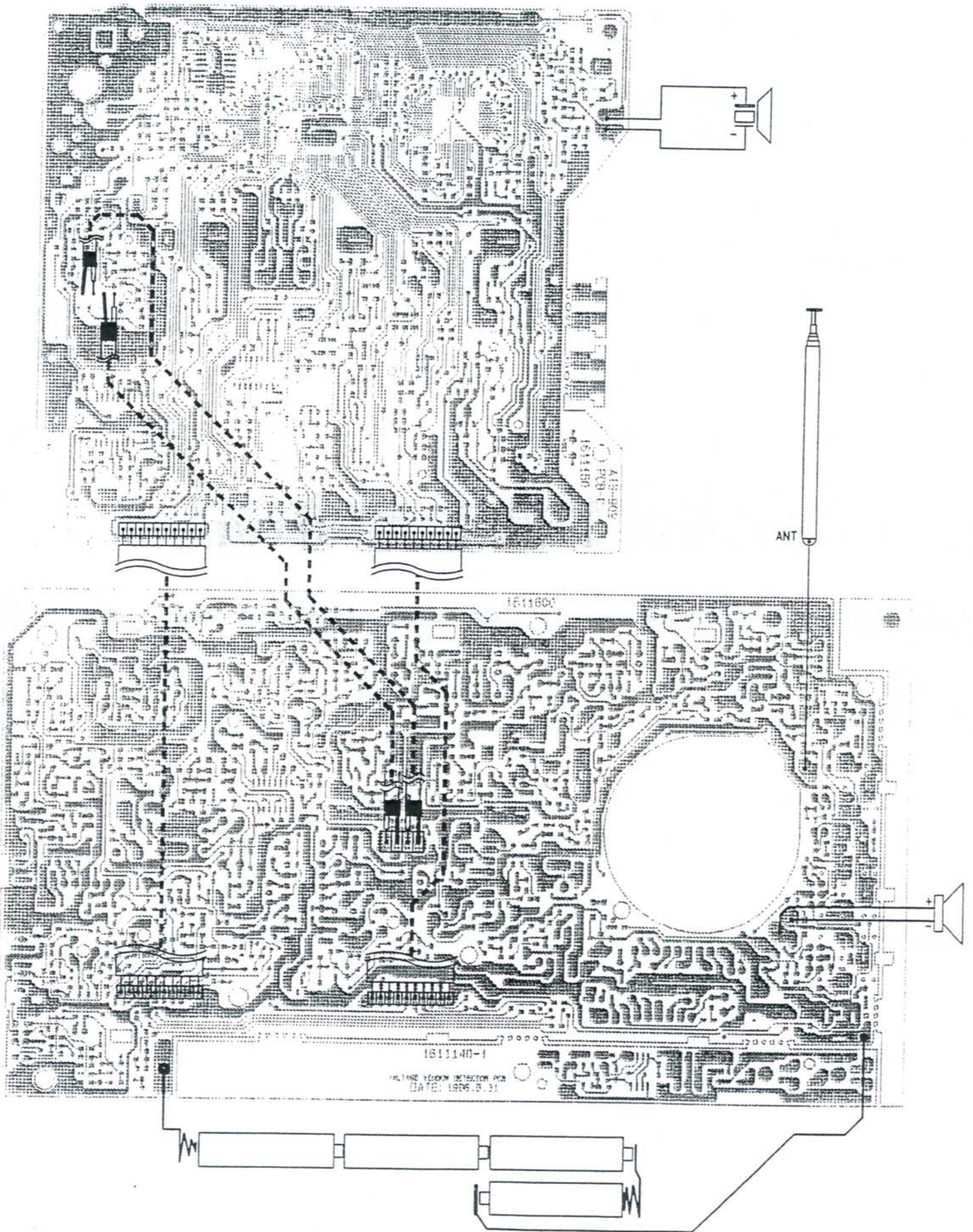
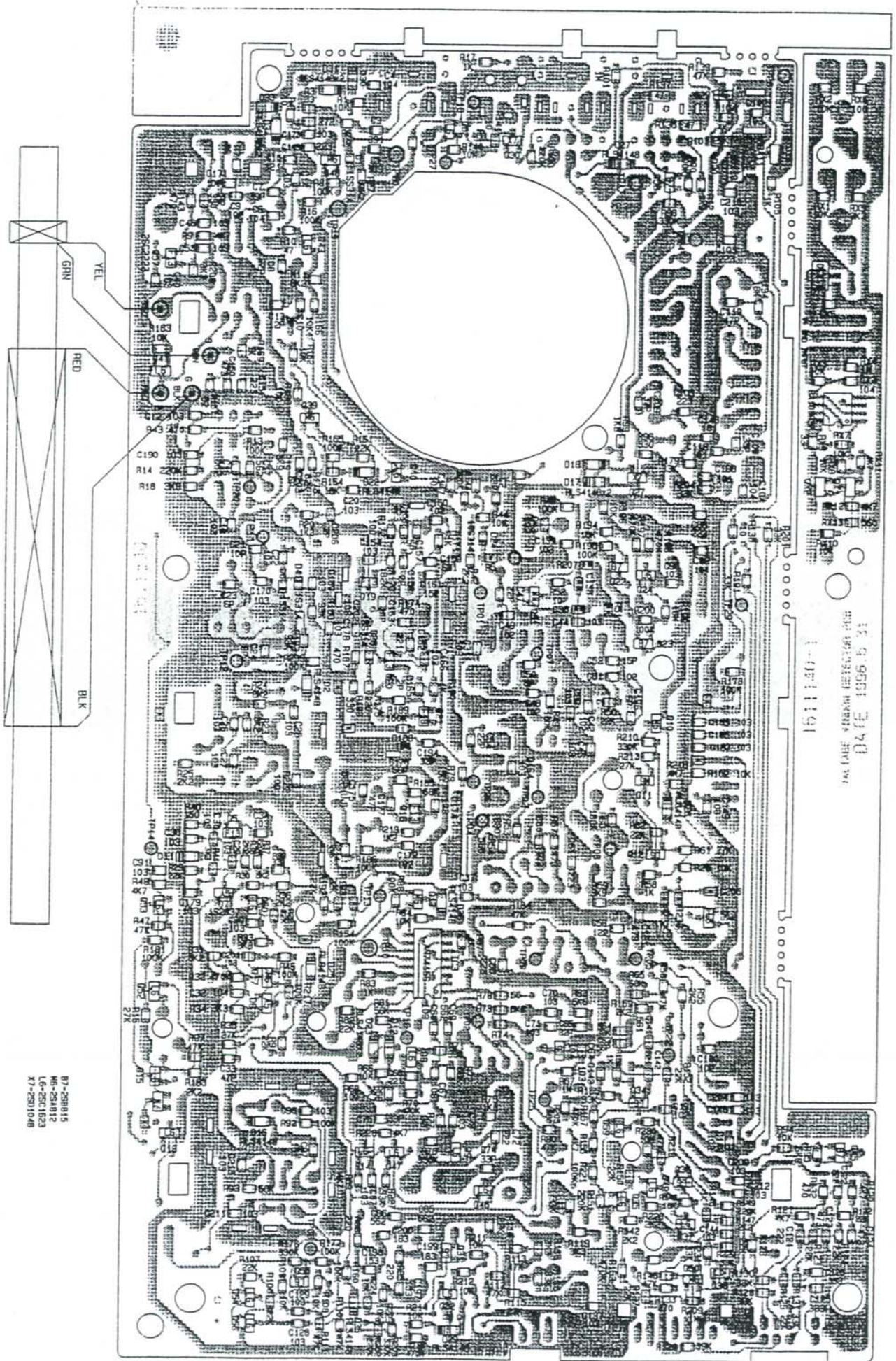


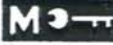







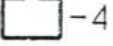
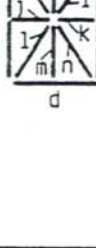
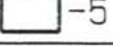
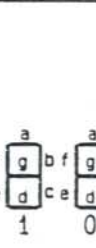
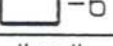

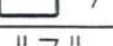


WIRING DIAGRAM



MAIN PCB BOTTOM VIEW



LCD CONFIGURATION

LCD SEGMENT	UPD7225 PIN NO.	COMMON 0 30 pin	COMMON 1 31 pin	COMMON 2 32 pin	COMMON 3 33 pin	DESCRIPTION	REMARK
B0	34	1f	1j	1e		NAME 1st character	
B1	35	1a	1g	1l	1d		
B2	36	1i	1h	1m	1n		
B3	37	1b	1k	1c	 -1		
B4	38	2f	2j	2e	"1"	NAME 2st character	
B5	39	2a	2g	2l	2d		
B6	40	2i	2h	2m	2n		
B7	41	2b	2k	2c	 -2		
B8	43	3f	3j	3e	"2"	NAME 3st character	
B9	44	3a	3g	3l	3d		
B10	45	3i	3h	3m	3n		
B11	46	3b	3k	3c	 -3		
B12	47	4f	4j	4e	"3"	NAME 4st character	
B13	48	4a	4g	4l	4d		
B14	50	4i	4h	4m	4n		
B15	51	4b	4k	4c	 -4		
B16	52	5f	5j	5e	"4"	NAME 5st character	
B17	53	5a	5g	5l	5d		
B18	54	5i	5h	5m	5n		
B19	55	5b	5k	5c	 -5		
B20	1	6f	6j	6e	"5"	NAME 6st character	
B21	2	6a	6g	6l	5d		
B22	3	6i	6h	6m	5n		
B23	4	6b	6k	6c	 -6		
B24	5	7f	7j	7e	"6"	NAME 7st character	
B25	6	7a	7g	7l	7d		
B26	7	7i	7h	7m	7n		
B27	8	7b	7k	7c	 -7		
B28	9	8f	8j	8e	"7"	NAME 8st character	
B29	10	8a	8g	8l	8d		
B30	11	8i	8h	8m	8n		
B31	12	8b	8k	8c	 -8		

LCD SEGMENT	UPD78063 PIN NO.	COMMON 0 51 pin	COMMON 1 52 pin	COMMON 2 53 pin	COMMON 3 54 pin	DESCRIPTION	REMARK
A0	60	"PAGE"	2b	2a.2d 2e.2f	2c	PAGE &NO.	
A1	61	1f	1g	1e	1d	PAGE &NO.	
A2	62	1a	1b	1c	"MEMO"	PAGE &NO.	
A3	63	"FM"	"LM"	"MW"	"SW"	BAND	
A4	64		"HOME"	"WORLD"	STEREO		
A5	65	R.D.S.	4b	4a, 4d 4e, 4f	4c	FREQUENCY 10~4	
A6	66	3f	3g	3e	3d	FREQUENCY 10~3	
A7	67	3a	3b	3c	3 .	FREQUENCY 10~3	
A8	68	2f	2g	2e	2d	FREQUENCY 10~2	
A9	69	2a	2b	2c	2 .	FREQUENCY 10~2	
A10	70	1f	1g	1e	1d	FREQUENCY 10~1	
A11	71	1a	1b	1c	"MHz"	FREQUENCY 10~1	
A12	72	0f	0g	0e	0d	FREQUENCY 10~0	
A13	73	0a	0b	0c	"KHz"	FREQUENCY 10~0	
A14	74	"SUMMER"	3b	3a, 3d 3e, 3f	3c	HOURS 10~1	
A15	75	2f	2g	2e	2d	HOURS 10~0	
A16	76	2a	2b	2c	:	HOURS 10~0	
A17	77	1f	1g	1e	1d	MINUTE 10~1	
A18	78	1a	1b	1c	"AM"	MINUTE 10~1	
A19	79	0f	0g	0e	0d	MINUTE 10~0	
A20	80	0a	0b	0c	"LSB"	MINUTE 10~0	
A21	81	z z z		"USB"		MINUTE 10~0	
A22	82	1f	1g	1e	1d	METER 10~1	
A23	83	1a	1b	1c	:	METER 10~1	
A24	84	0f	0g	0e	0d	METER 10~0	
A25	85	0a	0b	0c	"m"	METER 10~0	
A26	86		"1"	1-	6nd	TIMER BATTERY SIGNAL LEVEL	
A27	87		"2"	2-			
A28	88		"3"	3-	7nd		
A29	89	FAST	5nd	4nd	3nd		
A30	90	SLOW	2nd	1nd	"SIGNAL"		
A31	91	STOP	"9"	9-	"8"	MEMO POSITION	

