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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. | 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. |
| 2: Comply with all caution and safety-related notes provided on the cabinet back, inside the cabinet, on the chassis or the picture tube.  |  |

### X-RADIATION PRECAUTION

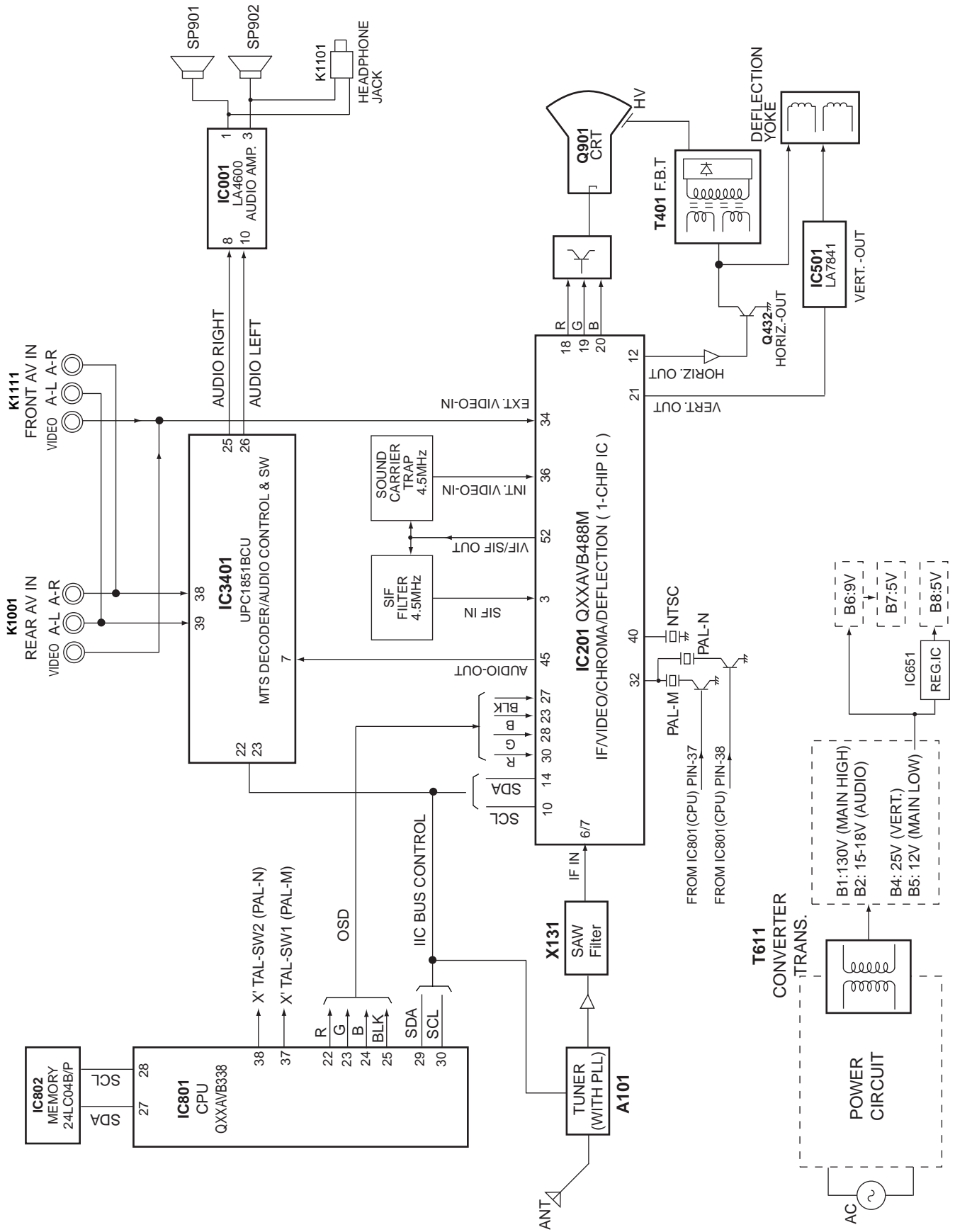
The primary source of X-RADIATION in television receiver is the picture tube. The picture tube is specially constructed to limit X-RADIATION emissions. For continued X-RADIATION protection, the replacement tube must be the same type as the original including suffix letter. Excessive high voltage may 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  $\triangle$  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  $\triangle$  . No deviations from resistance wattage or voltage ratings may be made for replacement items designated by mark  $\triangle$  .

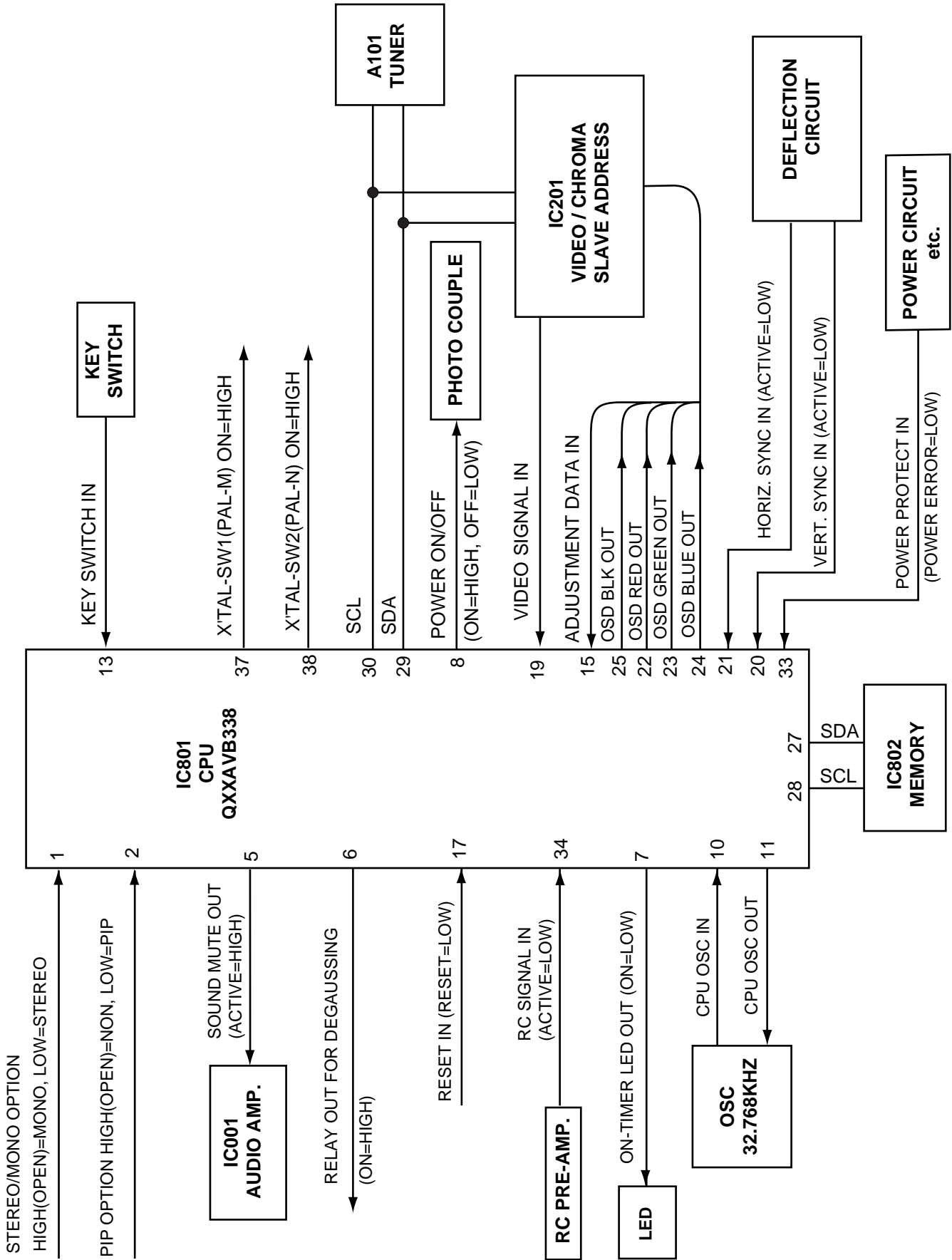
# Chassis Block Diagrams

## MAIN SIGNAL PROCESSING CIRCUIT



# Chassis Block Diagrams

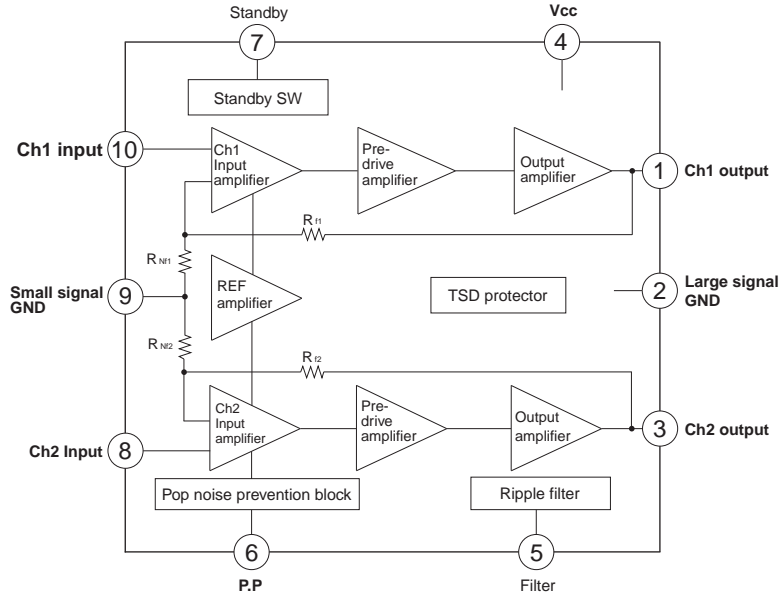
## SYSTEM CONTROL



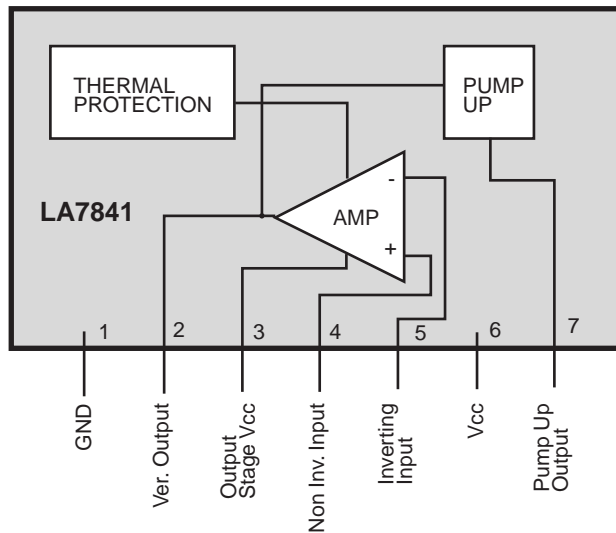


# IC Block Diagrams

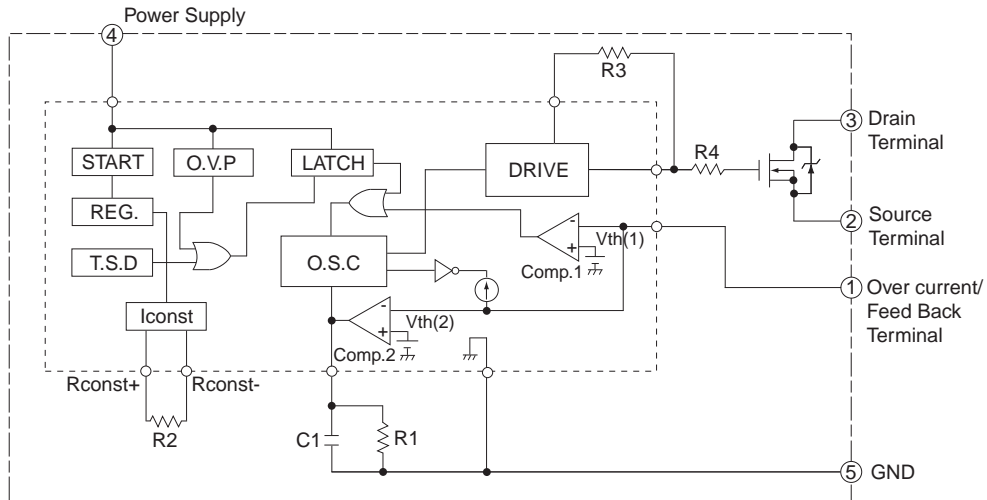
## IC001 < Audio AMP. > LA4600



## IC501 < Vertical Output > LA7841



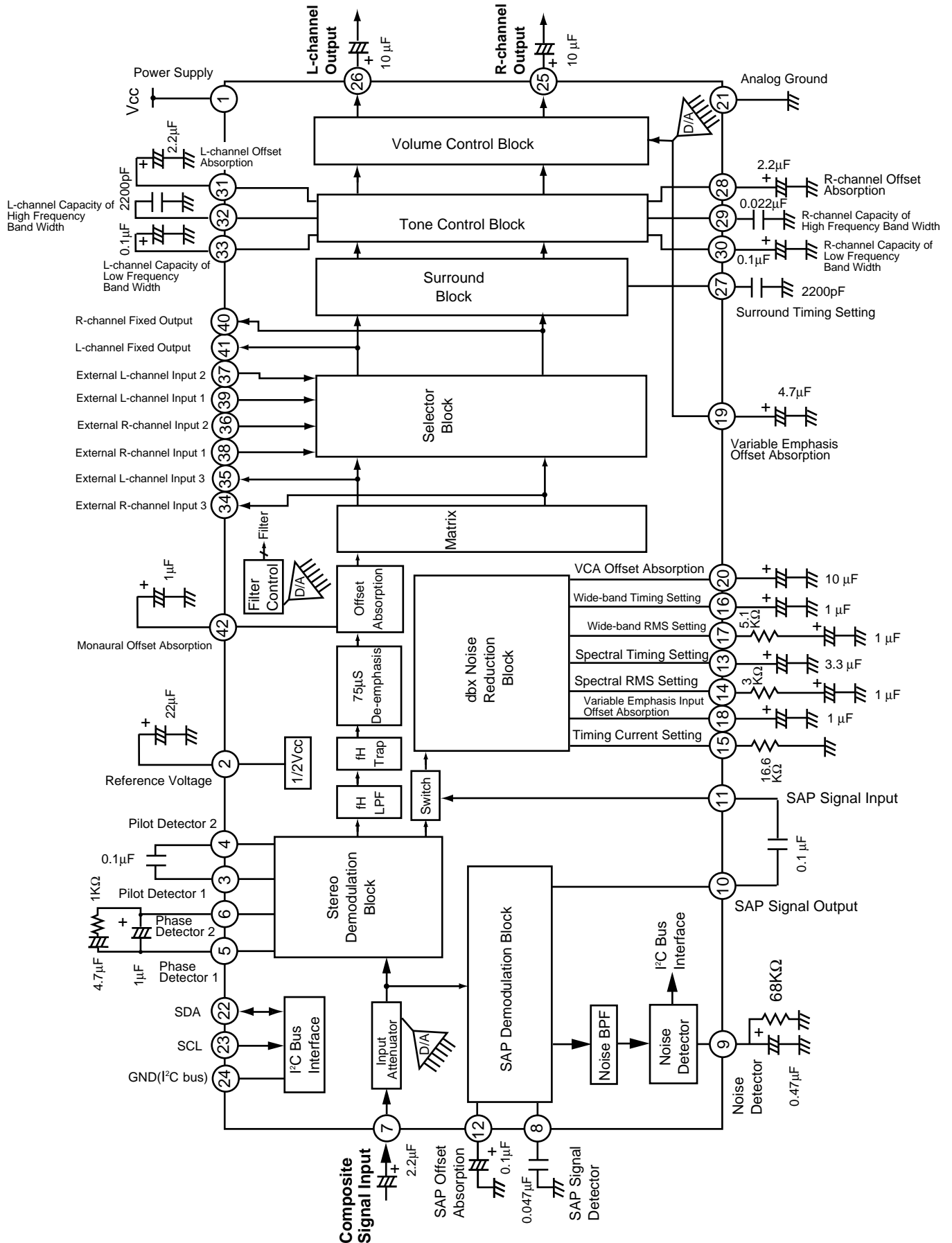
## IC611 < Switching Regulators > QXXAVB325



O.V.P: Overvoltage protection circuit  
T.S.D: Thermal shutdown circuit

# IC Block Diagrams

## IC3401 < MTS Decoder, Audio Control & Switch > UPC1851BCU

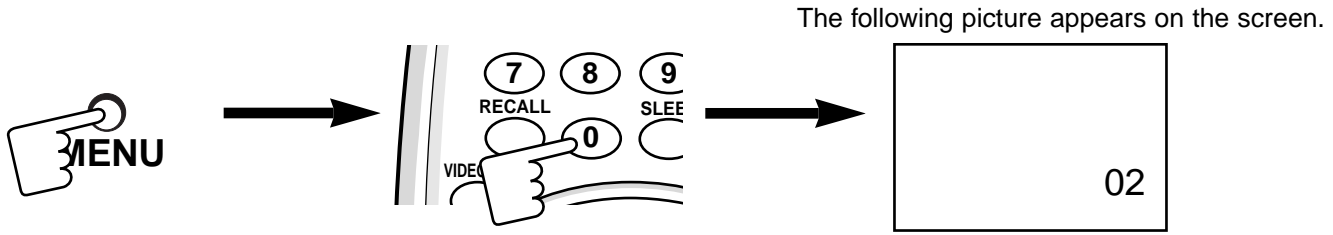


# Service Adjustments with Replacing Memory IC(IC802)

Note: The CPU (IC801) and memory IC (IC802) store the service adjustments data and controls data for each circuit. When the Memory IC(IC802) is replaced, some of the service adjustments should be readjusted to obtain the best performance. The necessary service adjustments are carried out by using the RC handset. Please set up the TV set with following steps [1] to [4].

