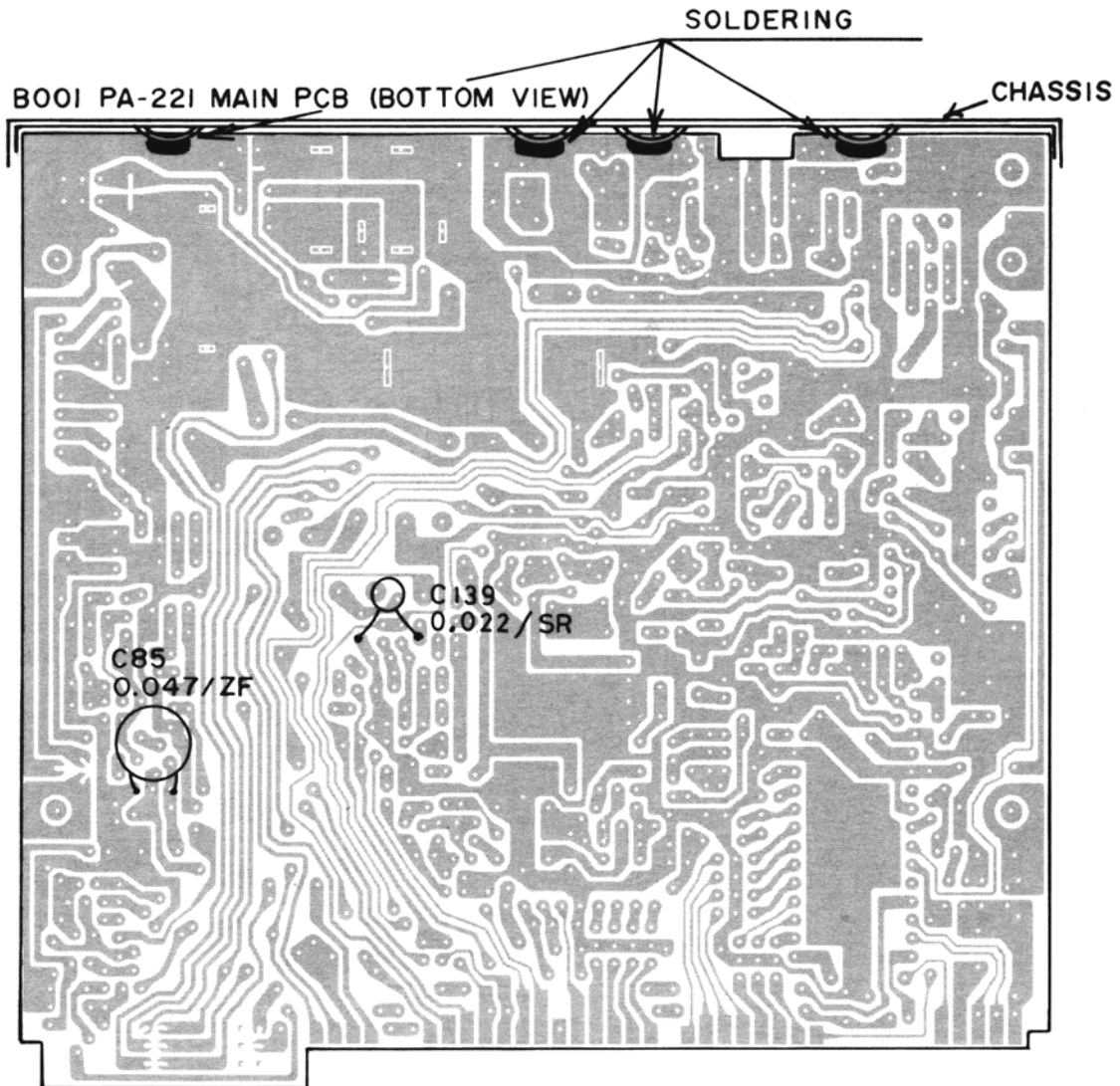


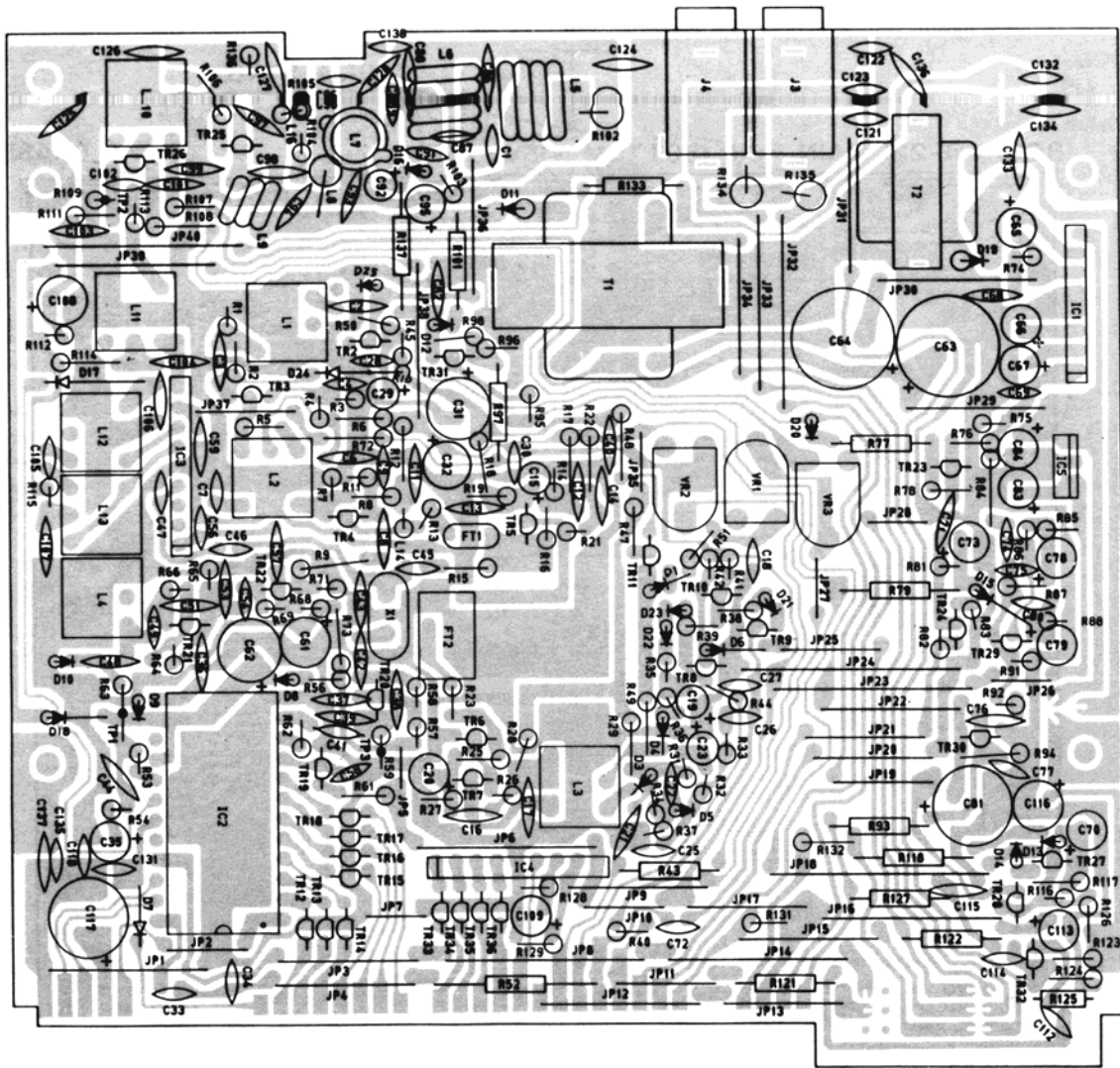
ADDITIONAL PARTS ON THE BOTTOM

MAIN P.C. BOARD



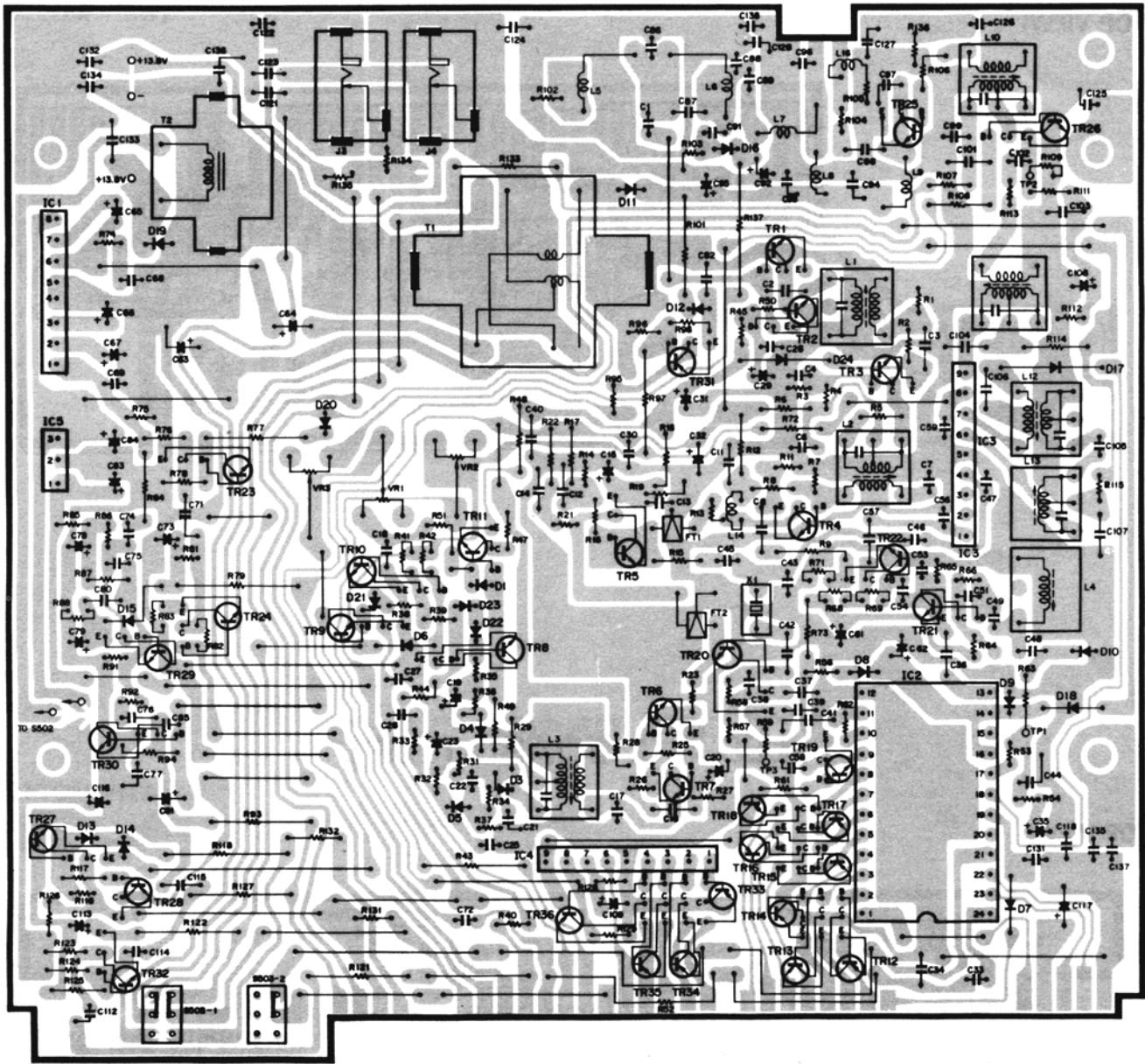
MAIN P.C. BOARD (TOP VIEW)

B001 PA-2211A



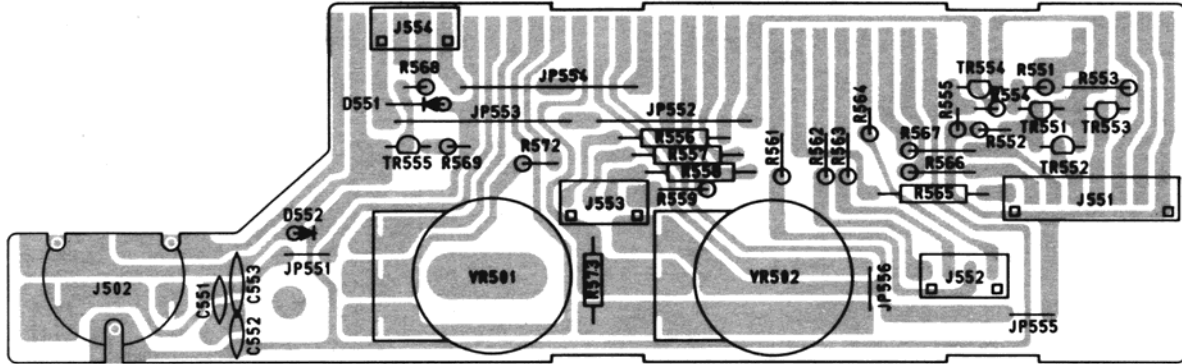
- NOTES:
1. RESISTANCE VALUES ARE SHOWN IN OHMS UNLESS OTHERWISE NOTED. (K-KILO OHM, M-MEG OHM)
 2. RESISTOR MATTERIES ARE 1/8W UNLESS OTHERWISE NOTED.
 3. CAPACITANCE VALUES ARE INDICATED IN MICRO FARADS UNLESS OTHERWISE NOTED. (P-MICRO-MICRO FARAD)
 4. ALL CAPACITORS TEMPERATURE CHARACTERISTICS ARE SL (LESS THAN 1000PF) OR YF (MORE THAN 1000PF) UNLESS OTHERWISE NOTED.

