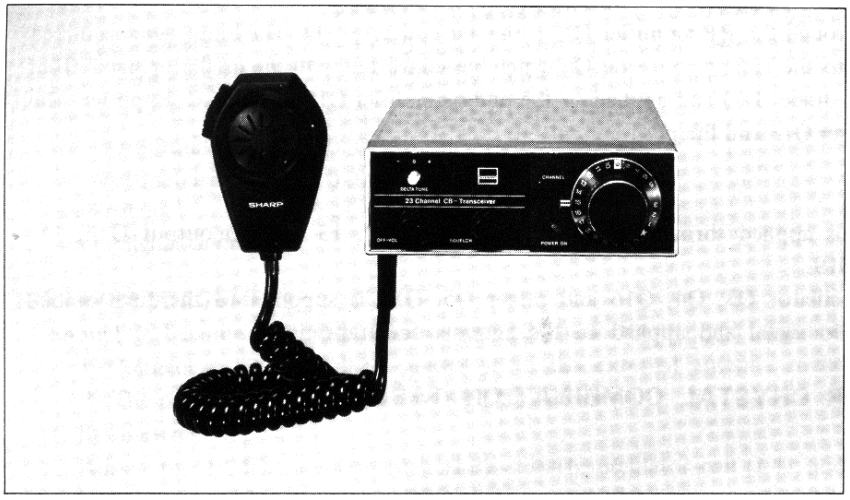
SHARP

OUTSTANDING RECEPTION THE WORLD OVER

SERVICE MANUAL

CB-550U
AD-111



23 Channel CB Transceiver

MODEL CB-550U

Power Supply Unit

MODEL AD-111

SPECIFICATIONS

CB-550U

Transmitter section

DC Power input	5W (maximum)
Frequency range	27MHz Citizens Band
Channels	23chs. Crystal controlled Synthesizer
Type of crystal	HC-18U ± 0.005% tolerance (at –4°F ~ +140°F)
Transmitter modulation	100% (maximum)
Range boost	Yields high average modulation at average voice levels
Antenna matching	Nominal 50 ohms
Carrier deviation	Not greater than ±800Hz nominal on (exceeds F.C.C., D.O.C., etc. requirements)
Harmonic suppression	Exceeds 50dB

Receiver section

Audio power output	2 Watts per channel, min. RMS, at 8 ohms from 400Hz to 1.3 kHz, with no more than 10% total harmonic distortion.
Sensitivity	0.7μv/m for 10dB S + N/N ratio at 30% at 1000Hz modulation
Channels	23chs. Crystal controlled Synthesizer
Type of crystal	HC-18U ± 0.005% tolerance (at –4°F ~ +140°F)
Selectivity	6dB down at ±3kHz; 50dB down at ±10kHz.
Intermediate frequency	1st IF: 11.275MHz, 2nd IF: 455kHz
Circuit type	Dual conversion superheterodyne: crystal frequency synthesizer provides 23 crystal controlled transmit and receive channels. Delta tuning of ±1.5kHz on each channels plus mechanical filter.
Auxiliary circuits	Automatic noise limiter (ANL), Variable squelch

General

Power source	DC 12.0V Nominal (DC 10.8 to 15.6V) negative or positive ground
Antenna	50 ohm external antenna for car or base operation.
Speaker	2¾" x 2¾" P.D.S. 8-ohm Imp.
Microphone	Press talk dynamic microphone (500 ohm)
Accessories	Microphone hanger. Mobile mounting bracket. (L-type) Mounting screws. DC power cable (2.2 amp. fused)
Dimensions	2"(H) x 5-3/4"(W) x 7-3/4"(D)
Weight	4 lbs.

AD-111

Power source:	120V, 60 Hz
Output:	12V DC, 1.0 Ampare
Dimensions:	5-1/2"(W) x 3"(H) x 6-3/8"(D)
Weight:	3.6 lbs.

SHARP ELECTRONICS CORPORATION

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GENERAL DESCRIPTION (Refer to Figure 1)

RECEIVER

The input from the antenna is applied through the RF amplifier Q1 to the 1st converter Q2. The input signal is mixed with the oscillator signal from Q5 and applied to the second converter Q6 which has converted with the oscillator signal from Q9. The IF output from Q8 is detected by the diode (D7) and applied to the audio amplifier Q12 and A.V.C. amplifier. The amplified audio signal is applied through the driver Q13 and the push-pull output Q14, 15.

TRANSMITTER

The audio signal from the microphone is applied through the audio amplifier Q12, 13 and the output Q14, 15 to the final stage Q20 and the drive stage Q19.

The carrier signal synthesized in the oscillator Q3, Q4, Q16 and mixer Q5, Q17 is supplied to the final amplifier Q20 where it is modulated with the audio signal and applied to the antenna for transmission.

SYNTHESIZER CRYSTAL COMBINATION TABLE

Frequency of Transmitter

[A] group + [B] group – 11.275 MHz

1st Local Oscillator Frequency of Receiver

[A] group + [B] group

2nd Local Oscillator Frequency of Receiver

Delta Tuning Center Frequency ..... 11.730 MHz

Delta Tuning + ... Center Frequency + 1.5 kHz

Delta Tuning – ..... Center Frequency – 1.5 kHz

Channel	[A] Group	[B] Group	[A] + [B]	[A] + [B] – 11.275 MHz
1	23.290 MHz	14.950(MHz)	38.240(MHz)	26.965(MHz)
2	〃	14.960	38.250	26.975
3	〃	14.970	38.260	26.985
4	〃	14.990	38.280	27.005
5	23.340 MHz	14.950	38.290	27.015
6	〃	14.960	38.300	27.025
7	〃	14.970	38.310	27.035
8	〃	14.990	38.330	27.055
9	23.390 MHz	14.950	38.340	27.065
10	〃	14.960	38.350	27.075
11	〃	14.970	38.360	27.085
12	〃	14.990	38.380	27.105
13	23.440 MHz	14.950	38.390	27.115
14	〃	14.960	38.400	27.125
15	〃	14.970	38.410	27.135
16	〃	14.990	38.430	27.155
17	23.490 MHz	14.950	38.440	27.165
18	〃	14.960	38.450	27.175
19	〃	14.970	38.460	27.185
20	〃	14.990	38.480	27.205
21	23.540 MHz	14.950	38.490	27.215
22	〃	14.960	38.500	27.225
23	〃	14.990	38.530	27.255

ALIGNMENT

EQUIPMENT REQUIRED

Signal Generator :	400kHz to 500kHz and 25MHz to 30MHz band 1000Hz mod. AM
DC Milliammeter :	0 to 500mA DC with π-network, RF filter
Audio Outputmeter :	0 to 5000mW, with 8 ohm dummy load
RF V.T.V.M. :	0 to 100MHz, 0 to 500mV
RF Outputmeter :	0 to 5W at 27MHz. 50 ohm
DC Voltmeter :	0 to 3/15V DC
Oscilloscope:	
Audio Signal Generator:	

RECEIVER ALIGNMENT

Should it become necessary at any time to check the receiver alignment of this set proceed as follows.

1) Connect a 50 ohm signal generator to the external antenna socket.
2) The power supply should be 13.8V DC.

1. Synthesizer Alignment
   Adjust the 14MHz oscillator coil (L8), 23MHz oscillator coil (L4), and 38MHz filter coil (L5, L6, L7) so that the voltage on TP1 are at maximum.
2. Second Local Oscillator Alignment
   Adjust the second oscillator coil (T5) so that the voltage on TP2 is about 160mV.
3. 455kHz-IF Alignment (Refer to Figure Ⓐ)
   1) Connect the audio output meter across the speaker voice coil lugs.
   2) Set the signal generator to 455kHz, modulated 30% at 1000Hz, and connect it to test point TP2 through the dummy (0.04 MFD + 5K ohm in series)
   3) The ground lead of the generator should be connected to the ground of EXT. antenna socket.
   4) Adjust IF transformer T2, T3, T4 and MF1 for maximum indication on the output meter, reducing the signal generator to maintain mid-scale deflection at needed.
4. First IF Alignment
   1) Leave all connections and settings as in step 3.
   2) Set the signal generator to 11.275MHz modulated 30% at 1000Hz, and connect it to test point TP1 through the dummy (0.01MFD)
   3) Adjust the 1st IF transformer T1 and coil L3 for maximum indication on the output meter.
5. RF Alignment
   1) Leave all connections and settings as in step 3.
   2) Set the signal generator to 27MHz, modulated 30% at 1000Hz, and connect it to the antenna.
   3) Adjust RF coils L2 and L1 for maximum indication on the output meter.
6. After these adjustments repeat steps 3, 4 and 5 until the best results are obtained.