## [1] Initializing Procedure

1. Put a new memory IC.
2. Turn on the TV set.
3. Press and hold the **MENU** button on the TV set, then press **0** button on the remote control transmitter.



This completes the initialization of memory IC.

Following shows the initialized contents of memory data by this procedure.

1. TV/AV mode : TV mode
2. Antenna or cable setting : Antenna
3. Colour system : AUTO
4. Channel Memory : Clear
5. Receiving Channel : Ch02
6. Sound Volume : 11/63 steps
7. Color : 30/63 steps
8. Contrast : 63/63 steps
9. Brightness : 32/63 steps
10. Sharpness : 31/63 steps
11. Tint : 31/63 steps
12. Language : Spanish
13. Password : Clear
14. Channel Block : Clear
15. Sleep Timer : Clear
16. Clock, ON/OFF Timer : Clear
17. Picture Mode : MANUAL
18. Stereo/Mono Setting : Stereo
19. Bass : 31/63 steps
20. Treble : 31/63 steps
21. Balance : 31/63 steps
22. Video status (Picture mode data)

Item	NORMAL	STRONG	SOFT	MANUAL
Colour	30	34	22	30
Contrast	63	63	63	63
Brightness	32	15	40	32



# Service Adjustments with Replacing Memory IC(IC802)

## [2] Service Adjustments-1

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

### Service mode adjustments table in CPU ROM

No.	Item	Initial value	Range	Description
01	H-P	08	00~15	Horizontal centre adjustment
02	V-P	04	00~07	Vertical centre adjustment
03	V-S	64	00~127	Vertical size adjustment
04	OSD	20	01~63	OSD position adjustment
05	AGC	64	00~127	RF AGC adjustment
06	VCO	128	00~255	VCO (AFT) adjustment
07	SIF	00	00	SIF VCO adjustment
08	SELF	00	00~15	SELF-adjusting
09	DLT	02	00~03	DL-time adjustment
10	DL F	00	00, 01	DL-fine adjustment
11	B-ST	00	00, 01	Black stretch on/off setting
12	ABCL	01	00, 01	ABCL adjustment
13	AB-G	00	00, 01	ABCL gain adjustment
14	TRAP	03	00~03	Trap frequency adjustment
15	WBK	00	00, 01	White back setting
16	BBK	00	00, 01	Blue back setting
17	AFCG	02	00~02	AFC gain adjustment
18	RBI	00	00~255	Red bias adjustment
19	GBI	00	00~255	Green bias adjustment
20	BBI	00	00~255	Blue bias adjustment
21	RD	64	00~127	Red drive adjustment
22	BD	64	00~127	Blue drive adjustment
23	DRV	--	--	White balance adjustment
24	--	--	--	Y-cut setting
25	OPT1	--	--	Option
26	OPT2	--	--	Option
27	CCD	20	01~255	Closed Caption position adjustment

Grey scale adjustment

### Notes:

The initial value that the CPU writes down the CPU ROM data to the memory when replaced the memory IC. TV set may not operate correctly with this initial value. It is required to set up the fine adjustment for service adjustments described below.

Readjust the following service adjustments.

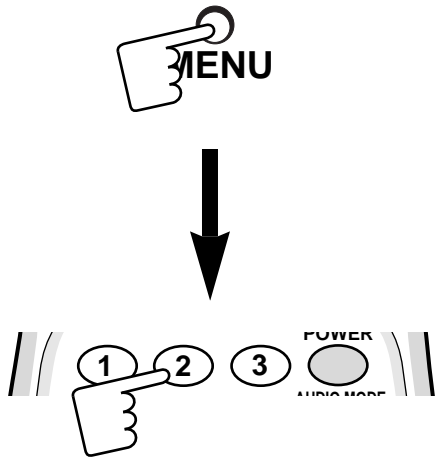
<b>Adjustments</b>	<b>Service Mode No. &amp; Item</b>
Horizontal centre adjustment	Item 01, H-P
Vertical centre adjustment	Item 02, V-P
Vertical size adjustment	Item 03, V-S
OSD position adjustment	Item 04, OSD
RF AGC adjustment	Item 05, AGC
AFT adjustment	Item 06, VCO
AFC gain adjustment	Item 17, AFCG
Grey scale adjustment	Item 18-24

Further adjustment please refer to page 11 and 12.

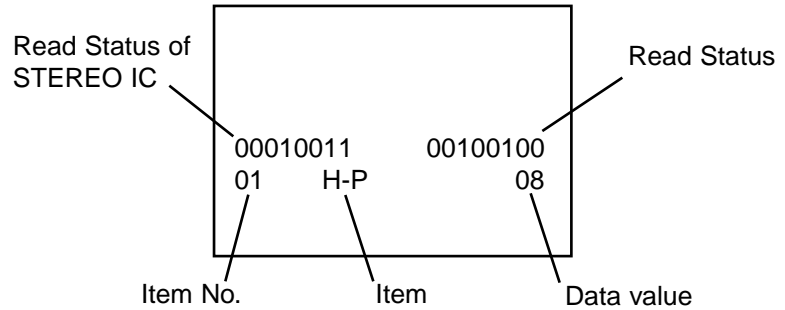
# Service Adjustments with Replacing Memory IC(IC802)

## [Entering to Service Mode]

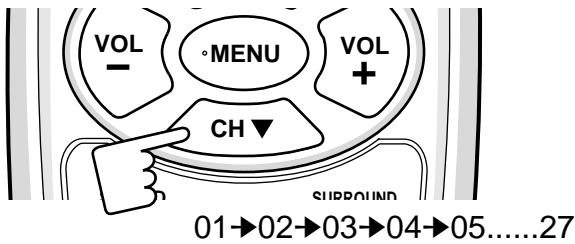
1. Press and hold the **MENU** button on the TV set and press the **2** button on the remote control handset. Following setting items appears on the screen.



Display for [H-P] Horizontal centre adjustment

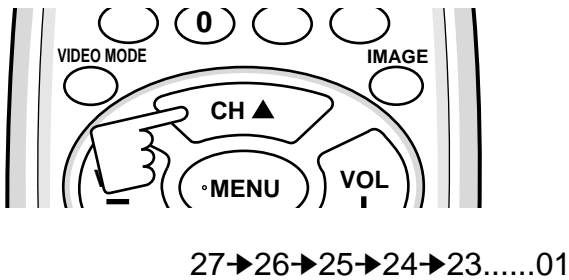
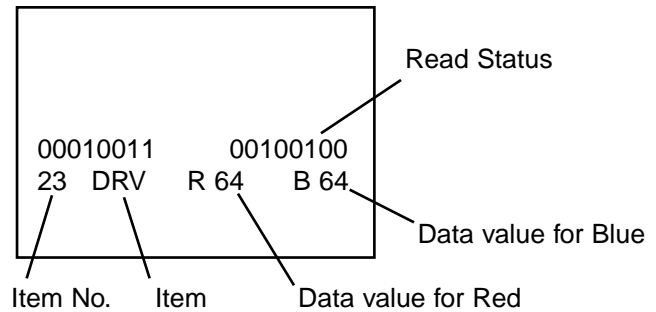


2. Select item by pressing the **CHANNEL DOWN** (Item No. UP) or **CHANNEL UP** (Item No. DOWN) button on the remote control handset.

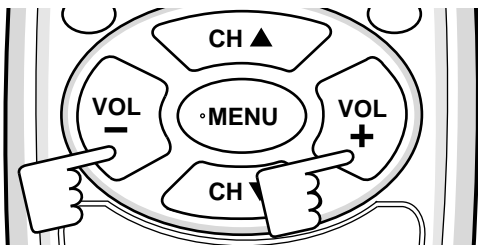


### Example

Display for [DRV] White balance adjustment



3. Adjust data value by pressing the **VOLUME +** or **VOLUME -** button on the remote control handset.

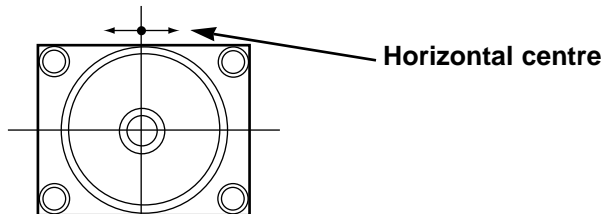


To return to normal TV mode, press the **MENU** button on the TV set or remote control handset.

# Service Adjustments with Replacing Memory IC(IC802)

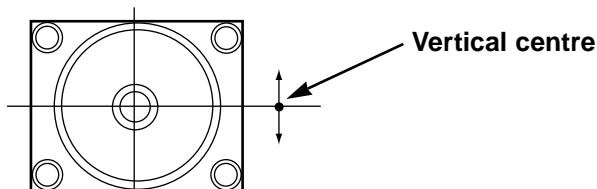
## Item 01 [H-P] HORIZONTAL CENTRE

- (1) Receive the monochrome circular pattern.
- (2) Set the brightness and contrast to normal.
- (3) Select [H-P] in the service mode.
- (4) Change value to be optimum horizontal centre position.
- (5) Exit from the service mode.



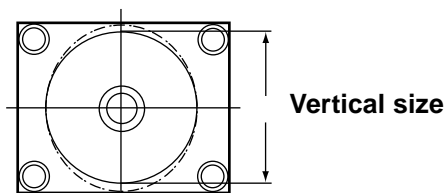
## Item 02 [V-P] VERTICAL CENTRE

- (1) Receive the monochrome circular pattern.
- (2) Set the brightness and contrast to maximum.
- (3) Select [V-P] in the service mode.
- (4) Change value to be optimum vertical centre position.
- (5) Exit from the service mode.



## Item 03 [V-S] VERTICAL SIZE

- (1) Receive the monochrome circular pattern.
- (2) Set the brightness and contrast to maximum.
- (3) Select [V-S] in the service mode.
- (4) Change value to be optimum vertical size.
- (5) Exit from the service mode.



## Item 04 [OSD] OSD POSITION

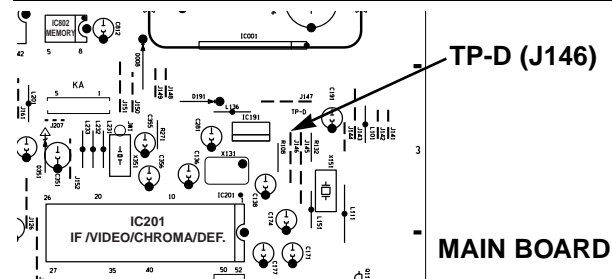
- (1) Receive the monochrome circular pattern.
- (2) Set the brightness and contrast to normal.
- (3) Select [OSD] in the service mode.
- (4) Change value to be proper OSD position.
- (5) Exit from the service mode.

## Item 05 [AGC] AGC

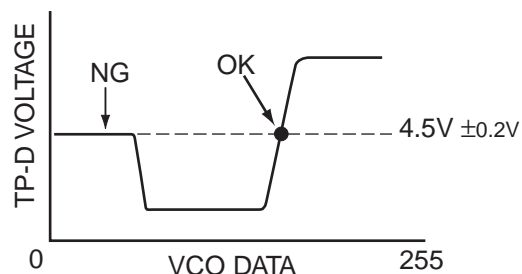
NOTE: Do not attempt this adjustment with weak signal.

- (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 [AGC] in the service mode.
- (3) Change value until the snow noise just disappears.
- (4) Exit from the service mode.

## Item 06 [VCO] AFT



- (1) Connect DC meter to TP-D and the ground.
- (2) Tune the receiver to the clearest station.
- (3) Disconnect RF input. (Disconnect antenna plug from the antenna socket.)
- (4) Select same channel. (If you have selected channel 03 in step 2, press "0" button next "3" button on the remote control to select channel 03.)
- (5) Connect antenna plug to the antenna socket.
- (6) Select [VCO] in the service mode.
- (7) Change value until the voltage (on TP-D) to be  $4.5 \pm 0.2V$  at OK point.



- (8) Exit from the service mode.

## Item 17 [AF CG] AFC GAIN

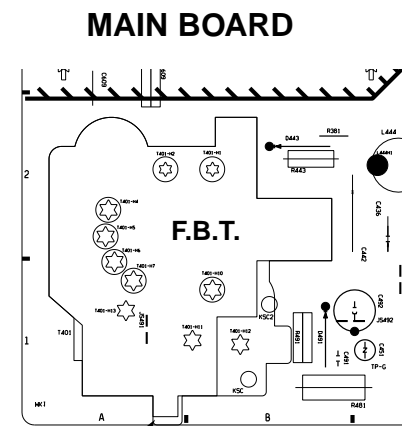
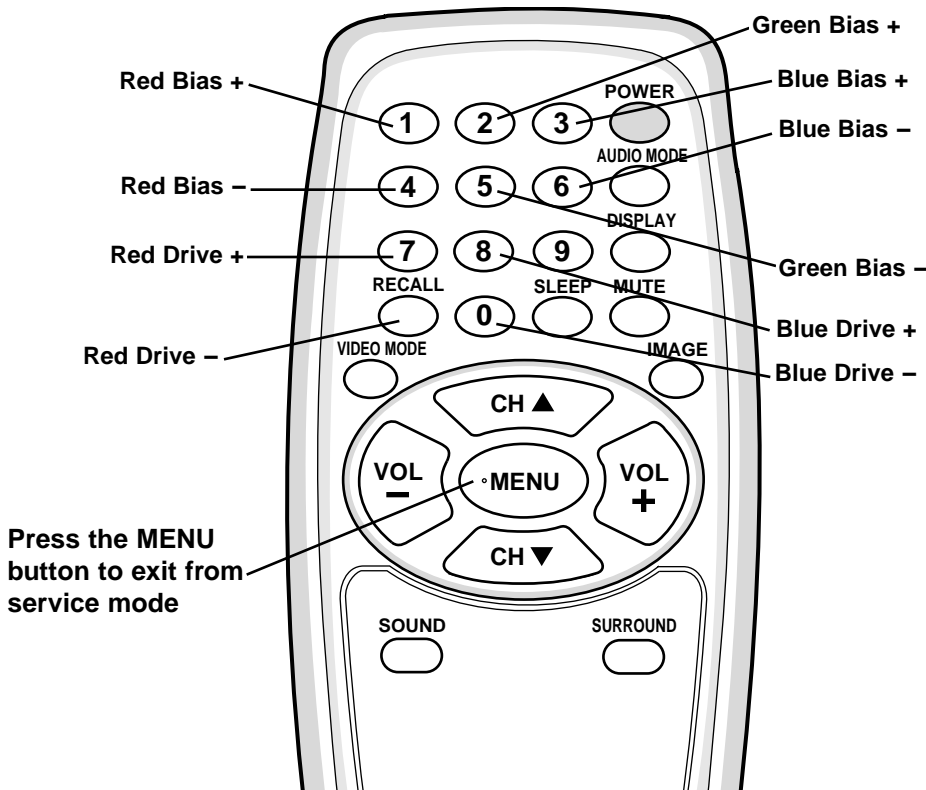
- (1) Switch on the TV.
- (2) Select [AF CG] in service mode.
- (3) Change data value to "01".
- (4) Exit from the service mode.

# Service Adjustments with Replacing Memory IC(IC802)

## Items 18-24 GREY SCALE

- (1) Receive the 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-18 **RBI**, 19 **GBI**, 20 **BBI** mode to 00. Set each value of Item-21 **RD**, 22 **BD** mode to 64.
- (5) Select Item-24 mode to be one horizontal scanning line and turn the screen volume on the FBT to obtain just visible one coloured line.
- (6) Press the **1 (Red Bias +)**, **4 (Red Bias -)**, **2 (Green Bias +)**, **5 (Green Bias -)**, **3 (Blue Bias +)** or **6 (Blue Bias -)** button to adjust the brightness of each colour until a dim white line produced. Please see the control button allocations in this mode.
- (7) Select Item-23 **DRV** mode to enter the white balance adjusting mode.
- (8) Press the **7 (Red Drive +)**, **CHANNEL RECALL (Red Drive -)**, **8 (Blue Drive +)** or **0 (Blue Drive -)** button alternately to produce normal black and white picture.
- (9) Exit from the service mode.
- (10) Check for proper grey scale tracking at all brightness levels.