MECHANICAL PARTS LIST

ATS-909 (SANGEAN)

Ref. No.	Description	Part No.
1	CNT WIRE ASS'Y 1P-A 80mm	1703750
2	LCD LIGHT LENS	2086010
3	ROD ANT HOLDER	2086020
4	KEYBOARD SPACER	2086030
5	PVC FILM	2086040
6	TUNING KNOB SPACER	2086050
7	AM RF GAIN KNOB SPACER	2086060
8	VOLUME KNOB SPACER	2086070
9	BATTERY SPRING (+)(-)	2122010
10	DC/DC SHIELD (UP)	2149020
11	DC/DC SHIELD (DOWN)	2149030
12	SPEAKER FIXER	2149080
13	BATTERY CONTACT (-)	2158040
14	LCD HOLDER	2186010
15	LCD SHIELD PLATE	2186020
16	KEYBOARD SHIELD	2186030
17	CONTROL PCB SHIELD	2186040
18	BATTERY SPRING (-)	2186050
19	POWER SHIELD	2186060
20	VCO SHIELD (UP)	2186070
21	VCO SHIELD (DOWN)	2186080
22	μ -COM SHIELD COVER	2186090
23	RIBBON	2258020
24	HEMELON SHEET	2262020
25	BACK SALON NET	2286010
26	SPACE SPONGE	2312000
27	EVA SPACER	2345020
28	PU FOOT	2473020
29	POWER RUBBER	2486010
30	KEYBOARD RUBBER	2486020
31	CONDUIT RUBBER	2486030
32	BAND KNOB SPACER	2486040
33	POWER KNOB SPACER	2486050
34	NEP SPACER	2486060
35	FRONT CABINET	3018601
36	MIDDLE CHASSIS	3028601
37	BACK COVER	3038601
38	BATTERY COVER	3048601
39	LCD WINDOW	3058601
40	BACK SUPPORTER	3068601
41	POWER KNOB	3108601
42	VOLUME KNOB	3118601
43	TUNING KNOB	3128601
44	FUNCTION KNOB ASS'Y	3158601
45	TEN KEYKNOB ASS'Y	3168601
46	AM RF GAIN KNOB	3178601
47	MANUAL/AUTO KNOB	3188601
48	9K/10K KNOB	3198601
49	FUNCTION SW. KNOB	3208601
50	STEP. KNOB	3218601
51	LIGHT KNOB	3228601
52	TIME SET KNOB	3238601
53	SANGEAN BADGE 26 x 7 mm	3240001
54	ROD ANT 909	3608601
55	SCREW JWK 2.6 x 6 (ZK)	9092061
56	SCREW PTP 2 x 8 (ZK)	9101081
57	SCREW PTP 2.6 x 8 (ZK)	9102081
58	SCREW PTP 2.6 x 30 (ZK)	9202301
59	WASHER INNER GEAR φ 2.8	9910010

MECHANICAL PARTS LIST

RK-777 (SIEMENS)

Ref. No.	Description	
1	CNT WIRE ASS'Y 1P-A 80mm	1703750
2	LCD LIGHT LENS	2086010
3	ROD ANT HOLDER	2086020
4	KEYBOARD SPACER	2086030
5	PVC FILM	2086040
6	TUNING KNOB SPACER	2086050
7	AM RF GAIN KNOB SPACER	2086060
8	VOLUME KNOB SPACER	2086070
9	BATTERY SPRING (+)(-)	2122010
10	DC/DC SHIELD (UP)	2149020
11	DC/DC SHIELD (DOWN)	2149030
12	SPEAKER FIXER	2149080
13	BATTERY CONTACT (-)	2158040
14	LCD HOLDER	2186010
15	LCD SHIELD PLATE	2186020
16	KEYBOARD SHIELD	2186030
17	CONTROL PCB SHIELD	2186040
18	BATTERY SPRING (-)	2186050
19	POWER SHIELD	2186060
20	VCO SHIELD (UP)	2186070
21	VCO SHIELD (DOWN)	2186080
22	μ-COM SHIELD COVER	2186090
23	RIBBON	2258020
24	HEMELON SHEET	2262020
25	BACK SALON NET	2286010
26	SPACE SPONGE	2312000
27	EVA SPACER	2345020
28	PU FOOT	2473020
29	POWER RUBBER	2486010
30	KEYBOARD RUBBER	2486020
31	CONDUT RUBBER	2486030
32	BAND KNOB SPACER	2486040
33	POWER KNOB SPACER	2486050
34	NEP SPACER	2486060
35	FRONT CABINET	3018631
36	MIDDLE CHASSIS	3028631
37	BACK COVER	3038631
38	BATTERY COVER	3048631
39	LCD WINDOW	3058601
40	BACK SUPPORTER	3068631
41	POWER KNOB	3108601
42	VOLUME KNOB	3118631
43	TUNING KNOB	3128631
44	FUNCTION KNOB ASS'Y	3158631
45	TEN KEYKNOB ASS'Y	3168631
46	AM RF GAIN KNOB	3178631
47	MANUAL/AUTO KNOB	3188601
48	9K/10K KNOB	3198601
49	FUNCTION SW. KNOB	3208601
50	STEP. KNOB	3218631
51	LIGHT KNOB	3228631
52	TIME SET KNOB	3238631
53	SIEMENS BADGE	3240031
54	ROD ANT 909	3608601
55	SCREW JWK 2.6 x 6 (ZK)	9092061
56	SCREW PTP 2 x 8 (ZK)	9101081
57	SCREW PTP 2.6 x 8 (ZK)	9102081
58	SCREW PTP 2.6 x 30 (ZK)	9202301
59	WASHER INNER GEAR φ 2.8	9910010

ELECTRICAL PARTS LIST

ATS-909

P1

Part No.	Description	Q'ty	Remark
1000210	IC μ PD78063GF-095-3BA	1	IC301
1010000	IC AN7117	2	IC4,5
1010031T	IC AN7415S-T	1	IC3
1010140	IC LA5003	1	IC9
1010210	IC TA7358AP	1	IC2
1010300	IC TA7758P	1	IC1
1011360	IC S-81230AG-RB-T2	1	IC305
1011480	IC S-81250HG-RD-T1	1	IC304
1011650	IC S-8052ALR-LF-T1	1	IC307
1011790	IC μ PD7225GB-3B7	1	IC302
1012021T	IC TC4094BF-T	1	IC306
1012071	IC NJM2100L	1	IC6
1012400	IC SAA6579T/V1	1	IC308
1012410	IC MB15A01PFV1-G-BND-EF	1	IC303
1012510T	IC 24LC164/SN-T	1	IC309
1012620	IC PHOTOCOUPLE PC-17T1	1	IC7
1020211	CH TR 2SB815 B7	4	Q22,23,45,58
1020230	CH TR 2SA812 M6	12	Q10,11,13,17,29,39,48,50,301,305,306,315
1020240/1	CH TR 2SC1623 L6/L7	37	Q7-9,12,14,15,18,24,31,32,34-38,40,41,43, 46,47,49,52-56,59,60,62,302-304,307,309, 312-314
1020250T	TR 2SA1020Y	1	Q28
1020260	CH TR 2SC2223 F13	7	Q5,16,19-21,57,308
1022021	TR 2SC3330U	2	Q25,26
1023010/1	CH TR 2SD1048 X6/X7	2	Q27,30
1030070	FET 2SK381A	1	Q33
1030081	FET 2SK715W	1	Q42
1030100	FET 2SK433B KC	1	Q310
1030122	FET 2SK435D	6	Q1-4,6,44
1040040	DIODE 1N60P	3	D13,14,32
1042030	DIODE 1S2837	2	D7,8
1043030	DIODE SVC201SP	4	D3,6,9,10
1043060	VARACTOR SVC203 (AA1/AA2)	1	D21
1045020	DIODE 1SS314	5	D1,4,5,24,26
1045090	ZENER UZ-15BH	1	D15
1046010	CH DIODE RLS4148	32	D2,11,12,16-18,22,23,25,27-31,33-36,304, 305,307-309,313,315,317-321,325,328
1046020	CH DIODE RB110C	1	D20
1046030	CH DIODE RB411	1	D19
1058040M	LED LAMP 3mm	2	D323,324
1110470	BAR & COIL 0470	1	L9
1120950	ADJ. COIL 0950	1	T15
1120990	ADJ. COIL 0990	1	T4
1122211	ADJ. COIL 2211	1	T1
1122220	ADJ. COIL 2220	1	T10
1122231	ADJ. COIL 2231	1	T3
1122250	ADJ. COIL 2250	1	T9
1122260	ADJ. COIL 2260	2	T7,18
1122280	ADJ. COIL 2280	1	T17
1122290	ADJ. COIL 2290	1	T20

