

# SERVICE MANUAL

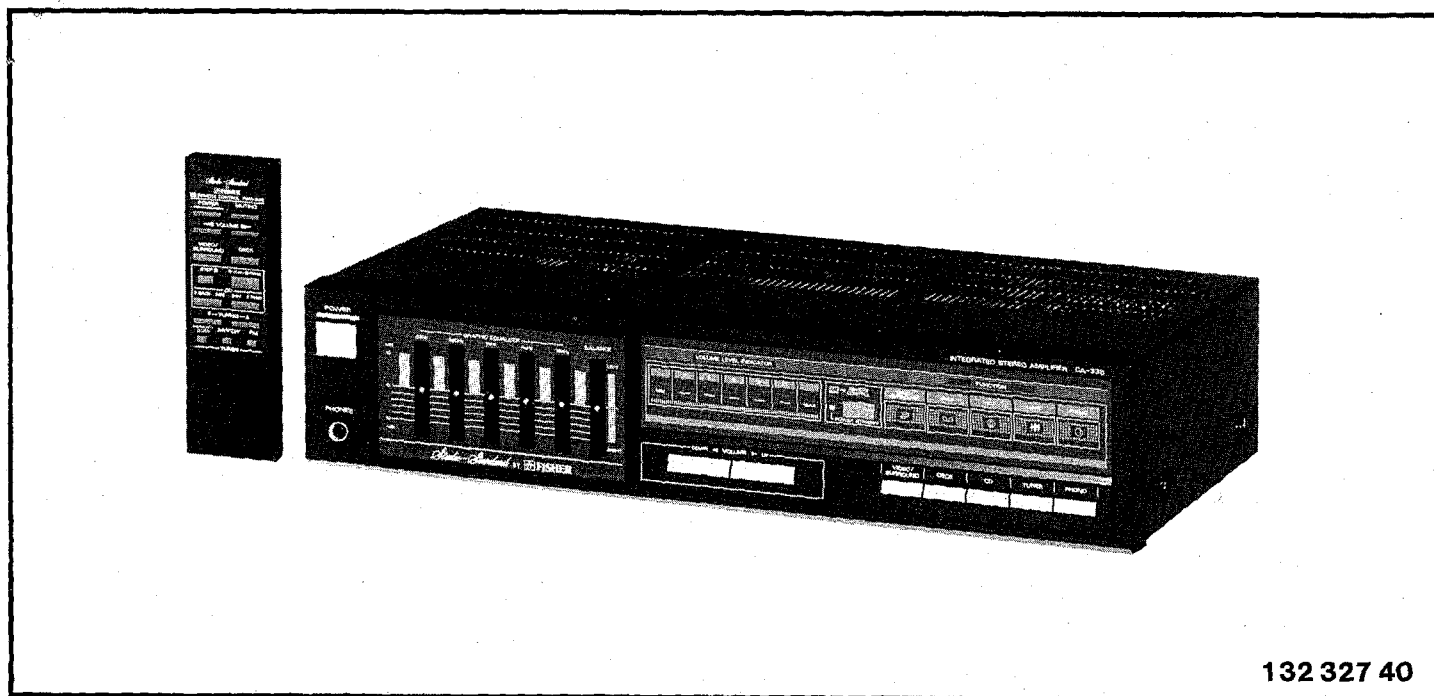


# FISHER

## INTEGRATED STEREO AMPLIFIER

# CA-335

(EUROPE)



132 327 40

### SPECIFICATIONS

#### POWER AMPLIFIER SECTION

Minimum RMS sine wave power per channel within stated bandwidth at no more than stated distortion and with 8-ohm load	35 Watts
Power Bandwidth	20 Hz – 20 kHz
Total Harmonic Distortion	0.5 %
I.M. Distortion	0.5 %
Speaker Damping	>20

#### PREAMPLIFIER SECTION

Frequency Response	
Phono (RIAA)	±1 dB
Aux (20 Hz – 20 kHz)	±1 dB
Input Sensitivity and Impedance	
Phono	2.5 mV/50 kΩ
Deck/Video/Surround	150 mV/50 kΩ
Tuner/CD	150 mV/50 kΩ
Phono Max. Input Capability	150 mV

#### Graphic Equalizer

63 Hz	±10 dB
250 Hz	±10 dB
1 kHz	±10 dB
4 kHz	±10 dB
16 kHz	±10 dB

#### Hum and Noise (IHF Short Circuit, A Network)

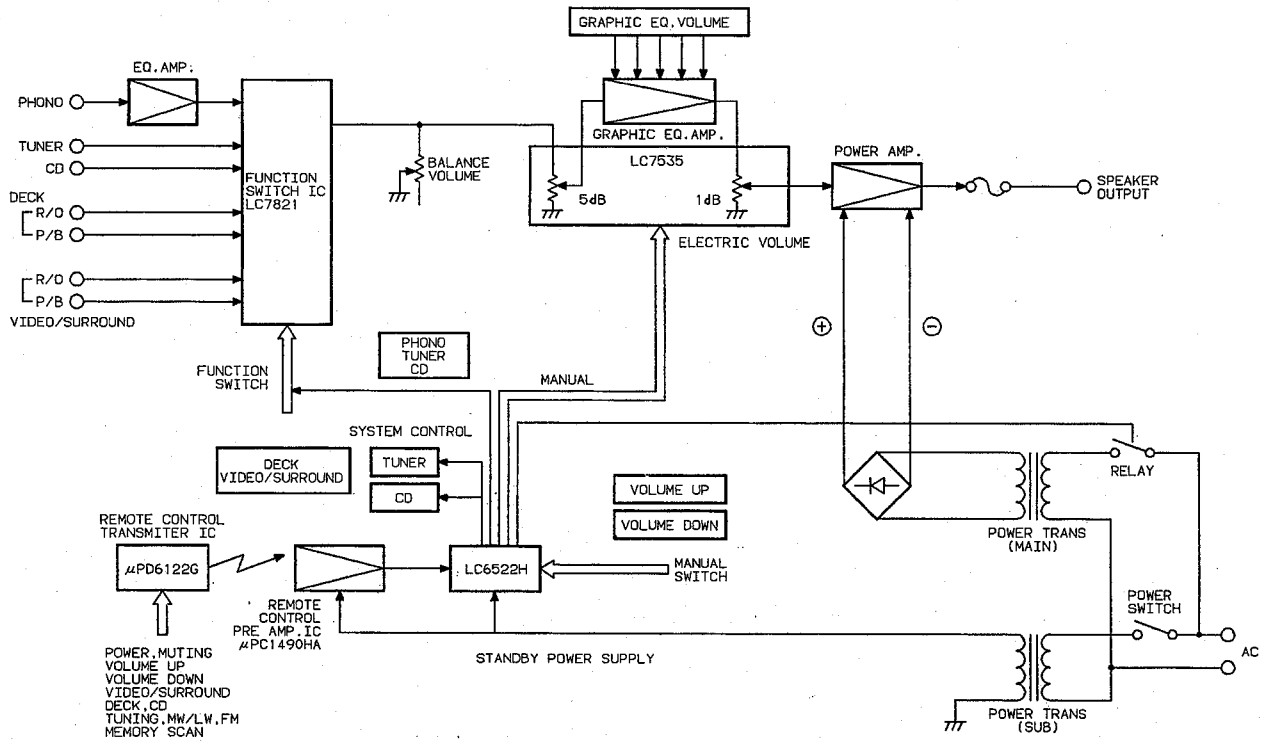
Phono	68 dB
Deck/Video/Surround	85 dB
Tuner/CD	85 dB

#### GENERAL

Power Requirements	AC 220 V
(50 Hz)	185 Watts
AC Outlet	1
Dimensions (W x H x D)	400 x 91 x 202 mm
Weight (approx.)	4.4 kg

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

## FUNCTIONAL BLOCK DIAGRAM



## 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 volume level to minimum level by Pressing the VOLUME DOWN button.
- IDLING CURRENT ADJUSTMENT VR101/VR102 (on the Main 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

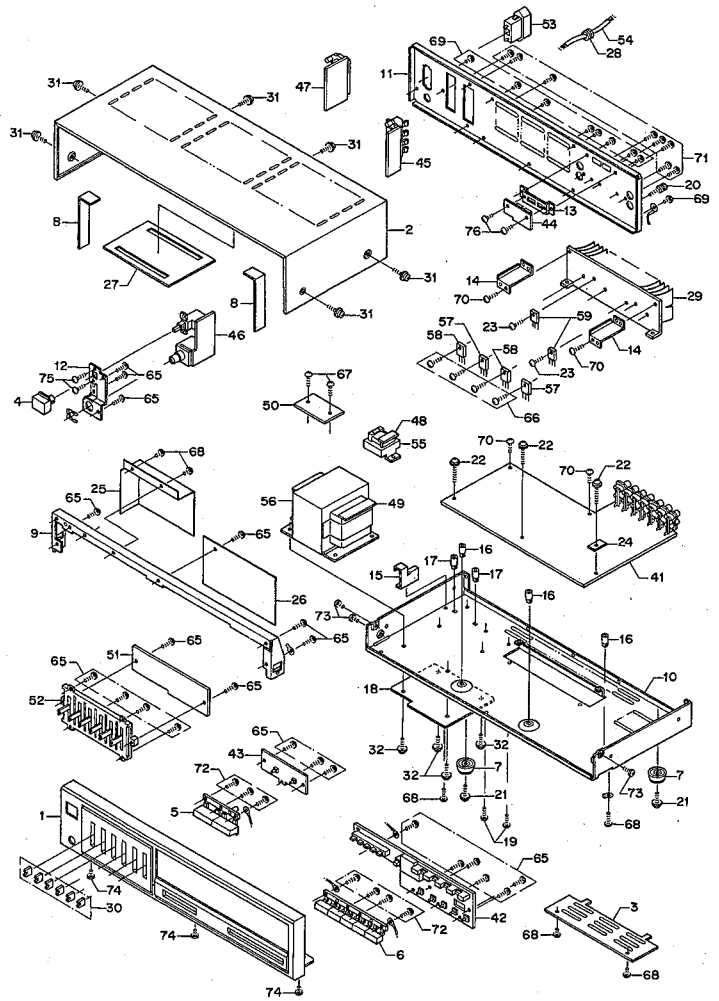
- 1) Connect the DC Voltmeter between Pins TP1 and TP2 on the Main P.C.Board.
- 2) Adjust the VR101 for an indication of  $3\text{mV} \pm 0.5\text{mV}$  on the DC Voltmeter.

