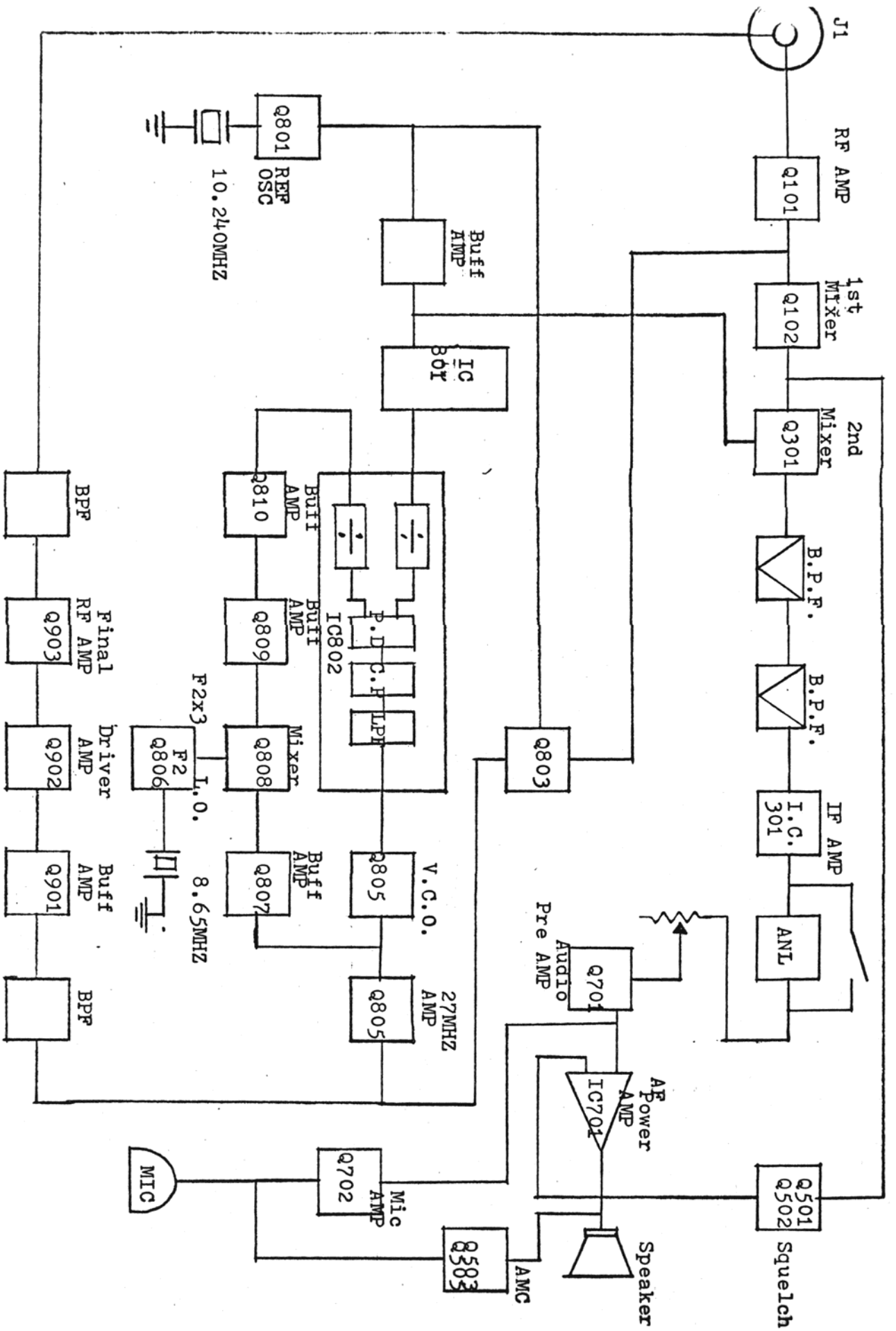