Part No.	Description	Q'ty	Remark
1122300	ADJ. COIL 2300	1	T14
1122420	ADJ. COIL 2420	1	T6
1122441	ADJ. COIL 2441	1	T13
1122890	ADJ. COIL 2890	1	T11
1123600	ADJ. COIL 3600	1	T8
1130510C	FIXED COIL 0.22 μ HK	3	L2,4,6
1130810C	FIXED COIL 0.39 μ HK 0204	1	L24
1130920C	FIXED COIL 0.47 μ HK	2	L5,10
1131700	FIXED COIL 2.2 μ HK(A)	2	L12,16
1131710C	FIXED COIL 2.2 μ HK	1	L7
1132003	FIXED COIL 3.9 μ HK 0608	1	L1
1132400	FIXED COIL 8.2 μ HK(A)	1	L11
1133300	FIXED COIL 47 μ HK	2	L23,25
1134500	FIXED COIL 470 μ HK	1	L3
1135100	FIXED COIL 1.5mH	2	L14,15
1135911	FIXED COIL 6.8MH	2	L26,27
1136100	FIXED COIL 10mH	1	T12
1150031	TOROID COIL 12T x 14	1	T5
1210000	TC 20P (A)	2	TC301,302
1210010	TC 10P 2222 808 23109	2	VC1,2
1210030	TC 10P 2222 808 32101	2	VC4,5
1310220	VOL VR 50KA (G)	1	VR2
1310441	R-VR 1KD RK09K1110470-SG	1	VR1
1320100	S.F-VR 10KB(D) TB067A-OC	3	SVR2,4,6
1320130	S.F-VR 100KB (VRZ)	1	SVR1
1320270	S-VR 200KB (A) TB067A-0	1	SVR5
1320380	S.F-VR 5KB TB067A-OC	1	SVR3
1321007	S.F-VR 200KV-B RIVER	1	VR301
1600270	LCD FSD-13126ACK	1	LCD
1611150	PCB C ATS-909	1	PCB C
1611600	PCB A ATS-909	1	PCB A
1620370/1	SP 3" 8 Ω 3W 77 φ x 29.1	1	SPEAKER
1625030	PIEZO BUZZER	1	BUZZER
1630470	SWITCH 2P3C (A)	1	S2
1630530	SWITCH 1P2C (G)	3	S1,303,304
1630560	SWITCH 1P1C (G)	1	S302
1640030	JACK HEADPHONE (D)	2	JK2,5
1647000	DC JACK (A)	1	JK3
1649030	EXT ANT HSJ3062-01-422	1	JK1
1649050	JACK HSJ0838-01-500	1	JK4
1650020	X'TAL 55.405MHz	1	X1
1650041	MFC 55.845MHz	2	CF2,3
1650151	X'TAL 32.768kHz +/- 20PPM	1	X302
1650250	X'TAL 4.332MHz	1	X301
1660170	FILTER SFPS450I	1	CF4
1660360	FILTER SFR450J	1	CF5
1664000	FILTER SFE10.7MS2-A	2	CF6,7
1664100	RESONATOR CSB453E	1	X4
1664110	RESONATOR CSB449E	1	X3
170102A	CONT BASE 2m/m 10PIN	2	CN1,2

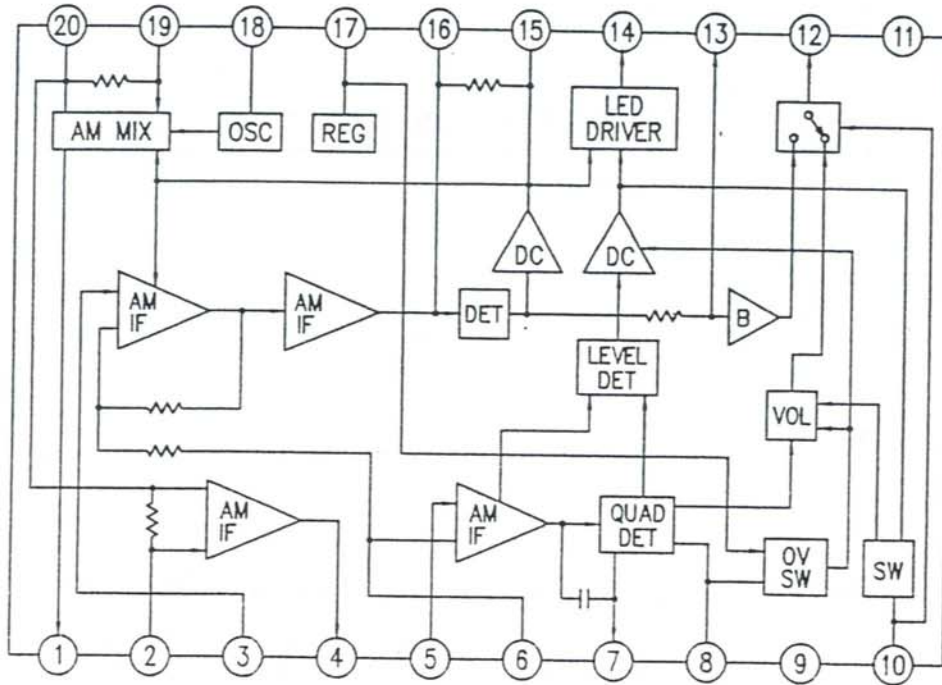
Part No.	Description	Q'ty	Remark
1702050	CNT HOUSING 4P(EH)	1	CN3
1703710	UL1354 + UL1533 155(P4+6)	1	WCN3
1703720	UL1061 #28 50(P10+P10)	2	WCN1,2
1730040	ROTARY ENCODER	1	S301
2149120	ANT TERMINAL PIN	1	TP ANT
2171080	SHIELD CASE	2	T9,14
2200150	6 φ GRN LABEL (FTZ)	2	.
4002001	CH CC 020C 50V NPO-A	3	C158,165,206
4003001	CH CC 030C 50V NPO-A	1	C10
4005001	CH CC 050C 50V NPO-A	5	C50,157,196,203,348
4006002	CH CC 060D 50V NPO-A	1	C23
4008001	CH CC 080J 50V NPO-A	2	C24,163
4010002	CH CC 100D 50V NPO-A	7	C9,21,171,351,359,363,373
4012001	CH CC 120J 50V NPO-A	1	C13
4015001	CH CC 150J 50V NPO-A	2	C52,161
4022001	CH CC 220J 50V NPO-A	7	C8,47,54,341,347,349,350
4033001	CH CC 330J 50V NPO-A	5	C2,108,109,194,214
4039001	CH CC 390J 50V NPO-A	1	C7
4047001	CH CC 470J 50V NPO-A	6	C33,119,177,342,345,376
4056001	CH CC 560J 50V NPO-A	2	C63,176
4056016	CH CC 560J 50V NPO-A	1	C175
4082001	CH CC 820J 50V NPO-A	2	C65,75
4010101	CH CC 101J 50V NPO-A	4	C118,148,188,366
4012101	CH CC 121J 50V NPO-A	2	C15,74
4015101	CH CC 151J 50V NPO-A	1	C97
4022101	CH CC 221J 50V NPO-A	3	C66,142,162
4039101	CH CC 391J 50V NPO-A	1	C3
4047101	CH CC 471J 50V NPO-A	2	C371,372
4056101	CH CC 561J 50V NPO-A	3	C141,309,312
4068101	CH CC 681J 50V NPO-A	1	C159
4010261	CH CC 102K 50V X7R-A	10	C42,43,48,49,51,139,160,172,180,191
4012261	CH CC 122K 50V X7R-A	1	C58
4022261	CH CC 222K 50V X7R-A	3	C72,121,122
4027261	CH CC 272K 50V X7R-A	1	C5
4056261	CH CC 562K 50V X7R-A	7	C16,17,69,85,86,343,355
4010362	CH CC 103M 50V X7R-A	82	C1,12,14,18,20,22,25-27,29-31,34-37,40,44-46 53,60,67,68,70,71,76,87,89,90,96,102,128,129 137,140,143,144,146,147,149,154,164,166, 168-170,173,174,178,179,183,185,187,190 201,202,204,209,210,211,302,303,315-323, 327,328,333,346,353,354,357,360,361,367
4015367	CH CC 153K 25V X7R-A	2	C197,198
4018367	CH CC 183K 25V X7R-A	2	C199,200
4022367	CH CC 223K 25V X7R-A	8	C55,61,88,103,105,145,151,156
4033361	CH CC 333K 50V X7R-A	2	C125,126
4047363	CH CC 473M 50V Z5U-A	4	C123,124,150,181
4010471	CH CC 104Z 25V Y5V-A	32	C4,6,32,64,92,104,301,304-306,308,310 311,313,330-332,334-340,356,362,364 365,368-370,374
4110482C	CH 104K 50V R20X7R2L	1	C344

Part No.	Description	Q'ty	Remark
4422460	EL 224M 50V 5 x 11	1	C81
4422461	EL 224M 50V 4 x 7 (1.5)	1	C120
4447461	EL 474M 50V 5 x 11	2	C62,82
4447464	NP 474M 50V 5 x 11 (2)	1	C59
4410561	EL 105M 50V 5 x 11	10	C80,83,84,93,94,106,107,130,131,184
4422560	EL 225M 50V 4 x 7 (1.5)	1	C307
4447562	EL 475M 50V 5 x 11	4	C95,132,133,189
4410632	EL 106M 16V 5 x 11	10	C11,28,77,98,134,135,152,153,155,167
4422622	EL 226M 10V 5 x 11	1	C57
4447601	EL 476M 4V 4 x 7	1	C314
4447620	EL 476M 10V 5 x 11	7	C19,56,78,112,113,127,136
4410722	EL 107M 10V 6.3 x 11.2-2.5	4	C110,111,114,115
4422721	EL 227M 10V 6.3 x 11.5-2.5	5	C99,100,117,192,193
4447721	EL 477M 10V 8 x 11.5 -3.5	2	C116,182
4410831	EL 108M 16V 10 x 20 (5)	1	C101
4501020	PS 102J 50V 5 x 12 (2.5)	1	C73
4504710	PS 471J 50V 4.8 x 12	1	C79
4822460	MP/C 224J 50V 7.5 x 8.5 (5)	1	C358
4922300	SUPER CAP. 223Z 5.5V	1	C329
6010516	RD 1/8W 22JSM5	2	R21,22
6110120	CH RD 1/8W 47J-B	2	R136,137
6110152	CH RD 1/8W 22KJ-B	1	R103
6160112	CH RD 1/10W 10J-A	9	R4,6,52,138,141,326,327,352,365
6160116	CH RD 1/10W 22J-A	1	R363
6160118	CH RD 1/10W 33J-A	1	R3
6160120	CH RD 1/10W 47J-A	2	R10,312
6160121	CH RD 1/10W 56J-A	1	R78
6160122	CH RD 1/10W 68J-A	1	R7
6160123	CH RD 1/10W 82J-A	1	R167
6160124	CH RD 1/10W 100J-A	8	R68,168,172,222,353,382,383,399
6160126	CH RD 1/10W 150J-A	3	R40,51,79
6160128	CH RD 1/10W 220J-A	4	R85,86,175,323
6160130	CH RD 1/10W 330J-A	5	R2,39,71,96,188
6160132	CH RD 1/10W 470J-A	8	R43,57,132,133,143,174,187,386
6160133	CH RD 1/10W 560J-A	1	R54
6160134	CH RD 1/10W 680J-A	2	R53,203
6160135	CH RD 1/10W 820J-A	1	R362
6160136	CH RD 1/10W 1KJ-A	17	R17,58,83,87,105,148,158,169,171,190,303 303,366,369,373,397,407,408
6160137	CH RD 1/10W 1.2KJ-A	2	R20,219
6160138	CH RD 1/10W 1.5KJ-A	1	R350
6160139	CH RD 1/10W 1.8KJ-A	3	R75,77,99
6160140	CH RD 1/10W 2.2KJ-A	25	R25,27,36,38,42,55,142,147,159,183,228,314 347,349,351,355-360,367,389,393,406
6160141	CH RD 1/10W 2.7KJ-A	1	R69
6160142	CH RD 1/10W 3.3KJ-A	7	R12,33,34,41,118,119,206
6160143	CH RD 1/10W 3.9KJ-A	3	R18,19,59
6160144	CH RD 1/10W 4.7KJ-A	13	R9,48,89,104,120,121,156,215,226,368 374,396,403
6160145	CH RD 1/10W 5.6KJ-A	1	R63

