

01472

# SERVICE MANUAL



# FISHER®

## STEREO TUNER-AMPLIFIER

# RS-913A

(U.S.A.)

132 334 25

This service manual is prepared for Model RS-913A. As only the components in the chart below differ, refer to the service manual RS-913 (WM-22775) for other components.

Ref.No.	RS-913	RS-913A	Description	Q'ty
	<b>PACKAGE</b> 620 186 8319	620 193 4656	Inner Carton	1
	<b>ACCESSORIES</b> 620 189 9894 620 187 4754 620 187 4648	620 054 8410 620 193 4151 620 193 4106	Label Explanatory Booklet Label Bar Code	1 1 1
2 3 15	<b>CABINET</b> 620 186 6407 620 186 6421 620 186 6612	620 193 4267 620 193 4281 620 193 4328	Cover Heat Sink Knob (Balance) Cabinet Front Assy	1 1 1
41	<b>TUNER P.C.B. ASSY</b> 620 186 8562 620 187 0558 620 189 6831	620 186 8579 620 195 1790 620 054 1251	Tuner P.C.B. Assy LCD, FTD6410D Filter (LCD)	1 1 1
47 C401 C402 C405 C406 C409 C410 C413 C414 C415 C416 C419 C420	<b>GRAPHIC EQ. P.C.B. ASSY</b> 620 186 9620 403 060 2807 403 060 2807 403 057 0908 403 057 0908 403 061 8709 403 061 8709 403 058 1607 403 058 1607 403 059 6601 403 059 6601 403 061 8709 403 061 8709	620 193 4908 403 003 4806 403 003 4806 403 002 1905 403 002 1905 403 073 8407 403 073 8407 403 070 8608 403 070 8608 403 003 2802 403 003 2802 403 073 8407 403 073 8407	Graphic EQ. P.C.B. Assy CERAMIC 0.027U K 50V CERAMIC 0.027U K 50V CERAMIC 0.01U K 25V CERAMIC 0.01U K 25V CERAMIC 4700P K 50V CERAMIC 4700P K 50V CERAMIC 1500P K 50V CERAMIC 1500P K 50V CERAMIC 0.022U K 25V CERAMIC 0.022U K 25V CERAMIC 4700P K 50V CERAMIC 4700P K 50V	1 1 1 1 1 1 1 1 1 1 1 1 1 1
50  Q605 Q606 Q607 Q608 Q609 Q610 R619 R620	<b>MAIN AMPLIFIER P.C.B. ASSY</b> 620 186 8630 620 017 0413 404 012 7000 404 012 7000 404 012 7000 405 002 9103 405 002 9103 405 002 9103 405 002 9103 405 016 3906 405 016 3906 402 039 6501 402 039 6501	620 186 8647 620 193 4830 - - - - - - - - - - - - 405 002 8908 405 002 8908 405 002 8908 405 002 8908 405 016 3708 405 016 3708 402 041 7800 402 041 7800	Main Amplifier P.C.B. Assy Relay CERAMIC 0.01U P 500V CERAMIC 0.01U P 500V CERAMIC 0.01U P 500V TR 2SA1208-S TR 2SA1208-S TR 2SA1208-S TR 2SA1208-S TR 2SC2910-S TR 2SC2910-S OXIDE-MT 12K JB 1W OXIDE-MT 12K JB 1W	1 1 1 1 1 1 1 1 1 1 1 1 1 1

Ref.No.	RS-913	RS-913A	Description	Q'ty
57	<b>POWER SWITCH P.C.B. ASSY</b> 620 080 6770	620 193 4915	Power Switch P.C.B. Assy	1
	620 017 1915	620 017 1663	Jack 7P	1
R701	401 099 5608	402 040 1601	OXIDE-MT 560 JB 2W	1
R702	401 099 5608	402 040 1601	OXIDE-MT 560 JB 2W	1

**Add this sheet Model RS-913 Service Manual (WM-22775).**

**For parts or service contact**



**SFS Corporation: 1200 West Artesia Blvd., Compton, California 90220**  
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# SERVICE MANUAL

## STEREO TUNER-AMPLIFIER

01247



# FISHER®

## RS-913

(U.S.A.)



132 334 24

### SPECIFICATIONS

Remote Control (REM-853)

15-function,  
wireless remote control

Loudness Contour (100 Hz/10 kHz)

+8 dB/+4 dB

Hum and Noise (IHF Short Circuit, A Network)

#### POWER AMPLIFIER SECTION

Minimum RMS sine wave power per channel  
within stated bandwidth at no more than stated  
distortion and with 8-ohm load

100 Watts  
20 Hz – 20 kHz

Power Bandwidth

Total Harmonic Distortion

0.09 %

I.M. Distortion

0.09 %

Speaker Damping

>20

Phono

65 dB

Tape Monitor 1, 2

85 dB

Video/AUX/CD

85 dB

#### FM SECTION

Usable Sensitivity

Mono

3.0  $\mu$ V/14.73 dBf

Stereo

8.0  $\mu$ V/23.26 dBf

50 dB Quieting Sensitivity

Mono

5.0  $\mu$ V/19.19 dBf

Stereo

7.0  $\mu$ V/42.10 dBf

#### PREAMPLIFIER SECTION

Frequency Response

Phono (RIAA)

$\pm 1$  dB

AUX (20 Hz – 20 kHz)

$\pm 1$  dB

Input Sensitivity and Impedance

Phono

2.5 mV/50 k $\Omega$

Tape Monitor 1, 2

150 mV/50 k $\Omega$

Video/AUX/CD

150 mV/50 k $\Omega$

Phono Max. Input Capability

150 mV

Graphic Equalizer

63 Hz

$\pm 10$  dB

250 Hz

$\pm 10$  dB

1 kHz

$\pm 10$  dB

4 kHz

$\pm 10$  dB

16 kHz

$\pm 10$  dB

Signal-to-Noise Ratio

Mono

70 dB

Stereo

65 dB

Capture Ratio

1.5 dB

Alt. Channel Selectivity ( $\pm 400$  kHz)

55 dB

Image Response Ratio

46 dB

Spurious Response Ratio

80 dB

IF Response Ratio

90 dB

AM Suppression Ratio

50 dB

Total Harmonic Distortion at 50 dB Quieting

Mono

0.4 %

Stereo

0.5 %

– Specifications and design are subject to change without notice. –

REFERENCE No. WM-22775

## SPECIFICATIONS (Continued)

Total Harmonic Distortion at 65 dB	
Mono (100 Hz/1 kHz/6 kHz)	0.3/0.3/0.4 %
Stereo (100 Hz/1 kHz/6 kHz)	0.4/0.4/0.5 %
Stereo Separation	
(100 Hz/1 kHz/10 kHz)	40/40/30 dB
Sub-Carrier Rejection (19 kHz/38 kHz)	30/50 dB
Audio Frequency Response	
(20 Hz – 15 kHz)	±3.0 dB
<b>AM SECTION</b>	
Usable Sensitivity	600 $\mu$ V/m

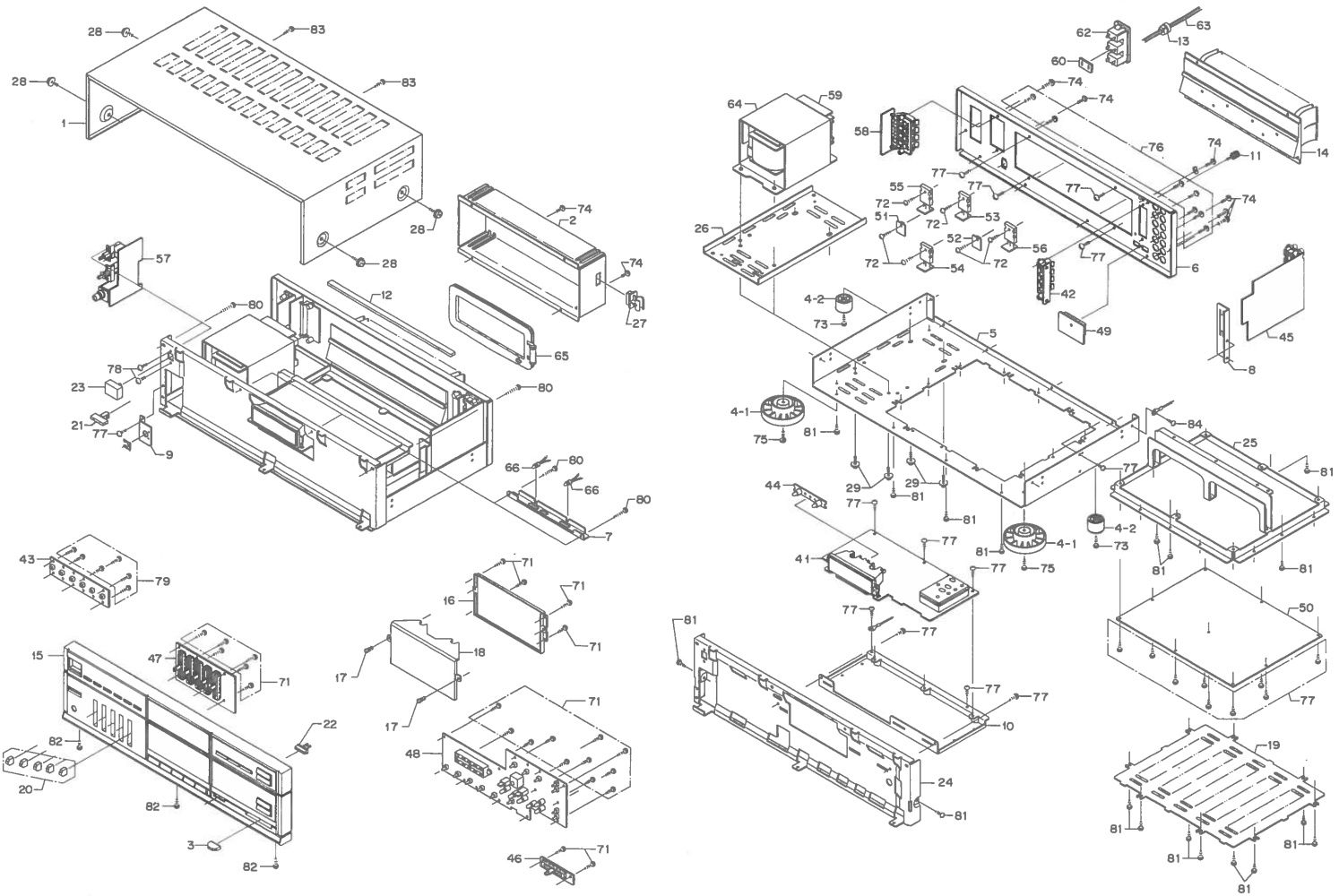
Selectivity	40 dB
Signal-to-Noise Ratio	55 dB
Image Response Ratio	40 dB
IF Response Ratio	60 dB
<b>GENERAL</b>	
Power Requirements	120 VAC $\pm$ 10 %
(50/60 Hz)	190 Watts
AC Outlet	3
Dimensions (W x H x D)	17.33" x 5.1" x 12.6"
Weight (approx.)	19.3 lbs.

– Specifications and design are subject to change without notice. –

## CABINET & CHASSIS PARTS LIST

Ref. No.	Part No.	Description	Q'ty	Ref. No.	Part No.	Description	Q'ty
<b>PACKAGE</b>							
	620 000 0024	Bag Polyethylene (AC CORD)	1	42	620 186 8586	Antenna P.C.B. Assy	1
	620 059 6596	Patching Sheet	1	43	620 186 9590	Band Switch P.C.B. Assy	1
	620 062 2127	Rubber Band (AC CORD)	1	44	620 080 0303	Lamp P.C.B. Assy	1
	620 186 8319	Inner Carton	1	45	620 187 4273	Input P.C.B. Assy	1
	620 148 3307	Pad Front	1	46	620 186 9613	Balance Volume P.C.B. Assy	1
	620 148 3314	Pad Rear	1	47	620 186 9620	Graphic EQ. P.C.B. Assy	1
	620 148 5639	Poly Cover 100 x 190	1	48	620 187 2217	Control Panel P.C.B. Assy	1
	620 148 8012	Sheet Polyethylene	1	49	620 186 8616	CD Remote Control P.C.B. Assy	1
<b>ACCESSORIES</b>							
	620 004 1256	REM-853UL (Remote Control)	1	50	620 186 8630	Main Amplifier P.C.B. Assy	1
	620 024 3872	FM Antenna	1	51	620 080 6718	Bias P.C.B. Assy	1
	620 030 8335	Dry Cell Pack	2	52	620 080 6725	Bias P.C.B. Assy	1
	620 189 9894	Label	1	53	620 080 6732	Power Transistor P.C.B. Assy	1
	620 057 8783	Bag Fan	1	54	620 080 6749	Power Transistor P.C.B. Assy	1
	620 059 7357	Patching Sheet	1	55	620 080 6756	Power Transistor P.C.B. Assy	1
	620 061 1107	Note	1	56	620 080 6763	Power Transistor P.C.B. Assy	1
	620 061 1732	Notes	1	57	620 080 6770	Power Switch P.C.B. Assy	1
	620 061 5662	Service Station List	1	58	620 186 8654	Speaker Terminal P.C.B. Assy	1
	620 062 0000	Warranty Card	1	59	620 186 8678	Power Trans P.C.B. Assy	1
	620 112 8123	Holder Antenna	1	60	620 080 6800	AC Outlet P.C.B. Assy	1
	620 187 4648	Label Bar Code	1	62 $\Delta$	620 018 0429	AC Socket with/Pola (AC Outlet)	1
	620 187 4754	Explanatory Booklet	1	63 $\Delta$	620 023 7482	Power Cord	1
<b>CABINET</b>							
	620 022 3454	Terminal Lug	1	64 $\Delta$	620 186 9231	Power Trans (Main)	1
	620 054 4184	Label	1	65	620 028 2741	AM Loop Antenna	1
	620 054 9950	Label (UL Caution)	1	66	620 188 0878	Lamp	2
	620 125 8424	Wire Band	14	71	411 020 5706	SCR S-TPG BRZ 2.6X8	23
1	620 045 6982	Cover	1	72	411 020 5904	SCR S-TPG BRZ 3X10	6
2	620 186 6407	Cover Heat Sink	1	73	411 020 7007	SCR S-TPG BRZ 3X20	2
3	620 186 6421	Knob (Balance)	1	74	411 099 9704	SCR S-TPG BRZ 3X6	8
4-1	620 185 2752	Leg Assy (Front)	2	75	411 020 8004	SCR S-TPG BRZ 3X8	2
4-2	620 047 4283	Leg (Rear)	2	76	411 099 9803	SCR S-TPG BRZ 3X8	7
5	620 048 7467	Chassis	1	77	411 020 7700	SCR S-TPG BRZ 3X6	22
6	620 186 7053	Panel Rear	1	78	411 003 8908	SCR PAN+ SW 3X6	2
7	620 050 1491	Metal Mount Lamp	1	79	411 021 3107	SCR S-TPG BIN 2.6X8	6
8	620 050 1514	Metal Support	1	80	411 021 3701	SCR S-TPG BIN 3X10	4
9	620 185 3278	Bracket Mount H.P	1	81	411 021 5705	SCR S-TPG BIN 3X6	18
10	620 050 5246	Metal Mount P.C.B.	1	82	411 021 5903	SCR S-TPG BIN 3X6	3
11	620 051 2152	Screw Ground	1	83	411 070 0607	SCR TPG BRZ 3X8	2
12	620 052 4155	Cushion	1	84	620 051 1728	Screw, Brazier Hd. Tapping-C, + M3.0X6	1
13	620 053 2136	Bushing (AC CORD)	1	<b>NOTES:</b>			
14	620 186 6445	Heat Sink	1	1.	Parts order must contain Model Number, Part Number and Description.		
15	620 186 6612	Cabinet Front Assy	1	2.	Ordering quantity of screws and resistors must be multiple of 10 pcs.		
16	620 186 7756	Mount Screen Assy	1	<p style="text-align: center;"><b>PRODUCT SAFETY NOTICE</b></p> <p>Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol <math>\Delta</math> in the parts list and the schematic diagram designate components in which safety can be of special significance. When replacing a component identified with <math>\Delta</math>, use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual. Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.</p>			
17	620 052 1659	Rivet	2				
18	620 188 2605	Filter	1				
19	620 095 0725	Bottom Cover	1				
20	620 186 5806	Knob Slide (Graphic EQ.)	5				
21	620 111 8407	Knob Push (Speaker)	1				
22	620 111 8414	Knob Tact (Loudness)	1				
23	620 185 3155	Knob Push (POWER)	1				
24	620 186 8203	Panel Front	1				
25	620 117 2034	Sub Chassis	1				
26	620 117 2690	Metal Reinforce	1				
27	620 122 2111	Holder Antenna	1				
28	620 123 0284	Screw, Bind Hd. Tapping-B, + M4.0X8	4				
29	620 123 0833	Screw, Bind Hd. Tapping-C, + M4.0X10	4				
41	620 186 8562	Tuner P.C.B. Assy	1				

# CABINET & CHASSIS EXPLODED VIEW



## POWER AMPLIFIER ADJUSTMENT

### BEFORE ADJUSTMENT

Unplug the AC power cord and set the front panel controls as follows:

- Power switch to OFF position.
- Set the SPEAKERS switch to the OFF position.
- Set the volume level to minimum level by Pressing the VOLUME DOWN button.
- IDLING CURRENT ADJUSTMENT VR601/VR602 (on the Main Amplifier P.C.Board) setting to mechanical center position.
- Connect the AC power cord and Power switch to the ON position.