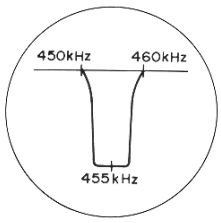


Figure Ⓐ

TRANSMITTER ALIGNMENT

Should it become necessary at any time to check the transmitter alignment of this set, proceed as follows.

1) Connect DC milliammeter thru RF filter (27MHz) to test point Ⓐ and Ⓑ
2) The power supply should be 13.8V DC.
3) Connect a 50 ohm RF wattmeter to antenna socket.
4) Before adjusting the surface of core should be identical with the top of the bobbin.

1. Oscillator Alignment
   Adjust the 27MHz filter coil (L9, L10, L11, L12) so that the driver current is at maximum.
2. Transmitter Amplifier Alignment
   Adjust T6 so that the driver current is at maximum.
3. Driver Alignment
   Adjust the driver coil (T7) so that the driver current is at minimum.
4. Matching Alignment
   Adjust the matching coil (L14) so that the collector current should be 370mA.
5. π-Filter Alignment
   Adjust the π-filter coil (L15) to obtain the maximum RF output.

6. Modulation Alignment
   1) Connect a dummy resistor (50 ohm, 5W) across the external antenna socket.
   2) Connect a loop (1 ~ 2 turn) across the oscilloscope and allow the loop to come near the dummy resistor.
   3) Connect the audio signal generator (1000Hz, 6mV) to the test points (TP-11 and TP-12) on the P.W. board.
   4) Depress the PUSH-TO-TALK switch on the microphone and adjust the variable resistor (R74) so that the wave form on the oscilloscope becomes as illustrated in Figure Ⓑ .

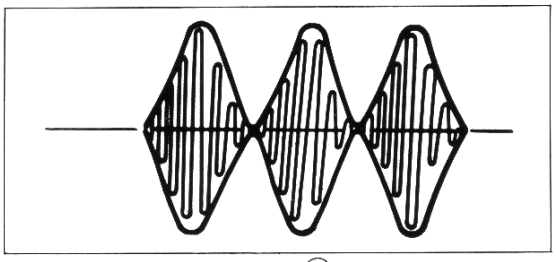


Figure Ⓑ

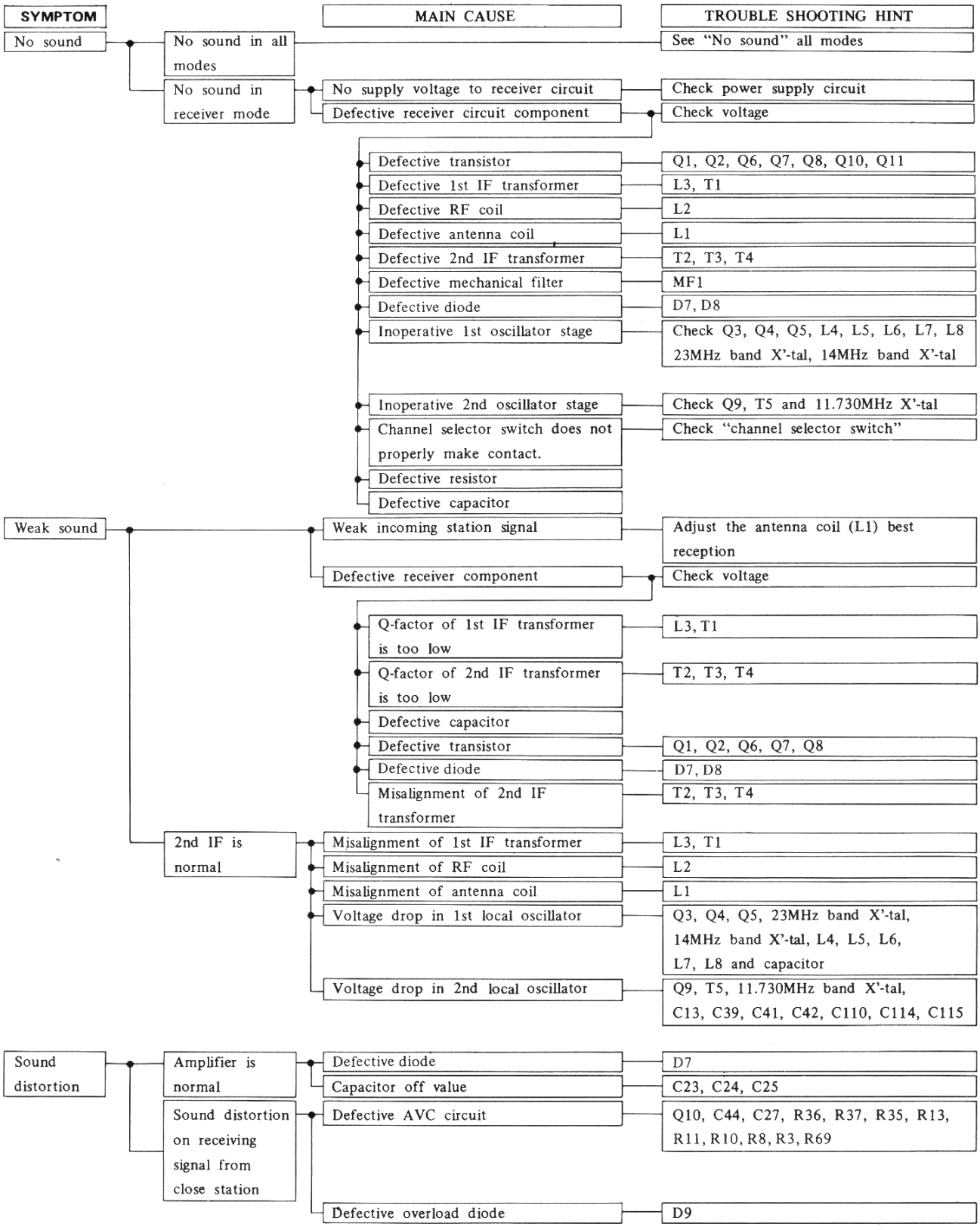
TROUBLE SHOOTING GUIDE (1)

(1) ALL OPERATIONAL MODES

SYMPTOM		MAIN CAUSE	TROUBLE SHOOTING HINT
No sound	Power supply is normal	Broken or shorted speaker cord, cross-over network or voice coil.	Check speaker cord and voice coil
	No power, LED is off.	Defective power switch (SW4)	Check power switch (SW4)
		Defective choke transformer	Check choke transformer (L18)
		Defective fuse	Check fuse (F1)
		Defective capacitor	C57, C68, C108
	LED is on, but no sound	Defective power supply circuit	Check voltage
		Defective audio amplifier	Check voltage
		Defective transistor	Q12, Q13, Q14, Q15
		Defective capacitor	C62, C63, C121, C51, C119, C50, C60 C66, C67, C70, C65, C122
		Defective transformer	T8, T9
		Defective squelch circuit	Check voltage
		Defective transistor	Q11
		Defective squelch volume	R2
		Defective zener diode	D3
		Defective capacitor	C47, C49, C124
Weak sound		Defective power supply circuit	Check power switch (SW4)
		Defective audio amplifier circuit	Check and compare voltages of each transistor pair
		Capacitor off value, leaky or shorted	
		Weak transistor	Q12, Q13, Q14, Q15
Sound distortion	Substitute speaker is normal	Defective speaker	Replace speaker
		Insufficient voltage of power circuit	Check voltage
		Defective audio amplifier circuit	
		Weak transistor	Q12, Q13, Q14, Q15
Noise	Resonant speaker	Defective speaker	Replace speaker
	Volume noise	Defective volume control circuit	R1, C25, C51
Control has no effect	Volume control	Defective R1 or circuit	
	Squelch control	Defective R2 or squelch circuit	

