

# DR-599T/E

## Service Manual

● SPECIFICATIONS .....	1
● PARTS LIST .....	2
● CABINET PARTS LOCATION .....	9
● ADJUSTMENT .....	10
● BLOCK DIAGRAM .....	12
● OVERALL WIRING .....	13
● SCHEMATIC DIAGRAM OF VHF MAIN UNIT .....	14
● VHF MAIN PC BOARDS .....	15
● SCHEMATIC DIAGRAM OF UHF MAIN UNIT .....	16
● UHF MAIN PC BOARDS .....	17
● SCHEMATIC DIAGRAM OF VHF/UHF PA UNIT .....	18
● VHF PA PC BOARDS .....	19
● UHF PA PC BOARDS .....	20
● SCHEMATIC DIAGRAM OF FRONT CONTROL UNIT .....	21
● FRONT CONTROL PC BOARDS .....	22
● SCHEMATIC DIAGRAM OF SUB CONTROL UNIT .....	23
● SUB CONTROL PC BOARDS .....	24
● SCHEMATIC DIAGRAM OF VOL UNIT .....	25
● VOL PC BOARDS .....	25
● SCHEMATIC DIAGRAM OF VHF VCO UNIT .....	26
● VHF VCO PC BOARDS .....	26
● SCHEMATIC DIAGRAM OF UHF VCO UNIT .....	27
● UHF VCO PC BOARDS .....	27
● SCHEMATIC DIAGRAM OF VHF PLL UNIT .....	28
● VHF PLL PC BOARDS .....	28
● SCHEMATIC DIAGRAM OF UHF PLL UNIT .....	29
● UHF PLL PC BOARDS .....	29
● SCHEMATIC DIAGRAM OF VHF AIR UNIT .....	30
● VHF AIR PC BOARDS .....	30
● SCHEMATIC DIAGRAM OF 880 FRONT UNIT .....	30
● 880 FRONT PC BOARDS .....	30

**ALINCO ELECTRONICS INC.**

# ■ SPECIFICATIONS

## ■ General

Frequency coverage..... ● DR-599T(U.S.Version)  
 144.000–147.995MHz (TX), 130.000–173.995MHz (RX),  
 440.000–449.995MHz (TX), 400.000–500.000 MHz (RX)  
 ● DR-599E(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 Impedance.....50 Ohms, unbalanced

Power Supply Requirement.....13.8 Volts D.C.

Current Drain at 13.8V.....Receiving  
 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

Dimension.....150mm(W) X 50mm(H) X 178mm(D)  
 (5–9/10") (2") (7")

Weight.....Approx. 1.5kgs (3.3lbs.)

## ■ Transmitter

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

Emission Mode.....F3 (FM)

Modulation System.....Variable Reactance F.M.

Max. Frequency Deviation.....±5kHz

Spurious Emission.....–60dB or under below carrier

Microphone.....Electret Condenser Microphone

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

DTMF Encoder.....Built-in (DR-599T only)

## ■ Receiver

Receiving System.....Superheterodyne, Dual Conversion

Modulation Acceptance.....F3 (FM)

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

Sensitivity.....12dB SINAD –16dB $\mu$

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

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

Speaker Impedance.....8 Ohms

## ■ MODEL CHART

Type	DR-599T	DR-599E
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.

# 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
<b>VHF MAIN Unit</b>								
C1	CJ9007	Chip C, CC3216CH1H330J	C84	CU8016	Chip C, C2012B1H102K	R22	RK0035	Chip R, MCR10EZJH102
C2	CU8016	Chip C, C2012B1H102K	C85	CE0315	Chemical C, 16CV 47B	R23	RK0028	Chip R, MCR10EZJH471E
C3	CJ0060	Chip C, C2012CH1H470J	C86	CU0051	Chip C, C2012CH1H471K	R24	RK0062	Chip R, MCR10EZJH473
C4	CJ8016	Chip C, C2012B1H102K	C87	CU8016	Chip C, C2012B1H102K	R25	RK0035	Chip R, MCR10EZJH102E
C6	CJ0069	Chip C, C2012CH1H680J	C88	CU8016	Chip C, C2012B1H102K	R26	RK0056	Chip R, MCR10EZJH223E
C7	CJ0060	Chip C, C2012CH1H470J	C89	CU0051	Chip C, C2012CH1H471K	R27	RK0035	Chip R, MCR10EZJH102E
C8	CJ0067	Chip C, C2012CH1H390J	C90	CS0061	Chip Tantal, TMC1V224TR	R28	RK0076	Chip R, MCR10EZJH334E
C11	CU8016	Chip C, C2012B1H102K	C91	CU8016	Chip C, C2012B1H102K	R29	RK0044	Chip R, MCR10EZJH392E
C12	CU0071	Chip C, C2012CH1H101J	C92	CU8016	Chip C, C2012B1H102K	R30	RK0069	Chip R, MCR10EZJH104E
C13	CU8016	Chip C, C2012B1H102K	C93	CU8016	Chip C, C2012B1H102K	R31	RK0035	Chip R, MCR10EZJH102E
C14	CU8016	Chip C, C2012B1H102K	C94	CU8016	Chip C, C2012B1H102K	R32	RK0052	Chip R, MCR10EZJH103E
C15	CU0062	Chip C, C2012CH1H150J	C95	CU0062	Chip C, C2012CH1H150J	R33	RK0069	Chip R, MCR10EZJH104E
C16	CU8016	Chip C, C2012B1H102K	C96	CU0051	Chip C, C2012CH1H471K	R34	RK0073	Chip R, MCR10EZJH224
C17	CU8016	Chip C, C2012B1H102K	C97	CU8016	Chip C, C2012B1H102K	R35	RK0025	Chip R, MCR10EZJH331E
C18	CJ0060	Chip C, C2012CH1H470J	C98	CU8016	Chip C, C2012B1H102K	R36	RK0081	Chip R, MCR10EZJH564
C19	CJ0060	Chip C, C2012CH1H470J	C99	CU8016	Chip C, C2012B1H102K	R38	RK0081	Chip R, MCR10EZJH564E
C20	CE0030	Chemical C, 16MS7 10	C100	CU8016	Chip C, C2012B1H102K	R39	RK0042	Chip R, MCR10EZJH332E
C21	CU8032	Chip C, C2012JF1E223K	C101	CU0003	Chip C, C2012CH1H020C	R40	RK0047	Chip R, MCR10EZJH562E
C22	CU8003	Chip C, C2012JF1E104Z	C102	CU8016	Chip C, C2012B1H102K	R41	RK0056	Chip R, MCR10EZJH223E
C23	CU8003	Chip C, C2012JF1E104Z	C104	CE0312	Chemical C, 16CV 10B	R42	RK0056	Chip R, MCR10EZJH223E
C24	CU8003	Chip C, C2012JF1E104Z	C105	CU8016	Chip C, C2012B1H102K	R43	RK0062	Chip R, MCR10EZJH473E
C25	CU8016	Chip C, C2012B1H102K	C106	CU8038	Chip C, CM316Y5V105Z25VAT	R44	RK0035	Chip R, MCR10EZJH102E
C26	CU8016	Chip C, C2012B1H102K	C107	CE0312	Chemical C, 16CV 10B	R45	RK0035	Chip R, MCR10EZJH102E
C28	CU8016	Chip C, C2012B1H102K	C108	CU8038	Chip C, CM316Y5V105Z25VAT	R46	RK0018	Chip R, MCR10EZJH101E
C29	CU8016	Chip C, C2012B1H102K	C109	CE0124	Chemical C, 16MS7 47	R47	RK0081	Chip R, MCR10EZJH564E
C30	CU8028	Chip C, C2012B1H103K	C110	CE0042	Chemical C, 16V 220 uF	R48	RK0053	Chip R, MCR10EZJH123
C31	CS0060	Chip Tantal, TMC1E474	C111	CE0124	Chemical C, 16MS7 47	R49	RK0039	Chip R, MCR10EZJH222E
C32	CU8022	Chip C, C2012B1H332K	C112	CE0124	Chemical C, 16MS7 47	R50	RK0023	Chip R, MCR10EZJH271E
C33	CU8035	Chip C, C2012B1E393K	C113	CE0124	Chemical C, 16MS7 47	R51	RK0056	Chip R, MCR10EZJH223E
C34	CE0312	Chemical C, 16CV10B	C114	CE0181	Chemical C, 10TWSS 470	R52	RK0062	Chip R, MCR10EZJH473E
C35	CU8003	Chip C, C2012JF1E104Z	C115	CE0181	Chemical C, 10TWSS 470	R53	RK0052	Chip R, MCR10EZJH103E
C36	CJ0045	Chip C, C2012CH1H271K	C116	CU8003	Chip C, C2012JF1E104Z	R54	RK0081	Chip R, MCR10EZJH564E
C37	CU8016	Chip C, C2012B1H102K	C117	CU8003	Chip C, C2012JF1E104Z	R55	RK0045	Chip R, MCR10EZJH472E
C38	CS0061	Chip Tantal, TMC1V224	C118	CE0192	Chemical C, 16TWSS 470	R56	RK0079	Chip R, MCR10EZJH474E
C39	CS0061	Chip Tantal, TMC1V224	C119	CU8016	Chip C, C2012B1H102K	R57	RK0039	Chip R, MCR10EZJH222E
C40	CU8035	Chip C, C2012B1E393K	C120	CJ0071	Chip C, C2012CH1H101J	R58	RK0039	Chip R, MCR10EZJH222E
C41	CU8028	Chip C, C2012B1H103K	C122	CU8016	Chip C, C2012B1H102K	R59	RK0107	Chip R, MCR10EZJH000E
C42	CU8034	Chip C, C2012X7R1E333K	C123	CU8041	Chip C, C2012UJ1H471J	R60	RK0069	Chip R, MCR10EZJH104E
C43	CU8035	Chip C, C2012B1E393K	C124	CU0003	Chip C, C2012CH1H020C	R61	RK0039	Chip R, MCR10EZJH222E
C44	CU8025	Chip C, C2012B1H562K	C125	CU8032	Chip C, C2012B1E223K	R62	RK0042	Chip R, MCR10EZJH332E
C45	CU8025	Chip C, C2012B1H562K	C126	CU0004	Chip C, C2012CH1H030C	R63	RK0052	Chip R, MCR10EZJH103
C46	CU8016	Chip C, C2012B1H102K	C127	CU0066	Chip C, C2012CH1H330J	R66	RK0045	Chip R, MCR10EZJH472E
C47	CE0124	Chemical C, 16MS7 47	C128	CJ0067	Chip C, C2012CH1H390J	R67	RK0001	Chip R, MCR10EZJH100E
C48	CU8038	Chip C, CM316Y5V105Z25VA	C129	CU8016	Chip C, C2012B1H102K	R68	RK0056	Chip R, MCR10EZJH223E
C49	CU8038	Chip C, CM316Y5V105Z25VA	C130	CU8003	Chip C, C2012JF1E104Z	R69	RK0052	Chip R, MCR10EZJH103E
C50	CU8016	Chip C, C2012B1H102K	C131	CJ0051	Chip C, C2012CH1H471K	R70	RK0035	Chip R, MCR10EZJH102E
C51	CU8016	Chip C, C2012B1H102K	C132	CU8016	Chip C, C2012B1H102K	R71	RK0018	Chip R, MCR10EZJH101E
C52	CU8016	Chip C, C2012B1H102K	C133	CU0006	Chip C, C2012CH1H050C	R72	RK0076	Chip R, MCR10EZJH334E
C53	CU8016	Chip C, C2012B1H102K	C134	CE0312	Chemical C, 16CV 10B	R73	RK0039	Chip R, MCR10EZJH222E
C54	CU8028	Chip C, C2012B1H103K	C136	CU8016	Chip C, C2012B1H102K	R74	RK0018	Chip R, MCR10EZJH101E
C55	CU8028	Chip C, C2012B1H103K	C137	CE0312	Chemical C, 16CV 10B	R75	RK0052	Chip R, MCR10EZJH103E
C56	CU8016	Chip C, C2012B1H102K	C138	CS0050	Chip Tantal, TMC5B1A475MTR	R76	RK0052	Chip R, MCR10EZJH103E
C57	CU8016	Chip C, C2012B1H102K	C139	CU0066	Chip C, C2012CH1H330J	R77	RK0038	Chip R, MCR10EZJH182E
C58	CU8016	Chip C, C2012B1H102K	C140	CU8034	Chip C, C2012X7R1E333K	R78	RK0056	Chip R, MCR10EZJH223E
C59	CU8016	Chip C, C2012B1H102K	C141	CU8016	Chip C, C2012B1H102K	R79	RK0038	Chip R, MCR10EZJH182E
C60	CU0004	Chip C, C2012CH1H030C	C142	CE0033	Chemical C, 10MV 10UWA	R80	RK0052	Chip R, MCR10EZJH103E
C61	CS0049	Chip Tantal, TMC5A1C105MTR	C143	CU8016	Chip C, C2012B1H102K	R81	RK0052	Chip R, MCR10EZJH103E
C62	CU0068	Chip C, C2012CH1H560J	C145	CU8016	Chip C, C2012B1H102K	R82	RK0056	Chip R, MCR10EZJH223E
C63	CU8016	Chip C, C2012B1H102K	C148	CU8016	Chip C, C2012B1H102K	R83	RK0018	Chip R, MCR10EZJH101E
C64	CE0312	Chemical C, 16CV 10B	R1	RK0069	Chip R, MCR10EZJH104	R84	RK0039	Chip R, MCR10EZJH222E
C65	CS0049	Chip Tantal, TMC1C105	R2	RK0052	Chip R, MCR10EZJH103E	R85	RK0018	Chip R, MCR10EZJH101E
C66	CU8016	Chip C, C2012B1H102K	R3	RK0018	Chip R, MCR10EZJH101E	R86	RK0035	Chip R, MCR10EZJH102E
C67	CJ0064	Chip C, C2012CH1H220J	R4	RK0069	Chip R, MCR10EZJH104E	R87	RK0056	Chip R, MCR10EZJH223E
C68	CU0071	Chip C, C2012CH1H101J	R5	RK0011	Chip R, MCR10EZJH470E	R88	RK0045	Chip R, MCR10EZJH472E
C69	CU0043	Chip C, C2012CH1H221K	R6	RK0018	Chip R, MCR10EZJH101E	R89	RK0014	Chip R, MCR10EZJH680E
C70	CU8028	Chip C, C2012B1H103K	R7	RK0045	Chip R, MCR10EZJH472E	R90	RK0018	Chip R, MCR10EZJH101E
C71	CU8016	Chip C, C2012B1H102K	R8	RK0069	Chip R, MCR10EZJH470E	R91	RK0025	Chip R, MCR10EZJH331E
C72	CJ0006	Chip C, C2012CH1H050C	R9	RK0069	Chip R, MCR10EZJH104E	R92	RK0011	Chip R, MCR10EZJH470E
C73	CU8016	Chip C, C2012B1H102K	R10	RK0069	Chip R, MCR10EZJH104E	R93	RK0037	Chip R, MCR10EZJH152E
C74	CU8028	Chip C, C2012B1H103K	R11	RK0035	Chip R, MCR10EZJH102E	R94	RK0008	Chip R, MCR10EZJH330E
C75	CU8028	Chip C, C2012B1H103K	R12	RK0056	Chip R, MCR10EZJH223E	R95	RK0011	Chip R, MCR10EZJH470E
C76	CJ0071	Chip C, C2012CH1H101J	R13	RK0011	Chip R, MCR10EZJH470E	R96	RK0022	Chip R, MCR10EZJH221E
C77	CU0071	Chip C, C2012CH1H101J	R14	RK0045	Chip R, MCR10EZJH472E	R97	RK0128	Chip R, MCR10EZJH562E
C78	CU0071	Chip C, C2012CH1H101J	R15	RK0074	Chip R, MCR10EZJH274E	R98	RK0020	Chip R, MCR10EZJH221E
C79	CU8038	Chip C, CM316Y5V105Z25VAT	R16	RK0018	Chip R, MCR10EZJH101E	R99	RK2010	Chip R, MCR50EZJH330E
C80	CU8016	Chip C, C2012B1H102K	R17	RK0018	Chip R, MCR10EZJH101E	R100	RK0035	Chip R, MCR10EZJH102E
C81	CJ0066	Chip C, C2012CH1H330J	R18	RK0025	Chip R, MCR10EZJH331	R101	RK0056	Chip R, MCR10EZJH223E
C82	CS0049	Chip Tantal, TMC1C105	R19	RK0062	Chip R, MCR10EZJH473E	R102	RK0052	Chip R, MCR10EZJH103E
C83	CU8016	Chip C, C2012B1H102K	R20	RK0069	Chip R, MCR10EZJH104	R103	RK0052	Chip R, MCR10EZJH103E
			R21	RK0059	Chip R, MCR10EZJH333	R104	RK0056	Chip R, MCR10EZJH223E
						R105	RK2000	Chip R, MCR50EZJH47E

Ref. No.	Part Code	Part Name and Number	Ref. No.	Part Code	Part Name and Number	Ref. No.	Part Code	Part Name and Number		
R106	RK0011	Chip R, MCR10EZJ470E	Q14	XU0014	Digital Transistor, DTC114 EKT14	C26	CU8032	Chip C, C2012B1E223K		
R107	RK0130	Chip R, MCR10EZJ47E	Q15	XT0061	Transistor, 2SB11320	C27	CU8003	Chip C, C2012JF1E104Z		
R108	RK0130	Chip R, MCR10EZJ47E	Q16	XT0081	Transistor, 2SC2714YTE85L	C28	CU0067	Chip C, C2012CH1H390J		
R109	RK0069	Chip R, MCR10EZJ104	Q17	XT0030	Transistor, 2SC3356BR25	C29	CU0051	Chip C, C2012CH1H471K		
R110	RK0073	Chip R, MCR10EZJ224	Q18	XT0048	Transistor, 2SC3357RE	C30	CU0071	Chip C, C2012CH1H101J		
R111	RK0011	Chip R, MCR10EZJ470E	Q19	XT0078	Transistor, 2SC3369	C31	CU8028	Chip C, C2012CH1H103K		
R112	RK0037	Chip R, MCR10EZJ152E	Q20	XT0061	Transistor, 2SB11320	C32	CS0060	Chip Tantal, TMC1E474		
R113	RK0045	Chip R, MCR10EZJ472E	Q21	XU0019	Digital Transistor, DTAI14YKT14	C33	CU0064	Chip C, C2012CH1H220J		
R114	RK0023	Chip R, MCR10EZJ271E	Q22	XU0019	Digital Transistor, DTAI144YK	C34	CU8003	Chip C, C2012JF1E104Z		
R115	RK0023	Chip R, MCR10EZJ271E	Q23	XT0037	Transistor, 2SC2412KR	C35	CU0043	Chip C, C2012CH1H221K		
R116	RK0069	Chip R, MCR10EZJ104E	Q24	XT0037	Transistor, 2SC2412KR	C36	CU8016	Chip C, C2012B1H102K		
R117	RK0070	Chip R, MCR10EZJ124E	Q25	XU0014	Digital Transistor, DTC1144EK	C37	CS0061	Chip Tantal, TMC1V224		
R119	RK0052	Chip R, MCR10EZJ103E	Q26	XT0037	Transistor, 2SC2412KR	C38	CS0061	Chip Tantal, TMC1V224		
R120	RK1107	Chip R, MCR18EZJ000E	Q27	XU0014	Digital Transistor, DTC1144EK	C39	CU8035	Chip C, C2012B1E393K		
R121	RK0035	Chip R, MCR10EZJ102E	Q28	XU0014	Digital Transistor, DTC1144EK	C40	CU8028	Chip C, C2012CH1H103K		
R122	RK0071	Chip R, MCR10EZJ154E	Q28	XU0014	Digital Transistor, DTC1144EK	C41	CU8034	Chip C, C2012X7R1E333K		
R123	RK2000	Chip R, MCR50EZJ47E	Q30	XU0014	Digital Transistor, DTC1144EK	C42	CU8035	Chip C, C2012B1E393K		
R124	RK0059	Chip R, MCR10EZJ333E	Q31	XT0037	Transistor, 2SC2412KR	C43	CU8025	Chip C, C2012B1H562K		
R125	RK0073	Chip R, MCR10EZJ224E	Q32	XU0014	Digital Transistor, DTC1144EK	C44	CU8025	Chip C, C2012B1H562K		
R130	RK0052	Chip R, MCR10EZJ103	Q33	XE0004	FET, 2SK209GRTE85L	C45	CU8038	Chip C, CM316Y5V105Z25VA		
R131	RK0076	Chip R, MCR10EZJ334	FL1	XF0001	X'fil, DFM21615B1	C46	CU8016	Chip C, C2012B1H102K		
R132	RK0107	MCR10EZJ000	FL2	XC0001	Ceramic Filter, CFW455F	C47	CE0124	Chemical C, 16VMS7 47		
R133	RK0056	Chip R, MCR10EZJ223	X1	XQ0023	Ceramic Filter, UM-1 22.055MHz	C48	CU8038	Chip C, CM316Y5V105Z25VA		
TP1	UE0041	Pin Jack, TMP-J01X-V6	X2	XQ0038	Ceramic Filter, HC-49/U, 12.8MHz	C49	CU0051	Chip C, C2012CH1H471K		
TP2	UE0047	Round Pin, R9 X10	TH1	XS0004	Thermistor, TD5A150D	C50	CU0051	Chip C, C2012CH1H471K		
TP3	UE0047	Round Pin, R9 X10	L1	QA0057	Coil, Front End	C51	CU8016	Chip C, C2012B1H102K		
TP4	UE0047	Round Pin, R9 X10	L2	QA0066	Coil, 144M S-10	C52	CU8016	Chip C, C2012B1H102K		
CN30	UE0043	Post With Base, PI22A02M	L3	QA0066	Coil, 144M S-10	C53	CU8016	Chip C, C2012B1H102K		
CN31	UE0109	Connector, 52030-1810	L4	QA0066	Coil, 144M S-10	C54	CS0049	Chip Tantal, TMC1C105		
CN32	UE0113	Connector, 5512-03A	L5	QA0005	Coil, 40092	C55	CU8016	Chip C, C2012B1H102K		
CN33	UE0108	Connector, 6FE-BT	L6	QA0005	Coil, 40092	C56	CE0312	Chemical C, 16CV10B		
CN34	UE0075	Pin Jack, TMP-J01X-A2	L7	QA0044	Coil, 455kHz	C57	CU8016	Chip C, C2012B1H102K		
CN35	UE0075	Pin Jack, TMP-J01X-A2	L8	QA0058	Coil	C58	CE0312	Chemical C, 16CV10B		
IC1	XA0156	IC, MC3381BD	L9	QC0034	Chip Coil, NL322522T-R39M	C59	CU8016	Chip C, C2012B1H102K		
IC2	XA0033	IC, uPC393G	L10	QC0065	Chip Coil, NL322522T-068M	C60	CE0315	Chemical C, 16CV47B		
IC3	XA0114	IC, uPD6345GS	L11	QC0067	Chip Coil, NL322522T-R10M	C61	CU8016	Chip C, C2012B1H102K		
IC4	XA0116	IC, LA4445	L12	QC0063	Chip Coil, NL322522T-047M	C62	CU8016	Chip C, C2012B1H102K		
IC5	XA0115	IC, TC4S66F	VR1	RH0037	VR, CVR-42A-472AD	C63	CS0065	Chip Tantal, TMC1D684		
IC6	XA0115	IC, TC4S66F	VR2	RH0031	VR, CVR-42A-103AD	C64	CU8016	Chip C, C2012B1H102K		
IC7	XA0087	IC, TC4S01F	VR3	RH0038	VR, CVR-42A-473AD	C65	CU0071	Chip C, C2012CH1H101J		
D1	XD0112	Pin-D, 1SV128	TC1	CT0031	Trimmer, CTZ-05A	C66	CU0071	Chip C, C2012CH1H101J		
D2	XD0100	Varicap, 1SV164	TC2	CT0030	Trimmer, CTZ-20C	C67	CU0071	Chip C, C2012CH1H101J		
D3	XD0100	Varicap, 1SV164	TC3	CT0030	Trimmer, CTZ-20C	C68	CU8038	Chip C, CM316Y5V105Z25VA		
D4	XD0100	Varicap, 1SV164	<b>UHF MAIN Unit</b>					C69	CU8016	Chip C, C2012B1H102K
D5	XD0100	Varicap, 1SV164	C1	CU8016	Chip C, C2012B1H102K	C70	CU8016	Chip C, C2012B1H102K		
D6	XD0097	Diode, 1SS268TE85	C2	CU0006	Chip C, C2012CH1H050C	C71	CU0004	Chip C, C2012CH1H030C		
D7	XD0100	Varicap, 1SV164	C3	CU8028	Chip C, C2012CH1H103K	C72	CU8016	Chip C, C2012B1H102K		
D8	XD0100	Varicap, 1SV164	C4	CU0071	Chip C, C2012CH1H101J	C73	CU0006	Chip C, C2012CH1H050C		
D9	XD0118	Diode, MA716	C5	CU0003	Chip C, C2012CH1H020C	C74	CU8016	Chip C, C2012B1H102K		
D11	XD0118	Diode, MA716	C6	CU8016	Chip C, C2012B1H102K	C75	CU0005	Chip C, C2012CH1H040C		
D12	XD0120	Diode, MA704WK	C7	CU0067	Chip C, C2012CH1H390J	C76	CU0051	Chip C, C2012CH1H471K		
D13	XD0097	Diode, 1SS268	C8	CU8016	Chip C, C2012B1H102K	C77	CU0051	Chip C, C2012CH1H471K		
D14	XD0041	Diode, DAP202K	C9	CU8016	Chip C, C2012B1H102K	C78	CU0051	Chip C, C2012CH1H471K		
D15	XD0041	Diode, DAP202K	C11	CU0066	Chip C, C2012CH1H330J	C79	CU0006	Chip C, C2012CH1H050C		
D16	XD0040	Diode, DAN202K	C12	CU0071	Chip C, C2012CH1H101J	C80	CU0051	Chip C, C2012CH1H471K		
D17	XD0113	Zener Diode, 02CZ4. 3Y	C13	CU0006	Chip C, C2012CH1H050C	C81	CU0051	Chip C, C2012CH1H471K		
D18	XD0104	Zener Diode, 02CZ6. 2Y	C14	CU8016	Chip C, C2012B1H102K	C82	CU0063	Chip C, C2012CH1H180J		
D19	XD0108	Diode, MA704TX	C15	CU8016	Chip C, C2012B1H102K	C83	CU0004	Chip C, C2012CH1H030C		
D20	XD0103	Diode, 1SS226	C16	CU0005	Chip C, C2012CH1H040C	C84	CU0051	Chip C, C2012CH1H471K		
D21	XD0103	Diode, 1SS226TE85L	C18	CU0060	Chip C, C2012CH1H470J	C85	CU0062	Chip C, C2012CH1H150J		
D22	XD0040	Diode, DAN202KT146	C19	CU0011	Chip C, C2012CH1H100D	C86	CU0051	Chip C, C2012CH1H471K		
Q1	XE0013	FET, 3SK184S	C20	CU8016	Chip C, C2012B1H102K	C87	CU0051	Chip C, C2012CH1H471K		
Q2	XE0013	FET, 3SK184S	C21	CU0067	Chip C, C2012CH1H390J	C88	CE0312	Chemical C, 16CV10B		
Q3	XT0037	Transistor, 2SC2412KT146R	C22	CU8028	Chip C, C2012CH1H103K	C89	CE0312	Chemical C, 16CV10B		
Q4	XT0081	Transistor, 2SC2714T	C23	CU8003	Chip C, C2012JF1E104Z	C90	CU0051	Chip C, C2012CH1H471K		
Q5	XT0037	Transistor, 2SC2412KR	C24	CU8003	Chip C, C2012JF1E104Z	C91	CU0051	Chip C, C2012CH1H471K		
Q6	XT0037	Transistor, 2SC2412KR	C25	CU8041	Chip C, C2012JH1H471J	C92	CU0051	Chip C, C2012CH1H471K		
Q7	XT0037	Transistor, 2SC2412KR				C93	CU8016	Chip C, C2012B1H102K		
Q8	XT0037	Transistor, 2SC2412KR				C94	CU8016	Chip C, C2012B1H102K		
Q9	XT0037	Transistor, 2SC2412KR				C95	CU8016	Chip C, C2012B1H102K		
Q10	XT0037	Transistor, 2SC2412KR				C96	CE0030	Chemical C, 16VMS7 10		
Q11	XT0037	Transistor, 2SC2412KR				C97	CU8028	Chip C, C2012CH1H103K		
Q12	XT0077	Transistor, 2SC3326AL				C98	CU8028	Chip C, C2012CH1H103K		
Q13	XU0014	Digital Transistor, DTC1144EK				C99	CS0049	Chip Tantal, TMC1C105		
						C100	CE0312	Chemical C, 16CV10B		
						C101	CS0049	Chip Tantal, TMC1C105		
						C102	CU8028	Chip C, C2012CH1H103K		
						C103	CU8028	Chip C, C2012CH1H103K		
						C104	CE0312	Chemical C, 16CV10B		
						C105	CE0030	Chemical C, 16VMS7 10		
						C106	CE0312	Chemical C, 16CV10B		