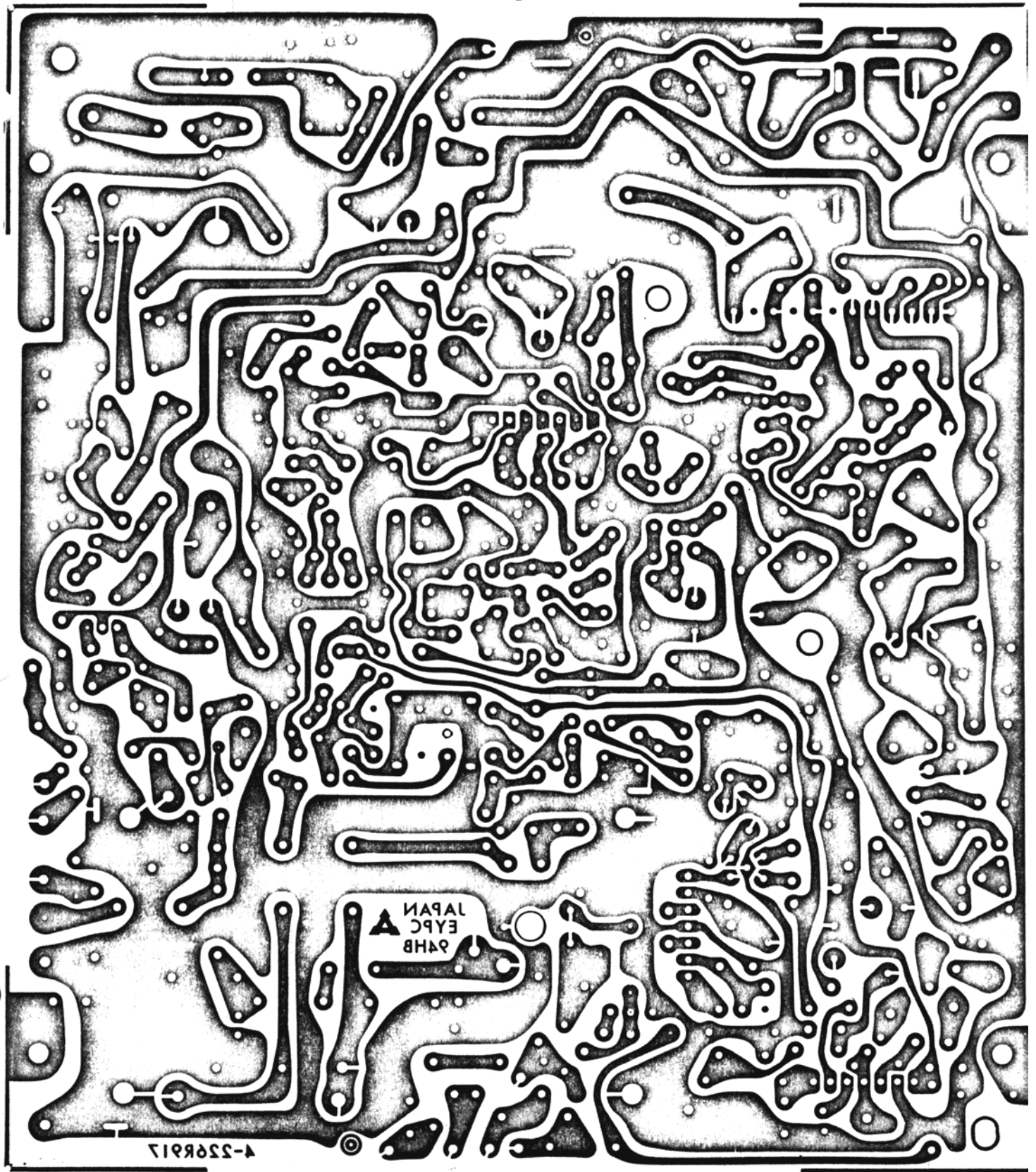


