

DR-590T/E

Service Manual

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■ SPECIFICATIONS

■ General

Frequency coverage..... ●DR-590T (U.S. Version)
 144.000–147.995MHz (TX), 137.000–173.995MHz (RX),
 440.000–449.995MHz (TX), 410.000–469.995MHz (RX)
 ●DR-590E (Europe Version)
 144.000–145.995MHz (TX & RX)
 430.000–439.995MHz (TX & RX)

Frequency Resolution.....5, 10 12.5, 15, 20, and 25kHz steps

Antenna Impedance50 Ohms, unbalanced

Power Supply Requirement13.8 Volts D.C.

Current Drain at 13.8VReceiving
 Squelched : does not exceed 800mA
 Trans-mitting
 VHF High: 45W approx. 9.5A
 Middle: 10W approx. 4.5A
 Low: 5W approx. 3.5A
 UHF High: 35W approx. 10A
 Middle: 8W approx. 5A
 Low: 4W approx. 4A

Dimension150mm(W) X 50mm(H) X 178mm(D)
 (5–9/10" (2" (7")

WeightApprox. 1.5kgs (3.3lbs.)

■ Transmitter

Output Power.....VHF High: Approx. 45W
 Middle: 10W
 Low: 5W
 UHF High: Approx. 35W
 Middle: 8W
 Low: 4W

Emission ModeF3 (FM)

Modulation SystemVariable Reactance F.M.

Max. Frequency Deviation±5kHz

Spurious Emission–60dB or under below carrier

MicrophoneElectret Condenser Microphone

Operating ModeSimplex
 Duplex :
 5kHz and 12.5kHz steps between 0 and 10.995MHz from receive
 frequency at 144–147.995MHz and 440–449.995MHz

DTMF EncoderBuilt-in (DR-590T only)

■ Receiver

Receiving System.....Superheterodyne, Dual Conversion

Modulation Acceptance.....F3 (FM)

Intermediate Frequency1st 21.6MHz and 455kHz at VHF
 1st 30.825MHz and 455kHz at UHF

Sensitivity12dB SINAD –16dB μ

Selectivity±6kHz or under at –6dB
 ±12kHz or under at –60dB

Audio Power Output.....Approx. 2.5W

Speaker Impedance8 Ohms

■ MODEL CHART

Type	DR-590T	DR-590E
Tone Burst	Not Available	1.750Hz
Subaudible Tone	Encode Included, Decode Optional	Optional
DTMF	Included (16 Buttons)	Optional

Note : Specifications are approximate and are subject to change without notice or obligation.

Ref. No.	Part Code	Part Name and Number	Ref. No.	Part Code	Part Name and Number	Ref. No.	Part Code	Part Name and Number
R124	RK0059	Chip R, MCR10EZHJ333E	L3	QA0066	Coil, 144M S-10	C64	CU8016	Chip C, C2012B1H102K
R125	RK0073	Chip R, MCR10EZHJ224E	L4	QA0066	Coil, 144M S-10	C65	CU0071	Chip C, C2012CH1H101J
TP1	UE0041	Pin Jack, TMP-J01X-V6	L5	QA0005	Coil, 40092	C66	CU0071	Chip C, C2012CH1H101J
TP2	UE0047	Round Pin, R9 ×10	L6	QA0005	Coil, 40092	C67	CU0071	Chip C, C2012CH1H101J
TP3	UE0047	Round Pin, R9 ×10	L7	QA0044	Coil, 455KHz	C68	CU8038	Chip C, CM316Y5V105Z25VA
TP4	UE0047	Round Pin, R9 ×10	L8	QA0058	Coil	C69	CU8016	Chip C, C2012B1H102K
CN30	UE0043	Post With Base, PI22A02M	L9	QC0034	Chip Coil, NL322522T-R39M	C70	CU8016	Chip C, C2012B1H102K
CN31	UE0109	Connector, 52030-1810	L10	QC0065	Chip Coil, NL322522T-068M	C71	CU0004	Chip C, C2012CH1H030C
CN32	UE0113	Connector, 5512-03A	L11	QC0067	Chip Coil, NL322522T-R10M	C72	CU8016	Chip C, C2012B1H102K
CN33	UE0108	Connector, 6FE-BT	L12	QC0063	Chip Coil, NL322522T-047M	C73	CU0006	Chip C, C2012CH1H050C
CN34	UE0075	Pin Jack, TMP-J01X-A2	VR1	RH0036	VR, CVR-42A-102AD	C74	CU8016	Chip C, C2012B1H102K
CN35	UE0075	Pin Jack, TMP-J01X-A2	VR2	RH0031	VR, CVR-42A-103AD	C75	CU0051	Chip C, C2012CH1H471K
IC1	XA0070	IC, MC3361D	VR3	RH0038	VR, CVR-42A-473AD	C76	CU0051	Chip C, C2012CH1H471K
IC2	XA0033	IC, μPC393G	TC1	CT0031	Trimmer, CTZ-05A	C77	CU0051	Chip C, C2012CH1H471K
IC3	XA0114	IC, μPD6345GS	TC2	CT0030	Trimmer, CTZ-20C	C78	CU0051	Chip C, C2012CH1H471K
IC4	XA0116	IC, LA4445	TC3	CT0030	Trimmer, CTZ-20C	C79	CU0006	Chip C, C2012CH1H050C
IC5	XA0115	IC, TC4S66F	UHF MAIN Unit			C80	CU0051	Chip C, C2012CH1H471K
IC6	XA0115	IC, TC4S66F	C1	CU8016	Chip C, C2012B1H102K	C81	CU0051	Chip C, C2012CH1H471K
IC7	XA0087	IC, TC4S01F	C2	CU0006	Chip C, C2012CH1H050C	C82	CU0063	Chip C, C2012CH1H180J
D1	XD0112	Pin-D, 1SV128	C3	CU8028	Chip C, C2012CH1H103K	C83	CU0004	Chip C, C2012CH1H030C
D2	XD0100	Varicap, 1SV164	C4	CU0071	Chip C, C2012CH1H101J	C84	CU0051	Chip C, C2012CH1H471K
D3	XD0100	Varicap, 1SV164	C5	CU0003	Chip C, C2012CH1H020C	C85	CU0062	Chip C, C2012CH1H150J
D4	XD0100	Varicap, 1SV164	C6	CU8016	Chip C, C2012B1H102K	C86	CU0051	Chip C, C2012CH1H471K
D5	XD0100	Varicap, 1SV164	C7	CU0067	Chip C, C2012CH1H390J	C87	CU0051	Chip C, C2012CH1H471K
D7	XD0100	Varicap, 1SV164	C8	CU8016	Chip C, C2012B1H102K	C88	CE0312	Chemical C, 16CV10B
D8	XD0100	Varicap, 1SV164	C9	CU8016	Chip C, C2012B1H102K	C89	CE0312	Chemical C, 16CV10B
D9	XD0118	Diode, MA716	C10	CU0066	Chip C, C2012CH1H330J	C90	CU0051	Chip C, C2012CH1H471K
D11	XD0118	Diode, MA716	C11	CU0071	Chip C, C2012CH1H101J	C91	CU0051	Chip C, C2012CH1H471K
D12	XD0120	Diode, MA704WK	C12	CU0006	Chip C, C2012CH1H050C	C92	CU0051	Chip C, C2012CH1H471K
D13	XD0097	Diode, 1SS268	C13	CU8016	Chip C, C2012B1H102K	C93	CU8016	Chip C, C2012B1H102K
D14	XD0041	Diode, DAP202K	C14	CU8016	Chip C, C2012B1H102K	C94	CU8016	Chip C, C2012B1H102K
D15	XD0041	Diode, DAP202K	C15	CU8016	Chip C, C2012B1H102K	C95	CU8016	Chip C, C2012B1H102K
D16	XD0040	Diode, DAN202K	C16	CU0005	Chip C, C2012CH1H040C	C96	CE0030	Chemical C, 16VMS7 10
D17	XD0113	Zener Diode, 02CZ4. 3Y	C17	CU0060	Chip C, C2012CH1H470J	C97	CU8028	Chip C, C2012CH1H103K
D18	XD0104	Zener Diode, 02CZ6. 2Y	C18	CU0067	Chip C, C2012CH1H390J	C98	CU8028	Chip C, C2012CH1H103K
D20	XD0103	Diode, 1SS226	C19	CU0011	Chip C, C2012CH1H100D	C99	CS0049	Chip Tantal, TMC1C105
D21	XD0112	Pin-D, 1SV128	C20	CU8016	Chip C, C2012B1H102K	C100	CE0312	Chemical C, 16CV10B
Q1	XE0013	FET, 3SK184S	C21	CU0067	Chip C, C2012CH1H390J	C101	CS0049	Chip Tantal, TMC1C105
Q2	XE0013	FET, 3SK184S	C22	CU8028	Chip C, C2012CH1H103K	C102	CU8028	Chip C, C2012CH1H103K
Q4	XT0081	Transistor, 2SC2714T	C23	CU8003	Chip C, C2012JF1E104Z	C103	CU8028	Chip C, C2012CH1H103K
Q5	XT0037	Transistor, 2SC2412KR	C24	CU8003	Chip C, C2012JF1E104Z	C104	CE0312	Chemical C, 16CV10B
Q6	XT0037	Transistor, 2SC2412KR	C25	CU0051	Chip C, C2012CH1H471K	C105	CE0030	Chemical C, 16VMS7 10
Q7	XT0037	Transistor, 2SC2412KR	C26	CU8032	Chip C, C2012B1E223K	C106	CE0312	Chemical C, 16CV10B
Q8	XT0037	Transistor, 2SC2412KR	C27	CU8003	Chip C, C2012JF1E104Z	C107	CU0071	Chip C, C2012CH1H101J
Q10	XT0037	Transistor, 2SC2412KR	C28	CU0067	Chip C, C2012CH1H390J	C108	CU8032	Chip C, C2012B1E223K
Q11	XT0037	Transistor, 2SC2412KR	C29	CU0071	Chip C, C2012CH1H101J	C110	CU8016	Chip C, C2012B1H102K
Q12	XT0077	Transistor, 2SC3326AL	C30	CU0071	Chip C, C2012CH1H101J	C111	CU0051	Chip C, C2012CH1H471K
Q13	XU0014	Digital Transistor, DTC144EK	C31	CU8028	Chip C, C2012CH1H103K	C112	CU0067	Chip C, C2012CH1H390J
Q14	XU0028	Digital Transistor, FMC2	C32	CS0060	Chip Tantal, TMC1E474	C113	CE0312	Chemical C, 16CV10B
Q15	XT0061	Transistor, 2SB1132Q	C33	CU0065	Chip C, C2012CH1H270J	C114	CU8016	Chip C, C2012B1H102K
Q16	XT0030	Transistor, 2SC3356BR25	C34	CU8003	Chip C, C2012JF1E104Z	C115	CU8016	Chip C, C2012B1H102K
Q17	XT0030	Transistor, 2SC3356BR25	C35	CU0043	Chip C, C2012CH1H221K	C116	CU8016	Chip C, C2012B1H102K
Q18	XT0048	Transistor, 2SC3357RE	C36	CU8016	Chip C, C2012B1H102K	C117	CU8016	Chip C, C2012B1H102K
Q19	XT0078	Transistor, 2SC3369	C37	CS0061	Chip Tantal, TMC1V224	C118	CU8016	Chip C, C2012B1H102K
Q20	XT0061	Transistor, 2SB1132Q	C38	CS0061	Chip Tantal, TMC1V224	C119	CU0003	Chip C, C2012CH1H020C
Q22	XU0019	Digital Transistor, DTA144YK	C39	CU8035	Chip C, C2012B1E393K	C120	CU8016	Chip C, C2012B1H102K
Q23	XT0037	Transistor, 2SC2412KR	C40	CU8028	Chip C, C2012CH1H103K	C121	CU8016	Chip C, C2012B1H102K
Q24	XT0037	Transistor, 2SC2412KR	C41	CU8034	Chip C, C2012X7R1E333K	C122	CU8016	Chip C, C2012B1H102K
Q27	XU0014	Digital Transistor, DTC144EK	C42	CU8035	Chip C, C2012B1E393K	C124	CS0049	Chip Tantal, TMC1C105
Q31	XT0037	Transistor, 2SC2412KR	C43	CU8025	Chip C, C2012B1H562K	C125	CU8016	Chip C, C2012B1H102K
FL1	XF0001	X'fil, DFM21615B1	C44	CU8025	Chip C, C2012B1H562K	C126	CU8016	Chip C, C2012B1H102K
FL2	XC0001	Ceramic Filter, CFW455F	C45	CU8038	Chip C, CM316Y5V105Z25VA	C127	CE0312	Chemical C, 16CV10B
X1	XQ0023	Ceramic Filter, UM-1 22.055MHz	C46	CU8016	Chip C, C2012B1H102K	C128	CU8016	Chip C, C2012B1H102K
X2	XQ0038	Ceramic Filter, HC-49/U, 12.8MHz	C47	CE0124	Chemical C, 16VMS7 47	C129	CU8016	Chip C, C2012B1H102K
TH1	XS0004	Thermistor, TD5A150D	C48	CU8038	Chip C, CM316Y5V105Z25VA	C130	CU0060	Chip C, C2012CH1H470J
L1	QA0057	Coil, Front End	C49	CU0051	Chip C, C2012CH1H471K	C131	CE0124	Chemical C, 16VMS7 47
L2	QA0066	Coil, 144M S-10	C50	CU0051	Chip C, C2012CH1H471K	C132	CU0071	Chip C, C2012CH1H101J
			C51	CU8016	Chip C, C2012B1H102K	C133	CU8016	Chip C, C2012B1H102K
			C52	CU8016	Chip C, C2012B1H102K	C134	CU0071	Chip C, C2012CH1H101J
			C53	CS0049	Chip Tantal, TMC1C105	C135	CU0003	Chip C, C2012CH1H020C
			C54	CU8016	Chip C, C2012B1H102K	R1	RK0059	Chip R, MCR10EZHJ333E
			C55	CU8016	Chip C, C2012B1H102K	R2	RK0069	Chip R, MCR10EZHJ104E
			C56	CE0312	Chemical C, 16CV10B	R3	RK0018	Chip R, MCR10EZHJ101E
			C57	CU8016	Chip C, C2012B1H102K	R4	RK0018	Chip R, MCR10EZHJ101E
			C58	CE0312	Chemical C, 16CV10B	R5	RK0005	Chip R, MCR10EZHJ220E
			C59	CU8016	Chip C, C2012B1H102K	R6	RK0018	Chip R, MCR10EZHJ101E
			C60	CE0315	Chemical C, 16CV47B	R8	RK0056	Chip R, MCR10EZHJ223E
			C61	CU8016	Chip C, C2012B1H102K	R9	RK0035	Chip R, MCR10EZHJ102E
			C62	CU8016	Chip C, C2012B1H102K	R10	RK0038	Chip R, MCR10EZHJ182E
			C63	CS0065	Chip Tantal, TMC1D684	R11	RK0052	Chip R, MCR10EZHJ103E

Ref. No.	Part Code	Part Name and Number	Ref. No.	Part Code	Part Name and Number	Ref. No.	Part Code	Part Name and Number
R12	RK0022	Chip R, MCR10EZHZ221E	R96	RK0045	Chip R, MCR10EZHZ472E	Q4	XT0030	Transistor, 2SC3356BR25
R13	RK0042	Chip R, MCR10EZHZ332E	R98	RK0070	Chip R, MCR10EZHZ124E	Q5	XT0037	Transistor, 2SC2412KR
R14	RK0045	Chip R, MCR10EZHZ472E	R99	RK0052	Chip R, MCR10EZHZ103E	Q6	XT0037	Transistor, 2SC2412KR
R15	RK0069	Chip R, MCR10EZHZ104E	R100	RK0038	Chip R, MCR10EZHZ182E	Q7	XT0037	Transistor, 2SC2412KR
R16	RK0035	Chip R, MCR10EZHZ102E	R101	RK2006	Chip R, MCR50EZHZ150E	Q8	XT0037	Transistor, 2SC2412KR
R17	RK0052	Chip R, MCR10EZHZ103E	R102	RK0073	Chip R, MCR10EZHZ224E	Q11	XU0018	Digital Transistor, DTC124EK
R18	RK0056	Chip R, MCR10EZHZ223E	R103	RK0036	Chip R, MCR10EZHZ122E	Q12	XT0077	Transistor, 2SC3326A
R19	RK0048	Chip R, MCR10EZHZ682E	R104	RK0069	Chip R, MCR10EZHZ104E	Q13	XU0014	Digital Transistor, DTC144EK
R20	RK0076	Chip R, MCR10EZHZ334E	R105	RK0107	Chip R, MCR10EZHZ000E	Q14	XU0014	Digital Transistor, DTC144EK
R21	RK0044	Chip R, MCR10EZHZ392E	VR1	RH0031	VR, CVR-42A-103AD	Q15	XT0061	Transistor, 2SB1132Q
R22	RK0076	Chip R, MCR10EZHZ334E	VR2	RH0038	VR, CVR-42A-473AD	Q16	XT0030	Transistor, 2SC3356BR25
R23	RK0044	Chip R, MCR10EZHZ392E	VR3	RH0031	VR, CVR-42A-103AD	Q17	XT0030	Transistor, 2SC3356BR25
R24	RK0052	Chip R, MCR10EZHZ103E	VR4	RH0051	VR, CVR-42A-472AD	Q18	XT0048	Transistor, 2SC3357RE
R25	RK0069	Chip R, MCR10EZHZ104E	VR5	RH0036	VR, CVR-42A-102AD	Q19	XT0078	Transistor, 2SC3369
R26	RK0028	Chip R, MCR10EZHZ471E	JP1	RD0017	R, JPW01FC05 0Ω	Q20	XU0014	Digital Transistor, DTC144EK
R27	RK0056	Chip R, MCR10EZHZ223E	TC1	CT0031	Trimmer, CTZ-05A	Q21	XT0061	Transistor, 2SB1132Q
R28	RK0081	Chip R, MCR10EZHZ564E	TC2	CT0031	Trimmer, CTZ-05A	Q22	XU0019	Digital Transistor, DTC124EK
R29	RK0042	Chip R, MCR10EZHZ332E	L1	QA0069	HF Coil, 110-90124(T only)	Q23	XT0037	Transistor, 2SC2412KR
R30	RK0047	Chip R, MCR10EZHZ562E	L1	QA0061	HF Coil, 110-7Hz-440C (E only)	Q24	XT0037	Transistor, 2SC2412KR
R31	RK0062	Chip R, MCR10EZHZ473E	L2	QA0069	HF Coil, 110-90124(T only)	Q26	XT0038	Transistor, 2SA1037KT146R
R32	RK0035	Chip R, MCR10EZHZ102E	L2	QA0061	HF Coil, 110-7Hz-440C (E only)	Q27	XT0037	Transistor, 2SC2412KR
R33	RK0035	Chip R, MCR10EZHZ102E	L3	QA0042	Coil, 30R8MIF	Q28	XT0092	Transistor, 2SA1307Y
R34	RK0018	Chip R, MCR10EZHZ101E	L5	QA0044	Coil, 455kHz	Q29	XU0018	Digital Transistor, DTC124EK
R35	RK0056	Chip R, MCR10EZHZ223E	L6	QK0036	Coil, 0R6-3-1R5FM	Q30	XU0014	Digital Transistor, DTC144EK
R36	RK0044	Chip R, MCR10EZHZ392E	L7	QC0056	Chip L, NL322522T-012M	Q31	XT0061	Transistor, 2SB1132Q
R37	RK0081	Chip R, MCR10EZHZ564E	L8	QC0057	Chip L, NL322522T-015M	Q32	XT0030	Transistor, 2SC3356BR25
R38	RK0039	Chip R, MCR10EZHZ222E	L9	QC0062	Chip L, NL322522T-039M	Q32	XU0014	Digital Transistor, DTC144EK
R39	RK0023	Chip R, MCR10EZHZ271E	L10	QC0039	Chip L, NL322522T-1R0M	FL1	XF0006	X'tal Filter, 30.8M15AUM-1
R40	RK0056	Chip R, MCR10EZHZ223E	L11	QC0059	Chip L, NL322522T-022M	FL2	XC0001	Ceramic Filter, CFW455F
R41	RK0062	Chip R, MCR10EZHZ473E	L12	QC0055	Chip L, NL322522T-010M	X1	XQ0034	X'tal, HC-49/T 30.4MHz
R43	RK0081	Chip R, MCR10EZHZ564E	L13	QC0055	Chip L, NL322522T-010M	VHF PA Unit		
R44	RK0045	Chip R, MCR10EZHZ472E	L14	QK0037	Coil, 0R6-3-2R5FM	C1	CJ8016	Chip C, C2012B1H102K
R45	RK0079	Chip R, MCR10EZHZ474E	L15	QK0038	Coil, 0R7-3-1R5FM	C2	CE0201	Chemical C, 16MW10SZ
R46	RK0039	Chip R, MCR10EZHZ222E	L17	QC0061	Chip L, NL322522T-033M	C3	CJ8016	Chip C, C2012B1H102K
R47	RK0035	Chip R, MCR10EZHZ102E	L18	QC0055	Chip L, NL322522T-010M	C4	CE0201	Chemical C, 16MW10SZ
R48	RK0107	Chip R, MCR10EZHZ000E	TH1	XS0004	Thermistor, TD5A150D	C5	CC5022	Ceramic C, HM60SJSJL270K
R49	RK0039	Chip R, MCR10EZHZ222E	TH2	XS0008	Thermistor, TD5C220D	C6	CJ8016	Chip C, C2012B1H102K
R51	RK0006	Chip R, MCR10EZHZ270E	TP1	UE0041	Pin Jack, TMP-J01X-V6	C7	CC5021	Ceramic C, HM60SJSJ220J
R52	RK0045	Chip R, MCR10EZHZ472E	TP2	UE0047	Round Pin, R9 ×10	C8	CU0006	Chip C, C2012CH1H050C
R53	RK0006	Chip R, MCR10EZHZ270E	TP3	UE0047	Round Pin, R9 ×10	C9	CU0002	Chip C, C2012CH1H010C
R54	RK0056	Chip R, MCR10EZHZ223E	TP4	UE0047	Round Pin, R9 ×10	C10	CC5023	Ceramic C, HM60SJSJ390J
R55	RK0056	Chip R, MCR10EZHZ223E	CN51	UE0109	Connector, 52030-1810	C11	CJ7003	Chip C, C3CK1NAR102K
R56	RK0035	Chip R, MCR10EZHZ102E	CN52	UE0111	Connector, 5513-03CPB	C12	CC5023	Ceramic C, HM60SJSJ390J
R57	RK0038	Chip R, MCR10EZHZ182E	CN53	UE0108	Connector, 6FE-BT	C13	CU0002	Chip C, C2012CH1H010C
R58	RK0052	Chip R, MCR10EZHZ103E	CN54	UE0075	Pin Jack, TMP-J01X-A2	C14	CJ8016	Chip C, C2012B1H102K
R59	RK0052	Chip R, MCR10EZHZ103E	CN55	UE0075	Pin Jack, TMP-J01X-A2	C15	CJ8016	Chip C, C2012B1H102K
R60	RK0052	Chip R, MCR10EZHZ103E	CN58	UE0108	Connector, 6FE-BT	C16	CU8016	Chip C, C2012B1H102K
R61	RK0052	Chip R, MCR10EZHZ103E	IC1	XA0070	IC, MC3361D	C17	CC5003	Ceramic C, HM60SJSJ30J
R62	RK0056	Chip R, MCR10EZHZ223E	IC2	XA0033	IC, μPC393G	C18	CJ8016	Chip C, C2012B1H102K
R63	RK0018	Chip R, MCR10EZHZ101E	IC3	XA0114	IC, μPD6345GS	J1	UJ0020	Jack, HSJ0836-01-310
R65	RK0018	Chip R, MCR10EZHZ101E	IC4	XA0119	IC, AN8010M	J2	UJ0021	Jack, HSJ0837-01-010
R66	RK0039	Chip R, MCR10EZHZ222E	D4	XD0040	Diode, DAN202K	CN42	UE0108	Connector, 6FE-BT
R67	RK0035	Chip R, MCR10EZHZ102E	D7	XD0118	Diode, MA716	CN44	UE0114	Connector, 5512-04A
R68	RK0045	Chip R, MCR10EZHZ472E	D8	XD0118	Diode, MA716	CN48	UE0043	Post with Base, PI22A02M
R69	RK0035	Chip R, MCR10EZHZ102E	D9	XD0040	Diode, DAN202K	RT1	UE0119	RT Pin, RT-01T-1.0B
R70	RK0011	Chip R, MCR10EZHZ470E	D10	XD0120	Diode, MA704WK	RT2	UE0119	RT Pin, RT-01T-1.0B
R71	RK0018	Chip R, MCR10EZHZ101E	D11	XD0112	Pin-D, 1SV128	RT3	UE0119	RT Pin, RT-01T-1.0B
R72	RK0011	Chip R, MCR10EZHZ470E	D12	XD0112	Pin-D, 1SV128	IC1	XA0122	IC, M57726R
R73	RK0037	Chip R, MCR10EZHZ152E	D13	XD0041	Diode, DAP202K	D1	XD0106	Diode, UM9401
R74	RK0001	Chip R, MCR10EZHZ100E	D14	XD0041	Diode, DAP202K	D2	XD0014	Diode, MI308
R75	RK0038	Chip R, MCR10EZHZ182E	D15	XD0014	Diode, MI308	D3	XD0102	Diode, 1SS101
R76	RK0045	Chip R, MCR10EZHZ472E	D16	XD0040	Diode, DAN202K	D4	XD0040	Diode, DAN202K
R77	RK0056	Chip R, MCR10EZHZ223E	D17	XD0113	Zener, 02CZ4. 3Y			
R78	RK0056	Chip R, MCR10EZHZ223E	D18	XD0104	Zener, 02CZ6. 2Y			
R79	RK0056	Chip R, MCR10EZHZ223E	D19	XD0103	Diode, 1SS226			
R80	RK0056	Chip R, MCR10EZHZ223E	Q1	XE0013	FET, 3SK184S			
R81	RK0052	Chip R, MCR10EZHZ103E	Q2	XE0014	FET, 3SK184R			
R82	RK0028	Chip R, MCR10EZHZ471E	Q3	XE0002	FET, 2SK125			
R83	RK0052	Chip R, MCR10EZHZ103E						
R84	RK0020	Chip R, MCR10EZHZ151E						
R85	RK0010	Chip R, MCR10EZHZ390E						
R86	RK0020	Chip R, MCR10EZHZ151E						
R87	RK0020	Chip R, MCR10EZHZ151E						
R88	RK0045	Chip R, MCR10EZHZ472E						
R89	RK0036	Chip R, MCR10EZHZ122E						
R90	RK2010	Chip R, MCR50JZHZ330E						
R91	RK0052	Chip R, MCR10EZHZ103E						
R92	RK0052	Chip R, MCR10EZHZ103E						
R93	RK0059	Chip R, MCR10EZHZ333E						
R94	RK0107	Chip R, MCR10EZHZ000E						
R95	RK0011	Chip R, MCR10EZHZ470E						