Ref. No.	Part Code	Part Name and Number	Ref. No.	Part Code	Part Name and Number	Ref. No.	Part Code	Part Name and Number
C107	CJ0071	Chip C, C2012CH1H101J	R56	RK0035	Chip R, MCR10EZHZ102E	TP2	UE0047	Round Pin, R9 ×10
C108	CJ0032	Chip C, C2012B1E223K	R57	RK0038	Chip R, MCR10EZHZ182E	TP4	UE0047	Round Pin, R9 ×10
C110	CJ0016	Chip C, C2012B1H102K	R58	RK0052	Chip R, MCR10EZHZ103E	CN51	UE0109	Connector, 52030-1810
C111	CJ0051	Chip C, C2012CH1H471K	R59	RK0052	Chip R, MCR10EZHZ103E	CN52	UE0111	Connector, 5513-03CPB
C112	CJ0067	Chip C, C2012CH1H390J	R60	RK0052	Chip R, MCR10EZHZ103E	CN53	UE0108	Connector, 6FE-BT
C113	CE0312	Chemical C, 16CV10B	R61	RK0052	Chip R, MCR10EZHZ103E	CN54	UE0075	Pin Jack, TMP-J01X-A2
C114	CJ0016	Chip C, C2012B1H102K	R62	RK0056	Chip R, MCR10EZHZ223E	CN55	UE0075	Pin Jack, TMP-J01X-A2
C115	CJ0016	Chip C, C2012B1H102K	R63	RK0018	Chip R, MCR10EZHZ101E	CN58	UE0108	Connector, 6FE-BT
C116	CJ0016	Chip C, C2012B1H102K	R65	RK0018	Chip R, MCR10EZHZ101E	IC1	XA0156	IC, MC3361BD
C117	CJ0016	Chip C, C2012B1H102K	R66	RK0039	Chip R, MCR10EZHZ222E	IC2	XA0033	IC, μPC393G
C118	CJ0016	Chip C, C2012B1H102K	R67	RK0035	Chip R, MCR10EZHZ102E	IC3	XA0114	IC, μPD63456S
C119	CJ0003	Chip C, C2012CH1H020C	R68	RK0045	Chip R, MCR10EZHZ472E	IC4	XA0119	IC, AN8010M
C120	CJ0016	Chip C, C2012B1H102K	R69	RK0035	Chip R, MCR10EZHZ102E	D4	XD0040	Diode, DAN202K
C121	CJ0016	Chip C, C2012B1H102K	R70	RK0011	Chip R, MCR10EZHZ470E	D7	XD0118	Diode, MA716
C122	CJ0016	Chip C, C2012B1H102K	R71	RK0018	Chip R, MCR10EZHZ101E	D8	XD0118	Diode, MA716
C124	CS0049	Chip Tantal, TMC1C105	R72	RK0011	Chip R, MCR10EZHZ470E	D9	XD0040	Diode, DAN202K
C125	CJ0016	Chip C, C2012B1H102K	R73	RK0037	Chip R, MCR10EZHZ152E	D10	XD0120	Diode, MA704WK
C126	CJ0016	Chip C, C2012B1H102K	R74	RK0001	Chip R, MCR10EZHZ100E	D11	XD0112	Pin-D, 1SV128
C127	CE0312	Chemical C, 16CV10B	R75	RK0038	Chip R, MCR10EZHZ182E	D12	XD0141	Diode, 1SV237TE85R
C128	CJ0016	Chip C, C2012B1H102K	R76	RK0045	Chip R, MCR10EZHZ472E	D13	XD0041	Diode, DAP202K
C129	CJ0016	Chip C, C2012B1H102K	R77	RK0056	Chip R, MCR10EZHZ223E	D14	XD0041	Diode, DAP202K
C130	CJ0060	Chip C, C2012CH1H470J	R78	RK0056	Chip R, MCR10EZHZ223E	D15	XD0014	Diode, MI308
C131	CE0124	Chemical C, 16VMS7 47	R79	RK0056	Chip R, MCR10EZHZ223E	D16	XD0040	Diode, DAN202K
C132	CJ0071	Chip C, C2012CH1H101J	R80	RK0056	Chip R, MCR10EZHZ223E	D17	XD0113	Zener, 02CZ4.3Y
C133	CJ0016	Chip C, C2012B1H102K	R81	RK0052	Chip R, MCR10EZHZ103E	D18	XD0104	Zener, 02CZ6.2Y
C134	CJ0071	Chip C, C2012CH1H101J	R82	RK0028	Chip R, MCR10EZHZ471E	D19	XD0103	Diode, 1SS226
C135	CJ0003	Chip C, C2012CH1H020C	R83	RK0052	Chip R, MCR10EZHZ103E	D20	XD0103	Diode, 1SS226TE85L
C136	CJ0005	Chip C, C2012CH1H040C	R84	RK0020	Chip R, MCR10EZHZ151E	Q1	XE0013	FET, 3SK184S
R1	RK0059	Chip R, MCR10EZHZ333E	R85	RK0010	Chip R, MCR10EZHZ390E	Q2	XE0014	FET, 3SK184R
R2	RK0069	Chip R, MCR10EZHZ104E	R86	RK0020	Chip R, MCR10EZHZ151E	Q3	XE0002	FET, 2SK125
R3	RK0018	Chip R, MCR10EZHZ101E	R87	RK0020	Chip R, MCR10EZHZ151E	Q4	XT0030	Transistor, 2SC3356BR25
R4	RK0018	Chip R, MCR10EZHZ101E	R88	RK0039	Chip R, MCR10EZHZ222E	Q5	XT0037	Transistor, 2SC2412KR
R5	RK0005	Chip R, MCR10EZHZ220E	R89	RK0036	Chip R, MCR10EZHZ122E	Q6	XT0037	Transistor, 2SC2412KR
R6	RK0018	Chip R, MCR10EZHZ101E	R90	RK2010	Chip R, MCR50JZHZ330E	Q7	XT0037	Transistor, 2SC2412KR
R8	RK0056	Chip R, MCR10EZHZ223E	R91	RK0052	Chip R, MCR10EZHZ103E	Q8	XT0037	Transistor, 2SC2412KR
R9	RK0035	Chip R, MCR10EZHZ102E	R92	RK0052	Chip R, MCR10EZHZ103E	Q10	XU0019	Digital Transistor, DTA114YKT14
R10	RK0038	Chip R, MCR10EZHZ182E	R93	RK0059	Chip R, MCR10EZHZ333E	Q11	XU0018	Digital Transistor, DTC124EK
R11	RK0052	Chip R, MCR10EZHZ103E	R94	RK0107	Chip R, MCR10EZHZ000E	Q12	XT0077	Transistor, 2SC3326A
R12	RK0022	Chip R, MCR10EZHZ221E	R95	RK0011	Chip R, MCR10EZHZ470E	Q13	XU0014	Digital Transistor, DTC144EK
R13	RK0042	Chip R, MCR10EZHZ332E	R96	RK0045	Chip R, MCR10EZHZ472E	Q14	XU0014	Digital Transistor, DTC144EK
R14	RK0045	Chip R, MCR10EZHZ472E	R98	RK0070	Chip R, MCR10EZHZ124E	Q15	XT0061	Transistor, 2SB1132Q
R15	RK0069	Chip R, MCR10EZHZ104E	R99	RK0052	Chip R, MCR10EZHZ103E	Q16	XT0030	Transistor, 2SC3356BR25
R16	RK0035	Chip R, MCR10EZHZ102E	R100	RK0038	Chip R, MCR10EZHZ182E	Q17	XT0030	Transistor, 2SC3356BR25
R17	RK0052	Chip R, MCR10EZHZ103E	R101	RK2006	Chip R, MCR50EZHZ150E	Q18	XT0048	Transistor, 2SC3357RE
R18	RK0056	Chip R, MCR10EZHZ223E	R102	RK0073	Chip R, MCR10EZHZ224E	Q19	XT0078	Transistor, 2SC3369
R19	RK0048	Chip R, MCR10EZHZ682E	R103	RK0036	Chip R, MCR10EZHZ122E	Q20	XU0014	Digital Transistor, DTC144EK
R20	RK0076	Chip R, MCR10EZHZ334E	R104	RK0069	Chip R, MCR10EZHZ104E	Q21	XT0061	Transistor, 2SB1132Q
R21	RK0044	Chip R, MCR10EZHZ392E	R105	RK0107	Chip R, MCR10EZHZ000E	Q22	XU0019	Digital Transistor, DTC124EK
R22	RK0076	Chip R, MCR10EZHZ334E	R106	RK0107	MCR10EZHZ000	Q23	XT0037	Transistor, 2SC2412KR
R23	RK0044	Chip R, MCR10EZHZ392E	R108	RK0107	MCR10EZHZ000	Q24	XT0037	Transistor, 2SC2412KR
R24	RK0052	Chip R, MCR10EZHZ103E	VR1	RH0031	VR, CVR-42A-103AD	Q26	XT0038	Transistor, 2SA1037KT146R
R25	RK0069	Chip R, MCR10EZHZ104E	VR2	RH0038	VR, CVR-42A-473AD	Q27	XT0037	Transistor, 2SC2412KR
R26	RK0028	Chip R, MCR10EZHZ471E	VR3	RH0031	VR, CVR-42A-103AD	Q28	XT0092	Transistor, 2SA1307Y
R27	RK0056	Chip R, MCR10EZHZ223E	VR4	RH0051	VR, CVR-42A-472AD	Q29	XU0018	Digital Transistor, DTC124EK
R28	RK0081	Chip R, MCR10EZHZ564E	VR5	RH0036	VR, CVR-42A-102AD	Q30	XU0014	Digital Transistor, DTC144EK
R29	RK0042	Chip R, MCR10EZHZ332E	TC1	CT0031	Trimmer, CTZ-05A	Q31	XT0061	Transistor, 2SB1132Q
R30	RK0047	Chip R, MCR10EZHZ562E	TC2	CT0031	Trimmer, CTZ-05A	Q32	XT0030	Transistor, 2SC3356BR25
R31	RK0069	Chip R, MCR10EZHZ104E	L1	QA0069	HF Coil, 110-90124	Q32	XU0014	Digital Transistor, DTC144EK
R32	RK0035	Chip R, MCR10EZHZ102E	L2	QA0069	HF Coil, 110-90124	FL1	XF0006	X'tal Filter, 30.8M15AUM-1
R33	RK0035	Chip R, MCR10EZHZ102E	L3	QA0042	Coil, 30R8MIF	FL2	XC0001	Ceramic Filter, CFW455F
R34	RK0018	Chip R, MCR10EZHZ101E	L4	QA0044	Coil, 455KHz	W2	UX1004	Wire
R35	RK0056	Chip R, MCR10EZHZ223E	L5	QA0044	Coil, 455KHz	X1	XQ0034	X'tal, HC-49/T 30.4MHz
R36	RK0044	Chip R, MCR10EZHZ392E	L6	QK0036	Coil, 0R6-3-1R5FM			
R37	RK0081	Chip R, MCR10EZHZ564E	L7	QC0056	Chip L, NL322522T-012M			
R38	RK0039	Chip R, MCR10EZHZ222E	L8	QC0057	Chip L, NL322522T-015M			
R39	RK0023	Chip R, MCR10EZHZ271E	L9	QC0062	Chip L, NL322522T-039M			
R40	RK0056	Chip R, MCR10EZHZ223E	L10	QC0039	Chip L, NL322522T-1R0M			
R41	RK0062	Chip R, MCR10EZHZ473E	L11	QC0059	Chip L, NL322522T-022M			
R43	RK0081	Chip R, MCR10EZHZ564E	L12	QC0055	Chip L, NL322522T-010M			
R44	RK0045	Chip R, MCR10EZHZ472E	L13	QC0055	Chip L, NL322522T-010M			
R45	RK0079	Chip R, MCR10EZHZ474E	L14	QK0037	Coil, 0R6-3-2R5FM			
R46	RK0039	Chip R, MCR10EZHZ222E	L15	QK0038	Coil, 0R7-3-1R5FM			
R47	RK0035	Chip R, MCR10EZHZ102E	L17	QC0061	Chip L, NL322522T-033M			
R48	RK0107	Chip R, MCR10EZHZ000E	L18	QC0055	Chip L, NL322522T-010M			
R49	RK0039	Chip R, MCR10EZHZ222E	TH1	XS0004	Thermistor, TD5A150D			
R51	RK0006	Chip R, MCR10EZHZ270E	TH2	XS0008	Thermistor, TD5C220D			
R52	RK0045	Chip R, MCR10EZHZ472E	TP1	UE0041	Pin Jack, TMP-J01X-V6			
R53	RK0006	Chip R, MCR10EZHZ270E						
R54	RK0056	Chip R, MCR10EZHZ223E						
R55	RK0056	Chip R, MCR10EZHZ223E						



Ref. No.	Part Code	Part Name and Number	Ref. No.	Part Code	Part Name and Number	Ref. No.	Part Code	Part Name and Number
<b>VHF PA Unit</b>								
C1	CU8016	Chip C, C2012B1H102K	C17	CU7003	Chip C, C3K31NAR102K	C23	CU8016	Chip C, C2012B1H102K
C2	CE0201	Chemical C, 16MV10SZ	C24	CU8016	Chip C, C2012B1H102K	C24	CU8016	Chip C, C2012B1H102K
C3	CU8016	Chip C, C2012B1H102K	C25	CU8016	Chip C, C2012B1H102K	C25	CU8016	Chip C, C2012B1H102K
C4	CE0201	Chemical C, 16MV10SZ	C26	CS0208	Chip Tantal, TMC-MQJ475M	C26	CU8016	Chip C, C2012B1H102K
C5	CC5022	Ceramic C, HM60SJ220J	C27	CU8016	Chip C, C2012B1H102K	C27	CU8016	Chip C, C2012B1H102K
C6	CU8016	Chip C, C2012B1H102K	C28	CU8016	Chip C, C2012B1H102K	C28	CU8016	Chip C, C2012B1H102K
C7	CC5021	Ceramic C, HM60SJ220J	C29	CS0208	Chip Tantal, TMC-MQJ475M	C29	CU8016	Chip C, C2012B1H102K
C8	CU0006	Chip C, C2012CH1H050C	C30	CU8016	Chip C, C2012B1H102K	C30	CS0052	Chip Tantal, TMC1A336
C9	CU0002	Chip C, C2012CH1H010C	C31	CU0051	Chip C, C2012CH1H471K	C31	CU0071	Chip C, C2012CH1H101J
C10	CC5023	Ceramic C, HM60SJ390J	C32	CU8016	Chip C, C2012B1H102K	C32	CU8034	Chip C, C2012X7R1E333K
C11	CU7003	Chip C, C3CK1NAR102K	C33	CU0005	Chip C, C2012CH1H040C	C33	CU8040	Chip C, 2012JB1E473K
C12	CC5023	Ceramic C, HM60SJ390J	CM62	UE0108	Connector, 6FE-BT	C34	CU8038	Chip C, CM316Y5V105Z25VA
C13	CU0002	Chip C, C2012CH1H010C	CM64	UE0112	Connector, 5513-04CPB	C35	CU8038	Chip C, CM316Y5V105Z25VA
C14	CU8016	Chip C, C2012B1H102K	CM65	UE0116	Pin 1.0x18L	C36	CU8038	Chip C, CM316Y5V105Z25VAT (T only)
C16	CU8016	Chip C, C2012B1H102K	CM67	UE0116	Pin 1.0x18L	C36	CU9010	Chip C, C32161H223KB (E only)
C17	CC5003	Ceramic C, HM60SJ330J	CM68	UA0002	R/B 1.25 x 0.25M Plug	C37	CU8038	Chip C, CM316Y5V105Z25VA
C18	CU8016	Chip C, C2012B1H102K	CM6A	UE0108	Connector, 6FE-BT	C38	CU8038	Chip C, CM316Y5V105Z25VA
J1	UJ0020	Jack, HSJ0836-01-310	RT1	UE0119	RT Pin, RT-01T-1.0B	C39	CU8016	Chip C, C2012B1H102K
J2	UJ0021	Jack, HSJ0837-01-010	RT2	UE0119	RT Pin, RT-01T-1.0B	C40	CE0118	Chemical C, 6R3MS7 220
CN42	UE0108	Connector, 6FE-BT	RT3	UE0119	RT Pin, RT-01T-1.0B	C41	CS0052	Chip Tantal, TMC1A336
CN44	UE0114	Connector, 5512-04A	RT5	UE0119	RT Pin, RT-01T-1.0B	C42	CU8016	Chip C, C2012B1H102K
CN48	UE0043	Post with Base, PI22A02M	R2	RK0107	Chip R, MCR10EZJH000E	C43	CU8016	Chip C, C2012B1H102K
RT1	UE0119	RT Pin, RT-01T-1.0B	R3	RK0107	Chip R, MCR10EZJH000E	C44	CS0052	Chip Tantal, TMC1A336
RT2	UE0119	RT Pin, RT-01T-1.0B	R4	RK0045	Chip R, MCR10EZJH472E	C45	CE0315	Chemical C, 16CV47B
RT3	UE0119	RT Pin, RT-01T-1.0B	R5	RK0011	Chip R, MCR10EZJH470E	C46	CU8016	Chip C, C2012B1H102K
IC1	XA0122	IC, M57726R	IC1	XA0077A	IC, M57788M	C48	CS0221	Chip Tantal, TMC1A336
D1	XD0106	Diode, UM9401	D1	XD0106	Diode, UM9401	C49	CU0071	Chip C, C2012CH1H101J
D2	XD0014	Diode, MI308	D2	XD0014	Diode, MI308	C50	CU0051	Chip C, C2012CH1H471K
D3	XD0102	Diode, 1SS101	D3	XD0102	Diode, 1SS101	C51	CU0051	Chip C, C2012CH1H471K
L1	QK0061	Coil, 0R8-3-9R5TLM	D5	XD0040	Diode, DAN202K	C52	CU0060	Chip C, C2012CH1H471K
L2	QK0042	Coil, 0R6-3-5R0 RM	D6	XD0107	Diode, G3B	C53	CU0065	Chip C, C2012CH1H270J
L3	QK0060	Coil, 0R8-3-5R0 RS	L2	QK0044	Air Core Coil, 0R5-3R0-9R5T	C54	CU0065	Chip C, C2012CH1H270J
L4	QK0059	Coil, 0R8-3-4R0 RS	L3	QK0068	Air Core Coil, 0R8-3R0-2R5T	C55	CS0057	Chip Tantal, TMC0J225
L5	QK0061	Coil, 0R5-3-9R5 LM	L4	QK0065	Air Core Coil, 0R8-4R0-1R2T	C56	CU8003	Chip C, C2012JF1E104Z
L6	QK0059	Coil, 0R8-3-4R0 RS	L5	QK0065	Air Core Coil, 0R8-4R0-1R2T (E only)	C57	CU8003	Chip C, C2012F1E104Z
L7	QK0059	Coil, 0R8-3-4R0 RS	L5	QK0094	Air Core Coil, 0R8-3R4-1R2T (T only)	C58	CU0071	Chip C, C2012CH1H101J
R1	RK0045	Chip R, MCR10EZJH472E	L7	QB0003	0P-2.6-3-1.2	C59	CU8028	Chip C, C2012B1H103K
R2	RK0011	Chip R, MCR10EZJH470E	VR1	RH0038	VR, CVR-42A-473AD	C60	CU8028	Chip C, C2012B1H103K
R4	RK2018	Chip R, MCR50JZHJ151E	W1	MRAE08CC	Wire #18R05-080-05	C61	CU8028	Chip C, C2012B1H103K
VR1	RH0038	VR, CVR-42A-473AD	W8	UX1007	Wire	C62	CU8028	Chip C, C2012B1H103K
W3	UX1005	Wire	W9	UX1008	Wire	C63	CU8016	Chip C, C2012B1H102K
W5	UX1007	Wire	W18	MRAH08FC	Wire #24R15-080-05	C64	CU3023	Chip C, CM105CH101K50VA
W6	UX1009	Wire			C65	CU3023	Chip C, CM105CH101K50VA	
<b>UHF PA Unit</b>			<b>CONTROL Unit</b>			C66	CU3023	Chip C, CM105CH101K50VA
C1	CE0163	Chemical C, 16MV 1000AZ	C1	CU8003	Chip C, C2012JF1E104Z	C67	CU0071	Chip C, C2012CH1H101J
C2	CU0051	Chip C, C2012CH1H471K	C2	CU8003	Chip C, C2012JF1E104Z	C68	CU0071	Chip C, C2012CH1H101J
C3	CE0201	Chemical C, 16MV 10SZ	C3	CU8003	Chip C, C2012JF1E104Z	C69	CU3053	Chip C, CM105Y5V33Z25VA
C4	CU0051	Chip C, C2012CH1H471K	C4	CU8003	Chip C, C2012JF1E104Z	C70	CU8040	Chip C, 2012JB1E473K
C5	CE0201	Chemical C, 16MV 10SZ	C5	CU8003	Chip C, C2012JF1E104Z	R1	RA0002	R. Ally, MNR12E 0AJ473E
C6	CU7014	Chip C, UC232H0060D-T	C6	CU8003	Chip C, C2012JF1E104Z	R2	RA0002	R. Ally, MNR12E 0AJ473E
C7	CU0051	Chip C, C2012CH1H471K	C7	CU8003	Chip C, C2012JF1E104Z	R3	RA0002	R. Ally, MNR12E 0AJ473E
C8	CU0007	Chip C, C2012CH1H060D	C8	CU8003	Chip C, C2012JF1E104Z	R4	RA0002	R. Ally, MNR12E 0AJ473E
C9	CC5008	Ceramic C, HM60SJSL070D (E only)	C9	CU8003	Chip C, C2012JF1E104Z	R5	RA0002	R. Ally, MNR12E 0AJ473E
C9	CC5016	Ceramic C, HM60SJSL080D (T only)	C10	CU8003	Chip C, C2012JF1E104Z	R6	RA0002	R. Ally, MNR12E 0AJ473E
C10	CU0002	Chip C, C2012CH1H010C	C11	CU8003	Chip C, C2012JF1E104Z	R8	RK0086	Chip R, MCR10EZJH105E
C11	CU8028	Chip C, C2012B1H103K	C12	CU8003	Chip C, C2012JF1E104Z	R9	RK0052	Chip R, MCR10EZJH103E
C12	CU7021	Chip C, UC232H0160J	C13	CU8003	Chip C, C2012JF1E104Z	R10	RK0105	Chip R, MCR10EZJH2R2E
C13	CU7022	Chip C, TE82UC232H0100D (E only)	C14	CU8003	Chip C, C2012JF1E104Z	R11	RK0062	Chip R, MCR10EZJH473E
C13	CU7016	Chip C, TE82UC232H0080D (T only)	C15	CU8003	Chip C, C2012JF1E104Z	R12	RK0062	Chip R, MCR10EZJH473E
C14	CU8016	Chip C, C2012B1H102K	C16	CU8003	Chip C, C2012JF1E104Z	R13	RK0036	Chip R, MCR10EZJH122E
C15	CU8016	Chip C, C2012B1H102K	C17	CU8003	Chip C, C2012JF1E104Z	R14	RK0036	Chip R, MCR10EZJH122E
C16	CU8016	Chip C, C2012B1H102K	C18	CU8028	Chip C, C2012B1H103K	R15	RK0033	Chip R, MCR10EZJH812E
			C19	CU8028	Chip C, C2012B1H103K	R16	RK0033	Chip R, MCR10EZJH821E
			C20	CU8028	Chip C, C2012B1H103K	R17	RK0033	Chip R, MCR10EZJH821E
			C21	CU8016	Chip C, C2012B1H102K	R18	RK0033	Chip R, MCR10EZJH821E
			C22	CU8016	Chip C, C2012B1H102K	R19	RA0005	R. Ally, MNR14AJ473E
						R20	RA0005	R. Ally, MNR14AJ473E
						R21	RA0005	R. Ally, MNR14AJ473E
						R22	RA0005	R. Ally, MNR14AJ473E
						R23	RK0059	Chip R, MCR10EZJH333E
						R24	RK0062	Chip R, MCR10EZJH473E
						R25	RK0042	Chip R, MCR10EZJH332E
						R26	RK0037	Chip R, MCR10EZJH152E
						R27	RK0056	Chip R, MCR10EZJH223E
						R28	RK0045	Chip R, MCR10EZJH472E
						R29	RK0062	Chip R, MCR10EZJH473E
						R30	RK0062	Chip R, MCR10EZJH473E
						R31	RK0107	Chip R, MCR10EZJH000E

