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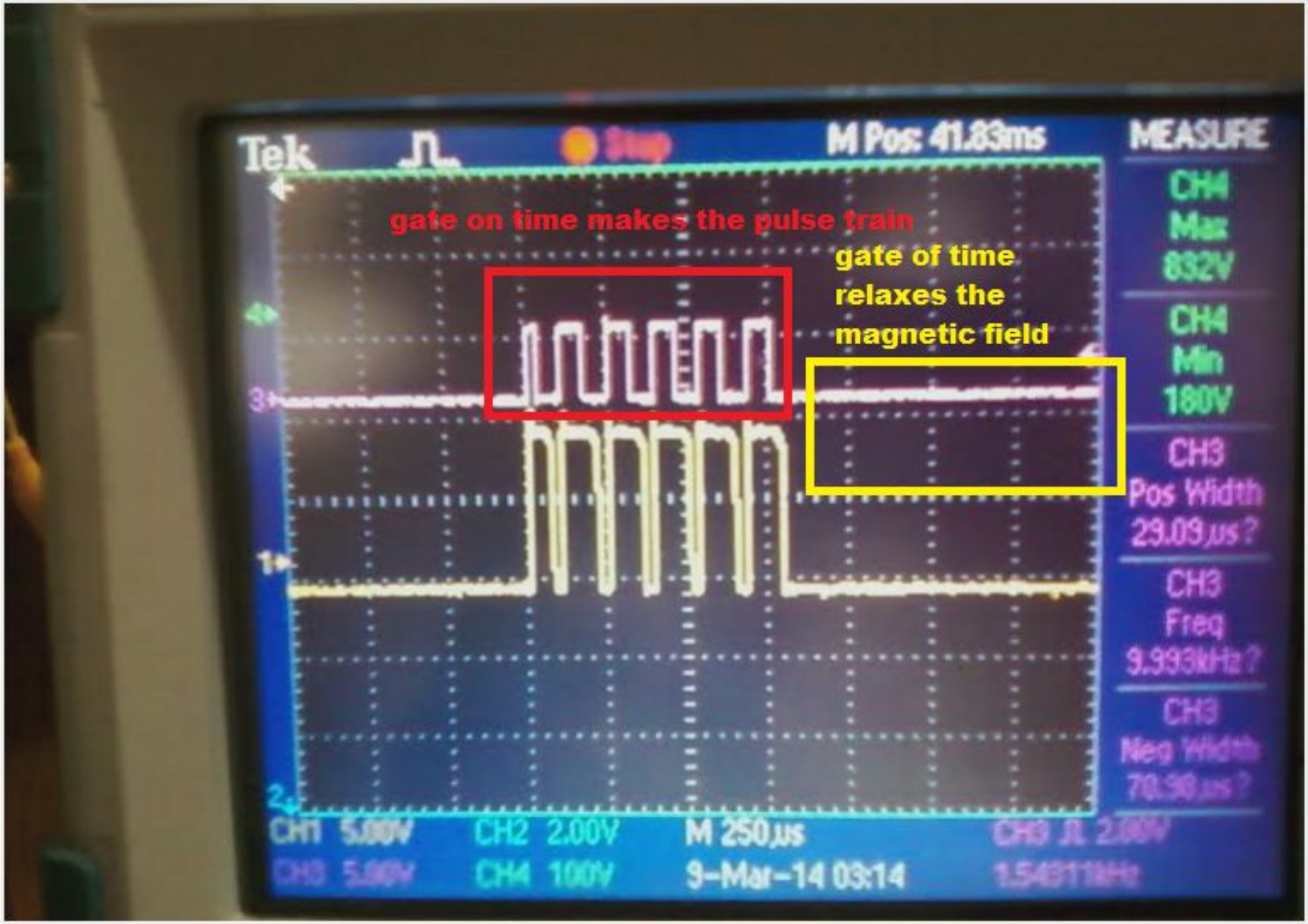
the gate however is not a 50% duty cycle. the gate is adjustable in on and off time.

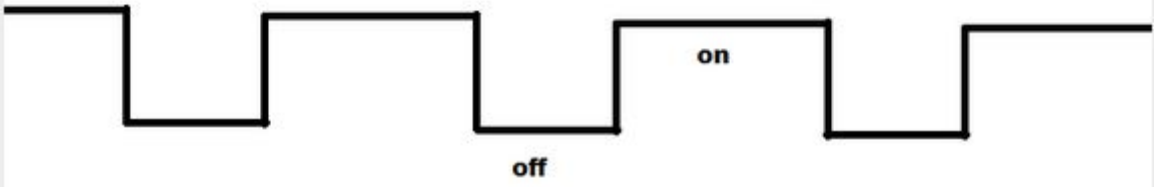
like this

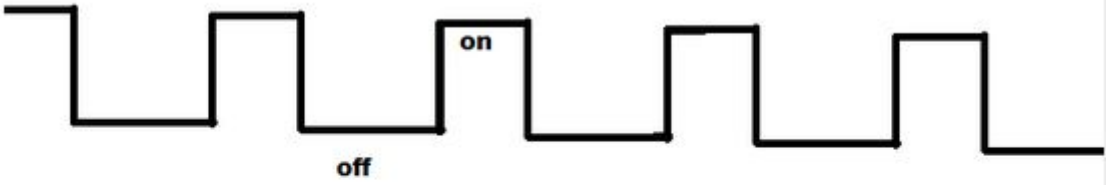


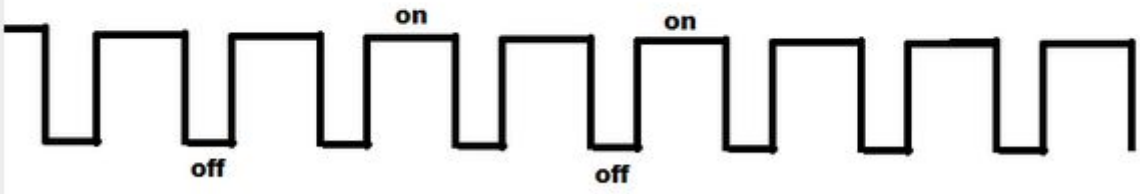
The main pulse from the frequency generator is a unipolar pulse, all positive.

meyer describes a 50% duty cycle, and his circuits show this.