#### RIGHT AMPLIFIER

- 1) Connect the DC Voltmeter between Pins TP3 and TP4 on the Main P.C.Board.
- 2) Adjust the VR102 for an indication of  $3\text{mV} \pm 0.5\text{mV}$  on the DC Voltmeter.

# CABINET & CHASSIS PARTS LIST/EXPLODED VIEW

Ref. No.	Part No.	Description	Q'ty
<b>PACKAGE</b>			
	131-6-1169-19906	Box Corrugate-Exp.	1
	131-6-3009-36250	Pad (Left)	1
	131-6-3009-36260	Pad (Right)	1
	131-6-3069-16350	Patching Sheet	1
	131-6-4559-11200	Serial No. Sheet	2
	141-6-2519-22390	Sheet Polyethylene	1
<b>ACCESSORIES</b>			
	4-1929-70305	REM-335 (Remote Control)	1
	131-6-2719-10401	Bag Fan	1
	131-6-4559-11200	Serial No. Sheet	1
	141-6-4519-27939	Certificate Card	1
	142-6-4119-33779	Explanatory Booklet	1
<b>CABINET</b>			
	4-2352-02721	Connector 1P Assy	2
	4-2379-21520	Terminal Lug	1
	131-6-4559-11200	Serial No. Sheet	1
	141-2-4729-07100	Wire Band	15
1	131-0-1016-46500	Cabinet Front Assy	1
	131-2-1110-39501	Plate Decorate (EQ)	1
	131-2-1110-39609	Plate Decorate	1
	131-2-1203-69000	Cabinet Front	1
	131-2-1801-16200	Leg	2
	131-2-3608-16600	Filter	1
2	131-2-1410-34400	Cover	1
3	131-2-1410-36400	Cover Bottom	1
4	131-2-1601-86200	Knob (Power)	1
5	131-2-1601-93500	Knob (Volume)	1
6	131-2-1601-99901	Knob (Function)	1
7	131-2-1801-12900	Leg	2
8	131-2-3202-13400	Metal Reinforce	2
9	131-2-3202-15900	Metal Reinforce	1
10	131-2-3301-34000	Chassis	1
11	131-2-3306-42000	Panel Rear	1
12	131-2-3604-16700	Metal Mount Switch	1
13	131-2-3604-16800	Metal Mount Switch	1
14	131-2-3604-16900	M.Mount Heat Sink	2
15	131-2-3604-17000	Metal Sever	1
16	131-2-3614-20300	Mount P.C.B.	3
17	131-2-3614-21800	Mount P.C.B	2
18	131-2-3617-19500	Metal Mount Trans	1
19	131-2-4201-16701	Screw, Brazier Hd. Tapping, + M3.0X8	2
20	131-2-4201-17800	Screw Ground	1
21	131-2-4201-25200	Screw, Brazier Hd. Tapping, + M3.0X6	2
22	131-2-4201-25202	Screw, Brazier Hd. Tapping, + M3.0X14	3
23	131-2-4201-25205	Screw	2
24	131-2-4208-53000	Spacer	1
25	131-2-6103-27300	Cover Shield	1
26	131-2-6103-27400	Plate Shield	1
27	131-2-6107-32700	Plate Sever	1
28	131-2-6111-14200	Bushing (4N-4)	1
29	131-2-6201-39700	Plate Heat Sink	1
30	141-2-1659-68800	Knob Cap (EQ./Balance)	6
31	141-2-4219-33101	Screw, Bind Hd. Tapping, + M3.0X8	6
32	141-2-4219-43300	Screw, Bind Hd. Tapping, + M4.0X10	4
41	141-0-1939-26790	Main P.C.B. Assy	1
42	141-0-1939-26800	Control P.C.B. Assy	1
43	141-0-1939-26810	Volume P.C.B. Assy	1
44	141-0-1939-26820	Remote Control P.C.B. Assy	1
45	141-0-1939-26840	Speaker Out P.C.B. Assy	1
46	141-0-1939-26850	Power Switch P.C.B. Assy	1
47	141-0-1939-26860	AC Supply P.C.B. Assy	1
48	141-0-1939-26870	Sub Trans P.C.B. Assy	1
49	141-0-1939-26880	Power Trans P.C.B. Assy	1
50	141-0-1939-26890	EC Terminal P.C.B. Assy	1
51	141-0-1939-26910	Graphic EQ. P.C.B. Assy	1
52	4-2229-76201	Slide Volume Unit	1
53	△ 4-2352-00450	AC Socket (AC OUTLET)	1
54	△ 4-2432-00500	Power Cord	1
55	△ 4-2512-23720	Power Trans (Sub)	1
56	△ 4-2512-33321	Power Trans (Main)	1
57	405 073 1006	TR 2SA1039-L [Q105, Q106]	2
or	405 073 1105	TR 2SB1039-K	2
58	405 073 1204	TR 2SD1311-L [Q103, Q104]	2
or	405 073 1303	TR 2SD1311-K	2
59	405 026 0803	TR 2SD947 [Q701, Q702]	2



Ref. No.	Part No.	Description	Q'ty
65	411 020 5706	SCR S-TPG BRZ 2.6X8	22
66	411 020 5904	SCR S-TPG BRZ 3X10	4
67	411 020 7007	SCR S-TPG BRZ 3X20	2
68	411 020 7700	SCR S-TPG BRZ 3X6	6
69	411 099 9704	SCR S-TPG BRZ 3X6	9
70	411 020 8004	SCR S-TPG BRZ 3X8	4
71	411 099 9803	SCR S-TPG BRZ 3X8	8
72	411 021 1202	SCR S-TPG BIN 2X8	7
73	411 021 5705	SCR S-TPG BIN 3X6	3
74	411 021 6603	SCR S-TPG BIN 3X8	3
75	411 003 8908	SCR PAN + SW 3X6	2
76	411 021 2704	SCR S-TPG BIN 2.6X8	2

**NOTES:**

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

**PRODUCT SAFETY NOTICE**

Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol  $\Delta$  in the parts list and the schematic diagram designate components in which safety can be of special significance. When replacing a component identified with  $\Delta$ , 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.C.BOARD PARTS LIST