Ref. No.	Part Code	Part Name and Number	Ref. No.	Part Code	Part Name and Number	Ref. No.	Part Code	Part Name and Number			
R34	RK0107	Chip R, MCR10EZJ000E (E only)	D18	XL0026	Chip LED, AA1101W-72-TR	C40	CU8028	Chip C, C2012B1H103K			
R36	RA0006	R. Ally. EXB-M16D6ALG (T only)	D19	XL0026	Chip LED, AA1101W-72-TR	C42	CU8034	Chip C, C2012X7R1E333K			
R36	RD0115	JPW01FC0 30Q (E only)	D20	XL0026	Chip LED, AA1101W-72-TR	C43	CU8034	Chip C, C2012X7R1E333K			
R37	RA0005	R. Ally. MNR14AJ473E	D21	XL0026	Chip LED, AA1101W-72-TR	C44	CU8038	Chip C, CM316Y5V105Z25VAT			
R38	RK0050	Chip R, MCR10EZJ822E	D22	XL0026	Chip LED, AA1101W-72-TR	C45	CU8038	Chip C, CM316Y5V105Z25VAT			
R39	RK0025	Chip R, MCR10EZJ331E	D23	XL0026	Chip LED, AA1101W-72-TR	C46	CS0221	Chip Tantal, TMC1C475MTR			
R41	RA0005	R. Ally. MNR14AJ473E	D24	XL0026	Chip LED, AA1101W-72-TR	C47	CU8028	Chip C, C2012B1H103K			
R42	RK0033	Chip R, MCR10EZJ821E	D25	XL0026	Chip LED, AA1101W-72-TR	C48	CS0051	Chip Tantal, TMC1C106			
R43	RK0033	Chip R, MCR10EZJ821E	D26	XL0026	Chip LED, AA1101W-72-TR	C49	CU8038	Chip C, CM316Y5V105Z25VAT			
R44	RK0039	Chip R, MCR10EZJ222E	IC1	XA0180	IC, $\mu$ PD75116GFF19-3BE	C50	CE0315	Chemical C, 16CV47B			
R45	RK0039	Chip R, MCR10EZJ222E	IC2	XA0105	IC, MC145436DWR	C51	CU8028	Chip C, C2012B1H103K			
R46	RK0039	Chip R, MCR10EZJ222E	IC3	XA0117	IC, S-2510A	C52	CU8038	Chip C, CM316Y5V105Z25VAT			
R47	RK0039	Chip R, MCR10EZJ222E	IC4	XA0118	IC, S-8054ALR-LN	C53	CU8003	Chip C, C2012JF1E104Z			
R48	RK0001	Chip R, MCR10EZJ100E	IC5	XA0075	IC, NJM78L08UA	C54	CS0051	Chip Tantal, TMC1C106			
R49	RK0069	Chip R, MCR10EZJ104E	IC6	XA0068	IC, M5218FP-T01-I	C55	CU8028	Chip C, C2012B1H103K			
R50	RK0056	Chip R, MCR10EZJ223E	IC7	XA0089	IC, NJM78L06UA	C56	CU8028	Chip C, C2012B1H103K			
R51	RK0001	Chip R, MCR10EZJ100E	IC8	XA0087	IC, TC4S01F	C57	CU8028	Chip C, C2012B1H103K			
R52	RK0036	Chip R, MCR10EZJ122E	Q1	XT0037	Transistor, 2SC2412KR	C58	CU8028	Chip C, C2012B1H103K			
R53	RK0035	Chip R, MCR10EZJ102E	Q2	XU0028	Digital Transistor, FMC2	C59	CU8028	Chip C, C2012B1H103K			
R54	RK0079	Chip R, MCR10EZJ474E	Q3	XU0012	Digital Transistor, DTC114EK	C60	CU8028	Chip C, C2012B1H103K			
R55	RK0072	Chip R, MCR10EZJ184E	Q4	XU0012	Digital Transistor, DTC114EK	C61	CU8028	Chip C, C2012B1H103K			
R56	RK0073	Chip R, MCR10EZJ224E	Q5	XT0037	Transistor, 2SC2412KR	C62	CS0057	Chip Tantal, TMC0J225M			
R57	RK0059	Chip R, MCR10EZJ333E	Q6	XT0018	Transistor, 2SB744Q	C63	CS0057	Chip Tantal, TMC0J225M			
R59	RK0064	Chip R, MCR10EZJ563 (T only)	Q7	XU0014	Digital Transistor, DTC144EK	C64	CU3023	Chip C, CM105CH101K			
R60	RK0062	Chip R, MCR10EZJ473E (E only)	Q8	XU0014	Digital Transistor, DTC144EK	C65	CU3023	Chip C, CM105CH101K			
R61	RK0045	Chip R, MCR10EZJ472E	Q9	XU0014	Digital Transistor, DTC144EK	C66	CU3023	Chip C, CM105CH101K			
R62	RK0069	Chip R, MCR10EZJ104E	Q10	XT0037	Transistor, 2SC2412KR	C67	CU3023	Chip C, CM105CH101K			
R63	RK0035	Chip R, MCR10EZJ102E	W12	MRCL02AA	Wire #30R02-020-02	C68	CU3023	Chip C, CM105CH101K			
R64	RK0107	Chip R, MCR10EZJ000E	W10	MACLO2AA	Wire #30A02-020-02	C69	CU3023	Chip C, CM105CH101K			
VR1	RH0038	VR, CVR-42A-473AD	W16	NGCLO2AA	Wire #30G02-020-02	C71	CU8038	CM316YV105Z25AT(E only)			
VR2	RH0038	VR, CVR-42A-473AD	W17	NGCLO2AA	Wire #30G02-020-02	CN21	UE0120	Connector, P-DR590			
L1	QC0104	Chip L, LER015T1R5M	X1	XQ0021	DSMAT3. 58MHz	CN22	UE0100	Connector, 52030-1610			
L2	QC0104	Chip L, LER015T1R5M	<b>SUB CONTROL Unit</b>						CN23	UE0110	Connector, 52030-1210
CN12	UE0115	Connector, 50020-8106	C1	CU8016	Chip C, C2012B1H102K	CN24	UE0109	Connector, 52030-1810	CN25	UE0109	Connector, 52030-1810
CN15	UE0121	Connector, R-DR590	C2	CE0124	Chemical C, 16MV47SWB	R1	RA0003	R. Ally, MNR14E0AJ102E	R2	RA0003	R. Ally, MNR14E0AJ102E
CN16	UE0035	Mic Connector, FM214-8SMPY	C3	CU8016	Chip C, C2012B1H102K	R3	RA0003	R. Ally, MNR14E0AJ102E	R4	RA0003	R. Ally, MNR14E0AJ102E
SW1	UU0011	Tact Switch, SKHMPU	C4	CE0313	Chemical C, 16CV22B	R5	RA0003	R. Ally, MNR14E0AJ102E	R6	RA0003	R. Ally, MNR14E0AJ102E
SW2	UU0011	Tact Switch, SKHMPU	C5	CS0210	Chip Tantal, TMCMB0J156MTR	R7	RK0035	Chip R, MCR10EZJ102E	R8	RK0035	Chip R, MCR10EZJ102E
SW3	UU0011	Tact Switch, SKHMPU	C6	CE0310	Chemical C, 10CV33B	R9	RK0035	Chip R, MCR10EZJ102E	R10	RK0035	Chip R, MCR10EZJ102E
SW4	UU0011	Tact Switch, SKHMPU	C7	CU8016	Chip C, C2012B1H102K	R11	RK0035	Chip R, MCR10EZJ102E	R12	RA0004	R. Ally, MNR14J473E
SW5	UU0011	Tact Switch, SKHMPU	C8	CU0060	Chip C, C2012CH1H470J	R13	RK0052	Chip R, MCR10EZJ103E	R14	RK0056	Chip R, MCR10EZJ223E
SW6	UU0011	Tact Switch, SKHMPU	C9	CU0060	Chip C, C2012CH1H470J	R15	RK0061	Chip R, MCR10EZJ393E	R16	RK0067	Chip R, MCR10EZJ823E
SW7	UU0011	Tact Switch, SKHMPU	C10	CU0060	Chip C, C2012CH1H470J	R17	RK0052	Chip R, MCR10EZJ103E	R18	RK0056	Chip R, MCR10EZJ223E
SW8	UU0011	Tact Switch, SKHMPU	C11	CU0060	Chip C, C2012CH1H470J	R19	RK0061	Chip R, MCR10EZJ393E	R20	RK0067	Chip R, MCR10EZJ823E
SW9	UU0011	Tact Switch, SKHMPU	C12	CU0051	Chip C, C2012CH1H471K	R21	RK0062	Chip R, MCR10EZJ473E	R22	RK0062	Chip R, MCR10EZJ473E
SW10	UU0011	Tact Switch, SKHMPU	C13	CS0051	Chip Tantal, TMC1C106	R23	RA0004	R. Ally, MNR14J392E	R24	RA0002	R. Ally, MNR12J473E
SW11	UU0011	Tact Switch, SKHMPU	C14	CU8003	Chip C, C2012JF1E104Z	R25	RA0005	R. Ally, MNR14J473E	R26	RK0038	Chip R, MCR10EZJ182E
SW12	UU0011	Tact Switch, SKHMPU	C15	CU8038	Chip C, CM316Y5V105Z25VAT	R27	RK0038	Chip R, MCR10EZJ182E	R28	RK0035	Chip R, MCR10EZJ102E
SW13	UU0011	Tact Switch, SKHMPU	C16	CE0310	Chemical C, 10CV33B	R29	RK0035	Chip R, MCR10EZJ102E	R30	RK0035	Chip R, MCR10EZJ102E
SW14	UQ0013	Switch, EVQ-QEC-04K	C17	CU8016	Chip C, C2012B1H102K	R31	RK0035	Chip R, MCR10EZJ102E	R32	RK0045	Chip R, MCR10EZJ472E
SW15	UQ0013	Switch, EVQ-QEC-04K	C18	CU0055	Chip C, C2012CH1H681K	R33	RK0062	Chip R, MCR10EZJ473E	R34	RK0107	Chip R, MCR10EZJ000E
SW16	UU0011	Tact Switch, SKHMPU	C19	CU8022	Chip C, C2012B1H332K	R35	RK0018	Chip R, MCR10EZJ101E	R36	RK0052	Chip R, MCR10EZJ103E
SW17	UU0011	Tact Switch, SKHMPU	C20	CU0070	Chip C, C2012CH1H820J	R37	RK0056	Chip R, MCR10EZJ223E	R38	RK0061	Chip R, MCR10EZJ393E
SW18	UQ0011	Switch, ESB-64801	C21	CU8016	Chip C, C2012B1H102K	R39	RK0067	Chip R, MCR10EZJ823E	R40	RK0044	Chip R, MCR10EZJ392E
SW19	UR0002	Switch, EVQWGF1542B	C22	CS0221	Chip Tantal, TMC1C475MTR	R41	RK0044	Chip R, MCR10EZJ392E	R42	RK0044	Chip R, MCR10EZJ392E
	ED0006	Lithium Battery, BR2032-1F2	C23	CU8020	Chip C, C2012B1H222K	R43	RK0044	Chip R, MCR10EZJ392E	R45	RK0045	Chip R, MCR10EZJ472E
	TZ0024	Insulating Paper	C24	CU8028	Chip C, C2012B1H103K	R46	RK0052	Chip R, MCR10EZJ103E			
LCD	EL0017	LCD Unit, DR599T	C25	CU8028	Chip C, C2012B1H103K						
D1	XD0040	Diode, DAN202K	C26	CU8016	Chip C, C2012B1H102K						
D2	XD0041	Diode, 1SS226	C27	CU8016	Chip C, C2012B1H102K						
D4	XD0040	Diode, DAN202K	C29	CS0051	Chip Tantal, TMC1C106						
D5	XD0040	Diode, DAN202K	C30	CU8003	Chip C, C2012JF1E104Z						
D6	XD0040	Diode, DAN202K	C31	CE0124	Chemical C, 16MV47SWB						
D11	XL0026	Chip LED, AA1101W-72-TR	C32	CU8028	Chip C, C2012B1H103K						
D12	XL0026	Chip LED, AA1101W-72-TR	C33	CU8034	Chip C, C2012X7R1E333K						
D13	XL0026	Chip LED, AA1101W-72-TR	C34	CU8028	Chip C, C2012B1H103K						
D14	XL0026	Chip LED, AA1101W-72-TR	C35	CU8016	Chip C, C2012B1H102K						
D15	XL0026	Chip LED, AA1101W-72-TR	C36	CU8034	Chip C, C2012X7R1E333K						
D16	XL0026	Chip LED, AA1101W-72-TR	C37	CU8028	Chip C, C2012B1H103K						
D17	XL0026	Chip LED, AA1101W-72-TR	C39	CU8028	Chip C, C2012B1H103K						

Ref. No.	Part Code	Part Name and Number
R47	RK0056	Chip R, MCR10EZJ223E
R48	RK0061	Chip R, MCR10EZJ393E
R49	RK0067	Chip R, MCR10EZJ823E
R51	RK0044	Chip R, MCR10EZJ392E
R52	RK0044	Chip R, MCR10EZJ392E
R53	RK0044	Chip R, MCR10EZJ392E
R54	RK0044	Chip R, MCR10EZJ392E
R55	RK0038	Chip R, MCR10EZJ182E
R56	RK0052	Chip R, MCR10EZJ103E
R57	RK0045	Chip R, MCR10EZJ472E
R58	RK0062	Chip R, MCR10EZJ473E
R60	RK0062	Chip R, MCR10EZJ473E
R61	RK0045	Chip R, MCR10EZJ472E
R63	RK0005	Chip R, MCR10EZJ220E
R64	RK0052	Chip R, MCR10EZJ103E (E only)
R65	RK0062	Chip R, MCR10EZJ473E
R66	RK0078	Chip R, MCR10EZJ394
R67	RK0076	Chip R, MCR10EZJ334E
R68	RK0072	Chip R, MCR10EZJ184E
R69	RK0073	Chip R, MCR10EZJ224E
R70	RK0047	Chip R, MCR10EZJ562E
R71	RK0047	Chip R, MCR10EZJ562E
R72	RK0067	Chip R, MCR10EZJ823E
R73	RK0070	Chip R, MCR10EZJ124E
R74	RK0070	Chip R, MCR10EZJ124E
R75	RK0069	Chip R, MCR10EZJ104E
R76	RK0056	Chip R, MCR10EZJ223E
R77	RK0001	Chip R, MCR10EZJ100E
R78	RK0039	Chip R, MCR10EZJ222E
R79	RK0081	Chip R, MCR10EZJ564E
R80	RK0035	Chip R, MCR10EZJ102E
R81	RK0045	Chip R, MCR10EZJ472E
R82	RK0062	Chip R, MCR10EZJ473E
R83	RK0052	Chip R, MCR10EZJ103E
R84	RK0045	Chip R, MCR10EZJ472E
R85	RK0039	Chip R, MCR10EZJ222E
R86	RK0045	Chip R, MCR10EZJ472E
R87	RK0001	Chip R, MCR10EZJ100E
R88	RK0035	Chip R, MCR10EZJ102E
R89	RK0081	Chip R, MCR10EZJ564E
R90	RK0018	Chip R, MCR10EZJ101E
R91	RK0039	Chip R, MCR10EZJ222E
R92	RK0045	Chip R, MCR10EZJ472E
R93	RK0062	Chip R, MCR10EZJ473E
R94	RK0045	Chip R, MCR10EZJ472E
R95	RK0001	Chip R, MCR10EZJ100E
R96	RK0035	Chip R, MCR10EZJ102E
R97	RK0081	Chip R, MCR10EZJ564E
R99	RK0070	Chip R, MCR10EZJ124E
R100	RK0070	Chip R, MCR10EZJ124E
R102	RK0052	Chip R, MCR10EZJ103E
R103	RK0052	Chip R, MCR10EZJ103E
R104	RK0045	Chip R, MCR10EZJ472E
R105	RK0045	Chip R, MCR10EZJ472E
R106	RK0018	Chip R, MCR10EZJ101E
R107	RK0027	Chip R, MCR10EZJ391E
R108	RK0027	Chip R, MCR10EZJ391E
R111	RK0052	Chip R, MCR10EZJ103E
R112	RK0052	Chip R, MCR10EZJ103E
R113	RK0052	Chip R, MCR10EZJ103E
R114	RK0052	Chip R, MCR10EZJ103E
R115	RK0045	Chip R, MCR10EZJ472E
R116	RK0069	Chip R, MCR10EZJ104E
R117	RK0052	Chip R, MCR10EZJ103E
R118	RK0107	Chip R, MCR10EZJ000E
R119	RK0001	Chip R, MCR10EZJ100E
R120	RK0069	Chip R, MCR10EZJ104E
R121	RK0069	Chip R, MCR10EZJ104E
R122	RK0073	Chip R, MCR10EZJ224E (E only)
R123	RK0107	Chip R, MCR10EZJ000E
R125	RK0055	Chip R, MCR10EZJ183
X1	XB0004	FAR, C4CA04194000K01
L1	QC0104	Chip L, LER105T1R5M
L2	QC0104	Chip L, LER105T1R5M
IC1	XA0183	IC, uPD75108GFR78-3BE
IC2	XA0118	IC, S-8054ALR-LN
IC3	XA0098	IC, NJM78L05UA
IC4	XA0082	IC, MC7808CT

Ref. No.	Part Code	Part Name and Number
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, DTC144EKT146
<b>VOL Unit</b>		
VR1	RV0016	VR, RK0972210L2550KB X 2
VR2	RV0016	VR, RK0972210L2550KB X 2
<b>VHF VCO Unit</b>		
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
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, MCR10EZJ682E
R17	RK0018	Chip R, MCR10EZJ101E
R18	RK0021	Chip R, MCR10EZJ181E
R19	RK0028	Chip R, MCR10EZJ471E
R20	RK0045	Chip R, MCR10EZJ472E
R21	RK0028	Chip R, MCR10EZJ471E
R22	RK0039	Chip R, MCR10EZJ222E