MAIN P.C. BOARD (BOTTOM VIEW)



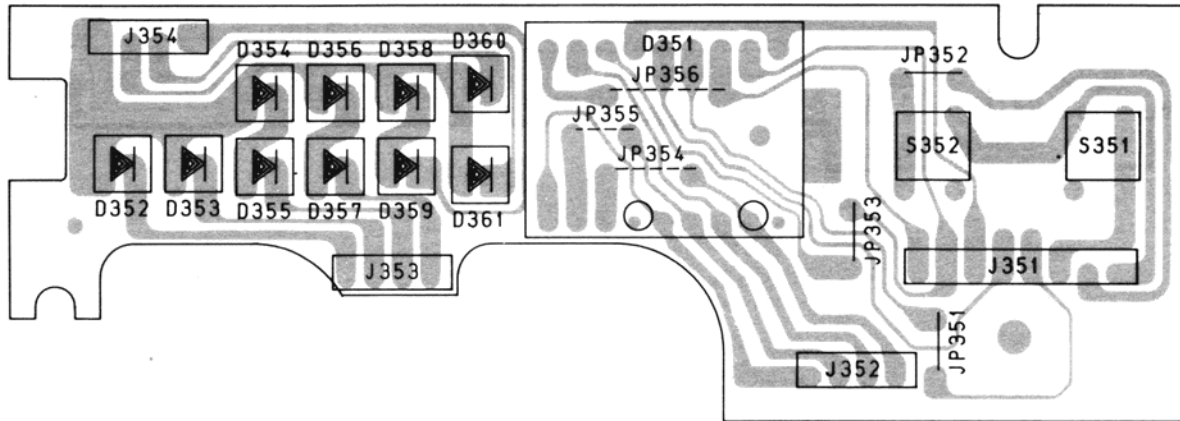
FRONT P.C. BOARD (TOP)

(TOP VIEW)



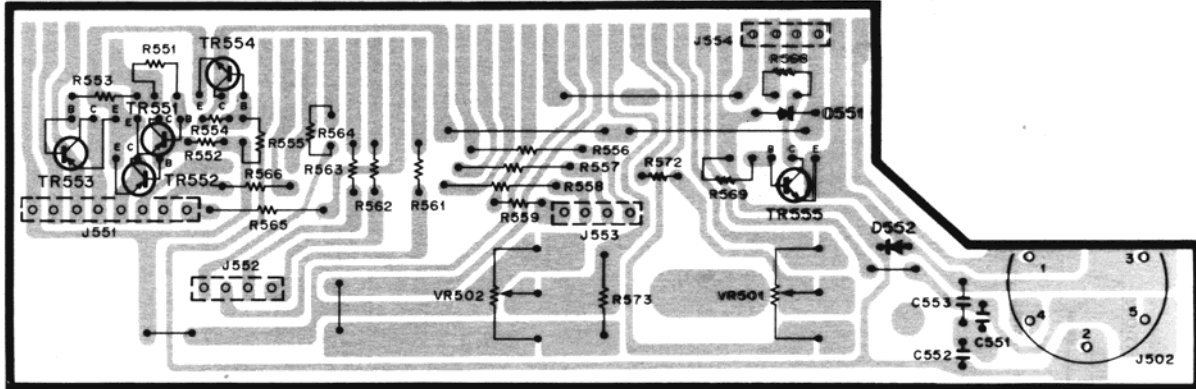
LED P.C. BOARD (TOP)

(TOP VIEW)



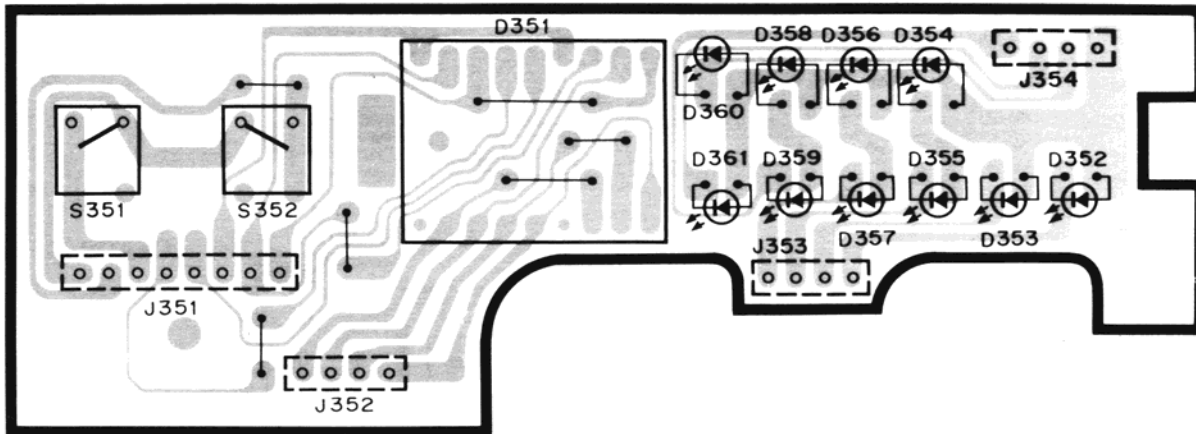
FRONT P.C. BOARD (BOTTOM)

(BOTTOM VIEW)

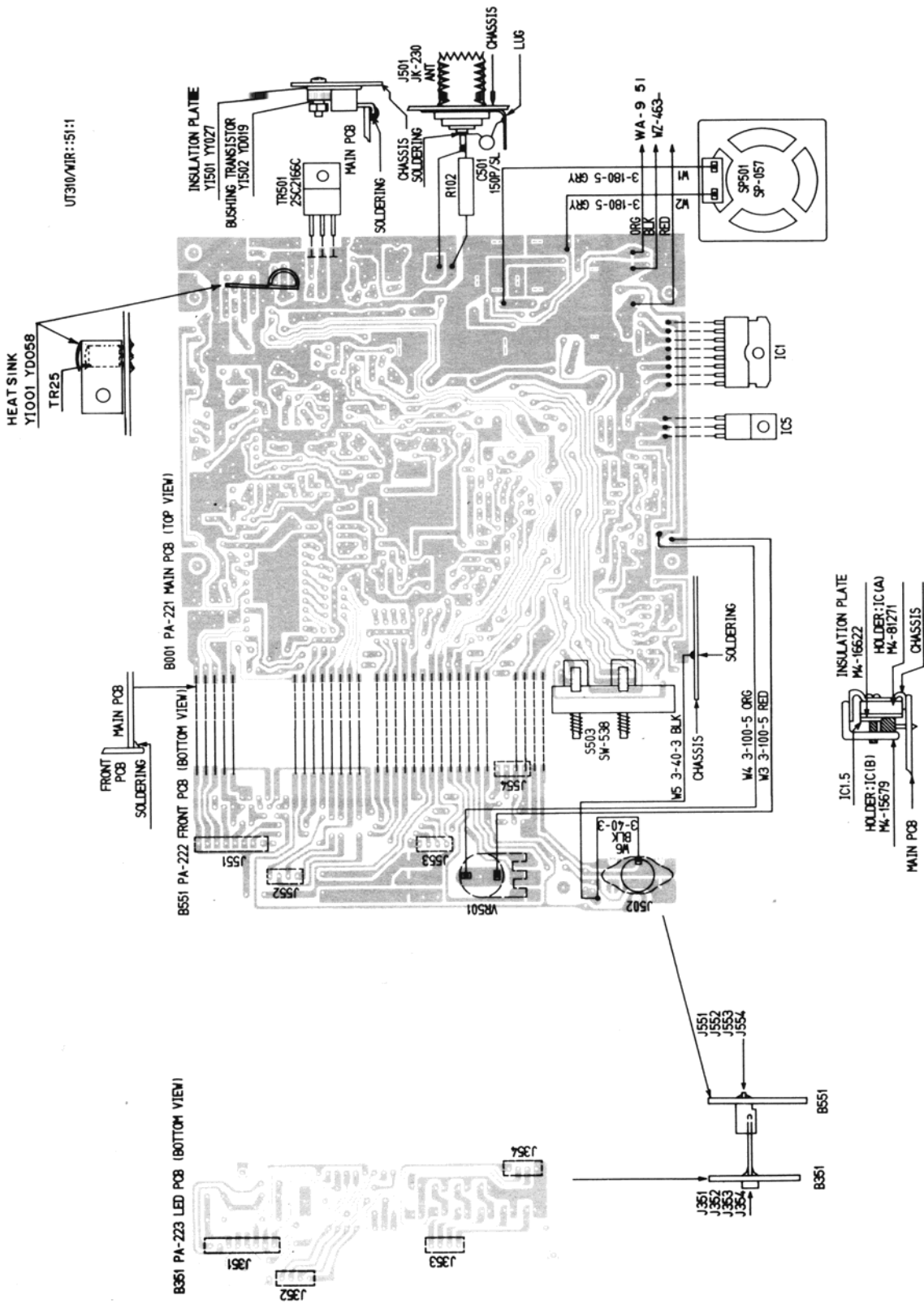


LED P.C. BOARD (BOTTOM)

