Free Energy is the Non-Saturation of Inductor Current

Managing the Generation of Reactive Power for its Free Energy

The Cosine of 0° is a Power Factor of +1 indicating a useful condition of the Consumption of Real Power at its maximum percentage of Positive Wattage.

The Cosine of 90° is a Power Factor of Zero indicating a useless condition of Real Power and its Conversion into Reactive Power.

Thus, the Sine of 90° yields a Leading Power Factor of +1 indicating a useful condition of Reactive Power Generated by Capacitive Reactance.

As with the Cosine of 90°, a Cosine of 270° is a Power Factor of Zero indicating another useless condition of Real Power.

But the Sine of 270° yields a Lagging Power Factor of –1 indicating a useful condition of Reactive Power Consumed by Inductive Reactance.

The simultaneous occurrence of the Sine of 90° along with the Sine of 270° results in a Power Factor of Zero and yields an angular phase difference of the Sine of 180° indicating a useless condition of Reactive Power and its Conversion into Real Power. Its analogous Cosine of 180° indicates a phase separation between the voltage and the current waveforms of an oscillating wave and the Generation of Negative Watts. FYI, Negative Watts is the Passive Sign Convention's definition for Generators and Batteries[1] and could just as easily be applied to *any* Generation of Negative Watts by *any* Reactive Component, such as: Inductors or Spark Gaps, instead of merely applicable to Sine Wave Generators and Batteries.

Two resistors fed by a battery is an example[2] of the distinction between the generation of real power versus its consumption and satisfies the Conservation of Kinetic Energy upheld by physics...

---

1 “Passive Sign Convention” https://en.wikipedia.org/wiki/Passive_sign_convention

2 http://vinyasi.info/hogwash/test/

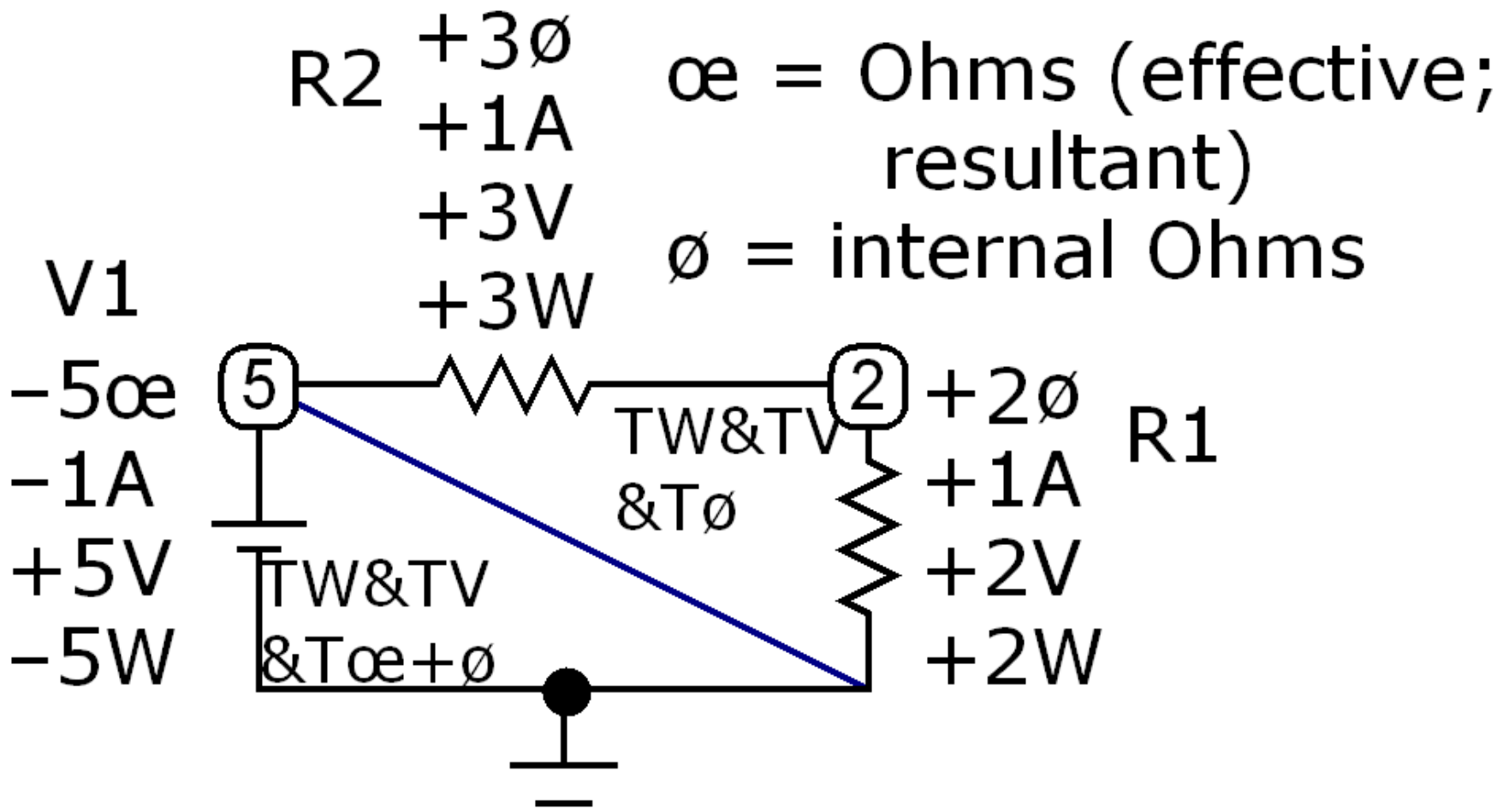

Fig. 1: Schematic of two Resistors fed by a Battery

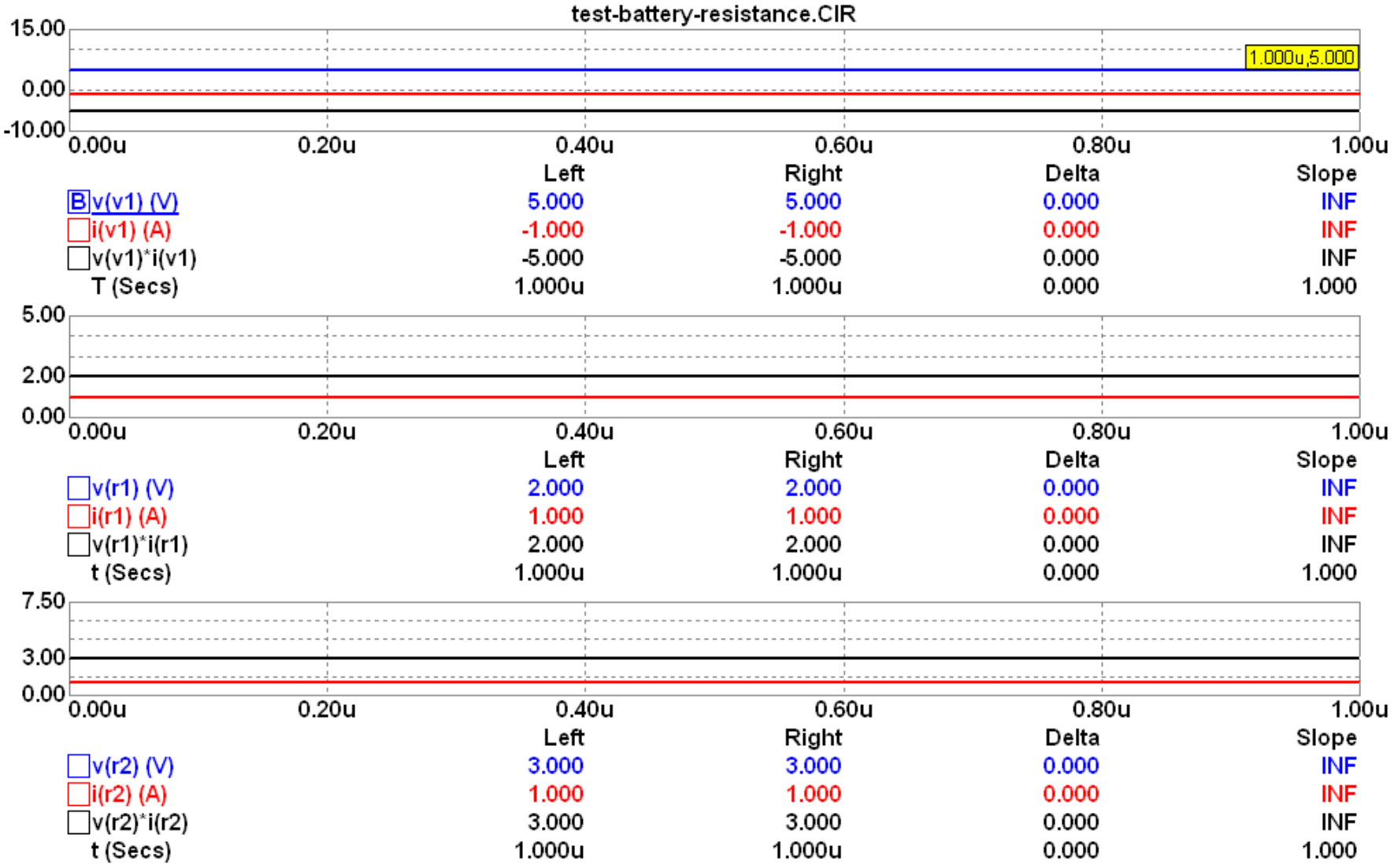

Fig. 2: Output of two Resistors fed by a Battery

When one of its resistors is replaced by an inductor...

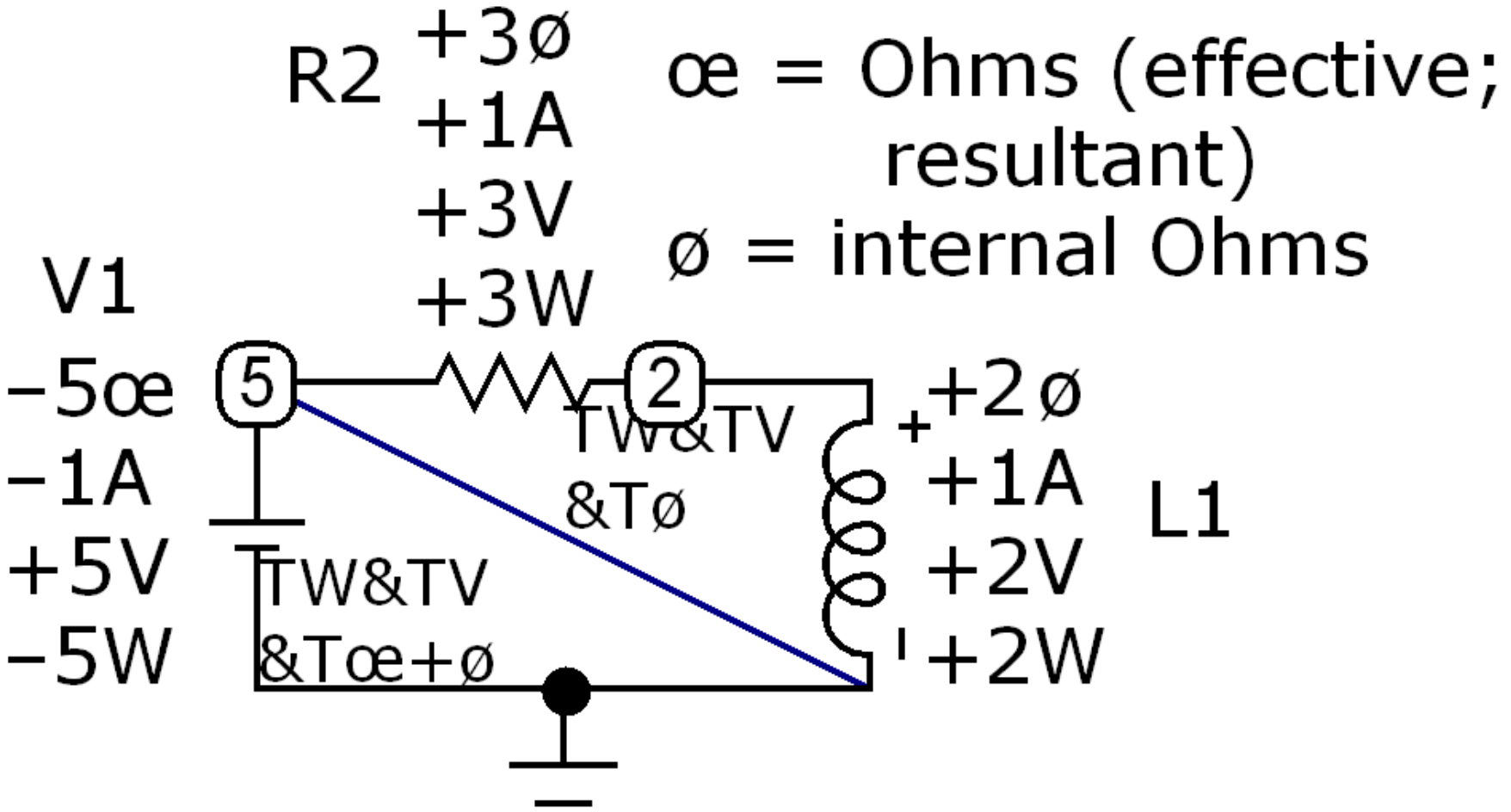

Fig. 3: Schematic of One Resistor and One Inductor fed by a Battery

...the result is exactly the same as if the resistor had not been replaced by an inductor – as per, Figures 1 and 2, above...

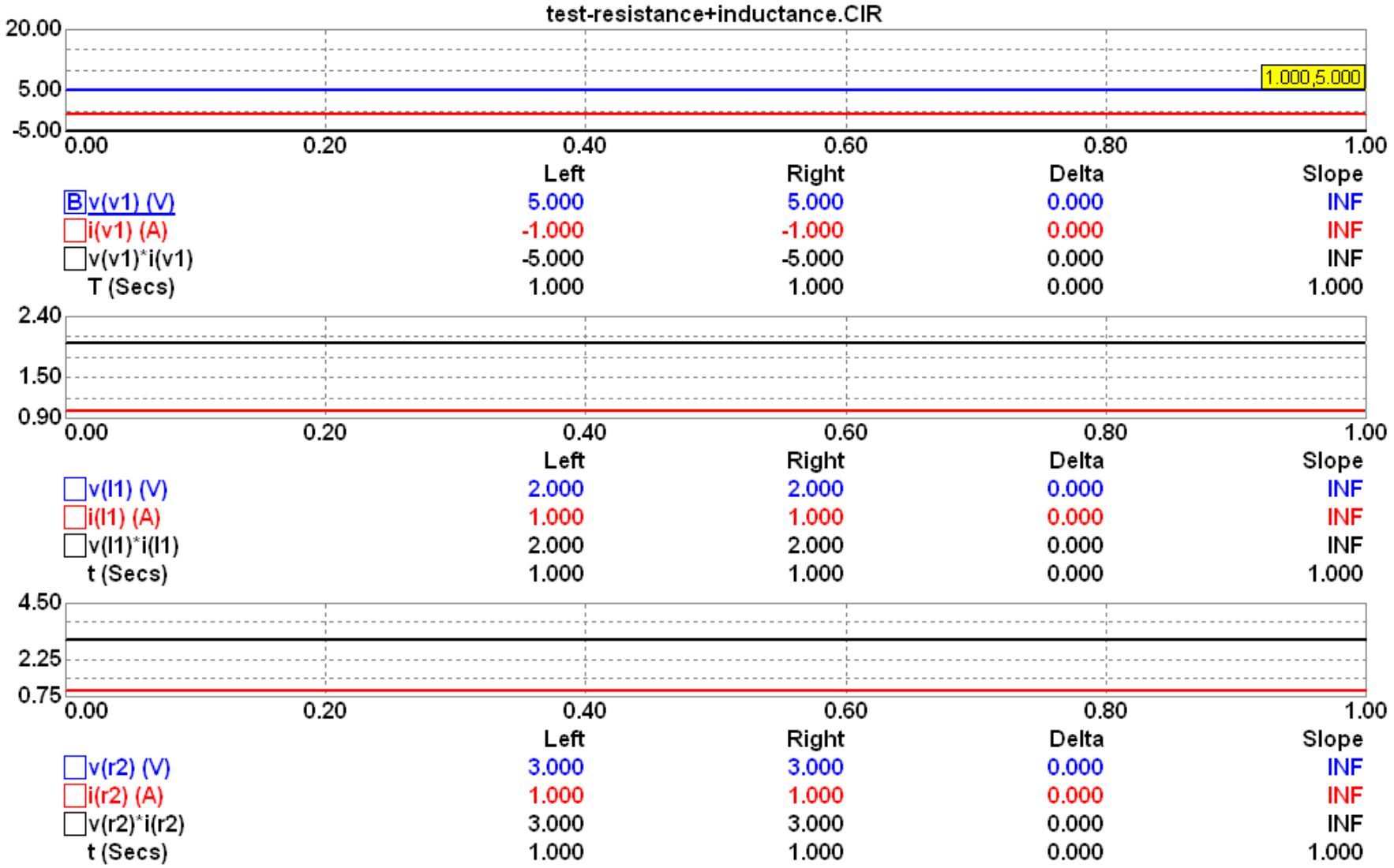

Fig. 4: Output of One Resistor and One Inductor fed by a Battery

It starts to get interesting when a sine wave voltage source replaces the battery...

