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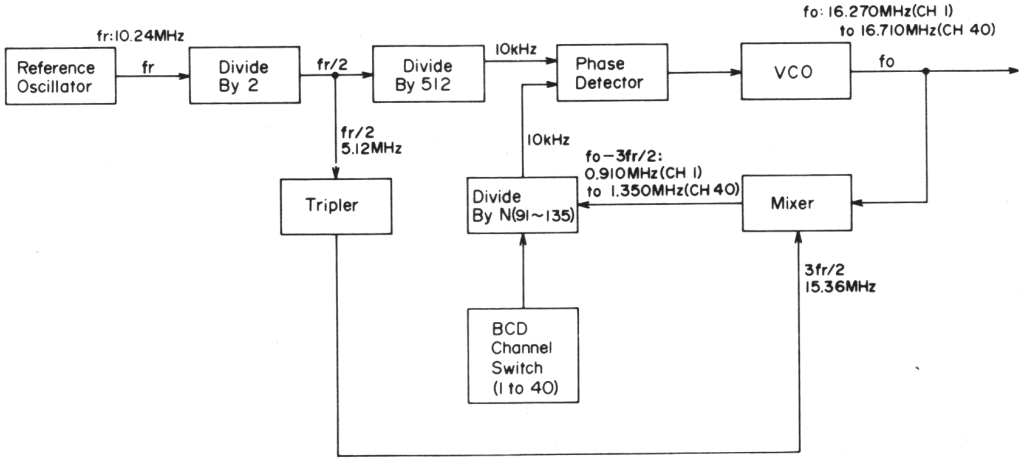
C. Description of PLL as used in the TRC-466

The digital PLL circuit used in this Transceiver generates the CB frequencies 10.695 MHz **below** the CB assigned frequency.

The circuitry is illustrated in Block Diagram form below.



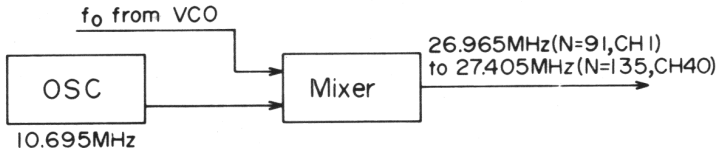
When the PLL is "locked", the relationship between the frequencies is:

$$\frac{f_r}{1024} = \frac{f_o - 1.5f_r}{N} \quad \text{or} \quad f_o = \left(\frac{N}{1024} + 1.5\right) f_r \text{ in MHz}$$

(where the VCO frequency is f_o and the reference frequency, f_r is 10.24 MHz)

Thus, by proper selection of N (from 91 to 135), the system will produce any one of 40 different frequencies. And these frequencies will be exactly 10.695 MHz below the assigned CB channel frequencies.

The VCO output is mixed with the output from a separate 10.695 MHz crystal oscillator, which produces the desired CB frequency.

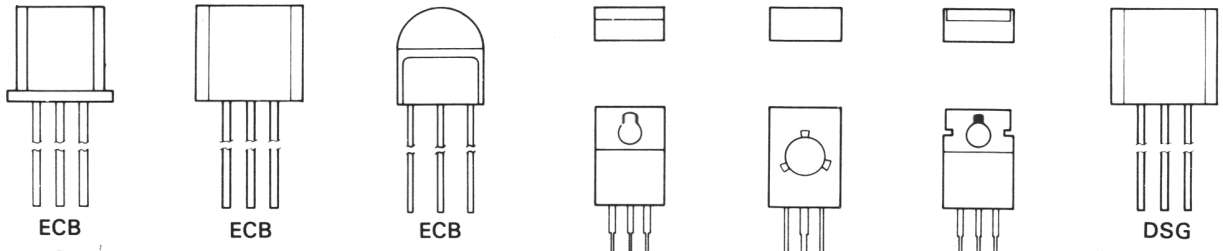


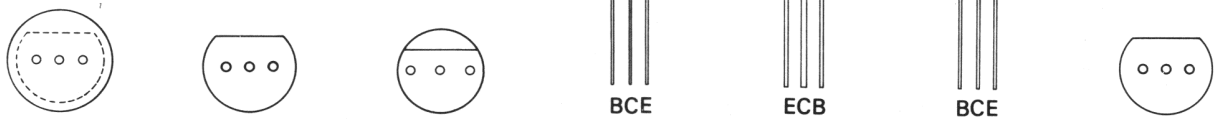
Since f_r is derived from the Reference Oscillator (a crystal oscillator), the tolerance and precision of f_r and f_o will be that of a crystal.

In the Receive mode, the VCO output is used as the 1st Local Oscillator. This is mixed with the incoming receive signal and produces the 1st I.F. of 10.695 MHz. The Reference Oscillator (10.24 MHz) is used as the 2nd Local Oscillator; mixed with the 1st I.F., this produces a 2nd I.F. of 455 kHz.

Note: If the phase of the VCO frequency cannot be locked, the bass-bias of TX OSC is cut off by a protection circuit inside IC-1 (PIN 22) and through Q3 and Q1 thus any spurious emission will not be radiated.