(BOTTOM VIEW)

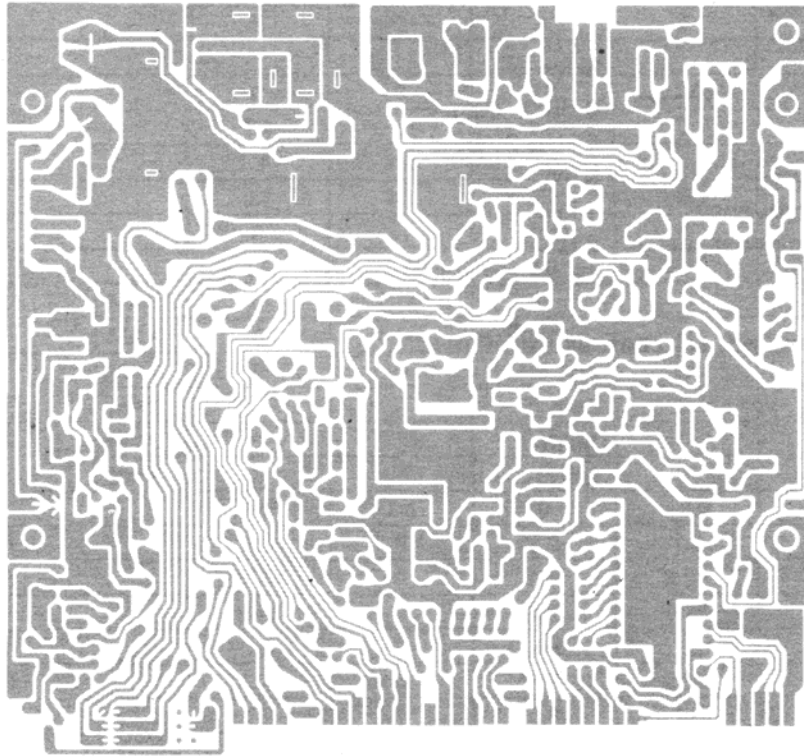


WIRING DIAGRAM

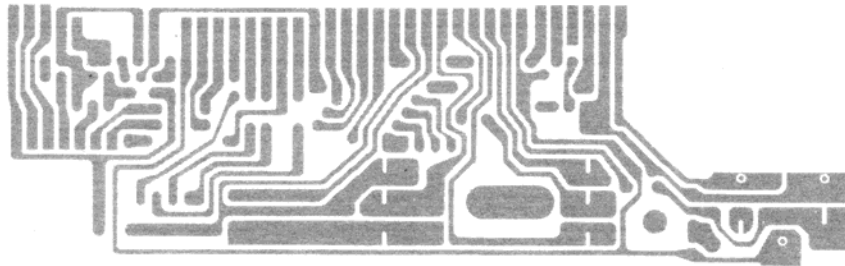


COPPER PATTERN LAYOUT

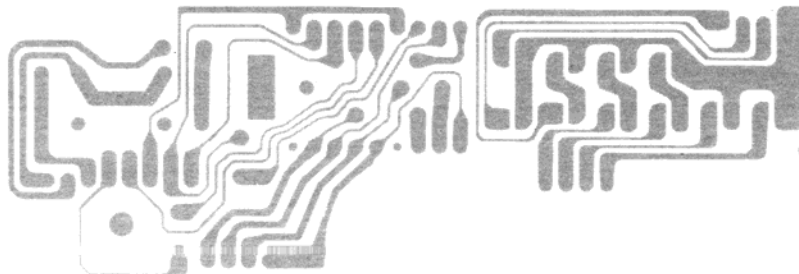
MAIN P.C. BOARD



FRONT P.C. BOARD



LED P.C. BOARD



VOLTAGE CHART

Measurement Conditions:

Power Supply Voltage:	13.8 V, DC
Antenna Impedance:	50 Ω
Temperature	25°C
SSG Output level:	0 dB 0.5 μ V
SSG Modulation:	1 kHz, 30%
Standard Audio level	0.5W
Standard Output frequency	1 kHz
Audio Frequency Impedance:	8 Ω
Channel:	19 CH (27.185 MHz)

Unless otherwise specified, set controls as follows:

P A:	OFF
D I M:	OFF
VOLUME:	MAX.
SQUELCH:	MIN.

TRANSISTOR VOLTAGE CHART

TR No.	TR NAME		RX (V)			TX (V)			
			E	C	B	E	C	B	
2	2SC1675		0	0	0.4	-1.05	-0.2	-0.5	
3	2SC1674L		1.1	7.15	1.8	0	1.0	0.25	
4	2SC1674L		1.35	7.2	2.0	0	1.0	0.3	
5	2SC1675L		0.7	3.1	1.2	-0.1	1.0	0.2	
6	2SC1675L		0	2.2	0.65	0	0.85	0.2	
7	2SC941TM (O)		1.5	6.6	2.2	0.25	0.9	0.85	
8	2SC945AQ	SQ	MIN	0	0.65	0	0	0.65	0
			MAX	0	0.05	0.55	0	0.05	0.55
9	2SC945AQ	SQ	MIN	0	0	0	0	0	
			MAX	0	0	0.7	0	0	0.7
10	2SC945AQ	SQ	MIN	0	0.05	0.65	0	0.05	0.65
			MAX	0	4.65	0	0	4.65	0
11	2SC945AQ		0.55	7.4	0	-0.3	1.0	0	
12	2SA1048GR		1.9	0	2.8	1.9	0	2.8	
13	2SA1048GR		0.75	0	0.15	0.75	0	0.15	
14	2SA1048GR		0.75	0	0.15	0.75	0	0.15	
15	2SA1048GR		1.9	0	2.8	1.9	0	2.8	
16	2SA1048GR		2.95	0	5.55	2.95	0	5.55	
17	2SA1048GR		1.9	0	2.8	1.9	0	2.8	
18	2SA1048GR		1.9	0	2.8	1.9	0	2.8	
19	2SC945AQ		0	0	0.65	0	0	0.65	
20	2SC1675L		5.2	7.6	4.8	5.2	7.6	4.8	
21	2SC1675L		5.0	6.3	5.1	5.0	6.3	5.1	
22	2SC1675L		2.7	5.9	3.3	2.7	5.9	3.3	
23	2SC945AQ		0	0	0.2	0	0	0.6	
24	2SC945AQ		0.1	2.2	0.55	0	0.8	0.2	
25	2SC2086D		0	13	0	0	12	0	
26	2SC941TM (O)		7.4	13.3	0.65	2.4	12	2.8	
27	2SC945AQ		7.4	8.2	8.1	1.0	8.2	1.0	
28	2SA733P		8.2	1.3	7.9	8.2	8.2	7.6	
29	2SC945AQ		2.5	8.1	2.2	1.55	4.75	2.0	
30	2SC945AQ		0	0	0.7	0	0	0.1	
31	2SA733P		3.9	0	3.5	3.9	0	3.5	
32	2SC945AQ	PA	OFF	2.05	8.2	2.25	2.05	8.2	2.25
			ON	7.7	8.1	2.3	1.7	4.65	2.1
33	2SA1048GR		6.5	0	4.5	6.5	0	4.5	
34	2SA1048GR		6.5	0	4.7	6.5	0	4.7	
35	2SA1048GR		4.75	0	3.1	4.75	0	3.1	
36	2SA1048GR		4.9	0	3.15	4.8	0	3.15	
501	2SC2166C		0	13	0	0	11.8	-0.1	
551	2SA733P		4.65	4.25	4.65	4.65	4.25	4.65	
552	2SB525C		4.65	2.3	4.25	4.65	2.3	4.25	
553	2SB525C		4.65	2.25	4.7	4.65	2.25	4.7	
554	2SC3242AE		4.65	8.3	5.25	4.65	8.3	5.25	
555	2SC945AQ		0	0.3	0.7	0	6.6	0	