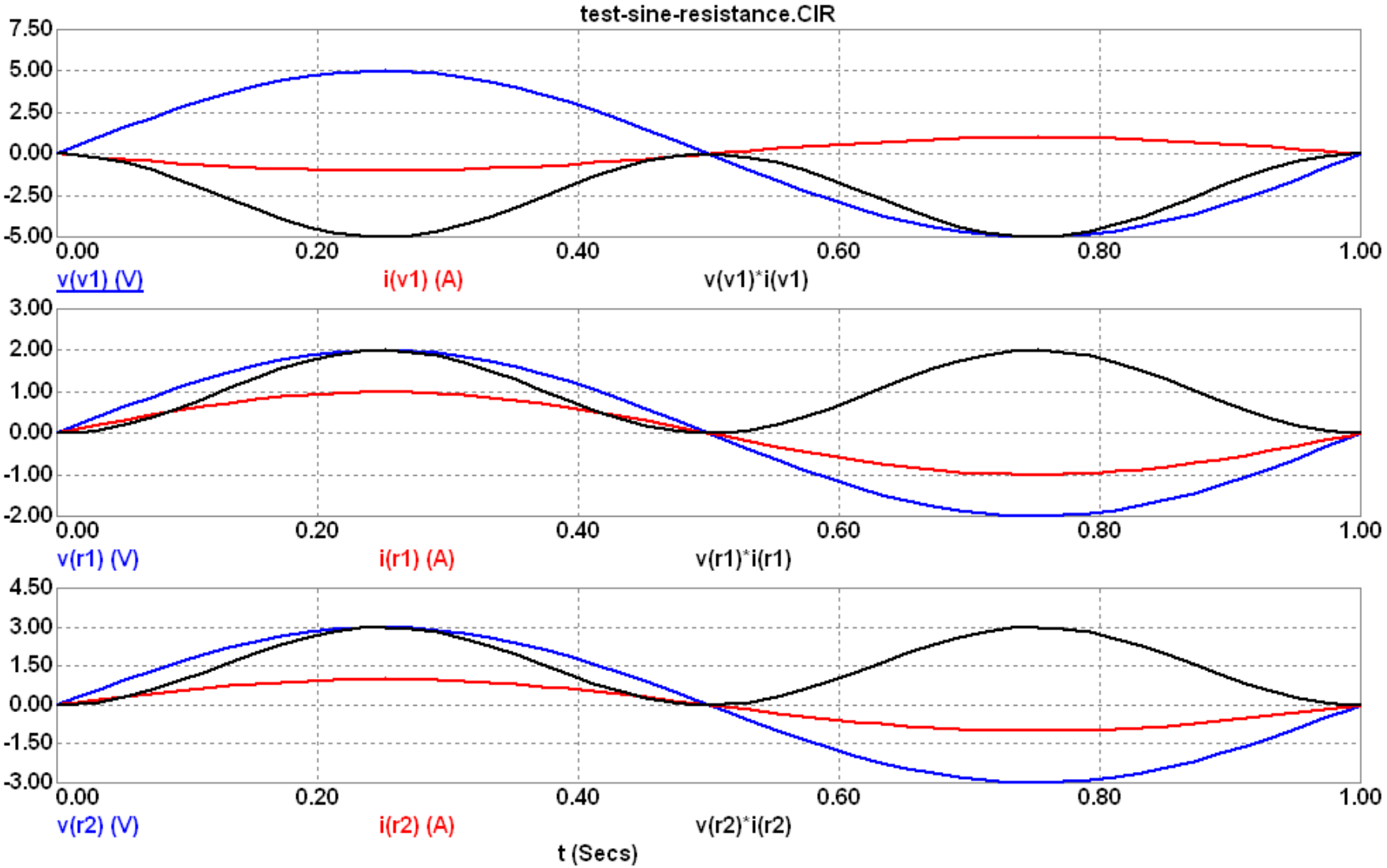

Fig. 5: Output of Two Resistors fed by a Sine Wave Voltage Source.

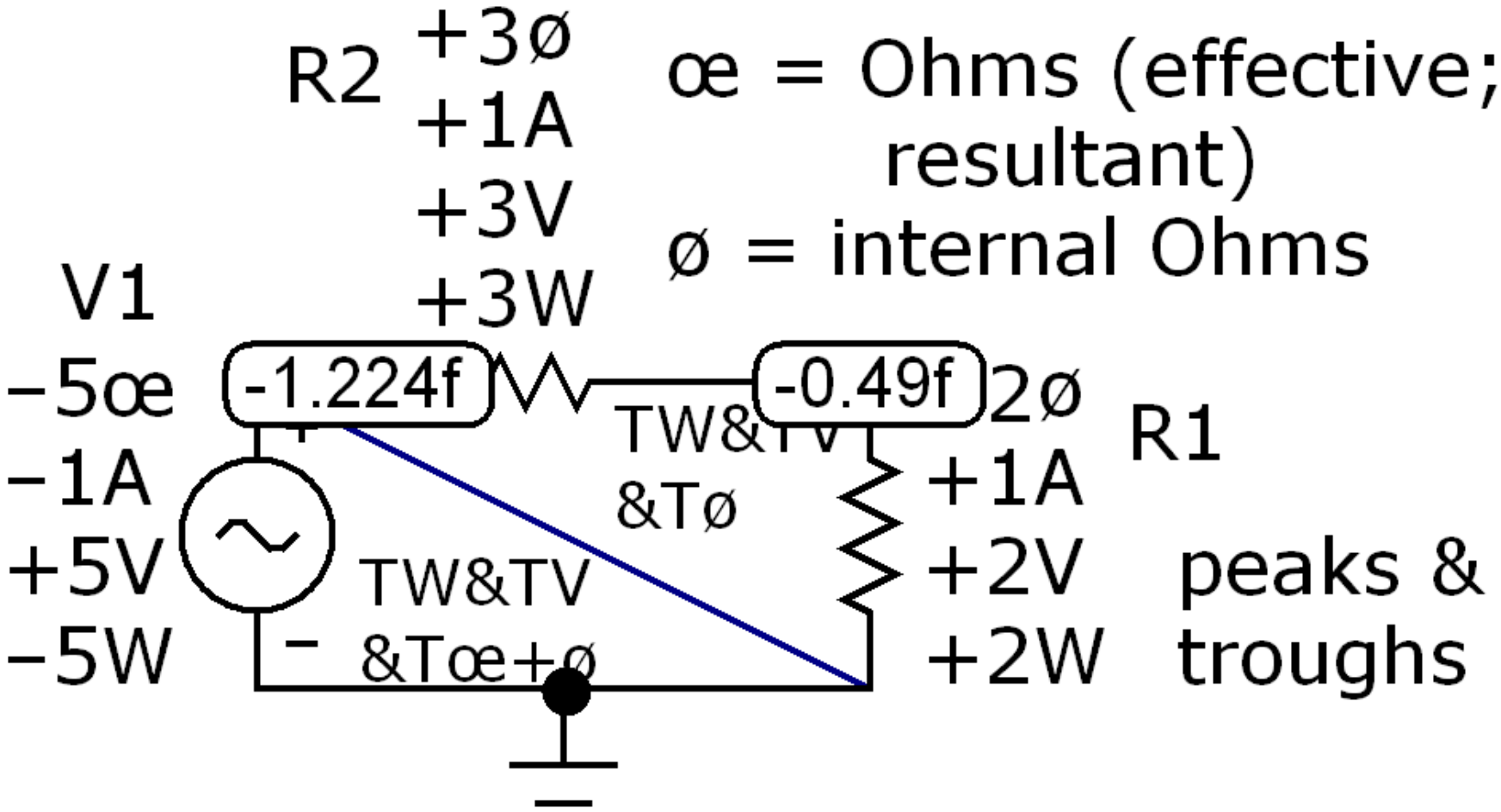

Fig. 6: Schematic of Two Resistors fed by a Sine Wave Voltage Source.

There is a slight momentary surge of current and a rise of voltage in an inductor/resistor load fed by a sine source...

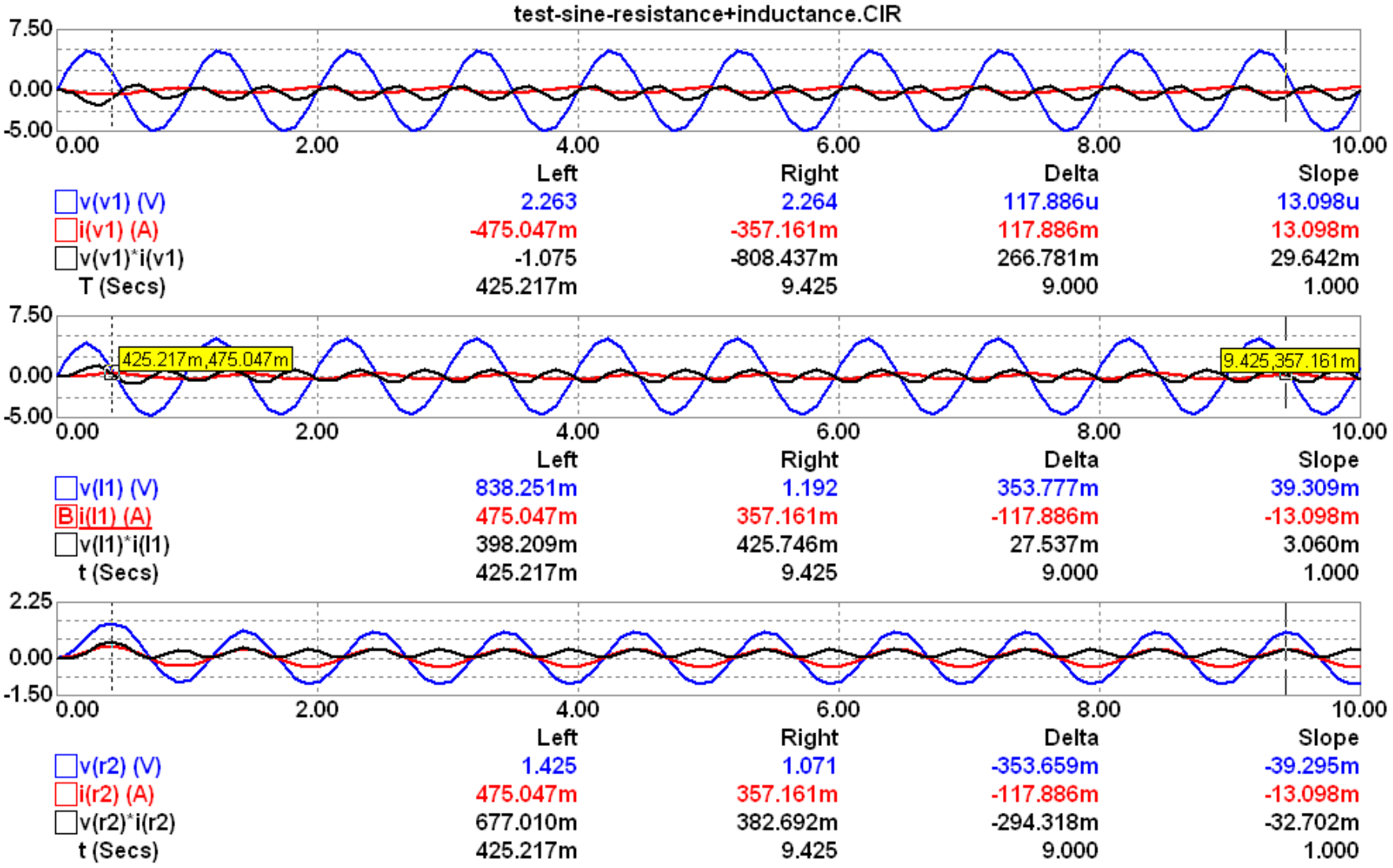

Fig. 7: Numeric Output of One Resistor and One Inductor fed by a Sine Wave Voltage Source.

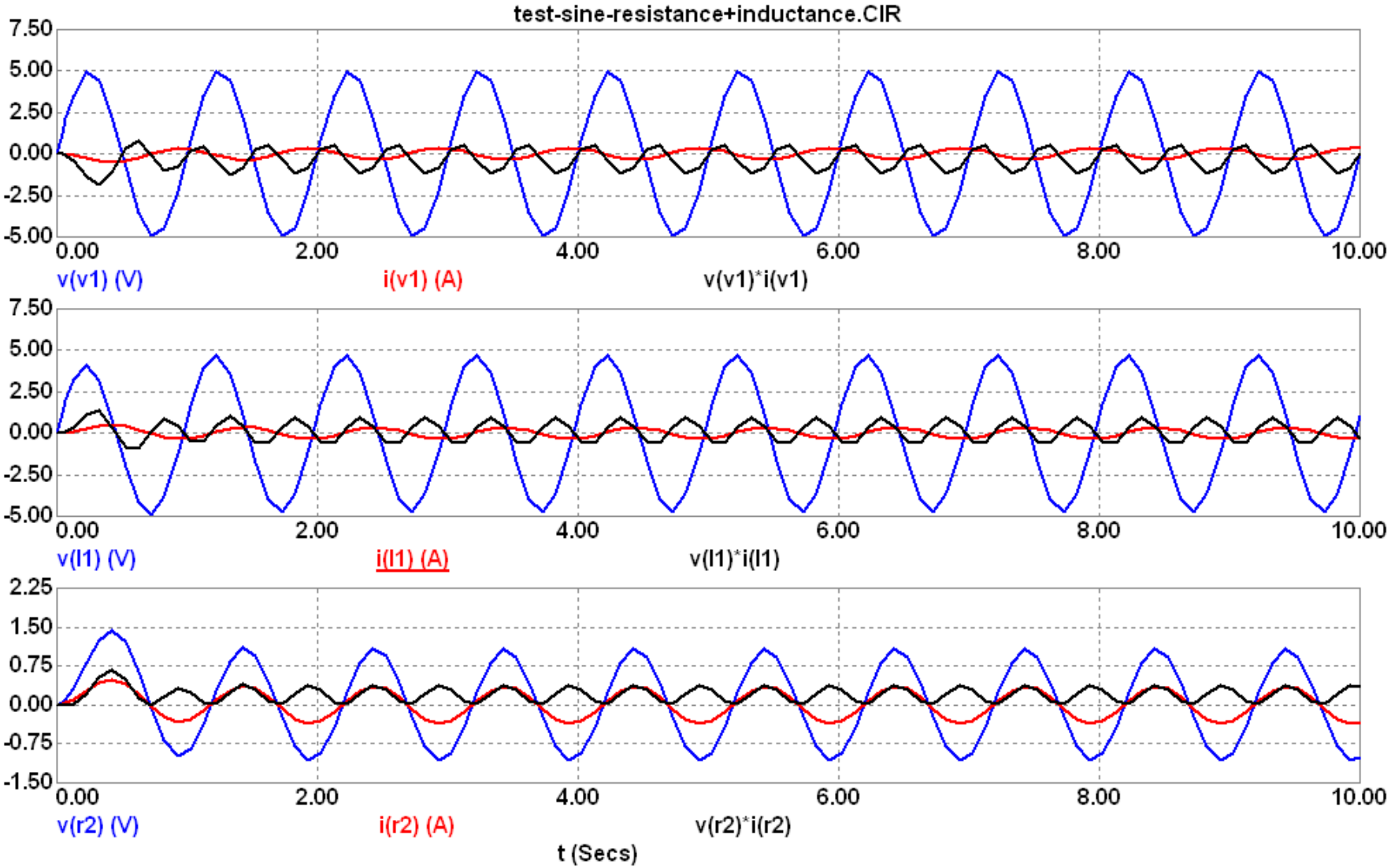

Fig. 8: Graphic Output of One Resistor and One Inductor fed by a Sine Wave Voltage Source.

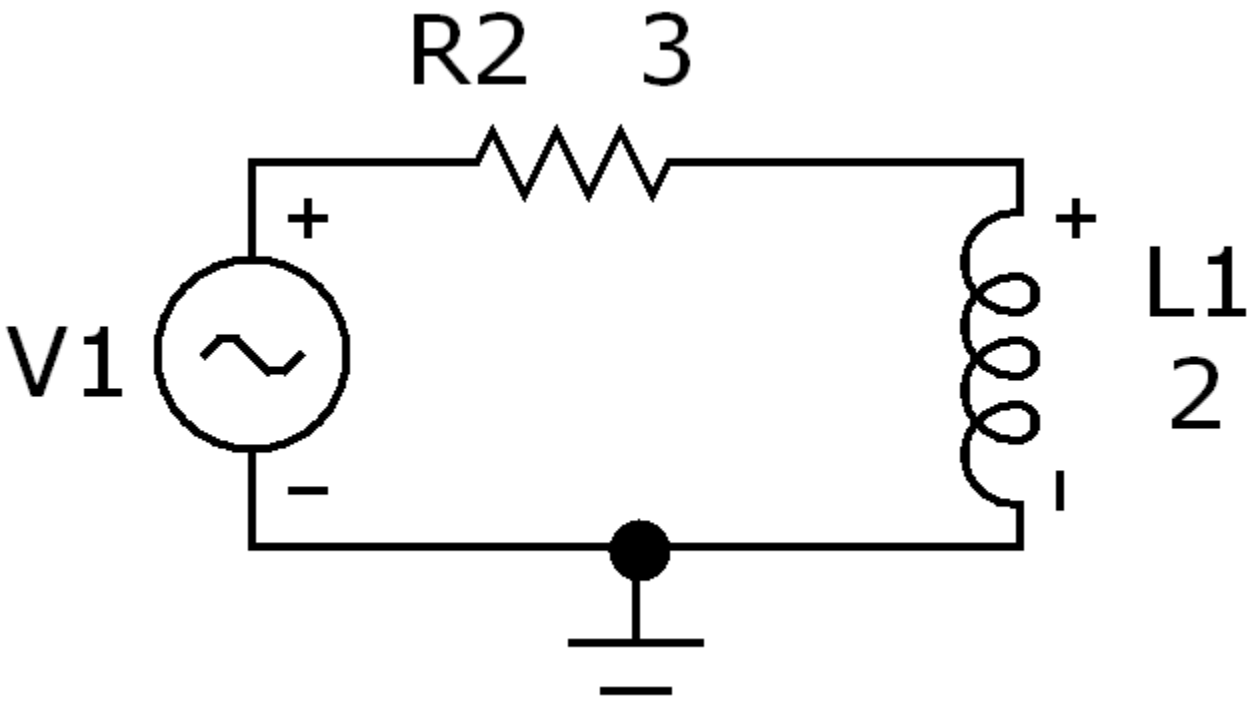

Fig. 9: Schematic of One Resistor and One Inductor fed by a Sine Wave Voltage Source.

The demonstration of a leading current versus a lagging current is considered to be indication of capacitive reactance versus inductive reactance, respectively. But this is only true when current has reached saturation...