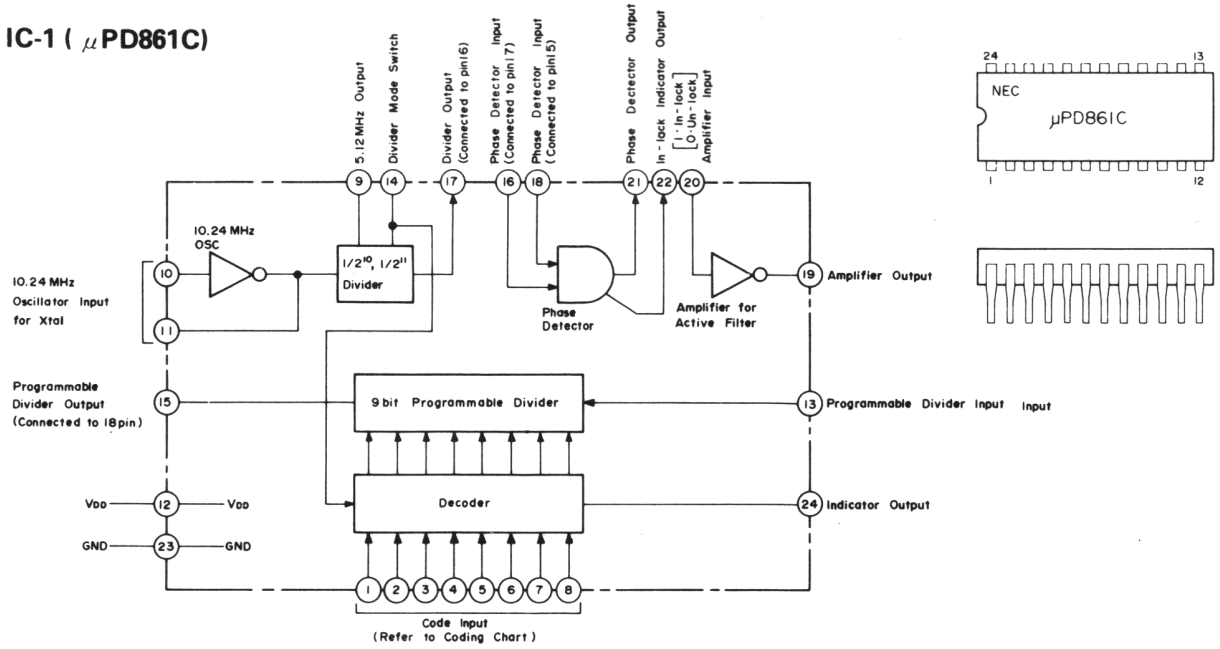
TRANSISTOR LEAD IDENTIFICATIONS & IC INTERNAL CONNECTION



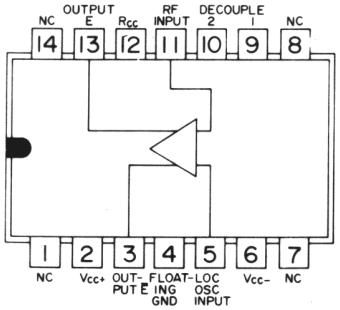


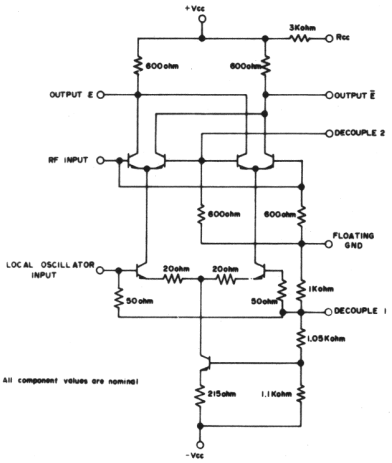
2SA495 2SC372 2SC373 2SC380 2SC735 | 2SA733 2SC536 2SC945 2SC1675 2SC930 | 2SC930 | 2SC1909 | 2SC1957 | 2SD325 | 2SK41

IC-1 (μPD861C)

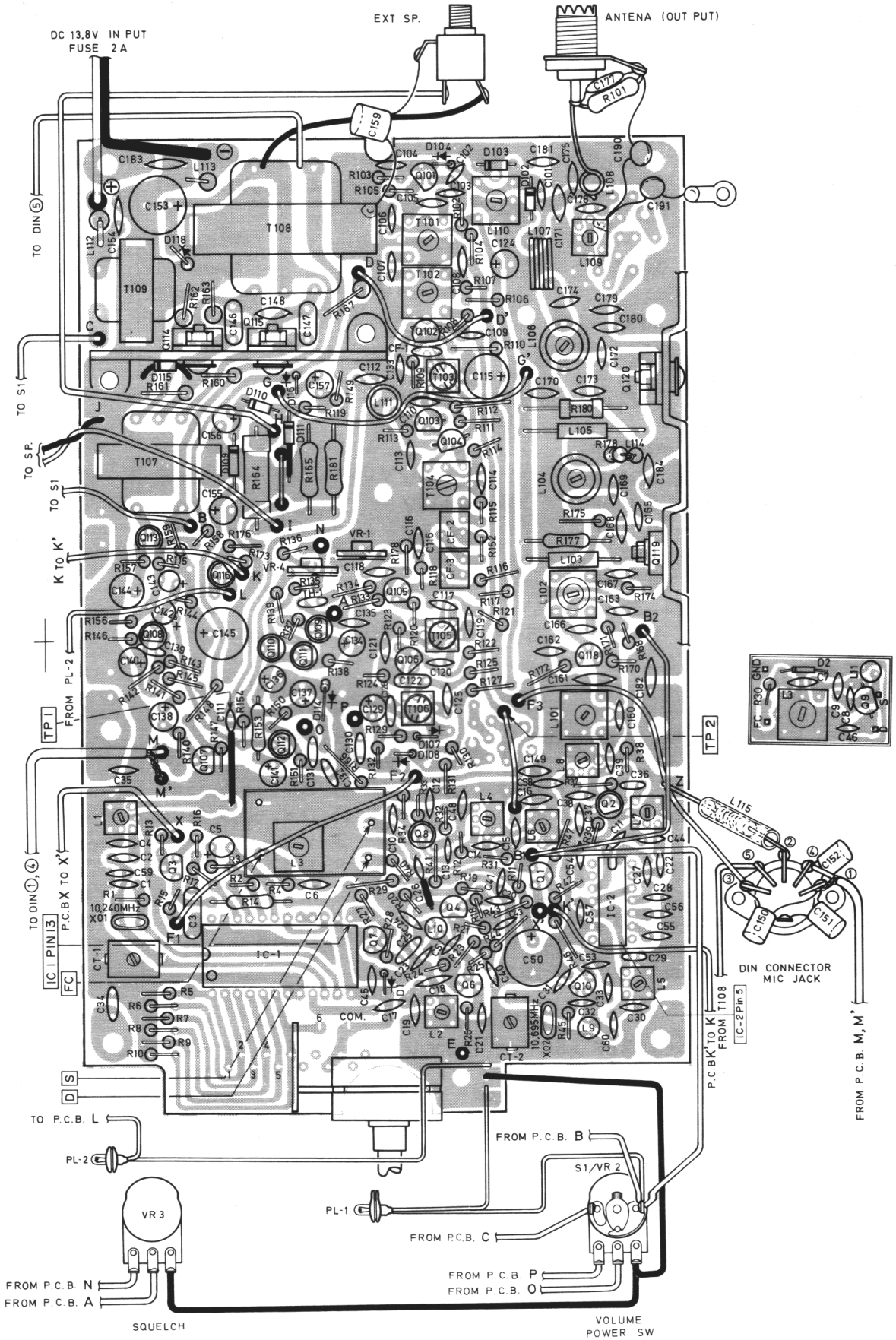


IC-2 (SN76514)



