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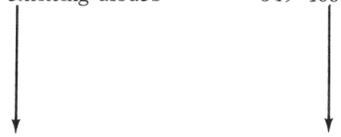
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The following changes are made to the Messenger 123A to make a Messenger 123B:

<u>Components Added</u>	<u>Schematic Location</u>	<u>Part Description</u>	<u>Part Number</u>
C100	D2	4700 pF $\pm 20\%$ , Z5U	510-3001-472
CR100	D2	1N4818, 200V, 1.5A	523-0013-201
CH3	--	Front panel	023-2618-032
NP14	--	Upper overlay, M123B	559-2032-031
S100	D2	DPDT slide switch	583-3001-005

The following changes are made to the Messenger 123B to make a Messenger 123SJ:

<u>Components Added</u>	<u>Schematic Location</u>	<u>Part Description</u>	<u>Part Number</u>
CR201	D4	Red, light emitting diodes 	549-4001-002
CR202	D4		
CR203	D4		
CR204	D4		
CR205	D4		
CR206	D4		
DS201	D4	2193D 14.4V, 0.12A	549-3001-003
Q201	D4	Silicon PNP 50 MHz amp	576-0003-017
Q202	D4	Silicon NPN amp	576-0003-011
Q203	D4	Silicon NPN amp	576-0003-011
R201	D4	680 ohm $\pm 10\%$ , 1/4 W	569-1002-681

<u>Components Added</u>	<u>Schematic Location</u>	<u>Part Description</u>	<u>Part Number</u>
R202	D4	1.2K ohm $\pm 10\%$ , 1/4 W	569-1002-122
R203	D4	1K ohm $\pm 10\%$ , 1/4 W	569-1002-102
R204	D4	680 ohm $\pm 10\%$ , 1/4 W	569-1002-681
R205	D4	390 ohm $\pm 10\%$ , 1/4 W	569-1002-391
R206	D4	10 ohm $\pm 10\%$ , 1/4 W	569-1002-100
R207	D4	820 ohm $\pm 10\%$ , 1/4 W	569-1002-821
R208	D4	220 ohm $\pm 10\%$ , 1/4 W	569-1002-221
R209	D4	150K ohm $\pm 10\%$ , 1/4 W	569-1002-154
R210	D4	33K ohm $\pm 10\%$ , 1/4 W	569-1002-333
R211	D4	4.7K ohm $\pm 10\%$ , 1/4 W	569-1002-472
R212	D4	68 ohm $\pm 10\%$ , 1 W	569-1006-680
R213	D4	47K ohm $\pm 10\%$ , 1/4 W	569-1002-473
U201	--	PC board	035-0251-001
NP14	--	Upper overlay (M123SJ)	559-2032-111
NP15	--	Lower overlay (M123SJ)	559-2033-001

<u>Parts Deleted</u>	<u>Schematic Location</u>	<u>Part Description</u>	<u>Part Number</u>
DS1	B9	6.3V bulb	549-3001-007
DS2	B10	6.3V bulb	549-3001-007

**MESSENGER 123A REVISION G**  
**MESSENGER 123B REVISION B**  
**MESSENGER 123SJ REVISION B**

<u>Components Deleted</u>	<u>Schematic Location</u>	<u>Part Description</u>		<u>Part Number</u>	<u>Reason for Change</u>
C15	A8	4700 pF ±20%, 50V		510-3204-472	Audio distortion
CR2	A6	1N4148 silicon diode		523-1500-883	Audio distortion

<u>Components Changed</u>	<u>Schematic Location</u>	<u>From</u>	<u>To</u>	<u>New Part Number</u>	<u>Reason for Change</u>
C27	B7	0.0022μF	0.047μF	510-3010-473	Self-modulation
C35	B9	0.01μF	0.022μF	510-3202-223	Audio distortion
C36	B9	0.01μF	0.022μF	510-3202-223	Audio distortion
C42	C2	6.8 pF	8.2 pF	520-3220-829	Improve T7 tuning
C43	C2	27 pF	22 pF	510-3216-220	Improve T7 tuning
CR2	A6	1N881	1N4148	523-1500-883	Availability
CR5	A8	↓	↓	↓	Increased tuning range LF oscillator bias regulation LF oscillator bias regulation
CR11	C9	↓	↓	↓	
CR14	C4	↓	↓	↓	
CR15	C4	↓	↓	↓	
CR17	B4	↓	↓	↓	
J1	B10	1001	1011	515-2001-011	
J3	D1			023-3370-001	
Q11	B9	2001	2029	576-0002-029	
Q12	B9	2001	2029	576-0002-029	
Q15	C6	4006	4035	576-0004-035	
R7	A5	2.2KΩ	1KΩ	562-0019-102	
R17	B2	2.2K	1.5K	569-1504-152	
R21	B2	2.2K	2.7K	569-1504-272	

