DC level	1E	00 ~ FF
56	BBIAS	Align Blue OUT DC level	02	00 ~ FF
57	RDRV	Align Red OUT AC level	42	00 ~ 7F
58	GDRV	Align Green OUT AC level	38	00 ~ 7F
59	BDRV	Align Blue OUT AC level	3C	00 ~ 7F
60		White Balance		00 ~ FF
61	RD xx GD xx BD xx	White Balance		00 ~ 7F
62	BLDEF	Disable RGB output blanking	00	00 ~ 01
63	SUBBI	Align common RGB DC level	38	00 ~ 7F
64	VTRNS	Enable data transmission between vertical retrace period	01	00 ~ 01
65	DOSDSelect	Analogue OSD mode/Digital OSD mode	01	00 ~ 01
66	EXCNT	Align Ext. RGB amplitude	08	00 ~ 0F
67	OSDCN	Align OSD AC level	05	00 ~ 07
68	RGBSW	Select the temperature characteristics for RGB DC output	01	00 ~ 01
69	ACLDF	Disable Contrast ABL	00	00 ~ 01
70	ACLSD	Changes inclination of Contrast ABL	00	00 ~ 01
71	BABLD	Disable brightness ABL	00	00 ~ 01
72	MIDDF	Disable brightness mid stop	00	00 ~ 01
73	BABLT	Align brightness ABL threshold	02	00 ~ 07
74	RGBT	Select RGB DAC test mode	00	00 ~ 0F
75	CLKSP	Test Mode	00	00 ~ 01
76	TSTMD	Test Mode	00	00 ~ 07
77	VXOAD	VXO Adj.	04	00 ~ 07
78	MCBCR	Chroma Test Mode	00	00 ~ 01
79	FODDS	Select DDS mode	00	00 ~ 01
80	CBCRI	Select YCbCr Input	00	00 ~ 01
81	CEXT	Selected of chroma signal	00	00 ~ 01
82	CBYPS	Select chroma BPF bypass	00*	00 ~ 01
83	CK ON	C Kill Mode (0: Enable Killer circuit)	00	00 ~ 01

## Service Adjustments

No	Item	Description	Initial Data	Range
84	CKOFF	Disable Killer circuit (for IC Test)	00	00 ~ 01
85	CKOPE	Select color killer operational level	04	00 ~ 07
86	AUTOG	Adjust Auto Green level	00	00 ~ 07
87	TINTT	Set tint center value	01*	00 ~ 01
88	WBADJ	Auto correct black level	00	00 ~ 01
89	IDKIL	Select color ident operational level	04	00 ~ 07
90	CVCOA	Control free Run frequency of chroma VCO	04	00 ~ 07
91	CVCOC	VCO free run mode	00	00 ~ 01
92	FSCSP	Select 10 pin output	01	00 ~ 01
93	COLSY	Select Color System	05*	00 ~ 07
94	RBGAI	R-Y/B-Y Gain Balance	07	00 ~ 0F
95	RBANG	R-Y/B-Y Angle	05	00 ~ 0F
96	RYLEV	R-Y DC Level (White-Balance)	07	00 ~ 1 F
97	BYLEV	B-Y DC level (White-Balance)	08	00 ~ 1 F
98	GYAMP	Adjust G-Y amplitude	08	00 ~ 0F
99	HTNCL	Select color on/off at Half Tone Mode	00	00 ~ 01
100	VXOFR	VXO test mode	00	00 ~ 01
101	VXOSB	VXO test mode	00	00 ~ 01
102	IFAGC	Disable IF and RF AGC	00	00 ~ 01
103	SVOSW	Select pin 68 output	00	00 ~ 01
104	STRSW	Select sound trap ON/OFF	01	00 ~ 01
105	VIFSY	Select VIF Freq. 38.0/38.9/39.5/45.75/58.75MHz	03	00 ~ 07
106	VLEV	Align IF video level	04	00 ~ 07
107	VCOFQ	Align ES Sample IF VCO Frequency. (MP is adjusted in the wafer line)	60	00 ~ FF
108	AMOSW	Select pin 70 output	00	00 ~ 01
109	DEMTC	Select De-emphasis Time Constant	01	00 ~ 01
110	FMGAI	Select FM Output Level	00	00 ~ 01
111	A2SW	West Germany Output Level	00	00 ~ 01
112	SIFS	Select 4.5/5.5/6.0/6.5 MHz	00	00 ~ 03
113	CHCON	CH converter measure mode at India	00	00 ~ 01
114	FMMUT	Disable FM output	00	00 ~ 01
115	AFTSE	Select AFT sensitivity 10/13/20/40 [mV/KHz]	02	00 ~ 03
116	IFTES IF	Test mode	00	00 ~ 01
117	VCOAD	Fine adjust of IFVCO Free run	08	00 ~ 0F
118	EWTES	Select East/West DAC test mode	00	00 ~ 07
119	VOLFL	Enable volume filter	01	00 ~ 01
120	VOL L	Customer L-ch volume control	7F	00 ~ 7F
121	AUDSW	Select audio input signal	00*	00 ~ 03
122	CLKTS	Operation CLK test modes	02	00 ~ 03
123	SRCNT	Select surround effect	00*	00 ~ 03
124	DCCUT	DC cut test modes	02	00 ~ 03
125	MONOM	Enable mono input mode	00	00 ~ 01
126	VOL R	Customer R-ch volume control	7F	00 ~ 7F
127	TOATT	Enable tone attenuator	00	00 ~ 01

# Service Adjustments

No	Item	Description	Initial Data	Range
128	TBOST	Select Boost/Cut of treble tone control	00*	00 ~ 01
129	TRGAI	Customer treble gain control	3F*	00 ~ 3F
130	PSEST	Pseud Stereo	00	00 ~ 01
131	BBOST	Select Boost/Cut of bass tone control	00	00 ~ 01
132	BAGAI	Customer bass gain control	3F	00 ~ 3F
133	YFLSY	Select Y Filter mode	00*	00 ~ 03
134	CFLSY	Select C Filter mode	00*	00 ~ 03
135	Y APF	Y APF	00*	00 ~ 01
136	YDLAD	Y Delay Adjust	04	00 ~ 07
137	COGAI	Select Coring Gain	03	00 ~ 03
138	PRESH	Select pre-shoot width	02	00 ~ 03
139	OVRSH	Select Over-shoot adjustment	02	00 ~ 03
140	WPLOP	Select White Peak Limiter level. (with Defeat)	00	00 ~ 03
141	YGAMS	Select Y Gamma start point. (with Defeat)	03	00 ~ 03
142	DCRES	Select luminace DC restoration	00	00 ~ 03
143	BLKST	Select Black Stretch Start Point (w/Defeat)	03	00 ~ 03
144	BLKGA	Select black stretch gain	00	00 ~ 03
145	CTRAP	Fine adjust of chroma trap	04	00 ~ 07
146	CBPF	Fine adjust of chroma BPF	01	00 ~ 03
147	STRAP	Fine adjust of sound trap	03	00 ~ 07
148	YGAMG	Select Y gamma gain	00	00 ~ 03
149	GRAY	Service Test Mode (White/Gray)	00	00 ~ 01
150	YCMIX	Select YC_C Input or 2.2V_DC Input	00	00 ~ 01
151	TXTCC	Select output by LPF or not	00	00 ~ 01
152	VIDEO	Video signal selector	00	00 ~ 03
153	DLYTE	DELAY Test	00	00 ~ 01
154	SYSEP	Select sync separation threshold level	03	00 ~ 07
155	OPT1	OPTION1	ED	00 ~ FF
156	OPTPW	AC SW ON Status	00	00 ~ 01
157	MHOSD	Horizontal position of OSD	2D	00 ~ FF
158	RFCOL	Bias Color(RF)	00	00 ~ FF
159	RFBRI	Bias Brightness(RF)	00	00 ~ FF
160	RFCON	Bias Contrast(RF)	00	00 ~ FF
161	RFSHP	Bias Sharpness(RF)	00	00 ~ 7F
162	DVDCL	Bias Color(DVD)	1F	00 ~ FF
163	DVDBR	Bias Brightness(DVD)	00	00 ~ FF
164	DVDCN	Bias Contrast(DVD)	00	00 ~ FF
165	DVDSP	Bias Sharpness(DVD)	00	00 ~ 7F
166	DVDRY	Bias R-Y DC LEVEL (DVD)	3A	00 ~ 3F
167	DVDBY	Bias R-Y DC LEVEL (DVD)	00	00 ~ 3F
168	CON60	CONTRAST(60Hz)	00	00 ~ 7F
169	BRI60	BRIGHT(60Hz)	00	00 ~ 7F
170	COL60	COLOR(60Hz)	00	00 ~ 7F
171	RBANT	R-Y/B-Y ANGLE (NTSC)	04	00 ~ 1F
172	RBAV3	R-Y/B-Y ANGLE (VIDEO)	00	00 ~ 1F
173	POMT	Power ON Video Mute Time	1A	00 ~ 7F

## Service Adjustments

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No	Item	Description	Initial Data	Range
174	SYSAV	Select sync separation threshold level for AV	04	00 ~ 07
175	ZSIZ5	ZOOM VSIZE FOR 50HZ	0E	00 ~ 7F
176	ZSIZ6	ZOOM VSIZE FOR 60HZ	0E	00 ~ 7F
177	ZHPHA	ZOOM HPHASE	00	00 ~ 1F
178	ZVSCO	ZOOM VSC	00	00 ~ 1F
179	ZVLIN	ZOOM VLIN	00	00 ~ 1F
180	ZEAM5	ZOOM EAST AMP FOR 50HZ	02	00 ~ 3F
181	ZEAM6	ZOOM EAST AMP FOR 50HZ	02	00 ~ 3F
182	ZCOLR	ZOOM COLOR	00	00 ~ 3F
183	ZCONT	ZOOM CONTRAST	00	00 ~ 3F
184	ZBRIT	ZOOM BRIGHTNESS	00	00 ~ 3F
185	ZVPOS	ZOOM V POSITION	00	00 ~ 0F
186	ZEWDC	ZOOM EWDC	00	00 ~ 3F
187	ZEWTI	ZOOM EAST/WEST TILT	00	00 ~ 3F
188	ZEWCT	ZOOM East/West Corner Top	02	00 ~ 0F
189	ZEWCB	ZOOM East/West Corner Bottom	02	00 ~ 0F
190	ZVSCP	ZOOM V COMP	00	00 ~ 07
191	ZHSCP	ZOOM H.Size.Comp	00	00 ~ 0F
192	CAPCN	CAPTION TEXT CONTRAST	06	00 ~ 07
193	OPTAV	OPTION FOR AV2 AV3	01	00 ~ 01
194	OPTFS	OPTION OF SLIM OR FLAT	01	00 ~ 01
195	OBASS	OFFSET OF BASS	00	00 ~ 0F
196	OTREB	OFFSETOF TREBLE	04	00 ~ 0F
197	EWADJ	East/West adjustment		
198	VEADJ	Vertical adjustment		
199	ROMCR	ROM CORRECTION	00	00 ~ FF

# Service Adjustments

## Important Notice:

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

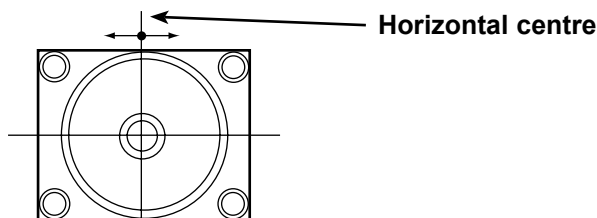
### Item 00 [RFAGC] AGC

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.

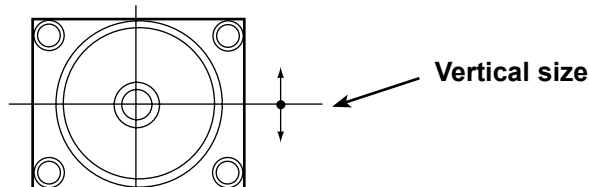
### Item 01 [H-PHA] HORIZONTAL CENTRE

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.



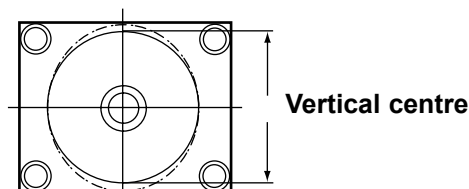
### Item 02 [VSIZE] VERTICAL SIZE

1. Receive a monochrome circular pattern.
2. Set the brightness to normal and contrast to maximum.
3. Select Item No. 02 [VSIZE] in the service mode.
4. Change value to be optimum vertical size.
5. Exit from the service mode.