this is the gate on and off time can be changed







black is the gate, this on and off time can change

as shown

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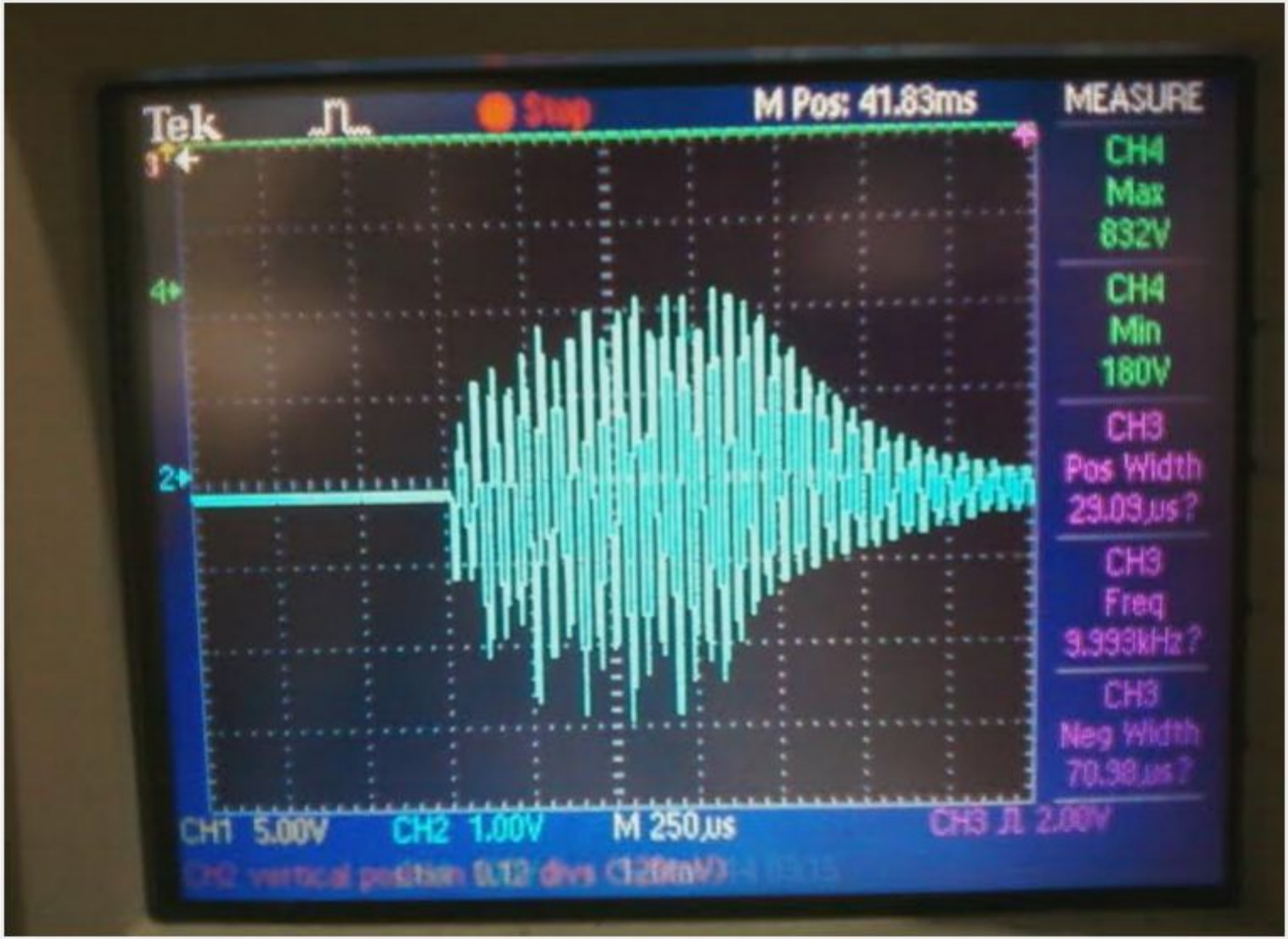
the gate relaxes and turns off the magnetic field
the blue trace is the magnetic field shown with a noncontact field probe
as you can see the gate turns off the unipolar pulse
on time is the blue wave, off time is a blank screen



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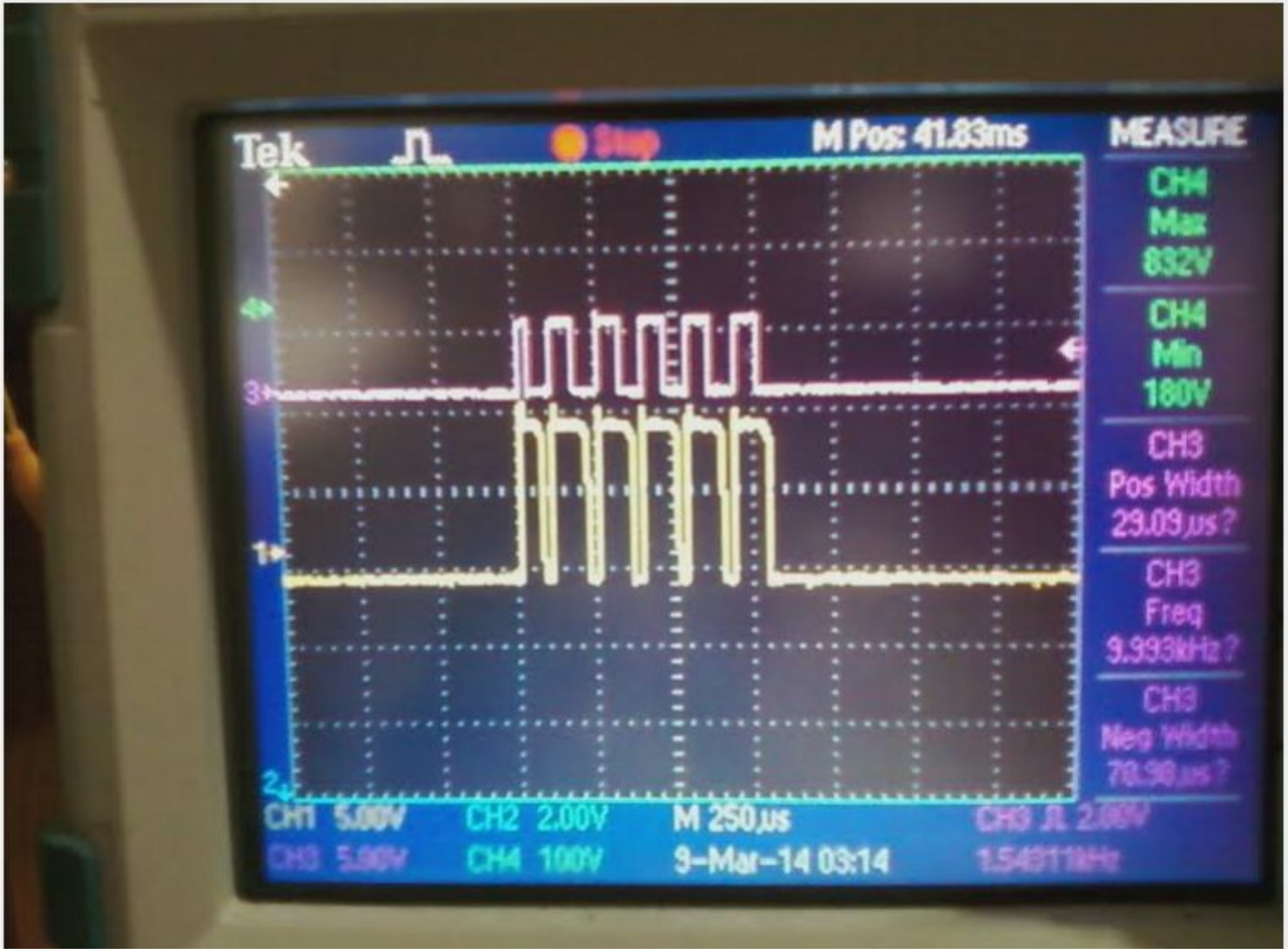
the main frequency and the gate can be seen in the unipolar pulses from the frequency generator in red.

