

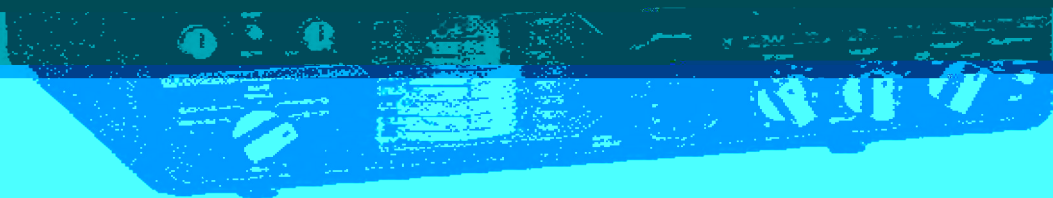
REALISTIC®

Service Manual

207

DX-200

**SOLID STATE
FIVE POINT**



CUSTOMER MANUFACTURING CORPORATION, BRANCO, A DIVISION OF TRAVEL CORPORATION

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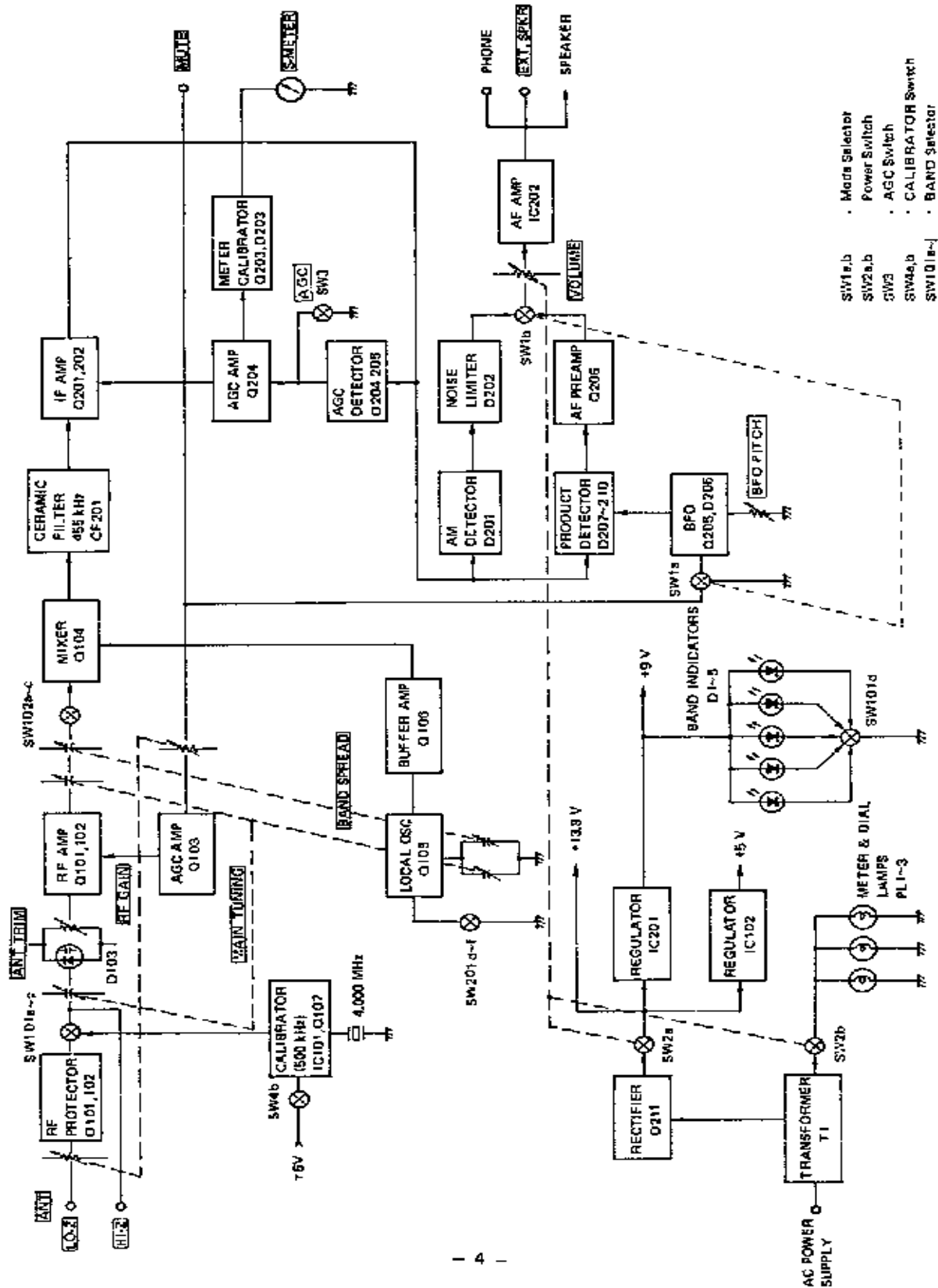
SPECIFICATIONS

Description	Condition	Nominal Spec.	Limit Spec
Frequency coverage	Band A Band B Band C Band D Band E		150 ~ 400 kHz 520 ~ 1620 kHz 1.55 ~ 4.5 MHz 4.5 ~ 13 MHz 13 ~ 30 MHz
Sensitivity (S + N)/N = 10 dB Output = 50 mW	250 kHz 1 MHz 2.5 MHz 7 MHz 21 MHz	1 μ V 1 μ V 1 μ V 1 μ V 1 μ V	2 μ V 2 μ V 2 μ V 2 μ V 2 μ V
Selectivity	-6 dB -40 dB	4 kHz \pm 8 kHz	3 kHz Min \pm 10 kHz Max
Image ratio	250 kHz 1 MHz 2.5 MHz 7 MHz 21 MHz	50 dB 40 dB 40 dB 25 dB 15 dB	40 dB 35 dB 35 dB 20 dB 10 dB
Signal to Noise ratio	1 mV at 7 MHz	40 dB	35 dB
Intermediate frequency		455 kHz	455 \pm 2 kHz
B.F.O. frequency	BFO PITCH at center	455 kHz	\pm 1 kHz
B.F.O. PITCH range		\pm 2.5 kHz	\pm 2 kHz Min
AGC action	10 dB Range at 7 MHz	50 dB	50 dB
Audio frequency response	AM 300 Hz 2 kHz	-8 dB -5 dB	-5 \pm 3 dB Not specified
Audio output power	Less than 10% T.H.D.	1.5 W	1 W
Hum and noise	AF Gain Minimum Speaker Phone	3 mV 0.3 mV	5 mV 1 mV
Calibrator	500 kHz	20 ppm	50 ppm
Dial calibration accuracy	Main Tuning Bandspread	+1 % \pm 0.1 %	\pm 3 % \pm 0.5 %
Oscillator drop-out	AC	80 V	100 V

- Semiconductors : 4 IC, 5 FET's, 8 transistors, 16 diodes and 5 LED's
- Reception : AM, AM/ANL and Single Side Band (USB/LSB)/CW
- Power source : 120 Volt AC 60 Hz for US and Canada, 220/240 Volt AC 50 Hz for Europe & Australia
- Antenna impedance : Low and High
- Phone jack matching impedance : More than 8 ohm
- Operating temperature : 0°C to 43°C
- Dimensions : 145(H) x 360(W) x 200(D) mm (5-3/4(H) x 14 1/2(W) x 8(D)")

NOTE: Nominal Specs represent the design specs; all units should be able to approximate these—some will exceed and some may drop slightly below these specs. Limit Specs represent the absolute worst condition which still might be considered acceptable; in no case should a unit perform to less than within any Limit Spec.