### Item 03 [V-DC] VERTICAL CENTRE

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

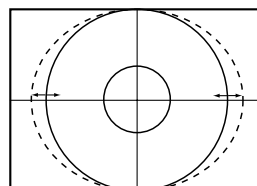


### Item 04 [VSHIFT] VERTICAL CENTRE

1. Receive a monochrome circular pattern.
2. Set the brightness and contrast to maximum.
3. Select Item No. 04 [VSHIFT] in the service mode.
4. Change value to be optimum vertical centre position.
5. Exit from the service mode.

### Item 08 [EWDC] HORIZONTAL WIDTH

1. Receive a monochrome circular pattern.
2. Set the brightness and contrast to maximum.
3. Select Item No.08 [EWDC] in the service mode.
4. Change value to be proper horizontal width.
5. Exit from the service mode.



### Item 157 [MHOSD] OSD H-POSITION

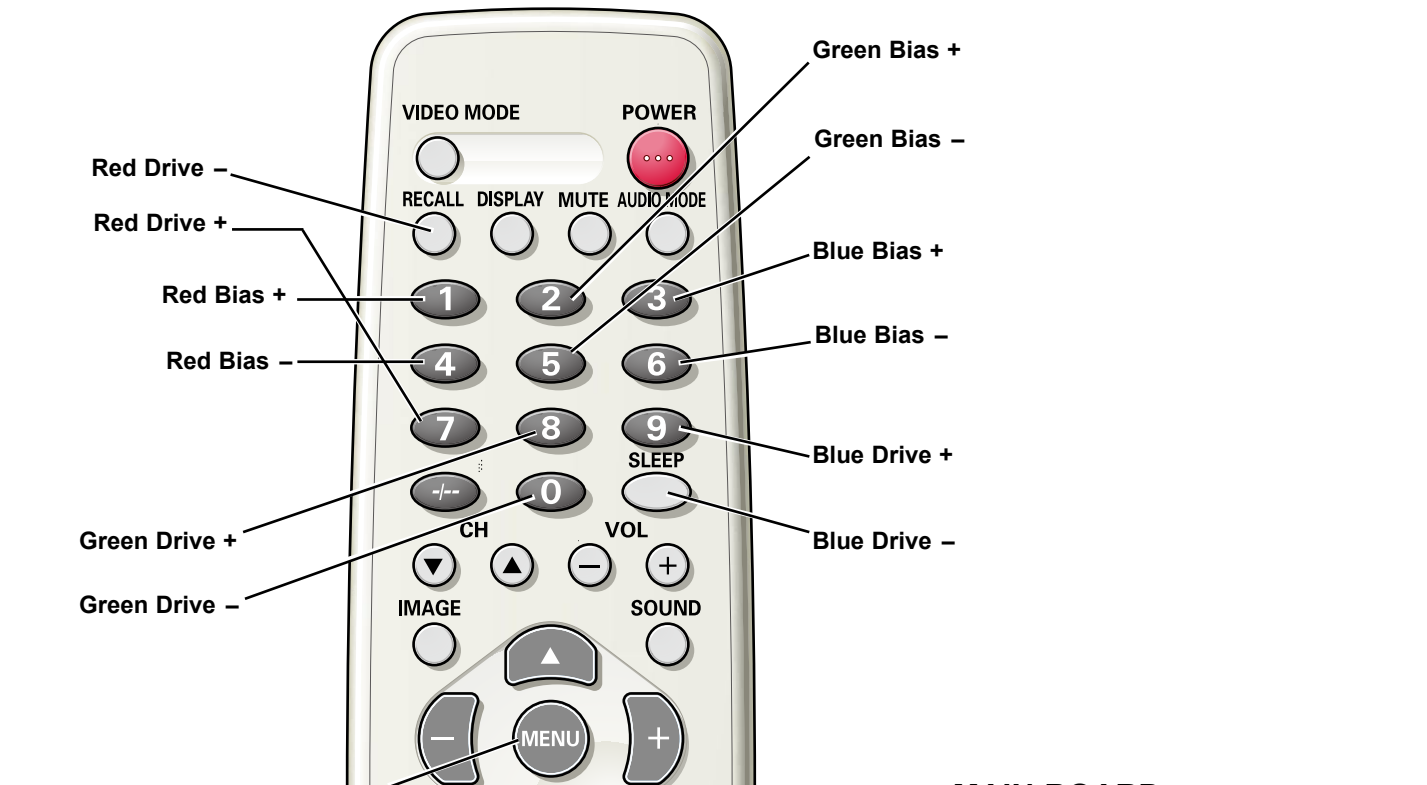
1. Receive a monochrome circular pattern.
2. Set the brightness and contrast to normal.
3. Select Item No. 157 [MHOSD] in the service mode.
4. Change value to be proper OSD horizontal position.
5. Exit from the service mode.

# Service Adjustments

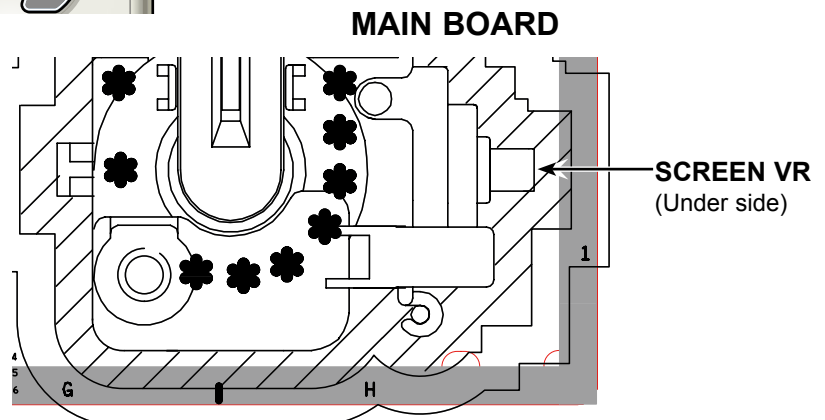
## Items 35-42 GREY SCALE

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 Item-**54 RBIAS**, **55 GBIAS** and **56 BBIAS** mode to 03, 1E and 02. Set Item-**57 RDRV** and **58 GDRV** mode to 42 and 38, **59 BDRV** to 3C.
5. Select Item-**60** 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-**61 DRV** mode to enter the white balance adjusting mode.
8. Press the **7 (Red Drive +)**, **RECALL (Red Drive -)**, **8 (Green Drive +)**, **0 (Green Drive -)**, **9 (Blue Drive +)** or **SLEEP (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.



Press the **MENU** button to exit from service mode





# Service Adjustments

## Service Adjustment-3

### 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.

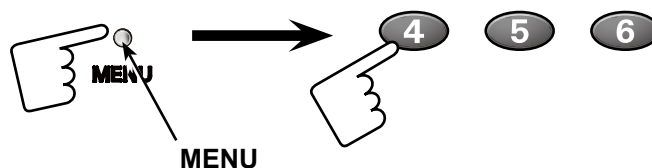
This function is available for one channel only and the fine-tuned channel is memorized into IC802 (EEPROM).

#### 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

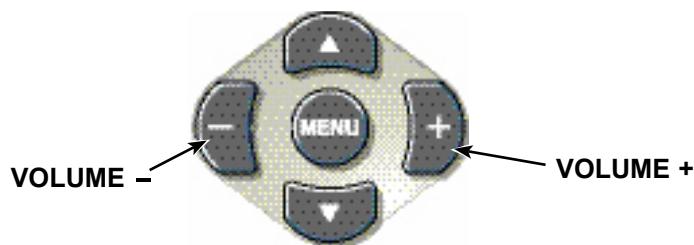


[ Entering the Service Menu ]

#### 2. Service Adjustments:

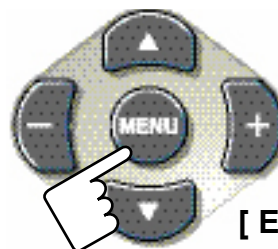
Press and hold the **VOLUME (+/-)** button on the remote control handset or TV set to make fine tuning adjustment. Press and hold the **+** button for higher frequency tuning, and press and hold the **-** for lower frequency tuning.

Fine tuning data value will be automatically stored in memory.



[ Service Adjustment ]

It will return to normal TV mode if no operation for 5 seconds.



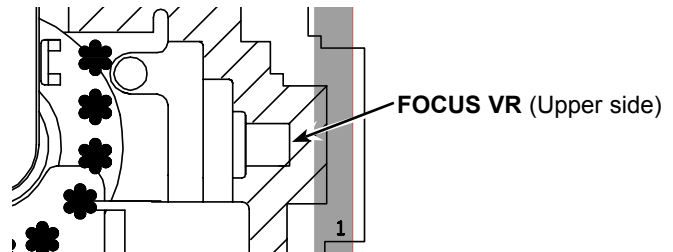
[ Exit from the Service Menu ]

# Service Adjustments

## Service Adjustment-4

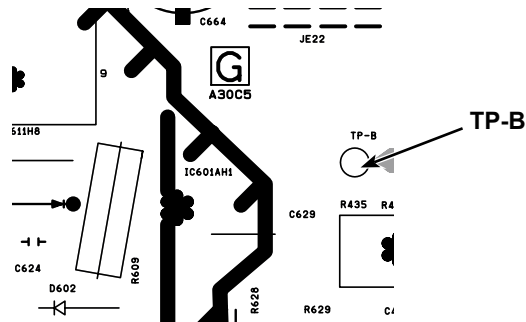
### FOCUS ADJUSTMENT

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.



### +B POWER SUPPLY CHECK

1. Connect a DC voltmeter to TP-B and the ground.
2. Set the brightness to normal and contrast to maximum.
3. Tune the receiver to an active channel and synchronized picture.
4. The +B voltage must be  $140 \pm 2.0$  volt DC.



### HIGH VOLTAGE CHECK

**Note:** +B (+140V) Voltage 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  $28KV \pm 1KV$  and less than  $29.5KV$  at 0 beam current (Brightness and contrast minimum setting).

Note: If the picture tube is replaced, 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.

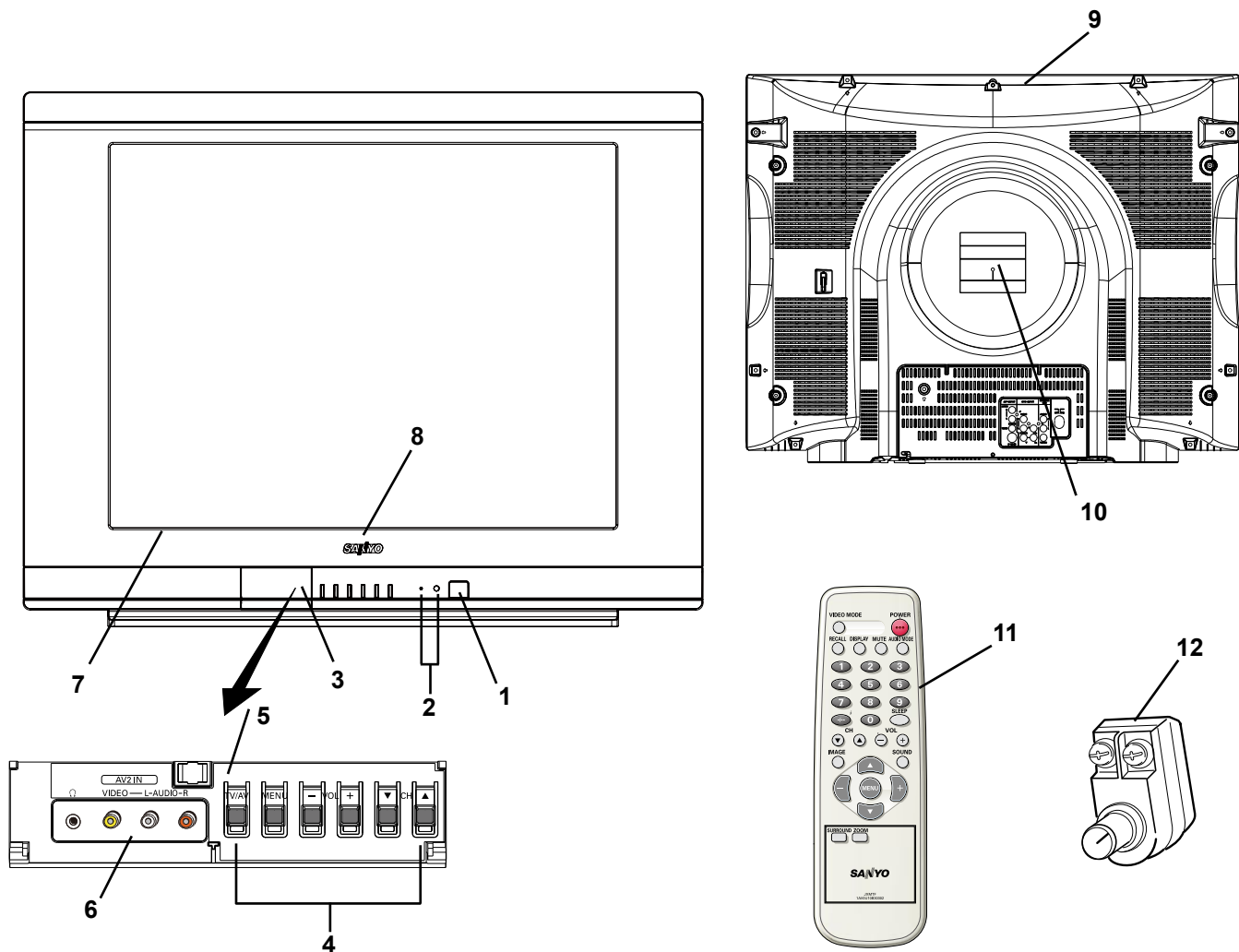
When an abnormality occurs during TV reception, it causes pin 23 of the CPU to go continually Low voltage for about one second. The CPU detects that this has occurred and outputs the signal from pin 36 to switch off the power supply lines.