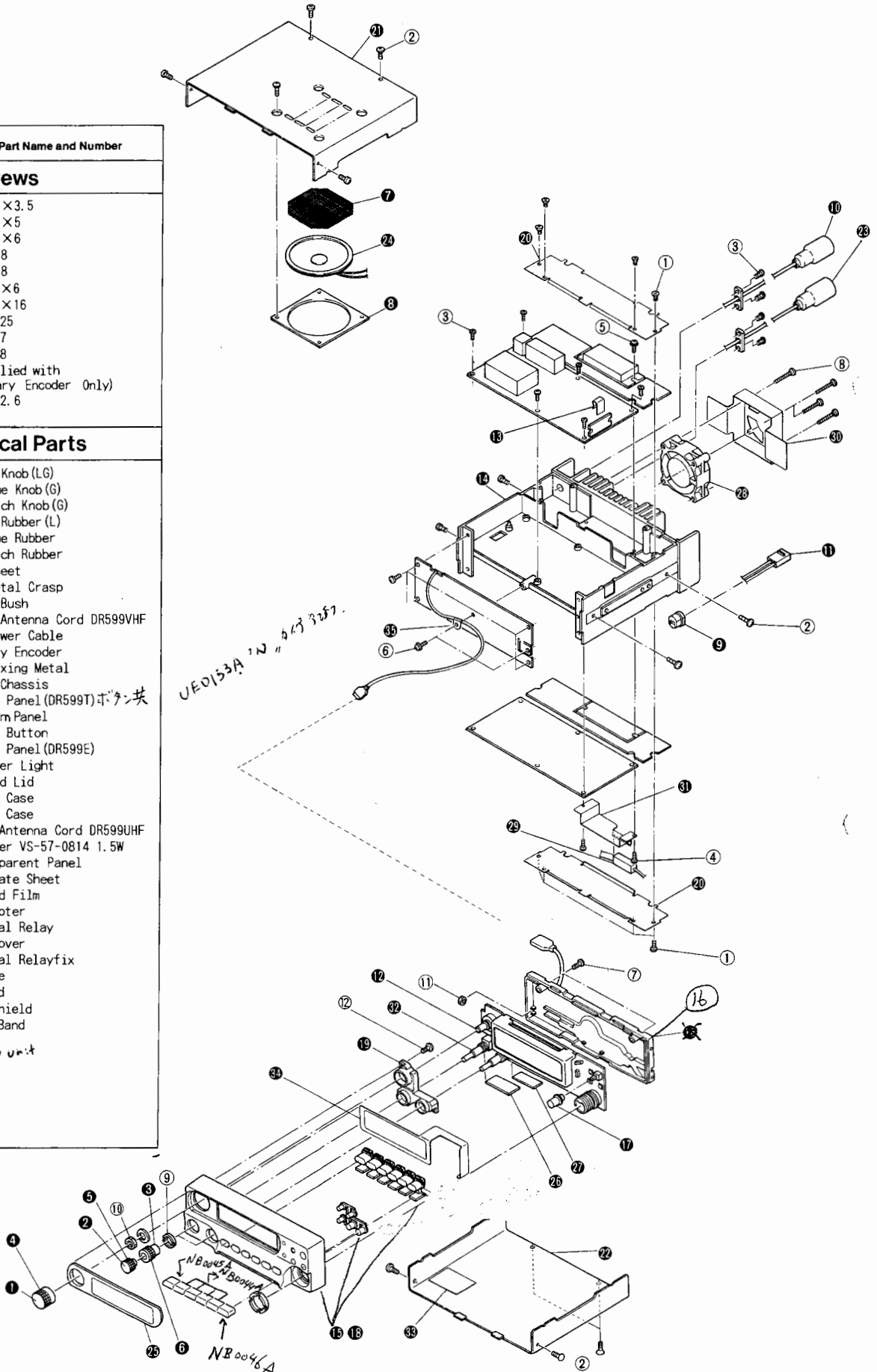
Ref. No.	Part Code	Part Name and Number
R23	RK0018	Chip R, MCR10EZJ101E
R24	RK0018	Chip R, MCR10EZJ101E
R25	RK0018	Chip R, MCR10EZJ101E
R26	RK0045	Chip R, MCR10EZJ472E
R27	RK0028	Chip R, MCR10EZJ471E
R28	RK0039	Chip R, MCR10EZJ222E
R29	RK0021	Chip R, MCR10EZJ181E
R32	RK0039	Chip R, MCR10EZJ222E
<b>UHF VCO Unit</b>		
C10	CU8016	Chip C, C2012B1H102K
C11	CU0003	Chip C, C2012CH1H20C
C12	CU0064	Chip C, C2012CH1H220J
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
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	QC0086	Coil, 0R5-2R2-3R5TMS
L5	QC0099	Chip L, LER015TR56M
L6	QC0062	Chip L, NL322522T-039M
L7	QC0096	Chip L, LER015TR33M
L8	QC0101	Chip L, LER015TR82M
R16	RK0056	Chip R, MCR10EZJ223
R17	RK0065	Chip R, MCR10EZJ683E
R18	RK0018	Chip R, MCR10EZJ101E
R19	RK0028	Chip R, MCR10EZJ471E
R20	RK0052	Chip R, MCR10EZJ103E
R21	RK0018	Chip R, MCR10EZJ101E
R22	RK0044	Chip R, MCR10EZJ392E
R23	RK0013	Chip R, MCR10EZJ560E
R26	RK0107	Chip R, MCR10EZJ000E
R29	RK0018	Chip R, MCR10EZJ101E
<b>VHF PLL Unit</b>		
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, MCR10EZJ103E
R2	RK0052	Chip R, MCR10EZJ103E
R3	RK0052	Chip R, MCR10EZJ103E
R4	RK0052	Chip R, MCR10EZJ103E
R5	RK0018	Chip R, MCR10EZJ101E
R6	RK0018	Chip R, MCR10EZJ101E
R7	RK0035	Chip R, MCR10EZJ102E
R8	RK0107	MCR10EZJ000
R9	RK0045	Chip R, MCR10EZJ472E
R10	RK0018	Chip R, MCR10EZJ101E
R11	RK0107	Chip R, MCR10EZJ000E
R12	RK0056	Chip R, MCR10EZJ223E
R13	RK0052	Chip R, MCR10EZJ103E



Ref. No.	Part Code	Part Name and Number	Ref. No.	Part Code	Part Name and Number	Ref. No.	Part Code	Part Name and Number
R14	RK0056	Chip R, MCR10EZHJ223E	C14	CU0011	Chip C, C2012CH1H100D			
R15	RK0022	Chip R, MCR10EZHJ221E	R 1	RK0039	Chip R, MCR10EZHJ222			
R30	RK0035	Chip R, MCR10EZHJ102E	R 2	RK0039	Chip R, MCR10EZHJ222			
R31	RK0107	Chip R, MCR10EZHJ000E	R 3	RK0048	Chip R, MCR10EZHJ682			
CN37	UE0117	Pin Header, SB7P-HVQ-27	R 4	RK0040	Chip R, MCR10EZHJ272			
IC1	XA0149	IC, MB15101LPF	R 5	RK0106	Chip R, MCR10EZHJ3R3			
Q1	XT0038	Transistor, 2SA1037KR	R 6	RK0022	Chip R, MCR10EZHJ221			
Q2	XT0077	Transistor, 2SC3326A	R 7	RK0037	Chip R, MCR10EZHJ152			
Q3	XU0017	Digital Transistor, OTA144EK	R 8	RK0039	Chip R, MCR10EZHJ222			
Q4	XT0081	Transistor, 2SC2714Y	R 9	RK0018	Chip R, MCR10EZHJ101			
D1	X00104	Diode, 02CZ6. 2Y	L 1	QC0057	Chip L, NL322522T-015M			
L2	GC0108	Chip L, LER015T3R3K	L 2	QC0067	Chip L, NL322522T-R10M			
<b>UHF PLL Unit</b>			L 3	QC0067	Chip L, NL322522T-R10M			
C1	CU8016	Chip C, C2012B1H102K	L 4	QK0085	Coil, 0R8-3R0-6R5TRM			
C2	CS0057	Chip Tantal, TMC0J225	L 5	QK0085	Coil, 0R8-3R0-6R5TRM			
C3	CS0063	Chip Tantal, TMC1V104	L 6	QC0067	Chip L, NL322522T-R10M			
C4	CS0221	Chip Tantal, TMC-MIC475	D 1	XD0066	Diode, RLS135TE11			
R5	RK0018	Chip R, MCR10EZHJ101	D 2	XD0066	Diode, RLS135TE11			
R7	RK0107	MCR10EZHJ000	D 3	XD0112	Diode, 1SV128TE85L			
R8	RK0045	Chip R, MCR10EZHJ472	Q 1	XT0030	Transistor, 2SC3356T1BR25			
C9	CU8016	Chip C, C2012B1H102K	Q 2	XU0012	Digital Transistor, DTC114EKT14			
C25	CU8016	Chip C, C2012B1H102K	CN3E	UE0118	Terminal, SL2.50-10			
C26	CU0060	Chip C, C2012CH1H470J	<b>880 FRONT Unit</b>					
C27	CU0060	Chip C, C2012CH1H470J	C 1	CU0006	Chip C, C2012CH1H050C			
CN57	UE0117	Pin Header, SB7P-HVQ-27	C 2	CU0006	Chip C, C2012CH1H050C			
IC1	XA0149	IC, MB1501LPG6BNOTF	C 3	CU0005	Chip C, C2012CH1H040C			
Q1	XT0038	Transistor, 2SA1037KR	C 4	CU0005	Chip C, C2012CH1H030C			
Q2	XT0077	Transistor, 2SC3326A	C 5	CU0004	Chip C, C2012CH1H030C			
Q3	XT0038	Transistor, 2SA1037KR	C 6	CU0051	Chip C, C2012CH1H471K			
Q4	XT0081	Transistor, 2SC2714YTE85L	C 7	CU0051	Chip C, C2012CH1H471K			
D1	XD0104	Zenner, 02CZ6. 2Y	C 8	CU0003	Chip C, C2012CH1H020C			
L2	GC0062	Chip L, NL322522T-039M	C 9	CU0003	Chip C, C2012CH1H020C			
R1	RK0052	Chip R, MCR10EZHJ103E	C10	CU0002	Chip C, C2012CH1H010C			
R2	RK0018	Chip R, MCR10EZHJ101E	C11	CU0003	Chip C, C2012CH1H020C			
R3	RK0052	Chip R, MCR10EZHJ103E	C12	CU0011	Chip C, C2012CH1H090D			
R4	RK0052	Chip R, MCR10EZHJ103E	C13	CU0004	Chip C, C2012CH1H030C			
R5	RK0039	Chip R, MCR10EZHJ222E	C15	CU0051	Chip C, C2012CH1H471K			
R6	RK0035	Chip R, MCR10EZHJ102E	C16	CU0064	Chip C, C2012CH1H220J			
R7	RK0052	Chip R, MCR10EZHJ103E	C17	CU8016	Chip C, C2012B1H102K			
R8	RK0039	Chip R, MCR10EZHJ222E	CN5B	UE0118	Terminal, SL2.50-10			
R9	RK0052	Chip R, MCR10EZHJ103E	Q 1	XT0030	Transistor, 2SC3356T1BR25			
R10	RK0018	Chip R, MCR10EZHJ101E	Q 2	XE0013	FET, 3SK184STX			
R11	RK0107	Chip R, MCR10EZHJ000E	Q 3	XT0030	Transistor, 2SC3356T1BR25			
R12	RK0062	Chip R, MCR10EZHJ473E	Q 4	XU0012	Digital Transistor, DTC114EKT14			
R13	RK0045	Chip R, MCR10EZHJ472E	L 6	QC0055	NL322522T-010M			
R14	RK0039	Chip R, MCR10EZHJ222E	L 7	QC0055	NL322522T-010M			
R15	RK0045	Chip R, MCR10EZHJ472E	R 1	RK0048	Chip R, MCR10EZHJ682			
R25	RK0022	Chip R, MCR10EZHJ221E	R 2	RK0035	Chip R, MCR10EZHJ102			
R27	RK0018	Chip R, MCR10EZHJ101E	R 3	RK0018	Chip R, MCR10EZHJ101			
R28	RK0018	Chip R, MCR10EZHJ101E	R 4	RK0018	Chip R, MCR10EZHJ101			
R30	RK0107	Chip R, MCR10EZHJ000E	R 5	RK0036	Chip R, MCR10EZHJ122			
<b>VHF AIR Unit</b>			R 6	RK0045	Chip R, MCR10EZHJ472			
C 1	CU8016	Chip C, C2012B1H102K	R 7	RK0045	Chip R, MCR10EZHJ472			
C 2	CU0007	Chip C, C2012CH1H060D	R 8	RK0039	Chip R, MCR10EZHJ222			
C 3	CU0064	Chip C, C2012CH1H220J	R 9	RK0028	Chip R, MCR10EZHJ471			
C 5	CU8016	Chip C, C2012B1H102K	R10	RD0028	R20 R-02J 471			
C 6	CU0072	Chip C, C2012CH1H240J	R11	RK0107	Chip R, MCR10EZHJ000			
C 7	CU8016	Chip C, C2012B1H102K						
C 8	CU8016	Chip C, C2012B1H102K						
C 9	CU8016	Chip C, C2012B1H102K						
C10	CU0011	Chip C, C2012CH1H100D						
C11	CU0060	Chip C, C2012CH1H470J						
C12	CU0060	Chip C, C2012CH1H470J						
C13	CU0066	Chip C, C2012CH1H330J						

# CABINET PARTS LOCATION

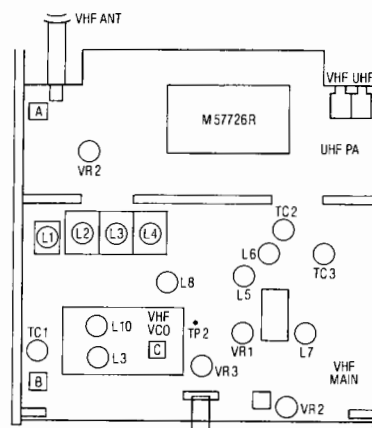
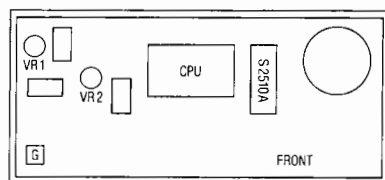
Ref. No.	Part Code	Part Name and Number
<b>Screws</b>		
①	AF0014	M2.6 × 3.5
②	AA0031	M2.6 × 5
③	AJ0017	M2.6 × 6
④		M3 × 8
⑤		M3 × 8
⑥	AP0006	M2.6 × 6
⑦		M2.6 × 16
⑧		M3 × 25
⑨	AN0012	Nut M7
⑩		Nut M8
		(Supplied with Rotary Encoder Only)
⑪		Nut M2.6
⑫	AP0006	M2 × 6
<b>Mechanical Parts</b>		
①	NK0023	Dial Knob (LG)
②	NK0022	Volume Knob (G)
③	NK0006	Squelch Knob (G)
④	ND0009	Dial Rubber (L)
⑤	ND0011	Volume Rubber
⑥	ND0012	Squelch Rubber
⑦	FF0013	SP Sheet
⑧	ST0009	SP Metal Crasp
⑨	FB0002	Cord Bush
⑩	UE0122A	MR M Antenna Cord DR599VHF
⑪	UA0002	DC Power Cable
⑫	UR0002	Rotary Encoder
⑬	SH0044	IC Fixing Metal
⑭	SS0047	Main Chassis
⑮	KM0130	Front Panel (DR599T) ボタン共
⑯	KB0037	Bottom Panel
⑰	NP0062	Power Button
⑱	KM0131	Front Panel (DR599E)
⑲	DG0010	Encoder Light
⑳	TS0035	Shield Lid
㉑	KU0079	Upper Case
㉒	KS0035	Lower Case
㉓	UE0124A	MR M Antenna Cord DR599UHF
㉔	ES0007	Speaker VS-57-0814 1.5W
㉕	DP0059	Transparent Panel
㉖	TZ0034	Insulate Sheet
㉗	TL0004	Shield Film
㉘	ET0001	Fan Moter
㉙	UL0009	Thermal Relay
㉚	ST0024	Fan Cover
㉛	ST0025	Thermal Relayfix
㉜	RV0016	Volume
㉝	TZ0033	Shield
㉞	FM0061	LCD Shield
㉟	FP0044	Code Band
	EL0004	7 LCD unit



# ADJUSTMENT

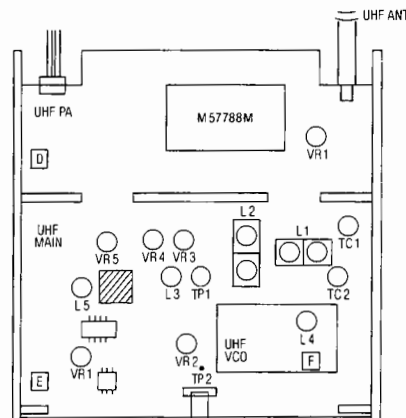
## 1. VHF Unit

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 $145.950 \pm 0.1$ kHz (T) or $144.950 \pm 0.1$ 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 $\mu$ input, adjust L5, 6, 7 so that the distortion is minimum at 50mW.
SENSITIVITY	Ⓑ L1, 2, 3, 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 $\mu$ [EMF], adjust VR1 so that 2 in the S-meter begins to light.

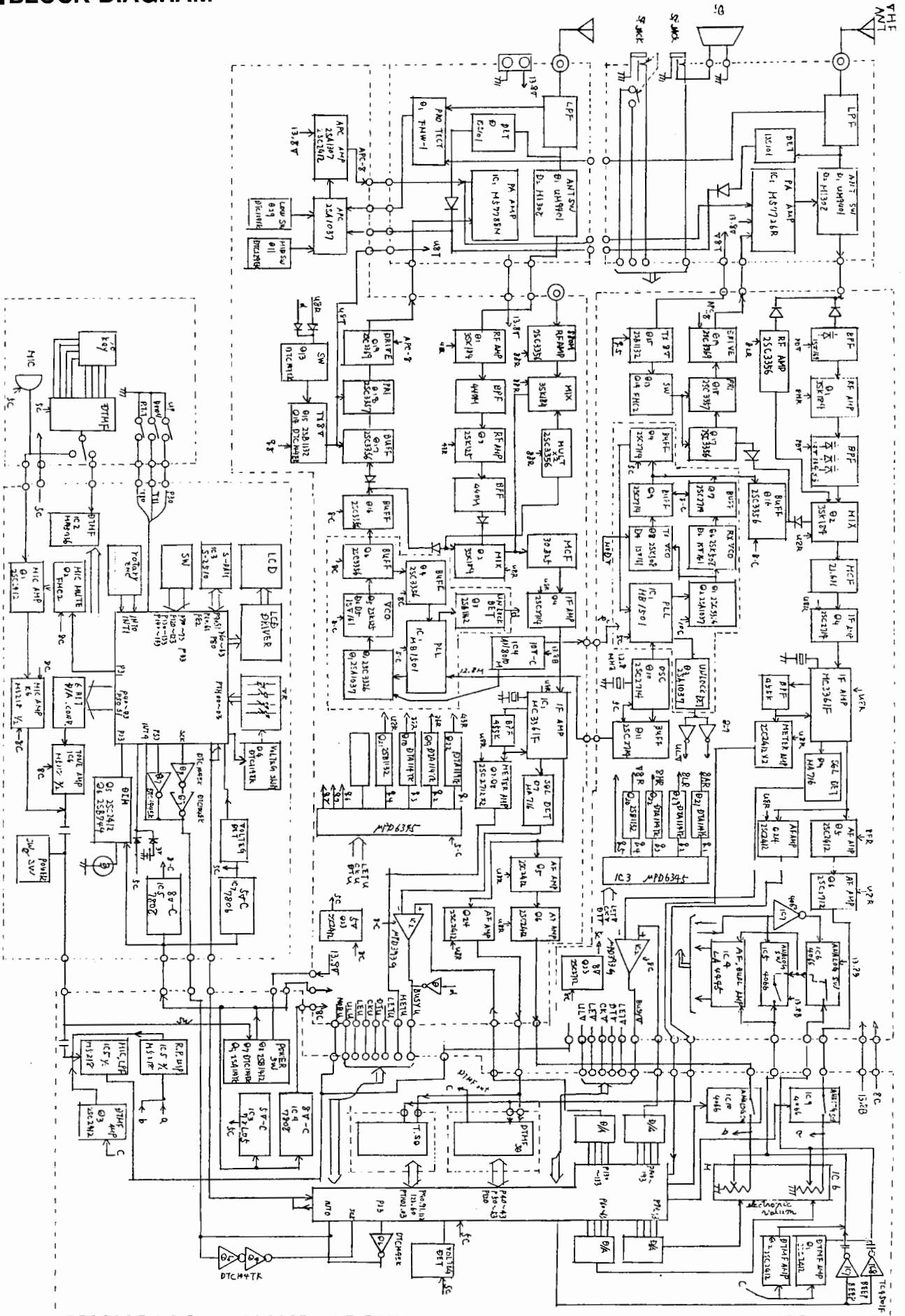


## 2. UHF Unit

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 $\pm$ 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)
DESCRIMINATOR	Ⓔ L3, L5	At 445.03MHz (T) or 435.03MHz (E) and 60 dB $\mu$ 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 $\mu$ [EMF], adjust VR5 so that 2 in the S-meter begins to light.