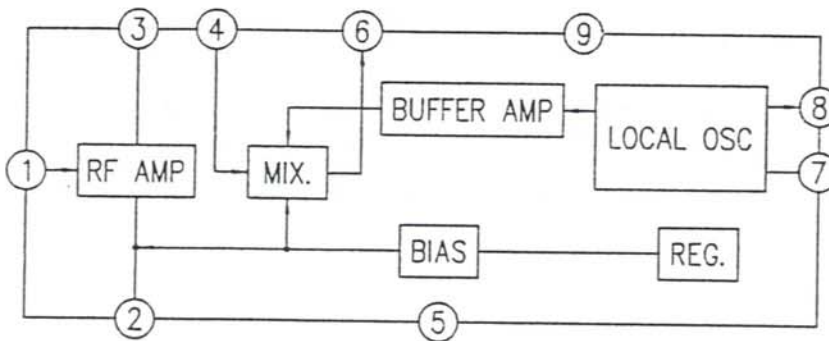
Part No.	Description	Q'ty	Remark
6160146	CH RD 1/10W 6.8KJ-A	3	R73,74,95
6160147	CH RD 1/10W 8.2KJ-A	5	R11,23,24,30,31
6160148	CH RD 1/10W 10KJ-A	35	R1,26,44,66,84,94,102,108,109,140,162,163,166 196,211,212,214,223,224,230,307-309,313,315 316,320,345,364,390-392,404,405,409
6160151	CH RD 1/10W 18KJ-A	5	R134,146,164,194,199
6160152	CH RD 1/10W 22KJ-A	34	R28,29,50,62,82,91,106,107,114,115 122-127,150,152,161,192,193,304-306 331-333,348,370-372,400-402
6160153	CH RD 1/10W 27KJ-A	4	R15,35,61,213
6160154	CH RD 1/10W 33KJ-A	13	R64,116,117,130,131,155,180,182,191,201, 227,229,231
6160155	CH RD 1/10W 39KJ-A	2	R128,129
6160156	CH RD 1/10W 47KJ-A	30	R47,56,80,97,110,111-113,139 145,184,218,301,302,310,317, 335-337,361,375-377,379-381 387,388,394,395
6160157	CH RD 1/10W 56KJ-A	3	R81,93,334
6160158	CH RD 1/10W 68KJ-A	3	R65,72,185
6160159	CH RD 1/10W 82KJ-A	2	R170,173
6160160	CH RD 1/10W 100KJ-A	31	R8,13,16,45,46,49,88,90,92,154,160,165,177-179 181,186,189,195,200, 204,217,221,234,319,321,342,346, 378,384,385
6160162	CH RD 1/10W 150KJ-A	1	R324
6160163	CH RD 1/10W 180KJ-A	3	R60,330,344
6160164	CH RD 1/10W 220KJ-A	11	R14,37,100,144,149,151,202,311,328,329, 354
6160166	CH RD 1/10W 330KJ-A	5	R76,98,176,203,210
6160168	CH RD 1/10W 470KJ-A	13	R32,70,153,157,197,198,216,318,322, 338-340,398
6160172	CH RD 1/10W 1MJ-A	6	R67,101,209,325,341,343
6160194	CH RD 1/10W 0J-A	3	J301-303
8000090	W/JUMP 15(10) 0.6mm	1	JP1
8171722	W/PVC 105(6+3) RED	1	WBT
8591720	W/PVC/2T100 (6+6) RED/WHT	1	WSP