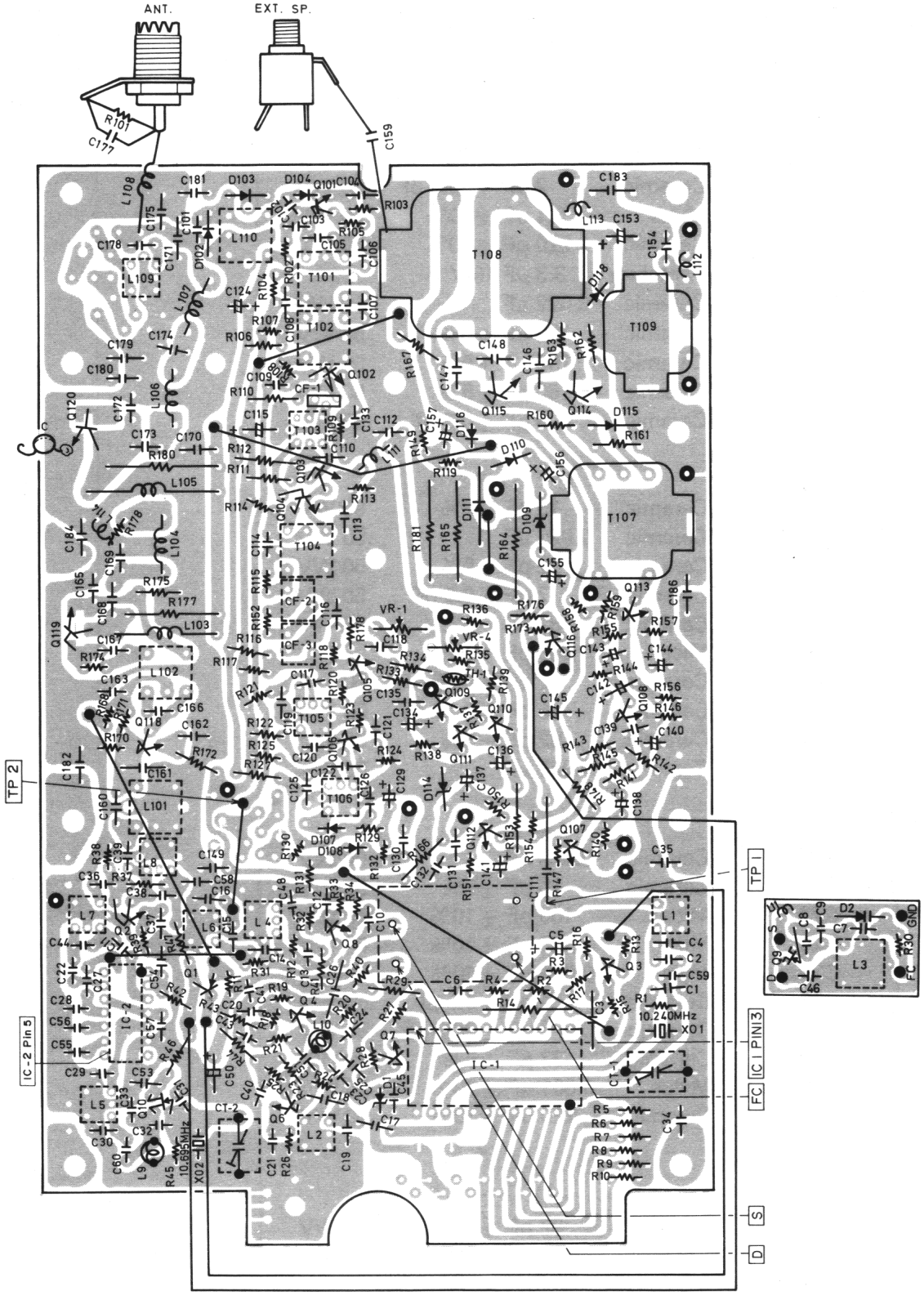


PRINTED CIRCUIT BOARD (TOP VIEW)



TRC-466 P. C. B. TOP VIEW (FEB. '77)

PRINTED CIRCUIT BOARD (BOTTOM VIEW)



TRC - 466 P. C. B. BOTTOM VIEW (FEB. '77)

