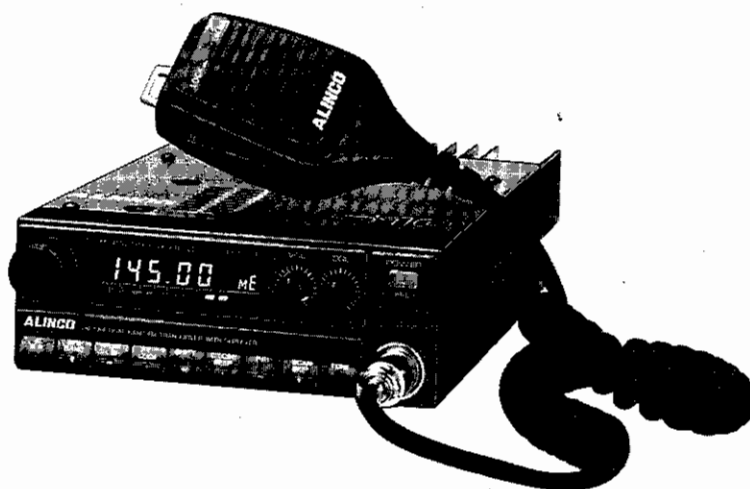


DR-510T/E

Service Manual



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**ALINCO ELECTRONICS INC.**

SPECIFICATIONS

General

Frequency Coverage 144.0~148.0 MHz (DR-510T)
 440.0~450.0 MHz
 144.0~146.0 MHz (DR-510E)
 430.0~440.0 MHz

Impedance 50 ohms unbalanced

Power Supply Requirement 13.8 Volts D.C.

Current Drain at 13.8 V Receiving
 Squelched: does not exceed 500 mA
 Transmitting

High: 45 W approx. 9.5 A at VHF
 35 W approx. 10 A at UHF
 Low: 5 W approx. 4 A at VHF
 5 W approx. 4 A at UHF

Dimensions 140 mm (W) x 50 mm (H) x 205 mm (D)
 (5 1/2" x 2" x 8 1/16")

Weight Approx. 1.7 kgs. (3.75 lbs.)

Transmitter

Output Power High: 45 Watts at VHF, 35 Watts at UHF
 Low: Approx. 5 Watts at both bands

Modulation System 16F3

Impedance System Variable Reactance F.M.

Frequency Deviation .. ±5 kHz

Spurious Emission More than 60 dB below carrier

Microphone Electret Condenser Microphone

Operating Mode Simplex

Duplex: ±600 kHz from receive frequency at VHF
 : ±5, 1.6, 7.6 MHz from receive frequency at UHF
 (Odd offsets programmable)

RF Encoder Built-in

Receiver

Receiving System Superhetrodyne, dual conversion

Modulation Acceptance 16F3

Intermediate Frequency 1st 10.7 MHz 2nd 455 kHz at VHF

1st 30.825 MHz 2nd 455 kHz at UHF

Sensitivity 12 dB SINAD less than 0.16 μV

Selectivity More than ±6 kHz at -6 dB

Less than ±12 kHz at -60 dB

Maximum Power Output More than 1.5 Watts (8 ohms-10% Distortion)

Speaker Impedance 8 ohms

PARTS LIST

Ref. No.	Part Code	Part Name and Number	Ref. No.	Part Code	Part Name and Number	Ref. No.	Part Code	Part Name and Number
UHF Drive Unit								
R7	RK0018	Chip R, MCR10EZHJ101E	R43	RK0045	Chip R, MCR10EZHJ472E	R136	RD0018	R. 1/4 W 100Ω R20
R8	RK0035	Chip R, MCR10EZHJ102E (DR-510T only)	R44	RK0005	Chip R, MCR10EZHJ220E	R137	RD0116	R. R20 R02 J1R0
R8	RK0048	Chip R, MCR10EZHJ682F (DR-510E only)	R45	RK0045	Chip R, MCR10EZHJ472E	R138	RK0062	Chip R, MCR10EZHJ473E
R9	RK0105	Chip R, MCR10EZHJ2R2E (DR-510T only)	R46	RK0062	Chip R, MCR10EZHJ473E	R140	RK0052	Chip R, MCR10EZHJ103E
R9	RK0011	Chip R, MCR10EZHJ470E (DR-510E only)	R47	RK0062	Chip R, MCR10EZHJ473E	R141	RK0035	Chip R, MCR10EZHJ102E
R10	RK0011	Chip R, MCR10EZHJ470E	R48	RK0062	Chip R, MCR10EZHJ473E	R142	RK0035	Chip R, MCR10EZHJ102E
R11	RK0042	Chip R, MCR10EZHJ332E	R49	RK0062	Chip R, MCR10EZHJ473E	C1	CU0011	Chip C, C2012CH1H100D
R12	RK0031	Chip R, MCR10EZHJ681E	R50	RK0062	Chip R, MCR10EZHJ473E	C2	CU0004	Chip C, C2012CH1H030C
R13	RK0011	Chip R, MCR10EZHJ470E	R51	RK0018	Chip R, MCR10EZHJ101E	C3	CU0035	Chip C, C2012CH1H101K
R14	RK0005	Chip R, MCR10EZHJ220E	R52	RK0052	Chip R, MCR10EZHJ103E	C4	CU8016	Chip C, C2012B1H102K
R17	RK0035	Chip R, MCR10EZHJ102E (DR-510T only)	R53	RK0056	Chip R, MCR10EZHJ223E	C5	CU8016	Chip C, C2012B1H102K
R17	RK0062	Chip R, MCR10EZHJ473E (DR-510E only)	R54	RK0035	Chip R, MCR10EZHJ102E	C6	CU0035	Chip C, C2012CH1H101K
R18	RK0018	Chip R, MCR10EZHJ101E (DR-510T only)	R55	RK0062	Chip R, MCR10EZHJ473E	C7	CU0002	Chip C, C2012CH1H101C
R18	RK0028	Chip R, MCR10EZHJ471E (DR-510E only)	R56	RK0062	Chip R, MCR10EZHJ473E	C8	CU8016	Chip C, C2012B1H102K
Q4	XT0030	Transistor, 2SC3356T1 (DR-510T only)	R57	RK0062	Chip R, MCR10EZHJ473E	C9	CU0025	Chip C, C2012CH1H390K
Q4	XT0074	Transistor, 2SC2759T1 (DR-510E only)	R58	RK0022	Chip R, MCR10EZHJ221E	C10	CU8016	Chip C, C2012B1H102K
Q5	XT0030	Transistor, 2SC3356T1 (DR-510T only)	R59	RK0052	Chip R, MCR10EZHJ103E	C11	CU8016	Chip C, C2012B1H102K
Q5	XT0074	Transistor, 2SC2759T1 (DR-510E only)	R60	RK0038	Chip R, MCR10EZHJ182E	C12	CU8016	Chip C, C2012B1H102K
L1	QC0018	Coil K3002 12NH	R61	RK0050	Chip R, MCR10EZHJ822E	C13	CU8016	Chip C, C2012B1H102K
L2	QC0018	Coil K3002 12NH	R62	RK0038	Chip R, MCR10EZHJ182E	C14	CU0003	Chip C, C2012CH1H020C
C3	CV8016	Chip C, C2012B1H102K	R63	RK0079	Chip R, MCR10EZHJ474E	C15	CU0023	Chip C, C2012CH1H330K
C4	CV8016	Chip C, C2012B1H102K	R64	RK0052	Chip R, MCR10EZHJ103E	C16	CU8016	Chip C, C2012B1H102K
C5	CV8016	Chip C, C2012B1H102K	R66	RK0052	Chip R, MCR10EZHJ103E	C17	CU0035	Chip C, C2012CH1H101K
C6	CV0064	Chip C, C2012B1H220J	R67	RK0056	Chip R, MCR10EZHJ223E	C18	CU8016	Chip C, C2012B1H102K
C7	CV8016	Chip C, C2012B1H102K	R68	RK0035	Chip R, MCR10EZHJ102E	C19	CU8016	Chip C, C2012B1H102K
C8	CV0051	Chip C, C2012CH1H471K	R69	RK0018	Chip R, MCR10EZHJ101E	C20	CU0008	Chip C, C2012CH1H070D
C9	CV0051	Chip C, C2012CH1H471K	R70	RK0045	Chip R, MCR10EZHJ472E	C21	CU0035	Chip C, C2012CH1H101K
C10	CV8016	Chip C, C2012B1H102K	R71	RK0039	Chip R, MCR10EZHJ222E	C22	CU8028	Chip C, C2012B1H103K
C11	CS0049	Chip Tantal, TMC1C105TR	R72	RK0018	Chip R, MCR10EZHJ101E	C23	CU8028	Chip C, C2012B1H103K
			R73	RK0035	Chip R, MCR10EZHJ102E (DR-510E only)	C24	CU8028	Chip C, C2012B1H103K
			R74	RK0039	Chip R, MCR10EZHJ222E	C25	CU8016	Chip C, C2012B1H102K
			R75	RK0106	Chip R, MCR10EZHJ3R3E	C26	CU0016	Chip C, C2012CH1H150K
			R76	RK0018	Chip R, MCR10EZHJ101E	C27	CU0029	Chip C, C2012CH1H560K
			R77	RK0022	Chip R, MCR10EZHJ221E	C28	CE0064	Chemical C, 10 V 47 μF MS9
			R79	RK0031	Chip R, MCR10EZHJ681E	C29	CE8028	Chemical C, B1H103K
			R81	RK0106	Chip R, MCR10EZHJ3R3E	C30	CE8016	Chemical C, B1H102K
			R82	RK0062	Chip R, MCR10EZHJ473E	C31	CE0030	Chemical C, 16 V 10 μF MS7
			R83	RK0062	Chip R, MCR10EZHJ473E	C33	CU8028	Chip C, C2012B1H103K
			R85	RK0020	Chip R, MCR10EZHJ151E	C34	CE0064	Chemical C, 10 V 47 μF MS9
			R86	RK0038	Chip R, MCR10EZHJ182E	C35	CE0121	Chemical C, 10 V 100 μF MS7
			R87	RK0107	Chip R, MCR10EZHJ000E (DR-510T only)	C36	CU8003	Chemical C, JF1E104Z
			R87	RK0128	Chip R, MCR10EZHJ5R6E (DR-510E only)	C38	CU8016	Chip C, C2012B1H102K
			R88	RK0022	Chip R, MCR10EZHJ221E	C39	CU8016	Chip C, C2012B1H102K
			R89	RK0107	Chip R, MCR10EZHJ000E (DR-510T only)	C40	CE0064	Chemical C, 10 V 47 μF MS9
			R89	RK0128	Chip R, MCR10EZHJ5R6E (DR-510E only)	C41	CU8007	Chemical C, JF1H473Z
			R90	RK2008	Chip R, MCR10EZHJ220E	C42	CE0064	Chemical C, 10 V 47 μF MS9
			R91	RK0069	Chip R, MCR10EZHJ104E	C44	CU8038	Chip C, CM316Y5V105Z25VAT
			R92	RK0069	Chip R, MCR10EZHJ104E	C45	CU8016	Chip C, C2012B1H102K
			R95	RK0035	Chip R, MCR10EZHJ102E	C46	CE0149	Chemical C, 10 V 220 μF SSP
			R96	RK0035	Chip R, MCR10EZHJ102E	C47	CE8028	Chemical C, 103K
			R97	RK0052	Chip R, MCR10EZHJ103E	C48	CS0064	Chip Tantal, TMC1A155TR
			R99	RK0079	Chip R, MCR10EZHJ474E	C49	CE0064	Chemical C, 10 V 47 μF MS9
			R100	RK0062	Chip R, MCR10EZHJ473E	C50	CE8028	Chemical C, 103K
			R101	RK0039	Chip R, MCR10EZHJ222E	C51	CE0019	Chemical C, CH1H220K
			R102	RK0035	Chip R, MCR10EZHJ102E	C52	CE8028	Chemical C, 103K
			R106	RK0069	Chip R, MCR10EZHJ104E	C53	CE0043	Chemical C, CH1H221K
			R107	RK0039	Chip R, MCR10EZHJ222E	C54	CE0035	Chemical C, CH1H101K
			R108	RK0062	Chip R, MCR10EZHJ473E	C55	CU8016	Chip C, C2012B1H102K
			R115	RK0076	Chip R, MCR10EZHJ334E	C56	CU0035	Chip C, C2012CH1H101K
			R116	RK0076	Chip R, MCR10EZHJ334E	C57	CU8032	Chip C, C2012CH1H223K
			R119	RK0056	Chip R, MCR10EZHJ223E	C58	CU8032	Chip C, C2012CH1H223K
			R120	RK0057	Chip R, MCR10EZHJ273E	C59	CS0064	Chip Tantal, TMC1A155TR
			R123	RK0045	Chip R, MCR10EZHJ472E	C60	CQ0008	Film C, 50F2M683K
			R125	RK0056	Chip R, MCR10EZHJ223E	C61	CU8016	Chip C, C2012B1H102K
			R126	RK0107	Chip R, MCR10EZHJ000E	C62	CQ0008	Film C, 50F2M683K
			R127	RK0056	Chip R, MCR10EZHJ223E	C63	CQ8028	Film C, 50F2M103K
			R128	RK0052	Chip R, MCR10EZHJ103E	C64	CS0049	Chip Tantal, TMC1C105TR
			R130	RK0052	Chip R, MCR10EZHJ103E	C65	CS8028	Chip Tantal, TMC1C103K
			R131	RK0052	Chip R, MCR10EZHJ103E	C66	CU8016	Chip C, C2012B1H102K
			R133	RK0056	Chip R, MCR10EZHJ223E	C67	CU8028	Chip C, C2012B1H103K
			R134	RK0107	Chip R, MCR10EZHJ000E	C68	CE0149	Chemical C, 10 V 220 μF SSP
			R135	RK0039	Chip R, MCR10EZHJ222E	C69	CE8028	Chemical C, 103K
						C70	CE0149	Chemical C, 10 V 220 μF SSP
						C71	CE0003	Chemical C, CH1H020C
						C72	CE0007	Chemical C, CH1H060D (DR 510E only)