IC CIRCUIT BLOCK DIAGRAM

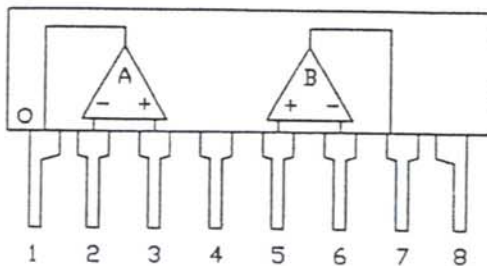
IC1-TA7758P



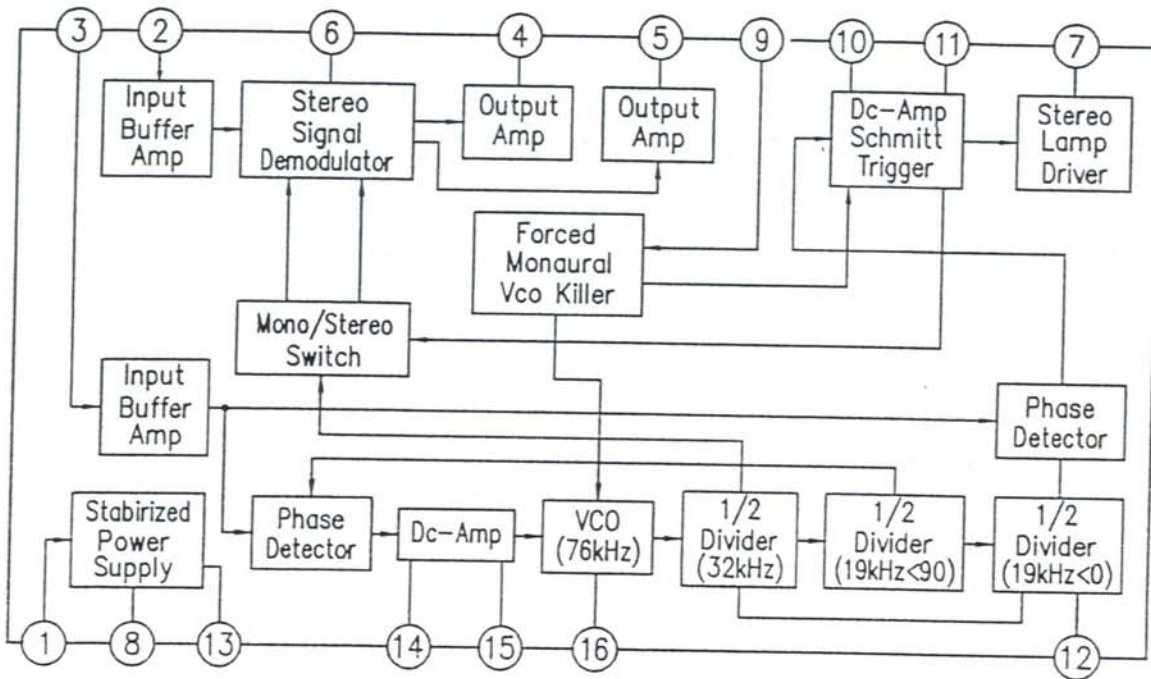
IC2-TA7358AP



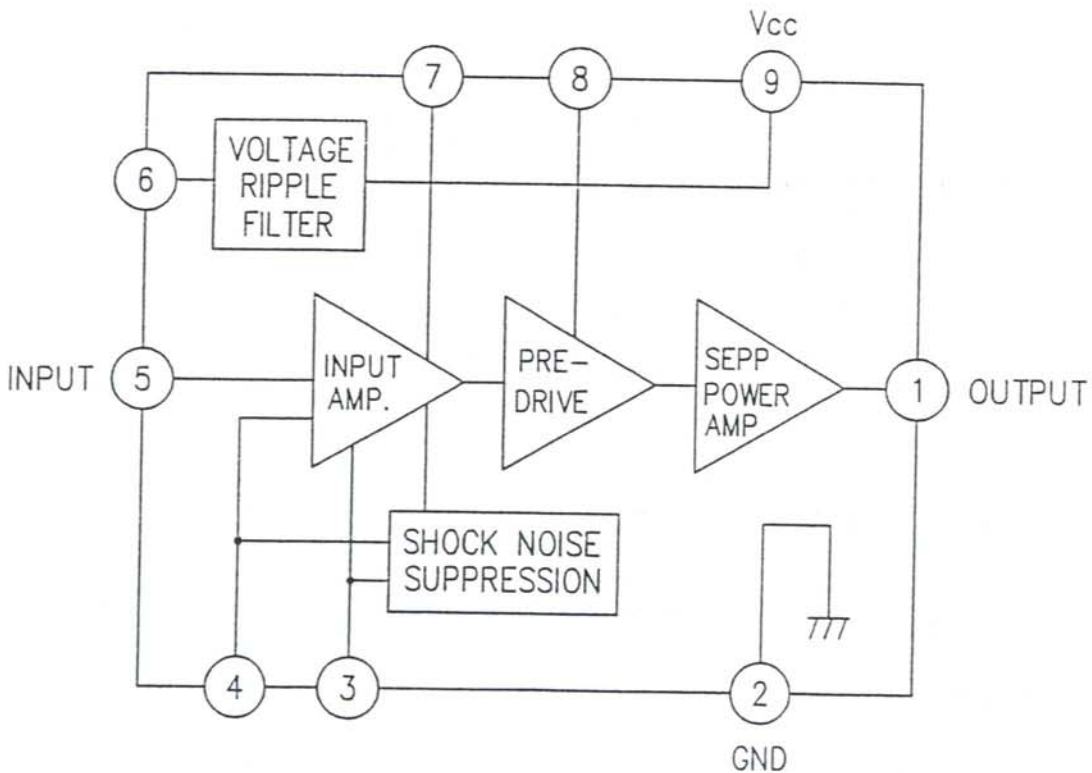
IC6-NJM2100L



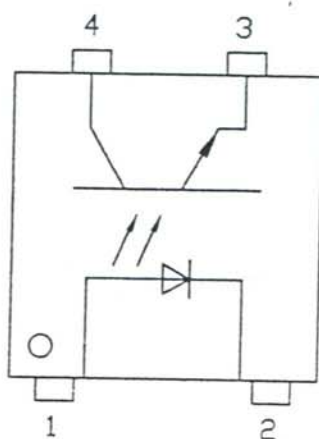
IC3-AN7415S-T



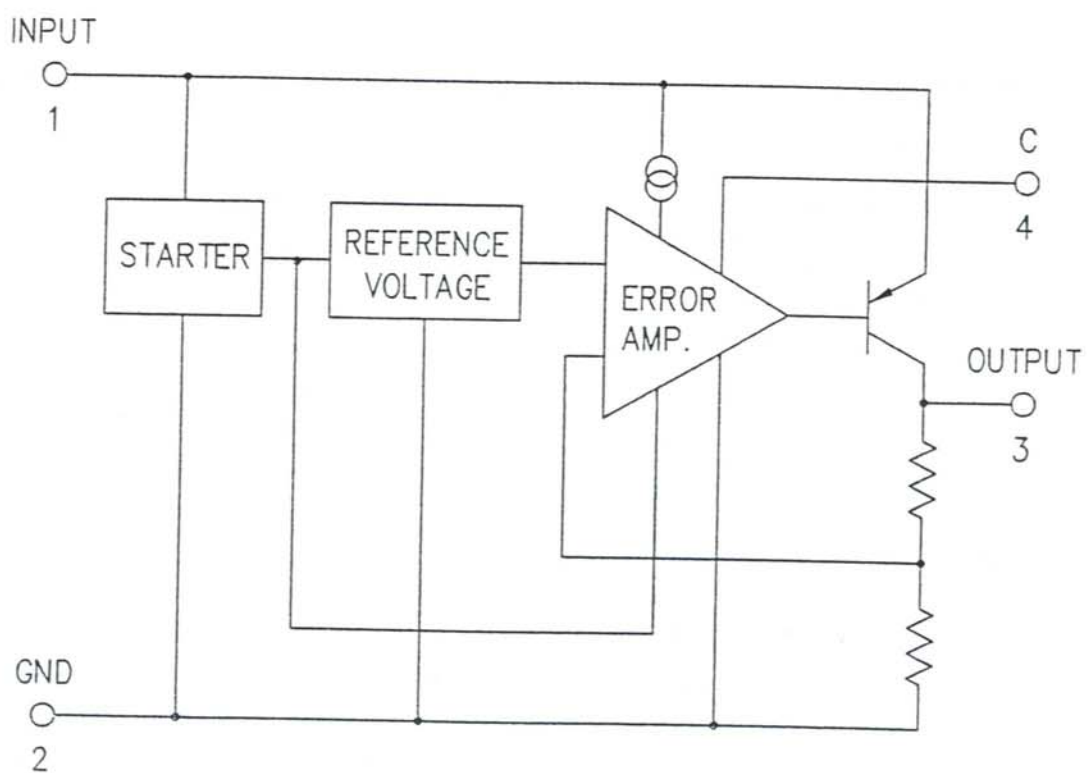
IC4,5-AN7117

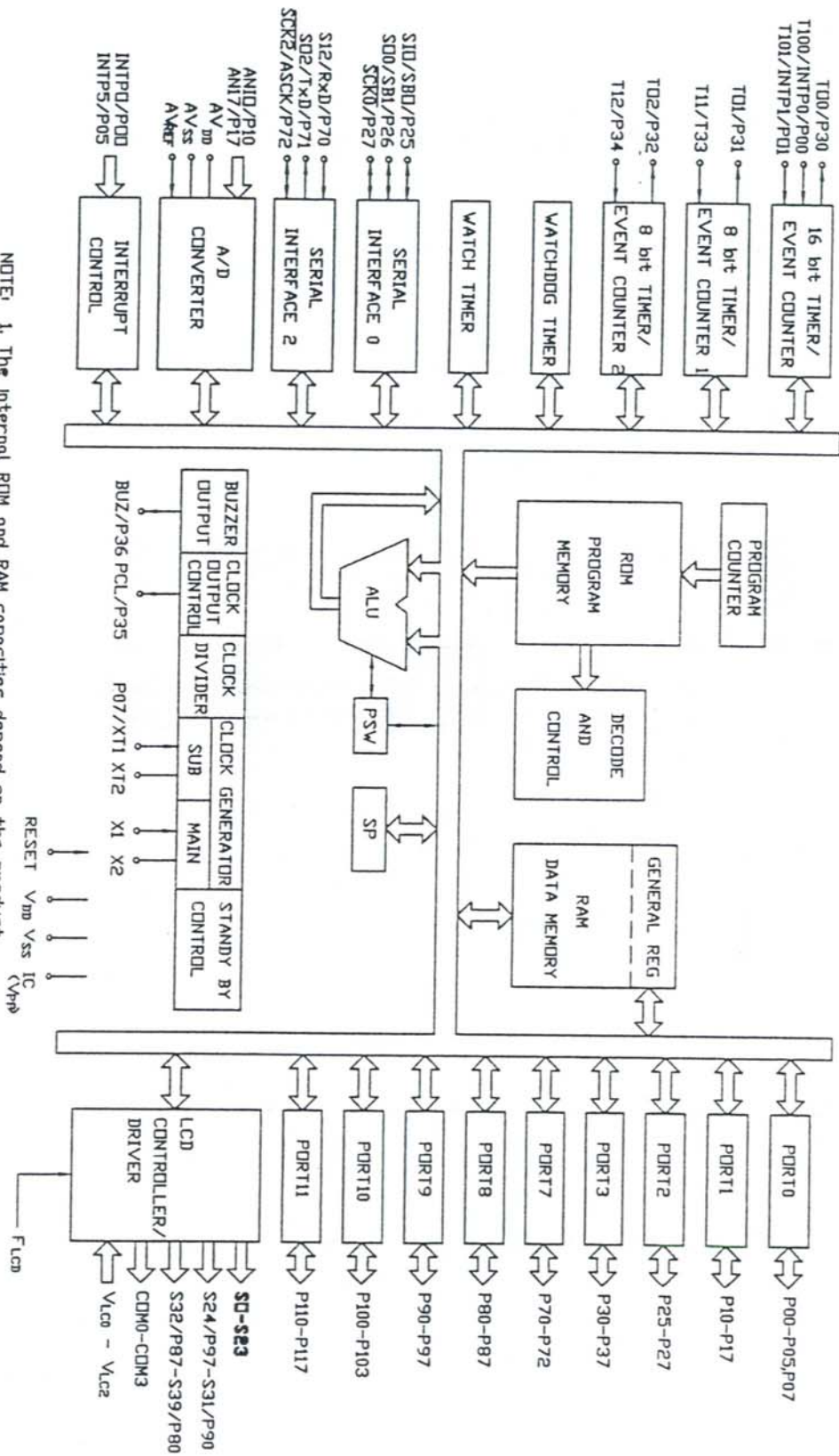


IC7-PHOTOCOUPLE PC-17T1

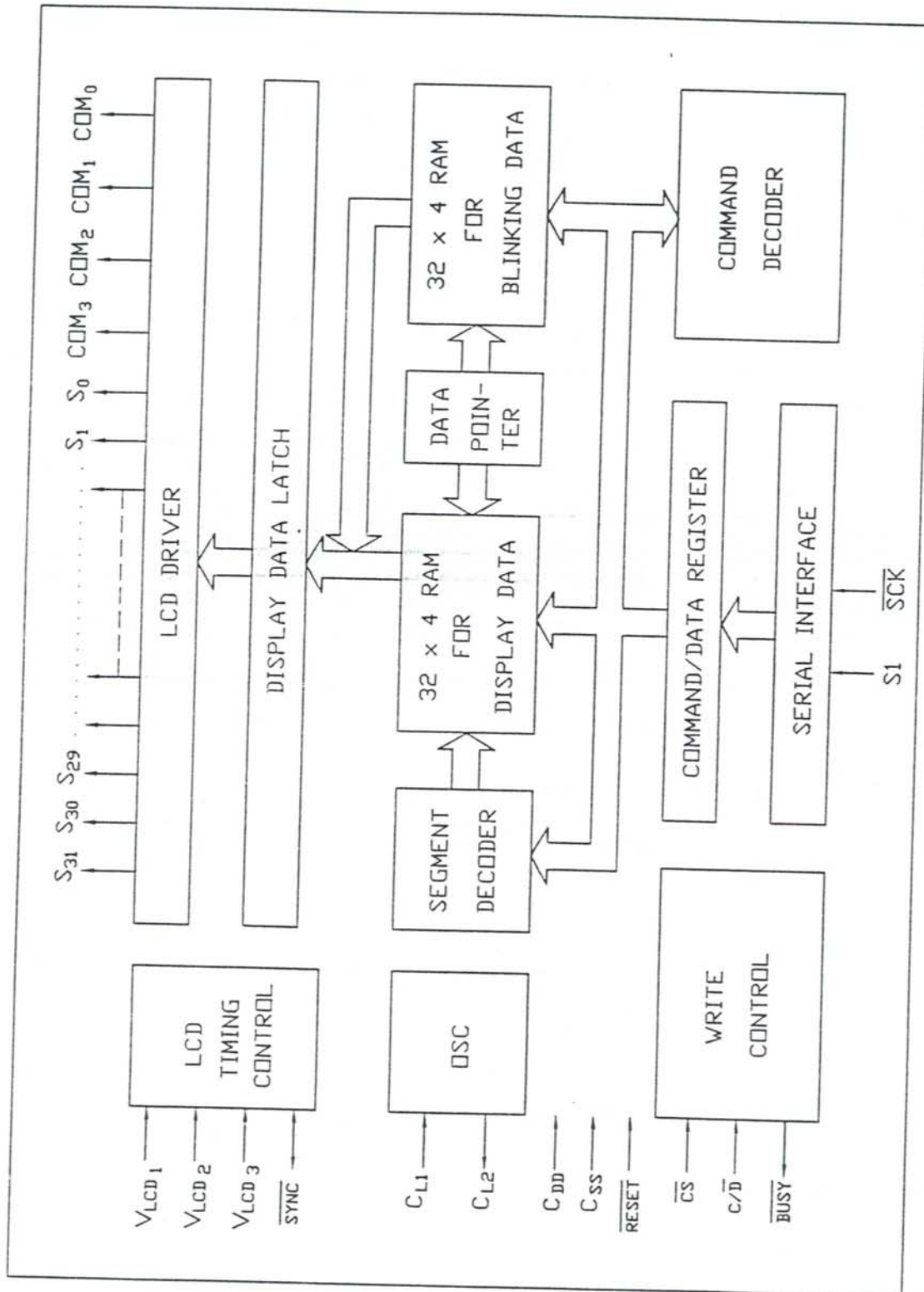


IC9-LA5003

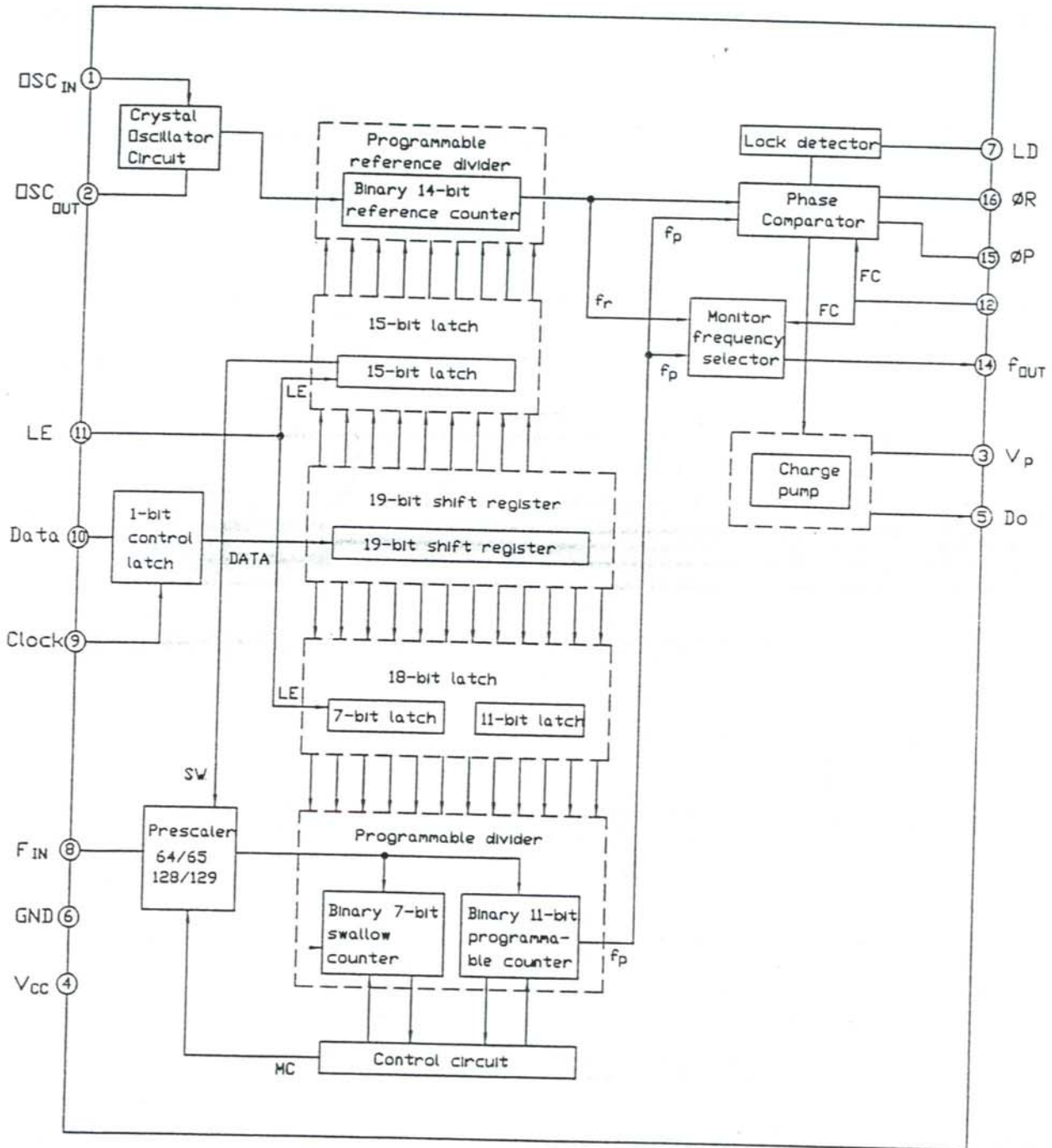




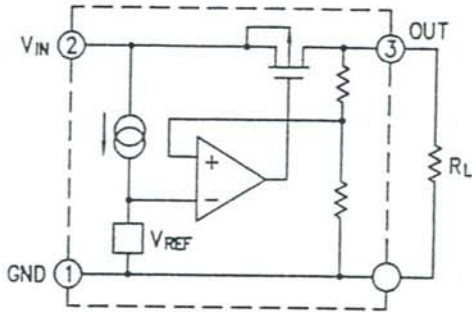
NOTE: 1. The internal ROM and RAM capacities depend on the product.
 2. Pin connection in parentheses is intended for the μ PD78P064.



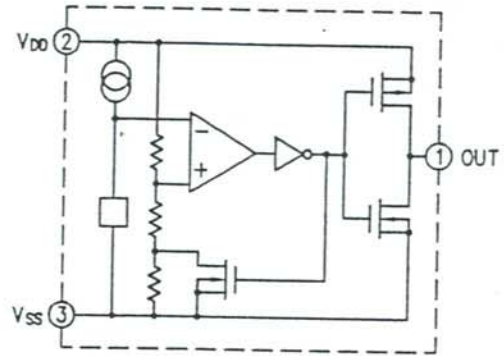
IC303-MB15A01PFV1-G-BND-EF



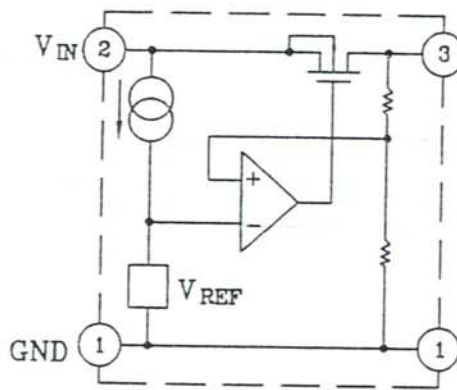
IC304-S-81250HG-RD-T1



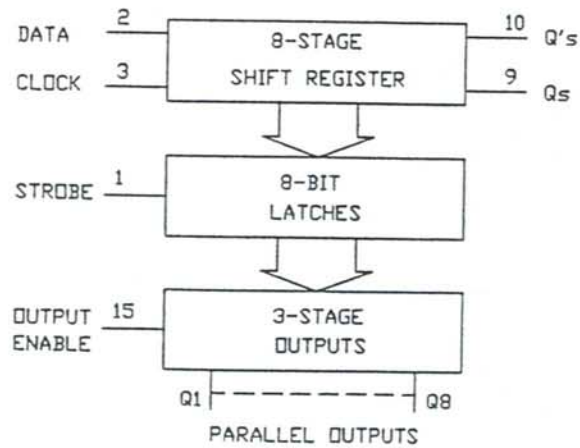
IC307-S-8052ALR-LF-T1