ELECTRICAL PARTS LIST

REF. NO.	DESCRIPTION	RS PART NO.	MFR'S PART NO.
CAPACITORS			
C1	Ceramic 39 pF ±5% 50 WV		
C2	Ceramic 2 pF ±0.25 pF 50 WV		
C3	Mylar 0.1 μF ±10% 50 WV		
C4	Ceramic 220 pF ±10% 50 WV		
C5	Tantalum 3.3 μF 16 V		
C6	Ceramic 0.022 μF 50 WV		
C7	Ceramic 100 pF ±5% 50 WV		
C8	Ceramic 150 μF ±5% 50 WV		
C9	Ceramic 150 pF ±5% 50 WV		
C10	Ceramic 4 pF ±0.5 pF 50 WV		
C11	Ceramic 15 pF ±5% 50 WV		
C12	Ceramic 0.022 μF 50 WV		
C13	Ceramic 82 pF ±5% 50 WV		
C14	Ceramic 7 pF ±0.5 pF 50 WV		
C15	Ceramic 82 pF ±5% 50 WV		
C16	Mica 250 pF ±10%		
C17	Ceramic 2 pF ±0.25 pF 50 WV		
C18	Ceramic 5 pF ±0.25 pF 50 WV		
C19	Ceramic 82 pF ±5% 50 WV		
C20	Ceramic 0.022 μF 50 WV		
C21	Ceramic 0.022 μF 50 WV		
C22	Ceramic 15 pF ±5% 50 WV		
C23	Mica 100 pF ±10% 50 WV		
C24	Mica 220 pF ±10% 50 WV		
C25	Mylar 0.001 μF ±10% 50 WV		
C26	Ceramic 4 pF ±0.5 pF 50 WV		
C27	Ceramic 2—7 pF ±0.25 pF 50 WV		
C28	Ceramic 33 pF ±5% 50 WV		
C29	Mylar 0.001 μF ±10% 50 WV		
C30	Ceramic 220 pF ±10% 50 WV		
C31	Not used		
C32	Ceramic 82 pF ±5% 50 WV		
C33	Ceramic 33 pF ±5% 50 WV		
C34	Ceramic Barrier 0.01 μF 25 WV		
C35	Ceramic Barrier 0.01 μF 25 WV		
C36	Mica 100 pF ±10% 50 WV		
C37	Ceramic Barrier 0.01 μF 50 WV		
C38	Ceramic 82 pF ±5% 50 WV		
C39	Ceramic 4 pF ±0.5 pF 50 WV		
C40	Ceramic 0.022 μF 50 WV		

REF. NO.	DESCRIPTION	RS PART NO.	MFR'S PART NO.
C41	Ceramic 0.022 μF 50 WV		
C42	Not used		
C43	Ceramic 0.022 μF 50 WV		
C44	Ceramic 33 pF ±5% 50 WV		
C45	Ceramic 0.022 μF 50 WV		
C46	Ceramic 0.022 μF 50 WV		
C47	Not used		
C48	Ceramic 0.022 μF 50 WV		
C49	Not used		
C50	Electrolytic 1000 μF/16V		
C51	Mica 22 pF ±10% 50 WV		
C52	Not used		
C53	Ceramic 0.022 μF 50 WV		
C54	Ceramic 0.01 μF 50 WV		
C55	Ceramic 0.01 μF 50 WV		
C56	Ceramic 0.01 μF 50 WV		
C57	Ceramic 0.01 μF 50 WV		
C58	Ceramic 0.01 μF 50 WV		
C59	Ceramic 24—33 pF ±5% 50 WV		
C60	Ceramic 1—2 pF ±0.25 pF 50 WV		
C101	Mica 39 pF ±10%		
C102	Mica 22 pF ±10%		
C103	Ceramic 1 pF ±0.25 pF 50 WV		
C104	Ceramic Barrier 0.01 μF 25 V		
C105	Mica 33 pF ±10%		
C106	Ceramic Barrier 0.01 μF 25 V		
C107	Mica 33 pF ±10%		
C108	Ceramic Barrier 0.022 μF 25 V		
C109	Ceramic 22 pF ±5% 50 WV		
C110	Ceramic Barrier 0.022 μF 25 V		
C111	Ceramic 33 pF ±5% 50 WV		
C112	Ceramic 330 pF ±10%		
C113	Ceramic Barrier 0.0022 μF 25 V		
C114	Ceramic Barrier 0.022 μF 25 V		
C115	Electrolytic 33 μF/16V		
C116	Ceramic 330 pF ±10%		
C117	Ceramic 1 pF ±0.25 pF 50 WV		
C118	Ceramic Barrier 0.022 μF 25 V		
C119	Ceramic Barrier 0.022 μF 25V		
C120	Ceramic Barrier 0.022 μF 25 V		

REF. NO.	DESCRIPTION	RS PART NO.	MFR'S PART NO.
C121	Ceramic Barrier 0.022 μF 25 V		
C122	Mylar 0.047 μF 50 WV		
C123	Not used		
C124	Electrolytic 4.7 μF/50 V		
C125	Ceramic Barrier 0.022 μF 25 V		
C126	Mylar 0.01 μF ± 10% 50 WV		
C127	Not used		
C128	Not used		
C129	Electrolytic 1 μF/50 V		
C130	Mylar 0.01 μF ± 10% 50 WV		
C131	Mylar 0.033 μF 50 WV		
C132	Mylar 0.01 μF ± 10% 50 WV		
C133	Ceramic Barrier 0.01 μF 25 V		
C134	Electrolytic 3.3 μF/50 V		
C135	Ceramic 0.01 μF 50 WV		
C136	Electrolytic 22 μF/16 V		
C137	Electrolytic 47 μF/10 V		
C138	Electrolytic 4.7 μF/50 V		
C139	Mylar 0.0015 μF ± 10% 50 WV		
C140	Electrolytic 33 μF/10 V		
C141	Electrolytic 33 μF/10 V		
C142	Electrolytic 0.47 μF/50 V		
C143	Alsicon 0.1 μF/25 V		
C144	Electrolytic 100 μF/10 V		
C145	Electrolytic 330 μF/16 V		
C146	Mylar 0.047 μF 50 WV		
C147	Mylar 0.047 μF 50 WV		
C148	Ceramic 0.047 μF 50 WV		
C149	Ceramic 0.047 μF 50 WV		
C150	Mylar 0.0047 μF ± 10% 50 WV		
C151	Mylar 0.0047 μF ± 10% 50 WV		
C152	Mylar 0.0033 μF ± 10% 50 WV		
C153	Electrolytic 470 μF/16 V		
C154	Ceramic 0.022 μF 50 WV		
C155	Electrolytic 22 μF/16 V		
C156	Electrolytic 10 μF/25 V		
C157	Electrolytic 1 μF/50 V		
C158	Not used		
※ C159	Ceramic Barrier 0.01 μF 50 WV		
C160	Mica 82 p—100 pF ± 10%		

