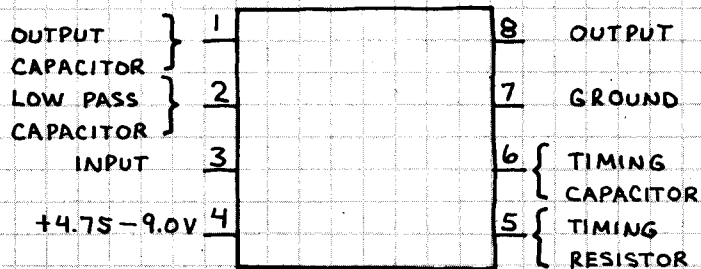


TONE DECODER

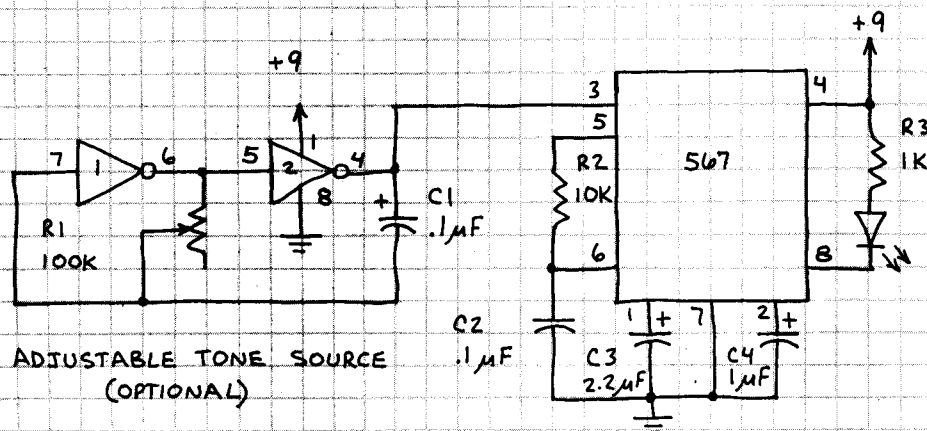
567

CONTAINS A PHASE-LOCKED LOOP. PIN 8 GOES LOW WHEN THE INPUT FREQUENCY MATCHES THE CHIP'S CENTER FREQUENCY (f_0). THE LATTER FREQUENCY IS SET BY THE TIMING RESISTOR AND CAPACITOR (R AND C) AND IS $(1.1) \div (RC)$. R SHOULD BE BETWEEN 2K-20K. THE 567 CAN BE ADJUSTED TO DETECT ANY INPUT BETWEEN 0.01 HZ TO 500 KHZ. NOTE: 1 SECOND OR MORE MAY BE REQUIRED FOR THE 567 TO LOCK ON TO LOW FREQUENCY INPUTS! SEE THIS CHIP'S SPECIFICATIONS FOR MORE INFORMATION.



THE VALUE IN MICROFARADS OF THE LOW PASS CAPACITOR SHOULD BE n/f_0 WHERE n RANGES BETWEEN 1300 (FOR UP TO 14% f_0 DETECTION BANDWIDTH) TO 62,000 (UP TO 2% f_0 DETECTION BANDWIDTH). THE OUTPUT CAPACITOR SHOULD HAVE ABOUT TWICE THE CAPACITANCE OF THE LOW PASS FILTER CAPACITOR.