Ref. No.	Part No.	Description	Q'ty	Ref. No.	Part No.	Description	Q'ty
<b>MAIN P.C.B. ASSY</b>				C105	403 047 1502	ELECT 4.7U M 25V	1
41	141-0-1939-26790	Main P.C.B. Assy	1	C106	403 047 1502	ELECT 4.7U M 25V	1
	4-2329-70430	Relay	1	C107	403 038 2303	ELECT 100U M 6.3V	1
△	4-2349-20580	Fuse T3.15A	4	C108	403 038 2303	ELECT 100U M 6.3V	1
	4-2352-01780	Pin Jack 6P (PHONO, TUNER, CD)	1	C109	403 018 8509	CERAMIC 220P K 50V	1
	4-2352-01940	Fuse Clip	8	C110	403 018 8509	CERAMIC 220P K 50V	1
	4-2352-03361	Pin Jack 8P (DECK, VIDEO/SURROUND)	1	C111	403 059 0401	POLYESTER 0.018U K 50V	1
	4-2352-02868	Connector 1P Assy	1	C112	403 059 0401	POLYESTER 0.018U K 50V	1
	4-2359-78835	Connector 1P Assy	1	C113	403 061 8709	POLYESTER 4700P K 50V	1
	111-2-6220-11100	Wire Wrap Terminal	2	C114	403 061 8709	POLYESTER 4700P K 50V	1
	131-2-6114-00200	Cover Safety	1	C115	403 047 1502	ELECT 4.7U M 25V	1
	131-2-6201-37000	Plate Heat Sink (for Q113)	1	C116	403 047 1502	ELECT 4.7U M 25V	1
	131-2-6201-39800	Plate Heat Sink (for Q105, 106)	2	C117	403 018 8509	CERAMIC 220P K 50V	1
	141-2-3229-44600	Plate Shield	1	C118	403 018 8509	CERAMIC 220P K 50V	1
	411 020 7700	SCR S-TPG BRZ 3X6	1	C119	403 018 8509	CERAMIC 220P K 50V	1
	411 021 2704	SCR S-TPG BIN 2.6X6	4	C120	403 018 8509	CERAMIC 220P K 50V	1
CF101	4-2259-71160	Ceramic. OSC CSA4.00	1	C123	403 018 8509	CERAMIC 220P K 50V	1
CN302	4-2369-74920	Plug 6P	1	C124	403 018 8509	CERAMIC 220P K 50V	1
CN303	4-2369-74990	Plug 8P	1	C127	403 018 8509	CERAMIC 220P K 50V	1
L101	4-2552-00650	AF Coil (2µH)	1	C128	403 018 8509	CERAMIC 220P K 50V	1
L102	4-2552-00650	AF Coil (2µH)	1	C131	403 018 8509	CERAMIC 220P K 50V	1
VR101	4-2222-01450	SEMI-Fixed (B-200Ω)	1	C132	403 018 8509	CERAMIC 220P K 50V	1
VR102	4-2222-01450	SEMI-Fixed (B-200Ω)	1	C135	403 018 8509	CERAMIC 220P K 50V	1
IC101	409 057 4403	IC UPC4570C	1	C136	403 018 8509	CERAMIC 220P K 50V	1
IC102	409 109 5105	IC LC7821	1	C139	403 018 8509	CERAMIC 220P K 50V	1
IC103	409 057 4403	IC UPC4570C	1	C140	403 018 8509	CERAMIC 220P K 50V	1
or	409 018 4503	IC LA6458DS	1	C143	403 044 0201	ELECT 47U M 16V	1
IC104	409 118 0504	IC LC7535	1	C144	403 044 0201	ELECT 47U M 16V	1
IC105	409 056 5302	IC UPC1270H	1	C145	403 049 1708	ELECT 1U M 50V	1
IC106	409 056 5302	IC UPC1270H	1	C147	403 044 0201	ELECT 47U M 16V	1
IC107	409 122 2907	IC LC6522H-3374	1	C148	403 044 0201	ELECT 47U M 16V	1
Q101	405 016 2206	TR 2SC2878-A	1	C149	403 044 0201	ELECT 47U M 16V	1
or	405 016 2305	TR 2SC2878-B	1	C150	403 044 0201	ELECT 47U M 16V	1
Q102	405 016 2206	TR 2SC2878-A	1	C153	403 029 0509	CERAMIC 560P K 50V	1
or	405 016 2305	TR 2SC2878-B	1	C154	403 029 0509	CERAMIC 560P K 50V	1
Q107	405 019 3804	TR 2SC536-G-NP	1	C155	403 057 3602	POLYESTER 0.1U K 50V	1
or	405 019 2708	TR 2SC536-F-NP	1	C156	403 057 3602	POLYESTER 0.1U K 50V	1
Q108	405 019 3804	TR 2SC536-G-NP	1	C159	403 047 1502	ELECT 4.7U M 25V	1
or	405 019 2708	TR 2SC536-F-NP	1	C160	403 047 1502	ELECT 4.7U M 25V	1
Q109	405 034 6804	TR DTA114-ES	1	C161	403 009 8105	CERAMIC 100P K 50V	1
Q110	405 019 3804	TR 2SC536-G-NP	1	C162	403 009 8105	CERAMIC 100P K 50V	1
or	405 019 2708	TR 2SC536-F-NP	1	C163	403 009 8105	CERAMIC 100P K 50V	1
Q111	405 023 8505	TR 2SD438-F-MP	1	C164	403 009 8105	CERAMIC 100P K 50V	1
or	405 023 8307	TR 2SD438-E-MP	1	C165	403 008 5204	CERAMIC 10P D 50V	1
Q112	405 007 5308	TR 2SB560-F-MP	1	C166	403 008 5204	CERAMIC 10P D 50V	1
or	405 007 5100	TR 2SB560-E-MP	1	C167	403 042 0302	ELECT 10U M 16V	1
Q113	405 035 7206	TR 2SD1913-S	1	C168	403 042 0302	ELECT 10U M 16V	1
or	405 035 7107	TR 2SD1913-R	1	C169	403 050 1209	ELECT 2.2U M 50V	1
Q114	405 004 5004	TR 2SA608-G-NP	1	C170	403 050 1209	ELECT 2.2U M 50V	1
or	405 004 4502	TR 2SA608-F-NP	1	C171	403 018 8509	CERAMIC 220P K 50V	1
Q115	405 019 3804	TR 2SC536-G-NP	1	C172	403 018 8509	CERAMIC 220P K 50V	1
or	405 019 2708	TR 2SC536-F-NP	1	C173	403 074 2701	CERAMIC 0.047U Z 50V	1
Q116	405 004 5004	TR 2SA608-G-NP	1	C174	403 074 2701	CERAMIC 0.047U Z 50V	1
or	405 004 4502	TR 2SA608-F-NP	1	C175	403 047 1502	ELECT 4.7U M 25V	1
Q117	405 019 3804	TR 2SC536-G-NP	1	C176	403 047 1502	ELECT 4.7U M 25V	1
or	405 019 2708	TR 2SC536-F-NP	1	C177	403 049 5409	ELECT 10U M 50V	1
Q118	405 019 3804	TR 2SC536-G-NP	1	C183	403 038 9302	ELECT 33U M 6.3V	1
or	405 019 2708	TR 2SC536-F-NP	1	C184	403 038 9302	ELECT 33U M 6.3V	1
Q220	405 019 3804	TR 2SC536-G-NP	1	C185	403 020 2809	CERAMIC 27P K 50V	1
or	405 019 2708	TR 2SC536-F-NP	1	C186	403 020 2809	CERAMIC 27P K 50V	1
D101	407 008 0405	DIODE GMB01	1	C187	403 049 5409	ELECT 10U M 50V	1
D102	407 008 0405	DIODE GMB01	1	C191	403 057 0908	POLYESTER 0.01U K 50V	1
D103	407 004 6005	DIODE DSA12B-KC8	1	C192	403 057 0908	POLYESTER 0.01U K 50V	1
D104	407 004 6005	DIODE DSA12B-KC8	1	C193	403 074 2701	CERAMIC 0.047U Z 50V	1
D105	407 004 6005	DIODE DSA12B-KC8	1	C194	403 074 2701	CERAMIC 0.047U Z 50V	1
D106	407 004 6005	DIODE DSA12B-KC8	1	C195	403 039 2906	ELECT 47U M 6.3V	1
D107	407 049 7005	ZENER DIODE GZA15Y	1	C197	404 012 6904	CERAMIC 0.047U Z 150V	1
D108	407 049 7005	ZENER DIODE GZA15Y	1	C198	404 012 6904	CERAMIC 0.047U Z 150V	1
D109	407 088 6502	DIODE MPG06D-PKG3	1	C199	404 012 6904	CERAMIC 0.047U Z 150V	1
D110	407 050 5502	ZENER DIODE GZA5.6Y	1	C200	404 012 6904	CERAMIC 0.047U Z 150V	1
D112	407 088 6502	DIODE MPG06D-PKG3	1	C201	404 012 6003	ELECT 3300U M 50V	1
D113	407 050 5502	ZENER DIODE GZA5.6Y	1	C202	404 012 6003	ELECT 3300U M 50V	1
D114	407 005 3805	DIODE DS442-BT	1	C203	403 051 3806	ELECT 47U M 50V	1
D115	407 005 3805	DIODE DS442-BT	1	C204	403 051 3806	ELECT 47U M 50V	1
D116	407 008 0405	DIODE GMB01	1	C205	403 047 1502	ELECT 4.7U M 25V	1
C101	403 018 8509	CERAMIC 220P K 50V	1	C206	403 047 1502	ELECT 4.7U M 25V	1
C102	403 018 8509	CERAMIC 220P K 50V	1	C207	403 044 0201	ELECT 47U M 16V	1
C103	403 023 5807	CERAMIC 330P K 50V	1	C208	403 044 0201	ELECT 47U M 16V	1
C104	403 023 5807	CERAMIC 330P K 50V	1	C209	4-2239-70970	Capacitor 0.01MF400V	1