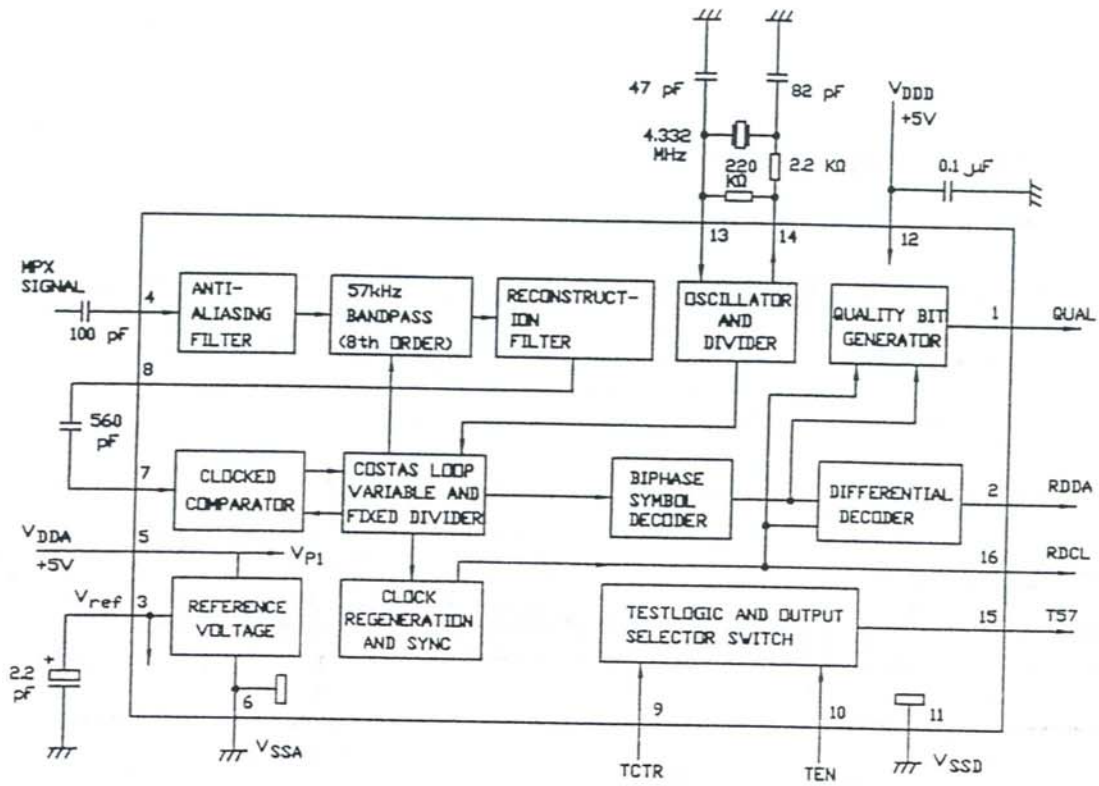
IC305-S-81230AG-RB-T2



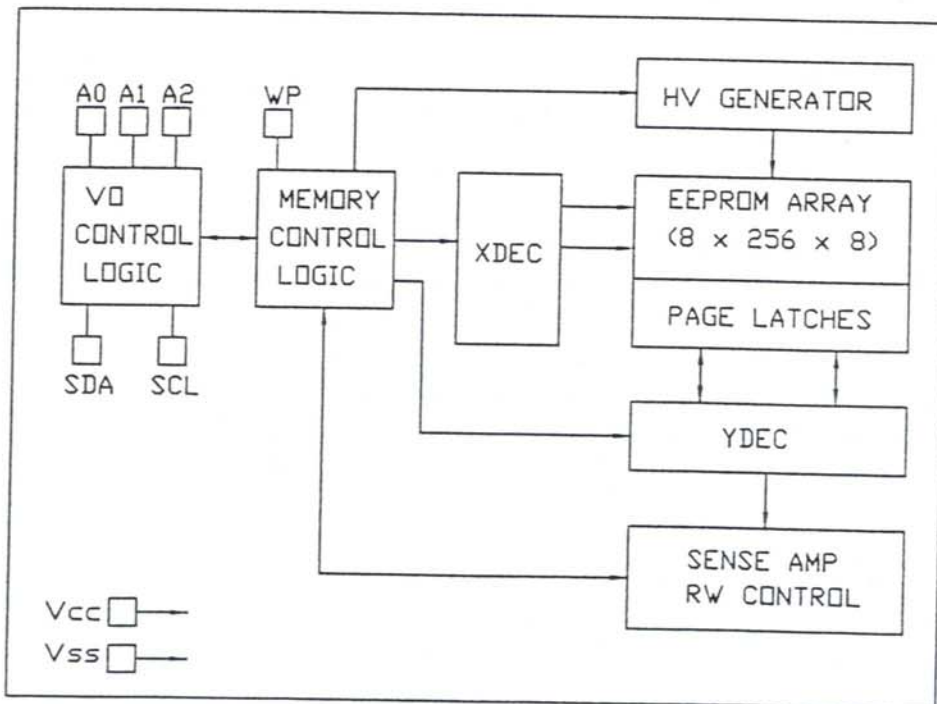
IC306-TC4094BF-T



IC308-SAA6579T/V1



IC309-24LC164/SN-T



IC AND TRANSISTOR VOLTAGE CHART

IC1

PIN	FM	AM
1	4.47	4.13
2	1.60	1.60
3	1.80	1.56
4	1.25	1.73
5	1.37	1.57
6	1.37	1.56
7	5.3	5.27
8	2.34	2.23
9	5.28	5.27
10	5.26	0
11	0	0
12	1.54	1.53
13	0	2.27
14	0	0
15	1.46	1.40
16	1.47	1.38
17	2.33	2.27
18	1.7	1.42
19	1.61	1.61
20	1.61	1.61

IC2

PIN	FM
1	0.75
2	1.48
3	4.62
4	1.44
5	0
6	4.65
7	3.87
8	4.60
9	4.63

IC3

PIN	FM
1	3
2	0.48
3	0.48
4	1.21
5	0
6	0
7	3.04
8	0
9	1.04
10	0.18
11	0.46
12	1.30
13	1.39
14	1.22
15	1.17
16	0.26

IC4

PIN	FM
1	2.8
2	0
3	2.8
4	2.78
5	2.77
6	5.95
7	4.72
8	3.36
9	6.01
Remark	Headphone

IC7

PIN	FM
1	5.4
2	6
3	0
4	0

IC5

PIN	FM
1	2.8
2	0
3	2.8
4	2.78
5	2.77
6	5.95
7	4.72
8	3.36
9	6.01
Remark	Headphone

