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MESSENGER 132 CB BASE STATION SERVICE MANUAL ADDITION



GENERAL

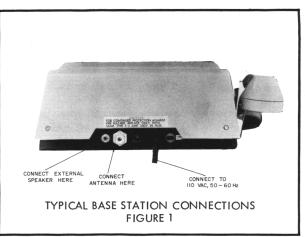
This service manual addition contains installation, service and alignment information for the Messenger[®]* 132 CB Base Station. Also included is a schematic diagram, a components layout with wiring terminations and a complete parts list. For complete transceiver service information and test setups, refer to the Messenger[®] 122-123A Service Manual, Part No. 001-0122-001.

DESCRIPTION

The Messenger 132 CB Base Station, Part No. 242-0132-001, is a fully solid state, 23 channel transceiver with a built-in power supply which operates from 117 VAC or 13.8 VDC. Also included in the Messenger 132 is an "S" meter which indicates receiver signal strength, modulation and relative RF power output. The Messenger 132 contains a 3 watt public address feature and a 14 crystal frequency synthesizer which generates all transmitter and receiver frequencies.

INSTALLATION

The Messenger 132 should be located in a position that will allow for the shortest possible antenna transmission line and operating convenience.



- a. Install the antenna, pay particular attention to FCC regulations concerning height above the ground.
- b. Route the transmission line to the intended transceiver location and connect it to the antenna connector.
- c. Connect the transceiver line cord to any 110 VAC, 50-60 Hz power source. Refer to the operating manual included with each transceiver for operating instructions.
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SPECIFICATIONS

(Measurements are made per EIA Standard RS-382 and are nominal unless otherwise stated.)

GENERAL

Channels	23
Frequency Range	26.965 to 27.255 MHz
Frequency Control	$\pm 0.005\%$ crystal, -30 $^{\rm o}{\rm C}$ to $60^{\rm o}{\rm C}$ transmit and receive
Overall Dimensions	13.3 cm W x 34.9 cm H x 32.9 cm D (5.2 in W x 13.7 in H x 9 in D)
Weight - Unit Shipping	3.4 kg (8.5 lbs) 4.0 kg (10 lbs)
Handset	High impedance ceramic microphone element, push to talk switch
Antenna Impedance	50 ohms
Compliance	FCC Type Acceptance Part 95 DOC Type Approved RSS-136
Circuitry	1 integrated circuit, 18 transistors, 25 diodes and 2 thermistors
Power Requirements	117 VAC, 50-60 Hz or 13.8 VDC
Circuit Protection	2 ampere fuse - DC operation 0.5 ampere fuse - AC operation
RECEIVER	
Sensitivity	10 dB (S+N)/N at 0.5 μ V input
Selectivity	6 kHz min. bandwidth at -6 dB 30 kHz max. bandwidth at -60 dB
Spurious Rejection	50 dB except image of 10 dB and $1/2$ IF of 35 dB
Tight Squelch	30 $\mu \rm V$ minimum to 2000 $\mu \rm V$ maximum
Squelch Sensitivity	1 dB or less signal change for 40 dB of quieting at 1 $\mu \rm V$
Intermediate	455 kHz

455 kHz

Frequency

AGC Characteristics	Flat within ± 6 dB from 100,000 μ V to 5 μ V with 12 dB of rolloff from
	5 to 0.5 μ V
Noise Limiting	3 dB maximum
Speaker Impedance	3.2 ohms
Audio Frequency Response	+2 dB, -16 dB from 300 to 3000 Hz
Audio Output Power	3 watts
TRANSMITTE	R
TRANSMITTE Emission	6A3
Emission	6A3
Emission RF Power Output RF Spurious and Harmonic Attenua-	6A3 4 watts maximum at 13.8 VDC

MINIMUM PERFORMANCE SPECIFICATIONS

(The specifications listed in this section are absolute service minimums.)

RECEIVER

	Sensitivity	7 dB (S+N)/N at 0.5 μV input
	Spurious Rejection	40 dB except image of 5 dB and 1/2 IF of 30 dB
	Audio Output Power	0.075 watt minimum at 0.5 μV , 2.5 watts with less than 10% distortion at 1000 μV input
	Tight Squelch	30 μV minimum and 2000 μV maximum
L	AGC Character- istics	15 ±4 dB rolloff from 500 to 0.5 μV
	TRANSMITTE	R
	RF Power Output	2.8 watts minimum at 13.8 VDC
	Modulation	80% minimum positive and negative

SERVICE

For transceiver servicing, refer to the Messenger 122-123A Service Manual Servicing Section. The Messenger 132 circuitry is similar to the Messenger 123A and the service information listed for the Messenger 123A applies to both transceivers. Only the unique functions of the Messenger 132 are discussed in this manual addition.

CRYSTAL REPLACEMENT

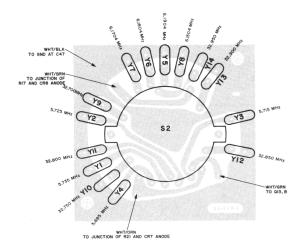
As a quick check of the transmit crystal activity, connect a frequency counter to the unmodulated transmitter output and count the carrier frequency on channels 1, 6, 11, 16, 20 and 23. Compare your readings with those listed in Table 1.

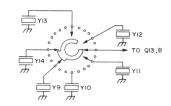
TABLE 1 Transmitter Channel Frequency Limits							
Channel No.	Crystal	High Limit, kHz	Low Limit, kHz				
1 6 11 16 20 23	Y9 Y10 Y11 Y12 Y13 Y14	26,966.348 27,026.351 27,086.354 27,156.357 27,206.360 27,256.362	26,963.652 27,023.649 27,083.646 27,153.643 27,203.640 27,253.638				

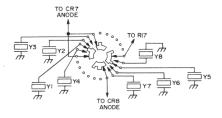
If channels 1, 6, 11, 16, 20 or 23 are either off frequency or completely inoperative, other channels may be affected. Refer to Table 2 for a more complete analysis of the frequency synthesizer crystal scheme.

Frequenc	TABLE 2 y Synthesiz	er Analysis	
Channel No.	Faulty Receive	Faulty Transmit	Faulty Crystal
1,2,3 and 4	Х	Х	Y9
5,6,7 and 8	Х	Х	Y10
9,10,11 and 12	Х	Х	Y11
13,14,15 and 16	Х	Х	Y12
17,18,19 and 20	Х	Х	Y13
21,22 and 23	Х	Х	Y14
1,5,9,13,17 and 21	Х		Y5
2,6,10,14,18 and 22	X		Y6
3,7,11,15 and 19	Х		Y7
4,8,12,16,20 and 23	Х		¥8
1,5,9,13,17 and 21		Х	Y1
2,6,10,14,18 and 22		Х	Y2
3,7,11,15 and 19		Х	Y3
4,8,12,16,20 and 23		Х	Y4

To replace a defective crystal, remove the two screws from the crystal circuit board and gently pull the board away from the switch detent. Figure 2 shows the crystal circuit board layout and switch wiring. The switch is shown in the channel 1 position as viewed from the knob end of the shaft. Channel numbers increase with clockwise rotation.



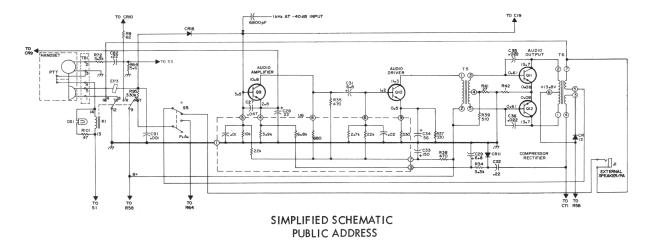




CRYSTAL SWITCH (SOLDER SIDE VIEW) FIGURE 2

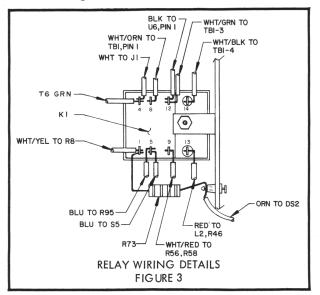
PUBLIC ADDRESS (PA)

The PA circuit utilizes the audio amplifier section of the transceiver for public address without activating the transmitter. When using the PA function, an external speaker must be connected to the external speaker jack. Refer to E. F. Johnson booklet 004-2000-001 which gives details on speaker installation. When S5, the Off/PA switch, is in the PA position, the external speaker jack is connected across the audio output at terminals 5 and 7 of T6 and the transmit B+ line is opened. Therefore, when the handset push to talk switch is depressed, CR18 is forward biased through contacts 5 and 9 of K1, which allows audio from the microphone to be applied to the base of Q9.



RELAY

Because of the switching requirements of the Messenger 132 handset, relay K1 is included to provide increased switching capability. Basically, the relay is used in conjunction with the handset push to talk (PTT) switch to switch between receive and transmit functions. In the receive mode, the receive B+ is supplied through contacts 1 and 9 of the relay. When the PTT switch is closed, the relay coil is activated and B+ is applied through contacts 5 and 9 of K1 to the transmit circuits. Contacts 8 and 12 provide the ground connections for the microphone portion of the handset. Figure 3 shows a bottom view of the relay and lists the wiring terminations.

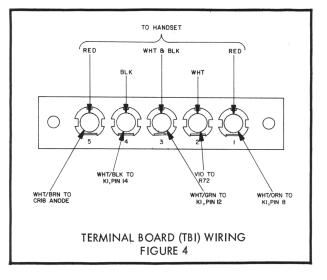


HANDSET

The telephone type handset contains a speaker element and a ceramic microphone cartridge. In the handle of the handset is the PTT switch which switches the transmit and receive functions through relay K1. The audio level to the earpiece is set by R72 to provide a comfortable listening level.

With the handset in the cradle, the audio is coupled to the speaker through S3. The audio can be switched to the handset earpiece, the speaker or both by S3 and S4.

The handset is wired to the transceiver through a terminal board, TB1. Refer to Figure 4 for TB1 wiring terminations.

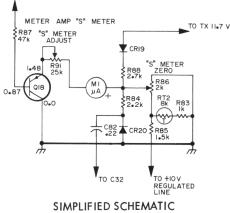


METER CIRCUITRY

The front panel meter on the Messenger 132 serves as an "S" meter in the receive condition and indicates relative power output in the transmit condition.

In the receive condition with no signal input, Q18 is biased off which results in no meter indication. When a signal is received, AGC-1 voltage is applied to Q18 base causing the base to become more negative with respect to the emitter and Q18 conducts. The Q18 conduction path is from ground through Q18, R91, M1 and R86 to receive B+. Therefore the meter indication is directly proportional to the conduction of Q18 which is determined by the receive signal strength. CR19 is used as a DC blocking diode to isolate the receive B+ from the transmit circuitry. In the transmit condition, transmit B+ voltage is applied from the PTT switch through CR19 to the meter circuit. When the transmitter is keyed, RF leakage through CR16 is coupled through T1 to Q1. The base-emitter junction of Q1 rectifies the RF and applies a negative going bias voltage to the base of Q18. With the base more negative then the emitter, Q18 conducts from ground through Q18, R91, M1, R88 and CR19 to transmit B+, causing the meter to deflect upscale indicating the transmit RF carrier. When the operator speaks into the microphone, a modulation sample is coupled through C82 and rectified by CR20. The resultant positive DC voltage, which varies with the modulation, aids Q18 conduction and causes the meter to vary with the modulation.

Thermistor RT2 provides for a constant rate of conduction through Q18 over various ambient temperatures.



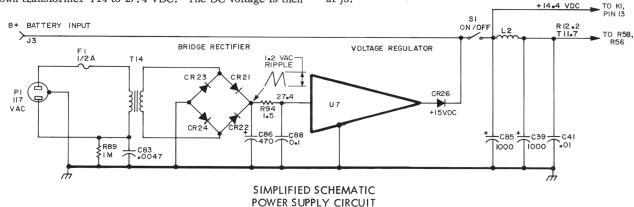
TO QI BASE

"S" METER CIRCUIT

POWER SUPPLY

The Messenger 132 contains an integrated circuit (IC) regulated power supply. When connected to a 110-120 VAC 50-60 Hz source, the voltage regulator provides a constant 14.4 VDC to the transceiver circuits.

