

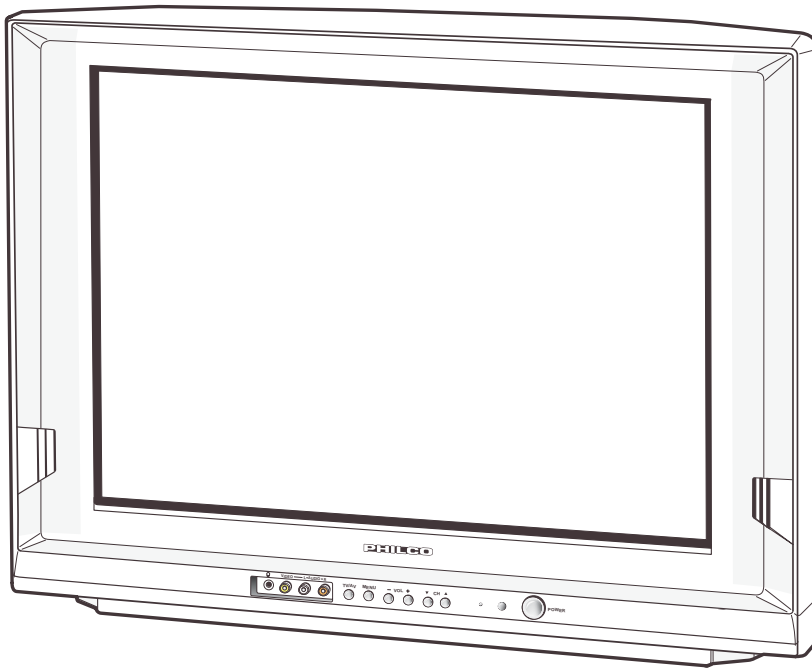
FILE NO.

SERVICE MANUAL Colour Television

Model No. PF2975

(Argentina)

Service Ref. No. PF2975-00



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

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

AV3 (Video): Component Y, Cb, Cr Input (Phone Jack) x 1 set

AV3 (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 749(W) x 586(H) x 486(D)mm

Weight approx. 41.5 Kg

Product Code: 111376508

Original Version

Chassis Series: LB4-C

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.

Contents

Safety Notice	2
Chassis Block Diagram	3-4
IC Block Diagrams	5-7
Service Adjustments	8-18
Cabinet Parts List	19
Chassis Electrical Parts List	20-30

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

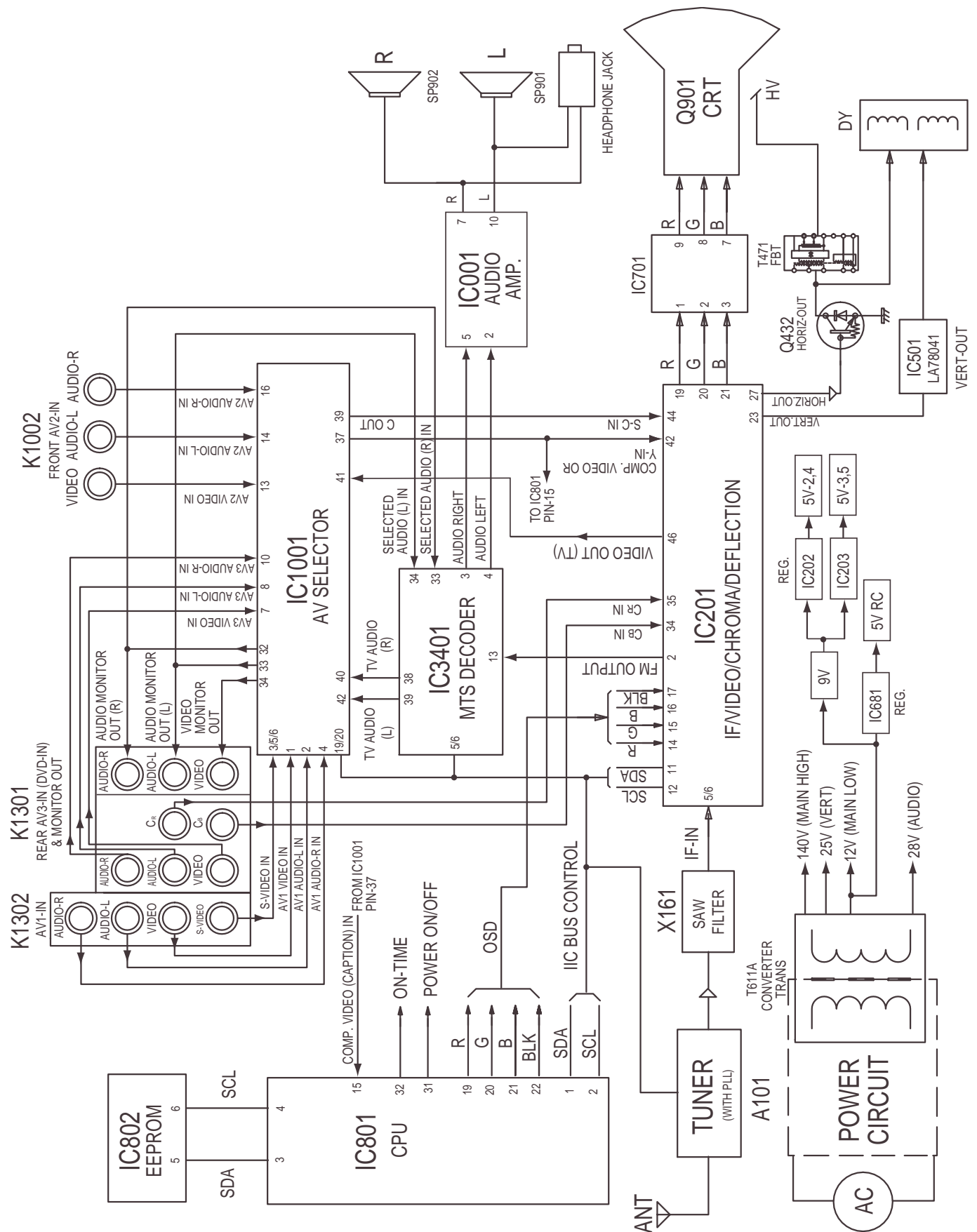
The primary source of X-RADIATION in television receiver is the picture tube. The picture tube is specially constructed to limit X-RADIATION emissions. For continued X-RADIATION protection, the replacement tube must be the same type as the original including suffix letter. Excessive high voltage may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