IC VOLTAGE CHART

IC No.	IC NAME	IC PIN NO.	RX (V)	TX (V)
1	μPC1242H	1	0	0
		2	1.85	1.85
		3	1.2	1.2
		4	0	0
		5	0	0
		6	7.1	7.0
		7	12.3	12.0
		8	13.3	12.8
2	SM5123A	1	2.9	2.9
		2	2.85	2.85
		3	0.2	0.2
		4	2.85	2.85
		5	2.85	2.85
		6	2.85	2.85
		7	5.55	5.55
		8	2.85	2.85
		9	0	0
		10	2.95	2.95
		11	2.9	2.9
		12	0	0
		13	1.0	1.0
		14	5.55	5.55
		15	0	0
		16	5.55	5.55
		17	2.1	3.6
		18	5.55	5.55
		19	4.4	0.4
		20	4.4	4.4
		21	4.45	4.45
		22	4.45	4.45
		23	4.45	4.45
		24	4.4	4.4
3	TA7310PU	1	2.35	2.35
		2	1.8	1.8
		3	1.15	1.15
		4	1.9	2.4
		5	0	0
		6	1.3	7.9
		7	1.9	1.9
		8	4.2	4.5
		9	1.25	6.9
4	LB1413	1	4.5	0
		2	4.7	0
		3	3.1	0
		4	3.2	0
		5	0	0
		6	5.1	4.3
		7	0	2.3
		8	0	0.2
		9	8.3	8.3
5	HA17808W	1	8.2	8.2
		2	0	0
		3	13.3	13.0

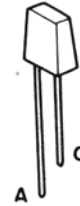
SEMI-CONDUCTOR LEAD IDENTIFICATION

Diodes A: ANODE
C: CATHODE

IN60AM
IN60P
IS2076A
IN4003
IS1555
ISV73-EB
HZ6A3

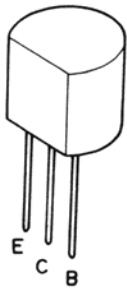


RT-242 PRS
RT-242 YS

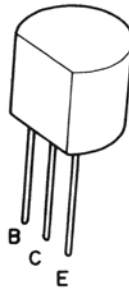


Transistors B: BASE
C: COLLECTOR
E: EMITTER

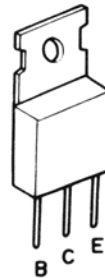
2SA733A-P
2SC941TM-O
2SC945A-Q
2SC1674-L
2SC1675-L
2SC3242A-E



2SB525-C
2SC2086-D

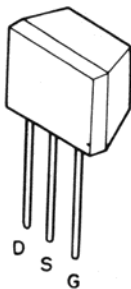


2SC2166-C

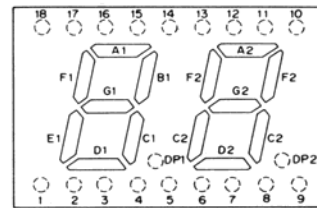


FET D: DRAIN
S: SOURCE
G: GATE

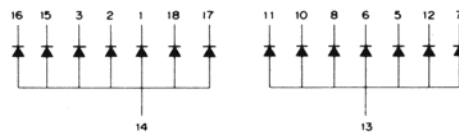
2SK192A-BL



LL-2253YG



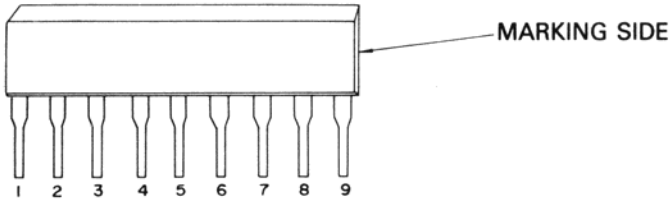
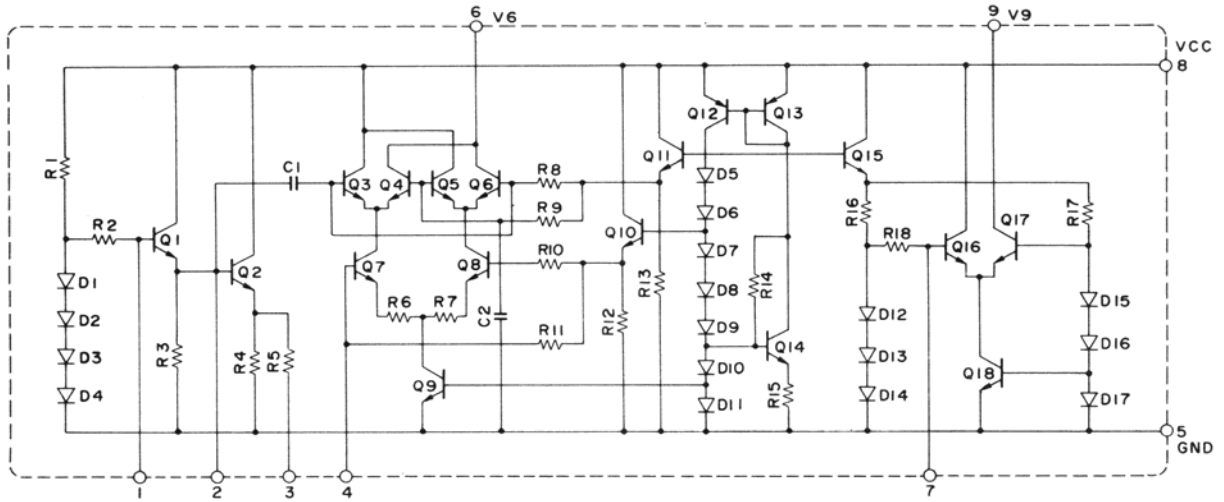
COMMON ANODE



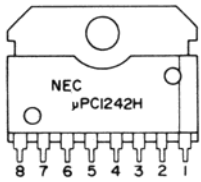
Pin no.	Function	Pin no.	Function
1	E1 Cathode	10	B2 Cathode
2	D1 Cathode	11	A2 Cathode
3	C1 Cathode	12	F2 Cathode
4	NC Cathode	13	DIGIT 2 Anode
5	E2 Cathode	14	DIGIT 1 Anode
6	D2 Cathode	15	B1 Cathode
7	G2 Cathode	16	A1 Cathode
8	C2 Cathode	17	G1 Cathode
9	NC Cathode	18	F1 Cathode

