C8,10	2 100 uF @ 25 V electrolytic cap
C9	1 5 uF @ 150 V electrolytic cap
C13	1 10 uF @ 25 V electrolytic cap
TM1	1 555 timer dip
A1	1 CA3018 amp array in can
Q1,2	2 PN2222 npn sil transistor
Q3	1 D4OD5 npn pwr tab transistor
D1,2	2 50 V 1 amp react. 1N4002
T1	1 1 « k/500 matching transformer
M1	1 large crystal microphone
J1	1 Phono jack optional for sense output
WR3	(24") #24 red and black hook up wire
WR4	(24") #24 black hook up wire
CL3,4	2 Alligator clips
CL1,2	2 6" battery snap clips
PB1	1 1 3/4x4 «x.1 perfboard
CA1	1 5 ¬x3x2 1/8 grey enclosure fab
WR15	(12") #24 buss wire
KN1	1 small plastic knob
BU1	1 small clamp bushing
B1,2	2 9 volt transistor battery or 9V ni -cad

Circuit Operation: Not being the most technical guy in the world, and not being very good at electronics (yet), I'm just repeating what Mr. Iannin's said about the circuit operation. The Transmitter consists of a high grain amplifier fed into the telephone lines via transformer. The circuit is initiated by the action of a voltage transient pulse occurring across the phone line at the instant the telephone circuit is made (the ring, in other words). This transient immediately triggers a timer whose output pin 3 goes positive, turning on transistors Q2 and Q3. Timer TM1 now remains in this state for a period depending on the values of R17 and C13 (usually about 10 seconds for the values shown). When Q3 is turned on by the timer, a simulated "off hook" condition is created by the switching action of Q3 connecting the 500 ohm winding of the transformer directly across the phone lines. Simultaneously, Q2 clamps the ground of A1, amplifier, and Q1, output transistor, to the negative return of B1, B2, therefore enabling this amplifier section. Note that B2 is always required by supplying quiescent power to TM1 during normal conditions. System is off/on controlled by S1 (switch). A crystal mike picks up the sounds that are fed to the first two transistors of the A1 array connected as an emitter follower driving the remaining two transistors as cascaded common emitters. Output of the array now drives Q1 capacitively coupled to the 1500 ohm winding of T1. R7 controls the pick up sensitivity of the system. Diode D1 is forward biased at the instant of connection and essentially applies a negative pulse at pin 2 of TM1, initiating the cycle. D2 clamps any high positive pulses. C9 dc-isolates and desensitizes the circuit. The system described should operate when any incoming call is made without ringing the phone.

Schematic Diagram: Because this is text, this doesn't look too hot. Please use a little imagination! I will hopefully get a graphics drawing of this out as soon as I can on a Fontrix graffile.

To be able to see what everything is, this character: | should appear as a horizontal bar. I did this on a][e using a][e 80 column card, so I'm sorry if it looks kinda weird to you.

Symbols: resistor: -///switch: _/ _ battery: - IIIcapacitor (electrolytic): - |(capacitor (disc): - ||transistor:(c) > (e) Transformer:)||()||(\ / (b) _)||(_ diode: |< chip: ! (chips are easy to recognize!) !

Dots imply a connection between wires. NO DOT, NO CONNECTION. i.e..: _!_ means a connection while _|_ means no connection.

-----1/4