The bridge rectifier, consisting of CR21-CR24, rectifies approximately 21 VAC from the secondary of the step down transformer T14 to 27.4 VDC. The DC voltage is then filtered by C86 and C88 and then regulated by the integrated circuit voltage regulator U7. Resistor R94 is a protection device which dissipates a sufficient amount of power to prevent damage to U7 when the transmitter is keyed. The output of U7 is approximately 15 volts, therefore CR26 is added in series to provide an additional 0.5 VDC voltage drop to ensure a constant 14.4 VDC output. CR26 also provides isolation between U7 and the DC voltage input jack to prevent any possible damage that might occur with a 13.8 VDC input at 13.



RECEIVER ALIGNMENT

Before aligning the Messenger 132, refer to the alignment section of the Messenger 122-123A Service Manual for a list of alignment tools and test setups. Refer to Figure 5 on the foldout page in this manual for alignment points locations.

NOTE

The low pass filter adjustments, L6 and L7, should be adjusted for 3.8 watts output power before the receiver is aligned. Refer to the transmitter tuneup section for details.

FREQUENCY SYNTHESIZER

- a. High Frequency Oscillator Adjustment
 - 1. Set the channel selector switch to channel 23 and connect the RF voltmeter to the CR14-CR15 junction.
 - Adjust T7 to the peak RF voltmeter reading point. A typical reading of approximately 0.4 VRF should be measured.
- b. Synthesizer Mixer Adjustment
 - 1. Set the channel selector switch to channel 12 and connect the RF voltmeter probe to the case of Q15.
 - Key the transmitter into an RF load and adjust T8, T9, T10 and T11 for a maximum meter reading. A typical reading of approximately 0.28 VRF should be measured.

RF AND IF SECTION (CHANNEL PEAKING METHOD)

- a. RF Adjustment
 - 1. Set the channel selector switch to channel 12 and connect a 1 kHz, 30% modulated RF signal to the antenna connector.
 - 2. Adjust T1 and T2 for a maximum audio output while keeping the RF signal generator output to a minimum.
- b. IF Adjustment
 - 1. Test setup same as a. l.
 - 2. Adjust Z1A, Z1B, T3 and T4 for a maximum audio output while keeping the RF signal generator output to a minimum.
 - Set the RF signal generator output level to 0.5 μV, modulated 30% at 1 kHz.

4. Readjust T1, T2, Z1A, Z1B, T3 and T4 for a maximum audio output and make final adjustment of T1 for best signal to noise ratio.

RF AND IF SECTION (455 kHz GENERATOR METHOD)

- a. IF Adjustment
 - 1. Connect a 455 kHz signal generator through a $0.02 \ \mu F$ coupling capacitor to the base of Q2.
 - 2. Adjust Z1A, Z1B, T3 and T4 for a maximum audio voltmeter indication while reducing the generator output level (an excessive generator output level will cause improper IF amplifier alignment).
- b. RF Adjustment
 - 1. Remove the 455 kHz signal generator and connect the RF signal generator to the antenna connector. Set the generator level to $0.5 \ \mu$ V, modulated 30% at 1 kHz on channel 12 (27.105 MHz).
 - 2. Adjust T1 and T2 for a maximum audio output and make final adjustment of T1 for best signal to noise ratio.

AUTOMATIC GAIN CONTROL (AGC) ROLLOFF

- a. Refer to the receiver test setup in the alignment section of the Messenger 122-123A Service Manual.
- b. Set the RF signal generator output for 500 μ V on channel 11 frequency (27.085 MHz) modulated with 1 kHz at 30%.
- c. Set the transceiver channel selector to channel 11 and adjust the volume control for a 0 dB indication on the VTVM.
- d. Reduce the RF signal generator output to a 0.5 μ V. The VTVM reading should decrease 15 ±4 dB. Adjust R7 and repeat steps 3 and 4 if unable to obtain the 15 ±4 dB reading.

METER

- a. S-Meter Zero
 - 1. Set the RF signal generator to channel 12 frequency (27.105 MHz) and set the output level to 0.5 μ V, modulated 30% at 1 kHz.
 - 2. Connect the RF signal generator to the transceiver antenna connector and set the channel selector switch on the transceiver to channel 12.
 - 3. Adjust R86 for an S1 indication on the meter.

- b. S-Meter Adjust
 - 1. Set the RF signal generator to channel 12 frequency (27.105 MHz) and set the output level to $50 \ \mu$ V, modulated 30% at 1 kHz.
 - 2. Connect the RF signal generator to the transceiver antenna connector and set the channel selector switch on the transceiver to channel 12.
 - 3. Adjust the S-meter adjust control, R91, for an S9 meter indication.

TRANSMITTER TUNEUP

PREDRIVER AND POWER AMPLIFIER

Connect a 5 watt wattmeter (Bird Model 43 or equivalent) and a dummy load to the antenna connector. Key the microphone and proceed as follows:

- a. Predriver
 - 1. Adjust T12 and T13 for maximum power output.

- 2. Adjust T10 and T11 for maximum power output.
- b. Power Amplifier
 - 1. Adjust L6 and L7 for a power output between 2.8 and 3.8 watts.
 - 2. Adjust L6 for minimum transmitter current while maintaining a power output between 2.8 and 3.8 watts.

TRANSMITTER FREQUENCY CHECK

To check the transmitter frequency, proceed as follows:

- a. Loop couple a frequency counter or meter to L7.
- b. Refer to Table 3 for channel frequencies. Replace crystals as necessary to maintain a channel frequency tolerance of $\pm 0.005\%$.

			CHANNEL F	LE 3 REQUENCIE	S		
Channel	Minimum Limit (kHz)	Center Frequency (MHz)	Maximum Limit (kHz)	Channel	Minimum Limit (kHz)	Center Frequency (MHz)	Maximum Limit (kHz)
1	26,963.652	26.965	26,966.348	13	27,113.645	27.115	27,116.355
2	26,973.652	26.975	26,976.348	14	27,123.644	27.125	27,126.356
3	26,983.651	26.985	26,986.349	15	27,133.644	27.135	27,136.356
4	27,003.651	27,005	27,006.350	16	27,153.643	27.155	27,156.357
5	27,013.650	27.015	27,016.350	17	27,163.642	27.165	27,166.358
6	27,023.649	27.025	27,026.351	18	27,173.642	27.175	27,176.358
7	27,033.649	27.035	27,036.351	19	27,183.641	27.185	27,186.359
8	27,053.648	27.055	27,056.352	20	27,203.640	27.205	27,206.360
9	27,063.647	27.065	27,066.353	21	27,213.640	27.215	27,216.360
10	27,073.647	27.075	27,076.353	22	27,223.638	27.225	27,226.361
11	27,083.646	27.085	27,086.354	23	27,253.638	27.255	27,256.362

NOTE:

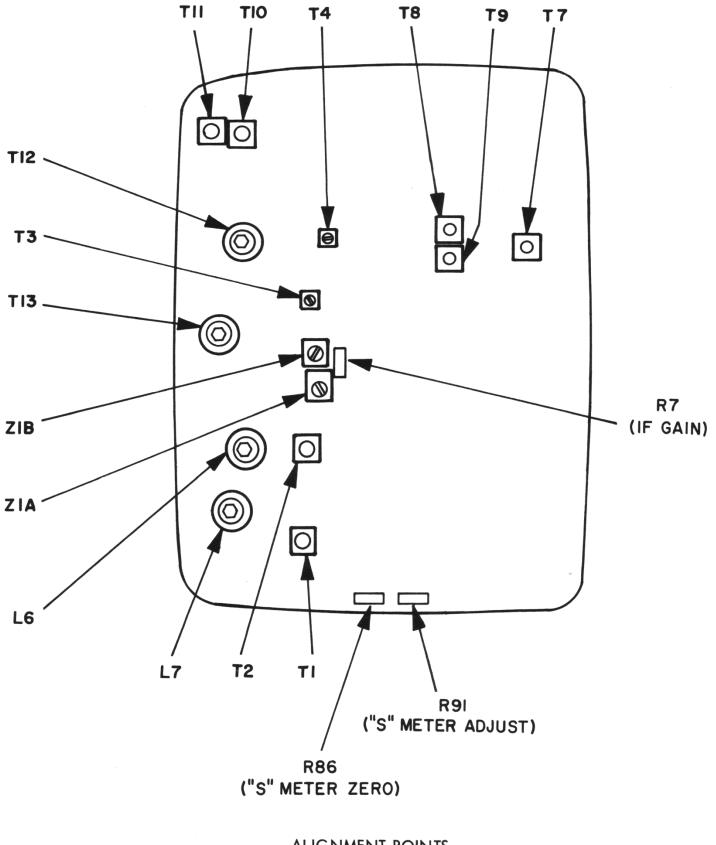
FCC regulations require all transmitter frequencies to be within ±0.005% as listed.

CRYSTAL STARTING AND MODULATION CHECK

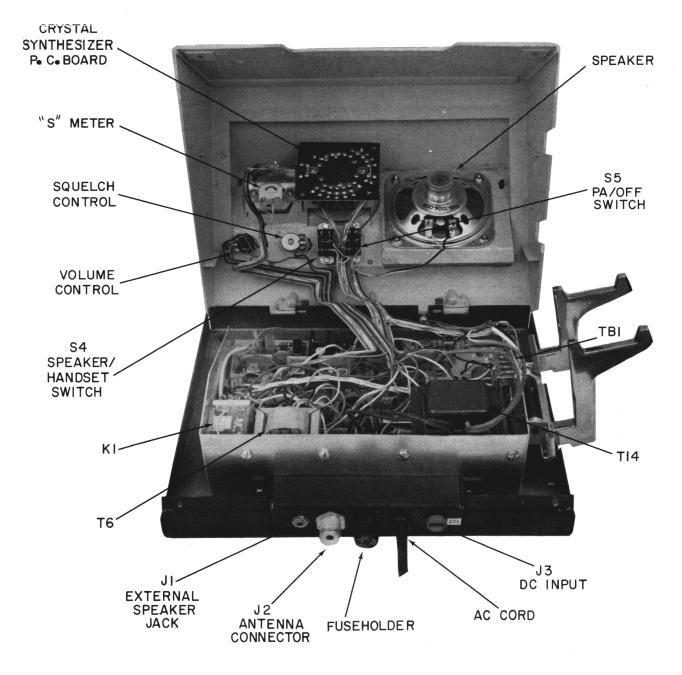
- a. Switch between channels 1 and 23 and check for normal crystal starting.
- b. Check for normal waveform and percent of modulation.
 - Loop couple the oscilloscope to L7. Refer to Figure 5-4 in the Messenger 122-123A Service Manual for fabrication details.
 - Set the audio generator frequency to 1 kHz and couple a 35 mV (-27 dB) audio input through a 6800 pF series capacitor to the base of Q9. The oscilloscope should indicate at least 50% modulation.
 - Increase the audio generator level to 220 mV (-11 dB). The oscilloscope should indicate not less than 80% nor more than 100% modulation on both negative and positive peaks.
- c. Check each channel for clean modulation and absence of oscillations. Adjust T12 and T13 as necessary to eliminate modulation distortion.
- d. Check for normal modulation by speaking into the handset microphone.

FINAL CHECKOUT PROCEDURE

- a. Connect a Bird Model 43 with a 10A element or equivalent wattmeter into the transmission line.
- b. Adjust the antenna for best VSWR following the manufacturer's instructions. The transceiver has been aligned at the factory and the output network will not normally require realignment to match it to the antenna. The measured VSWR should be 1.5 to 1 or less.
- c. Check the transmitter power output. The typical power output is 3.5 watts.
- Check the transmitter frequency, the maximum allowable tolerance from the center frequency is ±0.005%. Refer to Table 3 for frequency limits.
- e. Check the modulation, minimum acceptable is 80% upward and downward, it should not exceed 100%.
- f. Give the transceiver a complete operational checkout. Make several contacts with other units in the system and correct any problems that may affect transceiver performance.



