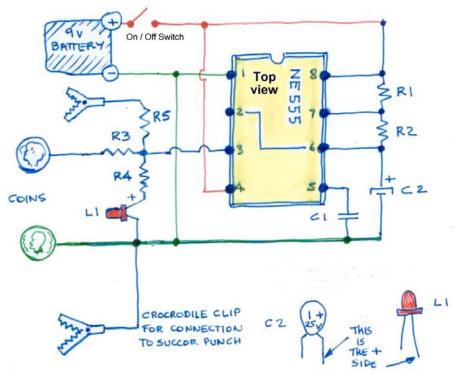
Building your Own Zapper

Disclaimer: This circuit is very similar to the one used in Don's Terminator, but the Terminator contains other devices & feature not shown here. This document only refers to the basic square wave generation of the zapper.

This project will be particularly useful to power a Succor Punch, for example, or for experimentation. Components have been provided for both the zapper function and the succor punch function.

This circuit is based on a 555 timer, officially called NE555. It makes an excellent square wave oscillator, is readily available and is inexpensive. It is housed in an 8 pin package. It can operate from 4.5 volts to 15 volts.

The frequency is not dependant on the voltage. A 9 Volts battery is a convenient way to power it for portability. A standard 9v battery will last approximately 9days with this design.



The frequency and duty cycle (ratio of On and Off time) are defined by the resistors R1, R2 and capacitor C2.

When R2 is much larger than R1 the duty cycle is very close to 50%, so the On and Off times are of the same duration, which is what we want.

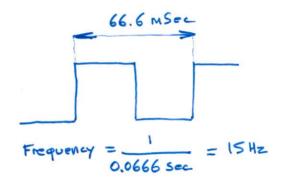
The Capacitor C1 is only used for stability and the value is not critical, but it should be low, in the order of 10 to 47 pico farad (same as 0.01 to 0.047 micro farad)

R4 is used to limit the current flowing into the LED (light emitting Diode) a standard 3 mm red LED light is used here. A lower resistor value will make the light brighter, but will drain the battery faster. The minimal value acceptable would be 2.2k

R3 This resistor protect the circuit in case someone short circuits the coins temporarily. It is relatively small compared with the skin resistance.

R5: This resistor protects the circuit for short circuits condition. Actually the Succor Punch acts like a short circuit, (the coil has very low resistance) so this condition can be sustained permanently without damaging the circuit.

Power Consumption: A number of combinations of R1, R2 and C2 can produce the same frequency, but the power consumption may not be the same. The circuit described here will work for around 9 days nonstop connected to a Succor Punch, with a standard 9v battery. Longer operating times are obtained with higher quality batteries. It would last longer as a Zapper mode than as a Succor Punch.



The frequency we are looking for is 15Hz. This mean we will have fifteen On - Off cycles per second. One On - Off cycle will last approximately 66.6 milliseconds.

This square wave can be observed with an oscilloscope.

It cannot be measured with a voltmeter as it changes too rapidly for it. So the real test of the circuit is visual, by the blinking rate of the LED light.

If you made an error in the construction, it is possible that the blinking rate is so fast that the light appears to be On all the time.

Selecting the components: The components are easily found:

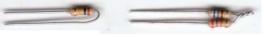


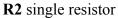
C2 1 micro farad, 35 volts tantalum capacitor, the bottom leg is the plus (silver line and plus sign on that side)





R1 and R2 must be folded to fit on the board. If using 2 resistors, solder then as below





R2 double resistor



On / Off switch



A NE555 device: the dot, on the bottom left of the device (in this image) indicates pin 1. In some devices, a notch indicates the top. Pin 1 is always at the left of the notch.



A piece of **Vero board**, or similar electronic project board. They have holes equally spaced, some have little solder pads on the back. Some have tracks already laid out in straight lines; you may have to be careful to cut the unwanted tracks in this case.

Some do not have soldering pads, and you use the legs of the components to make the connections.



A **9v battery connector**, they usually come with a red and black wires attached. The red is the plus side.

You may also want to insert your project in a box and add a switch. The switch would be interrupting the positive side (red wire) of the battery cable.

To make sure you get the proper values for the resistors, I have attached the color-codes for 10% precision resistors. Resistor with 1% precision are coded differently, using 1% resistors would be an overkill in this design.

Component	Value	Colors
R1	3.3k	Orange, Orange, Red
R2		See table below
R3	1k	Brown, Black, Red
R4	3.9k	Orange, White, Red
R5	4.7k	Yellow, Purple, Red
C1	0.01micro farad (or 10 Pico farad)	
C2	1 micro farad, 16 or 25 volts	
L1	3ml LED	

Resistor values are expressed by color bands, plus a band for the tolerance.

Tolerance colors: Gold=5%, silver = 10%. I have not shown the tolerance color here, 10% is fine but remember the following:

33k with 10% precision means that the real value in reality is between 29.70k and 36.30k.

33k with 5% precision means that the real value in reality is between 31.35k and 34.65k.