Ref. No.	Part Code	Part Name and Number	Ref. No.	Part Code	Part Name and Number	Ref. No.	Part Code	Part Name and Number
L1	QK0061	Coil, 0R8-3-9R5TLM	L2	QK0044	Air Core Coil, 0R5-3R0-9R5T	C64	CU3023	Chip C, CM105CH101K50VA
L2	QK0042	Coil, 0R6-3-5R0 RM	L3	QK0068	Air Core Coil, 0R8-3R0-2R5T	C65	CU3023	Chip C, CM105CH101K50VA
L3	QK0060	Coil, 0R8-3-5R0 RS	L4	QK0065	Air Core Coil, 0R8-4R0-1R2T	C66	CU3023	Chip C, CM105CH101K50VA
L4	QK0059	Coil, 0R8-3-4R0 RS	L5	QK0065	Air Core Coil, 0R8-4R0-1R2T (E only)	C67	CU0071	Chip C, C2012CH1H101J
L5	QK0061	Coil, 0R5-3-9R5 LM	L5	QK0094	Air Core Coil, 0R8-3R4-1R2T (T only)	C68	CU0071	Chip C, C2012CH1H101J
L6	QK0059	Coil, 0R8-3-4R0 RS	L7	QB0003	0P-2.6-3-1.2	C69	CU3053	Chip C, CM105Y5V33Z25VA
L7	QK0059	Coil, 0R8-3-4R0 RS	VR1	RH0038	VR, CVR-42A-473AD	C70	CU8040	Chip C, 2012JB1E473K
R1	RK0045	Chip R, MCR10EZJH472E				R1	RA0002	R. Ally, MNR12E0AJ473E
R2	RK0011	Chip R, MCR10EZJH470E				R2	RA0002	R. Ally, MNR12E0AJ473E
R3	RK0035	Chip R, MCR10EZJH102E				R3	RA0002	R. Ally, MNR12E0AJ473E
R4	RK2018	Chip R, MCR50JZHJ151E				R4	RA0002	R. Ally, MNR12E0AJ473E
VR1	RH0038	VR, CVR-42A-473AD				R5	RA0002	R. Ally, MNR12E0AJ473E
UHF PA Unit			CONTROL Unit			R6	RA0002	R. Ally, MNR12E0AJ473E
C1	CE0163	Chemical C, 16MV 1000AZ	C1	CU8003	Chip C, C2012JF1E104Z	R8	RK0086	Chip R, MCR10EZJH105E
C2	CU0051	Chip C, C2012CH1H471K	C2	CU8003	Chip C, C2012JF1E104Z	R9	RK0052	Chip R, MCR10EZJH103E
C3	CE0201	Chemical C, 16MV 10SZ	C3	CU8003	Chip C, C2012JF1E104Z	R10	RK0105	Chip R, MCR10EZJH2R2E
C4	CU0051	Chip C, C2012CH1H471K	C4	CU8003	Chip C, C2012JF1E104Z	R11	RK0062	Chip R, MCR10EZJH473E
C5	CE0201	Chemical C, 16MV 10SZ	C5	CU8003	Chip C, C2012JF1E104Z	R12	RK0062	Chip R, MCR10EZJH473E
C6	CU7014	Chip C, UC232H0600D-T	C6	CU8003	Chip C, C2012JF1E104Z	R13	RK0036	Chip R, MCR10EZJH122E
C7	CU0051	Chip C, C2012CH1H471K	C7	CU8003	Chip C, C2012JF1E104Z	R14	RK0036	Chip R, MCR10EZJH122E
C8	CU0007	Chip C, C2012CH1H060D	C8	CU8003	Chip C, C2012JF1E104Z	R15	RK0033	Chip R, MCR10EZJH821E
C9	CC5008	Ceramic C, HN60SJSJL070D (E only)	C9	CU8003	Chip C, C2012JF1E104Z	R16	RK0033	Chip R, MCR10EZJH821E
C9	CC5016	Ceramic C, HN60SJSJL080D (T only)	C10	CU8003	Chip C, C2012JF1E104Z	R17	RK0033	Chip R, MCR10EZJH821E
C10	CU0002	Chip C, C2012CH1H010C	C11	CU8003	Chip C, C2012JF1E104Z	R18	RK0033	Chip R, MCR10EZJH821E
C11	CU8028	Chip C, C2012B1H103K	C12	CU8003	Chip C, C2012JF1E104Z	R19	RA0005	R. Ally, MNR14AJ473E
C12	CU7021	Chip C, UC232H0160J	C13	CU8003	Chip C, C2012JF1E104Z	R20	RA0005	R. Ally, MNR14AJ473E
C13	CU7022	Chip C, TE82UC232H0100D (E only)	C14	CU8003	Chip C, C2012JF1E104Z	R21	RA0005	R. Ally, MNR14AJ473E
C13	CU7016	Chip C, TE82UC232H0080D (T only)	C15	CU8003	Chip C, C2012JF1E104Z	R22	RA0005	R. Ally, MNR14AJ473E
C14	CU8016	Chip C, C2012B1H102K	C16	CU8003	Chip C, C2012JF1E104Z	R23	RK0059	Chip R, MCR10EZJH333E
C15	CU8016	Chip C, C2012B1H102K	C17	CU8003	Chip C, C2012JF1E104Z	R24	RK0062	Chip R, MCR10EZJH473E
C16	CU8016	Chip C, C2012B1H102K	C18	CU8028	Chip C, C2012B1H103K	R25	RK0042	Chip R, MCR10EZJH332E
C17	CU7003	Chip C, C3K3INAR102K	C19	CU8028	Chip C, C2012B1H103K	R26	RK0037	Chip R, MCR10EZJH152E
C24	CU8016	Chip C, C2012B1H102K	C20	CU8028	Chip C, C2012B1H103K	R27	RK0056	Chip R, MCR10EZJH223E
C25	CU8016	Chip C, C2012B1H102K	C21	CU8016	Chip C, C2012B1H102K	R28	RK0045	Chip R, MCR10EZJH473E
C26	CS0208	Chip Tantal, TMC-MOJ475M	C22	CU8016	Chip C, C2012B1H102K	R29	RK0062	Chip R, MCR10EZJH473E
C27	CU8016	Chip C, C2012B1H102K	C23	CU8016	Chip C, C2012B1H102K	R30	RK0062	Chip R, MCR10EZJH473E
C28	CU8016	Chip C, C2012B1H102K	C24	CU8016	Chip C, C2012B1H102K	R31	RK0107	Chip R, MCR10EZJH000E
C29	CS0208	Chip Tantal, TMC-MOJ475M	C25	CU8016	Chip C, C2012B1H102K	R32	RK0107	Chip R, MCR10EZJH000E (T only)
C30	CU8016	Chip C, C2012B1H102K	C26	CU8016	Chip C, C2012B1H102K	R34	RK0107	Chip R, MCR10EZJH000E
C31	CU0051	Chip C, C2012CH1H471K	C27	CU8016	Chip C, C2012B1H102K	R36	RA0006	R. Ally, EXB-M16D8ALG (T only)
C32	CU8016	Chip C, C2012B1H102K	C28	CU8016	Chip C, C2012B1H102K	R36	RD0115	JPW01FC0 30Ω (E only)
CN62	UE0108	Connector, 6FE-BT	C29	CU8016	Chip C, C2012B1H102K	R37	RA0005	R. Ally, MNR14AJ473E
CN64	UE0112	Connector, 5513-04CPB	C30	CS0052	Chip Tantal, TMC1A336	R38	RK0050	Chip R, MCR10EZJH822E
CN65	UE0116	Pin 1.0x18L	C31	CU0071	Chip C, C2012CH1H101J	R39	RK0025	Chip R, MCR10EZJH331E
CN67	UE0116	Pin 1.0x18L	C32	CU8034	Chip C, C2012X7R1E333K	R41	RA0005	R. Ally, MNR14AJ473E
CN68	UA0002	R/B 1.25 x 0.25M Plug	C33	CU8040	Chip C, 2012JB1E473K	R42	RK0033	Chip R, MCR10EZJH821E
CN6A	UE0108	Connector, 6FE-BT	C34	CU8038	Chip C, CM316Y5V105Z25VA	R43	RK0033	Chip R, MCR10EZJH821E
RT1	UE0119	RT Pin, RT-01T-1.0B	C35	CU8038	Chip C, CM316Y5V105Z25VA	R44	RK0039	Chip R, MCR10EZJH222E
RT2	UE0119	RT Pin, RT-01T-1.0B	C36	CU8038	Chip C, CM316Y5V105Z25VAT (T only)	R45	RK0039	Chip R, MCR10EZJH222E
RT3	UE0119	RT Pin, RT-01T-1.0B	C37	CU8038	Chip C, C3216H223KB (E only)	R46	RK0039	Chip R, MCR10EZJH222E
RT5	UE0119	RT Pin, RT-01T-1.0B	C38	CU8038	Chip C, CM316Y5V105Z25VA	R47	RK0039	Chip R, MCR10EZJH222E
R2	RK0107	Chip R, MCR10EZJH000E	C39	CU8016	Chip C, C2012B1H102K	R48	RK0001	Chip R, MCR10EZJH100E
R3	RK0107	Chip R, MCR10EZJH000E	C40	CE0118	Chemical C, 6R3MS7 220	R49	RK0069	Chip R, MCR10EZJH104E
R4	RK0045	Chip R, MCR10EZJH472E	C41	CS0052	Chip Tantal, TMC1A336	R50	RK0056	Chip R, MCR10EZJH223E
R5	RK0011	Chip R, MCR10EZJH470E	C42	CU8016	Chip C, C2012B1H102K	R51	RK0001	Chip R, MCR10EZJH100E
R6	RK0052	Chip R, MCR10EZJH103E	C43	CU8016	Chip C, C2012B1H102K	R52	RK0036	Chip R, MCR10EZJH122E
R7	RK0023	Chip R, MCR10EZJH271E	C44	CS0052	Chip Tantal, TMC1A336	R53	RK0035	Chip R, MCR10EZJH102E
R8	RK2018	Chip R, MCR50JZHJ151E	C45	CE0315	Chemical C, 16CV47B	R54	RK0079	Chip R, MCR10EZJH474E
IC1	XA0077	IC, M57788M	C46	CU8016	Chip C, C2012B1H102K	R55	RK0072	Chip R, MCR10EZJH184E
Q1	XT0041	Transistor, FMN1T148	C47	CS0221	Chip Tantal, TMC1C475TR	R56	RK0073	Chip R, MCR10EZJH224E
D1	XD0106	Diode, UM9401	C48	CU0071	Chip C, C2012CH1H101J	R57	RK0059	Chip R, MCR10EZJH333E
D2	XD0014	Diode, MI308	C49	CU0051	Chip C, C2012CH1H471K	R59	RK0062	Chip R, MCR10EZJH473E
D3	XD0102	Diode, ISS101	C50	CU0051	Chip C, C2012CH1H471K	R60	RK0062	Chip R, MCR10EZJH473E
D4	XD0118	Diode, MA716	C51	CU0060	Chip C, C2012CH1H470J	R61	RK0045	Chip R, MCR10EZJH472E
D5	XD0040	Diode, DAN202K	C52	CU0065	Chip C, C2012CH1H270J	R62	RK0069	Chip R, MCR10EZJH104E
D6	XD0107	Diode, G3B	C53	CS0057	Chip Tantal, TMC0J225	R63	RK0035	Chip R, MCR10EZJH102E
			C54	CU8003	Chip C, C2012JF1E104Z	R64	RK0107	Chip R, MCR10EZJH000E
			C55	CU8032	Chip C, C2012B1E223K	VR1	RH0038	VR, CVR-42A-473AD
			C56	CU0071	Chip C, C2012CH1H101J	VR2	RH0038	VR, CVR-42A-473AD
			C57	CU8028	Chip C, C2012B1H103K	L1	QC0104	Chip L, LER015T1R5M
			C58	CU8028	Chip C, C2012B1H103K	L2	QC0104	Chip L, LER015T1R5M
			C59	CU8028	Chip C, C2012B1H103K	CN12	UE0115	Connector, 50020-8106
			C60	CU8028	Chip C, C2012B1H103K	CN15	UE0121	Connector, R-DR590
			C61	CU8028	Chip C, C2012B1H103K	CN16	UE0035	Mic Connector, FM214-8SMPY
			C62	CU8028	Chip C, C2012B1H103K			
			C63	CU8016	Chip C, C2012B1H102K			

Ref. No.	Part Code	Part Name and Number
R102	RK0052	Chip R, MCR10EZJ103E
R103	RK0052	Chip R, MCR10EZJ103E
R104	RK0045	Chip R, MCR10EZHJ472E
R105	RK0045	Chip R, MCR10EZHJ472E
R106	RK0018	Chip R, MCR10EZHJ101E
R107	RK0027	Chip R, MCR10EZHJ391E
R108	RK0027	Chip R, MCR10EZHJ391E
R111	RK0052	Chip R, MCR10EZHJ103E
R112	RK0052	Chip R, MCR10EZHJ103E
R113	RK0052	Chip R, MCR10EZHJ103E
R114	RK0052	Chip R, MCR10EZHJ103E
R115	RK0045	Chip R, MCR10EZHJ472E
R116	RK0069	Chip R, MCR10EZHJ104E
R117	RK0052	Chip R, MCR10EZHJ103E
R118	RK0107	Chip R, MCR10EZHJ000E
R119	RK0001	Chip R, MCR10EZHJ100E
R120	RK0069	Chip R, MCR10EZHJ104E
R121	RK0069	Chip R, MCR10EZHJ104E
R122	RK0073	Chip R, MCR10EZHJ224E
R123	RK0107	Chip R, MCR10EZHJ000E
X1	XB0004	FAR, C4CA0A194000K01
L1	QC0104	Chip L, LER105T1R5M
L2	QC0104	Chip L, LER105T1R5M
IC1	XA0120	IC, μ PD75108GFK30-3BE
IC2	XA0118	IC, S-8054ALR-LN
IC3	XA0098	IC, NJM78L05UA
IC4	XA0082	IC, MC7808CT
IC5	XA0068	IC, M5218FP-T01-1
IC6	XA0120	IC, M51132L
IC7	XA0087	IC, TC4S01F
IC8	XA0087	IC, TC4S01F
IC9	XA0115	IC, TC4S66F
IC10	XA0115	IC, TC4S66F
Q1	XT0037	Transistor, 2SC2412KR
Q2	XT0037	Transistor, 2SC2412KR
Q3	XT0037	Transistor, 2SC2412KR
Q4	XU0015	Digital Transistor, DTC144TK
Q5	XU0015	Digital Transistor, DTC144TK
Q6	XU0014	Digital Transistor, DTC144EK
Q7	XU0012	Digital Transistor, DTC114EK
Q8	XT0091	Transistor, 2SB1412QF5T200
Q9	XU0019	Digital Transistor, DTA114YK
Q10	XU0014	Digital Transistor, DTC144EXT146
VOL Unit		
VR1	RV0016	VR, RK0972210L2550KB \times 2
VR2	RV0016	VR, RK0972210L2550KB \times 2
VHF VCO Unit		
C10	CU8016	Chip C, C2012B1H102K
C11	CU8028	Chip C, C2012B1H103K
C12	CU0059	Chip C, C2012CH1H1R5C
C13	CU0051	Chip C, C2012CH1H471K
C14	CU8028	Chip C, C2012B1H103K
C15	CU0059	Chip C, C2012CH1H1R5C
C16	CU0064	Chip C, C2012CH1H220J
C17	CU8016	Chip C, C2012B1H102K
C18	CU8016	Chip C, C2012B1H102K
C19	CS0063	Chip Tantal, TMC1V104
C20	CU8028	Chip C, C2012B1H103K
C21	CU8028	Chip C, C2012B1H103K
C23	CU0059	Chip C, C2012CH1H1R5C
C24	CU0064	Chip C, C2012CH1H220J
C25	CU8028	Chip C, C2012B1H103K
C26	CU0071	Chip C, C2012CH1H101J
C27	CU0066	Chip C, C2012CH1H330J
C30	CE0033	Chemical C, 10MV10UWA