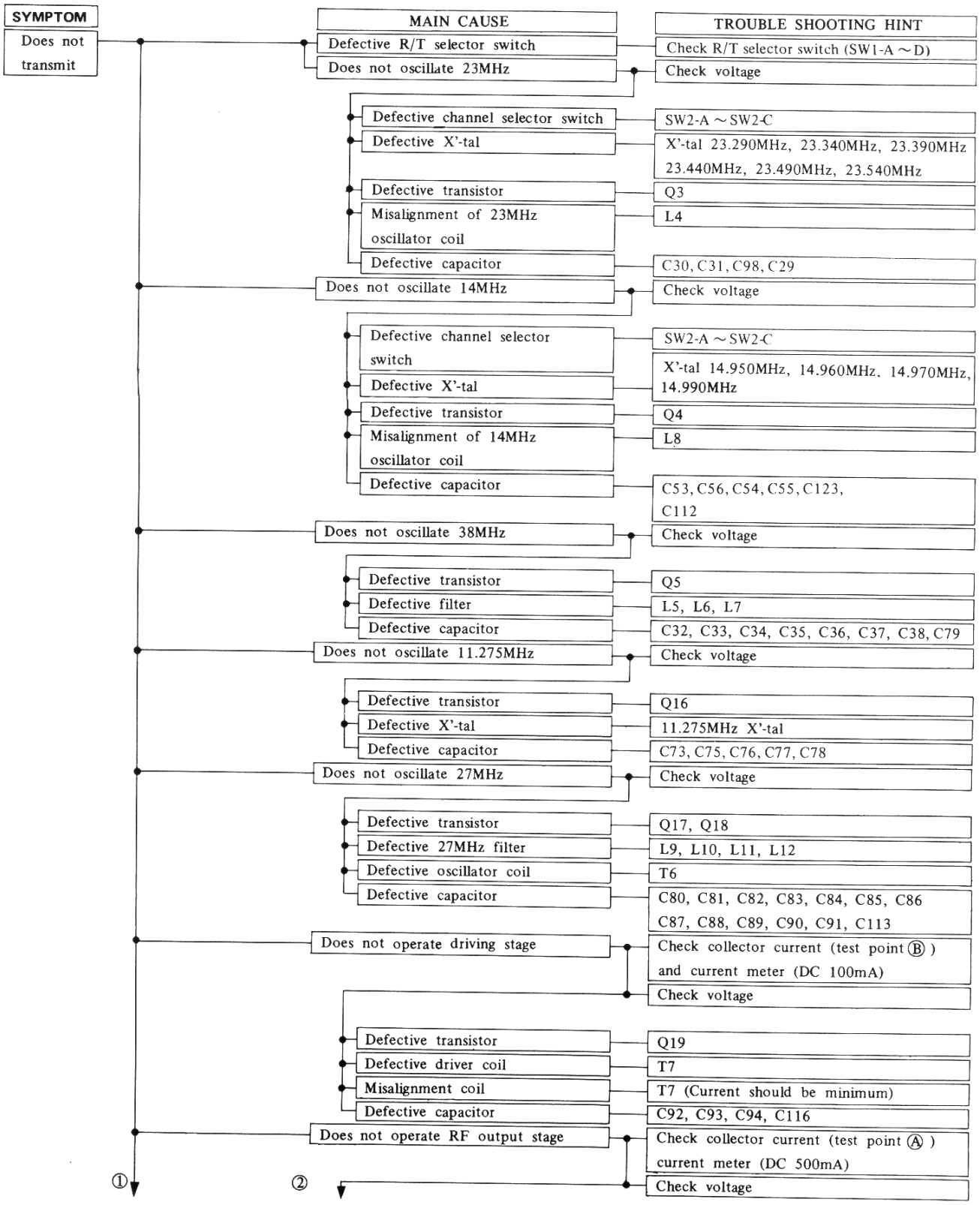
TROUBLE SHOOTING GUIDE (2)

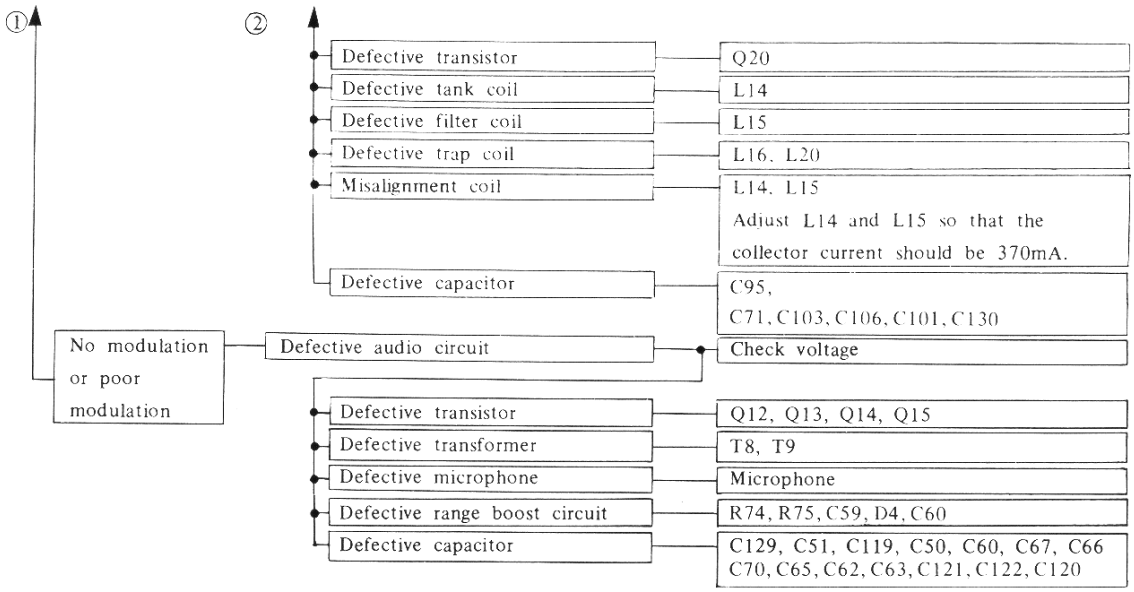
(2) RECEIVER



TROUBLE SHOOTING GUIDE (3)