※ FOR CANADA ONLY

REF. NO.	DESCRIPTION	RS PART NO.	MFR'S PART NO.
C161	Mica 100 p—470 pF ±10%		
C162	Ceramic Barrier 0.01 μF 25 V		
C163	Ceramic Barrier 0.01 μF 25 V		
C164	Not used		
C165	Ceramic Barrier 0.01 μF 25 V		
C166	Ceramic 33 p—47 pF ±5% 50 WV		
C167	Ceramic 220 pF ±10% 50 WV		
C168	Ceramic 56 pF ±5% 50 WV		
C169	Ceramic 82 pF ±5% 50 WV		
C170	Ceramic 0.047 μF 50 WV		
C171	Ceramic Barrier 0.01 μF 25 V		
C172	Mica 33 pF ±10% 50 WV		
C173	Ceramic 0.0047 μF 50 WV		
C174	Mica 220 pF ±10%		
C175	Mica 220 pF ±10%		
C176	Not used		
C177	Mica 250 pF ±10%		
C178	Mica 39 pF ±10%		
C179	Ceramic 0.022 μF 50 WV		
C180	Ceramic Barrier 0.01 μF 25 V		
C181	Ceramic Barrier 0.01 μF 25 V		
C182	Ceramic Barrier 0.01 μF 25 V		
C183	Ceramic 0.047 μF 50 WV		
C184	Ceramic 0.022 μF 50 WV		
C185	Not used		
C186	Ceramic 0.047 μF 50 WV		
C187	Not used		
C188	Not used		
C189	Not used		
C190	Ceramic 0.0033 μF 50 WV		
C191	Ceramic 0.0033 μF 50 WV		
C192	Ceramic Barrier 0.01 μF 25 V		
CERAMIC FILTERS			
CF1	Ceramic Filter SFE 10.7 MHz	C-0752	P-130047
CF2	Ceramic Filter CFU 455 kHz	C-0754	P-130050
CF3	Ceramic Filter CFU 455 kHz	C-0754	P-130050
TRIMMERS			
CT1	Trimmer	C-0751	P-160010
CT2	Trimmer	C-0751	P-160010

REF. NO.	DESCRIPTION	RS PART NO.	MFR'S PART NO.
DIODES			
D1	Zener Diode RD5.1E or UZ5.1B (or RD5AN)		
D2	Varicap Diode ITT-310 or 1S2688		
D101	Not used		
D102	Diode WG713		
D103	Diode WG713		
D104	Germanium Diode 1N60P or 1S188FM-1		
D105	Not used		
D106	Not used		
D107	Germanium Diode 1N60P or 1S188FM-1		
D108	Germanium Diode 1N60P or 1S188FM-1		
D109	Zener Diode RD12EC or UZ13B (or WZ13B)		
D110	Diode WG713		
D111	Diode WG713		
D112	Not used		
D113	Not used		
D114	Zener Diode RD6.2EB or UZ6.2B (or WZ061 or AW01-06)		
D115	Diode WG713		
D116	Silicon Diode SR-1K (or 10D-1)		
D117	Not used		
D118	Silicon Diode SR-1K (or 10D-1)		
INTEGRATED CIRCUITS			
IC1	μPD 861C		
IC2	SN76514		
FUSE			
F1	Fuse (Tube Type) 250V2A (2—2.5A)	HB-1111	P-250061
JACKS			
J1	Antenna Connector	J-6470	P-190104 P-190116
J2	5P DIN Jack	J-6397	P-190090 P-190036 P-190117
J3	External Speaker Jack	J-0683	P-190047

REF. NO.	DESCRIPTION	RS PART NO.	MFR'S PART NO.
COILS			
L1	RF Coil — 082	CA-3683	P-380081
L2	RF Coil — 082	CA-3584	P-380082
L3	OSC Coil — 083		P-380083
L4	RF Coil — 082	CA-3684	P-380082
L5	RF Coil — 082	CA-3684	P-380082
L6	RF Coil — 082	CA-3684	P-380082
L7	RF Coil — 084	CA-3685	P-380084
L8	RF Coil — 085	CA-3686	P-380085
L9	RF Choke Coil	CB-2319	P-360026
L10	RF Choke Coil	CB-2319	P-360026
L11	RF Choke Coil	CB-2319	P-360026
L101	Antenna Coil	CA-3687	P-380089
L102	Driver Coil	CA-3545	P-380046
L103	Choke Coil		P-380047
L104	Filter Coil	CA-3546	P-380045
L105	Choke Coil	CB-2284	P-380048
L106	Filter Coil	C-0755	P-380092
L107	Filter Coil	CA-3547	P-380044
L108	Filter Coil	CA-3548	P-380043
L109	Trap Coil	CA-3688	P-380086
L110	Antenna Coil	CA-3687	P-380089
L111	RF Choke Coil	CA-4725	P-380040
L112	Choke Coil	CB-2341	P-380104
L113	Choke Coil	CB-2341	P-380104
L114	Choke Coil	CB-2318	P-380098
L115	Choke Coil	CB-2283	P-380047
LAMPS			
PL1	Panel Lamp 4.2 14V 80mA	L-0021	P-240094
PL2	Panel Lamp 4.7 6V 35mA	L-0681	P-240073
TRANSISTORS			
Q1	2SA495(Y) or 2SA733(P) or (Q)		
Q2	2SC380(O) or (Y)		
Q3	2SC372(Y), 2SC945L(P) or (Q)		
Q4	2SC372(Y), 2SC945L(P) or (Q)		
Q5	Not used		
Q6	2SC373, 2SC945L(P) or (Q)		
Q7	2SC372(Y), 2SC945L(P) or (Q)		
Q8	2SC380(O) or (Y)		
Q9	2SK41(E)		
Q10	2SK41(E)		