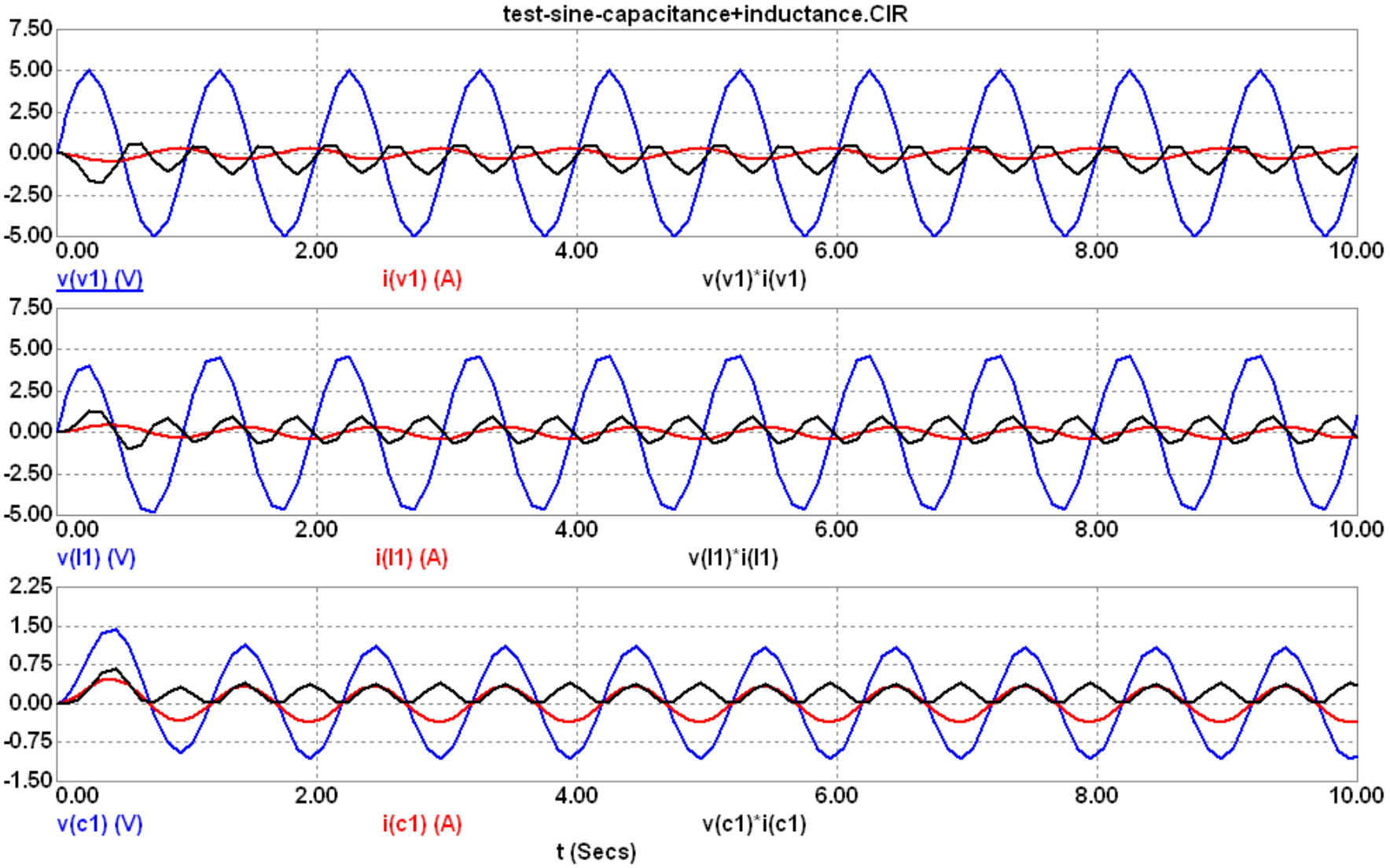

Fig. 10: Output of One Capacitor and One Inductor fed by a Sine Wave Voltage Source.

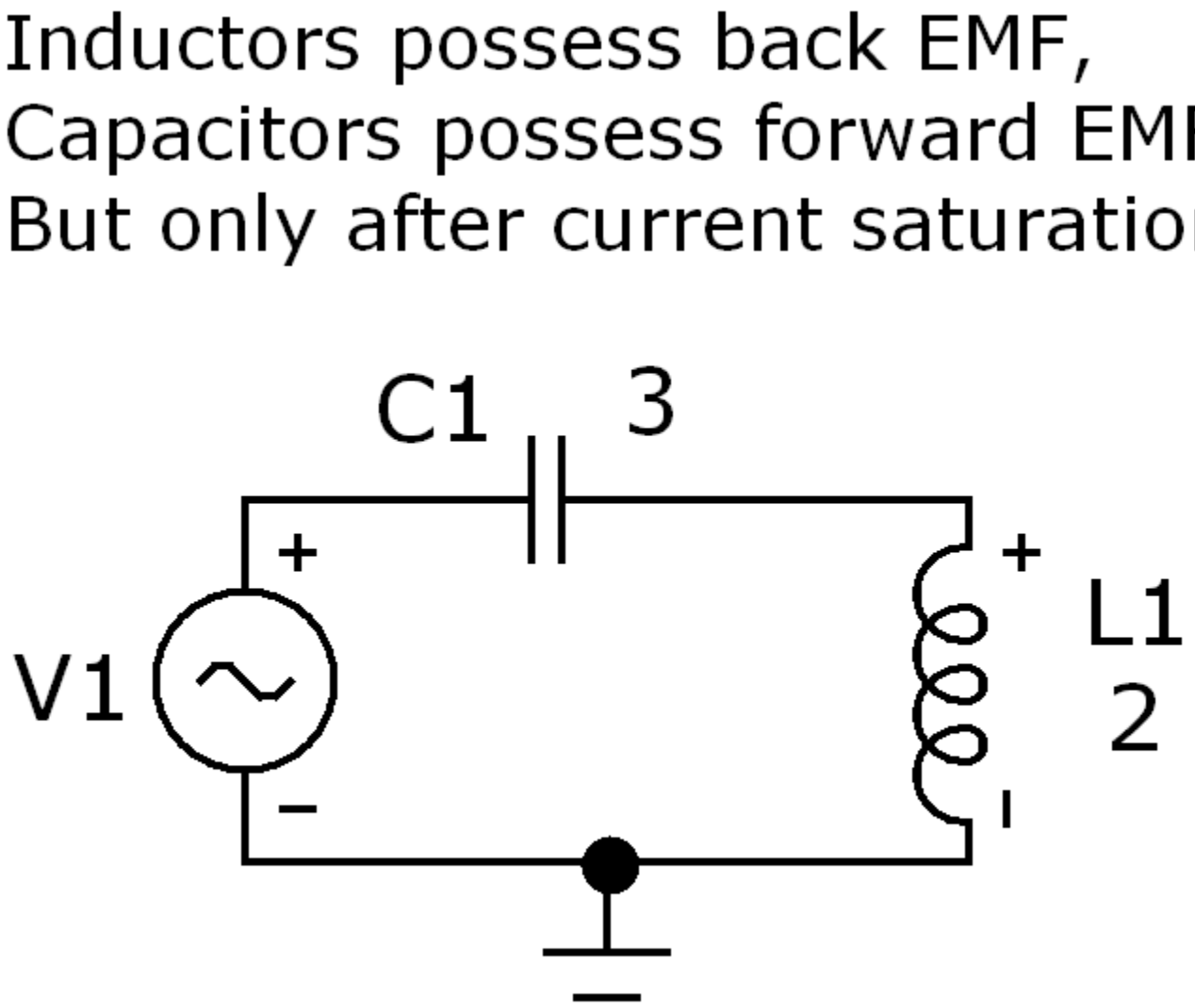

Fig. 11: Schematic of One Capacitor and One Inductor fed by a Sine Wave Voltage Source.

It's really true what electrical engineering says about capacitive reactance generates reactive power. Its current doesn't merely lead its voltage by 90°. The polarity of the sign of voltage (positive versus negative) versus the polarity of the sign of current are opposite to each other indicating a condition of negative wattage and the generation of reactive power. Meanwhile, inductive reactance consumes reactive

power due to its voltage and current polarity of signs are the same as each other. But these conditions are only true whenever the phase of voltage and the phase of current are *not* out-of-phase with each other by a half-cycle of oscillation (180°)...

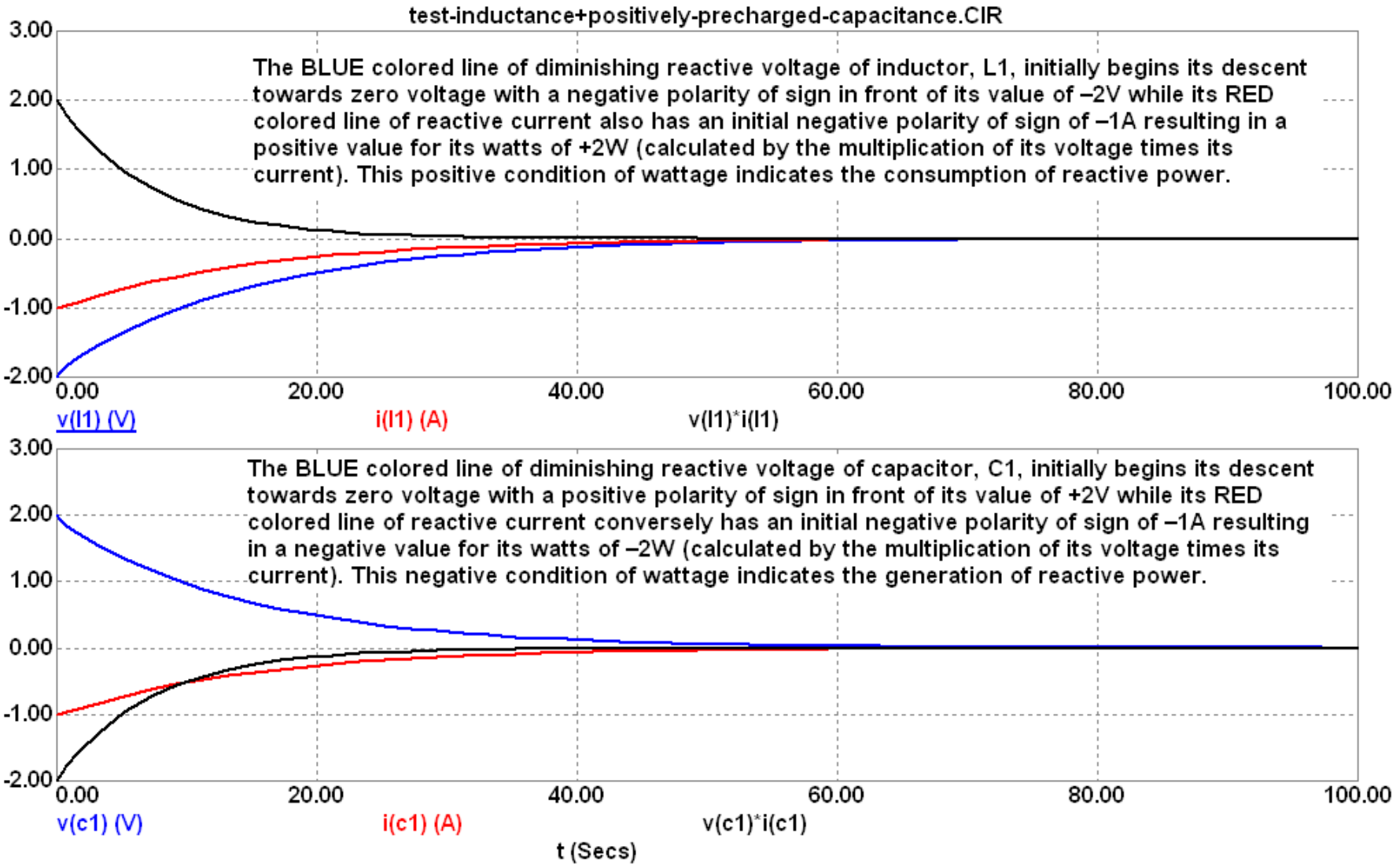

Fig. 12: Output of One Capacitor, Precharged with Five Volts, and One Inductor.

Capacitors generate negative wattage,
Inductors consume positive wattage,
And both diminish towards zero
outputs when merely a tank circuit.

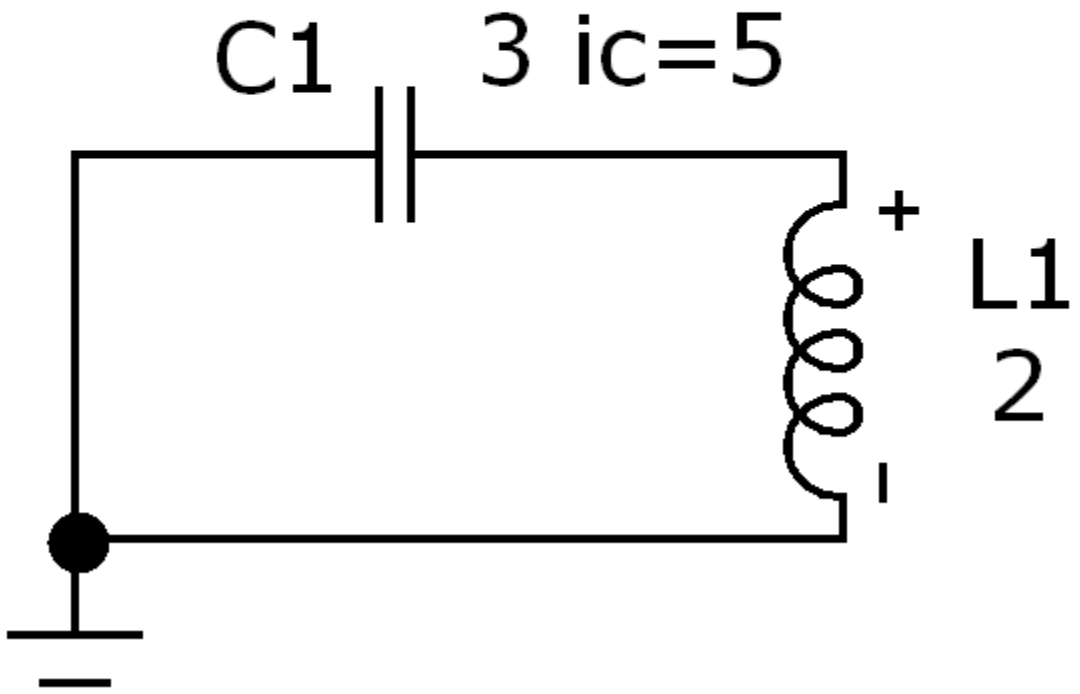

Fig. 13: Schematic of One Capacitor, Precharged with Five Volts, and One Inductor.

It doesn't matter if the capacitor is precharged with negative volts. The result is the same in both instances (above and below)...

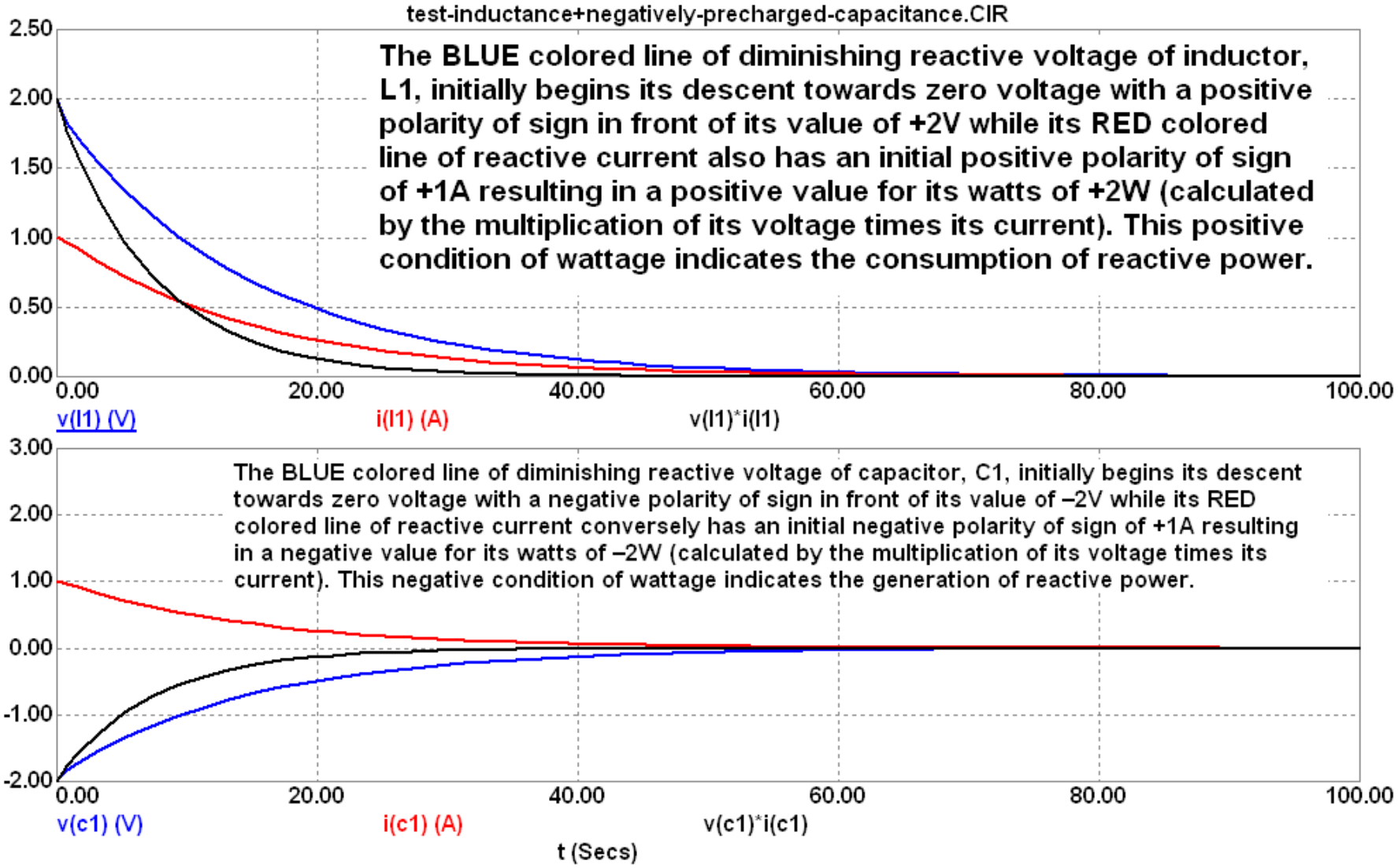

Fig. 14: Output of One Capacitor, Precharged with Negative Five Volts, and One Inductor.