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



SCREEN VR  
(Under side)

# Service Adjustments with Replacing Memory IC(IC802)

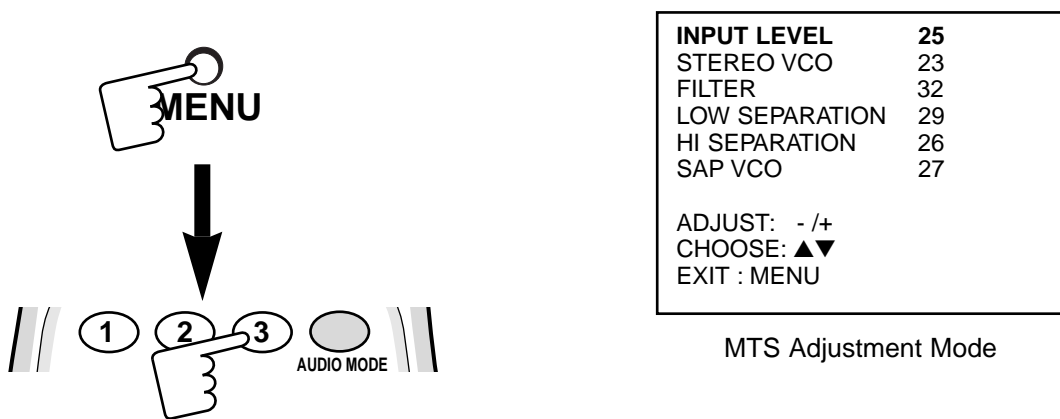
## [3] Service Adjustments-2

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

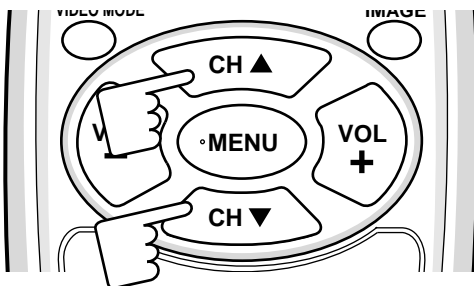
No.	Item	Initial value	Range
01	INPUT LEVEL	25	00~63
02	STEREO VCO	23	00~63
03	FILTER	32	00~63
04	LOW SEORATION	29	00~63
05	HIGH SEPARATION	26	00~63
06	SAP VCO	27	00~63

### [Entering to MTS Adjustment Service Mode]

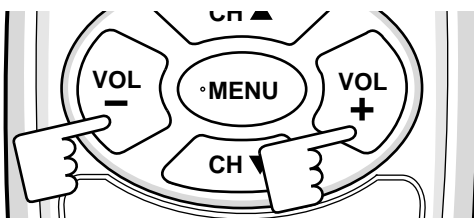
1. Press and hold the **MENU** button on the TV set and press the **3** button on the remote control handset. Following setting items appears on the screen.



2. Select item by pressing the **CHANNEL DOWN** (Item No. UP) or **CHANNEL UP** (Item No. DOWN) button on the remote control handset.



3. Adjust data value by pressing the **VOLUME +** or **VOLUME -** button on the remote control handset.



To return to normal TV mode, press the **MENU** button on the TV set or remote control handset.

# Service Adjustments with Replacing Memory IC(IC802)

## SOUND LEVEL ADJUSTMENT

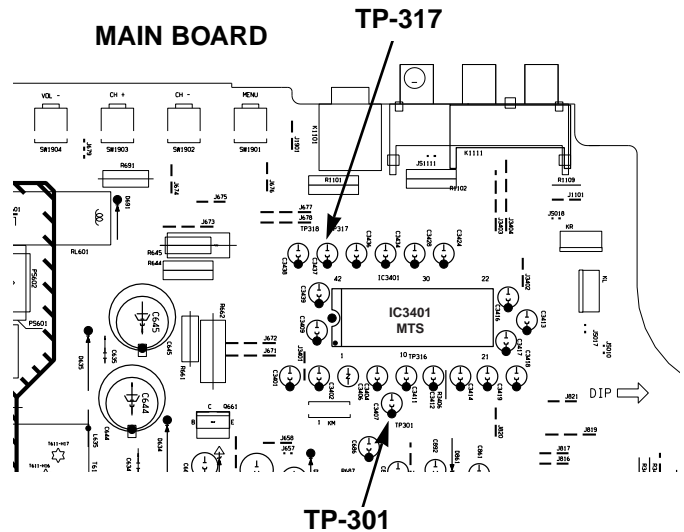
1. Connect a signal generator to TP-301(- side of C3407) on the Main Board and the ground. Signal output=300Hz, 150mVrms.
2. Connect a DC Volt-Meter to TP-317( + side of C3437) and the ground.
3. Ground TP-20(pin-45 of IC201) with the jumper lead.
4. Switch the TV set on.  
Press and hold the MENU button on the TV set, and press "3" button on the remote control transmitter to enter to the service mode.

INPUT LEVEL	25
STEREO VCO	23
FILTER	32
LOW SEPARATION	29
HI SEPARATION	26
SAP VCO	27

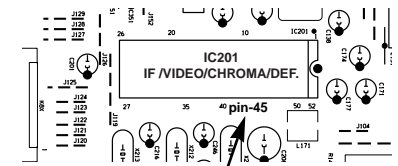
(Service Mode)

ADJUST: - /+  
CHOOSE: ▲▼  
EXIT : MENU

5. Adjust voltage to become DC 500mVrms±10mVrms by pressing the VOLUME(+/-) button on the remote control or TV set.
6. To exit from the service mode, press the MENU button.



TP-301



TP-20

## STEREO VCO ADJUSTMENT

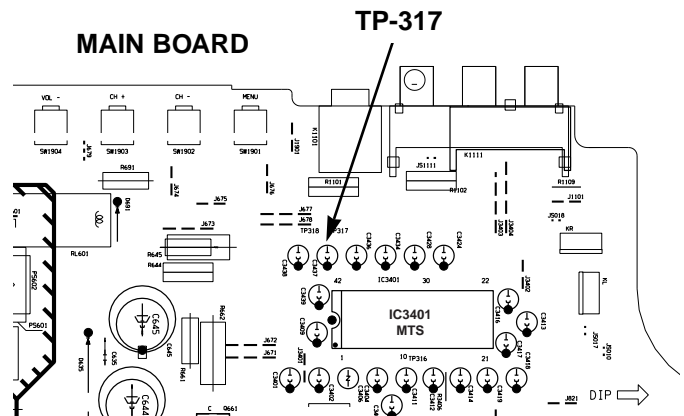
1. Connect a frequency counter to TP-317( + side of C3437) and the ground.
2. Ground TP-20(pin-45 of IC201) with the jumper lead.
3. Switch the TV set on.  
Press and hold the MENU button on the TV set, and press "3" button on the remote control transmitter to enter the service mode.
4. Select "STEREO VCO" by pressing the CHANNEL UP/DOWN button on the remote control or TV set.

INPUT LEVEL	25
<b>STEREO VCO</b>	<b>23</b>
FILTER	32
LOW SEPARATION	29
HI SEPARATION	26
SAP VCO	27

(Service Mode)

ADJUST: - /+  
CHOOSE: ▲▼  
EXIT : MENU

5. Adjust the frequency to become 15.625KHz ± 0.1KHz by pressing the VOLUME (+/-) button on the remote control or TV set.
6. To exit from the service mode, press the MENU button.



TP-20

# Service Adjustments with Replacing Memory IC(IC802)

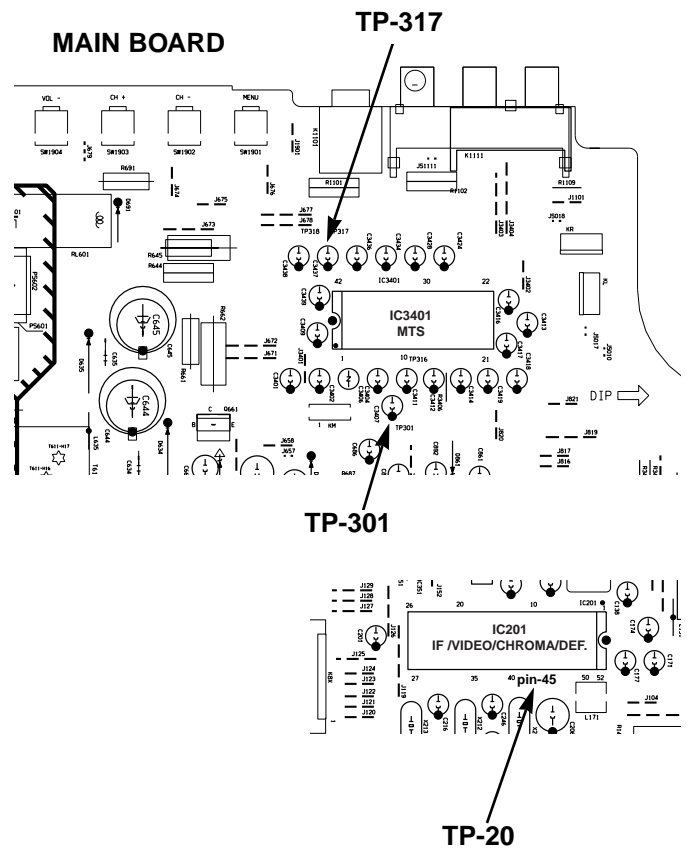
## MTS FILTER ADJUSTMENT

1. Connect a signal generator to TP-301(- side of C3407) and the ground.  
Signal output=15.734KHz, 100mVrms.
2. Connect a DC Volt-Meter to TP-317( + side of C3437) and the ground.
3. Ground TP-20(pin-45 of IC201) with the jumper lead.
4. Switch the TV set on.  
Press and hold the MENU button on the TV set, and press "3" button on the remote control transmitter to enter the service mode.
5. Select "FILTER" by pressing the CHANNEL UP/DOWN button on the remote control or TV set.

INPUT LEVEL	25
STEREO VCO	23
<b>FILTER</b>	<b>32</b>
LOW SEPARATION	29
HI SEPARATION	26
SAP VCO	27
ADJUST: - /+	
CHOOSE: ▲▼	
EXIT : MENU	

(Service Mode)

6. Adjust voltage to become minimum reading by pressing the VOLUME(+ -) button on the remote control or TV set.
7. To exit from the service mode, press the MENU button.

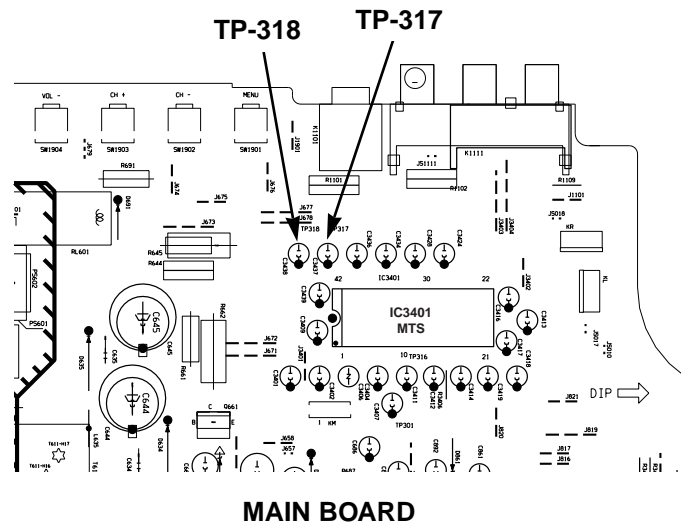


## STEREO SEPARATION ADJUSTMENT

1. Connect an oscilloscope:  
Probe-A to TP-317(+ side of C3437) and the ground.  
Probe-B to TP-318 (+ side of C3438) and the ground.
2. Switch the TV set on, and receive the multi sound program.
3. Press and hold the MENU button on the TV set, and press "3" button on the remote control transmitter to enter to the service mode.
4. Select "LOW SEPARATION" by pressing the CHANNEL UP/DOWN button on the remote control or TV set.

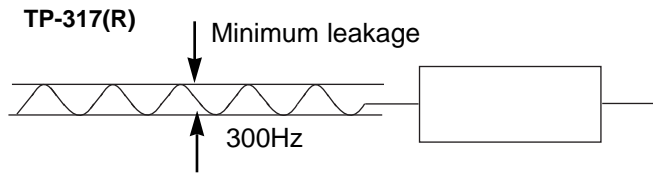
INPUT LEVEL	25
STEREO VCO	23
FILTER	32
<b>LOW SEPARATION</b>	<b>29</b>
HI SEPARATION	26
SAP VCO	27
ADJUST: - /+	
CHOOSE: ▲▼	
EXIT : MENU	

(Service Mode)



# Service Adjustments with Replacing Memory IC(IC802)

5. Adjust level of 300Hz at TP-317 (+ side of C3437) to become minimum level by pressing the VOLUME(+/-) button on the remote control or TV set.



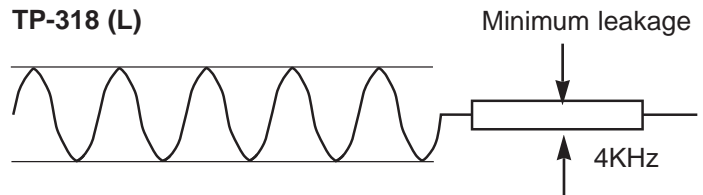
6. Select "HI SEPARATION" by pressing the CHANNEL UP/DOWN button on the remote control or TV set.

INPUT LEVEL	25
STEREO VCO	23
FILTER	32
LOW SEPARATION	29
<b>HI SEPARATION</b>	<b>26</b>
SAP VCO	27

(Service Mode)

ADJUST: -/+  
CHOOSE: ▲▼  
EXIT : MENU

7. Adjust level of 4KHz at TP-318 (+ side of C3438) to become minimum level by pressing the VOLUME (+/-) button on the remote control or TV set.



8. To exit from the service mode, press the MENU button.

## SAP VCO ADJUSTMENT

1. Connect a frequency counter to TP-317(+ side of C3437) and the ground.
2. Ground TP-20 (pin-45 of IC201) with the jumper lead.
3. Ground TP-316(+ side of C3411) with the jumper lead through 1M Ω resistor.
4. Switch the TV set on.
5. Press and hold the MENU button on the TV set, and press "3" button on the remote control transmitter to enter to the service mode.
6. Select "SAP VCO" by pressing the CHANNEL UP/DOWN button on the remote control or TV set.

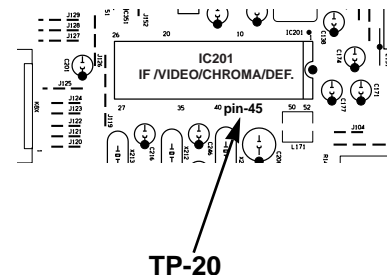
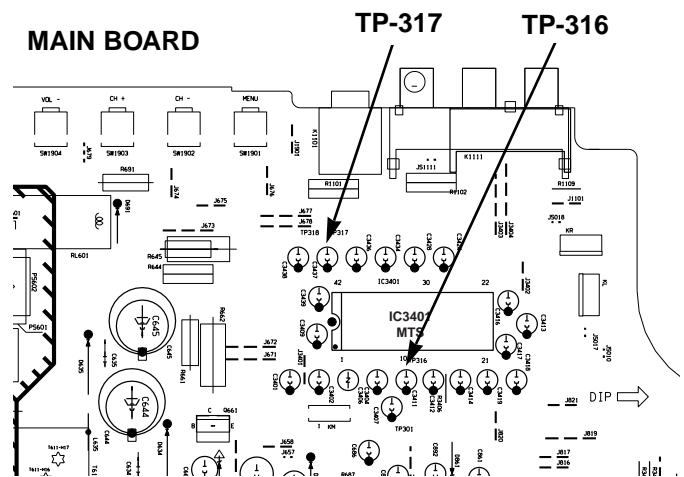
INPUT LEVEL	25
STEREO VCO	23
FILTER	32
LOW SEPARATION	29
HI SEPARATION	26
<b>SAP VCO</b>	<b>27</b>

(Service Mode)

ADJUST: -/+  
CHOOSE: ▲▼  
EXIT : MENU

7. Adjust frequency of the counter to become 78.125KHz ±0.5KHz by pressing the VOLUME (+/-) button on the remote control or TV set.

8. To exit from the service mode, press the MENU button.





# Service Adjustments with Replacing Memory IC(IC802)

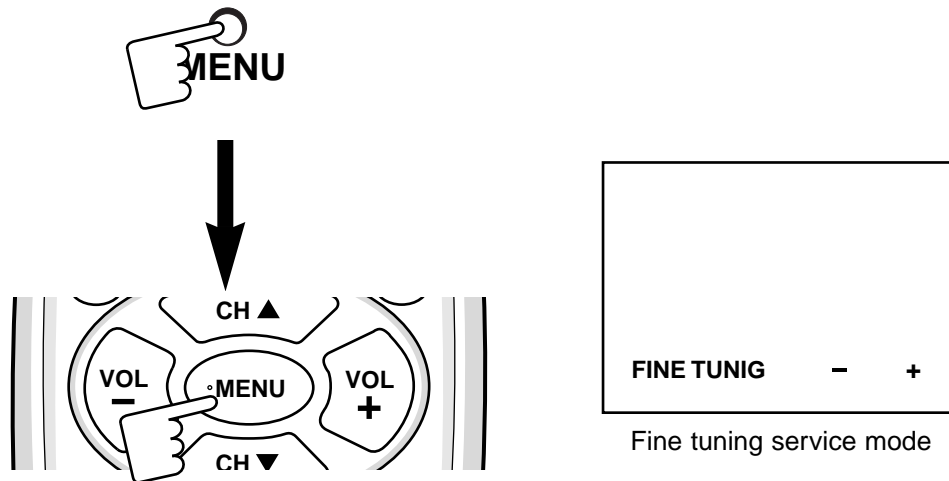
## [4] Service Adjustment-3

### FINE TUNING

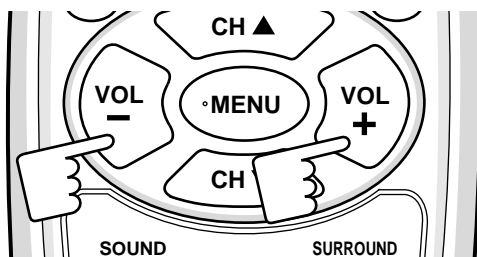
This adjustment is used to do a fine tuning of the channels with poor reception after they have been stored by the automatic tuning.

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

1. Press and hold the **MENU** button on the TV set and press the **4** or **MENU** button on the remote control handset to enter to the service mode.