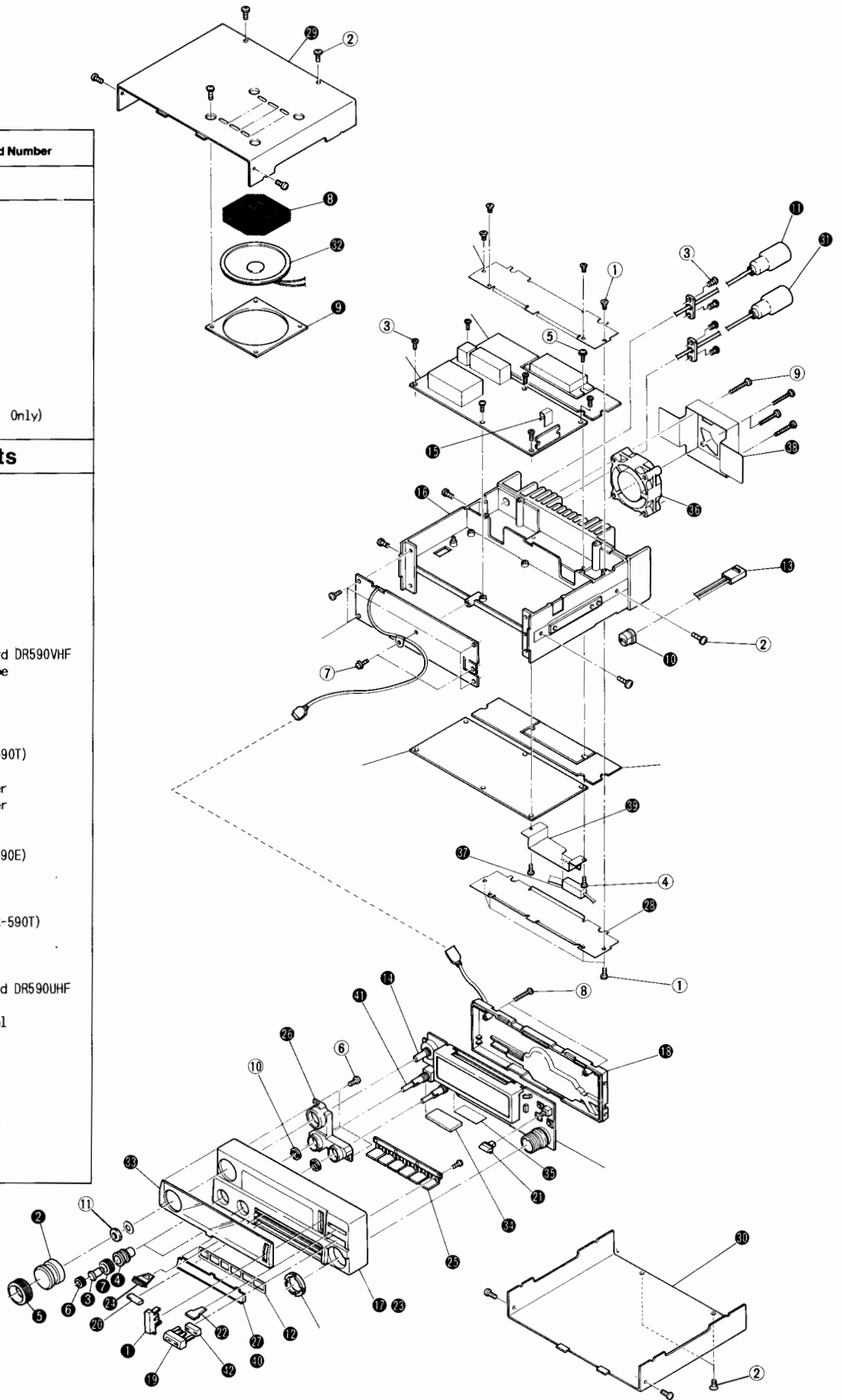
Ref. No.	Part Code	Part Name and Number
C31	CE0033	Chemical C, 10MV10UWA
CN3D	UE0076	Pin Header, SB4P-HVQ-CA
CN36	UE0097	Pin Header, SB3P-HVQ-CA
Q5	XU0012	Digital Transistor, DTC114EK
Q6	XE0010	FET, 2SK508K52T1
Q7	XT0081	Transistor, 2SC2714Y
Q8	XE0010	FET, 2SK508K52T1
Q9	XT0081	Transistor, 2SC2714Y
Q10	XU0012	Digital Transistor, DTC114EK
D4	XD0077	Varicap, 1SV161
D6	XD0077	Varicap, 1SV161
L3	QA0067	Coil, 100MOSC-2
L4	QC0110	Chip L, LER015T4R7K
L6	QC0104	Chip L, LER015T1R5M
L7	QC0104	Chip L, LER015T1R5M
L9	QC0110	Chip L, LER015T4R7K
L10	QA0067	Coil, 100MOSC-2
R16	RK0048	Chip R, MCR10EZHJ682E
R17	RK0018	Chip R, MCR10EZHJ101E
R18	RK0021	Chip R, MCR10EZHJ181E
R19	RK0028	Chip R, MCR10EZHJ471E
R20	RK0045	Chip R, MCR10EZHJ472E
R21	RK0028	Chip R, MCR10EZHJ471E
R22	RK0039	Chip R, MCR10EZHJ222E
R23	RK0018	Chip R, MCR10EZHJ101E
R24	RK0018	Chip R, MCR10EZHJ101E
R25	RK0018	Chip R, MCR10EZHJ101E
R26	RK0045	Chip R, MCR10EZHJ472E
R27	RK0028	Chip R, MCR10EZHJ471E
R28	RK0039	Chip R, MCR10EZHJ222E
R29	RK0021	Chip R, MCR10EZHJ181E
R32	RK0039	Chip R, MCR10EZHJ222E
UHF VCO Unit		
C10	CU8016	Chip C, C2012B1H102K
C11	CU0003	Chip C, C2012CH1H020C
C12	CU0003	Chip C, C2012CH1H020C
C13	CU8016	Chip C, C2012B1H102K
C14	CU0010	Chip C, C2012CH1H090D
C15	CU8016	Chip C, C2012B1H102K
C16	CS0063	Chip Tantal, TMC1V104
C17	CU0060	Chip C, C2012CH1H470J
C18	CU0005	Chip C, C2012CH1H040C
C19	CU0061	Chip C, C2012CH1H120J
C20	CU0001	Chip C, C2012CH1H0R5C
C21	CU0009	Chip C, C2012CH1H080D
C22	CU0006	Chip C, C2012CH1H050C
C23	CU0006	Chip C, C2012CH1H050C
C28	CE0033	Chip C, C201210MV10UWA
C29	CU0064	Chip C, C2012CH1H220J
CN56	UE0097	Pin Header, SB3P-HVQ-CA
CN5C	UE0076	Pin Header, SB4P-HVQ-CA
Q5	XE0002	FET, 2SK125
Q6	XT0030	Transistor, 2SC3356BR25
D4	XD0100	Varicap, 1SV164
D5	XD0077	Varicap, 1SV161
D6	XD0077	Varicap, 1SV161
L3	QC0101	Chip L, LER015TR82M
L4	QK0086	Coil, 0R5-2R2-3R5TRS
L5	QC0099	Chip L, LER015TR56M
L6	QC0062	Chip L, NL322522T-039M
L7	QC0096	Chip L, LER015TR33M
L8	QC0101	Chip L, LER015TR82M
R16	RK0035	Chip R, MCR10EZHJ102E
R17	RK0065	Chip R, MCR10EZHJ683E
R18	RK0018	Chip R, MCR10EZHJ101E
R19	RK0011	Chip R, MCR10EZHJ470E
R20	RK0052	Chip R, MCR10EZHJ103E

Ref. No.	Part Code	Part Name and Number
R21	RK0018	Chip R, MCR10EZHJ101E
R22	RK0044	Chip R, MCR10EZHJ392E
R23	RK0013	Chip R, MCR10EZHJ560E
R26	RK0107	Chip R, MCR10EZHJ000E
R29	RK0018	Chip R, MCR10EZHJ101E
VHF PLL Unit		
C1	CS0221	Chip Tantal, TMC-MIC475
C2	CS0063	Chip Tantal, TMC1V104
C3	CU0071	Chip C, C2012CH1H101J
C4	CU8016	Chip C, C2012B1H102K
C5	CS0061	Chip Tantal, TMC1V224
C6	CS0057	Chip Tantal, TMC0J225
C8	CU0011	Chip C, C2012CH1H100D
C9	CU8016	Chip C, C2012B1H102K
C28	CU0071	Chip C, C2012CH1H101J
C29	CU0071	Chip C, C2012CH1H101J
R1	RK0052	Chip R, MCR10EZHJ103E
R2	RK0052	Chip R, MCR10EZHJ103E
R3	RK0052	Chip R, MCR10EZHJ103E
R4	RK0052	Chip R, MCR10EZHJ103E
R5	RK0018	Chip R, MCR10EZHJ101E
R6	RK0039	Chip R, MCR10EZHJ222E
R7	RK0035	Chip R, MCR10EZHJ102E
R8	RK0052	Chip R, MCR10EZHJ103E
R9	RK0039	Chip R, MCR10EZHJ222E
R10	RK0018	Chip R, MCR10EZHJ101E
R11	RK0107	Chip R, MCR10EZHJ000E
R12	RK0056	Chip R, MCR10EZHJ223E
R13	RK0052	Chip R, MCR10EZHJ103E
R14	RK0056	Chip R, MCR10EZHJ223E
R15	RK0022	Chip R, MCR10EZHJ221E
R30	RK0035	Chip R, MCR10EZHJ102E
R31	RK0107	Chip R, MCR10EZHJ000E
CN37	UE0117	Pin Header, SB7P-HVQ-27
IC1	XA0149	IC, MB15101LFPF
Q1	XT0038	Transistor, 2SA1037KR
Q2	XT0077	Transistor, 2SC3326A
Q3	XU0017	Digital Transistor, DTA144EK
Q4	XT0081	Transistor, 2SC2714Y
D1	XD0104	Diode, 02CZ6. 2Y
D2	XD0103	Diode, 1SS226
L2	QC0108	Chip L, LER015T3R3K
UHF PLL Unit		
C1	CU8016	Chip C, C2012B1H102K
C2	CS0057	Chip Tantal, TMC0J225
C3	CS0063	Chip Tantal, TMC1V104
C4	CS0221	Chip Tantal, TMC-MIC475
C5	CU0071	Chip C, C2012CH1H101J
C7	CU0011	Chip C, C2012CH1H100D
C8	CS0061	Chip Tantal, TMC1V224
C9	CU8016	Chip C, C2012B1H102K
C25	CU8016	Chip C, C2012B1H102K
C26	CU0060	Chip C, C2012CH1H470J
C27	CU0060	Chip C, C2012CH1H470J
CN57	UE0117	Pin Header, SB7P-HVQ-27
IC1	XA0149	IC, MB1501LFPGBNDTF
Q1	XT0038	Transistor, 2SA1037KR
Q2	XT0077	Transistor, 2SC3326A
Q3	XT0038	Transistor, 2SA1037KR
Q4	XT0030	Transistor, 2SC3356BR25
D1	XD0104	Zenner, 02CZ6. 2Y
D2	XD0103	Diode, 1SS226
L2	QC0062	Chip L, NL322522T-039M

Ref. No.	Part Code	Part Name and Number	Ref. No.	Part Code	Part Name and Number	Ref. No.	Part Code	Part Name and Number
R1	RK0052	Chip R, MCR10EZHJ103E						
R2	RK0018	Chip R, MCR10EZHJ101E						
R3	RK0052	Chip R, MCR10EZHJ103E						
R4	RK0052	Chip R, MCR10EZHJ103E						
R5	RK0039	Chip R, MCR10EZHJ222E						
R6	RK0035	Chip R, MCR10EZHJ102E						
R7	RK0052	Chip R, MCR10EZHJ103E						
R8	RK0039	Chip R, MCR10EZHJ222E						
R9	RK0052	Chip R, MCR10EZHJ103E						
R10	RK0018	Chip R, MCR10EZHJ101E						
R11	RK0107	Chip R, MCR10EZHJ000E						
R12	RK0062	Chip R, MCR10EZHJ473E						
R13	RK0045	Chip R, MCR10EZHJ472E						
R14	RK0039	Chip R, MCR10EZHJ222E						
R15	RK0045	Chip R, MCR10EZHJ472E						
R25	RK0022	Chip R, MCR10EZHJ221E						
R27	RK0018	Chip R, MCR10EZHJ101E						
R28	RK0018	Chip R, MCR10EZHJ101E						
R30	RK0107	Chip R, MCR10EZHJ000E						

CABINET PARTS LOCATION

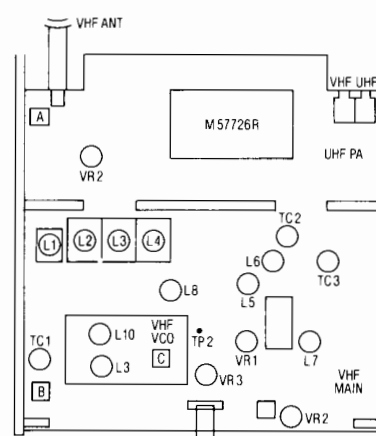
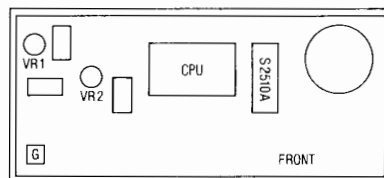
Ref. No.	Part Code	Part Name and Number
Screws		
①	AF0014	M2.6 ×3.5
②	AA0031	M2.6 ×5
③	AJ0017	M2.6 ×6
④		M3 ×8
⑤		M3 ×8
⑥	AP0006	M2 ×6
⑦		M2.6 ×6
⑧		M2.6 ×16
⑨		M3 ×25
⑩	AN0012	Nut M7
		Nut M8
		(Supplied with Rotary Encoder Only)
Mechanical Parts		
①	NB0024	UD Knob
②	NK0011	Dial Knob(L)
③	NK0013	Volume Knob
④	NW0003	Squelch Knob
⑤	ND0009	Dial Rubber(L)
⑥	ND0011	Volume Rubber
⑦	ND0012	Squelch Rubber
⑧	FF0013	SP sheet
⑨	ST0009	SP Metal Crasp
⑩	FB0002	Cord Bush
⑪	UE0122	MR M Antenna Cord DR590VHF
⑫	YZ0067	Display Paneltape
⑬	UA0002	DC Power Cable
⑭	UR0002	Rotary Encoder
⑮	SH0044	IC Fixing Metal
⑯	SS0047	Main Chassis
⑰	KM0061	Front Panel (DR-590T)
⑱	KB0032	Button Panel
⑲	NB0031	Band Switch Cover
⑳	NB0028	Key Button Cover
㉑	NP0040	Power Button
㉒	NB0032	HL Button
㉓	KM0074	Front Panel (DR-590E)
㉔	NB0030	Push Button
㉕	FP0041	Key Button
㉖	DG0010	Encoder Light
㉗	DK0101	Display Sheet (DR-590T)
㉘	TS0035	Shield Lid
㉙	KU0064	Upper Case
㉚	KS0034	Lower Case
㉛	UE0124	MR M Antenna Cord DR590UHF
㉜	ES0001	Speaker 57S38-1
㉝	DP0049	Transparent Panel
㉞	TZ0034	Insulate Sheet
㉟	TL0004	Shield Film
㊱	ET0001	Fan Motor
㊲	UL0009	Thermal Relay
㊳	ST0024	Fan Cover
㊴	ST0025	Thermal Relayfix
㊵	DK0105	Display Sheet
㊶	RV0016	Volume
㊷	ND0013	Band SW Light



ADJUSTMENT

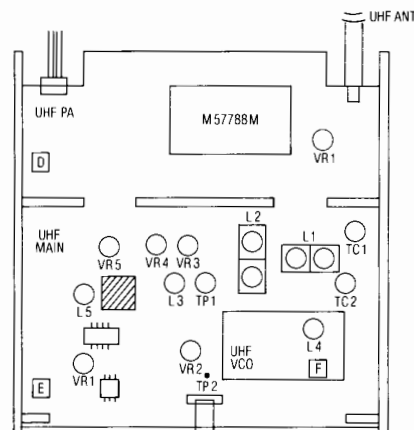
1. VHF Unit

ITEM	ADJUSTMENT POINT (S)	ADJUSTMENT METHOD
VCO VOLTAGE	Ⓒ L3, L10 (VCO BOX)	At 145.00MHz, adjust L3 so that the voltage of TP2 on B substrate is 3.0V. At 145.00MHz, pressing the PTT button, adjust L10 so that the voltage of TP2 on B substrate is 3.4V.
BASIC FREQUENCY	Ⓑ TC1	Pressing PTT button, adjust TC1 so that f-counter indicates 145.950 ± 0.1 kHz (T) or 144.950 ± 0.1 kHz (E) MHz.
TX POWER	Ⓑ TC2, 3	On "HI" position, pressing the PTT button, adjust TC2 and TC3 so that the power is maximum at 145.95MHz (T) or 144.95MHz (E).
POWER OUTPUT	Ⓐ VR2 (HI) Ⓔ VR3 (MID) Ⓔ VR4 (LO)	On "HI" position, turn VR2 for 45W output at 145.95MHz (T) or 144.95MHz (E). Verify the lightning of the entire RF meter. On "MID" position, turn VR3 for 10W output at 145.95MHz (T) or 144.95MHz (E). On "LO" position, turn VR4 for 5W output at 145.95MHz (T) or 144.95MHz (E).
DEVIATION	Ⓑ VR3	Enter the AF level of 0dBm, then pressing the PTT button, adjust VR3 so that you obtain 4.8kHz/Dev at 145.95MHz (T) or 144.95MHz (E) and AF 1kHz.
MIC GAIN	Ⓒ VR1	Enter the AF level of -46dBm, then pressing the PTT button, adjust VR1 so that you obtain 4.0kHz/Dev at 444.95MHz (T) or 434.95MHz (E) and AF 1kHz.
SUBAUDIBLE TONE DEVIATION (DR-590T)	Ⓒ VR2	Pressing the tone button at 145.95MHz, verify 0.6-0.8kHz/Dev at tone frequency of 88.5Hz.
1750Hz TONE DEVIATION (DR-590E)	Ⓒ VR2	Pressing the tone button, verify that the tone frequency is 1750Hz and the deviation is $3.5\text{kHz} \pm 0.2\text{kHz}$.
DISCRIMINATOR	Ⓑ L5, 6, 7	At 146.03MHz (T) or 145.03MHz (E) and 60 dB μ input, adjust L5, 6, 7 so that the distortion is minimum at 50mW.
SENSITIVITY	Ⓑ L1, 2, L3, 4, 8	Adjust L1, 2, 3, 4, 8 so that 12dB SINAD sensitivity is the highest at 146.03MHz (T) or 145.03MHz (E).
SQUELCH	Ⓑ VR2	At 146.03MHz (T) or 145.03MHz (E) and cut SG output. Adjust squelch knob point by VR2.
S-METER	Ⓑ VR1	At 145.03MHz (T) and 3-dB μ [EMF], adjust VR1 so that 2 in the S-meter begins to light.