(3) TRANSMITTER





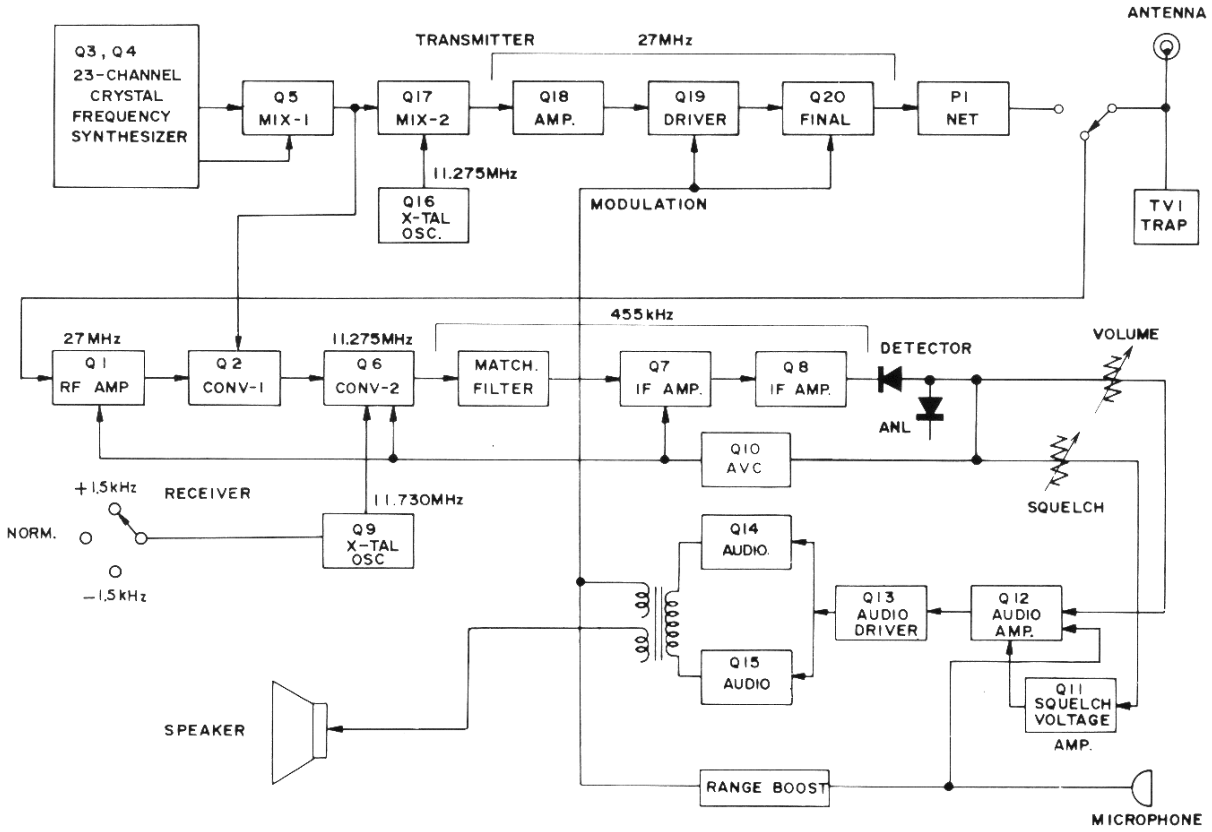


Figure 1 BLOCK DIAGRAM

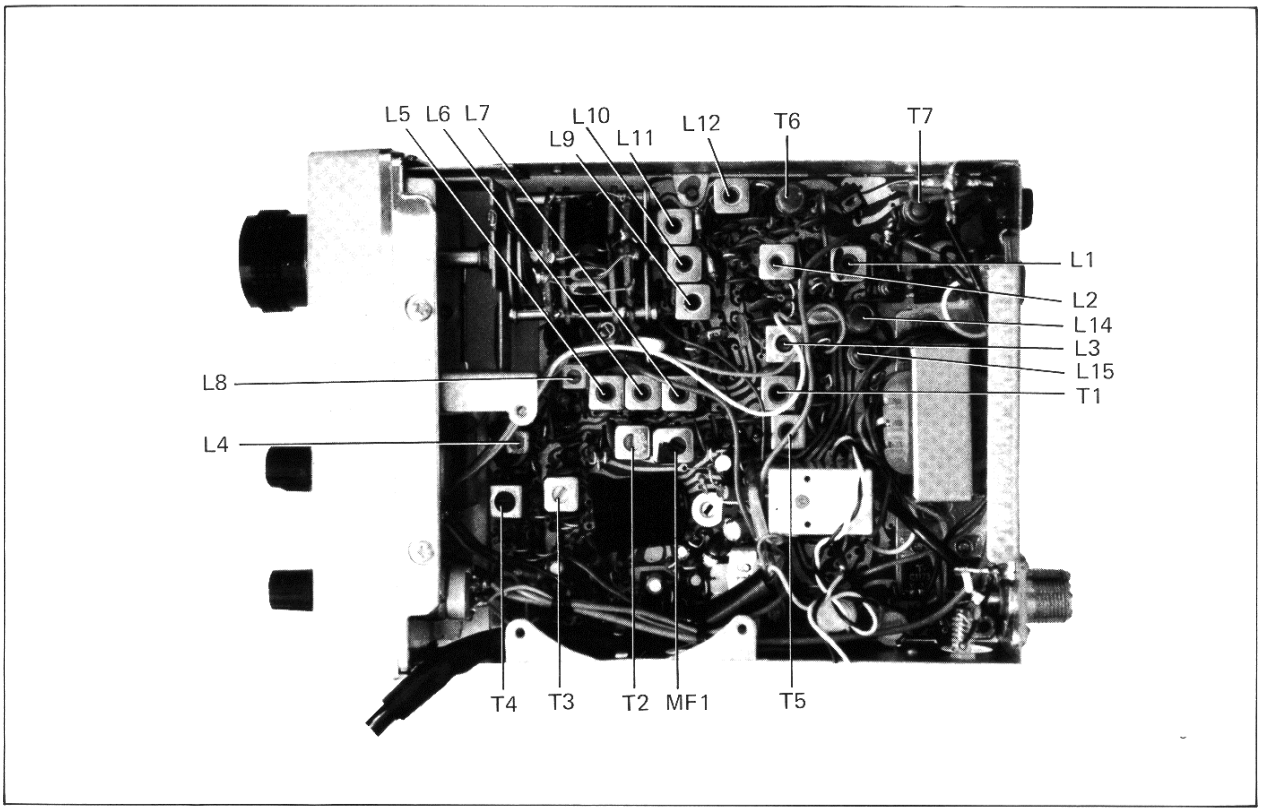


Figure 2 ALIGNMENT POINTS

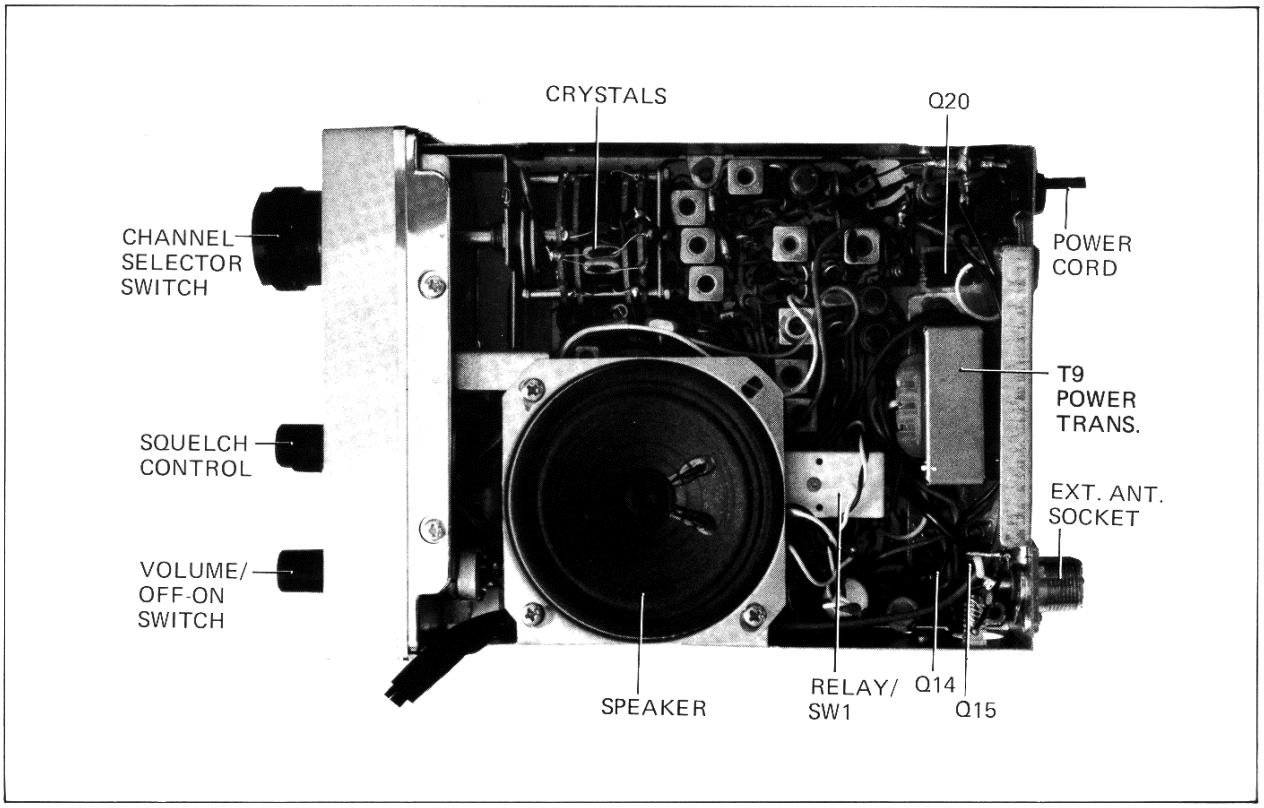


Figure 3 CHASSIS LAYOUT

REPLACEMENT PARTS LIST

"HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following informations.