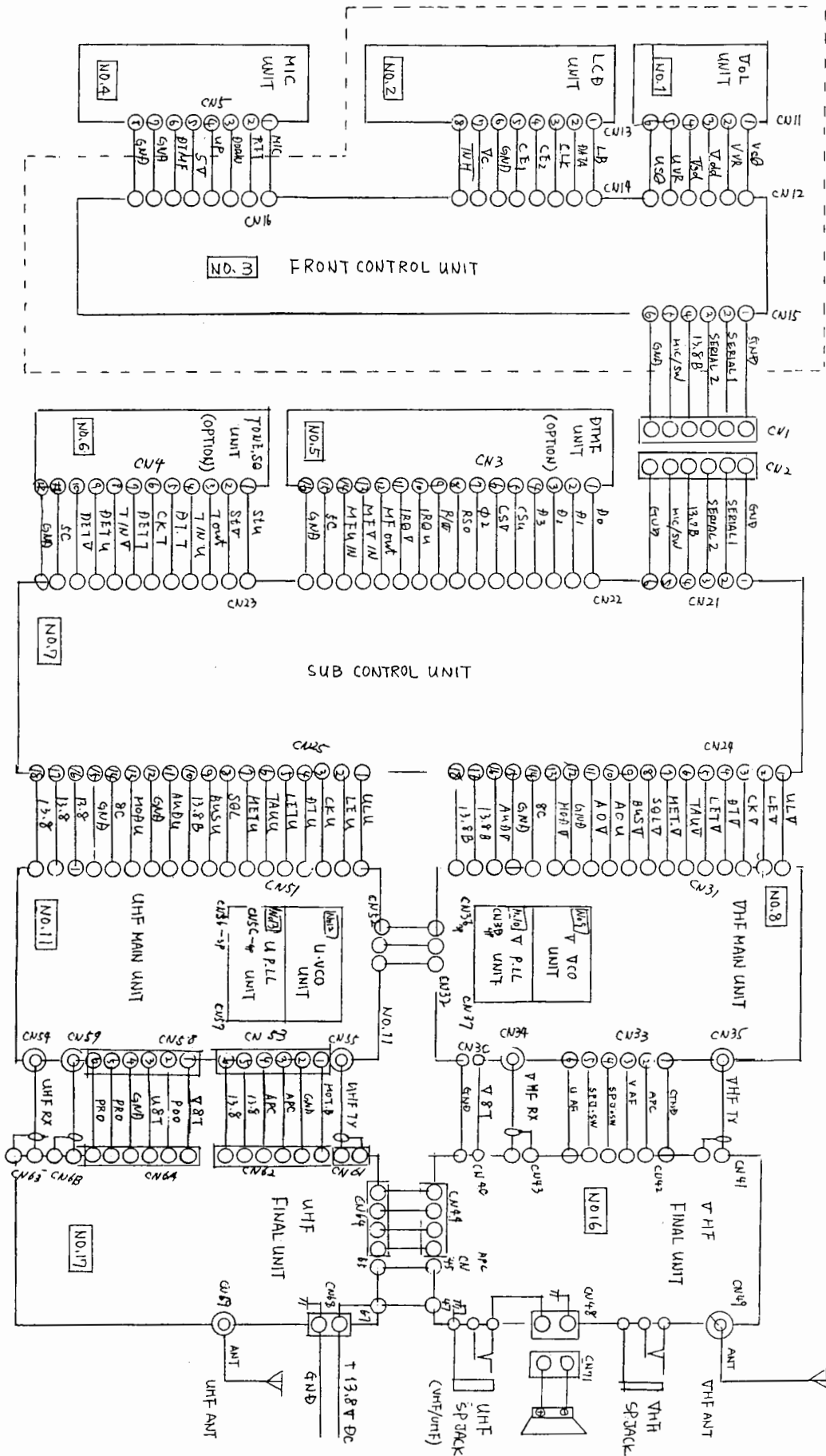


# BLOCK DIAGRAM

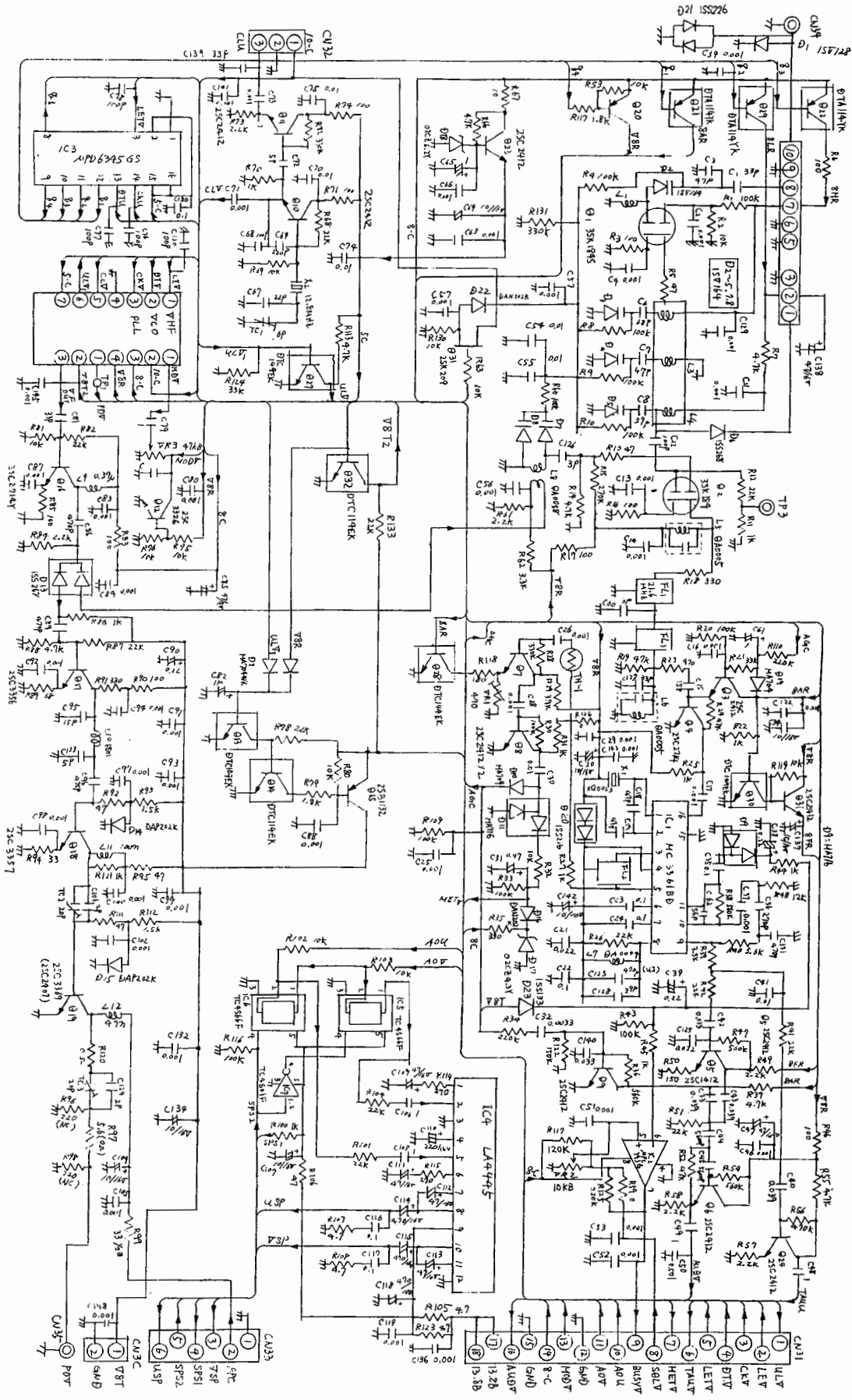




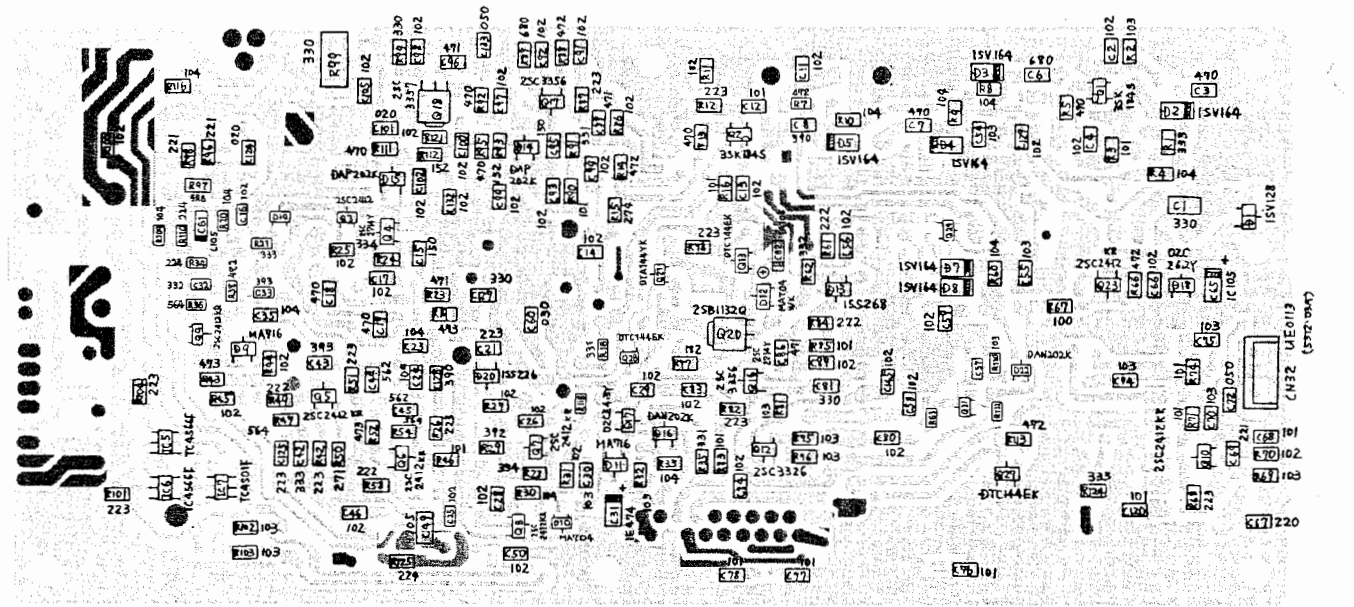
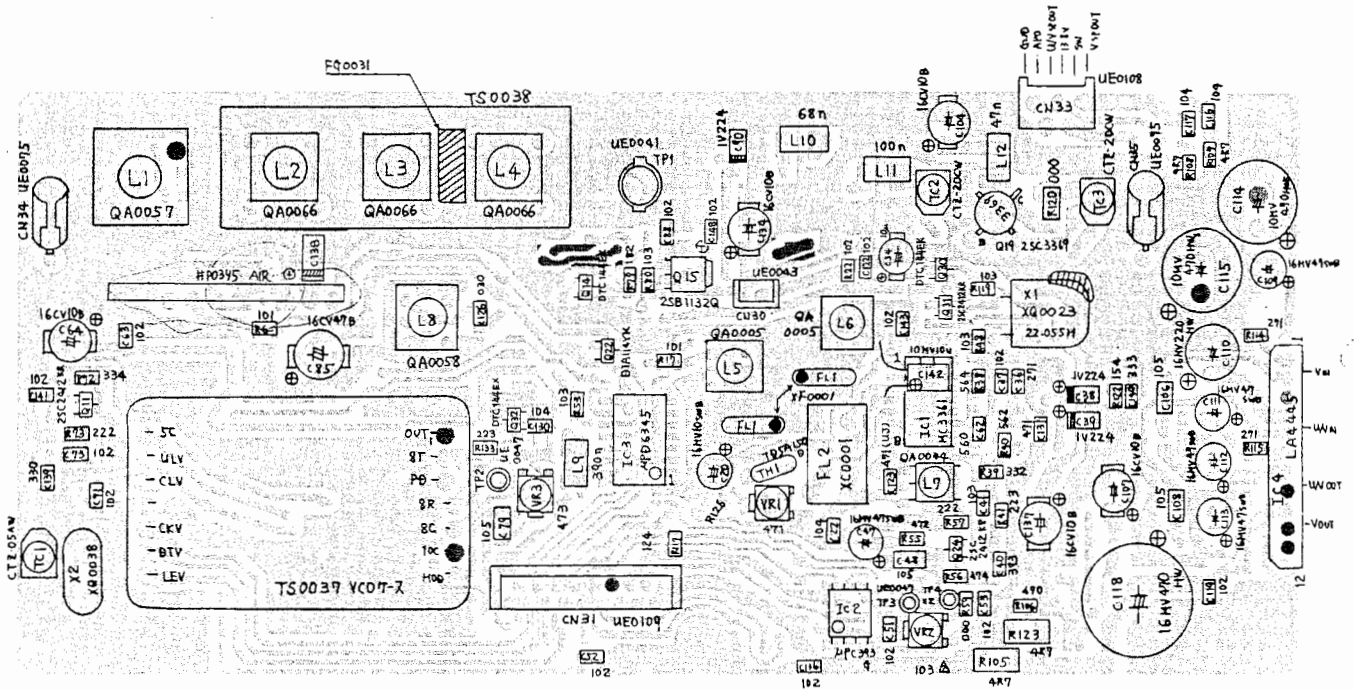
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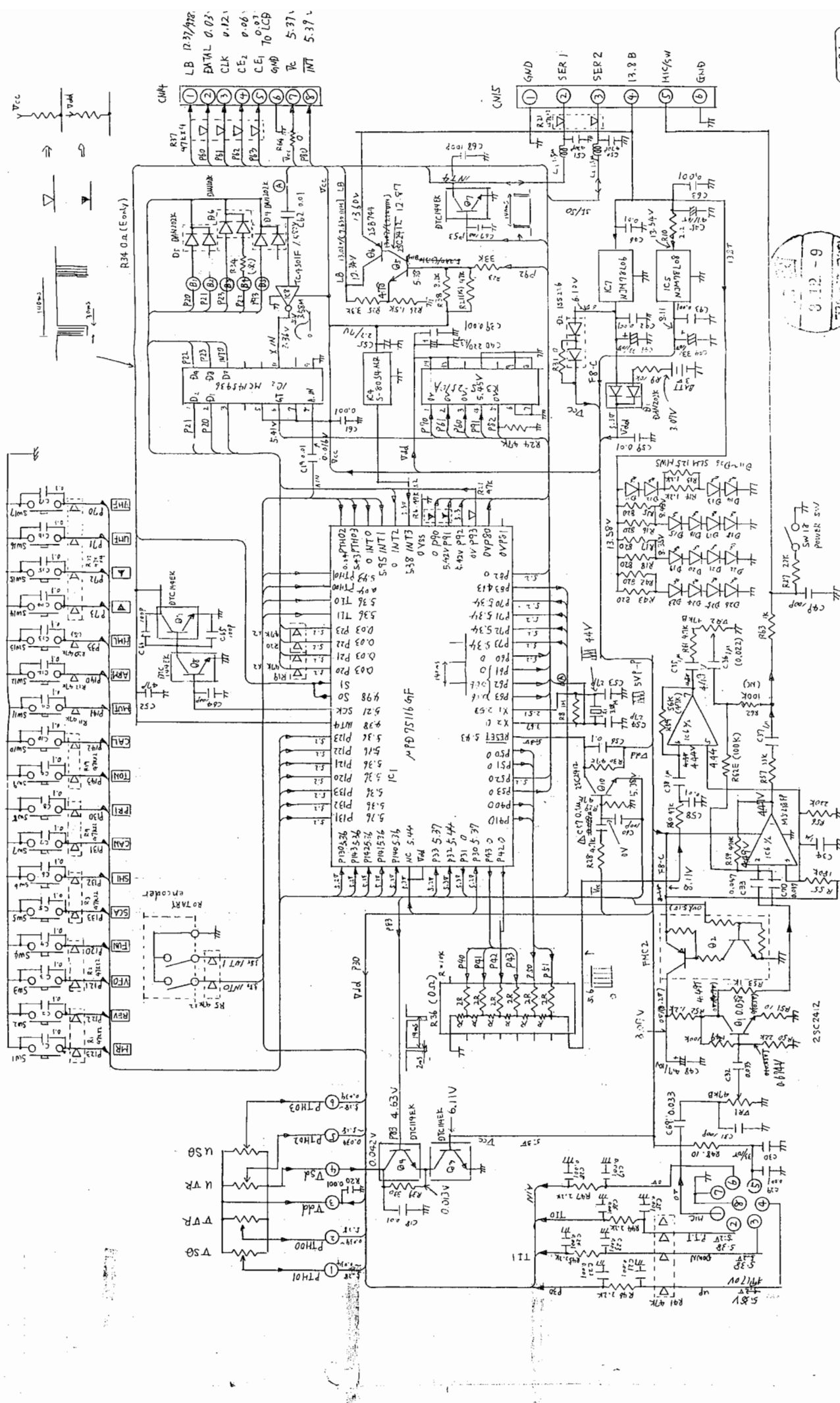


# SCHEMATIC DIAGRAM OF VHF MAIN UNIT



# VHF MAIN PC BOARDS

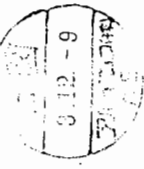




121

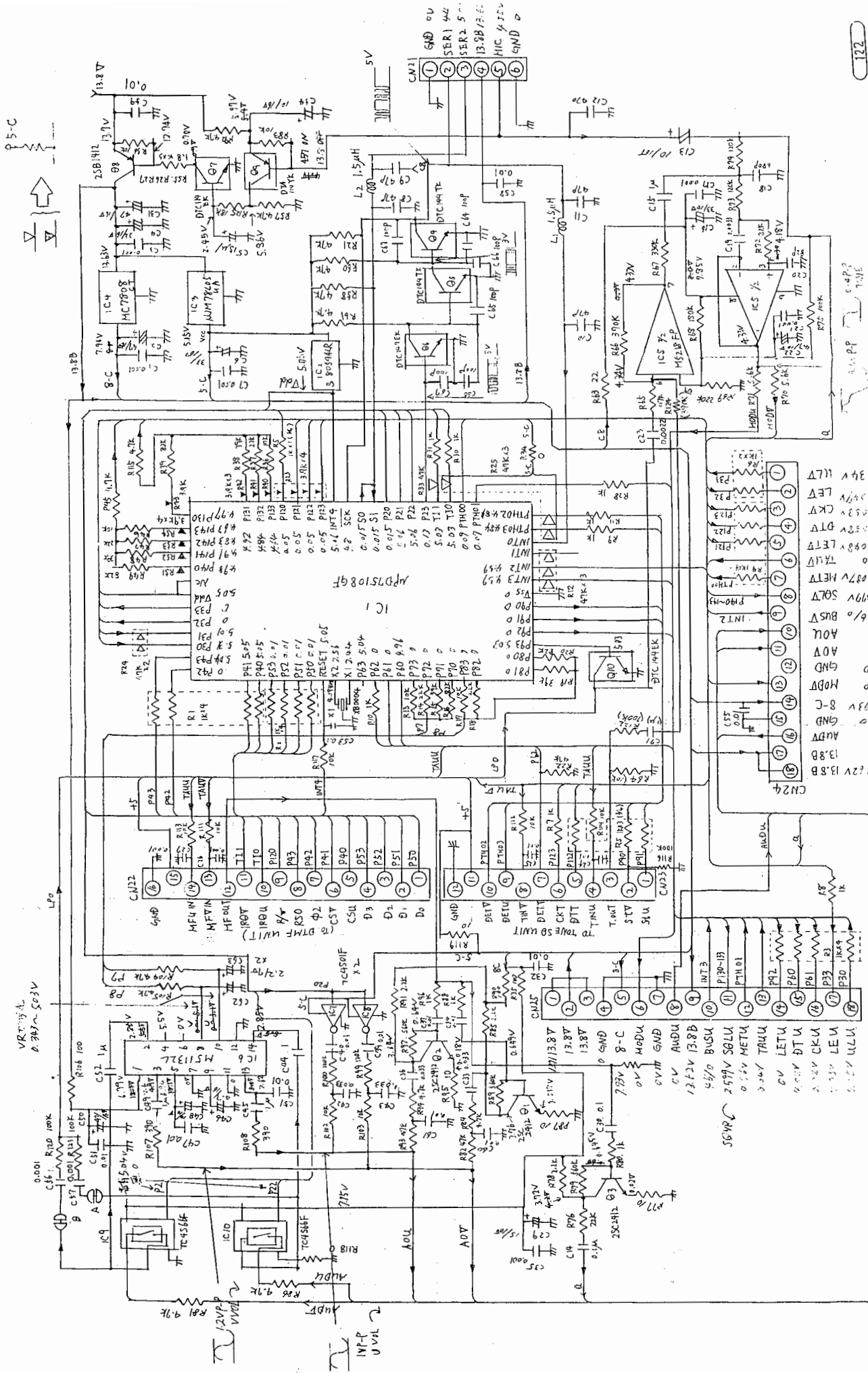
FRONT CONTROL SCHEMATIC DIAGRAM

DR 599 SX/HX/T/E



Δ NECA97

\* R23 12K ← DR599SX/HX/T/E → ECTE



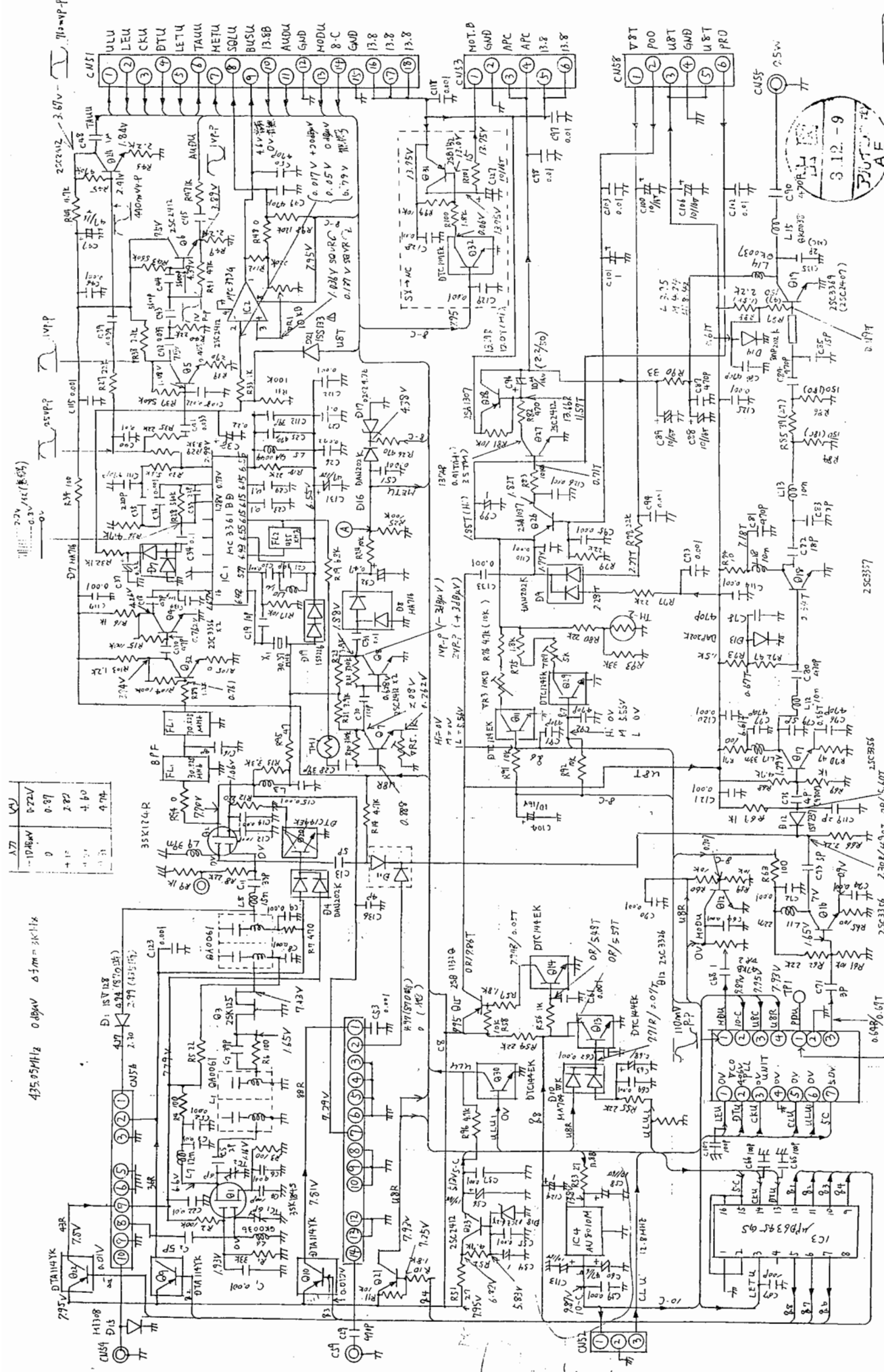
DR 599 SX/HX/T/E

8.12-9  
AE

SUB CONTROL SCHEMATIC DIAGRAM

ETC





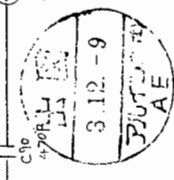
AV	V <sub>U</sub>
-10.0kV	0.22V
0	0.87
+1V	2.82
+3V	4.60
0.5	4.74

435.95MHz 0.089V 0.5mm = 3K11x  
 D: 15.128 407 0.91 (15.128)  
 2.30 2.91 (15.128)

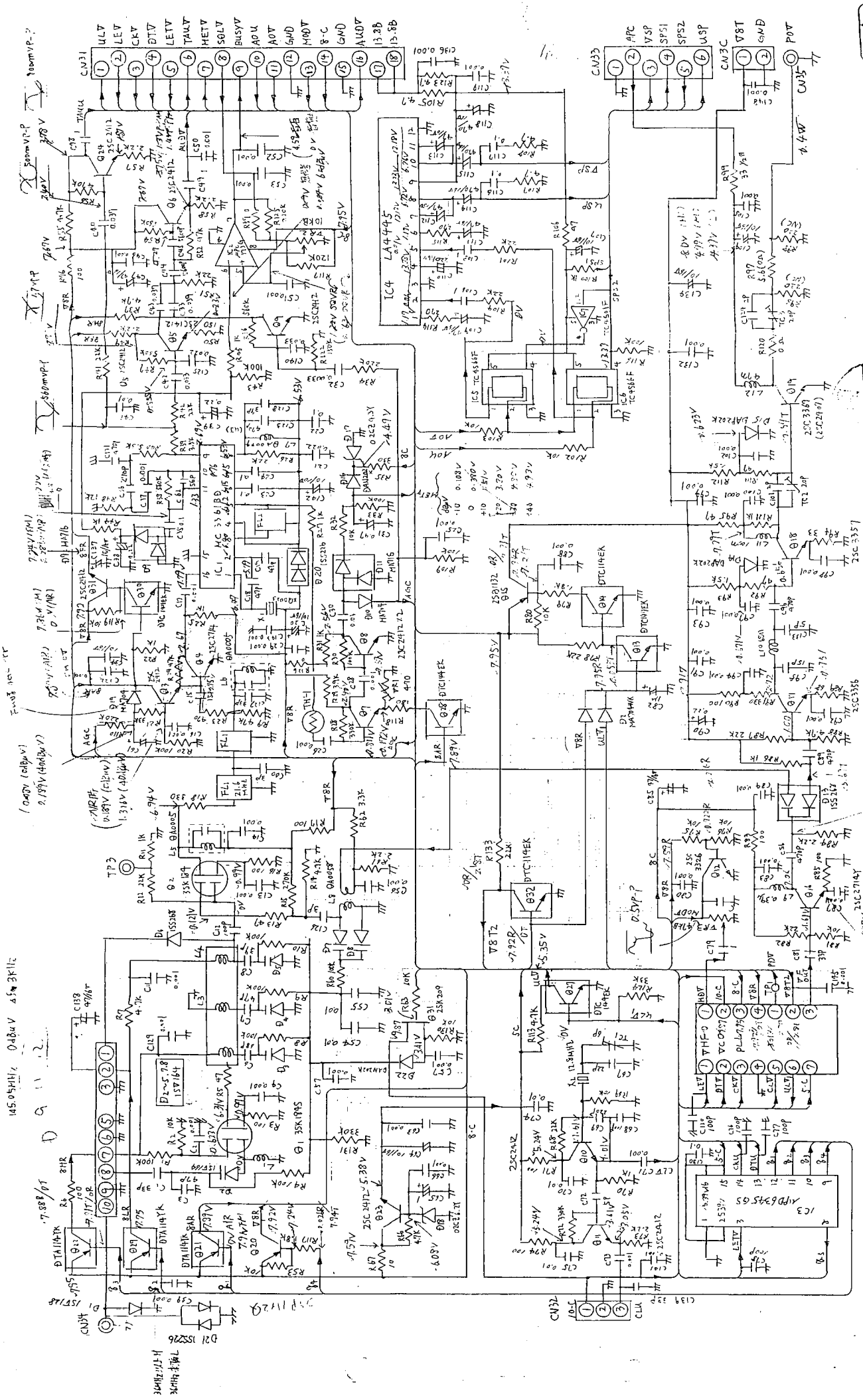
UHF MAIN SCHEMATIC DIAGRAM

△ AE1020

DR 599 SX/HX/TE



( ) SX 11x

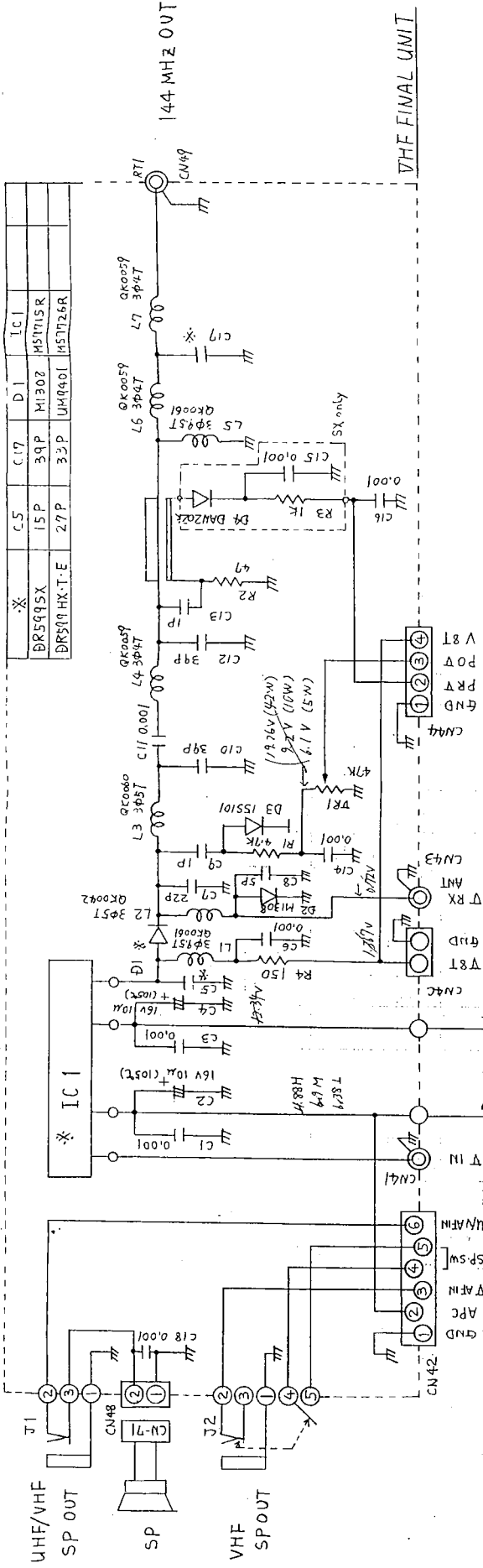


VHF MAIN SCHEMATIC DIAGRAM  
DR 599 SX/HX/T/E  
(SX)