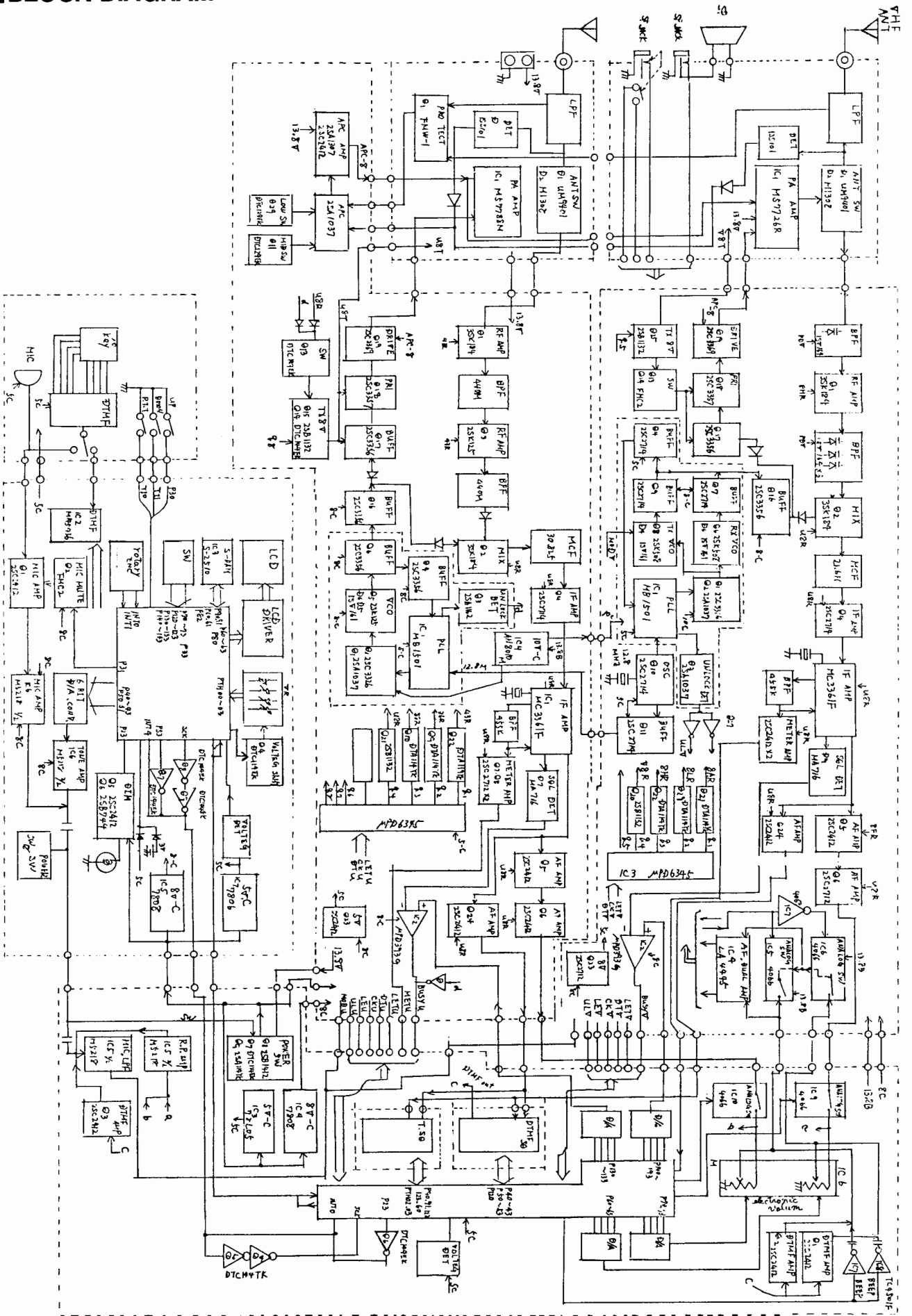


2. UHF Unit

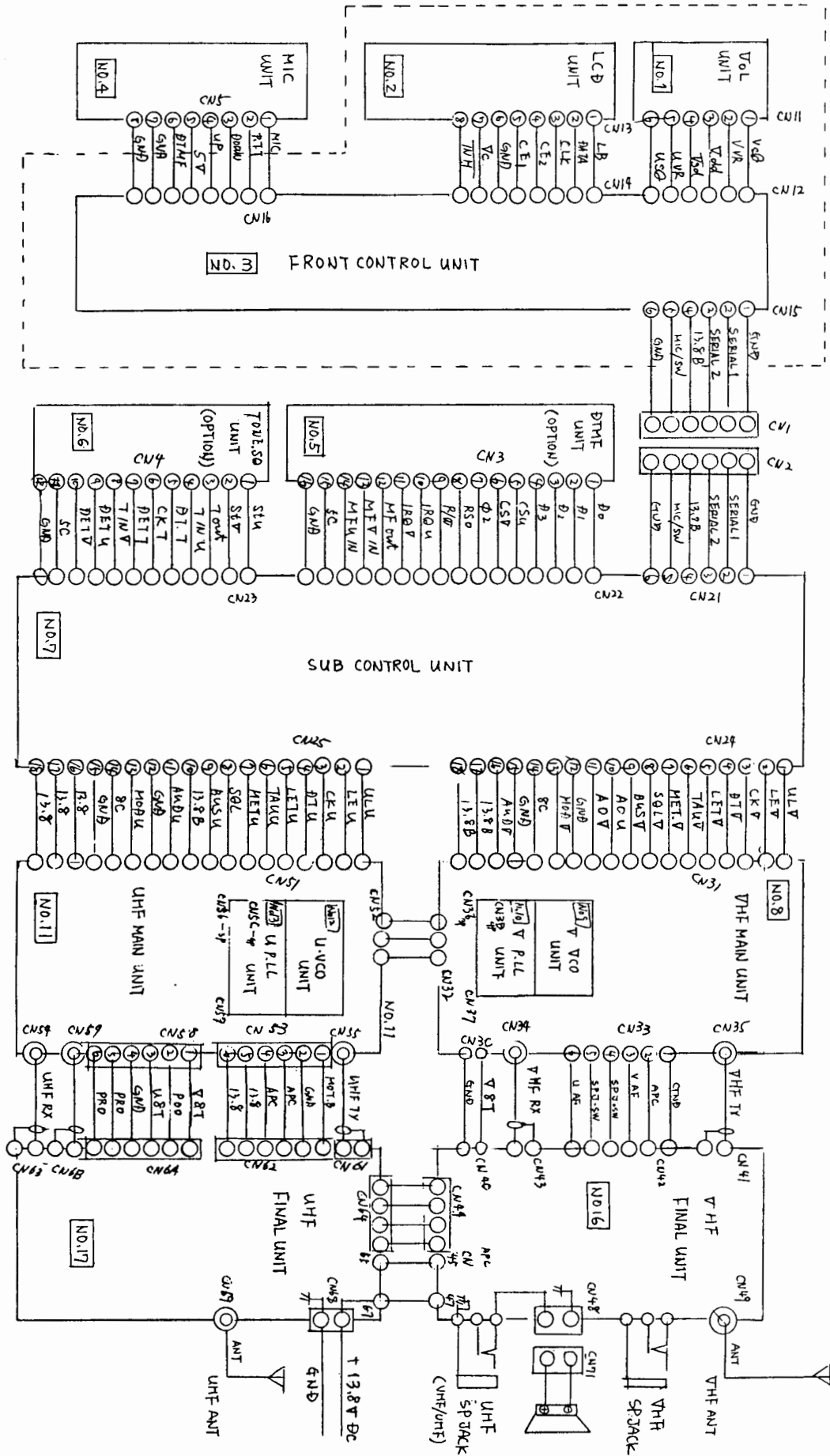
ITEM	ADJUSTMENT POINT (S)	ADJUSTMENT METHOD
VCO VOLTAGE	Ⓕ L4 (VCO BOX)	At 445.00MHz (T) or 435.00MHz (E), adjust L4 so that the voltage of TP2 on E substrate is 4.0V (T) or 3.2V (E).
POWER OUTPUT	Ⓓ VR1 (HI) Ⓔ VR3 (MID) Ⓔ VR4 (LO)	On "HI" position, turn VR1 for 35W output at 444.95MHz (T) at 434.95MHz (E). Verify the lighting of the entire RF meter. On "MID" position, turn VR3 for 8W output at 444.95MHz (T) or 434.95MHz (E). On "LO" position, turn VR4 for 4W output at 444.95MHz (T) or 434.95MHz (E).
DEVIATION	Ⓔ VR2	Enter the AF level of 0dBm, then pressing the PTT button, adjust VR2 so that you obtain 4.8kHz/Dev at 444.95MHz (T) or 434.95MHz (E) and AF 1kHz.
MIC GAIN	Ⓒ VR1	Enter the AF level of -46dBm, then pressing the PTT button, adjust VR1 so that you obtain 4.0kHz/Dev at 444.95MHz (T) or 434.95MHz (E) and AF 1kHz.
SUBAUDIBLE TONE DEVIATION (DR-590T)	Ⓒ VR2	Pressing the tone button at 444.95MHz, verify 0.6-0.8kHz/Dev at tone frequency of 88.5Hz. Adjust VR2.
1750Hz TONE DEVIATION (DR-590E)	Ⓒ VR2	Pressing the tone button, verify that the tone frequency is 1750Hz and the deviation is 3.5kHz ± 0.2kHz. Adjust VR2.
HELICAL FILTER	Ⓔ TC1, TC2 L1, L2	Connect the output of a tracking generator to the antenna and spectrum analyzer to TP1 the adjust TC1, 2 and L1, 2 so that the sensitivity is at its peak between 440 and 450MHz at maximum gain. (570E: 430-440MHz)
DISCRIMINATOR	Ⓔ L3, L5	At 445.03MHz (T) or 435.03MHz (E) and 60 dB μ input, adjust L3, L5 so that the distortion is minimum at 50mW.
SQUELCH	Ⓔ VR1	At 445.03MHz (T) or 435.03MHz (E) and cut the SG output power. Adjust squelch knob point by VR1.
S-METER	Ⓔ VR5	At 445.03MHz (T) or 435.03MHz (E) and 3-dB μ [EMF], adjust VR5 so that 2 in the S-meter begins to light.



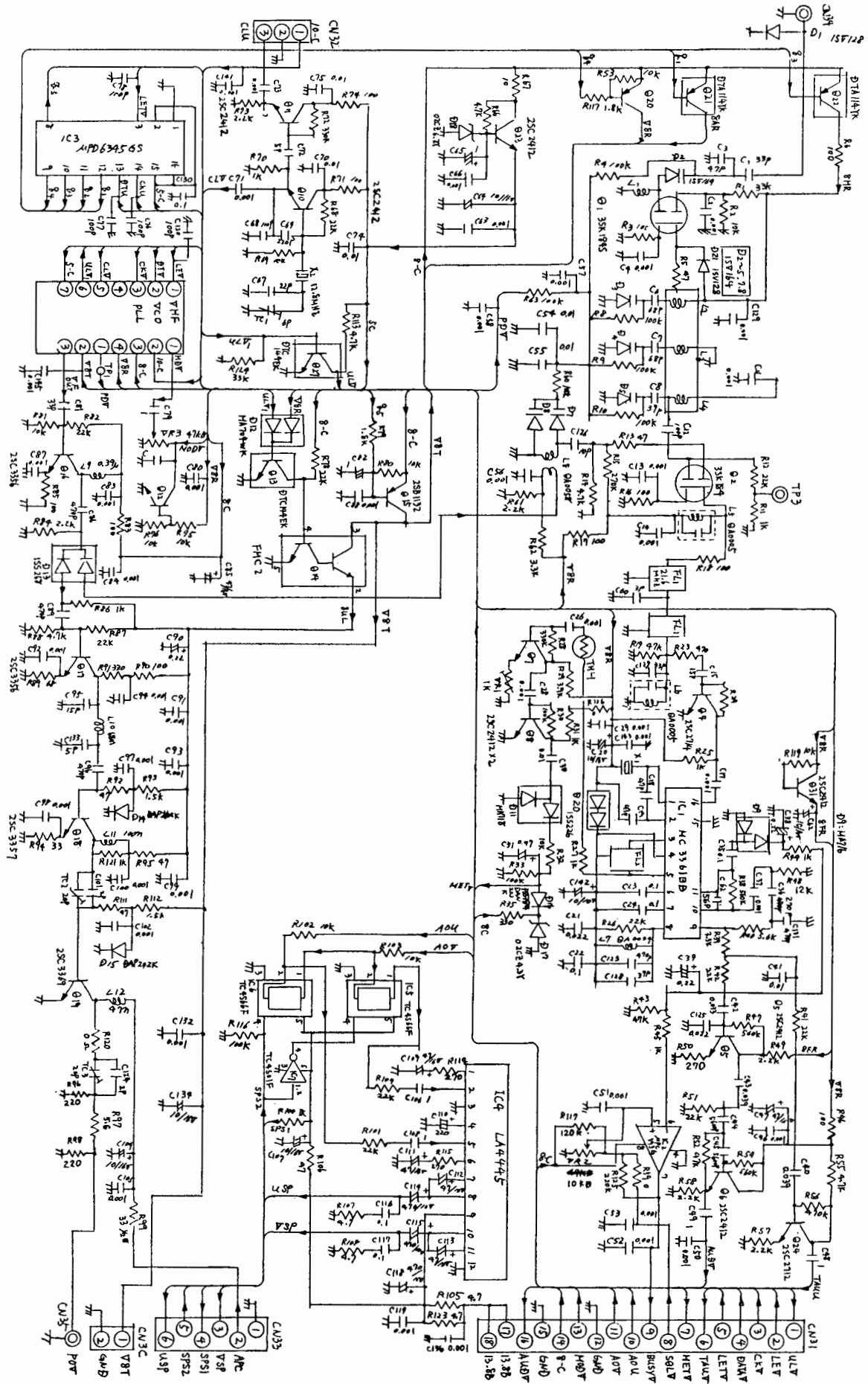
BLOCK DIAGRAM



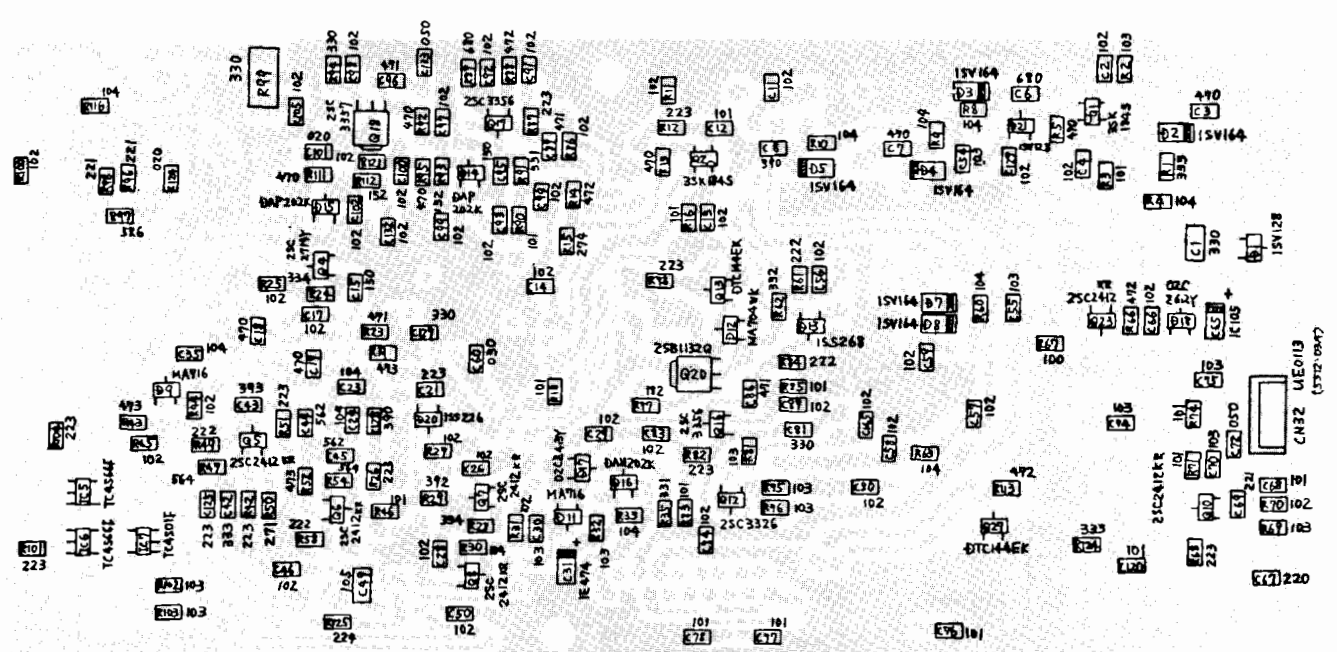
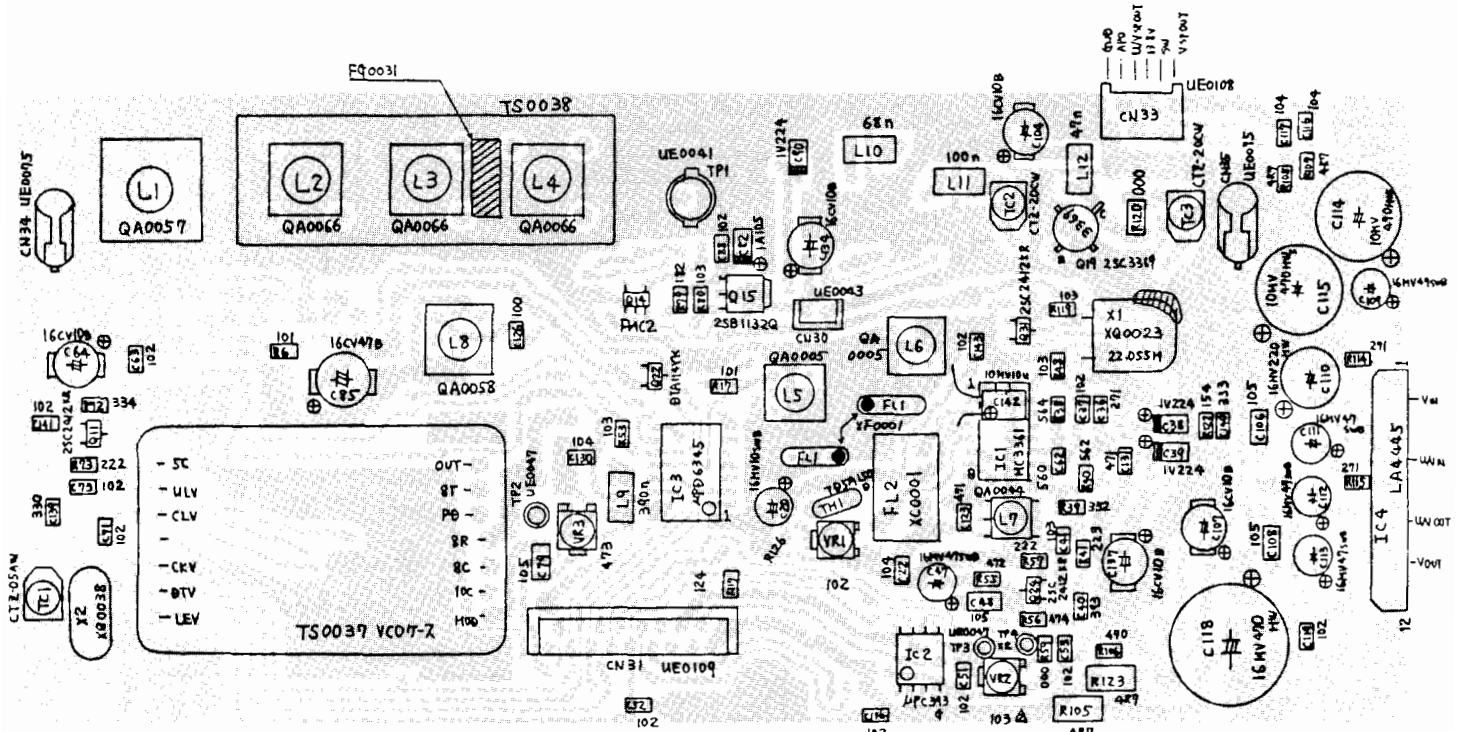
OVERALL WIRING