ALIGNMENT POINTS FIGURE 5



PARTS NOT SHOWN ON PC BOARD

PARTS LIST

SYMBOL NO.	DESCRIPTION	PART NO.	SYMBOL NO.	DESCRIPTION	PART NO
	COMPONENTS CODES		C 20	4700 TE M FON VELL dias	E10 2204 47
	COMPONENTS CODES		C30	4700 pF M 50V Y5U disc	510-3204-47
	$J = \pm 5\%$		C31 C32	6.8 μ F M 35V dipped	510-2045-68
	$J = \pm 3\%$ K = $\pm 10\%$		C32 C33	1.0 μF M 35V 150 μF 25V aluminum	510-2005-10
	, .				510-4006-00
	M = ±20% 1DM15 = 1 coat dipped mica, siz	o 15	C34 C35	56 μ F M 6V tubular	510-2001-56
	1DW15 = 1 coat dipped mica, siz	e 15		0.022 μF M 50V Y5U	510-3202-22
	LIANDOFT		C36	Same as C35	F10 0000 10
	HANDSET		C37	0.010 μ F M 50V Y5U	510-3202-10
	TT 1	000 00/7 001	C39	1000 μ F 16V aluminum	510-4006-00
A1	Handset Assembly	023-3267-001	C41	0.010 μF M 50V Y5U	510-3202-10
	Includes:	000 0050 000	C42	6.8 pF J 200V N750 ceramic	510-3220-68
	Resonator assembly	023-2858-002	C43	27 pF J 200V N150 ceramic	510-3216-27
	Handset	589-9002-010	C44	100 pF J 200V N150 ceramic	510-3216-10
	Machined cup	589-9002-012	C45	0.010 μF M 50V Y5U	510-3202-10
	Mouthpiece	589-9002-013	C46	Same as C45	
			C47	$0.010 \ \mu F M 16V Y5S disc$	510-3010-10
	CABINET PARTS		C48	180 pF J 200V N750 ceramic	510-3220-18
			C49	0.010 μF M 50V Y5U	510-3202-10
BK1	Bracket AC cover	017-1831-001	C51	1 pF J 500V composition	510-9002-10
BK 2	Bracket cradle stop	017-1834-001	C52	33 pF J 200V N150 ceramic	510-3216-33
BK 3	Bracket cradle mounting	017-1835-002	C53	Same as C52	
BK4	Bracket meter lights	017-1838-001	C54	0.010 μF M 50V Y5U	510-3202-10
BK5	Bracket dial light	017-1839-001	C55	220 μ F 16V aluminum	510-4006-00
CH1	Mounting tray	017-1832-002	C56	0.010 µF M 50V Y5U	510-3202-10
CH2	Chassis rail	017-1833-002	C57	Same as C56	
CH3	Plastic cabinet	032-0386-001	C58	1 pF J 500V composition	510-9002-10
CH6	Cover bottom AC pwrsup	017-1860-001	C59	33 pF J 200V N150 ceramic	510-3216-33
CH13	Bracket AC cover	017-1831-001	C60	$0.047 \ \mu F M \ 16V \ Y5S$	510-3210-47
EP1	Red rib loc feedthru	260-0202-901	C61	33 pF J 200V N150 ceramic	510-3216-33
MP6	Mounting clip, cabinet right	017-1841-002	C62	1000 pF J 100V 1DM15	510-0001-10
MP9	Cradle, handset	537-9026-001	C64	22 pF J 200V NPO ceramic	
MP12	Spring, handset cradle	580-0001-031	C65	$0.010 \ \mu\text{F} \text{ M} 50\text{V} \text{Y5U disc}$	510-3213-22
MP13	Mounting clip, cabinet left	017-1841-001	C66	12 pF J 200V N750 ceramic	510-3002-10
MP14	Grill cloth	018-0827-016	C67		510-3220-12
NP1	Overlay	032-0384-001	C68	1000 pF M 1KV Y5S disc	510-3261-10
	Overlay	002 0004 001	C69	47 pF J 200V N150 ceramic	510-3216-47
	CAPACITORS		C70	4700 pF M 50V Y5U disc	510-3204-47
C1		F10 00(1 100	C71	0.047 μF M 16V Y5S 0.047 μF M 50V Y5U	510-3210-47
C1	1000 pF M 1KV Y5S disc	510-3261-102	C72	1000 pF J 100V 1DM15	510-3202-47
C2	6.8 μ F M 35V dipped	510-2045-689	C73		510-0001-10
C4	27 pF J 200V N150 cera	510-3216-270	C74	27 pF J 200V NPO ceramic 1000 pF M 1KV Y5S disc	510-3213-27
C5	5.1 pF J 200V NPO cera	510-3213-519	C75	1000 pF J 200V N150 ceramic	510-3261-10
C6	0.010 μF M 50V Y5U	510-3202-103	C76	300 pF J 100V 1DM15	510-3216-10
C7 C8	Same as C6	510-4009-001	C77	330 pF J 100V 1DM15	510-0001-30 510-0001-33
C9	470 μF 40V aluminum Same as C8	510-4009-001	C78	4700 pF M 1.4 KV Z5U	510-3001-33
C10	4700 pF M 50V Y5U disc	510-3204-472	C82	$0.22 \ \mu F M 250V \ flatfoil$	510-1004-22
C11	150 pF J 100V 1DM15	510-0001-151	C83	4700 pF M 1.4 KV Z5U	510-3001-47
C12	$6.8 \mu\text{F} \text{ M} 35\text{V} \text{ dipped}$	510-2045-689	C85	$1000 \ \mu\text{F}$ 16V aluminum	510-4006-00
C13	$0.010 \ \mu F M 50V Y5U$	510-3202-103	C86	$470 \ \mu F \ 40V \ a luminum$	510-4009-00
C14	Same as C13	510-5202-105	C88	0.10 μ F M 250V flatfoil	510-1004-10
C15	$0.047 \ \mu F K \ 250V \ flatfoil$	510-1003-473	C90	470 pF J 100V 1DM15	510-0001-47
C16	$0.010 \ \mu\text{F} \text{ K} 250 \text{V} \text{ flatfoil}$	510-1003-103	C91	1000 pF M 1KV Y5S disc	510-3261-10
217	1.0 μ F M 35V dipped	510-2045-109	C92	0.22 μ F M 250V flatfoil	510-1004-22
C18	Same as C17		C93	0.1 µF ±20% 16V Y5S disc	510-3010-10
C19	Same as C17		C94	1000 pF ±20% 500V Y5U disc	510-3004-10
C21	820 pF J 100V 1DM15	510-0001-821	C101	1000 pF M 1KV Y5S disc	510-3061-10
			C121	0.010 μF M 50V Y5U	510-3202-10
C22	390 pF J 100V 1DM15	510-0001-391			
C23	0.010 μF M 50V Y5U	510-3202-103		DIODES	
C24	Same as C23	E10 4000 005	CPI	1N67A germ diada	522-1500-04
C25 C26	100 μF 10V aluminum 47 μF 25V aluminum	510-4003-005 510-4006-012	CR1 CR2	1N67A germ diode 1N4148 SI diode	523-1500-06 523-1500-88
C26 C27	$47 \ \mu F \ 25V \ a \ 10 \ Y5S$		CR2 CR3	1N4148 SI diode 1N67A germ diode	523-1500-88
		510-3210-473		-	525-1500-00
C28	22 μF M 15V tubular	510-2003-220	CR4	Same as CR3	
C29	6.8 μ F M 35V dipped	510-2045-689	CR5	1N4148 SI diode	523-1500-88

PARTS LIST (cont'd)					
SYMBOL NO.	DESCRIPTION	PART NO.	SYMBOL NO.	DESCRIPTION	PART NO.
CR6	1N881 SIL diode	523-1500-881	L3	20 µH choke	542-3002-002
CR7	Same as CR6	525-1500-881	L4	$13 \mu\text{H}$ choke	542-3003-001
CR8	Same as CR6		L5	Same as L4	0.12 0000 001
CR9	1N67A germ diode	523-1500-067	L6	10 1/2 T ind. 0.75-1.0 μ H	542-1005-010
CR10	10V J 1W zener	523-2503-100	L7	$4 \ 1/2 \ T$ ind. 0.24-0.32 μ H	542-1005-004
CR11	1N4148 SI diode	523-1500-883	L8	$6.8 \mu\text{H}\text{RF}$ choke	542-3004-689
CR12	1N4003 200V 1A rect	523-0001-002			
CR13	10V J 1W zener	523-2503-100		SPEAKER	
CR14	1N4148 SI diode	523-1500-883			
CR15	Same as CR14		LS1	3 in. 3.2 ohm speaker	589-1013-001
CR16	1N881 SIL diode	523-1500-881			
CR17	1N4148 SI diode	523-1500-883		METER	
CR18	1N881 SIL diode	523-1500-881		Matan	
CR19	Same as CR18		M1	Meter	554-0017-001
CR20	Same as CR18			KNOBS	
CR21	1N4818 200V 1.5A rect	523-0013-201		KINOB5	
CR22	Same as CR21		MP10	Volume knob, squelch knob	547-0008-001
CR23	Same as CR21 Same as CR21		MP11	Channel selector switch knob	547-0008-005
CR24 CR26	Same as CR21			Chamilter Sereeter Striten Kilob	017 0000 000
CR20				TRANSISTORS	
	LAMPS		Q1	SI NPN 50 MHz amp TO92	576-0003-018
DOI	01000 14 414 0 104 -1	F 40, 2001, 002	Q2	SI NPN gen. purp. TO92	576-0003-011
DS1	21930 14.4V 0.12A clear on/off indicator	549-3001-003	Q3	Same as Q2	570-0005-01.
DS2	1705D 14.0V 0.08A clear	549-3001-011	Q4	Same as Q2	
032	Receive indicator	549-5001-011	Q5	Same as Q2	
DS3	1705D 14, 0V 0, 08A red	549-3001-013	Q6	Same as Q2	
D33	Transmit indicator	349-3001-013	Q7	Same as Q2	
	Tanshit indicator		Q8	Same as Q2	
	FUSE		Q9	Same as Q2	
	POSE		Q10	Same as Q2	
F1	Fuse 0.5A 125V SB MDL	534-0002-014	Q11	MJE2480 SI NPN pwr aud	576-0002-026
FH1	HKP fuseholder	534-1002-001	Q12	Same as Q11	
1.111	TIKT IUSEHOIDET	554-1002-001	Q13	SI NPN 50 MHz amp TO92	576-0003-018
	FERRITE BEADS		Q14	SI NPN gen. purp. TO92	576-0003-01
			Q15	0.4W 27 MHz amp TO39	576-0004-004
EP2	0.14 x 0.13 ferrite bead	517-2002-001	Q16	Same as Q15	
EP3	0.14 x 0.24 ferrite bead	517-2002-002	Q17	3.4W 27 MHz amp	576-0004-003
			Q18	SI PNP 50 MHz amp TO92	576-0003-017
	TERMINAL STRIPS			RESISTORS	
EP4	2103-4 terminal lug	586-0005-004			
TB1	Terminal strip (Handset)	586-1007-005	R2	10K ohm K 1/2 W	569-1504-103
TB2	Terminal strip 2 ins 1 gnd	586-1001-120	R3	47 ohm K 1/2 W	569-1504-47
			R4	1.0K ohm K 1/2 W	569-1504-10
	AC CORD		R7	1.0K trim pot. (IF Gain)	562-0019-10
			R8	62 ohm J 1/2 W	569-1503-62
HW4	Strain relief AC cord	574-0003-002	R9	4.7K ohm K 1/2 W	569-1504-47
W57	8 ft. AC cord 3-18 black	597-1001-002	R12	10K ohm K 1/2 W	569-1504-10
			R13	10K 1/8 W A 5/8 (Volume)	562-0016-00
	CONNECTORS		R14	150K ohm K 1/2 W	569-1504-15
~ *			R15	68K ohm K 1/2 W	569-1504-68
J1	External speaker jack	515-2001-002	R16	100K ohm K 1/2 W	569-1504-10
J2	Antenna connector	142-0101-002	R17	2.2K ohm K 1/2 W	569-1504-22
13	DC Power Connector		R19	1.5K ohm ±10% 1/2 W	569-1504-15
	Includes:	E1E 4101 001	R21	Same as R17	E(0 1004 (0
	Terminal tab	515-4101-001	R22	680 ohm K 1/2 W	569-1004-68
	Red terminal bushing	515-4101-002	R23	330 ohm K 1/2 W	569-1504-33
			R 24	22K ohm K 1/2 W	569-1504-22
	RELAY		R25	330 ohm K 1/2 W	569-1504-33
			R26	680 ohm K $1/2$ W	569-1504-68
К1	Relay DPDT 12V coil	567-0020-001	R27	5K 1/8 W BD 5/8 (Squelch)	562-0002-01
			R29	1.0K ohm K $1/2$ W	569-1504-10
	INDUCTORS		R31	3. 3K ohm K 1/2 W	569-1504-33
		F 40, 0001, 011	R32	120 ohm K $1/2$ W	569-1504-12
L2	20 mH audio choke	542-8001-011	R34	3.3K ohm K 1/2 W	569-1504-33