### IDLING CURRENT ADJUSTMENT

This adjustment is very sensitive to changes in ambient temperature. Allow set to operate for 2 minutes before attempting this alignment.

#### LEFT AMPLIFIER

- 1) Connect the DC Voltmeter between Pins TP1 and TP2 on the Main Amplifier P.C.Board.
- 2) Adjust the VR601 for an indication of  $4\text{mV} \pm 1\text{mV}$  on the DC Voltmeter.

#### RIGHT AMPLIFIER

- 1) Connect the DC Voltmeter between Pins TP3 and TP4 on the Main Amplifier P.C.Board.
- 2) Adjust the VR602 for an indication of  $4\text{mV} \pm 1\text{mV}$  on the DC Voltmeter.

## CAUTION ON RF ADJUSTMENT

This model uses a microprocessor for memory preset control for the various bands. This function has been used to preset frequency points for the different bands to permit adjustment and make it possible to check the function of the microprocessor. To use this supplemental function, ground initialize test point TP8 for 1 second before beginning adjustment. The following table shows the initially preset frequencies.

Band	Memory					
	1	2	3	4	5	6
FM-1	87.5MHz	108MHz	88MHz	98MHz	108MHz	90MHz
AM	520kHz	1710kHz	600kHz	1400kHz	1000kHz	800kHz

## AM TUNER ALIGNMENT

**AM ALIGNMENT** – Band Selector switch to AM position.  
**Maintain generator output as low as possible for suitable indication.**

**Note:**  
 Perform this alignment after FM Tuner Alignment.

ITEM	GENERATOR	DIAL SETTING	INDICATOR	PROCEDURE
1. AM IF ALIGNMENT	Connect 450kHz Radio IF Genescope output to AM Antenna and ground. Adjust output level to 70dB $\mu$ V.	Position of non-interference Minimum Frequency.	Connect Radio IF Genescope input to TP6 and ground lead to chassis.	Adjust AM IFT (T104) for maximum gain and best symmetry. Keep signal low enough for noise on response.
2. AM RF FREQUENCY COVER ALIGNMENT (520kHz)	Do not connect generator.	Set Preset STATION button to "1" position. Set to 520kHz.	Connect DC Voltmeter to TP2 and ground lead to chassis.	Check DC Voltmeter for Indication 1.0V ~ 1.3V.
3. (1710kHz)	Same as above.	Change Preset STATION button to "2" position. Set to 1710kHz.	Same as above.	Check DC Voltmeter for Indication 8.4V ~ 9.0V.
<b>Note:</b> Repeat the adjustments in Items 2 and 3. Then, confirm that each voltage becomes 1.0V to 8.7V at receiving frequency of 520kHz to 1710kHz. (See Table 1)				
4. AM RF TRACKING ALIGNMENT (600kHz)	Connect Standard Loop Antenna to output terminal of AM RF Signal Generator. Place Loop Antenna 60cm away from Loop Antenna (Unit). Generator Setting to 600kHz or 1400kHz. Modulate with 400Hz (30 % modulation).	Set Preset STATION button to "3" position. Set to 600kHz.	Connect AC VTVM and Oscilloscope to SPEAKER Terminals.	Adjust AM Antenna Coil (T102) for maximum gain output.
5. (1400kHz)		Change Preset STATION button to "4" position. Set to 1400kHz.	Same as above.	Adjust AM ANT Trimmer (TC102) for maximum gain output.
<b>Note:</b> Repeat the adjustments in Items 4 and 5. Then, confirm there is no tracking error.				
6. AM AUTO STOP SENSITIVITY ADJUSTMENT	Change generator setting to 1000kHz and output level to 60dB $\mu$ V/m.	Set Preset STATION button to "5" position. Set to 1000kHz.	Front Panel TUNED Indicator Display.	Adjust VR101 until the TUNED Indicator partly light up.

Use a screwdriver with plastic grip for all adjustments.

### AM Frequency Cover Range Tuning Voltage Value at TP2

(Table 1)

	520kHz	1710kHz
Minimum	1.0V	8.4V
Typical	1.2V	8.7V
Maximum	1.3V	9.0V

### FM Frequency Cover Range Tuning Voltage Value at TP2

(Table 2)

	87.5MHz	108MHz
Minimum	1.4V	7.0V
Typical	1.5V	8.3V
Maximum	1.6V	9.0V

# FM TUNER ALIGNMENT

**FM ALIGNMENT** – Band Selector switch to FM STEREO position.

ITEM	GENERATOR	DIAL SETTING	INDICATOR	PROCEDURE
1. FM IF S-CURVE ALIGNMENT	Connect 10.7MHz Radio IF Generator output to TP1 and ground lead to chassis. Use 5pF capacitor in series with generator output lead.	Position of non-interference Minimum Frequency.	Connect Radio IF Genescope input to TP7 and ground lead to chassis.	Adjust FM DET 1st Coil (T105) and FM DET 2nd Coil (T106), so that S-wave form becomes symmetrical.
2. FM RF FREQUENCY COVER ALIGNMENT (87.5MHz)	Do not connect Generator.	Set Preset STATION button to "1" position. Set to 87.5MHz.	Connect DC Voltmeter to TP2 and ground lead to chassis.	Adjust FM OSC Coil (L106) until DC Voltmeter reads 1.45V ~ 1.55V.
3. (108MHz)	Same as above.	Change Preset STATION button to "2" position. Set to 108MHz.	Same as above.	Check the DC Voltmeter reads 7.0V ~ 9.0V.
<b>Note:</b> Repeat the adjustments in Items 2 and 3. Then, confirm that each voltage becomes 1.5V to 8.3V at receiving frequency of 87.5MHz to 108MHz. (See Table 2)				
4. FM RF TRACKING ALIGNMENT (88MHz)	Connect FM RF Signal Generator through FM Dummy Antenna to FM Antenna terminals. Set Generator to 88MHz or 108MHz. Modulate with 1kHz to provide $\pm 75$ kHz deviation. Set Generator output with attenuator as low as possible.	Set Preset STATION button to "3" position. Set to 88MHz.	Connect AC VTVM and Oscilloscope to SPEAKER Terminals.	Adjust FM Antenna Coil (L101/L102) and FM RF Coil (L103/L104) for maximum gain output.
5. (108MHz)		Change Preset STATION button to "2" position. Set to 108MHz.	Same as above.	Adjust FM RF Trimmer (TC101) for maximum gain output.
<b>Note:</b> Repeat the adjustments in Items 4 and 5. Then, confirm there is no tracking error.				
6. FM IFT ALIGNMENT	Set generator to 98MHz $\pm 2$ kHz. Adjust attenuator output level for 15dB $\mu$ V.	Set Preset STATION button to "4" position. Set to 98MHz.	Connect AC VTVM and Oscilloscope to SPEAKER Terminals.	Adjust FM IFT (T101) for maximum gain output.
7. DETECTOR ADJUSTMENT (MINIMUM T.H.D.)	Same as above. Adjust attenuator output level for 60dB $\mu$ V.	Same as above.	Connect DC Voltmeter across TP4 and TP5.	Adjust FM DET 1st Coil (T105) until DC Voltmeter reads 0V $\pm 50$ mV.
			Connect harmonic Distortion Analyzer to SPEAKER Terminals.	Adjust FM DET 2nd Coil (T106) for minimum gain and best linearity.
<b>Note:</b> Repeat Step 1 (FM DET 1st Coil T105) and 2 (FM DET 2nd Coil T106) until optimum alignment is reached.				
8. FM MUTING LEVEL ADJUSTMENT	Same as above. Adjust attenuator output level for 16dB $\mu$ V.	Same as above.	Scope vertical input to SPEAKER Terminals.	Set Band Selector Switch to FM ST/MUTE and Adjust VR102 until the received wave form becomes half of the maximum form.
<b>Note:</b> Decrease the output level of ATT and confirm that the wave form disappears. Increase the output level of ATT again and confirm that the input level meets the specifications sufficiently when the wave form has appeared.				
9. FM STEREO SIGNAL SEPARATION CONTROL	Connect FM Stereo SG to FM Antenna terminals. 19kHz signal ON. Main channel, sub channel signal ON. Apply 1000Hz signal from LEFT channel.		Connect AC VTVM and Oscilloscope to Right channel SPEAKER Terminals.	Adjust VR103 for minimum output.
	Same as above for RIGHT channel.		Connect AC VTVM and Oscilloscope to Left channel SPEAKER Terminals.	

Use a screwdriver with plastic grip for all adjustments.

# P.C.BOARD PARTS LIST

Ref. No.	Part No.	Description	Q'ty	Ref. No.	Part No.	Description	Q'ty
<b>TUNER P.C.B. ASSY</b>							
41	620 186 8562	Tuner P.C.B. Assy	1	or	405 004 4502	TR 2SA608-F-NP	1
	620 022 3454	Terminal Lug	1	Q112	405 019 2708	TR 2SC536-F-NP	1
	620 187 0558	LCD, 8035MJP	1	or	405 019 3804	TR 2SC536-G-NP	1
	620 031 4763	Wire Wrap Terminal	11	Q113	405 004 3901	TR 2SA608-E-NP	1
	620 052 9075	Cover Shield	1	or	405 004 4502	TR 2SA608-F-NP	1
	620 052 9082	Cover Shield Top	1	Q114	405 021 0105	TR 2SD1012-F	1
	620 053 9821	Reflector	1	or	405 021 0501	TR 2SD1012-G	1
	620 189 6831	Filter (LCD)	1	Q115	405 021 0105	TR 2SD1012-F	1
CA101	620 186 0238	Connector 3P Assy	1	or	405 021 0501	TR 2SD1012-G	1
CF101	620 014 6005	Ceramic Filter 10.7MHz	1	If necessary, replace both Diode D101, D103, D104 (SVC211) and Diode D105, D106 (SVC 321) together with new ones which have the equivalent characteristics.			
CF102	620 014 6005	Ceramic Filter 10.7MHz	1				
CF103	620 014 5862	Ceramic Filter 450kHz	1				
CF104	620 014 5879	Ceramic Filter 450kHz	1				
CF105	620 014 6258	Ceramic OSC	1				
CN101	620 182 9013	Plug 7P	1				
CN102	620 182 8948	Plug 6P	1				
CN103	620 182 8948	Plug 6P	1				
CX101	620 007 1338	Crystal 7.2MHz	1				
or	620 007 3226	Crystal 7.2MHz	1				
or	620 007 1314	Crystal 7.2MHz	1	D101	407 000 3503	VARACTOR DI SVC211SP	1
L101	620 028 2185	FM Antenna Coil	1	D102	407 007 9904	DIODE GMA01-BT	1
or	620 028 2161	FM Antenna Coil	1	D103	407 000 3503	VARACTOR DI SVC211SP	1
L102	620 028 2215	FM Antenna Coil	1	D104	407 000 3503	VARACTOR DI SVC211SP	1
or	620 028 2192	FM Antenna Coil	1	D105	407 000 4708	VARACTOR DI SVC321D-2	1
L103	620 029 1651	FM RF Coil	1	or	407 000 4807	VARACTOR DI SVC321D-2	1
or	620 029 1637	FM RF Coil	1	D106	407 000 4708	VARACTOR DI SVC321C-2	1
L104	620 029 1682	FM RF Coil	1	or	407 000 4807	VARACTOR DI SVC321D-2	1
or	620 029 1668	FM RF Coil	1	D107	407 005 3805	DIODE DS442-BT	1
L105	620 026 5133	RF Filter (2.2μH)	1	D108	407 050 3300	ZENER DIODE GZA4.3X	1
L106	620 028 8804	FM OSC Coil	1	or	407 050 3409	ZENER DIODE GZA4.3Y	1
or	620 028 8798	FM OSC Coil	1	D109	407 008 0405	DIODE GMB01-BT	1
or	620 188 0847	FM OSC Coil	1	D110	407 008 0405	DIODE GMB01-BT	1
T101	620 027 7105	FM IFT	1	D111	407 069 1205	DIODE DS441	1
or	620 027 7099	FM IFT	1	D112	407 008 0405	DIODE GMB01-BT	1
T102	620 185 9041	AM Antenna Coil	1	D113	407 008 0405	DIODE GMB01-BT	1
or	620 028 1348	AM Antenna Coil	1	C101	403 024 9507	CERAMIC 4P C 50V	1
T103	620 185 9058	AM OSC Coil	1	C103	403 072 2703	CERAMIC 0.022U Z 50V	1
or	620 028 7753	AM OSC Coil	1	C104	403 026 9406	CERAMIC 5P C 50V	1
T104	620 186 0528	AM IFT	1	C105	403 006 4100	CERAMIC 1P C 50V	1
or	620 027 7006	AM IFT	1	C106	403 011 1507	CERAMIC 12P K 50V	1
T105	620 027 7242	FM DET 1st	1	C107	403 009 8105	CERAMIC 100P K 50V	1
T106	620 027 7259	FM DET 2nd	1	C108	403 069 0705	CERAMIC 1000P K 50V	1
TC101	620 006 9274	Trimmer Condenser	1	C109	403 072 2703	CERAMIC 0.022U Z 50V	1
TC102	620 006 9724	Trimmer Condenser	1	C110	403 004 0500	CERAMIC 0.047U K 25V	1
VR101	620 006 1377	Potentiometer (B-10kΩ)	1	C111	403 024 9903	CERAMIC 4P C 50V	1
or	620 006 1940	Potentiometer (B-10kΩ)	1	C112	403 023 2103	CERAMIC 33P K 50V	1
VR102	620 006 1353	Potentiometer (B-100kΩ)	1	C113	403 010 6206	CERAMIC 12P J 50V	1
or	620 006 1933	Potentiometer (B-100kΩ)	1	C114	403 069 8404	CERAMIC 0.01U Z 50V	1
VR103	620 006 1353	Potentiometer (B-100kΩ)	1	C115	403 023 1601	CERAMIC 33P K 50V	1
or	620 006 1933	Potentiometer (B-100kΩ)	1	C116	403 026 9307	CERAMIC 5P C 50V	1
W103	620 055 3681	Jumper	1	C117	403 032 3405	CERAMIC 8P C 50V	1
W104	620 055 3681	Jumper	1	C119	403 069 8404	CERAMIC 0.01U Z 50V	1
W105	620 055 2448	Jumper	1	C120	403 069 0705	CERAMIC 1000P K 50V	1
W107	620 055 3179	Jumper	1	C121	403 069 8404	CERAMIC 0.01U Z 50V	1
IC101	409 073 9505	IC LA1266	1	C122	403 026 5408	CERAMIC 47P K 50V	1
or	409 079 6904	IC LA1266A	1	C123	403 004 0500	CERAMIC 0.047U K 25V	1
IC102	409 017 0803	IC LA3400	1	C124	403 004 0500	CERAMIC 0.047U K 25V	1
IC103	409 053 1604	IC TC9172P	1	C125	403 004 0500	CERAMIC 0.047U K 25V	1
IC104	410 014 9607	IC TSE2039AF-020	1	C126	403 069 8404	CERAMIC 0.01U Z 50V	1
Q101	405 026 9608	TR 2SK241-GR	1	C127	403 038 2402	ELECT 100U M 6.3V	1
or	405 026 9806	TR 2SK241-Y	1	C128	403 069 8404	CERAMIC 0.01U Z 50V	1
Q102	405 016 5603	TR 2SC2999-D	1	C129	403 088 4104	STYRENE 430P J 50V	1
or	405 016 5801	TR 2SC2999-E	1	C130	403 014 0200	CERAMIC 18P J 50V	1
Q103	405 020 2902	TR 2SC930-F-NP	1	C131	403 049 5508	ELECT 10U M 50V	1
or	405 020 1905	TR 2SC930-E-NP	1	C132	403 051 2106	ELECT 4.7U M 50V	1
Q104	405 026 9608	TR 2SK241-GR	1	C133	403 026 5408	CERAMIC 47P K 50V	1
Q105	405 026 8304	TR 2SK212-E	1	C134	403 069 8404	CERAMIC 0.01U Z 50V	1
or	405 026 8601	TR 2SK212-F	1	C135	403 049 1708	ELECT 1U M 50V	1
Q106	405 020 1103	TR 2SC930-D-NP	1	C136	403 051 2106	ELECT 4.7U M 50V	1
or	405 020 1905	TR 2SC930-E-NP	1	C137	403 050 7805	ELECT 3.3U M 50V	1
Q107	405 019 2708	TR 2SC536-F-NP	1	C138	403 069 8404	CERAMIC 0.01U Z 50V	1
or	405 019 3804	TR 2SC536-G-NP	1	C139	403 074 2701	CERAMIC 0.047U Z 50V	1
Q108	405 004 3901	TR 2SA608-E-NP	1	C140	403 074 2701	CERAMIC 0.047U Z 50V	1
or	405 004 4502	TR 2SA608-F-NP	1	C141	403 069 8404	CERAMIC 0.01U Z 50V	1
Q109	405 011 7107	TR 2SC1740-E	1	C142	403 044 0300	ELECT 47U M 16V	1
or	405 012 1807	TR 2SC1815-BL	1	C143	403 049 1708	ELECT 1U M 50V	1
Q110	405 027 0604	TR 2SK246-Y	1	C144	403 069 8404	CERAMIC 0.01U Z 50V	1
Q111	405 004 3901	TR 2SA608-E-NP	1	C145	403 044 0300	ELECT 47U M 16V	1
				C146	403 060 8700	POLYESTER 0.033U K 50V	1
				C147	403 074 2701	CERAMIC 0.047U Z 50V	1
				C148	403 049 5508	ELECT 10U M 50V	1
				C149	403 049 1708	ELECT 1U M 50V	1
				C150	403 048 7701	ELECT 0.47U M 50V	1