BLOCK DIAGRAM

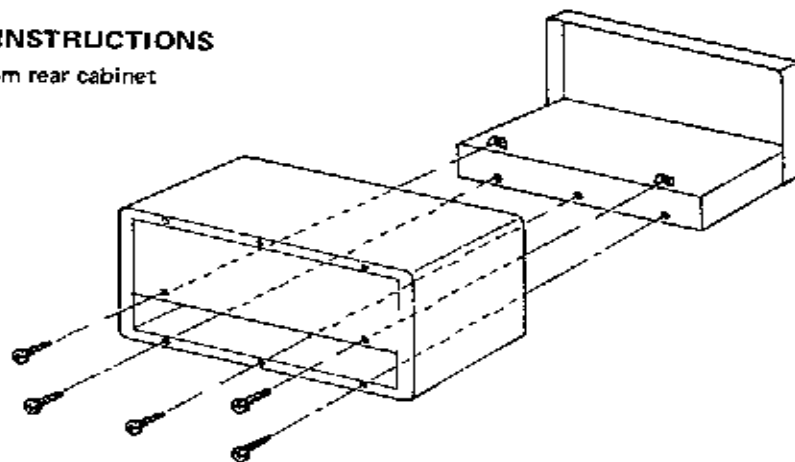


- SW1a,b Mode Selector
- SW2a,b Power Switch
- SW3 AGC Switch
- SW4a,b CALIBRATOR Switch
- SW1D1a-f BAND Selector

DISASSEMBLY

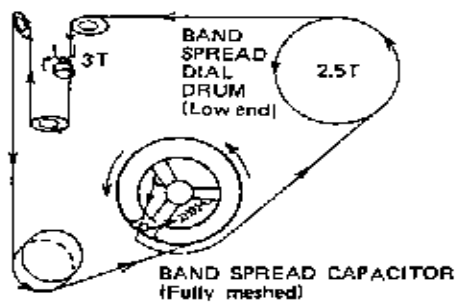
DISASSEMBLY INSTRUCTIONS

Remove 6 screws from rear cabinet

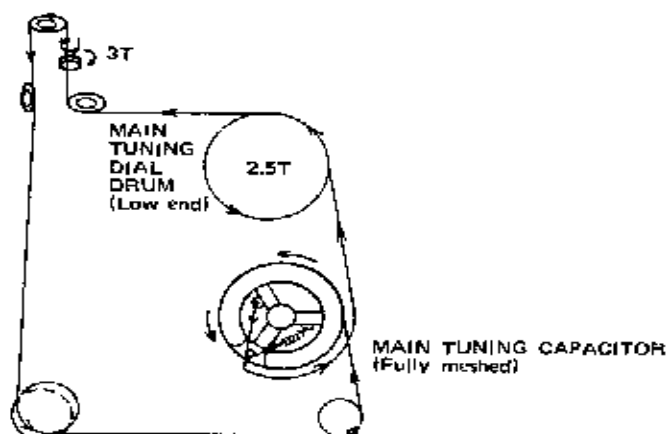


DIAL STRING ASSEMBLY

BAND SPREAD



MAIN



GENERAL ALIGNMENT INSTRUCTIONS

CAUTION: The DX 200 has been factory aligned and should seldom need realignment or readjustment unless component parts are changed

Test instruments required.

1. Signal Generator (150 kHz ~ 30 MHz)
2. AC VTVM
3. Oscilloscope
4. 8Ω dummy load
5. Frequency Counter 30 MHz

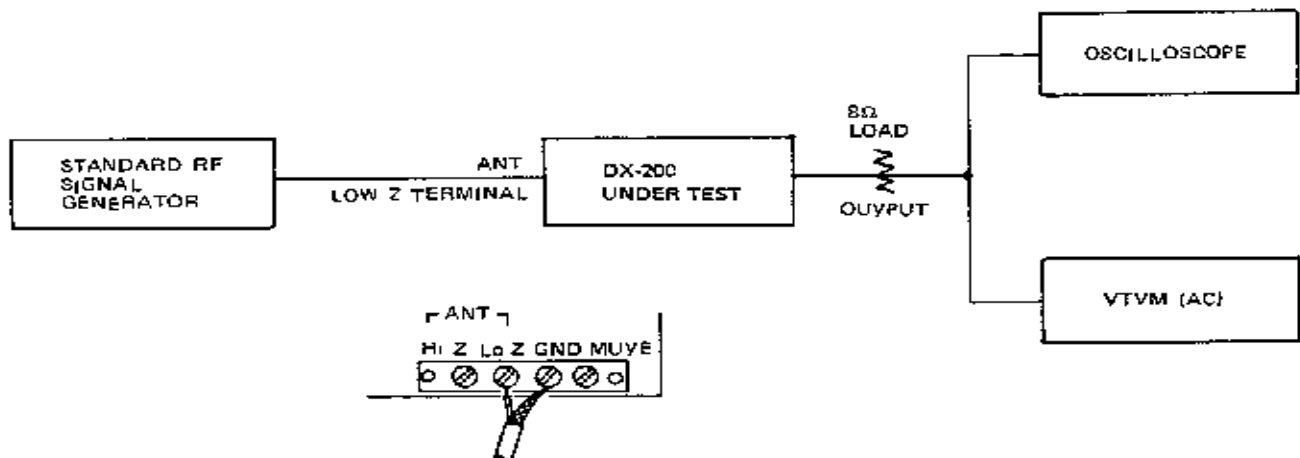
Preparation for Dial Tracking Alignment

- Note 1 Before attempting alignment, warm up the test instruments and the receiver for a minimum of 15 minutes to allow the components to stabilize.
- Note 2 During alignment, reduce the signal generator output as the VTVM readings become higher. Always use the lowest signal generator output.
- Note 3. A non-metallic alignment tool is required for complete alignment.
- Note 4. Before alignment confirm that, when the MAIN TUNING knob is rotated fully counterclockwise (main tuning capacitor fully meshed), the dial pointer rests exactly on the 0 mark on the LOG scale.

Step 1: Set the front panel controls as follows:

- BAND SPREAD — Set to "SET" mark.
- VOLUME — Adjust as necessary during alignment
- RF GAIN — Fully clockwise
- MODE SW — AM position

ALIGNMENT SET-UP DIAGRAM



DIAL TRACKING ALIGNMENT CHART

Step	Tune Signal Generator Frequency to: (Modulation 1kHz 30%)	Connect Signal Generator to:	Set Band Selector to:	Set Receiver Main Tuning	Adjust for Maximum VTVM or S Meter Reading:
IF STAGE					
1	455 kHz	Across TP101 and ground thru a 0.01 μ F capacitor	E	30 MHz	NOTE BELOW
2					T201 (WHT)
3					T202 (BLK)
4	Repeat Steps 2 and 3				
BAND A					
5	170 kHz	ANTENNA terminal (Low Z)	A	170 kHz	T111 (OSC coil)
6					T101 (ANT coil)
7	380 kHz			380 kHz	TC106 (OSC trimmer)
8					ANT trimmer, VR2
9	380 kHz	380 kHz	TC101 (RF trimmer)		
10					
11	Repeat steps 5 thru 10 until no improvement is observed.				
BAND B					
12	500 kHz	ANTENNA terminal (Low Z)	B	600 kHz	T112 (OSC coil)
13					T102 (ANT coil)
14	1400 kHz			1400 kHz	TC107 (OSC trimmer)
15					ANT trimmer, VR2
16	1400 kHz	1400 kHz	TC102 (RF trimmer)		
17					
18	Repeat steps 12 thru 17 until no improvement is observed				
BAND C					
19	1.7 MHz	ANTENNA terminal (Low Z)	C	1.7 MHz	T113 (OSC coil)
20					T103 (ANT coil)
21	4 MHz			4 MHz	TC108 (OSC trimmer)
22					ANT trimmer VR2
23	4 MHz	4 MHz	TC103 (RF trimmer)		
24					
25	Repeat steps 19 thru 24 until no improvement is observed				
BAND D					
26	5 MHz	ANTENNA terminal (Low Z)	D	5 MHz	T114 (OSC coil)
27					T104 (ANT coil)
28	12 MHz			12 MHz	TC109 (OSC trimmer)
29					ANT trimmer, VR2
30	12 MHz	12 MHz	TC104 (RF trimmer)		
31					
32	Repeat steps 26 thru 31 until no improvement is observed				