R37 330 ohm K 1/2 W 569-1504-331 Switch spacers 013 R38 470 ohm K 1/2 W 569-1504-471 FC board 035 R41 27 ohm K 1/2 W 569-1504-471 Dality threader 035 R42 1.0 ohm K 1/2 W 569-1504-470 Dality threader 035 R42 1.0 ohm K 1/2 W 569-1504-471 Y3 S. 735 Mit H-C-18/U S19 R43 2.2 kohm K 1/2 W 569-1504-471 Y3 S. 715 Mit H-C-18/U S19 R44 120 ohm K 1/2 W 569-1504-471 Y3 S. 715 Mit H-C-18/U S19 R46 120 ohm K 1/2 W 569-1504-471 Y4 S. 715 Mit H-C-18/U S19 R47 120 ohm K 1/2 W 569-1504-391 Y1 S. 700 Mit 2 0T HC-18/U S19 R51 120 ohm K 1/2 W 569-1504-321 Y1 S2.00 Mit S 0T HC-18/U S19 R52 390 ohm K 1/2 W 569-1504-221 Y1 S2.00 Mit S 0T HC-18/U S19 R53 390 chm K 1/2 W 569-1504-221 Y1 S2.00 Mit S 0T HC-18/U	SYMBOL NO.	DESCRIPTION	PART NO.	SYMBOL	NO.	DESCRIPTION	PART NO
R38 470 ohm K 1/2 W 569-1503-471 FC bard 035 R41 27 ohm K 1/2 W 569-1503-4270 Sol hum J 1/2 W 569-2503-120 YI Dal light bracket 0.77 R43 2, 2c ohm K 1/2 W 569-1504-427 Y2 S, 725 MHz HC-18/U S19 R44 15 ohm K 1/2 W 569-1504-471 Y3 S, 725 MHz HC-18/U S19 R46 15 ohm K 1/2 W 569-1504-150 Y4 S, 695 MHZ HC-18/U S19 R47 2, 7K ohm K 1/2 W 569-1504-121 Y6 G, 1604 MHz HC-18/U S19 R48 120 ohm K 1/2 W 569-1504-121 Y9 S, 700 MHz 3 OT HC-18/U S19 R48 120 ohm K 1/2 W 569-1504-301 Y10 S2, 700 MHz 3 OT HC-18/U S19 R51 120 ohm K 1/2 W 569-1504-321 Y13 S2, 800 MHz 3 OT HC-18/U S19 R53 3, 80 ohm K 1/2 W 569-1504-221 Y14 S2, 800 MHz 3 OT HC-18/U S19 R53 6, 86 ohm K 1/2 W 569-1504-221 Y14 S2, 800 MHz 3 OT HC-18/U S19 R54 120 ohm K 1/2 W 569-1504-221 Y14							
R38 470 ohm K 1/2 W 569-1503-471 FC bard 035 R41 27 ohm K 1/2 W 569-1503-470 Sult light bracket 0.71 R42 1.0 ohm K 1/2 W 569-1503-422 Y2 5.72 SM Hz HC-18/U 519 R43 2,20 chm K 1/2 W 569-1504-471 Y3 5.71 SM Hz HC-18/U 519 R46 15 ohm K 1/2 W 569-1504-172 Y4 5.09 SM Hz HC-18/U 519 R47 2,7K ohm K 1/2 W 569-1504-121 Y6 6.1604 MHz HC-18/U 519 R48 120 ohm K 1/2 W 569-1504-301 Y7 6.1704 MHz HC-18/U 519 R48 120 ohm K 1/2 W 569-1504-301 Y1 9.32 700 MHz 3 OT HC-18/U 519 R51 120 ohm K 1/2 W 569-1504-301 Y1 32, 800 MHz 3 OT HC-18/U 519 R53 3% chm K 1/2 W 569-1504-321 Y1 32, 800 MHz 3 OT HC-18/U 519 R53 6.180 MH K 1/2 W 569-1504-421 Y1 32, 800 MHZ 3 OT HC-18/U 519 R54 6.20 chm J 1/2 W 569-1504-421 Y1 32, 800 MHZ 3 OT HC-18/U 519 R55	237	330 ohm K 1/2 W	569-1504-331			Switch spacers	013-1422-00
Right S10 dm j L/2 W 569-1503-511 Switch wafer 533 R41 2.7 dm K 1/2 W 569-1504-270 Dial light bracket 017. R42 1.0 dm K 1/2 W 569-1504-270 V1 5.735 Mitz HC-18/U 519 R45 4.70 dm K 1/2 W 569-1504-471 Y3 5.715 Mitz HC-18/U 519 R46 15 dm K 1/2 W 569-1504-272 Y5 6.1904 Mitz HC-18/U 519 R47 2.7K ohm K 1/2 W 569-1504-121 Y6 6.1904 Mitz HC-18/U 519 R48 120 ohm K 1/2 W 569-1504-121 Y6 6.1904 Mitz HC-18/U 519 R51 120 ohm K 1/2 W 569-1504-121 Y9 32.750 Mitz 3 OT HC-18/U 519 R52 390 ohm K 1/2 W 569-1504-121 Y1 32.800 Mitz 3 OT HC-18/U 519 R53 120 ohm K 1/2 W 569-1504-121 Y1 32.800 Mitz 3 OT HC-18/U 519 R54 6.6 kofm K 1/2 W 569-1504-212 Y14 32.800 Mitz 3 OT HC-18/U 519 R56 120 ohm K 1/2 W 569-1504-212		-				•	035-0199-00
PA1 27 ohm K 1/2 W 569-1504-270 Dal light bracket 017. R42 1.0 ohm K 1/2 W 569-1504-222 Y2 5.735 MHz HC-18/U 519- R43 2, 30 ohm K 1/2 W 569-1504-121 Y2 5.735 MHz HC-18/U 519- R44 15 ohm K 1/2 W 569-1504-172 Y5 6.1904 MHz HC-18/U 519- R44 120 ohm K 1/2 W 569-1504-121 Y6 6.1904 MHz HC-18/U 519- R44 120 ohm K 1/2 W 569-1504-121 Y6 6.1904 MHz HC-18/U 519- R51 120 ohm K 1/2 W 569-1504-121 Y9 3.700 MHz 3 OT HC-18/U 519- R53 390 ohm K 1/2 W 569-1504-622 Y12 32.800 MHz 3 OT HC-18/U 519- R54 6.0 m K 1/2 W 569-1504-621 Y13 32.800 MHz 3 OT HC-18/U 519- R54 220 ohm K 1/2 W 569-1504-222 Y14 32.800 MHz 3 OT HC-18/U 519- R56 220 ohm K 1/2 W 569-1504-621 Y13 32.800 MHz 3 OT HC-18/U 519- R57 120 ohm							583-2009-21
R42 1, 0 0 m K 1/2 W 569-503-109 Y1 5.735 MHz HC-18/U 519- R43 2, 2X 0 m K 1/2 W 569-1504-471 Y3 5.715 MHz HC-18/U 519- R46 15 0 nm K 1/2 W 569-1504-471 Y3 5.715 MHz HC-18/U 519- R47 2,7K 0 nm K 1/2 W 569-1504-272 Y5 6.1904 MHz HC-18/U 519- R48 120 0 nm K 1/2 W 569-1504-212 Y6 6.1904 MHz HC-18/U 519- R49 390 0 nm K 1/2 W 569-1504-391 Y7 6.1504 MHz HC-18/U 519- R51 120 0 nm K 1/2 W 569-1504-391 Y10 32,750 MHz 3 OT HC-18/U 519- R53 390 0 nm K 1/2 W 569-1504-121 Y13 32,800 MHz 3 OT HC-18/U 519- R54 6.54 0 nm K 1/2 W 569-1504-121 Y13 32,900 MHz 3 OT HC-18/U 519- R55 120 0 nm K 1/2 W 569-1504-121 Y14 32,900 MHz 3 OT HC-18/U 519- R56 22 nm K 1/2 W 569-1504-121 Y14 32,900 MHz 3 OT HC-18/U 519-							017-1839-00
R43 2, 2K ohm K 1/2 W 569-1504-222 Y2 5.725 MHz HC-18/U 519- R46 15 ohm K 1/2 W 569-1504-471 Y3 5.715 MHz HC-18/U 519- R47 2.7K ohm K 1/2 W 569-1504-150 Y4 5.695 MHz HC-18/U 519- R48 120 ohm K 1/2 W 569-1504-121 Y6 6.1904 MHz HC-18/U 519- R48 120 ohm K 1/2 W 569-1504-91 Y7 6.1704 MHz HC-18/U 519- R49 390 ohm K 1/2 W 569-1504-91 Y9 3.700 MHz 3 OT HC-18/U 519- R51 120 ohm K 1/2 W 569-1504-933 Y11 32.800 MHz 3 OT HC-18/U 519- R55 120 ohm K 1/2 W 569-1504-622 Y12 32.800 MHz 3 OT HC-18/U 519- R56 120 ohm K 1/2 W 569-1504-222 Y1 32.800 MHz 3 OT HC-18/U 519- R57 120 ohm K 1/2 W 569-1504-212 Y1 32.800 MHz 3 OT HC-18/U 519- R57 120 ohm K 1/2 W 569-1504-212 Y1 32.800 MHz 3 OT HC-18/U 519- R56<					Y1	8	519-0023-104
R46 15 ohm K 1/2 W 569-1504-150 Y4 5,095 MHz HC-18/U 519 R47 2,7K ohm K 1/2 W 569-1504-121 Y5 6,1904 MHz HC-18/U 519 R48 120 ohm K 1/2 W 569-1504-121 Y6 6,1804 MHz HC-18/U 519 R49 390 ohm K 1/2 W 569-1504-391 Y10 32,700 MHz 3 OT HC-18/U 519 R51 120 ohm K 1/2 W 569-1504-391 Y10 32,700 MHz 3 OT HC-18/U 519 R53 390 ohm K 1/2 W 569-1504-393 Y11 32,800 MHz 3 OT HC-18/U 519 R55 120 ohm K 1/2 W 569-1504-321 Y13 32,900 MHz 3 OT HC-18/U 519 R55 120 ohm K 1/2 W 569-1504-221 Y14 32,800 MHz 3 OT HC-18/U 519 R56 220 ohm K 1/2 W 569-1504-221 Y14 32,800 MHz 3 OT HC-18/U 519 R57 120 ohm K 1/2 W 569-1504-221 Y14 32,900 MHz 3 OT HC-18/U 519 R57 120 ohm K 1/2 W 569-1504-221 Y14 32,900 MHz 3 OT HC-18/U 518			569-1504-222		Y2	5.725 MHz HC-18/U	519-0023-103
R47 2.7K ohm K 1/2 W 569-1504-272 Y5 6.1904 MHz HC-18/U 519- 519 R48 120 ohm K 1/2 W 569-1504-211 Y6 6.1304 MHz HC-18/U 519- 519 R50 22 ohm K 1/2 W 569-1504-211 Y6 6.1504 MHz HC-18/U 519- 519 R51 120 ohm K 1/2 W 569-1504-211 Y9 32.700 MHz 3 OT HC-18/U 519- 519 R53 390 ohm K 1/2 W 569-1504-931 Y11 32.800 MHz 3 OT HC-18/U 519- 519 R54 6. & ohm K 1/2 W 569-1504-931 Y11 32.800 MHz 3 OT HC-18/U 519- 519 R55 120 ohm K 1/2 W 569-1504-622 Y12 32.800 MHz 3 OT HC-18/U 519- 519 R57 120 ohm K 1/2 W 569-1504-221 Y14 32.900 MHz 3 OT HC-18/U 519- 58 R61 3.8 ohm K 1/2 W 569-1504-221 Y14 32.900 MHz 3 OT HC-18/U 519- 58 R64 470 ohm K 1/2 W 569-1504-701 Y14 32.900 MHz 3 OT HC-18/U 519- 58 R64 470 ohm K 1/2 W 569-1504-701 T1 10MMZ 7 MHz ant. transformer 592- 78 58 R65 120 ohm K 1/2 W 569-1504-32	₹45	470 ohm K 1/2 W	569-1504-471		Y3	5.715 MHz HC-18/U	519-0023-102
R48 120 ohm K 1/2 W 569-1504-121 Y6 6.1704 MHz HC-18/U 519 R50 22 ohm K 1/2 W 569-1504-921 Y7 6.1704 MHz HC-18/U 519 R51 120 ohm K 1/2 W 569-1504-931 Y10 32.700 MHz 3 OT HC-18/U 519 R53 390 ohm K 1/2 W 569-1504-931 Y10 32.700 MHz 3 OT HC-18/U 519 R54 6.80 ohm K 1/2 W 569-1504-932 Y11 32.800 MHz 3 OT HC-18/U 519 R55 120 ohm K 1/2 W 569-1504-931 Y11 32.800 MHz 3 OT HC-18/U 519 R55 120 ohm K 1/2 W 569-1504-221 Y14 32.950 MHz 3 OT HC-18/U 519 R56 220 ohm K 1/2 W 569-1504-221 Y14 32.950 MHz 3 OT HC-18/U 519 R57 120 ohm K 1/2 W 569-1504-221 Y14 32.950 MHz 3 OT HC-18/U 519 R56 2.2 ohm K 1/2 W 569-1504-221 Y14 32.950 MHz 3 OT HC-18/U 519 R57 120 ohm K 1/2 W 569-1504-221 S4 DPDT tocack switch 583	146	15 ohm K 1/2 W	569-1504-150		Y4	5.695 MHz HC-18/U	519-0023-10