### 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.

# 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	1AA2BUM0579-- 1S00620	BUTTON POWER COIL SPRING-D8HA			
2	1AA2DEM0479--	DEC IND			
3	1AA2DDM0203--	DOOR FRONT			
4	1AA2BUM0595--	BUTTON UNITED			
5	1AV2LA9FA01-- or 1LG2LA9FA01--	LATCH PUSH LATCH PUSH			
6	1AA2DES0996--	DEC SHEET			
7	1AA2CAM0684--	CABINET FRONT			
8	1LG2BAA0009--	BADGE,SANYO*53.5X12L53.5			
9	1AA2CBM0484--	CABINET BACK			
10	1AA6P4S3558--	LABEL RATING			
11	1AV0U10B30302	ASSY,REMOCON JXMTF			
12	1AV4U19B00700 1AV4U19B00701	ANTENNA CONVERTER ANTENNA CONVERTER			
	1LG6P1P0421--	INSTRUCTION MANUAL-BF5E			

# Chassis Electrical Parts List

Product safety should be considered when a component replacement is made in any area of a receiver. Components indicated by a  $\Delta$  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.

## NOTES:

Read description in the Capacitor and Resistor as follows:

### CAPACITOR

CERAMIC	100P	K	50V	
				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

#### 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

### RESISTOR

CARBON	4.7K	J	A	1/4W	
					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

#### 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

# Chassis Electrical Parts List

Location	Part No.	Description	Safety	Location	Part No.	Description	Safety
A013	013BG4E	ELECTRICAL PARTS		C216	CExLB1C100VDN	ELECT 10U M 16V	
L901	1LB4L81B03700	COIL,DEGAUSSING	⚠	C217	CK1H103KGQBNG	CERAMIC 0.01U K 50V	
Q901	BXXAVB602LGQ-	CRT-AS A68QGU820X64TSAD	⚠	C218	CK1E473KGQBNG	CERAMIC 0.047U K 25V	
SP901	1LB4A10B08800	SPEAKER,8		C219	CK1H332KGQBNG	CERAMIC 3300P K 50V	
SP902	1LB4A10B08800	SPEAKER,8		C223	CH1H474JAGANN	MT-COMPO 0.47U J 50V	
W901	1LB4W10B02300	CORD,POWER-2400MK	⚠	C224	CK1H223KGQBNG	CERAMIC 0.022U K 50V	
W902	1LB4W30B17700	ASSY,WIRE GND CONNECTOR		C225	CExLB1C101VDN	ELECT 100U M 16V	
A100	1LG0B10Y03900	ASSY,MAIN+CRT BG4E		C226	CK1H103KGQBNG	CERAMIC 0.01U K 50V	
A101	1LG0B10Y0390A	ASSY,MAIN BG4E		C227	CK1E104KGQBNG	CERAMIC 0.1U K 25V	
A101	1LB4F1BGZ0010	TUNERU/V		C229	CH1H474JAGANN	MT-COMPO 0.47U J 50V	
A1901	1LB4U20B01200	UNIT,REMOCON,RECEIVER		C232	CExLB1C101VDN	ELECT 100U M 16V	
C001	CExLB1E102VEN	ELECT 1000U M 25V		C233	CK1H103KGQBNG	CERAMIC 0.01U K 50V	
C002	CExLB1E101VEN	ELECT 100U M 25V		C234	CExLB1C100VDN	ELECT 10U M 16V	
C003	CK1H392KGQBNG	CERAMIC 3900P K 50V		C235	CF1H104JADANN	POLYESTER 0.1U J 50V	
C004	CK1C105ZGAFNG	CERAMIC 1U Z 16V		C235	CH1H104JAGANN	MT-COMPO 0.1U J 50V	
C004	CK1C105ZGMFNG	CERAMIC 1U Z 16V		C237	CExLB1C100VDN	ELECT 10U M 16V	
C005	CK1C105ZGAFNG	CERAMIC 1U Z 16V		C238	CExLB1C100VDN	ELECT 10U M 16V	
C005	CK1C105ZGMFNG	CERAMIC 1U Z 16V		C240	CExLB1H3R3VDN	ELECT 3.3U M 50V	
C006	CK1H392KGQBNG	CERAMIC 3900P K 50V		C245	CK1H103KGQBNG	CERAMIC 0.01U K 50V	
C011	CExLB1H100VDN	ELECT 10U M 50V		C250	CC1H101JGQCNG	CERAMIC 100P J 50V	
C013	CExLB1C101VDN	ELECT 100U M 16V		C3401	CExLB1H1R0VDN	ELECT 1U M 50V	
C019	CK1H103KGQBNG	CERAMIC 0.01U K 50V		C3402	CK1C334KGQBNG	CERAMIC 0.33U K 16V	
C1001	CExLB1H1R0VDN	ELECT 1U M 50V		C3403	CExLB1H4R7VDN	ELECT 4.7 U M 50V	
C1002	CExLB1H100VDN	ELECT 10U M 50V		C3405	CK1E104KGQBNG	CERAMIC 0.1U K 25V	
C1003	CExLB1H1R0VDN	ELECT 1U M 50V		C3406	CK1E104KGQBNG	CERAMIC 0.1U K 25V	
C1004	CExLB1H100VDN	ELECT 10U M 50V		C3408	CExLB1H2R2VDN	ELECT 2.2 U M 50V	
C1005	CK1E104KGQBNG	CERAMIC 0.1U K 25V		C3409	CExLB1H220VDN	ELECT 22 U M 50V	
C1006	CK1E104KGQBNG	CERAMIC 0.1U K 25V		C3410	CExLB1H1R0VDN	ELECT 1U M 50V	
C1007	CExLB1H100VDN	ELECT 10U M 50V		C3411	CK1E104KGQBNG	CERAMIC 0.1U K 25V	
C1009	CExLB1H100VDN	ELECT 10U M 50V		C3412	CExLB1H1R0VDN	ELECT 1U M 50V	
C101	CExLB1C471VDN	ELECT 470U M 16V		C3413	CExLB1H1R0VDN	ELECT 1U M 50V	
C1010	CK1E104KGQBNG	CERAMIC 0.1U K 25V		C3414	CExLB1H2R2VDN	ELECT 2.2 U M 50V	
C1011	CK1E104KGQBNG	CERAMIC 0.1U K 25V		C3415	CK1E104KGQBNG	CERAMIC 0.1U K 25V	
C1016	CK1E104KGQBNG	CERAMIC 0.1U K 25V		C3416	CExLB1C470VDN	ELECT 47U M 16V	
C1021	CExLB1H100VDN	ELECT 10U M 50V		C3417	CK1H333KGQBNG	CERAMIC 0.033U K 50V	
C1022	CExLB1H100VDN	ELECT 10U M 50V		C3418	CExLB1H100VDN	ELECT 10U M 50V	
C1023	CExLB1A471VDN	ELECT 470U M 10V		C3419	CK1H333KGQBNG	CERAMIC 0.033U K 50V	
C104	CExLB1H330VDN	ELECT 33U M 50V		C3420	CExLB1H100VDN	ELECT 10U M 50V	
C1040	CExLB1C101VDN	ELECT 100U M 16V		C3421	CExLB1H4R7VDN	ELECT 4.7 U M 50V	
C1041	CK1H103KGQBNG	CERAMIC 0.01U K 50V		C3422	CExLB1H4R7VEN	ELECT 4.7U M 50V	
C1042	CK1E104KGQBNG	CERAMIC 0.1U K 25V		C3423	CExLB1H4R7VDN	ELECT 4.7 U M 50V	
C1043	CK1E104KGQBNG	CERAMIC 0.1U K 25V		C3424	CExLB1H4R7VDN	ELECT 4.7 U M 50V	
C106	CExLB1H220VDN	ELECT 22 U M 50V		C355	CKXLB2H151YEN	CERAMIC 150P K 500V	
C1101	CK1E104KGQBNG	CERAMIC 0.1U K 25V		C355	CKXLB2H151ZEN	CERAMIC 150P K 500V	
C1102	CExLB1H100VDN	ELECT 10U M 50V		C420	CMXAA3Y722AKN	MT-POLYPRO 7200P H 1.5K	
C1103	CExLB1H100VDN	ELECT 10U M 50V		C423	CMXAA3Y802AKN	MT-POLYPRO 8000P H 1.5K	
C1111	CPXLB1C100YAN	NP-ELECT 10U M 16V		C424	CN2G223JBEAQN	POLYPRO 0.022U J 400V	
C1111	CPXLB1C100ZAN	NP-ELECT 10U M 16V		C425	CN2G223JBEAQN	POLYPRO 0.022U J 400V	
C1112	CPXLB1C100YAN	NP-ELECT 10U M 16V		C432	CKXLB2H102YEN	CERAMIC 1000P K 500V	
C1112	CPXLB1C100ZAN	NP-ELECT 10U M 16V		C432	CKXLB2H102ZEN	CERAMIC 1000P K 500V	
C114	CK1H103KGQBNG	CERAMIC 0.01U K 50V		C433	CKXLB2H392YEN	CERAMIC 3900P K 500V	
C1902	CExLB1H220VDN	ELECT 22 U M 50V		C433	CKXLB2H392ZEN	CERAMIC 3900P K 500V	
C201	CC1H150JGQCNG	CERAMIC 15P J 50V		C434	CExLB1V470VDN	ELECT 47U M 35V	
C202	CH1H474JAGANN	MT-COMPO 0.47U J 50V		C437	CG2E474JAPAA	MT-POLYEST 0.47U J 250V	
C203	CExLB1C101VDN	ELECT 100U M 16V		C437	CG2E474JAXAQN	MT-POLYEST 0.47U J 250V	
C204	CK1E473KGQBNG	CERAMIC 0.047U K 25V		C441	CM2G154JAMAQN	MT-POLYPRO 0.15U J 400V	
C205	CK1H103KGQBNG	CERAMIC 0.01U K 50V		C461	CG2G104KAPANN	MT-POLYEST 0.1U K 400V	
C206	CF1H104JADANN	POLYESTER 0.1U J 50V		C462	CExLB1H100VDN	ELECT 10U M 50V	
C206	CH1H104JAGANN	MT-COMPO 0.1U J 50V		C463	CF1H152JADANN	POLYESTER 1500P J 50V	
C207	CExLB1C101VDN	ELECT 100U M 16V		C464	CKXLB2H102YEN	CERAMIC 1000P K 500V	
C208	CK1H103KGQBNG	CERAMIC 0.01U K 50V		C464	CKXLB2H102ZEN	CERAMIC 1000P K 500V	
C209	CK1H152KGQBNG	CERAMIC 1500P K 50V		C464	CK2H102KCBBJN	CERAMIC 1000P K 500V	
C210	CExLB1C101VDN	ELECT 100U M 16V		C465	CG2A225KAAANN	MT-POLYEST 2.2U K 100V	
C211	CK1H103KGQBNG	CERAMIC 0.01U K 50V		C465	CG2A225KAPANN	MT-POLYEST 2.2U K 100V	
C212	CExLB1HR47VDN	ELECT 0.47 U M 50V		C466	CM2G184JAMAQN	MT-POLYPRO 0.18U J 400V	
C213	CK1H333KGQBNG	CERAMIC 0.033U K 50V		C468	CExLB1E220VDN	ELECT 22U M 25V	
C214	CExLB1H1R0VDN	ELECT 1U M 50V		C469	CExLB1H100VDN	ELECT 10U M 50V	
C215	CExLB1HR33VDN	ELECT 0.33U M 50V		C470	CH1H103JAGANN	MT-COMPO 0.01U J 50V	