IC INTERNAL DIAGRAMS

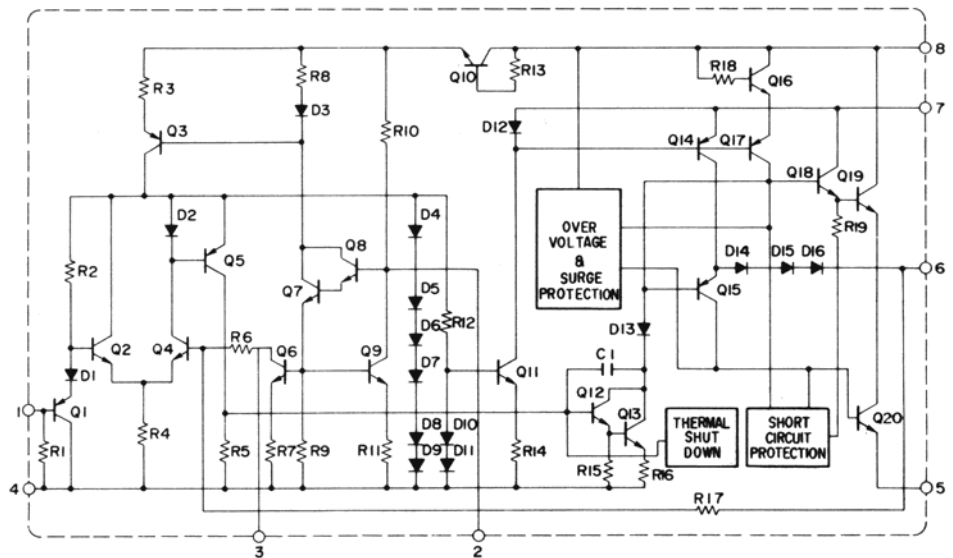
TA7310P-U



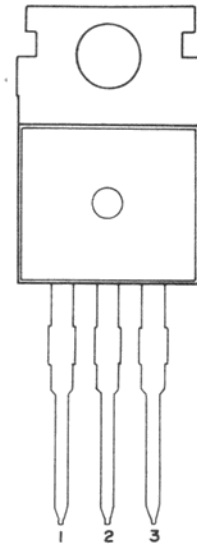
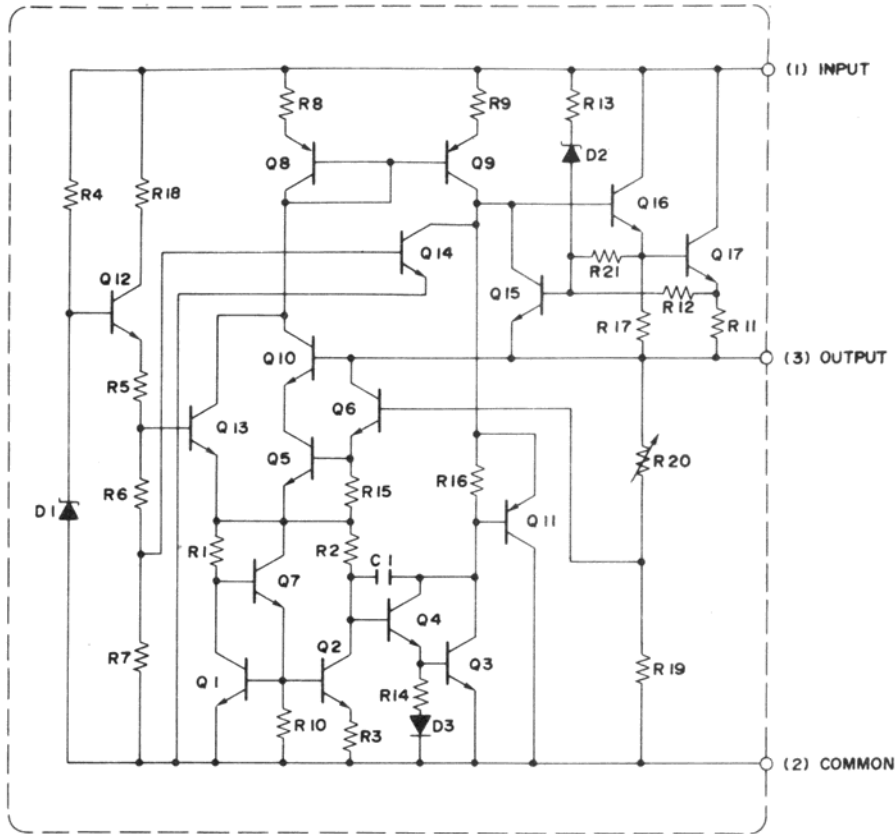
μPC1242H



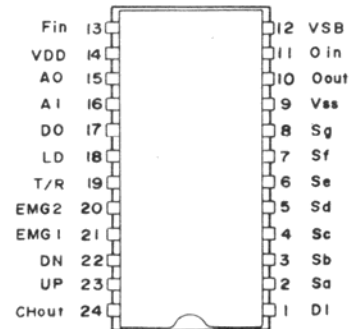
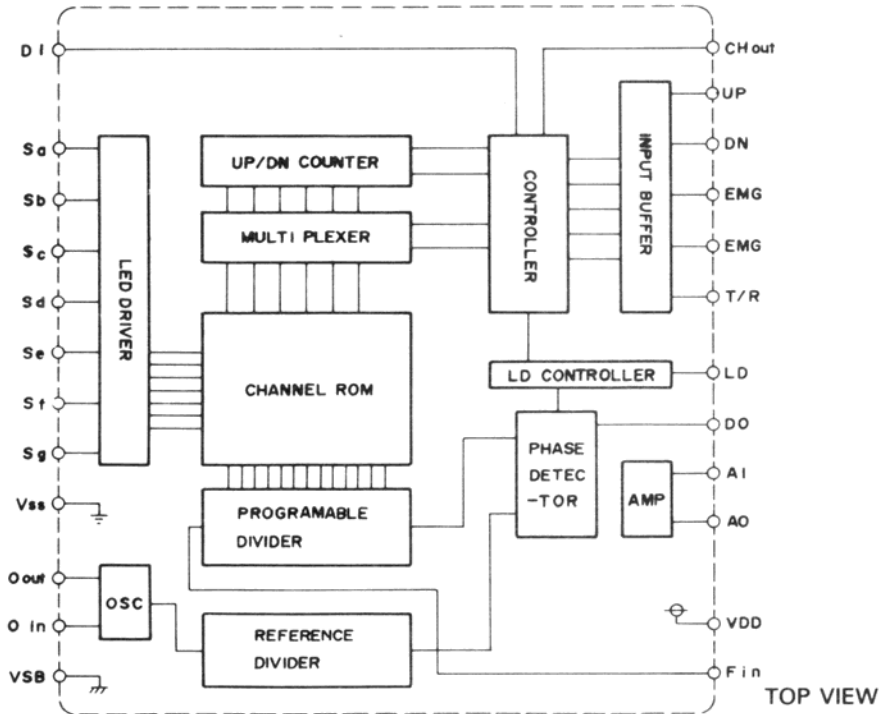
NO	μPC1242H
1	INPUT
2	RIPPLE FILTER
3	N. F. B.
4	GND
5	GND
6	OUTPUT
7	BOOTSTRAP
8	V+