R49 390 ohm k 1/2 W 569-1504-391 Y7 6.1704 MHz HC -18/U 519 R50 22 ohm k 1/2 W 569-1504-121 Y9 32.700 MHz 3 OT HC -18/U 519 R51 120 ohm K 1/2 W 569-1504-321 Y10 32.750 MHz 3 OT HC -18/U 519 R53 390 ohm K 1/2 W 569-1504-333 Y11 32.800 MHz 3 OT HC -18/U 519 R54 6. 8K ohm K 1/2 W 569-1504-221 Y13 32.800 MHz 3 OT HC -18/U 519 R56 120 ohm K 1/2 W 569-1504-221 Y14 32.750 MHz 3 OT HC -18/U 519 R56 120 ohm K 1/2 W 569-1504-221 Y14 32.750 MHz 3 OT HC -18/U 519 R57 120 ohm K 1/2 W 569-1504-221 Y14 32.750 MHz 3 OT HC -18/U 519 R57 120 ohm K 1/2 W 569-1504-221 S4 DPDT rocker switch 583 R58 62 ohm K 1/2 W 569-1504-471 T1 TARNSFORMERS 584 R61 3.3 cohm K 1/2 W 569-1504-471 T2 TMAN Z MHz ant. transformer 592 R64 470 ohm K 1/2 W 569-1504-121 T2 T0MM Z MHz ant. transformer 592 R66 47 ohm K 1/2 W 569-1004-700 T3 TMM Z MHz ant. transformer 592 R67 1.2 co	147	2.7K ohm K 1/2 W	569-1504-272		Y5	6.1904 MHz HC-18/U	519-0023-10
R50 22 0 hm K 1/2 W 569-1002-220 Y8 6.1504 MHz HC-18/U 519 R51 120 ohm K 1/2 W 569-1504-391 Y10 32.700 MHz 3 OT HC-18/U 519 R53 39% ohm K 1/2 W 569-1504-393 Y11 32.800 MHz 3 OT HC-18/U 519 R54 6. & ohm K 1/2 W 569-1504-682 Y12 32.800 MHz 3 OT HC-18/U 519 R55 120 ohm K 1/2 W 569-1504-121 Y14 32.900 MHz 3 OT HC-18/U 519 R57 120 ohm K 1/2 W 569-1504-221 Y14 32.950 MHz 3 OT HC-18/U 519 R56 220 ohm K 1/2 W 569-1504-221 Y14 32.950 MHz 3 OT HC-18/U 519 R57 2.20 ohm K 1/2 W 569-1504-221 Y14 32.950 MHz 3 OT HC-18/U 519 R57 2.20 ohm K 1/2 W 569-1504-221 Y14 S75 Same as 54 R60 2.20 ohm K 1/2 W 569-1504-471 T1 T1 T10MM 27 MHz ant. transformer 592 R64 470 ohm K 1/2 W 569-1504-471 T2 10MM 27 MHz ant. transformer 592 R66 470 ohm K 1/2 W 569-1504-121 T2		120 ohm K 1/2 W		1		6.1804 MHz HC-18/U	519-0023-10
Rs1 120 ohm K 1/2 W 569-1504-321 Y9 32, 700 MHz 3 OT HC-18/U 519 Rs2 390 ohm K 1/2 W 569-1504-393 Y11 32, 200 MHz 3 OT HC-18/U 519 Rs5 120 ohm K 1/2 W 569-1504-622 Y12 32, 850 MHz 3 OT HC-18/U 519 Rs5 120 ohm K 1/2 W 569-1504-221 Y13 32, 900 MHz 3 OT HC-18/U 519 Rs6 220 ohm K 1/2 W 569-1504-221 Y14 32, 950 MHz 3 OT HC-18/U 519 Rs7 120 ohm K 1/2 W 569-1504-221 Y14 32, 950 MHz 3 OT HC-18/U 519 Rs7 120 ohm K 1/2 W 569-1504-221 S4 DPDT rocker switch 583 Rs6 22 ohm K 1/2 W 569-1504-371 TRANSFORMERS 592 Rs6 120 ohm K 1/2 W 569-1504-471 T1 10MM 27 MHz ant. transformer 592 Rs6 120 ohm K 1/2 W 569-1504-471 T1 10MM 27 MHz ant. transformer 592 Rs6 120 ohm K 1/2 W 569-1504-471 T1 10MM 27 MHz ant. transformer 592 Rs7 1, 80 ohm K 1/2 W 569-1504-471 T1 10MM 27 MHz ant. transf				1			519-0023-10
R52 390 ohm k 1/2 W 569-1504-393 Y10 32.750 MHz 3 OT HC-18/U 519 R53 39K ohm K 1/2 W 569-1504-682 Y12 32.800 MHz 3 OT HC-18/U 519 R55 120 ohm K 1/2 W 569-1504-121 Y14 32.900 MHz 3 OT HC-18/U 519 R56 220 ohm K 1/2 W 569-1504-121 Y14 32.900 MHz 3 OT HC-18/U 519 R57 120 ohm K 1/2 W 569-1504-221 Y14 32.900 MHz 3 OT HC-18/U 519 R57 120 ohm K 1/2 W 569-1504-221 Y14 32.900 MHz 3 OT HC-18/U 519 R58 62 ohm J 1/2 W 569-1504-221 Y14 32.900 MHz 3 OT HC-18/U 519 R57 120 ohm K 1/2 W 569-1504-321 S Same as S4 583 R50 22 ohm K 1/2 W 569-1504-371 T1 10MM 37 MHz ant. transformer 592 R54 470 ohm K 1/2 W 569-1504-470 T3 TMM 455 HT eransformer 592 R56 120 ohm K 1/2 W 569-1504-470 T1 10MM 37 MHz ant. transformer 592 R56 120 ohm K 1/2 W 569-1504-470 T5 Inpt /driver transformer 592 R57 1.60 chm K 2/W 569-1504-470 T5 Inpt /driver transformer 592 R57 1.60 chm K 1/2 W 569-1				1		-	519-0023-10
R53 39K ohm K 1/2 W 569-1504-693 Y11 32,800 MHz 30 TH C-18/U 519 R54 6. 8K ohm K 1/2 W 569-1504-622 Y12 32,800 MHz 30 TH C-18/U 519 R56 220 ohm K 1/2 W 569-1504-121 Y13 32,900 MHz 30 TH C-18/U 519 R56 220 ohm K 1/2 W 569-1504-221 Y14 32,900 MHz 30 TH C-18/U 519 R57 120 ohm K 1/2 W 569-1504-222 S3 SPDT stack switch 583 R59 2.2 K ohm K 1/2 W 569-1504-220 S5 Same as S4 S87 R61 3.3 K ohm K 1/2 W 569-1504-471 T1 10MM 27 MHz mix, transformer 592 TRANSFORMERS 592 R64 470 ohm K 1/2 W 569-1504-470 T3 TMM 455 kHz IF transformer 592 592 R66 47 ohm K 1/2 W 569-1504-102 T6 OUM 27 MHz mix, transformer 592 71 T3 TMM 455 kHz IF transformer 592 592 R70 1.2 K ohm K 1/2 W 569-1504-102 T6 OUM 27 MHz mix, transformer 592 592 71 10M 27 MHz mix, transformer 592 71 10M 27 MHz mix transformer 592 592 71 10M							519-0024-00
R54 6. K ohm K 1/2 W 569-1504-622 Y12 32. 850 Miz 3 OT HC-18/U 519 R55 120 ohm K 1/2 W 569-1504-121 Y13 32. 900 Miz 3 OT HC-18/U 519 R57 120 ohm K 1/2 W 569-1504-221 Y13 32. 900 Miz 3 OT HC-18/U 519 R58 62 ohm J 1/2 W 569-1504-221 S4 DPDT rocker switch 583 R59 2. 2k ohm K 1/2 W 569-1504-322 S4 DPDT rocker switch 583 R60 22 ohm K 1/2 W 569-1504-421 T1 TRANSFORMERS 582 R61 3. 3k ohm K 1/2 W 569-1504-471 T1 10MM 27 Miz ant. transformer 592 R64 470 ohm K 1/2 W 569-1504-471 T1 10MM 27 Miz ant. transformer 592 R66 47 ohm K 1/2 W 569-1504-471 T3 TMM 455 kitz IF transformer 592 R70 1.0K ohm K 1/2 W 569-1504-470 T3 TMM 455 kitz IF transformer 592 R71 5.0 ohm K 1/2 W 569-1004-473 T5 Input /dtiver transformer 592 R71 5.0 ohm K 1/2 W 569-1004-220 T9 Same as							519-0024-002
R55 120 ohm K 1/2 W 569-1504-121 Y13 32.900 MHz 3 OT HC-18/U 519- R56 220 ohm K 1/2 W 569-1504-221 Y14 32.900 MHz 3 OT HC-18/U 519- R57 120 ohm K 1/2 W 569-1504-221 S3 SPDT stack switch 583- R59 2.2K ohm K 1/2 W 569-1504-222 S5 Same as S4 S87 R61 3.3K ohm K 1/2 W 569-1504-321 TRANSFORMERS 583- R62 470 ohm K 1/2 W 569-1504-470 TRANSFORMERS 592- R63 27 ohm K 1/2 W 569-1504-470 TI 10MM 27 MHz ant. transformer 592- R64 470 ohm K 1/2 W 569-1504-121 T2 10MM 27 MHz ant. transformer 592- R65 120 ohm K 1/2 W 569-1504-122 T4 Same as T3 592- R66 47 ohm K 1/2 W 569-1504-102 T6 Out/mod transformer 592- R71 5.6 ohm K 2 W 569-1004-473 T5 Input /driver transformer 592- R72 3.3K ohm K 1/2 W 569-104-220 T9 Same as T8 582- R84 2.2K				1			519-0024-00
Res 220 chm K 1/2 W 569-1504-221 Y14 32.950 MHz 3 OT HC-18/U 519- 519- 519- 519- 519- 519- 519- 519-				1			519-0024-004
R57 120 ohm K 1/2 W 569-1504-121 583 SPDT stack switch 583 R58 62 ohm J 1/2 W 569-1504-222 S4 DPDT rocker switch 583 R60 22 ohm K 1/2 W 569-1504-222 S4 DPDT rocker switch 583 R61 3. SK ohm K 1/2 W 569-1504-471 T1 10MM 27 MHz ant. transformer 592 R63 27 ohm K 1/2 W 569-1504-471 T1 10MM 27 MHz ant. transformer 592 R65 120 ohm K 1/2 W 569-1504-470 T3 TMM 355 kHz IF transformer 592 R66 470 ohm K 1/2 W 569-1504-470 T3 TMM 27 MHz ant. transformer 592 R67 1. 2K ohm K 1/2 W 569-1504-121 T4 Same as T3 FR 592 R67 1. 2K ohm K 1/2 W 569-1504-122 T4 Same as T3 FR 592 R70 1. 0K ohm K 1/2 W 569-1504-122 T4 Same as T3 FR 592 R71 5. 6 ohm K 2 W 569-1504-122 T12 Cout/mod transformer 592 R73 22 ohm K 1/2 W 569-1504-270 T10 <							519-0024-00