# Chassis Electrical Parts List

Location	Part No.	Description	Safety	Location	Part No.	Description	Safety
C471	CPXAA2A2R2AAN	NP-ELECT 2.2U M 100V		D001	DDXAAED0434--	DIODE 1N4148	
C471	CPXLB2A2R2YAN	NP-ELECT 2.2U M 100V		D001	DDXLBB047---N	DIODE 1SS133ST	
C471	CPXLB2A2R2ZAN	NP-ELECT 2.2U M 100V		D001	DDXLBB054---N	DIODE 1N4448	
C475	CF1H473JADANN	POLYESTER 0.047U J 50V		D001	DD1SS133---N	DIODE 1SS133	
C475	CH1H473JAGANN	MT-COMPO 0.047U J 50V		D004	DDXLBB053---G	DIODE 1SS35	
C486	CEXLB2E330UCN	ELECT 33U M 250V		D004	DD1SS352---G	DIODE 1SS352-(TPH3)	
C486	CE2E330M4VANN	ELECT 33U M 250V		D004	DD1SS355---G	DIODE 1SS355-TE-17	
C491	CKXLB2H681YEN	CERAMIC 680P K 500V		D1007	DZUDZS12B---G	ZENER DIODE UDZS-TE-1712B	
C491	CKXLB2H681ZEN	CERAMIC 680P K 500V		D1007	DZXLBB12B---G	ZENER DIODE MM3Z12B	
C491	CK2H681KCBBJN	CERAMIC 680P K 500V		D1008	DZUDZS12B---G	ZENER DIODE UDZS-TE-1712B	
C502	CEXLB1E471VDN	ELECT 470 U M 25V		D1008	DZXLBB12B---G	ZENER DIODE MM3Z12B	
C503	CK1H103KGQBNG	CERAMIC 0.01U K 50V		D1010	DZUDZS12B---G	ZENER DIODE UDZS-TE-1712B	
C504	CEXLB1H221VEN	ELECT 220U M 50V		D1010	DZXLBB12B---G	ZENER DIODE MM3Z12B	
C505	CEXLB1E471VDN	ELECT 470 U M 25V		D1011	DZUDZS12B---G	ZENER DIODE UDZS-TE-1712B	
C506	CK1H103KGQBNG	CERAMIC 0.01U K 50V		D1011	DZXLBB12B---G	ZENER DIODE MM3Z12B	
C507	CK1H103KGQBNG	CERAMIC 0.01U K 50V		D103	DZMTZJ36A---N	ZENER DIODE MTZJ36A	
C508	CK2H101KCBBJN	CERAMIC 100P K 500V		D103	DZRD36EB1---N	ZENER DIODE RD36EB1	
C510	CF1H103JADANN	POLYESTER 0.01U J 50V		D103	DZXLBA36A---N	ZENER DIODE ZJ36AST	
C510	CH1H103JAGANN	MT-COMPO 0.01U J 50V		D103	DZXLBA36A---N	ZENER DIODE MTZJ36A	
C512	CH2A474JAHANN	MT-COMPO 0.47U J 100V		D1101	DZUDZS12B---G	ZENER DIODE UDZS-TE-1712B	
C513	CH2A224JAHANN	MT-COMPO 0.22U J 100V		D1101	DZXLBB12B---G	ZENER DIODE MM3Z12B	
C601	CGXAA2E683BJN	MT-POLYEST 0.068U M 250V		D1102	DZUDZS12B---G	ZENER DIODE UDZS-TE-1712B	
C601	CGXAV27683ABC	MT-POLYEST 0.068U M 275V		D1102	DZXLBB12B---G	ZENER DIODE MM3Z12B	
C601	CGXAV27683DBN	MT-POLYEST 0.068U M 275V		D1103	DZUDZS12B---G	ZENER DIODE UDZS-TE-1712B	
C606	CK3A102KAHBNN	CERAMIC 1000P K 1K		D1103	DZXLBB12B---G	ZENER DIODE MM3Z12B	
C606	CK3A102KCBBJN	CERAMIC 1000P K 1K		D1111	DZUDZS12B---G	ZENER DIODE UDZS-TE-1712B	
C606	CK3A102KCRDNN	CERAMIC 1000P K 1K		D1111	DZXLBB12B---G	ZENER DIODE MM3Z12B	
C608	CK3A102KAHBNN	CERAMIC 1000P K 1K		D1112	DZUDZS12B---G	ZENER DIODE UDZS-TE-1712B	
C608	CK3A102KCBBJN	CERAMIC 1000P K 1K		D1112	DZXLBB12B---G	ZENER DIODE MM3Z12B	
C608	CK3A102KCRDNN	CERAMIC 1000P K 1K		D1301	DZUDZS12B---G	ZENER DIODE UDZS-TE-1712B	
C609	CEXAA2G271ACN	ELECT 270U M 400V		D1301	DZXLBB12B---G	ZENER DIODE MM3Z12B	
C609	CEXLB2G271UBN	ELECT 270U M 400V		D1302	DZUDZS12B---G	ZENER DIODE UDZS-TE-1712B	
C611	CEXLB1H1R0VDN	ELECT 1U M 50V		D1302	DZXLBB12B---G	ZENER DIODE MM3Z12B	
C612	CF1H102JADANN	POLYESTER 1000P J 50V		D1306	DZUDZS12B---G	ZENER DIODE UDZS-TE-1712B	
C613	CH1H104JAGANN	MT-COMPO 0.1U J 50V		D1306	DZXLBB12B---G	ZENER DIODE MM3Z12B	
C614	CK3D102KCRDNN	CERAMIC 1000P K 2K		D1309	DZUDZS12B---G	ZENER DIODE UDZS-TE-1712B	
C615	CF1H471JADANN	POLYESTER 470P J 50V		D1309	DZXLBB12B---G	ZENER DIODE MM3Z12B	
C616	CEXLB1H220VDN	ELECT 22 U M 50V		D1310	DZUDZS12B---G	ZENER DIODE UDZS-TE-1712B	
C617	CK3D221KCRDNN	CERAMIC 220P K 2K		D1310	DZXLBB12B---G	ZENER DIODE MM3Z12B	
C618	CN2J103JBEAQN	POLYPRO 0.01U J 630V		D1311	DZUDZS12B---G	ZENER DIODE UDZS-TE-1712B	
C619	CK3A102KCRDNN	CERAMIC 1000P K 1K		D1311	DZXLBB12B---G	ZENER DIODE MM3Z12B	
C620	CEXAA2C221AJN	ELECT 220U M 160V		D1312	DZUDZS12B---G	ZENER DIODE UDZS-TE-1712B	
C620	CEXAA2D221ADN	ELECT 220U M 200V		D1312	DZXLBB12B---G	ZENER DIODE MM3Z12B	
C620	CEXLB2C221UAN	ELECT 220U M 160V		D1321	DZUDZS12B---G	ZENER DIODE UDZS-TE-1712B	
C622	CK3A471KCRDNN	CERAMIC 470P K 1K		D1321	DZXLBB12B---G	ZENER DIODE MM3Z12B	
C623	CEXLB1E222VEN	ELECT 2200U M 25V		D1330	DZUDZS12B---G	ZENER DIODE UDZS-TE-1712B	
C627	CKXAA2G102ANN	CERAMIC 1000P M 400V	⚠	D1330	DZXLBB12B---G	ZENER DIODE MM3Z12B	
C627	CKXLB2G102ZJN	CERAMIC 1000P M 400V	⚠	D1901	DLSPR-39MVWFN	LED SPR-39MVWF	
C628	CKXAA2G102ANN	CERAMIC 1000P M 400V	⚠	D1901	DLXLB028---N	LED BL-BEG2T1Q-AB	
C628	CKXLB2G102ZJN	CERAMIC 1000P M 400V	⚠	D1901A	1AA2HLM0212--	HOLDER LED-S4KF	
C629	CKXAA2G102ANN	CERAMIC 1000P M 400V	⚠	D1901A	1LG2HLM0032--	LED HOLDER-C6CP	
C629	CKXLB2G102ZJN	CERAMIC 1000P M 400V	⚠	D1911	DZUDZS12B---G	ZENER DIODE UDZS-TE-1712B	
C631	CK3A102KAHBNN	CERAMIC 1000P K 1K	⚠	D1911	DZXLBB12B---G	ZENER DIODE MM3Z12B	
C631	CK3A102KCBBJN	CERAMIC 1000P K 1K		D1912	DZUDZS12B---G	ZENER DIODE UDZS-TE-1712B	
C632	CEXLB1H331VEN	ELECT 330U M 50V		D1912	DZXLBB12B---G	ZENER DIODE MM3Z12B	
C646	CFXLB2A103ZBN	POLYESTER 0.01U K 100V		D1913	DZUDZS12B---G	ZENER DIODE UDZS-TE-1712B	
C650	CK1E104KGQBNG	CERAMIC 0.1U K 25V		D1913	DZXLBB12B---G	ZENER DIODE MM3Z12B	
C651	CK3A102KAHBNN	CERAMIC 1000P K 1K		D1914	DZUDZS12B---G	ZENER DIODE UDZS-TE-1712B	
C651	CK3A102KCBBJN	CERAMIC 1000P K 1K		D1914	DZXLBB12B---G	ZENER DIODE MM3Z12B	
C652	CEXLB1E102VEN	ELECT 1000U M 25V		D209	DZUDZS12B---G	ZENER DIODE UDZS-TE-1712B	
C661	CK3A471KCRDNN	CERAMIC 470P K 1K		D209	DZXLBB12B---G	ZENER DIODE MM3Z12B	
C662	CEXLB1E222VEN	ELECT 2200U M 25V		D210	DZUDZS12B---G	ZENER DIODE UDZS-TE-1712B	
C671	CK3A102KAHBNN	CERAMIC 1000P K 1K		D210	DZXLBB12B---G	ZENER DIODE MM3Z12B	
C671	CK3A102KCBBJN	CERAMIC 1000P K 1K		D221	DZUDZS12B---G	ZENER DIODE UDZS-TE-1712B	
C672	CEXLB1V102VEN	ELECT 1000U M 35V		D221	DZXLBB12B---G	ZENER DIODE MM3Z12B	
C805	CEXLB1C101VDN	ELECT 100U M 16V		D222	DZUDZS12B---G	ZENER DIODE UDZS-TE-1712B	
C815	CK1H103KGQBNG	CERAMIC 0.01U K 50V		D222	DZXLBB12B---G	ZENER DIODE MM3Z12B	
C850	CEXLB1H100VDN	ELECT 10U M 50V		D223	DZUDZS12B---G	ZENER DIODE UDZS-TE-1712B	