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



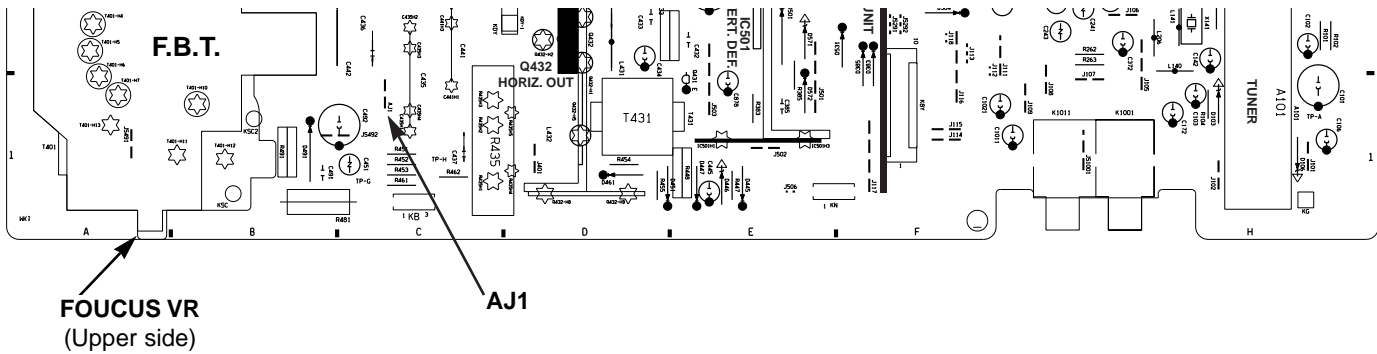
Fine tuning data value will be automatically stored in memory.

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.)

# Service Adjustments

Following adjustments are not required to readjust when replacing the memory IC.

## MAIN BOARD



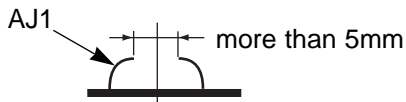
## FOCUS ADJUSTMENT

- (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.

## HORIZ. WIDTH AND HIGH VOLTAGE CHECK

- (1) Receive the monochrome circular pattern.
- (2) Set the brightness and contrast to maximum.
- (3) If the picture is too wide, or narrow, cut or short the "AJ1" on the main unit. When AJ1 is shorted, the horizontal width increase. When AJ1 is cut, the horizontal width decrease.

**Important note:** If the AJ1 is cut, it's gap must be more than 5mm to prevent sparks.



- (4) Connect a high voltage probe to anode lead of the picture tube.
- (5) The high voltage must be 14"=21KV  $\pm$  1KV / 20",21"=25KV  $\pm$  1KV / 29"=26.5KV  $\pm$  1KV and less than 14"=25KV / 20",21"=27.5KV / 29"=29.5KV at 0 beam current (Brightnees and contrast minimum setting).

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

## ■ Protection Circuit

This TV set has a built-in power supply protection circuit.

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

When an abnormality occurs during TV reception, it causes pin 33 of the CPU to go continually Low (less than 0.75V) for about one second. The CPU detects that this has occurred and outputs the signal from pin 8 to switch off the power supply lines.

## Releasing the protective circuit and restoring power supply

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

# Purity and Convergence Adjustment

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

## PURITY ADJUSTMENT

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

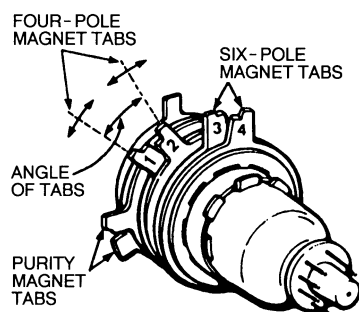


Figure- 1. PURITY AND CONVERGENCE MAGNETS

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

## CENTRE CONVERGENCE ADJUSTMENT

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

## OUTER AREA CONVERGENCE ADJUSTMENT

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

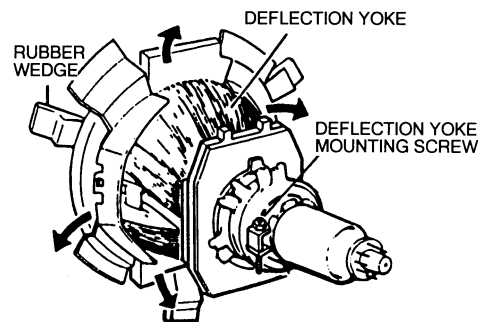


Figure- 4. ADJUSTMENT DEFLECTION YOKE

Adjust tabs angle to superimpose blue and red vertical line.

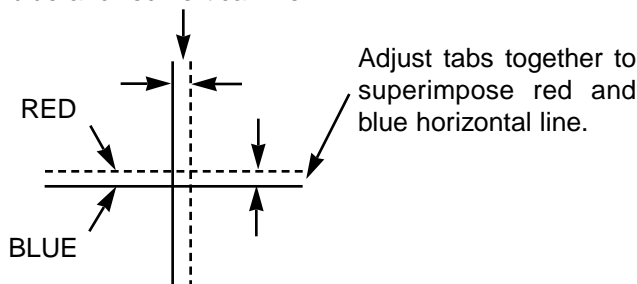


Figure- 2 BLUE AND RED LINE MOVEMENT

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

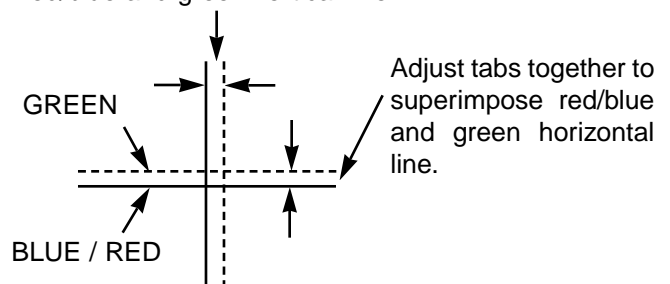


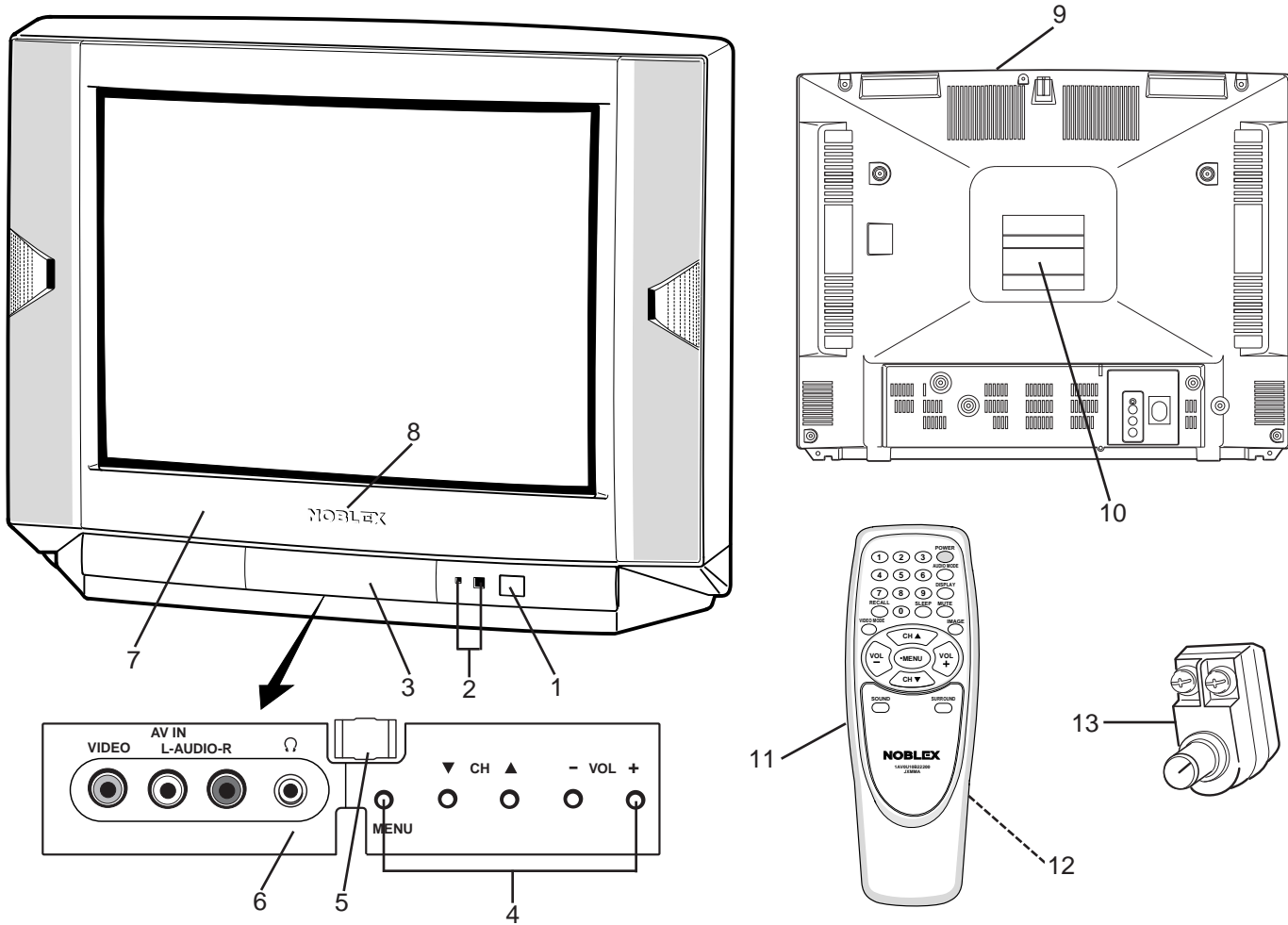
Figure- 3 BLUE/RED AND GREEN MOVEMENT

# Cabinet Parts List

C4BA/C4BAS

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

## Model 21TC647



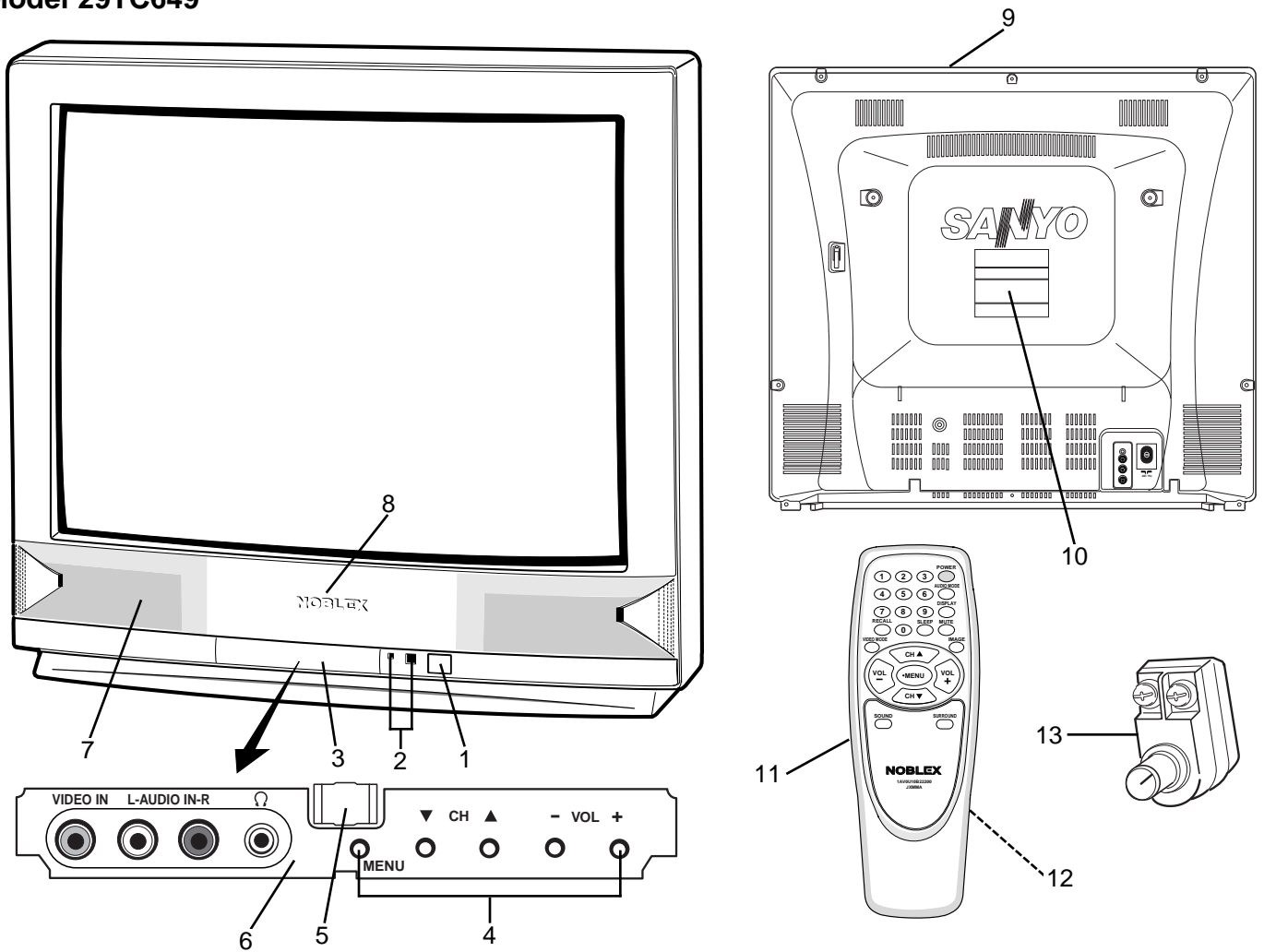
Key No.	Part No.	Description	Key No.	Part No.	Description
1	610 288 9147	BUTTON POWER	11	645 042 8968	ASSY,REMOCON JXMMMA
	610 210 7302	COIL SPRING	12	610 288 0397	RC-BATTERY LID
2	610 288 9253	DEC IND	13	645 004 5493	ANT MATCHING BOX
3	610 288 9239	DOOR		610 290 3089	INSTRUCTIONS MANUAL
4	610 277 8403	BUTTON UNITED			
5	610 104 2505	LATCH PUSH			
6	610 288 9277	DEC CONTROL SHEET			
7	610 288 9185	CABINET FRONT			
8	610 287 9384	BADGE NOBLEX			
9	610 273 5185	CABINET BACK			
10	610 288 9482	LABEL RATING			
		(Service Ref. No. 21TC647-00)			
	610 288 9826	LABEL RATING			
		(Service Ref. No. 21TC647-01)			

# Cabinet Parts List

C4CA

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

## Model 29TC649



Key No.	Part No.	Description	Key No.	Part No.	Description
1	610 288 9161	BUTTON POWER	11	645 042 8968	ASSY, REMOCON JXMMA
	610 210 7302	COIL SPRING	12	610 288 0397	RC-BATTERY LID
2	610 288 9260	DEC IND	13	645 004 5493	ANT MATCHING BOX
3	610 288 9246	DOOR		610 290 3089	INSTRUCTIONS MANUAL
4	610 277 8403	BUTTON UNITED			
5	610 104 2505	LATCH PUSH			
6	610 288 9277	DEC CONTROL SHEET			
7	610 288 9208	CABINET FRONT			
8	610 287 9384	BADGE NOBLEX			
9	610 288 9222	CABINET BACK			
10	610 288 9499	LABEL RATING			



Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
	405 002 0308	TR 2SA1037K T146 R	IC611	410 326 4901	IC STR-F6654 LF1351
	405 002 0407	TR 2SA1037K T146 S	IC631	409 172 8102	IC SE130NH
	405 002 6706	TR 2SA1179-M6-TB	IC651	409 241 5407	IC BA178M05T
	405 002 6904	TR 2SA1179-M7-TB		409 172 1509	IC MC78M05CT
Q431	405 018 0507	TR 2SC3332-R		409 320 5700	IC UPC78M05AHF
	405 018 0606	TR 2SC3332-S	IC801	410 328 4800	IC LC863232A-5L95
Q432	405 022 6809	TR 2SD1651-CTV-YB	IC802	409 343 6302	IC 24LC04B/P
Q576	405 014 4509	TR 2SC2412K T146 R	<b>CAPACITOR</b>		
	405 014 4608	TR 2SC2412K T146 S	C001	403 049 0008	ELECT 1U M 50V
	405 015 8704	TR 2SC2812-L6-TB	C002	403 157 6701	CERAMIC 560P K 50V
	405 015 8902	TR 2SC2812-L7-TB	C003	403 049 0008	ELECT 1U M 50V
Q611	406 000 6804	TR 2SA1015-GR(SAN)	C004	403 157 6701	CERAMIC 560P K 50V
	405 001 7605	TR 2SA1015-Y(SAN)	C005	403 051 0607	ELECT 4.7U M 50V
	405 004 3208	TR 2SA564A-R(CU)	C006	403 042 2405	ELECT 100U M 16V
	405 151 3304	TR 2SA608NF-NPA	C007	403 045 9807	ELECT 2200U M 25V
	405 006 1806	TR 2SA933S-R	C008	403 164 0204	CERAMIC 0.1U Z 25V
Q661	405 059 9903	TR 2SD1913-R-RA	C010	403 045 1504	ELECT 1000U M 25V
	405 060 0005	TR 2SD1913-S-RA	C012	403 045 1504	ELECT 1000U M 25V
Q681	405 014 4509	TR 2SC2412K T146 R	C015	403 164 0204	CERAMIC 0.1U Z 25V
	405 014 4608	TR 2SC2412K T146 S	C101	403 044 1703	ELECT 470U M 16V
	405 015 8704	TR 2SC2812-L6-TB	C102	403 038 8602	ELECT 33U M 6.3V
	405 015 8902	TR 2SC2812-L7-TB	C1021	403 049 0008	ELECT 1U M 50V
Q682	405 014 4509	TR 2SC2412K T146 R	C103	403 051 0607	ELECT 4.7U M 50V
	405 014 4608	TR 2SC2412K T146 S	C106	403 051 0607	ELECT 4.7U M 50V
	405 015 8704	TR 2SC2812-L6-TB	C111	403 149 9208	CERAMIC 0.01U Z 50V
	405 015 8902	TR 2SC2812-L7-TB	C112	403 149 9208	CERAMIC 0.01U Z 50V
Q683	405 089 0000	TR 2SA1707-S	C113	403 149 9208	CERAMIC 0.01U Z 50V
	405 089 0109	TR 2SA1707-T	C132	403 149 9208	CERAMIC 0.01U Z 50V
	405 009 6907	TR 2SB985-S	C136	403 043 3906	ELECT 33U M 16V
	405 009 7003	TR 2SB985-T	C137	403 149 9208	CERAMIC 0.01U Z 50V
Q684	405 014 4509	TR 2SC2412K T146 R	C138	403 048 1907	ELECT 0.22U M 50V
	405 014 4608	TR 2SC2412K T146 S	C142	403 042 7707	ELECT 22U M 16V
	405 015 8704	TR 2SC2812-L6-TB	C151	403 157 2901	CERAMIC 47P J 50V
	405 015 8902	TR 2SC2812-L7-TB	C152	403 157 2901	CERAMIC 47P J 50V
Q861	405 134 5905	TR 2SA1037AK-T146-R	C171	403 048 1907	ELECT 0.22U M 50V
	405 147 2205	TR 2SA1037AK-S-T146	C173	403 155 4204	CERAMIC 15P J 50V
	405 002 0308	TR 2SA1037K T146 R	C177	403 048 4205	ELECT 0.33U M 50V
	405 002 0407	TR 2SA1037K T146 S	C191	403 041 2109	ELECT 47U M 10V
	405 002 6706	TR 2SA1179-M6-TB	C201	403 043 9106	ELECT 47U M 16V
	405 002 6904	TR 2SA1179-M7-TB	C202	403 149 9208	CERAMIC 0.01U Z 50V
Q871	405 014 4509	TR 2SC2412K T146 R	C206	403 044 1703	ELECT 470U M 16V
	405 014 4608	TR 2SC2412K T146 S	C207	403 149 9208	CERAMIC 0.01U Z 50V
	405 015 8704	TR 2SC2812-L6-TB	C211	401 150 6001	MT-GLAZE 0.000 ZA 1/10W
	405 015 8902	TR 2SC2812-L7-TB	C212	401 150 6001	MT-GLAZE 0.000 ZA 1/10W
Q881	405 014 4509	TR 2SC2412K T146 R	C216	403 049 0008	ELECT 1U M 50V
	405 014 4608	TR 2SC2412K T146 S	C221	403 164 0204	CERAMIC 0.1U Z 25V
	405 015 8704	TR 2SC2812-L6-TB	C222	403 164 0204	CERAMIC 0.1U Z 25V
	405 015 8902	TR 2SC2812-L7-TB	C223	403 164 0204	CERAMIC 0.1U Z 25V
Q886	405 014 4509	TR 2SC2412K T146 R	C241	403 155 9704	NP-ELECT 0.1U M 50V
	405 014 4608	TR 2SC2412K T146 S	C243	403 155 9704	NP-ELECT 0.1U M 50V
	405 015 8704	TR 2SC2812-L6-TB	C246	403 049 0008	ELECT 1U M 50V
	405 015 8902	TR 2SC2812-L7-TB	C247	403 215 2409	CERAMIC 0.015U K 50V
Q887	405 134 5905	TR 2SA1037AK-T146-R	C248	403 149 9208	CERAMIC 0.01U Z 50V
	405 147 2205	TR 2SA1037AK-S-T146	C281	403 049 9803	ELECT 2.2U M 50V
	405 002 0308	TR 2SA1037K T146 R	C3400	403 164 0204	CERAMIC 0.1U Z 25V
	405 002 0407	TR 2SA1037K T146 S	C3401	403 043 9106	ELECT 47U M 16V
	405 002 6706	TR 2SA1179-M6-TB	C3402	403 042 7707	ELECT 22U M 16V
	405 002 6904	TR 2SA1179-M7-TB	C3403	403 164 0204	CERAMIC 0.1U Z 25V
<b>INTEGRATED CIRCUIT</b>			C3404	403 050 6600	ELECT 3.3U M 50V
IC001	409 389 4607	IC LA4600	C3406	403 166 1605	NP-ELECT 4.7U M 25V
IC191	409 241 5407	IC BA178M05T	C3407	403 049 9803	ELECT 2.2U M 50V
	409 172 1509	IC MC78M05CT	C3408	403 224 7006	CERAMIC 0.047U Z 50V
	409 320 5700	IC UPC78M05AHF	C3409	403 048 6308	ELECT 0.47U M 50V
IC201	410 342 8907	IC QXXAVB488--M	C3410	403 164 0204	CERAMIC 0.1U Z 25V
IC3401	409 432 7807	IC UPC1851BCU	C3411	403 047 8402	ELECT 0.1U M 50V
IC501	409 340 1904	IC LA7841	C3412	403 090 6004	TA-SOLID 3.3U K 10V





Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
R108	401 026 1307	CARBON 27K JA 1/6W	R3422	401 024 6700	CARBON 100 JA 1/6W
R109	401 162 3005	MT-GLAZE 22K JA 1/10W	R3440	401 256 3805	MT-GLAZE 1.5K JA 1/10W
R1101	401 007 7601	CARBON 150 JA 1/2W	R351	401 067 5302	OXIDE-MT 330 JA 2W
R1102	401 007 7601	CARBON 150 JA 1/2W	R356	401 162 3708	MT-GLAZE 4.7K JA 1/10W
R1106	401 150 6209	MT-GLAZE 1K JA 1/10W	R357	401 256 5106	MT-GLAZE 560K JA 1/10W
R1108	401 150 6209	MT-GLAZE 1K JA 1/10W	R361	401 150 6209	MT-GLAZE 1K JA 1/10W
R1109	401 024 7707	CARBON 100K JA 1/6W	R364	401 162 3005	MT-GLAZE 22K JA 1/10W
R111	401 150 6209	MT-GLAZE 1K JA 1/10W	R372	401 162 4002	MT-GLAZE 560 JA 1/10W
R112	401 162 4101	MT-GLAZE 5.6K JA 1/10W	R373	401 256 5106	MT-GLAZE 560K JA 1/10W
R113	401 255 6500	MT-GLAZE 100 JA 1/10W	R380	401 162 3708	MT-GLAZE 4.7K JA 1/10W
R114	401 162 2909	MT-GLAZE 220 JA 1/10W	R381	401 012 7009	CARBON 10K JA 1/4W
R116	401 256 7407	MT-GLAZE 39 JA 1/10W	R382	401 021 3009	CARBON 5.6K JA 1/4W
R132	401 027 5908	CARBON 68K JA 1/6W	R383	401 026 9907	CARBON 4.7K JA 1/6W
R133	401 256 5304	MT-GLAZE 56K JA 1/10W	R384	401 150 5905	MT-GLAZE 10K JA 1/10W
R134	401 256 0200	MT-GLAZE 120K JA 1/10W	R385	401 024 7400	CARBON 10K JA 1/6W
R140	401 162 3708	MT-GLAZE 4.7K JA 1/10W	R430	401 150 6209	MT-GLAZE 1K JA 1/10W
R141	401 025 7409	CARBON 220 JA 1/6W	R432	401 150 6209	MT-GLAZE 1K JA 1/10W
R142	401 256 2907	MT-GLAZE 150 JA 1/10W	R433	401 007 1104	CARBON 1K JA 1/2W
R144	401 256 7506	MT-GLAZE 390 JA 1/10W	R434	401 009 9306	CARBON 390 JA 1/2W
R145	401 162 3609	MT-GLAZE 470 JA 1/10W	R435	402 069 8704	WIRE WOUND 8.2 KA 7W
R146	401 150 6001	MT-GLAZE 0.000 ZA 1/10W		402 074 5309	WIRE WOUND 8.2 KA 7W
R147	401 150 6100	MT-GLAZE 2.2K JA 1/10W	R444	401 058 3706	OXIDE-MT 1K JA 1W
R151	401 152 3206	MT-GLAZE 330 JA 1/10W	R447	401 026 7002	CARBON 3.9K JA 1/6W
R170	401 150 5905	MT-GLAZE 10K JA 1/10W	R448	401 010 3102	CARBON 470 JA 1/2W
R171	401 150 5905	MT-GLAZE 10K JA 1/10W	R451	401 012 8105	CARBON 100K JA 1/4W
R172	401 256 7308	MT-GLAZE 6.8K JA 1/10W	R452	401 014 5201	CARBON 15K JA 1/4W
R173	401 150 6001	MT-GLAZE 0.000 ZA 1/10W	R453	401 024 7004	CARBON 1K JA 1/6W
R174	401 255 9501	MT-GLAZE 220K JA 1/10W	R454	401 024 7400	CARBON 10K JA 1/6W
R1902	401 256 7209	MT-GLAZE 18K JA 1/10W	R455	401 012 8105	CARBON 100K JA 1/4W
R1903	401 256 7308	MT-GLAZE 6.8K JA 1/10W	R461	401 015 4708	CARBON 180K JA 1/4W
R1904	401 162 3708	MT-GLAZE 4.7K JA 1/10W	R462	401 027 2600	CARBON 5.6K JA 1/6W
R1905	401 256 5908	MT-GLAZE 2.7K JA 1/10W	R481	401 061 0808	OXIDE-MT 3.9 JA 1W
R1906	401 025 7805	CARBON 2.2K JA 1/6W	R491	401 008 3800	CARBON 2.2 JB 1/2W
R1907	401 256 6202	MT-GLAZE 270 JA 1/10W	R501	401 026 3905	CARBON 330 JA 1/6W
R1908	401 150 5905	MT-GLAZE 10K JA 1/10W	R505	401 026 4308	CARBON 3.3K JA 1/6W
R1911	401 162 3609	MT-GLAZE 470 JA 1/10W	R506	401 026 1307	CARBON 27K JA 1/6W
R1912	401 162 3609	MT-GLAZE 470 JA 1/10W	R507	401 024 9701	CARBON 12K JA 1/6W
R1913	401 162 3609	MT-GLAZE 470 JA 1/10W	R508	401 024 7004	CARBON 1K JA 1/6W
R212	401 256 5304	MT-GLAZE 56K JA 1/10W	R509	401 006 8807	CARBON 1.8 JA 1/2W
R213	401 256 5304	MT-GLAZE 56K JA 1/10W	R511	401 059 6706	OXIDE-MT 180 JA 1W
R214	401 256 3607	MT-GLAZE 15K JA 1/10W	R514	401 007 4709	CARBON 1.2K JA 1/2W
R215	401 256 3607	MT-GLAZE 15K JA 1/10W	R571	401 024 7004	CARBON 1K JA 1/6W
R216	401 256 6301	MT-GLAZE 47K JA 1/10W	R576	401 162 3708	MT-GLAZE 4.7K JA 1/10W
R217	401 256 1702	MT-GLAZE 33K JA 1/10W	R577	401 256 0309	MT-GLAZE 820 JA 1/10W
R221	401 150 6209	MT-GLAZE 1K JA 1/10W	R601	401 008 8607	CARBON 220K JA 1/2W
R222	401 150 6209	MT-GLAZE 1K JA 1/10W	R602	402 072 1204	WIRE WOUND 1.8 KA 7W
R223	401 150 6209	MT-GLAZE 1K JA 1/10W		402 072 7800	WIRE WOUND 1.8 KA 7W
R231	401 150 6100	MT-GLAZE 2.2K JA 1/10W	△ R608	402 000 8305	SOLID 5.6M KA 1/2W
R232	401 150 6100	MT-GLAZE 2.2K JA 1/10W	△ R609	402 000 8305	SOLID 5.6M KA 1/2W
R233	401 150 6100	MT-GLAZE 2.2K JA 1/10W	R611	401 069 4501	OXIDE-MT 68K JA 2W
R246	401 162 3104	MT-GLAZE 3.3K JA 1/10W	R612	401 007 2903	CARBON 1M JA 1/2W
R248	401 256 7704	MT-GLAZE 3.9M JA 1/10W	R613	401 007 2903	CARBON 1M JA 1/2W
R261	401 162 3104	MT-GLAZE 3.3K JA 1/10W	R614	401 026 4308	CARBON 3.3K JA 1/6W
R262	401 025 7409	CARBON 220 JA 1/6W	R615	401 067 7306	OXIDE-MT 33K JA 2W
R263	401 025 7409	CARBON 220 JA 1/6W	R616	401 012 3407	CARBON 10 JA 1/4W
R271	401 024 6700	CARBON 100 JA 1/6W	R617	401 024 7400	CARBON 10K JA 1/6W
R272	401 255 6500	MT-GLAZE 100 JA 1/10W	R618	401 024 7004	CARBON 1K JA 1/6W
R281	401 162 3807	MT-GLAZE 470K JA 1/10W	R619	401 025 1605	CARBON 1.5K JA 1/6W
R3401	401 150 6209	MT-GLAZE 1K JA 1/10W	R620	401 025 1605	CARBON 1.5K JA 1/6W
R3402	401 256 6608	MT-GLAZE 68K JA 1/10W	R621	402 001 8106	FUSIBLE RES 680 J- 1/4W
R3403	401 256 3805	MT-GLAZE 1.5K JA 1/10W	R622	401 238 3304	OXIDE-MT 0.18 JA 2W
R3404	401 256 3805	MT-GLAZE 1.5K JA 1/10W	R642	401 012 7009	CARBON 10K JA 1/4W
R3405	401 255 6500	MT-GLAZE 100 JA 1/10W	R661	401 058 8107	OXIDE-MT 120 JA 1W
R3406	401 256 8008	MT-FILM 16.5K FD 1/6W	R662	401 069 0404	OXIDE-MT 6.8 JA 2W
R3407	401 162 3104	MT-GLAZE 3.3K JA 1/10W	R681	401 162 2800	MT-GLAZE 1.8K JA 1/10W
R3408	401 162 2800	MT-GLAZE 1.8K JA 1/10W	R682	401 012 5708	CARBON 1K JA 1/4W
R3421	401 024 6700	CARBON 100 JA 1/6W	R683	401 162 3708	MT-GLAZE 4.7K JA 1/10W