REF. NO.	DESCRIPTION	RS PART NO.	MFR'S PART NO.
Q101	2SC930(D) or (E)		
Q102	2SC1675(M) or (L)		
Q103	2SC1675(M) or (L)		
Q104	2SC1675(M) or (L)		
Q105	2SC930(D) or (E)		
Q106	2SC930(D) or (E)		
Q107	2SC536(D) or (E)		
Q108	2SC373		
Q109	2SC372(Y)		
Q110	2SC373		
Q111	2SC373		
Q112	2SC373		
Q113	2SC735(O) or (Y)		
Q114	2SD325(D) or (E)		
Q115	2SD325(D) or (E)		
Q116	2SC735(O) or (Y)		
Q117	Not used		
Q118	2SC945(P) or (Q)		
Q119	2SC1957(K)		
Q120	2SC1909(K)		
RESISTORS			
R1	Carbon UY 1 MΩ ¼W		
R2	Carbon UY 3.9 kΩ ¼W		
R3	Carbon UY 560 Ω ¼W		
R4	Carbon UY 10 kΩ ¼W		
R5	Carbon UY 10 kΩ ¼W		
R6	Carbon UY 10 kΩ ¼W		
R7	Carbon UY 10 kΩ ¼W		
R8	Carbon UY 10 kΩ ¼W		
R9	Carbon UY 10 kΩ ¼W		
R10	Carbon UY 10 kΩ ¼W		
R11	Carbon PY 33 Ω ½W		
R12	Carbon UY 5.6 kΩ ¼W		
R13	Carbon UY 10 kΩ ¼W		
R14	Carbon PY 1.2 kΩ ¼W		
R15	Carbon UY 3.9 kΩ ¼W		
R16	Carbon UY 10 kΩ ¼W		
R17	Carbon UY 10 kΩ ¼W		
R18	Carbon UY 10 kΩ ¼W		
R19	Carbon UY 4.7 kΩ ¼W		
R20	Carbon UY 680 Ω ¼W		

REF. NO.	DESCRIPTION	RS PART NO.	MFR'S PART NO.
R21	Carbon UY 680 Ω ¼W		
R22	Not used		
R23	Carbon UY 18 kΩ ¼W		
R24	Carbon UY 6.8 kΩ ¼W		
R25	Carbon UY 680 Ω ¼W		
R26	Carbon UY 1 kΩ ¼W		
R27	Carbon UY 680 Ω ¼W		
R28	Carbon UY 100 kΩ ¼W		
R29	Carbon PY 220 Ω ½W		
R30	Carbon UY 100 kΩ ¼W		
R31	Carbon UY 2.2 kΩ ¼W		
R32	Carbon UY 8.2 kΩ ¼W		
R33	Carbon UY 4.7 kΩ ¼W		
R34	Carbon UY 1 kΩ ¼W		
R35	Not used		
R36	Not used		
R37	Carbon UY 4.7 k—10 kΩ ¼W		
R38	Carbon UY 3.3 kΩ ¼W		
R39	Carbon UY 220 Ω ¼W		
R40	Carbon UY 100 Ω ¼W		
R41	Carbon UY 100 Ω ¼W		
R42	Carbon UY 100 Ω ¼W		
R43	Carbon UY 100 Ω ¼W		
R44	Carbon UY 100 Ω ¼W		
R45	Carbon UY 1 MΩ ¼W		
R46	Carbon UY 100 Ω ¼W		
R47	Carbon UY 100 Ω ¼W		
R101	Carbon PY 1.5 kΩ ½W		
R102	Carbon UY 10 kΩ ¼W		
R103	Carbon UY 1 kΩ ¼W		
R104	Carbon UY 1 kΩ ¼W		
R105	Carbon UY 330 Ω ¼W		
R106	Carbon UY 10 kΩ ¼W		
R107	Carbon UY 150 k—390 kΩ ¼W		
R108	Carbon UY 220 Ω ¼W		
R109	Carbon UY 330 Ω ¼W		
R110	Carbon UY 330 Ω ¼W		
R111	Carbon UY 150 k—390 kΩ ¼W		
R112	Carbon UY 8.2 kΩ ¼W		
R113	Carbon UY 1 kΩ ¼W		
R114	Carbon UY 470 Ω ¼W		
R115	Carbon UY 5.6 kΩ ¼W		
R116	Carbon UY 6.8 kΩ ¼W		
R117	Carbon UY 270 kΩ ¼W		

REF. NO.	DESCRIPTION	RS PART NO.	MFR'S PART NO.
R118	Carbon UY 2.2 kΩ ¼W		
R119	Carbon UY 150—1 kΩ ¼W		
R120	Carbon UY 470 Ω ¼W		
R121	Carbon UY 470 Ω ¼W		
R122	Carbon UY 33 kΩ ¼W		
R123	Carbon UY 10 kΩ ¼W		
R124	Carbon UY 470 Ω ¼W		
R125	Carbon UY 470 Ω ¼W		
R126	Not used		
R127	Carbon UY 27 kΩ ¼W		
R128	Not used		
R129	Carbon UY 47 kΩ ¼W		
R130	Carbon UY 68 kΩ ¼W		
R131	Carbon UY 47 kΩ ¼W		
R132	Carbon UY 33 kΩ ¼W		
R133	Carbon UY 10 kΩ ¼W		
R134	Carbon UY 6.8 kΩ ¼W		
R135	Carbon UY 22 k—100 kΩ ¼W		
R136	Carbon UY 22 kΩ ¼W		
R137	Carbon UY 5.6 kΩ ¼W		
R138	Carbon UY 18 Ω ¼W		
R139	Carbon UY 1.8 kΩ ¼W		
R140	Carbon UY 1 kΩ ¼W		
R141	Carbon UY 2.2 kΩ ¼W		
R142	Carbon UY 10 kΩ ¼W		
R143	Carbon UY 56 kΩ ¼W		
R144	Carbon UY 4.7 kΩ ¼W		
R145	Carbon UY 3.3 kΩ ¼W		
R146	Carbon UY 2.2 kΩ ¼W		
R147	Carbon UY 4.7 kΩ ¼W		
R148	Carbon UY 2.2 kΩ ¼W		
R149	Carbon UY 6.8 kΩ ¼W		
R150	Carbon UY 33 kΩ ¼W		
R151	Carbon UY 18 kΩ ¼W		
R152	Carbon UY 5.6 kΩ ¼W		
R153	Carbon PY 1 kΩ ¼W		
R154	Carbon UY 1.8 kΩ ¼W		
R155	Carbon UY 33 kΩ ¼W		
R156	Carbon UY 6.8 kΩ ¼W		
R157	Carbon UY 100 Ω ¼W		
R158	Carbon UY 220k—330k Ω ¼W		
R159	Carbon UY 220 Ω ¼W		
R160	Carbon PY 1.5 kΩ ½W		