IC9

PIN	FM
1	5.28
2	0
3	3.06
4	4.66

IC6

PIN	FM
1	2.66
2	2.66
3	2.65
4	0
5	2.65
6	2.66
7	2.66
8	5.27

IC301

PIN	FM	PIN	FM	PIN	FM
1	0	26	2.76	51	1.39
2	2.77	27	2.76	52	1.39
3	2.63	28	2.76	53	1.39
4	0	29	2.76	54	1.39
5	3.04	30	2.76	55	2.85
6	0	31	0	56	2.80
7	1.42	32	0	57	1.85
8	0.98	33	0	58	0.94
9	2.77	34	0	59	0
10	0.94	35	0	60-91	1.41
11	1.16	36	2.76	92	0
12	2.8	37	2.78	93	2.76
13	0	38	0	94	2.76
14	2.65	39	0	95	2.77
15	2.94	40	0	96	0
16	2.65	41	0	97	0
17	1.72	42	0.08	98	0
18	1.77	43	0.08	99	2.77
19	2.77	44	2.74	100	0.3
20	0	45	3.33		
21	2.76	46	1.53		
22	2.76	47	0		
23	2.76	48	0		
24	2.76	49	0		
25	2.76	50	0		

IC302

PIN	FM
1-13	1.41
14	0.96
15	1.38
16	2.79
17	0
18	0.96
19	0
20	0
21	2.82
22	2.82
23	0
24	2.84
25	0.52
26	2.82
27	2.82
28	1.56
29-56	1.41

IC303

PIN	FM
1	1.27
2	1.16
3	3
4	3
5	0.55
6	0
7	3
8	1.95
9	0
10	0
11	0.75
12	0
13	0
14	0
15	0.81
16	0

IC306

PIN	FM
1	0
2	0
3	2.8
4	2.83
5	0
6	0
7	0
8	0
9	2.83
10	0
11	2.83
12	0
13	0
14	0
15	2.84
16	2.83

IC304

PIN	FM
1	0
2	5.24
3	4.98

IC305

PIN	FM
1	0
2	5.34
3	2.92

IC307

PIN	FM
1	2.89
2	2.89
3	0

IC308

PIN	FM
1	*2.2
2	*2.2
3	2.32
4	2.3
5	4.65
6	0
7	2.3
8	2.35
9	0
10	0
11	0
12	4.64
13	2.10
14	2.47
15	2.32
16	2.32

IC309

PIN	FM
1	0
2	0
3	0
4	0
5	2.87
6	2.87
7	0
8	2.83

Transistors

	MODE	FM	AM
	PIN NAME		
Q1	G	0	0
	S	0	0.72
	D	0	5.2

	MODE	FM	AM (LSB)
	PIN NAME		
Q8	B	0	0.75
	C	0	1.45
	E	0	0.15

	MODE	FM	AM
	PIN NAME		
Q2	G	0	0.45
	S	0	1.7
	D	0	4.1

	MODE	FM	AM (LSB)
	PIN NAME		
Q9	B	0	0.31
	C	0	1.5
	E	0	0

	MODE	FM	AM
	PIN NAME		
Q3	G	0	0.45
	S	0	1.7
	D	0	4.1

	MODE	FM	AM
	PIN NAME		
Q10	B	4.06	2.34
	C	0.2	3
	E	3.06	3.05

	MODE	FM	AM
	PIN NAME		
Q4	G	0	0
	S	0	1.18
	D	0	4.6

	MODE	FM	AM (LSB)	AM (USB)
	PIN NAME			
Q11	B	2.74	0.6	0
	C	0	0	0
	E	0.2	0	0

	MODE	FM	AM
	PIN NAME		
Q5	B	0.86	0
	C	0.86	0
	E	0.13	0

	MODE	FM	AM
	PIN NAME		
Q12	B	0.62	0
	C	0	2.25
	E	0	0

	MODE	FM	AM
	PIN NAME		
Q6	G	0	0
	S	0	0.72
	D	0	5.2

	MODE	FM	AM
	PIN NAME		
Q13	B	2.31	2.31
	C	2.86	2.85
	E	2.91	2.91

	MODE	FM	AM
	PIN NAME		
Q7	B	0	0
	C	1.35	1.35
	E	0	0

	MODE	FM	AM (LSB)	AM (USB)
	PIN NAME			
Q14	B	0	0.6	0
	C	0	0	0.2
	E	0	0	0

	MODE PIN NAME	FM	AM
Q15	B	0.60	1.40
	C	0.05	2.8
	E	0.04	1.22

	MODE PIN NAME	FM	AM
Q22	B	5.21	4.6
	C	0	5.23
	E	5.26	5.26

	MODE PIN NAME	FM	AM
Q29	B	5.43	5.43
	C	6	6
	E	6	6

	MODE PIN NAME	FM	AM
Q36	B	*1.31	*1.26
	C	3.06	3.06
	E	*0.71	*0.69

	MODE PIN NAME	FM	AM
Q16	B	0.6	1.0
	C	0	2.77
	E	0	1.22

	MODE PIN NAME	FM	AM
Q23	B	4.6	5.20
	C	5.22	0
	E	5.26	5.26

	MODE PIN NAME	FM	AM
Q30	B	0	0
	C	0	0
	E	0	0

	MODE PIN NAME	FM	AM
Q37	B	0	*1.07
	C	*1.79	*1.58
	E	*0.45	*0.52

	MODE PIN NAME	FM	AM
Q17	B	0	5.15
	C	0	0
	E	0	5.2

	MODE PIN NAME	FM	AM
Q24	B	0.6	0
	C	0	5.21
	E	0	0

	MODE PIN NAME	FM	AM
Q31	B	0	0
	C	0	0
	E	0	0

	MODE PIN NAME	FM	AM
Q38	B	0	0.5
	C	0	0.5
	E	0	0

	MODE PIN NAME	FM	AM
Q18	B	0	0
	C	0.94	5.1
	E	0	0

	MODE PIN NAME	FM	AM
Q25	B	0.45	0
	C	0.6	0
	E	0	0

	MODE PIN NAME	FM	AM
Q32	B	0	0
	C	0	0
	E	0	0

	MODE PIN NAME	FM	AM
Q39	B	0	4.5
	C	0	5.12
	E	0	5.2

	MODE PIN NAME	FM	AM
Q19	B	0	0.55
	C	0	2.7
	E	0	0

	MODE PIN NAME	FM	AM
Q26	B	0.6	0
	C	3	0
	E	0	0

	MODE PIN NAME	FM	AM
Q33	G	*6.6	*1.8
	S	*6.9	*2.04
	D	15.5	2.84

	MODE PIN NAME	FM	AM
Q40	B	0	0.6
	C	0	0.04
	E	0	0

	MODE PIN NAME	FM	AM
Q20	B	0	1.2
	C	0	2.2
	E	0	0.5

	MODE PIN NAME	FM	AM
Q27	B	5.84	5.84
	C	5.92	5.92
	E	5.24	5.24

	MODE PIN NAME	FM	AM
Q34	B	1.23	0
	C	2.23	0
	E	0.6	0

	MODE PIN NAME	FM	AM
Q41	B	0	0.28
	C	0	0
	E	0	0

	MODE PIN NAME	FM	AM
Q21	B	0	0.55
	C	0	2.4
	E	0	0

	MODE PIN NAME	FM	AM
Q28	B	5.32	5.32
	C	5.97	5.97
	E	6.0	6.0

	MODE PIN NAME	FM	AM
Q35	B	0.6	0
	C	0	0.39
	E	0	0

	MODE PIN NAME	FM	AM
Q42	G	0	0
	S	0	0.4
	D	0	4.3

	MODE PIN NAME	FM	AM
Q43	B	0	0.69
	C	0	0.17
	E	0	0

	MODE PIN NAME	FM	AM
Q50	B	4.37	2.49
	C	0	3.02
	E	3.06	3.06

	MODE PIN NAME	FM	AM
Q58	B		5.82
	C		0.08
	E		6

	MODE PIN NAME	FM	AM
Q44	G		0
	S		1.2
	D		4.6

	MODE PIN NAME	FM	AM
Q52	B	0.12	1.82
	C	0.04	3
	E	0.19	1.21

	MODE PIN NAME	FM	AM
Q59	B	0.5	0.5
	C	0.5	0.5
	E	0	0

	MODE PIN NAME	FM	AM
Q45	B	5.28	5.83
	C	5.94	0.3
	E	5.97	6

	MODE PIN NAME	FM	AM
Q53	B	0	1.47
	C	0.19	2.06
	E	0	3

	MODE PIN NAME	FM	AM
Q60	B	0	0
	C	0.2	2.67
	E	0	0

	MODE PIN NAME	FM	AM
Q46	B	0	0.67
	C	0	0
	E	0	0

	MODE PIN NAME	FM	AM
Q54	B	0	0
	C	0	0
	E	0	0

	MODE PIN NAME	FM	AM
Q62	B		0
	C		5.67
	E		0

	MODE PIN NAME	FM	AM (LSB)	AM (USB)
Q47	B	0	0.62	0
	C	0	0	0.67
	E	0	0	0

	MODE PIN NAME	FM	AM
Q55	B	0.6	0.54
	C	0	0
	E	0	0

	MODE PIN NAME	FM	AM
Q48	B	0	4.75
	C	0	0.52
	E	0	5.20

	MODE PIN NAME	FM	AM
Q56	B	0	0
	C	0	0
	E	0	0

	MODE PIN NAME	FM	AM
Q49	B	*0.85	*0.84
	C	*1.79	*0.43
	E	0.3	*0.39

	MODE PIN NAME	FM	AM
Q57	G	0	1.71
	S	0	4.35
	D	0	0.96

	MODE PIN NAME	FM
Q301	B	2.26
	C	2.85
	E	2.88

	MODE PIN NAME	FM
Q308	B	0.76
	C	2.2
	E	0

MODE	FM MODE	AM MODE
FREQUENCY	100 MHz	1 MHz
RF IN	40 emf/dB μ	74 dB/m
DC IN TO JACK	6.4 V	6.4 V
FUNCTION MODE	MONO	WIDE
LOAD	SPEAKER	SPEAKER

	MODE PIN NAME	FM
Q302	B	0.66
	C	0.13
	E	0

	MODE PIN NAME	FM
Q309	B	0.74
	C	1.87
	E	0.07

	MODE PIN NAME	FM
Q303	B	0.61
	C	0.08
	E	0

	MODE PIN NAME	FM
Q310	G	0.56
	S	0.99
	D	3.0

	MODE PIN NAME	FM
Q304	B	0
	C	5.8
	E	0

	MODE PIN NAME	FM
Q312	B	2.76
	C	5.96
	E	2.19

	MODE PIN NAME	FM
Q305	B	2.89
	C	3.43
	E	3.44

	MODE PIN NAME	FM
Q313	B	0
	C	0
	E	0

	MODE PIN NAME	FM
Q306	B	1.41
	C	1.87
	E	1.91

	MODE PIN NAME	FM
Q314	B	0
	C	5.96
	E	0

	MODE PIN NAME	FM
Q307	B	0.59
	C	*5.70
	E	0

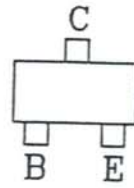
	MODE PIN NAME	FM
Q315	B	5.95
	C	0
	E	5.96