Capacitors generate negative wattage,
Inductors consume positive wattage,
And both diminish towards zero
outputs when merely a tank circuit.

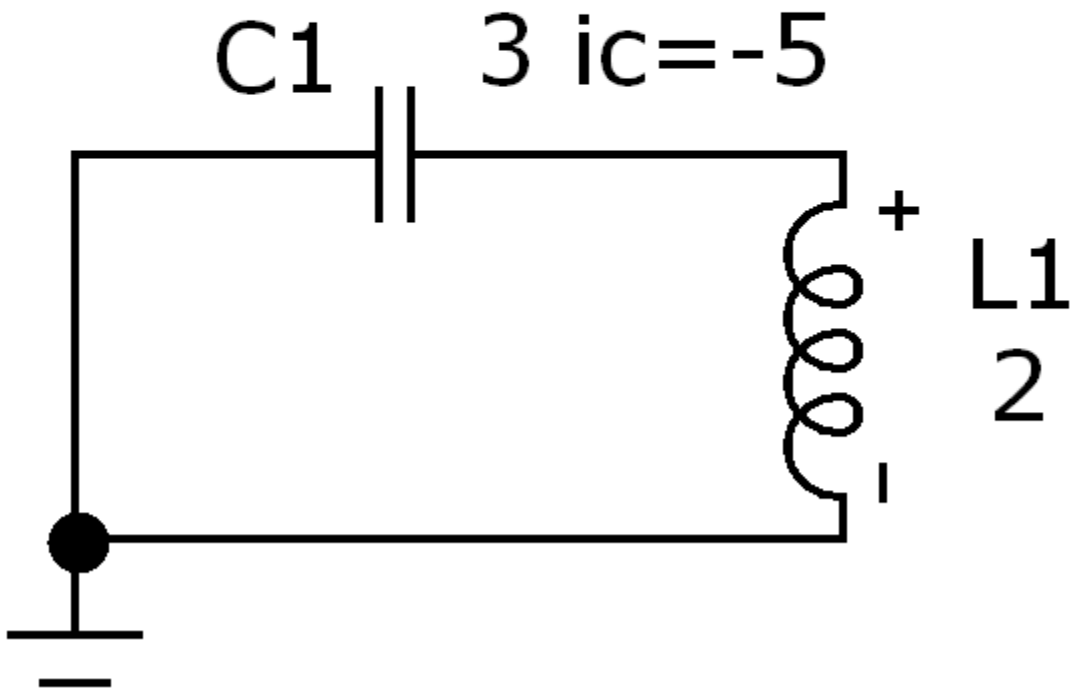

Fig. 15: Schematic of One Capacitor, Precharged with Negative Five Volts, and One Inductor.

Doubling the capacitors and doubling the inductors alters nothing. Yet, this hints at the high percentage of the reuse of power to which I

am developing this presentation... $A\ Percentage\ of\ the\ Infinite\ Reuse\ of\ Power = \left(1 - \frac{INPUT}{OUTPUT}\right) \times 100\ percent$

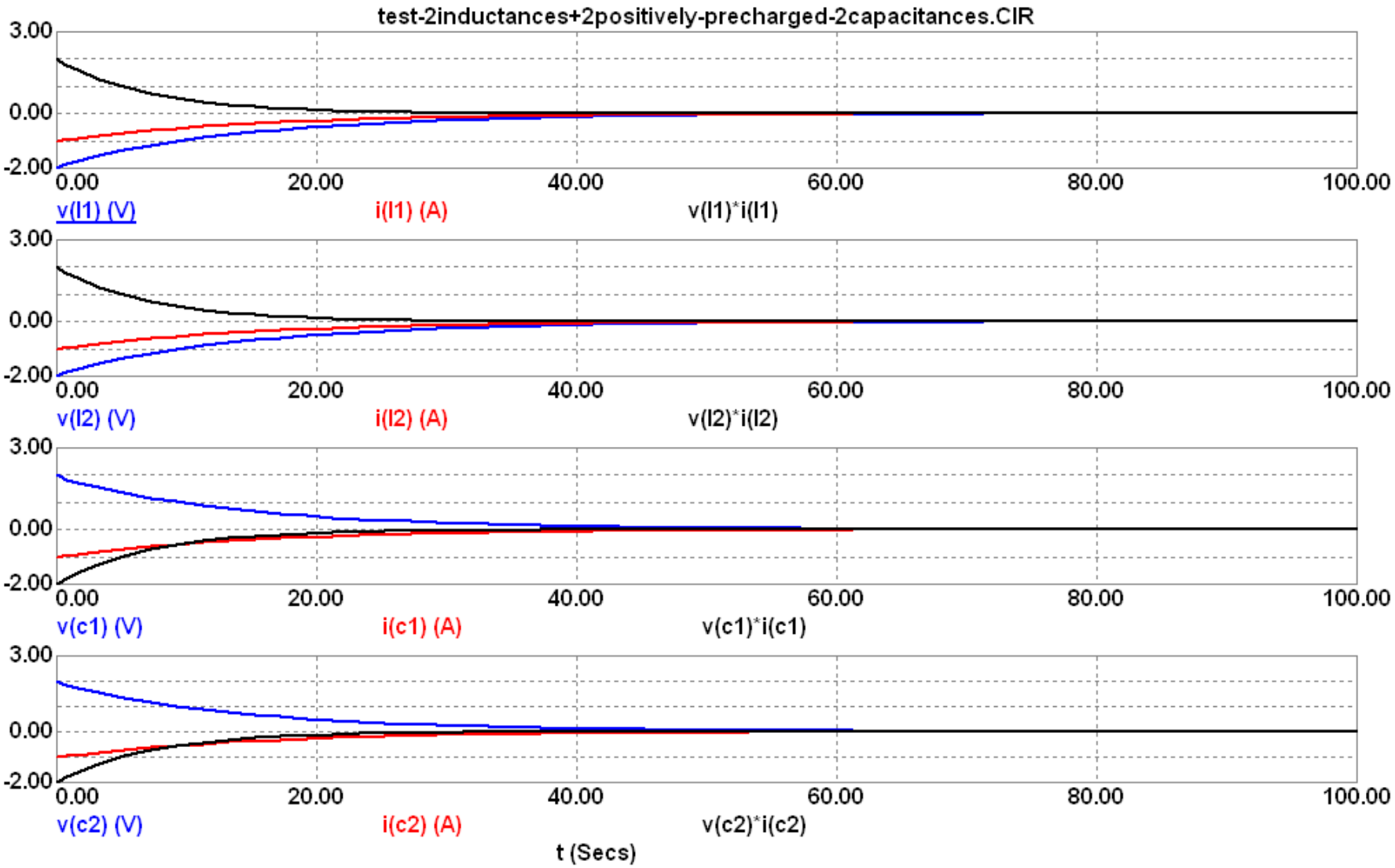

Fig. 16: Output of Two Capacitors, each Precharged with Five Volts, and Two Inductors.

Capacitors generate negative wattage,
Inductors consume positive wattage,
And both diminish towards zero
outputs when merely a tank circuit.

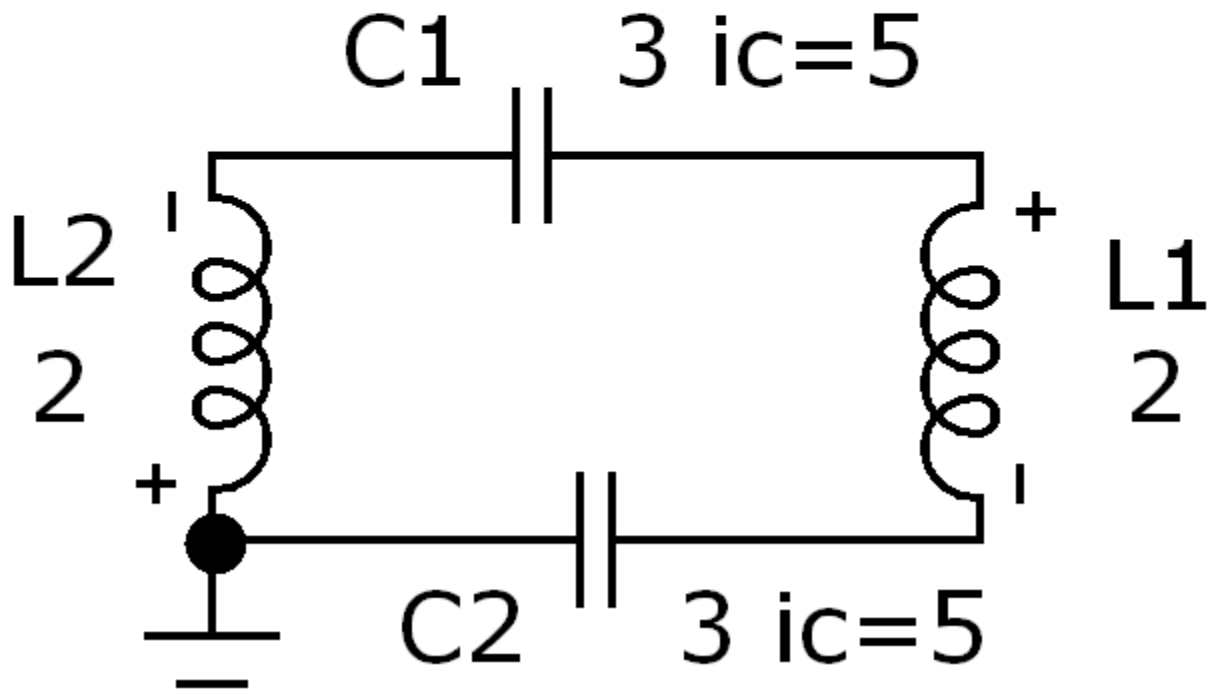

Fig. 17: Schematic of Two Capacitors, each Precharged with Five Volts, and Two Inductors.

Triangular Waves are an Indication of Back EMF and the Failure of an Inductor to Saturate Itself with Current.[3] This Provides for the Possibility of the Escalation of Reactive Power without Limit. This Limitless Escalation Constitutes "Free Energy".

3 "How to Avoid Inductor Saturation in your Power Supply Design" https://www.monolithicpower.com/en/how-to-avoid-inductor-saturation-in-your-power-supply-design

The triangular waves of this initial output looks promising,...

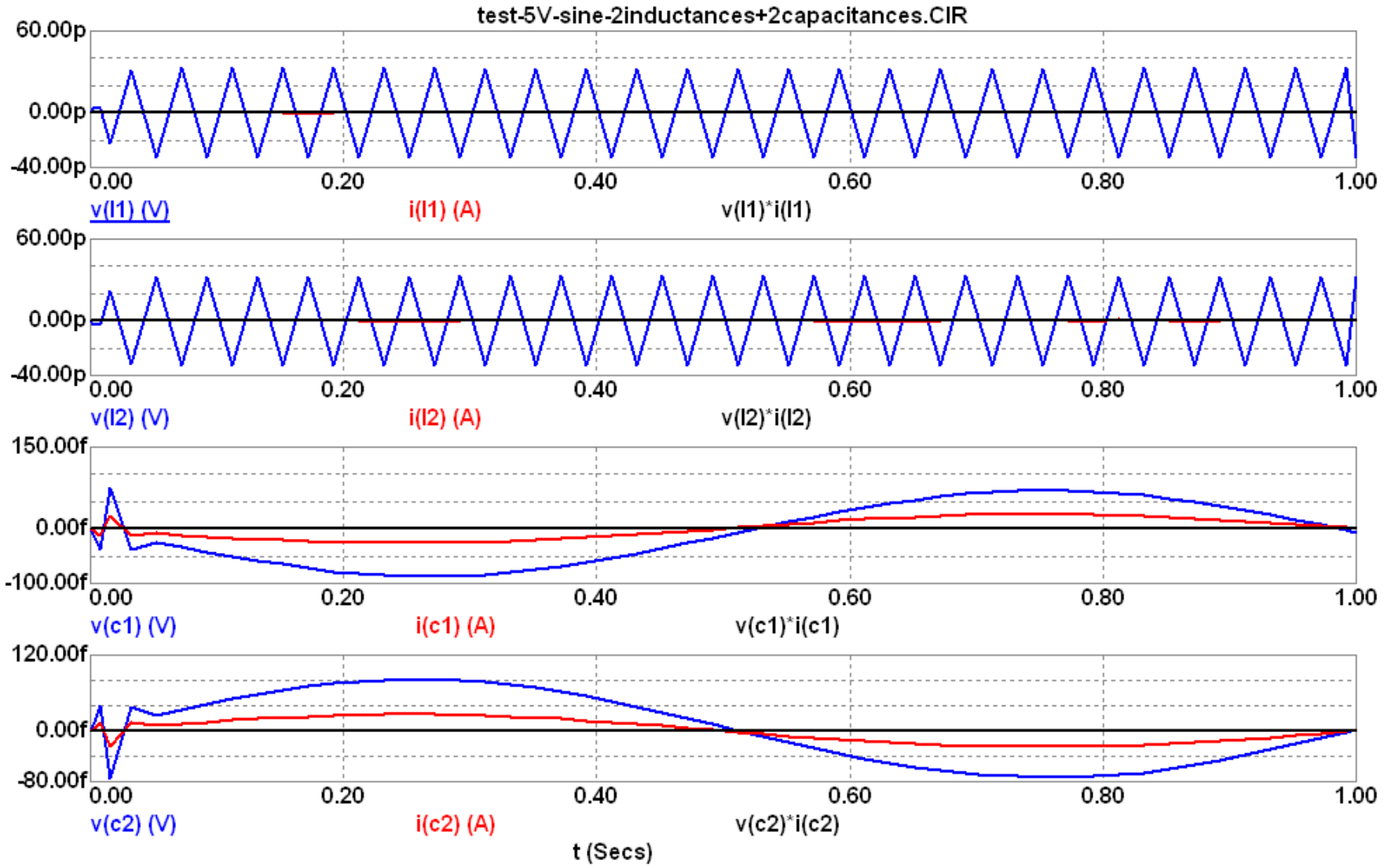

Fig. 18: One second output of Two Capacitors, Two Inductors and One 5V @ 1Hz Sine Wave Generator.

...but I wouldn't want to wait around to see what happens...

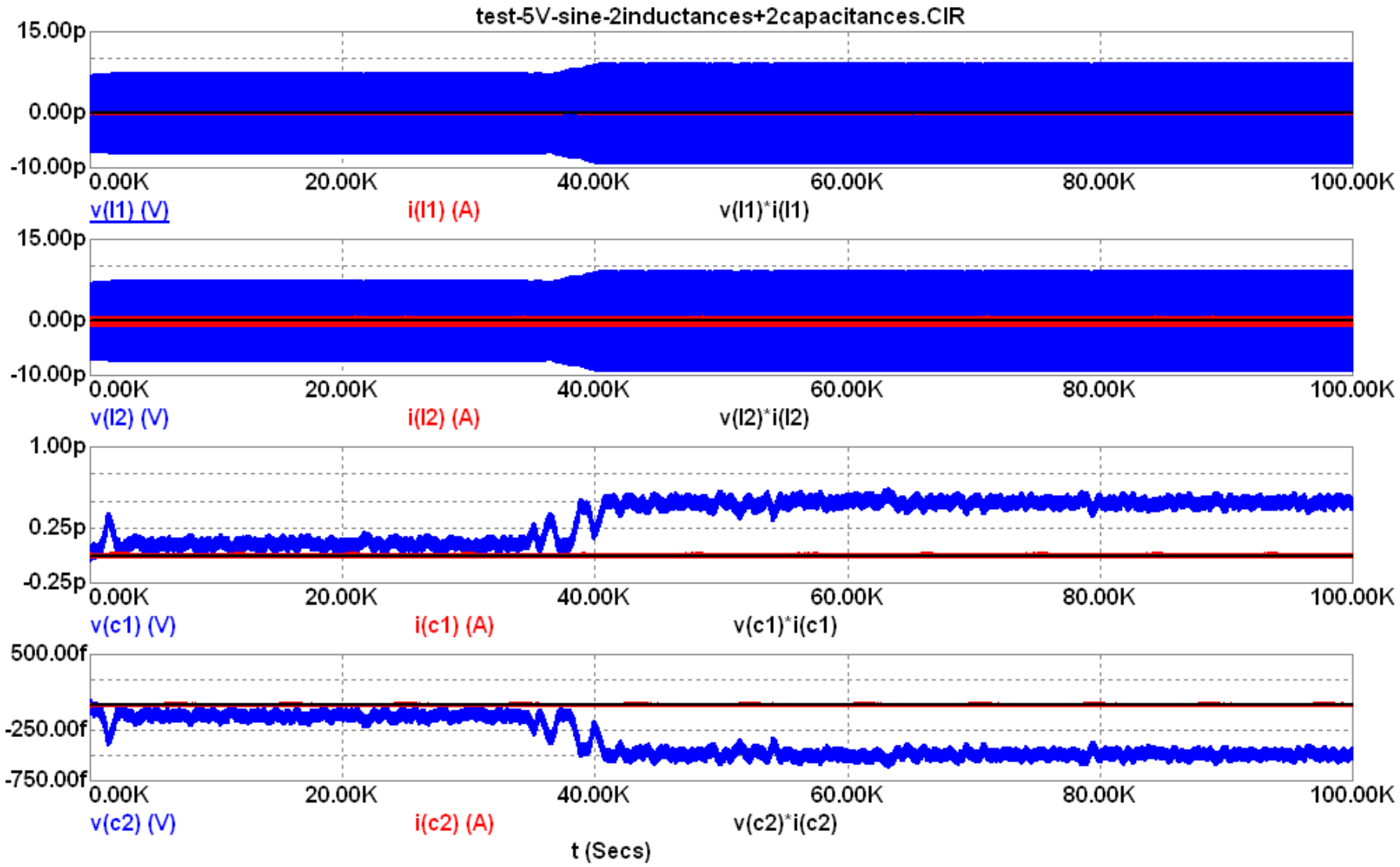

Fig. 19: 100 kilo-second Output of Two Capacitors, Two Inductors and One 5V @ 1Hz Sine Wave Generator.