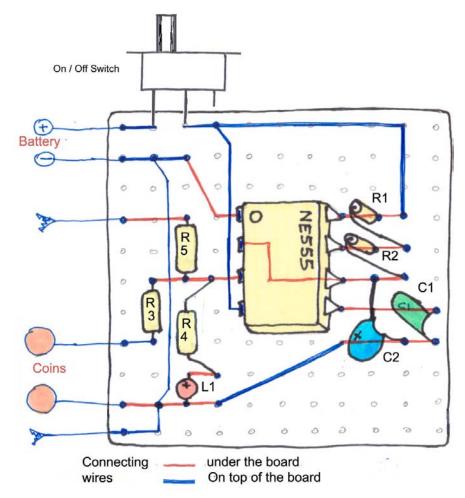
So check the table below to see what kind of marging you get. In practice 10% is fine.

Cycle duration = 1 / Frequency, so 1 / 15 Hz = 0.066 seconds (66 milli seconds)

Frequency	R2	Colors	
12.14	56k	green, blue, orange	
14.10	47k	yellow, purple, orange	
14.60	39k + 6.2k	orange, white, orange + blue, red, red	
14.84	39k + 5.6k	orange, white, orange + green, blue, red	
15.00	39k + 4.7k	orange, white, orange + yellow, purple, red	< zapper
15.57	39k + 3.9k	orange, white, orange + orange, White, red	
15.65	39k + 3.3k	orange, white, orange + orange, Orange, red	
17.00	39k	orange, white, orange	
19.93	33k	orange, orange	
24.34	27k	red, purple, orange	
29.60	22k	red, red, orange	
30.70	20k + 1.2k	red, black, orange + brown, red, red	
31.00	20k + 1k	red, black, orange + brown, black, red	
31.15	20k + 820 ohm	red, black, orange + grey, red, brown	
31.48	20k + 620 ohm	red, black, orange + blue, red, brown	
31.56	20k + 560 ohm	red, black, orange + green, blue, brown	
32.00	20k + 470 ohm	red, black, orange + yellow, purple, brown	crystal programming
32.44	20k	red, black, orange	

Construction: It is a good idea to position all the components properly before starting to solder them.

Position the NE555 at the center of the board first and bend some pins so that it does not fall when you turn the board over to solder.



Insert **R1** and **R2**, bend the legs to fit the board and use the cut out legs as wires to make other connections.

Make sure the longest leg of L1 is connected to the Plus and C2 plus side (marked by a plus sign on the body) is connected as indicated, otherwise the circuit will not work, or not for long.

L1 should be inserted on the back of the board if you wish to insert your project in a box. It could then show through a hole in the box.

Before connecting the power, it is VERY IMPORTANT to check that all connections are correct and that the polarity of the battery is right.

If a wire is missing or the battery polarity incorrect, the NE555 will be dead and the circuit will never work.

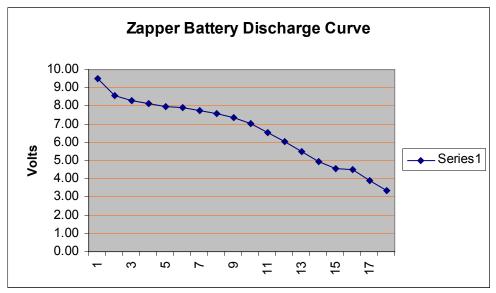
If the circuit is fine and works, it will work pretty much for ever. I have some timers still working after 10 years of use, and they are on 24 hours a day.

Installing the Circuit in a Box:

You will have to get a small plastic box for your circuit. Drill a hole for the light, drill a hole for the switch and one for the SP wires. You can use a small jack connector if you wish to disconnect the SP cable (the one terminated with the crocodile clips).

You can also add a velcro strip to hold your zapper on you arm or leg.

Depending if you have soldered the LED light on the front of back of the board, install the circuit in the box so that the light faces the hole. Use glue to hold in place. A hot glue gun is the handiest way to secure parts inside the box so they do not move.



18 reading were taken over 9 day. The zapper stopped at the end of the 9th day when battery was at 3.36 volts. It had ran for 214 hours of continuous operation.

Questions and Answers:

Q: is this the same circuit as Dr Clark zapper?

A: Yes, but the frequency is different, here we use 15hz

Q: Why use 15Hz?

A: We use 15Hz because it seems to kill parasites very effectively. It also feels good to balanced, healthy people and boosts our awareness. A theory is that it will be the earth's resonant frequency in the future.

Q: is this the same circuit as in Don's Terminator?

A: Yes, same frequency but the component values may be different. This has no effect on the output. I just did not want to copy his design. The circuit itself is a well-known electronic circuit freely available.

Q: Will the circuit be damaged if I short-circuit the coins or Sp output?

A: No, the output is protected by resistors to limit the current drain.

Q: Will the NE555 component be damaged if I power it the first time with a faulty wiring?

A: Yes, you will have to replace the NE555, fix the fault and start testing again

Q: Can I make the light brighter?

A: Yes, make resistor R4 smaller. The lowest value acceptable is 2.2k. but the battery will not last as long.

Q: Do I have to use coins?

A: No, you could also use a coil of copper wire like a Loohan coil. Coins made of copper are easy to solder and glue on a box. There may be health benefits to use copper on the skin. Anything metalic which can be soldered would do, I guess.

Q: Does the presence of organite affect battery life?

A: No, It does not at all. I personally experimented with 3 zapper circuits, one with no organite and one between two blocks of organite. Voltages were absolutely identical, see discharge curve above.