# P.C.BOARD PARTS LIST (Continued)

Ref. No.	Part No.	Description	Q'ty
C151	403 050 1308	ELECT 2.2U M 50V	1
C152	403 057 0908	POLYESTER 0.01U K 50V	1
C153	403 075 0508	CERAMIC 6800P K 50V	1
C154	403 024 8203	CERAMIC 390P K 50V	1
C155	403 069 0705	CERAMIC 1000P K 50V	1
C156	403 049 5508	ELECT 10U M 50V	1
C157	403 029 0509	CERAMIC 560P K 50V	1
C158	403 029 0509	CERAMIC 560P K 50V	1
C159	403 050 1308	ELECT 2.2U M 50V	1
C160	403 050 1308	ELECT 2.2U M 50V	1
C161	403 072 9603	CERAMIC 3300P K 50V	1
C162	403 072 9603	CERAMIC 3300P K 50V	1
C163	403 062 0900	POLYESTER 0.047U K 50V	1
C164	403 049 1708	ELECT 1U M 50V	1
C165	403 056 8608	POLYESTER 1000P K 50V	1
C166	403 044 0300	ELECT 47U M 16V	1
C167	403 044 0300	ELECT 47U M 16V	1
C168	403 057 0908	POLYESTER 0.01U K 50V	1
C169	403 049 5508	ELECT 10U M 50V	1
C170	403 069 8404	CERAMIC 0.01U Z 50V	1
C171	403 069 8404	CERAMIC 0.01U Z 50V	1
C172	403 069 8404	CERAMIC 0.01U Z 50V	1
C173	403 057 2100	POLYESTER 0.1U J 50V	1
C174	403 022 5907	CERAMIC 33P J 50V	1
C175	403 022 5907	CERAMIC 33P J 50V	1
C176	404 039 4303	ELECT 2200U M 10V	1
C177	404 039 4402	ELECT 100U M 10V	1
C178	403 069 8404	CERAMIC 0.01U Z 50V	1
C179	403 069 8404	CERAMIC 0.01U Z 50V	1
C181	403 044 0300	ELECT 47U M 16V	1
R101	401 024 7707	CARBON 100K JA 1/6W	1
R102	401 025 7102	CARBON 22 JA 1/6W	1
R103	401 024 6700	CARBON 100 JA 1/6W	1
R104	401 024 7707	CARBON 100K JA 1/6W	1
R105	401 026 9907	CARBON 4.7K JA 1/6W	1
R106	401 026 4605	CARBON 33K JA 1/6W	1
R107	401 027 8305	CARBON 820 JA 1/6W	1
R108	401 024 7400	CARBON 10K JA 1/6W	1
R109	402 023 4209	CARBON 1M JA 1/2W	1
R110	401 024 7400	CARBON 10K JA 1/6W	1
R111	401 024 7400	CARBON 10K JA 1/6W	1
R112	401 025 7805	CARBON 2.2K JA 1/6W	1
R113	401 024 6700	CARBON 100 JA 1/6W	1
R114	401 024 7004	CARBON 1K JA 1/6W	1
R115	401 026 3905	CARBON 330 JA 1/6W	1
R116	401 012 3407	CARBON 10 JA 1/4W	1
R121	401 012 8105	CARBON 100K JA 1/4W	1
R122	401 024 7004	CARBON 1K JA 1/6W	1
R123	401 024 8001	CARBON 1M JA 1/6W	1
R124	401 026 6609	CARBON 390 JA 1/6W	1
R125	401 026 1000	CARBON 2.7K JA 1/6W	1
R126	401 012 5708	CARBON 1K JA 1/4W	1
R127	401 012 4503	CARBON 100 JA 1/4W	1
R128	401 026 8108	CARBON 4.7 JA 1/6W	1
R129	401 025 7805	CARBON 2.2K JA 1/6W	1
R130	401 026 6609	CARBON 390 JA 1/6W	1
R131	401 026 6609	CARBON 390 JA 1/6W	1
R132	401 027 8305	CARBON 820 JA 1/6W	1
R133	401 027 2600	CARBON 5.6K JA 1/6W	1
R134	401 027 2600	CARBON 5.6K JA 1/6W	1
R136	401 012 8105	CARBON 100K JA 1/4W	1
R137	401 026 9907	CARBON 4.7K JA 1/6W	1
R138	401 016 4806	CARBON 22K JA 1/4W	1
R139	401 027 5502	CARBON 6.8K JA 1/6W	1
R140	401 026 1000	CARBON 2.7K JA 1/6W	1
R141	401 026 9907	CARBON 4.7K JA 1/6W	1
R142	401 025 8208	CARBON 22K JA 1/6W	1
R143	401 026 4308	CARBON 3.3K JA 1/6W	1
R144	401 022 3107	CARBON 6.8K JA 1/4W	1
R145	401 016 1508	CARBON 22 JA 1/4W	1
R146	401 012 5708	CARBON 1K JA 1/4W	1
R147	401 016 1102	CARBON 22 JA 1/4W	1
R148	401 012 5708	CARBON 1K JA 1/4W	1
R149	401 026 4308	CARBON 3.3K JA 1/6W	1
R150	401 012 7009	CARBON 10K JA 1/4W	1
R151	401 020 2904	CARBON 47K JA 1/4W	1
R152	401 012 8105	CARBON 100K JA 1/4W	1
R153	401 024 7707	CARBON 100K JA 1/6W	1
R154	401 027 5908	CARBON 68K JA 1/6W	1

Ref. No.	Part No.	Description	Q'ty
R155	401 025 8208	CARBON 22K JA 1/6W	1
R156	401 012 5708	CARBON 1K JA 1/4W	1
R157	401 025 0004	CARBON 120K JA 1/6W	1
R158	401 025 0004	CARBON 120K JA 1/6W	1
R159	401 024 7004	CARBON 1K JA 1/6W	1
R160	401 024 7004	CARBON 1K JA 1/6W	1
R161	401 024 7707	CARBON 100K JA 1/6W	1
R162	401 024 7707	CARBON 100K JA 1/6W	1
R163	401 024 7400	CARBON 10K JA 1/6W	1
R164	401 018 3807	CARBON 3.3K JA 1/4W	1
R165	401 024 7400	CARBON 10K JA 1/6W	1
R166	401 026 9907	CARBON 4.7K JA 1/6W	1
R167	401 026 9907	CARBON 4.7K JA 1/6W	1
R169	401 012 5708	CARBON 1K JA 1/4W	1
R170	401 024 7400	CARBON 10K JA 1/6W	1
R171	401 024 7400	CARBON 10K JA 1/6W	1
R172	401 022 1905	CARBON 680 JA 1/4W	1
R173	401 020 0801	CARBON 470 JA 1/4W	1
R174	401 019 9600	CARBON 47 JA 1/4W	1
R175	401 017 1804	CARBON 2.7K JA 1/4W	1
R176	401 026 1000	CARBON 2.7K JA 1/6W	1
R177	401 012 5708	CARBON 1K JA 1/4W	1
R178	401 012 8105	CARBON 100K JA 1/4W	1
R179	401 027 2600	CARBON 5.6K JA 1/6W	1
R180	401 012 4503	CARBON 100 JA 1/4W	1
R181	401 026 4308	CARBON 3.3K JA 1/6W	1
R182	401 025 7102	CARBON 22 JA 1/6W	1
R183	401 027 0309	CARBON 47K JA 1/6W	1
R184	401 024 7707	CARBON 100K JA 1/6W	1
R185	401 025 8208	CARBON 22K JA 1/6W	1
R186	401 024 7400	CARBON 10K JA 1/6W	1
R187	401 018 3807	CARBON 3.3K JA 1/4W	1
R188	401 018 3807	CARBON 3.3K JA 1/4W	1
R189	401 018 3807	CARBON 3.3K JA 1/4W	1
R190	401 012 7009	CARBON 10K JA 1/4W	1
R191	401 012 7009	CARBON 10K JA 1/4W	1
R192	401 012 7009	CARBON 10K JA 1/4W	1
R193	401 012 7009	CARBON 10K JA 1/4W	1
R194	401 024 7400	CARBON 10K JA 1/6W	1
R195	401 024 7400	CARBON 10K JA 1/6W	1

## ANTENNA P.C.B. ASSY

42	620 186 8586	Antenna P.C.B. Assy	1
	620 186 9187	Push Terminal 4P	1
	620 022 3003	4P Push Terminal	1

## BAND SWITCH P.C.B. ASSY

43	620 186 9590	Band Switch P.C.B. Assy	1
CA102	620 186 0320	Connector 6P Assy	1
SW101	620 015 1917	Keyboard SW. (Preset STATION 1)	1
SW102	620 015 1917	Keyboard SW. (Preset STATION 2)	1
SW103	620 015 1917	Keyboard SW. (Preset STATION 3)	1
SW104	620 015 1917	Keyboard SW. (Preset STATION 4)	1
SW105	620 015 1917	Keyboard SW. (Preset STATION 5)	1
SW106	620 015 1917	Keyboard SW. (Preset STATION 6)	1

## LAMP P.C.B. ASSY

44	620 080 0303	Lamp P.C.B. Assy	1
	620 030 8137	Lamp	2
	620 052 0171	Spacer	2

## INPUT P.C.B. ASSY

45	620 187 4273	Input P.C.B. Assy	1
	620 118 1630	Plate Shield	1
	620 182 8788	Pin Jack 4P (TAPE-1) (TAPE-2)	2
	620 182 8795	Pin Jack 6P (PHONO, CD, VIDEO/AUX)	1
CN104	620 182 8955	Plug 3P	1
CN401	620 182 9013	Plug 7P	1
CN603	620 021 6197	Connector 4P	1
CN801	620 182 8955	Plug 3P	1
PC301	620 186 0245	Connector 3P Assy	1
PC302	620 186 0276	Connector 3P Assy	1
W302	620 020 5894	Connector 1P Assy	1
IC301	409 018 4503	IC LA6458DS	1
IC302	409 109 5105	IC LC7821	1
IC303	409 118 0504	IC LC7535	1
IC304	409 018 4503	IC LA6458DS	1
C301	403 051 2106	ELECT 4.7U M 50V	1
C302	403 051 2106	ELECT 4.7U M 50V	1

# P.C.BOARD PARTS LIST (Continued)

Ref. No.	Part No.	Description	Q'ty	Ref. No.	Part No.	Description	Q'ty	
C303	403 018 8509	CERAMIC	220P K 50V	1	R371	401 015 1608	CARBON 180 JA 1/4W	1
C304	403 018 8509	CERAMIC	220P K 50V	1	R372	401 015 1608	CARBON 180 JA 1/4W	1
C305	403 018 8509	CERAMIC	220P K 50V	1	R375	401 026 9907	CARBON 4.7K JA 1/6W	1
C306	403 018 8509	CERAMIC	220P K 50V	1	R376	401 026 9907	CARBON 4.7K JA 1/6W	1
C307	403 044 0300	ELECT	47U M 16V	1	R378	401 024 7707	CARBON 100K JA 1/6W	1
C308	403 044 0300	ELECT	47U M 16V	1	R379	401 024 7707	CARBON 100K JA 1/6W	1
C309	403 059 0401	POLYESTER	0.018U K 50V	1	R380	401 024 7707	CARBON 100K JA 1/6W	1
C310	403 059 0401	POLYESTER	0.018U K 50V	1	<b>BALANCE VOLUME P.C.B. ASSY</b>			
C311	403 061 8709	POLYESTER	4700P K 50V	1	46	620 186 9613	Balance Volume P.C.B. Assy	1
C312	403 061 8709	POLYESTER	4700P K 50V	1	PC801	620 186 4632	Connector 3P Assy	1
C313	403 049 1708	ELECT	1U M 50V	1	VR801	620 006 0929	Slide Volume (W-200kΩ)	1
C314	403 049 1708	ELECT	1U M 50V	1	<b>GRAPHIC EQ. P.C.B. ASSY</b>			
C317	403 047 4305	ELECT	47U M 25V	1	47	620 186 9620	Graphic EQ. P.C.B. Assy	1
C318	403 047 4305	ELECT	47U M 25V	1	PC401	620 186 0375	Connector 7P Assy	1
C329	403 049 1708	ELECT	1U M 50V	1	VR401	620 006 0912	Slide Volume (SW-250kΩx2, 63Hz)	1
C363	403 074 6303	CERAMIC	560P K 50V	1	VR402	620 006 0912	Slide Volume (SW-250kΩx2, 250Hz)	1
C364	403 074 6303	CERAMIC	560P K 50V	1	VR403	620 006 0912	Slide Volume (SW-250kΩx2, 1kHz)	1
C365	403 057 2100	POLYESTER	0.1U J 50V	1	VR404	620 006 0912	Slide Volume (SW-250kΩx2, 4kHz)	1
C366	403 057 2100	POLYESTER	0.1U J 50V	1	VR405	620 006 0912	Slide Volume (SW-250kΩx2, 16kHz)	1
C367	403 049 5508	ELECT	10U M 50V	1	Q401	405 011 8500	TR 2SC1740S-R	1
C368	403 049 5508	ELECT	10U M 50V	1	or	405 011 8609	TR 2SC1740S-S	1
C369	403 009 8105	CERAMIC	100P K 50V	1	Q402	405 011 8500	TR 2SC1740S-R	1
C370	403 009 8105	CERAMIC	100P K 50V	1	or	405 011 8609	TR 2SC1740S-S	1
C371	403 049 5508	ELECT	10U M 50V	1	Q403	405 030 8000	TR 2SC1740SLN-R	1
C372	403 049 5508	ELECT	10U M 50V	1	or	405 030 8109	TR 2SC1740SLN-S	1
C373	403 008 5204	CERAMIC	10P D 50V	1	Q404	405 030 8000	TR 2SC1740SLN-R	1
C374	403 008 5204	CERAMIC	10P D 50V	1	or	405 030 8109	TR 2SC1740SLN-S	1
C375	403 045 0606	ELECT	100U M 25V	1	Q405	405 011 8500	TR 2SC1740S-R	1
C376	403 045 0606	ELECT	100U M 25V	1	or	405 011 8609	TR 2SC1740S-S	1
C377	403 051 2106	ELECT	4.7U M 50V	1	Q406	405 011 8500	TR 2SC1740S-R	1
C378	403 051 2106	ELECT	4.7U M 50V	1	or	405 011 8609	TR 2SC1740S-S	1
C381	403 009 8105	CERAMIC	100P K 50V	1	Q407	405 011 8500	TR 2SC1740S-R	1
C382	403 009 8105	CERAMIC	100P K 50V	1	or	405 011 8609	TR 2SC1740S-S	1
C384	403 074 2701	CERAMIC	0.047U Z 50V	1	Q408	405 011 8500	TR 2SC1740S-R	1
R301	401 024 7004	CARBON	1K JA 1/6W	1	or	405 011 8609	TR 2SC1740S-S	1
R302	401 024 7004	CARBON	1K JA 1/6W	1	Q409	405 011 8500	TR 2SC1740S-R	1
R303	401 024 7707	CARBON	100K JA 1/6W	1	or	405 011 8609	TR 2SC1740S-S	1
R304	401 024 7707	CARBON	100K JA 1/6W	1	Q410	405 011 8500	TR 2SC1740S-R	1
R305	401 024 7707	CARBON	100K JA 1/6W	1	or	405 011 8609	TR 2SC1740S-S	1
R306	401 024 7707	CARBON	100K JA 1/6W	1	C401	403 060 2807	POLYESTER 0.027U K 50V	1
R307	401 026 2700	CARBON	300 JA 1/6W	1	C402	403 060 2807	POLYESTER 0.027U K 50V	1
R308	401 026 2700	CARBON	300 JA 1/6W	1	C403	403 050 1308	ELECT 2.2U M 50V	1
R309	401 025 8703	CARBON	220K JA 1/6W	1	C404	403 050 1308	ELECT 2.2U M 50V	1
R310	401 025 8703	CARBON	220K JA 1/6W	1	C405	403 057 0908	POLYESTER 0.01U K 50V	1
R311	401 025 1902	CARBON	15K JA 1/6W	1	C406	403 057 0908	POLYESTER 0.01U K 50V	1
R312	401 025 1902	CARBON	15K JA 1/6W	1	C407	403 048 7701	ELECT 0.47U M 50V	1
R313	401 024 7707	CARBON	100K JA 1/6W	1	C408	403 048 7701	ELECT 0.47U M 50V	1
R314	401 024 7707	CARBON	100K JA 1/6W	1	C409	403 061 8709	POLYESTER 4700P K 50V	1
R315	401 012 5708	CARBON	1K JA 1/4W	1	C410	403 061 8709	POLYESTER 4700P K 50V	1
R316	401 012 5708	CARBON	1K JA 1/4W	1	C411	403 063 7205	POLYESTER 0.082U J 50V	1
R317	401 016 2604	CARBON	220 JA 1/4W	1	C412	403 063 7205	POLYESTER 0.082U J 50V	1
R318	401 016 2604	CARBON	220 JA 1/4W	1	C413	403 058 1607	POLYESTER 1500P K 50V	1
R319	401 026 9600	CARBON	470 JA 1/6W	1	C414	403 058 1607	POLYESTER 1500P K 50V	1
R320	401 020 0801	CARBON	470 JA 1/4W	1	C415	403 059 6601	POLYESTER 0.022U K 50V	1
R321	401 024 7004	CARBON	1K JA 1/6W	1	C416	403 059 6601	POLYESTER 0.022U K 50V	1
R322	401 024 7004	CARBON	1K JA 1/6W	1	C417	403 074 9007	CERAMIC 680P K 50V	1
R323	401 026 1000	CARBON	2.7K JA 1/6W	1	C418	403 074 9007	CERAMIC 680P K 50V	1
R324	401 026 1000	CARBON	2.7K JA 1/6W	1	C419	403 061 8709	POLYESTER 4700P K 50V	1
R325	401 024 7004	CARBON	1K JA 1/6W	1	C420	403 061 8709	POLYESTER 4700P K 50V	1
R326	401 024 7004	CARBON	1K JA 1/6W	1	R401	401 027 2303	CARBON 560 JA 1/6W	1
R327	401 024 9305	CARBON	1.2K JA 1/6W	1	R402	401 027 2303	CARBON 560 JA 1/6W	1
R328	401 024 9305	CARBON	1.2K JA 1/6W	1	R403	401 025 8703	CARBON 220K JA 1/6W	1
R329	401 024 7004	CARBON	1K JA 1/6W	1	R404	401 025 8703	CARBON 220K JA 1/6W	1
R330	401 024 7004	CARBON	1K JA 1/6W	1	R405	401 026 6609	CARBON 390 JA 1/6W	1
R333	401 024 7004	CARBON	1K JA 1/6W	1	R406	401 026 6609	CARBON 390 JA 1/6W	1
R334	401 024 7004	CARBON	1K JA 1/6W	1	R407	401 024 7400	CARBON 10K JA 1/6W	1
R337	401 024 7004	CARBON	1K JA 1/6W	1	R408	401 024 7400	CARBON 10K JA 1/6W	1
R338	401 024 7004	CARBON	1K JA 1/6W	1	R409	401 028 0001	CARBON 910 JA 1/6W	1
R341	401 024 7004	CARBON	1K JA 1/6W	1	R410	401 028 0001	CARBON 910 JA 1/6W	1
R342	401 024 7004	CARBON	1K JA 1/6W	1	R411	401 024 7707	CARBON 100K JA 1/6W	1
R351	401 024 7400	CARBON	10K JA 1/6W	1	R412	401 024 7707	CARBON 100K JA 1/6W	1
R361	401 026 9907	CARBON	4.7K JA 1/6W	1	R413	401 026 6609	CARBON 390 JA 1/6W	1
R362	401 020 2003	CARBON	4.7K JA 1/4W	1	R414	401 026 6609	CARBON 390 JA 1/6W	1
R363	401 024 8001	CARBON	1M JA 1/6W	1	R415	401 024 7400	CARBON 10K JA 1/6W	1
R364	401 024 8001	CARBON	1M JA 1/6W	1	R416	401 024 7400	CARBON 10K JA 1/6W	1
R367	401 024 8001	CARBON	1M JA 1/6W	1	R417	401 024 9305	CARBON 1.2K JA 1/6W	1
R368	401 024 8001	CARBON	1M JA 1/6W	1	R418	401 024 9305	CARBON 1.2K JA 1/6W	1
R369	401 027 2600	CARBON	5.6K JA 1/6W	1				
R370	401 027 2600	CARBON	5.6K JA 1/6W	1				