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

Ref. No.	Part No.	Description	Q'ty	Ref. No.	Part No.	Description	Q'ty
C210	403 047 1502	ELECT 4.7U M 25V	1	R177	401 022 5101	CARBON 680K JA 1/4W	1
C211	403 039 4504	ELECT 470U M 6.3V	1	R178	401 022 5101	CARBON 680K JA 1/4W	1
C213	403 043 7102	ELECT 330U M 16V	1	R181	401 015 6504	CARBON 2.2 JA 1/4W	1
C214	403 038 4505	ELECT 1000U M 6.3V	1	R182	401 015 6504	CARBON 2.2 JA 1/4W	1
C215	403 049 1609	ELECT 1U M 50V	1	R183	401 022 4104	CARBON 68K JA 1/4W	1
C216	403 069 8404	CERAMIC 0.01U Z 50V	1	R184	401 022 4104	CARBON 68K JA 1/4W	1
C217	403 042 3600	ELECT 100U M 16V	1	R185	401 015 6504	CARBON 2.2 JA 1/4W	1
C218	403 043 3104	ELECT 2200U M 16V	1	R186	401 015 6504	CARBON 2.2 JA 1/4W	1
C219	403 042 0302	ELECT 10U M 16V	1	R187	401 102 9401	OXIDE-MT 0.22 JB 1W	1
C220	403 049 1609	ELECT 1U M 50V	1	R188	401 102 9401	OXIDE-MT 0.22 JB 1W	1
C221	403 049 1609	ELECT 1U M 50V	1	R189	401 102 9401	OXIDE-MT 0.22 JB 1W	1
C222	403 047 9607	ELECT 0.1U M 50V	1	R190	401 102 9401	OXIDE-MT 0.22 JB 1W	1
C223	403 022 5907	CERAMIC 33P J 50V	1	R191	401 019 6203	CARBON 4.7 JA 1/4W	1
C224	403 022 5907	CERAMIC 33P J 50V	1	R192	401 019 6203	CARBON 4.7 JA 1/4W	1
C225	403 074 2701	CERAMIC 0.047U Z 50V	1	R193	401 054 7500	OXIDE-MT 10 JB 1/2W	1
C230	403 074 2701	CERAMIC 0.047U Z 50V	1	R194	401 054 7500	OXIDE-MT 10 JB 1/2W	1
C231	403 074 2701	CERAMIC 0.047U Z 50V	1	R195	401 027 3003	CARBON 56K JA 1/6W	1
C232	403 018 8509	CERAMIC 220P K 50V	1	R196	401 027 3003	CARBON 56K JA 1/6W	1
C233	403 018 8509	CERAMIC 220P K 50V	1	R197	401 024 9701	CARBON 12K JA 1/6W	1
C234	403 018 8509	CERAMIC 220P K 50V	1	R199	401 061 2604	OXIDE-MT 330 JB 1W	1
C235	403 018 8509	CERAMIC 220P K 50V	1	R200	401 061 2604	OXIDE-MT 330 JB 1W	1
C236	403 018 8509	CERAMIC 220P K 50V	1	R201	401 018 3807	CARBON 3.3K JA 1/4W	1
R101	401 024 7004	CARBON 1K JA 1/6W	1	R202	401 018 3807	CARBON 3.3K JA 1/4W	1
R102	401 024 7004	CARBON 1K JA 1/6W	1	R203	401 022 1905	CARBON 680 JA 1/4W	1
R103	401 024 7707	CARBON 100K JA 1/6W	1	R204	401 022 1905	CARBON 680 JA 1/4W	1
R104	401 024 7707	CARBON 100K JA 1/6W	1	R205	401 099 7305	OXIDE-MT 120 JB 2W	1
R105	401 024 7707	CARBON 100K JA 1/6W	1	R206	401 099 7305	OXIDE-MT 120 JB 2W	1
R106	401 024 7707	CARBON 100K JA 1/6W	1	R207	401 019 1901	CARBON 3.9K JA 1/4W	1
R107	401 026 2700	CARBON 300 JA 1/6W	1	R208	401 015 1608	CARBON 180 JA 1/4W	1
R108	401 026 2700	CARBON 300 JA 1/6W	1	R209	401 027 5502	CARBON 6.8K JA 1/6W	1
R109	401 025 8703	CARBON 220K JA 1/6W	1	R210	401 026 4308	CARBON 3.3K JA 1/6W	1
R110	401 025 8703	CARBON 220K JA 1/6W	1	R211	401 027 0309	CARBON 47K JA 1/6W	1
R111	401 025 1902	CARBON 15K JA 1/6W	1	R212	401 024 7400	CARBON 10K JA 1/6W	1
R112	401 025 1902	CARBON 15K JA 1/6W	1	R213	401 024 7400	CARBON 10K JA 1/6W	1
R113	401 024 7707	CARBON 100K JA 1/6W	1	R214	401 012 7009	CARBON 10K JA 1/4W	1
R114	401 024 7707	CARBON 100K JA 1/6W	1	R215	401 012 7009	CARBON 10K JA 1/4W	1
R115	401 024 7004	CARBON 1K JA 1/6W	1	R216	401 024 7004	CARBON 1K JA 1/6W	1
R116	401 024 7004	CARBON 1K JA 1/6W	1	R217	401 024 7004	CARBON 1K JA 1/6W	1
R117	401 024 7004	CARBON 1K JA 1/6W	1	R218	401 024 7004	CARBON 1K JA 1/6W	1
R118	401 024 7004	CARBON 1K JA 1/6W	1	R219	401 012 5708	CARBON 1K JA 1/4W	1
R121	401 024 7004	CARBON 1K JA 1/6W	1	R220	401 012 5708	CARBON 1K JA 1/4W	1
R122	401 024 7004	CARBON 1K JA 1/6W	1	R221	401 012 5708	CARBON 1K JA 1/4W	1
R125	401 024 7004	CARBON 1K JA 1/6W	1	R222	401 024 6700	CARBON 100 JA 1/6W	1
R126	401 024 7004	CARBON 1K JA 1/6W	1	R223	401 025 4606	CARBON 18K JA 1/6W	1
R129	401 024 7004	CARBON 1K JA 1/6W	1	R224	401 024 7400	CARBON 10K JA 1/6W	1
R130	401 024 7004	CARBON 1K JA 1/6W	1	R225	401 027 0507	CARBON 470K JA 1/6W	1
R133	401 024 7004	CARBON 1K JA 1/6W	1	R226	401 021 4105	CARBON 56K JA 1/4W	1
R134	401 024 7004	CARBON 1K JA 1/6W	1	R227	401 027 9005	CARBON 82K JA 1/6W	1
R137	401 024 7004	CARBON 1K JA 1/6W	1	R228	401 024 7400	CARBON 10K JA 1/6W	1
R138	401 024 7004	CARBON 1K JA 1/6W	1	R229	401 026 7408	CARBON 39K JA 1/6W	1
R141	401 018 3807	CARBON 3.3K JA 1/4W	1	R230	401 012 3407	CARBON 10 JA 1/4W	1
R142	401 018 3807	CARBON 3.3K JA 1/4W	1	R231	401 012 5708	CARBON 1K JA 1/4W	1
R143	401 012 4503	CARBON 100 JA 1/4W	1	R234	401 024 9701	CARBON 12K JA 1/6W	1
R144	401 012 4503	CARBON 100 JA 1/4W	1	RB101	4-2219-71830	Resistor 100k $\Omega$ x4 J	1
R145	401 024 7400	CARBON 10K JA 1/6W	1	RB102	4-2219-71800	Resistor 10k $\Omega$ x5	1
R147	401 012 4503	CARBON 100 JA 1/4W	1	RB103	4-2219-71760	Resistor 10k $\Omega$ x6	1
R148	401 012 4503	CARBON 100 JA 1/4W	1	RB104	4-2219-71870	Resistor 10k $\Omega$ x11 J	1
R149	401 012 4503	CARBON 100 JA 1/4W	1	RB105	4-2219-71810	Resistor 10k $\Omega$ x3 J	1
R150	401 012 4503	CARBON 100 JA 1/4W	1				
R151	401 024 8001	CARBON 1M JA 1/6W	1	<b>CONTROL P.C.B. ASSY</b>			
R152	401 024 8001	CARBON 1M JA 1/6W	1	42	141-0-1939-26800	Control P.C.B. Assy	1
R153	401 025 8703	CARBON 220K JA 1/6W	1		131-2-4208-49500	Spacer	1
R154	401 025 8703	CARBON 220K JA 1/6W	1		131-2-4208-52600	Spacer	1
R155	401 026 9907	CARBON 4.7K JA 1/6W	1		131-2-4208-52700	Spacer LED	1
R156	401 026 9907	CARBON 4.7K JA 1/6W	1		131-2-6103-27000	Cover Shield	1
R157	401 026 9907	CARBON 4.7K JA 1/6W	1		131-2-6306-12600	Reflector	1
R158	401 026 9907	CARBON 4.7K JA 1/6W	1		411 021 3107	SCR S-TPG BIN 2.6X8	3
R161	401 024 7004	CARBON 1K JA 1/6W	1	PC302	4-2352-03576	Connector 6P Assy	1
R162	401 024 7004	CARBON 1K JA 1/6W	1	PC303	4-2352-03577	Connector 8P Assy	1
R163	401 024 7707	CARBON 100K JA 1/6W	1	SW301	4-2319-78470	Tact Switch (PHONO)	1
R164	401 024 7707	CARBON 100K JA 1/6W	1	SW302	4-2319-78470	Tact Switch (TUNER)	1
R165	401 027 2600	CARBON 5.6K JA 1/6W	1	SW303	4-2319-78470	Tact Switch (CD)	1
R166	401 021 3009	CARBON 5.6K JA 1/4W	1	SW304	4-2319-78470	Tact Switch (DECK)	1
R169	401 024 9701	CARBON 12K JA 1/6W	1	SW305	4-2319-78470	Tact Switch (VIDEO/SURROUND)	1
R170	401 024 9701	CARBON 12K JA 1/6W	1	IC301	409 056 9409	IC UP C1490HA	1
R173	401 027 5908	CARBON 68K JA 1/6W	1	Q301	405 008 7004	TR 2SB808-G	1
R174	401 027 5908	CARBON 68K JA 1/6W	1	or	405 008 6700	TR 2SB808-F	1
R175	401 026 6609	CARBON 390 JA 1/6W	1	Q302	405 008 7004	TR 2SB808-G	1
R176	401 026 6609	CARBON 390 JA 1/6W	1	or	405 008 6700	TR 2SB808-F	1