the pulse in the primary can be seen in yellow



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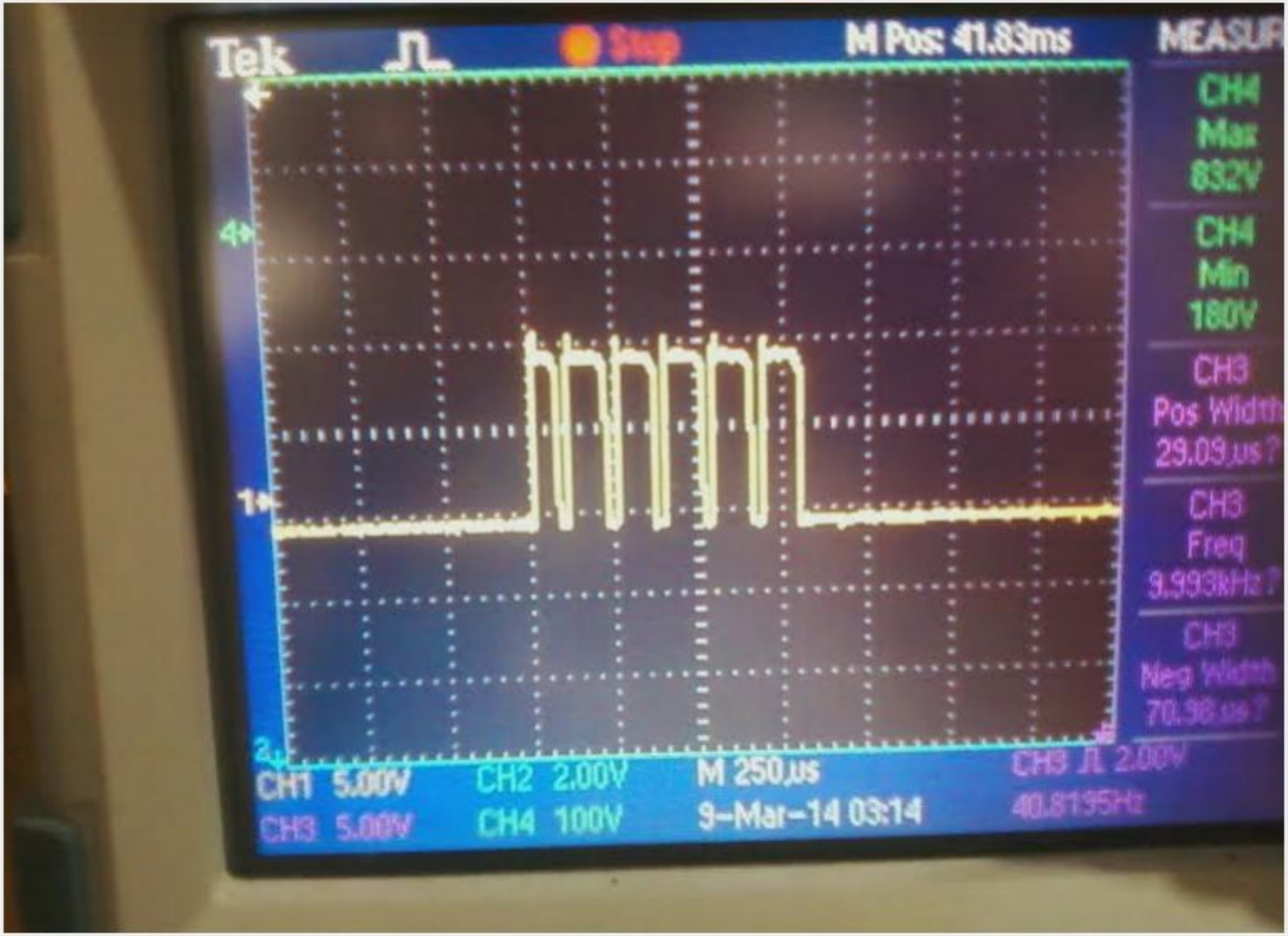
which brings us back to the pulse across the primary
the primary is an inductive load, so the on time is wider because the inductor slows the pulse down
so the pulse no longer looks like a 50% duty cycle. the on time looks longer then the input pulse.
the gate still effects the on time of the pulses