## P.C.BOARD PARTS LIST (Continued)

Ref. No.	Part No.	Description	Q'ty	Ref. No.	Part No.	Description	Q'ty	
R419	401 027 0309	CARBON 47K JA 1/6W	1	D506	407 063 2109	LED SLR-54VT3 (TAPE-2)	1	
R420	401 027 0309	CARBON 47K JA 1/6W	1	D507	407 063 2109	LED SLR-54VT3 (LOUDNESS)	1	
R421	401 026 6609	CARBON 390 JA 1/6W	1	D509	407 063 2109	LED SLR-54VT3 (POWER STANDBY)	1	
R422	401 026 6609	CARBON 390 JA 1/6W	1	D510	407 035 3400	LED SLP-673B-51 (VOLUME LEVEL)	1	
R423	401 024 7400	CARBON 10K JA 1/6W	1	D511	407 035 3400	LED SLP-673B-51 (VOLUME LEVEL)	1	
R424	401 024 7400	CARBON 10K JA 1/6W	1	D513	407 035 3400	LED SLP-673B-51 (VOLUME LEVEL)	1	
R425	401 024 8407	CARBON 1.1K JA 1/6W	1	D515	407 035 3400	LED SLP-673B-51 (VOLUME LEVEL)	1	
R426	401 024 8407	CARBON 1.1K JA 1/6W	1	D516	407 035 3400	LED SLP-673B-51 (VOLUME LEVEL)	1	
R427	401 026 7408	CARBON 39K JA 1/6W	1	D517	407 106 5500	LED ULP-R73B-50 (POWER LEVEL)	1	
R428	401 026 7408	CARBON 39K JA 1/6W	1	D518	407 106 5500	LED ULP-R73B-50 (POWER LEVEL)	1	
R429	401 026 6609	CARBON 390 JA 1/6W	1	D519	407 106 5500	LED ULP-R73B-50 (POWER LEVEL)	1	
R430	401 026 6609	CARBON 390 JA 1/6W	1	D520	407 106 5500	LED ULP-R73B-50 (POWER LEVEL)	1	
R431	401 024 7400	CARBON 10K JA 1/6W	1	D521	407 106 5500	LED ULP-R73B-50 (POWER LEVEL)	1	
R432	401 024 7400	CARBON 10K JA 1/6W	1	D524	407 008 0405	DIODE GMB01-BT	1	
R433	401 024 8407	CARBON 1.1K JA 1/6W	1	D525	407 008 0405	DIODE GMB01-BT	1	
R434	401 024 8407	CARBON 1.1K JA 1/6W	1	D526	407 005 3805	DIODE DS442-BT	1	
R435	401 026 1307	CARBON 27K JA 1/6W	1	D529	407 008 0405	DIODE GMB01-BT	1	
R436	401 026 1307	CARBON 27K JA 1/6W	1	D620	407 005 3805	DIODE DS442-BT	1	
R437	401 026 6609	CARBON 390 JA 1/6W	1	D621	407 069 1205	DIODE DS441	1	
R438	401 026 6609	CARBON 390 JA 1/6W	1	D632	407 008 0405	DIODE GMB01-BT	1	
R439	401 024 7400	CARBON 10K JA 1/6W	1	RC501	407 088 6601	SENSOR BX-1407	1	
R440	401 024 7400	CARBON 10K JA 1/6W	1	C501	403 050 1308	ELECT 2.2U M 50V	1	
<b>CONTROL PANEL P.C.B. ASSY</b>					C502	403 049 5508	ELECT 10U M 50V	1
48	620 187 2217	Control Panel P.C.B. Assy	1	C503	403 038 2402	ELECT 100U M 6.3V	1	
	620 051 8086	Spacer	8	C504	403 049 1708	ELECT 1U M 50V	1	
	620 052 0010	Spacer LED	1	C505	403 074 2701	CERAMIC 0.047U Z 50V	1	
	620 125 8424	Wire Band	1	C639	403 022 5907	CERAMIC 33P J 50V	1	
	411 020 5508	SCR S-TPG BRZ 2.6X6	2	C640	403 022 5907	CERAMIC 33P J 50V	1	
CX601	620 007 3349	Ceramic OSC CSA4.00	1	C641	403 049 1708	ELECT 1U M 50V	1	
PC102	620 186 0306	Connector 6P Assy	1	C642	403 047 9706	ELECT 0.1U M 50V	1	
PC601	620 186 0436	Connector 4P Assy	1	C643	403 043 3104	ELECT 2200U M 16V	1	
PC602	620 186 0450	Connector 5P Assy	1	C644	403 042 3600	ELECT 100U M 16V	1	
PC603	620 186 0443	Connector 4P Assy	1	C645	403 001 2309	CERAMIC 0.01U N 16V	1	
SW501	620 016 7796	Tact Switch (PHONO)	1	C662	403 049 1708	ELECT 1U M 50V	1	
SW502	620 016 7796	Tact Switch (COMPACT DISC)	1	R501	401 027 2600	CARBON 5.6K JA 1/6W	1	
SW503	620 016 7796	Tact Switch (VIDEO/AUX)	1	R506	401 019 9600	CARBON 47 JA 1/4W	1	
SW504	620 016 7796	Tact Switch (TAPE-1 Monitor)	1	R519	401 025 7805	CARBON 2.2K JA 1/6W	1	
SW505	620 016 7796	Tact Switch (TAPE-2 Monitor)	1	R520	401 025 7805	CARBON 2.2K JA 1/6W	1	
SW506	620 016 7796	Tact Switch (LOUDNESS)	1	R521	401 025 7805	CARBON 2.2K JA 1/6W	1	
SW508	620 016 7796	Tact Switch (VOLUME UP)	1	R522	401 027 2600	CARBON 5.6K JA 1/6W	1	
SW509	620 016 7796	Tact Switch (VOLUME DOWN)	1	R523	401 012 7009	CARBON 10K JA 1/4W	1	
SW510	620 016 7796	Tact Switch (AUTO/MANUAL MODE)	1	R524	401 012 7009	CARBON 10K JA 1/4W	1	
SW511	620 016 7796	Tact Switch (FM-1/2/3)	1	R525	401 012 7009	CARBON 10K JA 1/4W	1	
SW512	620 016 7796	Tact Switch (AM)	1	R526	401 024 7400	CARBON 10K JA 1/6W	1	
SW513	620 016 7796	Tact Switch (UP TUNING)	1	R529	401 012 7009	CARBON 10K JA 1/4W	1	
SW514	620 016 7796	Tact Switch (DOWN TUNING)	1	R530	401 012 7009	CARBON 10K JA 1/4W	1	
W301	620 189 4680	Wire 4 Parallel	1	R531	401 024 7400	CARBON 10K JA 1/6W	1	
IC501	409 020 2603	IC LB1423N	1	R532	401 024 7400	CARBON 10K JA 1/6W	1	
IC601	409 122 2907	IC LC6522H-3374	1	R533	401 021 1906	CARBON 560 JA 1/4W	1	
Q501	405 004 4700	TR 2SA608-F-SP	1	R534	401 024 9701	CARBON 12K JA 1/6W	1	
or	405 004 5202	TR 2SA608-G-SP	1	R535	401 025 4200	CARBON 1.8K JA 1/6W	1	
Q506	405 008 6700	TR 2SB808-F	1	R537	401 024 7400	CARBON 10K JA 1/6W	1	
or	405 008 7004	TR 2SB808-G	1	R540	401 012 4503	CARBON 100 JA 1/4W	1	
Q507	405 008 6700	TR 2SB808-F	1	R541	401 012 4503	CARBON 100 JA 1/4W	1	
or	405 008 7004	TR 2SB808-G	1	R542	401 012 4503	CARBON 100 JA 1/4W	1	
Q508	405 008 6700	TR 2SB808-F	1	R543	401 012 4503	CARBON 100 JA 1/4W	1	
or	405 008 7004	TR 2SB808-G	1	R664	401 013 5301	CARBON 1.2K JA 1/4W	1	
Q509	405 004 4700	TR 2SA608-F-SP	1	R666	401 024 6403	CARBON 10 JA 1/6W	1	
or	405 004 5202	TR 2SA608-G-SP	1	R667	401 024 7400	CARBON 10K JA 1/6W	1	
Q510	405 004 4700	TR 2SA608-F-SP	1	R668	401 024 7707	CARBON 100K JA 1/6W	1	
or	405 004 5202	TR 2SA608-G-SP	1	R669	401 026 7408	CARBON 39K JA 1/6W	1	
Q511	405 004 4700	TR 2SA608-F-SP	1	R670	401 024 6700	CARBON 100 JA 1/6W	1	
or	405 004 5202	TR 2SA608-G-SP	1	R692	401 024 7400	CARBON 10K JA 1/6W	1	
Q512	405 004 4700	TR 2SA608-F-SP	1	R693	401 024 7400	CARBON 10K JA 1/6W	1	
or	405 004 5202	TR 2SA608-G-SP	1	R694	401 027 0507	CARBON 470K JA 1/6W	1	
Q513	405 004 4700	TR 2SA608-F-SP	1	R702	401 027 3003	CARBON 56K JA 1/6W	1	
or	405 004 5202	TR 2SA608-G-SP	1	RA601	620 004 5674	Resistor 10K-12	1	
Q622	405 019 2906	TR 2SC536-F-SP	1	RA602	620 004 5612	Resistor 10K-11 J	1	
or	405 019 4009	TR 2SC536-G-SP	1	RA603	620 004 5575	Resistor 100K-4 J	1	
Q628	405 019 2906	TR 2SC536-F-SP	1	<b>CD REMOTE CONTROL P.C.B. ASSY</b>				
or	405 019 4009	TR 2SC536-G-SP	1	49	620 186 8616	CD Remote Control P.C.B. Assy	1	
Q629	405 004 4700	TR 2SA608-F-SP	1		620 186 7282	Bracket Connect PC	1	
or	405 004 5202	TR 2SA608-G-SP	1	CN303	620 021 5930	Plug 4P	1	
D501	407 063 1805	LED SLR-54PT3 (PHONO)	1	R390	401 024 7004	CARBON 1K JA 1/6W	1	
D502	407 063 1805	LED SLR-54PT3 (TUNER)	1	R391	401 024 7004	CARBON 1K JA 1/6W	1	
D503	407 063 1805	LED SLR-54PT3 (CD)	1	R392	401 024 7004	CARBON 1K JA 1/6W	1	
D504	407 063 1805	LED SLR-54PT3 (VIDEO/AUX)	1	R393	401 024 7004	CARBON 1K JA 1/6W	1	
D505	407 063 2109	LED SLR-54VT3 (TAPE-1)	1					

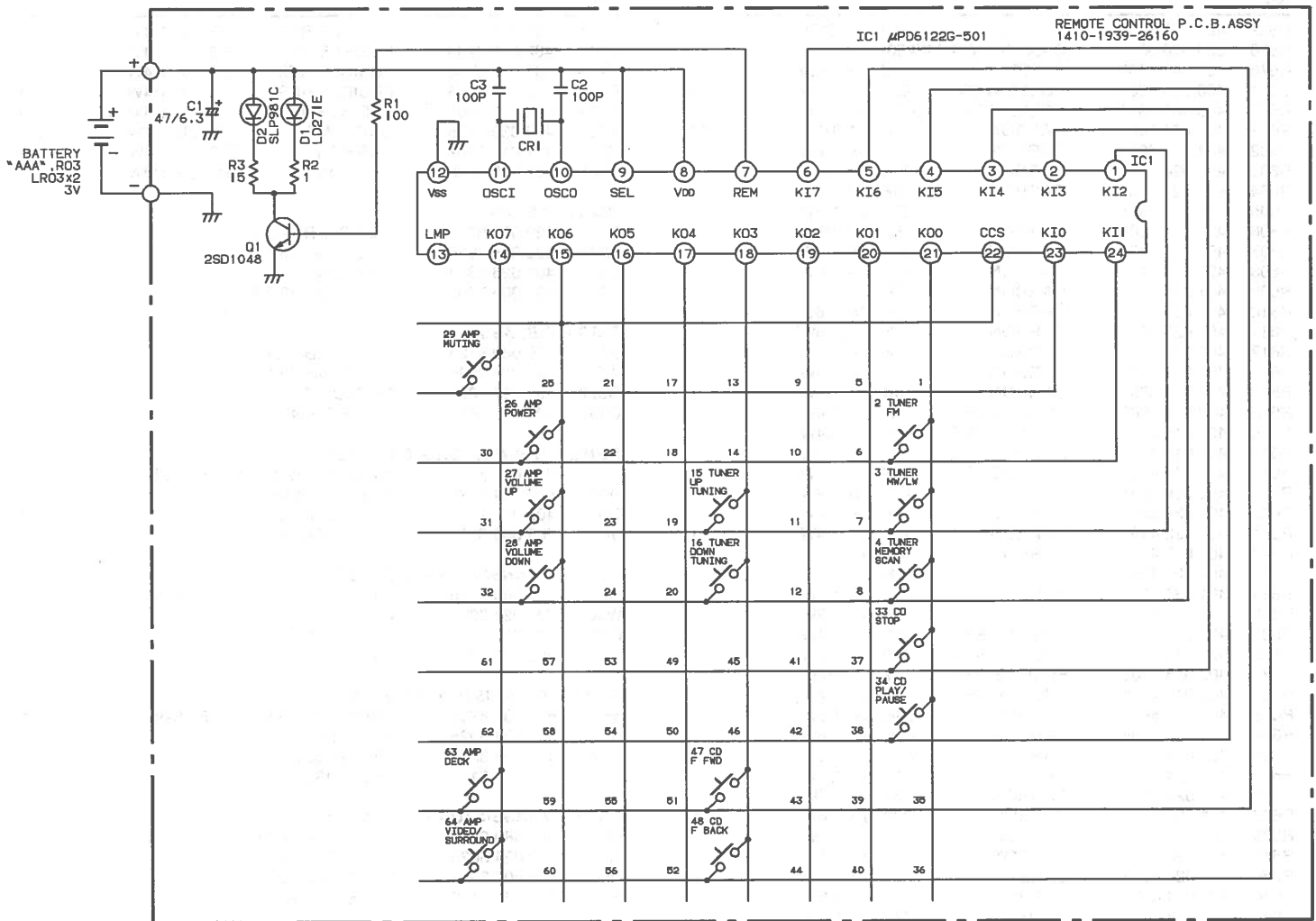
## P.C.BOARD PARTS LIST(Continued)