REF. NO.	DESCRIPTION	RS PART NO.	MFR'S PART NO.
R161	Carbon PY 82 Ω ½W		
R162	Metal Oxide 0.22 Ω 1W		
R163	Metal Oxide 0.22 Ω 1W		
R164	Metal Oxide 10—18 Ω 2W		
R165	Carbon PY 22 Ω ½W		
R166	Carbon UY 100 Ω ¼W		
R167	Metal Oxide 270 Ω 2W		
R168	Metal Oxide 10 Ω 1W		
R169	Carbon PY 33 Ω ¼W		
R170	Carbon UY 2.2 kΩ ¼W		
R171	Carbon UY 6.8 kΩ ¼W		
R172	Carbon UY 100 Ω ¼W		
R173	Carbon UY 39 k—68KΩ ¼W		
R174	Carbon UY 220 Ω ¼W		
R175	Carbon PY 15 Ω ½W		
R176	Carbon UY 56 kΩ ¼W		
R177	Carbon PY 560 Ω ¼W		
R178	Carbon UY 1 kΩ ¼W		
R179	Carbon PY 0—10 Ω ¼W		
R180	Metal Oxide 220 Ω 1W		
R181	Carbon PY 22 Ω ½W		
R182	Not used		
R183	Not used		
R184	Carbon PY 15 Ω ¼W		
SWITCHES			
S1	Power Switch (With VR-2)	P-1749	
S2	Channel Selector Switch	S-1272	
TRANSFORMERS			
T101	RF Coil 090	CA-3687	
T102	RF Coil 091	CA-4799	
T103	IFT 10.7 MHz 7F031	CA-7602	
T104	IFT 455 kHz 0A033	CA-7603	
T105	IFT 455 kHz 7A026	CA-7513	P-130026
T106	IFT 455 kHz 7A027	CA-7514	P-130027
T107	Audio Input Transformer	TN-0100	P-100346
T108	Audio Output/Modulation Transformer	TD-0139	P-100347
T109	Choke	TA-0561	P-100345

REF. NO.	DESCRIPTION	RS PART NO.	MFR'S PART NO.
THERMISTOR			
TH1	Thermistor S5C-24RED (20 kΩ)		
VARIABLE RESISTORS			
VR-1	Semi-Fixed Resistor 500 Ω B	P-6353	P-170197
VR-2	VOLUME 5 kΩ (With S1)	P-1749	P-170239
VR-3	SQUELCH 10 kΩ	P-1750	P-170240
VR-4	Semi-Fixed Resistor 20 kΩ B	P-6409	P-170204
CRYSTALS			
X01	Crystal HC-18/U 10.240 MHz	MX-2295	P-390047
		MX-2297	P-390049
		MX-2298	P-390056
X02	Crystal HC-18/U 10.695 MHz	MX-2296	P-390048
		MX-2299	P-390050
		MX-2300	P-390057

ACCESSORY PARTS LIST

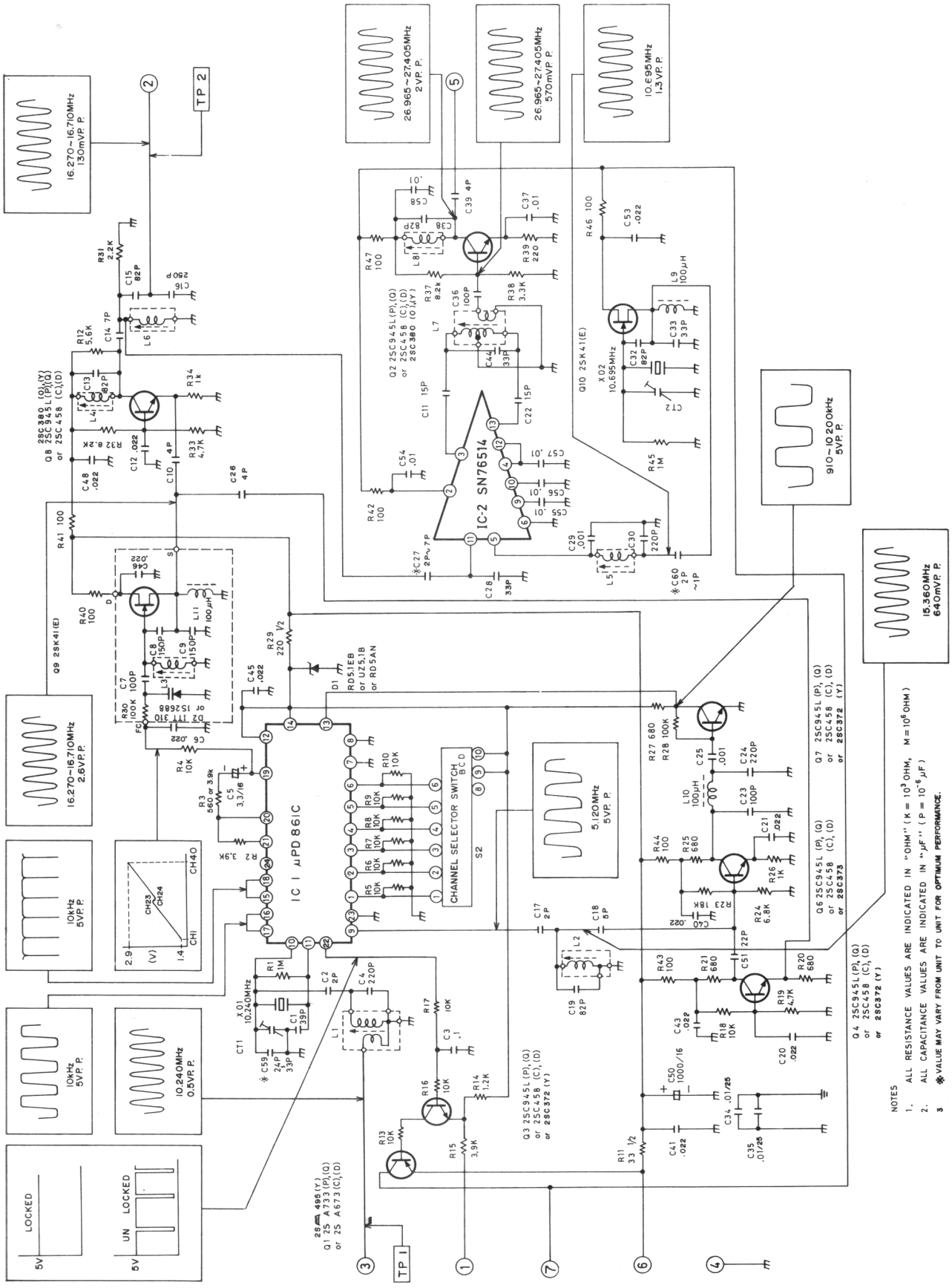
REF. NO.	DESCRIPTION	RS PART NO.	MFR'S PART NO.
S1	Tapping Screw (Black) 3 ϕ × 8PTII		
S2	Tapping Screw (Porr Wave Screw) 3 ϕ × 8PTII		
S3	Triple Screw 3 ϕ × 6P		
S4	Washer (Fiber)		
S5	Screw 3 ϕ × 8P (Black)		
S6	Screw 2 ϕ × 5F		
S7	Screw 3 ϕ × 6P		