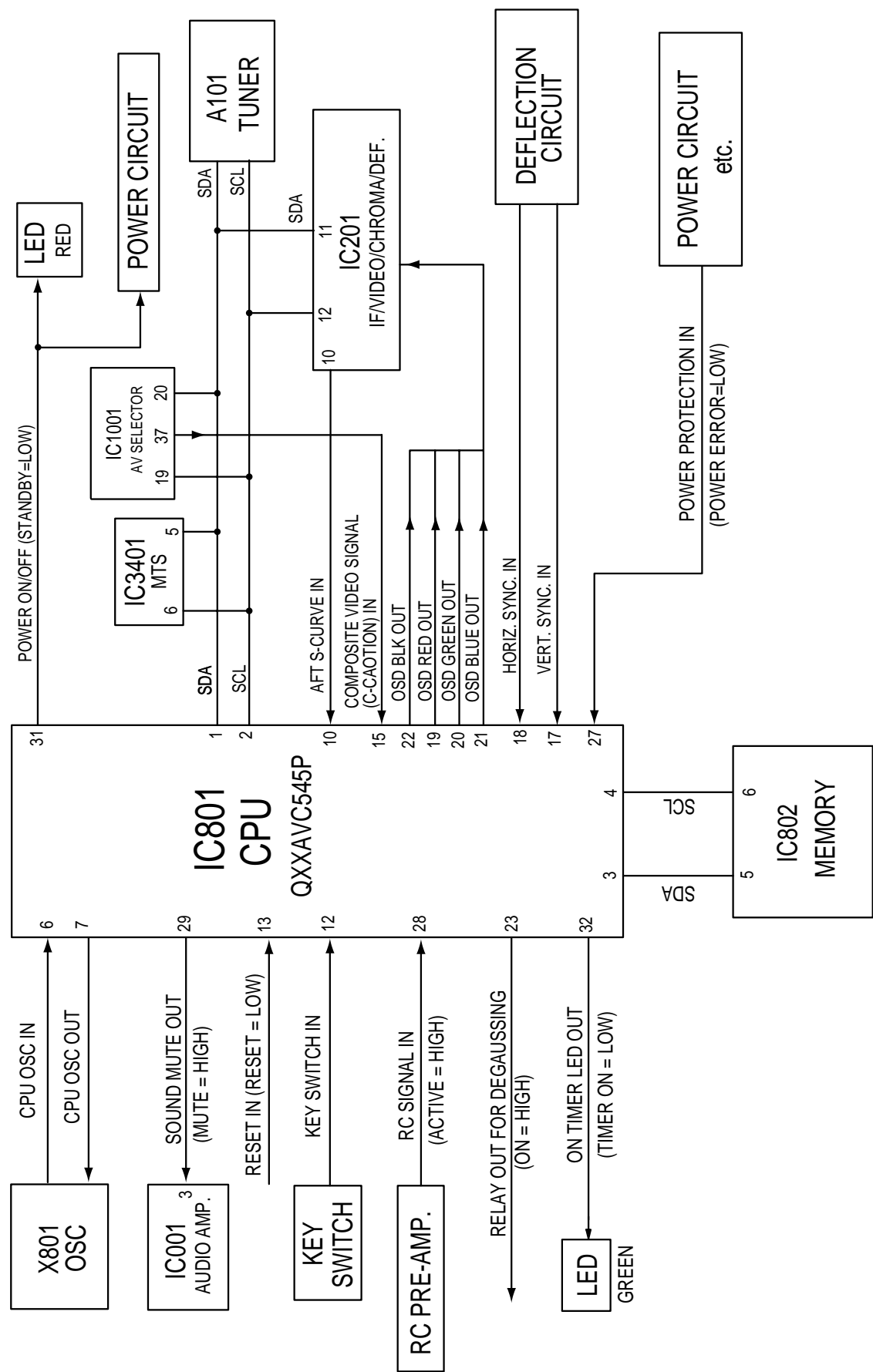
Chassis Block Diagrams

MAIN SIGNAL PROCESSING CIRCUIT



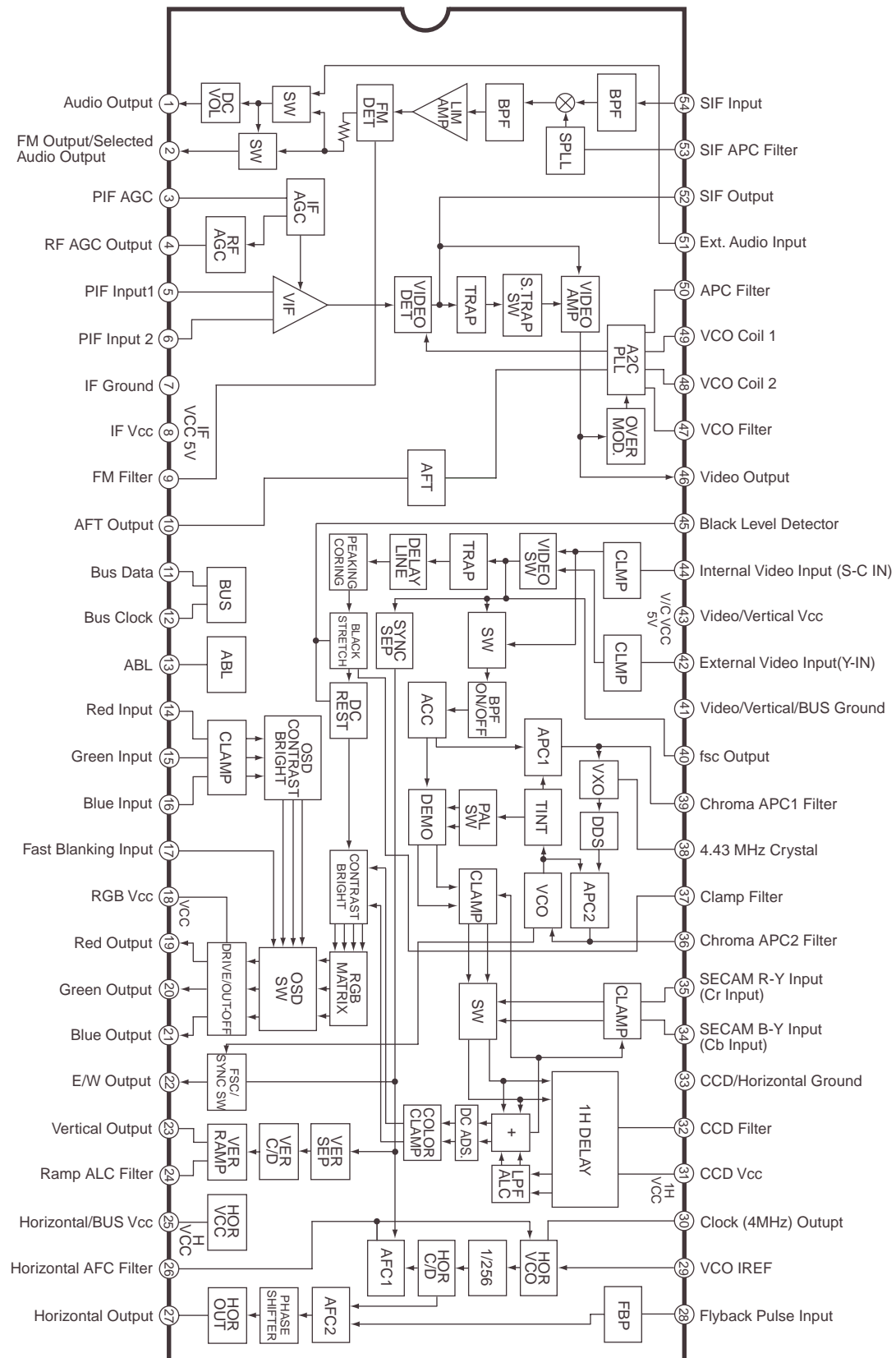
Chassis Block Diagrams

SYSTEM CONTROL



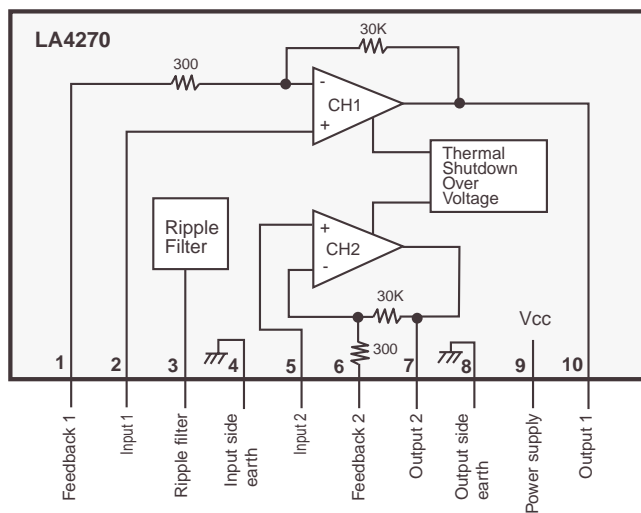
IC Block Diagrams

IC201 < IF/Video/Chroma/Def. > LA76828

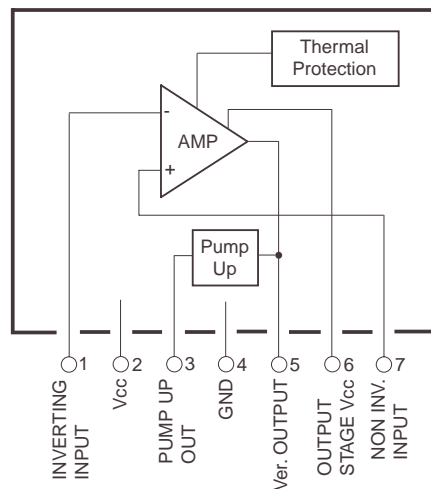


IC Block Diagrams

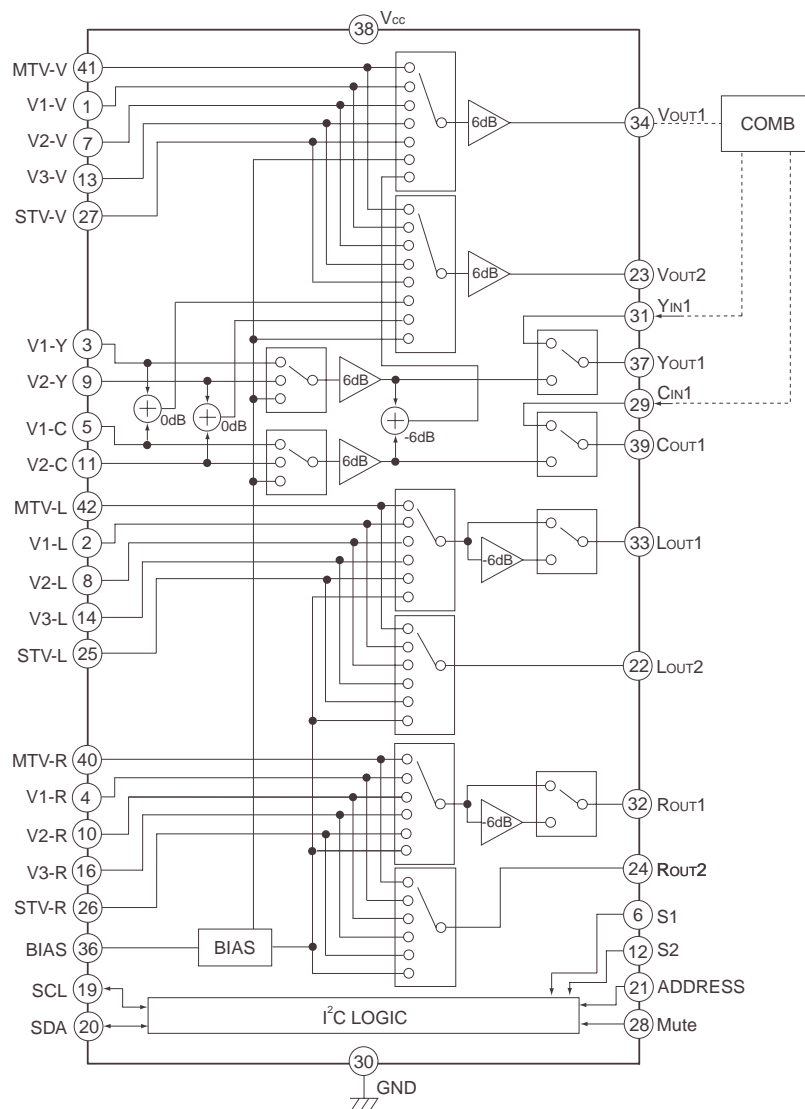
IC001 < Audio AMP. > LA4270-E



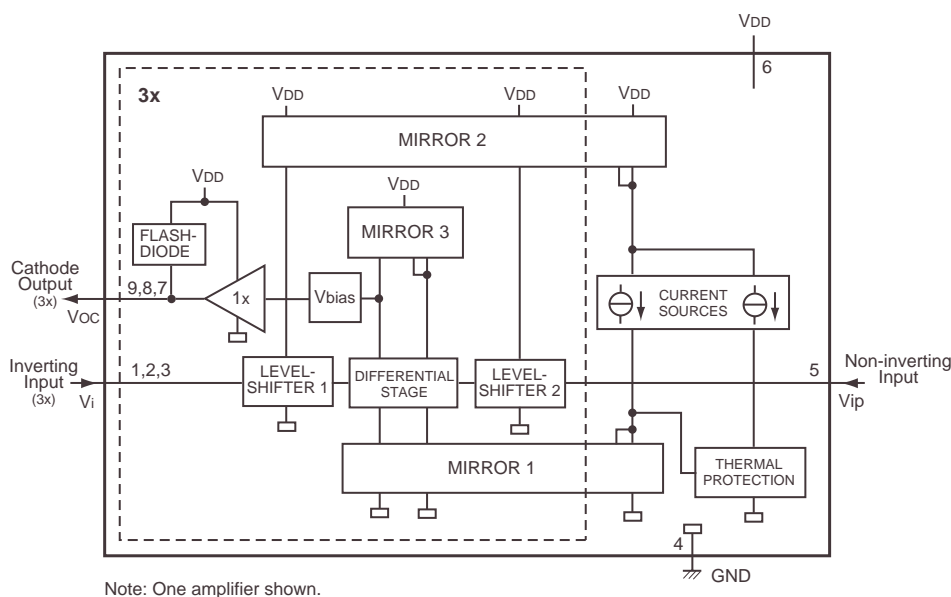
IC501 < Vertical Output > LA78041-E



IC1001 < AV Selector > MM1313BD

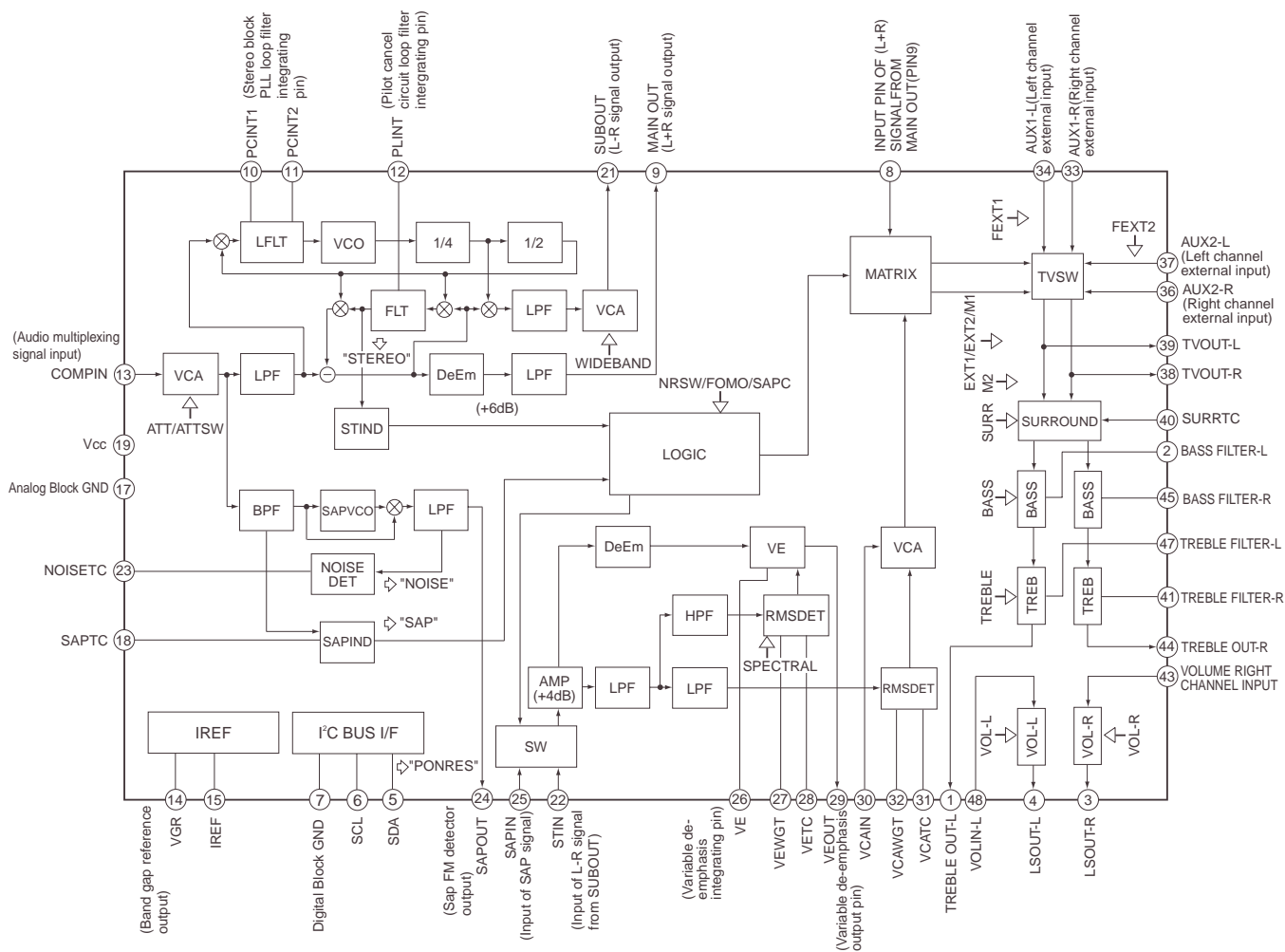


IC701 < Triple Video Output Amplifier > TDA6103Q/N3



Note: One amplifier shown.

IC3401 < MTS Decoder, Audio Control & Switch > CXA2134Q-T6



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, IC801 (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 ~ 12 for detailed information.)

Initial Bus Data Setup

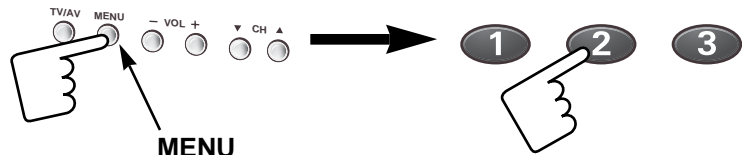
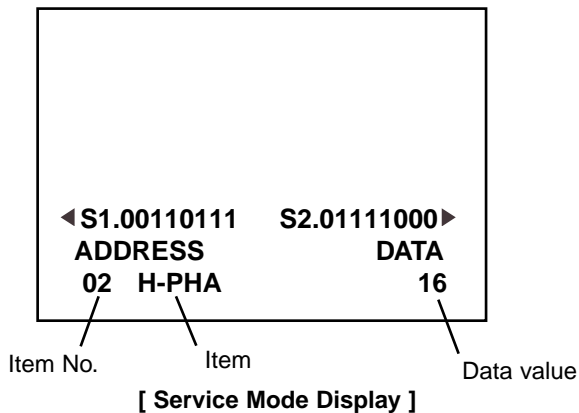
Note: When IC802 (EEPROM) is replaced, following Service Menu should be set up for proper TV operation before attempting the service adjustments.

NO.01 RFAGC (Adjust the data 11 to 14)	NO.23 EWCBM (Adjust the data 08 to 11)	NO.87 ZOMCON (Adjust the data -6 to -8)
NO.02 H-PHA (Adjust the data 10 to 14)	NO.27 EWTN (Adjust the data -4 to -1)	NO.121 POMT (Adjust the data 05 to 12)
NO.05 V-SCO (Adjust the data 16 to 23)	NO.28 EWCTPN (Adjust the data -3 to -1)	NO.125 CCD (Adjust the data 20 to 30)
NO.06 V-LIN (Adjust the data 30 to 28)	NO.29 EWCBN (Adjust the data -5 to -2)	NO.09 V-S60 (Adjust the data -1 to -3)
NO.11 VLI60 (Adjust the data +1 to 0)	NO.43 B-YD (Adjust the data 08 to 09)	NO.129 EWCTPZ (Adjust the data +1 to +5)
NO.17 OSDHP (Adjust the data 30 to 40)	NO.53 RBAG (Adjust the data 08 to 09)	
NO.18 OSDC (Adjust the data 18 to 30)	NO.56 RBAGN (Adjust the data -2 to 0)	
NO.19 EWDC (Adjust the data 44 to 35)	NO.58 RBDN (Adjust the data -2 to -5)	
NO.20 EWAMP (Adjust the data 16 to 19)	NO.60 RBBDN (Adjust the data 03 to 00)	
NO.21 EWTN (Adjust the data 28 to 30)	NO.61 COGV (Adjust the data 00 to 03)	
NO.22 EWCTP (Adjust the data 07 to 09)	NO.62 BLKS (Adjust the data 01 to 00)	

Service Adjustment-1

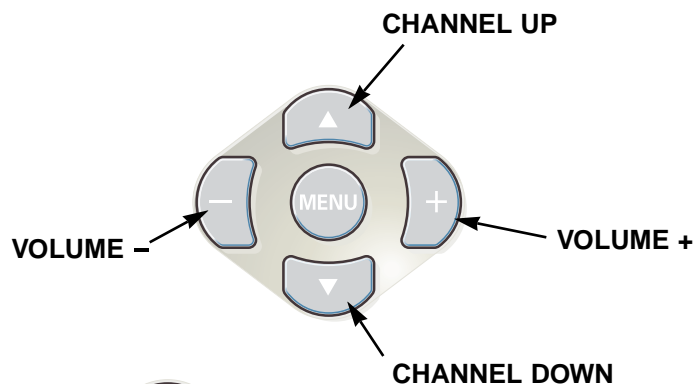
1. Enter the Service Menu

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



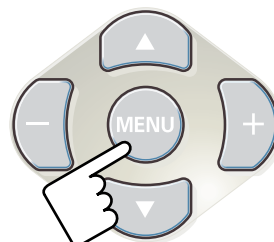
2. Service Adjustments:

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	Initial value	Range	Description
01	RFAGC	11→14*	00~63	RF AGC adjustment
02	H-PHA	10→14*	00~31	H-PHASE adjustment (50Hz)
03	V-POS	40	00~63	Vertical position adjustment (50Hz)
04	V-SIZ	46	00~127	Vertical size adjustment (50Hz)
05	V-SCO	16→23*	00~31	Vertical-S compensation (50Hz)
06	V-LIN	30→28*	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→-3*	-64~+63	Difference value of V-SIZE adjustment (60Hz)
10	VSC60	+4	-16~+15	Difference value of Vertical-S compensation (60Hz)
11	VLI60	-2	-16~+15	Difference value of Vertical linearity adjustment (60Hz)
12	H-PHAZ	-1	-16~+15	Difference value of H-PHASE adjustment (Zoom)
13	V-SZZ5	-34	-64~+63	Difference value of V-SIZE adjustment (Zoom, 50Hz)
14	V-SCOZ	0	-16~+15	Difference value of Vertical-S compensation (Zoom)
15	V-LINZ	0	-16~+15	Difference value of Vertical linearity adjustment (Zoom)
16	V-SIZZ6	-35	-64~+63	Difference value of V-SIZE adjustment (Zoom, 60Hz)
17	OSDHP	30→40*	01~255	OSD horizontal position
18	OSDC	18→30*	00~127	OSD contrast
19	EWDC	44→35*	00~63	EW DC (50Hz), Horizontal width adjustment
20	EWAMP	16→19*	00~63	EW Amp. (50Hz)
21	EWTL	28→30*	00~63	EW Tilt (50Hz)
22	EWCTP	07→09*	00~15	EW corner top (50Hz)
23	EWCBM	08→11*	00~15	EW corner bottom (50Hz)
24	EWAMZ	-9	-32~+31	Difference value of EW Amp. (Zoom, 50Hz)
25	EWDCN	0	-32~+31	Difference value of EW DC (60Hz)
26	EWAMN	-2	-32~+31	Difference value of EW Amp. (60Hz)
27	EWTLN	-4→-1*	-32~+31	Difference value of EW Tilt. (60Hz)
28	EWCTPN	-3→-1*	-8~+7	Difference value of EW corner top (60Hz)
29	EWCBN	-5→-2*	-8~+7	Difference value of EW corner bottom (60Hz)
30	EWAMZN	-8	-32~+31	Difference value of EW Amp. (Zoom, 60Hz)
31	EWCOR	0	0, 1	EW COR SW
32	V-SCP	07	00~07	V-SIZE COMP
33	H-SCP	07	00~07	H-SIZE COMP
34	SBIAS	70	00~127	Sub Bias adjustment
35	RBIAS	00	00~255	Red Bias adjustment
36	GBIAS	00	00~255	Green Bias adjustment
37	BBIAS	00	00~255	Blue Bias adjustment
38	RDRIV	64	00~127	Red Drive adjustment
39	GDRIV	08	00~15	Green Drive adjustment
40	BDRIV	64	00~127	Blue Drive adjustment
41	--	--	--	White balance (a lateral line)
42	DRV	--	--	Brightness and dark of White balance adjustment
43	B-YD	08→09*	00~15	B-Y DC Level
44	R-YD	08	00~15	R-Y DC Level
45	B-YDN	-1	-16~+15	Difference value of NTSC/PAL-M B-Y DC Level
46	R-YDN	0	-16~+15	Difference value of NTSC/PAL-M R-Y DC Level
47	B-YDD	-1	-16~+15	Difference value of DVD B-Y DC Level (50Hz)
48	R-YDD	-2	-16~+15	Difference value of DVD R-Y DC Level (50Hz)
49	B-YDD6	-1	-16~+15	Difference value of DVD B-Y DC Level (60Hz)
50	R-YDD6	-2	-16~+15	Difference value of DVD R-Y DC Level (60Hz)

Service Adjustments

No.	Item	Initial value	Range	Description
51	G-YA	00	00,01	G-Y Angle
52	RBGB	10	00~15	R-Y/B-Y Gain Balance
53	RBAG	08→09*	00~15	R-Y/B-Y Angle
54	G-YAN	00	00,01	Difference value of NTSC G-Y Angle
55	RBGBN	+4	-8~+7	Difference value of NTSC R-Y/B-Y Gain Balance
56	RBAGN	-2→0*	-8~+7	Difference value of NTSC R-Y/B-Y Angle
57	RBADP	+2	-8~+7	Difference value of DVD PAL R/B Angle
58	RBDN	-2→-5*	-8~+7	Difference value of DVD NTSC R/B Angle
59	RBBDP	+2	-8~+7	Difference value of DVD PAL R/B Balance
60	RBBDN	03→00*	00~15	Difference value of DVD NTSC R/B Balance
61	COGV	00→03*	00~03	Coring gain
62	BLKS	01→00*	00~03	BLK. STR. start (W/Defeat)
63	BLKG	00	00~03	BLK. STR. gain
64	BRTA	00	00, 01	BRT. ABL Defeat
65	BRST	00	00, 01	Mid. Stp. Defeat
66	BRTH	00	00~07	Bright. ABL. Threshold
67	WPL	00	00~03	WPL Ope. Point (W/Defeat)
68	YGAM	00	00~03	Y Gamma Start
69	PORW	00	00, 01	AV Mode Pre/Over SW
70	PORS	02	00~03	AV Mode Pre/Over-shoot adjustment
71	RFCO	0	-2~+1	Difference Value of RF Corring Gain
72	PORWN	01	00, 01	RF Pre/Over SW
73	PORSN	03	00~03	RF Pre/Over-shoot adjustment
74	TINT	+10	-16~+15	Tint
75	SHRF	00	-16~+15	Difference Value of RF Sharpness
76	SHRFD	00	-16~+15	Difference Value of DVD Sharpness
77	CODP	-10	-16~+15	Difference Value of DVD PAL colour
78	CODN	0	-16~+15	Difference Value of DVD NTSC colour
79	RFCOL	-7	-16~+15	Difference Value of TV colour
80	TIDN	+8	-16~+15	Difference Value of DVD NTSC tint
81	SHRFS	00	-16~+15	Difference Value of S-terminal Sharpness
82	TISN	00	-16~+15	Difference Value of S-terminal NTSC tint
83	COSPN	00	-16~+15	Difference Value of S-terminal colour PAL-N
84	COSPM	00	-16~+15	Difference Value of S-terminal colour PAL-M
85	COSN	00	-16~+15	Difference Value of S-terminal colour NTSC
86	ZOMCOL	-6	-16~+15	Difference Value of Colour (Zoom)
87	ZOMCON	-6→-8*	-16~+15	Difference Value of Contrast (Zoom)
88	ZOMBRI	-6	-16~+15	Difference Value of Brightness (Zoom)
89	TEXC	+8	-64~+63	OSD TEXT Contrast
90	AUFL	00	00~01	Auto. Flesh
91	COOP	07	00~07	Colour Killer option
92	Y-APF	01	00, 01	Y-APF Select
93	DEEM	00	00, 01	De-emphasis TC
94	V-LVL	04	00~07	Video Level
95	FMLVL	16	00~1F	FM Level
96	TTEST	00	00~07	Trap Test
97	IFOM-S	00	00, 01	Over Modulation SW
98	IFMN-S	00	00, 01	Audio Monitor SW, Monitor or FM
99	IFTRPS	00	00, 01	IC Built-in SIF Trap ON/OFF
100	IFMLVL	136	00~255	Video Level Coarse Adjustment & Modulation Operating Dot Setting
101	VBSW	00	00, 01	VBLK SW
102	FBTS	00	00, 01	FBP Blanking SW
103	HBLKL	05	00~07	H-Blanking Control Left
104	HBLKR	03	00~07	H-Blanking Control Right
105	AFCRF	00	00, 01	Adjustment of AFC Gain & Gate (RF)