R58 62 ohm J 1/2 W 569-1503-620 S3 SPDT stack switch 583 R59 2.2 kohm K 1/2 W 569-1504-222 S4 DPDT rocker switch 583- R61 3.3 K ohm K 1/2 W 569-1504-332 TRANSFORMERS 583- R62 470 ohm K 1/2 W 569-1504-471 TI TRANSFORMERS 592- R64 470 ohm K 1/2 W 569-1504-471 T1 10MM 27 MHz ant. transformer 592- R65 120 ohm K 1/2 W 569-1504-471 T3 TMM 455 kHz IF transformer 592- R66 47 ohm K 1/2 W 569-1504-122 T4 Same as T3 T4 Same as T3 T5 Input/driver transformer 592- R67 1.2K ohm K 1/2 W 569-1504-122 T6 Out/mod transformer 592- R70 1.0K ohm K 1/2 W 569-1504-102 T6 Out/mod transformer 592- R71 5.6 ohm K 1/2 W 569-1004-220 T9 Same as T8 592- R72 3.3K ohm K 1/2 W 569-1504-122 T10 Same as T8 592- R82 27 ohm K 1/2 W 569-1504-122 T11					Y14	32.950 MHz 3 OT HC-18/U	519-0024-00
R59 2. 2K ohm K 1/2 W 569-1504-222 S4 DPDT rocker switch 583- R60 22 ohm K 1/2 W 569-1504-332 S5 Same as S4 S64 R61 3. 3K ohm K 1/2 W 569-1504-332 TRANSFORMERS S5 R62 470 ohm K 1/2 W 569-1504-471 T1 10MM 27 MHz ant. transformer 592- R64 470 ohm K 1/2 W 569-1504-121 T2 10M 27 MHz ant. transformer 592- R65 120 ohm K 1/2 W 569-1504-121 T4 Same as T3 TMM 455 kHz [T ransformer 592- R66 47 ohm K 1/2 W 569-1504-102 T6 Out/mod transformer 592- R70 1. 0K ohm K 1/2 W 569-1004-473 T5 Input Attiver transformer 592- R71 5. 6 ohm K 1/2 W 569-1004-202 T6 Out/mod transformer 592- R73 22 ohm K 1/2 W 569-1004-202 T9 Same as T8 592- R82 27 ohm K 1/2 W 569-1504-102 T11 Same as T8 592- R83 1.0K ohm K 1/2 W 569-1504-102 T112 254 MHz avice transformer 59				6.2			F 00 1000 00
Ref 22 ohm K 1/4 W 569-1002-220 S5 Same as S4 R61 3, 3k ohm K 1/2 W 569-1504-332 TRANSFORMERS R62 470 ohm K 1/2 W 569-1504-471 TRANSFORMERS R63 27 ohm K 1/2 W 569-1504-471 T1 10MM 27 MHz ant. transformer 592 R64 470 ohm K 1/2 W 569-1504-470 T3 7MM 455 kHz IF transformer 592 R65 120 ohm K 1/2 W 569-1504-121 T2 10MM 27 MHz ant. transformer 592 R66 47 ohm K 1/2 W 569-1504-122 T4 Same as T3 592 R67 1.2k ohm K 1/2 W 569-1504-122 T4 Same as T3 592 R70 1.0k ohm K 1/2 W 569-1004-220 T9 Same as T8 592 R71 3.3k ohm K 1/2 W 569-1504-102 T10 Same as T8 584 R82 2 ohm K 1/2 W 569-1504-102 T11 Same as T8 584 R83 1.0k ohm K 1/2 W 569-1504-102 T11 Same as T8 582 R8							583-1002-00
R61 3, 3k ohm k 1/2 w 569-1504-332 TRANSFORMERS R62 470 ohm K 1/2 w 569-1504-471 TRANSFORMERS R63 27 ohm K 1/2 w 569-1504-471 T1 10MM 27 MHz ant. transformer 592- R65 120 ohm K 1/2 w 569-1504-121 T2 10MM 27 MHz mix. transformer 592- R65 120 ohm K 1/2 w 569-1504-121 T2 10MM 27 MHz mix. transformer 592- R66 47 ohm K 1/2 w 569-1504-121 T4 Same as T3 Same as T3 R67 1. 2k ohm K 1/2 w 569-1004-473 T5 Input/diver transformer 592- R70 1. 0k ohm K 1/2 w 569-1004-332 T8 00M 27 MHz acc. transformer 592- R71 5. 6 ohm K 1/2 w 569-1004-332 T8 10MM 27 MHz acc. transformer 592- R72 3. 8k ohm K 1/2 w 569-1504-102 T1 Same as T8 Same as T8 R83 1. 0k ohm K 1/2 w 569-1504-102 T11 Same as T8 Same as T8 R84 2. 2k ohm K 1/2 w 569-1504-102 T11 Same as T8 Same as T8 R84							583-3004-00
R62 470 ohm K 1/2 W 569-1504-471 TRANSFORMERS R63 27 ohm K 1/2 W 569-1504-471 T1 10MM 27 MHz ant. transformer 592 R65 120 ohm K 1/2 W 569-1504-471 T2 10MM 27 MHz ant. transformer 592 R66 47 ohm K 1/2 W 569-1504-121 T2 10MM 27 MHz ant. transformer 592 R66 47 ohm K 1/2 W 569-1504-122 T4 Same as T3 592 R67 1.2K ohm K 1/2 W 569-1004-473 T5 Input/driver transformer 592 R70 1.0K ohm K 1/2 W 569-2004-569 T7 10MM 27 MHz auto-transformer 592 R71 5.6 ohm K 1/2 W 569-1004-32 T8 10MM 27 MHz auto-transformer 592 R72 3.3K ohm K 1/2 W 569-1004-20 T9 Same as T8 592 R83 1.0K ohm K 1/2 W 569-1504-122 T11 Same as T8 592 R84 2.2K ohm K 1/2 W 569-1504-122 T11 Same as T8 592 R84 2.8K ohm K 1/2 W 569-1504-122 T12 25-50 MHz driver transformer 592 R84<				55		Same as 54	
R63 27 ohm K 1/2 W 569-1504-270 IDMM 27 MHz ant. transformer 592- R64 470 ohm K 1/2 W 569-1504-471 T1 10MM 27 MHz mix. transformer 592- R66 47 ohm K 1/2 W 569-1504-470 T3 7MM 455 kHz IF transformer 592- R67 1.2K ohm K 1/2 W 569-1504-473 T5 Input/driver transformer 592- R68 47K ohm K 1/2 W 569-1004-473 T5 Input/driver transformer 592- R70 1.0K ohm K 1/2 W 569-1004-473 T6 Out/mod transformer 592- R71 5.6 ohm K 2 W 569-1004-322 T8 10MM 27 MHz auto-transformer 592- R72 3.3K ohm K 1/2 W 569-1004-20 T9 Same as T8 592- R82 27 ohm K 1/2 W 569-1504-102 T11 Same as T8 592- R83 1.0K ohm K 1/2 W 569-1504-122 T12 25-40 MHz osc transformer 592- R84 2.2K ohm K 1/2 W 569-1504-152 T13 25-50 MHz driver transformer 592- R85 1.0M ohm K 1/2 W 569-1504-152 T14 115 AC-23 DC IA FWB t							
R64 470 ohm K 1/2 W 569-1504-471 T1 10MM 27 MHz ant. transformer 592- R65 120 ohm K 1/2 W 569-1504-121 T2 10MM 27 MHz ant. transformer 592- R66 47 ohm K 1/2 W 569-1504-122 T4 Same as T3 Fransformer 592- R67 1. 2K ohm K 1/2 W 569-1504-102 T6 Out/mod transformer 592- R71 5. 6 ohm K 2 W 569-2004-569 T7 10MM 27 MHz aut. transformer 592- R71 5. 6 ohm K 1/2 W 569-1004-132 T8 10MM 27 MHz aut. transformer 592- R72 3. 3K ohm K 1/2 W 569-1004-132 T8 10MM 27 MHz aut. transformer 592- R73 22 ohm K 1/2 W 569-1004-220 T9 Same as T8 592- R84 2. 3K ohm K 1/2 W 569-1504-122 T11 Same as T8 592- R84 2. 3K ohm K 1/2 W 569-1504-122 T12 25-40 MHz osc transformer 592- R85 1. 6K ohm K 1/2 W 569-1504-122 T13 25-50 MHz driver transformer 592- R86 2. K 1/8 W ("S" Meter adjust) 562-0004-2						TRANSFORMERS	
R65 120 ohm K 1/2 W 569-1504-121 T2 10MM 27 MHz mix, transformer 592. R66 47 ohm K 1/2 W 569-1504-470 T3 7MM 455 kHz IF transformer 592. R67 1. 2K ohm K 1/2 W 569-1504-122 T4 Same as T3 R68 47K ohm K 1/2 W 569-1504-102 T6 Out/mod transformer 592. R70 1. 0K ohm K 1/2 W 569-1004-473 T5 Input/driver transformer 592. R71 5. 6 ohm K 2 W 569-1004-322 T8 10MM 27 MHz osc. transformer 592. R73 22 ohm K 1/2 W 569-1004-322 T8 10MM 27 MHz osc. transformer 592. R82 27 ohm K 1/2 W 569-1004-220 T9 Same as T8 R84 2. 22 ohm K 1/2 W 569-1504-122 T12 25-40 MHz osc transformer 592. R85 1. 0K ohm K 1/2 W 569-1504-152 T13 25-50 MHz driver transformer 592. R84 2. 2K ohm K 1/2 W 569-1504-152 T13 25-50 MHz driver transformer 592. R86 3.9K ohm K 1/2 W 569-1504-332 T14 115 AC-23 DC 1A FWB trans. 592. R87 47K ohm K 1/2 W 569-1004-105 U1						10MM 27 MUS out transformer	592-5015-00
R66 47 ohm K 1/2 W 569-1504-470 T3 7MM 455 kHz IF transformer 592- R67 1. 2K ohm K 1/2 W 569-1504-122 T4 Same as T3 592- R68 47K ohm K 1/2 W 569-1504-102 T6 Out/mod transformer 592- R70 1. 0K ohm K 1/2 W 569-1004-473 T5 Input/fuiver transformer 592- R71 5. 6 ohm K 1/2 W 569-1004-332 T8 10MM 27 MHz osc. transformer 592- R73 22 ohm K 1/2 W 569-1004-320 T9 Same as T8 R8 R8 10K ohm K 1/2 W 569-1004-220 T9 Same as T8 R84 R84 2. 2K ohm K 1/2 W 569-1504-102 T11 Same as T8 R84 R84 2. 2K ohm K 1/2 W 569-1504-102 T13 Same as T8 S8 S8 SA Som K 1/2 W 569-1504-322 T12 25-40 MHz osc transformer 592- R85 1. 5K ohm K 1/2 W 569-1004-333 T14 115 AC-23 DC 1A FWB trans. 592- R86 2. K 1/8 W ("S" Meter adjust) 562-0004-253 U1 PEC RF amp. silicon 544- R91 2.5K 1/8 W							
R67 1. 2K ohm K 1/2 W 569-1504-122 T4 Same as T3 R68 47K ohm K 1/2 W 569-1004-473 T5 Input/driver transformer 592 R71 5. 6 ohm K 2 W 569-1004-332 T8 10MM 27 MHz osc. transformer 592 R72 3. 3K ohm K 1/2 W 569-1004-332 T8 10MM 27 MHz osc. transformer 592 R72 3. 3K ohm K 1/2 W 569-1004-320 T9 Same as T8 10MM 27 MHz osc. transformer 592 R82 27 ohm K 1/2 W 569-1004-220 T9 Same as T8 10MM 27 MHz osc. transformer 592 R83 1. 0K ohm K 1/2 W 569-1504-222 T10 Same as T8 592 R84 2. 2K ohm K 1/2 W 569-1504-222 T12 25-50 MHz driver transformer 592 R85 1. 5K ohm K 1/2 W 569-1004-473 T5 115 AC-23 DC IA FWB trans. 592 R86 3. 9K ohm K 1/2 W 569-1004-473 T14 115 AC-23 DC IA FWB trans. 592 R87 4. 1/8 W ("S" Meter zero) 562-0004-253 U1 PEC Ramp. silicon 544 R91 2.5 K / 8 W ("S" Meter adjust) <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>592-5020-00</td>							592-5020-00