LOGIC TABLE

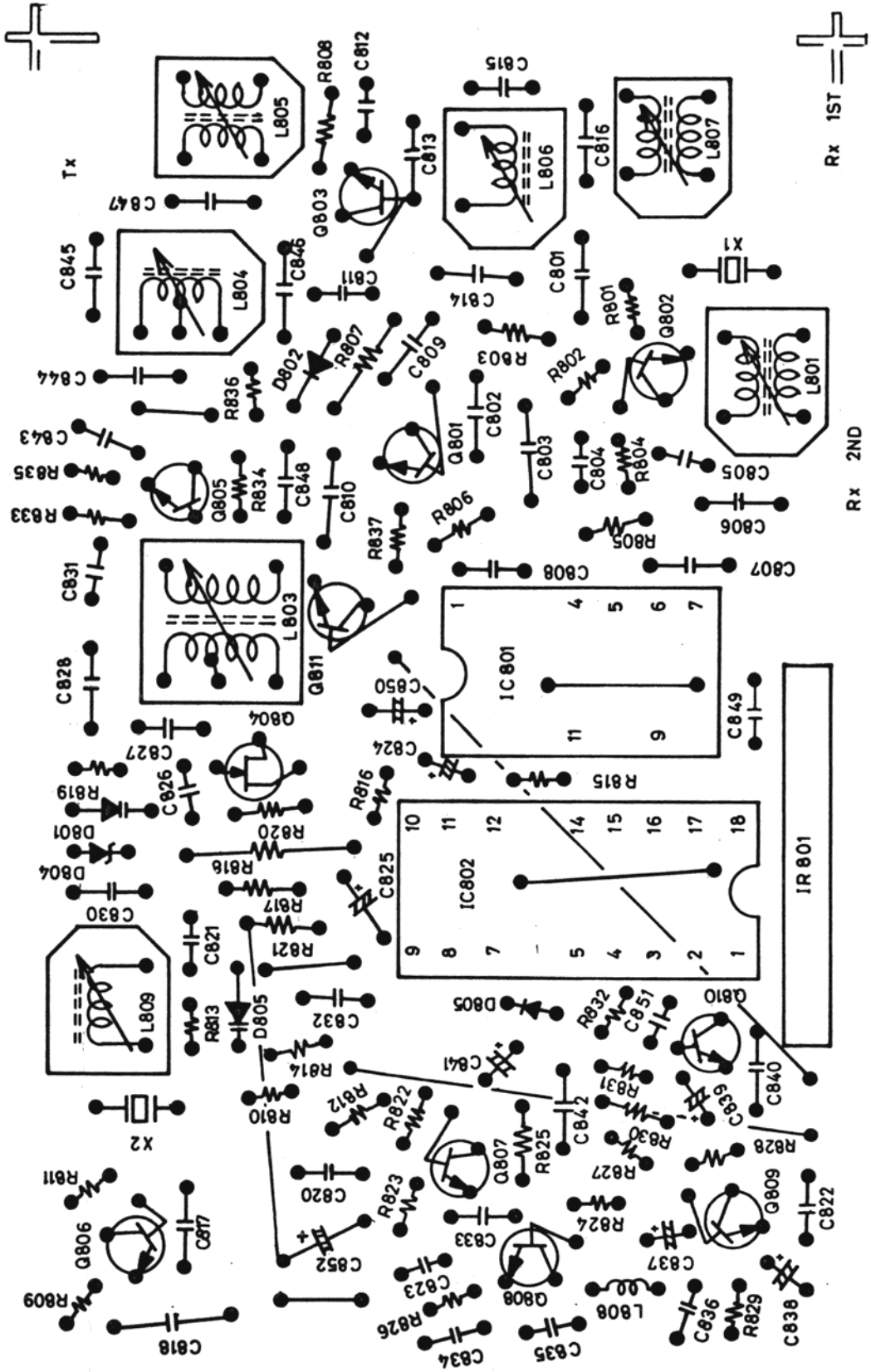
Channel	C	D	E	F	G
1	0	0	0	0	0
2	1	0	0	0	0
3	0	1	0	0	0
4	0	0	1	0	0
5	1	0	1	0	0
6	0	1	1	0	0
7	1	1	1	0	0
8	1	0	0	1	0
9	0	1	0	1	0
10	1	1	0	1	0
11	0	0	1	1	0
12	0	1	1	1	0
13	1	1	1	1	0
14	0	0	0	0	1
15	1	0	0	0	1
16	1	1	0	0	1
17	0	0	1	0	1
18	1	0	1	0	1
19	0	1	1	0	1
20	0	0	0	1	1
21	1	0	0	1	1
22	0	1	0	1	1
23	1	0	1	1	1