Service Adjustments

No.	Item	Initial value	Range	Description
106	VSURF	00	00, 01	Adjustment of Vertical Sync. Separation Sensitivity (RF)
107	CDMRF	00	00~07	Vertical Count Down Loop Adjustment (RF)
108	AFCV	01	00, 01	Adjustment of AFC Gain & Gate (AV)
109	VSUAV	00	00, 01	Adjustment of Vertical Sync. Separation Sensitivity (AV)
110	CDMAV	00	00~07	Vertical Count Down Loop Adjustment (AV)
111	HLK-T	00	00, 01	H-lock, V-det. (under RF mode)
112	HLK-V	00	00, 01	H-lock, V-Det. (under AV mode)
113	VCO-SW	00	00, 01	C. VCO Adjustment SW
114	VCOADJ	03	00~03	C. VCO Adjustment
115	GRAY	00	00, 01	Gray Mode
116	CROSS	00	00~03	Cross Black/White
117	HL-SW	01	00, 01	Half Tone ON/OFF
118	HL-TON	00	00~03	Half Tone Level
119	AVNCON	64	00~127	Contrast (No Signal in AV mode)
120	AVNBRI	64	00~127	Brightness (No Signal in AV mode)
121	POMT	05→12*	00~255	Power Mute Time
122	CHMT	05	00~255	Channel Mute Time
123	SYST	03	00~255	System-N
124	RELAY	80	00~255	Power Relay Time
125	CCD	20→30*	1~31	Horizontal Position of Closed captioning
126	V-POSZ	00	-32~+31	V-position (Zoom)
127	EWDCZ	+1	-32~+31	EW DC Zoom
128	EWT LZ	00	-32~+31	EW Tilt Zoom
129	EWCTPZ	+1→+5*	-8~+7	EW corner top Zoom
130	EWCBz	-1	-8~+7	EW corner bottom Zoom
131	VSCPZ	00	-4~+3	V-size Comp. Zoom
132	HSCPZ	00	-4~+3	H-size Comp. Zoom
133	AVTVTM	10	0~255	AV/TV mute time
134	FM-G	00	00~01	FM Gain
300	R00	FF	00~FF	ROM CORRECTION
301	R01	FF	00~FF	ROM CORRECTION
302	R02	FF	00~FF	ROM CORRECTION
303	R03	FF	00~FF	ROM CORRECTION
304	R04	FF	00~FF	ROM CORRECTION
305	R05	FF	00~FF	ROM CORRECTION
306	R06	FF	00~FF	ROM CORRECTION
307	R07	FF	00~FF	ROM CORRECTION
308	R08	FF	00~FF	ROM CORRECTION
309	R09	FF	00~FF	ROM CORRECTION
310	R10	FF	00~FF	ROM CORRECTION
311	R11	FF	00~FF	ROM CORRECTION
312	R12	FF	00~FF	ROM CORRECTION
313	R13	FF	00~FF	ROM CORRECTION
314	R14	FF	00~FF	ROM CORRECTION
315	R15	FF	00~FF	ROM CORRECTION
316	R16	FF	00~FF	ROM CORRECTION
317	R17	FF	00~FF	ROM CORRECTION
318	R18	FF	00~FF	ROM CORRECTION
319	R19	FF	00~FF	ROM CORRECTION
320	R20	FF	00~FF	ROM CORRECTION
321	R21	FF	00~FF	ROM CORRECTION
322	R22	FF	00~FF	ROM CORRECTION
323	R23	FF	00~FF	ROM CORRECTION
324	R24	FF	00~FF	ROM CORRECTION
325	R25	FF	00~FF	ROM CORRECTION

Service Adjustments

No.	Item	Initial value	Range	Description
326	R26	FF	00~FF	ROM CORRECTION
327	R27	FF	00~FF	ROM CORRECTION
328	R28	FF	00~FF	ROM CORRECTION
329	R29	FF	00~FF	ROM CORRECTION
330	R30	FF	00~FF	ROM CORRECTION
331	R31	FF	00~FF	ROM CORRECTION
332	R32	FF	00~FF	ROM CORRECTION
333	R33	FF	00~FF	ROM CORRECTION
334	R34	FF	00~FF	ROM CORRECTION
335	R35	FF	00~FF	ROM CORRECTION
336	R36	FF	00~FF	ROM CORRECTION
337	R37	FF	00~FF	ROM CORRECTION
338	R38	FF	00~FF	ROM CORRECTION
339	R39	FF	00~FF	ROM CORRECTION
340	R40	FF	00~FF	ROM CORRECTION
341	R41	FF	00~FF	ROM CORRECTION
342	R42	FF	00~FF	ROM CORRECTION
343	R43	FF	00~FF	ROM CORRECTION
344	R44	FF	00~FF	ROM CORRECTION
345	R45	FF	00~FF	ROM CORRECTION
346	R46	FF	00~FF	ROM CORRECTION
347	R47	FF	00~FF	ROM CORRECTION
348	R48	FF	00~FF	ROM CORRECTION
349	R49	FF	00~FF	ROM CORRECTION
350	R50	FF	00~FF	ROM CORRECTION
351	R51	FF	00~FF	ROM CORRECTION
352	R52	FF	00~FF	ROM CORRECTION
353	R53	FF	00~FF	ROM CORRECTION
354	R54	FF	00~FF	ROM CORRECTION
355	R55	FF	00~FF	ROM CORRECTION
356	R56	FF	00~FF	ROM CORRECTION
357	R57	FF	00~FF	ROM CORRECTION
358	R58	FF	00~FF	ROM CORRECTION
359	R59	FF	00~FF	ROM CORRECTION
360	R60	FF	00~FF	ROM CORRECTION
361	R61	FF	00~FF	ROM CORRECTION
362	R62	FF	00~FF	ROM CORRECTION
363	R63	FF	00~FF	ROM CORRECTION
364	R64	FF	00~FF	ROM CORRECTION
365	R65	FF	00~FF	ROM CORRECTION
366	R66	FF	00~FF	ROM CORRECTION
367	R67	FF	00~FF	ROM CORRECTION
368	R68	FF	00~FF	ROM CORRECTION
369	R69	FF	00~FF	ROM CORRECTION
370	R70	FF	00~FF	ROM CORRECTION
371	R71	FF	00~FF	ROM CORRECTION
372	R72	FF	00~FF	ROM CORRECTION CHECK DATA

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.

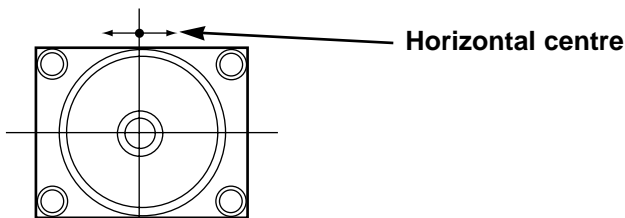
Item 01 [RFAGC] AGC

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.

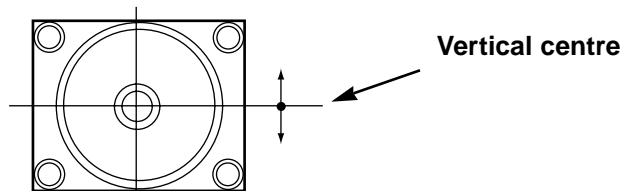
Item 02 [H-PHA] HORIZONTAL CENTRE

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.



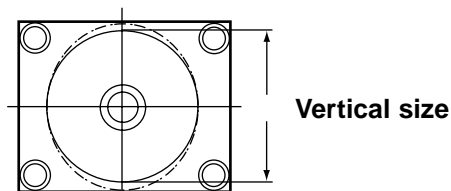
Item 03 [V-POS] VERTICAL CENTRE

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 to normal 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.

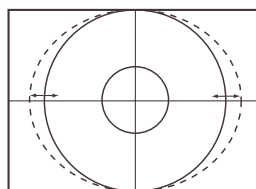


Item 17 [OSDHP] OSD H-POSITION

1. Receive a monochrome circular pattern.
2. Set the brightness and contrast to normal.
3. Select Item No. 17 [OSDHP] in the service mode.
4. Change value to be proper OSD horizontal position.
5. Exit from the service mode.

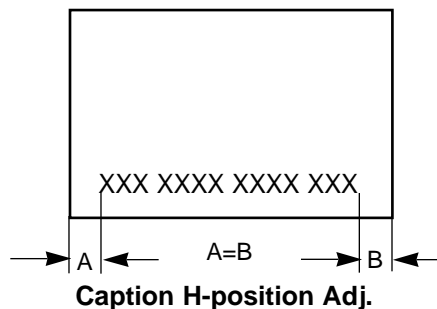
Item 19 [EWDC] HORIZONTAL WIDTH

1. Receive a monochrome circular pattern.
2. Set the brightness and contrast to maximum.
3. Select Item No.19 [EWDC] in the service mode.
4. Change value to be proper horizontal width.
5. Exit from the service mode.



Item 125 [CCD] CAPTION H-POSITION

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. 125 [CCD] in the service mode.
4. Adjust data with + or - key for proper horizontal center.
5. Exit from the service mode.

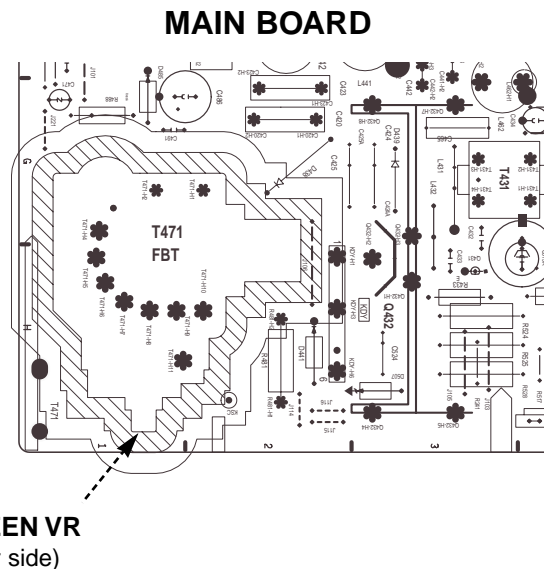
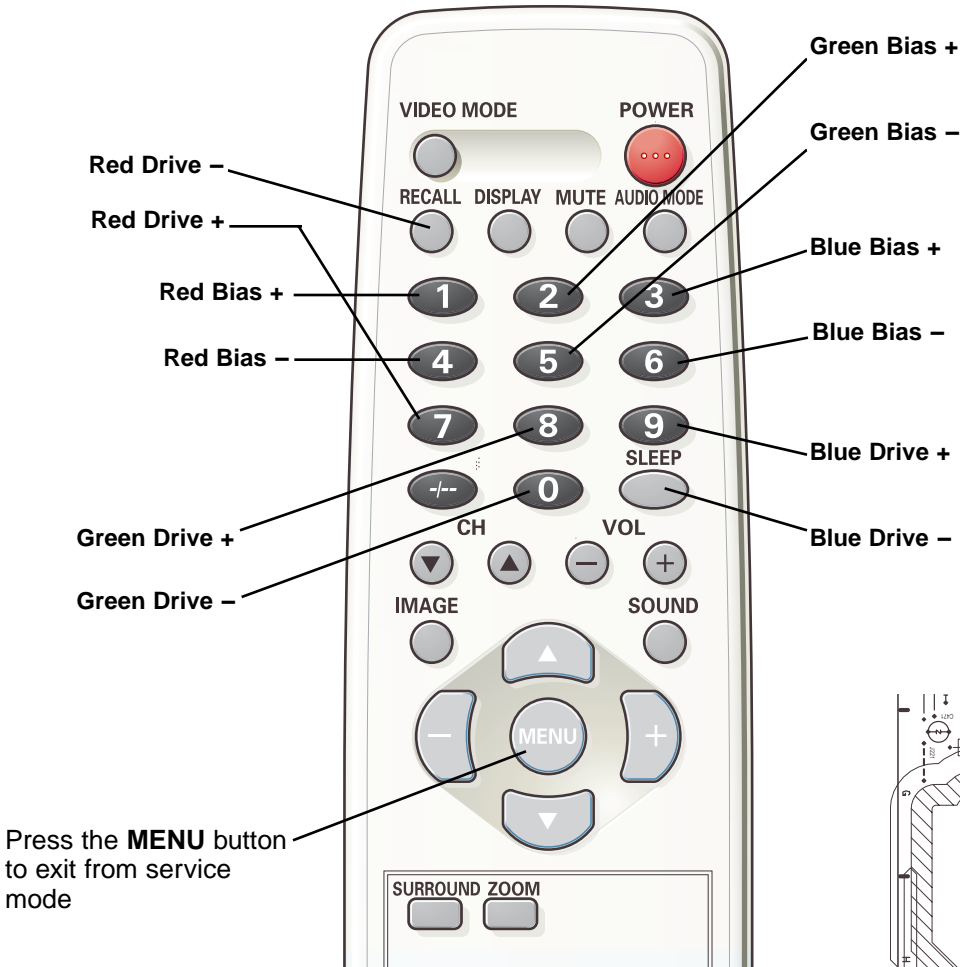


Service Adjustments

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 each value of Item-35 **RBIAS**, 36 **GBIAS**, 37 **BBIAS** mode to 00. Set each value of Item-38 **RDRIV**, 40 **BDRIV** mode to 64, 39 **GDRIV** to 08.
5. Select Item-41 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-42 **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.



Service Adjustments

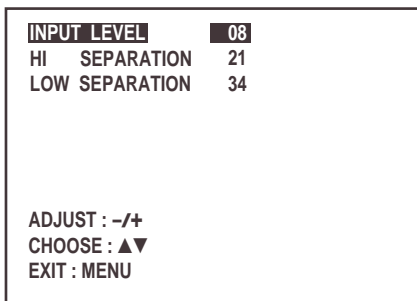
Service Adjustment-2 (MTS Adjustment)

Following table shows the initial values of MTS Adjustment which have been stored in the CPU ROM.

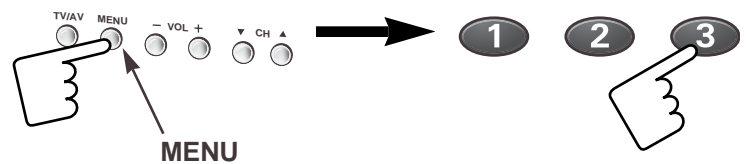
No.	Item	Initial value	Range
01	INPUT LEVEL	08	00~63
02	HIGH SEPARATION	21	00~63
03	LOW SEPARATION	34	00~63

1. Enter the Service Menu

While pressing the **MENU** button on the television, press the Number Key **3** on the remote control unit. The Service Menu now appear.



[MTS Adjustment Mode]

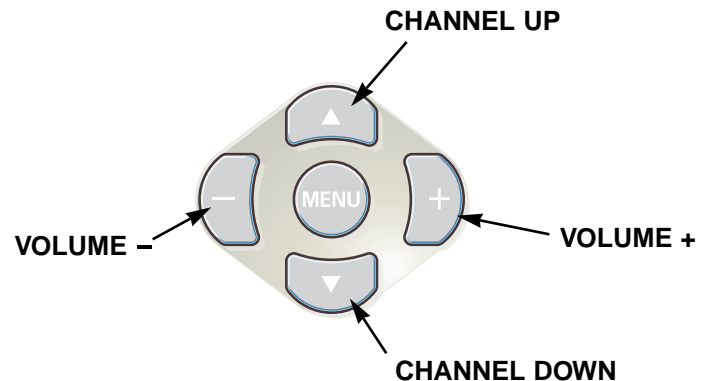


[Entering the Service Menu]

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.

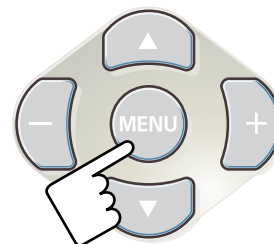


[Service Adjustment]

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]

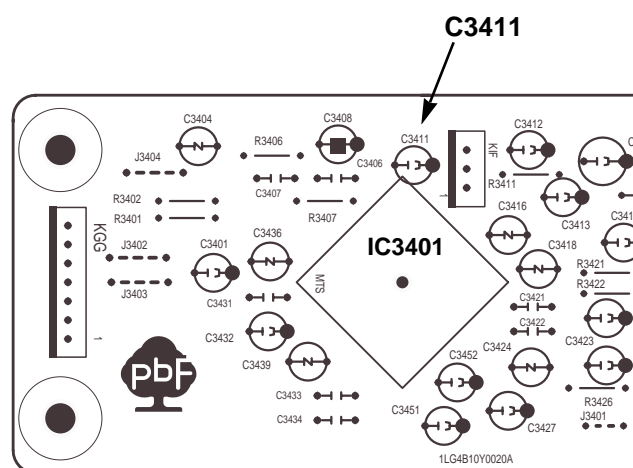
Service Adjustments

SOUND LEVEL ADJUSTMENT

1. Receive the channel with audio 1KHz 100% modulation signal.
2. Connect a DC Volt-Meter to **KFF pin-2** (pin-38 of IC3401) and the ground.
3. Set the Surround OFF. Press and hold the **MENU** button on the TV set, and press **“3”** button on the remote control transmitter to enter the service mode.

INPUT LEVEL	08
HI SEPARATION	21
LOW SEPARATION	34

ADJUST : -/+
CHOOSE : ▲▼
EXIT : MENU



MTS BOARD

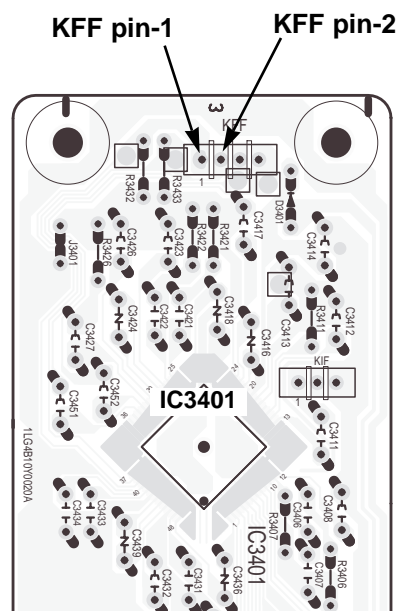
5. Adjust voltage to become DC 400mVrms±20mVrms at **KFF pin-2** by pressing the **VOLUME (+/-)** button on the remote control or TV set.
6. To exit from the service mode, press the **MENU** button.

STEREO SEPARATION ADJUSTMENT

1. Connect an oscilloscope:
Probe-A to **KFF Pin-2** (pin-38 of IC3401) and the ground.
Probe-B to **KFF Pin-1** (pin-39 of IC3401) and the ground.
2. Turn on the TV set, and receive the multi sound programme.
Set the Surround OFF.
3. Press and hold the **MENU** button on the TV set, and press
“**3**” button on the remote control transmitter to enter the
service mode.
4. Select “**LOW SEPARATION**” by pressing the CHANNEL
UP/DOWN button on the remote control or TV set.