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

Ref. No.	Part No.	Description	Q'ty	Ref. No.	Part No.	Description	Q'ty
Q303	405 008 7004	TR 2SB808-G	1		△ 4-2352-02990	Socket 2P (TURNTABLE, POWER SUPPLY)	1
or	405 008 6700	TR 2SB808-F	1		△ 4-2352-03000	Socket 2P (DECK, POWER SUPPLY)	1
Q304	405 008 7004	TR 2SB808-G	1	<b>SUB TRANS P.C.B. ASSY</b>			
or	405 008 6700	TR 2SB808-F	1	48	141-0-1939-26870	Sub Trans P.C.B. Assy	1
D301	407 065 0905	PHOTO DIODE SPS-501C-1	1	PC703	4-2439-72173	Wire 2 Parallel	1
D302	407 027 6907	LED SLP-153B (POWER STANDBY)	1	<b>POWER TRANS P.C.B. ASSY</b>			
D303	407 028 8900	LED SLP-173B-01 (VOLUME LEVEL 2)	1	49	141-0-1939-26880	Power Trans P.C.B. Assy	1
D304	407 028 8900	LED SLP-173B-01 (VOLUME LEVEL 4)	1	<b>EC TERMINAL P.C.B. ASSY</b>			
D305	407 028 8900	LED SLP-173B-01 (VOLUME LEVEL 6)	1	50	141-0-1939-26890	EC Terminal P.C.B. Assy	1
D306	407 028 8900	LED SLP-173B-01 (VOLUME LEVEL 8)	1		△ 4-2349-20570	Fuse T2.5A	1
D307	407 028 8900	LED SLP-173B-01 (VOLUME LEVEL 10)	1		4-2352-01940	Fuse Clip	2
D308	407 062 7204	LED SEL2213C (DECK)	1		4-2372-00830	EC Terminal 1P	2
D309	407 062 7204	LED SEL2213C (VIDEO/SURROUND)	1		111-2-6220-11100	Wire Wrap Terminal	3
D310	407 062 7303	LED SEL2413E (PHONO)	1	<b>GRAPHIC EQ. P.C.B. ASSY</b>			
D311	407 062 7303	LED SEL2413E (TUNER)	1	51	141-0-1939-26910	Graphic EQ. P.C.B. Assy	1
D312	407 062 7303	LED SEL2413E (CD)	1	Q901	405 017 9709	TR 2SC3330-U	1
D313	407 008 0405	DIODE GMB01-BT	1	or	405 017 9600	TR 2SC3330-T	1
D314	407 008 0405	DIODE GMB01-BT	1	Q902	405 017 9709	TR 2SC3330-U	1
D315	407 008 0405	DIODE GMB01-BT	1	or	405 017 9600	TR 2SC3330-T	1
C301	403 048 3406	ELECT 0.22U M 50V	1	Q903	405 017 9709	TR 2SC3330-U	1
C302	403 050 8000	ELECT 3.3U M 50V	1	or	405 017 9600	TR 2SC3330-T	1
C303	403 072 8200	CERAMIC 330P K 50V	1	Q904	405 017 9709	TR 2SC3330-U	1
C304	403 038 2303	ELECT 100U M 6.3V	1	or	405 017 9600	TR 2SC3330-T	1
R301	401 026 8108	CARBON 4.7 JA 1/6W	1	Q905	405 017 9709	TR 2SC3330-U	1
R302	401 025 3500	CARBON 160K JA 1/6W	1	or	405 017 9600	TR 2SC3330-T	1
R303	401 024 7400	CARBON 10K JA 1/6W	1	Q906	405 017 9709	TR 2SC3330-U	1
R304	401 012 4503	CARBON 100 JA 1/4W	1	or	405 017 9600	TR 2SC3330-T	1
R305	401 012 5708	CARBON 1K JA 1/4W	1	Q907	405 017 9709	TR 2SC3330-U	1
R306	401 012 5708	CARBON 1K JA 1/4W	1	or	405 017 9600	TR 2SC3330-T	1
R307	401 012 5708	CARBON 1K JA 1/4W	1	Q908	405 017 9709	TR 2SC3330-U	1
R308	401 012 5708	CARBON 1K JA 1/4W	1	or	405 017 9600	TR 2SC3330-T	1
R309	401 025 7805	CARBON 2.2K JA 1/6W	1	Q909	405 017 9709	TR 2SC3330-U	1
R310	401 025 7805	CARBON 2.2K JA 1/6W	1	or	405 017 9600	TR 2SC3330-T	1
R311	401 025 7805	CARBON 2.2K JA 1/6W	1	Q910	405 017 9709	TR 2SC3330-U	1
R312	401 014 2903	CARBON 150 JA 1/4W	1	or	405 017 9600	TR 2SC3330-T	1
R313	401 014 2903	CARBON 150 JA 1/4W	1	Q910	405 017 9709	TR 2SC3330-U	1
R314	401 014 2903	CARBON 150 JA 1/4W	1	or	405 017 9600	TR 2SC3330-T	1
R315	401 025 7805	CARBON 2.2K JA 1/6W	1	Q910	405 017 9709	TR 2SC3330-U	1
R316	401 027 5007	CARBON 68 JA 1/6W	1	or	405 017 9600	TR 2SC3330-T	1
<b>VOLUME P.C.B. ASSY</b>				D901	407 049 7500	ZENER DIODE GZA16Y	1
43	141-0-1939-26810	Volume P.C.B. Assy	1	C901	403 044 0706	ELECT 47U M 16V	1
SW306	4-2319-78470	Tact Switch (VOLUME UP)	1	C902	403 044 0706	ELECT 47U M 16V	1
SW307	4-2319-78470	Tact Switch (VOLUME DOWN)	1	C903	403 059 0401	POLYESTER 0.018U K 50V	1
<b>REMOTE CONTROL P.C.B. ASSY</b>				C904	403 059 0401	POLYESTER 0.018U K 50V	1
44	141-0-1939-26820	Remote Control P.C.B. Assy	1	C905	403 050 8000	ELECT 3.3U M 50V	1
CN401	4-2369-73150	Plug 5P (TUNER)	1	C906	403 050 8000	ELECT 3.3U M 50V	1
CN402	4-2369-73140	Plug 4P (CD)	1	C907	403 063 6208	POLYESTER 8200P K 50V	1
R401	401 012 5708	CARBON 1K JA 1/4W	1	C908	403 063 6208	POLYESTER 8200P K 50V	1
R402	401 012 5708	CARBON 1K JA 1/4W	1	C909	403 048 7909	ELECT 0.47U M 50V	1
R403	401 012 5708	CARBON 1K JA 1/4W	1	C910	403 048 7909	ELECT 0.47U M 50V	1
R404	401 012 5708	CARBON 1K JA 1/4W	1	C911	403 061 8709	POLYESTER 4700P K 50V	1
<b>SPEAKER OUT P.C.B. ASSY</b>				C912	403 061 8709	POLYESTER 4700P K 50V	1
45	141-0-1939-26840	Speaker Out P.C.B. Assy	1	C913	403 063 8103	POLYESTER 0.082U K 50V	1
	4-2359-78835	Connector 1P Assy	1	C914	403 063 8103	POLYESTER 0.082U K 50V	1
	4-2379-71270	4P Push Terminal (SPEAKERS)	1	C915	403 058 1607	POLYESTER 1500P K 50V	1
C601	403 069 1504	CERAMIC 1000P K 50V	1	C916	403 058 1607	POLYESTER 1500P K 50V	1
C602	403 069 1504	CERAMIC 1000P K 50V	1	C917	403 059 6601	POLYESTER 0.022U K 50V	1
C603	403 074 2701	CERAMIC 0.047U Z 50V	1	C918	403 059 6601	POLYESTER 0.022U K 50V	1
C604	403 074 2701	CERAMIC 0.047U Z 50V	1	C919	403 031 2805	CERAMIC 680P K 50V	1
<b>POWER SWITCH P.C.B. ASSY</b>				C920	403 031 2805	CERAMIC 680P K 50V	1
46	141-0-1939-26850	Power Switch P.C.B. Assy	1	C921	403 061 8709	POLYESTER 4700P K 50V	1
	4-2352-01170	Jack 7P 6.45 (PHONES)	1	C922	403 061 8709	POLYESTER 4700P K 50V	1
	141-2-4359-22501	Cover Capacitor	1	C923	403 069 8404	CERAMIC 0.01U Z 50V	1
SW501	△ 4-2312-05710	Switch Push Power (POWER)	1	C924	403 069 8404	CERAMIC 0.01U Z 50V	1
C501	△ 404 033 5207	CERAMIC 1000P Z 250V	1	C925	403 047 1502	ELECT 4.7U M 25V	1
R501	401 055 9503	OXIDE-MT 330 JB 1/2W	1	R901	401 012 4503	CARBON 100 JA 1/4W	1
R502	401 055 9503	OXIDE-MT 330 JB 1/2W	1	R902	401 012 4503	CARBON 100 JA 1/4W	1
R503	401 014 2903	CARBON 150 JA 1/4W	1	R903	401 026 6609	CARBON 390 JA 1/6W	1
R504	401 014 2903	CARBON 150 JA 1/4W	1	R904	401 026 6609	CARBON 390 JA 1/6W	1
<b>AC SUPPLY P.C.B. ASSY</b>				R905	401 025 1902	CARBON 15K JA 1/6W	1
47	141-0-1939-26860	AC Supply P.C.B. Assy	1	R906	401 025 1902	CARBON 15K JA 1/6W	1
	△ 4-2349-20380	Fuse T1.0A	2	R907	401 025 0004	CARBON 120K JA 1/6W	1
	4-2352-01940	Fuse Clip	4	R908	401 025 0004	CARBON 120K JA 1/6W	1
	△ 4-2352-02980	Socket 2P (TUNER, POWER SUPPLY)	1	R909	401 024 9305	CARBON 1.2K JA 1/6W	1
				R910	401 024 9305	CARBON 1.2K JA 1/6W	1
				R911	401 026 6609	CARBON 390 JA 1/6W	1
				R912	401 026 6609	CARBON 390 JA 1/6W	1
				R913	401 025 1902	CARBON 15K JA 1/6W	1
				R914	401 025 1902	CARBON 15K JA 1/6W	1

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

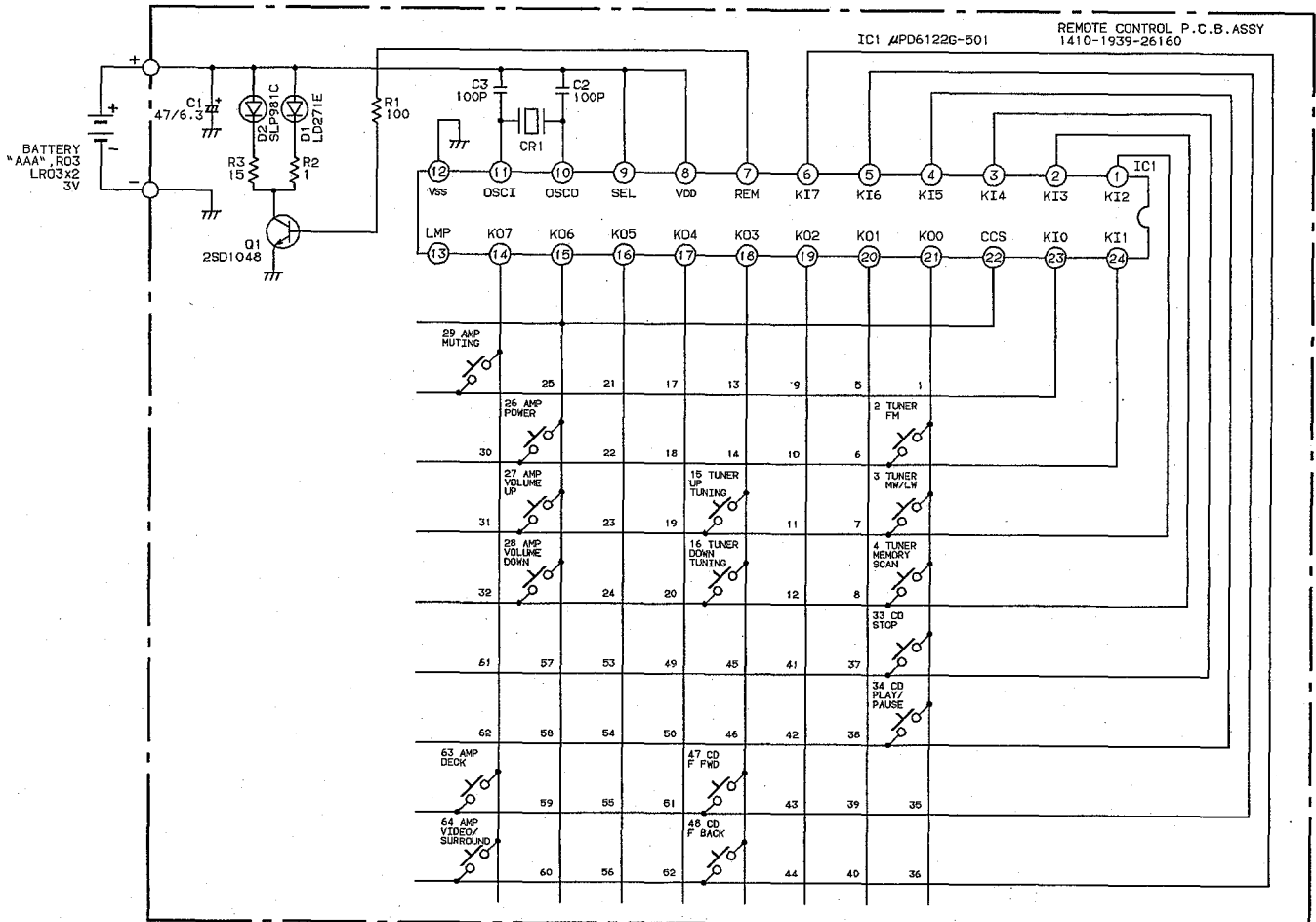
Ref. No.	Part No.	Description	Q'ty
R915	401 024 7707	CARBON 100K JA 1/6W	1
R916	401 024 7707	CARBON 100K JA 1/6W	1
R917	401 024 9305	CARBON 1.2K JA 1/6W	1
R918	401 024 9305	CARBON 1.2K JA 1/6W	1
R919	401 026 6609	CARBON 390 JA 1/6W	1
R920	401 026 6609	CARBON 390 JA 1/6W	1
R921	401 025 1902	CARBON 15K JA 1/6W	1
R922	401 025 1902	CARBON 15K JA 1/6W	1
R923	401 026 7408	CARBON 39K JA 1/6W	1
R924	401 026 7408	CARBON 39K JA 1/6W	1
R925	401 025 1605	CARBON 1.5K JA 1/6W	1
R926	401 025 1605	CARBON 1.5K JA 1/6W	1
R927	401 026 6609	CARBON 390 JA 1/6W	1
R928	401 026 6609	CARBON 390 JA 1/6W	1
R929	401 025 1902	CARBON 15K JA 1/6W	1
R930	401 025 1902	CARBON 15K JA 1/6W	1
R931	401 026 4605	CARBON 33K JA 1/6W	1