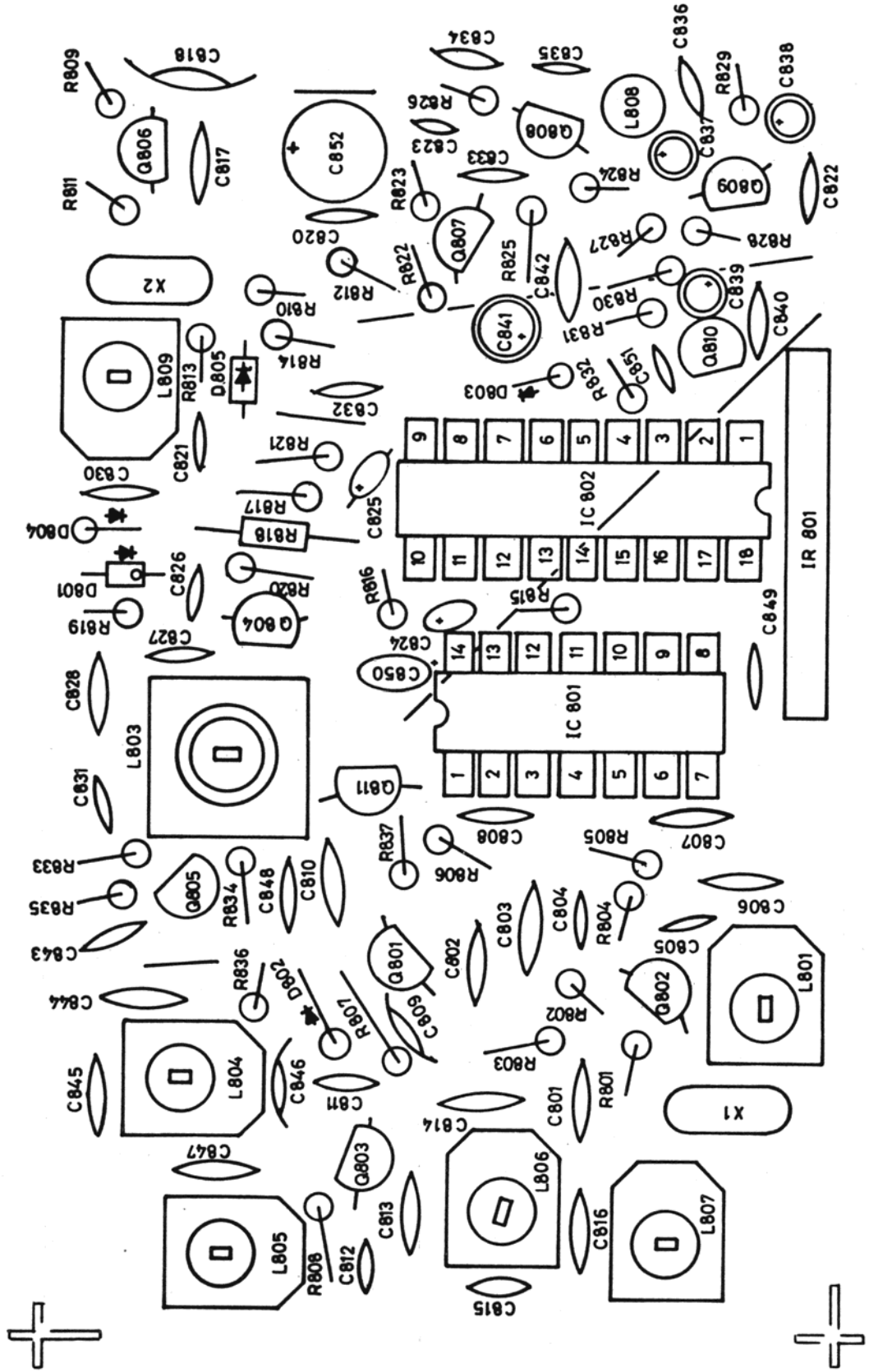
P.C.B. PATTERN FOR
COMPONENT LAYOUT

LAYER 1 (TOP) OF BOARD LAYOUT DRAWING



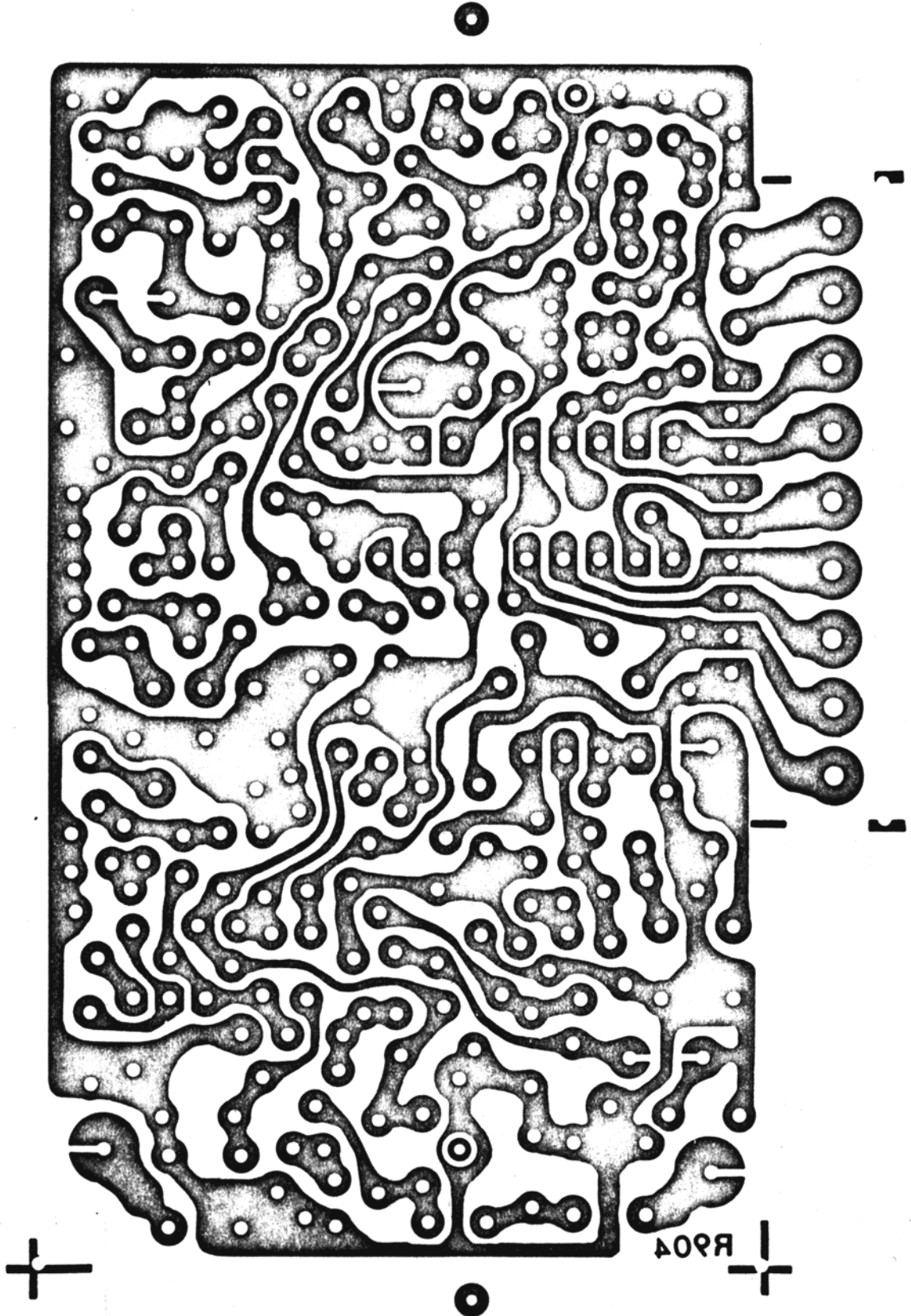
ΔT +VDD D5 D4 D3 D2 D1 EX (-)
 I H G F E D C B A

FLIP-A-ROUND CIRCUIT BOARD LAYOUT



P.C.B. PATTERN FOR PLL PACK ASSEMBLY COMPONENT LAYOUT

UP



SEMICONDUCTOR'S FUNCTION LIST

SYMBOL No.	PART No.	FUNCTION
Q101	2SC930 or 2SC839	RF Amplifier
Q102	2SC930 or 2SC839	1st. Mixer (Receive)
Q301	2SC930 or 2SC839	2nd. Mixer (Receive)
Q501	2SA733	Squelch Amplifier
Q502	2SC945 or 2SC536 or 2SC828	Squelch Amplifier
Q503	2SC945 or 2SC536	AMC Switch
Q504	2SA495	Modulation Lamp Switch
Q601	2SC945 or 2SC536 or 2SC828	Transmit Freq. Lock
Q602	2SC945 or 2SC536 or 2SC828	Unlock Switch
Q603	MJE200 or 2SD325 or 2SC1173	Regulator