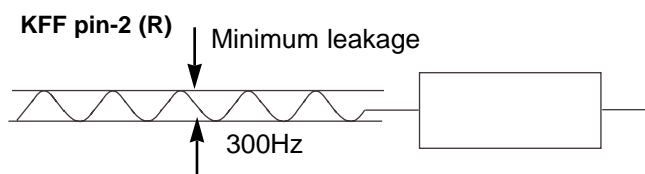
INPUT LEVEL	08
HI SEPARATION	21
LOW SEPARATION	34

ADJUST : -/+
CHOOSE : ▲▼
EXIT : MENU



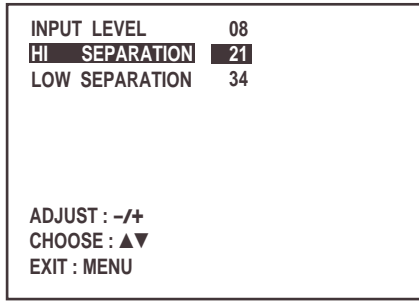
MTS BOARD
(Solder side)

5. Adjust the level of 300Hz at **KFF pin-2** (pin-38 of IC3401) to become minimum level by pressing the **VOLUME (+/-)** button on the remote control or TV set.

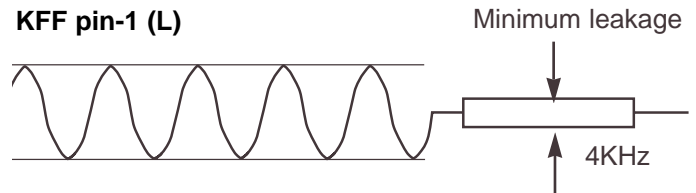


Service Adjustments

- Select "HI SEPARATION" by pressing the **CHANNEL UP/DOWN** button on the remote control or TV set.



- Adjust the level of 4KHz at **KFF pin-1** (pin-39 of IC3401) to become minimum level by pressing the **VOLUME (+/-)** button on the remote control or TV set.
- Repeat steps 4 to 7 for best separation.
- To exit from the service mode, press the **MENU** button.



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.

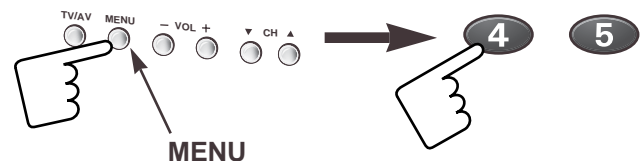
This function is available for one channel only and the fine-tuned channel is memorized into IC802 (EEPROM).

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.



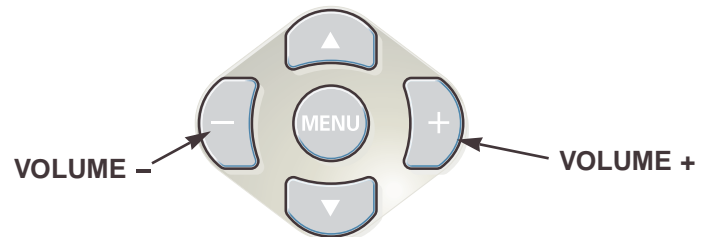
Fine tuning service mode



[Entering the Service Menu]

2. Service Adjustments:

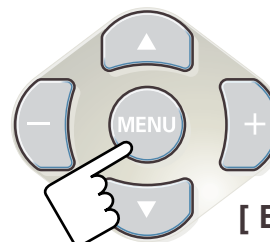
Press and hold the **VOLUME (+/-)** button on the remote control handset or TV set to make fine tuning adjustment. Press and hold the **+** button for higher frequency tuning, and press and hold the **-** for lower frequency tuning.



[Service Adjustment]

Fine tuning data value will be automatically stored in memory.

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.)



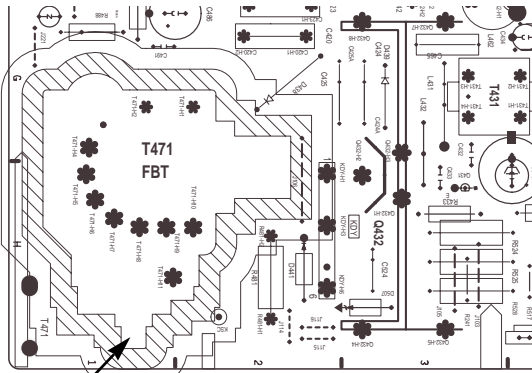
[Exit from the Service Menu]

Service Adjustments

Service Adjustment-4

FOCUS ADJUSTMENT

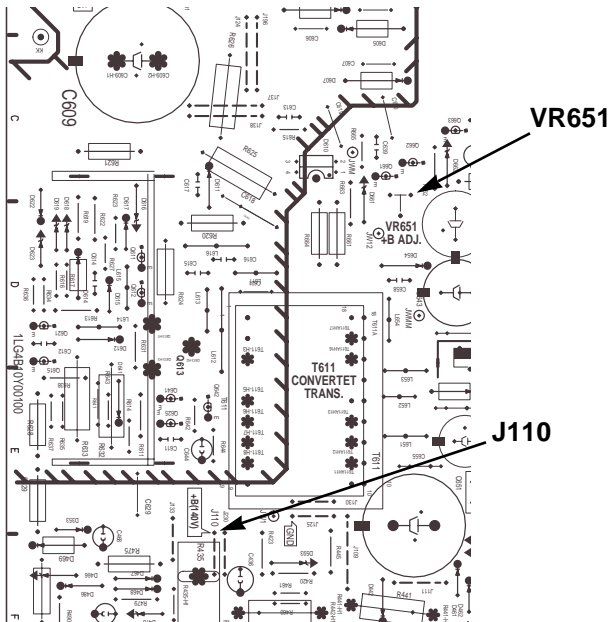
1. Receive the monochrome circular pattern.
2. Set the brightness to normal and contrast to maximum.
3. Adjust the focus control on the F.B.T. for the best focus on the screen centre.



FOCUS VR (Upper side)

+B POWER SUPPLY ADJUSTMENT

1. Connect a DC voltmeter to J110 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 synchro-nized picture.
4. Adjust +B voltage to 140 ± 1.0 volt DC by using VR651.



MAIN BOARD

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 $29.5KV \pm 1.5KV$ and less than 32KV 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.

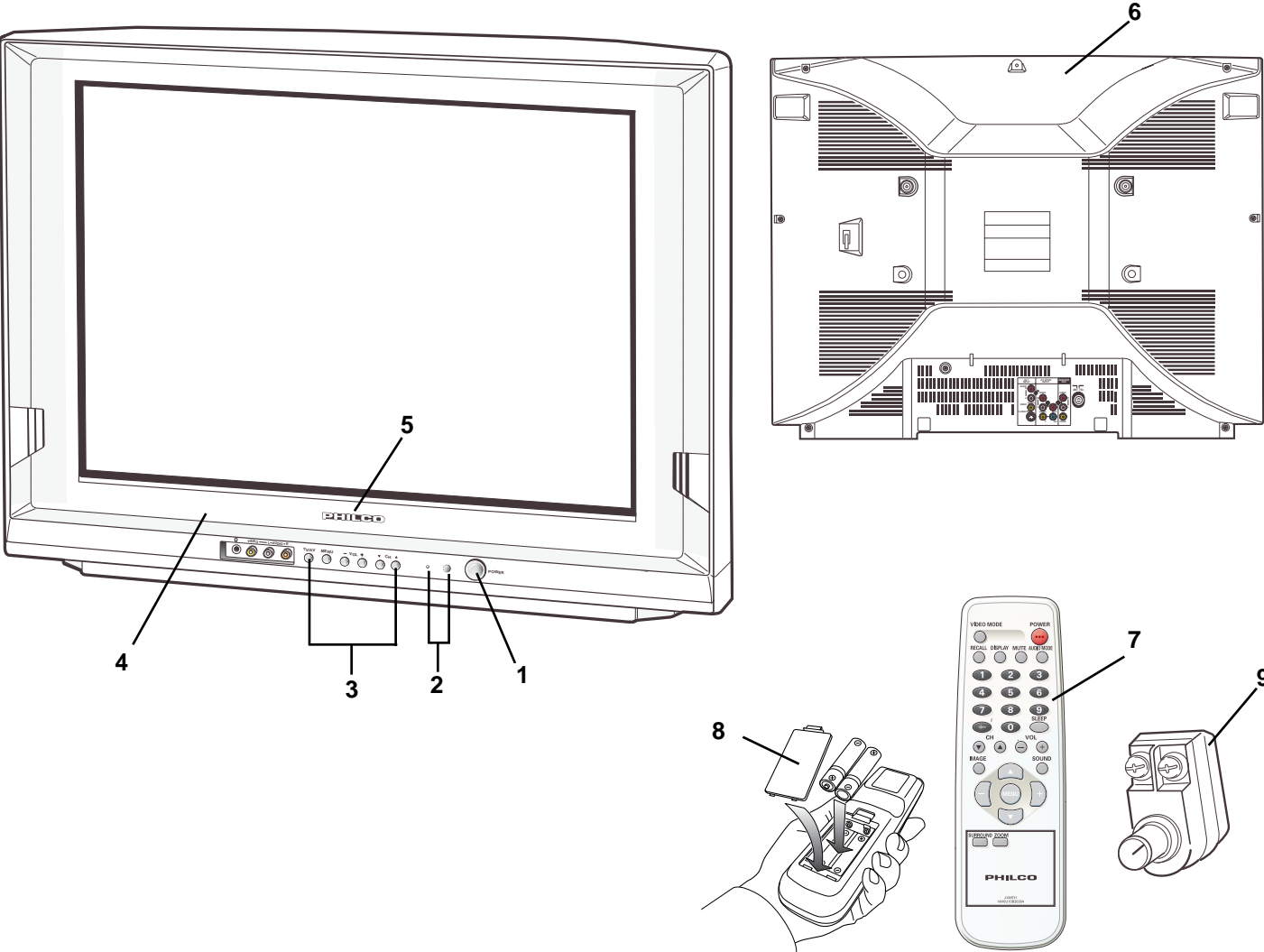
When an abnormality occurs during TV reception, it causes pin 27 of the CPU to go continually Low voltage for about one second. The CPU detects that this has occurred and outputs the signal from pin 31 to switch off the power supply lines.

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.

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	610 319 2611	BUTTON POWER-C7SJ			
	610 210 7302	COIL SPRING-D8HA			
2	610 319 2802	DEC IND-C7SA			
3	610 319 9009	BUTTON UNITED-C8AJ			
4	610 319 2727	CABINET FRONT-C8AJ			
5	610 318 1004	BADGE PHILCO-C4BS			
6	610 319 2758	CABINET BACK-C8AA			
7	645 072 9805	ASSY,REMOCON JXMTH			
8	610 297 9879	RC-BATTERY LID-JXMTA			
9	645 004 3925	ANTENNA CONVERTER			
	645 005 0251	ANTENNA CONVERTER			
	610 319 5643	INSTRUCTION MANUAL-C8AJ			

C8AJ

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.

-20-

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description	
Q1004	405 015 8724	TR 2SC2812-L6-TB	Q291	406 000 6804	TR 2SA1015-GR(SAN)	
	405 015 8922	TR 2SC2812-L7-TB		405 014 4519	TR 2SC2412K T146 R	
	405 163 1612	TR 2SC2812N-L6-TB0		405 014 4618	TR 2SC2412K T146 S	
	405 163 1711	TR 2SC2812N-L7-TB0		405 015 8724	TR 2SC2812-L6-TB	
	405 173 9813	TR 2SC3928A1R		405 015 8922	TR 2SC2812-L7-TB	
	405 173 9912	TR 2SC3928A1S		405 163 1612	TR 2SC2812N-L6-TB0	
	405 014 4519	TR 2SC2412K T146 R		405 163 1711	TR 2SC2812N-L7-TB0	
	405 014 4618	TR 2SC2412K T146 S		405 173 9813	TR 2SC3928A1R	
	405 015 8724	TR 2SC2812-L6-TB		405 173 9912	TR 2SC3928A1S	
	405 015 8922	TR 2SC2812-L7-TB		Q292	405 014 4519	TR 2SC2412K T146 R
405 163 1612	TR 2SC2812N-L6-TB0	405 014 4618	TR 2SC2412K T146 S			
405 163 1711	TR 2SC2812N-L7-TB0	405 015 8724	TR 2SC2812-L6-TB			
405 173 9813	TR 2SC3928A1R	405 015 8922	TR 2SC2812-L7-TB			
405 173 9912	TR 2SC3928A1S	405 163 1612	TR 2SC2812N-L6-TB0			
405 014 4519	TR 2SC2412K T146 R	405 163 1711	TR 2SC2812N-L7-TB0			
405 014 4618	TR 2SC2412K T146 S	405 173 9813	TR 2SC3928A1R			
405 015 8724	TR 2SC2812-L6-TB	405 173 9912	TR 2SC3928A1S			
405 015 8922	TR 2SC2812-L7-TB	Q431	405 018 0517		TR 2SC3332-R-AA	
405 163 1612	TR 2SC2812N-L6-TB0		405 018 0616		TR 2SC3332-S-AA	
Q1006	405 163 1711	TR 2SC2812N-L7-TB0	Q432	405 157 1304	TR 2SD2634-YB	
	405 173 9813	TR 2SC3928A1R		Q461	405 064 7307	TR 2SB1274-Q-RA
	405 173 9912	TR 2SC3928A1S	405 064 7406		TR 2SB1274-R-RA	
	405 134 5925	TR 2SA1037AK-T146-R	Q462	405 011 8411	TR 2SC1740S-TP-Q	
	405 147 2215	TR 2SA1037AK-S-T146		405 011 8510	TR 2SC1740S-TP-R	
	405 002 0318	TR 2SA1037K T146 R	405 011 8619	TR 2SC1740S-TP-S		
	405 002 0417	TR 2SA1037K T146 S	405 012 2012	TR 2SC1815-GR-TPE2		
	405 002 6726	TR 2SA1179-M6-TB	405 012 2111	TR 2SC1815-O-TPE2		
	405 002 6924	TR 2SA1179-M7-TB	405 012 2319	TR 2SC1815-Y-TPE2		
	405 163 1513	TR 2SA1179N-M6-TB	405 157 0515	TR 2SC536NF-NPA-AT		
Q106	405 163 2718	TR 2SA1179N-M7-TB	405 151 8725	TR 2SC536NG-NPA-AT		
	405 173 9615	TR 2SA1235A1E	405 020 7511	TR 2SC945A-PA-T		
	405 173 9714	TR 2SA1235A1F	405 020 7719	TR 2SC945A-QA-T		
	405 015 9721	TR 2SC2814-F4-TB	405 020 7917	TR 2SC945A-RA-T		
	Q171	405 134 5925	TR 2SA1037AK-T146-R	Q527	405 011 8411	TR 2SC1740S-TP-Q
		405 147 2215	TR 2SA1037AK-S-T146		405 011 8510	TR 2SC1740S-TP-R
		405 002 0318	TR 2SA1037K T146 R		405 011 8619	TR 2SC1740S-TP-S
		405 002 0417	TR 2SA1037K T146 S		405 012 2012	TR 2SC1815-GR-TPE2
		405 002 6726	TR 2SA1179-M6-TB		405 012 2111	TR 2SC1815-O-TPE2
		405 002 6924	TR 2SA1179-M7-TB		405 012 2319	TR 2SC1815-Y-TPE2
405 163 1513		TR 2SA1179N-M6-TB	405 157 0515		TR 2SC536NF-NPA-AT	
405 163 2718		TR 2SA1179N-M7-TB	405 151 8725		TR 2SC536NG-NPA-AT	
405 173 9615		TR 2SA1235A1E	405 020 7511		TR 2SC945A-PA-T	
405 173 9714		TR 2SA1235A1F	405 020 7719		TR 2SC945A-QA-T	
Q182	405 134 5925	TR 2SA1037AK-T146-R	Q591	405 020 7917	TR 2SC945A-RA-T	
	405 147 2215	TR 2SA1037AK-S-T146		405 014 4519	TR 2SC2412K T146 R	
	405 002 0318	TR 2SA1037K T146 R		405 014 4618	TR 2SC2412K T146 S	
	405 002 0417	TR 2SA1037K T146 S		405 015 8724	TR 2SC2812-L6-TB	
	405 002 6726	TR 2SA1179-M6-TB		405 015 8922	TR 2SC2812-L7-TB	
	405 002 6924	TR 2SA1179-M7-TB		405 163 1612	TR 2SC2812N-L6-TB0	
	405 163 1513	TR 2SA1179N-M6-TB		405 163 1711	TR 2SC2812N-L7-TB0	
	405 163 2718	TR 2SA1179N-M7-TB		405 173 9813	TR 2SC3928A1R	
	405 173 9615	TR 2SA1235A1E		405 173 9912	TR 2SC3928A1S	
	405 173 9714	TR 2SA1235A1F		Q611	405 013 6811	TR 2SC2274-E-AA
Q190	405 134 5925	TR 2SA1037AK-T146-R	405 013 7016		TR 2SC2274-F-AA	
	405 147 2215	TR 2SA1037AK-S-T146	Q612	405 006 6514	TR 2SA984-E-AA	
	405 002 0318	TR 2SA1037K T146 R		405 006 6712	TR 2SA984-F-AA	
	405 002 0417	TR 2SA1037K T146 S	Q613	405 172 6803	TR 2SK3102	
	405 002 6726	TR 2SA1179-M6-TB		Q615	405 011 8411	TR 2SC1740S-TP-Q
	405 002 6924	TR 2SA1179-M7-TB	405 011 8510		TR 2SC1740S-TP-R	
	405 163 1513	TR 2SA1179N-M6-TB	405 011 8619	TR 2SC1740S-TP-S		
	405 163 2718	TR 2SA1179N-M7-TB	405 012 2012	TR 2SC1815-GR-TPE2		
	405 173 9615	TR 2SA1235A1E	405 012 2319	TR 2SC1815-Y-TPE2		
	405 173 9714	TR 2SA1235A1F	405 157 0515	TR 2SC536NF-NPA-AT		
	Q1902	405 001 7615	TR 2SA1015-Y(SAN)-TPE2	405 151 8725	TR 2SC536NG-NPA-AT	
405 004 3218		TR 2SA564A-R(CU)-TA	405 020 7511	TR 2SC945A-PA-T		
405 151 3324		TR 2SA608NF-NPA-AT	405 020 7719	TR 2SC945A-QA-T		
405 006 1816		TR 2SA933S-TP-R	Q621	405 011 8411	TR 2SC1740S-TP-Q	