BASIC TONE DETECTOR CIRCUIT

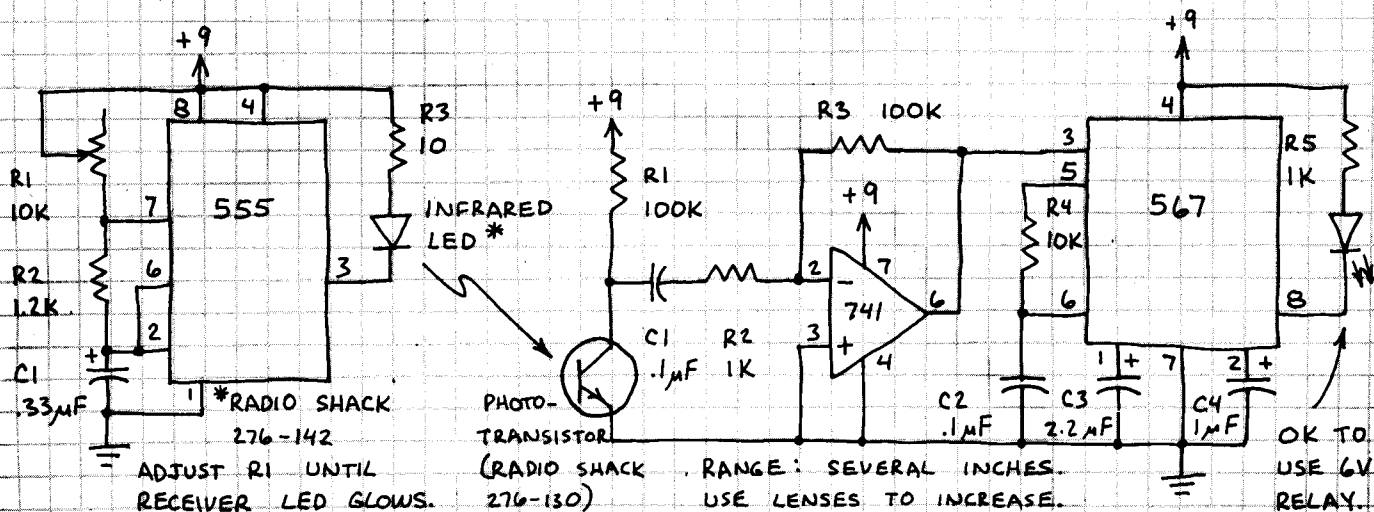


THIS CIRCUIT IS HANDY FOR LEARNING TONE DECODER BASICS. THE 567 PORTION CAN BE USED IN MANY DIFFERENT APPLICATIONS (SEE BELOW). THE PREDICTED f_0 IS 1.1 KHZ. THE TEST CIRCUIT f_0 WAS 1.3 KHZ.

INFRARED REMOTE CONTROL SYSTEM

TRANSMITTER

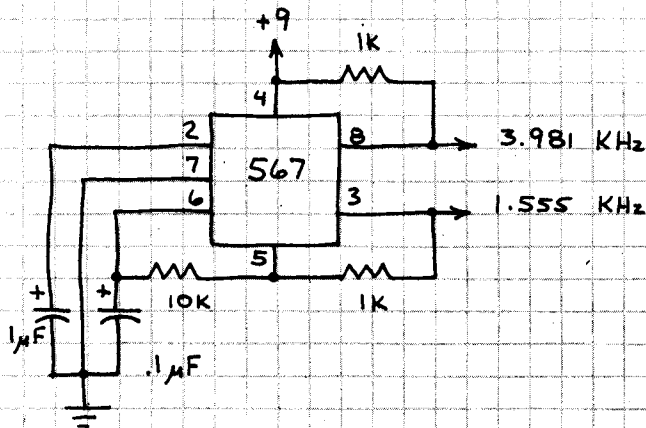
RECEIVER



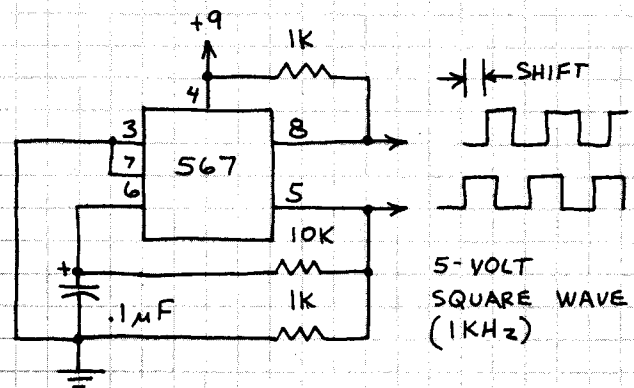
TONE DECODER (CONTINUED)