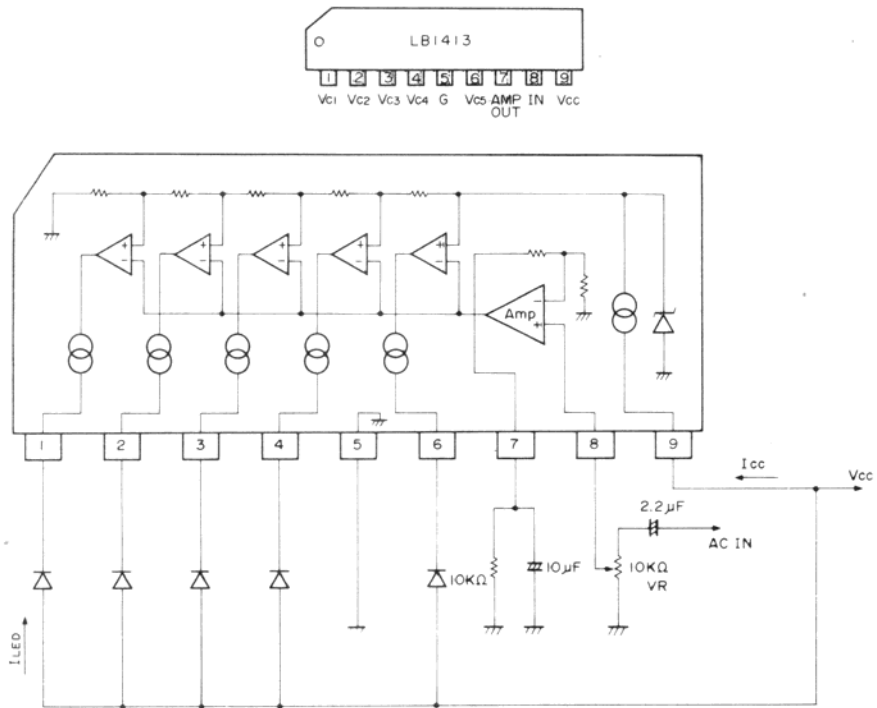
HA17808W



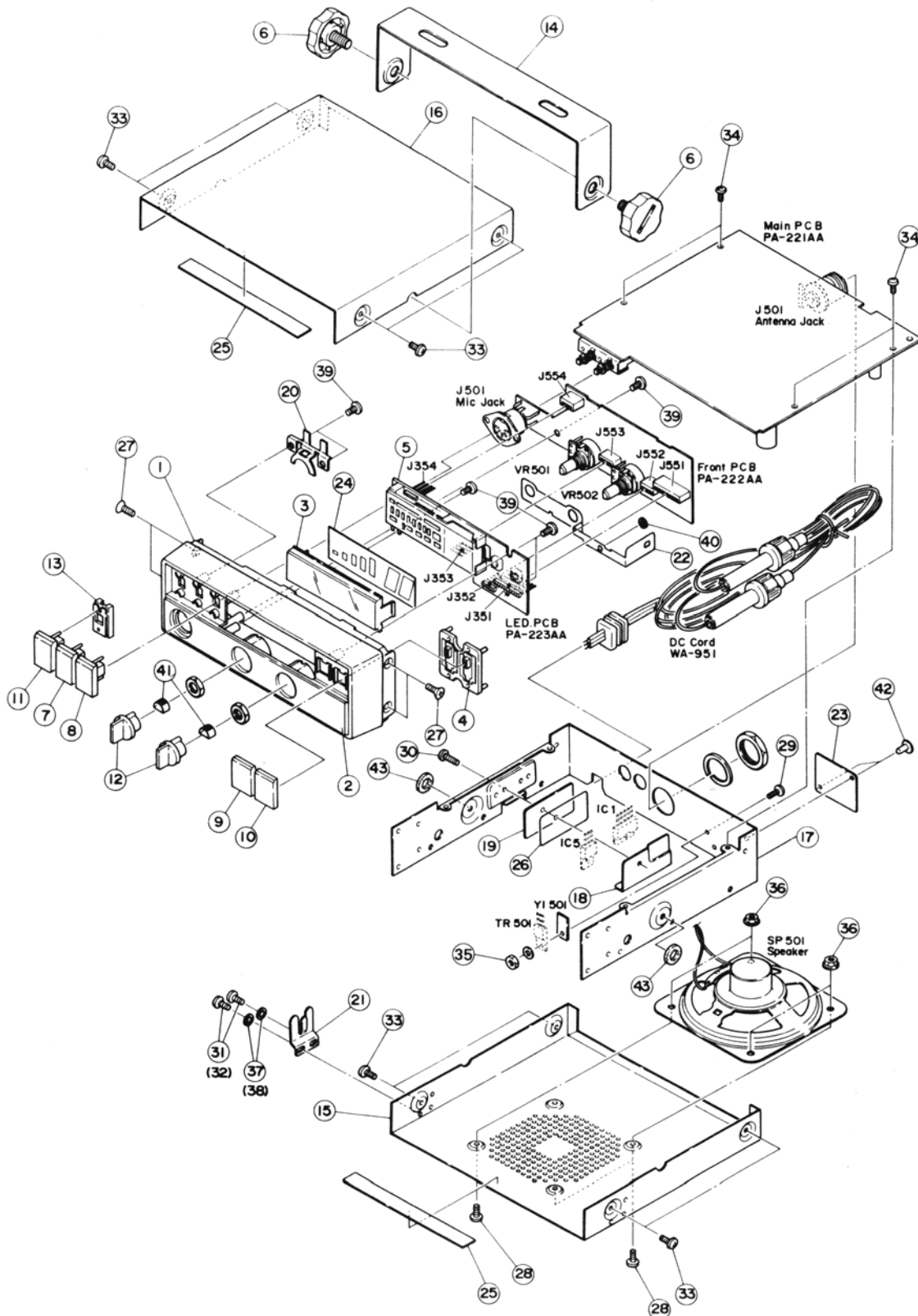
SM5123A



LB1413



EXPLODED VIEW



PARTS LIST 18 PLUS

PARTS LIST 18 PLUS

SYMBOL	DESCRIPTION	PART NO.	SYMBOL	DESCRIPTION	PART NO.
D004, 024	DIODE 1N60 AM	150 014 9 001	L003	COIL LA-204 RMC-41997N	046 024 9 003
D003	DIODE 1S2076A	151 101 9 001	L010	COIL LA-208 TKXC-24341AC	060 029 9 004
D0019, 011	DIODE 1N4003	151 083 9 001	L012	COIL LA-260 TKXC-25114N	060 030 9 014
D001, 002, 005, 008, 012-018, 020-023, 551, 552	DIODE 1S1555	151 028 9 007	L001	COIL LA-261 TKXC-25116X	047 047 9 001
D010	DIODE 1SV73-EB	151 137 9 001	L013	COIL LA-373 TKXC-28319Y	047 004 9 002
D009	DIODE: ZENER HZ6A-3	152 156 9 001	L007	COIL LC-074	044 040 9 002
D351	DIODE:LED (LL-2253)	158 070 9 001	L008	COIL LD-168	047 046 9 001
D358-360	DIODE:LED (GL-9HD4)	158 071 9 001	L016	COIL LD-087	044 048 9 003
D356, 357	DIODE:LED (GL-9HY4)	158 071 9 002	L005, 006	COIL LE-096 8-1/2T	047 044 9 001
D352-355, 361	DIODE:LED (GL-9NG4)	158 071 9 003	L009	COIL LE-151 C-7931 D4.0 6-1/2T	041 128 9 001
TR028, 031, 551	XSTOR DB-003 2SA733-P	177 020 9 001	MC951	MICROPHONE MK-342	561 007 9 001
TR012-018, 033-036	XSTOR DB-031 2SA1048-GR	177 081 9 003	L014	INDUCTOR, MOLDED LZ-035 470 μH	047 047 9 002
TR552, 553	XSTOR DB-106 2SB525-C	177 045 9 001	B351	PC BOARD:LED PA-223AA	302 950 9 001
TR007, 026	XSTOR DB-301 2SC941TM-O	176 089 9 004	X001	CRYSTAL QZ-074 10.240	132 027 9 001
TR008-011, 019 023, 024, 027, 029 030, 032, 555	XSTOR DB-224 2SC945A-Q	176 062 9 001	R134	RES: METAL OXIDE 2.7 2W J	011 002 5 279
TR003-005	XSTOR DB-295 2SC1674-L	176 081 9 002	R135	RES: METAL OXIDE 8.2 2W J	011 002 5 829
TR001.002.006 020-022	XSTOR DB-259 2SC1675-L	176 065 9 001	VR002	RES: SEMI-FIXED RT-182 TT24R 100KB	008 465 9 003
TR025	XSTOR DB-228 2SC2086-D	176 108 9 002	VR001, 003	RES: SEMI-FIXED RT-182 TT24R 500KB	008 843 9 001
TR501	XSTOR DB-331 2SC2166-C	176 108 9 001	VR502	RES: VARIABLE RV-615 50KB	008 843 9 005
TR554	XSTOR DB-383 2SC3242A-E	176 191 9 001	VR501	RES: VARIABLE RV-616 50KA	008 843 9 006
IC003	INTEGRATED CIRCUIT TA7310-P -U	307 328 9 001	SP501	SPEAKER SP-057	580 074 9 001
IC001	INTEGRATED CIRCUIT UPC1242H	307 415 9 001	S503	SWITCH:PUSH SW-538	088 149 9 001
IC005	INTEGRATED CIRCUIT HA17808W	307 415 9 002	S351, 352	SWITCH:TACT SW-539	084 155 9 001
IC002	INTEGRATED CIRCUIT (SM5123A)	307 415 9 004	T002	XFMR:AF CHOKE TF-083	042 021 9 001
IC004	INTEGRADED CIRCUIT (LB1413)	307 417 9 001	T001	XFMER:OUTPUT TF-177	061 050 9 001
FT001	FILTER: CERAMIC FL-048 S FE10-7MS2-M	140 038 9 001	WA951	DC CORD WZ-463	426 109 9 001