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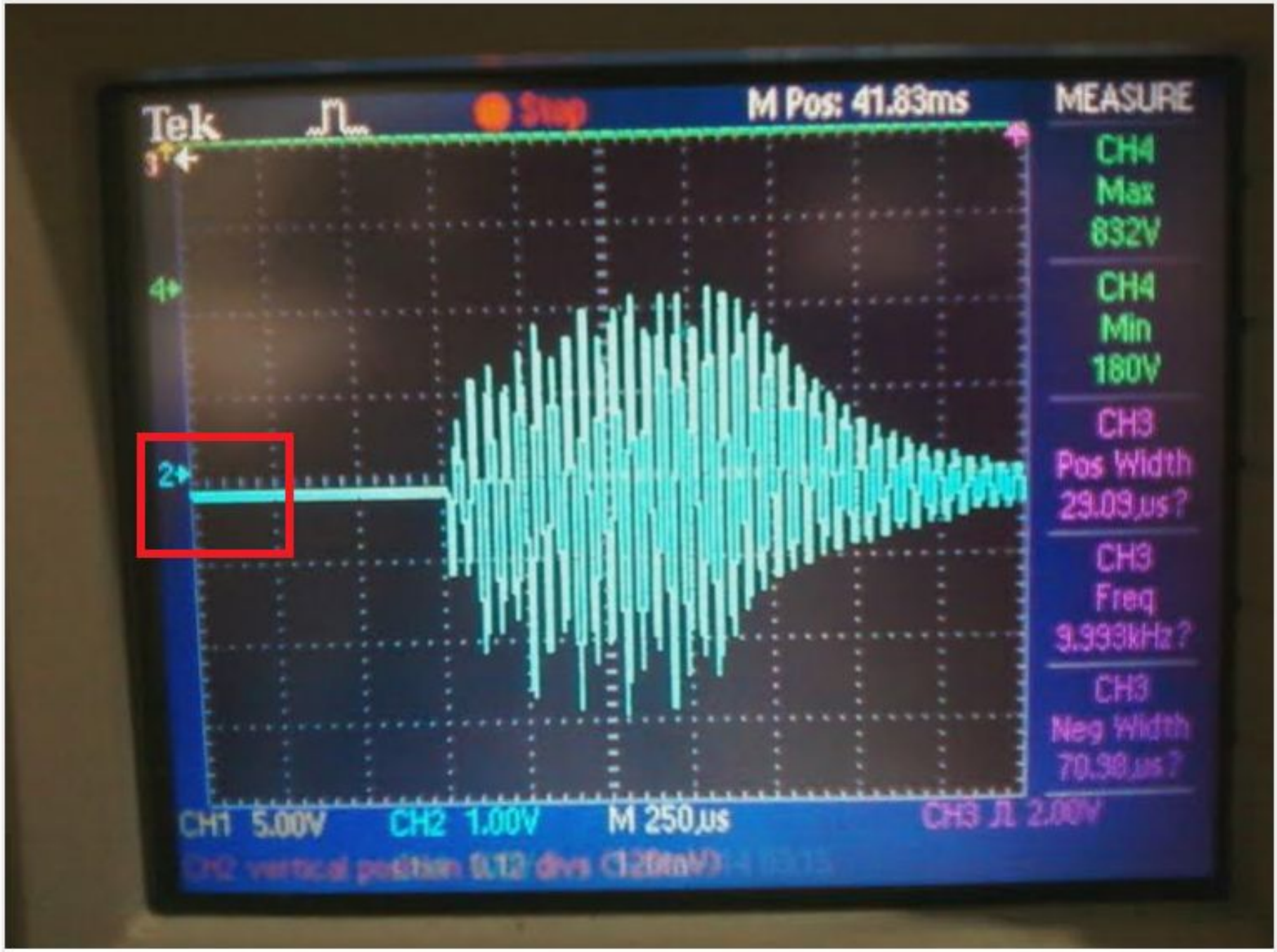
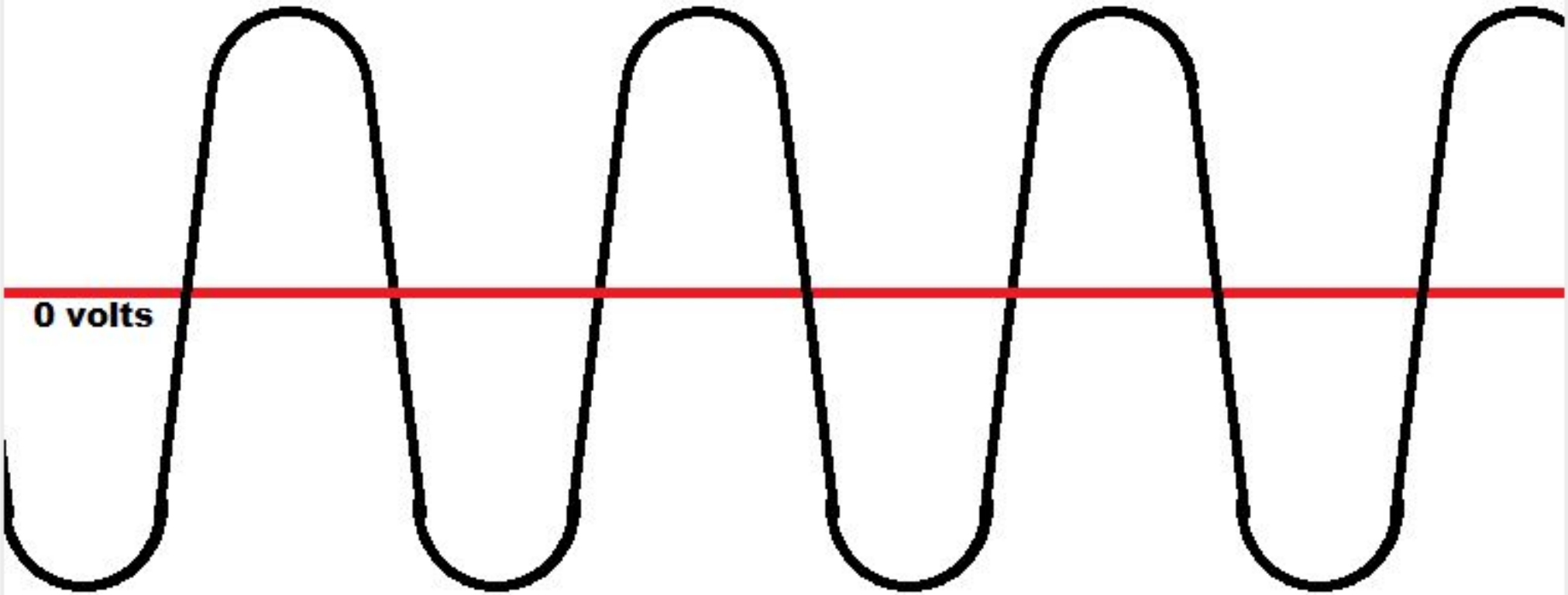
which applies a AC type magnetic field in the core.
AC as in the magnetic field is pos and neg