Q604	2SC732 or 2SC945 or 2SC536	Switch
Q701	2SC536 or 2SC828 or 2SC945	AF Amplifier
Q702	2SC536 or 2SC828 or 2SC945	Mic. Amplifier
Q901	BC546 or 2SC1247 or 2SC1166 or 2SC1175 or J-SP7001 or 2SC2076	Buffer Amplifier
Q902	2SC1957 or 2SD483 or 2SC2079 or 2SC2086 or 2SC2028 or LM8000	Driver Amplifier
Q903	2SC1909 or 2SC2166 or 2SC2078 or MRS482 or 2SC2029	Final Power Amplifier
Q505	2SC536 or 2SC945 or 2SC828	AMC
Q801	2SC710 or 2SC930	Local Crystal Controlled Osc.
Q802	2SC710 or 2SC930	Buffer Amp.
Q803	2SC710 or 2SC930	Mixer
Q804	2SK49 or 2SK83	Voltage Controlled Osc.
Q805	2SC710 or 2SC930	27MHz Amp.
Q806	2SC710 or 2SC930	Local Crystal Controlled Osc.
Q807	2SC710 or 2SC930	Buffer Amp.
Q808	2SC710 or 2SC930	Mixer
Q809	2SC710 or 2SC930	Buffer Amp.