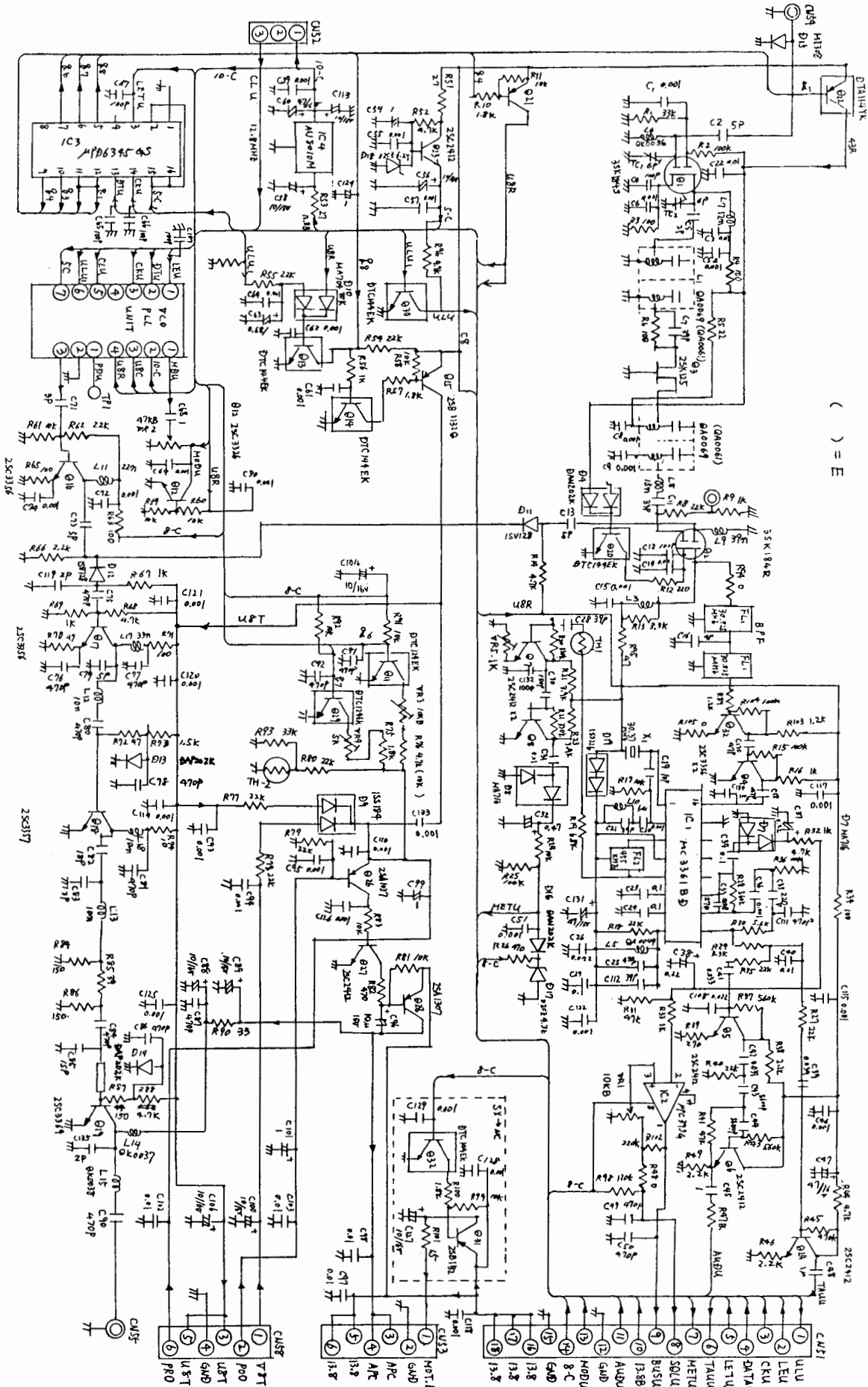
SCHEMATIC DIAGRAM OF VHF MAIN UNIT



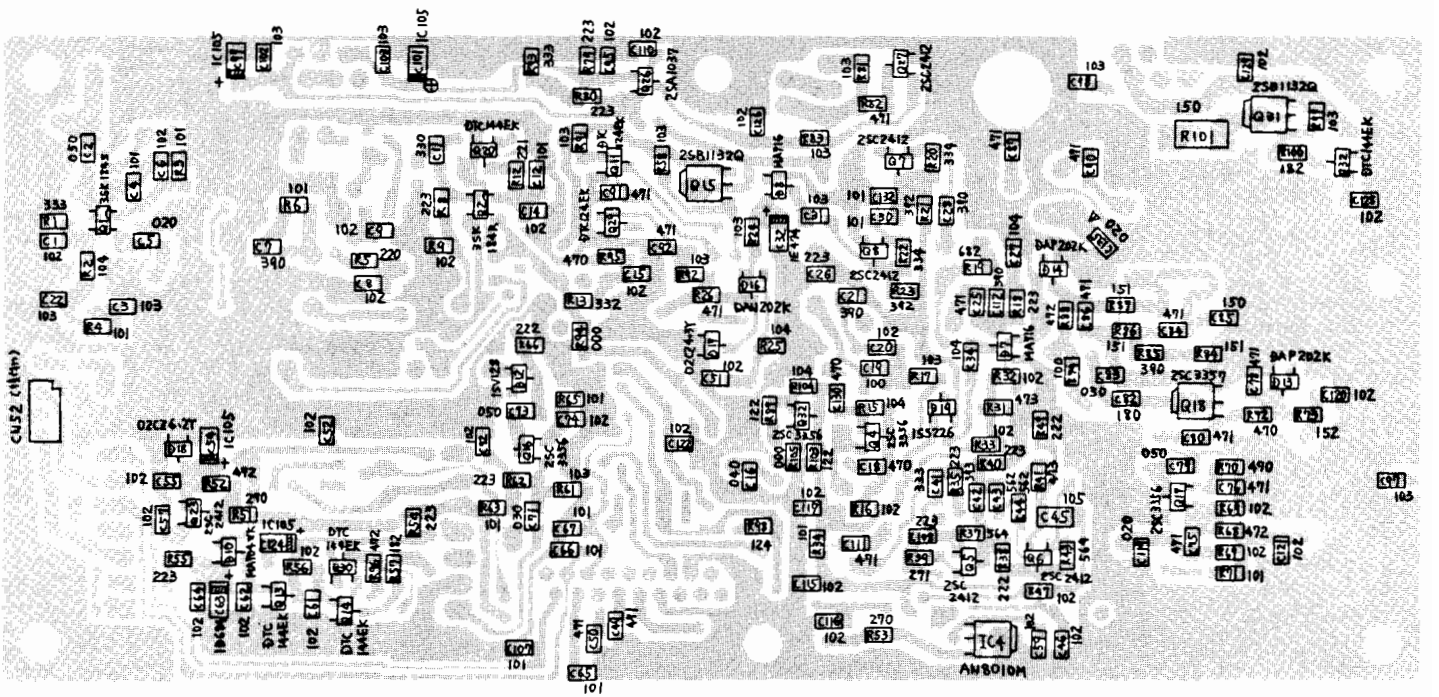
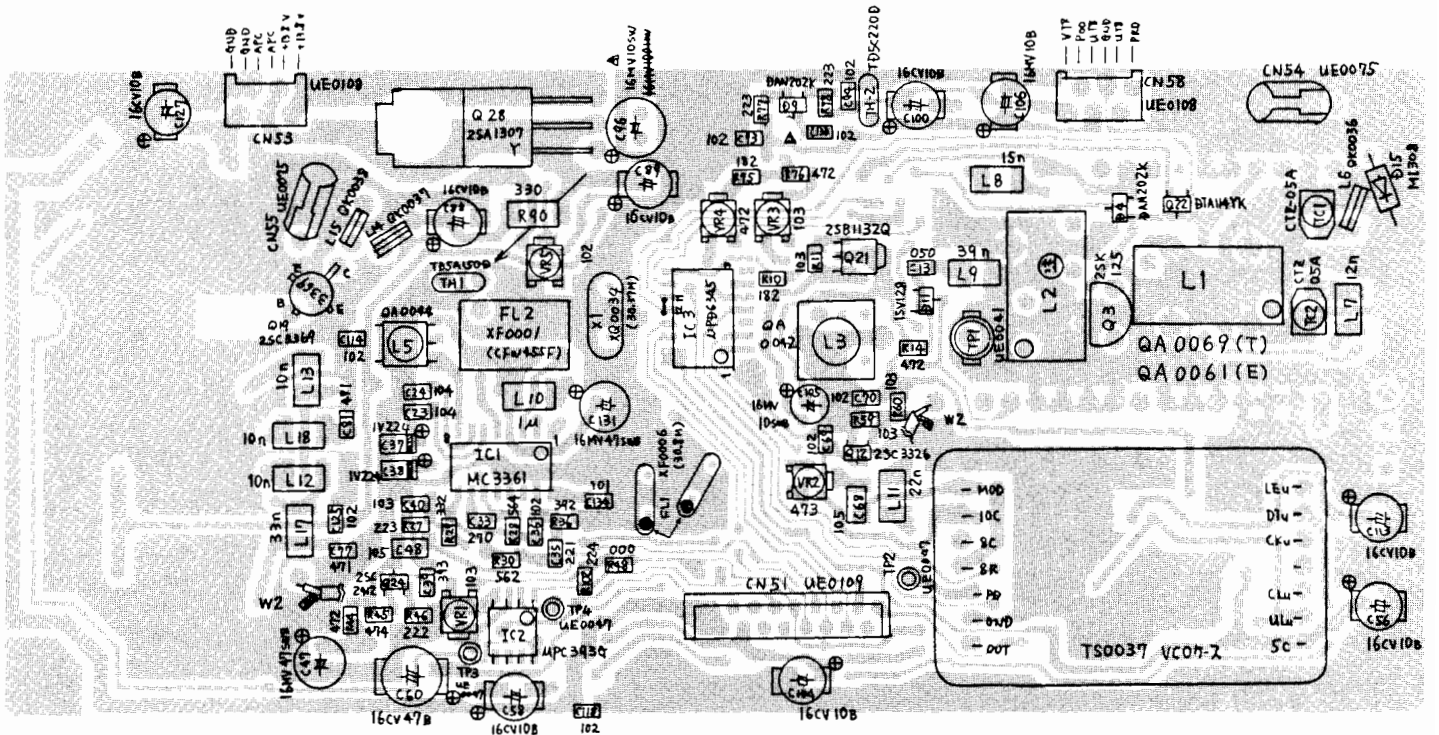
VHF MAIN PC BOARDS



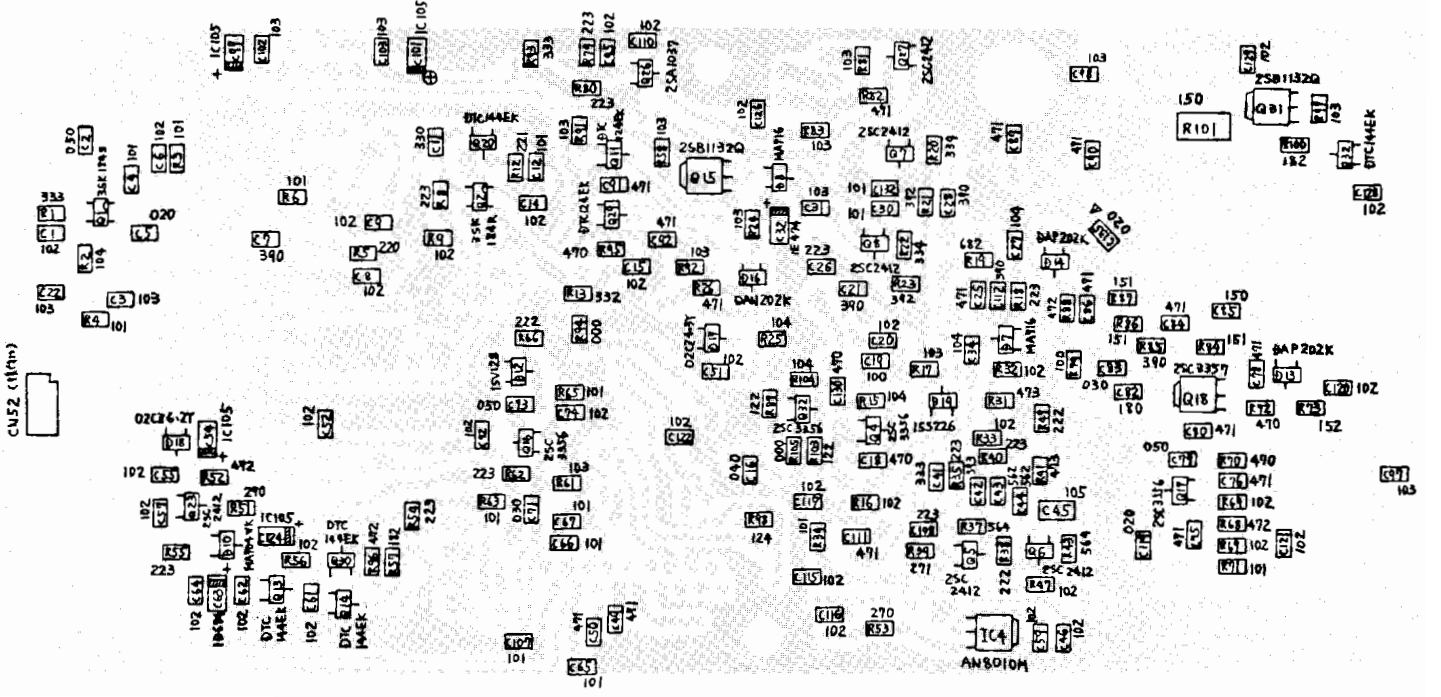
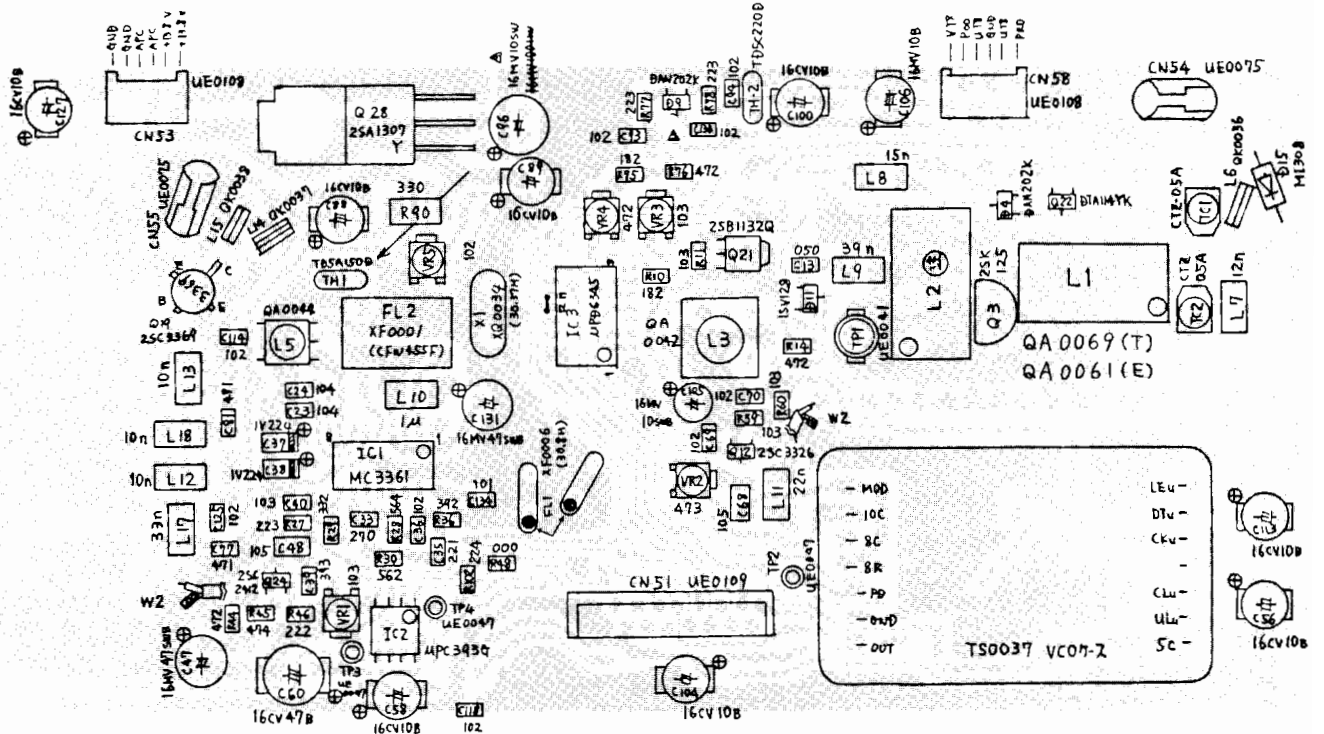
SCHEMATIC DIAGRAM OF UHF MAIN UNIT