Here is its schematic...

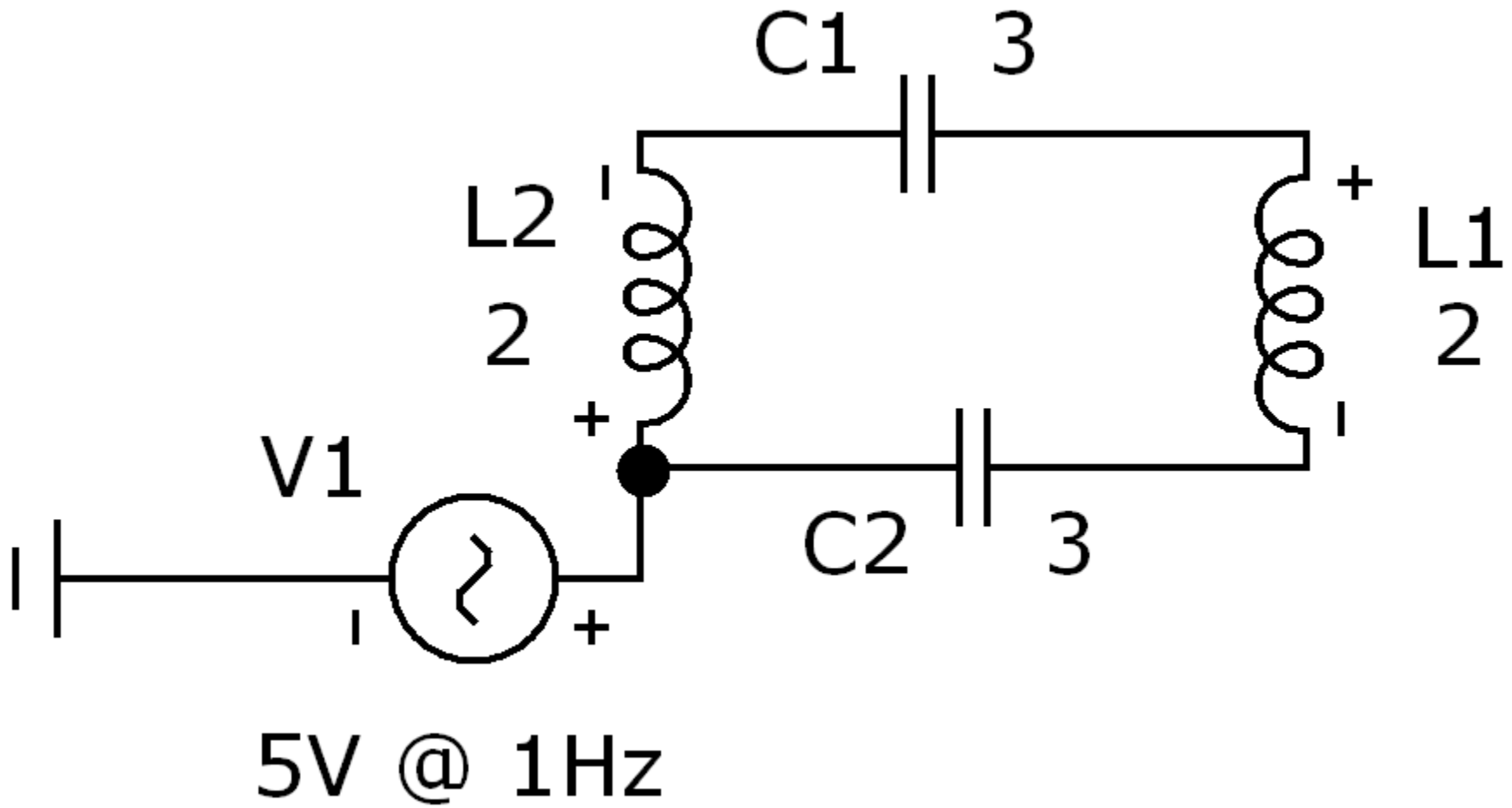

Fig. 20: Schematic of Two Capacitors, Two Inductors and One 5V @ 1Hz Sine Wave Generator.

Here is another initial output...

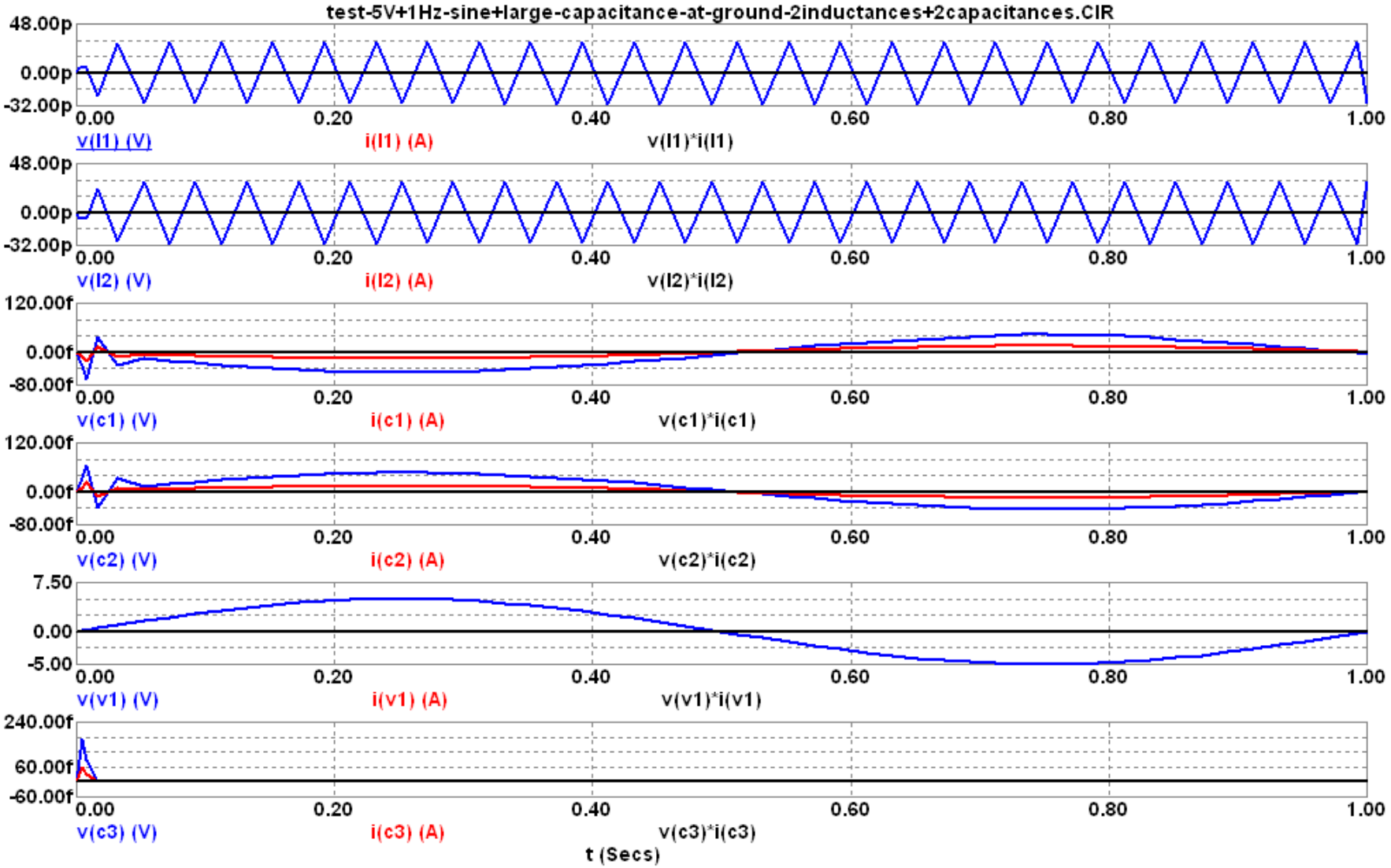

Fig. 21: Initial Output of Two Capacitors, Two Inductors and One Capacitor between Ground and a 5V @ 1Hz Sine Wave Generator.

...of another similarly long wait-time. And here is its schematic...

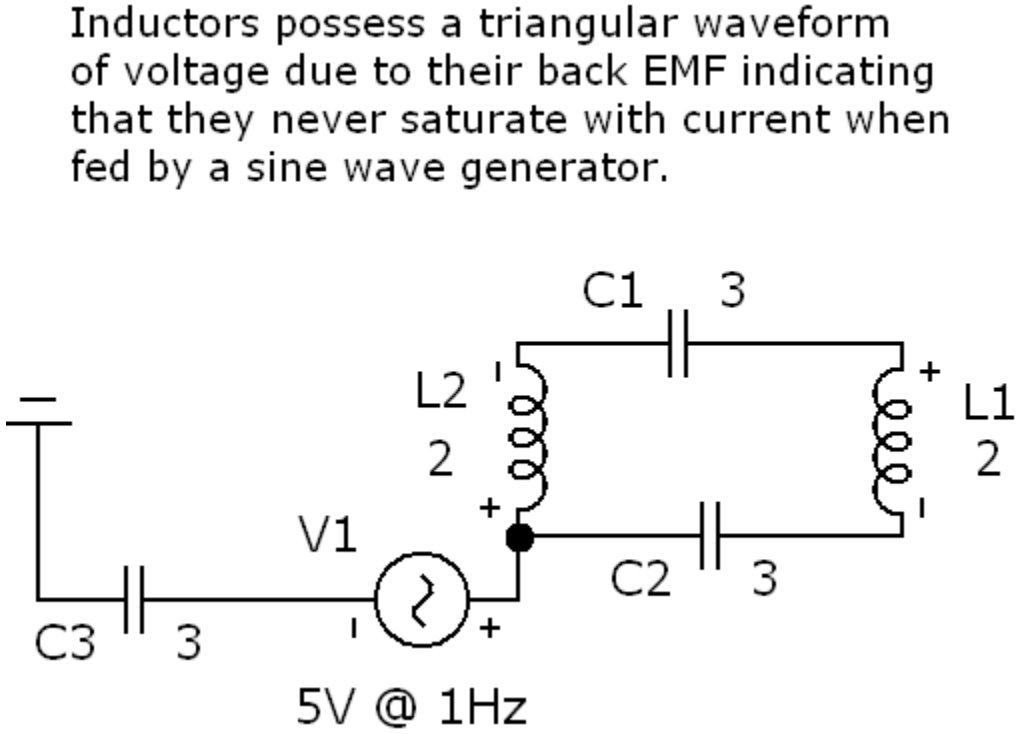

Fig. 22: Schematic of Two Capacitors, Two Inductors and One additional Capacitor between Ground and a 5V @ 1Hz Sine Wave Generator.

This shows promise for amassing lots of voltage *and not much else* reminiscent of a modern-day version of a Tesla Transformer,...

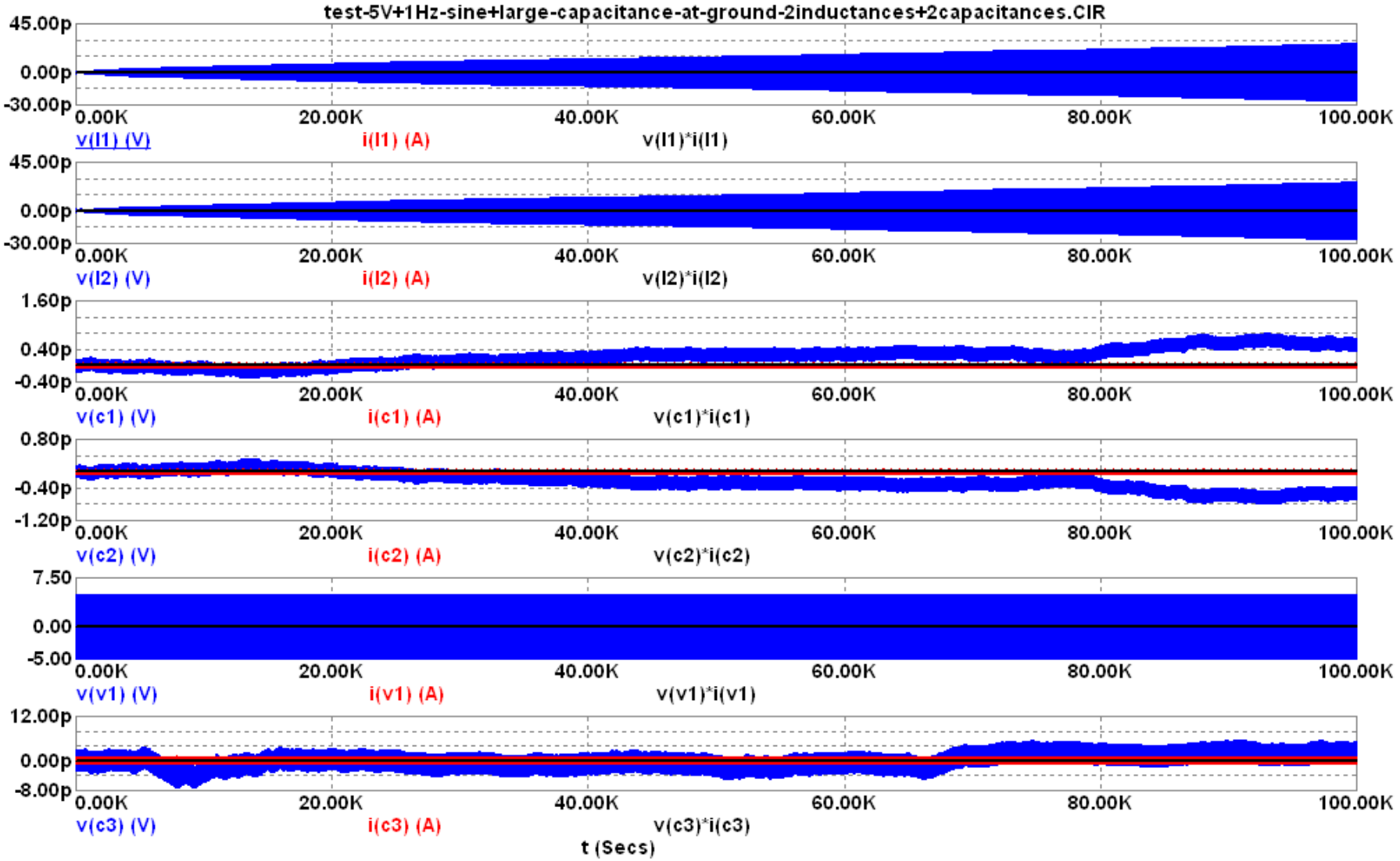

Fig. 23: Schematic of Two Capacitors, Two Inductors and One additional Capacitor between Ground and a 5V @ 1Hz Sine Wave Generator.

...but like before (at Fig. 19), I don't want to wait around for a noticeable gain of voltage! Looks like I'll have to share one more...

Coupled inductors possess a triangular waveform of voltage only at first due to their transient back EMF indicating that they quickly saturate with current when fed by a sine wave generator.

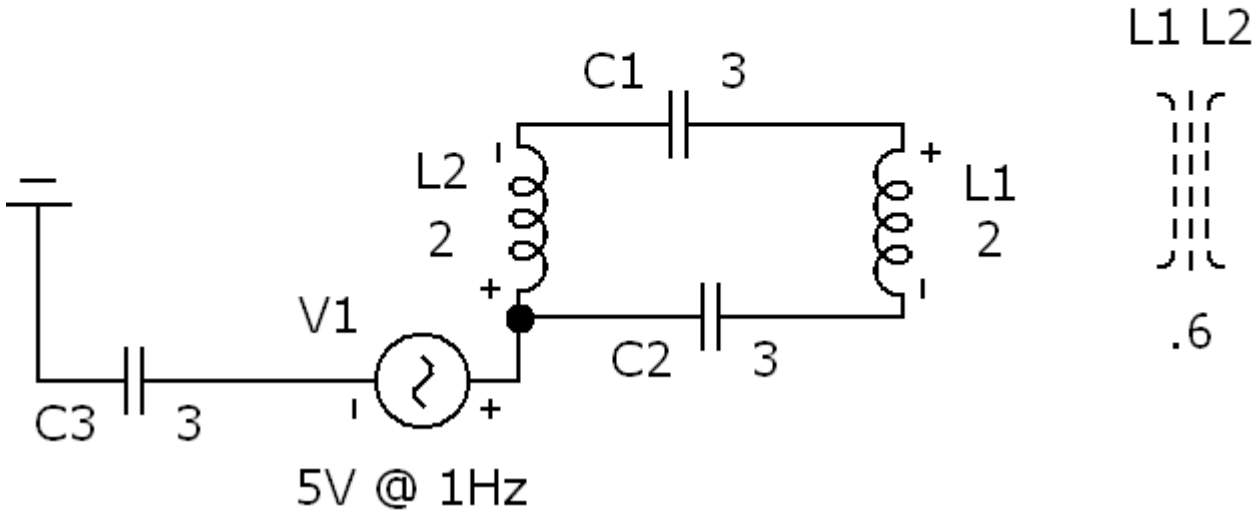

Fig. 24: Schematic of Two Capacitors, Two Coupled Inductors and One additional Capacitor between Ground and a 5V @ 1Hz Sine Wave Generator.