# Chassis Electrical Parts List

Location	Part No.	Description	Safety	Location	Part No.	Description	Safety
D223	DZXLBB12B--G	ZENER DIODE MM3Z12B		D615	DDES1Z-----N	DIODE ES1Z	
D353	DZMTZJ7.5A--N	ZENER DIODE MTZJ7.5A		D615	DDXLBB041---N	DIODE EU1	
D421	DZXLBZA16A--N	ZENER DIODE MTZJ16A		D616	DDEG01C-----N	DIODE EG01C	
D438	DDXLBB036---N	DIODE ERD07-15		D616	DDXLBB035---N	DIODE EG01C	
D439	DDXLBB033---N	DIODE ERB44-04		D619	DDXLBB053---G	DIODE 1SS35	
D461	DDXAAED0434--	DIODE 1N4148		D619	DD1SS352---G	DIODE 1SS352-(TPH3)	
D461	DD1SS133---N	DIODE 1SS133		D619	DD1SS355---G	DIODE 1SS355-TE-17	
D461	DD1S2076A---N	DIODE 1S2076A-E		D621	DDRU3YX-----N	DIODE RU3YX	
D462	DDXAAED0434--	DIODE 1N4148		D621	DDXLBB038---N	DIODE RU3YX	
D462	DD1SS133---N	DIODE 1SS133		D622	DDRU4AMLF-J3N	DIODE RU4AM LF-J3	
D462	DD1S2076A---N	DIODE 1S2076A-E		D622	DDRU4AMLF-K2N	DIODE RU4AM LF-K2	
D463	DZMTZJ12B---N	ZENER DIODE MTZJ12B		D622	DDRU4AMLF-L1N	DIODE RU4AM LF-L1	
D463	DZXLBZA12B--N	ZENER DIODE MTZJ12B		D622	DDXLBB032---N	DIODE RU4AM	
D464	DZMTZJ4.7A--N	ZENER DIODE MTZJ4.7A		D624	DZMTZJ6.8B--N	ZENER DIODE MTZJ6.8B	
D464	DZXLBZA4.7A-N	ZENER DIODE MTZJ4.7A		D624	DZXLBXA6.8B-N	ZENER DIODE ZJ6.8BST	
D465	DDXAAED0434--	DIODE 1N4148		D631	DDXLBB031---N	DIODE RN1Z	
D465	DD1SS133---N	DIODE 1SS133		D651	DDXLBB045---N	DIODE EU2	
D465	DD1S2076A---N	DIODE 1S2076A-E		D666	RGFR000ZTCANL	MT-GLAZE 0.000 ZA 1/10W	
D466	DZMTZJ20A---N	ZENER DIODE MTZJ20A		D667	DDXLBB053---G	DIODE 1SS35	
D466	DZRD20EB1---N	ZENER DIODE RD20EB1		D667	DD1SS352---G	DIODE 1SS352-(TPH3)	
D467	DDXAAED0434--	DIODE 1N4148		D667	DD1SS355---G	DIODE 1SS355-TE-17	
D467	DD1SS133---N	DIODE 1SS133		D669	DDXLBB053---G	DIODE 1SS35	
D467	DD1S2076A---N	DIODE 1S2076A-E		D669	DD1SS352---G	DIODE 1SS352-(TPH3)	
D468	DDXAAED0434--	DIODE 1N4148		D669	DD1SS355---G	DIODE 1SS355-TE-17	
D468	DD1SS133---N	DIODE 1SS133		D670	DZUDZS7.5B--G	ZENER DIODE UDZS7.5BTE-17	
D468	DD1S2076A---N	DIODE 1S2076A-E		D670	DZXLBBX7.5B-G	ZENER DIODE MM3Z67V5B	
D469	DDEU1-----N	DIODE EU1		D671	DDES1Z-----N	DIODE ES1Z	
D470	DZMTZJ7.5A--N	ZENER DIODE MTZJ7.5A		D671	DDEU01Z-----N	DIODE EU01Z	
D476	DZXLBZA5.1B-N	ZENER DIODE MTZJ5.1B		D682	RGFR000ZTCANL	MT-GLAZE 0.000 ZA 1/10W	
D485	DDEU1-----N	DIODE EU1		D683	DDXLBB053---G	DIODE 1SS35	
D485	DDXLBB017---N	DIODE EU1		D683	DD1SS352---G	DIODE 1SS352-(TPH3)	
D486	DDXAAED0434--	DIODE 1N4148		D683	DD1SS355---G	DIODE 1SS355-TE-17	
D486	DD1SS133---N	DIODE 1SS133		D684	DDYG901C2---N	DIODE YG901C2	
D486	DD1S2076A---N	DIODE 1S2076A-E		D887	DDXAAED0434--	DIODE 1N4148	
D501	DDXAAED0434--	DIODE 1N4148		D887	DD1SS133---N	DIODE 1SS133	
D501	DD1SS133---N	DIODE 1SS133		D887	DD1S2076A---N	DIODE 1S2076A-E	
D501	DD1S2076A---N	DIODE 1S2076A-E		F601	F31S4R0A2HOTS	FUSE 250V 4A	
D502	DDXLBB012---N	DIODE ERA15-02		F601	F31S4R0A2LTTW	FUSE 250V 4A	
D502	DDXLBB040---N	DIODE ERA15-02		F601A	1AV4J20B00100	HOLDER,FUSE	
D503	DDXAAED0434--	DIODE 1N4148		F601A	1AV4J20B0120J	HOLDER,FUSE	
D503	DD1SS133---N	DIODE 1SS133		F601B	1AV4J20B00100	HOLDER,FUSE	
D503	DD1S2076A---N	DIODE 1S2076A-E		F601B	1AV4J20B0120J	HOLDER,FUSE	
D605	DDRM11C-----N	DIODE RM11C		IC001	QLA42205-E--N	IC LA42205-E	
D605	DDXLBB016---N	DIODE ERC05-10B		IC001A	1LG2HEA0069A-	HEAT SINK -BG4E	
D606	DDRM11C-----N	DIODE RM11C		IC001B	SM2PW308R0SV-	SCR PAN+SW+W 3X8	
D606	DDXLBB016---N	DIODE ERC05-10B		IC001E	SM2PW308R0SV-	SCR PAN+SW+W 3X8	
D607	DDRM11C-----N	DIODE RM11C		IC1001	QTC4052BF---P	IC TC4052BF(EL)	
D607	DDXLBB016---N	DIODE ERC05-10B		IC1002	QNJM2533M---P	IC NJM2533M	
D608	DDRM11C-----N	DIODE RM11C		IC201	QXXAVD111---M	IC LV761132C5AL0-MPB-E	
D608	DDXLBB016---N	DIODE ERC05-10B		IC3401	QLA72703-E--N	IC LA72703-E	
D609	DZMTZJ6.2B--N	ZENER DIODE MTZJ6.2B		IC501-1	QLA7846NZ---N	IC LA7846NZ	
D609	DZXLBXA6.2B-N	ZENER DIODE ZJ6.2BST		IC501A-1	1AA2HEA0234Z-	HEAT SINK A-BG4E	
D610	DCPC123X5YFZN	PHOTO COUPLE PC123X5YFZ0F		IC501B	SM2PW30100SV-	SCR PAN+SW+W 3X10	
D610	DCPC123Y52--N	PHOTO COUPLE PC123Y52J00F		IC501E	SM2PW30100SV-	SCR PAN+SW+W 3X10	
D610	DCTLP421F-BLN	PC TLP421F(D4-BL)		IC601	QXXAVC634---N	IC STR-W6756(LF2003)	
D611	DDXLBB047---N	DIODE 1SS133ST		IC601A	1LG0HEA0028--	ASSY,HEAT SINK BA7E	
D611	DDXLBB054---N	DIODE 1N4448			1LG2HEA0049--	HEAT SINK-BA7E	
D611	DD1SS133---N	DIODE 1SS133			1LG2MOA0001--	RADIATOR MTG BRKT-C2GK	
D611	DD1S2076A---N	DIODE 1S2076A-E		IC601B	SM2PW308R0SV-	SCR PAN+SW+W 3X8	
D612	DZMTZJ16A---N	ZENER DIODE MTZJ16A		IC662	QTL431ATA---N	IC TL431ATA	
D613	DDXLBB047---N	DIODE 1SS133ST		IC802	QXXAVC899---N	IC LE24C162-E	
D613	DDXLBB054---N	DIODE 1N4448		IC802	Q24LC16B/P--N	IC 24LC16B/P	
D613	DD1SS133---N	DIODE 1SS133		JF55	RGFR000ZTCANL	MT-GLAZE 0.000 ZA 1/10W	
D613	DD1S2076A---N	DIODE 1S2076A-E		JF56	RGFR000ZTCANL	MT-GLAZE 0.000 ZA 1/10W	
D614	DDXLBB047---N	DIODE 1SS133ST		JF57	RGFR000ZTCANL	MT-GLAZE 0.000 ZA 1/10W	
D614	DDXLBB054---N	DIODE 1N4448		JF59	RGFR000ZTCANL	MT-GLAZE 0.000 ZA 1/10W	
D614	DD1SS133---N	DIODE 1SS133		JF65	RGFR000ZTCANL	MT-GLAZE 0.000 ZA 1/10W	
D614	DD1S2076A---N	DIODE 1S2076A-E		JH45	RGFR000ZTCANL	MT-GLAZE 0.000 ZA 1/10W	



# Chassis Electrical Parts List

Location	Part No.	Description	Safety	Location	Part No.	Description	Safety
JH58	RGFR000ZTCANL	MT-GLAZE 0.000 ZA 1/10W		Q462	7QT00202	TR 2SC1740S	
JP804	RGFR000ZTCANL	MT-GLAZE 0.000 ZA 1/10W		Q463	TXXLBB006---P	TR MMBTSC3928R	
J172	RGFR000ZTCANL	MT-GLAZE 0.000 ZA 1/10W		Q463	7T200220	TR 2SC2412K(P)-6	
KP&K7P	1AA95CTAN500W	STANDARD WIRE ASSY-JPN		Q622	TXXLBB002---N	TR CJC1815-GR	
KQ&K7Q	1AA93CTAN480W	STANDARD WIRE ASSY-JPN		Q622	T2SC1815-GR-N	TR 2SC1815-GR	
K1003	1AV4J12B05400	JACK,PHONE D3.6		Q631	TXXLBB004---N	TR CJB985-S	
K1003	1LB4J12B00200	JACK,PHONE D3.5		Q631	T2SB985-S---N	TR 2SB985-S	
K1003	1LB4J12B05000	JACK,PHONE D3.6		Q632	TXXLBB002---N	TR CJC1815-GR	
K1101	1LB4J12B08302	JACK,RCA-8		Q632	T2SC1815-GR-N	TR 2SC1815-GR	
K1302	1LB4J31B00300	TERMINAL, BOARD		Q651	T2SD1347-S--N	TR 2SD1347-S	
K1303	1LB4J12B02000	JACK,RCA-3		Q652	TXXLBB005---P	TR MMBTSA1235F	
K1303	1LB4J12B02900	JACK,RCA-3		Q652	7T210221	TR 2SA1037K(P)-6	
L201	1AV4L2B9100JN	INDUCTOR,10U J		Q671	T2SB985-S---N	TR 2SB985-S	
L201	1AV4L2B9100KN	INDUCTOR,10U K		Q672	TXXLBB006---P	TR MMBTSC3928R	
L431	1LB4Z21B0160N	CORE,PIPE		Q672	7T200220	TR 2SC2412K(P)-6	
L431	1LB4Z21B0360N	CORE,PIPE		Q684	TXXLBB006---P	TR MMBTSC3928R	
L432	1AV4Z21B0330N	CORE,PIPE		Q684	7T200220	TR 2SC2412K(P)-6	
L432	1LB4Z21B0160N	CORE,PIPE		Q685	TXXLBB006---P	TR MMBTSC3928R	
L432	1LB4Z21B0360N	CORE,PIPE		Q685	7T200220	TR 2SC2412K(P)-6	
L441	1LB4L71B0440N	COIL,LINEARITY		Q886	TXXLBB006---P	TR MMBTSC3928R	
L442	1LB4L26B1290N	INDUCTOR,155UH		Q886	7T200220	TR 2SC2412K(P)-6	
L461	1AV4L26B0170N	INDUCTOR,2200U K		Q887	TXXLBB006---P	TR MMBTSC3928R	
L461	1LB4L26B0030N	INDUCTOR,2.0MH		Q887	7T200220	TR 2SC2412K(P)-6	
L462	1LB4L26B0490N	INDUCTOR,350UH	⚠	RL601	1AV4S20B0460N	RELAY	⚠
L601	1AV4F35B1100N	LINE FILTER	⚠	RL601	1AV4S20B0480N	RELAY	
L601	1LB4F35B0200N	LINE FILTER		R001	RGF2701JTCANL	MT-GLAZE 2.7K JA 1/10W	
L611	ZZ0122 PIPE CORE			R002	RGF2701JTCANL	MT-GLAZE 2.7K JA 1/10W	
L611	1LB4Z21B0150N	CORE,PIPE		R003	RGF3901JTCANL	MT-GLAZE 3.9K JA 1/10W	
L621	ZZ0122 PIPE CORE		⚠	R004	RGF3901JTCANL	MT-GLAZE 3.9K JA 1/10W	
PB101	1LG4B10Y03400	PWB,MAIN+CRT BF5E	⚠	R005	RDD8201JPAANN	CARBON 8.2K JA 1/6W	
PB101	1LG4B10Y0340A	PWB,MAIN BF5E	⚠	R007	RGF3301JTCANL	MT-GLAZE 3.3K JA 1/10W	
PS601	DHXLBB013---N	TH J503P62C090Q290		R008	RGF2201JTCANL	MT-GLAZE 2.2K JA 1/10W	
Q002	TXXLBB005---P	TR MMBTSA1235F		R014	RGF1001JTCANL	MT-GLAZE 1K JA 1/10W	
Q002	7T210221	TR 2SA1037K(P)-6		R015	RGFR000ZTCANL	MT-GLAZE 0.000 ZA 1/10W	
Q1001	TXXLBB005---P	TR MMBTSA1235F		R1009	RDD4700JPAANN	CARBON 470 JA 1/6W	
Q1001	7T210221	TR 2SA1037K(P)-6		R1011	RDD4700JPAANN	CARBON 470 JA 1/6W	
Q1002	TXXLBB005---P	TR MMBTSA1235F		R1012	RGF2200JTCANL	MT-GLAZE 220 JA 1/10W	
Q1002	7T210221	TR 2SA1037K(P)-6		R1013	RGF1001JTCANL	MT-GLAZE 1K JA 1/10W	
Q1003	TXXLBB005---P	TR MMBTSA1235F		R1014	RDD1001JPAANN	CARBON 1K JA 1/6W	
Q1003	7T210221	TR 2SA1037K(P)-6		R1015	RDB2200JPBANN	CARBON 220 JA 1/4W	
Q1902	TXXLBB006---P	TR MMBTSC3928R		R103	RSXAV1393JDAK	OXIDE-MT 39KJB 1W	
Q1902	7T200220	TR 2SC2412K(P)-6		R1032	RGFR000ZTCANL	MT-GLAZE 0.000 ZA 1/10W	
Q201	TXXLBB003---N	TR CJD400-E		R1033	RGFR000ZTCANL	MT-GLAZE 0.000 ZA 1/10W	
Q201	T2SD400-E-MPN	TR 2SD400-E-MP		R1036	RGF1500JTCANL	MT-GLAZE 150 JA 1/10W	
Q202	TXXLBB003---N	TR CJD400-E		R1036A	RGF1500JTCANL	MT-GLAZE 150 JA 1/10W	
Q202	T2SD400-E-MPN	TR 2SD400-E-MP		R1037	RGF1003JTCANL	MT-GLAZE 100K JA 1/10W	
Q205	TXXLBB003---N	TR CJD400-E		R1038	RGF1003JTCANL	MT-GLAZE 100K JA 1/10W	
Q205	T2SD400-E-MPN	TR 2SD400-E-MP		R1041	RGF1000JTCANL	MT-GLAZE 100 JA 1/10W	
Q206	TXXLBB003---N	TR CJD400-E		R106	RGF1000JTCANL	MT-GLAZE 100 JA 1/10W	
Q206	T2SD400-E-MPN	TR 2SD400-E-MP		R107	RGF1000JTCANL	MT-GLAZE 100 JA 1/10W	
Q210	TXXLBB006---P	TR MMBTSC3928R		R1070	RGF1003JTCANL	MT-GLAZE 100K JA 1/10W	
Q210	7T200220	TR 2SC2412K(P)-6		R1071	RGF1003JTCANL	MT-GLAZE 100K JA 1/10W	
Q211	TXXLBB006---P	TR MMBTSC3928R		R1072	RGF1003JTCANL	MT-GLAZE 100K JA 1/10W	
Q211	7T200220	TR 2SC2412K(P)-6		R1073	RGF1003JTCANL	MT-GLAZE 100K JA 1/10W	
Q3401	TXXLBB006---P	TR MMBTSC3928R		R1074	RGF1003JTCANL	MT-GLAZE 100K JA 1/10W	
Q3401	7T200220	TR 2SC2412K(P)-6		R1075	RGF1003JTCANL	MT-GLAZE 100K JA 1/10W	
Q425	TXXGA0008684N	TR 2SK2010-CTV-YA14		R1076	RGF1003JTCANL	MT-GLAZE 100K JA 1/10W	
Q431	T2SC3332-R--N	TR 2SC3332-R		R1077	RGF1003JTCANL	MT-GLAZE 100K JA 1/10W	
Q431	T2SC3332-S--N	TR 2SC3332-S		R1078	RGF1003JTCANL	MT-GLAZE 100K JA 1/10W	
Q432	T2SD2634-YB-N	TR 2SD2634-YB		R1079	RGF1003JTCANL	MT-GLAZE 100K JA 1/10W	
Q432A	1LG0HEA0025A-	ASSY,HEAT SINK H BA7E		R108	RDD1802JPAANN	CARBON 18K JA 1/6W	
Q432B	SM2PW308R0SV-	SCR PAN+SW+W 3X8		R1080	RGF1003JTCANL	MT-GLAZE 100K JA 1/10W	
Q432D	1AV2FX9MA16-A	FIXER HOOK,D13(PP)		R1081	RGF1003JTCANL	MT-GLAZE 100K JA 1/10W	
Q432E	SM2PW308R0SV-	SCR PAN+SW+W 3X8		R1082	RGF1003JTCANL	MT-GLAZE 100K JA 1/10W	
Q461-1	T2SB817-E---N	TR 2SB817-E		R1083	RGF1003JTCANL	MT-GLAZE 100K JA 1/10W	
Q461A-1	1AA2HEA0396--	HEAT SINK B-BG4E		R1084	RGF1003JTCANL	MT-GLAZE 100K JA 1/10W	
Q461B	SM2PW30100SV-	SCR PAN+SW+W 3X10		R1085	RGF1003JTCANL	MT-GLAZE 100K JA 1/10W	
				R1086	RGF1003JTCANL	MT-GLAZE 100K JA 1/10W	