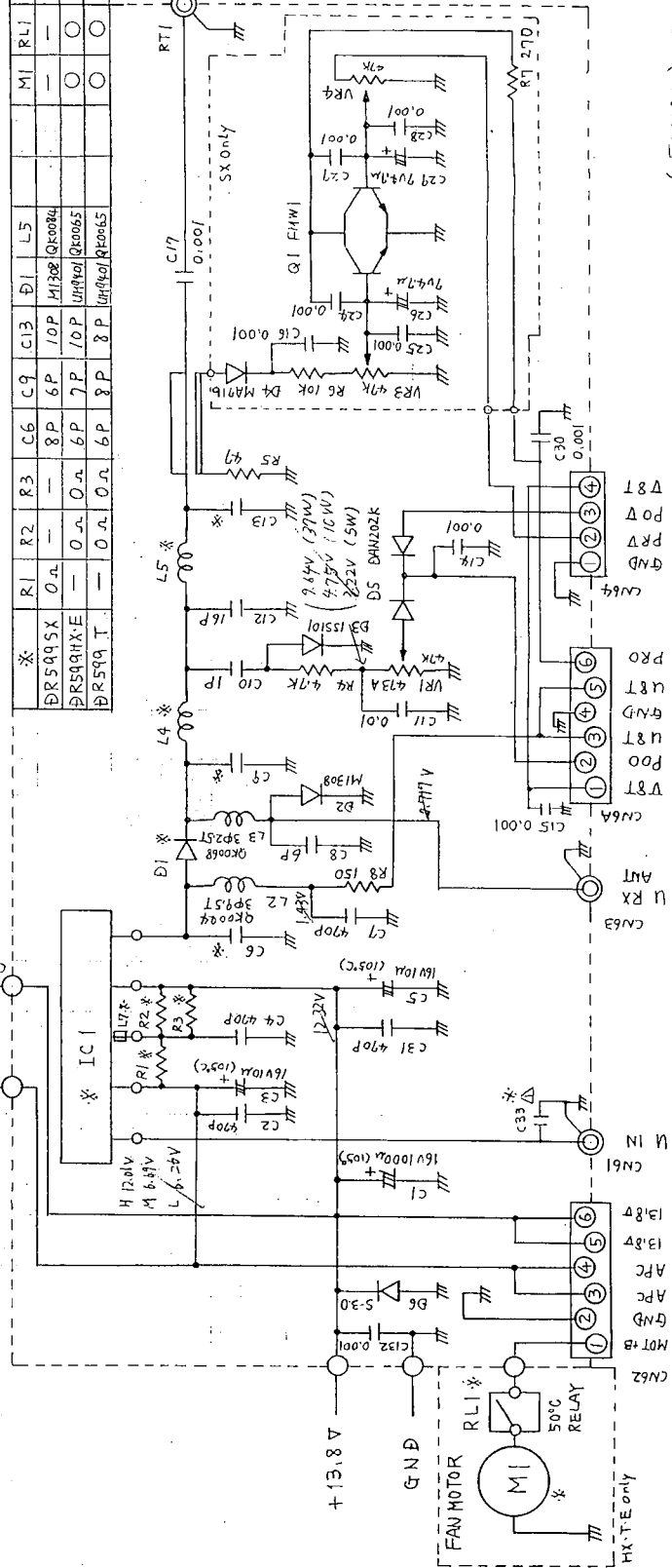
10.00V/4.00V

DR599SX	15P	C5	C17	D1	IC1
DR599HX-T-E	27P	33P	UM9401	M57715R	M57715R

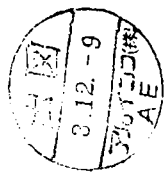


VHF FINAL UNIT

DR599SX	0.1	R1	R2	R3	C6	C9	C13	D1	L5	MI	RL1	IC1	L4	L7	C33
DR599HX-T-E	0.1	0.1	0.1	0.1	8P	6P	10P	M1308	Q1	Q2	Q1	M57715R	Q1	Q2	Q3
DR599HX-T-E	0.1	0.1	0.1	0.1	8P	6P	10P	UM9401	Q1	Q2	Q1	M57715R	Q1	Q2	Q3
DR599HX-T-E	0.1	0.1	0.1	0.1	8P	6P	10P	UM9401	Q1	Q2	Q1	M57715R	Q1	Q2	Q3



UHF FINAL UNIT

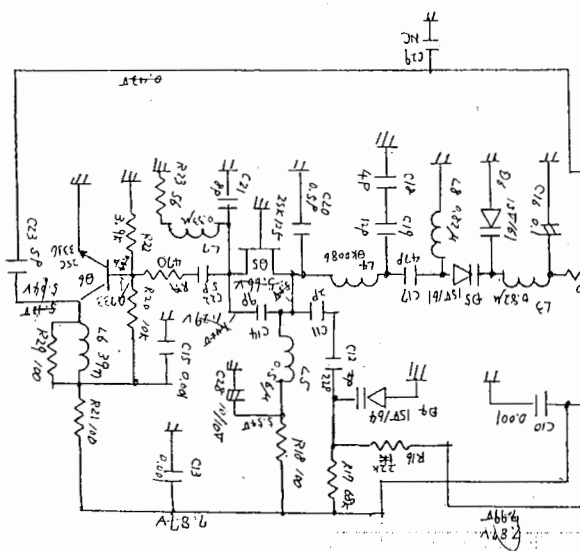


(FINAL) SCHEMATIC DIAGRAM  
DR599 SX/HX/T/E

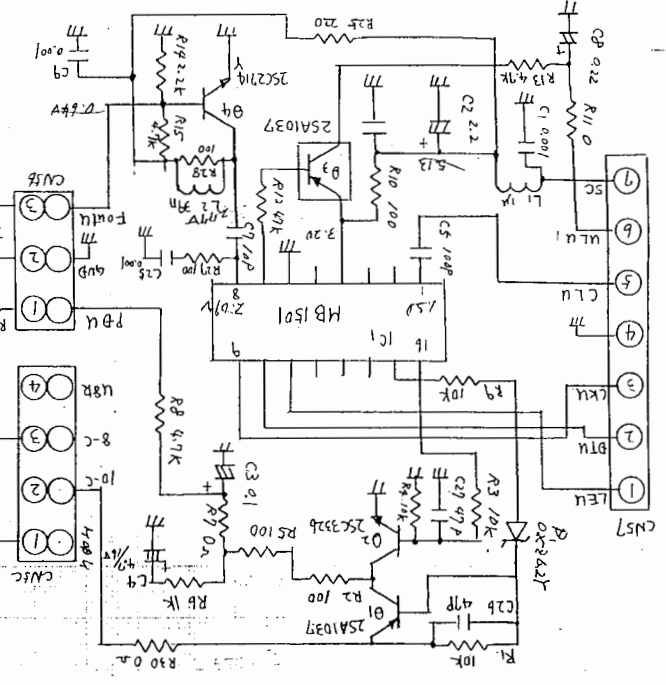
ΔAE1040



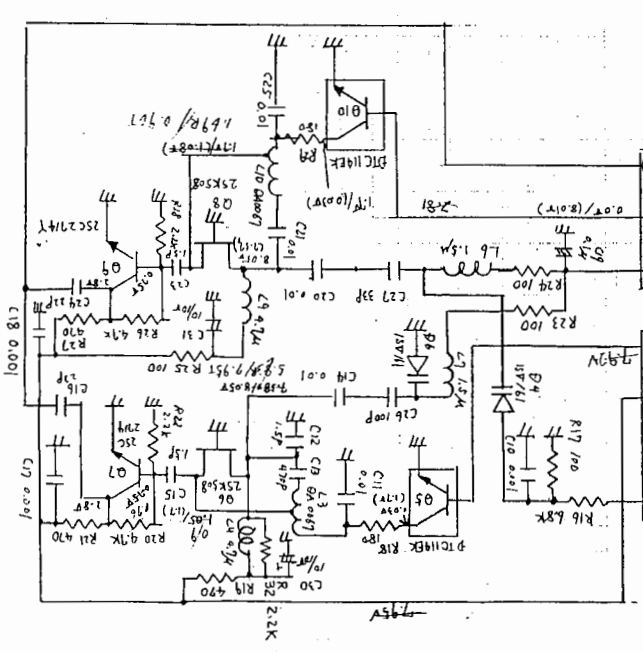
VHF VCO UNIT



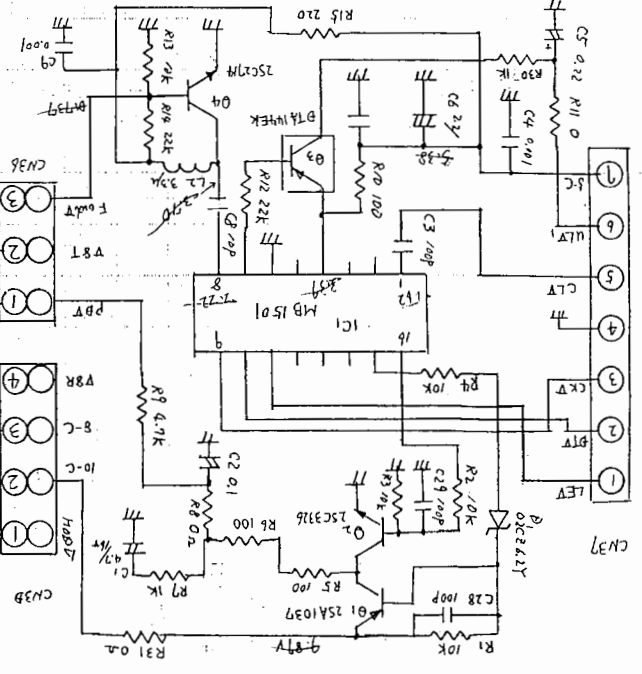
UHF PLL UNIT

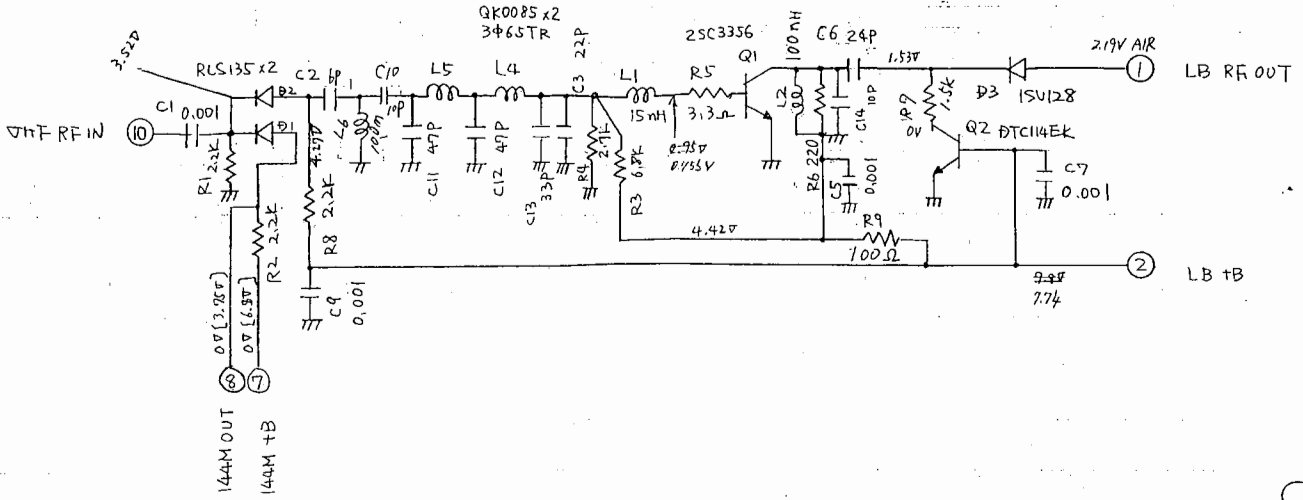


VHF VCO UNIT



UHF PLL UNIT

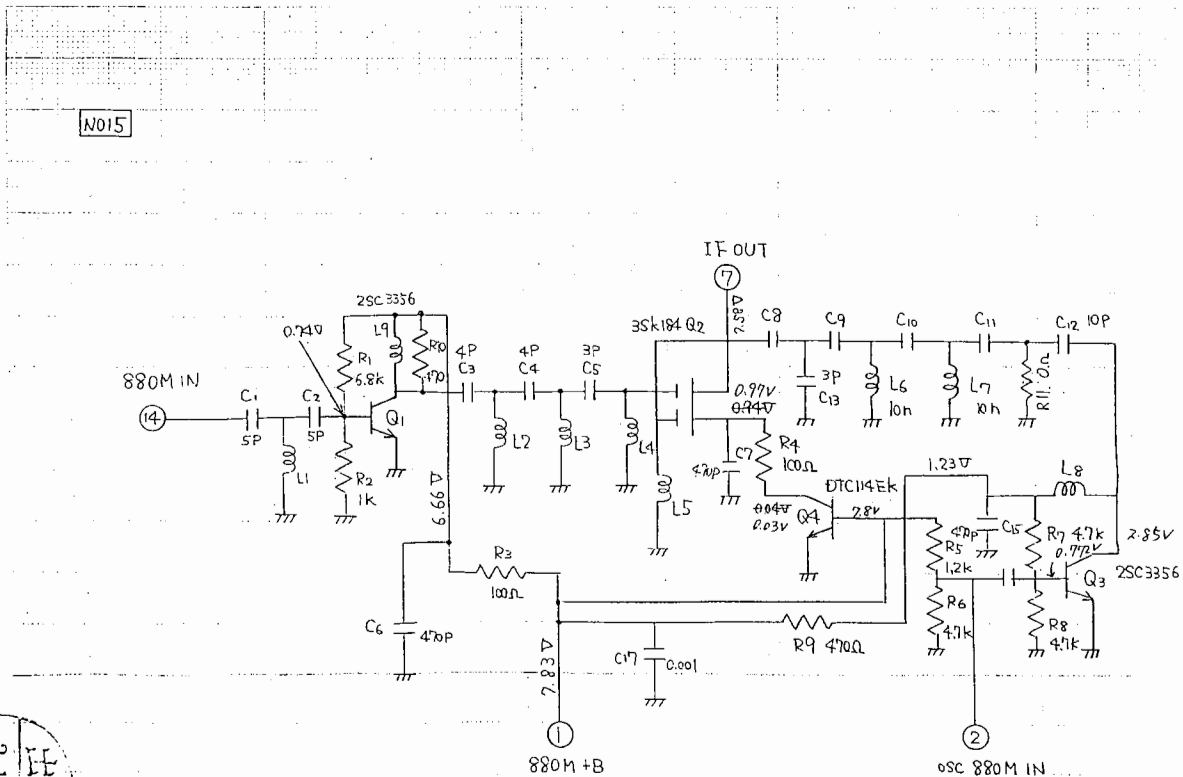




128

VHF AIR SCHEMATIC DIAGRAM

DR599 SX-HX-T-E



127-1

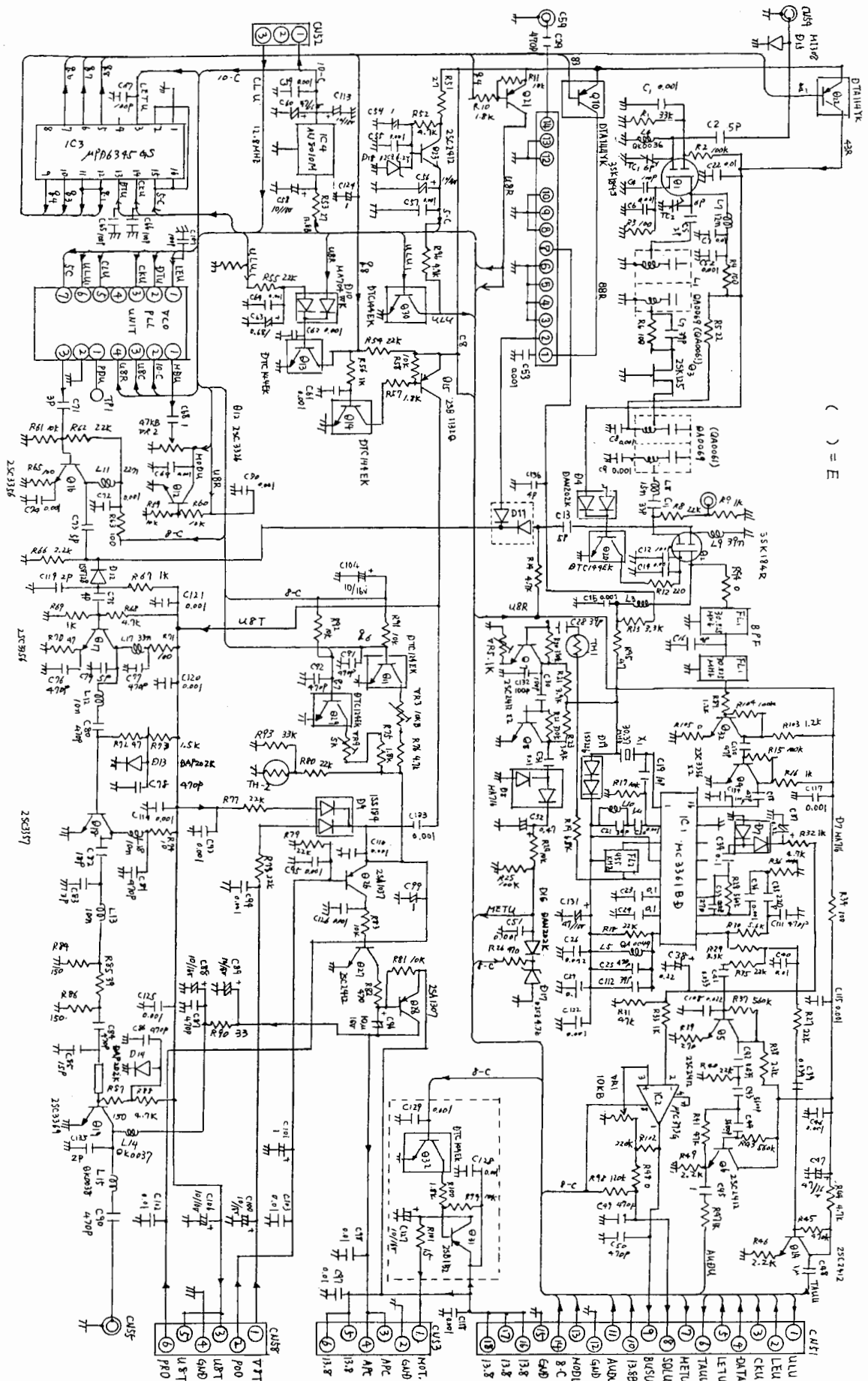
880 RF UNIT SCHEMATIC DIAGRAM

DR599 T/E

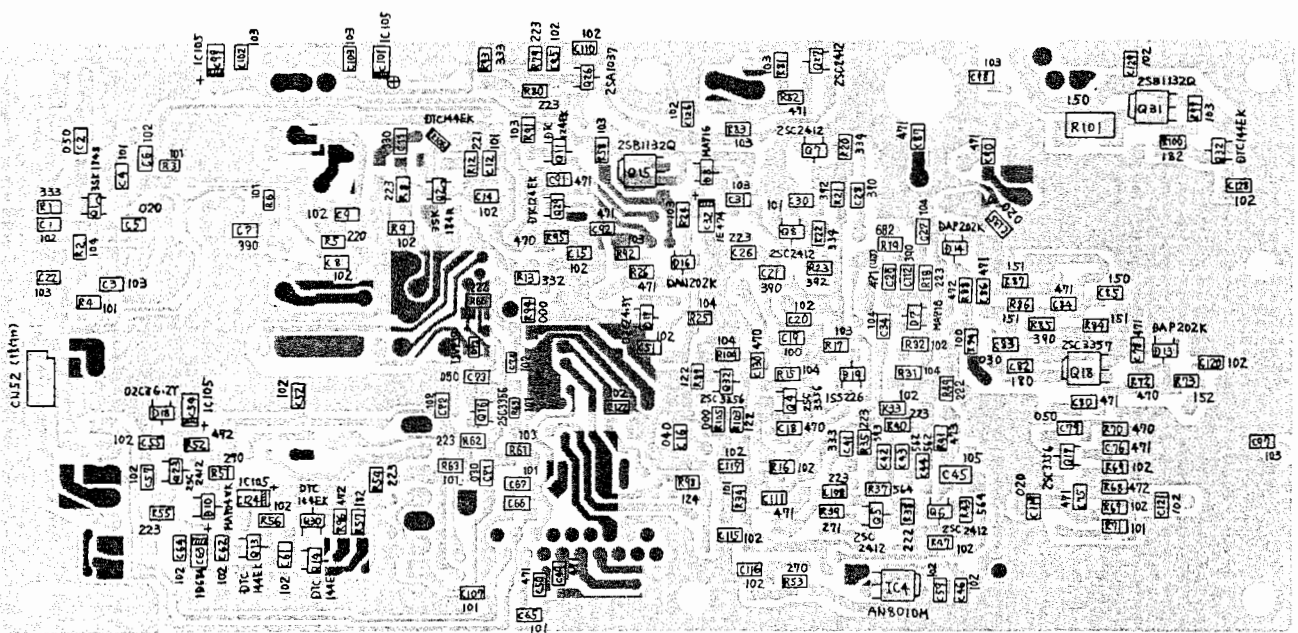
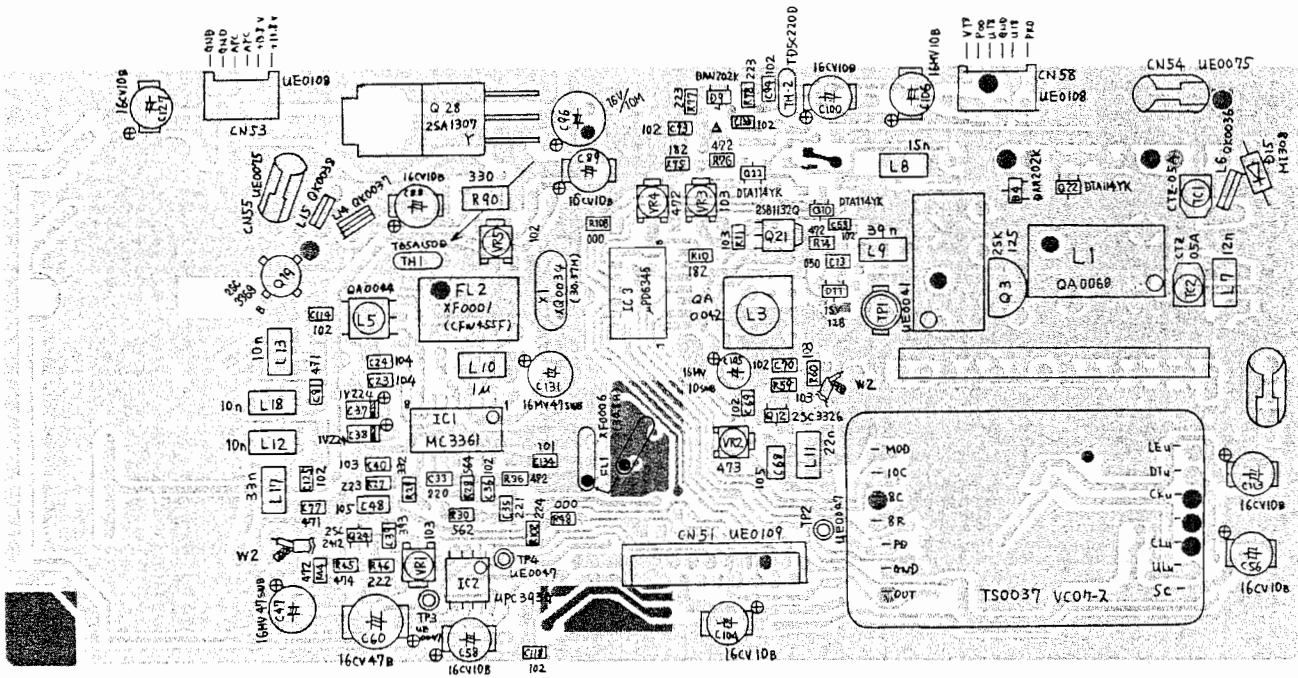
3-12-9  
6-9