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
R684	401 150 5905	MT-GLAZE 10K JA 1/10W	D009	407 099 5808	ZENER DIODE MTZJ7.5A
R685	401 012 5708	CARBON 1K JA 1/4W		407 057 6304	ZENER DIODE RD7.5EB1
R686	401 012 7009	CARBON 10K JA 1/4W	D103	407 100 0204	ZENER DIODE MTZJ36A
R687	401 019 1901	CARBON 3.9K JA 1/4W		407 056 2307	ZENER DIODE RD36EB1
R688	401 162 3005	MT-GLAZE 22K JA 1/10W	D191	408 008 2406	DIODE 1N4148
R689	401 256 5106	MT-GLAZE 560K JA 1/10W		407 012 4406	DIODE 1SS133
R801	401 256 5809	MT-GLAZE 270K JA 1/10W		407 013 4306	DIODE 1S2076A
R831	401 150 5905	MT-GLAZE 10K JA 1/10W		407 013 7109	DIODE 1S2473
R832	401 150 6001	MT-GLAZE 0.000 ZA 1/10W	D1910	407 196 7705	LED SLP-581D-51
R834	401 150 5905	MT-GLAZE 10K JA 1/10W		407 158 9204	LED SPR-39MVWF
R835	401 150 5905	MT-GLAZE 10K JA 1/10W	D350	408 008 2406	DIODE 1N4148
R836	401 150 5905	MT-GLAZE 10K JA 1/10W		407 012 4406	DIODE 1SS133
R837	401 162 3708	MT-GLAZE 4.7K JA 1/10W		407 013 4306	DIODE 1S2076A
R838	401 162 3708	MT-GLAZE 4.7K JA 1/10W		407 013 7109	DIODE 1S2473
R839	401 255 6500	MT-GLAZE 100 JA 1/10W	D351	407 099 6003	ZENER DIODE MTZJ9.1B
R840	401 255 6500	MT-GLAZE 100 JA 1/10W		407 057 9701	ZENER DIODE RD9.1EB2
R841	401 162 3708	MT-GLAZE 4.7K JA 1/10W	D381	407 063 8903	ZENER DIODE MTZJ5.6C
R842	401 162 3708	MT-GLAZE 4.7K JA 1/10W		407 057 0104	ZENER DIODE RD5.6EB3
R851	401 256 7605	MT-GLAZE 3.9K JA 1/10W	D383	408 008 2406	DIODE 1N4148
R852	401 256 7605	MT-GLAZE 3.9K JA 1/10W		407 012 4406	DIODE 1SS133
R853	401 162 4101	MT-GLAZE 5.6K JA 1/10W		407 013 4306	DIODE 1S2076A
R855	401 162 4101	MT-GLAZE 5.6K JA 1/10W		407 013 7109	DIODE 1S2473
R857	401 162 4101	MT-GLAZE 5.6K JA 1/10W	D384	407 012 4406	DIODE 1SS133
R861	401 152 3206	MT-GLAZE 330 JA 1/10W	D385	408 008 2406	DIODE 1N4148
R862	401 150 5905	MT-GLAZE 10K JA 1/10W		407 012 4406	DIODE 1SS133
R863	401 150 5905	MT-GLAZE 10K JA 1/10W		407 013 4306	DIODE 1S2076A
R868	401 150 5806	MT-GLAZE 100K JA 1/10W		407 013 7109	DIODE 1S2473
R870	401 025 8208	CARBON 22K JA 1/6W	D445	408 008 2406	DIODE 1N4148
R871	401 150 5905	MT-GLAZE 10K JA 1/10W		407 012 4406	DIODE 1SS133
R878	401 162 4101	MT-GLAZE 5.6K JA 1/10W		407 013 4306	DIODE 1S2076A
R879	401 026 1307	CARBON 27K JA 1/6W		407 013 7109	DIODE 1S2473
R881	401 150 5905	MT-GLAZE 10K JA 1/10W	D446	407 099 5204	ZENER DIODE MTZJ5.1B
R883	401 256 1702	MT-GLAZE 33K JA 1/10W		407 056 8002	ZENER DIODE RD5.1EB2
R886	401 162 3005	MT-GLAZE 22K JA 1/10W	D447	408 008 2406	DIODE 1N4148
R887	401 162 3005	MT-GLAZE 22K JA 1/10W		407 012 4406	DIODE 1SS133
R888	401 162 2909	MT-GLAZE 220 JA 1/10W		407 013 4306	DIODE 1S2076A
R891	401 162 2909	MT-GLAZE 220 JA 1/10W		407 013 7109	DIODE 1S2473
R892	401 255 6005	MT-GLAZE 1M JA 1/10W	D461	408 008 2406	DIODE 1N4148
R893	401 255 6005	MT-GLAZE 1M JA 1/10W		407 012 4406	DIODE 1SS133
R894	401 255 6500	MT-GLAZE 100 JA 1/10W		407 013 4306	DIODE 1S2076A
				407 013 7109	DIODE 1S2473
<b>TRANSFORMER</b>			D491	407 124 6404	DIODE ERA18-04
△ T401	652 000 0711	TRANS, FRYBACK		407 007 6606	DIODE ES1
T431	652 000 0698	TRANS, DRIVE		407 124 5506	DIODE RMPG06G
△ T611	652 000 1046	TRANS, POWER, PULSE	D501	407 005 7308	DIODE EM01Z
				407 005 8602	DIODE ERA15-02
<b>COIL</b>				408 009 9008	DIODE BYD33D
L136	645 008 2894	INDUCTOR, 5.6U K	D571	407 099 7901	ZENER DIODE MTZJ20B
L140	645 001 4567	INDUCTOR, 10U K		407 055 1806	ZENER DIODE RD20EB2
L141	645 008 2733	INDUCTOR, 12U K	D572	408 008 2406	DIODE 1N4148
L151	645 003 9713	INDUCTOR, 15U K		407 012 4406	DIODE 1SS133
L171	645 032 8633	TRANS, OSC, 45.75MHZ		407 013 4306	DIODE 1S2076A
L201	645 008 0159	INDUCTOR, 47U K		407 013 7109	DIODE 1S2473
L206	645 008 2894	INDUCTOR, 5.6U K	D603	407 006 6300	DIODE ERC05-10B
L231	401 025 7409	CARBON 220 JA 1/6W		407 009 6901	DIODE RM11C
L232	401 025 7409	CARBON 220 JA 1/6W	D604	407 006 6300	DIODE ERC05-10B
L233	401 025 7409	CARBON 220 JA 1/6W		407 009 6901	DIODE RM11C
L431	610 031 9998	PIPE CORE	D605	407 006 6300	DIODE ERC05-10B
L432	610 031 9998	PIPE CORE		407 009 6901	DIODE RM11C
L444	645 036 7465	COIL, LINEARITY	D606	407 006 6300	DIODE ERC05-10B
L445	610 000 0339	COIL		407 009 6901	DIODE RM11C
	610 230 8822	COIL	△ D610	407 173 2907	PHOTO COUPLE PC123F2
L601	610 031 5938	LINE FILTER		407 104 2402	PHOTO COUPLE PC817C
	645 017 6159	LINE FILTER		407 106 6101	PHOTO COUPLE PC817D
<b>DIODE</b>			D611	407 146 8103	DIODE EG01C
D008	407 012 4406	DIODE 1SS133	D612	407 007 7603	DIODE EU2
				407 007 7801	DIODE EU2Z

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
D613	407 006 0100	DIODE ERA91-02		405 066 9903	TR 2SC2688(1)-K
D614	407 099 7000	ZENER DIODE MTZJ15B		405 067 0008	TR 2SC2688(1)-L
	407 054 5805	ZENER DIODE RD15EB2		405 067 0107	TR 2SC2688(1)-M
D615	408 008 2406	DIODE 1N4148		406 000 3605	TR 2SC3620(LB-SAN-1)
	407 012 4406	DIODE 1SS133	Q711	405 041 6507	TR 2SC2621-D-RA
	407 013 4306	DIODE 1S2076A		405 041 6705	TR 2SC2621-E-RA
	407 013 7109	DIODE 1S2473		405 066 9903	TR 2SC2688(1)-K
D616	407 012 4406	DIODE 1SS133		405 067 0008	TR 2SC2688(1)-L
D618	408 008 2406	DIODE 1N4148		405 067 0107	TR 2SC2688(1)-M
	407 012 4406	DIODE 1SS133		406 000 3605	TR 2SC3620(LB-SAN-1)
	407 013 4306	DIODE 1S2076A	Q721	405 041 6507	TR 2SC2621-D-RA
	407 013 7109	DIODE 1S2473		405 041 6705	TR 2SC2621-E-RA
D631	407 007 7702	DIODE EU2A		405 066 9903	TR 2SC2688(1)-K
D633	407 007 7603	DIODE EU2		405 067 0008	TR 2SC2688(1)-L
	407 007 7801	DIODE EU2Z		405 067 0107	TR 2SC2688(1)-M
D634	407 009 8905	DIODE RU3M		406 000 3605	TR 2SC3620(LB-SAN-1)
D635	407 009 8905	DIODE RU3M	Q751	405 134 5905	TR 2SA1037AK-T146-R
D661	407 099 6102	ZENER DIODE MTZJ10B		405 147 2205	TR 2SA1037AK-S-T146
	407 054 0008	ZENER DIODE RD10EB2		405 002 0308	TR 2SA1037K T146 R
D681	407 099 5709	ZENER DIODE MTZJ6.8C		405 002 0407	TR 2SA1037K T146 S
	407 057 4201	ZENER DIODE RD6.8EB3		405 002 6706	TR 2SA1179-M6-TB
D682	408 008 2406	DIODE 1N4148		405 002 6904	TR 2SA1179-M7-TB
	407 012 4406	DIODE 1SS133			
	407 013 4306	DIODE 1S2076A			
	407 013 7109	DIODE 1S2473			
D861	407 099 4801	ZENER DIODE MTZJ4.3B			
	407 056 4707	ZENER DIODE RD4.3EB2			
<b>MISCELLANEOUS</b>			<b>CAPACITOR</b>		
△ F601	423 024 8409	FUSE 250V 4A	C701	403 157 6404	CERAMIC 330P K 50V
F601-A1	645 000 5077	HOLDER,FUSE	C710	403 056 0008	ELECT 4.7U M 250V
F601-A2	645 000 5077	HOLDER,FUSE	C711	403 157 6404	CERAMIC 330P K 50V
A101	645 032 8589	TUNER,U/V	C721	403 157 6404	CERAMIC 330P K 50V
	645 032 8596	TUNER,U/V	C731	403 077 2708	CERAMIC 1000P P 2K
A1901	645 027 4213	UNIT,REMOCON RECEIVER		403 077 2807	CERAMIC 1000P Z 2K
K1001	645 006 3787	JACK,RCA-3	C751	403 044 1703	ELECT 470U M 16V
K1101	645 005 5706	JACK,PHONE D3.6			
	645 006 4708	JACK,PHONE D3.6			
K1111	645 002 0568	TERMINAL,BOARD			
PS601	408 003 6805	THERMISTOR 902P44E180MR14			
	408 000 3906	TH PTH451A112BF180M270			
SW1901	645 027 7382	SWITCH,PUSH 1P-1TX1			
SW1902	645 027 7382	SWITCH,PUSH 1P-1TX1			
SW1903	645 027 7382	SWITCH,PUSH 1P-1TX1			
SW1904	645 027 7382	SWITCH,PUSH 1P-1TX1			
SW1905	645 027 7382	SWITCH,PUSH 1P-1TX1			
△ SW601	645 017 0928	SWITCH,PUSH POWER 2P-2T			
X131	421 006 3206	SAW F TSF5221P			
X141	610 015 3059	TRAP,CERAMIC 4.5MHZ			
	645 041 1618	TRAP CERAMIC 4.5MHZ			
	652 000 0230	TRAP,CERAMIC 4.5MHZ			
X151	610 015 2946	CERAMIC FILTER 4.5MHZ			
	645 030 1049	CERAMIC FILTER 4.5MHZ			
	645 041 1656	CERAMIC FILTER 4.5MHZ			
X211	610 012 0655	CRYSTAL OSCILLATOR			
X212	645 001 6172	OSC,CRYSTAL 3575.611KHZ			
X213	610 012 1294	CRYSTAL OSCILLATOR			
X351	645 030 1889	OSC,CERAMIC 503KHZ			
X801	645 004 1938	OSC,CRYSTAL 32.768KHZ			
	645 004 1945	OSC,CRYSTAL 32.768KHZ			
<b>610 278 5272 ASSY,PWB,CRT F2GE 1AA0B10E526BB</b>			<b>RESISTOR</b>		
<b>TRANSISTOR</b>			R701	401 162 3609	MT-GLAZE 470 JA 1/10W
Q701	405 041 6507	TR 2SC2621-D-RA	R703	401 162 3609	MT-GLAZE 470 JA 1/10W
	405 041 6705	TR 2SC2621-E-RA	R704	401 065 4604	OXIDE-MT 12K JA 2W
			R705	401 009 1508	CARBON 2.7K JA 1/2W
			R711	401 162 3609	MT-GLAZE 470 JA 1/10W
			R713	401 162 3609	MT-GLAZE 470 JA 1/10W
			R714	401 065 4604	OXIDE-MT 12K JA 2W
			R715	401 009 1508	CARBON 2.7K JA 1/2W
			R721	401 162 3609	MT-GLAZE 470 JA 1/10W
			R723	401 162 3609	MT-GLAZE 470 JA 1/10W
			R724	401 065 4604	OXIDE-MT 12K JA 2W
			R725	401 009 1508	CARBON 2.7K JA 1/2W
			R732	401 015 6504	CARBON 2.2 JA 1/4W
			R751	401 150 6001	MT-GLAZE 0.000 ZA 1/10W
			R752	401 150 5905	MT-GLAZE 10K JA 1/10W
			R753	401 150 5905	MT-GLAZE 10K JA 1/10W
			<b>DIODE</b>		
			D751	407 012 4406	DIODE 1SS133
			D752	407 012 4406	DIODE 1SS133
			D753	407 012 4406	DIODE 1SS133
			D754	407 012 4406	DIODE 1SS133
			<b>MISCELLANEOUS</b>		
			△ K701	645 026 2005	SOCKET,CRT 8P





Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
	405 002 0308	TR 2SA1037K T146 R	<b>INTEGRATED CIRCUIT</b>		
	405 002 0407	TR 2SA1037K T146 S	IC001	409 389 4607	IC LA4600
	405 002 6706	TR 2SA1179-M6-TB	IC191	409 241 5407	IC BA178M05T
	405 002 6904	TR 2SA1179-M7-TB		409 172 1509	IC MC78M05CT
Q431	405 018 0507	TR 2SC3332-R		409 320 5700	IC UPC78M05AHF
	405 018 0606	TR 2SC3332-S	IC201	410 342 8907	IC QXXAVB488--M
Q432	405 112 7600	TR 2SD1880-CTV-YB	IC3401	409 432 7807	IC UPC1851BCU
Q531	405 014 4509	TR 2SC2412K T146 R	IC501	409 340 1904	IC LA7841
	405 014 4608	TR 2SC2412K T146 S	IC611	410 326 5007	IC STR-F6656 LF1351
	405 015 8704	TR 2SC2812-L6-TB	IC631	409 172 8102	IC SE130NH
	405 015 8902	TR 2SC2812-L7-TB	IC651	409 241 5407	IC BA178M05T
Q576	405 014 4509	TR 2SC2412K T146 R		409 172 1509	IC MC78M05CT
	405 014 4608	TR 2SC2412K T146 S		409 320 5700	IC UPC78M05AHF
	405 015 8704	TR 2SC2812-L6-TB	IC801	410 328 4800	IC LC863232A-5L95
	405 015 8902	TR 2SC2812-L7-TB	IC802	409 343 6302	IC 24LC04B/P
Q611	406 000 6804	TR 2SA1015-GR(SAN)	<b>CAPACITOR</b>		
	405 001 7605	TR 2SA1015-Y(SAN)	C001	403 049 0008	ELECT 1U M 50V
	405 004 3208	TR 2SA564A-R(CU)	C002	403 157 6701	CERAMIC 560P K 50V
	405 151 3304	TR 2SA608NF-NPA	C003	403 049 0008	ELECT 1U M 50V
	405 006 1806	TR 2SA933S-R	C004	403 157 6701	CERAMIC 560P K 50V
Q661	405 059 9903	TR 2SD1913-R-RA	C005	403 051 0607	ELECT 4.7U M 50V
	405 060 0005	TR 2SD1913-S-RA	C006	403 042 2405	ELECT 100U M 16V
Q681	405 014 4509	TR 2SC2412K T146 R	C007	403 045 9807	ELECT 2200U M 25V
	405 014 4608	TR 2SC2412K T146 S	C008	403 164 0204	CERAMIC 0.1U Z 25V
	405 015 8704	TR 2SC2812-L6-TB	C010	403 045 1504	ELECT 1000U M 25V
	405 015 8902	TR 2SC2812-L7-TB	C012	403 045 1504	ELECT 1000U M 25V
Q682	405 014 4509	TR 2SC2412K T146 R	C015	403 164 0204	CERAMIC 0.1U Z 25V
	405 014 4608	TR 2SC2412K T146 S	C101	403 044 1703	ELECT 470U M 16V
	405 015 8704	TR 2SC2812-L6-TB	C102	403 038 8602	ELECT 33U M 6.3V
	405 015 8902	TR 2SC2812-L7-TB	C1021	403 049 0008	ELECT 1U M 50V
Q683	405 089 0000	TR 2SA1707-S	C103	403 051 0607	ELECT 4.7U M 50V
	405 089 0109	TR 2SA1707-T	C106	403 051 0607	ELECT 4.7U M 50V
	405 009 6907	TR 2SB985-S	C111	403 149 9208	CERAMIC 0.01U Z 50V
	405 009 7003	TR 2SB985-T	C112	403 149 9208	CERAMIC 0.01U Z 50V
Q684	405 014 4509	TR 2SC2412K T146 R	C113	403 149 9208	CERAMIC 0.01U Z 50V
	405 014 4608	TR 2SC2412K T146 S	C132	403 149 9208	CERAMIC 0.01U Z 50V
	405 015 8704	TR 2SC2812-L6-TB	C136	403 043 3906	ELECT 33U M 16V
	405 015 8902	TR 2SC2812-L7-TB	C137	403 149 9208	CERAMIC 0.01U Z 50V
Q691	405 014 4509	TR 2SC2412K T146 R	C138	403 048 1907	ELECT 0.22U M 50V
	405 014 4608	TR 2SC2412K T146 S	C142	403 042 7707	ELECT 22U M 16V
	405 015 8704	TR 2SC2812-L6-TB	C151	403 157 2901	CERAMIC 47P J 50V
	405 015 8902	TR 2SC2812-L7-TB	C152	403 157 2901	CERAMIC 47P J 50V
Q861	405 134 5905	TR 2SA1037AK-T146-R	C171	403 048 1907	ELECT 0.22U M 50V
	405 147 2205	TR 2SA1037AK-S-T146	C173	403 155 4204	CERAMIC 15P J 50V
	405 002 0308	TR 2SA1037K T146 R	C177	403 048 4205	ELECT 0.33U M 50V
	405 002 0407	TR 2SA1037K T146 S	C191	403 041 2109	ELECT 47U M 10V
	405 002 6706	TR 2SA1179-M6-TB	C201	403 043 9106	ELECT 47U M 16V
	405 002 6904	TR 2SA1179-M7-TB	C202	403 149 9208	CERAMIC 0.01U Z 50V
Q871	405 014 4509	TR 2SC2412K T146 R	C206	403 044 1703	ELECT 470U M 16V
	405 014 4608	TR 2SC2412K T146 S	C207	403 149 9208	CERAMIC 0.01U Z 50V
	405 015 8704	TR 2SC2812-L6-TB	C211	401 150 6001	MT-GLAZE 0.000 ZA 1/10W
	405 015 8902	TR 2SC2812-L7-TB	C212	401 150 6001	MT-GLAZE 0.000 ZA 1/10W
Q881	405 014 4509	TR 2SC2412K T146 R	C216	403 049 0008	ELECT 1U M 50V
	405 014 4608	TR 2SC2412K T146 S	C221	403 164 0204	CERAMIC 0.1U Z 25V
	405 015 8704	TR 2SC2812-L6-TB	C222	403 164 0204	CERAMIC 0.1U Z 25V
	405 015 8902	TR 2SC2812-L7-TB	C223	403 164 0204	CERAMIC 0.1U Z 25V
Q886	405 014 4509	TR 2SC2412K T146 R	C241	403 155 9704	NP-ELECT 0.1U M 50V
	405 014 4608	TR 2SC2412K T146 S	C243	403 155 9704	NP-ELECT 0.1U M 50V
	405 015 8704	TR 2SC2812-L6-TB	C246	403 049 0008	ELECT 1U M 50V
	405 015 8902	TR 2SC2812-L7-TB	C247	403 215 2409	CERAMIC 0.015U K 50V
Q887	405 134 5905	TR 2SA1037AK-T146-R	C248	403 149 9208	CERAMIC 0.01U Z 50V
	405 147 2205	TR 2SA1037AK-S-T146	C281	403 049 9803	ELECT 2.2U M 50V
	405 002 0308	TR 2SA1037K T146 R	C3400	403 164 0204	CERAMIC 0.1U Z 25V
	405 002 0407	TR 2SA1037K T146 S	C3401	403 043 9106	ELECT 47U M 16V
	405 002 6706	TR 2SA1179-M6-TB	C3402	403 042 7707	ELECT 22U M 16V
	405 002 6904	TR 2SA1179-M7-TB	C3403	403 164 0204	CERAMIC 0.1U Z 25V