SYMBOL No.	PART No.	FUNCTION
Q810	2SC710 or 2SC930	Buffer Amp.
Q811	2SC710 or 2SC930	Switch (Inhibit)
IC301	CX-075B	IF Amplifier
IC701	LA4400	AF Amplifier & Mod. Amplifier
IC801	M53273P or TI7473	Flip Flop
IC802	M58472P	P.L.L.
D101	1S188 or IN60	Over Load Protector
D102	1S1588 or ITT73N	Over Load Protector
D301	1S188 or IN60	AM Detector
D302	1S1588 or ITT73N	AGC Stabilizer
D303	XZ-070	Voltage Stabilizer
D501	1S1588 or ITT73N	ANL
D502	1S1588 or ITT73N	S Meter Detector
D503	DS-130 or 10D-1	Switching
D504	1S1588 or ITT73N	AMC
D505	1S1588 or ITT73N	AMC
D506	1S1588 or ITT73N	AMC
D507	1S1588 or ITT73N	RF Meter Detector
D508	SLP-123B	Mod. Lamp (LED)
D509	1S1588 or ITT73N	Mod. Lamp Protector
D601	1S1588 or ITT73N	Delta Tune
D602	1S1588 or ITT73N	Transmitter Freq. Stabilizer
D603	1S1588 or ITT73N	Protector
D604	1S188 or IN60	Switch
D605	XZ-076	Voltage Stabilizer
D701	DS-130 or 10D-1	Voltage Stabilizer
D801	SVC201	VCO Control
D802	1S188 or IN60	Switch
D803	1S1588 or ITT73N	Switch
D804	XZ-049	Voltage Stabilizer
D805	SVC201	Delta Tune Control

SYMBOL No.	PART No.	FUNCTION
F301	CFU455H	455KHz Filter
F302	SF455D	455KHz Filter
M		S/RF Meter
X1	10.240MHz	Crystal
X2	8.650MHz	Crystal

RACER "T" PARTS LIST

<u>Reference No.</u>	<u>Teaberry Part No.</u>		<u>Description</u>
Q301	2SC930		2SC930 D Transistor
Q101, 102	2SC930		2SC930 E Transistor
Q502, 503, 601, 602, 604	2SC372	or	2SC372 Y Transistor or
	2SC945	or	2SC945 Q Transistor or
	2SC536		2SC536 E Transistor
Q701, 702	2SC536		2SC536 E Transistor
Q501	2SA733		2SA733 Q Transistor
Q504	2SA495		2SA495 O Transistor
Q901	BC546		BC546 A Transistor
Q902	2SC1957		2SC1957 K Transistor
Q903	2SC1909		2SC1909 Transistor
Q603	2SD325		2SD325 E Transistor
TH501	SDT-500		SDT-500 Thermistor
IC301	CX-075		CX-075 B I.C.
IC701	LA-4400		LA-4400 I.C.
D508	SLP-123B		Light Emitting Diode
D101, 301, 604	1S188 A		1S188 (A) FM Diode
D102, 302, 501, 502, 504, 505, 507, 509, 601, 602, 603	1S1588	or	1S1588 Diode or
	1TT73N		1TT73N Diode
D503, 701	DS-130	or	DS-130 Diode or
	10D-1		10D-1 Diode
D303	XZ-070		XZ-070 Diode
D605	XZ-076		XZ-076 Diode
D506	XZ-152		XZ-152 Diode
L101	4-257R815		Antenna Coil
L102	4-259R828		RF Coil
L901	4-259R865		RF Coil
L902	4-253R709		Choke Coil