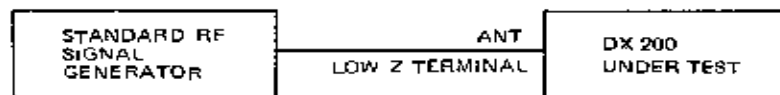
NOTE If s-meter or audio circuit does not operate, use TP201 connecting a DC VTVM (3V range, - to TP201 and + to ground).

BAND E					
33	14 MHz	ANTENNA terminal (Low Z)	E	14 MHz	T115
34					T105
35	28 MHz			T110	
36				TC110	
37				ANT trimmer, VR2	
38				TC105	
39	Tune the generator to 28.910 MHz and check for the image frequency. If the image frequency does not appear at this point, repeat steps 33 thru 38, being careful to align to the correct frequency.				

NOTE. The image frequency is 910 kHz above the signal frequency.

S-METER ALIGNMENT

Step 1. Connect signal generator to Lo Z terminal



- Step 1. Set signal generator to 7 MHz, 3 μ V
- Step 3. Tune the radio so as to receive the 7 MHz signal with maximum sensitivity
- Step 4. Set signal generator output to 100 μ V
- Step 5. Adjust VR202 to get full scale reading on the S meter.
- Step 6. Reduce signal generator output to 3 μ V.
- Step 7. Adjust VR201 to get S-9 reading on the S-Meter.

CALIBRATOR ADJUSTMENT

- Step 1. Connect a frequency counter across TP102 and ground
- Step 2. Set the frequency counter gate time 1 second
- Step 3. Adjust TC111 to get 500.000 kHz \pm 10Hz reading on the frequency counter

Note In case if no frequency counter is available, tune the radio to 2.5, 5, 10, or 15 MHz (WWV or WWVH), and adjust TC111 to obtain zero-beat.

BFO ADJUSTMENT

- Step 1. Set calibrator to 500 kHz (ON)
- Step 2. Set the tuning dial to 1 MHz, and use the band spread dial to obtain maximum gain on the S-Meter
- Step 3. Set BFO PITCH to 12 o'clock position
- Step 4. Set MODE switch to SSB/CW.
- Step 5. Adjust T203 to obtain zero-beat
- Step 6. Connect a tester (DC 12V range) across R227 (BFO side) and ground
- Step 7. It should read 0V at 8 o'clock BFO PITCH, and more than 8V at 4 o'clock position
- Step 8. Disconnect the tester and check for the beat is more than 2 ~ 3 kHz at minimum and maximum positions of the BFO PITCH.

NOTE Alignment of T204 is not required if happens to be adjustable only because of ease of parts procurement and does not need any adjustment

TRDUBLESHDDTING

Sympton	Possible Cause
1) Dial lamp, S-meter lamp and/or Band indicator does not light and/or set fails to operate when power is on.	A) Faulty power cord. B) Defective power transformer. C) Defective power switch. D) Defective D211 and/or IC201 E) Defective lamp.
2) All lamps light but no sound on any band	A) Defective speaker B) Defective phone and/or EXT SPKR Jack. C) Defective IC202 and/or IC201 D) Defective Mode switch SW1.
3) No audio on any band.	A) Faulty local oscillator and/or associated circuit components B) Faulty RF and/or IF stage and/or associated circuit components.
4) SSB/CW mode does not function.	A) Faulty mode switch. B) Defective Q205 and/or associated circuit components. C) Defective D207-210 and/or associated circuit components. D) Defective Q206 and/or associated circuit components
5) S meter not operating	A) Defective S-meter B) Defective Q203, VR202 and/or Associated circuit components
6) AGC does not function	A) D204,206 and/or associated circuit components
7) ANT TRIMMER does not function.	A) Defective VR2,D103 and/or associated circuit components.
8) AGC FAST and SLOW does not function.	A) Defective SW3, C217 and/or associated circuit components.
9) BFO PITCH does not function	A) Defective VR3, D206 and/or associated circuit components
10) CALIBRATOR does not function	A) Faulty CALIBRATOR switch SW4. B) IC102 and associated circuit components. C) IC101, Q107 and associated circuit components.

PARTS LIST

CAPACITORS				
Ref. No.	Value	Voltage (V)	Tolerance (%)	Material
C1	0.01 μ F	50	+80-20	Ceramic
C101	39pF	50	10	Ceramic
C102	0.01 μ	25	+80-20	Ceramic
C103	220pF	50	10	Ceramic
C104	10pF	50	\pm 0.5pF	Ceramic
C105	270pF	50	10	Ceramic
C106	Not used			
C107	0.047 μ F	25	+80-20	Ceramic
C108	0.01 μ F	25	+80-20	Ceramic
C109	0.047 μ F	25	+80-20	Ceramic
C110	0.047 μ F	25	+80-20	Ceramic
C111	22pF	50	10	Ceramic
C112	270pF	50	10	Ceramic
C113	0.01 μ F	50	10	Mylar
C114	0.01 μ F	25	+80-20	Ceramic
C115	150pF	50	10	Ceramic
C116	10pF	50	10	Ceramic
C117	470pF	50	5	Polystyrene
C118	1000pF	50	5	Polystyrene
C119	5pF	50	\pm 0.5pF	Ceramic
C120	3300pF	50	5	Polystyrene
C121	5pF	50	\pm 0.5pF	Ceramic
C122	47pF	50	10	Ceramic
C123	270pF	50	10	Ceramic
C124	100pF	50	10	Ceramic
C125	1000pF	50	5	Polystyrene
C126	0.047 μ F	25	+80-20	Ceramic
C127	0.047 μ F	25	+80-20	Ceramic
C128	3pF	50	+0.5pF	Ceramic
C129	3pF	50	+0.5pF	Ceramic
C130	56pF	50	10	Ceramic
C131	27pF	50	10	Ceramic
C132	47 μ F	16	-10+50	Electrolytic
C201	0.01 μ F	25	+80-20	Ceramic
C202	0.01 μ F	25	+80-20	Ceramic
C203	4pF	50	\pm 0.5pF	Ceramic
C204	0.047 μ F	50	10	Mylar
C205	0.047 μ F	25	+80-20	Ceramic
C206	0.047 μ F	25	+80-20	Ceramic
C207	0.047 μ F	50	10	Mylar
C208	0.047 μ F	25	+80-20	Ceramic
C209	0.01 μ F	25	+80-20	Ceramic
C210	0.01 μ F	25	+80-20	Ceramic
C211	0.1 μ F	50	10	Mylar
C212	0.01 μ F	50	10	Mylar
C213	0.1 μ F	50	10	Mylar
C214	10 μ F	15	-10+50	Electrolytic
C215	100 μ F	15	-10+50	Electrolytic
C216	10 μ F	15	-10+50	Electrolytic
C217	33 μ F	15	-10+50	Electrolytic
C218	Not used			
C219	47pF	50	10	Ceramic
C220	0.01 μ F	25	+80-20	Ceramic
C221	220pF	50	10	Ceramic
C222	1000pF	50	5	Polystyrene
C223	100pF	50	10	Ceramic
C224	22pF	50	10	Ceramic
C225	0.01 μ F	50	10	Mylar
C226	0.01 μ F	50	10	Mylar
C227	47pF	50	10	Ceramic