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
C3404	403 050 6600	ELECT 3.3U M 50V	△ C608	404 073 5106	CERAMIC 470P K 250V
C3406	403 166 1605	NP-ELECT 4.7U M 25V		404 073 3300	CERAMIC 470P M 250V
C3407	403 049 9803	ELECT 2.2U M 50V	△ C609	404 073 5106	CERAMIC 470P K 250V
C3408	403 224 7006	CERAMIC 0.047U Z 50V		404 073 3300	CERAMIC 470P M 250V
C3409	403 048 6308	ELECT 0.47U M 50V	C610	404 073 5106	CERAMIC 470P K 250V
C3410	403 164 0204	CERAMIC 0.1U Z 25V		404 073 3300	CERAMIC 470P M 250V
C3411	403 047 8402	ELECT 0.1U M 50V	C611	403 083 4307	POLYPRO 0.022U J 400V
C3412	403 090 6004	TA-SOLID 3.3U K 10V	C612	403 247 3306	CERAMIC 330P K 2K
C3413	403 049 0008	ELECT 1U M 50V		403 232 1607	CERAMIC 330P K 2K
C3414	403 090 3607	TA-SOLID 10U K 10V	C613	403 247 3306	CERAMIC 330P K 2K
C3416	403 049 0008	ELECT 1U M 50V		403 232 1607	CERAMIC 330P K 2K
C3417	403 049 0008	ELECT 1U M 50V	C614	403 138 9905	POLYESTER 470P J 50V
C3418	403 051 0607	ELECT 4.7U M 50V		403 276 9102	POLYESTER 470P J 50V
C3419	403 049 0008	ELECT 1U M 50V		403 312 9905	POLYESTER 470P J 50V
C3423	403 284 4304	CERAMIC 0.022U K 50V	C615	403 056 7304	POLYESTER 1000P J 50V
C3424	403 049 9803	ELECT 2.2U M 50V		403 178 9200	POLYESTER 1000P J 50V
C3426	403 113 4109	CERAMIC 2200P K 50V		403 311 8404	POLYESTER 1000P J 50V
C3427	403 164 0204	CERAMIC 0.1U Z 25V	C616	403 138 9905	POLYESTER 470P J 50V
C3428	403 049 9803	ELECT 2.2U M 50V		403 276 9102	POLYESTER 470P J 50V
C3429	403 113 4109	CERAMIC 2200P K 50V		403 312 9905	POLYESTER 470P J 50V
C3431	403 164 0204	CERAMIC 0.1U Z 25V	C617	403 148 1708	ELECT 100U M 35V
C3434	403 046 9905	ELECT 4.7U M 25V	C618	403 057 0601	POLYESTER 0.01U K 50V
C3436	403 046 9905	ELECT 4.7U M 25V		403 179 3801	POLYESTER 0.01U K 50V
C3439	403 049 0008	ELECT 1U M 50V		403 311 8701	POLYESTER 0.01U K 50V
C3440	403 157 7302	CERAMIC 6800P K 50V	C631	403 262 4500	CERAMIC 820P K 1K
C351	403 043 6006	ELECT 330U M 16V	C633	403 222 1303	CERAMIC 1000P K 1K
C354	403 284 4304	CERAMIC 0.022U K 50V		403 271 9602	CERAMIC 1000P K 1K
C355	403 048 6308	ELECT 0.47U M 50V		403 262 1806	CERAMIC 1000P K 1K
C356	403 048 6308	ELECT 0.47U M 50V	C641	404 073 9005	ELECT 220U M 160V
C357	403 215 2201	CERAMIC 0.01U K 50V	C643	403 119 8101	ELECT 1000U M 35V
C359	403 215 2201	CERAMIC 0.01U K 50V	C644	403 148 0404	ELECT 1000U M 25V
C361	403 260 2003	MT-COMPO 1U J 50V	C645	403 045 9807	ELECT 2200U M 25V
	403 270 2109	MT-COMPO 1U J 50V	C646	403 069 8305	CERAMIC 0.01U Z 50V
C371	403 157 6800	CERAMIC 680P K 50V	C651	403 040 9406	ELECT 330U M 10V
C372	403 049 0008	ELECT 1U M 50V	C661	403 043 0202	ELECT 220U M 16V
C385	403 061 9805	POLYESTER 0.047U J 50V	C662	403 043 6006	ELECT 330U M 16V
	403 179 1005	POLYESTER 0.047U J 50V	C682	403 057 3107	POLYESTER 0.1U K 50V
C432	403 075 7101	CERAMIC 1000P K 500V		403 181 8207	POLYESTER 0.1U K 50V
C433	403 076 3102	CERAMIC 3900P K 500V		403 311 8909	POLYESTER 0.1U K 50V
C434	403 054 0703	ELECT 47U M 35V	C683	403 042 2405	ELECT 100U M 16V
C435	CMXAA3Y143AK	MT-POLYPRO 0.014U H 1.5K	C686	403 043 9106	ELECT 47U M 16V
C436	403 324 3106	CERAMIC 820P K 3K	C801	403 155 4204	CERAMIC 15P J 50V
	403 232 3601	CERAMIC 820P K 3K	C802	403 157 2505	CERAMIC 27P J 50V
C437	403 067 7805	MT-COMPO 0.47U J 50V	C803	403 149 9208	CERAMIC 0.01U Z 50V
C441	403 102 0006	POLYPRO 0.24U J 200V	C804	403 224 7006	CERAMIC 0.047U Z 50V
C442	403 082 8405	POLYPRO 0.22U J 200V	C811	403 149 9208	CERAMIC 0.01U Z 50V
C445	403 049 4204	ELECT 10U M 50V	C812	403 041 8804	ELECT 10U M 16V
C451	404 056 5307	NP-ELECT 2.2U M 100V	C832	403 149 9208	CERAMIC 0.01U Z 50V
C491	403 076 5304	CERAMIC 680P K 500V	C851	403 155 1609	CERAMIC 33P J 50V
C492	403 115 0802	ELECT 22U M 100V	C853	403 155 1609	CERAMIC 33P J 50V
C501	403 054 1502	ELECT 470U M 35V	C854	403 155 1609	CERAMIC 33P J 50V
C502	403 053 2104	ELECT 220U M 35V	C855	403 155 1609	CERAMIC 33P J 50V
C503	403 023 9607	CERAMIC 39P J 50V	C861	403 049 0008	ELECT 1U M 50V
C504	403 149 9208	CERAMIC 0.01U Z 50V	C878	403 049 0008	ELECT 1U M 50V
C511	403 188 1201	MT-POLYEST 0.15U K 100V	C891	403 113 3805	CERAMIC 1000P K 50V
	403 313 7603	MT-COMPO 0.15U J 100V	C892	403 049 0008	ELECT 1U M 50V
C512	403 233 1002	ELECT 1000U M 50V	C893	403 049 9803	ELECT 2.2U M 50V
C513	403 051 0607	ELECT 4.7U M 50V	C894	403 281 5007	CERAMIC 0.033U K 25V
C516	403 050 6600	ELECT 3.3U M 50V			
C520	403 113 3805	CERAMIC 1000P K 50V	<b>RESISTOR</b>		
C531	403 308 2101	CERAMIC 0.056U K 16V	RL601	645 000 4155	RELAY
C532	403 215 2201	CERAMIC 0.01U K 50V		645 011 2713	RELAY
C576	403 041 8804	ELECT 10U M 16V		645 024 7828	RELAY
C601	404 072 7705	MT-POLYEST 0.068U M 250V		645 015 8629	RELAY
	404 079 6503	MT-POLYEST 0.068U M 250V	R001	401 256 0408	MT-GLAZE 12K JA 1/10W
C602	403 262 1608	CERAMIC 100P K 1K	R002	401 256 0309	MT-GLAZE 820 JA 1/10W
C607	404 078 7600	ELECT 270U M 400V			

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
R003	401 256 0408	MT-GLAZE 12K JA 1/10W	R261	401 162 3104	MT-GLAZE 3.3K JA 1/10W
R004	401 256 0309	MT-GLAZE 820 JA 1/10W	R262	401 025 7409	CARBON 220 JA 1/6W
R006	401 026 4605	CARBON 33K JA 1/6W	R263	401 025 7409	CARBON 220 JA 1/6W
R008	401 152 3206	MT-GLAZE 330 JA 1/10W	R271	401 024 6700	CARBON 100 JA 1/6W
R009	401 150 6100	MT-GLAZE 2.2K JA 1/10W	R272	401 255 6500	MT-GLAZE 100 JA 1/10W
R010	401 026 4308	CARBON 3.3K JA 1/6W	R281	401 162 3807	MT-GLAZE 470K JA 1/10W
R1001	401 256 2709	MT-GLAZE 75 JA 1/10W	R3401	401 150 6209	MT-GLAZE 1K JA 1/10W
R1006	401 150 6209	MT-GLAZE 1K JA 1/10W	R3402	401 256 6608	MT-GLAZE 68K JA 1/10W
R1007	401 150 5806	MT-GLAZE 100K JA 1/10W	R3403	401 256 3805	MT-GLAZE 1.5K JA 1/10W
R1021	401 256 6301	MT-GLAZE 47K JA 1/10W	R3404	401 256 3805	MT-GLAZE 1.5K JA 1/10W
R1022	401 256 5304	MT-GLAZE 56K JA 1/10W	R3405	401 255 6500	MT-GLAZE 100 JA 1/10W
R1023	401 162 2404	MT-GLAZE 1.2K JA 1/10W	R3406	401 256 8008	MT-FILM 16.5K FD 1/6W
R103	401 061 8101	OXIDE-MT 39K JA 1W	R3407	401 162 3104	MT-GLAZE 3.3K JA 1/10W
R106	401 255 6500	MT-GLAZE 100 JA 1/10W	R3408	401 162 2800	MT-GLAZE 1.8K JA 1/10W
R107	401 255 6500	MT-GLAZE 100 JA 1/10W	R3421	401 024 6700	CARBON 100 JA 1/6W
R108	401 026 1307	CARBON 27K JA 1/6W	R3422	401 024 6700	CARBON 100 JA 1/6W
R109	401 162 3005	MT-GLAZE 22K JA 1/10W	R3440	401 256 3805	MT-GLAZE 1.5K JA 1/10W
R1101	401 007 7601	CARBON 150 JA 1/2W	R351	401 067 5302	OXIDE-MT 330 JA 2W
R1102	401 007 7601	CARBON 150 JA 1/2W	R356	401 162 3708	MT-GLAZE 4.7K JA 1/10W
R1106	401 150 6209	MT-GLAZE 1K JA 1/10W	R357	401 256 5106	MT-GLAZE 560K JA 1/10W
R1108	401 150 6209	MT-GLAZE 1K JA 1/10W	R358	401 256 5106	MT-GLAZE 560K JA 1/10W
R1109	401 024 7707	CARBON 100K JA 1/6W	R361	401 150 6209	MT-GLAZE 1K JA 1/10W
R111	401 150 6209	MT-GLAZE 1K JA 1/10W	R364	401 162 3005	MT-GLAZE 22K JA 1/10W
R112	401 162 4101	MT-GLAZE 5.6K JA 1/10W	R372	401 162 4002	MT-GLAZE 560 JA 1/10W
R113	401 255 6500	MT-GLAZE 100 JA 1/10W	R373	401 256 5106	MT-GLAZE 560K JA 1/10W
R114	401 162 2909	MT-GLAZE 220 JA 1/10W	R380	401 162 3708	MT-GLAZE 4.7K JA 1/10W
R116	401 256 7407	MT-GLAZE 39 JA 1/10W	R381	401 012 7009	CARBON 10K JA 1/4W
R132	401 027 5908	CARBON 68K JA 1/6W	R382	401 021 3009	CARBON 5.6K JA 1/4W
R133	401 256 5304	MT-GLAZE 56K JA 1/10W	R383	401 026 9907	CARBON 4.7K JA 1/6W
R134	401 256 0200	MT-GLAZE 120K JA 1/10W	R384	401 150 5905	MT-GLAZE 10K JA 1/10W
R140	401 162 3708	MT-GLAZE 4.7K JA 1/10W	R385	401 024 7400	CARBON 10K JA 1/6W
R141	401 025 7409	CARBON 220 JA 1/6W	R430	401 150 6209	MT-GLAZE 1K JA 1/10W
R142	401 256 2907	MT-GLAZE 150 JA 1/10W	R432	401 150 6001	MT-GLAZE 0.000 ZA 1/10W
R144	401 256 7506	MT-GLAZE 390 JA 1/10W	R433	401 007 1104	CARBON 1K JA 1/2W
R145	401 162 3609	MT-GLAZE 470 JA 1/10W	R434	401 062 5109	OXIDE-MT 56 JA 1W
R146	401 150 6001	MT-GLAZE 0.000 ZA 1/10W	R435	402 068 5001	WIRE WOUND 6.8 KA 7W
R147	401 150 6100	MT-GLAZE 2.2K JA 1/10W		402 074 5101	WIRE WOUND 6.8 KA 7W
R151	401 152 3206	MT-GLAZE 330 JA 1/10W	R444	401 058 3706	OXIDE-MT 1K JA 1W
R170	401 150 5905	MT-GLAZE 10K JA 1/10W	R447	401 026 7002	CARBON 3.9K JA 1/6W
R171	401 150 5905	MT-GLAZE 10K JA 1/10W	R448	401 010 3102	CARBON 470 JA 1/2W
R172	401 256 7308	MT-GLAZE 6.8K JA 1/10W	R451	401 023 3700	CARBON 82K JA 1/4W
R173	401 150 6001	MT-GLAZE 0.000 ZA 1/10W	R452	401 020 2003	CARBON 4.7K JA 1/4W
R174	401 255 9501	MT-GLAZE 220K JA 1/10W	R453	401 024 7004	CARBON 1K JA 1/6W
R1902	401 256 7209	MT-GLAZE 18K JA 1/10W	R454	401 024 7400	CARBON 10K JA 1/6W
R1903	401 256 7308	MT-GLAZE 6.8K JA 1/10W	R455	401 012 8105	CARBON 100K JA 1/4W
R1904	401 162 3708	MT-GLAZE 4.7K JA 1/10W	R461	401 015 4708	CARBON 180K JA 1/4W
R1905	401 256 5908	MT-GLAZE 2.7K JA 1/10W	R462	401 027 2600	CARBON 5.6K JA 1/6W
R1906	401 025 7805	CARBON 2.2K JA 1/6W	R481	401 064 5305	OXIDE-MT 1.5 JA 2W
R1907	401 256 6202	MT-GLAZE 270 JA 1/10W	R491	401 008 3800	CARBON 2.2 JB 1/2W
R1908	401 150 5905	MT-GLAZE 10K JA 1/10W	R501	401 026 3905	CARBON 330 JA 1/6W
R1911	401 162 3609	MT-GLAZE 470 JA 1/10W	R505	401 026 1000	CARBON 2.7K JA 1/6W
R1912	401 162 3609	MT-GLAZE 470 JA 1/10W	R506	401 026 7408	CARBON 39K JA 1/6W
R1913	401 162 3609	MT-GLAZE 470 JA 1/10W	R507	401 025 4606	CARBON 18K JA 1/6W
R212	401 256 5304	MT-GLAZE 56K JA 1/10W	R508	401 027 5205	CARBON 680 JA 1/6W
R213	401 256 5304	MT-GLAZE 56K JA 1/10W	R509	401 057 9105	OXIDE-MT 1.2 JA 1W
R214	401 256 3607	MT-GLAZE 15K JA 1/10W	R511	401 059 2807	OXIDE-MT 150 JA 1W
R215	401 256 3607	MT-GLAZE 15K JA 1/10W	R514	401 007 1104	CARBON 1K JA 1/2W
R216	401 256 6301	MT-GLAZE 47K JA 1/10W	R516	401 162 3401	MT-GLAZE 39K JA 1/10W
R217	401 256 1702	MT-GLAZE 33K JA 1/10W	R531	401 256 5304	MT-GLAZE 56K JA 1/10W
R221	401 150 6209	MT-GLAZE 1K JA 1/10W	R532	401 150 5806	MT-GLAZE 100K JA 1/10W
R222	401 150 6209	MT-GLAZE 1K JA 1/10W	R533	401 150 5806	MT-GLAZE 100K JA 1/10W
R223	401 150 6209	MT-GLAZE 1K JA 1/10W	R534	401 256 5304	MT-GLAZE 56K JA 1/10W
R231	401 150 6100	MT-GLAZE 2.2K JA 1/10W	R571	401 024 7004	CARBON 1K JA 1/6W
R232	401 150 6100	MT-GLAZE 2.2K JA 1/10W	R576	401 162 3708	MT-GLAZE 4.7K JA 1/10W
R233	401 150 6100	MT-GLAZE 2.2K JA 1/10W	R577	401 256 0309	MT-GLAZE 820 JA 1/10W
R246	401 162 3104	MT-GLAZE 3.3K JA 1/10W	R601	401 008 8607	CARBON 220K JA 1/2W
R248	401 256 7704	MT-GLAZE 3.9M JA 1/10W	R602	402 073 3702	WIRE WOUND 1.8 KA 15W



Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
△ R608	402 000 8305	SOLID 5.6M KA 1/2W	T431	652 000 0704	TRANS,DRIVE
△ R609	402 000 8305	SOLID 5.6M KA 1/2W	△ T611	652 000 1053	TRANS,POWER,PULSE
R611	401 069 4501	OXIDE-MT 68K JA 2W	<b>COIL</b>		
R612	401 007 2903	CARBON 1M JA 1/2W	L136	645 008 2894	INDUCTOR,5.6U K
R613	401 007 2903	CARBON 1M JA 1/2W	L140	645 001 4567	INDUCTOR,10U K
R614	401 026 4308	CARBON 3.3K JA 1/6W	L141	645 008 2733	INDUCTOR,12U K
R615	401 069 4501	OXIDE-MT 68K JA 2W	L151	645 003 9713	INDUCTOR,15U K
R616	401 012 3407	CARBON 10 JA 1/4W	L171	645 032 8633	TRANS,OSC,45.75MHZ
R617	401 024 7400	CARBON 10K JA 1/6W	L201	645 008 0159	INDUCTOR,47U K
R618	401 024 7004	CARBON 1K JA 1/6W	L206	645 008 2894	INDUCTOR,5.6U K
R619	401 025 1605	CARBON 1.5K JA 1/6W	L231	401 025 7409	CARBON 220 JA 1/6W
R620	401 025 1605	CARBON 1.5K JA 1/6W	L232	401 025 7409	CARBON 220 JA 1/6W
R621	402 001 8106	FUSIBLE RES 680 J- 1/4W	L233	401 025 7409	CARBON 220 JA 1/6W
R622	401 228 0405	OXIDE-MT 0.27 JA 2W	L431	610 031 9998	PIPE CORE
R623	401 228 0405	OXIDE-MT 0.27 JA 2W	L432	610 031 9998	PIPE CORE
R642	401 012 7009	CARBON 10K JA 1/4W	L444	645 029 8042	COIL,LINEARITY
R661	401 058 8107	OXIDE-MT 120 JA 1W	L445	610 000 0070	COIL
R662	401 069 0404	OXIDE-MT 6.8 JA 2W	L521	645 001 5748	INDUCTOR,33U K
R681	401 162 2800	MT-GLAZE 1.8K JA 1/10W	L601	610 031 5938	LINE FILTER
R682	401 012 5708	CARBON 1K JA 1/4W		645 017 6159	LINE FILTER
R683	401 162 3708	MT-GLAZE 4.7K JA 1/10W	<b>DIODE</b>		
R684	401 150 5905	MT-GLAZE 10K JA 1/10W	D008	407 012 4406	DIODE 1SS133
R685	401 012 5708	CARBON 1K JA 1/4W	D009	407 099 5808	ZENER DIODE MTZJ7.5A
R686	401 012 7009	CARBON 10K JA 1/4W		407 057 6304	ZENER DIODE RD7.5EB1
R687	401 019 1901	CARBON 3.9K JA 1/4W	D103	407 100 0204	ZENER DIODE MTZJ36A
R688	401 162 3005	MT-GLAZE 22K JA 1/10W		407 056 2307	ZENER DIODE RD36EB1
R689	401 256 5106	MT-GLAZE 560K JA 1/10W	D191	408 008 2406	DIODE 1N4148
R691	401 061 2505	OXIDE-MT 330 JA 1W		407 012 4406	DIODE 1SS133
R692	401 256 3805	MT-GLAZE 1.5K JA 1/10W		407 013 4306	DIODE 1S2076A
R801	401 256 5809	MT-GLAZE 270K JA 1/10W		407 013 7109	DIODE 1S2473
R831	401 150 5905	MT-GLAZE 10K JA 1/10W	D1910	407 196 7705	LED SLP-581D-51
R832	401 150 6001	MT-GLAZE 0.000 ZA 1/10W		407 158 9204	LED SPR-39MVWF
R834	401 150 5905	MT-GLAZE 10K JA 1/10W	D350	408 008 2406	DIODE 1N4148
R835	401 150 5905	MT-GLAZE 10K JA 1/10W		407 012 4406	DIODE 1SS133
R836	401 150 5905	MT-GLAZE 10K JA 1/10W		407 013 4306	DIODE 1S2076A
R837	401 162 3708	MT-GLAZE 4.7K JA 1/10W		407 013 7109	DIODE 1S2473
R838	401 162 3708	MT-GLAZE 4.7K JA 1/10W	D351	407 099 6003	ZENER DIODE MTZJ9.1B
R839	401 255 6500	MT-GLAZE 100 JA 1/10W		407 057 9701	ZENER DIODE RD9.1EB2
R840	401 255 6500	MT-GLAZE 100 JA 1/10W	D381	407 063 8903	ZENER DIODE MTZJ5.6C
R841	401 162 3708	MT-GLAZE 4.7K JA 1/10W		407 057 0104	ZENER DIODE RD5.6EB3
R842	401 162 3708	MT-GLAZE 4.7K JA 1/10W	D383	408 008 2406	DIODE 1N4148
R851	401 256 7605	MT-GLAZE 3.9K JA 1/10W		407 012 4406	DIODE 1SS133
R852	401 256 7605	MT-GLAZE 3.9K JA 1/10W		407 013 4306	DIODE 1S2076A
R853	401 162 4101	MT-GLAZE 5.6K JA 1/10W		407 013 7109	DIODE 1S2473
R855	401 162 4101	MT-GLAZE 5.6K JA 1/10W	D384	407 012 4406	DIODE 1SS133
R857	401 162 4101	MT-GLAZE 5.6K JA 1/10W	D385	408 008 2406	DIODE 1N4148
R861	401 152 3206	MT-GLAZE 330 JA 1/10W		407 012 4406	DIODE 1SS133
R862	401 150 5905	MT-GLAZE 10K JA 1/10W		407 013 4306	DIODE 1S2076A
R863	401 150 5905	MT-GLAZE 10K JA 1/10W		407 013 7109	DIODE 1S2473
R868	401 150 5806	MT-GLAZE 100K JA 1/10W	D441	407 005 7209	DIODE EM01A
R870	401 025 8208	CARBON 22K JA 1/6W		407 109 5507	DIODE ERC12-06
R871	401 150 5905	MT-GLAZE 10K JA 1/10W	D445	408 008 2406	DIODE 1N4148
R878	401 162 4101	MT-GLAZE 5.6K JA 1/10W		407 012 4406	DIODE 1SS133
R879	401 026 1307	CARBON 27K JA 1/6W		407 013 4306	DIODE 1S2076A
R881	401 150 5905	MT-GLAZE 10K JA 1/10W		407 013 7109	DIODE 1S2473
R883	401 256 1702	MT-GLAZE 33K JA 1/10W	D446	407 099 5204	ZENER DIODE MTZJ5.1B
R886	401 162 3005	MT-GLAZE 22K JA 1/10W		407 056 8002	ZENER DIODE RD5.1EB2
R887	401 162 3005	MT-GLAZE 22K JA 1/10W	D447	408 008 2406	DIODE 1N4148
R888	401 162 2909	MT-GLAZE 220 JA 1/10W		407 012 4406	DIODE 1SS133
R891	401 162 2909	MT-GLAZE 220 JA 1/10W		407 013 4306	DIODE 1S2076A
R892	401 255 6005	MT-GLAZE 1M JA 1/10W		407 013 7109	DIODE 1S2473
R893	401 255 6005	MT-GLAZE 1M JA 1/10W	D461	408 008 2406	DIODE 1N4148
R894	401 255 6500	MT-GLAZE 100 JA 1/10W		407 012 4406	DIODE 1SS133
<b>TRANSFORMER</b>				407 013 4306	DIODE 1S2076A
△ T401	645 014 6091	TRANS,FLYBACK		407 013 7109	DIODE 1S2473

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
D491	407 124 6404	DIODE ERA18-04		645 006 4708	JACK,PHONE D3.6
	407 007 6606	DIODE ES1	K1111	645 002 0568	TERMINAL,BOARD
	407 124 5506	DIODE RMPG06G	PS602	408 013 3801	TH PTH451C262BF140M270
D501	407 005 7308	DIODE EM01Z	SW1901	645 027 7382	SWITCH,PUSH 1P-1TX1
	407 005 8602	DIODE ERA15-02	SW1902	645 027 7382	SWITCH,PUSH 1P-1TX1
	408 009 9008	DIODE BYD33D	SW1903	645 027 7382	SWITCH,PUSH 1P-1TX1
D531	407 012 4406	DIODE 1SS133	SW1904	645 027 7382	SWITCH,PUSH 1P-1TX1
D571	407 099 7901	ZENER DIODE MTZJ20B	SW1905	645 027 7382	SWITCH,PUSH 1P-1TX1
	407 055 1806	ZENER DIODE RD20EB2	△ SW601	645 017 0928	SWITCH,PUSH POWER 2P-2T
D572	408 008 2406	DIODE 1N4148	X131	421 006 3206	SAW F TSF5221P
	407 012 4406	DIODE 1SS133	X141	610 015 3059	TRAP,CERAMIC 4.5MHZ
	407 013 4306	DIODE 1S2076A		645 041 1618	TRAP CERAMIC 4.5MHZ
	407 013 7109	DIODE 1S2473		652 000 0230	TRAP,CERAMIC 4.5MHZ
D603	407 006 6300	DIODE ERC05-10B	X151	610 015 2946	CERAMIC FILTER 4.5MHZ
	407 009 6901	DIODE RM11C		645 030 1049	CERAMIC FILTER 4.5MHZ
D604	407 006 6300	DIODE ERC05-10B		645 041 1656	CERAMIC FILTER 4.5MHZ
	407 009 6901	DIODE RM11C	X211	610 012 0655	CRYSTAL OSCILLATOR
D605	407 006 6300	DIODE ERC05-10B	X212	645 001 6172	OSC,CRYSTAL 3575.611KHZ
	407 009 6901	DIODE RM11C	X213	610 012 1294	CRYSTAL OSCILLATOR
D606	407 006 6300	DIODE ERC05-10B	X351	645 030 1889	OSC,CERAMIC 503KHZ
	407 009 6901	DIODE RM11C	X801	645 004 1938	OSC,CRYSTAL 32.768KHZ
△ D610	407 173 2907	PHOTO COUPLE PC123F2		645 004 1945	OSC,CRYSTAL 32.768KHZ
	407 104 2402	PHOTO COUPLE PC817C			
	407 106 6101	PHOTO COUPLE PC817D			
D611	407 146 8103	DIODE EG01C			
D612	407 007 7603	DIODE EU2			
	407 007 7801	DIODE EU2Z			
D613	407 006 0100	DIODE ERA91-02			
D614	407 099 7000	ZENER DIODE MTZJ15B			
	407 054 5805	ZENER DIODE RD15EB2			
D615	408 008 2406	DIODE 1N4148			
	407 012 4406	DIODE 1SS133			
	407 013 4306	DIODE 1S2076A			
	407 013 7109	DIODE 1S2473			
D616	407 012 4406	DIODE 1SS133			
D618	408 008 2406	DIODE 1N4148			
	407 012 4406	DIODE 1SS133			
	407 013 4306	DIODE 1S2076A			
	407 013 7109	DIODE 1S2473			
D631	407 009 8806	DIODE RU3AM			
D633	407 009 8905	DIODE RU3M			
D634	407 009 8905	DIODE RU3M			
D635	407 009 8905	DIODE RU3M			
D661	407 099 6102	ZENER DIODE MTZJ10B			
	407 054 0008	ZENER DIODE RD10EB2			
D681	407 099 5709	ZENER DIODE MTZJ6.8C			
	407 057 4201	ZENER DIODE RD6.8EB3			
D682	408 008 2406	DIODE 1N4148			
	407 012 4406	DIODE 1SS133			
	407 013 4306	DIODE 1S2076A			
	407 013 7109	DIODE 1S2473			
D691	408 008 2406	DIODE 1N4148			
	407 012 4406	DIODE 1SS133			
	407 013 4306	DIODE 1S2076A			
	407 013 7109	DIODE 1S2473			
D861	407 099 4801	ZENER DIODE MTZJ4.3B			
	407 056 4707	ZENER DIODE RD4.3EB2			
<b>MISCELLANEOUS</b>			<b>610 277 2579 ASSY,PWB,CRT F5AF 1AA0B10E5280B</b>		
△ F601	423 024 8409	FUSE 250V 4A	<b>TRANSISTOR</b>		
F601-A1	645 000 5077	HOLDER,FUSE	Q701	405 041 6507	TR 2SC2621-D-RA
F601-A2	645 000 5077	HOLDER,FUSE		405 041 6705	TR 2SC2621-E-RA
A101	645 032 8589	TUNER,U/V		405 066 9903	TR 2SC2688(1)-K
	645 032 8596	TUNER,U/V		405 067 0008	TR 2SC2688(1)-L
A1901	645 027 4213	UNIT,REMOCON RECEIVER		405 067 0107	TR 2SC2688(1)-M
K1001	645 006 3787	JACK,RCA-3		406 000 3605	TR 2SC3620(LB-SAN-1)
K1101	645 005 5706	JACK,PHONE D3.6	Q711	405 041 6507	TR 2SC2621-D-RA
				405 041 6705	TR 2SC2621-E-RA
				405 066 9903	TR 2SC2688(1)-K
				405 067 0008	TR 2SC2688(1)-L
				405 067 0107	TR 2SC2688(1)-M
				406 000 3605	TR 2SC3620(LB-SAN-1)
			Q721	405 041 6507	TR 2SC2621-D-RA
				405 041 6705	TR 2SC2621-E-RA
				405 066 9903	TR 2SC2688(1)-K
				405 067 0008	TR 2SC2688(1)-L
				405 067 0107	TR 2SC2688(1)-M
				406 000 3605	TR 2SC3620(LB-SAN-1)
			Q741	405 134 5905	TR 2SA1037AK-T146-R
				405 147 2205	TR 2SA1037AK-S-T146
				405 002 0308	TR 2SA1037K T146 R
				405 002 0407	TR 2SA1037K T146 S
				405 002 6706	TR 2SA1179-M6-TB
				405 002 6904	TR 2SA1179-M7-TB
			Q751	405 134 5905	TR 2SA1037AK-T146-R
				405 147 2205	TR 2SA1037AK-S-T146
				405 002 0308	TR 2SA1037K T146 R
				405 002 0407	TR 2SA1037K T146 S
				405 002 6706	TR 2SA1179-M6-TB
				405 002 6904	TR 2SA1179-M7-TB
<b>MISCELLANEOUS</b>			<b>CAPACITOR</b>		
△ F601	423 024 8409	FUSE 250V 4A	C701	403 157 6602	CERAMIC 470P K 50V
F601-A1	645 000 5077	HOLDER,FUSE	C710	403 056 0008	ELECT 4.7U M 250V
F601-A2	645 000 5077	HOLDER,FUSE	C711	403 157 6602	CERAMIC 470P K 50V
A101	645 032 8589	TUNER,U/V	C721	403 157 6602	CERAMIC 470P K 50V
	645 032 8596	TUNER,U/V	C731	403 077 2708	CERAMIC 1000P P 2K
A1901	645 027 4213	UNIT,REMOCON RECEIVER		403 077 2807	CERAMIC 1000P Z 2K
K1001	645 006 3787	JACK,RCA-3	C751	403 044 1703	ELECT 470U M 16V
K1101	645 005 5706	JACK,PHONE D3.6			

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
<b>RESISTOR</b>					
R701	401 152 3206	MT-GLAZE 330 JA 1/10W			
R703	401 162 3609	MT-GLAZE 470 JA 1/10W			
R704	401 065 4604	OXIDE-MT 12K JA 2W			
R705	401 009 1508	CARBON 2.7K JA 1/2W			
R711	401 152 3206	MT-GLAZE 330 JA 1/10W			
R713	401 162 3609	MT-GLAZE 470 JA 1/10W			
R714	401 065 4604	OXIDE-MT 12K JA 2W			
R715	401 009 1508	CARBON 2.7K JA 1/2W			
R721	401 152 3206	MT-GLAZE 330 JA 1/10W			
R723	401 162 3609	MT-GLAZE 470 JA 1/10W			
R724	401 065 4604	OXIDE-MT 12K JA 2W			
R725	401 009 1508	CARBON 2.7K JA 1/2W			
R732	401 015 6504	CARBON 2.2 JA 1/4W			
R741	401 162 2404	MT-GLAZE 1.2K JA 1/10W			
R744	401 162 3609	MT-GLAZE 470 JA 1/10W			
R751	401 150 6001	MT-GLAZE 0.000 ZA 1/10W			
R752	401 150 5905	MT-GLAZE 10K JA 1/10W			
R753	401 150 5905	MT-GLAZE 10K JA 1/10W			
<b>DIODE</b>					
D751	407 012 4406	DIODE 1SS133			
D752	407 012 4406	DIODE 1SS133			
D753	407 012 4406	DIODE 1SS133			
D754	407 012 4406	DIODE 1SS133			
<b>MISCELLANEOUS</b>					
△ K701	645 026 2005	SOCKET,CRT 8P			