Ref. No.	Part No.	Description	Q'ty	Ref. No.	Part No.	Description	Q'ty
<b>MAIN AMPLIFIER P.C.B. ASSY</b>							
50	620 186 8630	Main Amplifier P.C.B. Assy	1	D606	407 008 0405	DIODE GMB01-BT	1
	620 017 0413	Relay	1	D607	407 008 0405	DIODE GMB01-BT	1
	620 018 3536	Fuse Holder	2	D608	407 008 0405	DIODE GMB01-BT	1
△	620 025 3253	Power Trans (Sub)	1	D609	407 008 0405	DIODE GMB01-BT	1
	620 031 4763	Wire Wrap Terminal	7	D610	407 008 0405	DIODE GMB01-BT	1
	620 053 9241	Plate Heat Sink (for Q625, Q626)	2	D611	407 008 0405	DIODE GMB01-BT	1
	620 123 3025	Cover Capacitor	1	D612	407 008 0405	DIODE GMB01-BT	1
△	423 011 4001	FUSE 125V 5A	1	D613	407 008 0405	DIODE GMB01-BT	1
	411 020 8004	SCR S-TPG BRZ 3X8	2	D614	407 008 0405	DIODE GMB01-BT	1
	620 182 7866	Relay TV-5	1	D624	407 049 6602	ZENER DIODE GZA13Y-BT	1
	620 017 0406	Relay	1	D625	407 049 7807	ZENER DIODE GZA18Y-BT	1
CN301	620 182 8955	Plug 3P	1	D626	407 050 5403	ZENER DIODE GZA5.6X-BT	1
CN302	620 182 8955	Plug 3P	1	D627	407 049 7807	ZENER DIODE GZA18Y-BT	1
CN601	620 021 6197	Connector 4P	1	D628	407 004 9105	DIODE DSF10C-BT	1
CN602	620 021 6203	Connector 5P	1	D629	407 004 9105	DIODE DSF10C-BT	1
PC101	620 186 0344	Connector 7P Assy	1	D630	407 004 9105	DIODE DSF10C-BT	1
VR601	620 004 7098	Potentiometer 100B	1	D631	407 004 9105	DIODE DSF10C-BT	1
VR602	620 004 7098	Potentiometer 100B	1	D633	407 050 5601	ZENER DIODE GZA5.6Z-BT	1
W601	620 020 6853	Connector 1P Assy	1	D634	407 004 9105	DIODE DSF10C-BT	1
Q601	405 016 2206	TR 2SC2878-A	1	D635	407 004 9105	DIODE DSF10C-BT	1
or	405 016 2305	TR 2SC2878-B	1	D636	407 088 3105	DIODE DSC30TC-KD2	1
Q602	405 016 2206	TR 2SC2878-A	1	D637	407 088 3105	DIODE DSC30TC-KD2	1
or	405 016 2305	TR 2SC2878-B	1	D638	407 088 3105	DIODE DSC30TC-KD2	1
Q603	405 016 8901	TR 2SC3066-F	1	D639	407 088 3105	DIODE DSC30TC-KD2	1
or	405 016 9007	TR 2SC3066-G	1	D643	407 004 9105	DIODE DSF10C-BT	1
Q604	405 016 8901	TR 2SC3066-F	1	D646	407 050 5502	ZENER DIODE GZA5.6Y-BT	1
or	405 016 9007	TR 2SC3066-G	1	D647	407 008 0405	DIODE GMB01-BT	1
Q605	405 002 9103	TR 2SA1209-S	1	D648	407 008 0405	DIODE GMB01-BT	1
or	405 002 9202	TR 2SA1209-T	1	D649	407 005 3805	DIODE DS442-BT	1
Q606	405 002 9103	TR 2SA1209-S	1	D650	407 005 3805	DIODE DS442-BT	1
or	405 002 9202	TR 2SA1209-T	1	C601	403 018 8509	CERAMIC 220P K 50V	1
Q607	405 002 9103	TR 2SA1209-S	1	C602	403 018 8509	CERAMIC 220P K 50V	1
or	405 002 9202	TR 2SA1209-T	1	C603	403 049 5508	ELECT 10U M 50V	1
Q608	405 002 9103	TR 2SA1209-S	1	C604	403 049 5508	ELECT 10U M 50V	1
or	405 002 9202	TR 2SA1209-T	1	C605	403 072 2703	CERAMIC 0.022U Z 50V	1
Q609	405 016 3906	TR 2SC2911-S	1	C606	403 072 2703	CERAMIC 0.022U Z 50V	1
or	405 016 4002	TR 2SC2911-T	1	C609	403 038 2402	ELECT 100U M 6.3V	1
Q610	405 016 3906	TR 2SC2911-S	1	C610	403 038 2402	ELECT 100U M 6.3V	1
or	405 016 4002	TR 2SC2911-T	1	C611	404 012 6904	CERAMIC 0.047U Z 150V	1
Q611	405 017 9501	TR 2SC3330-S	1	C612	404 012 6904	CERAMIC 0.047U Z 150V	1
or	405 017 9600	TR 2SC3330-T	1	C613	403 035 8506	CERAMIC 3P C 500V	1
Q612	405 017 9501	TR 2SC3330-S	1	C614	403 035 8506	CERAMIC 3P C 500V	1
or	405 017 9600	TR 2SC3330-T	1	C615	403 035 2207	CERAMIC 15P K 500V	1
Q613	405 003 5203	TR 2SA1317-S	1	C616	403 035 2207	CERAMIC 15P K 500V	1
or	405 003 5302	TR 2SA1317-T	1	C617	403 035 2207	CERAMIC 15P K 500V	1
Q614	405 003 5203	TR 2SA1317-S	1	C618	403 035 2207	CERAMIC 15P K 500V	1
or	405 003 5302	TR 2SA1317-T	1	C619	403 096 8408	ELECT 22U M 100V	1
Q615	405 017 2801	TR 2SC3117-S	1	C620	403 096 8408	ELECT 22U M 100V	1
or	405 017 2700	TR 2SC3117-T	1	C622	403 049 5508	ELECT 10U M 50V	1
Q616	405 017 2801	TR 2SC3117-S	1	C623	403 096 8408	ELECT 22U M 100V	1
or	405 017 2700	TR 2SC3117-T	1	C624	403 096 8408	ELECT 22U M 100V	1
Q617	405 003 1601	TR 2SA1249-S	1	C627	403 059 6601	POLYESTER 0.022U K 50V	1
or	405 003 1700	TR 2SA1249-T	1	C628	403 059 6601	POLYESTER 0.022U K 50V	1
Q618	405 003 1601	TR 2SA1249-S	1	C629	403 059 6601	POLYESTER 0.022U K 50V	1
or	405 003 1700	TR 2SA1249-T	1	C630	403 059 6601	POLYESTER 0.022U K 50V	1
Q619	405 019 2906	TR 2SC536-F-SP	1	C631	403 061 4404	POLYESTER 0.039U K 50V	1
or	405 019 4009	TR 2SC536-G-SP	1	C632	403 061 4404	POLYESTER 0.039U K 50V	1
Q620	405 019 2906	TR 2SC536-F-SP	1	C633	403 075 6906	CERAMIC 100P K 500V	1
or	405 019 4009	TR 2SC536-G-SP	1	C634	403 075 6906	CERAMIC 100P K 500V	1
Q621	405 019 2906	TR 2SC536-F-SP	1	C635	403 075 6906	CERAMIC 100P K 500V	1
or	405 019 4009	TR 2SC536-G-SP	1	C636	403 075 6906	CERAMIC 100P K 500V	1
Q623	405 004 4700	TR 2SA608-F-SP	1	C638	403 038 2402	ELECT 100U M 6.3V	1
or	405 004 5202	TR 2SA608-G-SP	1	C646	403 038 2402	ELECT 100U M 6.3V	1
Q624	405 013 6801	TR 2SC2274-E	1	C647	403 049 5508	ELECT 10U M 50V	1
or	405 013 7006	TR 2SC2274-F	1	C648	403 049 5508	ELECT 10U M 50V	1
Q625	405 035 7107	TR 2SD1913-R	1	C649	403 049 5508	ELECT 10U M 50V	1
or	405 035 7206	TR 2SD1913-S	1	C650	403 045 0606	ELECT 100U M 25V	1
Q626	405 035 7107	TR 2SD1913-R	1	C651	403 049 5508	ELECT 10U M 50V	1
or	405 035 7206	TR 2SD1913-S	1	C652	403 045 0606	ELECT 100U M 25V	1
Q627	405 004 3901	TR 2SA608-E-NP	1	C653	403 052 9609	ELECT 1000U M 35V	1
or	405 004 4502	TR 2SA608-F-NP	1	C654	403 052 9609	ELECT 1000U M 35V	1
Q630	405 019 2906	TR 2SC536-F-SP	1	C659	403 043 7102	ELECT 330U M 16V	1
or	405 019 4009	TR 2SC536-G-SP	1	C661	403 039 4504	ELECT 470U M 6.3V	1
Q631	405 034 6804	TR DTA114-ES	1	C663	403 054 1304	ELECT 47U M 35V	1
D602	407 049 9504	ZENER DIODE GZA20Y-BT	1	C664	620 006 8178	Elect 6800MF 70V	1
D603	407 008 0405	DIODE GMB01-BT	1	C665	620 006 8178	Elect 6800MF 70V	1
D604	407 008 0405	DIODE GMB01-BT	1	C666	404 012 7000	CERAMIC 0.01U P 500V	1
D605	407 008 0405	DIODE GMB01-BT	1	C667	404 012 7000	CERAMIC 0.01U P 500V	1
				C668	404 012 7000	CERAMIC 0.01U P 500V	1

## P.C.BOARD PARTS LIST(Continued)

Ref. No.	Part No.	Description	Q'ty	Ref. No.	Part No.	Description	Q'ty
C689	404 012 7000	CERAMIC 0.01U P 500V	1	R714	402 015 4705	FUSIBLE RES 47 J- 1/4W	1
C670	620 006 8284	Capacitor 0.01MF250V	1	R715	402 015 3708	FUSIBLE RES 2.2 J- 1/4W	1
C676	403 049 1708	ELECT 1U M 50V	1	R716	402 015 3708	FUSIBLE RES 2.2 J- 1/4W	1
C681	403 059 6601	POLYESTER 0.022U K 50V	1	R717	402 015 3708	FUSIBLE RES 2.2 J- 1/4W	1
C682	403 059 6601	POLYESTER 0.022U K 50V	1	R718	402 015 3708	FUSIBLE RES 2.2 J- 1/4W	1
R601	401 024 7004	CARBON 1K JA 1/6W	1	R720	402 039 7508	OXIDE-MT 220 JB 1W	1
R602	401 024 7004	CARBON 1K JA 1/6W	1	R721	401 018 7607	CARBON 360 JA 1/4W	1
R603	401 024 7707	CARBON 100K JA 1/6W	1	R901	402 023 3905	CARBON 3.9M JA 1/2W	1
R604	401 024 7707	CARBON 100K JA 1/6W	1	<b>BIAS P.C.B. AS</b>			
R605	401 027 5908	CARBON 68K JA 1/6W	1	51	620 080 6718	Bias P.C.B. Assy	1
R606	401 027 5908	CARBON 68K JA 1/6W	1	W801	620 024 2936	Wire 2 Parallel	1
R607	401 024 7400	CARBON 10K JA 1/6W	1	Q801	405 026 0803	TR 2SD947	1
R608	401 024 7400	CARBON 10K JA 1/6W	1	D801	407 005 3805	DIODE DS442-BT	1
R609	401 025 7805	CARBON 2.2K JA 1/6W	1	<b>BIAS P.C.B. ASSY</b>			
R610	401 025 7805	CARBON 2.2K JA 1/6W	1	52	620 080 6725	Bias P.C.B. Assy	1
R611	401 025 7805	CARBON 2.2K JA 1/6W	1	W802	620 024 2936	Wire 2 Parallel	1
R612	401 025 7805	CARBON 2.2K JA 1/6W	1	Q802	405 026 0803	TR 2SD947	1
R613	401 014 5201	CARBON 15K JA 1/4W	1	D802	407 005 3805	DIODE DS442-BT	1
R614	401 014 5201	CARBON 15K JA 1/4W	1	<b>POWER TRANSISTOR P.C.B. ASSY</b>			
R615	402 015 5603	FUSIBLE RES 82 J- 1/4W	1	53	620 080 6732	Power Transistor P.C.B. Assy	1
R616	402 015 5603	FUSIBLE RES 82 J- 1/4W	1	W901	620 024 3025	Wire 3 Parallel	1
R617	402 015 4705	FUSIBLE RES 47 J- 1/4W	1	Q901	405 017 7705	TR 2SC3280-O	1
R618	402 015 4705	FUSIBLE RES 47 J- 1/4W	1	or	405 033 3309	TR 2SC3280-R	1
R619	402 039 6501	OXIDE-MT 12K JB 2W	1	<b>POWER TRANSISTOR P.C.B. ASSY</b>			
R620	402 039 6501	OXIDE-MT 12K JB 2W	1	54	620 080 6749	Power Transistor P.C.B. Assy	1
R621	401 022 4104	CARBON 68K JA 1/4W	1	W902	620 024 3025	Wire 3 Parallel	1
R622	401 022 4104	CARBON 68K JA 1/4W	1	Q902	405 017 7705	TR 2SC3280-O	1
R623	401 024 9305	CARBON 1.2K JA 1/6W	1	or	405 033 3309	TR 2SC3280-R	1
R624	401 024 9305	CARBON 1.2K JA 1/6W	1	<b>POWER TRANSISTOR P.C.B. ASSY</b>			
R628	402 039 6204	OXIDE-MT 5.6K JB 1/2W	1	56	620 080 6763	Power Transistor P.C.B. Assy	1
R629	402 015 3609	FUSIBLE RES 150 J- 1/4W	1	W903	620 024 3025	Wire 3 Parallel	1
R630	402 015 3609	FUSIBLE RES 150 J- 1/4W	1	Q903	405 003 3902	TR 2SA1301-O	1
R631	402 015 4705	FUSIBLE RES 47 J- 1/4W	1	or	405 031 2106	TR 2SA1301-R	1
R632	402 015 4705	FUSIBLE RES 47 J- 1/4W	1	<b>POWER TRANSISTOR P.C.B. ASSY</b>			
R633	401 027 5908	CARBON 68K JA 1/6W	1	55	620 080 6756	Power Transistor P.C.B. Assy	1
R634	401 027 5908	CARBON 68K JA 1/6W	1	W904	620 024 3025	Wire 3 Parallel	1
R635	401 024 7707	CARBON 100K JA 1/6W	1	Q904	405 003 3902	TR 2SA1301-O	1
R636	401 024 7707	CARBON 100K JA 1/6W	1	or	405 031 2106	TR 2SA1301-R	1
R637	401 026 3905	CARBON 330 JA 1/6W	1	<b>POWER TRANSISTOR P.C.B. ASSY</b>			
R638	401 026 3905	CARBON 330 JA 1/6W	1	56	620 080 6763	Power Transistor P.C.B. Assy	1
R639	401 026 3905	CARBON 330 JA 1/6W	1	W904	620 024 3025	Wire 3 Parallel	1
R640	401 026 3905	CARBON 330 JA 1/6W	1	Q904	405 003 3902	TR 2SA1301-O	1
R645	401 024 8605	CARBON 11K JA 1/6W	1	or	405 031 2106	TR 2SA1301-R	1
R646	401 024 8605	CARBON 11K JA 1/6W	1	<b>POWER SWITCH P.C.B. ASSY</b>			
R647	402 015 4408	FUSIBLE RES 330 J- 1/4W	1	57	620 080 6770	Power Switch P.C.B. Assy	1
R648	402 015 4408	FUSIBLE RES 330 J- 1/4W	1		620 015 3324	Push Switch 1 Key	1
R649	620 004 3885	Cement 0.22X2	1		620 017 1915	Jack 7P 6.45 (PHONES)	1
R650	620 004 3885	Cement 0.22X2	1	SW701	620 015 2372	Power Switch (POWER) $\Delta$	1
R653	402 039 6303	OXIDE-MT 10 JB 1W	1	W702	620 024 1311	Wire 4 Parallel	1
R654	402 039 6303	OXIDE-MT 10 JB 1W	1	W905	620 024 3629	Wire 2 Parallel	1
R655	401 013 6407	CARBON 12K JA 1/4W	1	R701	401 099 5608	OXIDE-MT 560 JB 3W	1
R656	401 013 6407	CARBON 12K JA 1/4W	1	R702	401 099 5608	OXIDE-MT 560 JB 3W	1
R657	401 015 1608	CARBON 180 JA 1/4W	1	R703	401 016 7500	CARBON 240 JA 1/4W	1
R658	401 013 4205	CARBON 120 JA 1/4W	1	R704	401 016 7500	CARBON 240 JA 1/4W	1
R659	401 027 0309	CARBON 47K JA 1/6W	1	R705	401 016 7500	CARBON 240 JA 1/4W	1
R660	401 024 9701	CARBON 12K JA 1/6W	1	R706	401 016 7500	CARBON 240 JA 1/4W	1
R661	401 027 3003	CARBON 56K JA 1/6W	1	<b>SPEAKER TERMINAL P.C.B. ASSY</b>			
R662	401 021 4105	CARBON 56K JA 1/4W	1	58	620 186 8654	Speaker Terminal P.C.B. Assy	1
R665	401 013 5301	CARBON 1.2K JA 1/4W	1		620 185 1953	Push Terminal 8P (SPEAKER)	1
R671	401 024 7400	CARBON 10K JA 1/6W	1	W701	620 024 2998	Wire 6 Parallel	1
R672	401 027 0309	CARBON 47K JA 1/6W	1	<b>POWER TRANS P.C.B. ASSY</b>			
R675	401 026 4308	CARBON 3.3K JA 1/6W	1	59	620 186 8678	Power Trans P.C.B. Assy	1
R677	401 023 1706	CARBON 820 JA 1/4W	1	W910	620 024 3636	Wire 2 Parallel	1
R680	401 016 3809	CARBON 2.2K JA 1/4W	1	W911	620 187 4907	Wire 3 Parallel	1
R681	402 039 6600	OXIDE-MT 120 JB 2W	1	W913	620 187 4891	Wire 2 Parallel	1
R682	401 023 1706	CARBON 820 JA 1/4W	1	<b>AC OUTLET P.C.B. ASSY</b>			
R683	401 013 5301	CARBON 1.2K JA 1/4W	1	60	620 080 6800	AC Outlet P.C.B. Assy	1
R684	402 039 6709	OXIDE-MT 82 JB 2W	1	<b>NOTES:</b>			
R685	402 039 6709	OXIDE-MT 82 JB 2W	1	1.	Parts order must contain Model Number, Part Number and Description.		
R686	401 018 3807	CARBON 3.3K JA 1/4W	1	2.	Ordering quantity of screws and resistors must be multiple of 10 pcs.		
R687	402 039 6709	OXIDE-MT 82 JB 2W	1				
R688	401 013 5301	CARBON 1.2K JA 1/4W	1				
R689	401 023 1706	CARBON 820 JA 1/4W	1				
R690	401 018 7607	CARBON 360 JA 1/4W	1				
R691	402 039 6402	OXIDE-MT 4.7 JB 1W	1				
R710	401 026 1000	CARBON 2.7K JA 1/6W	1				
R711	402 015 4705	FUSIBLE RES 47 J- 1/4W	1				
R712	402 015 4705	FUSIBLE RES 47 J- 1/4W	1				
R713	402 015 4705	FUSIBLE RES 47 J- 1/4W	1				

