

CIRCUIT BOARD AND SCHEMATIC DIAGRAM NOTES

1. *FREQUENCY SENSITIVE, REFER TO ELECTRICAL PARTS LIST FOR VALUE.
2. UNLESS OTHERWISE NOTED:
3. CAPACITOR VALUES ONE OR GREATER ARE IN PICOFARADS; CAPACITOR VALUES LESS THAN ONE ARE IN MICROFARADS.
6. ALL RESISTOR VALUES ARE IN OHMS (R = 1000).

EPF-10387-D

CODE PLUG OUTPUT TRUTH TABLE

OUTPUT LINE PIN NO.	A	B	C	D	TO NE	TO NE FREQUENCY (Hz)
	H	H	H	H	0	600.0
	H	H	H	L	1	741.0
	H	H	L	H	2	882.0
	H	H	L	L	3	1023.0
	H	L	H	H	4	1164.0
	H	L	H	L	5	1305.0
	H	L	L	H	6	1446.0
	H	L	L	L	7	1587.0
	L	H	H	H	8	1728.0
	L	H	H	L	9	1869.0
	L	H	L	H	R	459.0
	L	L	H	H	X	2010.0

LOGIC L DEFINED AS LOW ($\approx 0V$)
LOGIC H DEFINED AS HIGH ($\approx 0.94V$)

EPF-10478-A

GAIN MEASUREMENTS AND WAVEFORM NOTES

1. PLACE PAGER IN RADIATION TEST FIXTURE. SET RF GENERATOR TO 50 mV. USING A STANDARD MILLIVAC RF METER WITH A HIGH IMPEDANCE PROBE, MAKE THE FOLLOWING MEASUREMENTS:

- A. TP1: 3.0 mV
- B. TP2: 6.5 mV - DISABLE HIGH CONVERSION OSCILLATOR; GROUND U1 PIN 3.
- C. TP3: 45 mV
- D. TP4: 40 mV
- E. TP5: 55 mV - DISABLE LOW CONVERSION OSCILLATOR; GROUND U2 PIN 20.

2. PLACE PAGER IN RADIATION TEST FIXTURE. SET RF GENERATOR TO 50 μ V

- A. TP5: 500 μ V - DISABLE LOW CONVERSION OSCILLATOR; GROUND U2 PIN 20 AND USE A STANDARD MILLIVAC RF METER WITH HIGH IMPEDANCE PROBE.
- B. TP6: 1 mV (USE AC VOLTMETER MODEL HP-400FL)
- C. M1: 30 mV (USE AC VOLTMETER MODEL HP-400FL)

ALL MEASUREMENTS TAKEN WITH B+ = 1.3 VDC AND 1 KHz MODULATION. MEASUREMENTS ARE TYPICAL AND MAY VARY SLIGHTLY.

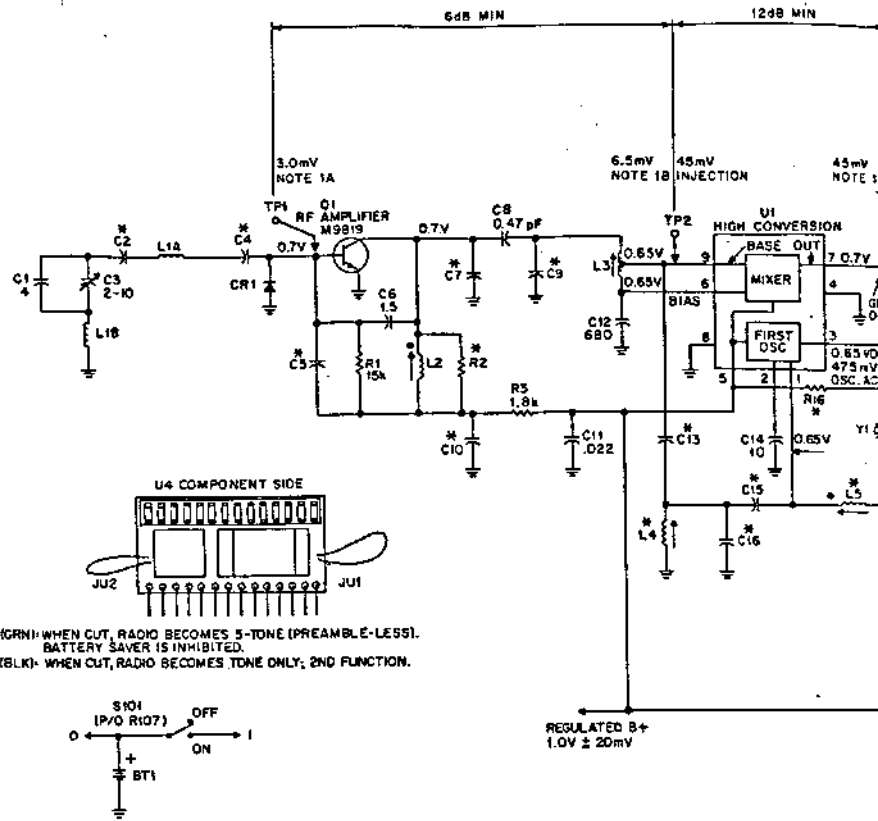
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OSCILLATOR CRYSTAL FREQUENCIES

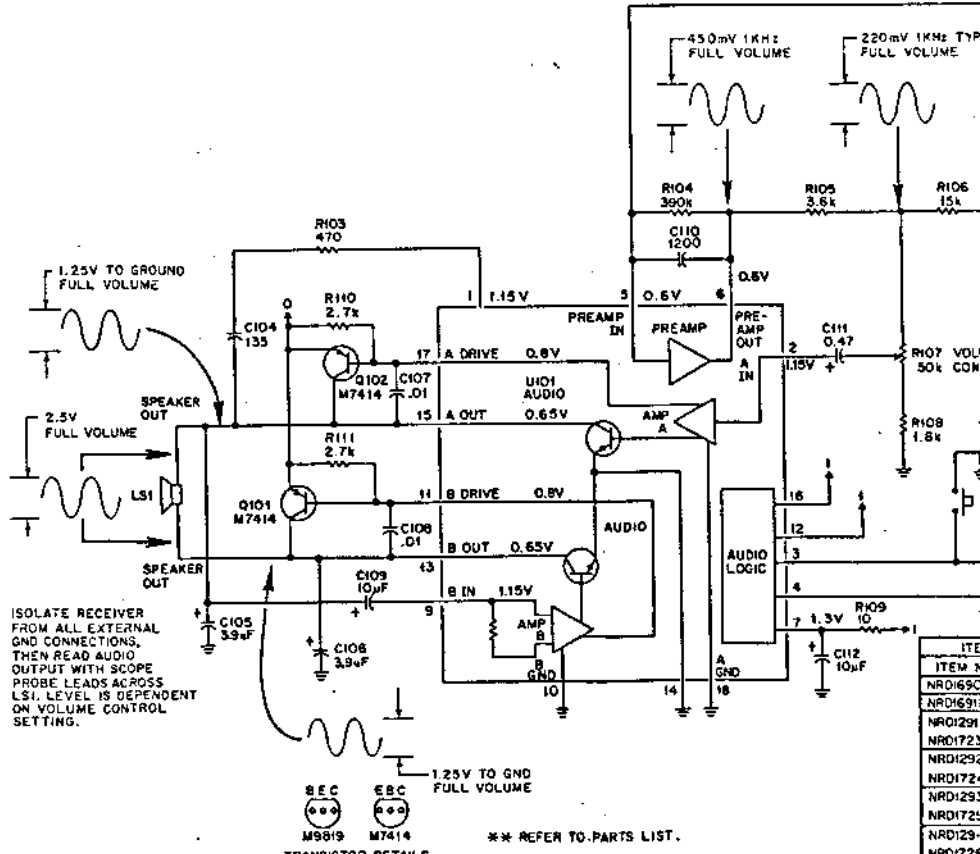
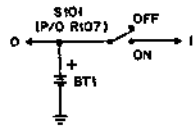
CARRIER FREQ. (f_c) (MHz)	1ST. OSC. FREQ. (f_0) RANGE (MHz)	2ND. OSC. FREQ. (MHz)
138.00-139.30	60.05-60.70	17.865
139.30-139.40	60.70-60.75	17.935
139.40-140.30	60.75-61.20	17.865
140.30-140.50	61.20-61.30	17.935
140.50-142.80	61.30-62.45	17.865
142.80-143.40	62.45-62.75	17.935
143.40-145.40	62.75-63.75	17.865
145.40-146.00	63.75-64.05	17.935
146.00-146.50	64.05-64.30	17.865
146.50-147.00	64.30-64.55	17.935
147.00-148.00	64.55-65.05	17.865
148.00-151.70	43.36-44.60	17.865
151.70-152.00	44.60-44.70	17.935
152.00-157.10	44.70-46.40	17.865
157.10-157.70	46.40-46.60	17.935
157.70-160.70	46.60-47.60	17.865
160.70-161.30	47.60-47.80	17.935
161.30-165.20	47.80-49.10	17.865
165.20-166.80	49.10-49.30	17.935
166.80-167.90	49.30-50.00	17.865
167.90-168.50	50.00-50.20	17.935
168.50-169.70	50.20-50.60	17.865
169.70-170.30	50.60-50.80	17.935
170.30-174.00	50.80-52.03	17.865

CARRIER FREQUENCY: $f_c = 2(f_0) + 17.9$ MHz (138-148 MHz)
 $f_c = 3(f_0) + 17.9$ MHz (148-174 MHz)

EPF-9384-D



JU1 (GRN) WHEN CUT, RADIO BECOMES 5-TONE (PREAMBLE-LESS). BATTERY SAVER IS INHIBITED.
JU2 (BLK) WHEN CUT, RADIO BECOMES TONE ONLY; 2ND FUNCTION.

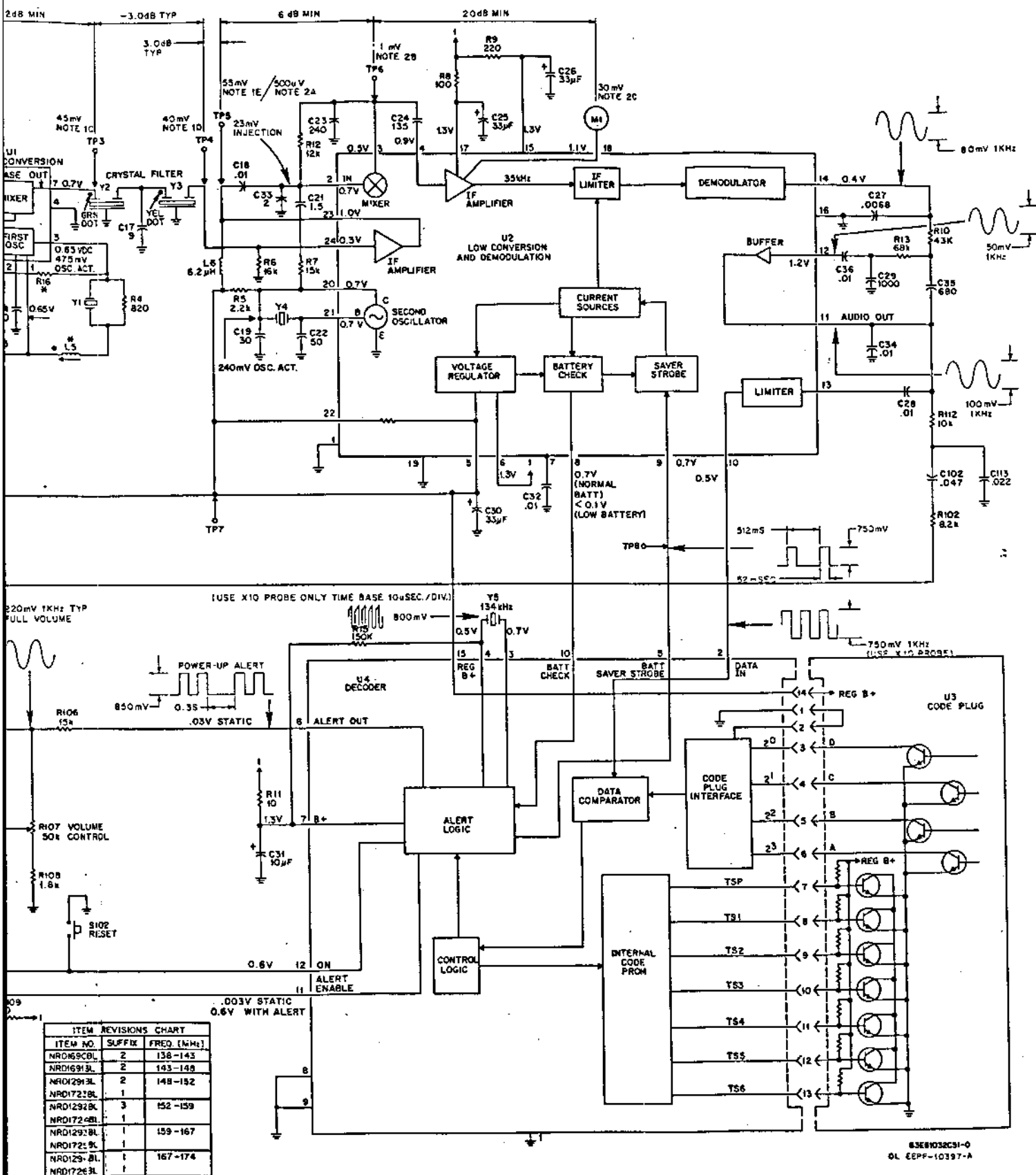


ISOLATE RECEIVER FROM ALL EXTERNAL GND CONNECTIONS. THEN READ AUDIO OUTPUT WITH SCOPE PROBE LEADS ACROSS LSI. LEVEL IS DEPENDENT ON VOLUME CONTROL SETTING.

TRANSISTOR DETAILS (BOTTOM VIEWS)

** REFER TO PARTS LIST.

ITEM #	DESCRIPTION
NRD169C	
NRD1691	
NRD1291	
NRD1721	
NRD1292	
NRD1722	
NRD1293	
NRD1723	
NRD1294	
NRD1724	



SCHEMATIC DIAGRAM
VHF Tone and Voice