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Main: DesignProblemMEGCircuitry

Design problem in the MEG circuitry

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I have recently been looking into the Motionless Energy Generator of MEG for short. The working principle is based on the principle also used in the electropermanent magnet:

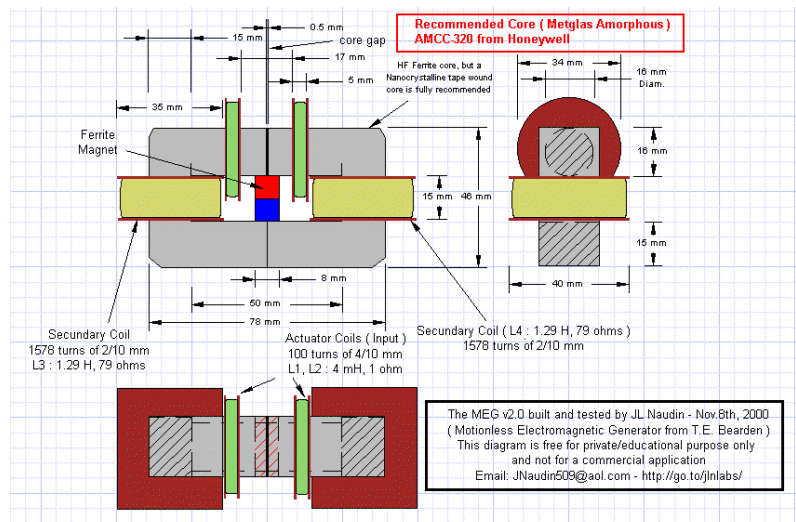
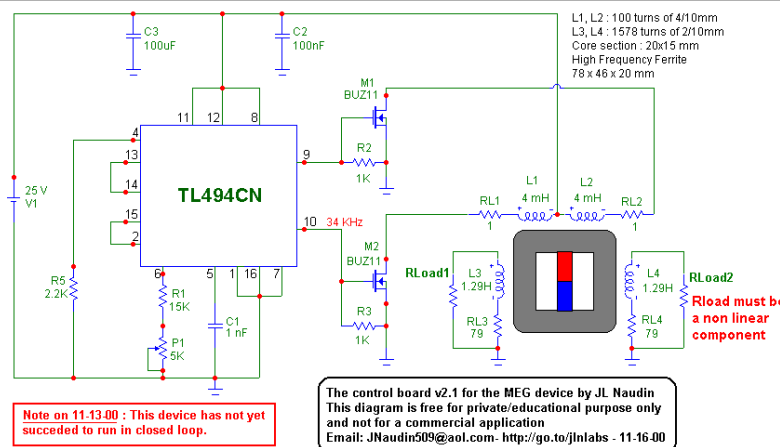
https://en.wikipedia.org/wiki/Electropermanent_magnet

In this video, the ideas behind the MEG are explained by the inventors of the device:



http://www.youtube.com/watch?v=no50_5iSr2Y

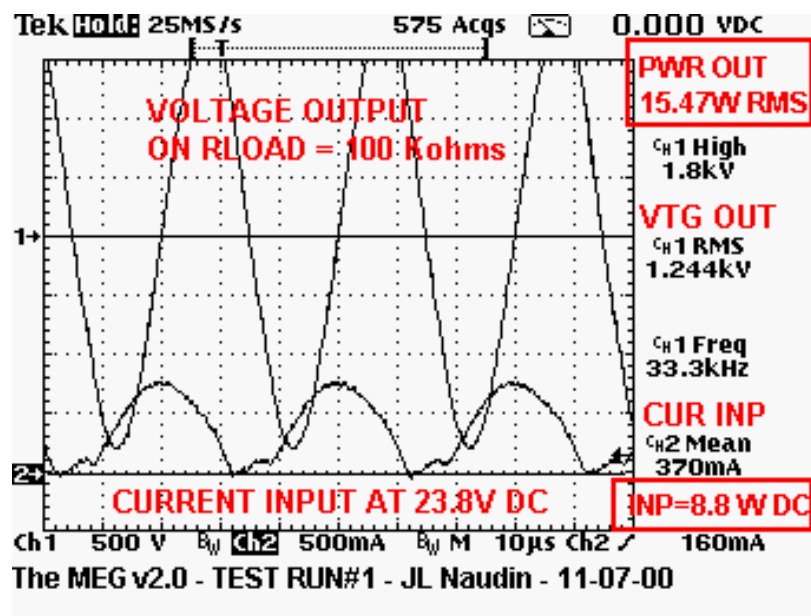
In this video, it is said that higher frequencies would be required, so the first thing that comes to mind is to use ferrite cores, as has also been done by Jean Naudin in his **version 2**, judging by the text on his diagram:



As well as the photograph of the device:

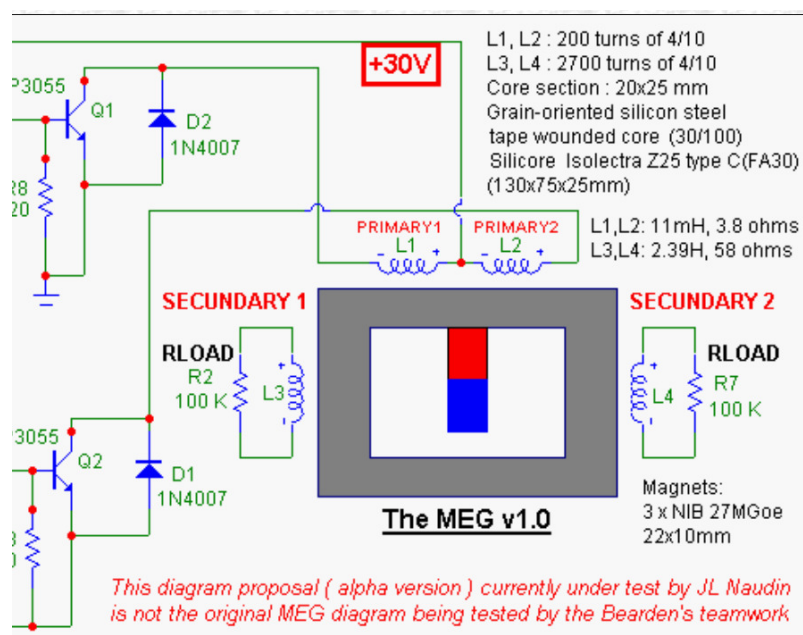


This version had a COP of 1.75, quite an accomplishment given the design flaw in his circuitry, which we will discuss below:



Freewheeling diode

Let's take a look at Naudin's v1 schematic:

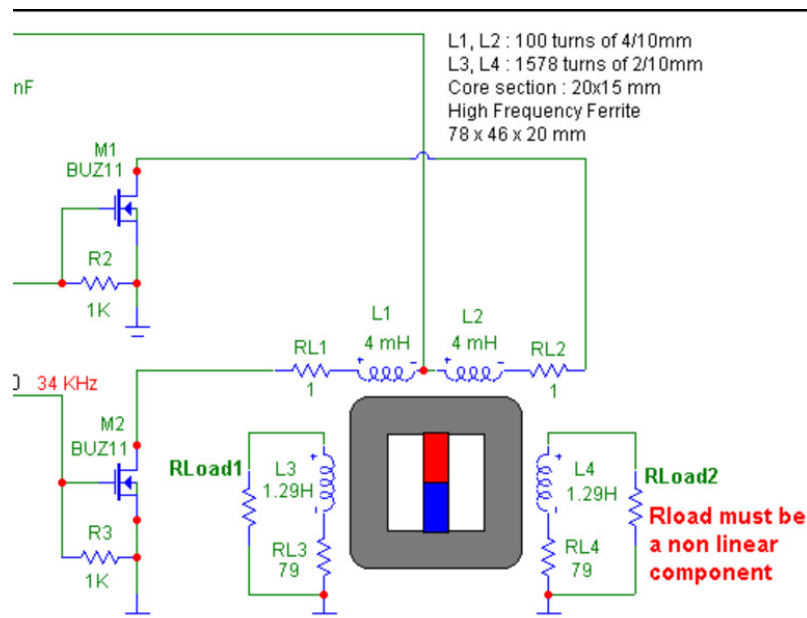


Notice the freewheeling diodes D1 and D2?

A freewheeling diode is used in inductive circuits to provide a path for the current when the driving voltage is suddenly reduced or removed. It prevents voltage spikes that can occur due to the inductive kickback, protecting the circuit components.

However, in this case this is not a good idea, because this way the coils get shortcuted and all the energy that is put in to energize the coil gets burned up by the diode.

In the v2 schematic, these are still there, but integrated in the BUZ11 mosfets:



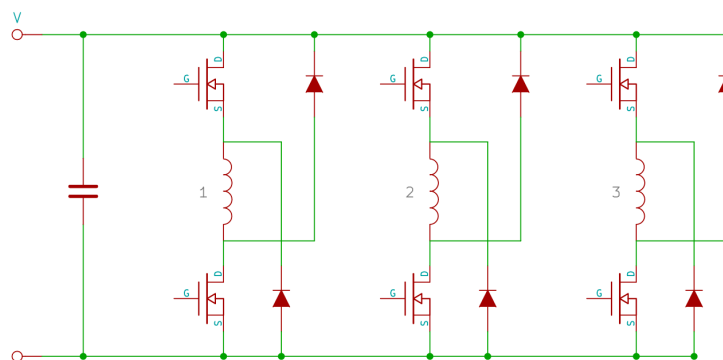
On the **v2** page we read:

The new MEG control board v2.0 is now fully in line with the original Bearden's MEG comparing to my previous version.

So, apparently both Bearden's team as well as Naudin made this same mistake.

However, an elegant solution is to use an asymmetric bridge converter as described in my earlier **article** (optionally switching the capacitors between series and parallel), with this picture showing a triple bridge converter:

https://en.wikipedia.org/wiki/Switched_reluctance_motor#Power_circuitry



Further updates may become available at:

<http://www.tuks.nl/wiki/index.php/Main/DesignProblemMEGCircuitry>

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