# SCHEMATIC DIAGRAM (REMOTE CONTROL)

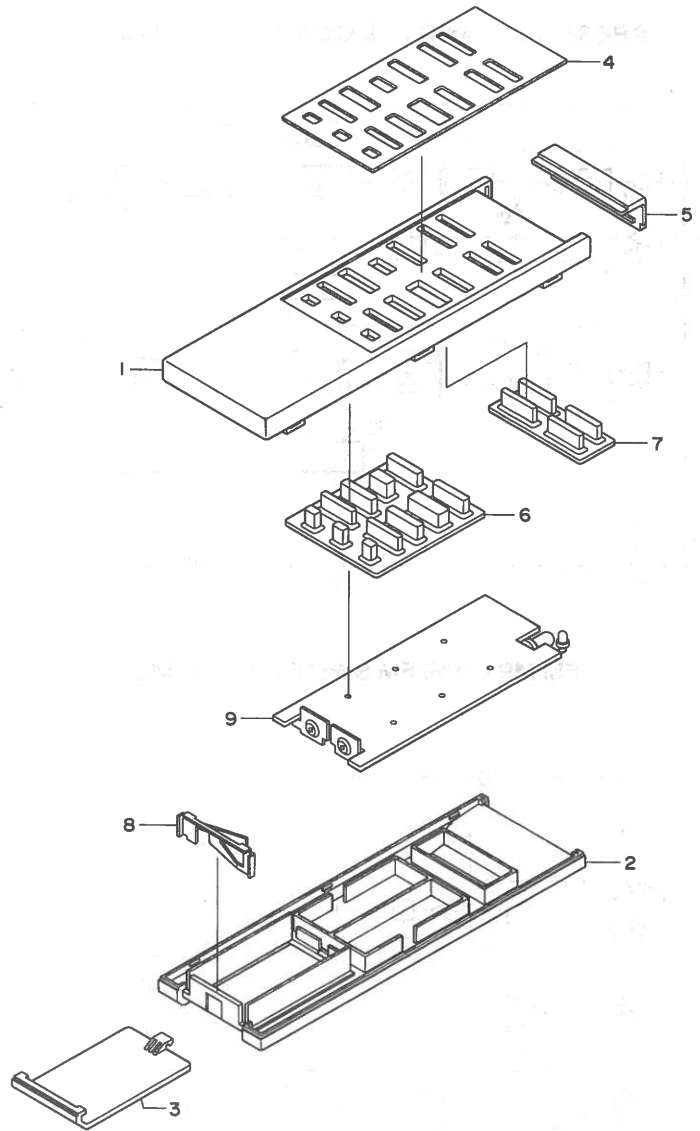


# PARTS LIST & EXPLODED VIEW (REMOTE CONTROL)

Ref. No.	Part No.	Description	Q'ty	
<b>REMOTE CONTROL CABINET</b>				
	620 004 1256	REM-853UL (Remote Control)	1	
1	620 038 8153	Cabinet Top	1	
2	620 038 8160	Cabinet Bottom	1	
3	620 040 0206	Lid Battery	1	
4	620 040 6123	Plate Decorate	1	
5	620 054 1381	Filter	1	
6	620 111 7127	Knob Rubber (11KEY)	1	
7	620 111 7141	Knob Rubber (4KEY)	1	
8	620 122 1305	Spring Battery	1	
9	620 080 3144	Remote Control P.C.B. Assy	1	
<b>REMOTE CONTROL P.C.B. ASSY</b>				
9	620 080 3144	Remote Control P.C.B. Assy	1	
	620 122 1312	Terminal Anode (+)	1	
	620 122 1329	Terminal Anode (-)	1	
CR1	620 007 3301	Ceramic KBR-455BT	1	
IC1	409 121 5909	IC UPD6122G-501	1	
Q1	405 021 2505	TR 2SD1048-X8-TA	1	
or	405 021 2406	TR 2SD1048-X7-TA	1	
D1	407 016 2408	LED LD271E	1	
D2	407 036 6301	LED SLP-981C-50	1	
C1	403 039 2906	ELECT	47U M 6.3V	1
C2	403 068 9709	CERAMIC	100P K 50V	1
C3	403 068 9709	CERAMIC	100P K 50V	1
R1	402 035 8004	MT-GLAZE	100 JA 1/8W	1
R2	402 033 8303	MT-GLAZE	1 JA 1/8W	1
R3	402 022 9106	MT-GLAZE	15 JA 1/8W	1

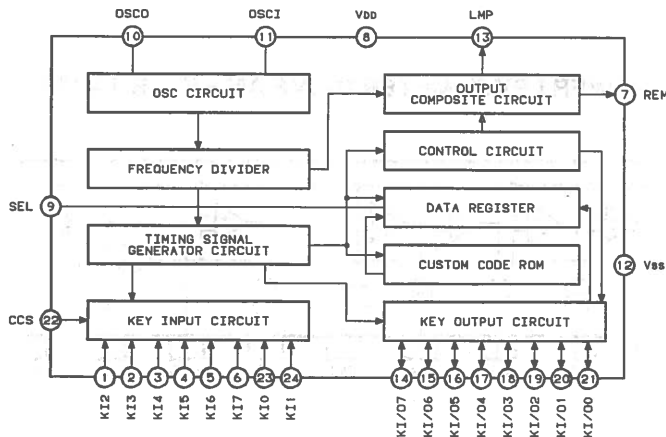
**NOTES:**

1. Parts order must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and resistors must be multiple of 10 pcs.

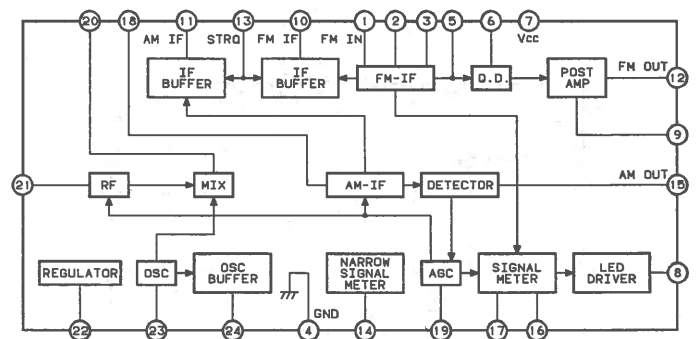


## INTEGRATED CIRCUIT BLOCK DIAGRAM

### REMOTE CONTROL TRANSMITTER IC $\mu$ PD 6122 G

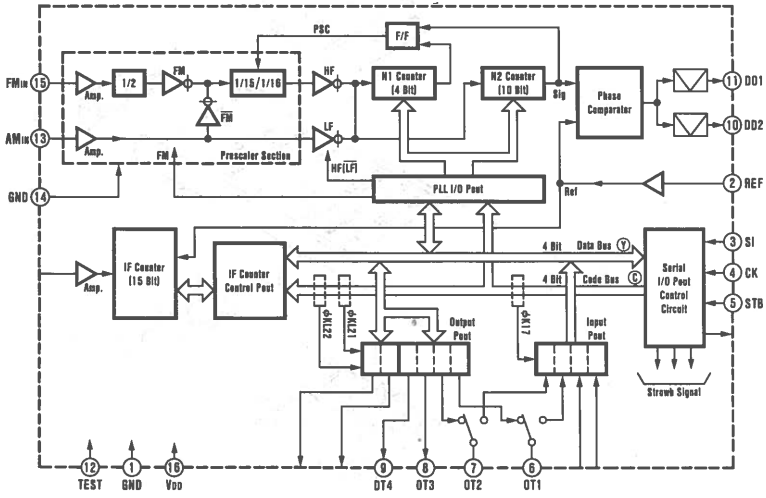


### AM RF IF/FM IF IC LA 1266

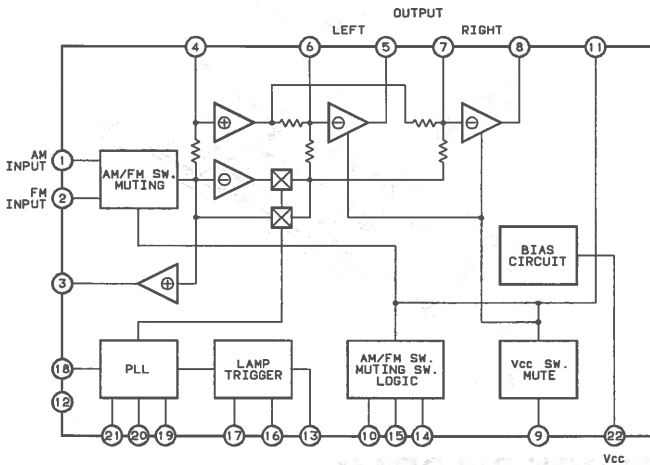


# INTEGRATED CIRCUIT BLOCK DIAGRAM (Continued)

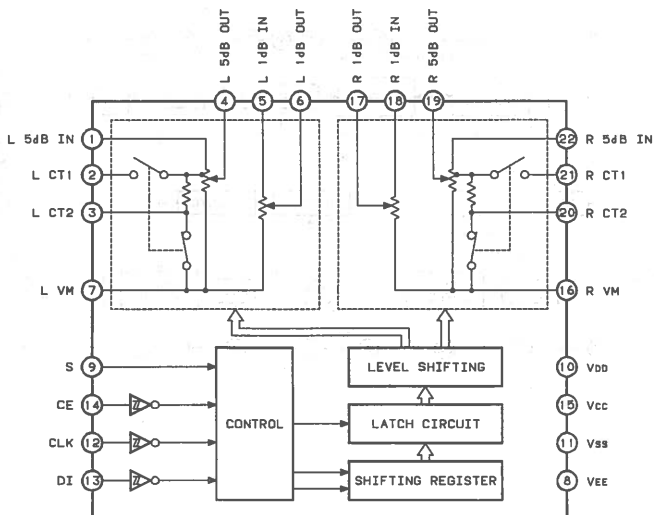
## PRESCALER AND PLL CONTROL IC TC 9172 P



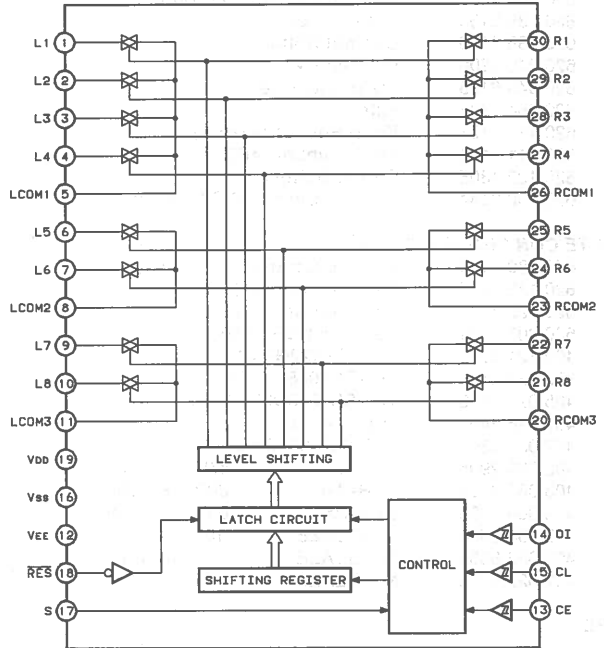
## FM MPX AM/FM SWITCH IC LA 3400



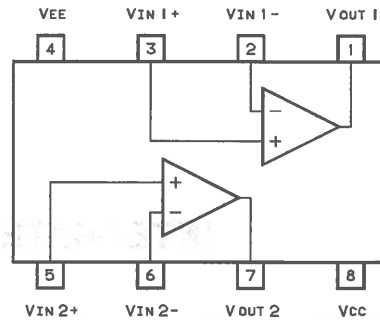
## ELECTRONIC VOLUME IC LC 7535



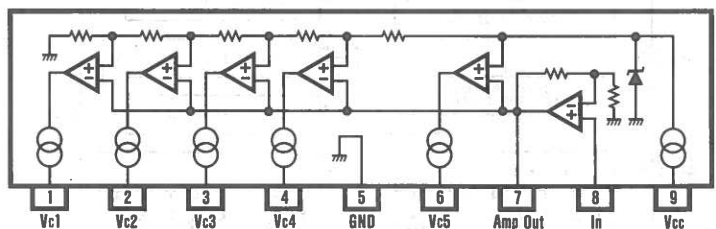
## FUNCTION ANALOG SWITCH IC LC 7821



## PHONO EQ./GRAPHIC EQ. AMP IC LA 6458 DS



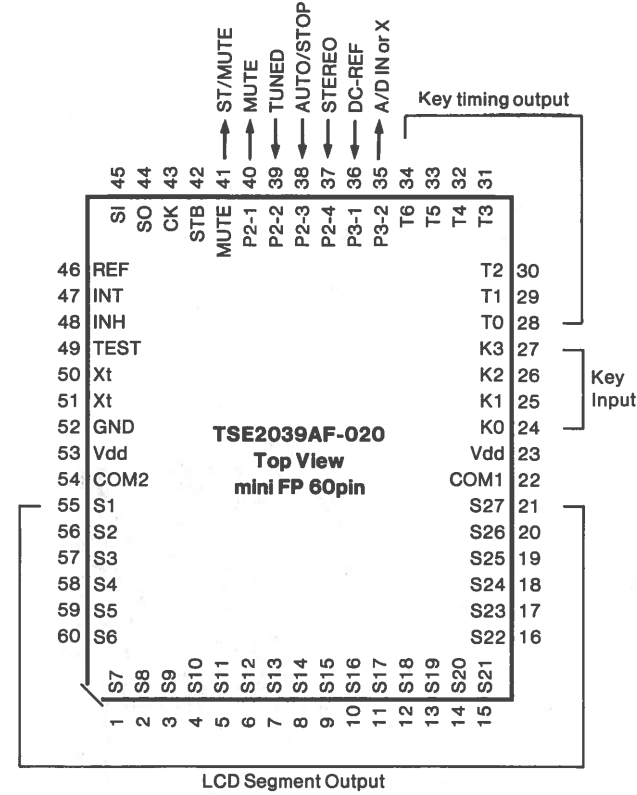
## POWER LEVEL METER DRIVE AMP IC LB 1423 N