<u>Reference No.</u>	<u>Teaberry Part No.</u>	<u>Description</u>
L903	4-259R861	RF Coil
L904	4-265R802	VHF Coil
L905	4-265R803	VHF Coil
L906	4-259R80810	RF Coil
T301	4-256R717	IFT, 10 MHz
T302	4-256R714	IFT, 10 MHz
T303	4-256R748	IFT, 455 kHz
T304	4-256R734	IFT, 455 kHz
T701	4-254R809	OPT
T702	4-255R810	Choke Coil
F301	4-253R910	HF Filter, CFU-455H
F302	4-253R804	HF Filter, SF-455D
F901	4-253R912	HF Filter, 54 MHz
VR2	4-222R512	Variable Resistor, 10 KB SQUELCH
VR5	4-222R526	Variable Resistor, 10 KD with Switch, OFF/ON VOLUME
VR7	4-222R775	Semi Variable Resistor, 1 K OHM
VR4	4-222R777	" " " , 5 K OHM
VR3, 9	4-222R780	" " " , 50 K OHM
VR1	4-222R781	" " " , 100 K OHM
RESISTORS (carbon)		
R909	R-R0150JB	1.5 ohm \pm 5% $\frac{1}{4}$ W.
R905	R-R0220JB	2.2 ohm " "
R714	R-R150KB	15 ohm \pm 10% "
R903	R-R330KB	33 ohm " "
R718, 723	R-R560JB	56 ohm \pm 5% "
R904	R-R680JB	68 ohm " "
R501, 509, 908	R-R820JB	82 ohm " "
R505, 610	R-R101KB	100 ohm \pm 5% "
R103, 502	R-R121KB	120 ohm \pm 10% "
R305	R-R151KB	150 ohm " "
R510	R-R820KB	82 ohm " "

<u>Reference No.</u>	<u>Teaberry Part No.</u>	<u>Description</u>
RESISTORS (carbon) cont.		
R614, 705	R-R391KB	390 ohm $\pm 10\%$ $\frac{1}{4}$ W.
R102	R-R561JB	560 ohm $\pm 5\%$ "
R506, 508, 906	R-R681JB	680 ohm " "
R105, 302	R-R821JB	820 ohm " "
R722	R-R331JB	330 ohm " "
R913	R-R474KB	4.7 K ohm $\pm 10\%$ "
R303, 304, 701, 704, 712	R-R102KB	1 K ohm " "
R106	R-R122KB	1.2 K ohm " "
R706, 707, 710	R-R152JB	1.5 K ohm $\pm 5\%$ "
R901	R-R182JB	1.8 K ohm " "
R601	R-R222KB	2.2 K ohm $\pm 10\%$ "
R101, 104, 301, 503	R-R332KB	3.3 K ohm " "
R611, 703	R-R392KB	3.9 K ohm " "
R603, 711, 715, 716	R-R472JB	4.7 K ohm $\pm 5\%$ "
R504	R-R562JB	5.6 K ohm " "
R606, 708, 713	R-R682JB	6.8 K ohm " "
R507, 511, 612, 717	R-R103KB	10 K ohm $\pm 10\%$ "
R616, 902	R-R123KB	12 K ohm " "
R607	R-R153KB	15 K ohm " "
R608	R-R183KB	18 K ohm " "
R605, 613	R-R223KB	22 K ohm " "
R602	R-R273KB	27 K ohm " "
R604, 617	R-R333KB	33 K ohm " "
R609, 709	R-R393JB	39 K ohm $\pm 5\%$ "
R912	R-R473KB	47 K ohm $\pm 10\%$ "
R702	R-R154KB	150 K ohm " "
R615	R-R224KB	220 K ohm " "
R913	R-R472KB	4.7 K ohm " "
R10	R-R0470JC	4.7 ohm $\pm 5\%$ $\frac{1}{2}$ W.
R907	R-R0820JC	8.2 ohm " "

<u>Reference No.</u>	<u>Teaberry Part No.</u>	<u>Description</u>
RESISTORS (Cont.)		
R911	R-R271JC	270 ohm \pm 5% $\frac{1}{2}$ W. Solid
R720	Metal Oxide Film	8.2 ohm \pm 10% 2 W.
R719, 721	Metal Oxide Film	22 ohm " "
R306	Metal Oxide Film	150 ohm " "

CAPACITORS (ceramic)