Part Code	Part Name and Number	Ref. No.	Part Code	Part Name and Number	Ref. No.	Part Code	Part Name and Number
CU0015	Chip C, C2012CH1H150K (DR-510T only)	L1	QA0050	Coil 5x5 1/4 T	R2	RK0052	Chip R, MCR10EZJH103E
CE0004	Chemical C, CH1H030C (DR-510E only)	L2	QA0036	Coil 3x1.5 T	R3	RK0056	Chip R, MCR10EZJH229E
CU8016	Chip C, C2012B1H102K	L3	QA0061	Coil 110-7H2-440C	R4	RK0018	Chip R, MCR10EZJH101E
CU0019	Chip C, C2012CH1H220K	L4	QA0061	Coil 110-7H2-440C	R5	RK0028	Chip R, MCR10EZJH471E
CU8016	Chip C, C2012B1H102K	L5	QC0018	Coil K3002 12NH	R6	RK0022	Chip R, MCR10EZJH221E (DR-510E only)
CU8016	Chip C, C2012B1H102K	L6	QK0050	Coil 5x5 1/4 T	R8	RK0037	Chip R, MCR10EZJH152E
CU0011	Chip C, C2012CH1H100D	L7	QA0042	Coil 30R8MIF	R9	RK0011	Chip R, MCR10EZJH470E
CU8016	Chip C, C2012B1H102K	L8	QA0043	Coil 30R8MIF	R10	RK0052	Chip R, MCR10EZJH103E
CU8038	Chip C, CM316Y5V105Z25VAT	L9	QA0043	Coil 30R8MIF	R11	RK0069	Chip R, MCR10EZJH104E
CU8038	Chip C, CM316Y5V105Z25VAT	L10	QC0039	Coil NL322522T-1ROM	R12	RK0028	Chip R, MCR10EZJH471E
CU8034	Chip C, C2012B1E333K	L11	QK0045	Coil 4x1R2xOR6	R13	RK0022	Chip R, MCR10EZJH221E (DR-510E only)
CE0064	Chemical C, 10 V 47 μF MS9	L13	QK0036	Coil 3x1.5 T	R14	RK0011	Chip R, MCR10EZJH470E
CE0064	Chemical C, 10 V 47 μF MS9	L14	QA0041	Coil 455K IF	R15	RK0107	Chip R, MCR10EZJH000E
CE0151	Chemical C, 10 V 47 μF MS9	L15	QC0048	Coil NL322522T 100K	R16	RK0107	Chip R, MCR10EZJH000E
CU8003	Chemical C, JF1E104Z	L16	QC0020	Coil K3004 25NH	R17	RK0052	Chip R, MCR10EZJH103E
CE0051	Chemical C, 16 V 1000 μF MS16	L17	QC0020	Coil K3004 25NH	R18	RK0035	Chip R, MCR10EZJH102E
CE8028	Chemical C, 103K	IC1	XA0082	IC, MC7808CT	R19	RK0052	Chip R, MCR10EZJH103E
CE0051	Chemical C, 16 V 1000 μF MS16	IC2	XA0078	IC, M54959	C1	CU8016	Chip C, C2012B1H102K
CE8028	Chemical C, 103K	IC4	XA0079	IC, μPC1241H	C2	CU8028	Chip C, C2012B1H103K
CE0006	Chemical C, C2012CH1H050C	FL1	XF0005	XF IL30. 8M 15A HC49/T	C3	CU0003	Chip C, C2012CH1H020C
CE0064	Chemical C, 10 V 47 μF MS9	FL2	XC0001	Ceramic F, CFW 455F	C4	CU0009	Chip C, C2012CH1H080D
CU8016	Chip C, C2012B1H102K	D1	XD0103	Diode, ISS226TE85L	C5	CU0011	Chip C, C2012CH1H100D
CU8016	Chip C, C2012B1H102K	D3	XD0040	Diode, DAN202KT96	C6	CU0061	Chip C, C2012CH1H120J
CE0030	Chemical C, 16 V 10 μF MS7	D4	XD0040	Diode	C7	CU0029	Chip C, C2012CH1H560K (DR-510T only)
CU8016	Chip C, C2012B1H102K	D5	XD0104	Diode, 02CZ6.2YTE85L	C7	CU0008	Chip C, C2012CH1H070D (DR-510E only)
CE0199	Chemical C, 16 V 100 μF MS7	D6	XD0041	Diode, DAP202KT96	C8	CU8016	Chip C, C2012B1H102K
CU8016	Chip C, C2012B1H102K	D7	XD0070	Diode, ISS265	C9	CU0003	Chip C, C2012CH1H020C
CU8016	Chip C, C2012B1H102K	D8	XD0070	Diode, ISS265	C10	CU0009	Chip C, C2012CH1H080D
CU8016	Chip C, C2012B1H102K	D9	XD0041	Diode, DAP202KT96	C11	CU0011	Chip C, C2012CH1H100D
CU8016	Chip C, C2012B1H102K	D10	XD0058	Diode, ISS181	C13	CU8016	Chip C, C2012B1H102K
CU8016	Chip C, C2012B1H102K	D11	XD0040	Diode, DAN202KT96	C14	CU8016	Chip C, C2012B1H102K
CU8016	Chip C, C2012B1H102K	D12	XD0040	Diode, DAN202KT96	C15	CU8016	Chip C, C2012B1H102K
CE0122	Chemical C, 16 V 22 μF SM7	D13	XD0080	Diode, RB400DT96	C16	CU8016	Chip C, C2012B1H102K
CS0064	Chip Tantal, C, TMC1A155TR	D14	XD0080	Diode, RB400DT96	C17	CU0001	Chip C, C2012CH1H0R5C
CU8025	Chip C, C2012B1H562K	D15	XD0040	Diode, DAN202KT96	C18	CU8016	Chip C, C2012B1H102K
CU8025	Chip C, C2012B1H562K	D17	XD0040	Diode, DAN202KT96	C19	CU0003	Chip C, C2012CH1H020C
CE0125	Chemical C, 25 V 4.7 μF MS7	D18	XD0078	Diode, DAN235KT96	C20	CU8016	Chip C, C2012B1H102K
CE8028	Chemical C, 103K	D20	XL0011	LED, TLG211	Q1	XT0074	Transistor 2SC2759T1
CE8028	Chemical C, 103K	Q1	XE0013	FET, 3SK184STX	Q2	XE0010	Transistor 2SK508K52T1
CE8028	Chemical C, 103K	Q2	XE0002	FET, 2SK125	Q3	XT0037	Transistor 2SC2412KT96R
CE8028	Chemical C, CH1H101K	Q3	XE0014	FET, 3SK184RTX	Q4	XE0010	Transistor 2SK508K52T1
CE8028	Chemical C, 103K	Q4	XT0059	Transistor, 2SC3082	Q5	XU0012	Transistor DTC114EKT96
CE8028	Chemical C, 103K	Q5	XT0077	Transistor, 2SC3326ATE85L	D1	XD0100	Varicap 1SV164T1
CE8003	Chemical C, JF1E104Z	Q6	XT0061	Transistor, 2SB1132T100Q	D2	XD0100	Varicap 1SV164T1
CU8016	Chip C, C2012B1H102K	Q7	XT0061	Transistor, 2SB1132T100Q	D3	XD0100	Varicap 1SV164T1
CU8016	Chip C, C2012B1H102K	Q8	XU0018	Digital Transistor DTC124EKT96	D4	XD0100	Varicap 1SV164T1
CU8016	Chip C, C2012B1H102K	Q9	XU0018	Digital Transistor DTC124EKT96	D5	XD0078	Diode DAN235KT96
CU8016	Chip C, C2012B1H102K	Q10	XT0037	Transistor, 2SC2412KT96R	TC1	CT0022	Trimmer C, ECRJA020E12W
CU8016	Chip C, C2012B1H102K	Q11	XT0037	Transistor, 2SC2412KT96R	TC2	CT0021	Trimmer C, ECRJA010A12W
CU0035	Chip C, C2012CH1H101K	Q12	XT0037	Transistor, 2SC2412KT96R	L1	QK0076	Coil QK0076 (DR-510T only)
CU0035	Chip C, C2012CH1H101K	Q13	XT0037	Transistor, 2SC2412KT96R	L2	QK0039	Coil QK0039 (DR-510E only)
CU0035	Chip C, C2012CH1H101K	Q14	XT0037	Transistor, 2SC2412KT96R	L3	QK0039	Coil QK0039
CU0035	Chip C, C2012CH1H101K	Q15	XT0037	Transistor, 2SC2412KT96R	L4	QC0036	Coil NL322522T-R56M
CU8016	Chip C, C2012B1H102K	Q16	XT0038	Transistor, 2SA1037KT96R	L5	QC0036	Coil NL322522T-R56M
CU8016	Chip C, C2012B1H102K	Q17	XT0030	Transistor, 2SC3356T1	L6	QC0036	Coil NL322522T-R56M
CU8016	Chip C, C2012B1H102K	Q18	XT0030	Transistor, 2SC3356T1	L7	QC0036	Coil NL322522T-R56M
CU8016	Chip C, C2012B1H102K	Q19	XT0037	Transistor, 2SC2412KT96R	L8	QC0036	Coil NL322522T-R56M
CU8016	Chip C, C2012B1H102K	Q20	XT0078	Transistor, 2SC3369	L9	QC0022	Coil K300639NH
CK0003	Ceramic C, 50 V 102Z	Q21	XT0064	Transistor, 2SD1761E	L10	QC0010	Coil MLF3216E100M (DR-510T only)
CE0149	Chemical C, 10 V 220 μF BSP	Q22	XT0037	Transistor, 2SC2412KT96R	L10	QC0052	Coil LER015TR56M (DR-510E only)
RH0043	VR, VM6CK-PV-1S501B	Q23	XT0037	Transistor, 2SC2412KT96R	RX-SW Unit		
RH0044	VR, VM6CK-PV-1S103B	Q24	XT0037	Transistor, 2SC2412KT96R	R1	RK0062	Chip R, MCR10EZJH473E
RH0046	VR, VM6CK-PV-1S503B	Q25	XU0012	Digital Transistor DTC114EKT96	R2	RK0107	Chip R, MCR10EZJH000E
RH0044	VR, VM6CK-PV-1S103B	X1	XQ0037	X'tal HC-49/u 12.8 MHz	R3	RK0107	Chip R, MCR10EZJH000E
RH0044	VR, VM6CK-PV-1S103B	X2	XQ0034	X'tal HC-49/u 30.4 MHz	R4	RK0107	Chip R, MCR10EZJH000E
RH0045	VR, VM6CK-PV-1S303B	TH1	Thermistor	TD 5A150D	UHF VCO Unit		
RH0021	VR, H0651A 10KB	R1	RK0019	Chip R, MCR10EZJH121E			
CT0015	Trimmer C, CV05A0601						
CT0015	Trimmer C, CV05A0601						
CT0015	Trimmer C, CV05A0601						
CT0024	Trimmer C, ECRJA010A12						
CT0024	Trimmer C, ECRJA010A12						
CT0015	Trimmer C, CV05A0601						

Ref. No.	Part Code	Part Name and Number	Ref. No.	Part Code	Part Name and Number	Ref. No.	Part Code	Part Name and Number	Ref. No.	Part Code	Part Name and Number
R5	RK0107	Chip R, MCR10EZJH000E	R1	RK0069	Chip R, MCR10EZJH104E	R2	RK0035	Chip R, MCR10EZJH102E	R2	RK0035	Chip R, MCR10EZJH102E
D1	XD0040	Diode DAN202KT96	R2	RK0040	Chip R, MCR10EZJH272E	R3	RK0037	Chip R, MCR10EZJH152E	R3	RK0037	Chip R, MCR10EZJH152E
D2	XD0040	Diode DAN202KT96	R3	RK0039	Chip R, MCR10EZJH222E	R4	RK0052	Chip R, MCR10EZJH103E	R4	RK0052	Chip R, MCR10EZJH103E
D3	XD0041	Diode DAP202KT96	R4	RK0056	Chip R, MCR10EZJH223E	R5	RK0052	Chip R, MCR10EZJH103E	R5	RK0052	Chip R, MCR10EZJH103E
D4	XD0105	Diode 02CZ3.9XTE85L	R5	RK0042	Chip R, MCR10EZJH332E	R6	RK0036	Chip R, MCR10EZJH122E	R6	RK0036	Chip R, MCR10EZJH122E
D5	XD0105	Diode 02CZ3.9XTE85L	R6	RK0048	Chip R, MCR10EZJH682E	Q1	XU0020	Transistor, FMW1 T98	Q1	XU0020	Transistor, FMW1 T98
C1	CS0049	Chip Tantal, TMC1C105TR	R7	RK0052	Chip R, MCR10EZJH103E	Q2	XU0020	Transistor, FMW1 T98	Q2	XU0020	Transistor, FMW1 T98
C2	CS0049	Chip Tantal, TMC1C105TR	R8	RK0069	Chip R, MCR10EZJH104E	Q3	XT0038	Transistor, 2SA1037KT96R	Q3	XT0038	Transistor, 2SA1037KT96R
C3	CS0049	Chip Tantal, TMC1C105TR	R9	RK0045	Chip R, MCR10EZJH472E	C1	CU8016	Chip C, C2012B1H102K	C1	CU8016	Chip C, C2012B1H102K
Q1	XU0019	Transistor DTA114YKT96	R10	RK0079	Chip R, MCR10EZJH474E	C2	CU0066	Chip C, C2012CH1H330J	C2	CU0066	Chip C, C2012CH1H330J
Q2	XU0021	Transistor FMC3T98	R11	RK0057	Chip R, MCR10EZJH273E	C4	CU9015	Chip C, 32161E 0.1 μFZ	C4	CU9015	Chip C, 32161E 0.1 μFZ
Q3	XU0019	Transistor DTA114YKT96	R12	RK0056	Chip R, MCR10EZJH223E	C5	CU8038	Chip C, CM316Y5V105Z25VAT	C5	CU8038	Chip C, CM316Y5V105Z25VAT
Q4	XU0019	Transistor DTA114YKT96	R13	RK0039	Chip R, MCR10EZJH222E	C6	CS0065	Chip Tantal, TMC1D684TR	C6	CS0065	Chip Tantal, TMC1D684TR
			R14	RK0061	Chip R, MCR10EZJH393E	C7	CU8035	Chip C, C2012B1E393K	C7	CU8035	Chip C, C2012B1E393K
			R15	RK0057	Chip R, MCR10EZJH273E	C8	CU8035	Chip C, C2012B1E393K	C8	CU8035	Chip C, C2012B1E393K
			R17	RK0039	Chip R, MCR10EZJH222E	C9	CU8030	Chip C, C2012B1H153K	C9	CU8030	Chip C, C2012B1H153K
			APC Unit			C10	CU8034	Chip C, C2012B1E333K	C10	CU8034	Chip C, C2012B1E333K
R1	RK0039	Chip R, MCR10EZJH222E	D1	XD0103	Diode ISS226TE85L	D1	XD0103	Diode ISS226TE85L	D1	XD0103	Diode ISS226TE85L
R2	RK0035	Chip R, MCR10EZJH102E	D2	XD0041	Diode DAP202KT96	D2	XD0041	Diode DAP202KT96	D2	XD0041	Diode DAP202KT96
R3	RK0037	Chip R, MCR10EZJH152E	Q1	XT0037	Transistor, 2SC2412KT96R	Q1	XT0037	Transistor, 2SC2412KT96R	Q1	XT0037	Transistor, 2SC2412KT96R
R4	RK0052	Chip R, MCR10EZJH103E	Q2	XT0037	Transistor, 2SC2412KT96R	Q2	XT0037	Transistor, 2SC2412KT96R	Q2	XT0037	Transistor, 2SC2412KT96R
R5	RK0052	Chip R, MCR10EZJH103E	Q3	XT0076	Transistor, 2SC3295BTE85L	Q3	XT0076	Transistor, 2SC3295BTE85L	Q3	XT0076	Transistor, 2SC3295BTE85L
R6	RK0036	Chip R, MCR10EZJH122E	Q4	XT0076	Transistor, 2SC3295BTE85L	Q4	XT0076	Transistor, 2SC3295BTE85L	Q4	XT0076	Transistor, 2SC3295BTE85L
C1	CU8016	Chip C, C2012B1H102K	Q5	XT0037	Transistor, 2SC2412KT96R	Q5	XT0037	Transistor, 2SC2412KT96R	Q5	XT0037	Transistor, 2SC2412KT96R
C2	CS0064	Chip Tantal, TMC1A155TR	Q6	XT0037	Transistor, 2SC2412KT96R	Q6	XT0037	Transistor, 2SC2412KT96R	Q6	XT0037	Transistor, 2SC2412KT96R
C3	CU8024	Chip C, C2012B1H472K									
C4	CU8016	Chip C, C2012B1H102K									
C5	CU8024	Chip C, C2012B1H472K									
C6	CU8016	Chip C, C2012B1H102K									
			Lock SW Unit								
R1	RK0045	Chip R,									

Part Code	Part Name and Number
QC0045	Chip L, NL322522T-3R3M
QK0042	Coil 3x5R0x0R8
QC0045	Chip L, NL322522T-3R3M
QC0045	Chip L, NL322522T-3R3M
QK0041	Coil 3x4R0x0R8
QC0039	Chip L, NL322522T-1R0M
CT0021	Trimmer C, ECRJA010A12W
CT0021	Trimmer C, ECRJA010A12W
CU8016	Chip C, C2012B1H102K
CU8016	Chip C, C2012B1H102K
CU0004	Chip C, C2012CH1H030C
CU8028	Chip C, C2012B1H103K
CU0004	Chip C, C2012CH1H030C
CU0011	Chip C, C2012CH1H100D
CU0009	Chip C, C2012CH1H080D
CU0064	Chip C, C2012CH1H220J
CU0001	Chip C, C2012CH1H0R5C
CU0065	Chip C, C2012CH1H270J
CU8016	Chip C, C2012B1H102K
CU0004	Chip C, C2012CH1H030C
CU8028	Chip C, C2012B1H103K
CU0004	Chip C, C2012CH1H030C
CU0061	Chip C, C2012CH1H120J
CU0066	Chip C, C2012CH1H330J
CU0060	Chip C, C2012CH1H470J
CU0011	Chip C, C2012CH1H100D
CU8016	Chip C, C2012B1H102K
CU0060	Chip C, C2012CH1H470J
CU8016	Chip C, C2012B1H102K
CU8016	Chip C, C2012B1H102K
CE0198	Chemical C, 10MS5100