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
Q625	405 011 8510	TR 2SC1740S-TP-R	Q681	405 012 2012	TR 2SC1815-GR-TPE2
	405 011 8619	TR 2SC1740S-TP-S		405 012 2111	TR 2SC1815-O-TPE2
	405 012 2012	TR 2SC1815-GR-TPE2		405 012 2319	TR 2SC1815-Y-TPE2
	405 012 2319	TR 2SC1815-Y-TPE2		405 157 0515	TR 2SC536NF-NPA-AT
	405 157 0515	TR 2SC536NF-NPA-AT		405 151 8725	TR 2SC536NG-NPA-AT
	405 151 8725	TR 2SC536NG-NPA-AT		405 020 7511	TR 2SC945A-PA-T
	405 020 7511	TR 2SC945A-PA-T		405 020 7719	TR 2SC945A-QA-T
	405 020 7719	TR 2SC945A-QA-T		405 020 7917	TR 2SC945A-RA-T
	405 016 9413	TR 2SC3068-AA		405 014 4519	TR 2SC2412K T146 R
	405 001 7615	TR 2SA1015-Y(SAN)-TPE2		405 014 4618	TR 2SC2412K T146 S
Q641	405 004 3218	TR 2SA564A-R(CU)-TA	Q691	405 015 8724	TR 2SC2812-L6-TB
	405 151 3324	TR 2SA608NF-NPA-AT		405 015 8922	TR 2SC2812-L7-TB
	405 006 1816	TR 2SA933S-TP-R		405 163 1612	TR 2SC2812N-L6-TB0
	406 000 6804	TR 2SA1015-GR(SAN)		405 163 1711	TR 2SC2812N-L7-TB0
	405 011 8411	TR 2SC1740S-TP-Q		405 173 9813	TR 2SC3928A1R
	405 011 8510	TR 2SC1740S-TP-R		405 173 9912	TR 2SC3928A1S
	405 011 8619	TR 2SC1740S-TP-S		405 014 4519	TR 2SC2412K T146 R
	405 012 2012	TR 2SC1815-GR-TPE2		405 014 4618	TR 2SC2412K T146 S
	405 012 2319	TR 2SC1815-Y-TPE2		405 015 8724	TR 2SC2812-L6-TB
	405 157 0515	TR 2SC536NF-NPA-AT		405 015 8922	TR 2SC2812-L7-TB
Q642	405 151 8725	TR 2SC536NG-NPA-AT	Q7904	405 163 1612	TR 2SC2812N-L6-TB0
	405 020 7511	TR 2SC945A-PA-T		405 163 1711	TR 2SC2812N-L7-TB0
	405 020 7719	TR 2SC945A-QA-T		405 173 9813	TR 2SC3928A1R
	405 089 0010	TR 2SA1707-S-AN		405 173 9912	TR 2SC3928A1S
	405 089 0119	TR 2SA1707-T-AN		405 014 4519	TR 2SC2412K T146 R
	405 009 6917	TR 2SB985-S-AE		405 014 4618	TR 2SC2412K T146 S
	405 009 7013	TR 2SB985-T-AE		405 015 8724	TR 2SC2812-L6-TB
	405 089 0010	TR 2SA1707-S-AN		405 015 8922	TR 2SC2812-L7-TB
	405 089 0119	TR 2SA1707-T-AN		405 163 1612	TR 2SC2812N-L6-TB0
	405 009 6917	TR 2SB985-S-AE		405 163 1711	TR 2SC2812N-L7-TB0
Q652	405 009 7013	TR 2SB985-T-AE	Q7905	405 173 9813	TR 2SC3928A1R
	405 059 9804	TR 2SD1913-Q-RA		405 173 9912	TR 2SC3928A1S
	405 059 9903	TR 2SD1913-R-RA		405 014 4519	TR 2SC2412K T146 R
	405 011 8411	TR 2SC1740S-TP-Q		405 014 4618	TR 2SC2412K T146 S
	405 011 8510	TR 2SC1740S-TP-R		405 015 8724	TR 2SC2812-L6-TB
	405 011 8619	TR 2SC1740S-TP-S		405 015 8922	TR 2SC2812-L7-TB
	405 012 2012	TR 2SC1815-GR-TPE2		405 163 1612	TR 2SC2812N-L6-TB0
	405 012 2319	TR 2SC1815-Y-TPE2		405 163 1711	TR 2SC2812N-L7-TB0
	405 157 0515	TR 2SC536NF-NPA-AT		405 173 9813	TR 2SC3928A1R
	405 151 8725	TR 2SC536NG-NPA-AT		405 173 9912	TR 2SC3928A1S
Q653	405 020 7511	TR 2SC945A-PA-T	Q7906	405 014 4519	TR 2SC2412K T146 R
	405 020 7719	TR 2SC945A-QA-T		405 014 4618	TR 2SC2412K T146 S
	405 001 7615	TR 2SA1015-Y(SAN)-TPE2		405 015 8724	TR 2SC2812-L6-TB
	405 004 3218	TR 2SA564A-R(CU)-TA		405 015 8922	TR 2SC2812-L7-TB
	405 151 3324	TR 2SA608NF-NPA-AT		405 163 1612	TR 2SC2812N-L6-TB0
	405 006 1816	TR 2SA933S-TP-R		405 163 1711	TR 2SC2812N-L7-TB0
	406 000 6804	TR 2SA1015-GR(SAN)		405 173 9813	TR 2SC3928A1R
	405 011 8411	TR 2SC1740S-TP-Q		405 173 9912	TR 2SC3928A1S
	405 011 8510	TR 2SC1740S-TP-R		405 134 5925	TR 2SA1037AK-T146-R
	405 011 8619	TR 2SC1740S-TP-S		405 147 2215	TR 2SA1037AK-S-T146
Q654	405 012 2012	TR 2SC1815-GR-TPE2	Q7907	405 002 0318	TR 2SA1037K T146 R
	405 012 2319	TR 2SC1815-Y-TPE2		405 002 0417	TR 2SA1037K T146 S
	405 157 0515	TR 2SC536NF-NPA-AT		405 002 6726	TR 2SA1179-M6-TB
	405 151 8725	TR 2SC536NG-NPA-AT		405 002 6924	TR 2SA1179-M7-TB
	405 020 7511	TR 2SC945A-PA-T		405 163 1513	TR 2SA1179N-M6-TB
	405 020 7719	TR 2SC945A-QA-T		405 163 2718	TR 2SA1179N-M7-TB
	405 001 7417	TR 2SA1015OSAN		405 173 9615	TR 2SA1235A1E
	405 001 7615	TR 2SA1015-Y(SAN)-TPE2		405 173 9714	TR 2SA1235A1F
	405 004 3119	TR 2SA564A-Q(CU)-TA		405 014 4519	TR 2SC2412K T146 R
	405 004 3218	TR 2SA564A-R(CU)-TA		405 014 4618	TR 2SC2412K T146 S
Q661	405 151 3324	TR 2SA608NF-NPA-AT	Q7908	405 015 8724	TR 2SC2812-L6-TB
	405 006 1717	TR 2SA933S-TP-Q		405 015 8922	TR 2SC2812-L7-TB
	405 006 1816	TR 2SA933S-TP-R		405 163 1612	TR 2SC2812N-L6-TB0
	406 000 6804	TR 2SA1015-GR(SAN)		405 163 1711	TR 2SC2812N-L7-TB0
	405 011 8411	TR 2SC1740S-TP-Q		405 173 9813	TR 2SC3928A1R
	405 011 8510	TR 2SC1740S-TP-R		405 173 9912	TR 2SC3928A1S
	405 011 8619	TR 2SC1740S-TP-S		405 014 4519	TR 2SC2412K T146 R
	405 012 2012	TR 2SC1815-GR-TPE2		405 014 4618	TR 2SC2412K T146 S
	405 012 2319	TR 2SC1815-Y-TPE2		405 015 8724	TR 2SC2812-L6-TB
	405 157 0515	TR 2SC536NF-NPA-AT		405 015 8922	TR 2SC2812-L7-TB
Q662	405 151 8725	TR 2SC536NG-NPA-AT	Q7909	405 163 1612	TR 2SC2812N-L6-TB0
	405 020 7511	TR 2SC945A-PA-T		405 163 1711	TR 2SC2812N-L7-TB0
	405 020 7719	TR 2SC945A-QA-T		405 173 9813	TR 2SC3928A1R
	405 001 7615	TR 2SA1015-Y(SAN)-TPE2		405 173 9912	TR 2SC3928A1S
	405 004 3218	TR 2SA564A-R(CU)-TA		405 014 4519	TR 2SC2412K T146 R
	405 151 3324	TR 2SA608NF-NPA-AT		405 014 4618	TR 2SC2412K T146 S
	405 006 1717	TR 2SA933S-TP-Q		405 015 8724	TR 2SC2812-L6-TB
	405 006 1816	TR 2SA933S-TP-R		405 015 8922	TR 2SC2812-L7-TB
	406 000 6804	TR 2SA1015-GR(SAN)		405 163 1612	TR 2SC2812N-L6-TB0
	405 011 8411	TR 2SC1740S-TP-Q		405 163 1711	TR 2SC2812N-L7-TB0
Q663	405 011 8510	TR 2SC1740S-TP-R	Q7909	405 173 9813	TR 2SC3928A1R
	405 011 8619	TR 2SC1740S-TP-S		405 173 9912	TR 2SC3928A1S
	405 012 2012	TR 2SC1815-GR-TPE2		405 014 4519	TR 2SC2412K T146 R
	405 012 2319	TR 2SC1815-Y-TPE2		405 014 4618	TR 2SC2412K T146 S
	405 157 0515	TR 2SC536NF-NPA-AT		405 015 8724	TR 2SC2812-L6-TB
	405 151 8725	TR 2SC536NG-NPA-AT		405 015 8922	TR 2SC2812-L7-TB
	405 020 7511	TR 2SC945A-PA-T		405 163 1612	TR 2SC2812N-L6-TB0
	405 020 7719	TR 2SC945A-QA-T		405 163 1711	TR 2SC2812N-L7-TB0
	405 001 7417	TR 2SA1015OSAN		405 173 9813	TR 2SC3928A1R
	405 001 7615	TR 2SA1015-Y(SAN)-TPE2		405 173 9912	TR 2SC3928A1S
Q670	405 004 3119	TR 2SA564A-Q(CU)-TA	Q7909	405 014 4519	TR 2SC2412K T146 R
	405 004 3218	TR 2SA564A-R(CU)-TA		405 014 4618	TR 2SC2412K T146 S
	405 151 3324	TR 2SA608NF-NPA-AT		405 015 8724	TR 2SC2812-L6-TB
	405 006 1717	TR 2SA933S-TP-Q		405 015 8922	TR 2SC2812-L7-TB
	405 006 1816	TR 2SA933S-TP-R		405 163 1612	TR 2SC2812N-L6-TB0
	406 000 6804	TR 2SA1015-GR(SAN)		405 163 1711	TR 2SC2812N-L7-TB0
	405 011 8411	TR 2SC1740S-TP-Q		405 173 9813	TR 2SC3928A1R
	405 011 8510	TR 2SC1740S-TP-R		405 173 9912	TR 2SC3928A1S
	405 011 8619	TR 2SC1740S-TP-S		405 014 4519	TR 2SC2412K T146 R
				405 014 4618	TR 2SC2412K T146 S

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
Q861	405 014 4618	TR 2SC2412K T146 S	C011	403 274 9718	POLYESTER 0.22U K 50V
	405 015 8724	TR 2SC2812-L6-TB	C012	403 274 9718	POLYESTER 0.22U K 50V
	405 015 8922	TR 2SC2812-L7-TB	C013	404 084 8400	ELECT 1000U M 25V
	405 163 1612	TR 2SC2812N-L6-TB0	C014	404 084 8400	ELECT 1000U M 25V
	405 163 1711	TR 2SC2812N-L7-TB0	C017	403 154 8520	ELECT 3300U M 35V
	405 173 9813	TR 2SC3928A1R		404 102 9501	ELECT 3300U M 35V
	405 173 9912	TR 2SC3928A1S	C018	403 274 9718	POLYESTER 0.22U K 50V
	405 134 5925	TR 2SA1037AK-T146-R	C019	403 274 9718	POLYESTER 0.22U K 50V
	405 147 2215	TR 2SA1037AK-S-T146	C033	404 084 8806	ELECT 1U M 50V
	405 002 0318	TR 2SA1037K T146 R	C035	404 084 7908	ELECT 1000U M 16V
	405 002 0417	TR 2SA1037K T146 S	C1001	404 087 1606	ELECT 0.1U M 50V
	405 002 6726	TR 2SA1179-M6-TB	C1002	404 084 9001	ELECT 2.2U M 50V
	405 002 6924	TR 2SA1179-M7-TB	C1003	404 087 1606	ELECT 0.1U M 50V
	405 163 1513	TR 2SA1179N-M6-TB	C1004	404 084 9001	ELECT 2.2U M 50V
	405 163 2718	TR 2SA1179N-M7-TB	C1005	403 215 2231	CERAMIC 0.01U K 50V
	405 173 9615	TR 2SA1235A1E	C1006	404 087 1606	ELECT 0.1U M 50V
	405 173 9714	TR 2SA1235A1F	C1007	404 084 9001	ELECT 2.2U M 50V
Q871	405 014 4519	TR 2SC2412K T146 R	C1009	404 084 9001	ELECT 2.2U M 50V
	405 014 4618	TR 2SC2412K T146 S	C101	403 044 1743	ELECT 470U M 16V
	405 015 8724	TR 2SC2812-L6-TB	C1012	404 087 1606	ELECT 0.1U M 50V
	405 015 8922	TR 2SC2812-L7-TB	C1013	404 084 9001	ELECT 2.2U M 50V
	405 163 1612	TR 2SC2812N-L6-TB0	C1014	404 084 9001	ELECT 2.2U M 50V
	405 163 1711	TR 2SC2812N-L7-TB0	C1016	404 084 8202	ELECT 47U M 16V
	405 173 9813	TR 2SC3928A1R	C1017	403 215 2231	CERAMIC 0.01U K 50V
	405 173 9912	TR 2SC3928A1S	C1018	404 084 9001	ELECT 2.2U M 50V
	405 014 4519	TR 2SC2412K T146 R	C1019	404 084 9001	ELECT 2.2U M 50V
	405 014 4618	TR 2SC2412K T146 S	C1021	404 084 7700	ELECT 10U M 16V
Q881	405 015 8724	TR 2SC2812-L6-TB	C1022	404 084 7700	ELECT 10U M 16V
	405 015 8922	TR 2SC2812-L7-TB	C1025	404 089 6401	NP-ELECT 4.7U M 50V
	405 163 1612	TR 2SC2812N-L6-TB0	C1027	404 087 1606	ELECT 0.1U M 50V
	405 163 1711	TR 2SC2812N-L7-TB0	C1028	404 088 7300	ELECT 22U M 16V
	405 173 9813	TR 2SC3928A1R	C103	404 093 9702	ELECT 33U M 50V
	405 173 9912	TR 2SC3928A1S	C1030	404 089 6401	NP-ELECT 4.7U M 50V
	405 011 8411	TR 2SC1740S-TP-Q	C107	404 084 9209	ELECT 4.7U M 50V
	405 011 8510	TR 2SC1740S-TP-R		404 081 0506	ELECT 4.7U M 50V
	405 011 8619	TR 2SC1740S-TP-S	C1101	404 090 2102	NP-ELECT 10U M 16V
	405 012 2012	TR 2SC1815-GR-TPE2	C1102	404 090 2102	NP-ELECT 10U M 16V
Q886	405 012 2319	TR 2SC1815-Y-TPE2	C113	403 149 9248	CERAMIC 0.01U Z 50V
	405 157 0515	TR 2SC536NF-NPA-AT	C115	403 149 9248	CERAMIC 0.01U Z 50V
	405 151 8725	TR 2SC536NG-NPA-AT	C121	403 149 9248	CERAMIC 0.01U Z 50V
	405 020 7511	TR 2SC945A-PA-T	C122	404 084 8202	ELECT 47U M 16V
	405 020 7719	TR 2SC945A-QA-T	C124	403 149 9248	CERAMIC 0.01U Z 50V
			C138	403 284 4324	CERAMIC 0.022U K 50V
			C1900	404 088 7300	ELECT 22U M 16V
			C201	404 084 9803	NP-ELECT 1U M 50V
			C202	403 058 2426	POLYESTER 0.015U J 50V
			C203	403 149 9248	CERAMIC 0.01U Z 50V
INTEGRATED CIRCUIT			C204	404 084 8905	ELECT 10U M 50V
IC001	409 017 7505	IC LA4270-E	C205	404 084 8905	ELECT 10U M 50V
IC1001	409 419 5406	IC MM1313BD	C206	403 164 0234	CERAMIC 0.1U Z 25V
IC201	409 502 7805	IC LA76828	C207	403 164 0234	CERAMIC 0.1U Z 25V
IC202	409 124 5302	IC L78M05T	C208	403 113 3835	CERAMIC 1000P K 50V
IC203	409 124 5302	IC L78M05T	C209	404 084 8707	ELECT 0.47U M 50V
IC501	409 453 5905	IC LA78041-E	C210	404 084 8301	ELECT 470U M 16V
IC681	409 241 5407	IC BA178M05T	C212	403 155 4234	CERAMIC 15P J 50V
IC801	410 553 5306	IC LC863440C-55R0-TLM-E	C221	403 305 3527	CERAMIC 0.1U Z 50V
IC802	409 343 6302	IC 24LC04B/P	C222	403 305 3527	CERAMIC 0.1U Z 50V
	409 495 7004	IC CAT24WC04P	C223	403 305 3527	CERAMIC 0.1U Z 50V
	409 470 3403	IC KS24C041C	C224	403 205 2838	CERAMIC 0.047U K 25V
	409 427 4705	IC M24C04-BN6	C225	404 084 8707	ELECT 0.47U M 50V
	410 499 0908	IC AT24C04-10PI-2.7	C226	404 084 8707	ELECT 0.47U M 50V
CAPACITOR			C227	403 086 2617	NP-ELECT 1U M 50V
C003	403 215 2439	CERAMIC 0.015U K 50V		404 084 9803	NP-ELECT 1U M 50V
C004	403 215 2439	CERAMIC 0.015U K 50V	C229	403 149 9248	CERAMIC 0.01U Z 50V
C005	404 084 8806	ELECT 1U M 50V	C230	403 149 9248	CERAMIC 0.01U Z 50V
C006	404 084 8806	ELECT 1U M 50V	C231	403 260 2944	MT-COMPO 0.33U J 50V
C007	404 084 7809	ELECT 100U M 16V	C232	403 260 2944	MT-COMPO 0.33U J 50V
C008	404 084 7809	ELECT 100U M 16V			
C009	404 084 8004	ELECT 220U M 16V			
C010	404 084 9209	ELECT 4.7U M 50V			