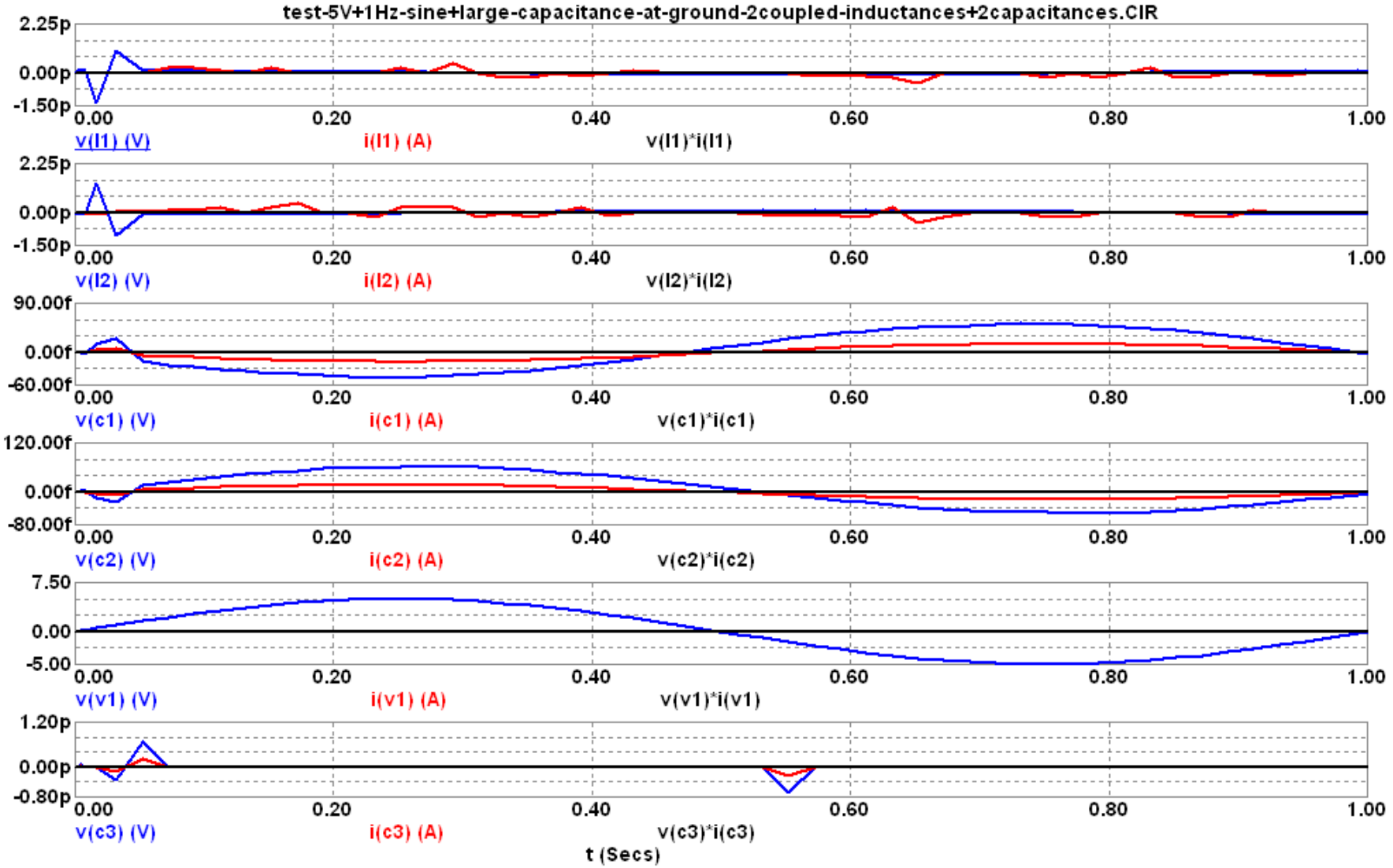

Fig. 25: One Second Output of Two Capacitors, Two Coupled Inductors and One additional Capacitor between Ground and a 5V @ 1Hz Sine Wave Generator.

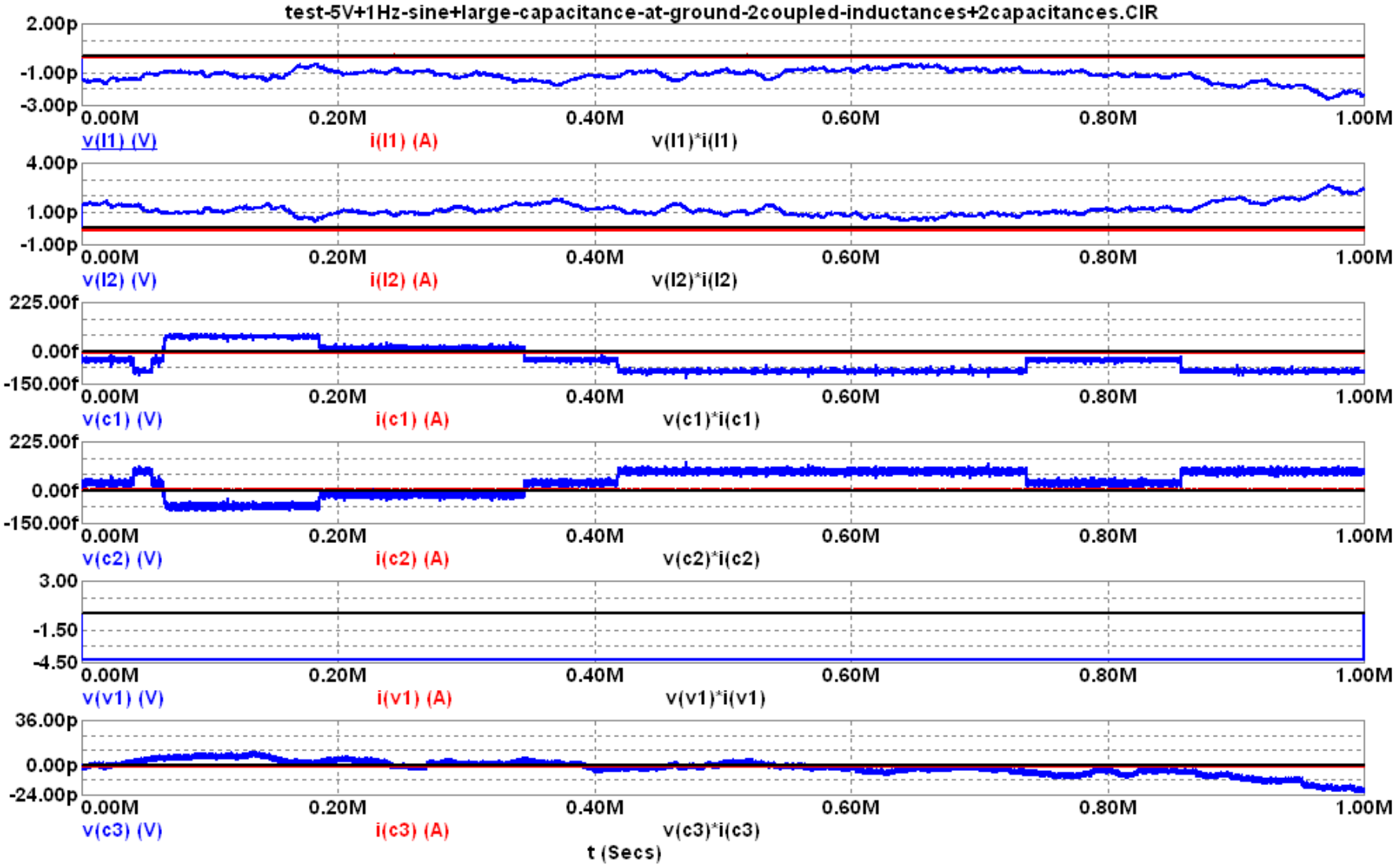

Fig. 26: One Million Seconds of Output of Two Capacitors, Two Coupled Inductors and One additional Capacitor between Ground and a 5V @ 1Hz Sine Wave Generator.

Now, why would I want to torture you with these boring results. To make a point. Sometimes, if you don't have a technique, all you can hope for is to raise the input frequency...

Coupled inductors possess a triangular waveform of voltage due to their back EMF indicating that they refuse to saturate with current when fed by a sine wave generator.

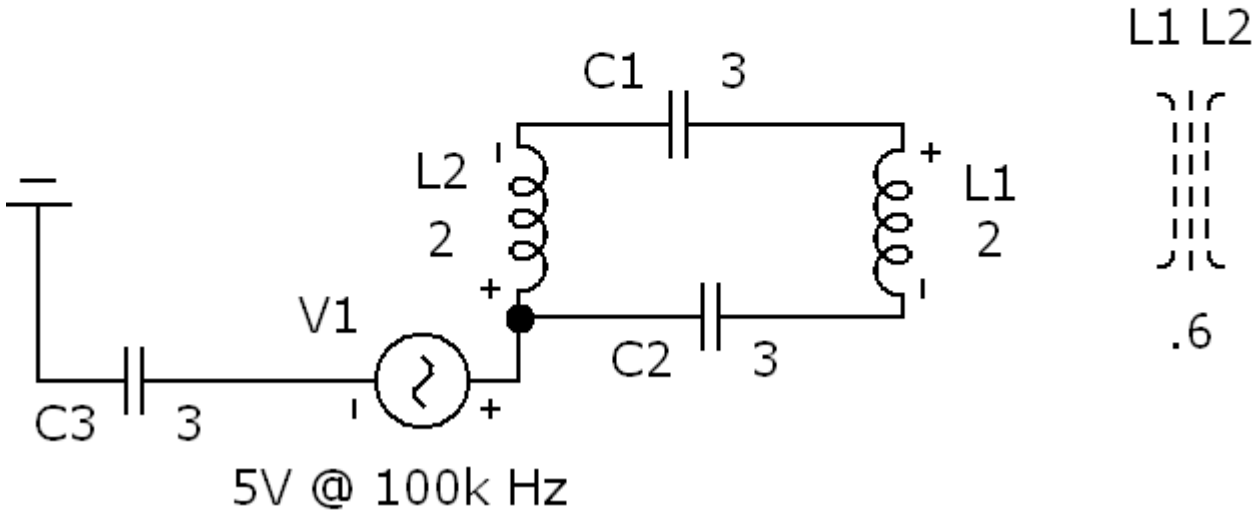

Fig. 26: Schematic of Two Capacitors, Two Coupled Inductors and One additional Capacitor between Ground and a 5V @ 100k Hz Sine Wave Generator.

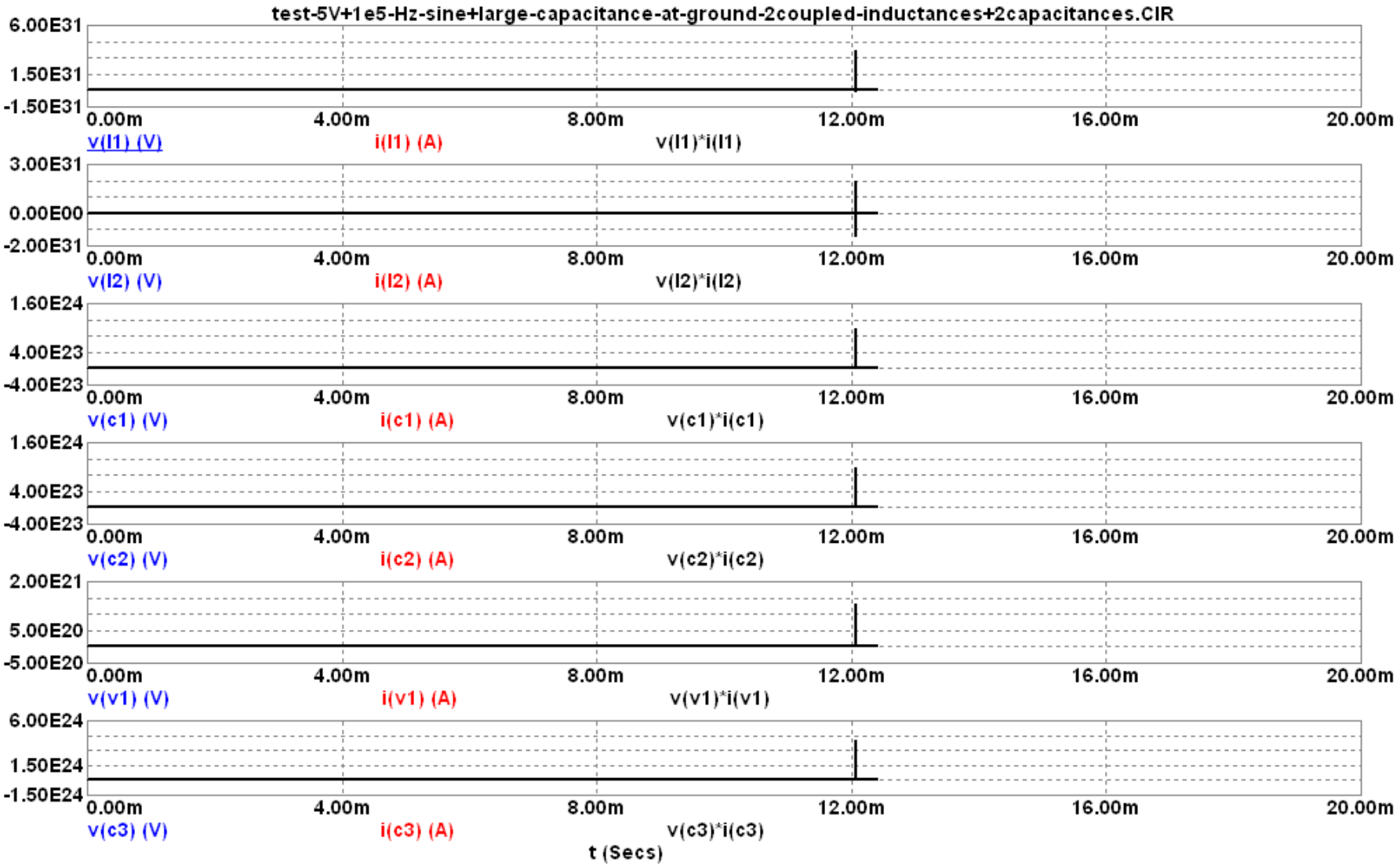

Fig. 27: Output of Two Capacitors, Two Coupled Inductors and One additional Capacitor between Ground and a 5V @ 100k Hz Sine Wave Generator.

Coupled inductors possess a triangular waveform of voltage due to their back EMF indicating that they refuse to saturate with current when fed by a sine wave generator.

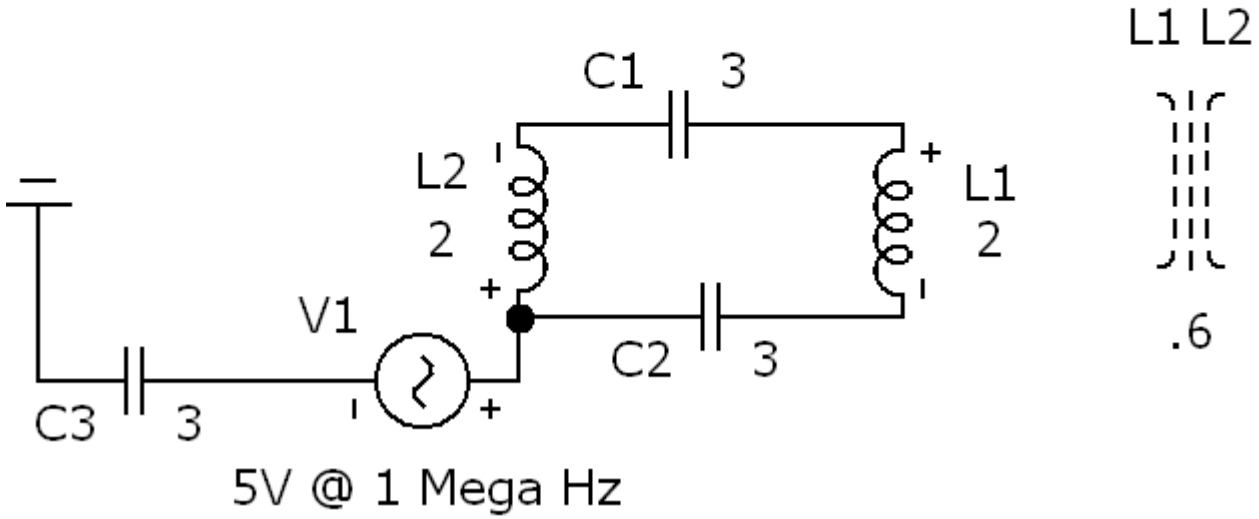

Fig. 28: Schematic of Two Capacitors, Two Coupled Inductors and One additional Capacitor between Ground and a 5V @ 1 Mega Hz Sine Wave Generator.

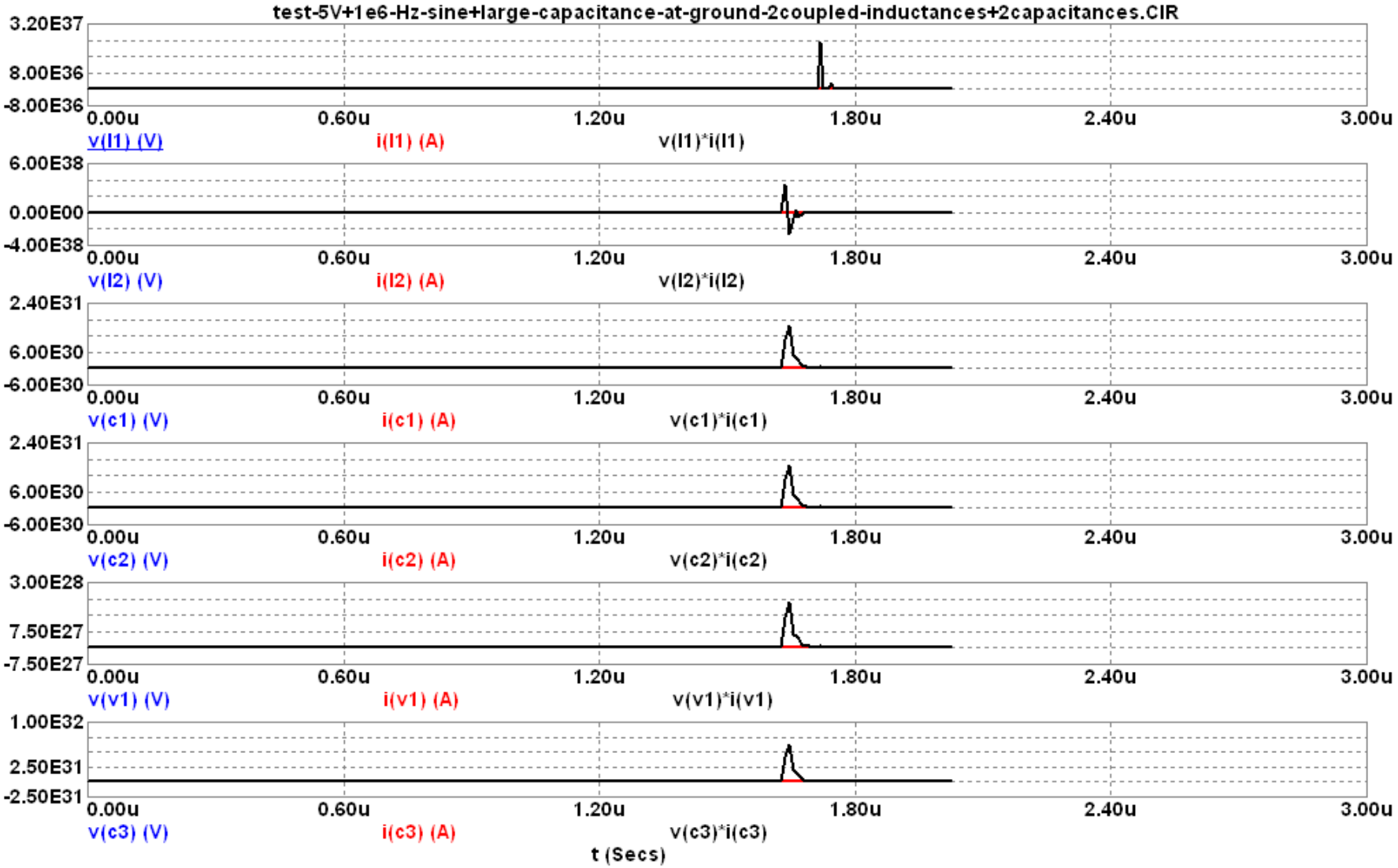

Fig. 29: Output of Two Capacitors, Two Coupled Inductors and One additional Capacitor between Ground and a 5V @ 1 Mega Hz Sine Wave Generator.