R68 47K ohm K 1/2 W 569-1004-473 T5 Input/driver transformer 592- R70 1.0K ohm K 1/2 W 569-1504-102 T6 Out/mod transformer 592- R71 5.6 ohm K 2 W 569-2004-569 T7 10MM 27 MHz auto-transformer 592- R72 3.3K ohm K 1/2 W 569-1004-332 T8 10MM 27 MHz auto-transformer 592- R82 27 ohm K 1/2 W 569-1504-270 T10 Same as T8 Same as T8 T11 Same as T8 S				1			392-3020-00
R70 1.0K ohm K 1/2 W 569-1504-102 T6 Out/mod transformer 592- R71 5.6 ohm K 2 W 569-2004-569 T7 10MM 27 MHz osc. transformer 592- R73 22 ohm K 1/2 W 569-1004-322 T8 10MM 27 MHz osc. transformer 592- R73 22 ohm K 1/2 W 569-1004-220 T9 Same as T8 582- R84 2.7 ohm K 1/2 W 569-1504-222 T10 Same as T8 582- R83 1.0K ohm K 1/2 W 569-1504-222 T12 25-40 MHz osc transformer 592- R84 2.2K ohm K 1/2 W 569-1504-102 T11 Same as T8 592- R85 1.5K ohm K 1/2 W 569-1504-132 T13 25-50 MHz driver transformer 592- R86 2.8K ohm K 1/2 W 569-1004-473 T14 115 AC-23 DC 1A FWB trans. 592- R87 47K ohm K 1/2 W 569-1004-105 T14 115 AC-23 DC 1A FWB trans. 592- R88 3.9K ohm K 1/2 W 569-1004-105 U1 PEC RF amp. silicon 544- R94 1.5 ohm K 2 W 569-2004-159 U2 PEC Ist IF 120 silicon<		• •					592-1007-00
R71 5.6 ohm K 2 W 569-2004-569 T7 10MM 27 MHz osc. transformer 592 R72 3.3K ohm K 1/2 W 569-1004-332 T8 10MM 27 MHz osc. transformer 592 R73 22 ohm K 1/2 W 569-1004-220 T9 Same as T8 10MM 27 MHz osc. transformer 592 R82 27 ohm K 1/2 W 569-1004-220 T9 Same as T8 10M 07 MHz osc. transformer 592 R83 1.0K ohm K 1/2 W 569-1504-102 T11 Same as T8 10M 27 MHz osc. transformer 592 R84 2.2K ohm K 1/2 W 569-1504-102 T11 Same as T8 592 R85 1.5K ohm K 1/2 W 569-1504-152 T13 25-50 MHz driver transformer 592 R86 2K 1/8 W ("S" Meter zero) 562-0004-202 T14 115 AC-23 DC 1A FWB trans. 592 R88 3.9K ohm K 1/2 W 569-1004-105 U1 PEC RF amp. silicon 544 R91 25K 1/8 W ("S" Meter adjust) 562-0004-159 U2 PEC lst mixer silicon 544 R93 1.0M ohm K 1/2 W 569-1301-001 W14 PEC lst IF 120 silicon 544		-		1			592-1013-00
R72 3. 3K ohm K 1/2 W 569-1004-332 T8 10MM 27 MHz auto-transformer 592 R73 22 ohm K 1/2 W 569-1004-220 T9 Same as T8 R82 27 ohm K 1/2 W 569-1004-220 T9 Same as T8 R83 1.0K ohm K 1/2 W 569-1504-102 T10 Same as T8 R84 2. Xc ohm K 1/2 W 569-1504-102 T11 Same as T8 R84 2. Xc ohm K 1/2 W 569-1504-102 T12 25-40 MHz osc transformer 592- R85 1.5K ohm K 1/2 W 569-1504-102 T13 25-50 MHz driver transformer 592- R86 2. Xc ohm K 1/2 W 569-1004-473 T14 115 AC-23 DC 1A FWB trans. 592- R87 47K ohm K 1/2 W 569-1004-473 PACKAGED ELECTRONIC CIRCUITS 889 1.0M ohm K 1/2 W 569-1004-105 PACKAGED ELECTRONIC CIRCUITS 544- R94 1.5 ohm K 2 W 569-2004-159 U2 PEC 1st mixer silicon 544- R95 30K ohm K 1/2 W 569-301-001 W PEC 2nd IF silicon 544- R12 THERMISTORS U5 PEC noise limit. germ. 544-				1			
R73 22 ohm K 1/2 W 569-1004-220 T9 Same as T8 R82 27 ohm K 1/2 W 569-1504-270 T10 Same as T8 R83 1.0K ohm K 1/2 W 569-1504-270 T10 Same as T8 R84 2.2K ohm K 1/2 W 569-1504-102 T11 Same as T8 R85 1.5K ohm K 1/2 W 569-1504-152 T12 25-40 MHz osc transformer 592- R86 2K 1/8 W ("S" Meter zero) 562-0004-202 T14 115 AC-23 DC 1A FWB trans. 592- R87 47K ohm K 1/2 W 569-1004-473 T14 115 AC-23 DC 1A FWB trans. 592- R88 3.9K ohm K 1/2 W 569-1004-473 T14 115 AC-23 DC 1A FWB trans. 592- R89 1.0M ohm K 1/2 W 569-1004-473 T14 115 AC-23 DC 1A FWB trans. 592- R89 1.0M ohm K 1/2 W 569-1004-105 U1 PEC RF amp. silicon 544- R94 1.5 ohm K 2 W 569-2004-159 U2 PEC list mixer silicon 544- R95 330K ohm K 1/2 W 569-3001-001 W14 PEC colst IF 120 silicon 544- R12 Thermis				1			
R82 27 ohm K 1/2 W 569-1504-270 T10 Same as T8 R83 1.0K ohm K 1/2 W 569-1504-102 T11 Same as T8 R84 2.2K ohm K 1/2 W 569-1504-222 T12 25-40 MHz osc transformer 592- R85 1.5K ohm K 1/2 W 569-1504-152 T13 25-50 MHz driver transformer 592- R86 2K 1/8 W ("S" Meter zero) 562-0004-202 T14 115 AC-23 DC 1A FWB trans. 592- R86 3.9K ohm K 1/2 W 569-1504-392 T14 115 AC-23 DC 1A FWB trans. 592- R87 47K ohm K 1/2 W 569-1004-473 PACKAGED ELECTRONIC CIRCUITS 594- R88 3.9K ohm K 1/2 W 569-1004-105 PACKAGED ELECTRONIC CIRCUITS 544- R91 25K 1/8 W ("S" Meter adjust) 562-0004-253 U1 PEC RF amp. silicon 544- R95 330K ohm K 1/2 W 569-1004-159 U2 PEC Ist mixer silicon 544- R95 330K ohm K 1/2 W 569-3001-001 U4 PEC 2nd IF silicon 544- THERMISTORS U4 PEC adl IF silicon 544- Stire SwitrCh Assembly							071 0010 00
R83 1.0K ohm K 1/2 W 569-1504-102 T11 Same as T8 R84 2.2K ohm K 1/2 W 569-1504-222 T12 25-40 MHz osc transformer 592- R85 1.5K ohm K 1/2 W 569-1504-152 T13 25-50 MHz driver transformer 592- R86 2K 1/8 W ("S" Meter zero) 562-0004-202 T14 115 AC-23 DC 1A FWB trans. 592- R87 47K ohm K 1/2 W 569-1004-473 T14 115 AC-23 DC 1A FWB trans. 592- R88 3.9K ohm K 1/2 W 569-1004-105 T14 PACKAGED ELECTRONIC CIRCUITS R91 1.5 ohm K 2 W 569-2004-159 U2 PEC RF amp. silicon 544- R94 1.5 ohm K 1/2 W 569-2004-159 U2 PEC 1st mixer silicon 544- R95 330K ohm K 1/2 W 569-1504-334 U3 PEC 2nd IF silicon 544- R95 330K ohm K 1/2 W 569-3001-001 W4 PEC 2nd IF silicon 544- R71 Thermistor 569-3001-001 W5 PEC audio silicon 544- S1 ON/OFF, SPST (Volume Control) 562-0016-004 V6 PC BOARD PC BOARD </td <td></td> <td></td> <td>569-1504-270</td> <td></td> <td></td> <td></td> <td></td>			569-1504-270				
R84 2. 2K ohm K 1/2 W 569-1504-222 T12 25-40 MHz osc transformer 592- R85 1.5K ohm K 1/2 W 569-1504-152 T13 25-50 MHz driver transformer 592- R86 2K 1/8 W ("S" Meter zero) 562-0004-202 T14 115 AC-23 DC 1A FWB trans. 592- R87 47K ohm K 1/2 W 569-1004-473 T14 115 AC-23 DC 1A FWB trans. 592- R88 3.9K ohm K 1/2 W 569-1004-473 T14 115 AC-23 DC 1A FWB trans. 592- R87 47K ohm K 1/2 W 569-1004-473 T14 115 AC-23 DC 1A FWB trans. 592- R89 1.0M ohm K 1/2 W 569-1004-105 PACKAGED ELECTRONIC CIRCUITS 544- R94 1.5 ohm K 2 W 569-1004-159 U2 PEC 1st mixer silicon 544- R94 1.5 ohm K 1/2 W 569-1504-334 U3 PEC 1st IF 120 silicon 544- R95 330K ohm K 1/2 W 569-3001-001 U4 PEC 2nd IF silicon 544- THERMISTORS U5 PEC noise limit, germ. 544- S1 ON/OFF, SPST (Volume Control) 562-0016-004 PC BOARD PC BOARD </td <td>183</td> <td>1.0K ohm K 1/2 W</td> <td>569-1504-102</td> <td>1</td> <td></td> <td></td> <td></td>	183	1.0K ohm K 1/2 W	569-1504-102	1			
R85 1.5K ohm K 1/2 W 569-1504-152 T13 25-50 MHz driver transformer 592- R86 2K 1/8 W ("S" Meter zero) 562-0004-202 T14 115 AC-23 DC 1A FWB trans. 592- R87 47K ohm K 1/2 W 569-1004-473 T14 115 AC-23 DC 1A FWB trans. 592- R88 3.9K ohm K 1/2 W 569-1004-105 PACKAGED ELECTRONIC CIRCUITS 544- R89 1.0M ohm K 1/2 W 569-1004-105 U1 PEC RF amp. silicon 544- R91 25K 1/8 W ("S" Meter adjust) 562-0004-253 U1 PEC RF amp. silicon 544- R95 330K ohm K 1/2 W 569-1504-334 U3 PEC 1st mixer silicon 544- R95 330K ohm K 1/2 W 569-1504-334 U3 PEC last IF 120 silicon 544- THERMISTORS U5 PEC noise limit. germ. 544- KT1 Thermistor 569-3001-001 KT V6 PC audio silicon 544- S2 Crystal Switch Assembly 023-026-001 U7 IC MC7815CP volt. reg. 544- S2 Crystal Switch knob 542-0016-004 PC board 035- <td>184</td> <td>2.2K ohm K 1/2 W</td> <td>569-1504-222</td> <td></td> <td></td> <td></td> <td>592-5014-00</td>	184	2.2K ohm K 1/2 W	569-1504-222				592-5014-00