VHF Main Unit

XE0013	FET, 3SK184STX
XE0012	FET, 3SK131V11(V12)T1
XT0059	Transistor, 2SC3082KT96Q
XT0061	Transistor, 2SB1132T100Q
XT0061	Transistor, 2SB1132T100Q
XU0018	Transistor, DTC124EKT96
XU0018	Transistor, DTC124EKT96
XT0037	Transistor, 2SC2412KT96R
XT0061	Transistor, 2SC2714Y
XT0037	Transistor, 2SC2412KT96R
XT0037	Transistor, 2SC2412KT96R
XT0038	Transistor, 2SA1037KT96R
XT0030	Transistor, 2SC3356T1
XT0030	Transistor, 2SC3356T1
XT0037	Transistor, 2SC2412KT96R
XT0078	Transistor, 2SC3369
XT0064	Transistor, 2SD1761E
XT0037	Transistor, 2SC2412KT96R
XT0037	Transistor, 2SC2412KT96R
XD0103	Diode ISS226TE85L
XD0040	Diode DAN202KT96
XD0040	Diode DAN202KT96
XD0104	Diode 02C26.2YTE85L
XD0041	Diode DAP202KT96
XD0070	Diode ISS265
XD0070	Diode ISS265
XD0041	Diode DAP202KT96
XD0058	Diode ISS181TE85L
XD0100	Varicap ISV164T1
XD0100	Varicap ISV164T1
XD0100	Varicap ISV164T1
XD0040	Diode DAN202KT96
XD0040	Diode DAN202KT96
XD0080	Diode RB400DT96
XD0080	Diode RB400DT96
XF0004	XF 1L10.7M 15 A 49/T
XC0001	Ceramic Filter CFW455F
XQ0037	X'tal HC-49/u 12.8 MHz

Ref. No.	Part Code	Part Name and Number
X2	XQ0033	X'tal HC-49/u 10.245 MHz
TH1	XS0004	Thermistor TD5A150D
IC1	XA0082	IC, MC7808CT
IC2	XA0078	IC, M54959P
R1	RK0047	Chip R, MCR10EZJH562E
R2	RK0052	Chip R, MCR10EZJH103E
R3	RK0056	Chip R, MCR10EZJH223E
R4	RK0018	Chip R, MCR10EZJH101E
R5	RK0011	Chip R, MCR10EZJH470E
R6	RK0025	Chip R, MCR10EZJH331E
R7	RK0011	Chip R, MCR10EZJH470E
R8	RK0052	Chip R, MCR10EZJH103E
R9	RK0062	Chip R, MCR10EZJH473E
R10	RK0011	Chip R, MCR10EZJH470E
R11	RK0062	Chip R, MCR10EZJH473E
R12	RK0035	Chip R, MCR10EZJH102E
R13	RK0001	Chip R, MCR10EZJH100E
R14	RK0074	Chip R, MCR10EZJH274E
R15	RK0018	Chip R, MCR10EZJH101E
R16	RK0038	Chip R, MCR10EZJH182E
R17	RK0062	Chip R, MCR10EZJH473E
R18	RK0052	Chip R, MCR10EZJH103E
R19	RK0018	Chip R, MCR10EZJH101E
R20	RK0028	Chip R, MCR10EZJH471E
R21	RK0018	Chip R, MCR10EZJH101E
R23	RK0038	Chip R, MCR10EZJH182E
R25	RK0059	Chip R, MCR10EZJH333E
R31	RK0035	Chip R, MCR10EZJH102E
R33	RK0069	Chip R, MCR10EZJH104E
R34	RK0039	Chip R, MCR10EZJH222E
R35	RK0107	Chip R, MCR10EZJH000E
R36	RK0038	Chip R, MCR10EZJH182E
R37	RK0052	Chip R, MCR10EZJH103E
R38	RK0038	Chip R, MCR10EZJH182E
R39	RK0035	Chip R, MCR10EZJH102E
R40	RK0052	Chip R, MCR10EZJH103E
R41	RK0038	Chip R, MCR10EZJH182E
R42	RK0035	Chip R, MCR10EZJH102E
R43	RK0001	Chip R, MCR10EZJH100E
R44	RK0045	Chip R, MCR10EZJH472E
R45	RK0062	Chip R, MCR10EZJH473E
R46	RK0062	Chip R, MCR10EZJH473E
R47	RK0062	Chip R, MCR10EZJH473E
R48	RK0062	Chip R, MCR10EZJH473E
R49	RK0062	Chip R, MCR10EZJH473E
R50	RK0048	Chip R, MCR10EZJH682E
R51	RK0076	Chip R, MCR10EZJH334E
R52	RK0044	Chip R, MCR10EZJH392E
R53	RK0076	Chip R, MCR10EZJH334E
R54	RK0044	Chip R, MCR10EZJH392E
R55	RK0056	Chip R, MCR10EZJH223E
R58	RK0018	Chip R, MCR10EZJH101E
R59	RK0056	Chip R, MCR10EZJH223E
R60	RK0052	Chip R, MCR10EZJH103E
R62	RK0052	Chip R, MCR10EZJH103E
R63	RK0062	Chip R, MCR10EZJH473E
R64	RK0040	Chip R, MCR10EZJH272E
R65	RK0040	Chip R, MCR10EZJH272E
R66	RK0050	Chip R, MCR10EZJH822E
R67	RK0038	Chip R, MCR10EZJH182E
R68	RK0052	Chip R, MCR10EZJH103E
R69	RK0052	Chip R, MCR10EZJH103E
R70	RK0045	Chip R, MCR10EZJH472E
R71	RK0056	Chip R, MCR10EZJH223E
R72	RK0052	Chip R, MCR10EZJH103E
R73	RK0056	Chip R, MCR10EZJH223E
R74	RK0018	Chip R, MCR10EZJH101E
R75	RK0035	Chip R, MCR10EZJH102E
R76	RK0018	Chip R, MCR10EZJH101E
R77	RK0035	Chip R, MCR10EZJH102E
R78	RK0056	Chip R, MCR10EZJH223E
R79	RK0052	Chip R, MCR10EZJH103E
R80	RK0018	Chip R, MCR10EZJH101E
R81	RK0052	Chip R, MCR10EZJH103E

Ref. No.	Part Code	Part Name and Number
R82	RK0052	Chip R, MCR10EZJH103E
R89	RK0018	Chip R, MCR10EZJH101E
R90	RK0038	Chip R, MCR10EZJH182E
R91	RK0020	Chip R, MCR10EZJH151E
R94	RK0039	Chip R, MCR10EZJH222E
R95	RK2008	Chip R, MCR50JZHJ220E
R96	RK0069	Chip R, MCR50JZHJ104E
R98	RK0069	Chip R, MCR50JZHJ104E
R100	RK0045	Chip R, MCR50JZHJ472E
R103	RK0055	Chip R, MCR50JZHJ183E
R104	RK0052	Chip R, MCR50JZHJ103E
R109	RK0035	Chip R, MCR50JZHJ102E
R110	RK0069	Chip R, MCR50JZHJ104E
R111	RK0069	Chip R, MCR50JZHJ104E
R112	RK0069	Chip R, MCR50JZHJ104E
R113	RK0062	Chip R, MCR50JZHJ473E
R114	RK0035	Chip R, MCR50JZHJ102E
R115	RK0035	Chip R, MCR50JZHJ102E
R116	RK0035	Chip R, MCR50JZHJ102E
R118	RK0107	Chip R, MCR50JZHJ000E
R121	RK0107	Chip R, MCR50JZHJ000E
R122	RK0107	Chip R, MCR10EZJH000E
R124	RK0107	Chip R, MCR10EZJH000E
R127	RK0056	Chip R, MCR10EZJH223E
R128	RK0057	Chip R, MCR10EZJH273E
R129	RK0008	Chip R, MCR10EZJH330E
R130	RK0052	Chip R, MCR10EZJH103E
R131	RK0052	Chip R, MCR10EZJH103E
R132	RK0056	Chip R, MCR10EZJH223E
R133	RK0052	Chip R, MCR10EZJH103E
R140	RK0107	Chip R, MCR10EZJH000E
R141	RK0035	Chip R, MCR10EZJH102E
R142	RD0116	R, R20R02J1R0
R143	RK0039	Chip R, MCR10EZJH222E
R144	RK0107	Chip R, MCR10EZJH000E
L1	QA0038	Coil, 114M RF
L2	QA0038	Coil, 114M RF
L3	QA0053	Coil, 144M
L4	QA0053	Coil, 144M
L5	QA0054	Coil, 144M
L6	QA0037	Coil, 144M TC
L7	QA0039	Coil, 10R7M IF
L8	QA0039	Coil, 10R7M IF
L10	QA0041	Coil, 455K IF
L11	QL0007	Choke Coil, 1R6MH R6A
L13	QC0045	Chip L, NL322522T-3R3M
L14	QC0034	Chip L, NL322522T-R39M
L15	QK0032	Coil, 3x4T
L16	QK0042	Coil, 3x5R0x0R6
C1	CU0066	Chip C, C2012CH1H330J
C2	CU0061	Chip C, C2012CH1H120J
C3	CU0009	Chip C, C2012CH1H080C
C4	CU0010	Chip C, C2012CH1H090D
C5	CU8016	Chip C, C2012B1H102K
C6	CU8016	Chip C, C2012B1H102K
C7	CU8028	Chip C, C2012B1H103K
C8	CU8016	Chip C, C2012B1H102K
C9	CU8016	Chip C, C2012B1H102K
C10	CU8028	Chip C, C2012B1H103K
C11	CU0005	Chip C, C2012CH1H040C
C12	CU0062	Chip C, C2012CH1H150J
C13	CU8016	Chip C, C2012B1H102K
C14	CU8028	Chip C, C2012B1H103K
C15	CU0006	Chip C, C2012CH1H050C
C16	CU8016	Chip C, C2012B1H102K
C17	CU8028	Chip C, C2012B1H103K
C18	CU8016	Chip C, C2012B1H102K
C19	CU8028	Chip C, C2012B1H103K
C20	CU8016	Chip C, C2012B1H102K
C21	CE0064	Chemical C, 10 V 47 μF MS9
C22	CU2073	Chip C, C2012SL151J
C23	CU8028	Chip C, C2012B1H103K
C25	CU0066	Chip C, C2012CH1H330J
C27	CU8016	Chip C, C2012B1H102K
C32	CU8003	Chip C, C2012JF1E104Z

Ref. No.	Part Code	Part Name and Number
C33	CU8003	Chip C, C2012JF1E104Z
C34	CU8028	Chip C, C2012B1H103K
C35	CU8016	Chip C, C2012B1H102K
C36	CU8016	Chip C, C2012B1H102K
C37	CE0064	Chemical C, 10 V 47 μF MS9
C38	CU8034	Chip C, C2012B1E333K
C39	CE0064	Chemical C, 10 V 47 μF MS9
C40	CU8038	Chip C, CM316Y5V105Z25VAT
C41	CU8028	Chip C, C2012B1H103K
C42	CE0064	Chemical C, 10 V 47 μF MS9
C43	CU8028	Chip C, C2012B1H103K
C44	CE0030	Chemical C, 16 V 10 μF MS7
C45	CS0049	Chip Tantal, TMC1C105TR
C46	CE0064	Chemical C, 10 V 47 μF MS9
C47	CU8016	Chip C, C2012B1H102K
C48	CU8028	Chip C, C2012B1H103K
C49	CU8028	Chip C, C2012B1H103K
C50	CU8028	Chip C, C2012B1H103K
C51	CU8003	Chip C, C2012JF1E104Z
C53	CU8028	Chip C, C2012B1H103K
C54	CU0064	Chip C, C2012CH1H220J
C55	CU0043	Chip C, C2012CH1H221K
C56	CU0071	Chip C, C2012CH1H101J
C57	CU0071	Chip C, C2012CH1H101J
C59	CO0007	Film C, 50F2M473K
C60	CU0071	Chip C, C2012CH1H101J
C61	CU2051	Chip C, C2012SL471K
C62	CU8019	Chip C, C2012B1H182K
C63	CU8028	Chip C, C2012B1H103K
C65	CU8016	Chip C, C2012B1H102K
C67	CU8028	Chip C, C2012B1H103K
C68	CO0008	Film C, 50F2M683K
C69	CS0049	Chip Tantal, TMC1C105TR
C70	CE0199	Chemical C, 16 V 100 μF MS7
C72	CU0066	Chip C, C2012CH1H330J
C73	CU8016	Chip C, C2012B1H102K
C74	CU0066	Chip C, C2012CH1H330J
C75	CU8028	Chip C, C2012B1H103K
C76	CU0011	Chip C, C2012CH1H100D
C77	CU8016	Chip C, C2012B1H102K
C78	CU0011	Chip C, C2012CH1H100D
C79	CU8028	Chip C, C2012B1H103K
C80	CU2051	Chip C, C2012SL471K
C81	CU8016	Chip C, C2012B1H102K
C82	CU8028	Chip C, C2012B1H103K
C84	CU8028	Chip C, C2012B1H103K
C85	CU8028	Chip C, C2012B1H103K
C93	CE0051	Chemical C, 16 V 1000 μF MS16
C96	CE0125	Chemical C, 25 V 4.7 μF MS7
C97	CE0030	Chemical C, 16 V 10 μF MS7
C98	CU8016	Chip C, C2012B1H102K
C100	CU8016	Chip C, C2012B1H102K
C101	CE0030	Chemical C, 16 V 10 μF MS7
C102	CU8016	Chip C, C2012B1H102K
C103	CE0199	Chemical C, 16 V 100 μF MS7
C104	CU8	