Ref. No.	Value	Voltage (V)	Tolerance (%)	Material
C228	0.01 μ F	50	10	Mylar
C229	2200 μ F	25	-10+50	Electrolytic
C230	470 μ F	16	-10+50	Electrolytic
C231	1 μ F	50	-10+75	Electrolytic
C232	270pF	50	10	Ceramic
C233	4.7 μ F	35	-10+75	Electrolytic
C234	100 μ F	16	-10+50	Electrolytic
C235	270pF	50	10	Ceramic
C236	100 μ F	16	-10+50	Electrolytic
C237	47 μ F	16	-10+50	Electrolytic
C238	47 μ F	16	-10+50	Electrolytic
C239	0.1 μ F	50	10	Mylar
C240	1 μ F	50	-10+75	Electrolytic
C241	0.01 μ F	25	+80-20	Ceramic

COILS & TRANSFORMERS			
Ref No	Description	RS Part No	MFR's Part No
V101	A band ANT Coil	CA-5253	6PSA-145
T102	B band ANT Coil	CA-5284	6PSA-146
T103	C band ANT Coil	CA-5255	6PNA-147
V104	D band ANT Coil	CA-5256	6PNA-148
T105	E band ANT Coil	CA-3006	6PNA-077
T106	A band RF Coil	CA-5263	6PSA-145
T107	B band RF Coil	CA-5269	6PSR-149
T108	C band RF Coil	CA-4472	6PNR-072
T109	D band RF Coil	CA-4473	6PNR-075
T110	E band RF Coil	CA-5267	6PNR-078B
T111	A band OSC Coil	CA-5269	6PSO-150
T112	B band OSC Coil	CA-5270	6PSO-151
T113	C band OSC Coil	CA-4467	6PNO-073
V114	D band OSC Coil	CA-4468	6PNO-076
V115	E band OSC Coil	CA-4469	6PNO-079
T201	455 kHz IFT	CA-5274	10SSO-132
T202	455 kHz IFT	CA-5275	10SSI-133
T203	8pF OSC Coil	CA-5273	10SSO-131A
T204	8FD Coil	CA-5275	10SSI-133
L101	Coil (1 mH)	CB-2434	LF5-102K
L102	Coil (1.5 μ H)	CA-5272	LF4-1R5K

DIODES			
Ref. No.	Description	RS Part No.	MFR's Part No.
D1	LED	L-0983	TLR124
D2	LED	L-0983	TLR124
D3	LED	L-0983	TLR124
D4	LED	L-0983	TLR124
D5	LED	L-0983	TLR124
D101	Silicon	DX-0270	1S1556
D102	Silicon	DX-0270	1S1556
D103	Varicap	DX-1362	FC53M
D104	Germanium	DX-0161	IN50
D105	Germanium	DX-0161	IN60
D201	Germanium	DX-0161	IN60
D202	Germanium	DX-0161	IN60
D203	Zener	DX-1216	H2-483
D204	Germanium	DX-0161	IN60
D205	Germanium	DX-0161	IN60
D206	Varicap	DX-1362	FC53M
D207	Germanium	DX-0161	IN60
D208	Germanium	DX-0161	IN60
D209	Germanium	DX-0161	IN60
D210	Germanium	DX-0161	IN60
D211	Silicon Bridge	DX 1212	1B451

INTEGRATED CIRCUITS			
Ref No.	Type No.	RS Part No.	Substitute Type No.
IC101	DM7490A	MX-4307	SN7490A
IC102	TA78L005P	MX-4308	
IC201	TA78L009P	MX-3778	
IC202	μPC575CZ	MX-3393	

RESISTORS					
NOTE: Unless otherwise specified all resistors are carbon film, wattage 1/4W, tolerance ±5%					
Ref. No.	Value	RS Part No.	Wattage (W)	Tolerance (%)	Material
R1	10kΩ	ERD-50TJ-103	1/2		
R2	100Ω	ERD-25PJ-101			
R3	1.8MΩ	ERD-50TJ-185	1/2		
R101	Not used				
R102	56Ω	ERD-25PJ-660			
R103	100kΩ	ERD-25PJ-104			
R104	100kΩ	ERD-25PJ-104			
R105	100kΩ	ERD-25PJ-104			
R106	47kΩ	ERD-25PJ-473			
R107	10kΩ	ERD-25PJ-103			
R108	56kΩ	ERD-25PJ-563			
R109	100Ω	ERD-25PJ-101			
R110	22Ω	ERD-25PJ-220			
R111	6.8kΩ	ERD-25PJ-682			
R112	10kΩ	ERD-25PJ-103			
R113	100kΩ	ERD-25PJ-104			
R114	100Ω	ERD-25PJ-101			
R115	100kΩ	ERD-25PJ-104			
R116	100kΩ	ERD-25PJ-104			
R117	220Ω	ERD-25PJ-221			
R118	3.3kΩ	ERD-25PJ-332			
R119	33Ω	ERD-25PJ-330			
R120	470kΩ	ERD-25PJ-474			
R121	470Ω	ERD-25PJ-471			
R122	47Ω	ERD-25PJ-470			
R123	100kΩ	ERD-25PJ-104			
R124	470Ω	ERD-25PJ-471			
R125	270Ω	ERD-25PJ-271			
R126	150kΩ	ERD-25PJ-154			
R127	1kΩ	ERD-25PJ-102			
R128	270Ω	ERD-25PJ-271			
R201	3.3kΩ	ERD-25PJ-332			
R202	2.2kΩ	ERD-25PJ-222			
R203	82kΩ	ERD-25PJ-823			
R204	18kΩ	ERD-25PJ-183			
R205	47Ω	ERD-25PJ-470			
R206	470Ω	ERD-25PJ-471			
R207	220Ω	ERD-25PJ-221			
R208	3.3kΩ	ERD-25PJ-332			
R209	10kΩ	ERD-25PJ-103			
R210	22Ω	ERD-25PJ-220			
R211	470Ω	ERD-25PJ-471			
R212	100Ω	ERD-25PJ-101			
R213	220Ω	ERD-25PJ-221			
R214	470Ω	ERD-25PJ-471			
R215	3.3kΩ	ERD-25PJ-332			
R216	470kΩ	ERD-25PJ-474			
R217	33kΩ	ERD-25PJ-333			
R218	10kΩ	ERD-25PJ-103			
R219	470kΩ	ERD-25PJ-474			
R220	470kΩ	ERD-25PJ-474			
R221	1.5kΩ	ERD-25PJ-152			
R222	39kΩ	ERD-25PJ-393			
R223	220Ω	ERD-25PJ-221			
R224	100kΩ	ERD-25PJ-104			

