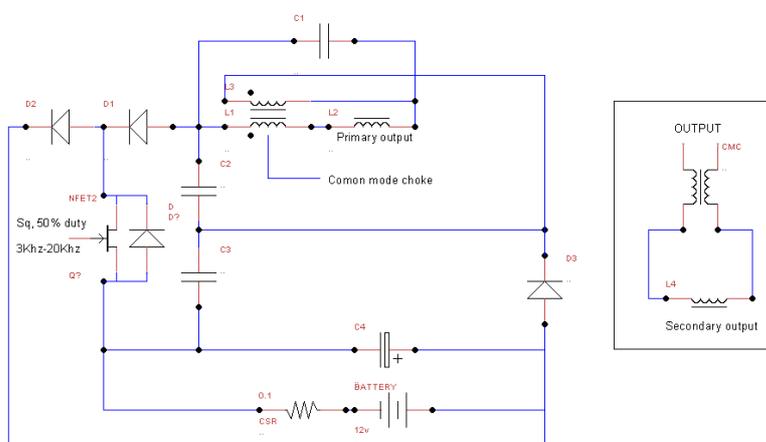


Some ideas that I will now open source which have dated back to my “STEAP” work a long time ago.

Here are two schematics, the first is the original but with what I call an internal feed back via D2, I have never shown this before due to lack of interest by others. The start voltage is 12vdc, but the feed back voltage at the point between D1 and D2 can be around 100v, so some form of voltage control is needed in case of runaway. C4 charges and maintains the run voltage, when **tuned to the correct frequency** no current should be seen across the CSR.

The last time I ran this circuit the battery was killed due to high voltage and the CMC (L1/L3)



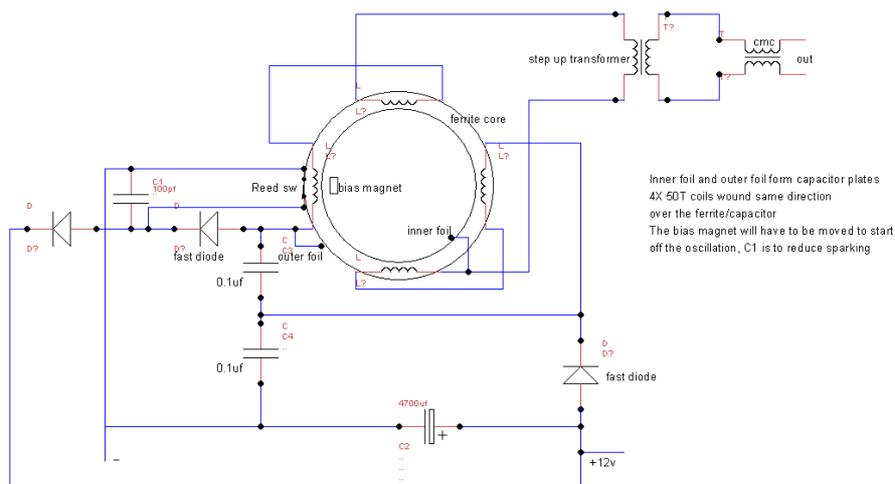
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Revision	Date	Sheets
1.0		1 of 1

melted with heat build up, the output was running a compact FL, and the fet was replaced by a reed switch on the primary of the output transformer and a small magnet was needed to bias the reed.

C2 and C3 can be around 0,1uf @ 300v, these are for bias, C1 can be around 0,33uf @ 300v. All diodes are fast diodes but must be able to handle the voltage. C4 can be 200uf but at twice the required run voltage!!!!

Some form of stabilising circuit has to be designed for the return loop, as of yet I have not done this and why I destroyed the battery and CMC (L1/L3), maybe someone could do this.

The second schematic is my idea of using the above as a possible TPU. The inner and outer foil of the toroid acts as the capacitor C1. A small capacitor is placed across the reed to save the contacts, this circuit has not been built.



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I have added a photo of the type of CMC I have used. These have as you can see 4 coils, 2+2 and are wound in the same direction, where the first coil ends it then passes to the start of the second.

In the first schematic I only show each as one coil, but note how they are wired. L2 is the primary of a separate output transformer, the secondary, L4 and output along with a common mode toroid choke is shown separate, a capacitor could also be added to help smooth the hash and fasing. Carefull here as a 1:10 transformer can produce over 1kv.

This is parametrics creating multiple frequencies which mesh and add together to give a greater volume than we had to start with. It is this meshing that needs to have more work done to perfect it, and I am sure this is similar to the SM TPU, note it can be totally passive when using a reed switch, and maybe someone could add a trigger coil to switch a mosfet gate instead of a reed switch.