C301, 513	R-CKD020C	2 pfd \pm 0.25 pfd 50V N220
C107	R-CKD150J	15 pfd \pm 5% 50 V. N220
C102	R-CKD220J	22 pfd " " "
C101	R-CKD270J	27 pfd " " "
C909	R-CKD330J	33 pfd " " "
C303, 903, 914	R-CKD470J	47 pfd " " "
C306	R-CKD680J	68 pfd " " SL
C104	R-CKD820J	82 pfd " " N220
C908	R-CKD101J	100 pfd " " "
C915	R-CKD221K	220 pfd \pm 10% " SL
C510	R-CKD271K	270 pfd " " "
C718	R-CKD331K	330 pfd " " "
C913	R-CKD391J	390 pfd \pm 5% " "
C906, 911	R-CKD222M	0.0022 mfd \pm 20% 50 V. YP
C514, 603, 725, 901, 917	R-CKD472M	0.0047 mfd " " "
C607, 912, 916, 920, 921, 922, 923, 924	R-CKD103M	0.01 mfd " " "
C103, 108	R-CKD103Z	0.01 mfd \pm 80% -20% 50V YZ
C902	R-CKD223Z	0.022 mfd " " " "
C105, 106, 109, 302, 307, 308, 311, 315, 316, 504, 512, 601, 605, 904, 905, 918, 925	R-CKD393Z	0.039 mfd " " 25V "

<u>Reference No.</u>	<u>Teaberry Part No.</u>	<u>Description</u>
CAPACITORS (ceramic)		
C910, 919	R-CKD393Z	0.039 mfd +80%-20% 50 V. YM
C724	R-CKD104Z	0.1 mfd " " " "
CAPACITORS (Mylar)		
C716	R-CQS682M	0.0068 mfd ± 20% 50 V
C708, 713, 715, 726, 727	R-CQS103M	0.01 mfd " "
C312, 502, 507, 516	R-CQS223M	0.022 mfd " "
C304, 305, 309, 310, 7702, 7703, 709	R-CQS393M	0.039 mfd " "
C506, 719, 721	R-CQS683M	0.068 mfd " "
C728	R-CQS472Z	0.0047 mfd + 80%-20% 50 V.
CAPACITORS (Aluminum electrolytic)		
C701, 706, 711, 712		0.1 mfd 10 V.
CAPACITORS (Electrolytic)		
C602		1 mfd "
C501		1 mfd 50 V.
C503		3.3 mfd 16 V.
C511		3.3 mfd 50 V.
C515		4.7 mfd 16 V.
C714		4.7 mfd 10 V.
C313, 710		10 mfd "
C509		10 mfd 16 V.
C704		33 mfd 6.3 V.
C314, 508, 705		33 mfd 10 V.
C720		47 mfd 16 V.
C604		47 mfd 10 V.
C707		100 mfd 16 V.
C606, 717		220 mfd 10 V.
C722		470 mfd 16 V.
C723		10000 mfd 16 V.

<u>Reference No.</u>	<u>Teaberry Part No.</u>	<u>Description</u>
SX-1	176-0-311R112.	PLL Unit Assembly
1R501	4-221R804	Resistor Network
	4-231R514	Rotary Switch, CHANNEL SELECTOR SWITCH
SL, 4	4-231R815	Push Switch, ANL-OFF SWITCH and PA-CB SWITCH
S3	4-231R217	Slide Switch, DELTA TUNE SWITCH
	4-235R830	Socket, 3-pin, DC 12 V. Socket
	4-235R815	Socket, 4-pin, Microphone Socket
	4-235R829	Socket, PA Speaker Jack and External Speaker Jack
	4-235R806	Receptacle, Antenna Connector
	4-511R10471	RF POWER/S METER
PL2	4-612R816	Meter Lamp, 14 V/40 mA
PL1	4-612R10691	Channel Indicator Lamp, 6V/21mA
	4-151R813	Speaker, 3", 8-ohm
		Bushing, 3B type, for IC 701
		Bushing, H type, for O603 and Q903
		Mica Sheet, 1S-12F type, for IC701
		Mica Sheet, 1S-313B type, for Q903 and Q603
	4-243R20501	Power Cord Assembly
	4-243R205	Power Cord, 3-pin
	4-234R809	Fuse, 2 amp.
	176-6-472R145	Label, for ⊖ Power Cable identification
	176-6-472R175	Label, on Fuse Holder
	4-153R80701	Microphnne Assembly
	4-153R807	Microphone
	4-236R807	Plug
	176-2-142R115A	Badge
	176-2-382R125	Tip plug
	176-2-382R12300	Terminal, with white wire
	176-2-382R12301	Terminal, with red wire
	176-2-382R12302	Terminal, with violet wire
	176-2-382R12303	Terminal, with blue wire
	176-2-382R12304	Terminal, with green wire

<u>Reference No.</u>	<u>Teaberry Part No.</u>	<u>Description</u>
	176-2-382R12305	Terminal, with yellow wire
	176-2-382R12306	Terminal, with orange wire
	176-2-382R12307	Terminal, with brown wire
	176-2-382R12308	Terminal, with black wire