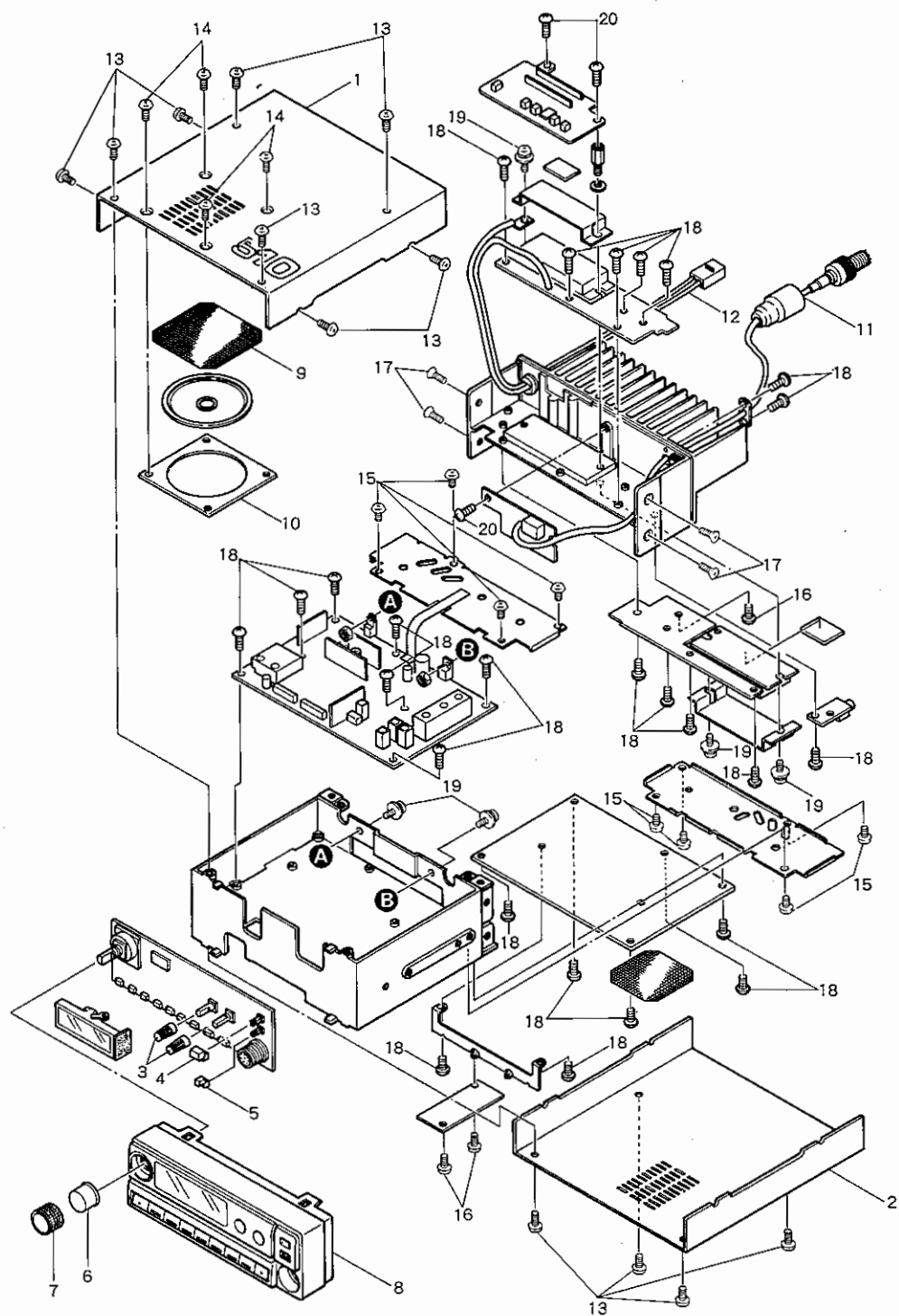
Part Code	Part Name and Number
CT0020	Trimmer C, CV38A2001
CT0017	Trimmer C, CV38A0301
CT0017	Trimmer C, CV38A0301
CT0017	Trimmer C, CV38A0301
CT0018	Trimmer C, CV38A0601
CT0019	Trimmer C, CV38A1001
CT0019	Trimmer C, CV38A1001
CU0064	Chip C, C2012CH1H220J
CU0009	Chip C, C2012CH1H080D
CU0060	Chip C, C2012CH1H470J
CU0002	Chip C, C2012CH1H010C
CU0060	Chip C, C2012CH1H470J
CU0004	Chip C, C2012CH1H030C
CU8016	Chip C, C2012B1H102K
CU0071	Chip C, C2012CH1H101J
CU0064	Chip C, C2012CH1H220J
CU0002	Chip C, C2012CH1H010C
CU8028	Chip C, C2012B1H103K
CU0063	Chip C, C2012CH1H180J
CU0002	Chip C, C2012CH1H010J
CU8016	Chip C, C2012B1H102K
CU8016	Chip C, C2012B1H102K
CU8026	Chip C, C2012B1H103K
CU0006	Chip C, C2012CH1H050C
CU0003	Chip C, C2012CH1H020C
CU0003	Chip C, C2012CH1H020C
CU0006	Chip C, C2012CH1H050C
CU0001	Chip C, C2012CH1H0R5C
CU0051	Chip C, C2012CH1H471K
CU0006	Chip C, C2012CH1H050C
CU8016	Chip C, C2012B1H102K
CU0009	Chip C, C2012CH1H080D
CU0071	Chip C, C2012CH1H101J
CU0066	Chip C, C2012CH1H330J
CU0062	Chip C, C2012CH1H150J
CU0061	Chip C, C2012CH1H120J
CU0004	Chip C, C2012CH1H030C
CU0061	Chip C, C2012CH1H120J
CU8016	Chip C, C2012B1H102K
CU0004	Chip C, C2012CH1H030C
CU8016	Chip C, C2012B1H102K
CU8028	Chip C, C2012B1H103K
CU8028	Chip C, C2012B1H103K
CU8028	Chip C, C2012B1H103K
QK0037	Coil, 3x2.5T
QK0037	Coil, 3x2.5T
QA0046	Coil, 30RBMIF
QK0036	Coil, 3x1.5T
QK0036	Coil, 3x1.5T
QK0005	Coil, 3x3T
QA0048	Coil, 58MOSC
QA0047	Coil, 177MTC
QA0047	Coil, 177MTC
RD0108	JPW01 R-01
RD0108	JPW01 R-01
UHF PA Unit	
RD1008	R, 1/2 W 150Ω
RD0052	R, 1/4 W 10K R20
CU0051	Chip C, C2012CH1H471K
CE0044	Chemical C, 16 V 10 μF MS5
CU0051	Chip C, C2012CH1H471K
CF0044	Chemical C, 16 V 10 μF MS5
CU7014	Chip C, UC232H0060D-T
CU0051	Chip C, C2012CH1H471K
CU0051	Chip C, C2012CH1H471K
CC5014	Ceramic C, HM60SJSJL040C
CU0005	Chip C, C2012CH1H040C
CC5019	Ceramic C, HM60SJSJL150J
CC5020	Ceramic C, HM60SJSJL180J
CC5021	Ceramic C, HM60SJSJL220J
CC0101	Ceramic C, 50 V 0.5 pF CH

Ref. No.	Part Code	Part Name and Number
C14	CU0051	Chip C, C2012CH1H471K
C15	CC5014	Ceramic C, HM60SJSJL040C
C16	CU7018	Chip C, VC232H0180J-T
C17	CC5014	Ceramic C, HM60SJSJL040C
C18	CU0051	Chip C, C2012CH1H471K
C19	CU0051	Chip C, C2012CH1H471K
C21	CU0002	Chip C, C2012CH1H010C
C25	CU8016	Chip C, C2012B1H102K
C26	CU0005	Chip C, C2012CH1H040C (DR-510E only)
VR1	RH0049	VR, TM64K2PV101B
L1	QK0044	Coil, 3x9R5x0R5
L2	QK0038	Coil, 3x1R5x0R7
L3	QK0040	Coil, 3x3R5x0R6
L4	QK0038	Coil, 3x1R5x0R7
L5	QK0038	Coil, 3x1R5x0R7
L6	QC0051	Inductor FL4H1R0
Q1	XA0077	IC, M57788M
D2	XD0106	Diode, UM9401
D3	XD0014	Diode, M1308
D4	XD0102	Diode, ISS101
D5	XD0102	Diode, ISS101
VHF PA Unit		
R1	RD1008	R, 1/2 W 150Ω
R2	RD0054	R, 1/4 W 15 kΩ
C1	CE0044	Chemical C, 16 V 10 μF MS5
C2	CE0044	Chemical C, 16 V 10 μF MS5
C3	CC5002	Ceramic C, 500 V 10 pF SL
C4	CC5020	Ceramic C, HM60SJSJL180J
C5	CC5025	Ceramic C, HM60SJSJYB102K
C6	CC5020	Ceramic C, HM60SJSJL180J
C7	CC5023	Ceramic C, HM60SJSJL390J
C8	CC0102	Ceramic C, 50 V 1 pF CH
C9	CC5003	Ceramic C, 500 V 33 pF SL
C10	CC0102	Ceramic C, 50 V 1 pF CH
C11	CC5021	Ceramic C, HM60SJSJL220J
C12	CU8016	Chip C, C2012B1H102K
C13	CU8016	Chip C, C2012B1H102K
C14	CU8016	Chip C, C2012B1H102K
C15	CU8016	Chip C, C2012B1H102K
C16	CU8016	Chip C, C2012B1H102K
D1	XD0107	Diode, G3B
D2	XD0106	Diode, UM9401
D3	XD0014	Diode, M1308
D4	XD0095	Diode, 1S2472
D5	XD0095	Diode, 1S2472
IC1	XA0043	IC, M57726
L1	QK0044	Coil, 3x9R5x0R5
L2	QK0031	Coil, 3x6T
L3	QK0041	Coil, 3x4R0x0R8
L4	QK0044	Coil, 3x9R5x0R5
L5	QK0041	Coil, 3x4R0x0R8
L6	QK0041	Coil, 3x4R0x0R8
L7	QC0051	Inductor, FL4H1R0
VR1	RH0049	VR, TM64K2PU101B
Duplexer Unit		
R1	RK0039	Chip R, MCR10EZJH222E
R2	RK0069	Chip R, MCR10EZJH104E
R3	RK0069	Chip R, MCR10EZJH104E
C1	CC5022	Ceramic C, HM60SJSJL270D
C2	CC5022	Ceramic C, HM60SJSJL270D
C3	CU7012	Chip C, UC232H0040C-T
C4	CU0051	Chip C, C2012CH1H471K

Ref. No.	Part Code	Part Name and Number
C5	CU0051	Chip C, C2012CH1H471K
C6	CC5016	Ceramic C, HM60SJSJL080D
C7	CC5015	Ceramic C, HM60SJSJL060D
C8	CC5015	Ceramic C, HM60SJSJL060D
C9	CU0011	Chip C, C2012CH1H100D
C10	CU0051	Chip C, C2012CH1H471K
C11	CS0049	Chip Tantal, TMC1C105TR
C12	CU8016	Chip C, C2012B1H102K
C13	CU0005	Chip C, C2012CH1H040C
L1	QK0055	Coil, 3x6T x 0.8
L2	QK0055	Coil, 3x6T x 0.8
L3	QK0054	Coil, 3x1.75T x 0.8
L5	QK0054	Coil, 3x1.75T x 0.8
L6	QK0054	Coil, 3x1.75T x 0.8
RL1	UL0006	Relay, AG201344
Q1	XT0037	Transistor, 2SC2412KT96R
Dual Control Unit		
R1	RK0035	Chip R, MCR10EZJH102E
R2	RK0062	Chip R, MCR10EZJH473E
R3	RK0062	Chip R, MCR10EZJH473E
R4	RK0052	Chip R, MCR10EZJH103E
R5	RK0018	Chip R, MCR10EZJH101E
R6	RK0067	Chip R, MCR10EZJH823E
R7	RK0071	Chip R, MCR10EZJH154E
R8	RK0067	Chip R, MCR10EZJH823E
R9	RK0059	Chip R, MCR10EZJH333E
R10	RK0052	Chip R, MCR10EZJH103E
R11	RK0062	Chip R, MCR10EZJH473E
R12	RK0062	Chip R, MCR10EZJH473E
R13	RK0062	Chip R, MCR10EZJH473E
R14	RK0062	Chip R, MCR10EZJH473E
R15	RK0062	Chip R, MCR10EZJH473E
R16	RK0062	Chip R, MCR10EZJH473E
R17	RK0062	Chip R, MCR10EZJH473E
R18	RK0062	Chip R, MCR10EZJH473E
R19	RK0062	Chip R, MCR10EZJH473E
R20	RK0062	Chip R, MCR10EZJH473E
R21	RK0062	Chip R, MCR10EZJH473E
R22	RK0062	Chip R, MCR10EZJH473E
R23	RK0062	Chip R, MCR10EZJH473E
R24	RK0062	Chip R, MCR10EZJH473E
R25	RK0062	Chip R, MCR10EZJH473E
R26	RK0045	Chip R, MCR10EZJH472E
R27	RK0070	Chip R, MCR10EZJH124E
R28	RK0070	Chip R, MCR10EZJH124E
R29	RK0070	Chip R, MCR10EZJH124E
R30	RK0070	Chip R, MCR10EZJH124E
R31	RK0062	Chip R, MCR10EZJH473E
R35	RK0052	Chip R, MCR10EZJH103E
R36	RK0052	Chip R, MCR10EZJH103E
R37	RK0045	Chip R, MCR10EZJH472E
R38	RK0069	Chip R, MCR10EZJH104E
R39	RK0035	Chip R, MCR10EZJH102E
R42	RK0069	Chip R, MCR10EZJH104E
R43	RK1035	Chip R, MCR18EZJH102E
R44	RK0052	Chip R, MCR10EZJH103E
R47	RK0018	Chip R, MCR10EZJH101E
R48	RK0062	Chip R, MCR10EZJH473E
R49	RK0062	Chip R, MCR10EZJH473E
R50	RK0038	Chip R, MCR10EZJH182E
R51	RK0038	Chip R, MCR10EZJH182E
R52	RK0038	Chip R, MCR10EZJH182E
R53	RK0038	Chip R, MCR10EZJH182E
R54	RK0038	Chip R, MCR10EZJH182E
R55	RK1039	Chip R, MCR18EZJH222E
R56	RK0035	Chip R, MCR10EZJH102E
R57	RK0107	Chip R, MCR10EZJH000E (DR-510T only)
R58	RK0035	Chip R, MCR10EZJH102E
R59	RK0035	Chip R, MCR10EZJH102E
R60	RK0035	Chip R, MCR10EZJH102E
R61	RK0035	Chip R, MCR10EZJH102E
R62	RK0035	Chip R, MCR10EZJH102E

Ref. No.	Part Code	Part Name and Number
C1	CU0071	Chip C, C2012CH1H101J
C2	CU8016	Chip C, C2012B1H102K
C3	CU8016	Chip C, C2012B1H102K
C4	CU8016	Chip C, C2012B1H102K
C5	CU8016	Chip C, C2012B1H102K
C6	CU8016	Chip C, C2012B1H102K
C7	CU8016	Chip C, C2012B1H102K
C8	CU8016	Chip C, C2012B1H102K
C9	CU8016	Chip C, C2012B1H102K
C10	CU8016	Chip C, C2012B1H102K
C14	CU8016	Chip C, C2012B1H102K
C15	CU8016	Chip C, C2012B1H102K
C16	CU8016	Chip C, C2012B1H102K
C17	CE0057	Chemical C, 6.3 V 330 μF MS9
C18	CU8028	Chip C, C2012B1H103K
C19	CE0044	Chemical C, 16 V 10 μF MS5
C21	CU8024	Chip C, C2012B1H471K
C22	CS0051	Chip Tantal, TMC1C106TR
C23	CU8038	Chip C, CM316Y5V105Z25VAT
C24	CS0051	Chip Tantal, TMC1C106TR
C26	CU0071	Chip C, C2012CH1H101J
C27	CU0071	Chip C, C2012CH1H101J
C28	CU0071	Chip C, C2012CH1H101J
C29	CU8016	Chip C, C2012B1H102K
C30	CU8016	Chip C, C2012B1H102K
C31	CU8016	Chip C, C2012B1H102K
C32	CU8016	Chip C, C2012B1H102K
C33	CU8016	Chip C, C2012B1H102K
C34	CU8016	Chip C, C2012B1H102K
C35	CU8016	Chip C, C2012B1H102K
C36	CU8016	Chip C, C2012B1H102K
C38	CU8016	Chip C, C2012B1H102K
C39	CU8016	Chip C, C2012B1H102K
C40	CU8016	Chip C, C2012B1H102K
PL1	EP0004	Lamp, BQ031-30674A
PL2	EP0004	Lamp, BQ031-30674A
PL3	EP0004	Lamp, BQ031-30674A
PL4	EP0003	Lamp, BQ031-30403A
PL5	EP0003	Lamp, BQ031-30403A
VR1	RV0010	Volume, EVU-F2AF20B54
VR2	RV0009	Volume, EVU-F2AF20B14
VR3	RV0036	Volume, CVR-42A-102AW1D
SW1	UQ0011	Push SW, ESB-64801
SW2	UQ0011	Push SW, ESB-64801
SW3	UQ0013	Tact SW, EVQ-QEC-04K
SW4	UQ0013	Tact SW, EVQ-QEC-04K
SW5	UQ0013	Tact SW, EVQ-QEC-04K
SW6	UQ0013	Tact SW, EVQ-QEC-04K
SW7	UQ0013	Tact SW, EVQ-QEC-04K
SW8	UQ0013	Tact SW, EVQ-QEC-04K
SW9	UQ0013	Tact SW, EVQ-QEC-04K
SW10	UQ0013	Tact SW, EVQ-QEC-04K
SW11	UQ0013	Tact SW, EVQ-QEC-04K
SW12	UQ0013	Tact SW, EVQ-QEC-04K
IC1	XA0072	IC, MB88543-142M
IC2	XA0022	IC, MBL82C43PF
IC3	XA0033	IC, MPC393G-T
IC4	XA0074	IC, AN8006
IC5	XA0073	IC, MN1280-T
FAR1	XB0001	FAR, C4CA0358000K01
D3	XD0061	Diode, DA204K T96
D4	XD0040	Diode, DAN202K T96
D6	XD0040	Diode, DAN202K T96
LED1	XL0020	LED, TLG211
Q2	XU0015	Transistor, DTC144TK T96
Q5	XT0088	Transistor, 2SA1213Y
Q6	XT0037	Transistor, 2SC2412K T96R