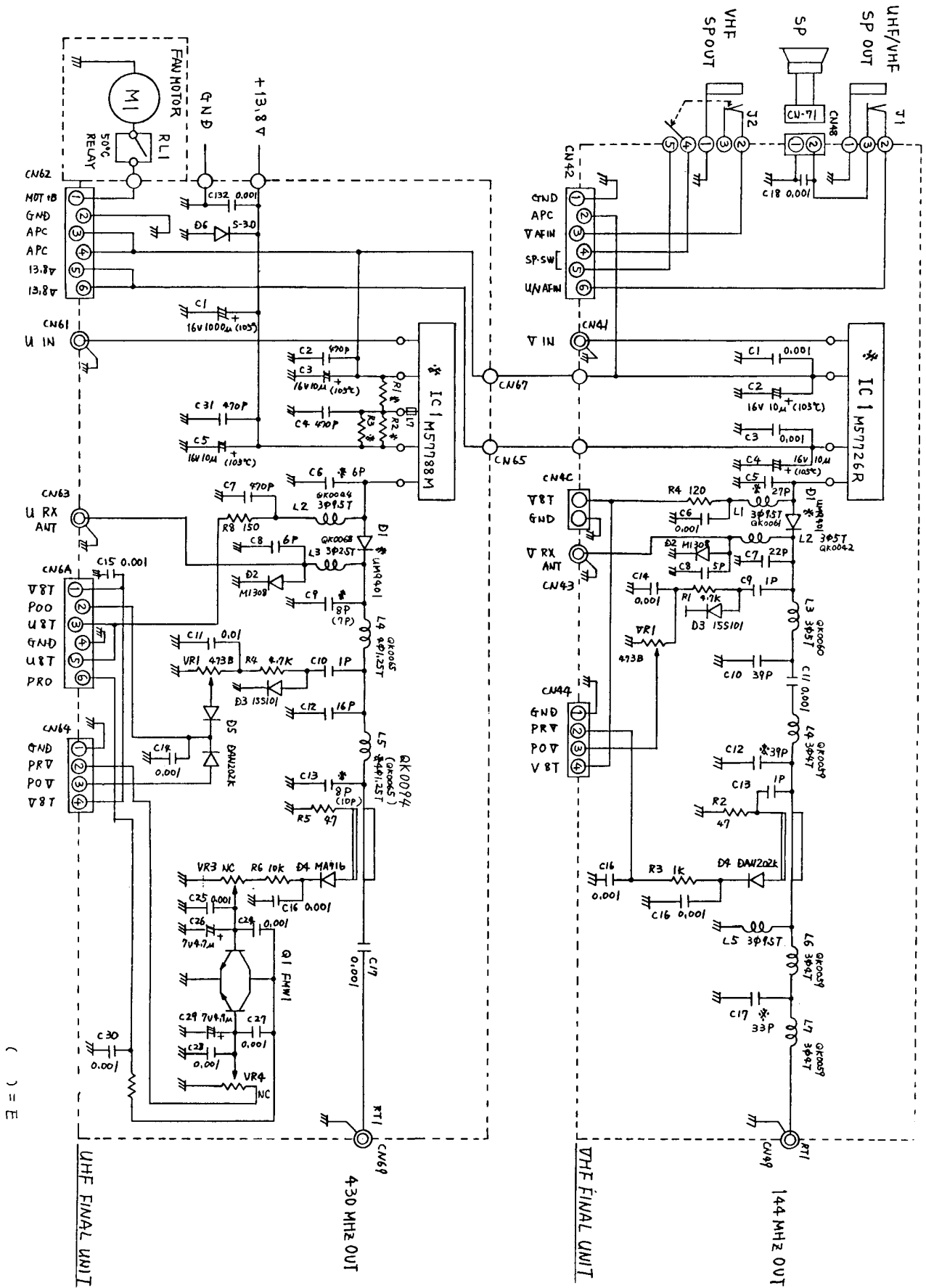
UHF MAIN PC BOARDS



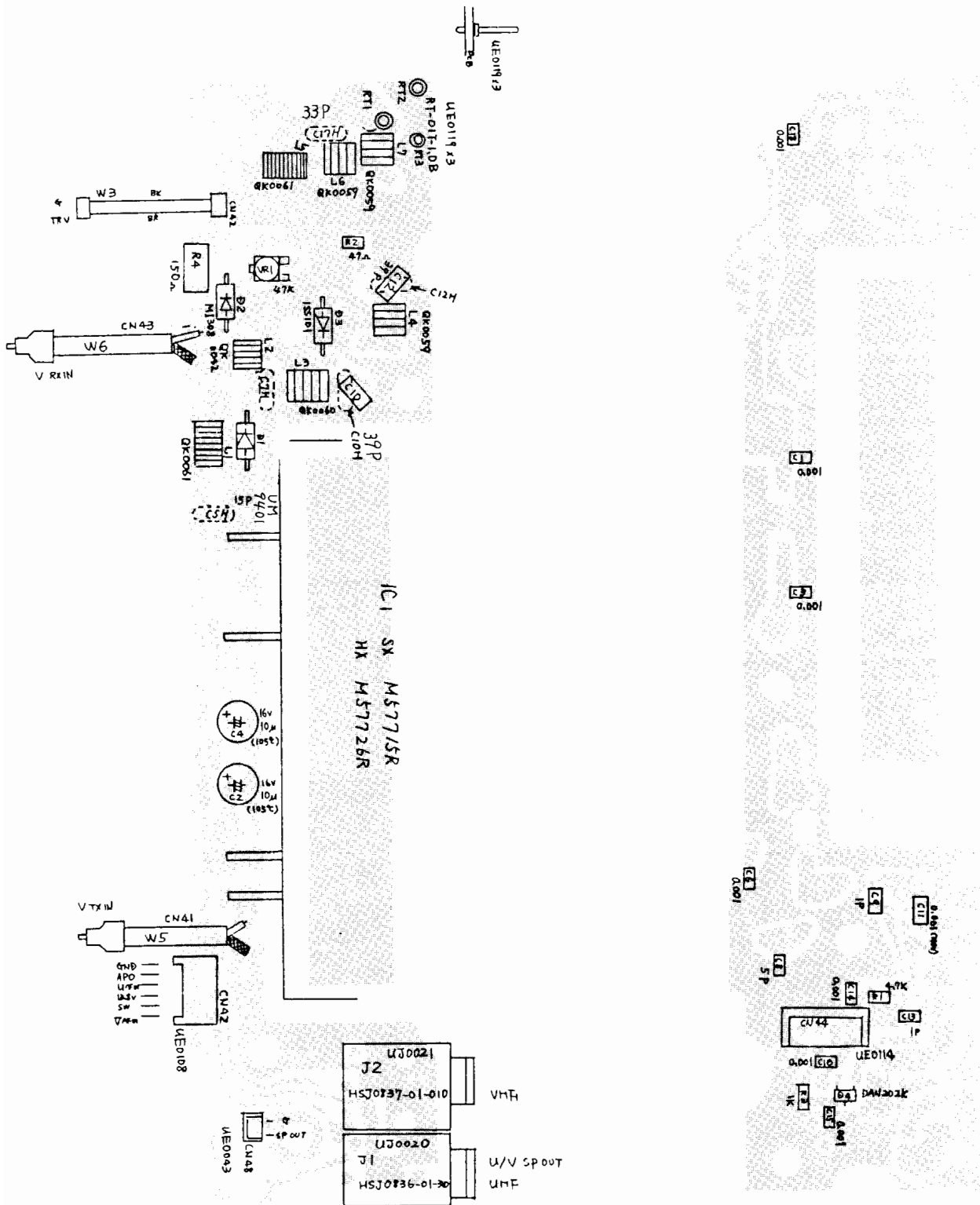
UHF MAIN PC BOARDS



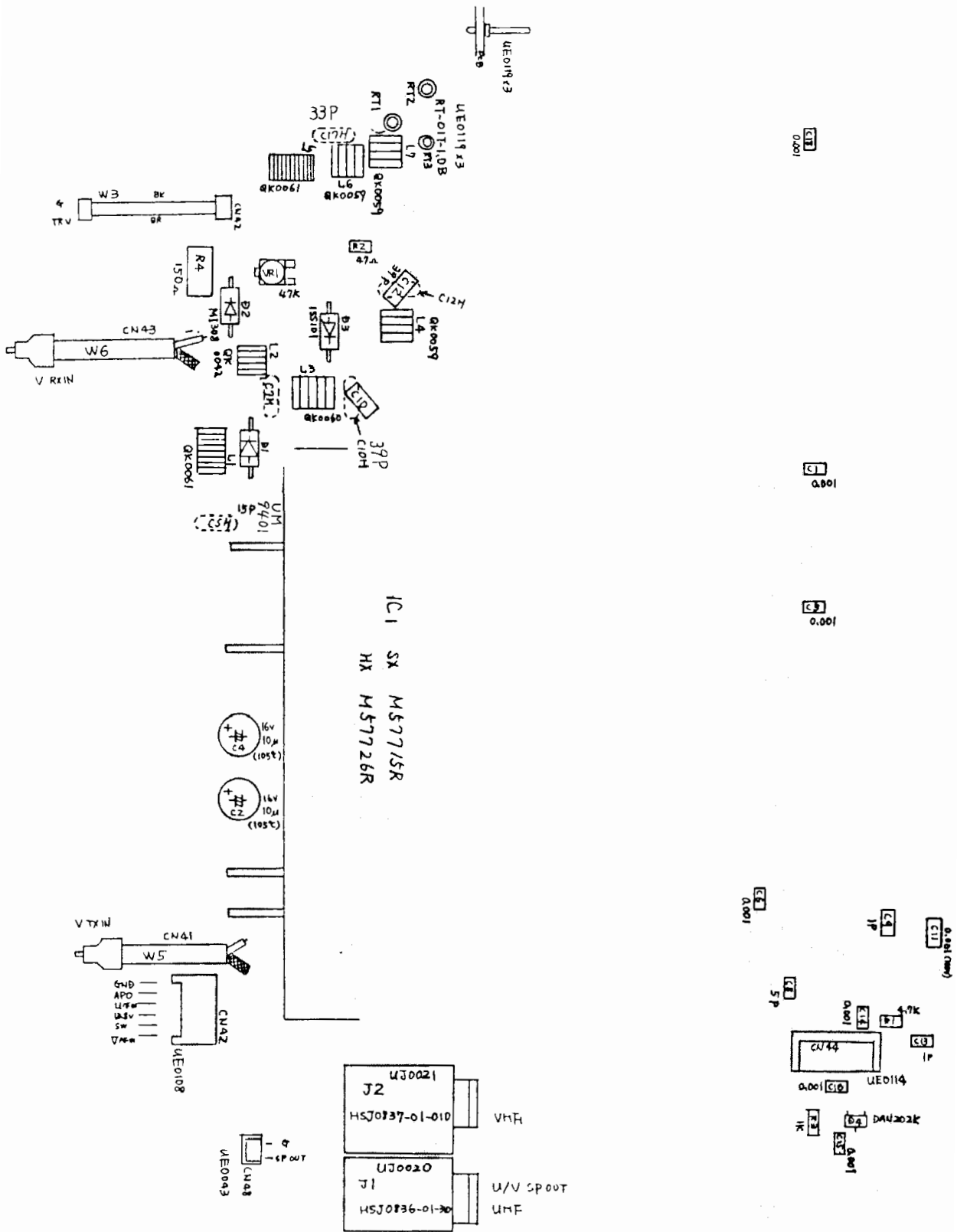
SCHEMATIC DIAGRAM OF VHF/UHF PA UNIT



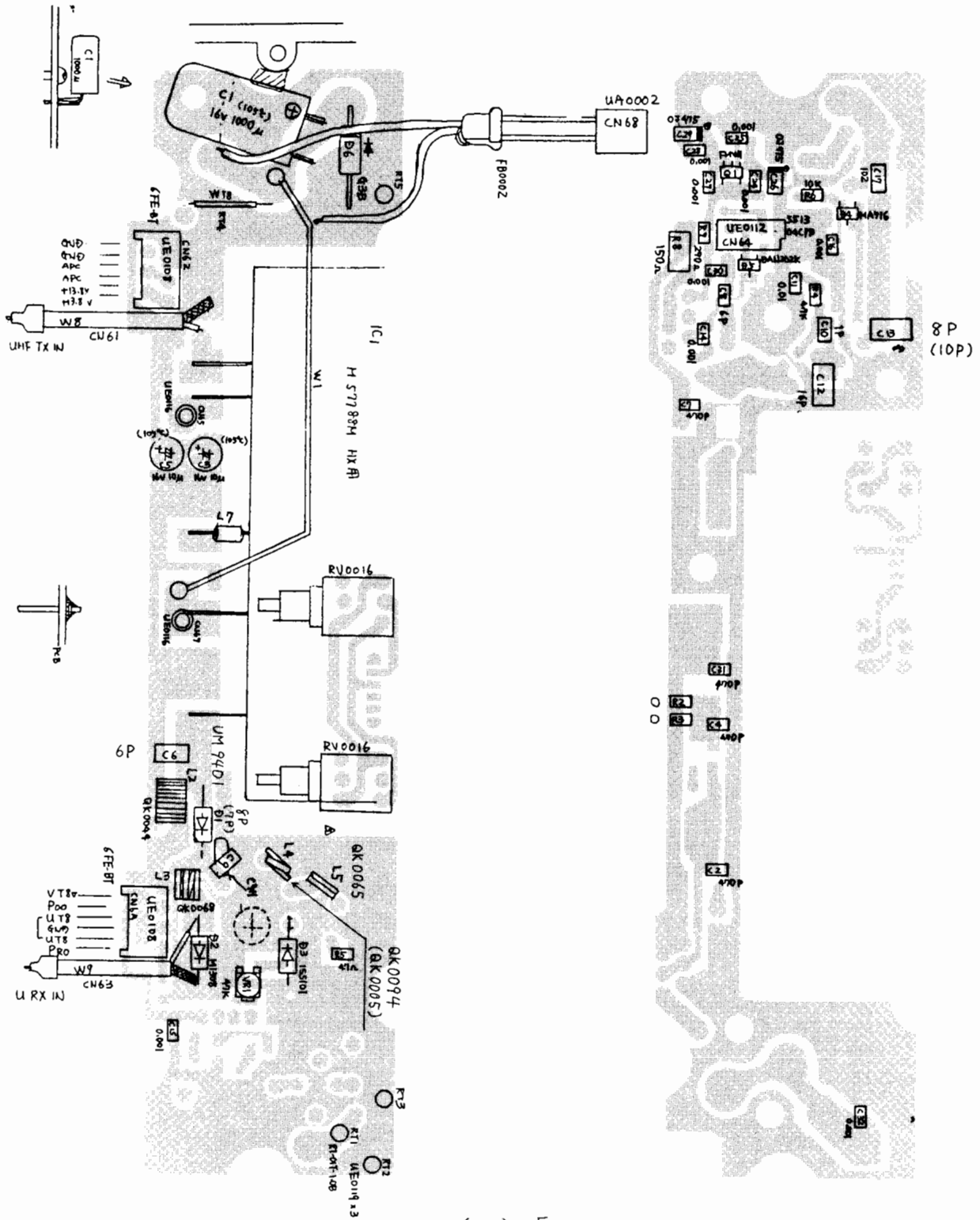
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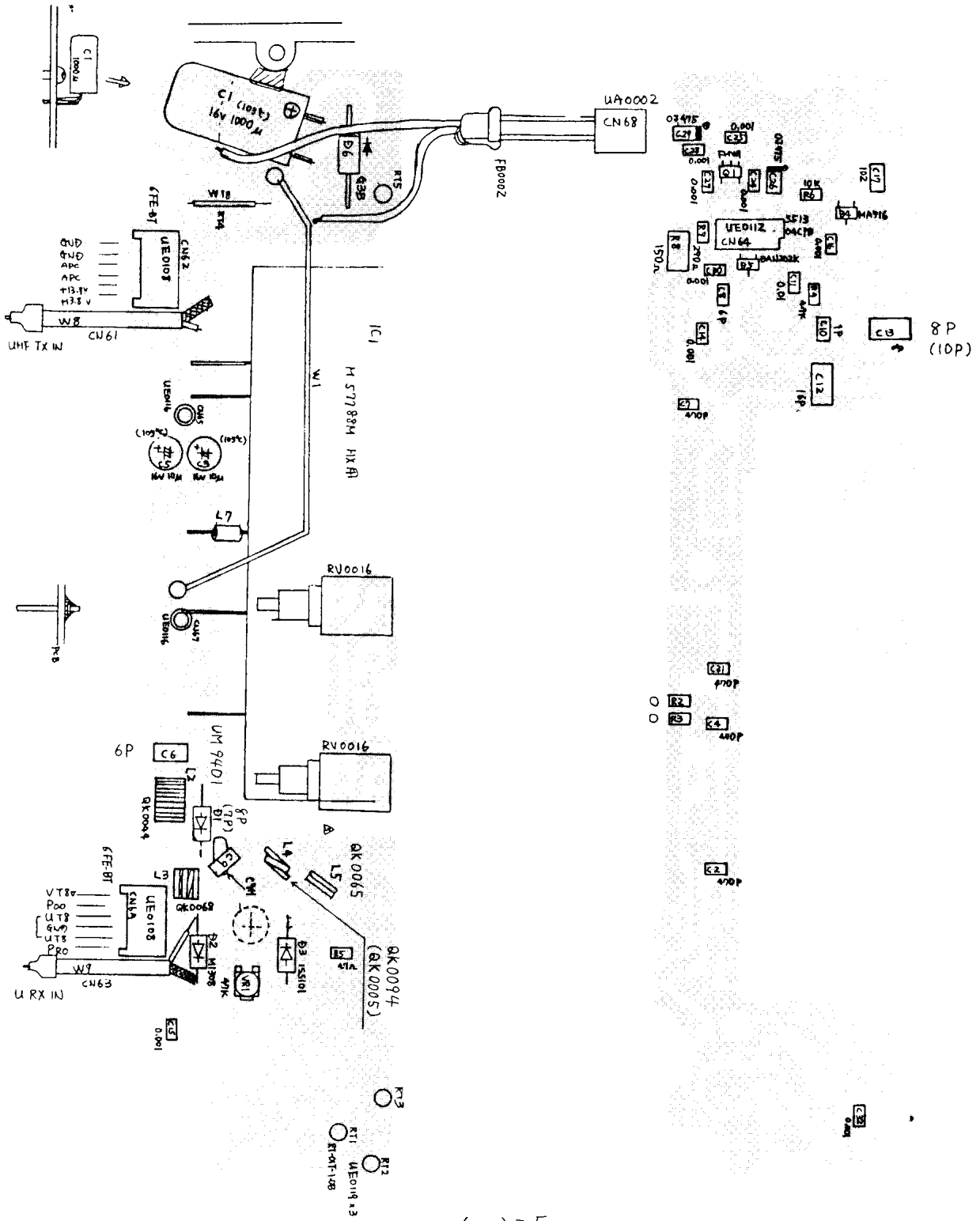
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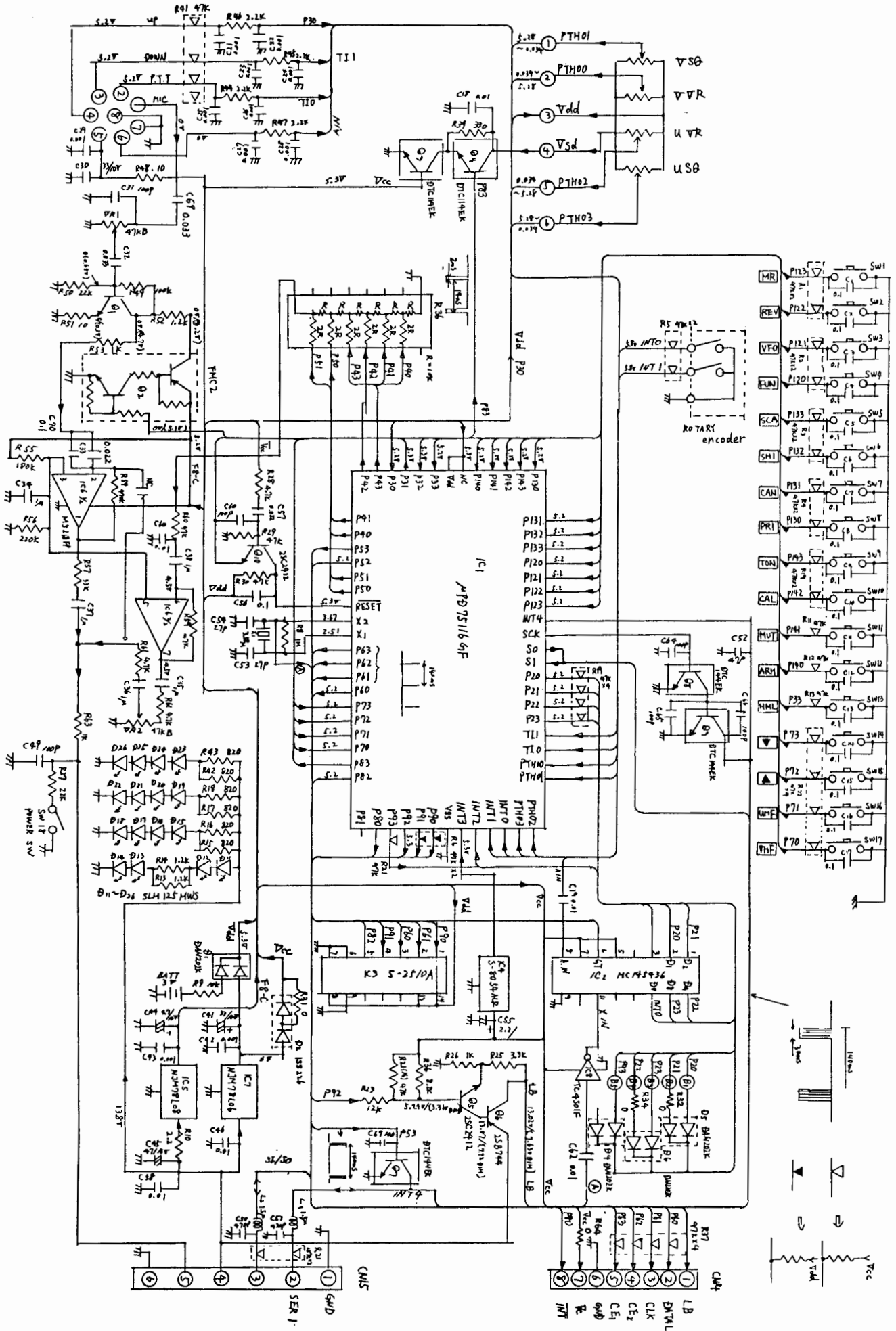
UHF PA PC BOARDS



UHF PA PC BOARDS



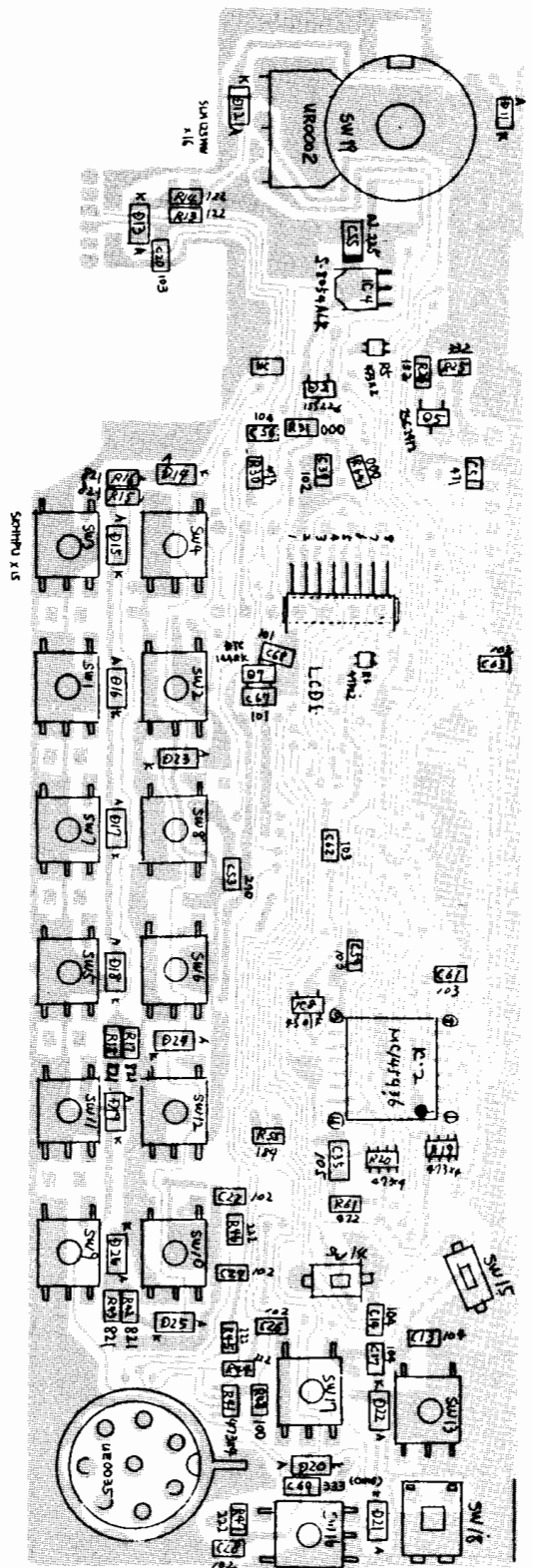
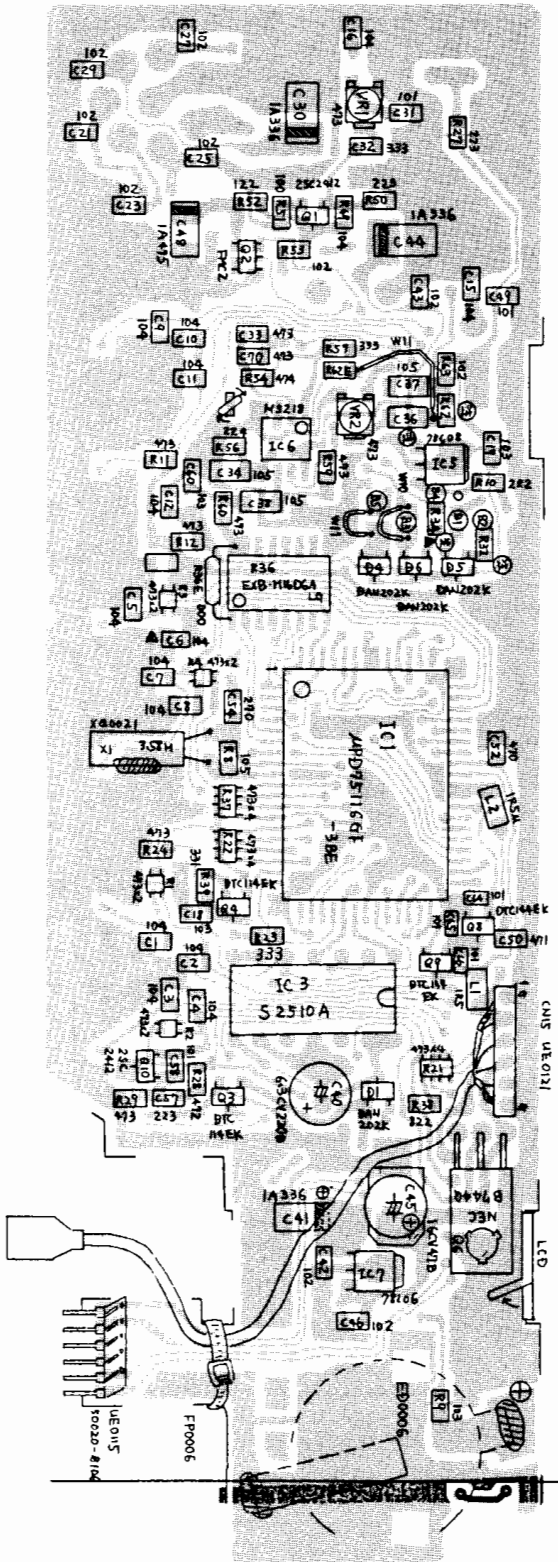
SCHEMATIC DIAGRAM OF FRONT CONTROL UNIT