1. MODEL NUMBER
2. REF. NO.
3. PART NO.
4. DESCRIPTION

REF. NO.	PART NO.	DESCRIPTION
	TRANSISTORS	
Q1	2SC784 (R) or (T)	RF Amplifier
Q2	2SC394 (O)	1st Mixer
Q3	2SC394 (Y)	Synthesizer, 23MHz Oscillator
Q4	2SC372 (O)	Synthesizer, 14MHz Oscillator
Q5	2SC394 (Y)	Synthesizer, Mixer
Q6	2SC372 (O) or (Y)	2nd Mixer
Q7	2SC372 (O) or (Y)	1st IF Amplifier
Q8	2SC372 (O) or (Y)	2nd IF Amplifier
Q9	2SC372 (O) or (Y)	2nd Oscillator (11.730MHz)
Q10	2SC373 (GR)	AVC Amplifier
Q11	2SC733 (BL)	Squelch Amplifier
Q12	2SC732 (BL) or (GR)	Audio Amplifier
Q13	2SC735 (Y) or (O)	Audio Driver
Q14, Q15	2SC1173 (Y)	Audio Output (Matched Pair)
Q16	2SC372 (O)	Transmitter Oscillator, 11.275MHz
Q17	2SC735 (Y)	Synthesizer, Transmitter Mixer
Q18	2SC1166 (Y)	Transmitter, Amplifier
Q19	2SC495 (T)	Transmitter, Driver
Q20	2SC1237	Transmitter, Final
	DIODES	
D1	1S2076	Static Protector
D3	WZ-100	Zener Diode, Voltage Regulator (10V ±0.5V)
D4	1N60	Range Booster
D5	1S1209	Varistor
D6	1N60	AVC
D7	1N60	AM Detector
D8	1N60	Automatic Noise Limiter
D9	1N60	Rectifier, AVC Voltage
D10	1S2076	Static Protector
D11	VHPGL30PR//-1	Light Emitting Diode, Power
	COILS	
L1	RCILA0124AFL	Antenna
L2	RCILR0076AFZZ	RF
L3	RCILR0098AFZZ	1st IF
L4	RCILB0252AFZZ	Synthesizer, 23MHz Oscillator
L5	RCILR0099AFZZ	Synthesizer, 38MHz Filter
L6	RCILR0100AFZZ	Synthesizer, 38MHz Filter
L7	RCILR0101AFZZ	Synthesizer, 38MHz Filter
L8	RCILB0253AFZZ	Synthesizer, 14MHz Oscillator
L9, L10, L11	RCILR0102AFZZ	Synthesizer, 27MHz Filter
L12	RCILR0103AFZZ	Synthesizer, 27MHz Filter
L13	RCILC0011AFZZ	RF Choke
L14	RCILR0135AFZZ	Matching, Transmitter
L15	RCILR0055AFZZ	π-Filter, Transmitter
L16	RCILR0180AFZZ	54MHz Trap
L17	RCILC0024AFZZ	RF Choke (27μH)
L18	RTRNC0003AFZZ	Power Choke
L19	RCILC0023AFZZ	Choke
L20	RCILR0180AFZZ	81MHz Trap
MF1	RFILA0004AFZZ	Mechanical Filter
	TRANSFORMERS	
T1	RCILB0030AFZZ	1st IF
T2	RCILI0088AFZZ	Matching (Mechanical Filter)
T3	RCILI0095AFZZ	2nd IF
T4	RCILI0096AFZZ	3rd IF
T5	RCILB0030AFZZ	2nd Oscillator
T6	RCILB0221AFZZ	Transmitter, 1st Amplifier
T7	RCILR0037AFZZ	Transmitter, Driver
T8	RTRNI0037AFZZ	Driver
T9	RTRNS0855AFZZ	Output
	CRYSTALS	
	RCRSB0005AFZZ	14.950MHz
	RCRSB0006AFZZ	14.960MHz
	RCRSB0007AFZZ	14.970MHz
	RCRSB0008AFZZ	14.990MHz
	RCRSB0009AFZZ	23.290MHz
	RCRSB0010AFZZ	23.340MHz
	RCRSB0011AFZZ	23.390MHz
	RCRSB0012AFZZ	23.440MHz
	RCRSB0013AFZZ	23.490MHz
	RCRSB0014AFZZ	23.540MHz
	RCRSB0015AFZZ	11.275MHz, Transmitter
	RCRSB0016AFZZ	11.730MHz, Receiver
	PACKAGED CIRCUIT	
M1	RMPTA0037AFZZ	Capristor, 1K ohm +.02MFD