# Chassis Electrical Parts List

Location	Part No.	Description	Safety	Location	Part No.	Description	Safety
R1087	RGF1003JTCANL	MT-GLAZE 100K JA 1/10W		R234	RGF1002JTCANL	MT-GLAZE 10K JA 1/10W	
R1088	RGF1003JTCANL	MT-GLAZE 100K JA 1/10W		R240	RGF1000JTCANL	MT-GLAZE 100 JA 1/10W	
R1089	RGF1003JTCANL	MT-GLAZE 100K JA 1/10W		R242	RGF2700JTCANL	MT-GLAZE 270 JA 1/10W	
R109	RGF6802JTCANL	MT-GLAZE 68K JA 1/10W		R244	RGF2700JTCANL	MT-GLAZE 270 JA 1/10W	
R1090	RGF1000JTCANL	MT-GLAZE 100 JA 1/10W		R245	RGF1000JTCANL	MT-GLAZE 100 JA 1/10W	
R1091	RGF1000JTCANL	MT-GLAZE 100 JA 1/10W		R247	RGF5600JTCANL	MT-GLAZE 560 JA 1/10W	
R1101	RGF1500JTCANL	MT-GLAZE 150 JA 1/10W		R248	RGF5600JTCANL	MT-GLAZE 560 JA 1/10W	
R1101A	RGF1500JTCANL	MT-GLAZE 150 JA 1/10W		R249	RGF1003JTCANL	MT-GLAZE 100K JA 1/10W	
R1103	RGF1003JTCANL	MT-GLAZE 100K JA 1/10W		R251	RGFR000ZTCANL	MT-GLAZE 0.000 ZA 1/10W	
R1105	RGF1003JTCANL	MT-GLAZE 100K JA 1/10W		R254	RGF1000JTCANL	MT-GLAZE 100 JA 1/10W	
R1112	RDB3900JPBANN	CARBON 390 JA 1/4W		R255	RGF1000JTCANL	MT-GLAZE 100 JA 1/10W	
R1114	RDB3900JPBANN	CARBON 390 JA 1/4W		R256	RGF4701JTCANL	MT-GLAZE 4.7K JA 1/10W	
R113	RGFR000ZTCANL	MT-GLAZE 0.000 ZA 1/10W		R257	RSXAV2270JDAK	OXIDE-MT 27JB 2W	
R1301	RGF1500JTCANL	MT-GLAZE 150 JA 1/10W		R258	RSXAV2330JDAK	OXIDE-MT 33JB 2W	
R1301A	RGF1500JTCANL	MT-GLAZE 150 JA 1/10W		R259	RSXAV2220JDAK	OXIDE-MT 22JB 2W	
R1302	RGF1500JTCANL	MT-GLAZE 150 JA 1/10W		R260	RSXAV23R9JDAK	OXIDE-MT 3.9JB 2W	
R1302A	RGF1500JTCANL	MT-GLAZE 150 JA 1/10W		R261	RGF1802JTCANL	MT-GLAZE 18K JA 1/10W	
R1304	RGF1003JTCANL	MT-GLAZE 100K JA 1/10W		R263	RGF4701JTCANL	MT-GLAZE 4.7K JA 1/10W	
R1305	RGF1003JTCANL	MT-GLAZE 100K JA 1/10W		R264	RGF2202JTCANL	MT-GLAZE 22K JA 1/10W	
R1307	RGF1003JTCANL	MT-GLAZE 100K JA 1/10W		R268	RGF2201JTCANL	MT-GLAZE 2.2K JA 1/10W	
R1308	RGF1003JTCANL	MT-GLAZE 100K JA 1/10W		R269	RGF4701JTCANL	MT-GLAZE 4.7K JA 1/10W	
R1309	RGF1500JTCANL	MT-GLAZE 150 JA 1/10W		R270	RGF2702JTCANL	MT-GLAZE 27K JA 1/10W	
R1309A	RGF1500JTCANL	MT-GLAZE 150 JA 1/10W		R271	RDD1003JPAANN	CARBON 100K JA 1/6W	
R1310	RGF1500JTCANL	MT-GLAZE 150 JA 1/10W		R272	RGF3302JTCANL	MT-GLAZE 33K JA 1/10W	
R1310A	RGF1500JTCANL	MT-GLAZE 150 JA 1/10W		R273	RDD8202JPAANN	CARBON 82K JA 1/6W	
R1311	RGF1500JTCANL	MT-GLAZE 150 JA 1/10W		R280	RGF4701JTCANL	MT-GLAZE 4.7K JA 1/10W	
R1311A	RGF1500JTCANL	MT-GLAZE 150 JA 1/10W		R281	RGF1000JTCANL	MT-GLAZE 100 JA 1/10W	
R1314	RGF75R0JTCANL	MT-GLAZE 75 JA 1/10W		R283	RGF1200JTCANL	MT-GLAZE 120 JA 1/10W	
R1315	RGF1003JTCANL	MT-GLAZE 100K JA 1/10W		R284	RGF1200JTCANL	MT-GLAZE 120 JA 1/10W	
R1901	RGF1502JTCANL	MT-GLAZE 15K JA 1/10W		R285	RGF1200JTCANL	MT-GLAZE 120 JA 1/10W	
R1902	RGF3901JTCANL	MT-GLAZE 3.9K JA 1/10W		R286	RGF1002JTCANL	MT-GLAZE 10K JA 1/10W	
R1903	RGF1801JTCANL	MT-GLAZE 1.8K JA 1/10W		R287	RGF1002JTCANL	MT-GLAZE 10K JA 1/10W	
R1904	RGF1001JTCANL	MT-GLAZE 1K JA 1/10W		R295	RGFR000ZTCANL	MT-GLAZE 0.000 ZA 1/10W	
R1905	RGF6800JTCANL	MT-GLAZE 680 JA 1/10W		R3433	RGF3901JTCANL	MT-GLAZE 3.9K JA 1/10W	
R1906	RGF4700JTCANL	MT-GLAZE 470 JA 1/10W		R3434	RGF1001JTCANL	MT-GLAZE 1K JA 1/10W	
R1907	RGF4700JTCANL	MT-GLAZE 470 JA 1/10W		R3435	RGF1002JTCANL	MT-GLAZE 10K JA 1/10W	
R1908	RGF2001JTCANL	MT-GLAZE 2K JA 1/10W		R3436	RDD47R0JPAANN	CARBON 47 JA 1/6W	
R1910	RGF1000JTCANL	MT-GLAZE 100 JA 1/10W		R3437	RDD47R0JPAANN	CARBON 47 JA 1/6W	
R1911	RGF2200JTCANL	MT-GLAZE 220 JA 1/10W		R3438	RGF4701JTCANL	MT-GLAZE 4.7K JA 1/10W	
R1912	RGF2200JTCANL	MT-GLAZE 220 JA 1/10W		R3461	RGFR000ZTCANL	MT-GLAZE 0.000 ZA 1/10W	
R1913	RGF2200JTCANL	MT-GLAZE 220 JA 1/10W		R355	RDB1002JPBANN	CARBON 10K JA 1/4W	
R201	RGF1202JTCANL	MT-GLAZE 12K JA 1/10W		R421	RDD4701JPAANN	CARBON 4.7K JA 1/6W	
R202	RND2202FPAANN	MT-FILM 22K FA 1/6W		R422	RDB4702JPBANN	CARBON 47K JA 1/4W	
R203	RDD2200JPAANN	CARBON 220 JA 1/6W		R423	RDB5602JPBANN	CARBON 56K JA 1/4W	
R204	RGF1500JTCANL	MT-GLAZE 150 JA 1/10W		R424	RDD1001JPAANN	CARBON 1K JA 1/6W	
R205	RGF3002JTCANL	MT-GLAZE 30K JA 1/10W		R426	RGF1502JTCANL	MT-GLAZE 15K JA 1/10W	
R206	RGF1802JTCANL	MT-GLAZE 18K JA 1/10W		R432	RGF1001JTCANL	MT-GLAZE 1K JA 1/10W	
R207	RGF1000JTCANL	MT-GLAZE 100 JA 1/10W		R433	RDA1001JPCANN	CARBON 1K JA 1/2W	
R208	RGF1004JTCANL	MT-GLAZE 1M JA 1/10W		R434	RSXAV2271JDAK	OXIDE-MT 270JB 2W	
R213	RGF1000JTCANL	MT-GLAZE 100 JA 1/10W		R435	RWXLB75R6KXBL	WIRE WOUND 5.6 KA 7W	
R214	RGF4701JTCANL	MT-GLAZE 4.7K JA 1/10W		R441	RSXAV2102JDAK	OXIDE-MT 1.0KJB 2W	
R215	RGF4701JTCANL	MT-GLAZE 4.7K JA 1/10W		R442	RSXAV2332JDAK	OXIDE-MT 3.3KJB 2W	
R216	RGF1000JTCANL	MT-GLAZE 100 JA 1/10W		R454	RDD1000JPAANN	CARBON 100 JA 1/6W	
R217	RGF1000JTCANL	MT-GLAZE 100 JA 1/10W		R456	RSXAV1823JDAK	OXIDE-MT 82KJB 1W	
R218	RGF1000JTCANL	MT-GLAZE 100 JA 1/10W		R457	RGF6800JTCANL	MT-GLAZE 680 JA 1/10W	
R219	RGF1000JTCANL	MT-GLAZE 100 JA 1/10W		R458	RGF1801JTCANL	MT-GLAZE 1.8K JA 1/10W	
R220	RGF1000JTCANL	MT-GLAZE 100 JA 1/10W		R459	RDD4703JPAANN	CARBON 470K JA 1/6W	
R222	RGF1000JTCANL	MT-GLAZE 100 JA 1/10W		R460	RDD1002JPAANN	CARBON 10K JA 1/6W	
R223	RGF1000JTCANL	MT-GLAZE 100 JA 1/10W		R461	RDA1203JPCANN	CARBON 120K JA 1/2W	
R224	RGF1000JTCANL	MT-GLAZE 100 JA 1/10W		R462	RDD3302JPAANN	CARBON 33K JA 1/6W	
R225	RGF1000JTCANL	MT-GLAZE 100 JA 1/10W		R469	RDD2204JPAANN	CARBON 2.2M JA 1/6W	
R226	RGF1000JTCANL	MT-GLAZE 100 JA 1/10W		R470	RDD1803JPAANN	CARBON 180K JA 1/6W	
R227	RGF1000JTCANL	MT-GLAZE 100 JA 1/10W		R471	RDD1501JPAANN	CARBON 1.5K JA 1/6W	
R229	RGF1003JTCANL	MT-GLAZE 100K JA 1/10W		R473	RDD6800JPAANN	CARBON 680 JA 1/6W	
R230	RGF1000JTCANL	MT-GLAZE 100 JA 1/10W		R475	RDA3300JPCANN	CARBON 330 JA 1/2W	
R231	RDD1500JPAANN	CARBON 150 JA 1/6W		R477	RSXAV1561JDAK	OXIDE-MT 560JB 1W	
R232	RDD1500JPAANN	CARBON 150 JA 1/6W		R479	RDD3301JPAANN	CARBON 3.3K JA 1/6W	
R233	RGF1000JTCANL	MT-GLAZE 100 JA 1/10W		R481	RSXAV23R3JDAK	OXIDE-MT 3.3JB 2W	