Ref. No.	Value	MFR's Part No.	Watt- age (W)	Toler- ance (%)	Material
R226	10k Ω	ERD-25PJ-103			
R226	Not used				
R227	66k Ω	ERD-25PJ-563			
R228	100k Ω	ERD-25PJ-104			
R229	4.7k Ω	ERD-25PJ-472			
R230	3.3k Ω	ERD-25PJ-332			
R231	470k Ω	ERD-25PJ-474			
R232	4.7k Ω	ERD-25PJ-472			
R233	1k Ω	ERD-25PJ-102			
R234	470k Ω	ERD-25PJ-474			
R235	47k Ω	ERD-25PJ-473			
R236	150k Ω	ERD-25PJ-154			
R237	120k Ω	ERD-25PJ-124			
R238	270 Ω	ERD-25PJ-271			
R239	Not used				
R240	100k Ω	ERD-25PJ-104			

VARIABLE CAPACITOR			
Ref. No.	Description	RS Part No.	MFR's Part No.
TC101	Trimmer	C-1047	ECV-1ZW20X53N
TC102	Trimmer	C-1047	ECV-1ZW20X53N
TC103	Trimmer	C-1047	ECV-1ZW20X53N
TC104	Trimmer	C-1047	ECV-1ZW20X53N
TC105	Trimmer	C-1047	ECV-1ZW20X53N
TC106	Trimmer	C-1047	ECV-1ZW20X53N
TC107	Trimmer	C-1047	ECV-1ZW20X53N
TC108	Trimmer	CA-4464	AT1-6
TC109	Trimmer	CA-4464	AT1-6
TC110	Trimmer	CA-4464	AT1-6
TC111	Trimmer	C-1048	ECV-1ZW30X32E

TRANSISTORS			
Ref. No.	Type No.	RS Part No.	Substitute Type No.
Q101	35K45		
Q102	2SK19 (GR)		
Q103	2SC1815 (Y)		
Q104	35K45		
Q105	2SK19 (GR)		
Q106	2SC1815 (Y)		
Q107	2SC1815 (Y)		
Q201	2SC1815 (Y)		
Q202	2SC1815 (Y)		
Q203	2SC1815 (Y)		
Q204	2SC1815 (Y)		
Q205	2SK19 (GR)		
Q206	2SC1815 (Y)		

VARIABLE RESISTORS			
Ref. No.	Description	RS Part No.	MFR's Part No.
VR201	Semi-Fixed (50k Ω)	P-6601	EVN-JOA-A00-B54
VR202	Semi-Fixed (1k Ω)	P-6602	EVN-JOA-A00-B13

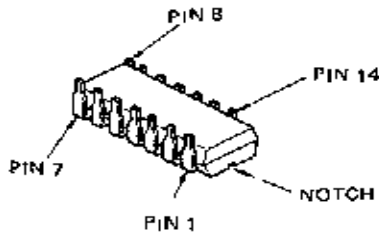
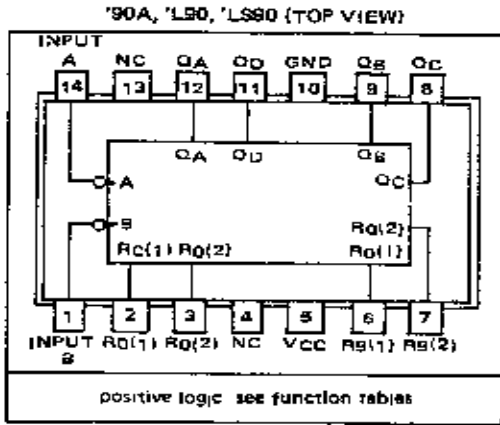
OTHER ELECTRICAL PARTS

Ref. No.	Description	RS Part No.	MFR's Part No
J1	① Phone Jack	J-1013	S-G7652
J2	② Ext Speaker Jack	J-0840	S-G8022
	③ 4P Screw Terminal Strip (ANT/GND/MUTE)	J-4633	UB 1004
	④ Signal Strength Meter	M-0447	49C 334 01
	⑤ Speaker Ω	S-4875	EAS-85P19S
PL1, 2	⑥ Dial Lamp (14V/40 mA)	L 1117	ML-L6-141F
PL3	⑦ Meter Lamp (14V, 50 mA)	L-1118	L50-14V/50 mA
	Cord Strain Relief	H8-0705	SR3P 4
	Pressure Terminal	J 4634	1 SD

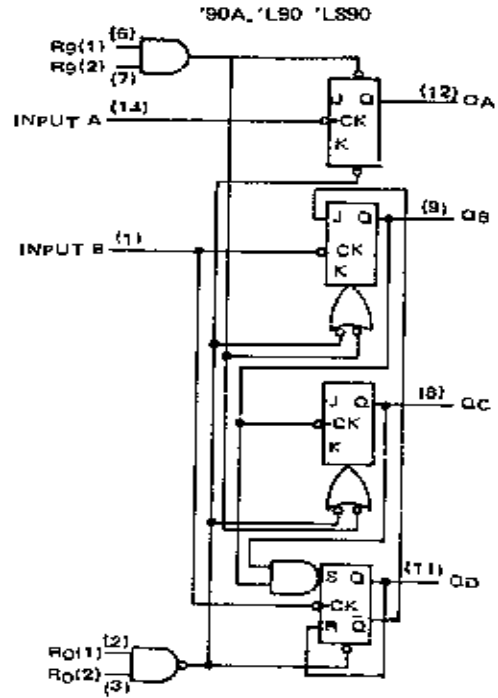
MISCELLANEOUS			
Ref. No.	Description	RS Part No.	MFR's Part No.
(21)	AL Barnder		
(15)	Back Board	Z-5340	GE-79C-0365
(22)	Bracket for Dial Lamp P.C. Board	HB 9643	GE-79D-0353
(24)	Cabinet	Z 5339	GE-79A-0351
	Chassis		GE 79A 0350
	Cloth for Slide switch		GE 79D 0499
	Dial Spring 5 $\frac{1}{2}$ x 3 ϕ		
	Dial String 0.7 ϕ 1 set 260 cm		
(25)	Drum Shaft	HB-9646	GE 79D 0358
(26)	Foot (H) $\ell = 16$	F 1157	No 7107
(27)	Foot (L) $\ell = 11$	F-0250	No. 7105
(28)	Front Escutcheon Ass'y	Z 5341	GA-79D-0560
	Front Escutcheon		GE-79A-0278
	MAIN Dial window		GE-79D 0279
	BAND SPREAD window		GE-79D-0280
	Cursor		GE-79D-0281
(15)	Knob for BAND, RF GAIN, VOLUME MODE	K-3330	GE-23D-7070
(30)	Knob for ANT TRIM, BFO PITCH	K-3327	GE-23D-7038
(31)	Knob MAIN TUNING, BAND SPREAD	K-3906	GE 23D-7068
(32)	Lamp Grommet	HB 1182	BU687
(33)	Lamp reflector		GE-79D-0658
(34)	LED P.C BOARD Holder	HB-9644	GE-79D-0441
(35)	Main Dial Drum	D 0447	GE-79D 0282A
(36)	Meter Holder	HB-9642	GE-79D-0352
(36)	Model Label	HB-9646	GE-79D-0139
			GE 79D 0449
			GE-79D 0448
			GE 79D-0410
(37)	Pulley (L) 61 ϕ for MAIN and SPREAD VC	RA 2776	No 1005
(38)	Pulley (M) 19 5 ϕ	D-0266	No 7009
	Pulley (S) 13 ϕ	RA-2777	No 7006
	Pulley Shaft 18 mm 3 ϕ	RA-2773	GE-79D-0359
(15)	Pulley Shaft 40 mm 6 ϕ	RA-2774	GE-79D-0360
(40)	Pulley Shaft 40 mm Hex	RA 2776	GE-79D 0442
(41)	Remote Switch (Control)	S 1381	ESA 3038B
(42)	Remote Switch (Operation)	S-1380	ESA-23475
(43)	Rubber cushion for Speaker	HB-5031	GE 15D-2689
	Shield Case for Main VC	HB 8641	GE 79D-0355
(44)	Spread Dial Drum	D-0438	GE-79D 0282B
(45)	Tuning Dial Shaft Ass'y	D-5397	GA-79A-0681
	Tuning Shaft		GE-79D-0356
	Bearing		GE-79D-0357
	E-ring 4 ϕ		
	VC shaft holder		GE-79D 0615
	Wire Clip		No 412