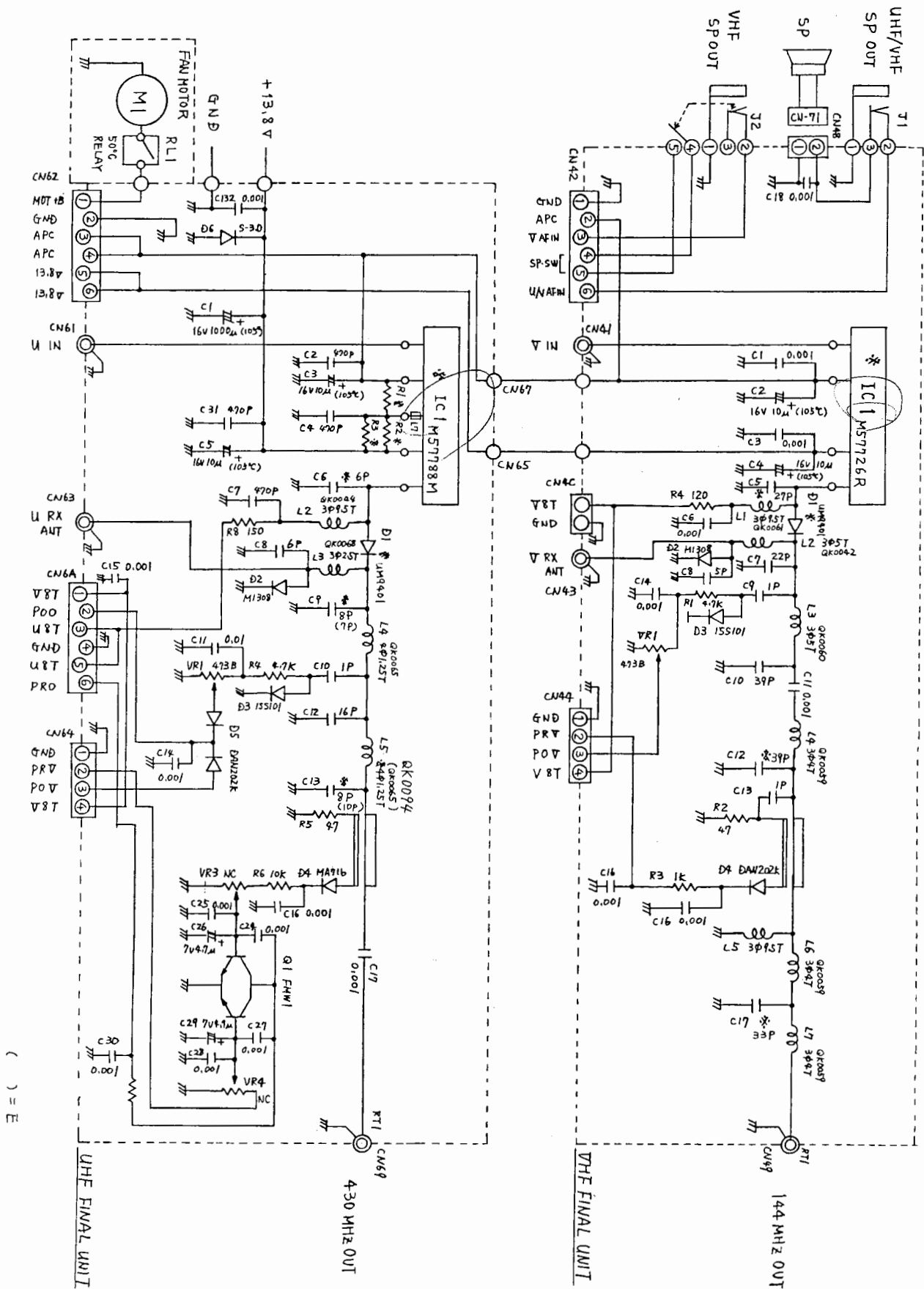
# SCHEMATIC DIAGRAM OF UHF MAIN UNIT



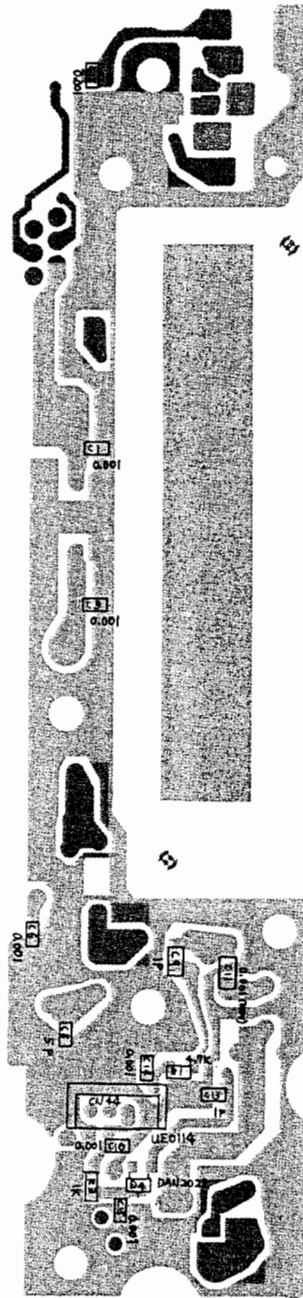
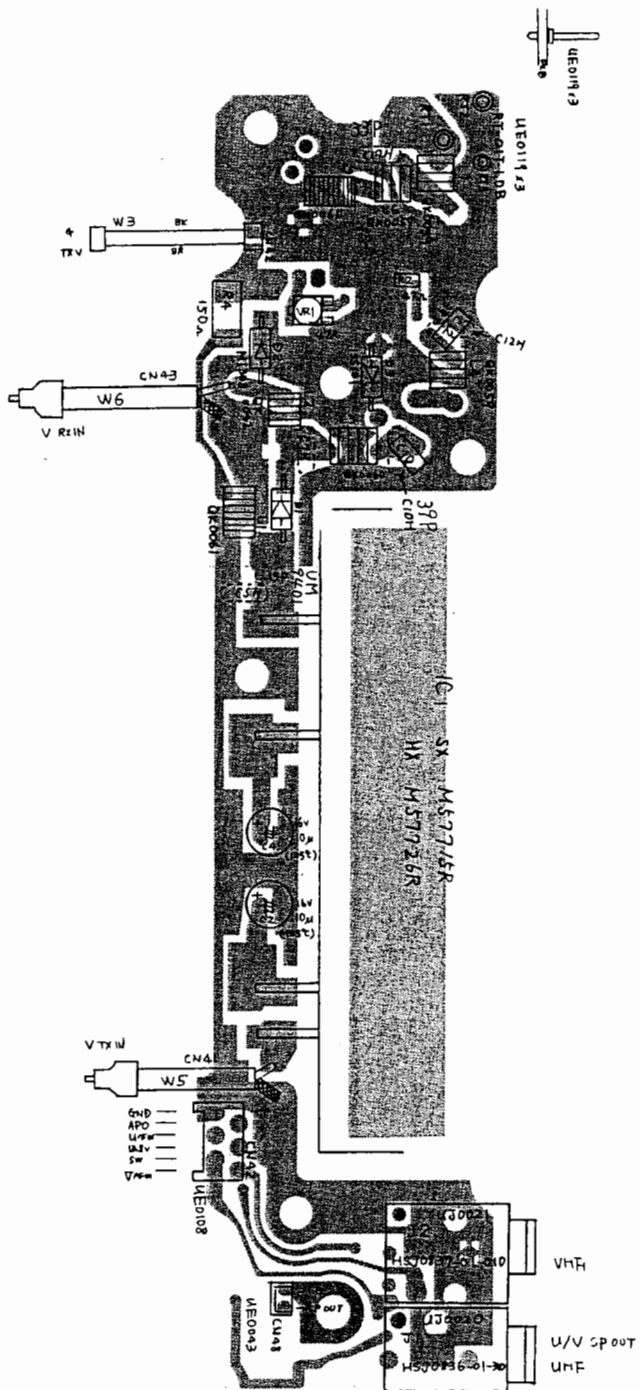
# UHF MAIN PC BOARDS



# SCHEMATIC DIAGRAM OF VHF/UHF PA UNIT



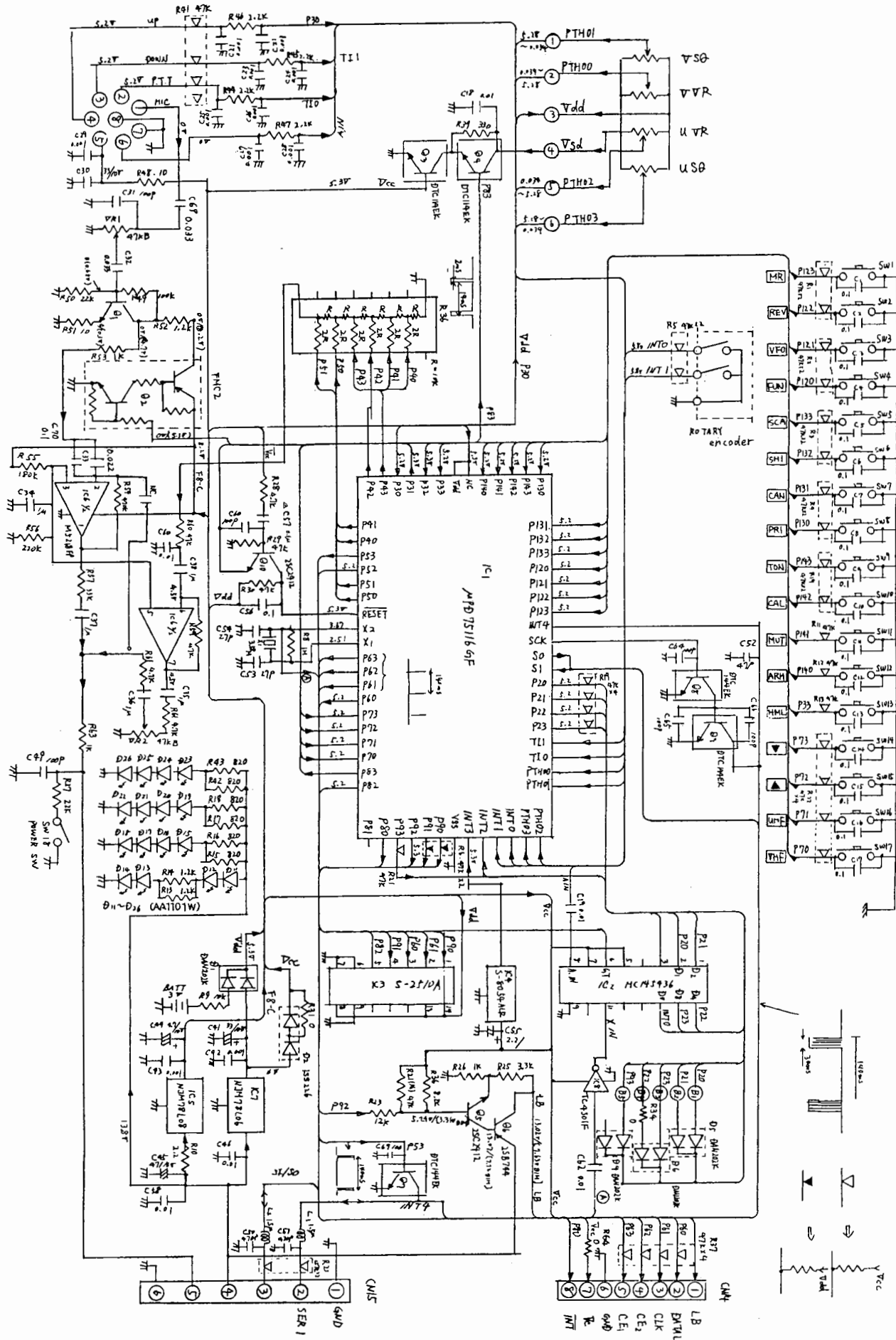
■ VHF PA PC BOARDS



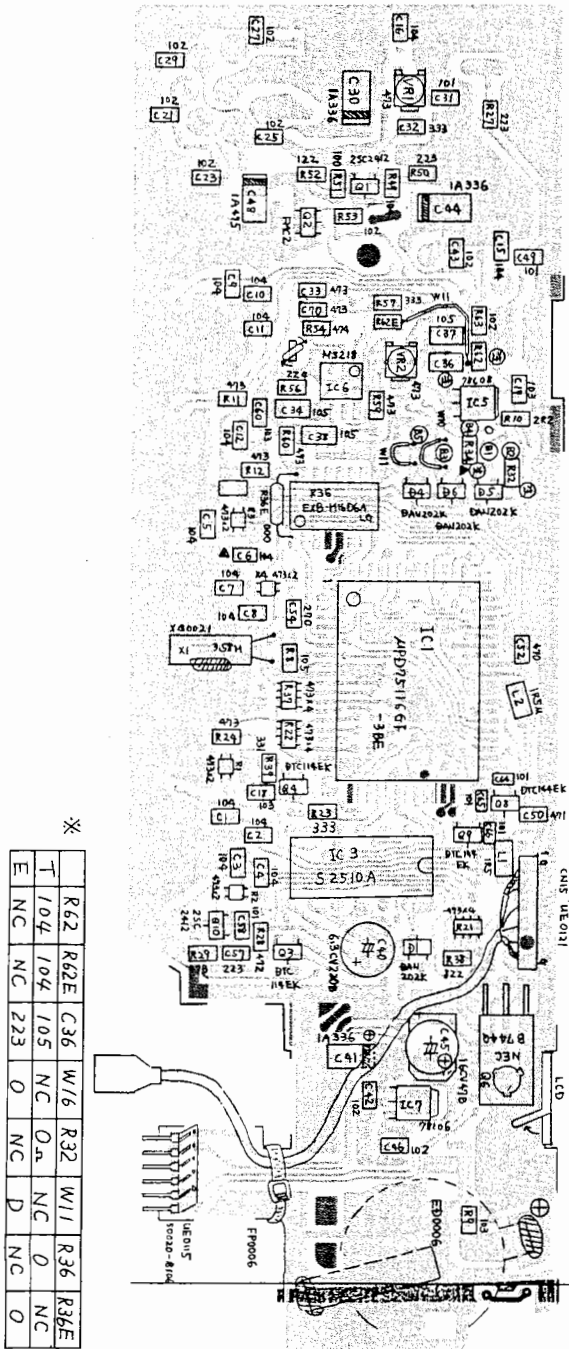




# SCHEMATIC DIAGRAM OF FRONT CONTROL UNIT

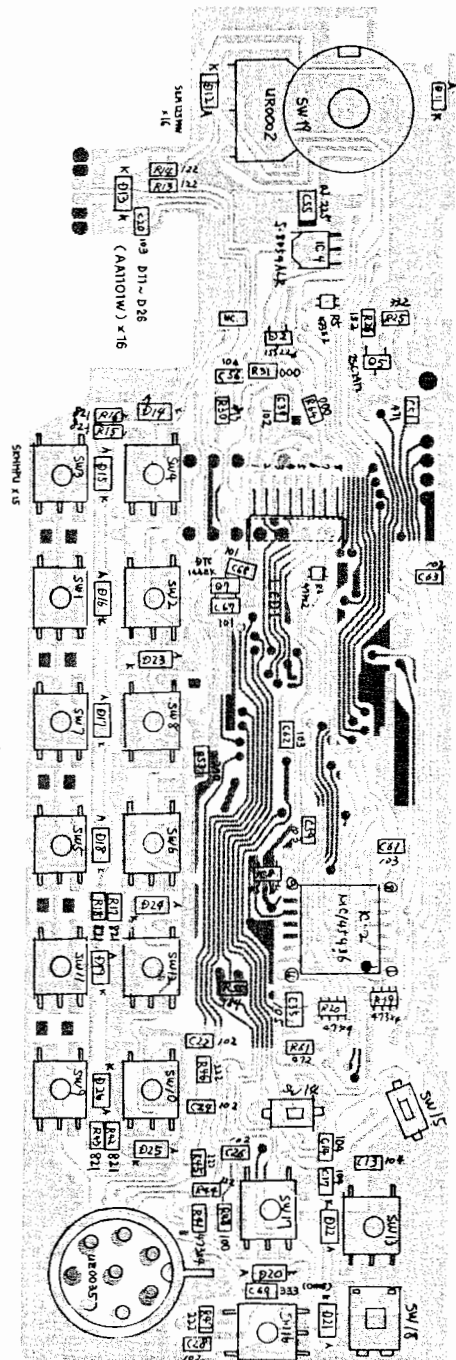


# FRONT CONTROL PC BOARDS

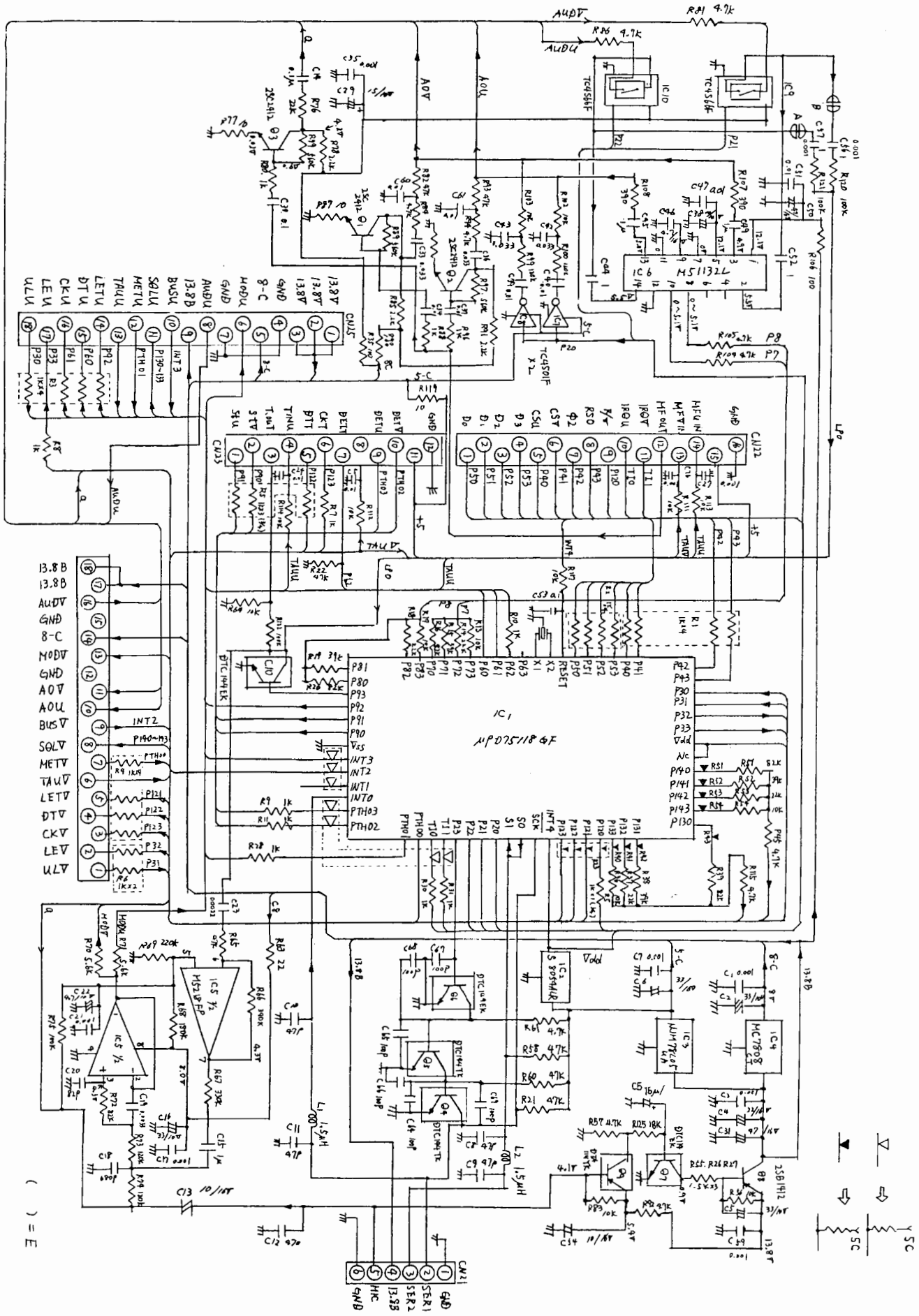


※

R62	R62E	C36	W/6	R32	W/1	R36	R36E
T 104	104	105	NC	0a	NC	0	NC
E NC	NC	223	0	NC	D	NC	0



# SCHEMATIC DIAGRAM OF SUB CONTROL UNIT

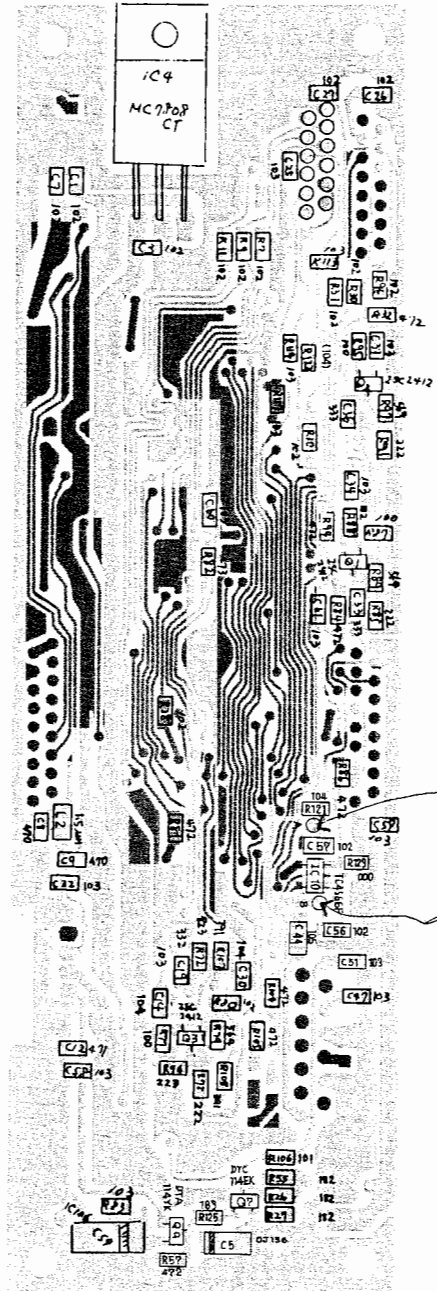
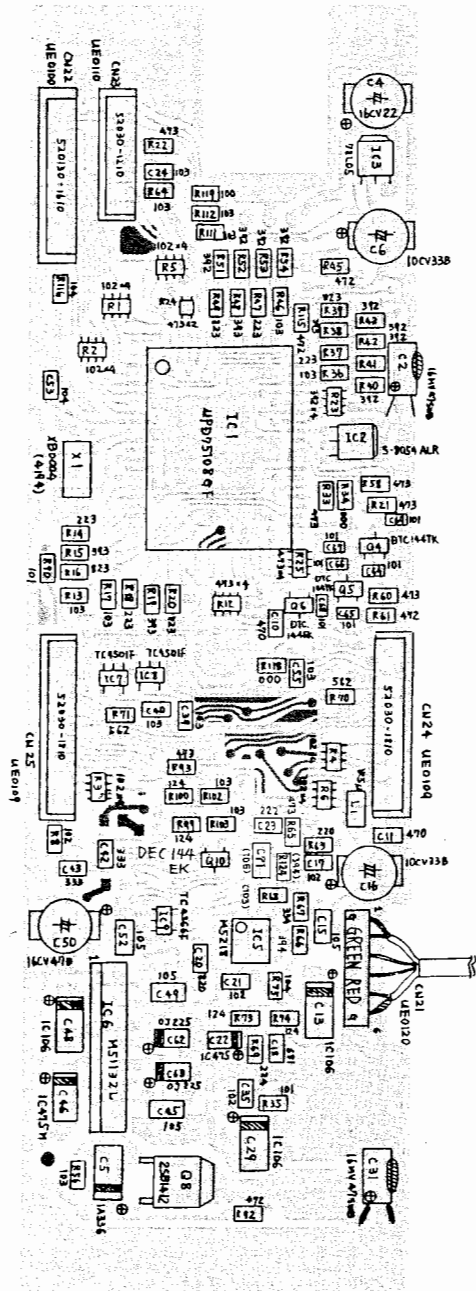