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
C233	404 084 8202	ELECT 47U M 16V		403 237 7941	MT-COMPO 0.22U J 50V
C243	403 149 9248	CERAMIC 0.01U Z 50V	C615	403 324 3314	CERAMIC 220P K 2K
C244	404 084 8301	ELECT 470U M 16V	C616	403 324 3314	CERAMIC 220P K 2K
C245	404 084 9803	NP-ELECT 1U M 50V	C617	403 324 3314	CERAMIC 220P K 2K
C246	404 084 8806	ELECT 1U M 50V	C618	403 149 5101	MT-POLYEST 0.047U K 630V
C247	404 084 9001	ELECT 2.2U M 50V		403 314 5113	MT-POLYEST 0.047U K 630V
C248	404 084 8707	ELECT 0.47U M 50V	C619	404 073 2303	CERAMIC 1500P M 250V
C249	404 084 8707	ELECT 0.47U M 50V		404 071 3708	CERAMIC 1500P M 400V
C251	403 149 9248	CERAMIC 0.01U Z 50V		404 097 3805	CERAMIC 1.5K P M 400V
C252	403 149 9248	CERAMIC 0.01U Z 50V	C620	404 073 5106	CERAMIC 470P K 250V
C253	403 070 8816	CERAMIC 1500P K 50V		404 073 3300	CERAMIC 470P M 250V
C255	403 157 1934	CERAMIC 10P D 50V		404 071 4507	CERAMIC 470P K 400V
C272	404 084 7908	ELECT 1000U M 16V		404 087 0302	CERAMIC 470P M 400V
C273	403 164 0234	CERAMIC 0.1U Z 25V	C621	403 076 6727	CERAMIC 1000P K 1K
C274	404 084 7908	ELECT 1000U M 16V		403 312 8225	CERAMIC 1000P K 1K
C358	404 084 8806	ELECT 1U M 50V	C622	403 113 3835	CERAMIC 1000P K 50V
C360	403 075 9026	CERAMIC 150P K 500V	C623	403 056 7334	POLYESTER 1000P J 50V
C3806	403 149 9248	CERAMIC 0.01U Z 50V		403 178 9210	POLYESTER 1000P J 50V
C420	404 077 4402	MT-POLYPRO 7200P H 1.5K	C624	403 113 3835	CERAMIC 1000P K 50V
	404 088 0103	MT-POLYPRO 7200P J 1.6K	△C629	404 073 5106	CERAMIC 470P K 250V
C423	404 080 6608	MT-POLYPRO 6800P H 1.5K		404 073 3300	CERAMIC 470P M 250V
	404 087 9909	MT-POLYPRO 6800P J 1.6K		404 071 4507	CERAMIC 470P K 400V
C424	403 083 3419	POLYPRO 0.015U J 400V		404 087 0302	CERAMIC 470P M 400V
C425	403 083 4317	POLYPRO 0.022U J 400V	C643	403 148 0741	ELECT 2200U M 25V
C432	403 075 7131	CERAMIC 1000P K 500V		404 087 2405	ELECT 2200U M 25V
C433	403 076 3142	CERAMIC 3900P K 500V	C644	404 087 4904	ELECT 47U M 25V
C434	404 087 6007	ELECT 47U M 35V	C651	404 044 0703	ELECT 470U M 160V
C436	404 087 6205	ELECT 0.47U M 160V	C652	403 119 8111	ELECT 1000U M 35V
C437	403 066 6126	MT-POLYEST 0.47U J 250V	C654	403 355 3304	ELECT 2200U M 35V
C441	404 083 7305	MT-POLYPRO 0.15U M 200V	C655	403 245 4414	CERAMIC 470P K 2K
C442	404 083 7305	MT-POLYPRO 0.15U M 200V		403 232 1835	CERAMIC 470P K 2K
C465	403 066 0124	MT-POLYEST 2.2U K 100V	C663	404 084 8806	ELECT 1U M 50V
C468	404 087 5406	ELECT 22U M 50V	C664	404 084 7700	ELECT 10U M 16V
C469	404 084 8905	ELECT 10U M 50V	C665	404 084 8301	ELECT 470U M 16V
C470	403 069 8325	CERAMIC 0.01U Z 50V	C670	403 305 3527	CERAMIC 0.1U Z 50V
C471	404 102 5206	NP-ELECT 4.7U M 100V	C681	404 087 4409	ELECT 2200U M 10V
C481	403 070 8410	CERAMIC 1500P K 50V	C7912	404 088 7300	ELECT 22U M 16V
C486	403 260 0722	ELECT 33U M 250V	C7913	404 088 7300	ELECT 22U M 16V
C491	403 076 5324	CERAMIC 680P K 500V	C7919	404 084 7502	ELECT 47U M 10V
C501	404 084 8806	ELECT 1U M 50V	C801	403 155 4234	CERAMIC 15P J 50V
C514	404 084 8905	ELECT 10U M 50V	C802	403 155 4234	CERAMIC 15P J 50V
C515	404 088 6600	ELECT 2200U M 25V	C803	403 149 9248	CERAMIC 0.01U Z 50V
C517	404 102 8207	ELECT 220U M 35V	C804	403 224 7036	CERAMIC 0.047U Z 50V
C518	403 157 7233	CERAMIC 3900P K 50V	C811	403 149 9248	CERAMIC 0.01U Z 50V
C519	403 071 1727	CERAMIC 180P K 50V	C812	404 084 7700	ELECT 10U M 16V
C520	403 188 0907	MT-POLYEST 0.22U K 100V	C832	403 149 9248	CERAMIC 0.01U Z 50V
C521	404 088 6709	ELECT 1000U M 35V	C835	401 105 7939	MT-GLAZE 0.000 ZA 1/16W
	404 080 5809	ELECT 1000U M 35V	C851	403 155 1639	CERAMIC 33P J 50V
C522	403 188 0907	MT-POLYEST 0.22U K 100V	C853	403 155 1639	CERAMIC 33P J 50V
C524	403 288 9107	POLYESTER 0.22U K 100V	C854	403 155 1639	CERAMIC 33P J 50V
C527	404 084 8905	ELECT 10U M 50V	C855	403 155 1639	CERAMIC 33P J 50V
C530	404 084 9209	ELECT 4.7U M 50V	C861	404 084 8806	ELECT 1U M 50V
△C601	404 073 7506	MT-POLYEST 0.068U M 275V	C878	404 084 8806	ELECT 1U M 50V
	404 072 7705	MT-POLYEST 0.068U M 250V	C880	403 305 3527	CERAMIC 0.1U Z 50V
	404 079 6503	MT-POLYEST 0.068U M 250V	C882	401 105 7939	MT-GLAZE 0.000 ZA 1/16W
C608	403 076 6727	CERAMIC 1000P K 1K	C891	403 113 3835	CERAMIC 1000P K 50V
	403 312 8225	CERAMIC 1000P K 1K	C892	404 084 8806	ELECT 1U M 50V
C609	404 051 8105	ELECT 270U M 400V	C893	404 084 9001	ELECT 2.2U M 50V
	404 078 7600	ELECT 270U M 400V	C894	403 333 5128	CERAMIC 0.033U K 50V
△C610	404 073 5106	CERAMIC 470P K 250V	RESISTOR		
	404 073 3300	CERAMIC 470P M 250V	R001	401 105 1630	MT-GLAZE 15K JA 1/16W
	404 071 4507	CERAMIC 470P K 400V	R002	401 105 1630	MT-GLAZE 15K JA 1/16W
	404 087 0302	CERAMIC 470P M 400V	R003	401 105 3337	MT-GLAZE 2.7K JA 1/16W
C611	403 179 2517	POLYESTER 0.022U J 50V	R004	401 105 3337	MT-GLAZE 2.7K JA 1/16W
C612	403 072 4420	CERAMIC 270P K 50V	R005	401 105 7939	MT-GLAZE 0.000 ZA 1/16W
C613	403 181 8316	POLYESTER 0.1U J 50V	R006	401 105 7939	MT-GLAZE 0.000 ZA 1/16W
C614	403 270 3423	MT-POLYEST 0.22U K 63V			

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
R007	401 015 6534	CARBON 2.2 JA 1/4W	R1307	401 105 0732	MT-GLAZE 100K JA 1/16W
R008	401 015 6534	CARBON 2.2 JA 1/4W	R1308	401 105 0732	MT-GLAZE 100K JA 1/16W
R010	401 105 4027	MT-GLAZE 330 JA 1/16W	R1309	401 113 4422	MT-GLAZE 75 JA 1/16W
R011	401 105 0613	MT-GLAZE 10K JA 1/16W	R1310	401 113 4422	MT-GLAZE 75 JA 1/16W
R012	401 105 0732	MT-GLAZE 100K JA 1/16W	R1311	401 113 4422	MT-GLAZE 75 JA 1/16W
R013	401 105 0633	MT-GLAZE 10K JA 1/16W	R1312	401 105 0732	MT-GLAZE 100K JA 1/16W
R014	401 021 1946	CARBON 560 JA 1/4W	R1313	401 105 0732	MT-GLAZE 100K JA 1/16W
R015	401 021 1946	CARBON 560 JA 1/4W	R1314	401 113 4422	MT-GLAZE 75 JA 1/16W
R021	401 269 1508	OXIDE-MT 0.56 JA 2W	R1331	401 113 4422	MT-GLAZE 75 JA 1/16W
R021A	401 269 1508	OXIDE-MT 0.56 JA 2W	R171	401 025 7429	CARBON 220 JA 1/6W
R023	401 026 1020	CARBON 2.7K JA 1/6W	R172	401 026 7022	CARBON 3.9K JA 1/6W
R031	401 024 8021	CARBON 1M JA 1/6W	R174	401 105 0534	MT-GLAZE 1K JA 1/16W
R032	401 105 8025	MT-GLAZE 1M JA 1/16W	R177	401 105 5925	MT-GLAZE 560 JA 1/16W
R033	401 027 6123	CARBON 680K JA 1/6W	R178	401 105 5925	MT-GLAZE 560 JA 1/16W
R035	401 105 0633	MT-GLAZE 10K JA 1/16W	R1902	401 105 2132	MT-GLAZE 18K JA 1/16W
R036	401 012 7049	CARBON 10K JA 1/4W	R1903	401 105 6625	MT-GLAZE 6.8K JA 1/16W
R1001	401 105 2726	MT-GLAZE 220 JA 1/16W	R1904	401 105 5331	MT-GLAZE 4.7K JA 1/16W
R1002	401 105 2726	MT-GLAZE 220 JA 1/16W	R1905	401 105 3337	MT-GLAZE 2.7K JA 1/16W
R1005	401 105 2726	MT-GLAZE 220 JA 1/16W	R1906	401 105 2835	MT-GLAZE 2.2K JA 1/16W
R1006	401 105 2726	MT-GLAZE 220 JA 1/16W	R1907	401 026 0627	CARBON 270 JA 1/6W
R1007	401 105 2726	MT-GLAZE 220 JA 1/16W	R1908	401 105 0633	MT-GLAZE 10K JA 1/16W
R1008	401 105 2726	MT-GLAZE 220 JA 1/16W	R1910	401 105 0425	MT-GLAZE 100 JA 1/16W
R1009	401 105 5222	MT-GLAZE 470 JA 1/16W	R1911	401 025 7429	CARBON 220 JA 1/6W
R1010	401 105 0633	MT-GLAZE 10K JA 1/16W	R1912	401 105 2726	MT-GLAZE 220 JA 1/16W
R1011	401 105 5222	MT-GLAZE 470 JA 1/16W	R1913	401 105 2726	MT-GLAZE 220 JA 1/16W
R1012	401 105 2726	MT-GLAZE 220 JA 1/16W	R192	401 105 2726	MT-GLAZE 220 JA 1/16W
R1013	401 105 0534	MT-GLAZE 1K JA 1/16W	R195	401 105 0534	MT-GLAZE 1K JA 1/16W
R1014	401 105 0534	MT-GLAZE 1K JA 1/16W	R199	401 027 2323	CARBON 560 JA 1/6W
R1015	401 105 0534	MT-GLAZE 1K JA 1/16W	R208	401 105 0534	MT-GLAZE 1K JA 1/16W
R1017	401 105 0425	MT-GLAZE 100 JA 1/16W	R209	401 048 6849	MT-FILM 4.7K FA 1/4W
R1018	401 105 7939	MT-GLAZE 0.000 ZA 1/16W	R210	401 105 4136	MT-GLAZE 3.3K JA 1/16W
R1019	401 105 5222	MT-GLAZE 470 JA 1/16W	R221	401 105 0534	MT-GLAZE 1K JA 1/16W
R1020	401 105 7939	MT-GLAZE 0.000 ZA 1/16W	R222	401 105 0534	MT-GLAZE 1K JA 1/16W
R1021	401 024 7024	CARBON 1K JA 1/6W	R223	401 105 0534	MT-GLAZE 1K JA 1/16W
R1022	401 024 7024	CARBON 1K JA 1/6W	R224	401 105 1125	MT-GLAZE 12K JA 1/16W
R1026	401 105 4027	MT-GLAZE 330 JA 1/16W	R225	401 105 1125	MT-GLAZE 12K JA 1/16W
R1028	401 025 7429	CARBON 220 JA 1/6W	R226	401 105 2934	MT-GLAZE 22K JA 1/16W
R103	401 061 8418	OXIDE-MT 39K JA 1W	R227	401 105 4235	MT-GLAZE 33K JA 1/16W
R1030	401 027 5225	CARBON 680 JA 1/6W	R228	401 105 0732	MT-GLAZE 100K JA 1/16W
R1031	401 105 7939	MT-GLAZE 0.000 ZA 1/16W	R229	401 105 6526	MT-GLAZE 680 JA 1/16W
R1032	401 105 7939	MT-GLAZE 0.000 ZA 1/16W	R230	401 105 4027	MT-GLAZE 330 JA 1/16W
R1033	401 105 7939	MT-GLAZE 0.000 ZA 1/16W	R234	401 105 5826	MT-GLAZE 56 JA 1/16W
R1034	401 105 7939	MT-GLAZE 0.000 ZA 1/16W	R235	401 105 5826	MT-GLAZE 56 JA 1/16W
R1037	401 105 7939	MT-GLAZE 0.000 ZA 1/16W	R236	401 105 5826	MT-GLAZE 56 JA 1/16W
R1038	401 105 4027	MT-GLAZE 330 JA 1/16W	R237	401 026 9323	CARBON 47 JA 1/6W
R1040	401 105 0425	MT-GLAZE 100 JA 1/16W	R238	401 025 1328	CARBON 150 JA 1/6W
R1041	401 105 0425	MT-GLAZE 100 JA 1/16W	R239	401 105 7939	MT-GLAZE 0.000 ZA 1/16W
R105	401 105 0534	MT-GLAZE 1K JA 1/16W	R240	401 105 5222	MT-GLAZE 470 JA 1/16W
R106	401 105 0425	MT-GLAZE 100 JA 1/16W	R243	401 024 6720	CARBON 100 JA 1/6W
R107	401 105 0425	MT-GLAZE 100 JA 1/16W	R244	401 105 5430	MT-GLAZE 47K JA 1/16W
R108	401 105 2132	MT-GLAZE 18K JA 1/16W	R245	401 105 5430	MT-GLAZE 47K JA 1/16W
R109	401 105 8223	MT-GLAZE 68K JA 1/16W	R246	401 014 2933	CARBON 150 JA 1/4W
R1101	401 007 7641	CARBON 150 JA 1/2W	R250	401 105 0633	MT-GLAZE 10K JA 1/16W
R1102	401 007 7641	CARBON 150 JA 1/2W	R271	401 024 6720	CARBON 100 JA 1/6W
R1112	401 105 7939	MT-GLAZE 0.000 ZA 1/16W	R272	401 024 6720	CARBON 100 JA 1/6W
R1114	401 105 7939	MT-GLAZE 0.000 ZA 1/16W	R273	401 062 9216	OXIDE-MT 6.8 JA 1W
R114	401 105 2726	MT-GLAZE 220 JA 1/16W	R274	401 062 9216	OXIDE-MT 6.8 JA 1W
R114A	401 105 2726	MT-GLAZE 220 JA 1/16W	R289	401 105 4027	MT-GLAZE 330 JA 1/16W
R117	401 105 6021	MT-GLAZE 5.6K JA 1/16W	R290	401 105 0633	MT-GLAZE 10K JA 1/16W
R118	401 105 2726	MT-GLAZE 220 JA 1/16W	R291	401 105 7939	MT-GLAZE 0.000 ZA 1/16W
R119	401 105 4423	MT-GLAZE 39 JA 1/16W	R293	401 105 7939	MT-GLAZE 0.000 ZA 1/16W
R1300	401 105 0633	MT-GLAZE 10K JA 1/16W	R352	401 105 0633	MT-GLAZE 10K JA 1/16W
R1301	401 113 4422	MT-GLAZE 75 JA 1/16W	R354	401 105 2934	MT-GLAZE 22K JA 1/16W
R1302	401 113 4422	MT-GLAZE 75 JA 1/16W	R355	401 012 7049	CARBON 10K JA 1/4W
R1304	401 105 0732	MT-GLAZE 100K JA 1/16W	R358	401 105 3416	MT-GLAZE 27K JA 1/16W
R1305	401 105 0732	MT-GLAZE 100K JA 1/16W	R420	401 019 3044	CARBON 39K JA 1/4W
R1306	401 113 4422	MT-GLAZE 75 JA 1/16W	R421	401 027 5522	CARBON 6.8K JA 1/6W