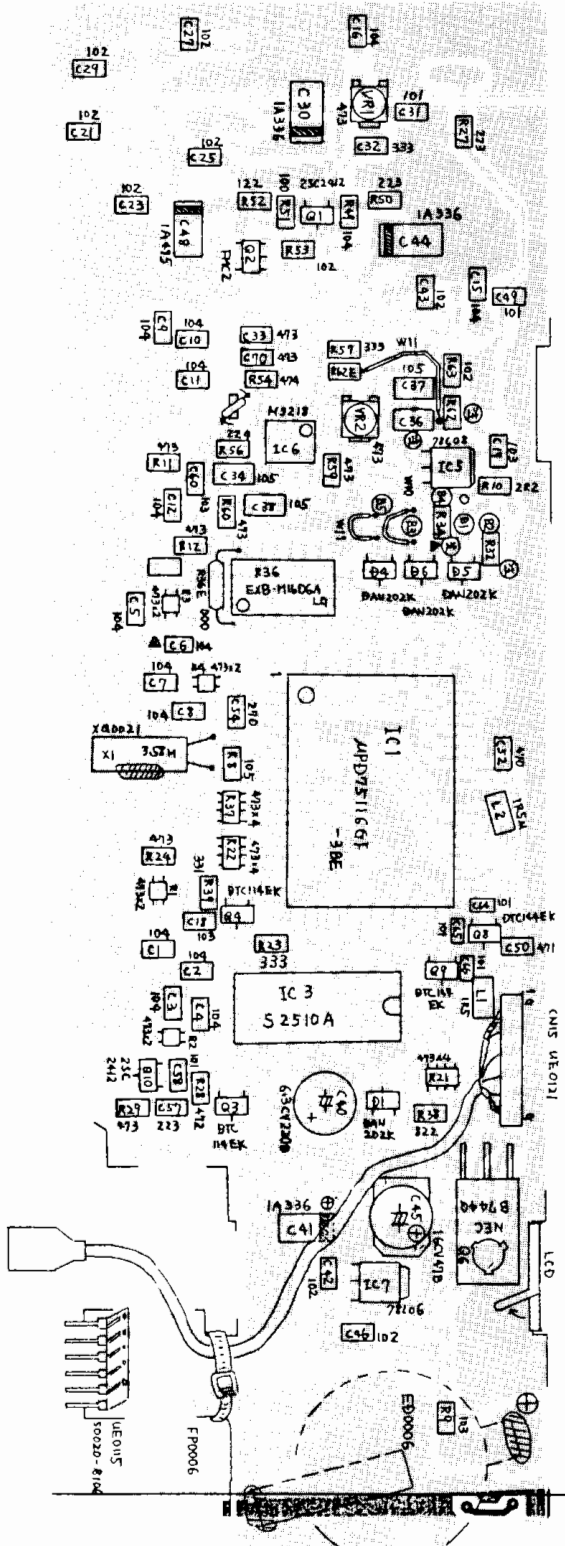
FRONT CONTROL PC BOARDS

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E	T	R62	R62E	C36	W/6	R32	W/1	R36	R36E
NC	104	104	105	NC	O _n	NC	O	NC	NC
NC	NC	223	O	NC	D	NC	O	NC	O

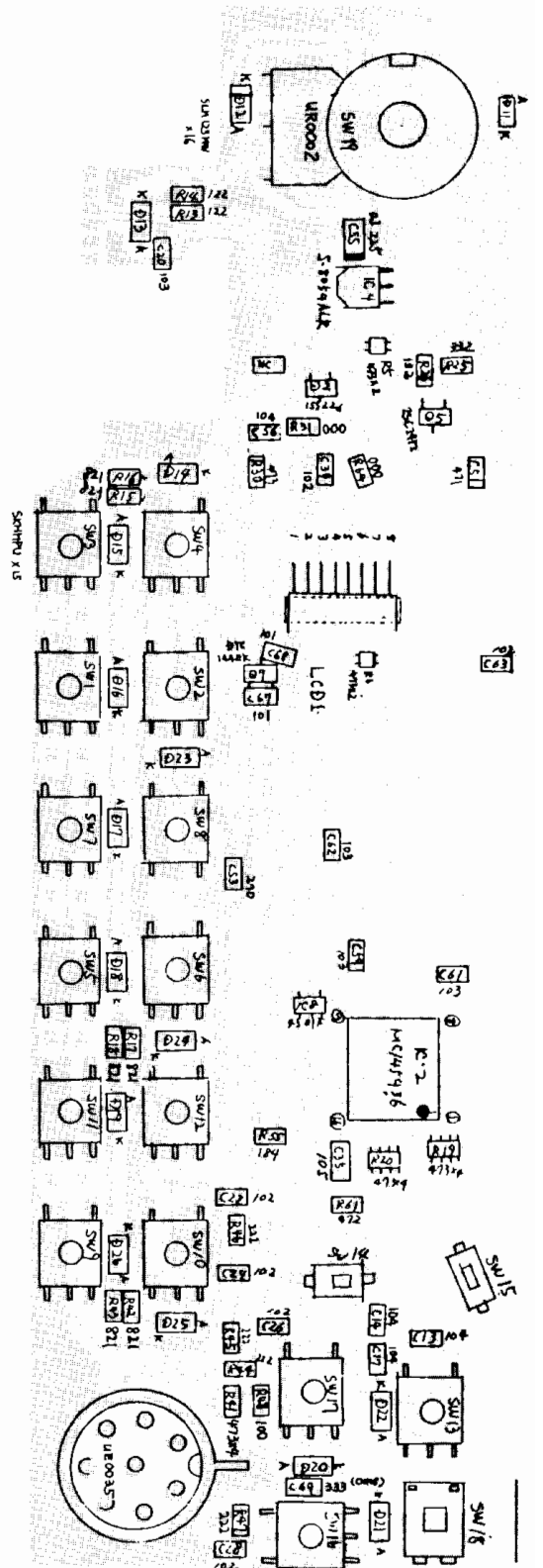


FRONT CONTROL PC BOARDS

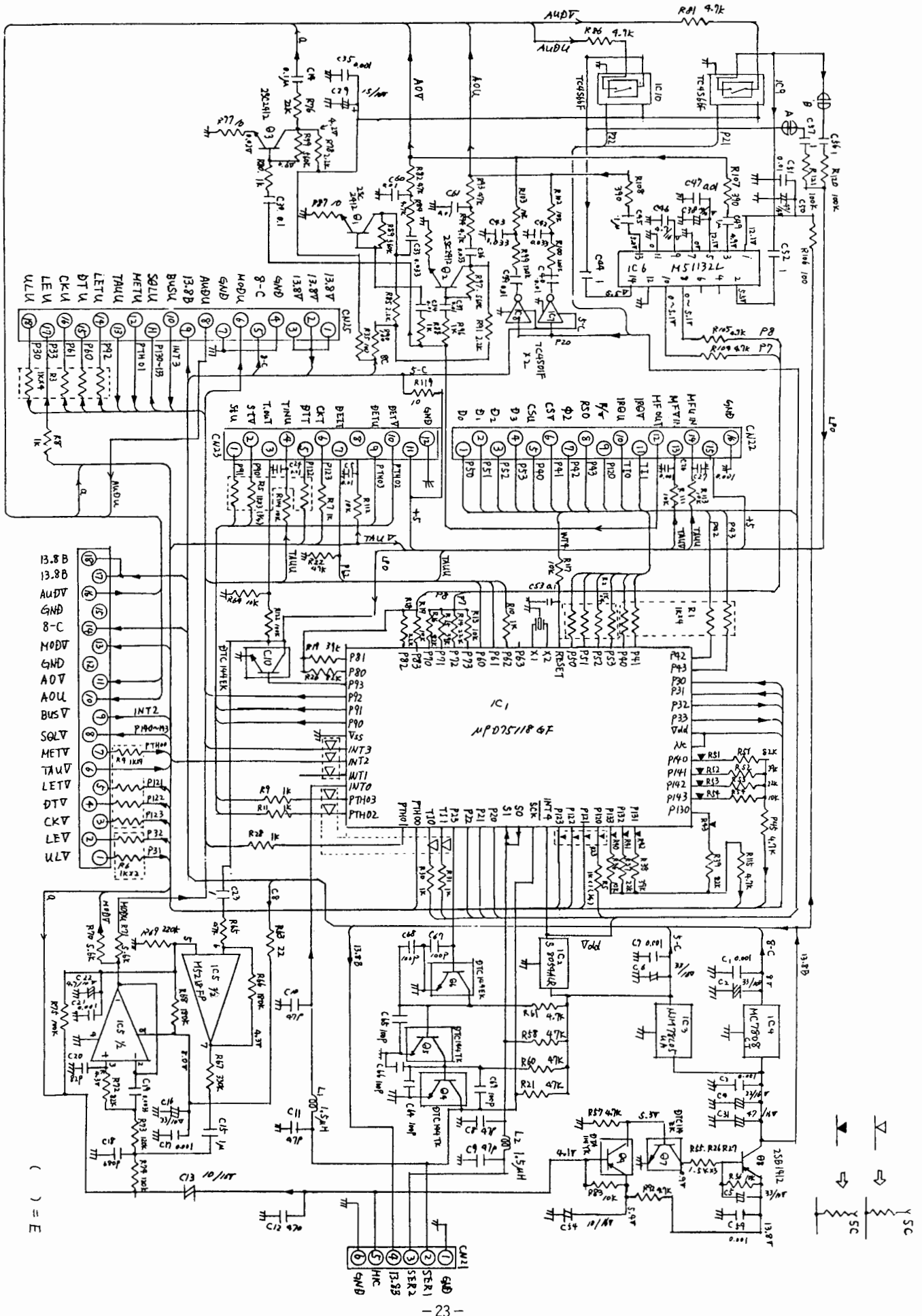


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R62	R62E	C36	W16	R32	W11	R36	R36E
T104	104	NC	0A	NC	0	NC	NC
E NC	NC	223	0	NC	D	NC	0

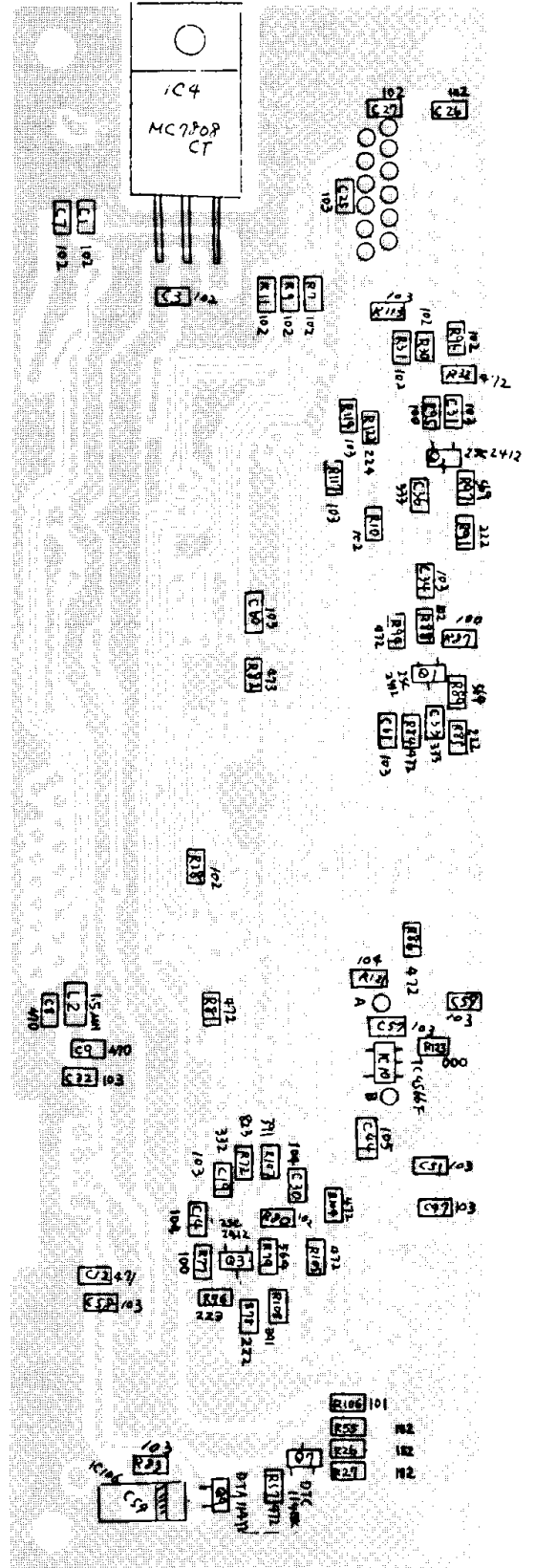
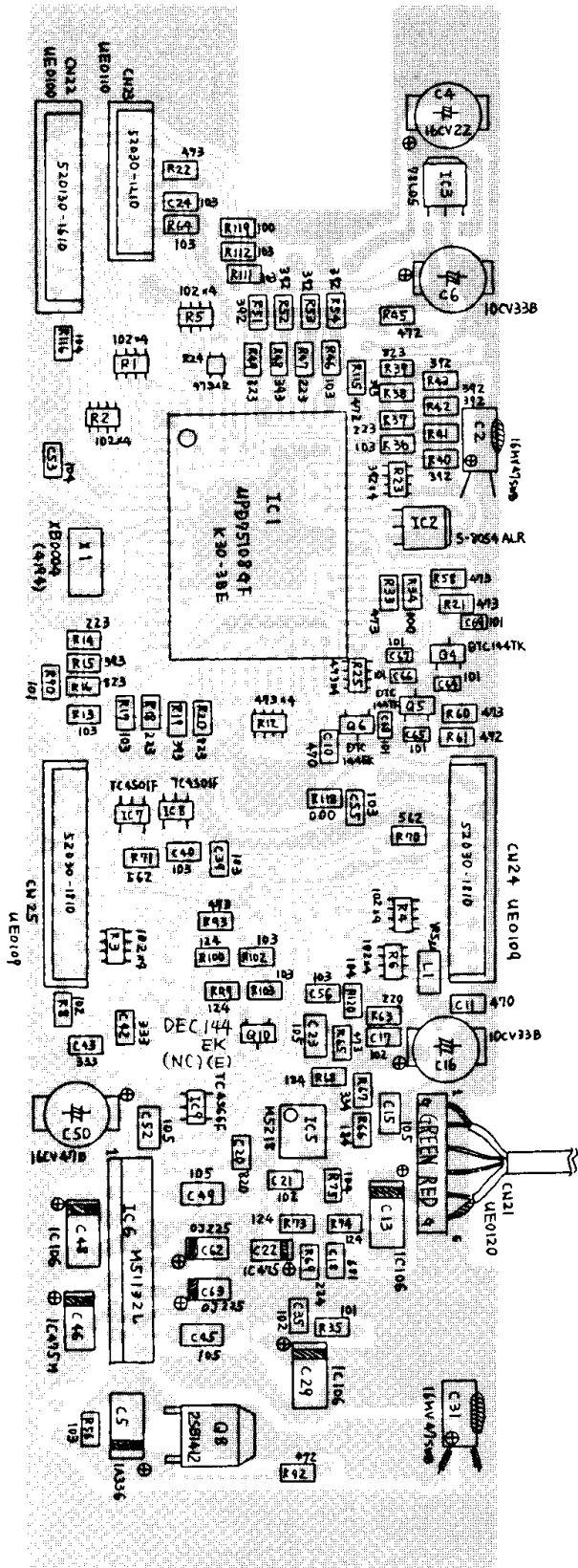


SCHEMATIC DIAGRAM OF SUB CONTROL UNIT

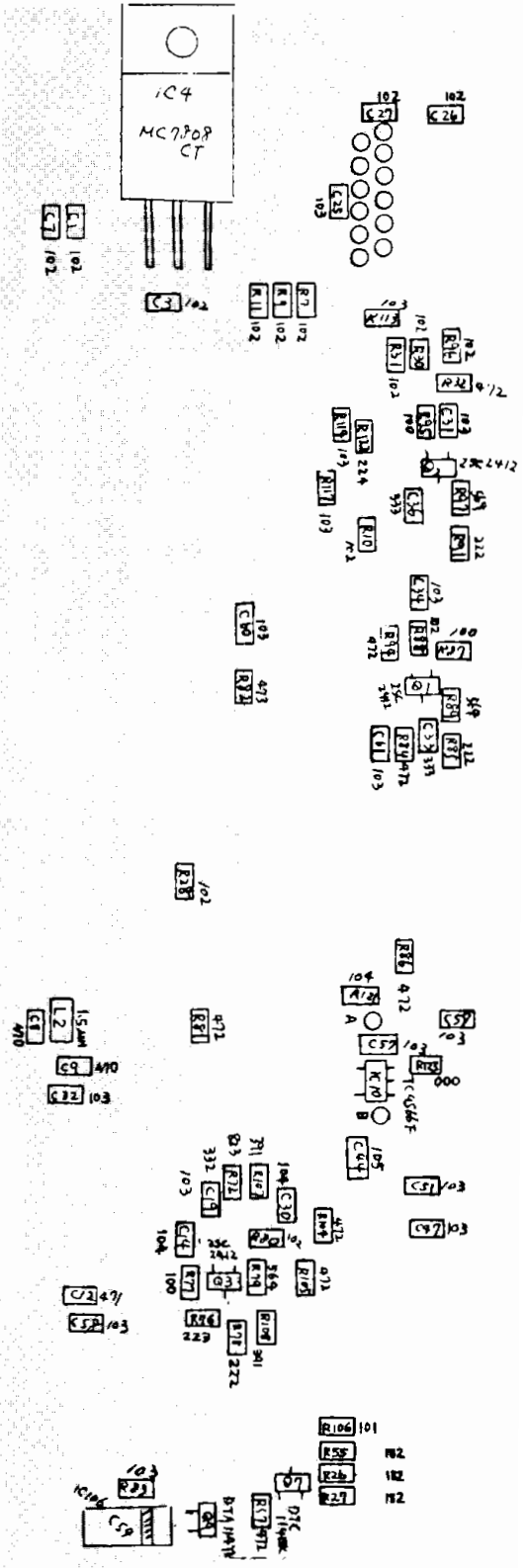
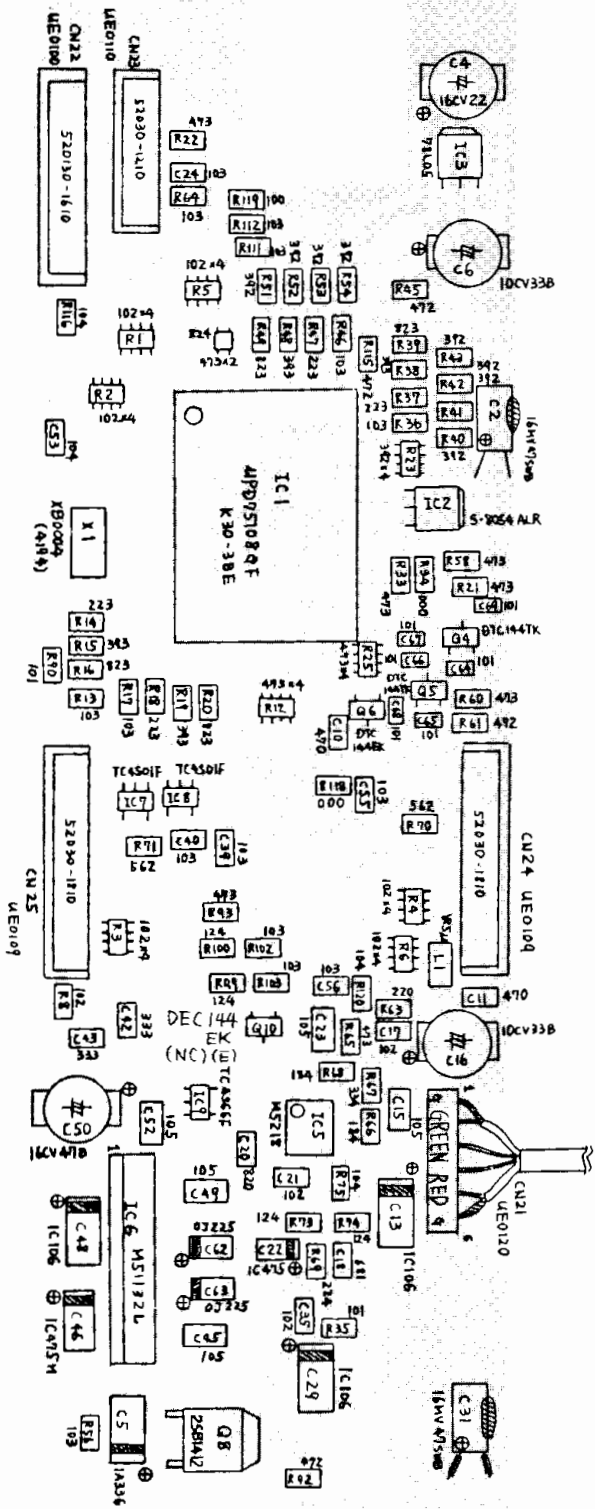