SEMICONDUCTOR LEAD IDENTIFICATIONS

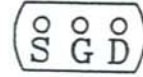
Transistors



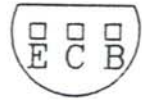
2SC2839E
2SD1012G
2SA1317T/U
2SC2999E
2SC3330S/T/U



2SA812M6
2SC1623L6
2SB815B6/B7
2SD1048X6/X7
2SC2223F13



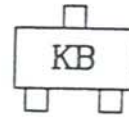
2SK381A/B
2SK715W



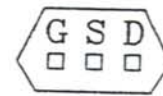
2SA1020Y



2SK435D



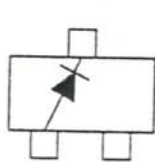
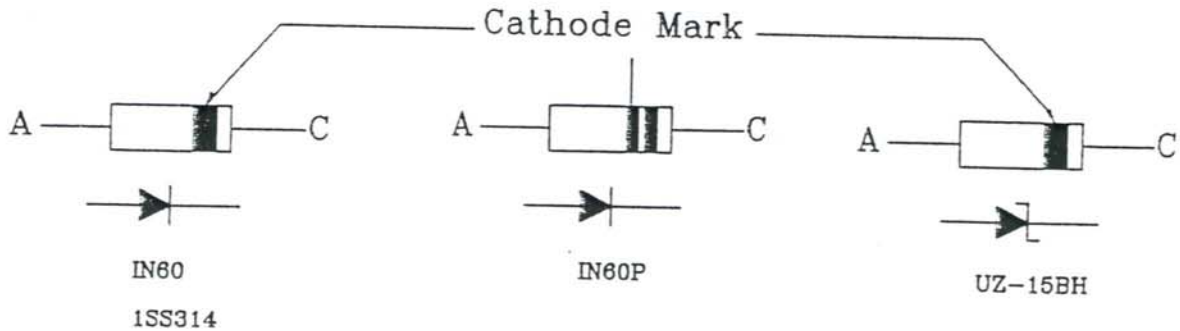
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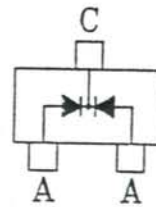
2SK212E

(E:Emitter C:Collector B:Base S:Source G:Gate D:Drain)

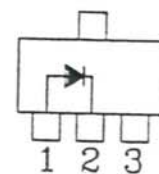
Diodes



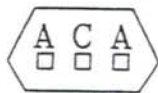
RB411



1S2837



A → C
RB110C



SVC203



SVC201 SP



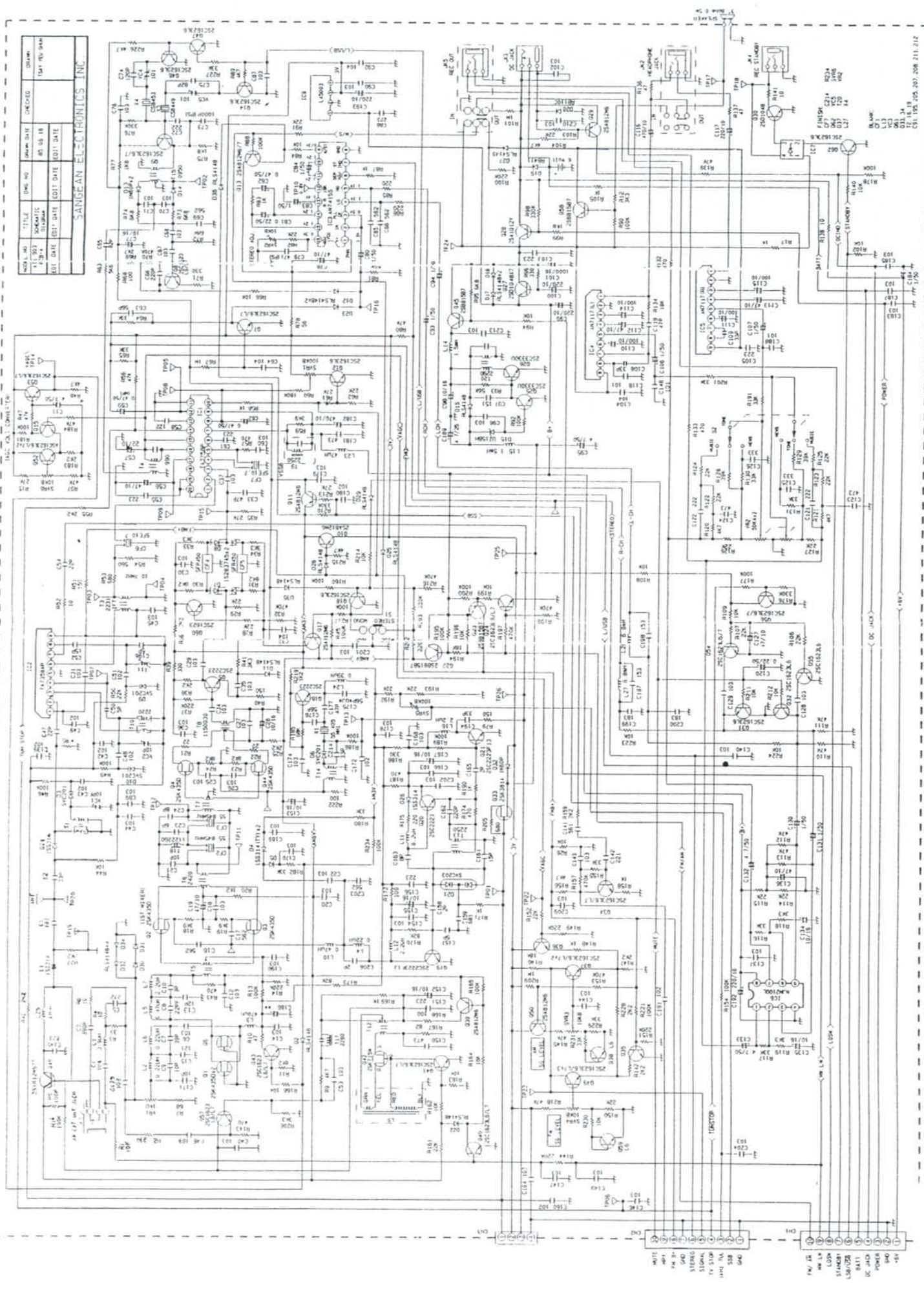
A → C
RLS4148

(A:Anode C:Cathode)

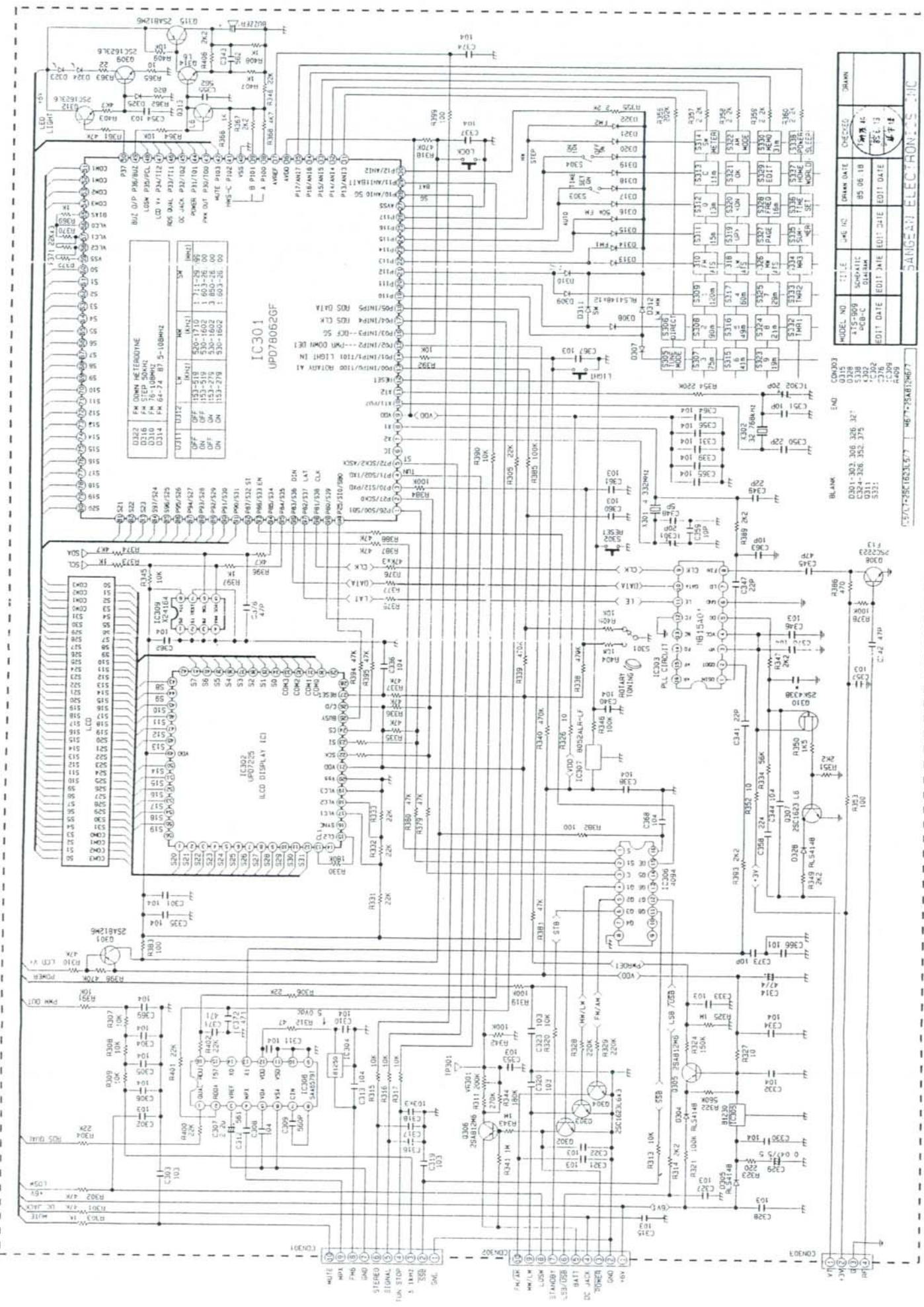
SCHEMATIC DIAGRAM

NO.	DATE	BY	CHKD.	DRW.
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11-107	11-107	11-107	11-107	11-107
11-107	11-107	11-107	11-107	11-107

SANGHAN ELECTRONICS, INC.



SCHEMATIC DIAGRAM



MODEL NO	TITLE	J-#E NO	DRAWN DATE	CHECKED	CHKD
475-009	SCHMATIC		85.06.18		
483-C	DIAGRAM				
EDIT DATE	EDIT DATE	EDIT DATE	EDIT DATE	EDIT DATE	EDIT DATE
532	532	532	532	532	532

CONDOR
 END
 BLANK
 0301-303 306 326 327
 0308 308
 0311 309 326 375
 532

CONDOR
 0315
 5338
 4302
 0311 309 326 375
 532

CONDOR
 0315
 5338
 4302
 0311 309 326 375
 532

CONDOR
 0315
 5338
 4302
 0311 309 326 375
 532

DANCEMAN ELECTRONICS, INC.