sine wave, red is 0 volts



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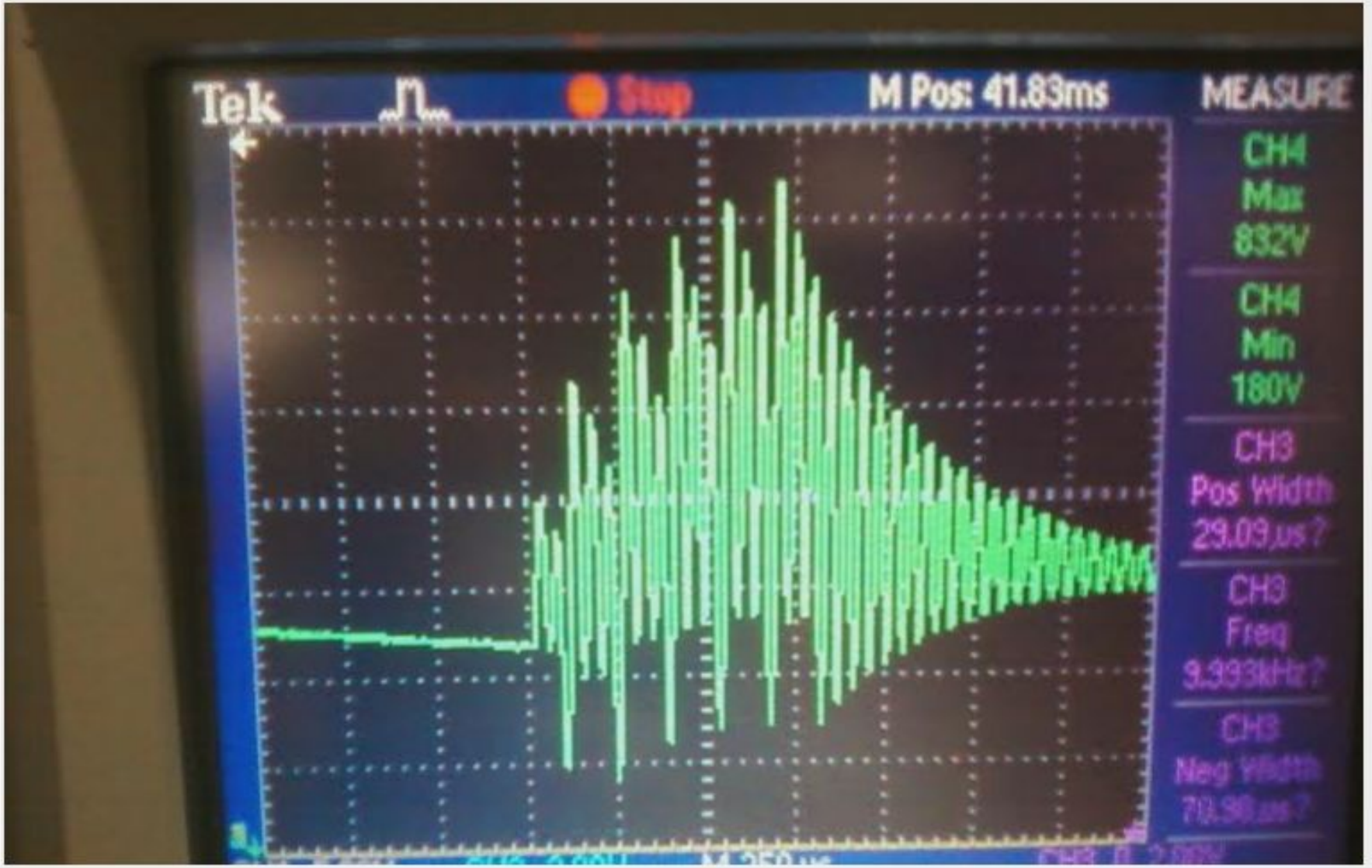
now the output from the vic
all pulses are pos, as in they are all above the 0 reference on the scope.
note the 832 volts and 180 volts in green in the upper right. and the number 3 on the bottom left.
the 832 and 180 on the upper right are the positive voltage pulse train. the 3 on the lower left is pointing to 0 reference
so this is meyers unipolar pulse to apply to the cell



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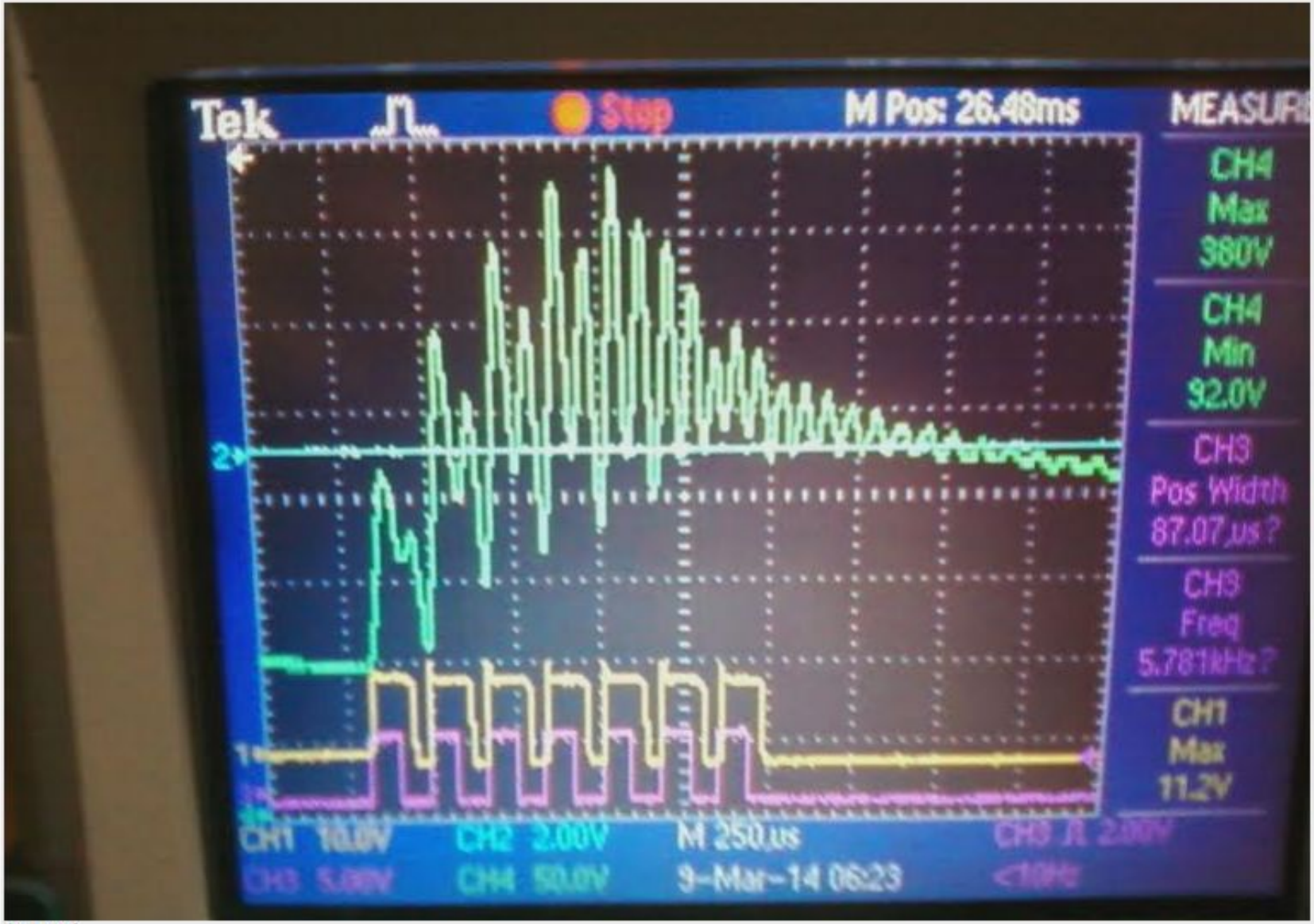
now this is the pulse doubling or tripling.... the magnetic field in the core and the inductive load has imparted a added frequency as you can see here. the main frequency is shown and the output frequency is shown