() = E

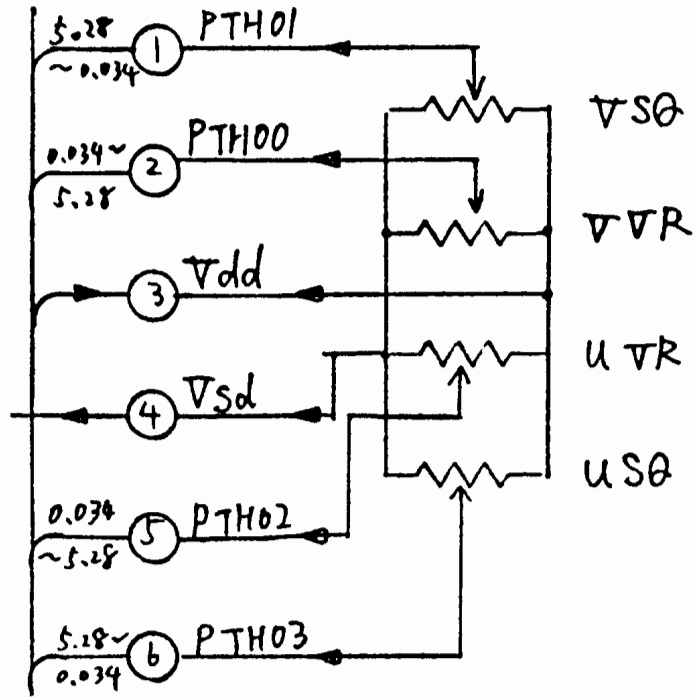
SUB CONTROL PC BOARDS



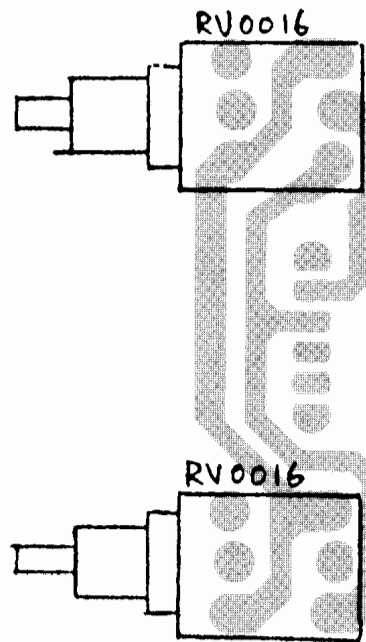
SUB CONTROL PC BOARDS



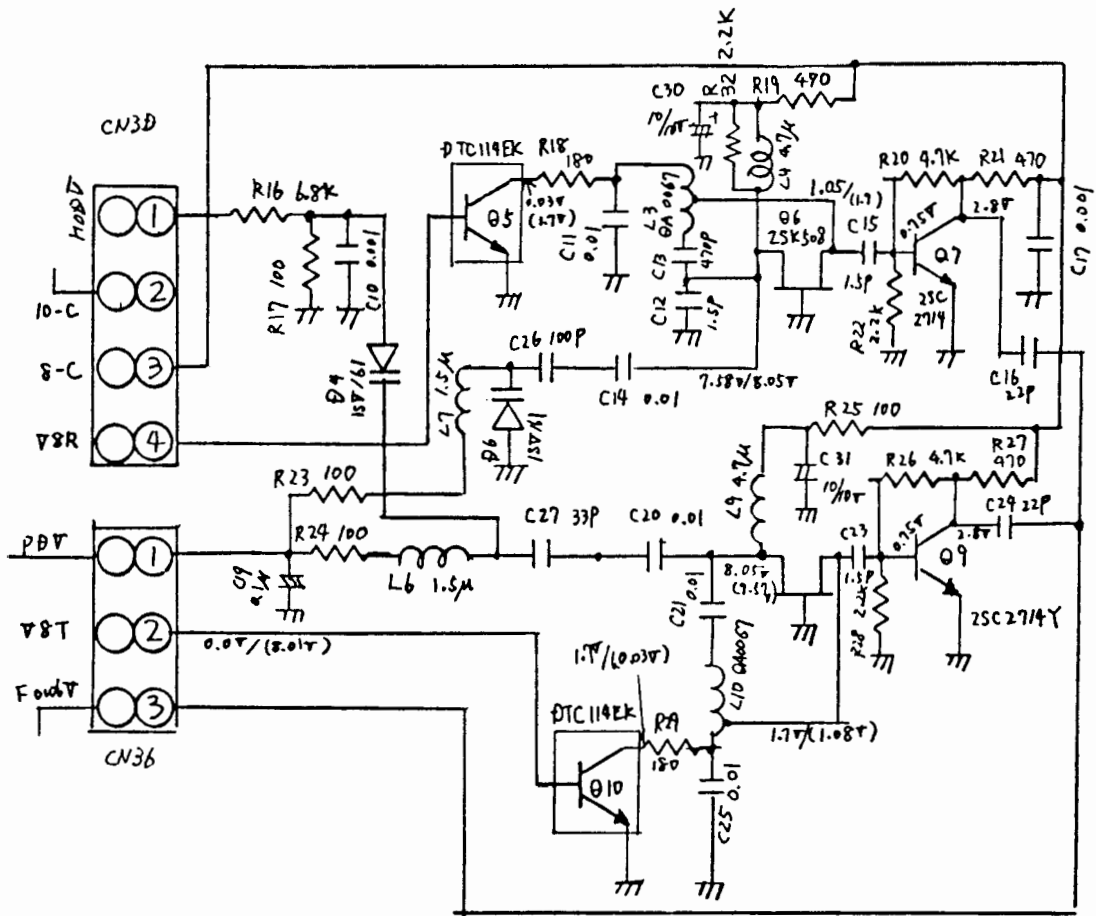
■ SCHEMATIC DIAGRAM OF VOL UNIT



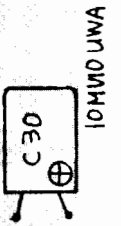
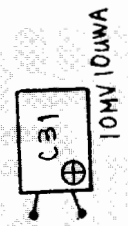
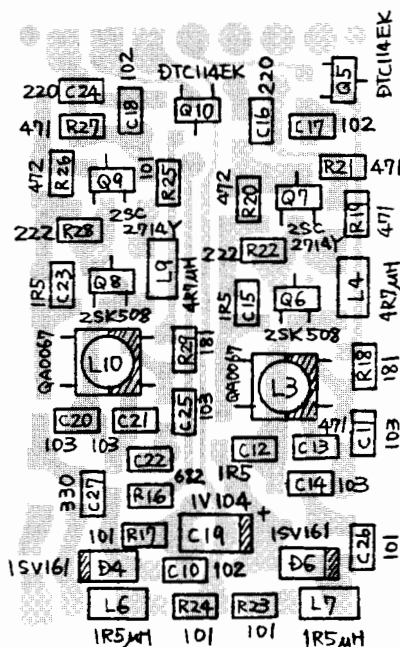
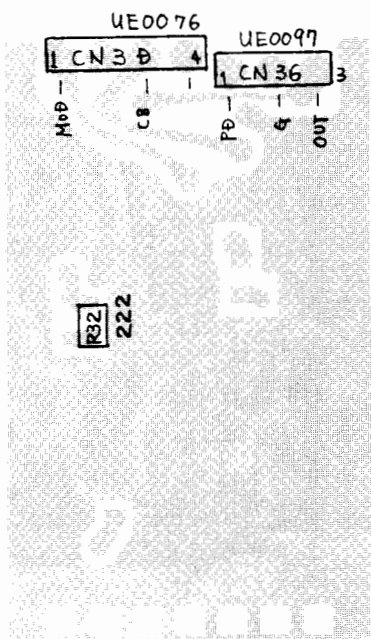
■ VOL PC BOARDS



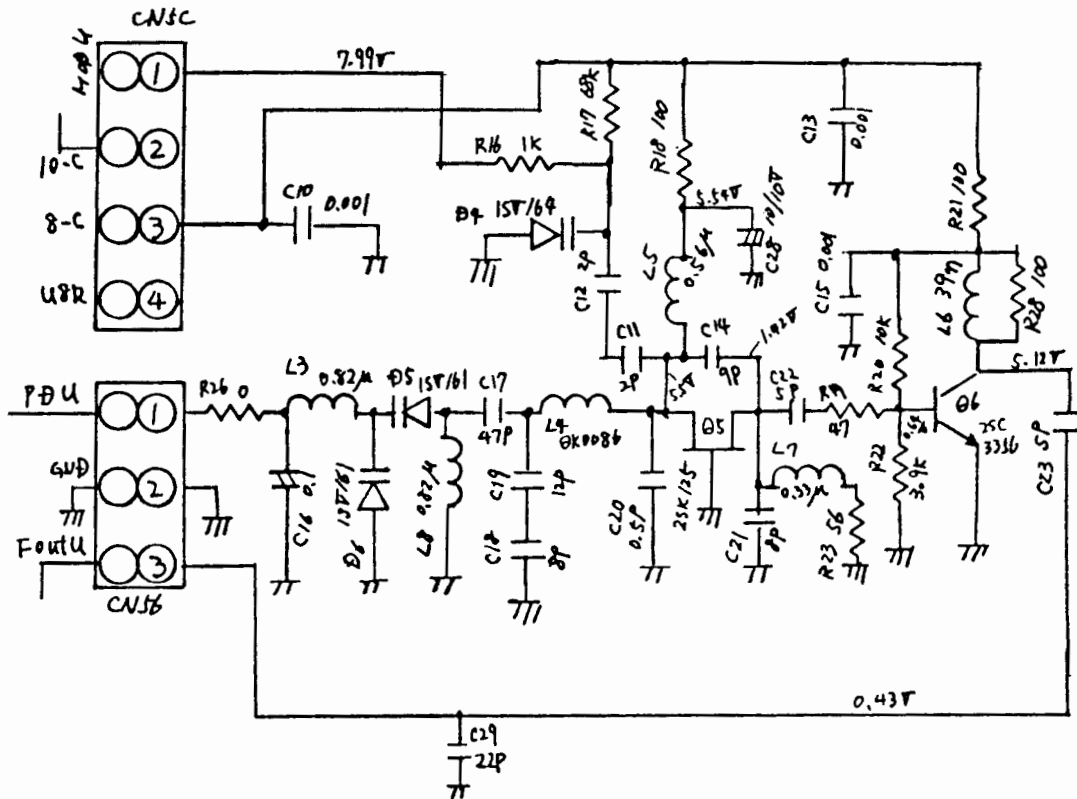
■ SCHEMATIC DIAGRAM OF VHF VCO UNIT



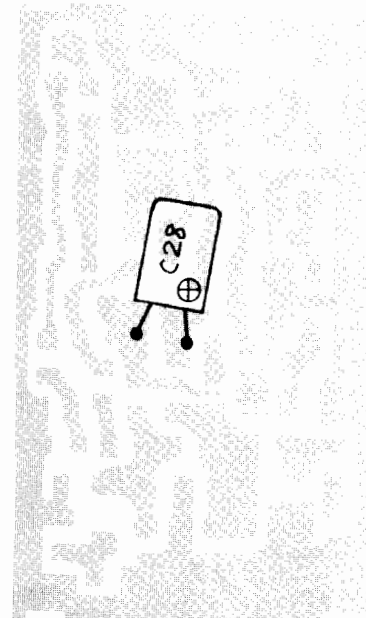
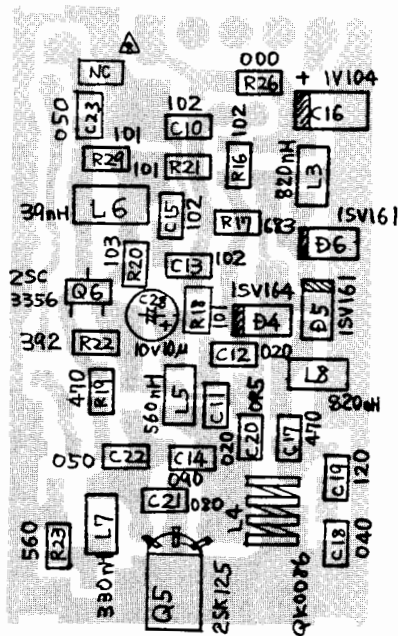
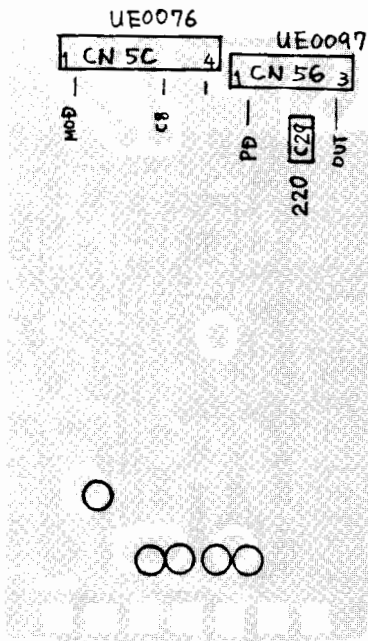
■ VHF VCO PC BOARDS



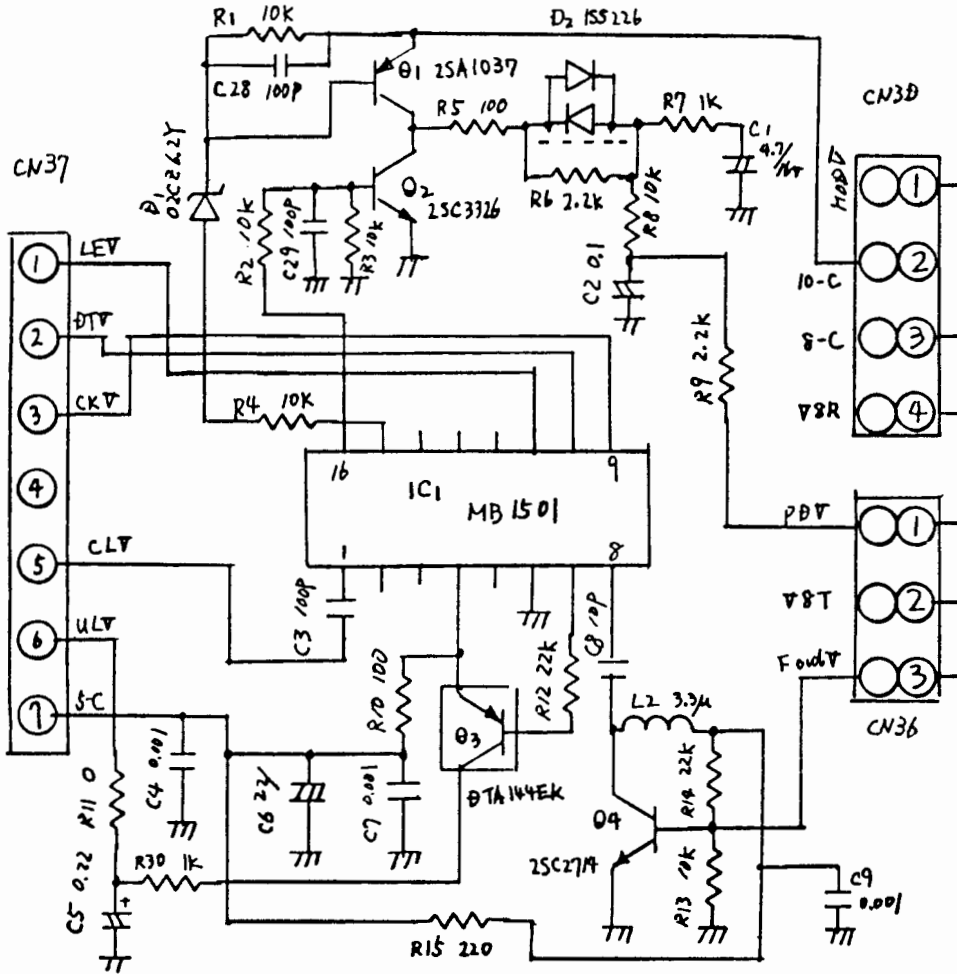
■ SCHEMATIC DIAGRAM OF UHF VCO UNIT



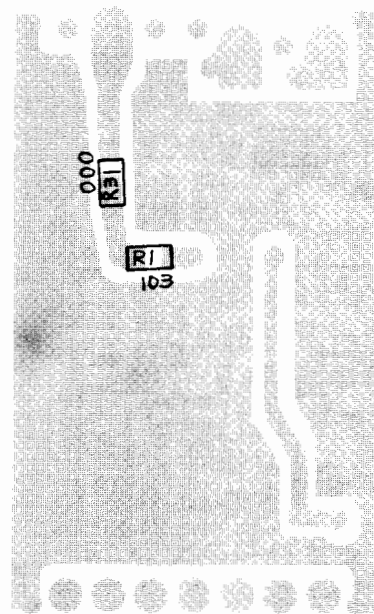
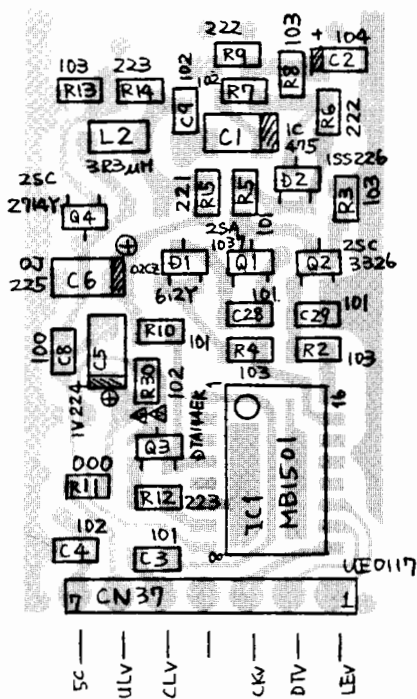
■ UHF VCO PC BOARDS



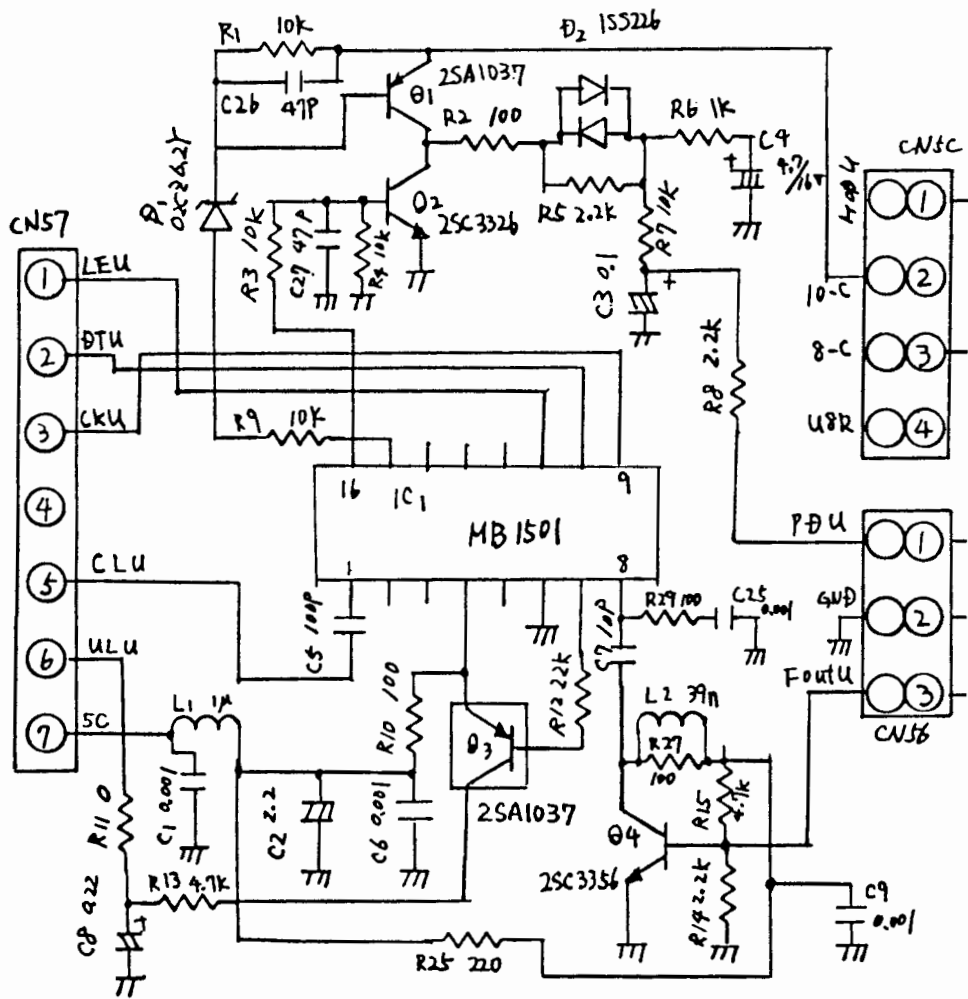
■ SCHEMATIC DIAGRAM OF VHF PLL UNIT



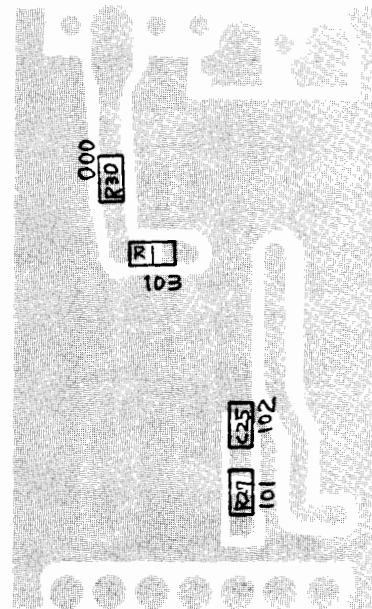
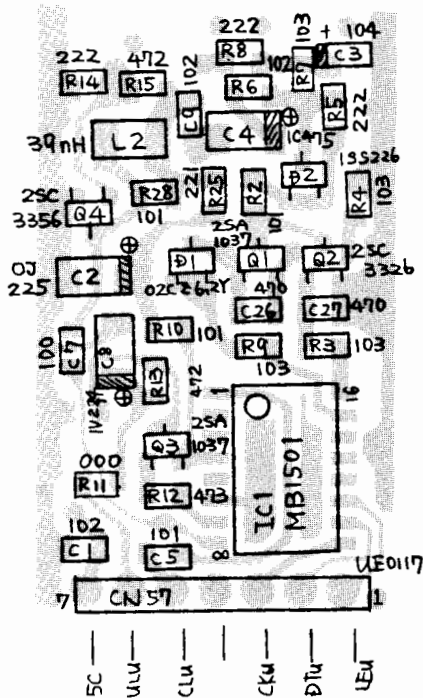
■ VHF PLL PC BOARDS



■ SCHEMATIC DIAGRAM OF UHF PLL UNIT



■ UHF PLL PC BOARDS



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