

BUGDTCT.TXT

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Warning: This formatted for 80 column and upper/lower case capabilities...

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Basic theory
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Because most bugs are triggered through certain frequencies, it is very simple to build a small sweeping device that will trigger any bug present. The two IC's are what create the oscillating tone. The IC1 operates at .8 Hz where the IC2 runs at about 10 Hz. Frequency is determined by this formula:

$$f=1.44/(R_1+2R_2)C$$

f measured in Hertz, R in megohms, and C in microfarads

The oscillation can be varied by the voltage placed upon pin #5. This is how we create the wave sound. When voltage goes up, so does the frequency, and vice-versa.

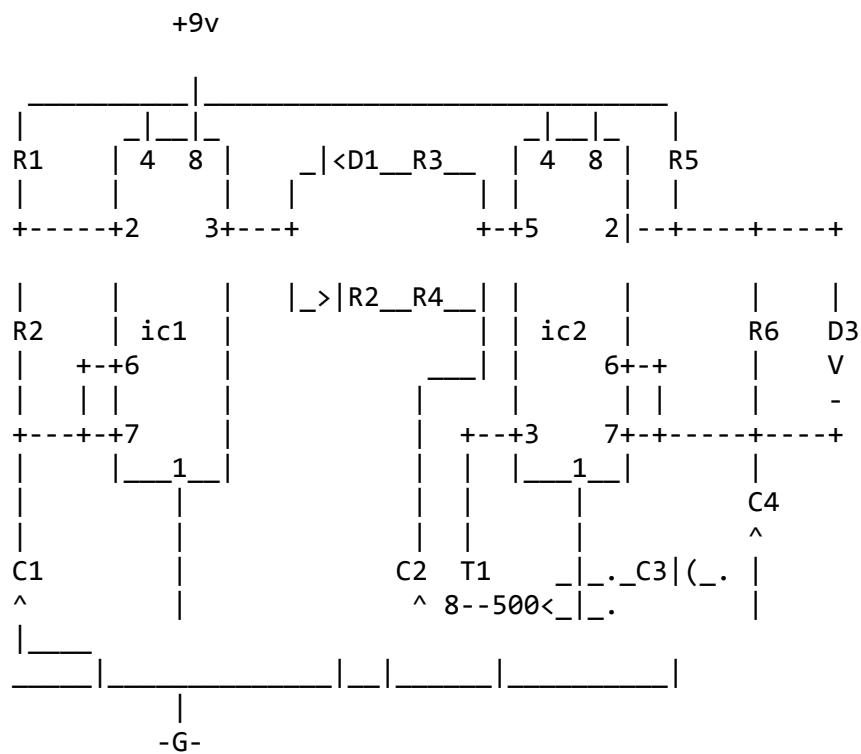
Normally, the output pin 3 is a square wave. Since we need varying wave at pin #5, we need a triangular wave. We get this through integrating the square wave created at pin #3 of IC1. It is achieved by D1, D2, R3, R4 and C2.

This varying output is fed into the phone line by transformer T1 which has an 8 ohm winding going to pin #3 of IC2 and the 500 end to a 0.1 microfarad capacitor at the phone line.

Enuf talk..let's get movin!

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Schematic Design
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Parts List
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C1 10-uF electrolytic capacitor 25 WDVC
C2 300-uF electrolytic capacitor 25 WDVC
C3 0.1-uF capacitor
C4 0.068-uF capacitor
D1-D3 1N914
IC1,IC2 555 timers
R1, R4-R6 1-kilohm resistors
R2 91-kilohm resistor
R3 22 kilohm resistor
T1 500-to-8 ohm audio output transformer

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Construction

When building this unit, it is very useful to use a breadboard or vector board. I suggest that leads being connected to phone line (T1, C3) end in a jack or a modular connector to make the hookup easier. To test it, hook it to the phone line (not the suspected line) and call the line you suspect is being bugged. The party you are calling should not answer the phone. Now, the unit is activated. 3 times, every 4 seconds, the oscillator will go up to 10 kHz and back down again..like a bell curve..If there is a frequency sensitive bug on the line, the phone will stop ringing, and you will be able to hear everything said in the room. If the phone keeps ringing, chances are that all is fine..unless the bug requires a multi-frequency trigger..but these are very rare..

So, we can see that 415-BUG-1111 really does work! It creates the tone..any click heard is the Phone Co's (or whoever is bugging) speaker/tape recorder picking up!

Have phun, and hope it helped!

The Gremlin

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