CABINET PARTS LOCATION



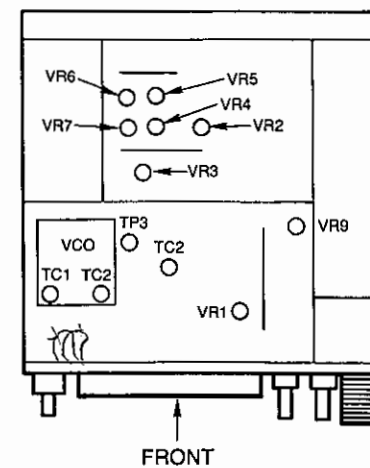
Ref. No.	Part Code	Part Name and Number
Mechanical Parts		
1	KU0059	Upper Case
2	KS0031	Lower Case
3	NK0010	Vol Knob
4	NP0015	Power Knob
5	NP0016	HI/LO Knob
6	NK0009	Dial Knob
7	ND0004	Dial Cover
8	KM0055	Front Panel
9	FF0013	SP Sheet
10	ST0009	SP Metal Crasp
11	UE0053	Coaxial Cable
12	UA0002	DC Power Cable

Screws		
13	AA0031	M2.6×5
14	AA0003	M2.6×5
15	AF0011	M2.6×4
16	AF0027	M2×4
17	AA0022	M3×6
18	AJ0015	2.6×6 (tap)
19	AD0001	M3×8
20	AA0028	M2.6×5

ADJUSTMENT (VHF)

Item	Adjustment point	Adjustment method
VCO P/D Voltage (RX)	TC2 (VCO Box)	Adjust TC2 so that the voltage of TP3 is 4V on the receiving mode.
VCO P/D Voltage (TX)	TC1 (VCO Box)	Adjust TC1 so that the voltage of TP3 is 3V on the transmission mode.
Frequency	TC2 (Main Board)	Set the unit in the transmission mode at 145.00 MHz and adjust TC2.
Power output	VR6 (Hi)	On "HI" position, turn VR6 for 45 W output at 145.00 MHz.
	VR7 (Lo)	On "LO" position, turn VR7 for 5 W output at 145.00 MHz.
RF Power Meter	VR4	Turn VR4 so that three segments will light on "LO" position.
Deviation	VR3	Input a signal of 1 KHz/25 mV into the MIC jack and adjust VR3 so that you obtain 4.9 KHz/Dev in the transmission mode.
MIC Gain	VR2	Input a signal of 1 KHz/10 mV into the MIC jack and adjust VR2 so that you obtain 4.0 KHz/Dev in the transmission mode.
Protection Circuit	VR5	Disconnect the antenna in the transmission mode and adjust VR5 so that the current consumption will be 5A.
Subaudible Tone Deviation (DR-510T)	VR1 (Tone squelch board)	On the "ENC" mode at 146.00 MHz, turn VR1 so that the deviation is 0.7 KHz.
1750 Hz Tone Deviation (DR-510E)	VR1 (Tone burst board)	Pressing Tone button at 145.00 MHz, turn VR1 so that the deviation is 3.5 KHz.
S-Meter (SG output: 3 dBμ EMF)	VR1	Turn VR1 so that the 1 begins to light.
Squelch Sensitivity (SG output: -6 dBμ EMF)	VR9	Turn the squelch control fully clockwise and turn VR9 so that the squelch will be closed at the SG output of -6 dBμ.

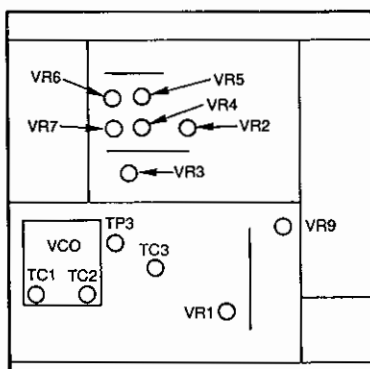
Upper Side View



■ ADJUSTMENT (UHF)

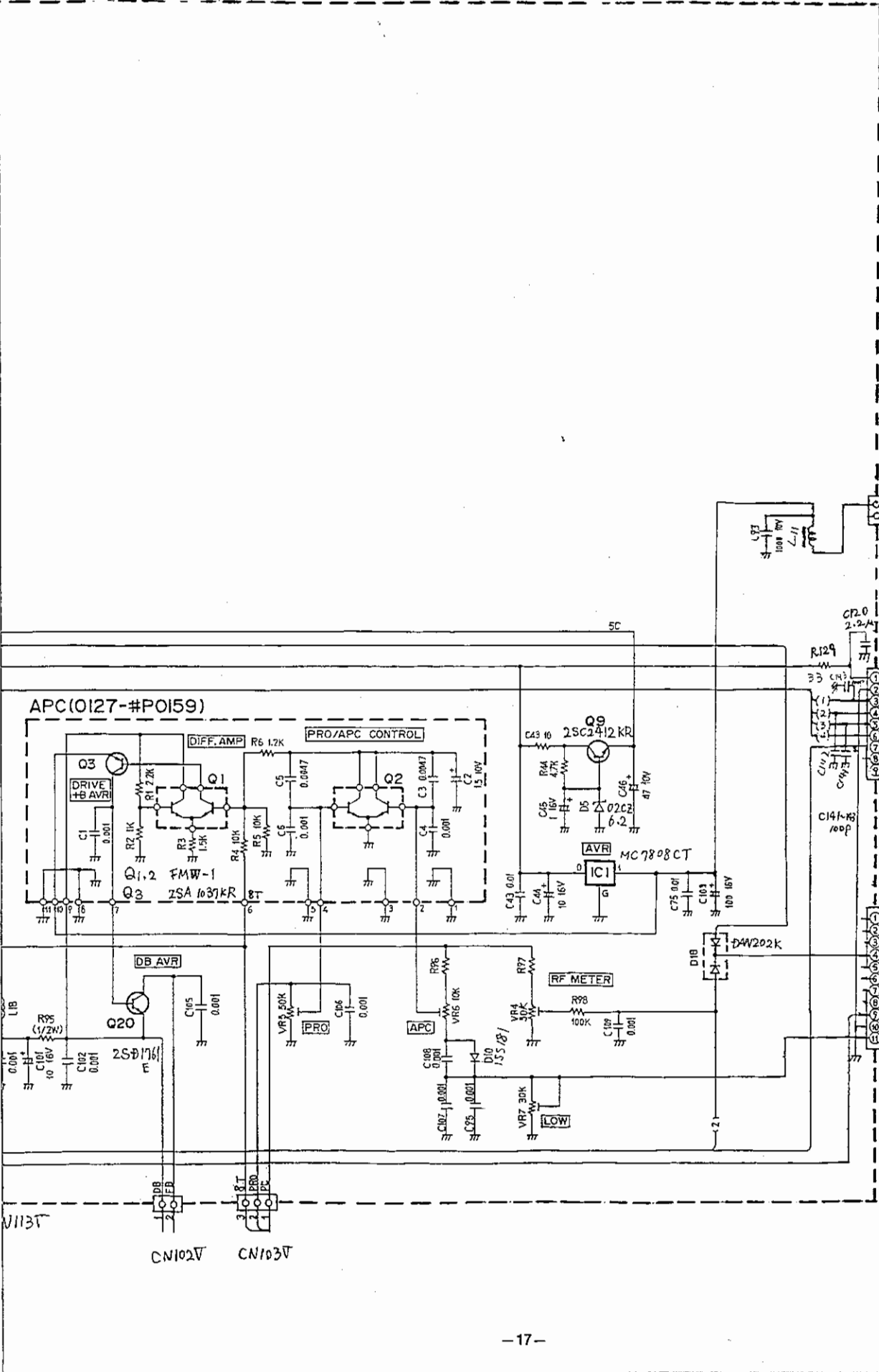
Item	Adjustment point	Adjustment method
VCO P/D Voltage (RX)	TC2 (VCO Box)	Adjust TC2 so that the voltage of TP3 is 2 V on the receiving mode.
VCO P/D Voltage (TX)	TC1 (VCO Box)	Adjust TC1 so that the voltage of TP3 is 1 V on the transmission mode.
Frequency	TC3 (Main Board)	Set the unit in the transmission mode at 435.00 MHz (T: 445.00 MHz) and adjust TC3.
Power output	VR6 (Hi)	On "HI" position, turn VR6 for 35 W output at 435 (T: 445) MHz.
	VR7 (Lo)	On "LO" position, turn VR7 for 5 W output at 145.00 MHz.
RF Power Meter	VR4	Turn VR4 so that three segments will light on "LO" position.
Deviation	VR3	Input a signal of 1 KHz/25 mV into the MIC jack and adjust VR3 so that you obtain 4.9 KHz/Dev in the transmission mode.
MIC Gain	VR2	Input a signal of 1 KHz/10 mV into the MIC jack and adjust VR2 so that you obtain 4.0 KHz/Dev in the transmission mode.
Protection Circuit	VR5	Disconnect the antenna in the transmission mode and adjust VR5 so that the current consumption will be 4A.
Subaudible Tone Deviation (DR-510T)	VR1 (Tone squelch board)	On the "ENC" mode at 435.00 MHz, (T: 445.00 MHz), turn VR1 so that the deviation is 0.7 KHz.
1750 Hz Tone Deviation (DR-510E)	VR1 (Tone burst board)	Pressing Tone button at 435.00 MHz (T: 445.00 MHz), turn VR1 so that the deviation is 3.5 KHz.
S-Meter (SG output: 3 dB μ EMF)	VR1	Turn VR1 so that the <input type="checkbox"/> begins to light.
Squelch Sensitivity (SG output: -6 dB μ EMF)	VR9	Turn the squelch control fully clockwise and turn VR9 so that the squelch will be closed at the SG output of -6 dB μ .