PARTS LIST

CAPACITORS

Unless otherwise specified capacitors are 30V, +80 −20%, Ceramic Type

REF. NO.	PART NO.	DESCRIPTION
C1	VCQYKU1HM102M	.001MFD, 50V, ±20%, Mylar
C2, C3, C4, C5	VCKYPU1SD103Z	.01MFD
C6	VCCSPU1HL330J	33PF, 50V, ±5%, Ceramic
C7, C8	VCKYPU1SD103Z	.01MFD
C9	VCCSBU1HL221J	220PF, 50V, ±5%, Ceramic
C10	VCCSPU1HL5R0C	5PF, 50V, ±0.25PF, Ceramic
C11	VCCSBU1HL221J	220PF, 50V, ±5%, Ceramic
C12	VCKYPU1SD103Z	.01MFD
C13	VCQYKU1HM223M	.022MFD, 50V, ±20%, Mylar
C14	VCKZPU1HF103Z	.01MFD, 50V, +80 −20%, Ceramic
C15	VCCSBU1HL511J	510PF, 50V, ±5%, Ceramic
C16	VCKYPU1SD103Z	.01MFD
C17	VCQYKU1HM223M	.022MFD, 50V, ±20%, Mylar
C18	VCKZPU1HF103Z	.01MFD, 50V, +80 −20%, Ceramic
C19	VCCSPU1HL1R0C	1PF, 50V, ±0.25PF, Ceramic
C20	VCKYPU1SD103Z	.01MFD
C21	VCQYKU1HM333M	.033MFD, 50V, ±20%, Mylar
C22	VCKYPU1SD103Z	.01MFD
C23	VCQYKU1HM103M	.01MFD, 50V, ±20%, Mylar
C28	VCQYKU1HM222M	.0022MFD, 50V, ±20%, Mylar
C29	VCCSPU1HL150J	15PF, 50V, ±5%, Ceramic
C30	VCCSBU1HL101J	100PF, 50V, ±5%, Ceramic
C31	VCCSBU1HL101J	100PF, 50V, ±5%, Ceramic
C32	VCKYPU1SD103Z	.01MFD
C33	VCKZPU1HF103Z	.01MFD, 50V, +80−20%, Ceramic
C34	VCQSMT1HS101J	100PF, 50V, ±5%, Styrol
C35	VCCCPU1HH470J	47PF, 50V, ±5%, Ceramic
C36	VCCCPU1HH820J	82PF, 50V, ±5%, Ceramic
C37, C38	VCCSPU1HL3R0C	3PF, 50V, ±0.25PF, Ceramic
C39	VCKYPU1SD103Z	.01MFD
C41	VCCSBU1HL221J	220PF, 50V, ±5%, Ceramic
C42	VCCSBU1HL101J	100PF, 50V, ±5%, Ceramic
C44	VCKZPU1HF103Z	.01MFD, 50V, +80−20%, Ceramic
C45	VCCSBU1HL121J	120PF, 50V, ±5%, Ceramic
C47	VCKZPU1HF103Z	.01MFD, 50V, +80−20%, Ceramic
C53	RTO-H2007AFZZ	Trimmer Capacitor, 30PF Maximum
C54	VCQYKU1HM102M	.001MFD, 50V, ±20%, Mylar
C55	VCKZPU1HF103Z	.01MFD, 50V, +80−20%, Ceramic
C56	VCCCPU1HH560J	56PF, 50V, ±5%, Ceramic
C57	VCKYWC2HF102L	.001MFD, Feed Through
C61	VCKZPU1HF103Z	.01MFD, 50V, +80 −20%, Ceramic
C62, C63	VCQYKU1HM153M	.015MFD, 50V, ±20%, Mylar
C66	VCQYKU1HM103M	.01MFD, 50V, ±20%, Mylar
C71	VCCSBU1HL560J	56PF, 50V, ±5%, Ceramic
C73	VCCSBU1HL151J	150PF, 50V, ±5%, Ceramic
C75	VCQYKU1HM102M	.001MFD, 50V, ±20%, Mylar
C76	VCCSBU1HL560J	56PF, 50V, ±5%, Ceramic
C77	VCCSBU1HL221J	220PF, 50V, ±5%, Ceramic
C78	VCKZPU1HF103Z	.01MFD, 50V, +80 −20%, Ceramic
C79	VCCSBU1HL560J	56PF, 50V, ±5%, Ceramic
C80	VCKYPU1SD103Z	.01MFD
C81	VCKZPU1HF103Z	.01MFD, 50V, +80 −20%, Ceramic
C82, C83, C84	VCQSMT1HS151J	150PF, 50V, ±5%, Styrol
C85	VCCCPU1HH560J	56PF, 50V, ±5%, Ceramic
C86	VCCSPU1HL6R0C	6PF, 50V, ±0.25PF, Ceramic
C87	VCCSPU1HL5R0C	5PF, 50V, ±0.25PF, Ceramic
C88	VCCSPU1HL6R0C	6PF, 50V, ±0.25PF, Ceramic
C89	VCKZPU1HF103Z	.01MFD, 50V, +80 −20%, Ceramic
C90	VCKYPU1SD103Z	.01MFD,
C91	VCCSPU1HL180J	18PF, 50V, ±5%, Ceramic
C92	VCCSBU1HL391J	390PF, 50V, ±5%, Ceramic
C93	VCCSBU1HL390J	39PF, 50V, ±5%, Ceramic
C94	VCKYPU1SD103Z	.01MFD
C95	VCCSBU1HL511J	510PF, 50V, ±5%, Ceramic
C97	VCKZPU1HF333P	.033MFD, 50V, +100 −0%, Ceramic
C98	VCKZPU1HF103Z	.01MFD, 50V, +80 −20%, Ceramic
C99	VCQYKU1HM223M	.022MFD, 50V, ±20%, Mylar
C101	VCCSBU1HL221J	220PF, 50V, ±5%, Ceramic
C103	VCKYPU1SD103Z	.01MFD
C104	VCQYKU1HM333M	.033MFD, 50V, ±20%, Mylar
C106	VCKYPU1SD103Z	.01MFD
C108	VCKZPU1HF103Z	.01MFD, 50V, +80 −20%, Ceramic
C109	VCCSBU1HL560J	56PF, 50V, ±5%, Ceramic
C110	VCCSBU1HL221J	220PF, 50V, ±5%, Ceramic
C112	VCCSBU1HL560J	56PF, 50V, ±5%, Ceramic
C113	VCKZPU1HF103Z	.01MFD, 50V, +80 −20%, Ceramic
C114	VCCSBU1HL470J	47PF, 50V, ±5%, Ceramic
C115	VCCSPU1HL180J	18PF, 50V, ±5%, Ceramic
C116	VCCSBU1HL221J	220PF, 50V, ±5%, Ceramic
C118	VCQYKU1HM102M	.001MFD, 50V, ±20%, Mylar
C119, C120	VCQYKU1HM222M	.0022MFD, 50V, ±20%, Mylar
C121	VCQYKU1HM103M	.01MFD, 50V, ±20%, Mylar
C122	VCQYKU1HM222M	.0022MFD, 50V, ±20%, Mylar
C123	VCKZPU1HF103Z	.01MFD, 50V, +80 −20%, Ceramic
C124	VCKZPU1HF103Z	.01MFD, 50V, +80 −20%, Ceramic
C129	VCQYKU1HM333M	.033MFD, 50V, ±20%, Mylar
C130	VCCSPU1HL270J	27PF, 50V, ±5%, Ceramic
C131	VCQYKU1HM472M	.0047MFD, 50V, ±20%, Mylar
C132	VCQYKU1HM472M	.0047MFD, 50V, ±20%, Mylar
C134, C135, C136, C137, C138, C139, C140, C141, C142, C143, C144, C145	VCKZPU1HF103Z	.01MFD, 50V, +80 −20%, Ceramic
C199	VCCSPU1HL100F	10PF, 50V, ±1%, Ceramic

ELECTROLYTIC CAPACITORS

Unless otherwise specified capacitors are 16V, +50 −10%, Electrolytic Type

C24	VCEAAU1CW106Y	10MFD
C25	VCEAAU1EW475Y	4.7MFD, 25V, +50 −10%
C27	VCEAAU1AW336Y	33MFD, 10V, +50 −10%
C40	VCEAAU1CW107Y	100MFD
C48, C49, C50, C51, C59	VCEAAU1EW475Y	4.7MFD, 25V, +50 −10%
C60	VCEAAU1CW106Y	10MFD

PARTS LIST

REF. NO.	PART NO.	DESCRIPTION
C65	VCEAAU0JW476Y	47MFD, 6.3V, +50 −10%
C67	VCEAAU1EW475Y	4.7MFD, 25V, +50 −10%
C68	VCEAAU1CW477Y	470MFD
C70	VCEAAU1CW106Y	10MFD
C102	VCEAAU1AW336Y	33MFD, 10V, +50 −10%