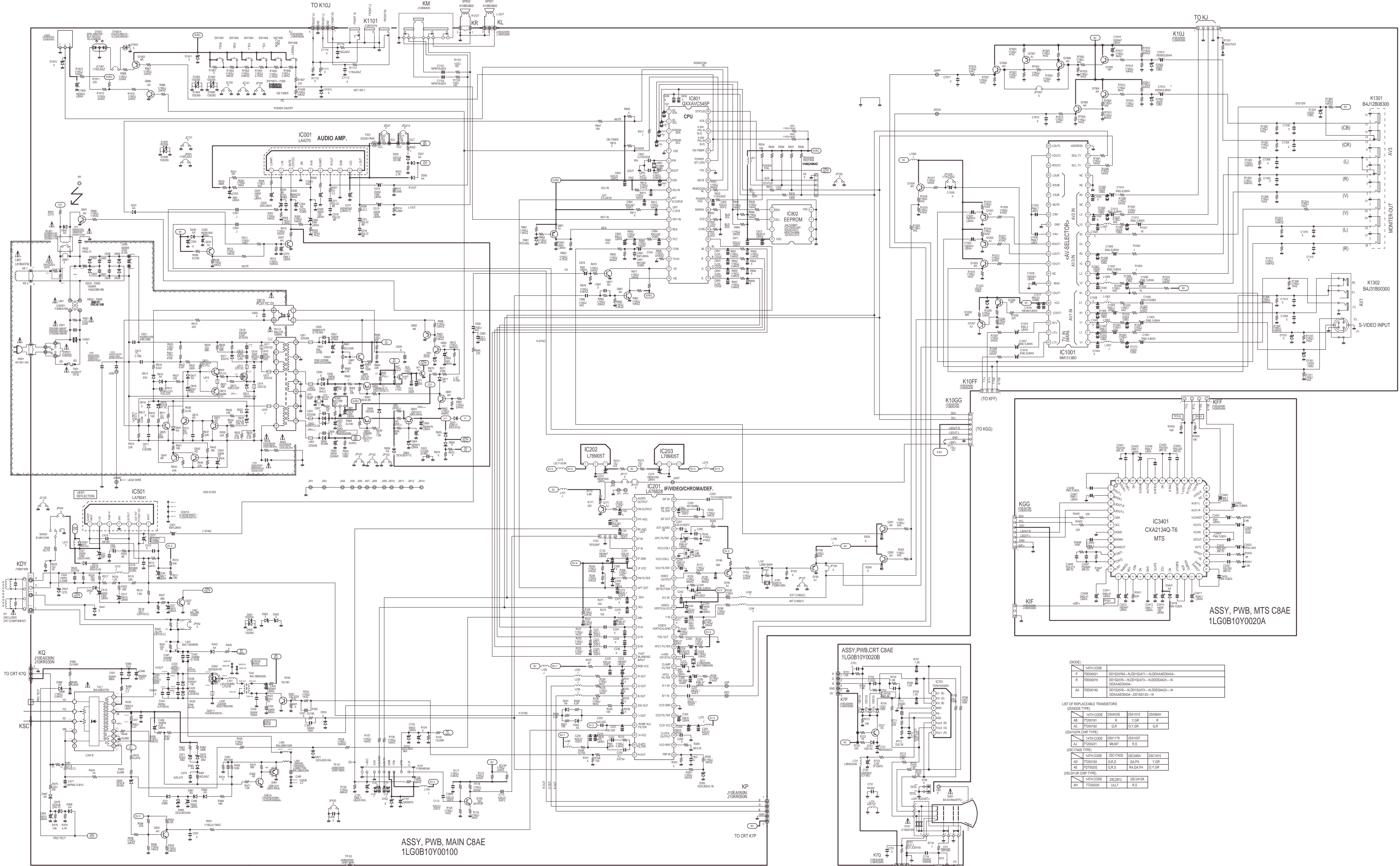
Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
R423	401 020 2944	CARBON 47K JA 1/4W	R626	401 069 4818	OXIDE-MT 68K JA 2W
R424	401 024 7024	CARBON 1K JA 1/6W	R627	401 025 8228	CARBON 22K JA 1/6W
R426	401 105 1630	MT-GLAZE 15K JA 1/16W	△R628	402 000 8602	SOLID 5.6M KA 1/2W
R432	401 105 0534	MT-GLAZE 1K JA 1/16W		402 097 5706	CARBON 5.6M KA 1/2W
R433	401 007 1134	CARBON 1K JA 1/2W		402 088 1106	RESISTER 5.6M JA 1/2W
R434	401 059 7218	OXIDE-MT 180 JA 1W	△R629	402 000 8602	SOLID 5.6M KA 1/2W
R435	402 082 6107	WIRE WOUND 5.6 KA 7W		402 097 5706	CARBON 5.6M KA 1/2W
R436	401 105 0732	MT-GLAZE 100K JA 1/16W		402 088 1106	RESISTER 5.6M JA 1/2W
R441	401 064 9214	OXIDE-MT 1K JA 2W	R631	401 026 7428	CARBON 39K JA 1/6W
R442	401 064 8603	OXIDE-MT 1K JA 2W	R632	401 064 1614	OXIDE-MT 0.33 JA 2W
	402 092 9600	OXIDE-MT 1KJA 2W	R633	401 064 1614	OXIDE-MT 0.33 JA 2W
R449	401 062 6522	OXIDE-MT 560 JA 1W	R634	401 024 7430	CARBON 10K JA 1/6W
R460	401 026 7626	CARBON 390K JA 1/6W	R635	401 025 8228	CARBON 22K JA 1/6W
R461	401 026 1624	CARBON 270K JA 1/6W	R636	401 024 7430	CARBON 10K JA 1/6W
R467	401 105 7939	MT-GLAZE 0.000 ZA 1/16W	R637	401 025 8228	CARBON 22K JA 1/6W
R468	401 025 4626	CARBON 18K JA 1/6W	R638	401 012 5748	CARBON 1K JA 1/4W
R471	401 025 1625	CARBON 1.5K JA 1/6W	R641	401 024 7430	CARBON 10K JA 1/6W
R473	401 027 5225	CARBON 680 JA 1/6W	R642	401 027 0329	CARBON 47K JA 1/6W
R475	401 009 5843	CARBON 330 JA 1/2W	R643	401 025 4626	CARBON 18K JA 1/6W
R476	401 024 7430	CARBON 10K JA 1/6W	R644	401 025 8228	CARBON 22K JA 1/6W
R479	401 026 9927	CARBON 4.7K JA 1/6W	R652	401 012 7049	CARBON 10K JA 1/4W
R480	401 025 2325	CARBON 150K JA 1/6W	R653	401 068 2013	OXIDE-MT 4.7 JA 2W
R481	401 064 5602	OXIDE-MT 1.8 JA 2W		402 093 1801	OXIDE-MT 4.7JA 2W
	402 092 9402	OXIDE-MT 1.8JA 2W	R654	401 007 2319	CARBON 100K JA 1/2W
R485	401 012 8145	CARBON 100K JA 1/4W	R655	401 012 7049	CARBON 10K JA 1/4W
R486	401 105 6021	MT-GLAZE 5.6K JA 1/16W	R656	401 025 3827	CARBON 180 JA 1/6W
R488	402 002 4909	FUSIBLE RES 2.2 J- 1W	R657	401 009 9811	CARBON 3.9K JA 1/2W
R490	401 023 3740	CARBON 82K JA 1/4W	R658	401 012 7049	CARBON 10K JA 1/4W
R506	401 025 7825	CARBON 2.2K JA 1/6W	R659	401 015 2744	CARBON 1.8K JA 1/4W
R507	401 024 7430	CARBON 10K JA 1/6W	R661	401 007 2319	CARBON 100K JA 1/2W
R508	401 027 8622	CARBON 8.2K JA 1/6W	R662	401 026 9927	CARBON 4.7K JA 1/6W
R510	401 024 7430	CARBON 10K JA 1/6W	R663	401 014 6149	CARBON 150K JA 1/4W
R511	401 024 7430	CARBON 10K JA 1/6W	R664	401 010 4317	CARBON 47K JA 1/2W
R512	401 020 0841	CARBON 470 JA 1/4W	R665	401 025 8228	CARBON 22K JA 1/6W
R514	401 027 7229	CARBON 7.5K JA 1/6W	R666	401 105 2934	MT-GLAZE 22K JA 1/16W
R515	401 026 4625	CARBON 33K JA 1/6W	R667	401 105 0633	MT-GLAZE 10K JA 1/16W
R516	401 024 9325	CARBON 1.2K JA 1/6W	R668	401 069 0711	OXIDE-MT 6.8 JA 2W
R518	401 064 4011	OXIDE-MT 1 JA 2W		402 093 2402	OXIDE-MT 6.8JA 2W
	402 092 9204	OXIDE-MT 1JA 2W	R669	401 069 0711	OXIDE-MT 6.8 JA 2W
R522	401 027 2323	CARBON 560 JA 1/6W		402 093 2402	OXIDE-MT 6.8JA 2W
R523	401 027 5027	CARBON 68 JA 1/6W	R670	401 024 9721	CARBON 12K JA 1/6W
R524	401 065 7120	OXIDE-MT 150 JA 2W	R671	401 025 8723	CARBON 220K JA 1/6W
R525	401 064 8217	OXIDE-MT 100 JA 2W	R672	401 105 6120	MT-GLAZE 560K JA 1/16W
R527	401 027 3023	CARBON 56K JA 1/6W	R675	402 092 2106	FUSIBLE RES 0.22 J 1/2W
R528	401 064 9214	OXIDE-MT 1K JA 2W	R676	401 105 5331	MT-GLAZE 4.7K JA 1/16W
R529	401 058 4426	OXIDE-MT 1K JA 1W	R677	401 105 4235	MT-GLAZE 33K JA 1/16W
R591	401 177 2129	MT-GLAZE 4.7M JA 1/16W	R678	401 105 4235	MT-GLAZE 33K JA 1/16W
R592	401 027 2620	CARBON 5.6K JA 1/6W	R679	401 105 4235	MT-GLAZE 33K JA 1/16W
R593	401 105 6021	MT-GLAZE 5.6K JA 1/16W	R681	401 105 2934	MT-GLAZE 22K JA 1/16W
R594	401 027 0329	CARBON 47K JA 1/6W	R682	401 105 6110	MT-GLAZE 560K JA 1/16W
R595	401 105 0633	MT-GLAZE 10K JA 1/16W	R691	401 012 3447	CARBON 10 JA 1/4W
R596	401 105 2934	MT-GLAZE 22K JA 1/16W	R692	401 105 1521	MT-GLAZE 1.5K JA 1/16W
R601	401 008 8627	CARBON 220K JA 1/2W	R694	401 064 6817	OXIDE-MT 10 JA 2W
R602	402 085 6500	WIRE WOUND 2.7 KA 7W	R7904	401 105 7939	MT-GLAZE 0.000 ZA 1/16W
R611	401 020 0841	CARBON 470 JA 1/4W	R7909	401 105 0534	MT-GLAZE 1K JA 1/16W
R613	402 062 6608	FUSIBLE RES 1.5K J- 1/4W	R7910	401 105 0633	MT-GLAZE 10K JA 1/16W
	402 099 7104	FUSIBLE RES 1.5K J 1/4W	R7911	401 105 0633	MT-GLAZE 10K JA 1/16W
R614	401 025 8228	CARBON 22K JA 1/6W	R7912	401 105 5826	MT-GLAZE 56 JA 1/16W
R615	401 025 7429	CARBON 220 JA 1/6W	R7913	401 105 6526	MT-GLAZE 680 JA 1/16W
R616	401 024 7430	CARBON 10K JA 1/6W	R7914	401 105 3921	MT-GLAZE 33 JA 1/16W
R619	401 016 1538	CARBON 22 JA 1/4W	R7915	401 105 0633	MT-GLAZE 10K JA 1/16W
R620	401 010 4812	CARBON 470K JA 1/2W	R7916	401 105 0633	MT-GLAZE 10K JA 1/16W
R621	401 010 4812	CARBON 470K JA 1/2W	R7917	401 105 5826	MT-GLAZE 56 JA 1/16W
R622	401 019 9640	CARBON 47 JA 1/4W	R7918	401 105 0534	MT-GLAZE 1K JA 1/16W
R623	401 026 4922	CARBON 330K JA 1/6W	R7919	401 105 3921	MT-GLAZE 33 JA 1/16W
R624	402 060 9403	FUSIBLE RES 10 J- 1/2W	R7920	401 105 7939	MT-GLAZE 0.000 ZA 1/16W
R625	401 069 4818	OXIDE-MT 68K JA 2W	R7921	401 105 0534	MT-GLAZE 1K JA 1/16W

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
R7922	401 105 0534	MT-GLAZE 1K JA 1/16W		610 078 4635	PIPE CORE
R7923	401 105 5123	MT-GLAZE 47 JA 1/16W	L441	652 000 1343	COIL, LINEARITY
R7924	401 105 3228	MT-GLAZE 270 JA 1/16W	L442	652 001 0284	INDUCTOR, 133UH
R7925	401 105 0534	MT-GLAZE 1K JA 1/16W	L461	645 005 5645	INDUCTOR, 2200U K
R7926	401 105 0534	MT-GLAZE 1K JA 1/16W		652 000 0742	INDUCTOR, 2.0MH
R801	401 105 3525	MT-GLAZE 270K JA 1/16W		610 031 1367	INDUCTOR 202J
R812	401 105 0633	MT-GLAZE 10K JA 1/16W		610 211 3488	INDUCTOR
R813	401 105 3436	MT-GLAZE 27K JA 1/16W	L462	652 000 2005	INDUCTOR, 438UH
R814	401 105 0633	MT-GLAZE 10K JA 1/16W	△ L601	645 017 6159	LINE FILTER
R818	401 105 0425	MT-GLAZE 100 JA 1/16W		610 031 5938	LINE FILTER
R819	401 105 0425	MT-GLAZE 100 JA 1/16W	L611	610 078 5953	PIPE CORE
R826	401 105 0633	MT-GLAZE 10K JA 1/16W	L612	610 078 5953	PIPE CORE
R827	401 105 0633	MT-GLAZE 10K JA 1/16W	L613	610 078 5953	PIPE CORE
R828	401 105 0633	MT-GLAZE 10K JA 1/16W	L614	610 078 5953	PIPE CORE
R829	401 105 0633	MT-GLAZE 10K JA 1/16W	L651	610 078 6820	PIPE CORE
R831	401 105 5925	MT-GLAZE 560 JA 1/16W	L652	610 078 6820	PIPE CORE
R832	401 105 7939	MT-GLAZE 0.000 ZA 1/16W	L653	610 078 6820	PIPE CORE
R834	401 024 7430	CARBON 10K JA 1/6W	L654	610 078 6820	PIPE CORE
R835	401 105 0633	MT-GLAZE 10K JA 1/16W			
R836	401 105 0633	MT-GLAZE 10K JA 1/16W	DIODE		
R837	401 105 0633	MT-GLAZE 10K JA 1/16W	D006	407 013 4326	DIODE 1S2076A-TD
R838	401 105 0633	MT-GLAZE 10K JA 1/16W		407 013 7109	DIODE 1S2473
R839	401 105 0425	MT-GLAZE 100 JA 1/16W		407 012 4416	DIODE 1SS133 T-77
R840	401 105 0425	MT-GLAZE 100 JA 1/16W		408 009 3204	DIODE 1N4148 TP
R841	401 105 0633	MT-GLAZE 10K JA 1/16W	D020	408 047 2207	ZENER DIODE MTZJ10B-52
R842	401 105 0633	MT-GLAZE 10K JA 1/16W	D021	407 013 4326	DIODE 1S2076A-TD
R847	401 024 7430	CARBON 10K JA 1/6W		407 013 7109	DIODE 1S2473
R851	401 105 4621	MT-GLAZE 3.9K JA 1/16W		407 012 4416	DIODE 1SS133 T-77
R852	401 105 4621	MT-GLAZE 3.9K JA 1/16W		408 009 3204	DIODE 1N4148 TP
R853	401 105 6021	MT-GLAZE 5.6K JA 1/16W	D030	407 013 4326	DIODE 1S2076A-TD
R855	401 105 6021	MT-GLAZE 5.6K JA 1/16W		407 013 7109	DIODE 1S2473
R857	401 105 6021	MT-GLAZE 5.6K JA 1/16W		407 012 4416	DIODE 1SS133 T-77
R861	401 105 1521	MT-GLAZE 1.5K JA 1/16W		408 009 3204	DIODE 1N4148 TP
R862	401 105 7424	MT-GLAZE 8.2K JA 1/16W	D031	407 013 4326	DIODE 1S2076A-TD
R863	401 105 5331	MT-GLAZE 4.7K JA 1/16W		407 013 7109	DIODE 1S2473
R870	401 105 2934	MT-GLAZE 22K JA 1/16W		407 012 4416	DIODE 1SS133 T-77
R871	401 105 0633	MT-GLAZE 10K JA 1/16W		408 009 3204	DIODE 1N4148 TP
R878	401 105 6021	MT-GLAZE 5.6K JA 1/16W	D103	408 047 6106	ZENER DIODE MTZJ36A-52
R881	401 105 0633	MT-GLAZE 10K JA 1/16W	D1301	407 221 7116	ZENER DIODE UDZS-TE-1712B
R882	401 105 4136	MT-GLAZE 3.3K JA 1/16W	D1302	407 221 7116	ZENER DIODE UDZS-TE-1712B
R883	401 105 4235	MT-GLAZE 33K JA 1/16W	D1304	407 221 7116	ZENER DIODE UDZS-TE-1712B
R885	401 026 1327	CARBON 27K JA 1/6W	D1305	407 221 7116	ZENER DIODE UDZS-TE-1712B
R886	401 105 2934	MT-GLAZE 22K JA 1/16W	D1306	407 221 7116	ZENER DIODE UDZS-TE-1712B
R887	401 105 2934	MT-GLAZE 22K JA 1/16W	D1307	407 221 7116	ZENER DIODE UDZS-TE-1712B
R888	401 105 2726	MT-GLAZE 220 JA 1/16W	D1308	407 221 7116	ZENER DIODE UDZS-TE-1712B
R891	401 026 9620	CARBON 470 JA 1/6W	D1309	407 221 7116	ZENER DIODE UDZS-TE-1712B
R892	401 105 7325	MT-GLAZE 820 JA 1/16W	D1310	407 221 7116	ZENER DIODE UDZS-TE-1712B
R893	401 105 8025	MT-GLAZE 1M JA 1/16W	D1311	407 221 7116	ZENER DIODE UDZS-TE-1712B
R894	401 105 0425	MT-GLAZE 100 JA 1/16W	D1312	407 221 7116	ZENER DIODE UDZS-TE-1712B
R895	401 105 5529	MT-GLAZE 470K JA 1/16W	D1322	407 221 7116	ZENER DIODE UDZS-TE-1712B
			D1323	407 221 7116	ZENER DIODE UDZS-TE-1712B
			D1901	407 196 7705	LED SLP-581D-51
VARIABLE RESISTOR				407 158 9204	LED SPR-39MVWF
VR651	645 006 5125	VR, SEMI, 2K N		408 050 8906	LED M209GRW
	652 000 0100	VR, SEMI, 2K N			
TRANSFORMER			D1901A	655 000 5717	LED HOLDER-C6CP
T431	652 000 0704	TRANS, DRIVE	D1903	407 149 0817	DIODE 1SS355-TE-17
△ T471	652 001 0840	TRANS, FLYBACK	D1904	407 149 0817	DIODE 1SS355-TE-17
△ T611A	652 001 0857	TRANS, POWER, PULSE	D1905	407 149 0817	DIODE 1SS355-TE-17
			D1906	407 149 0817	DIODE 1SS355-TE-17
COIL			D1907	407 149 0817	DIODE 1SS355-TE-17
L171	645 053 9015	TRANS, OSC, 45.75MHZ	D1908	407 149 0817	DIODE 1SS355-TE-17
L191	645 001 4604	INDUCTOR, 12U K	D201	407 005 7318	DIODE EM01Z-V0
L273	645 007 9542	INDUCTOR, 12U J		407 005 8612	DIODE ERA15-02-V5
L431	645 008 5628	INDUCTOR, 1U M	D352	408 047 6700	ZENER DIODE MTZJ5.1B-52
	610 032 5821	FILTER COIL	D401	407 149 0817	DIODE 1SS355-TE-17
L432	652 000 0469	CORE, PIPE	D402	407 149 0817	DIODE 1SS355-TE-17
			D421	408 047 5208	ZENER DIODE MTZJ16A-52