FT002	FILTER: CRYSTAL FL-066 CFW455HT	143 013 9 001		PANEL:FRONT ABS, BLACK	380 542 9 001
F951, 952	FUSE FS-014 2A	191 251 3 002		CONTROL PLATE ABS,CR	380 542 9 002
J003, 004	JACK JK-089 HSJ0615	773 086 9 001		THUMBSCREW, ACCY	634 204 9 001
J552-554	JACK JK-221 5224-04H 4P	777 052 9 001		ABS INST CLR BLACK	
J551	JACK JK-221 5224-08CH	777 052 9 002		BUTTON:PUSH (PA)	384 075 9 003
J501	JACK:ANT JK-230 M-BR-23D	777 050 9 004		ABS,CR SILK PRINT	
J352-354	JACK JK-328 5551-03	777 052 9 003		BUTTON:PUSH (CH9)	384 075 9 006
J351	JACK JK-328 5551-08	777 052 9 004		ABS,CR,SILK PRINT	
J502	JACK JK-334	777 052 9 005		BUTTON:PUSH (DWN)	384 075 9 007
L0161	COIL LA-088 TKXC-24124N	066 019 9 002		ABS,CR,SILK PRINT	
L002	COIL LA-138 TKXC-16853N	066 035 9 001		BUTTON:PUSH (UP)	384 075 9 008
L004	COIL LA-165 VTKXNA-XT231ZO-TW	044 046 9 001		ABS,CR,SILK PRINT	
				BUTTON:PUSH ABS,CR	384 077 9 001
				KNOB ABS,CR	751 313 9 001
				MOUNTING BRKT	
				SPCC,1.6T,BLACK	250 205 9 001
				COVER:BOTTOM VINYLTOP, SB-K08,1.0T,BLACK	252 056 9 001
				COVER:TOP VINYLTOP, SB-K08,1.0T,BLACK	253 136 9 001

MECHANICAL PARTS LIST

REF. NO.	DESCRIPTION	DYNASCAN PART NO.
1	Panel, Front ABS,Black	380-542-9-001
2	Control Plate ABS, CR	380-542-9-002
3	Window AS, Gray Smoke	
4	Support ABS, Black	
5	LED, Housing ABS, White	
6	Screw, Mounting ABS INST CLR,Black	634-204-9-001
7	Button, Push (PA) ABS, CR, Silk Print	384-075-9-003
8	Button, Push (CH9) ABS,CR, Silk Print	384-075-9-006
9	Button, Push (Down) ABS, CR, Silk Print	384-075-9-007
10	Button, Push (Up) ABS, CR, Silk Print	384-075-9-008
11	Button, Push ABS, CR	384-077-9-001
12	Knob ABS, CR	751-313-9-001
13	Spacer, Push Button ABS, Black	
14	Mounting Bracket SPCC, 1.6T,Black	250-205-9-001
15	Cover, Botton Vinytop, SB-K08, 1.0T, Black	252-056-9-001
16	Cover, Top Vinytop, SB-K08, 1.0T, Black	253-136-9-001
17	Chassis SPCC, 1.9T, MFZN3	
18	Holder, IC(B)	SECC,1T Non Oil
19	Holder, IC(A)	ALP,2T Non Oil
20	Holder, Jack	SECC, 1.0T
21	Hanger, Microphone SPCC, 1.0T, NI	
22	Shield Plate	ALP, 0.1T
23	ID Plate, FCC	ALP,0.5T
24	Display Plate Mylar 0.35T	
25	Wool-coated Paper, Wool Tack Wool Paper, 100*10*0.3T	
26	Insulation Plate Mylar 0.1T	
27	Screw, Flat HD +	M3×5 NI
28	Screw, Bind HD +	M3×8 BNI
29	Screw, Bind HD +	M3×8 NI
30	Screw, Bind HD +	M3×12 NI
31	Screw, Tapping Round HD +	D3.5×8 NI
32	Screw Tapping Round HD +	D5×10 NI
33	Screw Taptight Bind HD +	M3×6 BNI
34	Screw, Taptight Bind HD +	M3×6 NI
35	Hex Nut	M3.0NI
36	Nut Flange	M3 NI
37	Washer, Lock	D3.5 NI
38	Washer, Star	D5 NI
39	Screw, P Tight Bind HD +	D3×8 NI
40	Push Nut SUS,	D2
41	Spring Plate, Knob	D6
42	Rivet, AL, ID Plate	D3.2×3.2
43	Spacer Wool Track, 0.3T, Black	