Ref. No.	Part No.	Description	Q'ty
R932	401 026 4605	CARBON 33K JA 1/6W	1
R933	401 025 1605	CARBON 1.5K JA 1/6W	1
R934	401 025 1605	CARBON 1.5K JA 1/6W	1
R935	401 026 6609	CARBON 390 JA 1/6W	1
R936	401 026 6609	CARBON 390 JA 1/6W	1
R937	401 025 1902	CARBON 15K JA 1/6W	1
R938	401 025 1902	CARBON 15K JA 1/6W	1
R939	401 025 8208	CARBON 22K JA 1/6W	1
R940	401 025 8208	CARBON 22K JA 1/6W	1
R941	401 025 1605	CARBON 1.5K JA 1/6W	1
R942	401 025 1605	CARBON 1.5K JA 1/6W	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.

## SCHEMATIC DIAGRAM (REMOTE CONTROL)

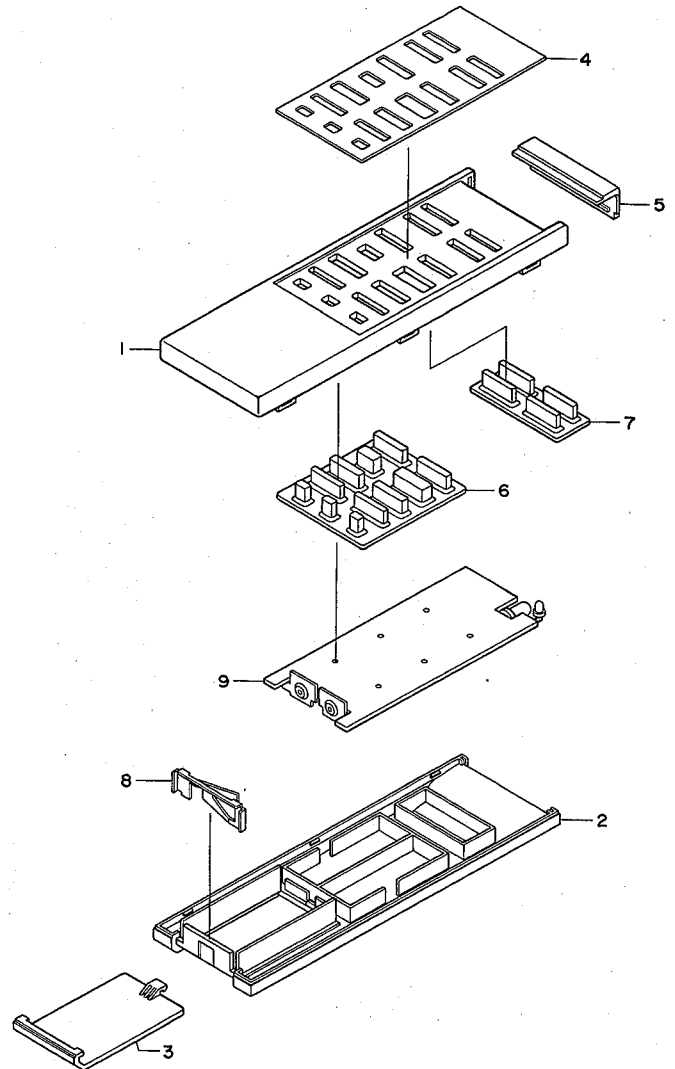


# PARTS LIST & EXPLODED VIEW (REMOTE CONTROL)

Ref. No.	Part No.	Description	Q'ty
<b>REMOTE CONTROL CABINET</b>			
	4-1929-70305	REM-335 (Remote Control)	1
	131-6-2119-02580	Bag Polyethylene-Exp.	1
1	131-2-1101-53100	Cabinet Top	1
2	131-2-1101-53200	Cabinet Bottom	1
3	131-2-1107-27700	Lid Battery	1
4	131-2-1110-42905	Plate Decorate	1
5	131-2-6308-26600	Filter	1
6	141-2-1659-94202	Knob Rubber (11 Key)	1
7	141-2-1659-94300	Knob Rubber (4 Key)	1
8	141-2-3829-49500	Spring Battery	1
9	141-0-1939-26160	Remote Control P.C.B. Assy	1
<b>REMOTE CONTROL P.C.B. ASSY</b>			
9	141-0-1939-26160	Remote Control P.C.B. Assy	1
	141-2-3829-49600	Terminal Anode (+)	1
	141-2-3829-49601	Terminal Anode (-)	1
CR1	4-2259-71120	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
C2	403 068 9709	CERAMIC	100P K 50V
C3	403 068 9709	CERAMIC	100P K 50V
R1	402 035 8004	MT-GLAZE	100 JA 1/8W
R2	402 033 8303	MT-GLAZE	1 JA 1/8W
R3	402 022 9106	MT-GLAZE	15 JA 1/8W

## NOTES:

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



## IMPORTANT NOTE

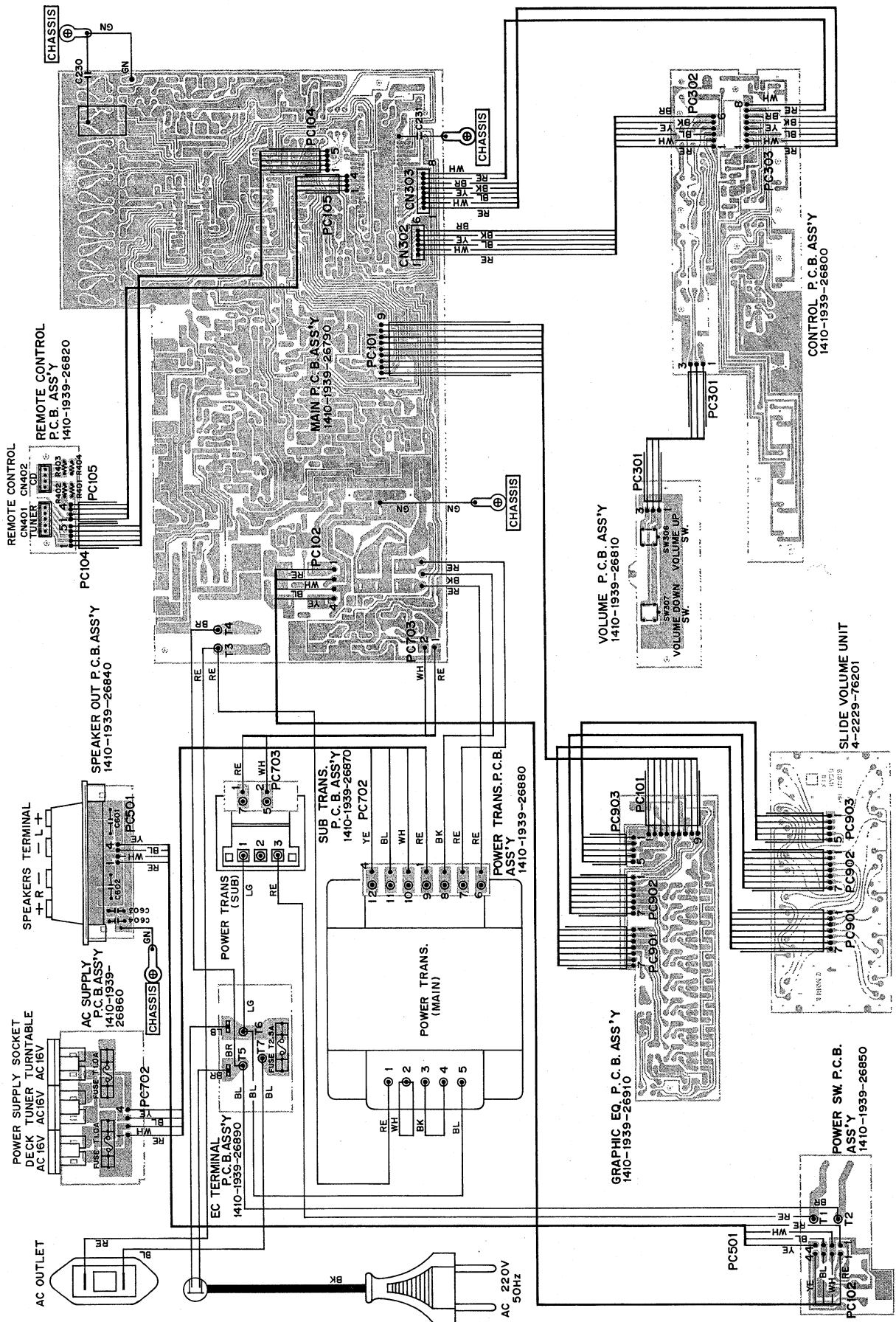
The Amplifier has been Factory-adjusted for operation on 220V AC. The voltage can be changed for operation on 110V AC by making the following changes on the Amplifier inside.

- Remove the AC plug from the wall outlet.
- Remove the screws securing the cover.
- Disconnect Black lead from Power Trans (Main) Terminal No. 4, and then connect it to Power Trans (Main) Terminal No. 5.
- Disconnect one of the White leads from the Power Trans (Main) Terminal No. 2, and connect its lead to the Power Trans (Main) Terminal No. 4.
- Disconnect Red lead from Power Trans (Sub) Terminal No. 3, and then connect it to Power Trans (Sub) Terminal No. 2.