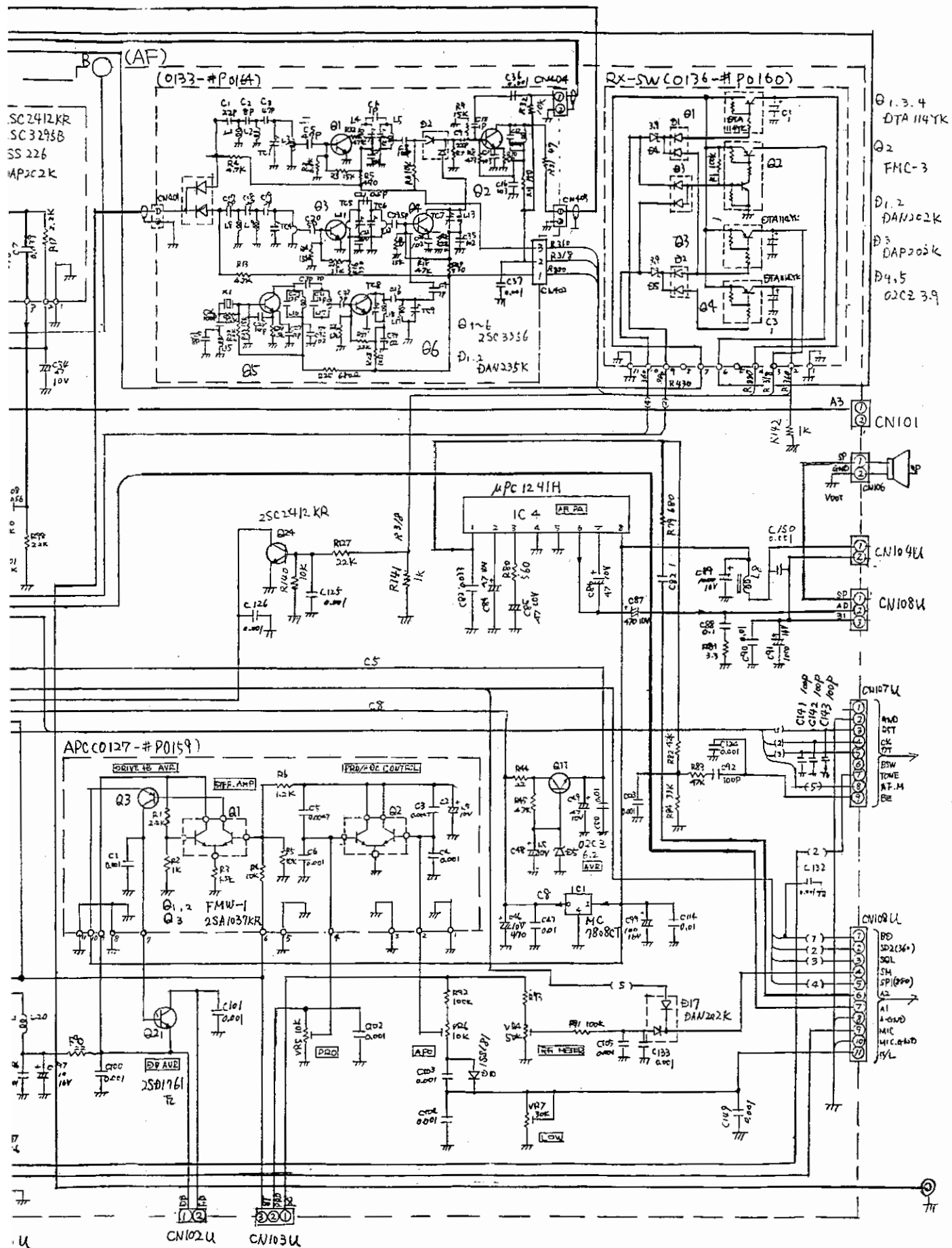
Lower Side View



FRONT

VP 9



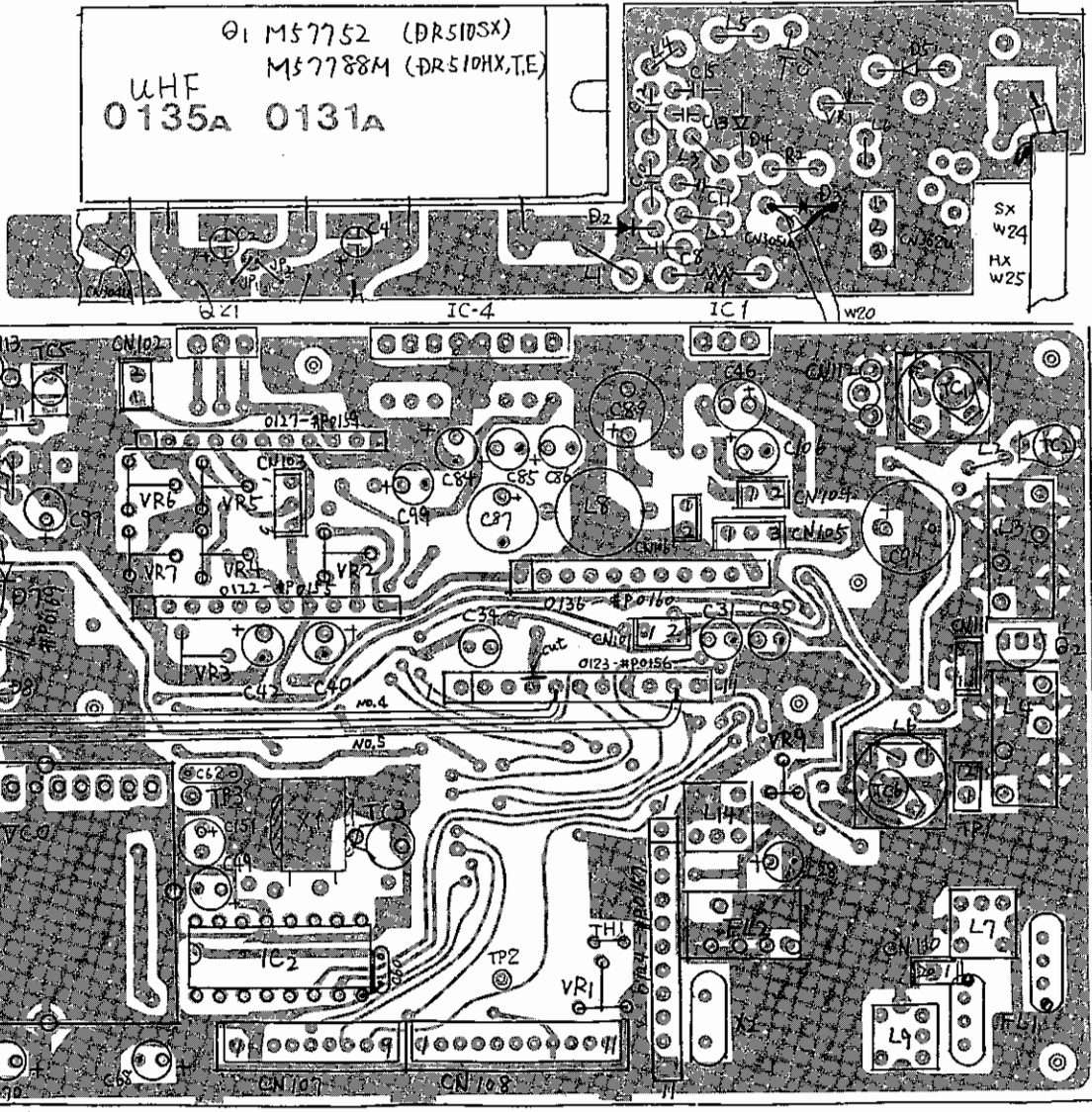


- Q1,3,4 DTA 1147K
- Q2 FMC-3
- D1,2 DAN202K
- D3 DAP202K
- D4,5 Q2C2 3.9

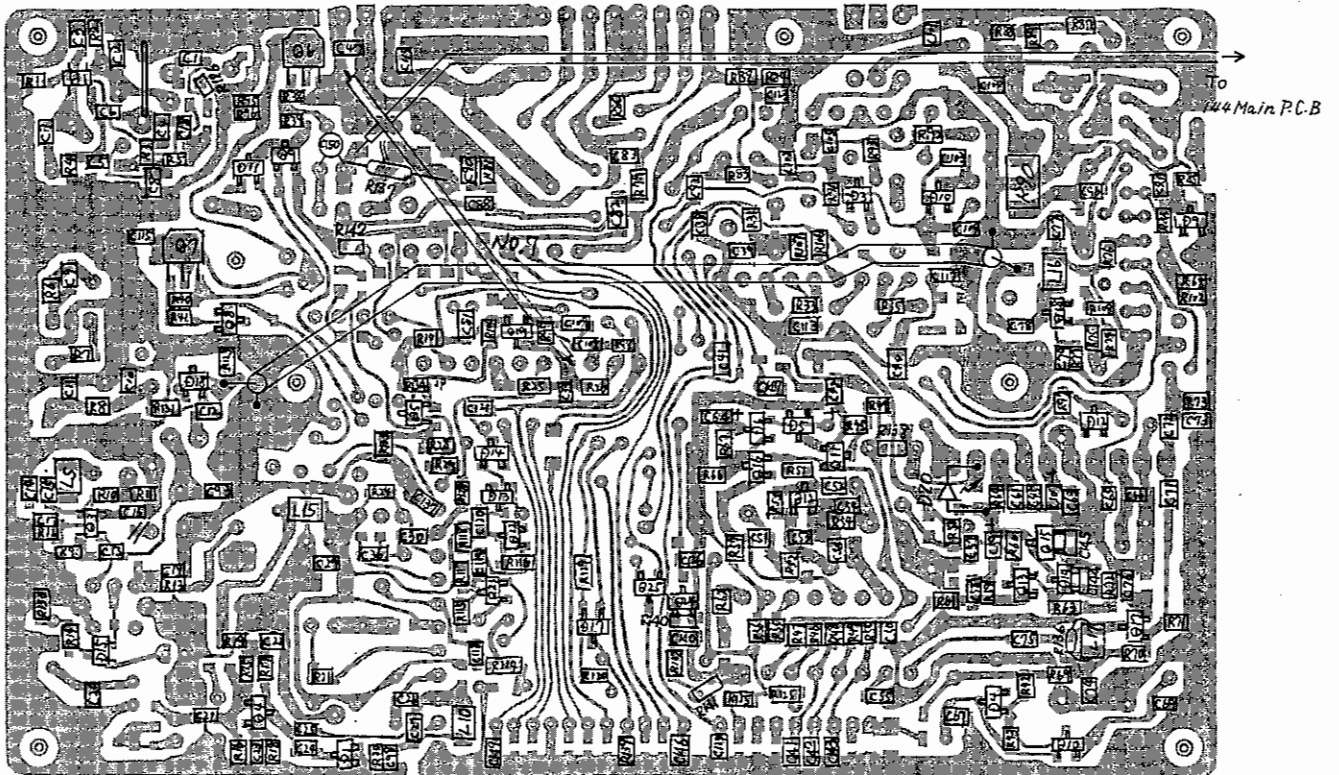
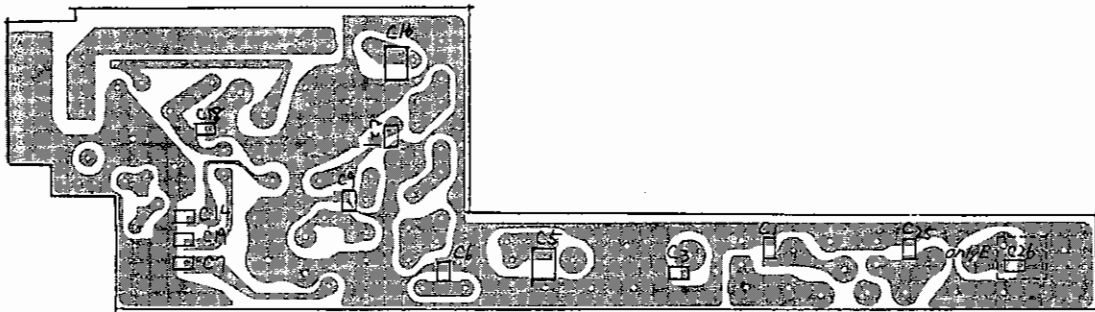
- Q1,2 2SC3356
- D1,2 DAN335K

- CN101
- CN104A
- CN108U
- CN107U
- CN108U
- BD 3D2(36°)
- SOL
- SH
- SP(250)
- A2
- A1 1-5V0
- MIC
- MIC. 0-50
- SYL

■ UHF PA AND MAIN PC BOARD

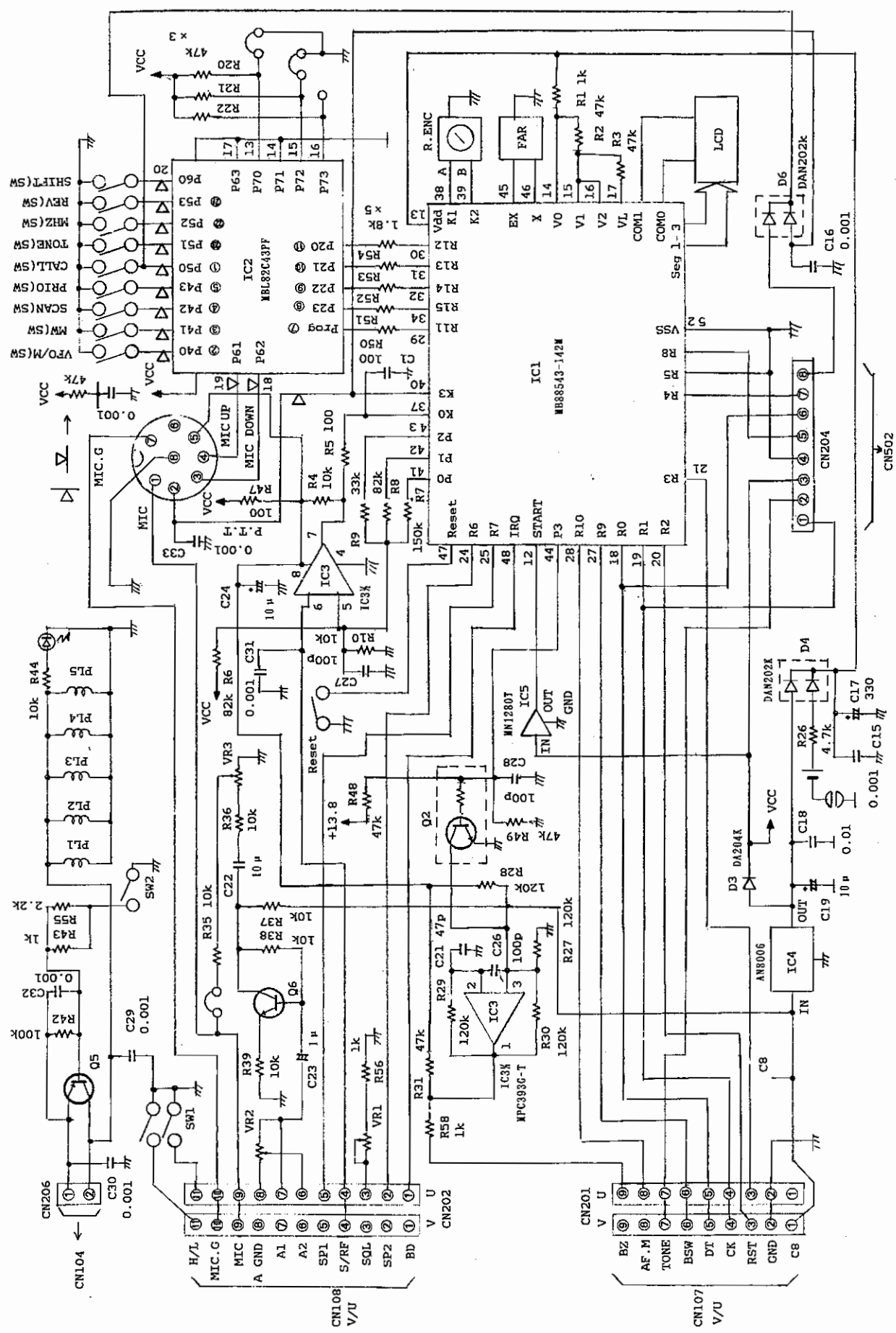


(Part)

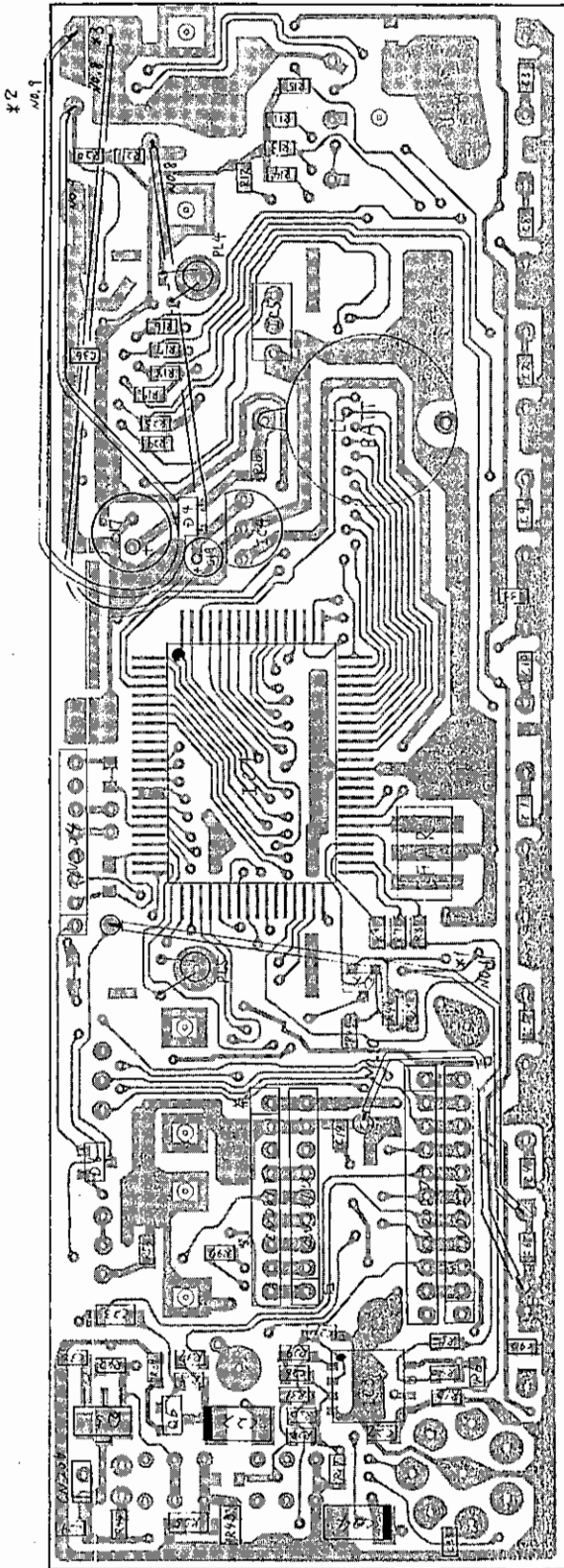


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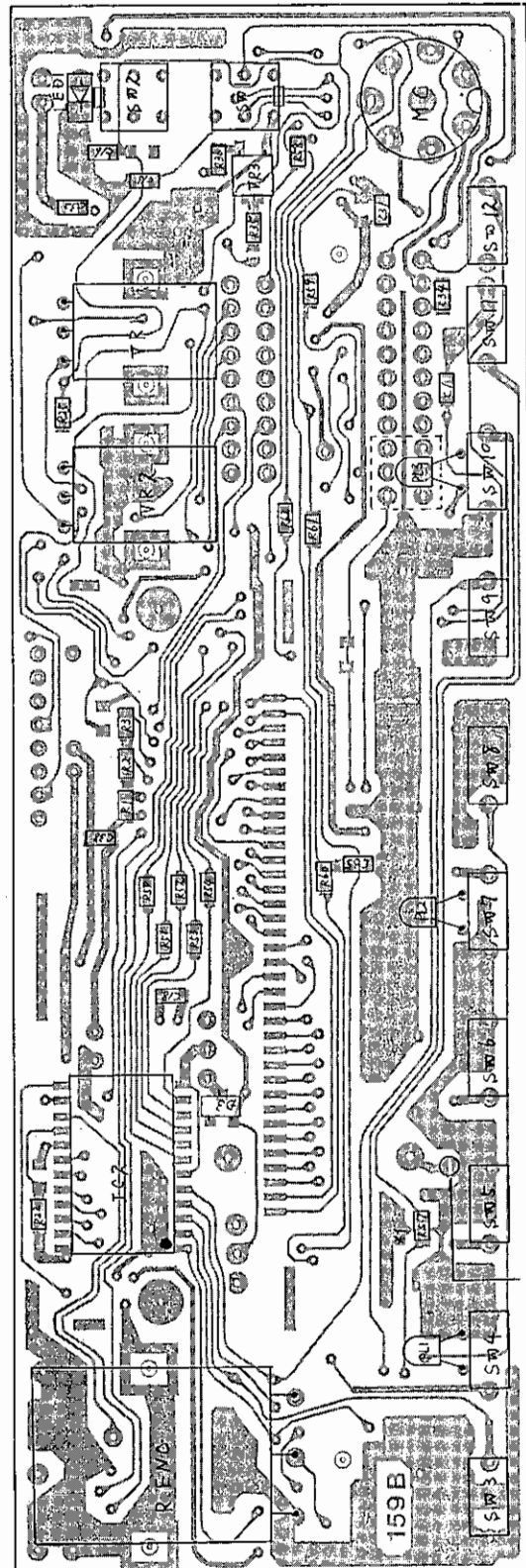
CONTROL SCHEMATIC DIAGRAM