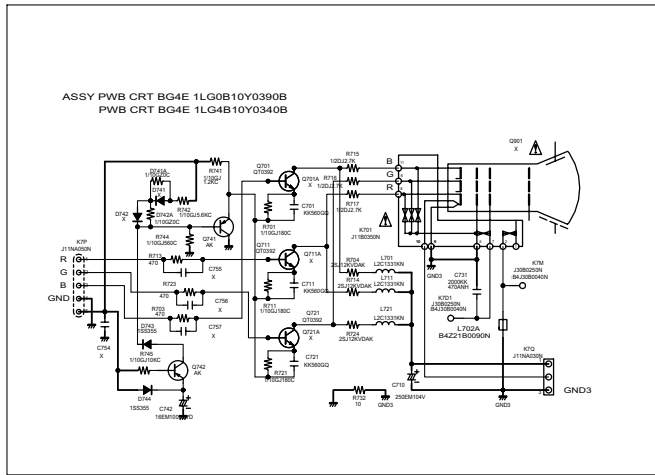
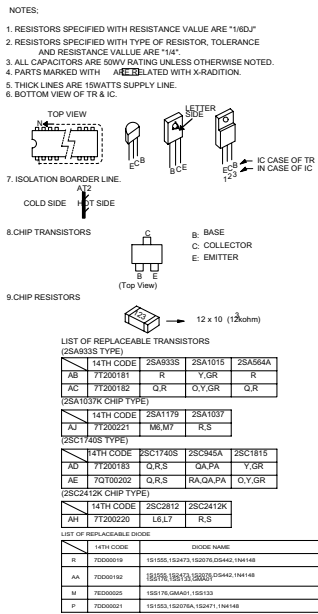
# Chassis Electrical Parts List

Location	Part No.	Description	Safety	Location	Part No.	Description	Safety
R481A	RSXAV22R7JDAK	OXIDE-MT 2.7JB 2W		R842	RGF4701JTCANL	MT-GLAZE 4.7K JA 1/10W	
R484	RDB1003JPBANN	CARBON 100K JA 1/4W		R884	RDB22R0JPBANN	CARBON 22 JA 1/4W	
R485	RDB8202JPBANN	CARBON 82K JA 1/4W		R885	RDD1501JPAANN	CARBON 1.5K JA 1/6W	
R486	RGF5601JTCANL	MT-GLAZE 5.6K JA 1/10W		R886	RDD2202JPAANN	CARBON 22K JA 1/6W	
R488	RFXAAA10R0JFN	FUSIBLE RES 10 J- 1/2W		R887	RDD2202JPAANN	CARBON 22K JA 1/6W	
R488	RFXAVA100JFNW	FUSIBLE RES 10 J- 1/2W		R888	RGF5600JTCANL	MT-GLAZE 560 JA 1/10W	
R488	RFXLBA100JZAN	FUSIBLE RES 10 J 1/2W		SW1901	1AV4S10B5650J	SWITCH,PUSH 1P-1TX1	
R501	RND6801FPAANN	MT-FILM 6.8K FA 1/6W		SW1902	1AV4S10B5650J	SWITCH,PUSH 1P-1TX1	
R502	RSXAV21R2JDAK	OXIDE-MT 1.2JB 2W		SW1903	1AV4S10B5650J	SWITCH,PUSH 1P-1TX1	
R503	RDD2702JPAANN	CARBON 27K JA 1/6W		SW1904	1AV4S10B5650J	SWITCH,PUSH 1P-1TX1	
R504	RND5601FPAANN	MT-FILM 5.6K FA 1/6W		SW1905	1AV4S10B5650J	SWITCH,PUSH 1P-1TX1	
R505	RSXAV11R0JDAK	OXIDE-MT 1.0JB 1W		SW1906	1AV4S10B5650J	SWITCH,PUSH 1P-1TX1	⚠
R507	RND5601FPAANN	MT-FILM 5.6K FA 1/6W		SW601	1AV4S10B5560N	SWITCH,PUSH POWER 2P-2T	⚠
R508	RDD2702JPAANN	CARBON 27K JA 1/6W		SW601	1AV4S10B5750N	SWITCH,PUSH POWER 2P-2T	⚠
R511	RGF6801JTCANL	MT-GLAZE 6.8K JA 1/10W		SW601	1LB4S10B0090N	SWITCH,PUSH POWER 2P-2T	⚠
R513	RSXAV2121JDAK	OXIDE-MT 120JB 2W		SW601	1LB4S10B01600	SWITCH,PUSH POWER 2P-2T	
R514	RSXAV2151JDAK	OXIDE-MT 150JB 2W		T431A	1LB4L18B0020N	TRANS,DRIVE	⚠
R601	RDA2203JPCANN	CARBON 220K JA 1/2W		T471	1LB4L40B11500	TRANS,FLYBACK	⚠
R602A	RWXLBZ1R0KXAL	WIRE WOUND 1.0 KA 10W		T611	1LB4L51B1590N	TRANS,POWER,PULSE	⚠
R609	RSXAV2104JDAK	OXIDE-MT 100KJB 2W		VA601	DVENE621D14AN	VARISTOR ENE621D-14A	⚠
R610	RSXAV2104JDAK	OXIDE-MT 100KJB 2W		VA601	DVMYG314K385N	VARISTOR	⚠
R612	RDD1001JPAANN	CARBON 1K JA 1/6W		VA601	DVS14K385E2-N	VARISTOR	⚠
R613	RFXAVB101JFNN	FUSIBLE RES 100 J- 1/4W		X161	WFXLBB009---N	SAW F SF5235	
R613	RFXLBB101JZAN	FUSIBLE RES 100 J 1/4W		X201	1AV4V10B2930J	OSC,CRYSTAL 4.433619MHZ	
R616	RSXAV2R39JDAK	OXIDE-MT 0.39JB 2W		X201	1AV4V10B8020J	OSC,CRYSTAL 4.433619MHZ	
R617	RSXAV2R33JDAK	OXIDE-MT 0.33JB 2W		X201	1LB4V10B0040N	OSC,CRYSTAL 4.433619MHZ	
R618	RDB2200JPBANN	CARBON 220 JA 1/4W		X201	1LB4V10B0180N	OSC,CRYSTAL 4.433619MHZ	
R619	RDB1802JPBANN	CARBON 18K JA 1/4W		X3401	1AV4F31B0540N	CERAMIC FILTER 4.5MHZ	
R620	RDB1001JPBANN	CARBON 1K JA 1/4W		A701	1LG0B10Y0390B	ASSY,CRT BG4E	
R621	RDD10R0JPAANN	CARBON 10 JA 1/6W	⚠	C701	CK1H561KGQBNG	CERAMIC 560P K 50V	
R628	RCXAAA5604KGN	SOLID 5.6M KA 1/2W	⚠	C710	CEXLB2E100UCN	ELECT 10U M 250V	
R628	RDXLBA565KWAB	SOLID 5.6M KA 1/2W	⚠	C710	CE2E100M4VANN	ELECT 10U M 250V	
R629	RCXAAA5604KGN	SOLID 5.6M KA 1/2W	⚠	C711	CK1H561KGQBNG	CERAMIC 560P K 50V	
R629	RDXLBA565KWAB	SOLID 5.6M KA 1/2W		C721	CK1H561KGQBNG	CERAMIC 560P K 50V	
R631	RDD1002JPAANN	CARBON 10K JA 1/6W		C731	CK3D471KANHAN	CERAMIC 470P K 2K	
R632	RDA3901JPCANN	CARBON 3.9K JA 1/2W		C731	CK3D471KANHNN	CERAMIC 470P K 2K	
R633	RGF5603JTCANL	MT-GLAZE 560K JA 1/10W		C742	CEXLB1C101VDN	ELECT 100U M 16V	
R634	RGF2202JTCANL	MT-GLAZE 22K JA 1/10W		D741A	RGFR000ZTCANL	MT-GLAZE 0.000 ZA 1/10W	
R635	RSXAV21R5JDAK	OXIDE-MT 1.5JB 2W		D742A	RGFR000ZTCANL	MT-GLAZE 0.000 ZA 1/10W	
R636	RDD1003JPAANN	CARBON 100K JA 1/6W		D743	DDXLBB053---G	DIODE 1SS35	
R637	RDD1002JPAANN	CARBON 10K JA 1/6W		D743	DD1SS352---G	DIODE 1SS352-(TPH3)	
R638	RGF3301JTCANL	MT-GLAZE 3.3K JA 1/10W		D743	DD1SS355---G	DIODE 1SS355-TE-17	
R645	RNB1003FPAANN	MT-FILM 100K FA 1/4W		D744	DDXLBB053---G	DIODE 1SS35	
R646	RND2202FPAANN	MT-FILM 22K FA 1/6W		D744	DD1SS352---G	DIODE 1SS352-(TPH3)	
R647	RND2201FPAANN	MT-FILM 2.2K FA 1/6W		D744	DD1SS355---G	DIODE 1SS355-TE-17	⚠
R648	RDD1003JPAANN	CARBON 100K JA 1/6W		K701	1LB4J11B0070N	SOCKET,CRT 8P	⚠
R650	RDA1003JPCANN	CARBON 100K JA 1/2W		K701	1LB4J11B0170N	SOCKET,CRT 12P	⚠
R651	RSXAV2R47JDAK	OXIDE-MT 0.47JB 2W		K701	1LB4J11B0350N	SOCKET,CRT 8P	
R652	RGF1003JTCANL	MT-GLAZE 100K JA 1/10W		L701	1AV4L2C1331KN	INDUCTOR,330U K	
R653	RGF1003JTCANL	MT-GLAZE 100K JA 1/10W		L702A	1LB4Z21B0090N	CORE,PIPE	
R654	RDB2201JPBANN	CARBON 2.2K JA 1/4W		L711	1AV4L2C1331KN	INDUCTOR,330U K	
R655	RSXAV21R0JDAK	OXIDE-MT 1.0JB 2W		L721	1AV4L2C1331KN	INDUCTOR,330U K	⚠
R656	RDD1002JPAANN	CARBON 10K JA 1/6W		PB701	1LG4B10Y03400	PWB,MAIN+CRT BF5E	⚠
R657	RDD1002JPAANN	CARBON 10K JA 1/6W		PB701	1LG4B10Y0340B	PWB,CRT BF5E	
R658	RDD1002JPAANN	CARBON 10K JA 1/6W		Q701	TXXAAQT0392--	TR 2SC4544	
R659	RDD8201JPAANN	CARBON 8.2K JA 1/6W		Q711	TXXAAQT0392--	TR 2SC4544	
R660	RGF3301JTCANL	MT-GLAZE 3.3K JA 1/10W		Q721	TXXAAQT0392--	TR 2SC4544	
R661	RDA1003JPCANN	CARBON 100K JA 1/2W		Q741	TXXLBB005---P	TR MMBTSA1235F	
R666	RDD1003JPAANN	CARBON 100K JA 1/6W		Q741	7T210221	TR 2SA1037K(P)-6	
R667	RDD1003JPAANN	CARBON 100K JA 1/6W		Q742	TXXLBB005---P	TR MMBTSA1235F	
R668	RSXAV21R5JDAK	OXIDE-MT 1.5JB 2W		Q742	7T210221	TR 2SA1037K(P)-6	
R669	RSXAV21R2JDAK	OXIDE-MT 1.2JB 2W		R701	RGF1800JTCANL	MT-GLAZE 180 JA 1/10W	
R671	RDB1003JPBANN	CARBON 100K JA 1/4W		R703	RDD4700JPAANN	CARBON 470 JA 1/6W	
R673	RDD1002JPAANN	CARBON 10K JA 1/6W		R704	RSXAV2123JDAK	OXIDE-MT 12KJB 2W	
R676	RGF2202JTCANL	MT-GLAZE 22K JA 1/10W		R711	RGF1800JTCANL	MT-GLAZE 180 JA 1/10W	
R677	RDA3901JPCANN	CARBON 3.9K JA 1/2W		R713	RDD4700JPAANN	CARBON 470 JA 1/6W	
R698	RDB1001JPBANN	CARBON 1K JA 1/4W		R714	RSXAV2123JDAK	OXIDE-MT 12KJB 2W	
R841	RGF4701JTCANL	MT-GLAZE 4.7K JA 1/10W		R715	RDA2701JPCANN	CARBON 2.7K JA 1/2W	