RESISTORS

Unless otherwise specified resistors are 1/4W, ±10%, Carbon Type

R1/SW4	RVR-D0086AFZZ	5K ohm, OFF-ON/Volume Control
R2	RVR-B0024AFZZ	10K ohm, Squelch Control
R3	VRD-SU2EY102K	1K ohm
R4	VRD-SU2EY472K	4.7K ohm
R5	VRD-SU2EY472K	4.7K ohm
R6	VRD-SU2EY333K	33K ohm
R7	VRD-SU2EY102K	1K ohm
R8	VRD-SU2EY472K	4.7K ohm
R9	VRD-SU2EY333K	33K ohm
R10	VRD-SU2EY102K	1K ohm
R11	VRD-SU2EY472K	4.7K ohm
R12	VRD-SU2EY223K	22K ohm
R13	VRD-SU2EY102K	1K ohm
R14	VRD-SU2EY472K	4.7K ohm
R15	VRD-SU2EY333K	33K ohm
R16, R17	VRD-SU2EY102K	1K ohm
R18	VRD-SU2EY394K	390K ohm
R19	VRD-SU2EY103K	10K ohm
R20	VRD-ST2EY222K	2.2K ohm
R21	VRD-SU2EY822K	8.2K ohm
R22	VRD-SU2EY562K	5.6K ohm
R23	VRD-SU2EY333K	33K ohm
R24	VRD-SU2EY472K	4.7K ohm
R25	VRD-SU2EY153K	15K ohm
R26	VRD-SU2EY331K	330 ohm
R27	VRD-ST2EY472K	4.7K ohm
R28	VRD-SU2EY103K	10K ohm
R29	VRD-SU2EY331K	330 ohm
R31	VRD-SU2EY223K	22K ohm
R32	VRD-SU2EY472K	4.7K ohm
R33	VRD-SU2EY562K	5.6K ohm
R35	VRD-SU2EY102K	1K ohm
R36	VRD-SU2EY124K	120K ohm
R37	VRD-ST2EY473K	47K ohm
R38	VRD-SU2EY103K	10K ohm
R39	VRD-SU2EY562K	5.6K ohm
R41	VRD-SU2EY392K	3.9K ohm
R43	VRD-SU2EY332K	3.3K ohm
R44	VRD-ST2EY331K	330 ohm
R45	VRD-SU2EY563K	56K ohm
R46	VRD-SU2EY222K	2.2K ohm
R47	VRD-SU2EY102K	1K ohm
R48	VRD-SU2EY682K	6.8K ohm
R49	VRD-SU2EY151K	150 ohm
R50	VRD-SU2EY821K	820 ohm
R51	VRW-PL2HRR50K	.5 ohm, 1/2W, ±10%, Resin
R52	VRD-SU2EY392K	3.9K ohm
R53	VRD-SU2EY152K	1.5K ohm
R54	VRD-SU2EY331K	330 ohm
R55	VRD-SU2EY103K	10K ohm
R56	VRD-SU2EY472K	4.7K ohm
R57	VRD-SU2EY153K	15K ohm
R58	VRD-SU2EY562K	5.6K ohm
R59	VRD-SU2EY680K	68 ohm
R60	VRD-SU2EY223K	22K ohm
R61	VRD-ST2EY332K	3.3K ohm
R62, R63	VRD-SU2EY470K	47 ohm
R64	VRD-SU2EY223K	22K ohm
R65	VRD-ST2EY332K	3.3K ohm
R66	VRD-SU2EY101K	100 ohm
R67	VRD-SU2EY680K	68 ohm
R68	VRD-ST2HA470K	47 ohm, 1/2W ±10%, Carbon
R69	VRD-SU2EY682K	6.8K ohm
R70	VRD-SU2EY153K	15K ohm
R71	VRD-SU2EY472K	4.7K ohm
R72	VRD-ST2EY151K	150 ohm
R73	VRD-SU2EY332K	3.3K ohm
R74	RVR-M0010AFZZ	30K ohm, Pot., Range Boost Adjusting
R75	VRD-ST2EY472K	4.7K ohm
R77	VRD-SU2EY681K	680 ohm
R78	VRD-SU2EY822K	8.2K ohm
R79	VRD-SU2EY470K	47 ohm
R81	VRD-SU2EY181K	180 ohm
R82	VRD-SU2EY103K	10K ohm
R83	VRD-SU2EY472K	4.7K ohm
R84	VRD-SU2EY102K	1K ohm
R85	VRD-SU2EY472K	4.7K ohm
R86	VRD-SU2EY221K	220 ohm
R87	VRD-SU2EY120K	12 ohm
R92	VRD-SU2EY222K	2.2K ohm
R93	VRD-SU2EY101K	100 ohm
R100	VRD-ST2HA471J	470 ohm, 1/2W, ±5%, Carbon

MISCELLANEOUS

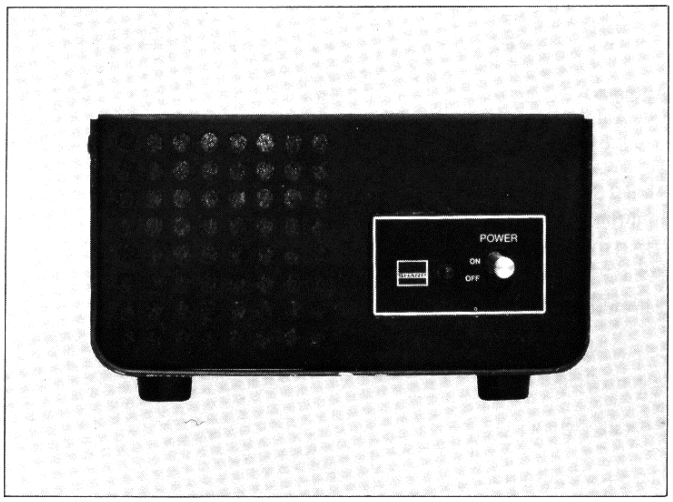
	QPWBF0202AFZZ	Printed Wiring Board, Main
	QPWBF0237AFZZ	Printed Wiring Board, Delta Tuning
	PGUMM0002AF00	Rubber, Washer, Car Bracket
	LX-BZ0021AGFD	Bolt (5ϕ x 8mm)
	LX-BZ0053AFFD	Bolt (5ϕ x 10mm)
	PHAG-8001AFFC	Hanger, Microphone
	XBBSC30W08000	Screw (3ϕ x 8mm), Plus and Minus
	XNESD50-40000	Nut (5mm)
	XWHSD30-05000	Washer (3mm)
	XWHSD50-05000	Washer (5mm)
	XWSSJ50-13000	Spring Washer (5mm)
	LANGT0507AFFW	Bracket, Delta Tuning Switch
SW7	QSW-B0003AFZZ	Switch, Delta Tuning
	LANGT0087AFFW	Bracket, Power Transformer/ Heat Sink
F1	QFS-A232AAFNA	Fuse, 2.3A
	QFSHJ9051AFZZ	Power Cord with Fuse and Holder
	LANGQ0129AFFW	Bracket, Channel Selector Switch
SW2 A ~ C	QSW-R0041AFZZ (A part designated by Sharp)	Switch, Channel Selector
	LCHSM0224AFFW	Chassis

PARTS LIST

REF. NO.	PART NO.	DESCRIPTION
S2	QSOCZ0024AFZZ	Socket, External Antenna
	XLHAW30-06000	Rivet, Socket of Ext. Antenna
	LHLDZ8052AF00	Holder, LED
	PFLT-0263AF00	Felt, Delta Tuning
	TSPC-0359AFZZ	Indication Sheet, Model Spec.
	LANGZ0003AFFW	Bracket, Mobile Mounting (L-type)
	LBSHC0003AGZZ	Bushing, Power Cord
RY1/SW1 A ~ D	RRRLYZ0007AFZZ	Relay, Receiver/Transmitter Switch
	GCAB-0353AFSD	Cabinet, Main
	PFLT-0137AF00	Felt, Speaker
	PSPAD0001AFZZ	Spacer, Channel Selector Shaft
	JKNBM0225AFSA	Knob, Delta Tuning
SW5	RMICD0203AFZZ	Microphone, w/Press talk Switch
SP-1	VSP0080P-398A	Speaker, 8-ohm
	JKNBN0193AFSD	Knob, OFF/Volume, Squelch Control
	JKNBN0291AFSA	Knob, Channel Selector
	QSOCZ0020AFZZ	Socket, Polarity Switch
	QPLGE0403AGZZ	Plug, Polarity Switch

DWAKP0161GSSA
(Front Cabinet Complete)

	GWAKP1013AFSA	Cabinet, Front
	HINDM1055AFSA	Indication Metal, OFF-Volume/ Squelch Control
	HINDM1056AFSA	Indication Metal, Channel Selector
	LANGH0104AFFW	Spacer, Channel Selector Plate



MODEL AD-111

PARTS LIST

REF. NO.	PART NO.	DESCRIPTION
Q1	2SC458 Ⓓ	Transistor
Q2	2SC1061 Ⓒ	Transistor
D1	RH-DX1001AFZZ	Diode, Power Rectifier (1B2C1)
D2	RH-DX1002AFZZ	Diode, Power Rectifier (1B2Z1)
D3	RD-13E	Zener, 13.5 ~ 14.4V
D4	VHPGL-52AR/1F	Light Emitting Diode, Power (GL-52AR)
T1	RTRNP0423AFZZ	Transformer, Power with AC Cord
C1	VCEAAU1EW108Q	Capacitor, 1000MFD, 25V, +100 −10%, Electrolytic
C2	VCEAAU1CW107Q	Capacitor, 100MFD, 16V, +100 −10%, Electrolytic
R1, R2	VRD-ST2EY821K	Resistor, 820 ohm, 1/4W, ±10%, Carbon
	GCAB-3013AFSA	Cabinet, Main
	GLEGG0022AG00	Leg, Rubber
	PGUMM0028AG00	Rubber, LED
	PRDAR0120AFFW	Heat Sink