# CPU PORT DESIGNATIONS (TSE 2039AF-020)

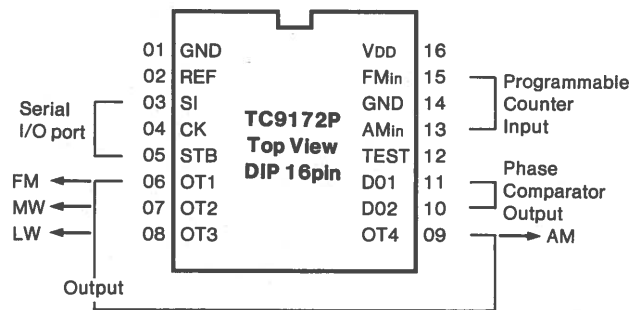
TSE 2039AF-020 OUTLINE



Port	Pin No.	Segment Name		Explanation of Function
		COM1	COM2	
COM1	22	COM1	-	Common 1
S27	21	AM	FM1	AM : MW (2 band) FM1 : FM1 band
S26	20	MW	FM2	MW : MW band FM2 : FM2 band
S25	19	LW	FM3	LW : LW band FM3 : FM3 band
S24	18	AUTO	MANUAL	AUTO : Auto Scan MANUAL : Manual Scan
S23	17	CH	1bc	CH : 6 CH 1bc : 108.00MHz segment
S22	16	[5]	STEREO	[5] : point 5 on level meter STEREO : Stereo In
S21	15	TUNED	MUTING	TUNED : Input On MUTING : Stereo/Mute On
S20	14	2f	2b	2f-a : 108.00MHz segment
S19	13	2a	2g	
S18	12	2d	2c	
S17	11	-	2a	
S16	10	3f	3b	3f-a : 108.00MHz segment
S15	9	3e	3g	
S14	8	3d	3c	
S13	7	FM dot	3a	: 108.00MHz mark
S12	6	4f	4b	4f-a : 108.00MHz segment
S11	5	4e	4g	
S10	4	4d	4c	
S9	3	[1]	4a	[1] : point 1 on level meter (normally ON)
S8	2	5g	5be	5g-f : 108.00MHz segment, 0/5
S7	1	5acd	[2]	[2] : point 2 on level meter
S6	60	[3]	kHz	[3] : point 3 on level meter kHz : MW/LW unit
S5	59	[4]	MHz	[4] : point 4 on level meter MHz : FM unit
S4	58	7f	7b	75-a : 6 CH segment
S3	57	7e	7g	
S2	56	7d	7c	
S1	55	MEMORY	7a	MEMORY : Store mode
COM2	54	-	COM2	Common 2

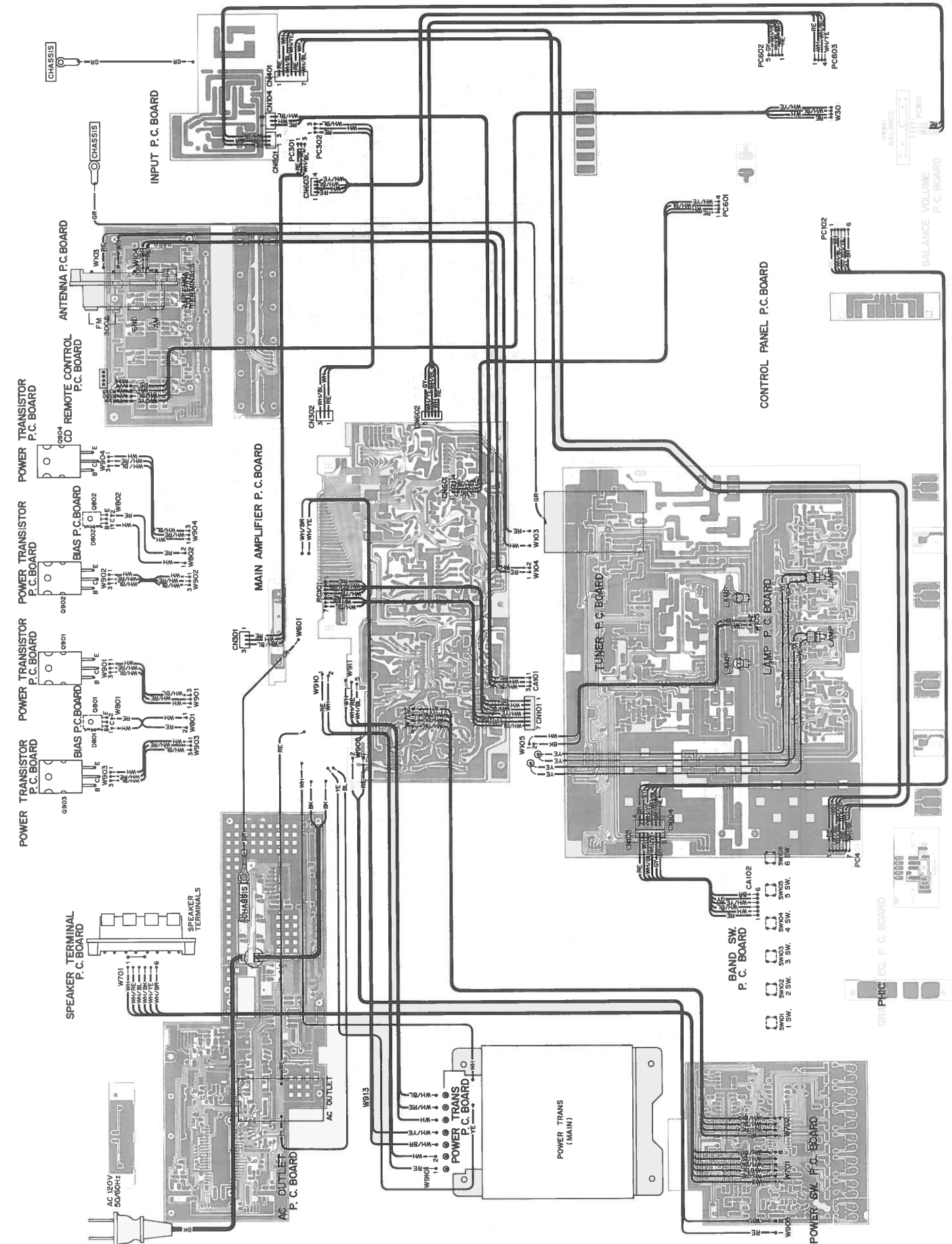
Port	Pin No.	Name	Assignment	Active	Initial
MUTE	41	ST/MUTE	Stereo/Mute Output	L	L
P2-1	40	MUTE	Mute Output	L	H
P2-2	39	TUNED	Tuned Input	L	-
P2-3	38	AUTO/STOP	Auto/Stop Input	L	-
P2-4	37	STEREO	Stereo Ind. Input	L	-
P3-1	36	DC-REF	A/D Ref Input	-	-
P3-2	35	A/D IN or X	Signal Meter Input	-	-

TC 9172 P OUTLINE

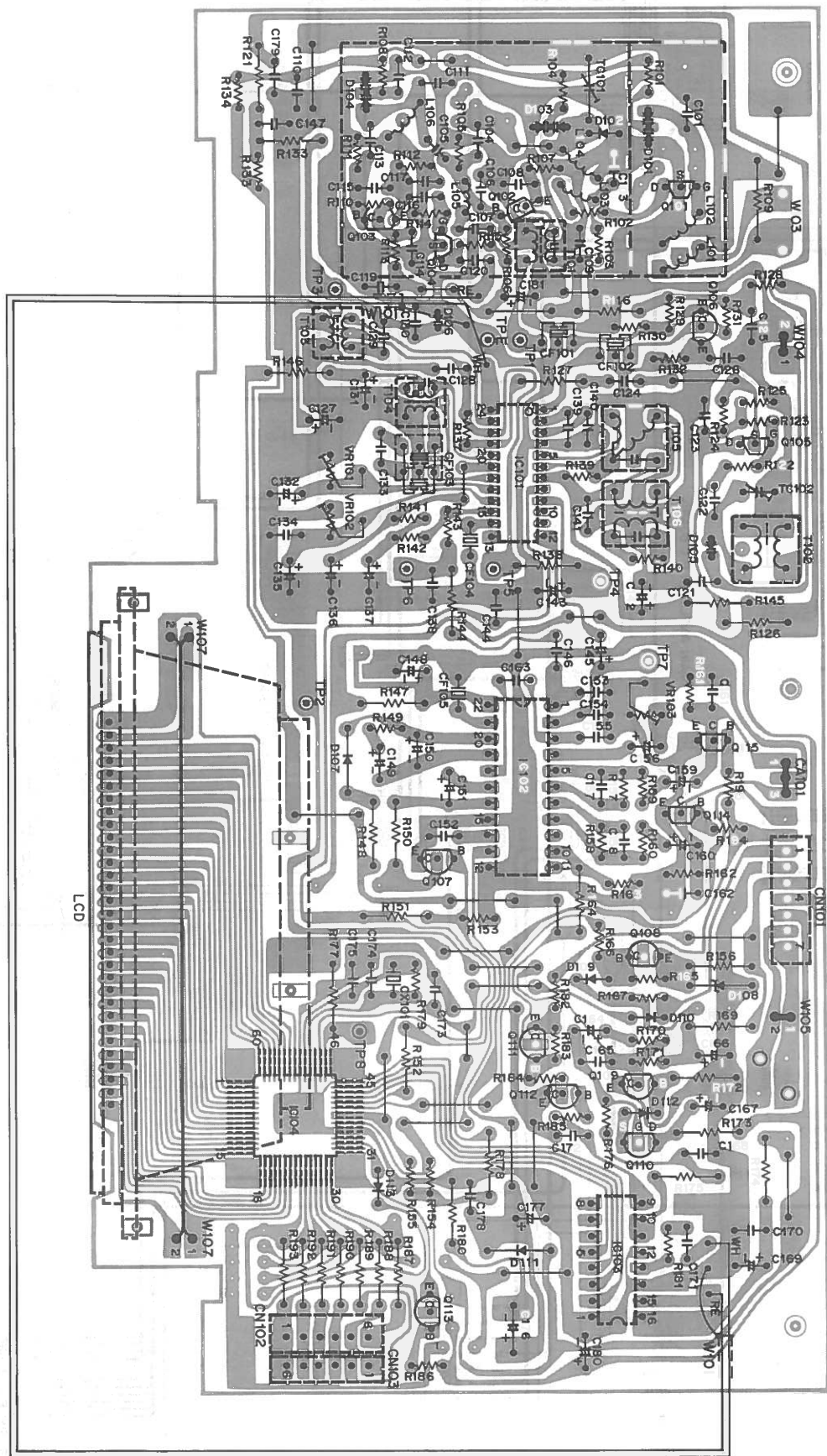


Port	Pin No.	Name	Assignment	Active	Initial
OT1	06	FM	Band Output	H	H
OT2	07	MW	Band Output	H	L
OT3	08	LW	Band Output	H	L
OT4	09	AM	Band Output	H	L

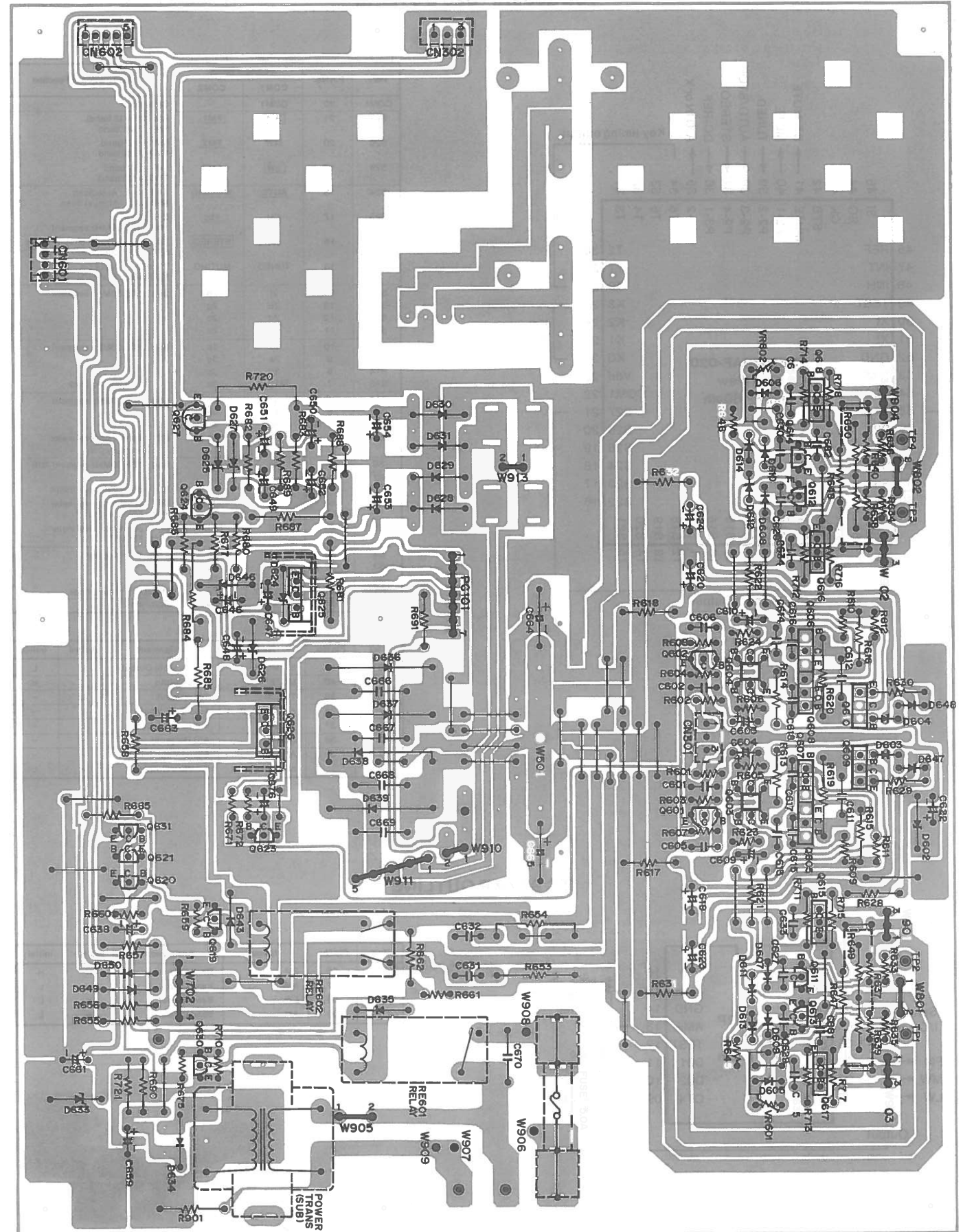
# POINT TO POINT WIRING DIAGRAM



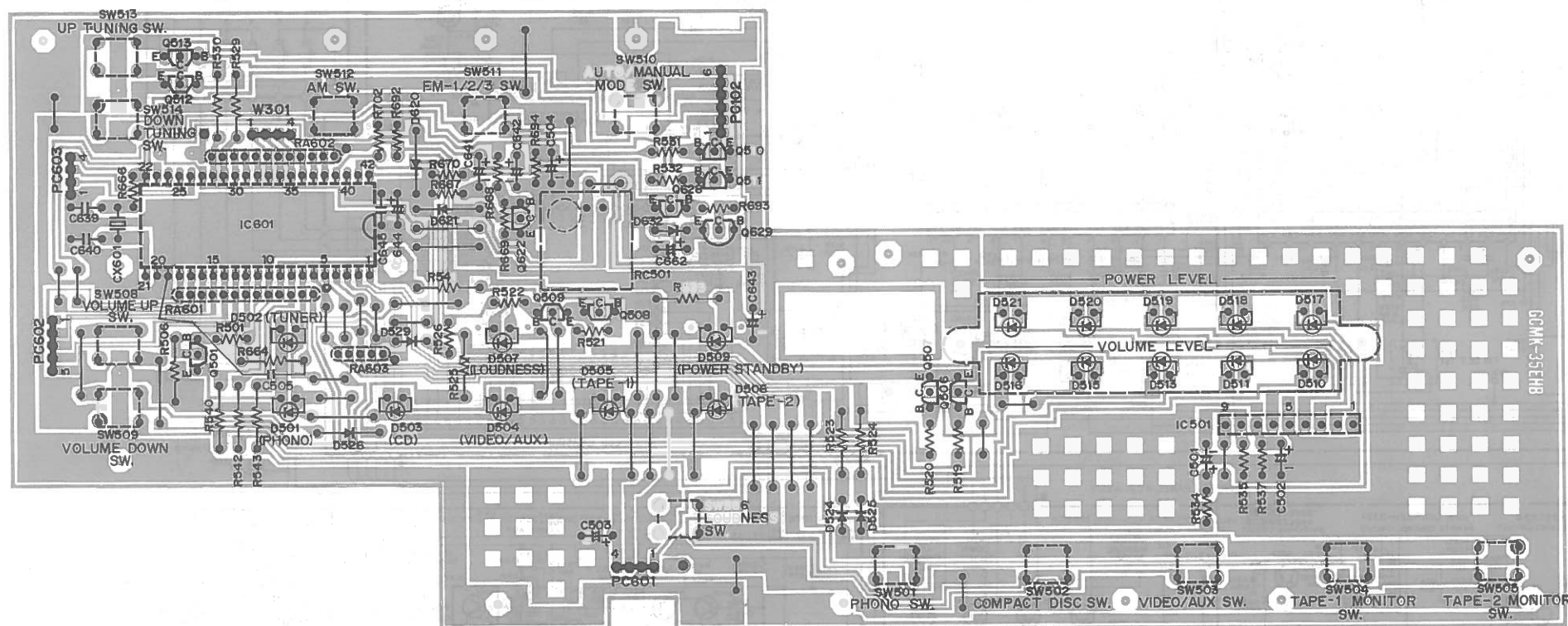
**TUNER PRINTED CIRCUIT BOARD  
(BOTTOM VIEW)**