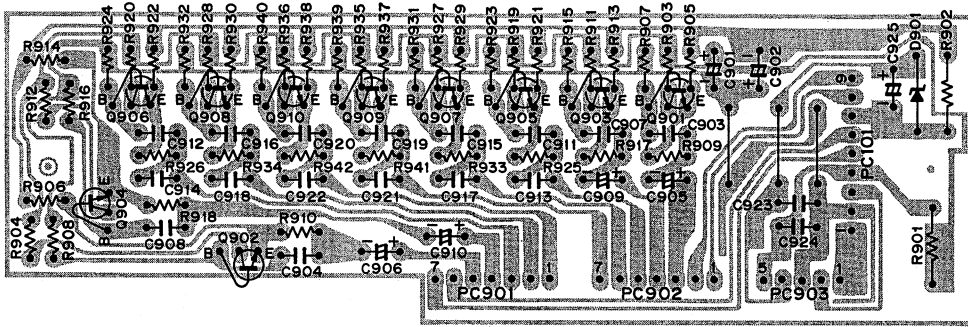
The Amplifier is now ready 110V operation. DO NOT attempt to operate the Amplifier on 220V. Damage will result!



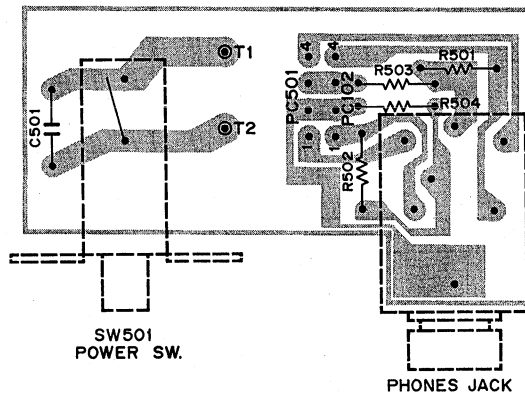
# POINT TO POINT WIRING DIAGRAM



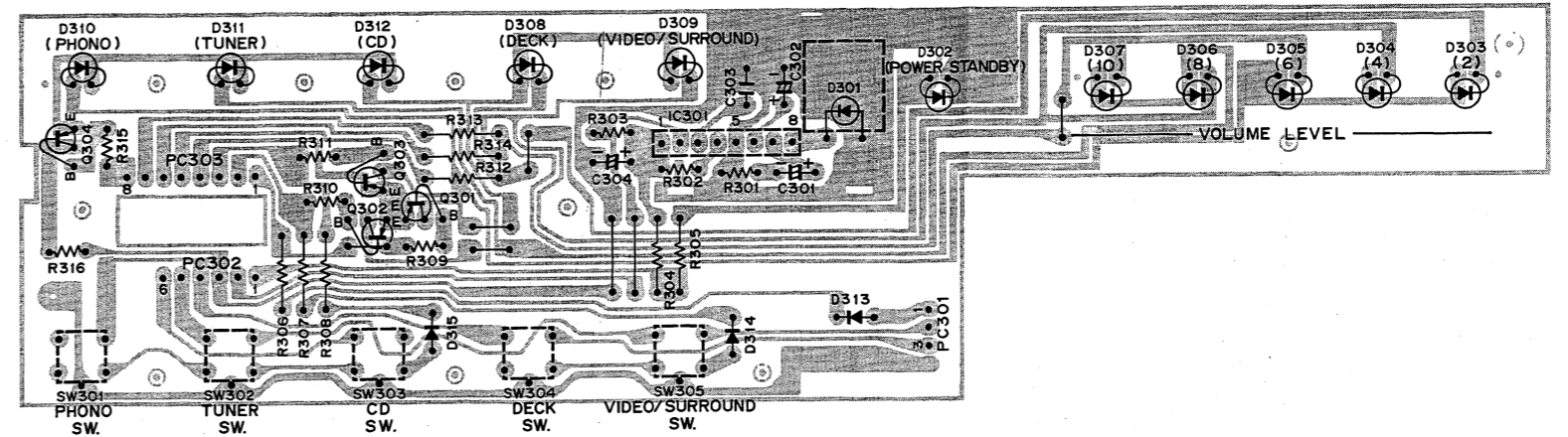
## GRAPHIC EQ. PRINTED CIRCUIT BOARD (BOTTOM VIEW)



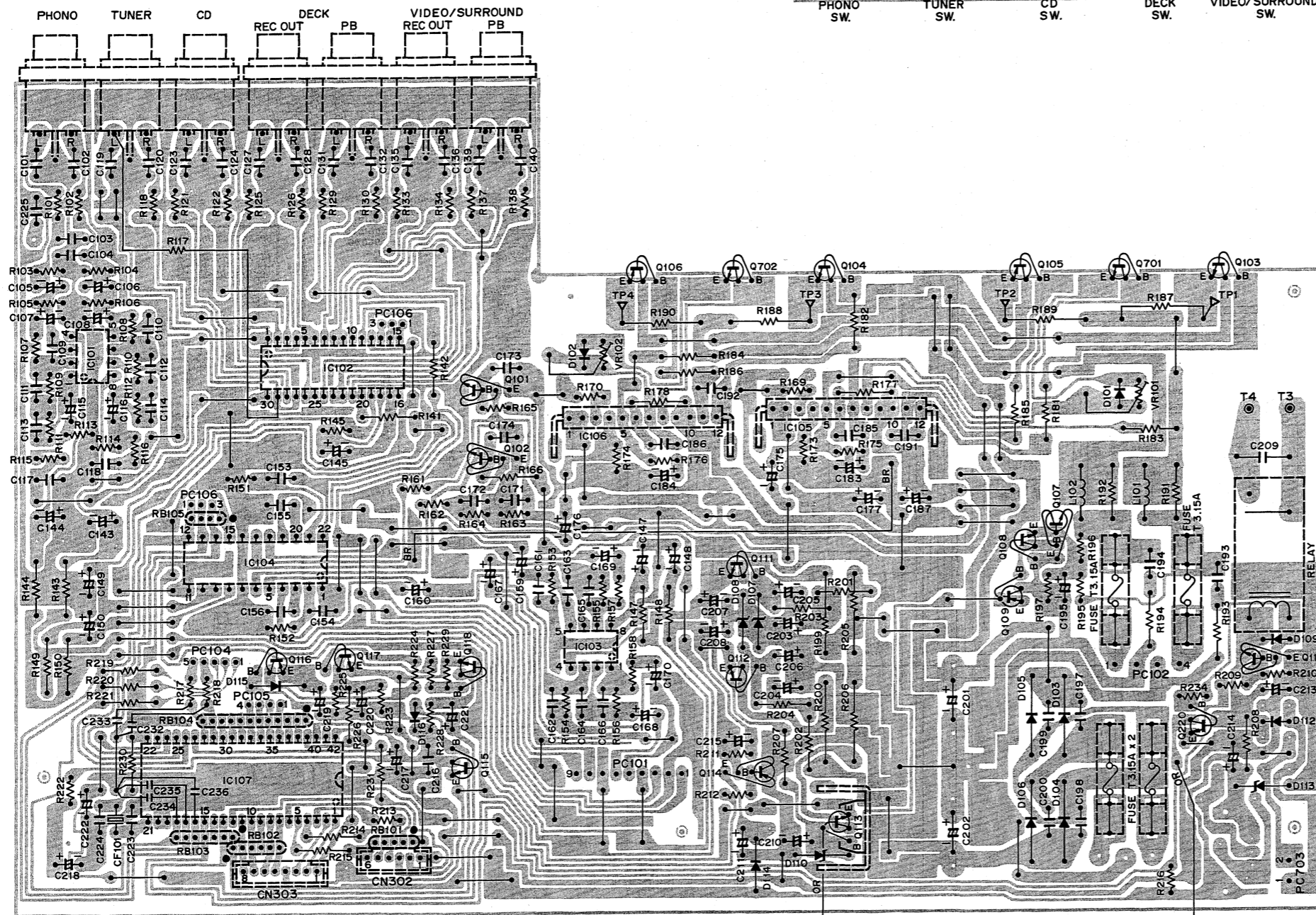
## POWER SWITCH P.C.BOARD (BOTTOM VIEW)



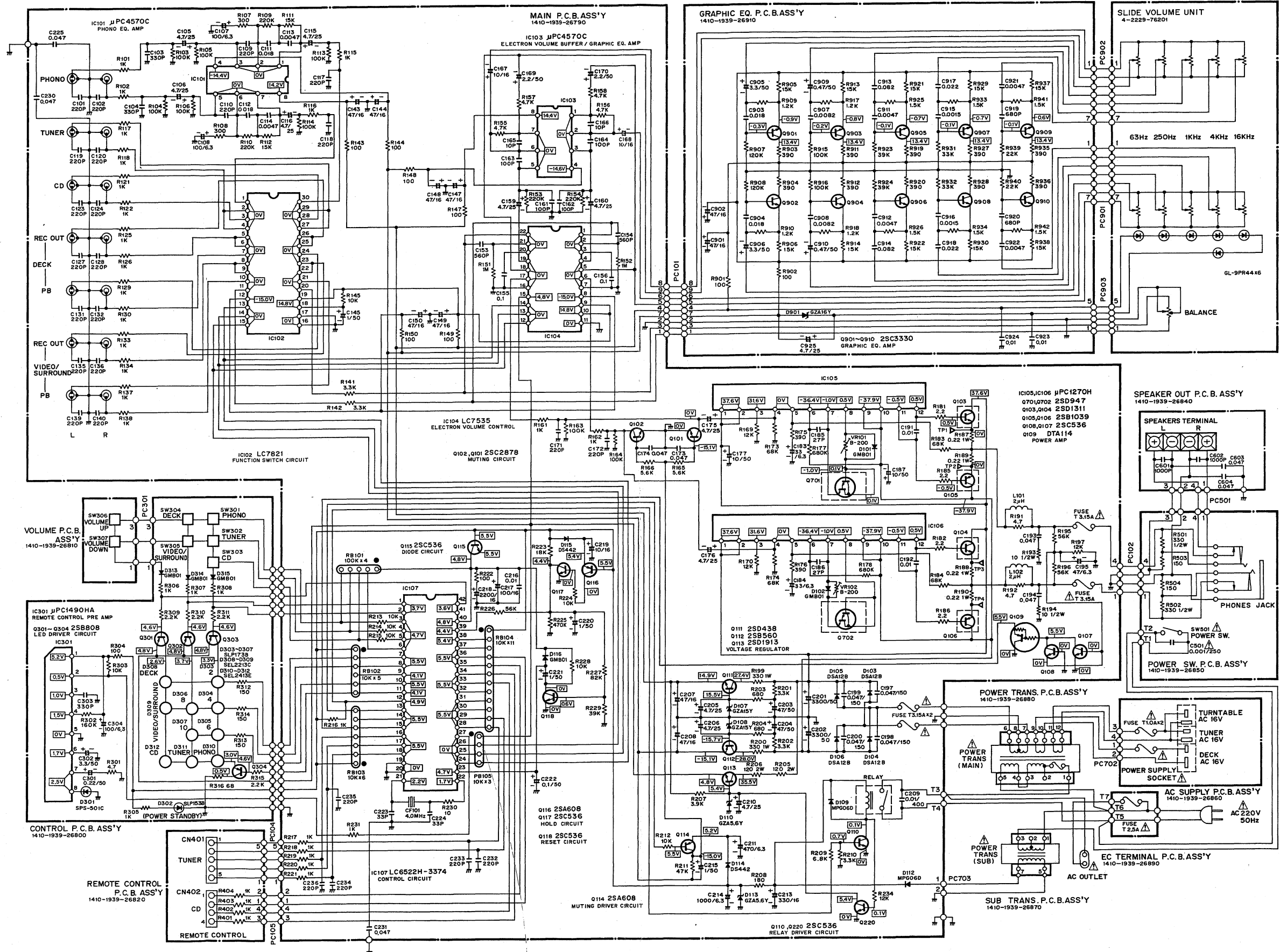
**CONTROL PRINTED CIRCUIT BOARD  
(BOTTOM VIEW)**