INTEGRATED CIRCUIT IDENTIFICATION

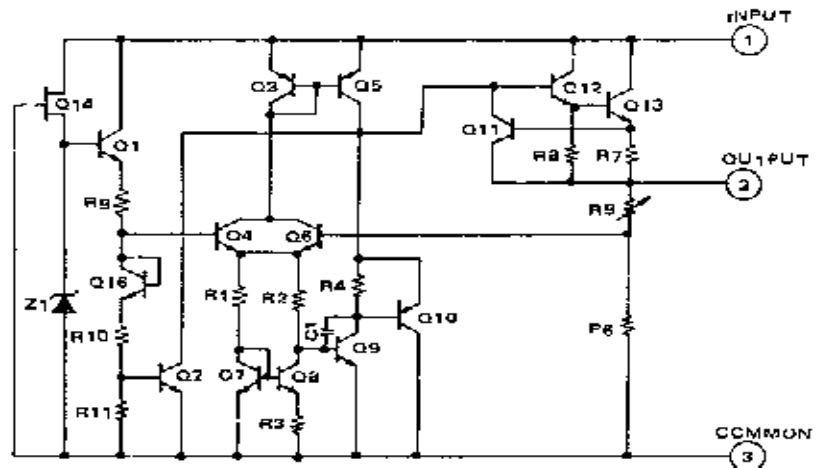
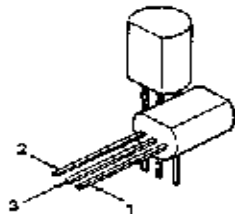
SN7490A



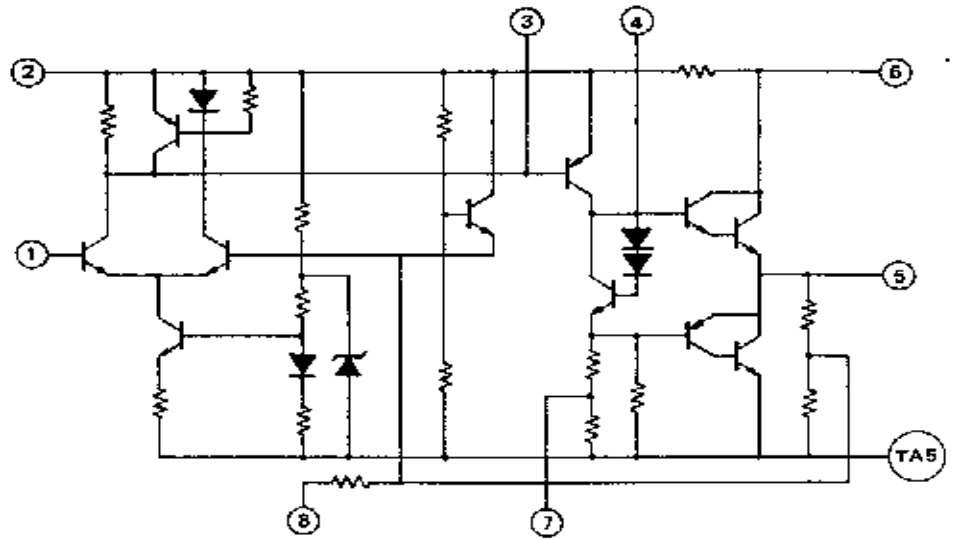
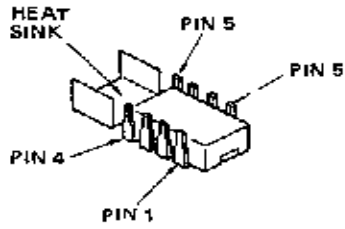
functional block diagrams



TA78L005P/TA78L008P



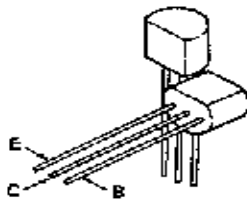
μPC575C2



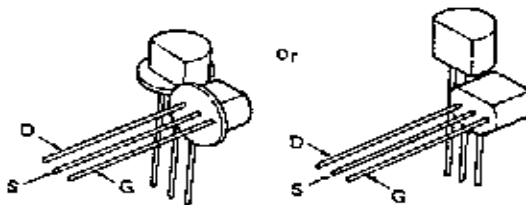
SEMICONDUCTOR LEAD IDENTIFICATION

- (A) : 2SC1815(Y)
- (B) : 2SK19(GR)
- (C) : 3SK45

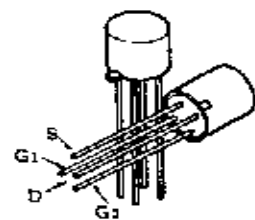
(A)



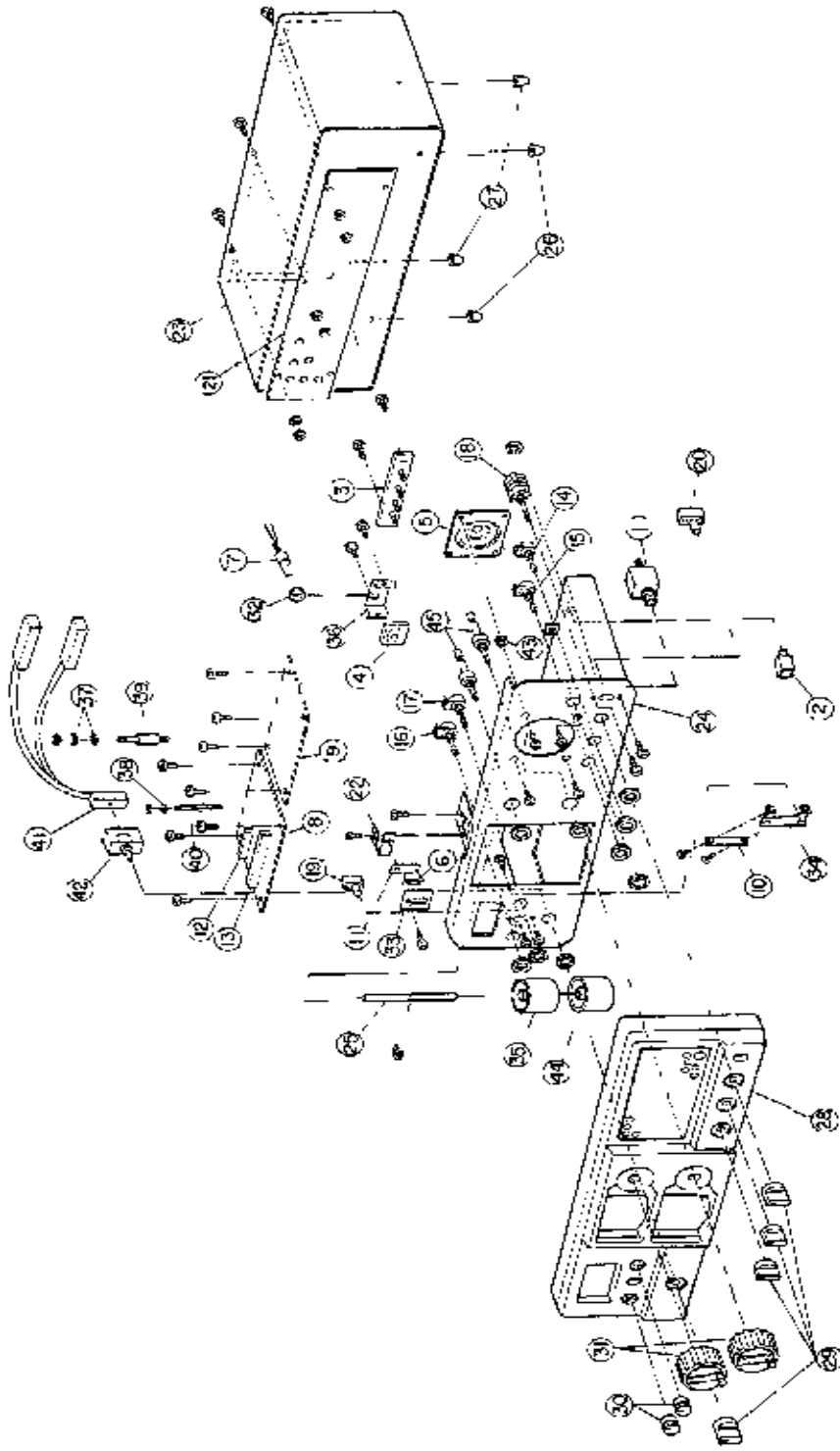
(B)