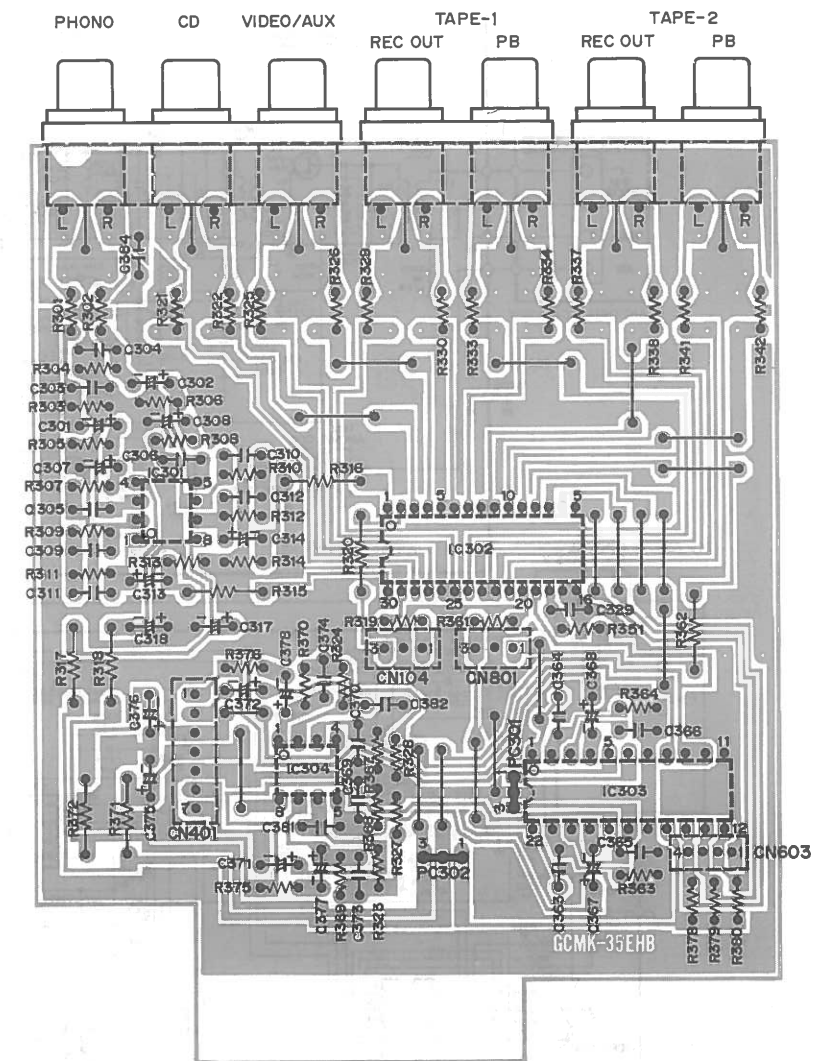
**MAIN AMPLIFIER PRINTED CIRCUIT BOARD  
(BOTTOM VIEW)**



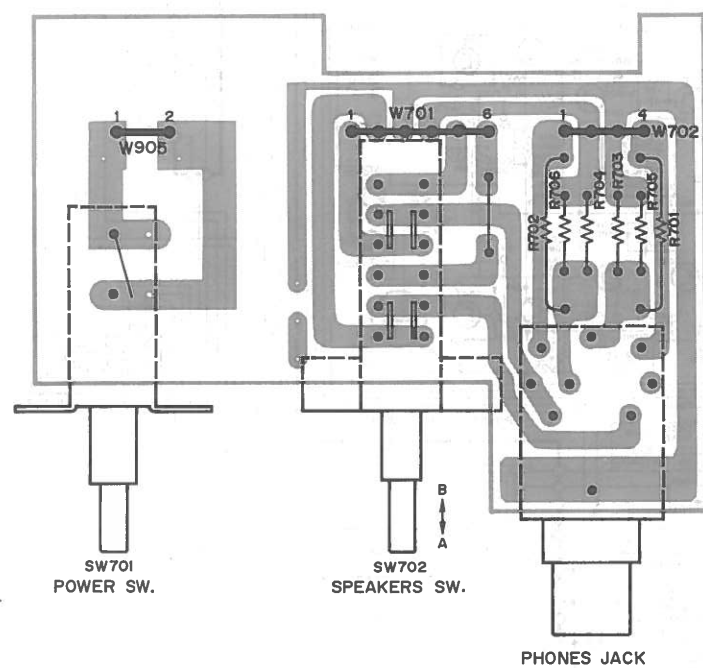
**CONTROL PANEL PRINTED CIRCUIT BOARD  
(BOTTOM VIEW)**



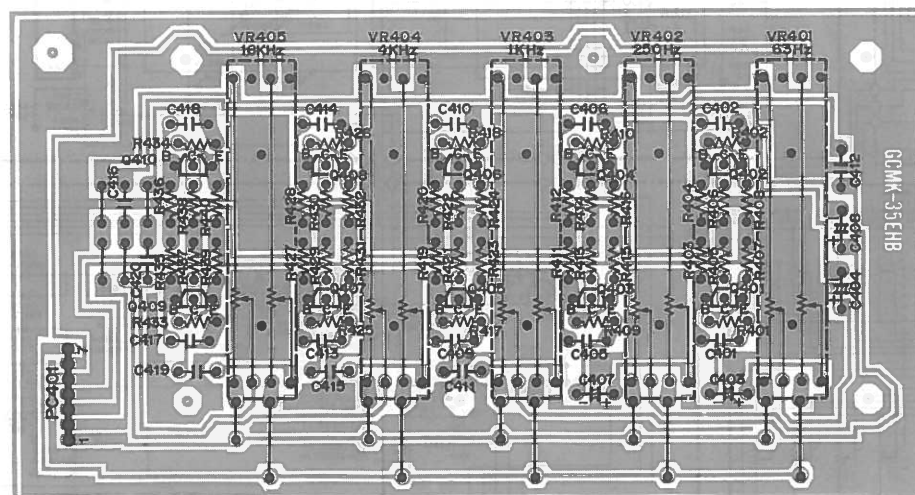
**INPUT PRINTED CIRCUIT BOARD  
(BOTTOM VIEW)**



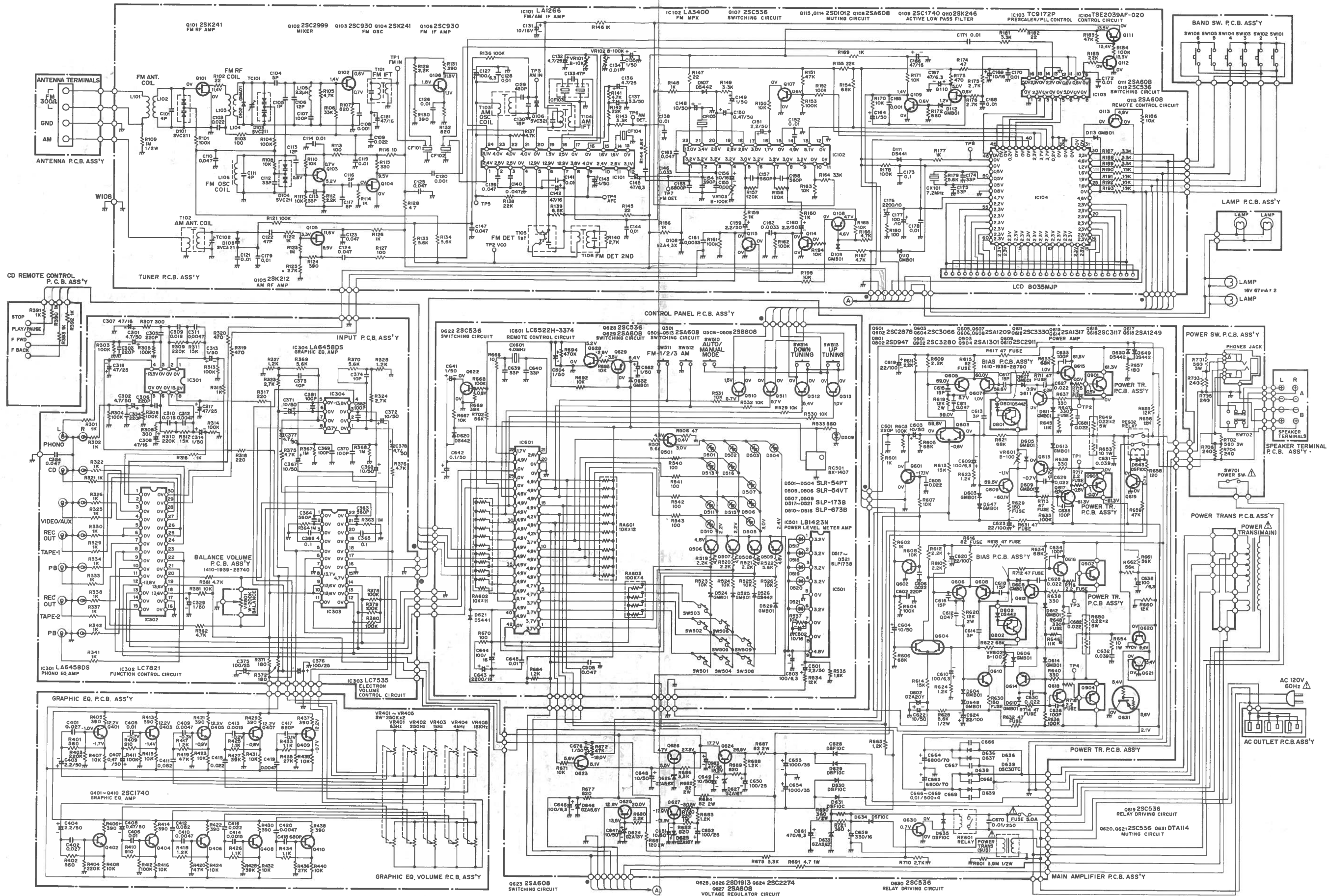
**POWER SWITCH P.C. BOARD  
(BOTTOM VIEW)**



**GRAPHIC EQ. P.C. BOARD  
(BOTTOM VIEW)**



# SCHEMATIC DIAGRAM



## IC & TRANSISTOR LEAD IDENTIFICATION

TRANSISTOR	FRONT VIEW	BOTTOM VIEW	TRANSISTOR	FRONT VIEW	BOTTOM VIEW
2SA608 2SC1740 2SC2274 2SC2878 2SC536 2SC930	 ECB	 ECB	DTA114 2SA1317 2SA608 2SB808 2SC2999 2SC3330 2SC536 2SD1012	 ECB	 ECB
2SA1209 2SA1249 2SC2911 2SC3117 2SD947	 ECB	 ECB	2SD1913	 BCE	 BCE
2SA1301 2SC3280	 BCE	 BCE	2SK212 2SK241	 DSG	 DSG
2SK246	 SGD	 SGD	2SC3066	 ECB	 ECB
<b>TERMINAL NAME</b>					
B → BASE C → COLLECTOR E → EMITTER			S → SOURCE G → GATE D → DRAIN		

### SWITCH POSITION TABLE

No.	Name	Position	No.	Name	Position
SW101	Preset STATION 1 Switch	OFF	SW506	LOUDNESS Switch	OFF
SW102	Preset STATION 2 Switch	OFF	SW508	VOLUME UP Switch	OFF
SW103	Preset STATION 3 Switch	OFF	SW509	VOLUME DOWN Switch	OFF
SW104	Preset STATION 4 Switch	OFF	SW510	AUTO/MANUAL MODE Switch	OFF
SW105	Preset STATION 5 Switch	OFF	SW511	FM-1/2/3 Switch	OFF
SW106	Preset STATION 6 Switch	OFF	SW512	AM Switch	OFF
SW501	PHONO Switch	OFF	SW513	UP TUNING Switch	OFF
SW502	COMPACT DISC Switch	OFF	SW514	DOWN TUNING Switch	OFF
SW503	VIDEO/AUX Switch	OFF	SW701	POWER Switch	OFF
SW504	TAPE-1 Monitor Switch	OFF	SW702	SPEAKERS Switch	A
SW505	TAPE-2 Monitor Switch	OFF			

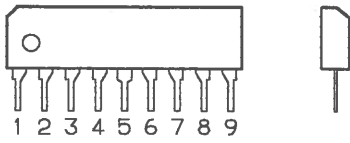
**NOTES:**

1. All resistors values are indicated in "ohm" (K=10<sup>3</sup>, M=10<sup>6</sup>).
2. All capacitors values are indicated in "μF" (P=10<sup>-12</sup>).
3. All voltages indicated on the schematics are measured under the following conditions.
  - a. Use a V.T.V.M.

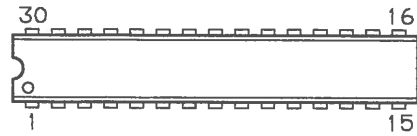
- b. All voltages ±10 % with respect to chassis ground.
- c. No signals at input terminals.
- d. AC input at 120 volts 60 Hz.
4. This is a basic schematic diagram.

# IC & TRANSISTOR LEAD IDENTIFICATION (Continued)

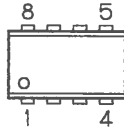
**LB1423N FRONT/SIDE VIEWS**



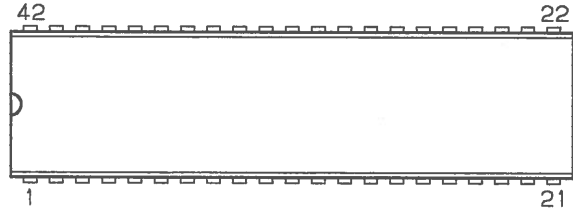
**LC7821 TOP VIEW**



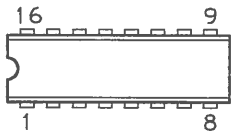
**LA6458DS TOP VIEW**



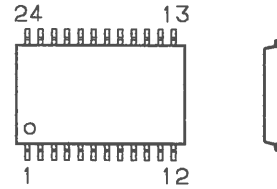
**LC6522H-3374 TOP VIEW**



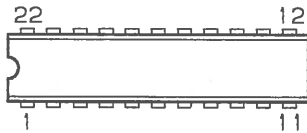
**TC9172P TOP VIEW**



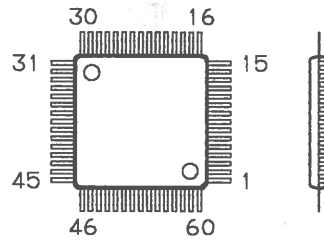
**UPD6122G-501 TOP/SIDE VIEWS**



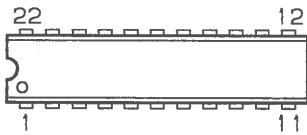
**LA3400 TOP VIEW**



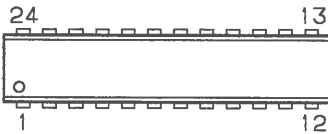
**TSE2039AF-020 TOP/SIDE VIEWS**



**LC7535 TOP VIEW**



**LA1266 TOP VIEW**



For parts or service contact



SFS Corporation: 1200 West Artesia Blvd., Compton, California 90220