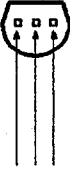




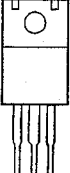



**MAIN PRINTED CIRCUIT BOARD  
(BOTTOM VIEW)**



# SCHEMATIC DIAGRAM



## SEMICONDUCTOR LEAD IDENTIFICATION

TRANSISTOR	FRONT VIEW	BOTTOM VIEW	TRANSISTOR	FRONT VIEW	BOTTOM VIEW
2SA 608 2SB 560 2SC 536 2SC 2878 2SD 438	 E C B	 E C B	2SB 808 2SC 3330 DTA 114	 E C B	 E C B
2SB 1039 2SD 1311	 B C E	 B C E	2SD 1913	 E C B	 E C B
2SD 947	 E C B	 E C B	<b>TERMINAL NAME</b>		
B → BASE C → COLLECTOR E → EMITTER					

### SWITCH POSITION TABLE

No.	Name	Position	No.	Name	Position
SW301	PHONO Switch	OFF	SW305	VIDEO/SURROUND Switch	OFF
SW302	TUNER Switch	OFF	SW306	VOLUME UP Switch	OFF
SW303	CD Switch	OFF	SW307	VOLUME DOWN Switch	OFF
SW304	DECK Switch	OFF	SW501	POWER Switch	OFF

**NOTES:**

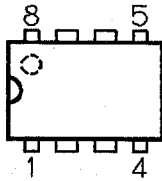
1. All resistors values are indicated in "ohm" ( $K=10^3$ ,  $M=10^6$ ).
2. All capacitors values are indicated in " $\mu F$ " ( $P=10^{-12}$ ).
3. All voltages indicated on the schematics are measured under the following conditions.
  - a. Use a V.T.V.M.

- b. All voltages  $\pm 10\%$  with respect to chassis ground
- c. No signals at input terminals
- d. AC input at 220 volts 50 Hz
4. This is a basic schematic diagram.

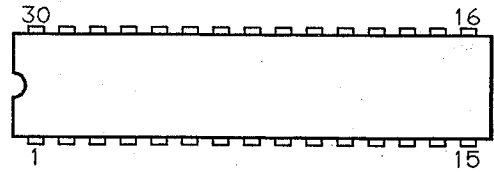
Because Fisher products are subject to continuous improvement, Fisher Corporation reserves the right to make any changes or modifications without notice.

# SEMICONDUCTOR LEAD IDENTIFICATION (Continued)

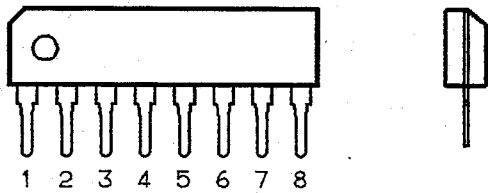
**$\mu$ PC 4570 C TOP VIEW**



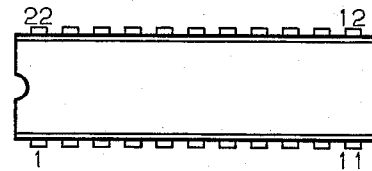
**LC 7821 TOP VIEW**



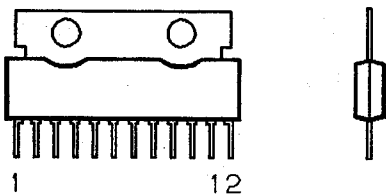
**$\mu$ PC 1490 HA TOP/SIDE VIEWS**



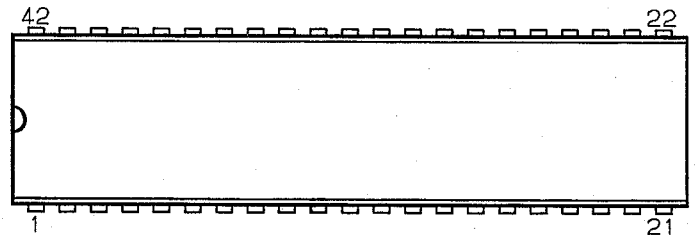
**LC 7535 TOP VIEW**



**$\mu$ PC 1270 H TOP/SIDE VIEWS**



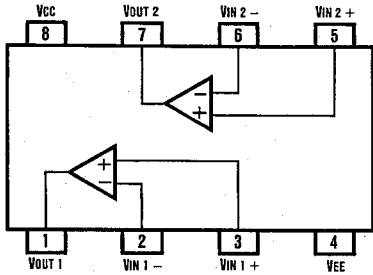
**LC 6522 H-3374 TOP VIEW**



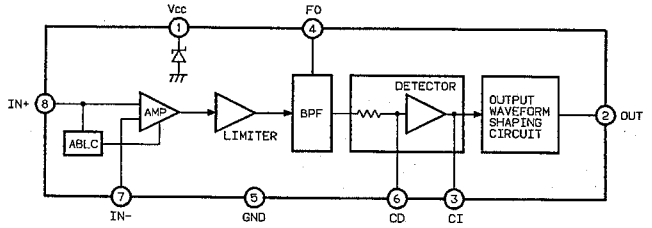


# INTEGRATED CIRCUIT BLOCK DIAGRAM

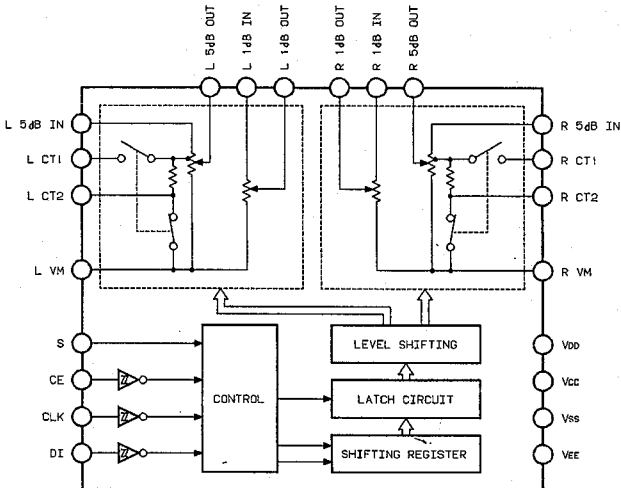
PHONO EQ./GRAPHIC EQ. AMP IC  $\mu$ PC 4570 C



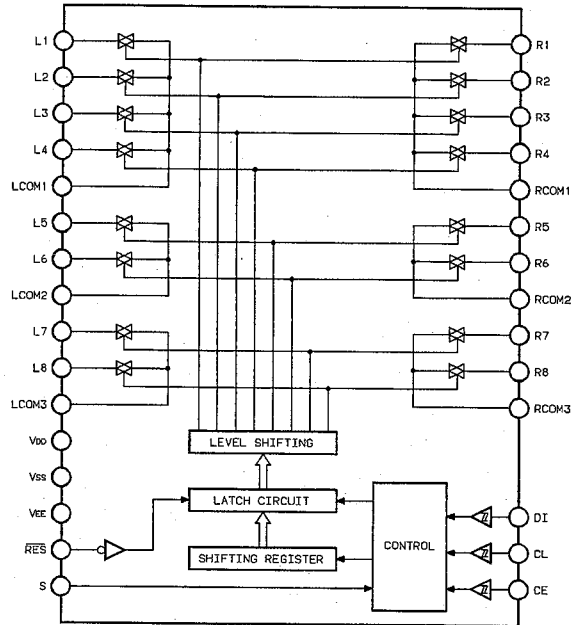
REMOTE CONTROL PRE AMP IC  $\mu$ PC 1490 HA



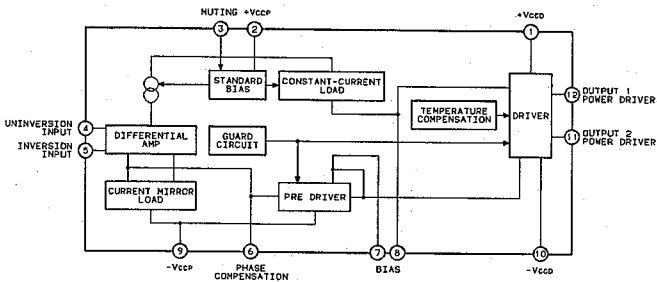
ELECTRONIC VOLUME IC LC 7535



FUNCTION ANALOG SWITCH IC LC 7821



POWER AMP IC  $\mu$ PC 1270 H





# FISHER

## FISHER Hi-Fi Europa Vertriebs GmbH

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Bitte geben Sie unbedingt die Ersatzteil-Nummer und die Modellbezeichnung an.  
Sie sparen so wertvolle Zeit. Vielen Dank.

September/'87/2,000/K