( ) = E

■ SUB CONTROL PC BOARDS

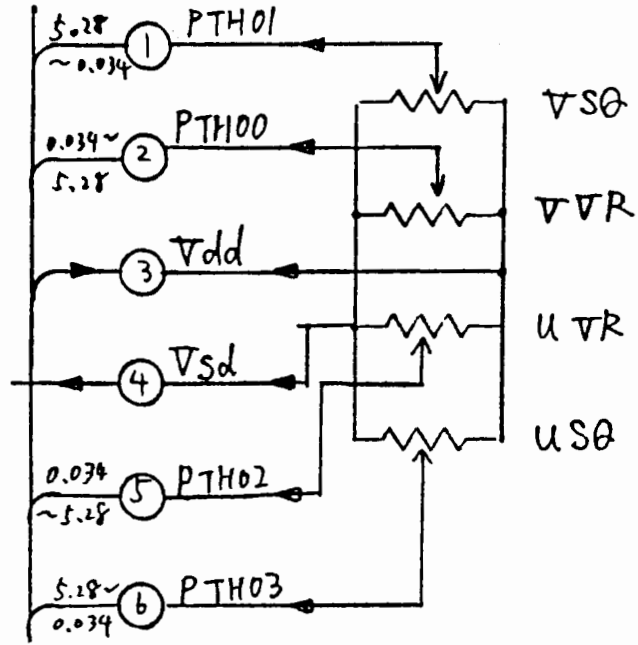
◎ 702ポート用  
A, B 0547E04

DR-599T

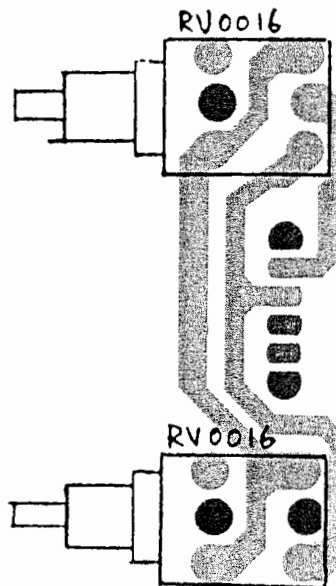


( )=E

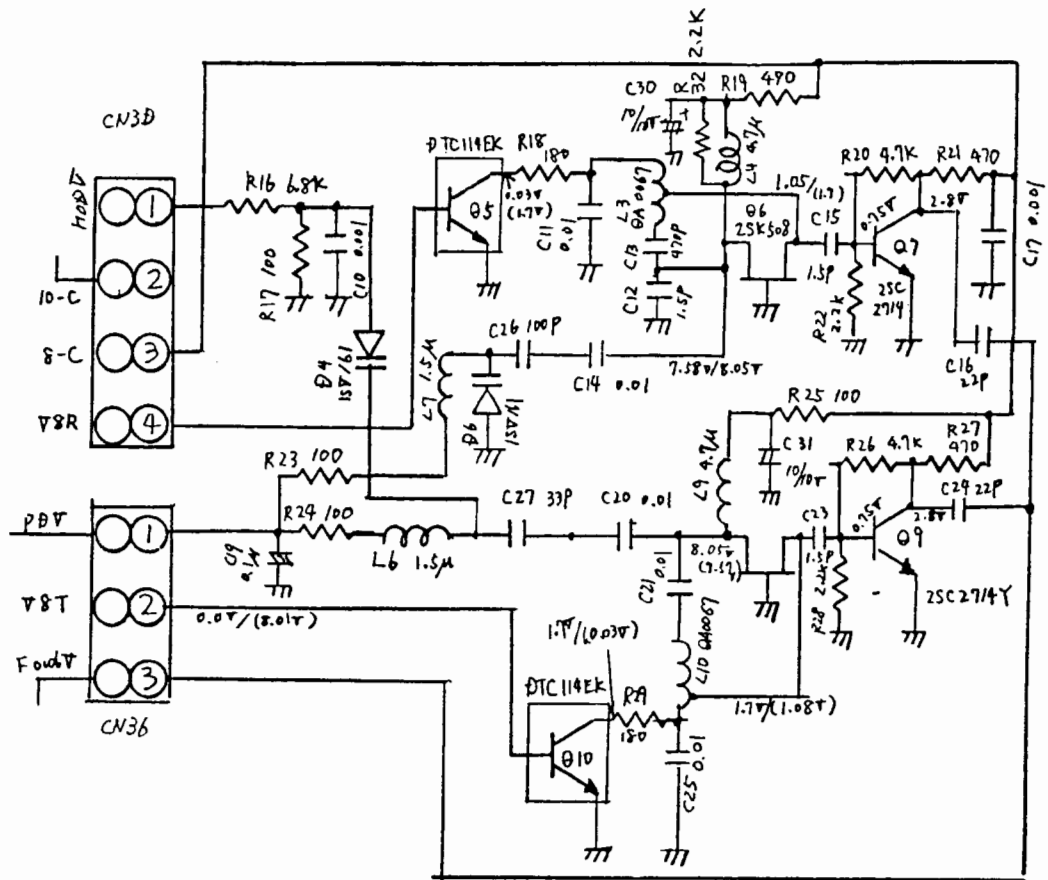
## ■ SCHEMATIC DIAGRAM OF VOL UNIT



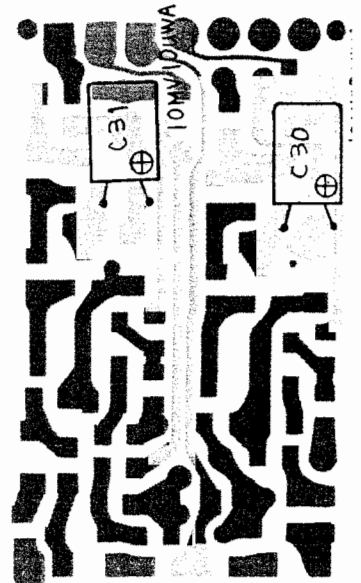
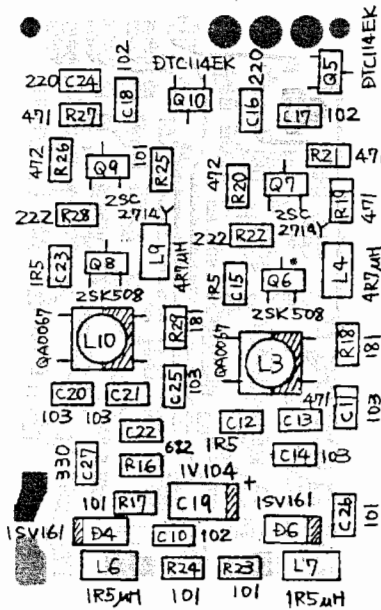
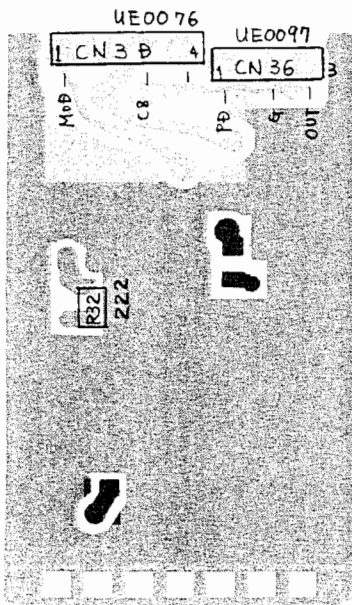
## ■ VOL PC BOARDS



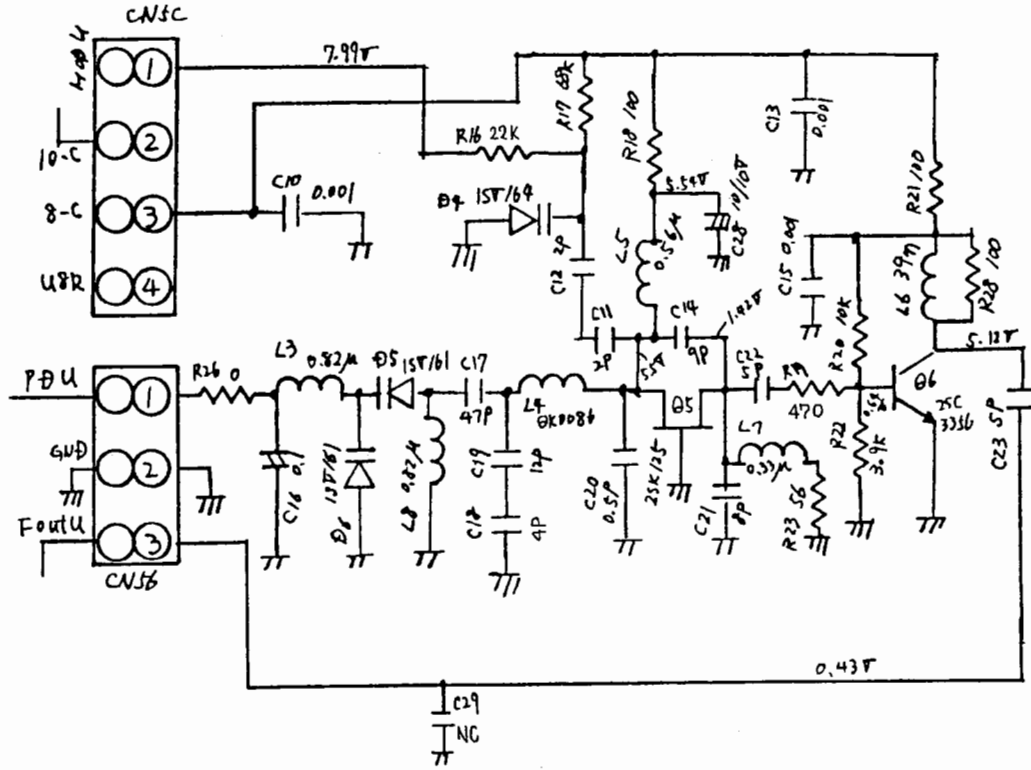
# SCHEMATIC DIAGRAM OF VHF VCO UNIT



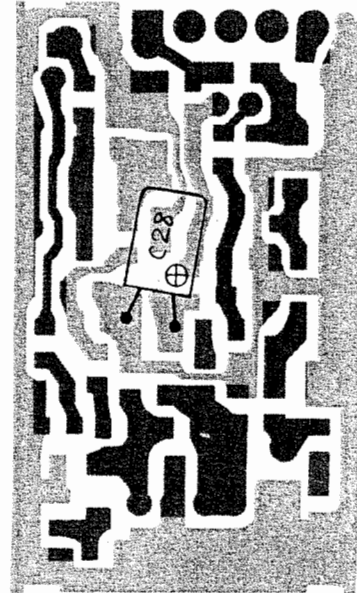
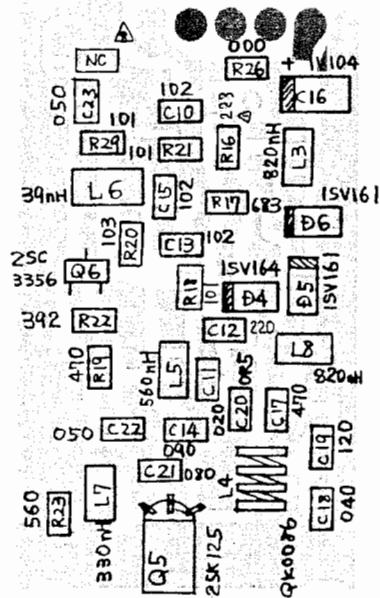
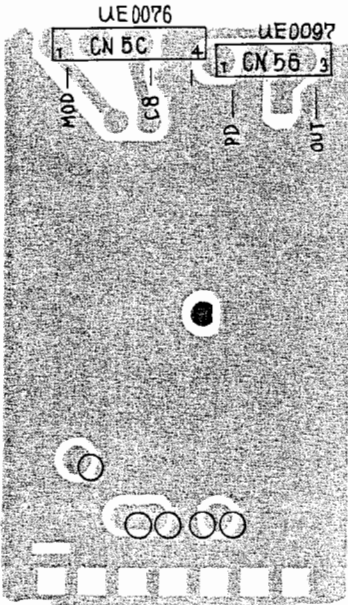
# VHF VCO PC BOARDS



## SCHEMATIC DIAGRAM OF UHF VCO UNIT

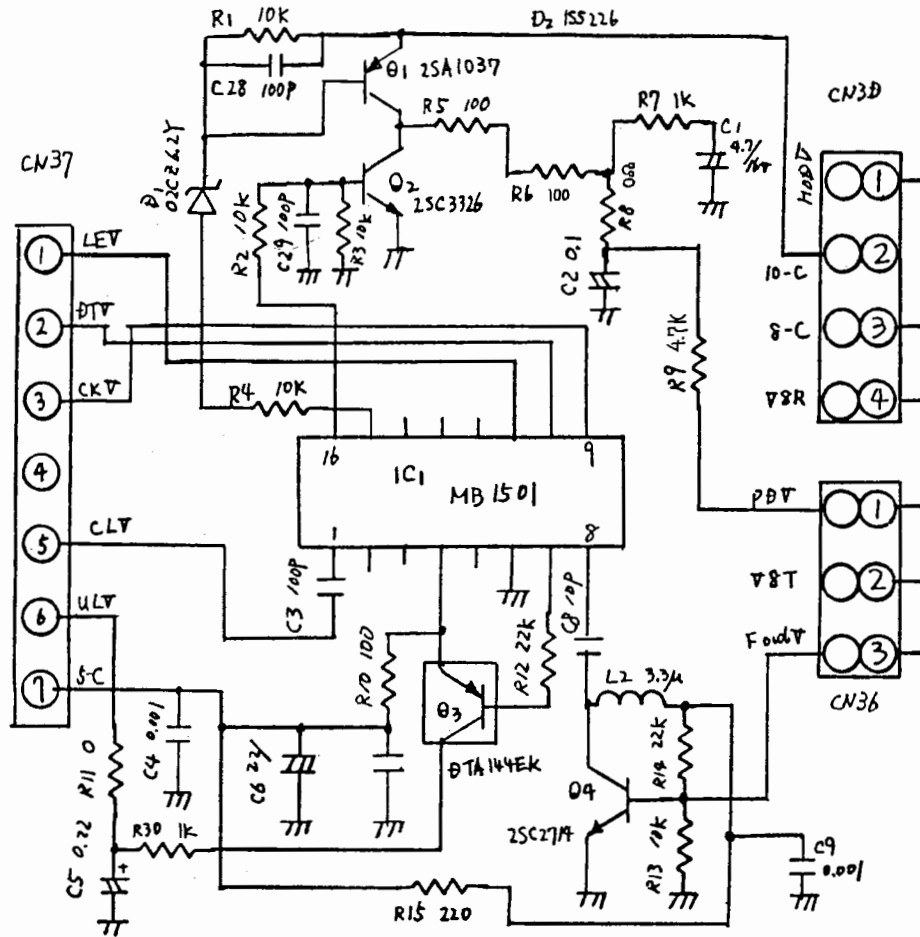


## UHF VCO PC BOARDS

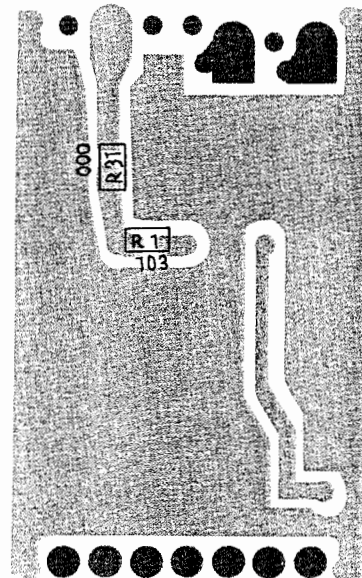
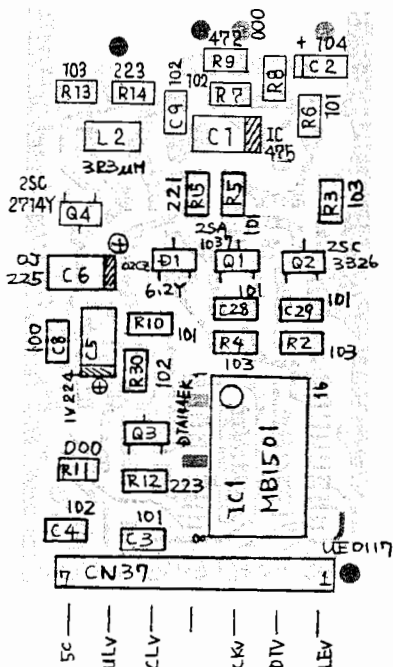




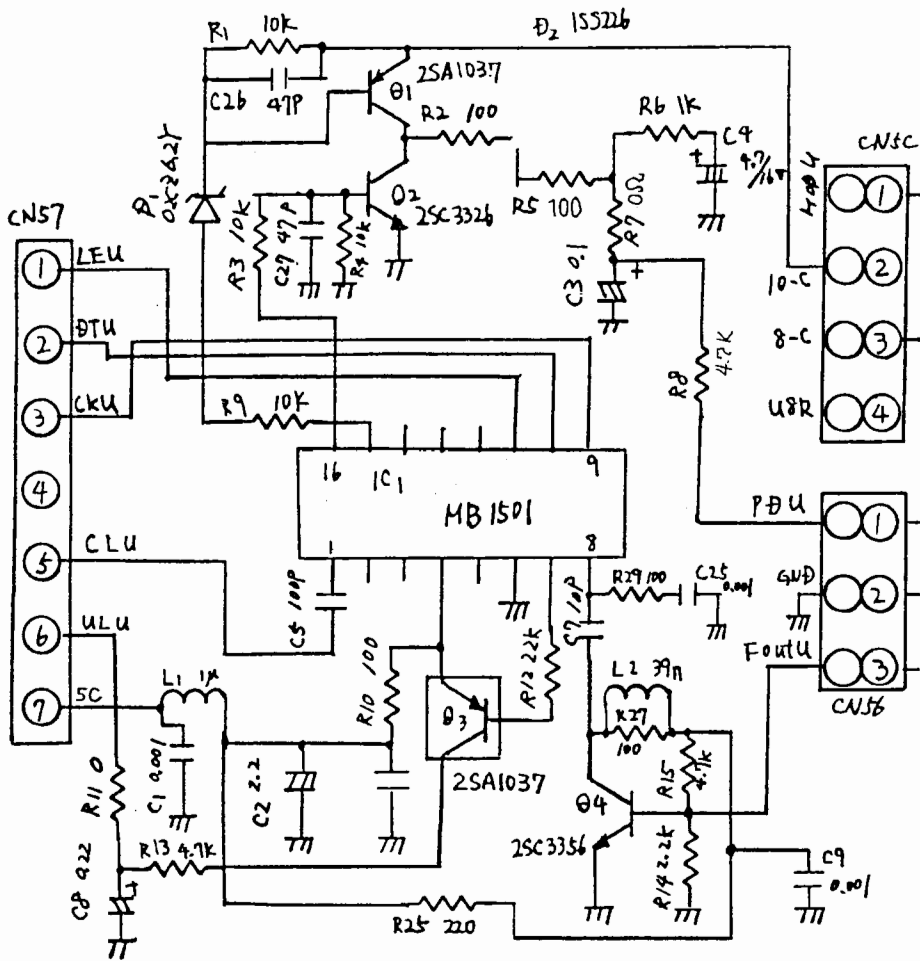
## ■ SCHEMATIC DIAGRAM OF VHF PLL UNIT



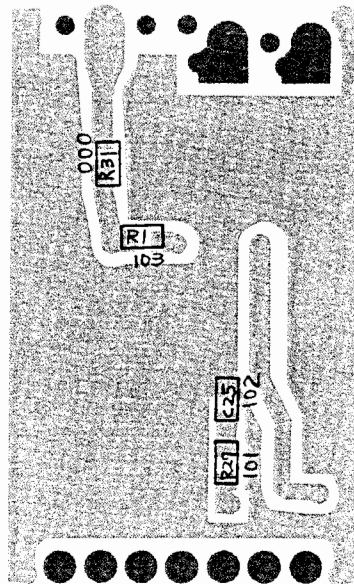
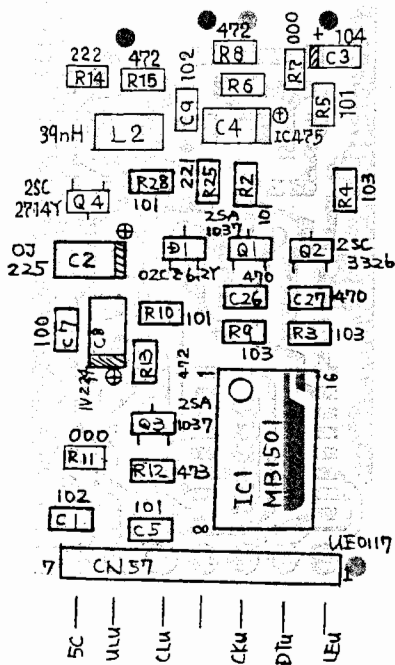
## ■ VHF PLL PC BOARDS



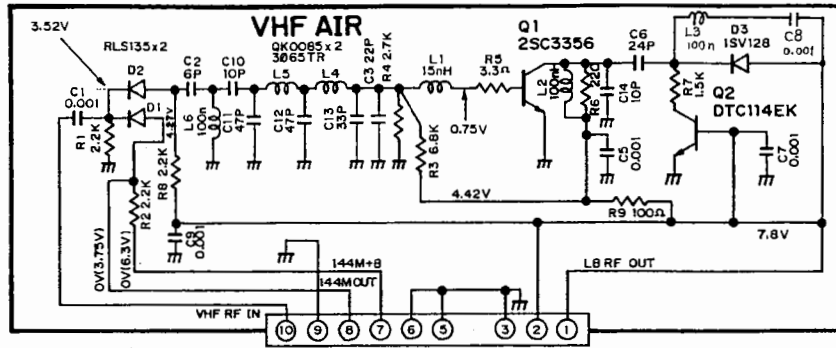
# ■ SCHEMATIC DIAGRAM OF UHF PLL UNIT



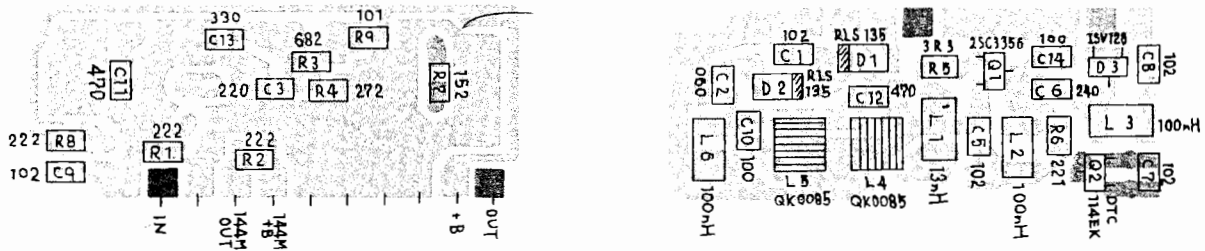
# ■ UHF PLL PC BOARDS



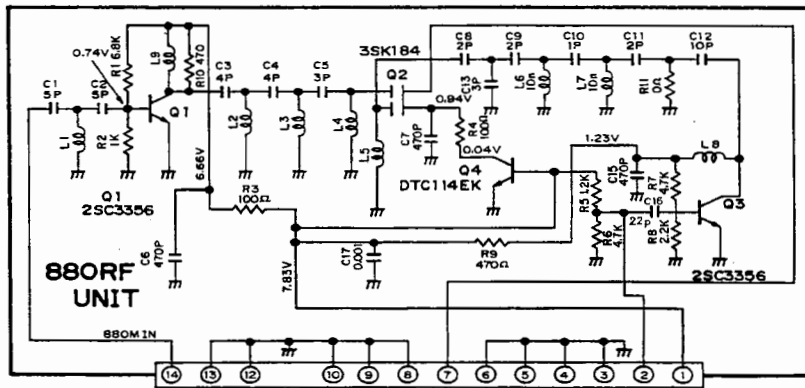
## ■ SCHEMATIC DIAGRAM OF VHF AIR UNIT



## ■ VHF AIR PC BOARDS



## ■ SCHEMATIC DIAGRAM OF 880 FRONT UNIT



## ■ 880 FRONT PC BOARDS