567

2-FREQUENCY OSCILLATOR



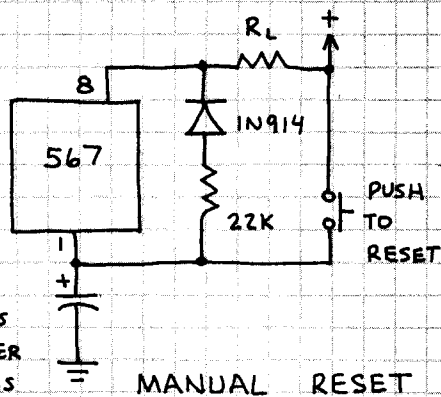
2-PHASE OSCILLATOR



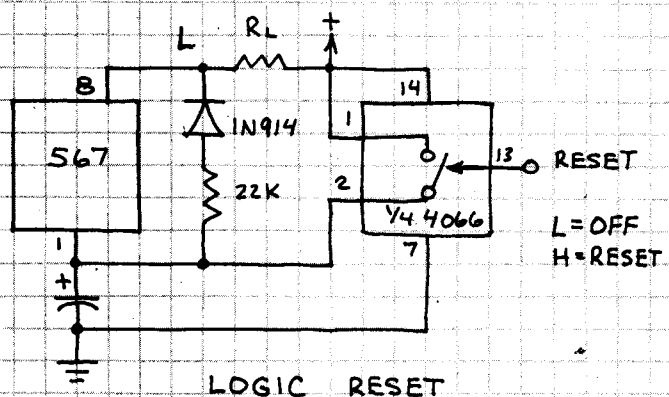
LATCHING THE 567 OUTPUT *

BOTH CIRCUITS SHOW ONLY THE LATCH COMPONENTS. R_L IS THE LOAD (LED, RELAY, ETC.).

* OUTPUT STAYS ON EVEN AFTER INPUT TONE IS REMOVED.

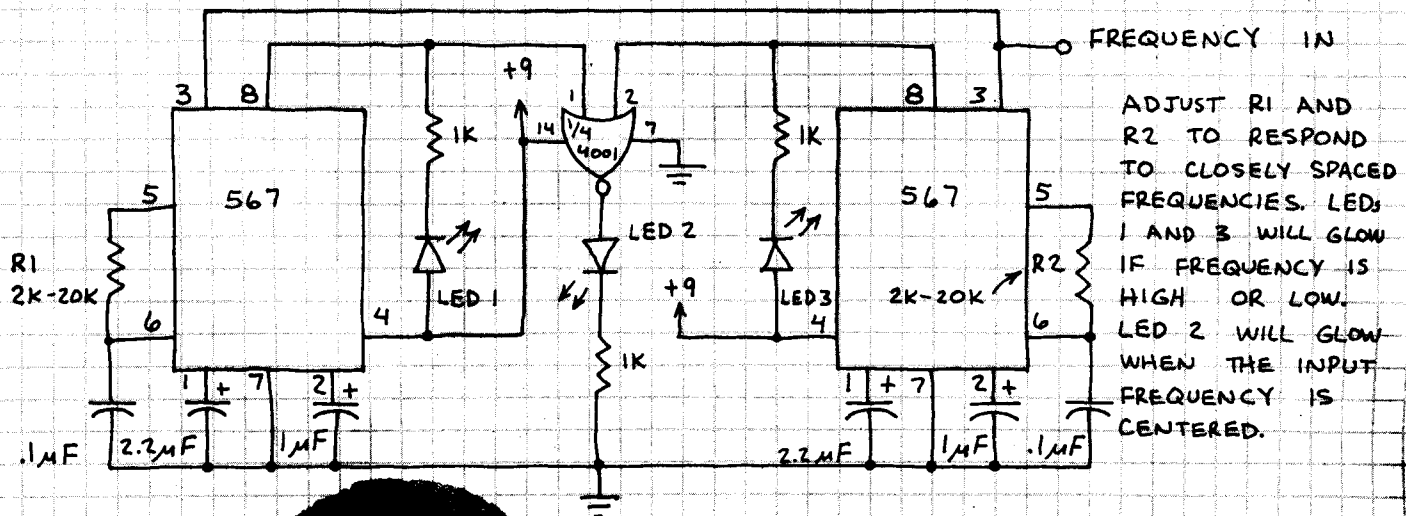


MANUAL RESET



LOGIC RESET

NARROW BAND FREQUENCY DETECTOR



TONE DECODER (CONTINUED)

567

TOUCH-TONE[®] DECODER