IC & TRANSISTOR VOLTAGE CHART

TRANSISTOR VOLTAGE CHART

TRANSISTOR NUMBER	RECEIVER SECTION 〔V〕			TRANSMITTER SECTION 〔V〕		
	EMITTER (SOURCE)	COLLECTOR (DRAIN)	BASE (GATE)	EMITTER (SOURCE)	COLLECTOR (DRAIN)	BASE (GATE)
Q 1	13.7	0	13.1	13.1	13.0	12.4
Q 2	0	0	0	3.5	11.5	4.1
Q 3	5.7	13.1	5.1	4.5	6.9	5.1
Q 4	3.0	8.6	3.5	2.8	8.5	3.5
Q 5	Not used					
Q 6	2.6	10.3	3.2	2.4	9.9	3.0
Q 7	0	3.3	0.7	0	2.7	0.8
Q 8	3.6	11.8	4.2	3.5	10.1	4.0
Q 9	(0)	(11.0)	(—)	(0)	(11.0)	(—)
Q 10	(0)	(0)	(—)	(0)	(10.7)	(—)
Q101	0.3	7.3	0.9	0.5	0	0
Q102	0.4	7.2	1.1	0	0	0
Q103	0.6	7.3	1.2	0	0	0
Q104	0.6	7.3	1.2	0	0	0
Q105	0.5	7.1	1.1	0	0	0
Q106	0.9	6.7	1.6	0	0	0
Q107	0	0	0	0	0	0
Q108	2.4	13.8	2.0	1.2	8.1	1.8
Q109	0.1	4.7	0	0	0	0
Q110	0.1	5.9	0.8	0	0	0
Q111	0.1	0.1	0.8	0	0	0
Q112	1.0	4.4	1.6	0	0	0
Q113	1.2	11.4	1.9	1.1	10.8	1.5
Q114	0	13.8	0.6	0	13.0	0.6
Q115	0	13.6	0.6	0	13.0	0.5
Q116	0.3	13.7	0	1.2	12.0	1.6
Q117	0	7.6	0.5	0.2	0	0
Q118	7.6	13.8	4.5	2.4	11.0	2.9
Q119	0	13.4	0	1.2	10.9	0.2
Q120	0	13.3	0	0	10.3	0

SCHEMATIC DIAGRAM (PLL CIRCUIT)



EXPLODED VIEW PARTS LIST

REF. NO.	DESCRIPTION	RS PART NO.	MFR'S PART NO.
1	Thumb Screw for Mounting Bracket	K-2181	P-650170
2	Rubber Washer		P-680114
3	Mounting Bracket	HB-6022	P-411128
4	Case Top	Z-3444	P-411119
5	Case Bottom	Z-3445	P-411120
6	In-line Fuse Holder	F-1120	P-260014
7	Heat Sink "A"	HH-0203	P-411052
8	Heat Sink "B"	HH-0215	P-411121
9	Chassis		P-400157
10	5P DIN Jack	J-6397	P-190090 or P-190117 or P-190036
11	EXT. SP. Jack	J-0683	P-190047
12	Strain Relief	HB-0598	P-480010
13	Antenna Connector	J-6470	P-190104 or P-190116 or
14	Rubber Cushion		P-660123
15	Front Panel	Z-3446	P-700213
16	Speaker Bracket		P-410765
17	Speaker 77 m/m 8 ohm	S-4645	P-270051 or P-270058
18	VOLUME Control (VR-2)	P-1749	P-170239
19	SQUELCH Control (VR-3)	P-1750	P-170240
20	Pilot Lamp 14 V 80 mA (PL1)	L-0021	P-240094
21	Pilot Lamp 6 V 35 mA (PL2)	L-0681	P-240073
22	Lamp Cover	HB-6017	P-710107
23	Pilot (Modulation Indicator)	L-0022	P-610468
24	Rubber Bushing	HB-5323	P-680137
25	Front Bracket (R)	Z-3447	P-610464
26	Front Bracket (L)	Z-3448	P-610463
27	Knob for VOLUME/SQUELCH	K-2533	P-650233
28	Knob for Channel Selector	K-2532	P-650232
29	Net for Bottom Case		P-820380
30	Main P.C.B.		P-200402
31	Channel Plate	HB-6019	P-610465
32	Channel Selector Switch (S2)	S-1272	P-180230
33	Insulator Plate		P-480158
34	Front Bracket		P-680146

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