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
D438	407 095 8001	DIODE ERD07-15L	D616	407 055 1816	ZENER DIODE RD20EB2
D439	407 006 4128	DIODE ERB44-04V1	D617	407 013 4326	DIODE 1S2076A-TD
D442	407 013 4326	DIODE 1S2076A-TD		407 013 7109	DIODE 1S2473
	407 013 7109	DIODE 1S2473		407 012 4416	DIODE 1SS133 T-77
	407 012 4416	DIODE 1SS133 T-77		408 009 3204	DIODE 1N4148 TP
	408 009 3204	DIODE 1N4148 TP	D619	408 047 9107	ZENER DIODE MTZJ7.5C-52
D461	407 013 4326	DIODE 1S2076A-TD	D622	407 013 4326	DIODE 1S2076A-TD
	407 013 7109	DIODE 1S2473		407 013 7109	DIODE 1S2473
	407 012 4416	DIODE 1SS133 T-77		407 012 4416	DIODE 1SS133 T-77
	408 009 3204	DIODE 1N4148 TP		408 009 3204	DIODE 1N4148 TP
D462	407 013 4326	DIODE 1S2076A-TD	D623	408 048 0004	ZENER DIODE MTZJ9.1B-52
	407 013 7109	DIODE 1S2473	D641	407 013 4326	DIODE 1S2076A-TD
	407 012 4416	DIODE 1SS133 T-77		407 013 7109	DIODE 1S2473
	408 009 3204	DIODE 1N4148 TP		407 012 4416	DIODE 1SS133 T-77
D465	407 013 4326	DIODE 1S2076A-TD		408 009 3204	DIODE 1N4148 TP
	407 013 7109	DIODE 1S2473	D651	407 191 3900	DIODE FML-G16S
	407 012 4416	DIODE 1SS133 T-77	D652	407 210 5700	DIODE RN1Z
	408 009 3204	DIODE 1N4148 TP	D653	407 154 2704	DIODE YG901C2-LB
D466	408 047 5505	ZENER DIODE MTZJ20A-52	D653C		G-FLOIL GREASE*SY-600
D467	407 013 4326	DIODE 1S2076A-TD		610 077 7613	SILICON GREASE G-746
	407 013 7109	DIODE 1S2473		610 077 7781	SILICON GREASE
	407 012 4416	DIODE 1SS133 T-77	D653D	610 014 5818	WASHER
	408 009 3204	DIODE 1N4148 TP	D654	407 009 8915	DIODE RU3MV1
D468	407 013 4326	DIODE 1S2076A-TD	D655	407 013 4326	DIODE 1S2076A-TD
	407 013 7109	DIODE 1S2473		407 013 7109	DIODE 1S2473
	407 012 4416	DIODE 1SS133 T-77		407 012 4416	DIODE 1SS133 T-77
	408 009 3204	DIODE 1N4148 TP		408 009 3204	DIODE 1N4148 TP
D469	407 007 7415	DIODE EU1-V1	D658	407 013 4326	DIODE 1S2076A-TD
D470	407 054 7106	ZENER DIODE RD16EB2		407 013 7109	DIODE 1S2473
D471	407 055 2912	ZENER DIODE RD22EB2		407 012 4416	DIODE 1SS133 T-77
D476	408 048 0202	ZENER DIODE MTZJ9.1C-26		408 009 3204	DIODE 1N4148 TP
D485	407 007 7415	DIODE EU1-V1	D659	407 149 0817	DIODE 1SS355-TE-17
D486	407 013 4326	DIODE 1S2076A-TD	D661	408 047 8506	ZENER DIODE MTZJ6.8A-52
	407 013 7109	DIODE 1S2473	D662	408 047 8506	ZENER DIODE MTZJ6.8A-52
	407 012 4416	DIODE 1SS133 T-77	D664	408 047 3006	ZENER DIODE MTZJ11C-26
	408 009 3204	DIODE 1N4148 TP	D671	407 013 4326	DIODE 1S2076A-TD
D501	407 005 7318	DIODE EM01Z-V0		407 013 7109	DIODE 1S2473
	407 005 8612	DIODE ERA15-02-V5		407 012 4416	DIODE 1SS133 T-77
D507	407 118 2207	ZENER DIODE 1Z75		408 009 3204	DIODE 1N4148 TP
D512	407 005 7318	DIODE EM01Z-V0	D691	407 013 4326	DIODE 1S2076A-TD
	407 005 8612	DIODE ERA15-02-V5		407 013 7109	DIODE 1S2473
D591	407 013 4326	DIODE 1S2076A-TD		407 012 4416	DIODE 1SS133 T-77
	407 013 7109	DIODE 1S2473		408 009 3204	DIODE 1N4148 TP
	407 012 4416	DIODE 1SS133 T-77	D7902	407 221 7116	ZENER DIODE UDZS-TE-1712B
	408 009 3204	DIODE 1N4148 TP	D7903	407 221 7116	ZENER DIODE UDZS-TE-1712B
D592	407 013 4326	DIODE 1S2076A-TD	D861	407 055 7927	ZENER DIODE RD3.6EL-T1
	407 013 7109	DIODE 1S2473			
	407 012 4416	DIODE 1SS133 T-77			
	408 009 3204	DIODE 1N4148 TP			
D593	408 047 5208	ZENER DIODE MTZJ16A-52			
D605	407 006 6310	DIODE ERC05-10BV1			
	407 009 6921	DIODE RM11CV1			
D606	407 006 6310	DIODE ERC05-10BV1			
	407 009 6921	DIODE RM11CV1			
D607	407 006 6310	DIODE ERC05-10BV1			
	407 009 6921	DIODE RM11CV1			
D608	407 006 6310	DIODE ERC05-10BV1			
	407 009 6921	DIODE RM11CV1			
△D610	407 104 2402	PHOTO COUPLE PC817C			
	407 106 6101	PHOTO COUPLE PC817D			
D611	407 146 8113	DIODE EG01C			
D612	407 005 9837	DIODE ERA81-004-V1			
D614	407 007 6626	DIODE ES1V0			
D615	407 013 4326	DIODE 1S2076A-TD			
	407 013 7109	DIODE 1S2473			
	407 012 4416	DIODE 1SS133 T-77			
	408 009 3204	DIODE 1N4148 TP			
			MISCELLANEOUS		
			△F001	645 017 6944	PROTECTOR,1.5A 125V
			△F601	423 028 8603	FUSE 250V 4A
				423 024 8409	FUSE 250V 4A
			A101	645 064 2777	TUNER,U/V
			A1901	645 041 1519	UNIT,REMOCON RECEIVER
				645 044 0519	UNIT,REMOCON RECEIVER
			J104	401 105 7939	MT-GLAZE 0.000 ZA 1/16W
			J107	401 105 7939	MT-GLAZE 0.000 ZA 1/16W
			J108	401 105 7939	MT-GLAZE 0.000 ZA 1/16W
			J112	401 105 7939	MT-GLAZE 0.000 ZA 1/16W
			J113	401 105 7939	MT-GLAZE 0.000 ZA 1/16W
			J118	401 105 7939	MT-GLAZE 0.000 ZA 1/16W
			J122	401 105 7939	MT-GLAZE 0.000 ZA 1/16W
			J123	401 105 7939	MT-GLAZE 0.000 ZA 1/16W
			J128	401 105 7939	MT-GLAZE 0.000 ZA 1/16W
			J129	401 105 7939	MT-GLAZE 0.000 ZA 1/16W
			J132	401 105 7939	MT-GLAZE 0.000 ZA 1/16W
			J152	401 105 7939	MT-GLAZE 0.000 ZA 1/16W
			J154	401 105 7939	MT-GLAZE 0.000 ZA 1/16W

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
J203	401 105 7939	MT-GLAZE 0.000 ZA 1/16W	C3422	403 062 0524	POLYESTER 0.047U K 50V
J226	401 105 7939	MT-GLAZE 0.000 ZA 1/16W		403 179 0919	POLYESTER 0.047U K 50V
JC106	401 105 7939	MT-GLAZE 0.000 ZA 1/16W	C3423	403 090 6024	TA-SOLID 3.3U K 10V
JC108	401 105 7939	MT-GLAZE 0.000 ZA 1/16W	C3424	404 089 6401	NP-ELECT 4.7U M 50V
JC109	401 105 7939	MT-GLAZE 0.000 ZA 1/16W	C3426	403 090 3627	TA-SOLID 10U K 10V
JC110	401 105 7939	MT-GLAZE 0.000 ZA 1/16W	C3427	404 084 8806	ELECT 1U M 50V
JC111	401 105 7939	MT-GLAZE 0.000 ZA 1/16W	C3431	403 061 8333	POLYESTER 4700P K 50V
JC112	401 105 7939	MT-GLAZE 0.000 ZA 1/16W		403 179 1114	POLYESTER 4700P K 50V
JC113	401 105 7939	MT-GLAZE 0.000 ZA 1/16W	C3432	404 087 1606	ELECT 0.1U M 50V
JC122	401 105 7939	MT-GLAZE 0.000 ZA 1/16W	C3433	403 061 8333	POLYESTER 4700P K 50V
JC1901	401 105 7939	MT-GLAZE 0.000 ZA 1/16W		403 179 1114	POLYESTER 4700P K 50V
JP001	401 105 7939	MT-GLAZE 0.000 ZA 1/16W	C3434	403 059 6235	POLYESTER 0.022U K 50V
JP1026	401 105 7939	MT-GLAZE 0.000 ZA 1/16W		403 179 2418	POLYESTER 0.022U K 50V
JP172	401 105 7939	MT-GLAZE 0.000 ZA 1/16W	C3436	404 089 6401	NP-ELECT 4.7U M 50V
K1101	645 016 6433	JACK,RCA-3	C3439	404 089 6401	NP-ELECT 4.7U M 50V
K1301	652 001 5302	JACK,RCA-8	C3451	404 084 9209	ELECT 4.7U M 50V
KM	645 006 4791	JACK,PHONE D3.6	C3452	404 084 9209	ELECT 4.7U M 50V
△PS601	408 046 5407	TH PTDCA1BF4R5Q200	RESISTOR		
△RL601	645 000 4155	RELAY	R3401	401 025 7429	CARBON 220 JA 1/6W
	645 011 2713	RELAY	R3402	401 025 7429	CARBON 220 JA 1/6W
	645 024 7828	RELAY	R3406	401 024 7727	CARBON 100K JA 1/6W
SW1901	645 027 7382	SWITCH,PUSH 1P-1TX1	R3407	401 024 8021	CARBON 1M JA 1/6W
	645 052 2284	SWITCH,PUSH 1P-1TX1	R3411	401 027 4634	CARBON 62K JA 1/6W
SW1902	645 027 7382	SWITCH,PUSH 1P-1TX1	R3421	401 026 4328	CARBON 3.3K JA 1/6W
	645 052 2284	SWITCH,PUSH 1P-1TX1	R3422	401 026 2948	CARBON 3K JA 1/6W
SW1903	645 027 7382	SWITCH,PUSH 1P-1TX1	R3426	401 026 7022	CARBON 3.9K JA 1/6W
	645 052 2284	SWITCH,PUSH 1P-1TX1	R3432	401 024 7430	CARBON 10K JA 1/6W
SW1904	645 027 7382	SWITCH,PUSH 1P-1TX1	R3433	401 024 7430	CARBON 10K JA 1/6W
	645 052 2284	SWITCH,PUSH 1P-1TX1	DIODE		
SW1905	645 027 7382	SWITCH,PUSH 1P-1TX1	D3401	407 013 4326	DIODE 1S2076A-TD
	645 052 2284	SWITCH,PUSH 1P-1TX1		407 013 7109	DIODE 1S2473
SW1906	645 027 7382	SWITCH,PUSH 1P-1TX1		407 012 4416	DIODE 1SS133 T-77
	645 052 2284	SWITCH,PUSH 1P-1TX1		408 009 3204	DIODE 1N4148 TP
SW501	610 011 2728	SWITCH,LEVER 1P-3T	655 000 8251 ASSY,PWB,CRT C8AE		
△SW601	645 050 4129	SWITCH,PUSH POWER 2P-2T	1LG0B10Y0020B		
	645 053 4904	SWITCH,PUSH POWER 2P-2T	TRANSISTOR		
X161	421 008 9008	SAW F TSF5235P	Q721	405 001 7417	TR 2SA1015OSAN
X191	645 009 7850	TRAP,CERAMIC 4.5MHZ		405 001 7615	TR 2SA1015-Y(SAN)-TPE2
	610 015 3066	CERAMIC TRAP		405 004 3119	TR 2SA564A-Q(CU)-TA
X211	645 024 8801	OSC,CRYSTAL 4.433619MHZ		405 004 3218	TR 2SA564A-R(CU)-TA
	652 001 0154	OSC,CRYSTAL 4.433619MHZ		405 151 3324	TR 2SA608NF-NPA-AT
X801	645 004 1938	OSC,CRYSTAL 32.768KHZ		405 006 1717	TR 2SA933S-TP-Q
				405 006 1816	TR 2SA933S-TP-R
				406 000 6804	TR 2SA1015-GR(SAN)
655 000 8336 ASSY,PWB,MTS C8AE			INTEGRATED CIRCUIT		
1LG0B10Y0020A			IC701	409 468 8403	IC TDA6103Q/N3
INTEGRATED CIRCUIT			CAPACITOR		
IC3401	409 467 1118	IC CXA2134Q-T6	C702	403 017 7523	CERAMIC 22P J 50V
CAPACITOR			C703	403 146 7435	CERAMIC 10P J 50V
C3401	404 087 1606	ELECT 0.1U M 50V	C711	403 159 7439	MT-POLYEST 0.1U K 250V
C3404	404 089 6401	NP-ELECT 4.7U M 50V	C712	403 270 3423	MT-POLYEST 0.22U K 63V
C3406	403 057 7739	POLYESTER 0.012U K 50V		403 237 7941	MT-COMPO 0.22U J 50V
	403 179 3514	POLYESTER 0.012U K 50V	C718	403 077 2817	CERAMIC 1000P Z 2K
C3407	403 062 5321	POLYESTER 5600P K 50V	C721	403 201 5011	ELECT 330U M 16V
	403 179 0711	POLYESTER 5600P K 50V	C722	403 055 8421	ELECT 22U M 250V
C3408	404 084 8707	ELECT 0.47U M 50V		403 260 0415	ELECT 22U M 250V
C3411	404 084 8707	ELECT 0.47U M 50V	C731	403 074 5722	CERAMIC 560P K 50V
C3412	404 084 8202	ELECT 47U M 16V	RESISTOR		
C3413	404 084 9209	ELECT 4.7U M 50V	R701	401 025 1625	CARBON 1.5K JA 1/6W
C3414	404 084 7809	ELECT 100U M 16V			
C3416	404 089 6401	NP-ELECT 4.7U M 50V			
C3417	404 084 9209	ELECT 4.7U M 50V			
C3418	404 089 6401	NP-ELECT 4.7U M 50V			
C3421	403 060 0724	POLYESTER 2700P K 50V			
	403 179 2210	POLYESTER 2700P K 50V			

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
R702	401 025 1625	CARBON 1.5K JA 1/6W			
R703	401 025 1625	CARBON 1.5K JA 1/6W			
R704	401 007 2319	CARBON 100K JA 1/2W			
R705	401 065 1217	OXIDE-MT 100K JA 2W			
R706	401 007 2319	CARBON 100K JA 1/2W			
R707	401 024 9325	CARBON 1.2K JA 1/6W			
R708	401 024 9325	CARBON 1.2K JA 1/6W			
R709	401 024 9325	CARBON 1.2K JA 1/6W			
R711	401 008 8627	CARBON 220K JA 1/2W			
R712	401 016 3849	CARBON 2.2K JA 1/4W			
R713	401 007 8440	CARBON 1.5K JA 1/2W			
R714	401 007 8440	CARBON 1.5K JA 1/2W			
R715	401 007 8440	CARBON 1.5K JA 1/2W			
R720	401 025 7429	CARBON 220 JA 1/6W			
R721	401 024 7430	CARBON 10K JA 1/6W			
R722	401 024 7024	CARBON 1K JA 1/6W			
R723	402 061 2106	FUSIBLE RES 47 J- 1/4W			
	402 097 4006	FUSIBLE RES 47 J 1/4W			
R751	401 064 4813	OXIDE-MT 1.2 JA 2W			
	402 093 4604	OXIDE-MT 1.2JA 2W			
COIL					
L721	645 001 4642	INDUCTOR, 22U J			
L731	610 078 5953	PIPE CORE			
DIODE					
D701	407 012 4416	DIODE 1SS133 T-77			
D702	407 012 4416	DIODE 1SS133 T-77			
D703	407 012 4416	DIODE 1SS133 T-77			
D721	407 012 4416	DIODE 1SS133 T-77			
MISCELLANEOUS					
△ K701	645 026 2005	SOCKET, CRT 8P			



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

LB4-C

CHASSIS SERIES

SERVICE REF. NO. PF2975-00

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:**
- All resistance value are in ohms, K=1,000, M=1,000,000.
 - All resistance rated wattages are 1/6W unless otherwise noted.
 - Excepting electrolytic capacitors, all capacitance values of less than 1 are expressed in μF and more than 1 are pF.
 - All capacitance rated voltages are 50V unless otherwise noted.
 - All inductance values are in μH .
 - 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.
 - 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.
 - 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.
 - Parts specified with "X" are not installed in this model.
 - Parts specified with "J" are just jumper wires.

11. Expression of capacitance and resistance in circuit diagrme.

Capacitance (Example)

1000 C M 200 D

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

Resistance (Example)

1/2 N J 1.2

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

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

D: Carbon
N: Metalized carbon
S: Oxided 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)