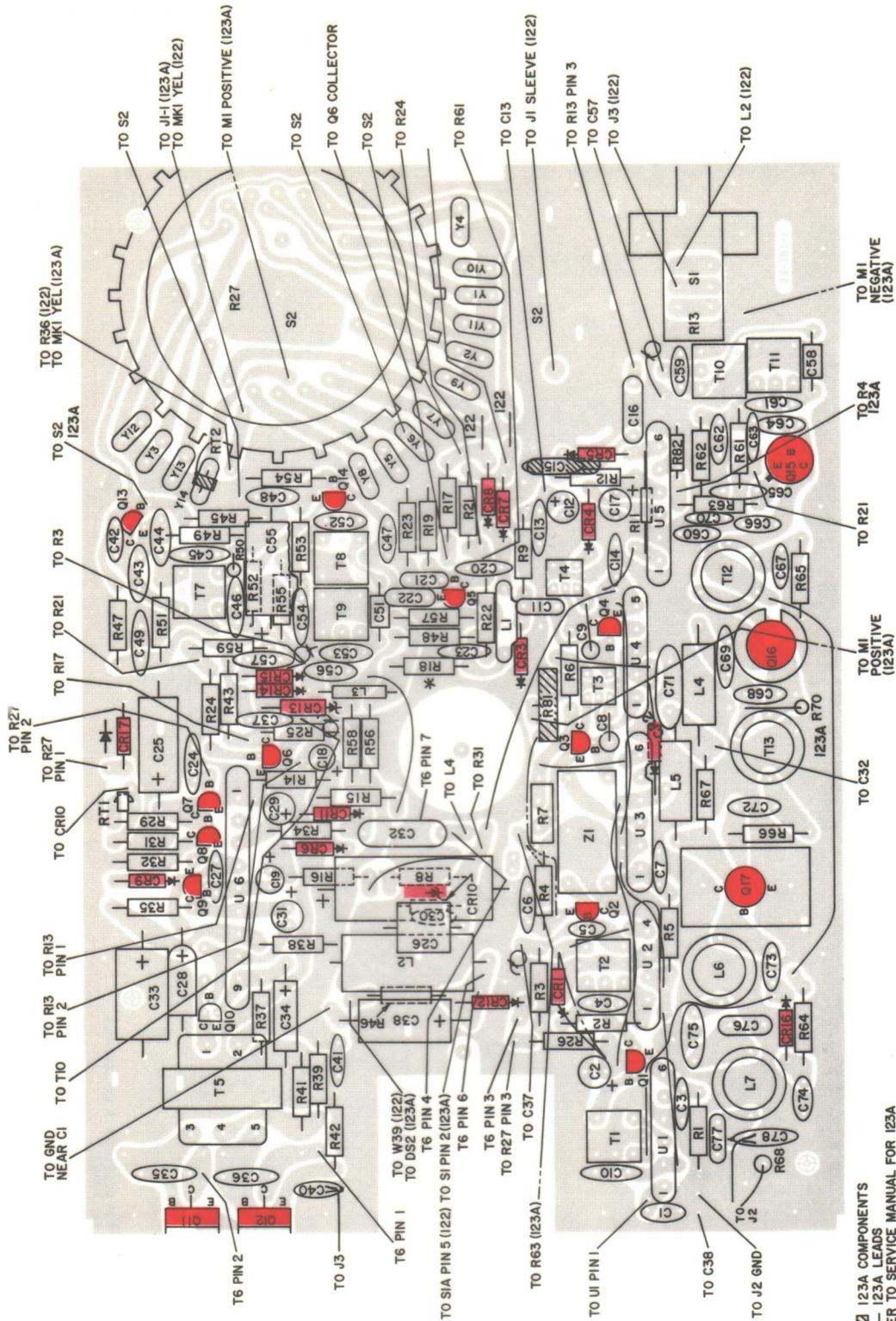
<u>Components Changed</u>	<u>Schematic Location</u>	<u>From</u>	<u>To</u>	<u>New Part Number</u>	<u>Reason for Change</u>
R26	B4	1.5KΩ	1KΩ	569-1504-102	Increased squelch threshold
R39	B9	510Ω	470Ω	569-1503-471	Audio distortion
R41	B9	33Ω	27Ω	569-1502-270	Audio distortion
R47	C2	2.7K	2.2K	569-1504-222	HF oscillator bias regulation to prevent oscillator dropout
R58	D4	62Ω	27Ω	569-1504-270	Improve CR13 regulation at low voltages
RT71	A8	470Ω	8K thermistor	569-3001-001	Audio distortion at cold temps
T7	C3	5004	5006	592-5015-006	Oscillator dropout at high temperatures
Front panel		plated	painted	023-2618-031 (M123A) 023-2618-032 (M123B) 023-2618-033 (M123SJ)	Availability

**MESSENGER 123A REVISION H**

<u>Components Changed</u>	<u>Schematic Location</u>	<u>From</u>	<u>To</u>	<u>New Part Number</u>	<u>Reason for Change</u>
U10	---	1013	1005	035-0181-005	LED meter

<u>Components Deleted</u>	<u>Schematic Location</u>	<u>Part Description</u>		<u>Reason for Change</u>
Q6	B3	Silicon NPN general purpose		Improved DC switching
R24	B3	22KΩ ±10%, 1/2 W		
R25	B4	330Ω ±10%, 1/2 W		



**MESSENGER 122 AND 123A  
COMPONENTS LAYOUT \*  
(AS VIEWED FROM THE SOLDER SIDE)**

- NOTES:
1. [Hatched symbol] 123A COMPONENTS
  2. [Dashed line symbol] 123A LEADS
  3. REFER TO SERVICE MANUAL FOR 123A CRYSTAL SWITCH DETAILS.
  4. \*123A (A AND B MODEL) LOW OSCILLATOR CONFIGURATION
  5. 122 (A MODEL) AND 123A (C MODEL) LOW OSCILLATOR CONFIGURATION:

