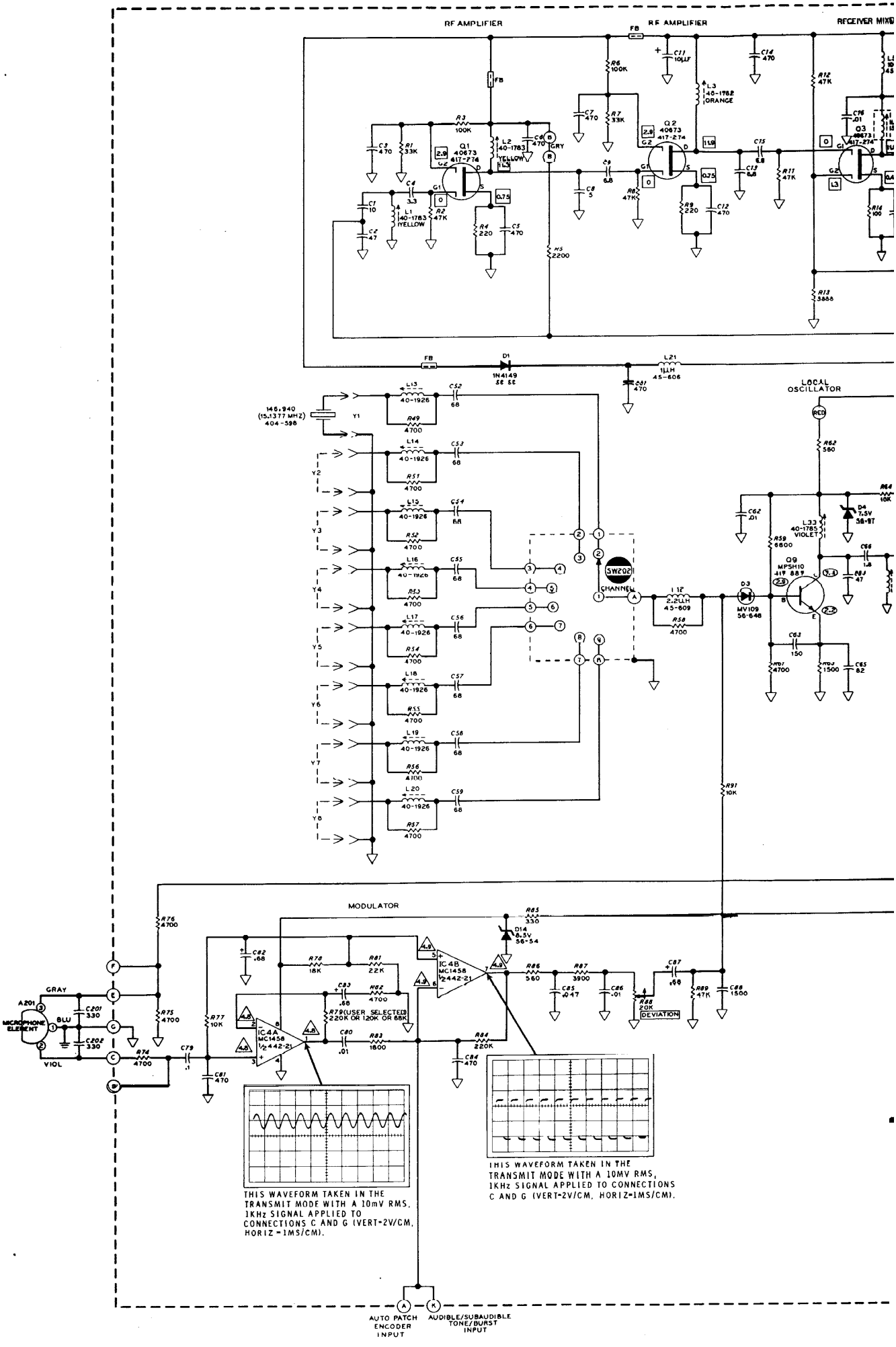
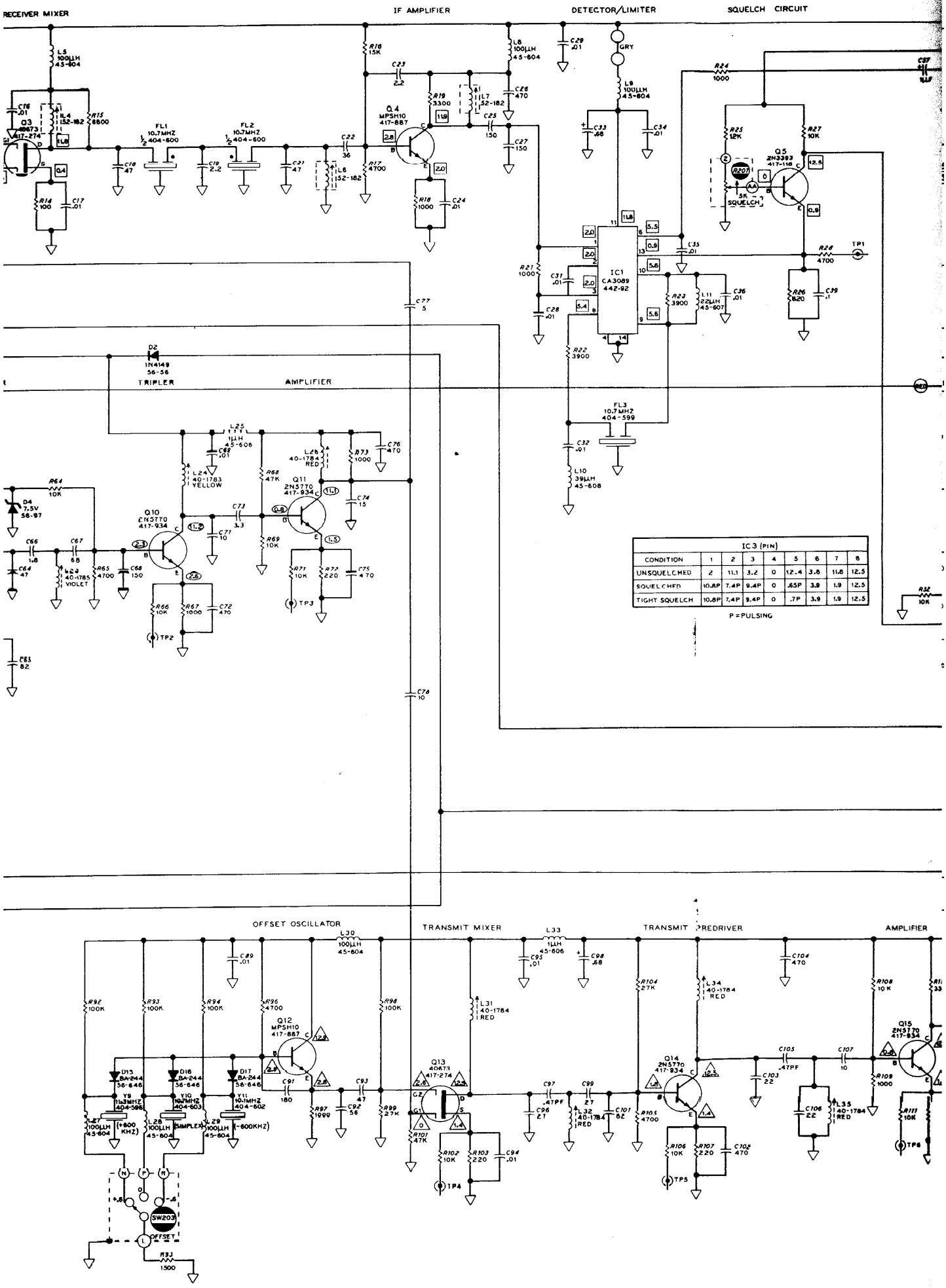
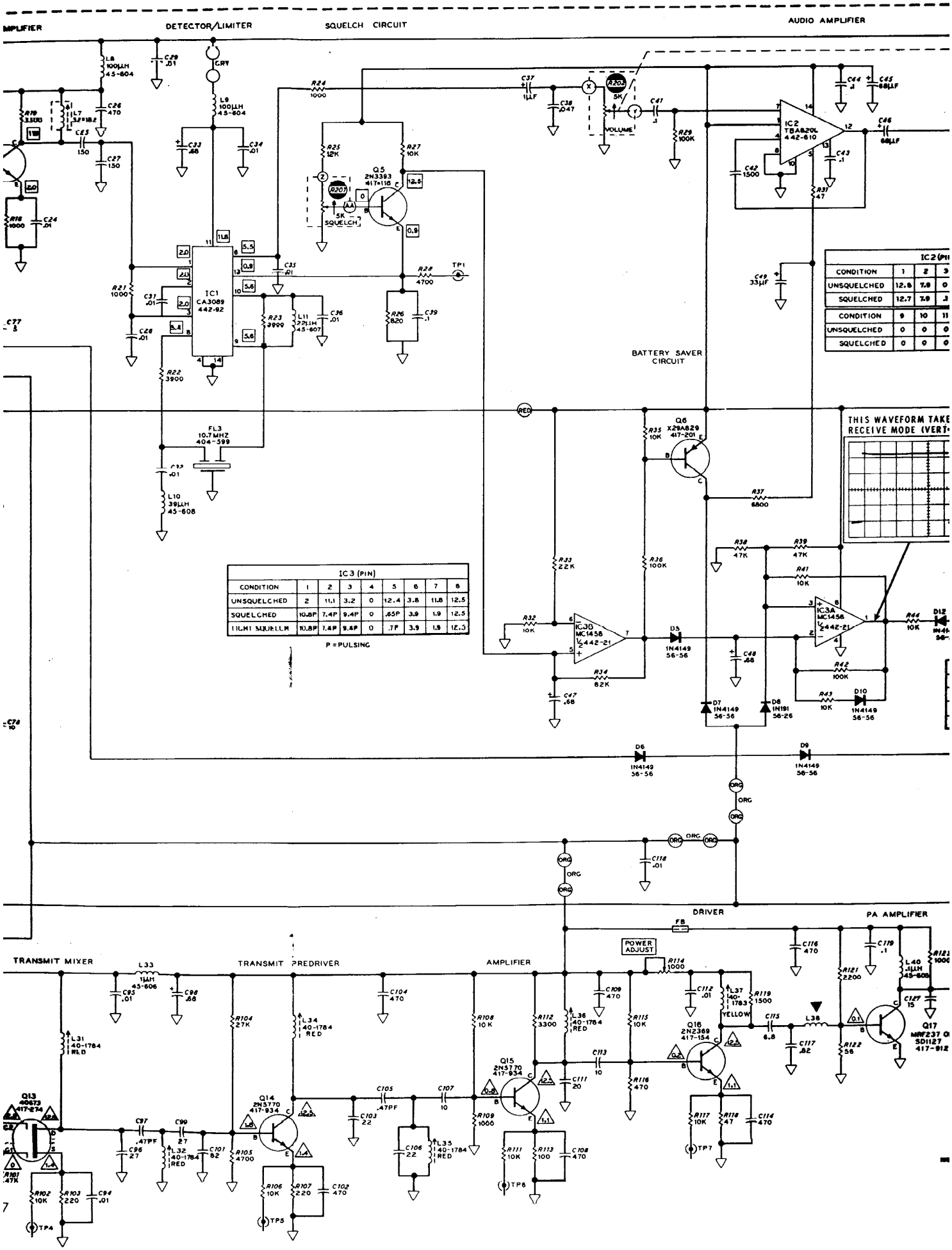
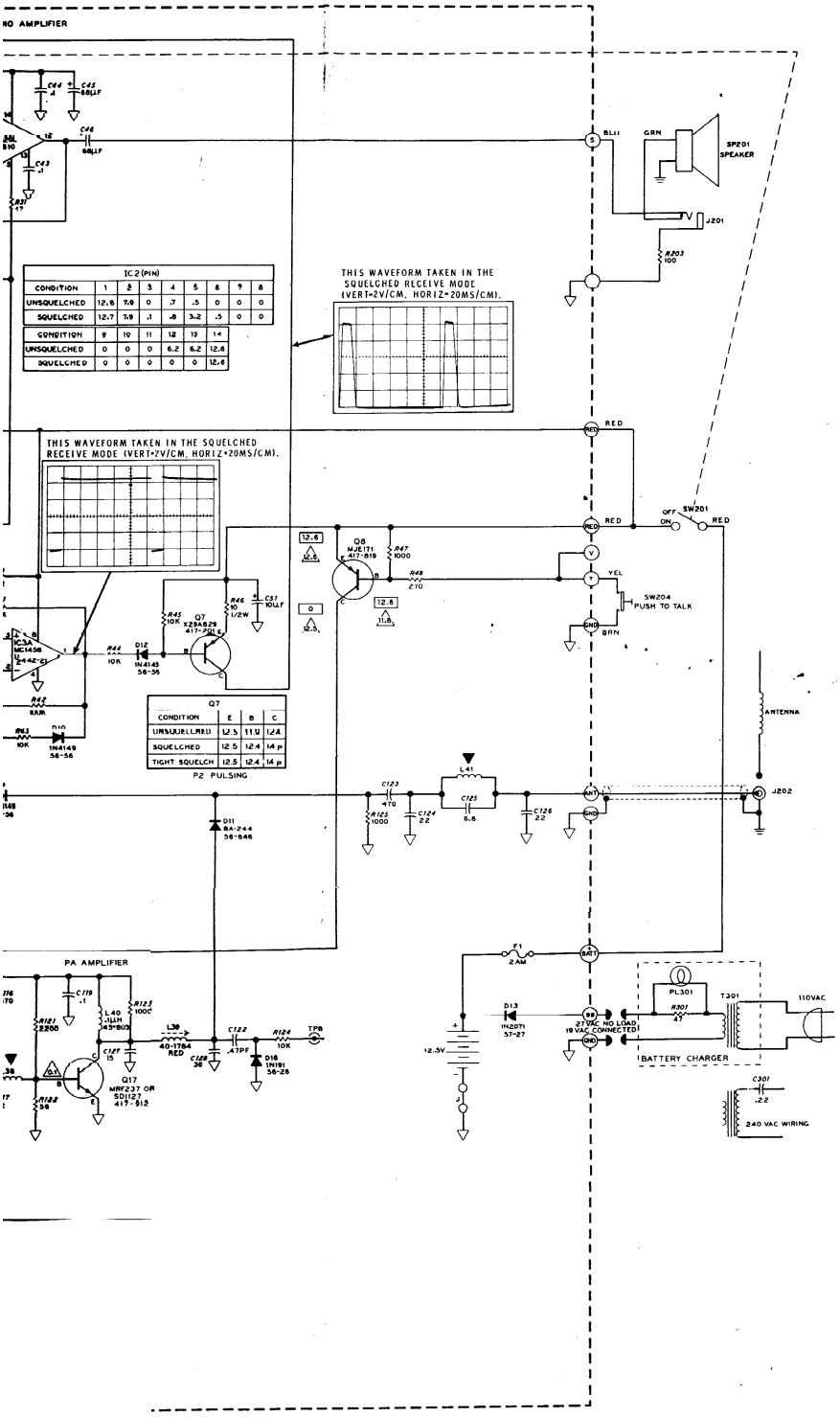

RF AMPLIFIER
RF AMPLIFIER
LOCAL OSCILLATOR
MODULATOR
SW202
CHANNEL
MICROPHONE ELEMENT
GRAY
BLU
VIOL
AUTO PATCH ENCODER INPUT
AUDIBLE/SUBAUDIBLE TONE/BURST INPUT
THIS WAVEFORM TAKEN IN THE TRANSMIT MODE WITH A 10mV RMS, 1KHz SIGNAL APPLIED TO CONNECTIONS C AND G (VERT=2V/CM, HORIZ=1MS/CM).
THIS WAVEFORM TAKEN IN THE TRANSMIT MODE WITH A 10MV RMS, 1KHz SIGNAL APPLIED TO CONNECTIONS C AND G (VERT=2V/CM, HORIZ=1MS/CM).



IC3 (PIN)								
CONDITION	1	2	3	4	5	6	7	8
UNSQUELCHED	2	11.1	3.2	0	12.4	3.8	11.8	12.5
SQUELCHED	10.8P	7.4P	9.4P	0	.65P	3.9	1.9	12.5
TIGHT SQUELCH	10.8P	7.4P	9.4P	0	.7P	3.9	1.9	12.5

P = PULSING


DETECTOR/LIMITER
SQUELCH CIRCUIT
AUDIO AMPLIFIER
IC1 CA3089 442-92
IC2 TBA820L 442-610
Q5 2N3393 417-116
SQUELCH
VOLUME
BATTERY SAVER CIRCUIT
Q6 X29A829 417-201
FL3 10.7MHZ 404-599
IC3A MC1458 1/2 442-21
IC3B MC1458 1/2 442-21
D5 1N4149 56-56
D6 1N4149 56-56
D7 1N4149 56-56
D8 1N191 56-26
D9 1N4149 56-56
D10 1N4149 56-56
D12 1N4149 56-56
IC2 (PIN)
CONDITION | 1 | 2 | 3
UNSQUELCHED | 12.8 | 7.9 | 0
SQUELCHED | 12.7 | 7.9 | 3
CONDITION | 9 | 10 | 11
UNSQUELCHED | 0 | 0 | 0
SQUELCHED | 0 | 0 | 0
IC3 (PIN)
CONDITION | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8
UNSQUELCHED | 2 | 11.1 | 3.2 | 0 | 12.4 | 3.8 | 11.8 | 12.5
SQUELCHED | 10.8P | 7.4P | 9.4P | 0 | .65P | 3.9 | 1.9 | 12.5
HIGHT SQUELCH | 10.8P | 7.4P | 9.4P | 0 | .7P | 3.9 | 1.9 | 12.3
P = PULSING
THIS WAVEFORM TAKE
RECEIVE MODE (VERT
TRANSMIT MIXER
TRANSMIT PREDRIVER
AMPLIFIER
DRIVER
PA AMPLIFIER
POWER ADJUST
Q13 40673 417-274
Q14 2N5770 417-934
Q15 2N5770 417-934
Q16 2N2369 417-154
Q17 MRF237 OR SD1127 417-912
TP1
TP4
TP5
TP6
TP7



SCHEMATIC OF THE HEATHKIT® HAND-HELD 2-METER TRANSCEIVER MODEL VF-2031

NOTES:

1. COMPONENT NUMBERS ARE IN THE FOLLOWING GROUPS:

   1-199 PARTS ON THE CIRCUIT BOARD.
   201-299 PARTS ON THE CASE.
   301-399 PARTS IN THE CHARGER.

2. ALL RESISTORS ARE 1/4-WATT, 5% TOLERANCE, UNLESS OTHERWISE NOTED. RESISTOR VALUES ARE IN OHMS, k=1000.

3. CAPACITORS LESS THAN 1 ARE IN µF (MICROFARADS). ALL OTHER CAPACITORS ARE pF (PICOFARADS) UNLESS OTHERWISE NOTED.

4. ARROWS AT CONTROLS INDICATE CLOCKWISE ROTATION AS VIEWED FROM THE SHAFT END, OR TOP OF, THE CONTROL.

5. ⬭ THIS SYMBOL INDICATES A POSITIVE DC VOLTAGE MEASURED WITH A HIGH INPUT IMPEDANCE VOLTMETER FROM THE POINT INDICATED TO CASE GROUND. ALL VOLTAGES ARE ± 20%.

6. □ THIS SYMBOL INDICATES A VOLTAGE MEASURED IN THE RECEIVE MODE.

7. △ THIS SYMBOL INDICATES A VOLTAGE MEASURED IN THE TRANSMIT MODE.

8. ▽ THIS SYMBOL INDICATES CIRCUIT BOARD GROUND.

9. ⏚ THIS SYMBOL INDICATES CASE GROUND.

10. ◯ THIS SYMBOL INDICATES A SOLDERED CONNECTION TO THE CIRCUIT BOARD.

11. ▼ THIS SYMBOL INDICATES A COIL WOUND BY THE KITBUILDER.

12. ⊕ THIS SYMBOL INDICATES A TEST POINT.

13. ⊖ THIS SYMBOL INDICATES A COMPONENT DRAWN WITHIN THE CIRCUIT BOARD OUTLINE THAT IS ACTUALLY MOUNTED ON THE CASE.

14. REFER TO THE CIRCUIT BOARD "X-RAY VIEWS" FOR THE PHYSICAL LOCATION OF PARTS.

Part of 595-2085-05