CONTROL PC BOARD

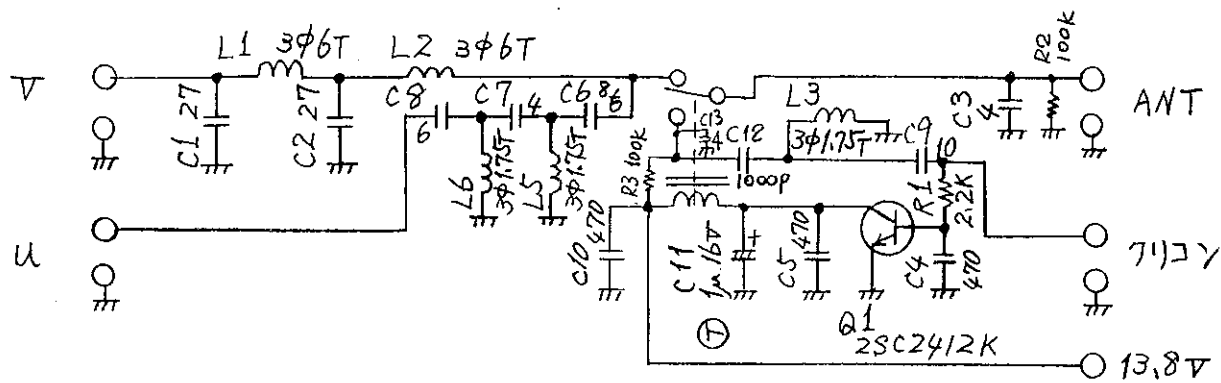


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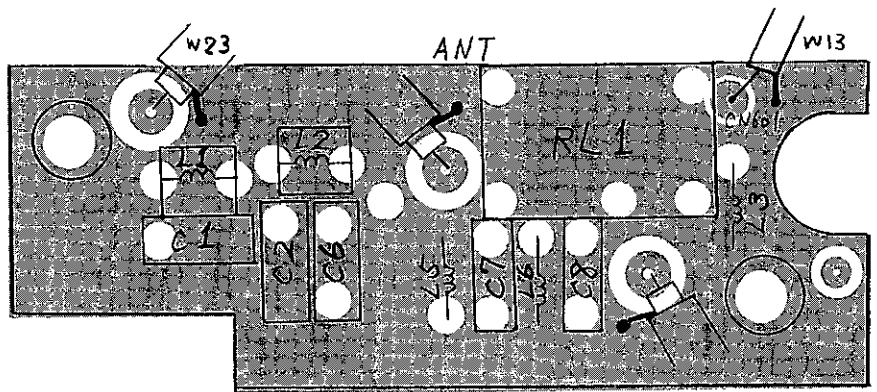
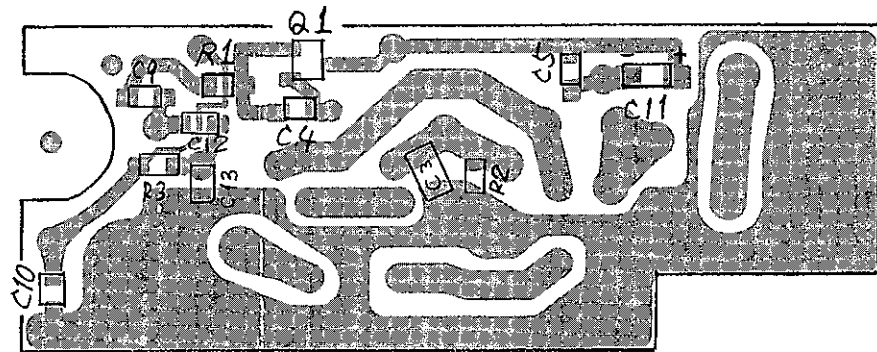


(Solder)

UPLEXER SCHEMATIC DIAGRAM

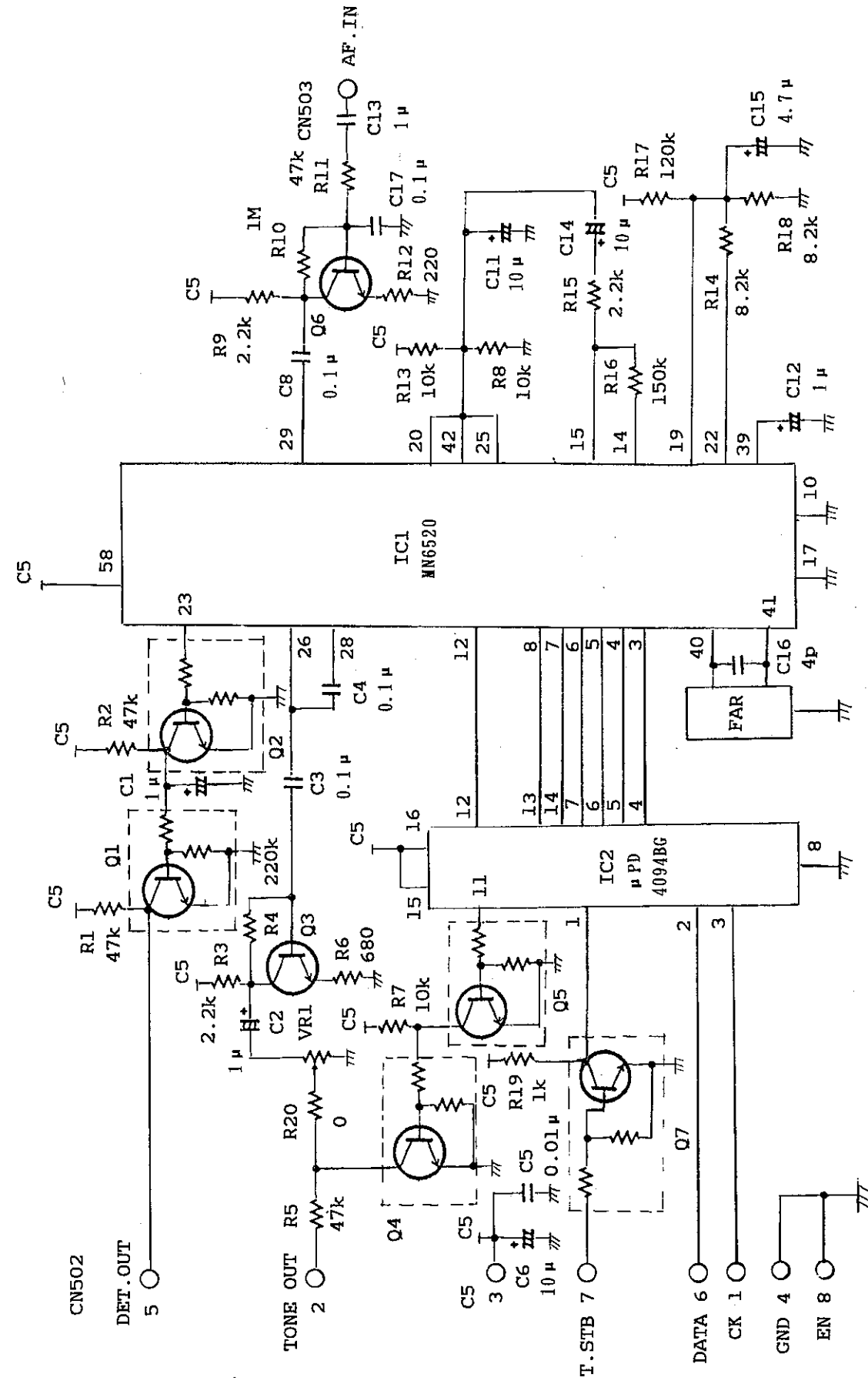


UPLEXER PC BOARD



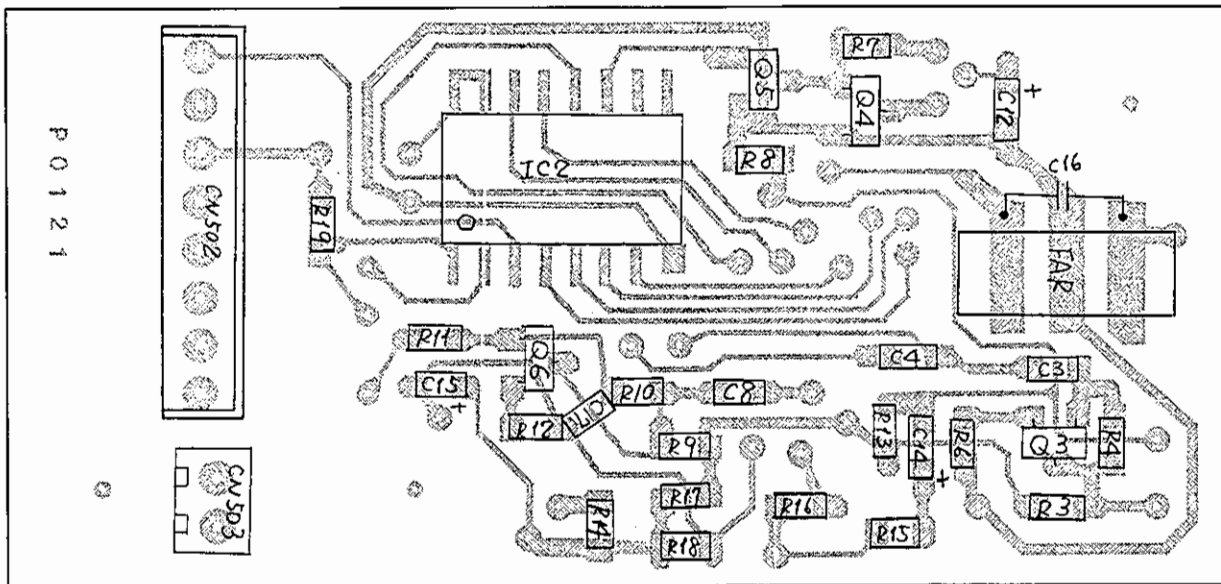
(Solder)

■ TONE SQUELCH SCHEMATIC DIAGRAM

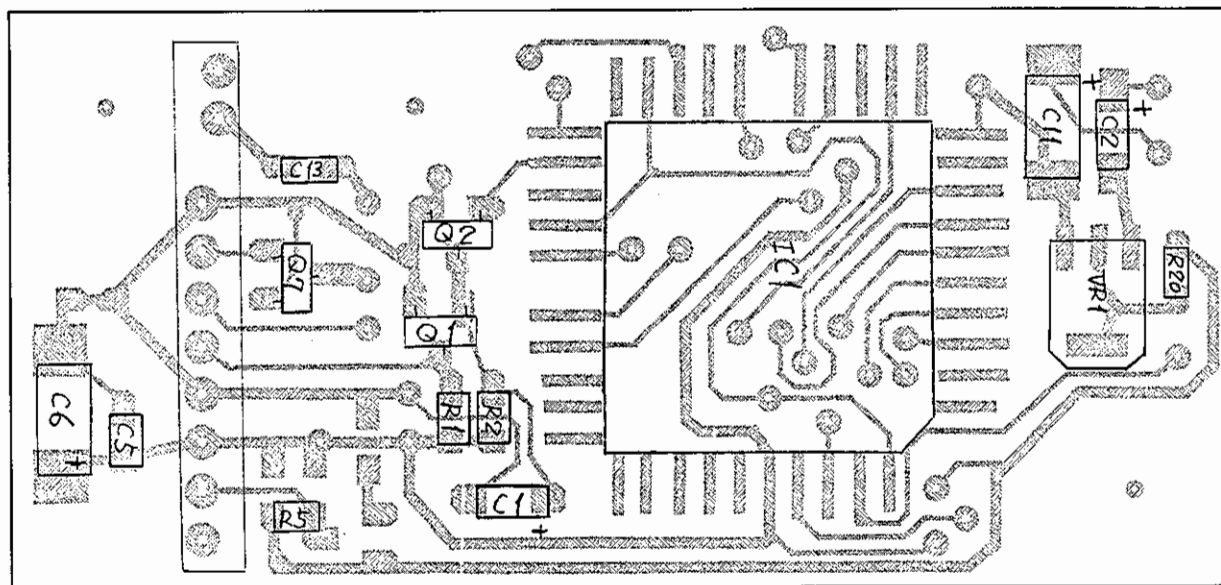
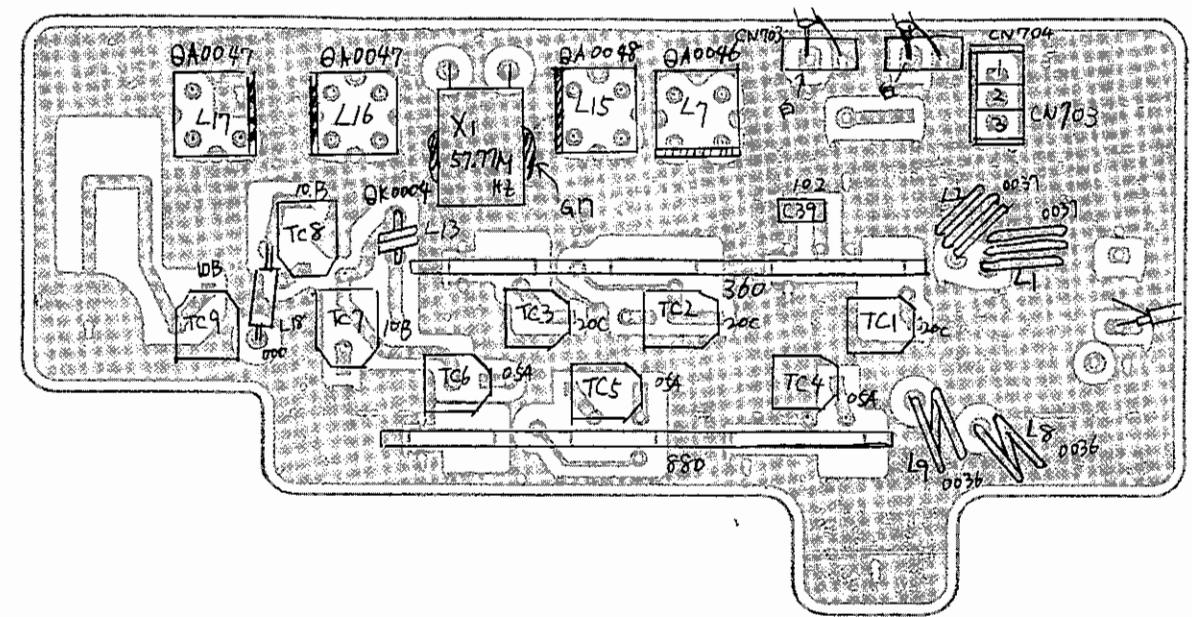