(4 PNG)

Online  Expert Posts: 2737 ★★★★★	the diode the diode is placed between the secondary and the pos choke -----

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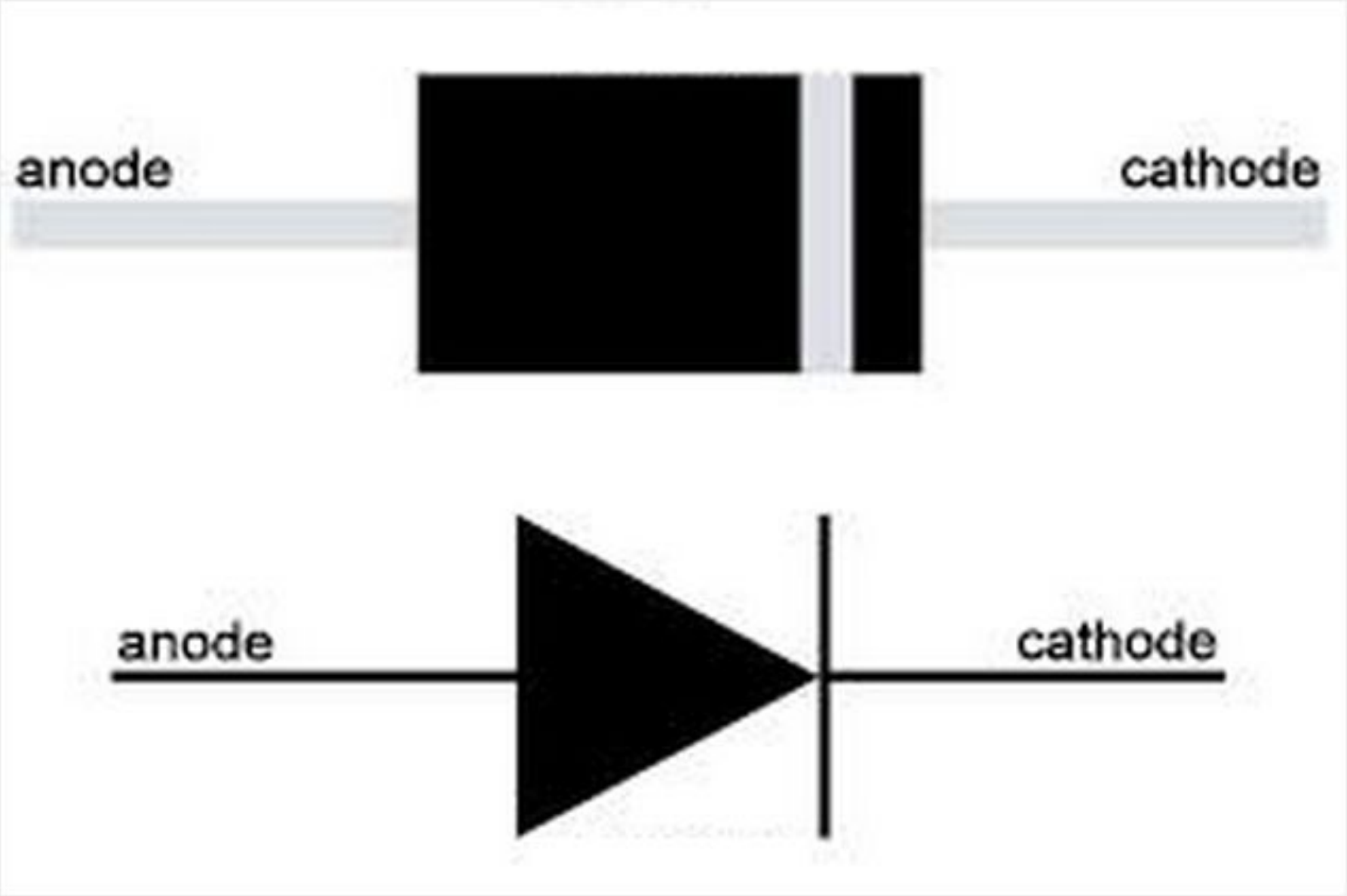
the diode
the diode is placed between the secondary and the pos choke
a diode looks like this



(diode.PNG)

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this is the meyer vic with wireing shown as copied from Don Gabels' drawing