Well, now, wasn't that refreshing? ;-) But kind of short-lived... We must try for something better... Think we can make it?

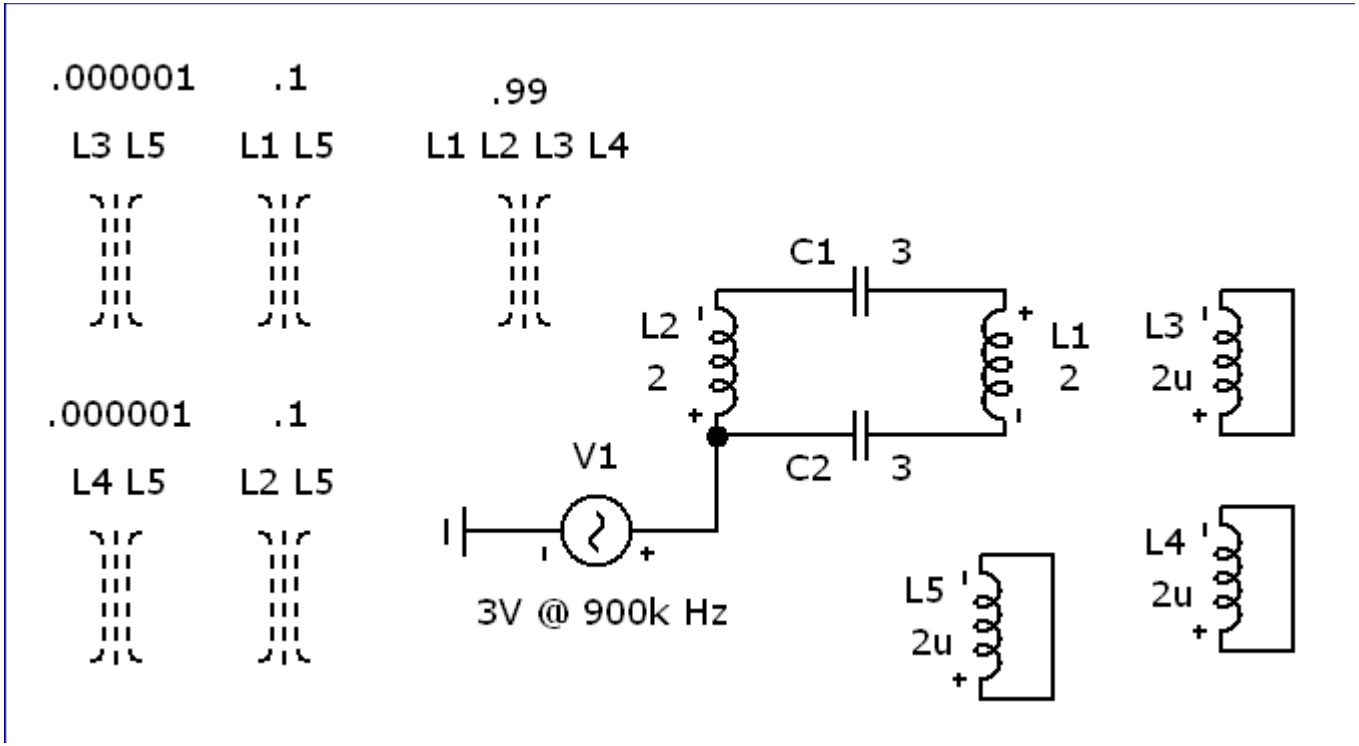

Fig. 30: Schematic of Two Capacitors, Five Coupled Inductors and One additional Capacitor between Ground and a 5V @ 900k Hz Sine Wave Generator.

Little interlude playing John Lennon's, “Imagine”...

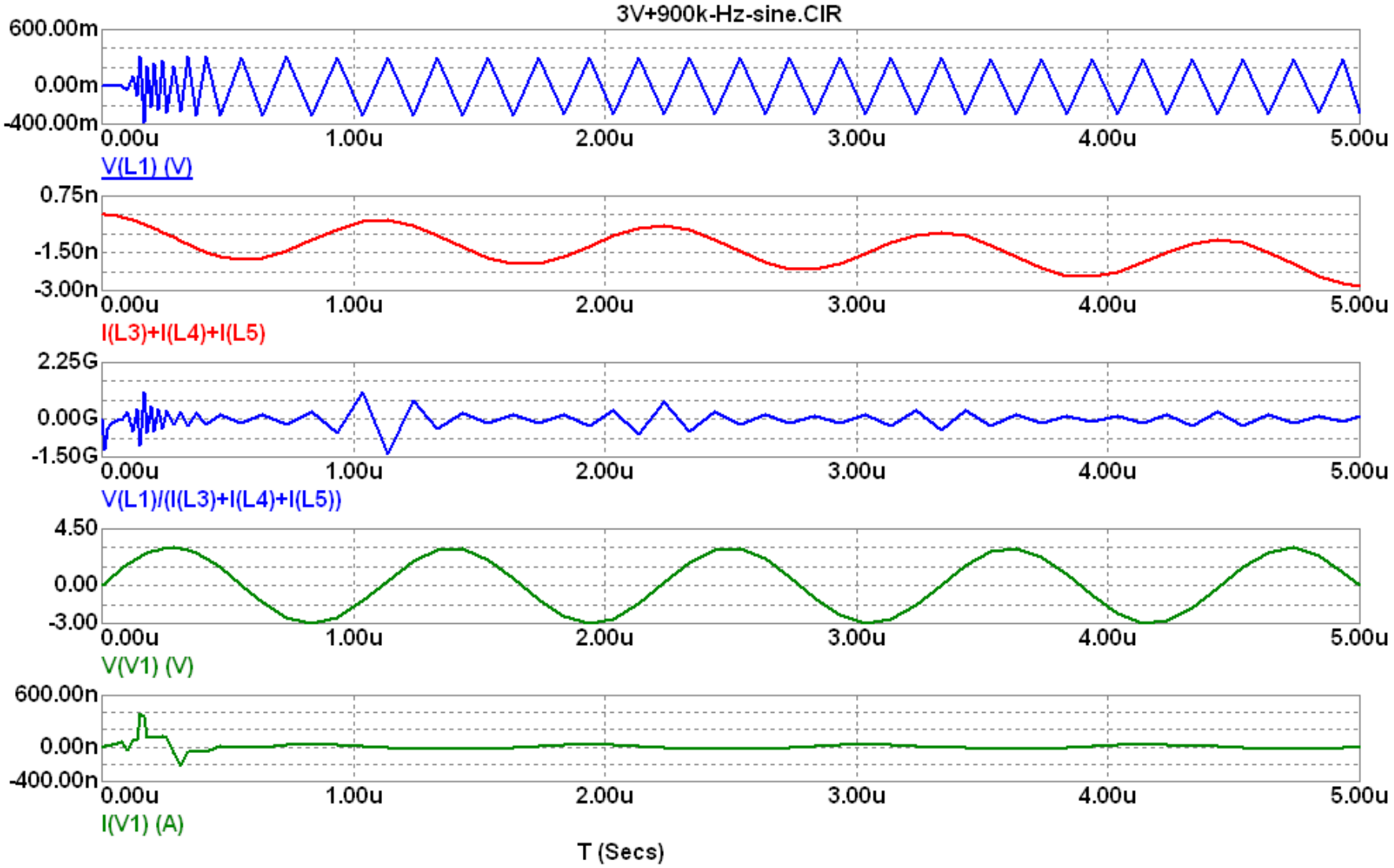

Fig. 31: Five Micro-Seconds of Output from Two Capacitors, Five Coupled Inductors and One additional Capacitor between Ground and a 5V @ 900k Hz Sine Wave Generator.

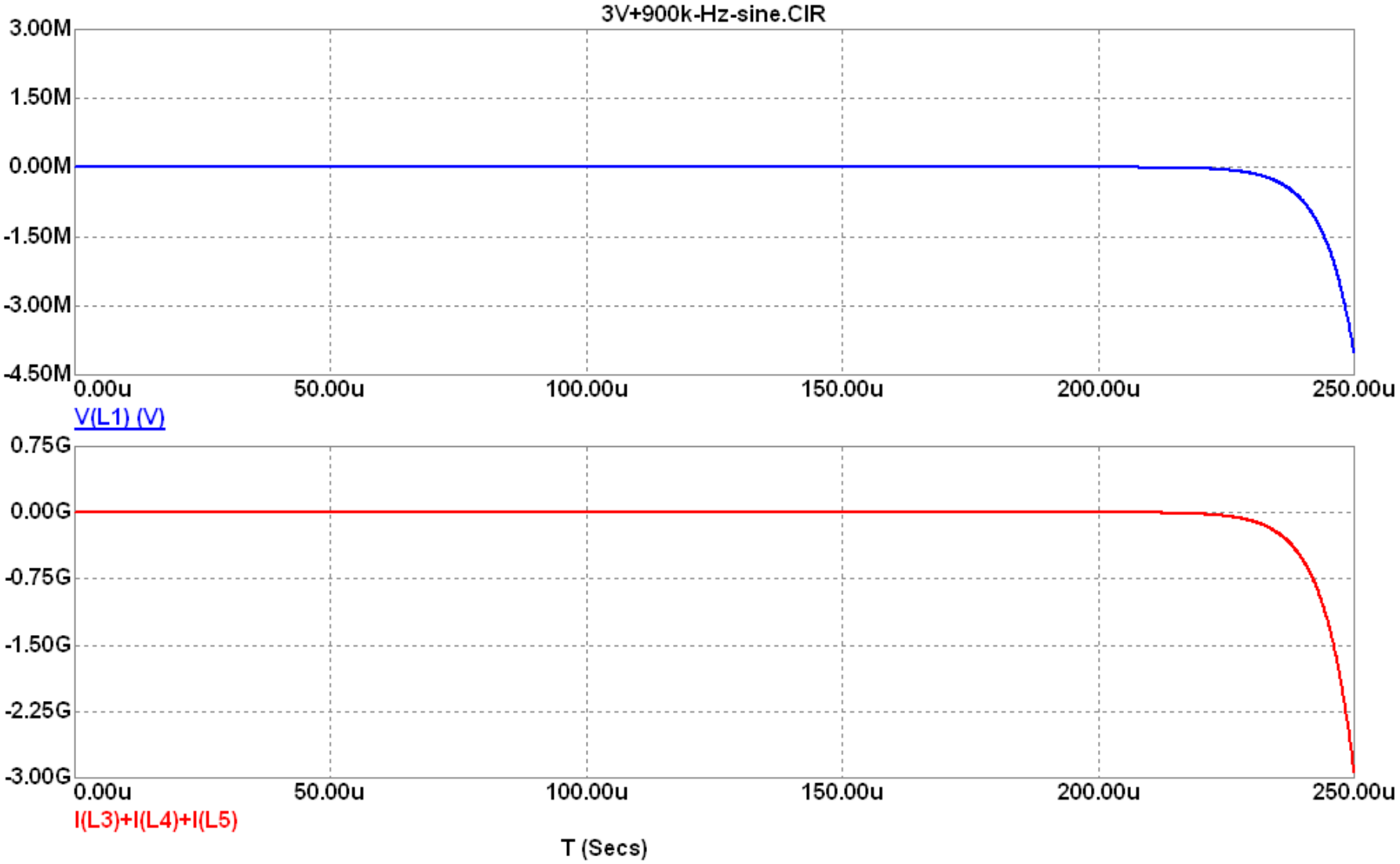

Fig. 32: Output from 250 Micro-Seconds of Run-Time from Tesla's TriMetal Generator fed by a 3V @ 20k Hz Sine Wave Generator.

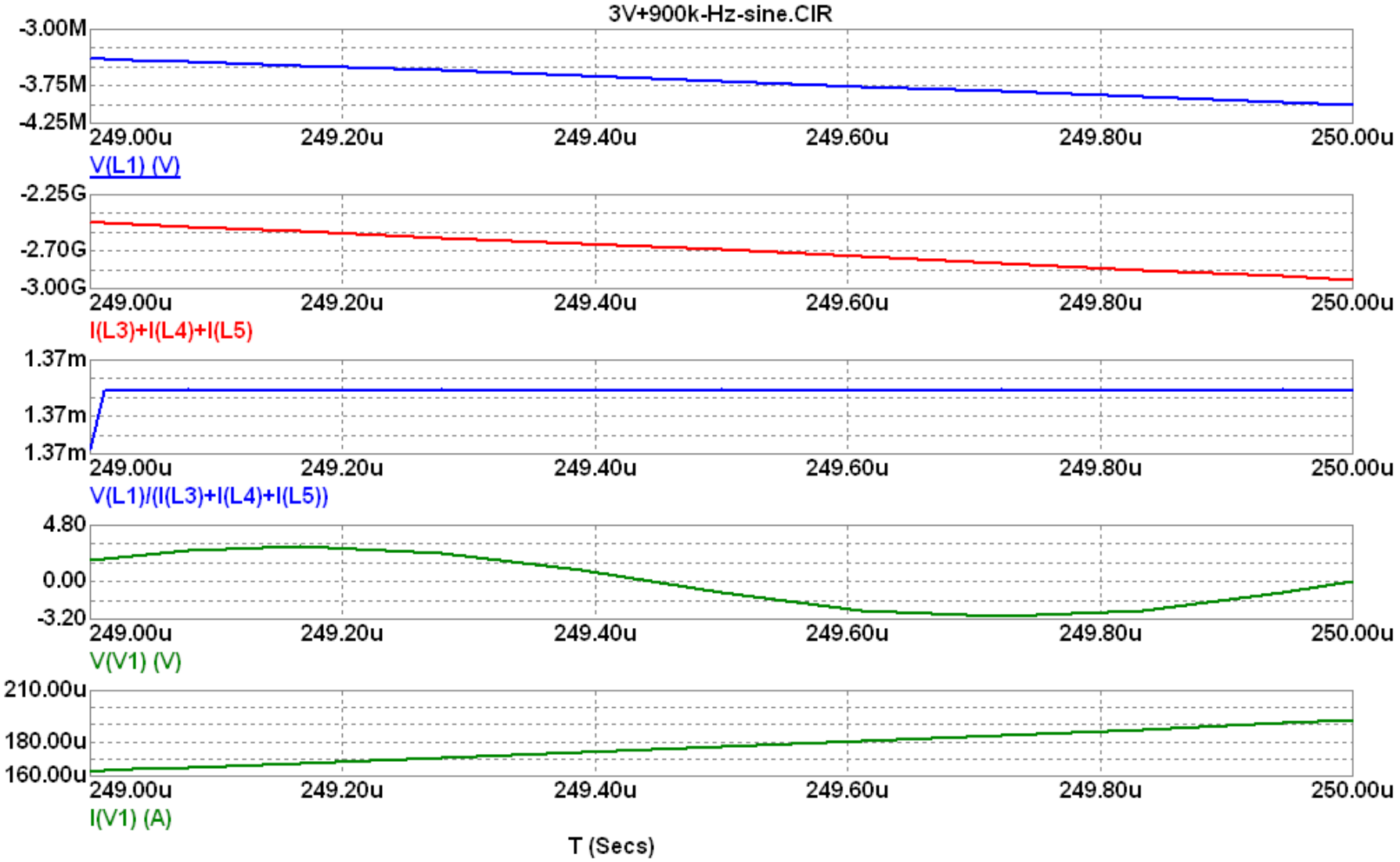

Fig. 33: Last Micro-Second of Output after 249 Micro-Seconds of Run-Time from Tesla's TriMetal Generator fed by a 3V @ 20k Hz Sine Wave Generator.