(C)

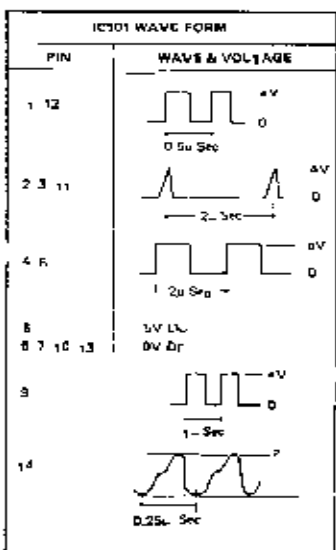
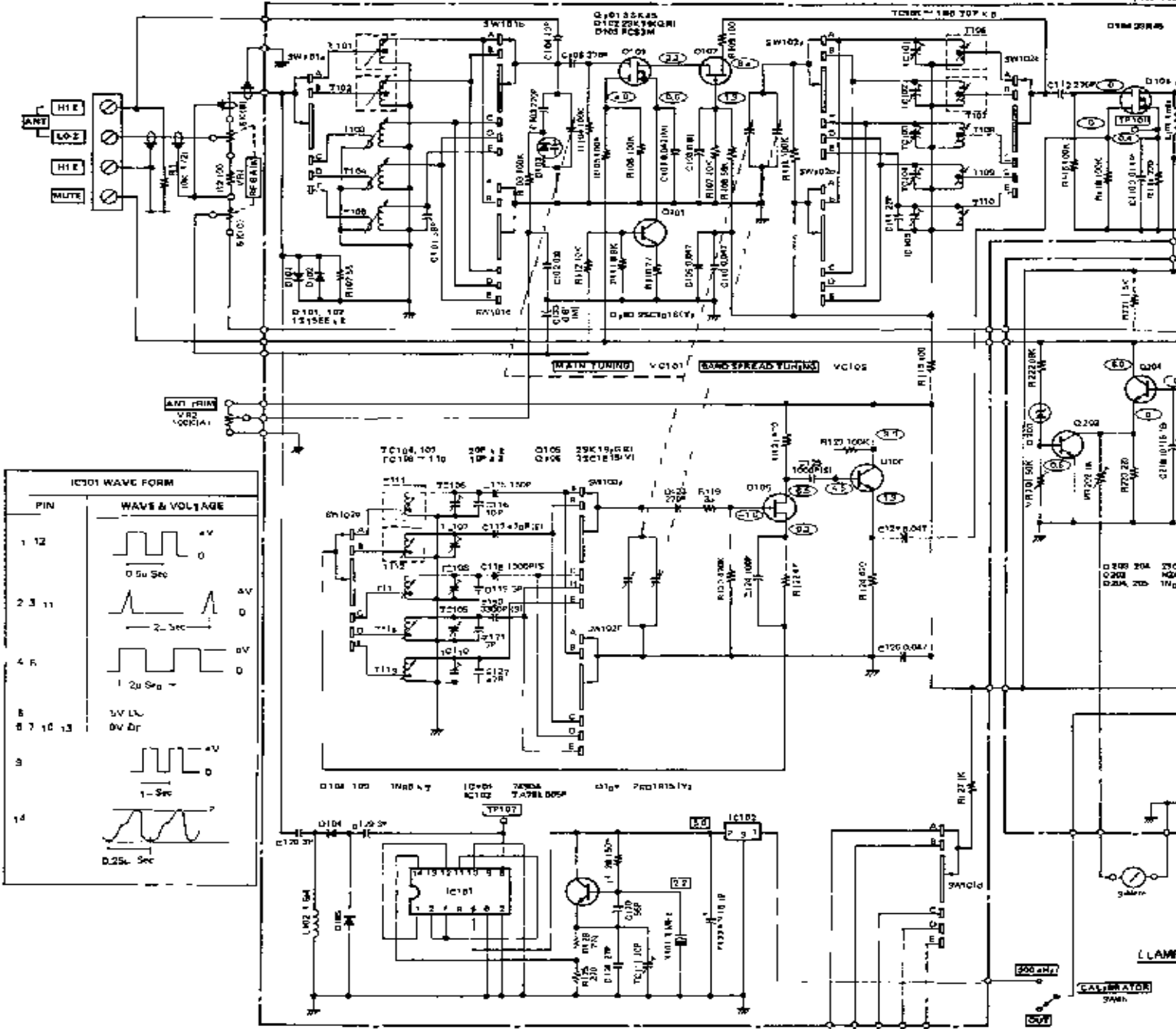