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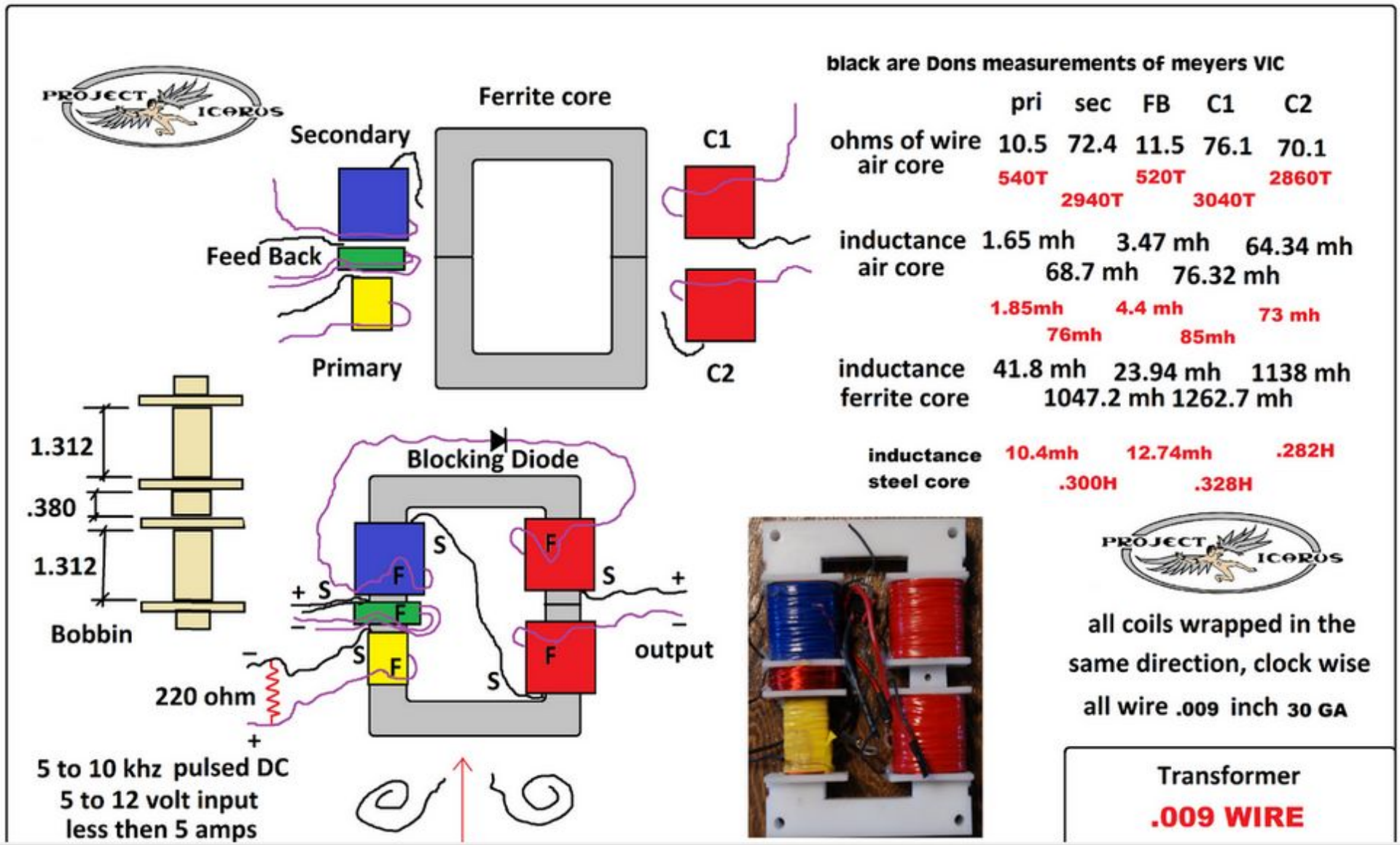

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what the diode does is separate the pos inductor from the secondary. the pos inductor needs to resonate with the tube. this makes a tank circuit.
a tank circuit is when a capacitor and a inductor resonate at the same frequency

what is a tank circuit
http://en.wikipedia.org/wiki/LC_circuit

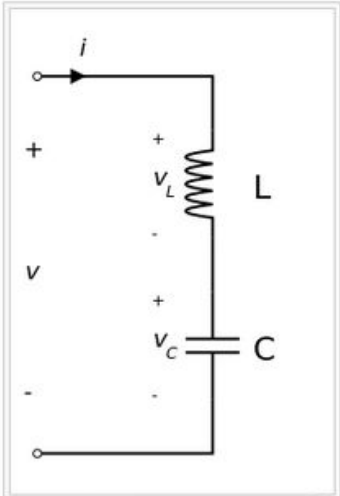
so now the hho cell has become part of the circuit, as a water capacitor, with capacitance and resistance.
the inductor has become a inductor with capacitance and resistance.
the diode stops the tank circuit from using the secondary as part of the inductor.

the capacitance of the inductor must be used in the tank formula, just as the inductance must be used in the formula. the resistance of the cell and resistance of the wire, also needs to be figured.

Series LC circuit [edit]

In the series configuration of the LC circuit, the inductor *L* and capacitor *C* are connected in series, as shown here. The total voltage *v* across the open terminals is simply the sum of the voltage across the inductor and the voltage across the capacitor. The current *i* flowing into the positive terminal of the circuit is equal to the current flowing through both the capacitor and the inductor.

$$v = v_L + v_C$$
$$i = i_L = i_C$$



Series LC Circuit

Resonance [edit]

Inductive reactance magnitude (X_L) increases as frequency increases while capacitive reactance magnitude (X_C) decreases with the increase in frequency. At one particular frequency these two reactances are equal in magnitude but opposite in sign. The frequency at which this happens is called the resonant frequency (f_0) for the given circuit.

Hence, at resonance:

$$X_L = -X_C$$
$$\omega L = \frac{1}{\omega C}$$

Solving for ω, we have

$$\omega = \omega_0 = \frac{1}{\sqrt{LC}}$$

which is defined as the resonant angular frequency of the circuit.

Converting angular frequency (in radians per second) into frequency (in hertz), we have

$$f_0 = \frac{\omega_0}{2\pi} = \frac{1}{2\pi\sqrt{LC}}$$

In a series configuration, X_C and X_L cancel each other out. In real, rather than idealised components the current is opposed, mostly by the resistance of the coil windings. Thus, the current supplied to a series resonant circuit is a maximum at resonance.

- In the limit as $f \to f_0$ current is maximum. Circuit impedance is minimum. In this state a circuit is called an *acceptor circuit*[citation needed].
- For $f < f_0$, $X_L \ll (-X_C)$. Hence circuit is capacitive.
- For $f > f_0$, $X_L \gg (-X_C)$. Hence circuit is inductive.

(15.PNG)

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this causes an impediance to form. the impediance of the tank circuit sets up the a charge potential onto the positive plate.
once you set up a positive potential, then a neg potential will form from the water itself, or from the neg electron flow from the water.