# Chassis Electrical Parts List

Location	Part No.	Description	Safety	Location	Part No.	Description	Safety
R716	RDA2701JPCANN	CARBON 2.7K JA 1/2W					
R717	RDA2701JPCANN	CARBON 2.7K JA 1/2W					
R721	RGF1800JTCANL	MT-GLAZE 180 JA 1/10W					
R723	RDD4700JPAANN	CARBON 470 JA 1/6W					
R724	RSXAV2123JDAK	OXIDE-MT 12KJB 2W					
R732	RDD10R0JPAANN	CARBON 10 JA 1/6W					
R741	RGF1201JTCANL	MT-GLAZE 1.2K JA 1/10W					
R742	RGF5601JTCANL	MT-GLAZE 5.6K JA 1/10W					
R744	RGF5600JTCANL	MT-GLAZE 560 JA 1/10W					
R745	RGF1002JTCANL	MT-GLAZE 10K JA 1/10W					





**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  $\Delta$  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.

### 11. Expression of capacitance and resistance in circuit diagram.

**Capacitance (Example)**

1000 C M 2000 D

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

J =  $\pm 5\%$   
 K =  $\pm 10\%$   
 M =  $\pm 20\%$

T, A, U, D: Electrolytic  
 C, K, B: Ceramic  
 F: Polyester film  
 M: Mylar  
 P: Polypropylene  
 Z: Metalized paper

**Resistance (Example)**

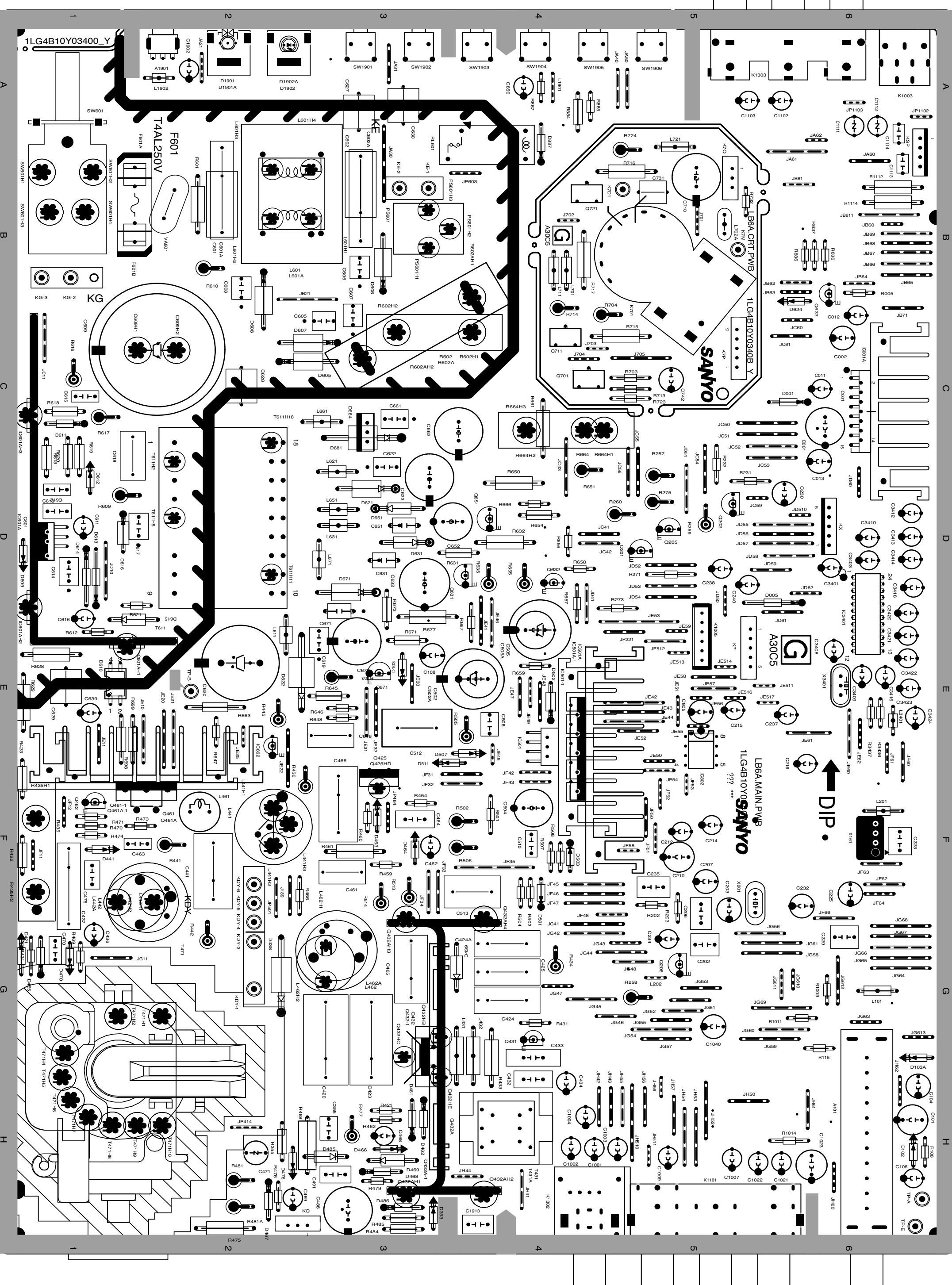
1/2 N J 1 Z

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

D: Carbon  
 N: Metalized carbon  
 S: Oxid metalized  
 W: Wire wounding  
 C: Solid



## Component Location



## Waveforms & Voltages

**(On the Main Board)**

IC001 (AUDIO AMP.)									
Pin-1	0 V	2 11.12 V	3 0.73	4 0 V	5 0.73 V	6 2.65 V	7 0 V	8 0 V	9 11.35V
	10 5.54	11 0 V	12 5.62 V	13 5.58 V	14 5.65 V	15 0 V			

IC1001 (AV SELECTOR)									
Pin-1: 4.00V	2: 3.76V	3: 4V	4: 3.78V	5: 3.75V	6: 0V	7: 0V	8: 0V	9: 0V	
10: 0V	11: 3.78V	12: 4V	13: 4V	14: 3.75V	15: 3.76V	16: 7.56V			

<b>IC1002 (AV SELECTOR)</b>							
<b>Pin-1:</b> 3.90V	<b>2:</b> 2.78V	<b>3:</b> 3.85V	<b>4:</b> 0V	<b>5:</b> 0V	<b>6:</b> 7.57V	<b>7:</b> 3.10V	<b>8:</b> 0V

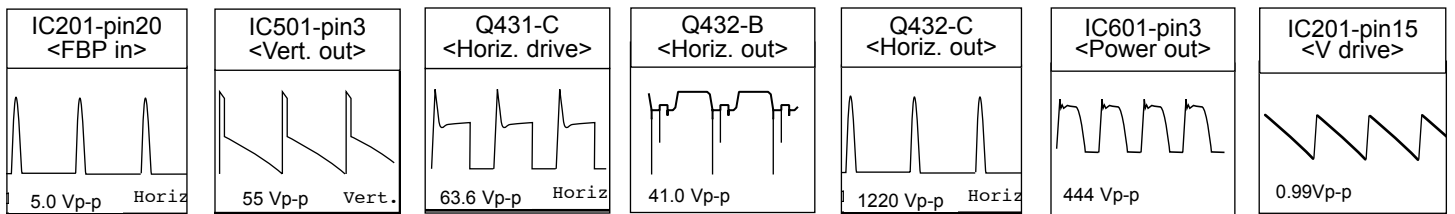
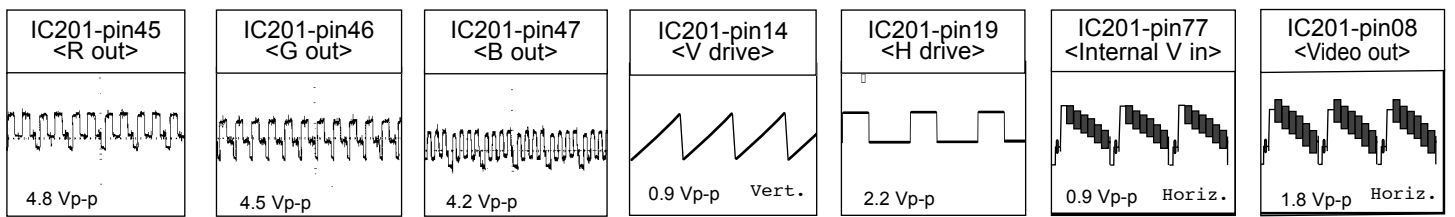
IC501 (VERT. OUT)																		
Pin-1-18.0V	2	-18.0V	3	-16.7V	4	18.55	5	1.33V	6	1.32V	7	17.95V	8	-14.79V	9	-14.79V	10	-14.79V

IC802 (MEMORY)															
Pin-1	GND	2	GND	3	GND	4	GND	5	4.80V	6	4.80V	7	0	8	4.80V

Q002	Q1001	Q1002	Q1003	Q1902	Q201	Q202	Q205	Q206	Q210	Q211
B 7.6V	B 4V	B 4V	B 2.1V	B 0.1V	B 8.2V	B 5.4V	B 5.7V	B 5.7V	B 0.8V	B 0.8V
C 0V	C 0V	C 0V	C 0V	C 4.8V	C 11.3V	C 10.3V	C 6.3V	C 8.2V	C 0V	C 0V
E 7.4V	E 4.7V	E 4.6V	E 2.7V	E 0.1V	E 7.6V	E 4.8V	E 5V	E 5.1V	E 0V	E 0V

Q3401	Q431	Q461	Q462	Q622	Q631	Q632	Q651	Q652	Q671	Q672
B 2.5V	B 0.3V	B 16.5V	B 0.6V	B 0V	B 18.2V	B 0.6V	B -17.9V	B -0.7V	B 29.2V	B 0.6V
C 5V	C 1.8V	C 0V	C 16.2V	C 4.2V	C 18.6V	C 0V	C -18.5V	C -0.1V	C 29.8V	C 0.1V
E 2.0V	E 0V	E 16.0V	E 0V	E 0V	E 18.8V	E 0V	E -18.6V	E 0V	E 29.8V	E 0V

<b>Q685</b> B -1.9V C 0V E 0V	<b>Q886</b> B 0.7V C 0.1V E 0V	<b>Q887</b> B 0.2V C 4.8V E 0V	<b>Q684</b> B 0.6V C 0V E 0V	<b>Q463</b> B-14.8V C -11.4V E-14.4V	<b>Q425</b> B -11.5V C -14.5V E -7.6V
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IC3401																									
Pin-1	2.4V		2	2.4V		3	2.42V		4	2.86V		5	2.37V		6	0V		7	1.2V		8	0.5V		9	4.3V
10	4.17V		11	2.37V		12	2.77V		13	2.4V		14	2.28V		15	2.41V		16	2.35V		17	2.39V		18	2.39V
19	5.04V		20	1.01V		21	2.41V		22	1.51V		23	2.4V		24	2.4V									

**(On the CRT Board)**

<b>Q701</b>	<b>Q721</b>	<b>Q711</b>
B 2.1V	B 2.2V	B 2.2V
C 156.2V	C 116V	C 156V
E 2.0V	E 2.1V	E 2.1V