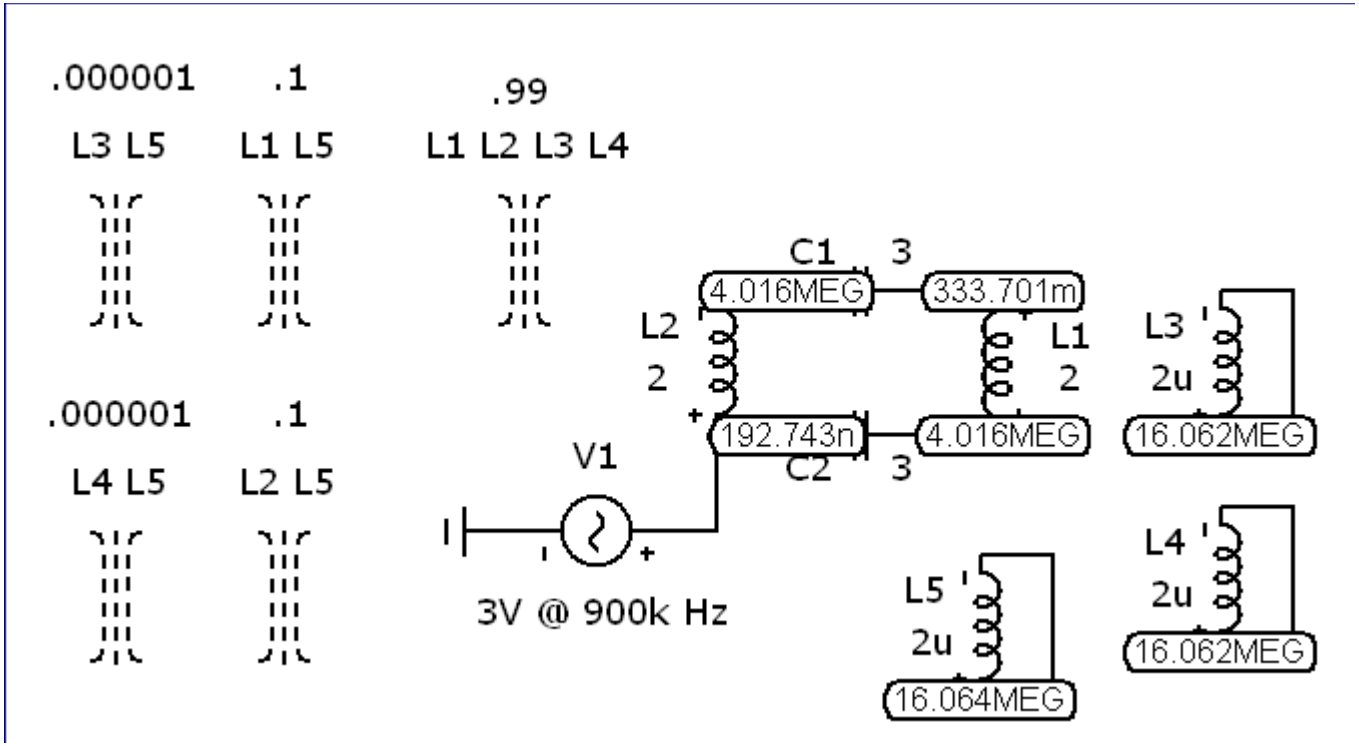

Fig. 34: Nodal Voltages after 250 Micro-Seconds of Run-Time from Tesla's TriMetal Generator fed by a 3V @ 20k Hz Sine Wave Generator.

Wow! Are you in for a treat...!

Although this may be a challenge to build, it hits the mark for my car's requirements and holds onto these outputs without blowing up...

http://vinyasi.info/graham/max%20acceleration%20for%20a%202002%20RAV4EV/

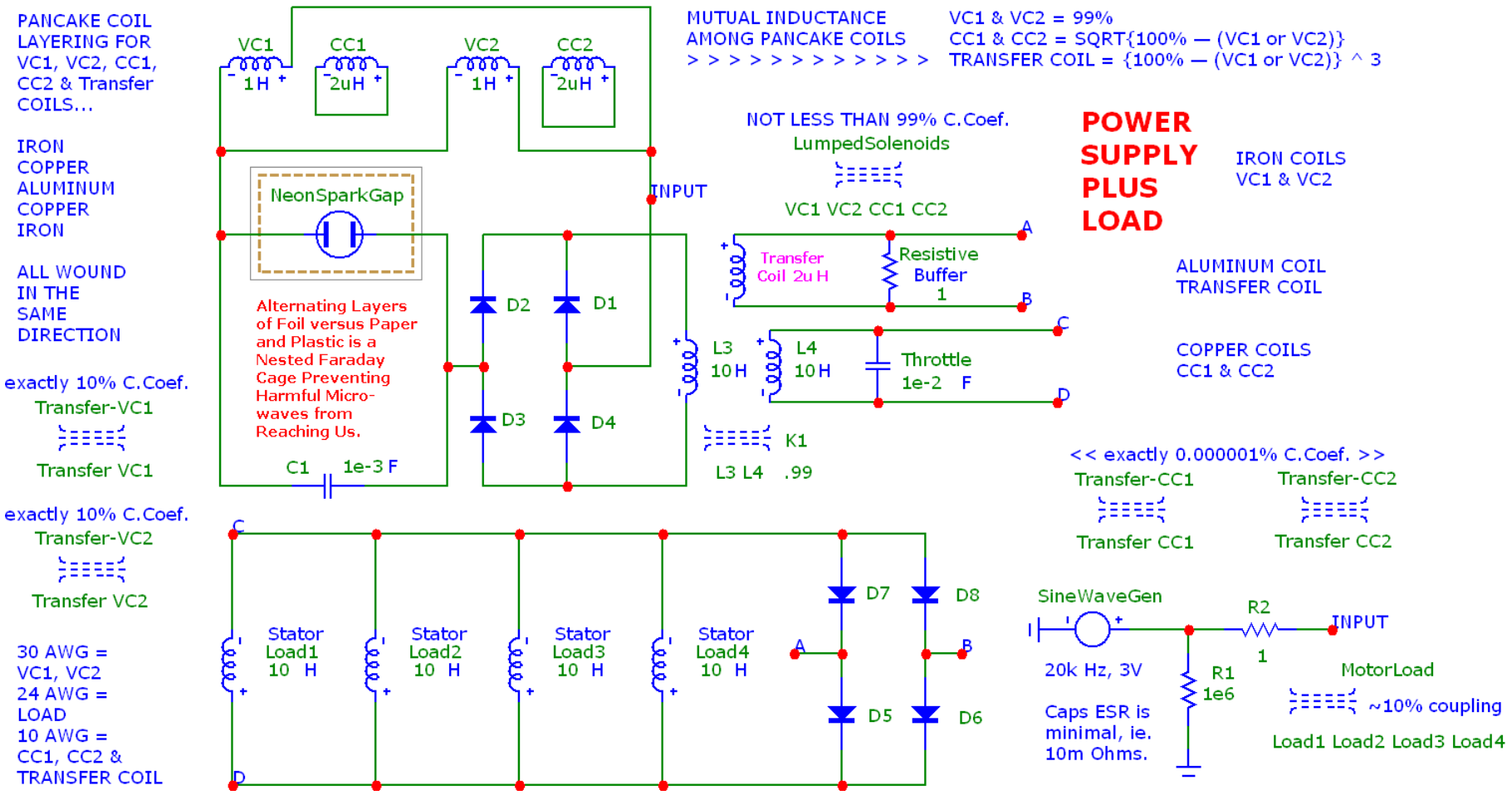

Fig. 35: Schematic of Tesla's TriMetal Generator fed by a 3V @ 20k Hz Sine Wave Generator.

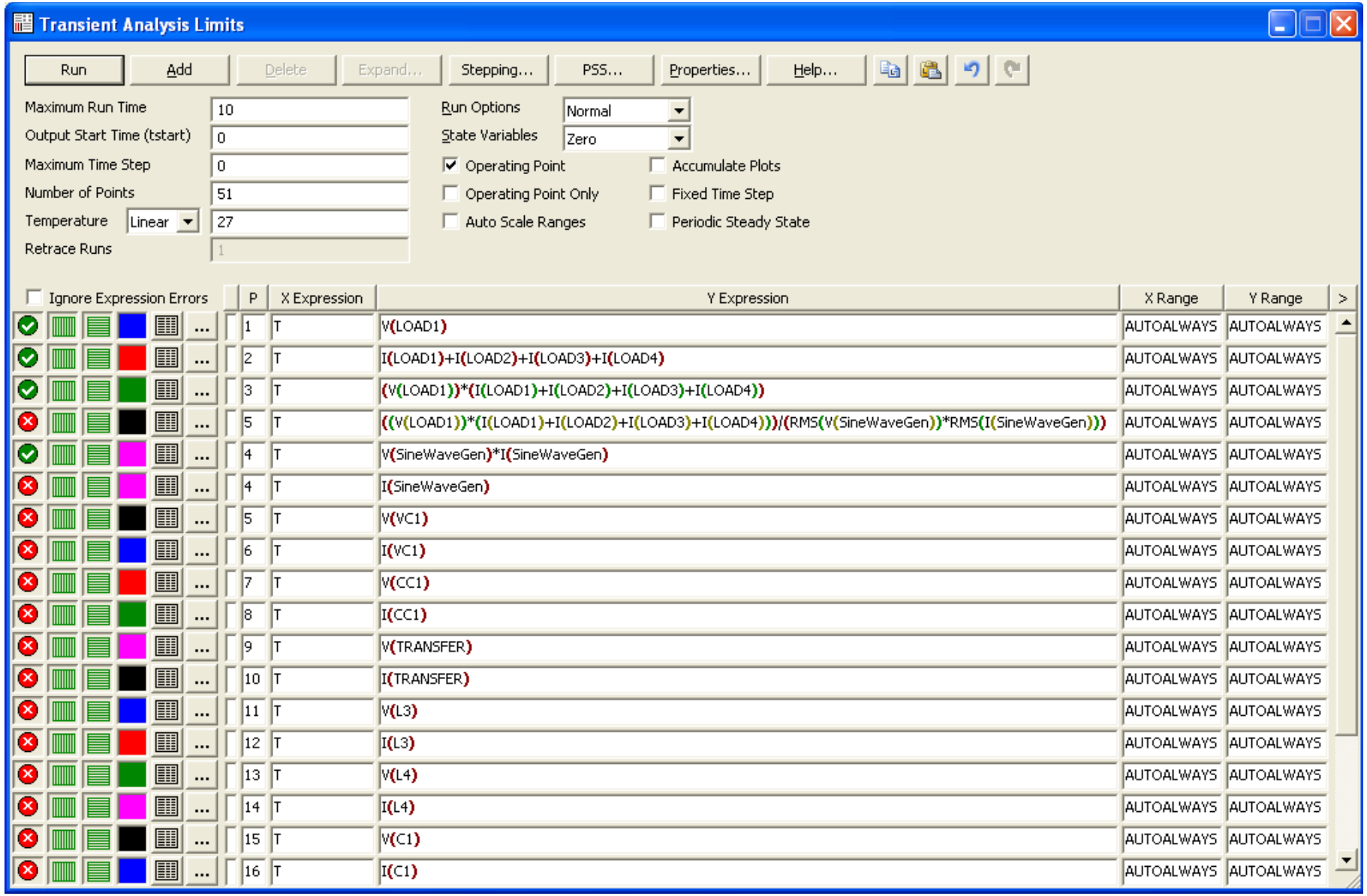

Fig. 36: Output Parameters of Tesla's TriMetal Generator fed by a 3V @ 20k Hz Sine Wave Generator.

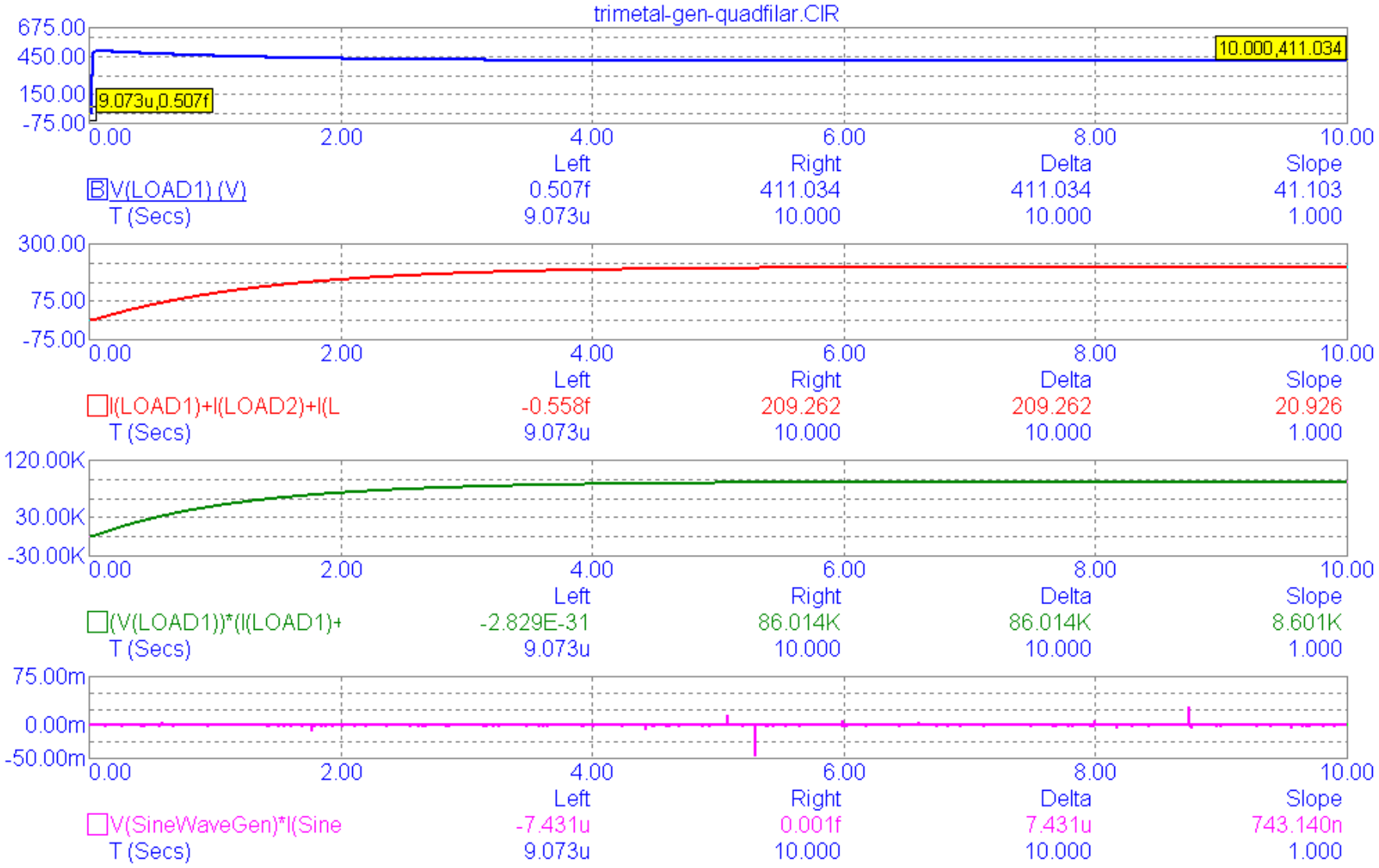

Fig. 37: Two Seconds of Output from Tesla's TriMetal Generator fed by a 3V @ 20k Hz Sine Wave Generator.

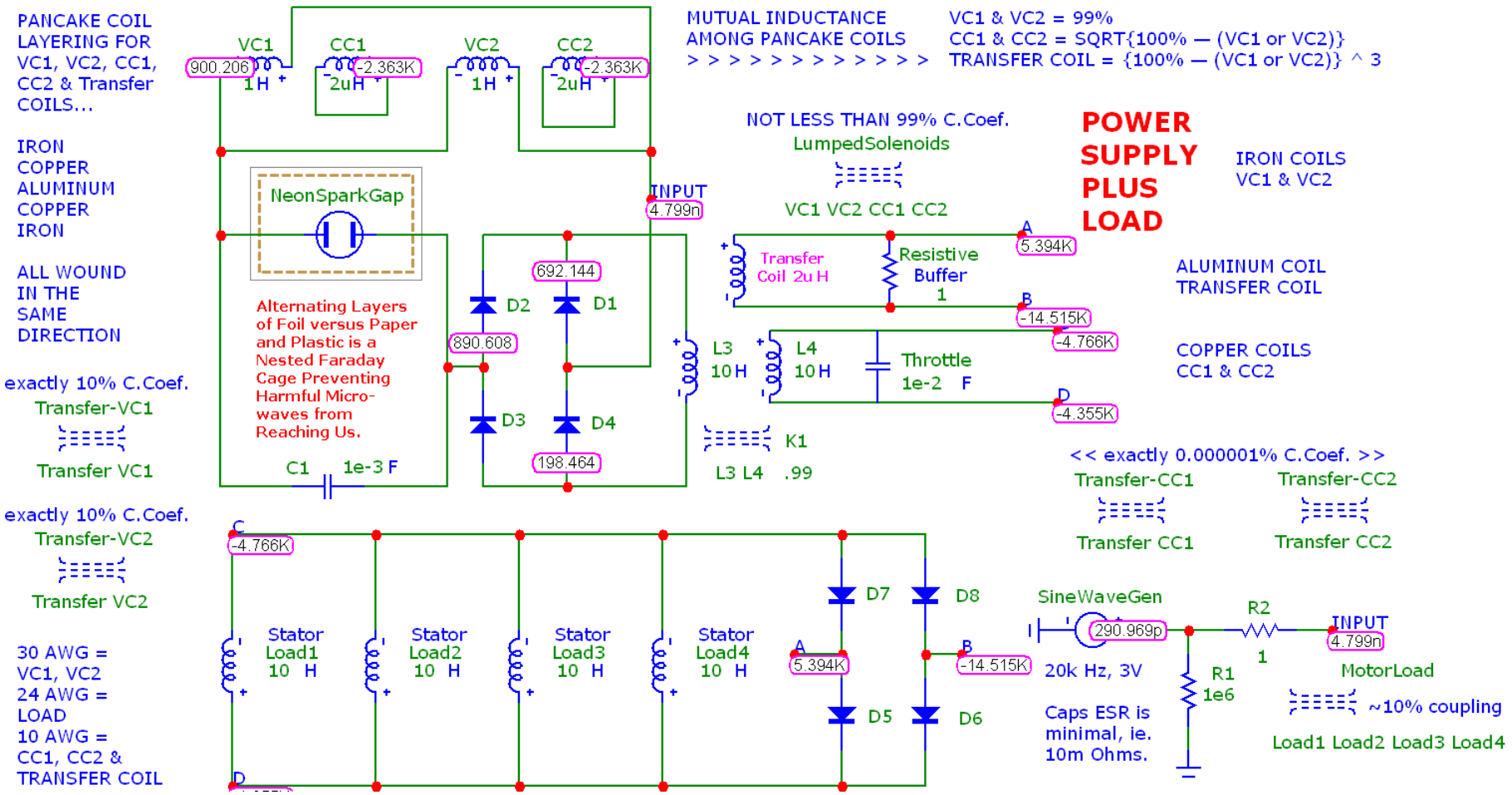

Fig. 38: Nodal Voltages after Two Seconds of Run-Time from Tesla's TriMetal Generator fed by a 3V @ 20k Hz Sine Wave Generator.