R87 47K ohm K 1/2 W 569-1004-473 R88 3.9K ohm K 1/2 W 569-1504-392 R89 1.0M ohm K 1/2 W 569-1004-105 R91 25K 1/8 W ("S" Meter adjust) 562-0004-253 U1 PEC RF amp. silicon 544- R94 1.5 ohm K 2 W 569-1504-334 U2 PEC 1st mixer silicon 544- R95 330K ohm K 1/2 W 569-1504-334 U3 PEC 1st IF 120 silicon 544- U4 PEC 2nd IF silicon 544- U5 PEC noise limit. germ. 544- U4 PEC 2nd IF silicon 544- U5 PEC noise limit. germ. 544- U5 PEC noise limit. germ. 544- U5 PEC audio silicon 544- U5 PEC audio silicon 544- U6 PEC audio silicon 544- U5 PEC audio silicon 544- U5 Same as RT1 INTEGRATED CIRCUIT S1 ON/OFF, SPST (Volume Control) 562-0016-004 PC BOARD S2 Crystal Switch Assembly 023-3266-001 U8 PC board 035-	₹85	1.5K ohm K 1/2 W	569-1504-152	T13		25-50 MHz driver transformer	592-5014-00
R88 $3.9 \text{K} \text{ ohm K } 1/2 \text{ W}$ $569-1504-392$ PACKAGED ELECTRONIC CIRCUITS R89 $1.0 \text{M} \text{ ohm K } 1/2 \text{ W}$ $569-1004-105$ U1 PEC RF amp. silicon 544 - R91 $25 \text{K} 1/8 \text{ W}$ ("S" Meter adjust) $562-0004-253$ U1 PEC RF amp. silicon 544 - R94 $1.5 \text{ ohm K } 2 \text{ W}$ $569-2004-159$ U2 PEC 1st mixer silicon 544 - R95 $330 \text{K} \text{ ohm K } 1/2 \text{ W}$ $569-1504-334$ U3 PEC 2nd IF silicon 544 - U4 PEC 2nd IF silicon 544 - U5 PEC noise limit. germ. 544 - R11 Thermistor $569-3001-001$ W6 PEC audio silicon 544 - R12 Same as RT1 U6 PEC audio silicon 544 - S1 ON/OFF, SPST (Volume Control) $562-0016-004$ PC BOARD PC BOARD S2 Crystal Switch Assembly $023-3266-001$ U8 PC board 035 - Switch indicator dial $032-0154-102$ Switch knob $547-0008-005$ FILTER FILTER	₹86	2K 1/8 W ("S" Meter zero)	562-0004-202	T14		115 AC-23 DC 1A FWB trans.	592-3001-00
R89 1.0M ohm K 1/2 W 569-1004-105 FACKAGED FLECTRONIC CIRCUITS R91 25K 1/8 W ("S" Meter adjust) 562-0004-253 U1 PEC RF amp. silicon 544- R94 1.5 ohm K 2 W 569-2004-159 U2 PEC 1st mixer silicon 544- R95 330K ohm K 1/2 W 569-1504-334 U3 PEC 1st IF 120 silicon 544- U4 PEC 2nd IF silicon 544- U5 PEC noise limit. germ. 544- U5 PEC audio silicon 544- U5 PEC audio silicon 544- U6 PEC audio silicon 544- U6 PEC audio silicon 544- U7 INTEGRATED CIRCUIT 544- S1 ON/OFF, SPST (Volume Control) 562-0016-004 PC BOARD S2 Crystal Switch Assembly 023-3266-001 U8 PC board 035- Switch indicator dial 032-0154-102 Switch knob 547-0008-005 FILTER Switch knob 547-0008-005 FILTER 544-	₹87	47K ohm K 1/2 W	569-1004-473				
R89 1.0M ohm K 1/2 W 569-1004-105 R91 25K 1/8 W ("S" Meter adjust) 562-0004-253 U1 PEC RF amp. silicon 544- R94 1.5 ohm K 2 W 569-2004-159 U2 PEC 1st mixer silicon 544- R95 330K ohm K 1/2 W 569-1504-334 U3 PEC 2nd IF silicon 544- U4 PEC 2nd IF silicon 544- THERMISTORS U5 PEC noise limit. germ. 544- RT1 Thermistor 569-3001-001 KTEGRATED CIRCUIT 544- Same as RT1 U7 IC MC7815CP volt. reg. 544- S1 ON/OFF, SPST (Volume Control) 562-0016-004 PC BOARD 562-0016-004 S2 Crystal Switch Assembly 023-3266-001 U8 PC board 035- Switch indicator dial 032-0154-102 Switch knob 547-0008-005 FILTER FILTER		3.9K ohm K 1/2 W	569-1504-392			PACKAGED ELECTRONIC CIRCUIT	ГS
R941.5 ohm K 2 W569-2004-159U2FEC 1st mixer silicon544R95330K ohm K 1/2 W569-1504-334U3PEC 1st mixer silicon544THERMISTORSU4PEC 2nd IF silicon544THERMISTORSU5PEC noise limit. germ.544RT1Thermistor569-3001-001U6PEC audio silicon544RT2Same as RT1U6PEC audio silicon544SWITCHESU7IC MC7815CP volt. reg.544S1ON/OFF, SPST (Volume Control)562-0016-004PC BOARD544S2Crystal Switch Assembly023-3266-001U8PC board035-Switch indicator dial032-0154-102Switch knob547-0008-005FILTERDetent plate018-1009-001FILTERFILTERFILTER							
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THERMISTORSU3FIGURING 1011344THERMISTORSU4PEC 18d IF silicon544RT1Thermistor569-3001-001RT1Thermistor569-3001-001SWITCHESU7INTEGRATED CIRCUITSWITCHESU7IC MC7815CP volt. reg.544-SSION/OFF, SPST (Volume Control) 562-0016-004PC BOARDS2Crystal Switch Assembly023-3266-001U8PC BOARDS2Crystal Switch Assembly023-3266-001U8PC board035-Switch indicator dial032-0154-102Switch knob544-Detent plate018-1009-001				U2		PEC 1st mixer silicon	544-0002-01
THERMISTORS U5 PEC noise limit. germ. 544- V6 PEC audio silicon 544- V6 PEC audio silicon 544- U6 PEC audio silicon 544- INTEGRATED CIRCUIT INTEGRATED CIRCUIT SWITCHES U7 IC MC7815CP volt. reg. 544- S1 ON/OFF, SPST (Volume Control) 562-0016-004 S2 Crystal Switch Assembly 023-3266-001 Includes: Switch indicator dial 032-0154-102 Switch indicator dial 032-0154-102 Switch knob 547-0008-005 Detent plate 018-1009-001	195	330K ohm K 1/2 W	569-1504-334	U3		PEC 1st IF 120 silicon	544-0003-04
RT1 Thermistor 569-3001-001 RT2 Same as RT1 U6 PEC audio silicon 544- SWITCHES U7 IC MC7815CP volt. reg. 544- U7 IC MC7815CP volt. reg. 544- PC BOARD S2 Crystal Switch Assembly 023-3266-001 Includes: Switch indicator dial 032-0154-102 Switch knob 547-0008-005 Detent plate 018-1009-001				U4		PEC 2nd IF silicon	544-0002-01
RT1 Thermistor 569-3001-001 RT2 Same as RT1 INTEGRATED CIRCUIT SWITCHES U7 IC MC7815CP volt. reg. 544- S1 ON/OFF, SPST (Volume Control) 562-0016-004 PC BOARD S2 Crystal Switch Assembly 023-3266-001 U8 PC board 035- Switch indicator dial 032-0154-102 Switch knob 547-0008-005 FILTER		THERMISTORS				0	544-0002-01
RT2 Same as RT1 INTEGRATED CIRCUIT SWITCHES U7 IC MC7815CP volt. reg. 544- S1 ON/OFF, SPST (Volume Control) 562-0016-004 PC BOARD S2 Crystal Switch Assembly Includes: Switch indicator dial 032-0154-102 Switch knob U8 PC board 035- Switch knob 547-0008-005 Detent plate 018-1009-001 FILTER	271	Thermistor	569-3001-001	U6		PEC audio silicon	544-0002-02
SWITCHES U7 IC MC7815CP volt. reg. 544- CON/OFF, SPST (Volume Control) 562-0016-004 S2 Crystal Switch Assembly 023-3266-001 Includes: Switch indicator dial 032-0154-102 Switch knob 547-0008-005 Detent plate 018-1009-001			309-3001-001				
S1 ON/OFF, SPST (Volume Control) 562-0016-004 S2 Crystal Switch Assembly 023-3266-001 Includes: U8 PC board 035- Switch indicator dial 032-0154-102 Switch knob 547-0008-005 Detent plate 018-1009-001		Same as MII				INTEGRATED CIRCUIT	
S1 ON/OFF, SPST (Volume Control) 562-0016-004 S2 Crystal Switch Assembly 023-3266-001 Includes: U8 PC board 035- Switch indicator dial 032-0154-102 Switch knob 547-0008-005 Detent plate 018-1009-001		SWITCHES		117		IC MC7815CP volt reg	544-2003-00
S2 Crystal Switch Assembly 023-3266-001 Includes: U8 PC board 035- Switch indicator dial 032-0154-102 Switch knob 547-0008-005 FILTER Detent plate 018-1009-001	51	ON/OFF, SPST (Volume Contro	1) 562-0016-004	07		ie me/biser voit. reg.	544-2003-00
Includes:U8PC board035-Switch indicator dial032-0154-102035-035-Switch knob547-0008-005FILTERDetent plate018-1009-001FILTER						PC BOARD	
Switch indicator dial032-0154-102Switch knob547-0008-005Detent plate018-1009-001	52		023-3266-001	811		PC board	035-0191-00
Switch knob547-0008-005FILTERDetent plate018-1009-001			022-0154-102	0.0		i O board	035-0181-003
Detent plate 018-1009-001						FUTEP	
						TILIER	
		1		71		Mech, filter 455-7	532-1004-001
		24 position detent	555 7001-012				50# 100 1 -00]