REF. NO.	PART NO.	DESCRIPTION
F1	QFS-H152AAFNB	Fuse, 1.5A
	QPWBF0474AFZZ	Printed Wiring Board
SW1	QSW-B0072AFZZ	Switch, Power ON-OFF
	GCOVH3150AFFW	Cover, Circuits
	GFTAR3100AFFW	Cabinet, Rear
	GWAKM1001AFSA	Cabinet, Front
	HINDM1071AFSA	Indication Metal, Power Switch
	LBSHC0002AGZZ	Bushing, AC Cord
	PFLT-0268AF00	Felt, Front Cabinet
TB1	QTANN0250AFZZ	Terminal, 12V Output
	XBBSB30P06000	Screw, 3ϕ x 6mm, Black
	TLABG0078AFZZ	Label, Model Spec.
	LANGT0529AFFW	Bracket, Unit Mounting (Accessory)
	LX-BZ0021AGFN	Bolt, 5ϕ x 8mm (Accessory)
	PGUMM0002AF00	Rubber, Washer (Accessory)
	XWHNZ52-08100	Washer, 5mm (Accessory)

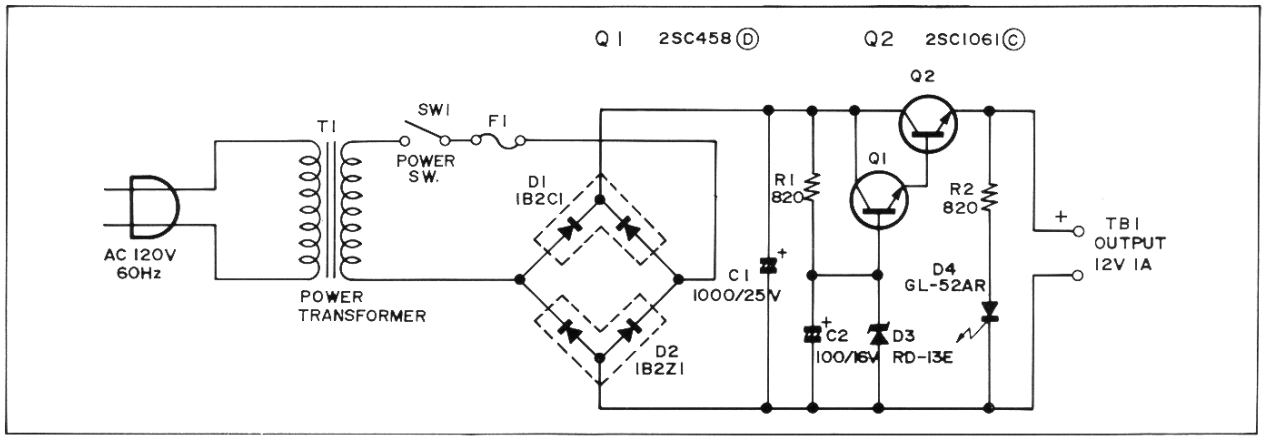


Figure 6 SCHEMATIC DIAGRAM (AD-111)

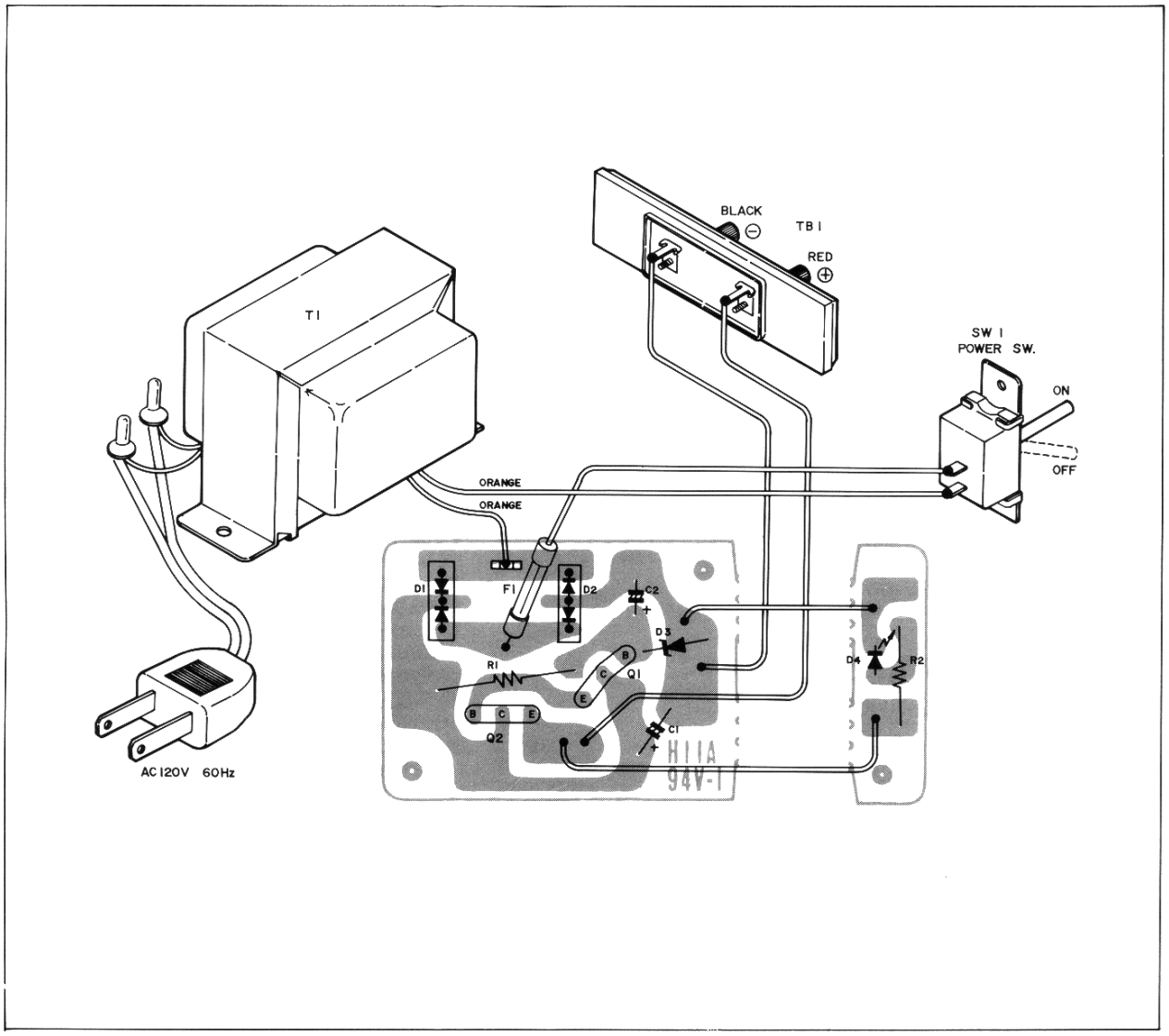


Figure 7 WIRING SIDE OF P.W. BOARD (AD-111)

A2501 -3.1MH
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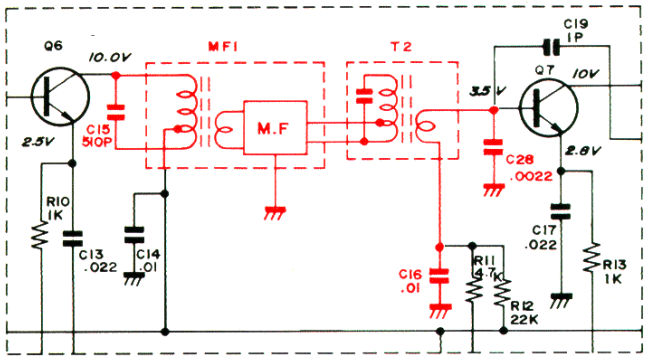
Technical Information

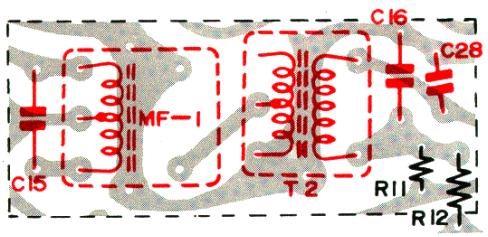
MODEL CB-550U

- Two types of IF circuits are used for the unit CB-550U as shown below. In the parts replacement, take care of which type of IF circuits should be used.

CIRCUIT (I)



WIRING (I)



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