EXPLODED VIEW



SCHEMATIC DIAGRAM

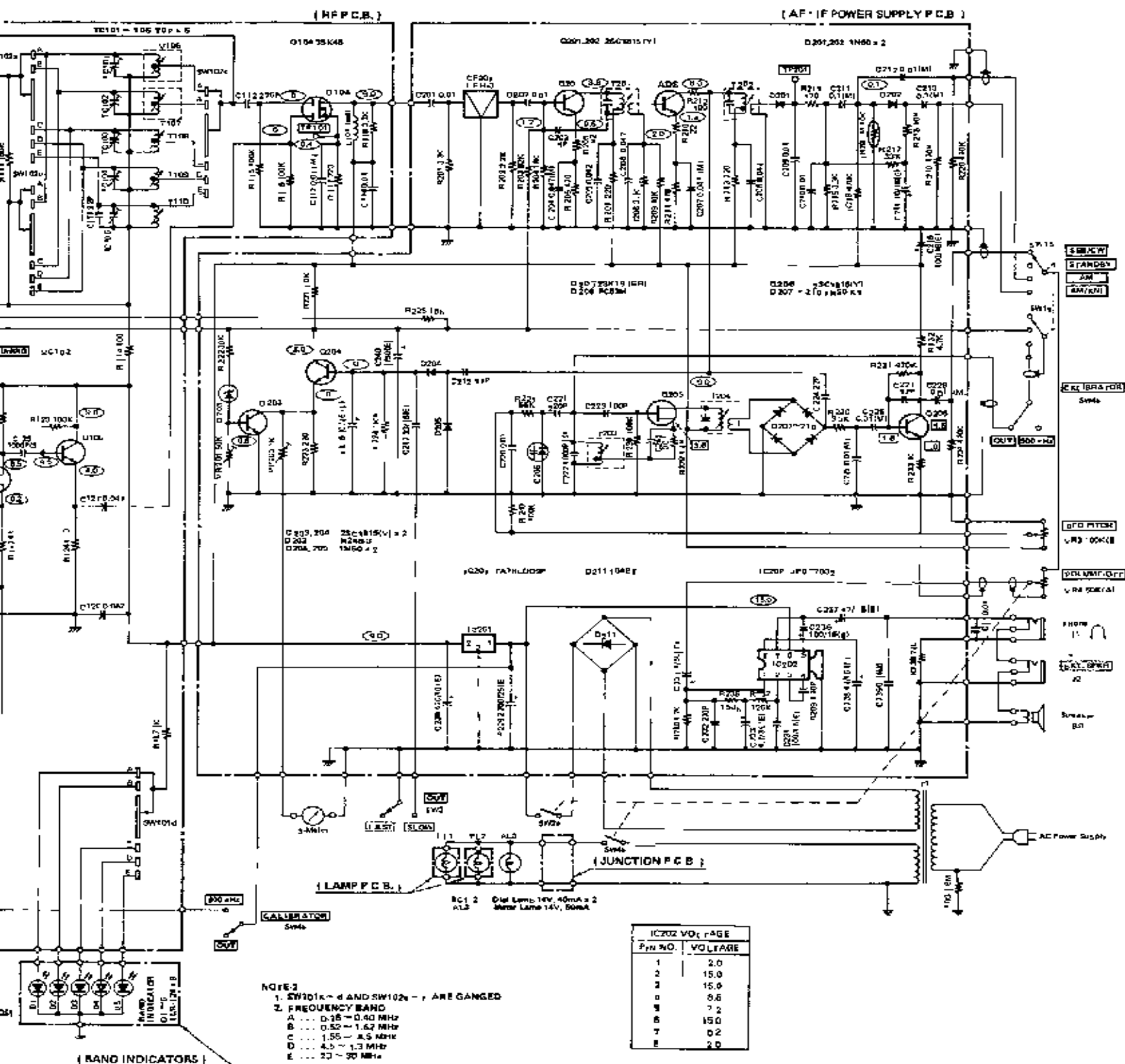
(RF PC)



- NOTE 1:**
1. ALL RESISTANCE VALUES ARE SHOWN IN OHMS UNLESS OTHERWISE SPECIFIED. $1K = 10^3$ $M = 10^6$ OHMS
 2. ALL RESISTOR WATTAGES ARE SHOWN IN WATT UNLESS OTHERWISE SPECIFIED.
 3. ALL CAPACITANCE VALUES ARE SHOWN IN MICROPARADES UNLESS OTHERWISE SPECIFIED. $\mu =$ MICRO MICROPARADES
 4. (E) ... ELECTROLYTIC CAPACITOR
 5. (M) ... MYLAR CAPACITOR
 6. (SI) ... POLYESTERENE CAPACITOR
 7. UNLESS OTHERWISE SPECIFIED ALL CAPACITORS ARE CERAMIC.
 8. RATING OR TYPE NUMBER OF COMPONENT PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT WITHOUT NOTICE
 9. THIS SYMBOL INDICATES DC VOLTAGE MEASURED BY VTVM AT THE CONDITION OF NO SIGNAL, VOLUME MINIMUM, B.F. GAIN CONTROL MAXIMUM AND CALIB. A/D R "OUT" POSITION
 10. THIS SYMBOL INDICATES CALIBRATOR "500 Hz"

- NOTE 2:**
1. SW101 - 4-4
 2. FREQUENCY
 3. 0.5-1
 4. 0.5-1
 5. 4.5-1
 6. 10-30

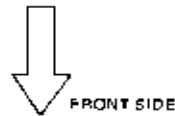
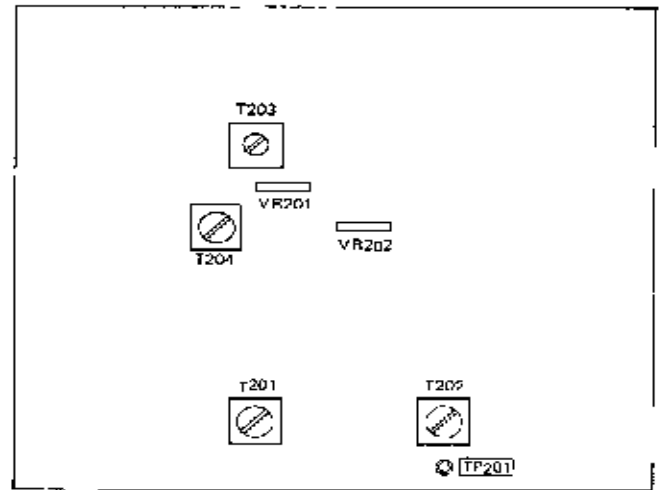
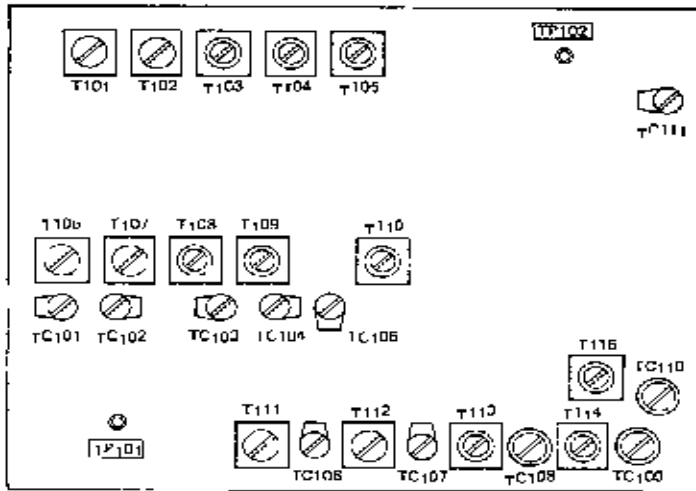
[BAND INDICATORS]




NOTE 3
 1. SW101-K-4 AND SW102-K-7 ARE GANGED
 2. FREQUENCY BAND
 A ... 0.25 - 0.40 MHz
 B ... 0.50 - 1.62 MHz
 C ... 1.55 - 4.5 MHz
 D ... 4.5 - 13 MHz
 E ... 20 - 30 MHz

IC202 VOCT RANGE	
PIN NO.	VOLTAGE
1	2.0
2	15.0
3	15.0
4	0.6
5	7.2
6	15.0
7	0.2
8	2.0

ALIGNMENT POINTS



RADIO SHACK  A DIVISION OF TANDY CORPORATION
U.S.A.: FORT WORTH, TEXAS 76102
CANADA: BARRIE, ONTARIO L4M 4W5

TANDY CORPORATION

AUSTRALIA	BELGIUM	U K
280 316 VICTORIA ROAD RYDALMERE N.S.W. 2116	PARC INDUSTRIEL DE NANINNE 5140 NANINNE	BILSTON ROAD WEDNESBURY, WEST MIDLANDS WS10 7JN