ONE SQUELCH PC BOARD

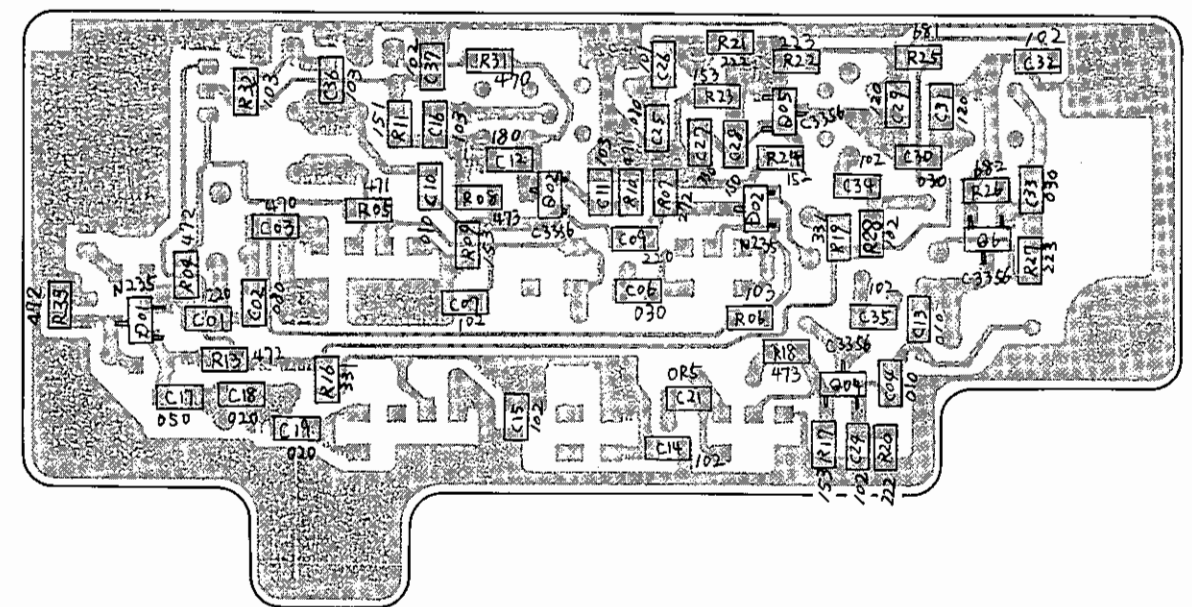
■ X'CON PC BOARD



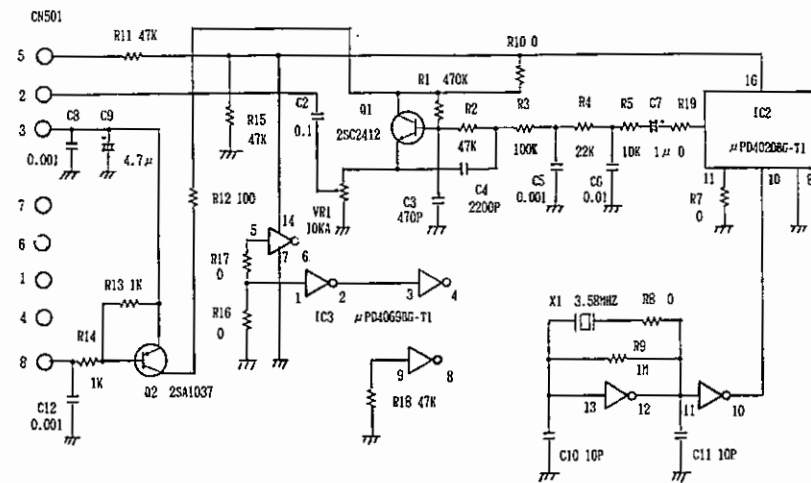
(Parts Side)



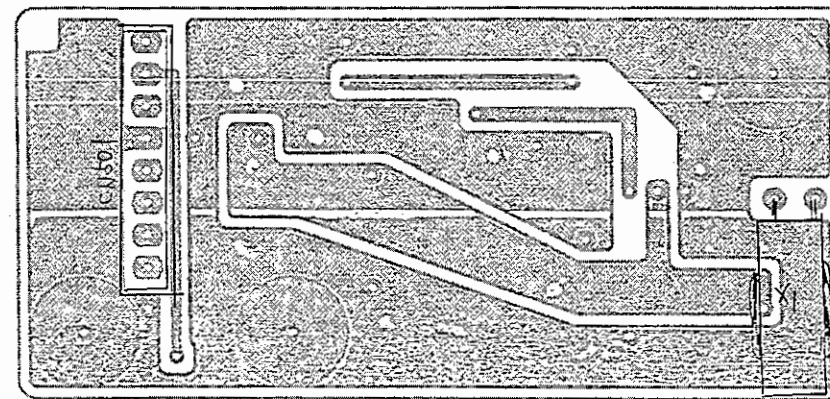
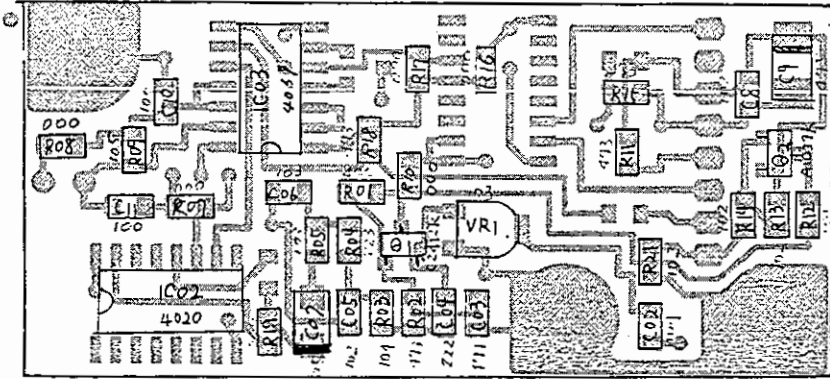
(Solder Side)



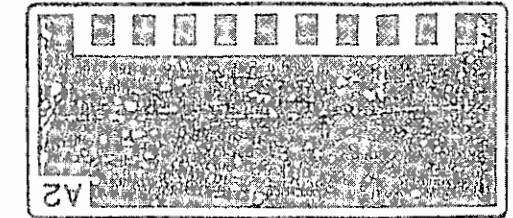
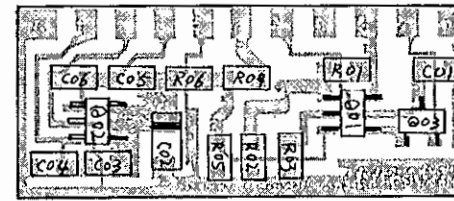
ONE BURST UNIT CIRCUIT DIAGRAM



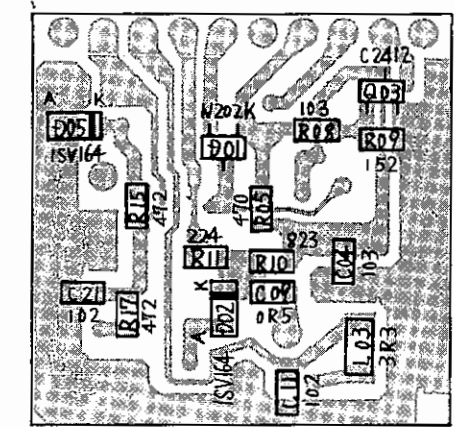
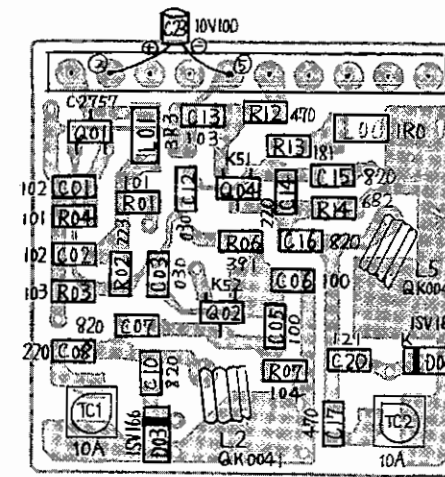
TONE BURST PC BOARD



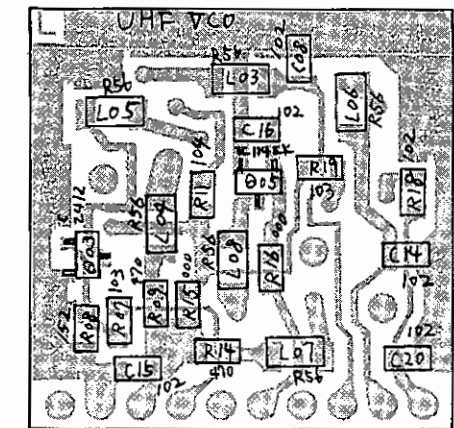
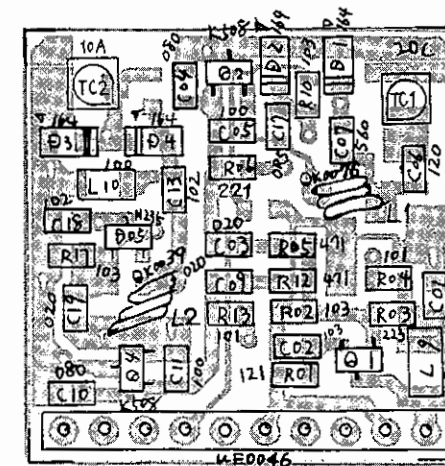
APC PC BOARD



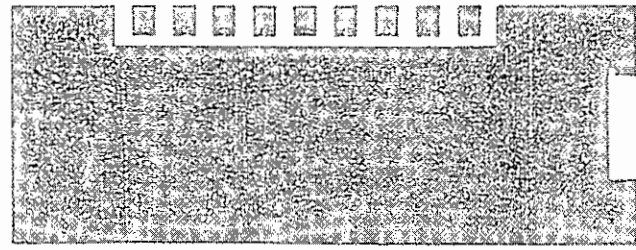
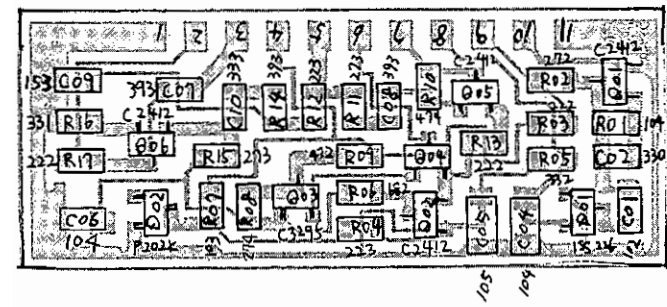
VHF VCO PC BOARD



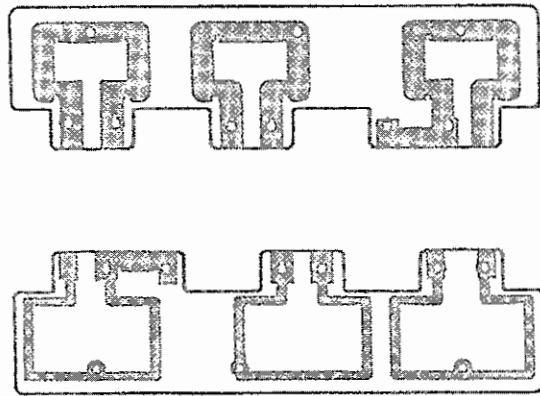
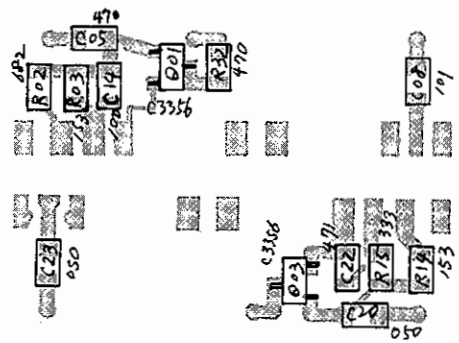
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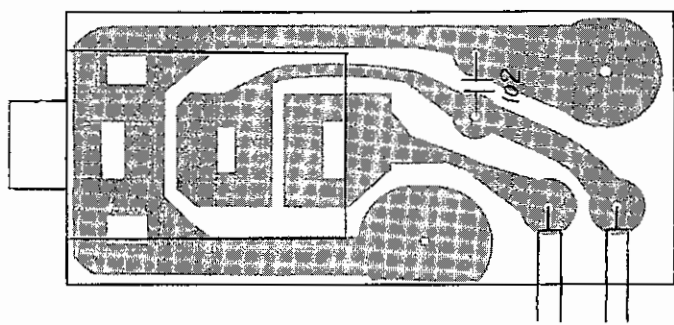
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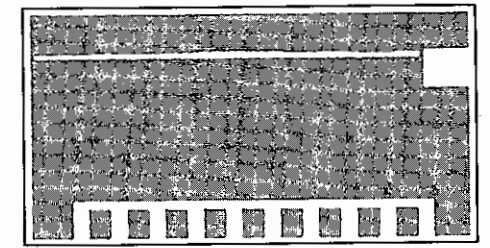
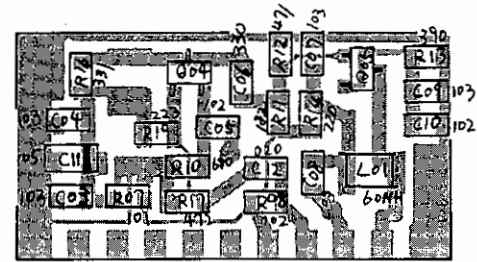
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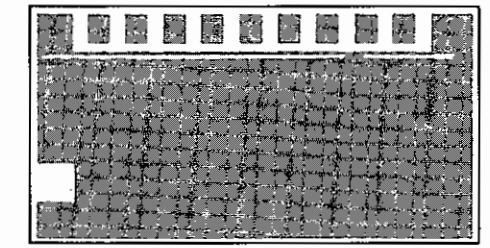
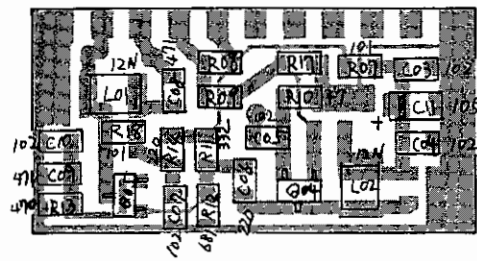
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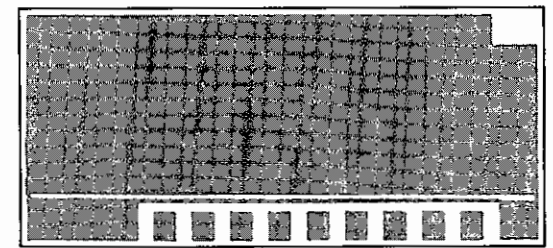
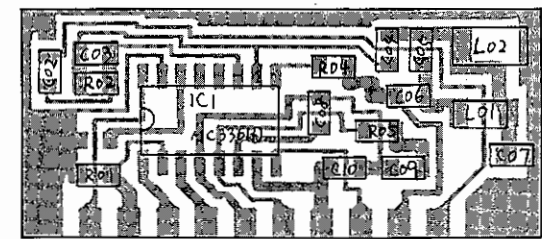
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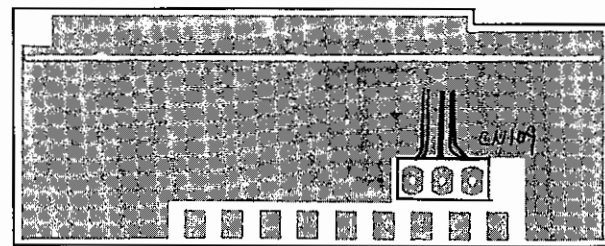
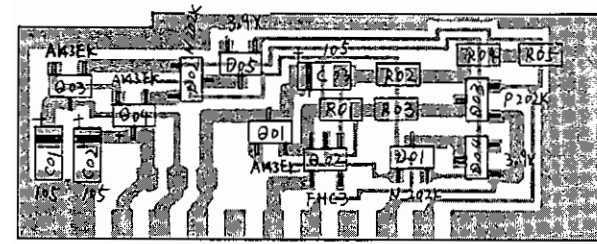
■ UHF DRIVE PC BOARD



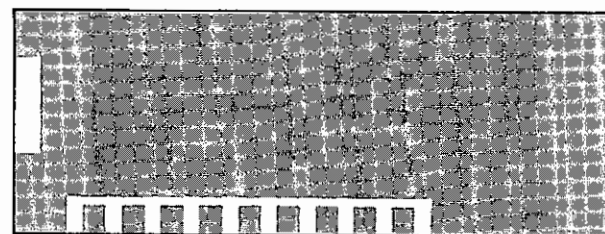
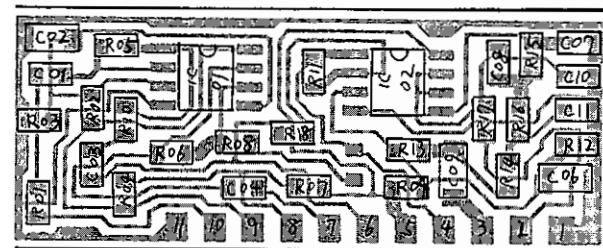
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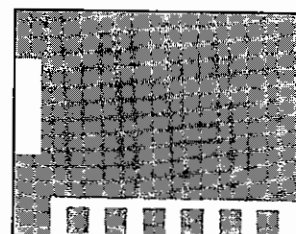
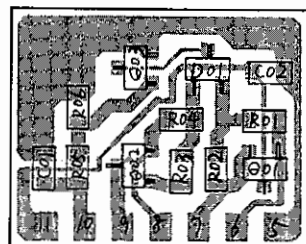
X SW PC BOARD



IC PC BOARD



DCK SW PC BOARD



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