Impedance [edit]

In the series configuration, resonance occurs when the complex electrical impedance of the circuit approaches zero.

First consider the impedance of the series LC circuit. The total impedance is given by the sum of the inductive and capacitive impedances:

$$Z = Z_L + Z_C$$

Impedance [edit]

In the series configuration, resonance occurs when the complex electrical impedance of the circuit approaches zero.

First consider the impedance of the series LC circuit. The total impedance is given by the sum of the inductive and capacitive impedances:

$$Z = Z_L + Z_C$$

By writing the inductive impedance as $Z_L = j\omega L$ and capacitive impedance as $Z_C = (j\omega C)^{-1}$ and substituting we have

$$Z(\omega) = j\omega L + \frac{1}{j\omega C}.$$

Writing this expression under a common denominator gives

$$Z(\omega) = j\frac{(\omega^2 LC - 1)}{\omega C}.$$

Finally, defining the natural angular frequency as

$$\omega_0 = \frac{1}{\sqrt{LC}}$$

the impedance becomes

$$Z(\omega) = jL\left(\frac{\omega^2 - \omega_0^2}{\omega}\right).$$

The numerator implies that in the limit as $\omega \to \pm\omega_0$ the total impedance Z will be zero and otherwise non-zero. Therefore the series LC circuit, when connected in series with a load, will act as a band-pass filter having zero impedance at the resonant frequency of the LC circuit.

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now the C2 inductor on the negitive side. this is adjusted to help form the voltage off set onto the cell and the phase relationship of the pulses. the neg inductor works out of Phase with the positive inductor. this keeps the voltage from drawing amps

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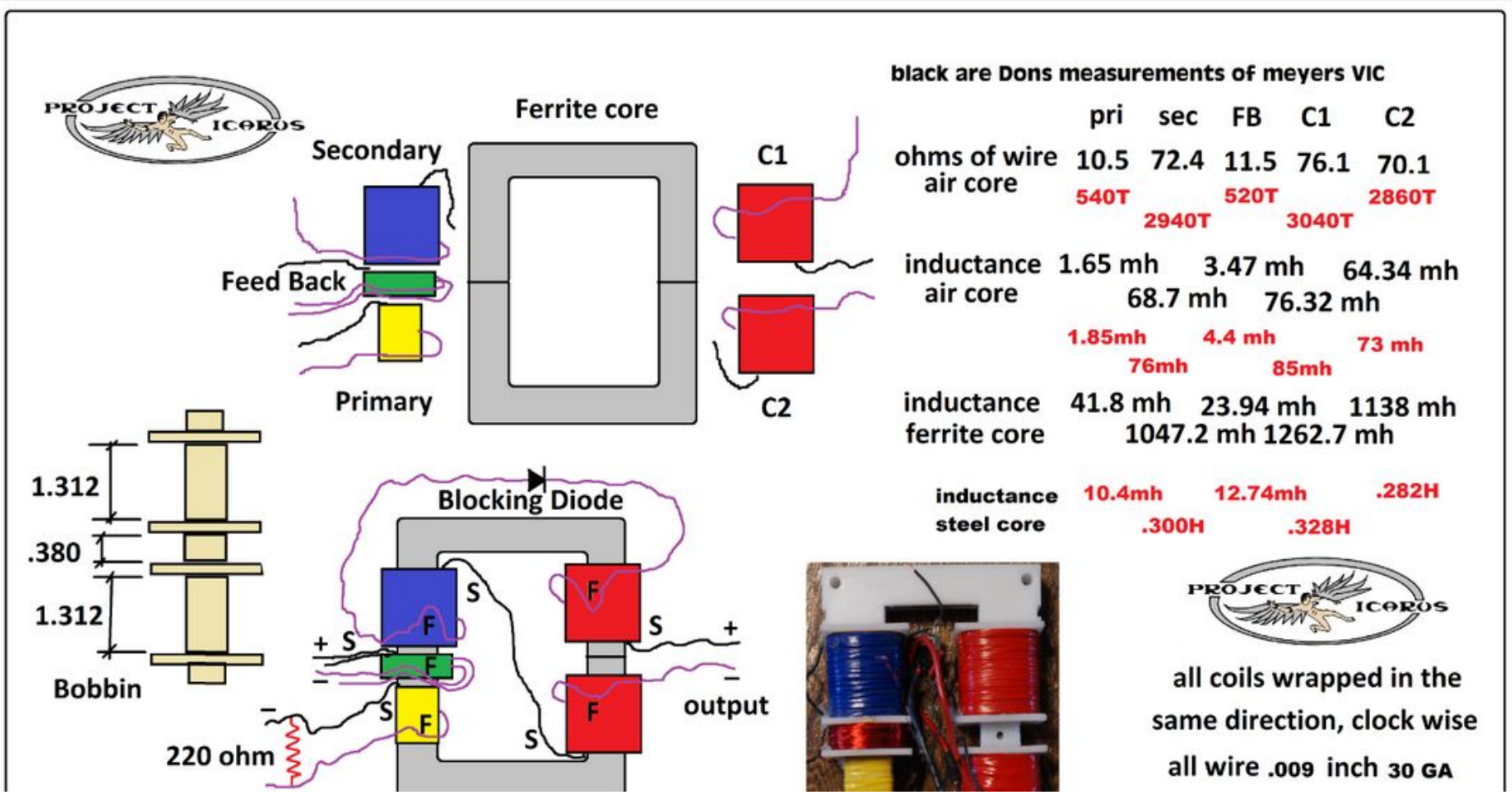
now the C2 inductor on the negitive side. this is adjusted to help form the voltage off set onto the cell and the phase relationship of the pulses.
the neg choke must be adjusted to get the cell to function as a voltage potential, and let the voltage take over and do the work.
a charged voltage potential is what does the work, not amps. once the plates are charged, then the water splits from being pulled apart by static voltage, and not amps.



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tuning of a tank circuit is over 100 years old.
a crystal radio used the same principle, 100 years ago. in fact the old knob tuned radios all worked off the same principle.
turning a knob actually tuned a capacitor or a inductor. the radio station broacasts at some known frequency,
you merely tuned your radio into the same frequency as the radio station.
as you tune into the correct frequency, the voltage amplitude goes up and the radio broadcast becomes louder and clearer

http://en.wikipedia.org/wiki/Crystal_radio

http://en.wikipedia.org/wiki/Cat's-whisker_detector

http://www.techlib.com/electronics/crystal.html#Crystal%20Radio