

Capacitors: one of the key for "OU"?

According to wikipedia:

A **capacitor** (originally known as a **condenser**) is a **passive two-terminal electrical component** used to store **energy electrostatically** in an **electric field**. The forms of practical capacitors vary widely, but all contain at least two **electrical conductors** (plates) separated by a **dielectric** (i.e., **insulator**). The conductors can be thin films of metal, aluminum foil or disks, etc. The 'nonconducting' dielectric acts to increase the capacitor's charge capacity. A dielectric can be **glass, ceramic, plastic film, air, paper, mica, etc.**

And:

An **electrical insulator** is a material whose internal **electric charges** do not flow freely, and therefore make it very hard to conduct an **electric current** under the influence of an **electric field**. A perfect insulator does not exist, but some materials such as **glass, paper** and **Teflon**, which have high **resistivity**, are very good electrical insulators. A much larger class of materials, even though

So no 'real' current (hard electrons(?)) can flow through a capacitor. Meanwhile something seems to pass through (between to 2 plates) of a capacitor. It is the "Displacement Current"

Displacement current

From Wikipedia, the free encyclopedia

In **electromagnetism**, **displacement current** is a quantity appearing in **Maxwell's equations** that is defined in terms of the rate of change of **electric displacement field**.

Displacement current has the units of electric **current density**, and it has an associated **magnetic field** just as actual currents do. However it is not an electric current of moving **charges**, but a time-varying **electric field**. In materials, there is also a contribution from the slight motion of charges bound in atoms, **dielectric polarization**.

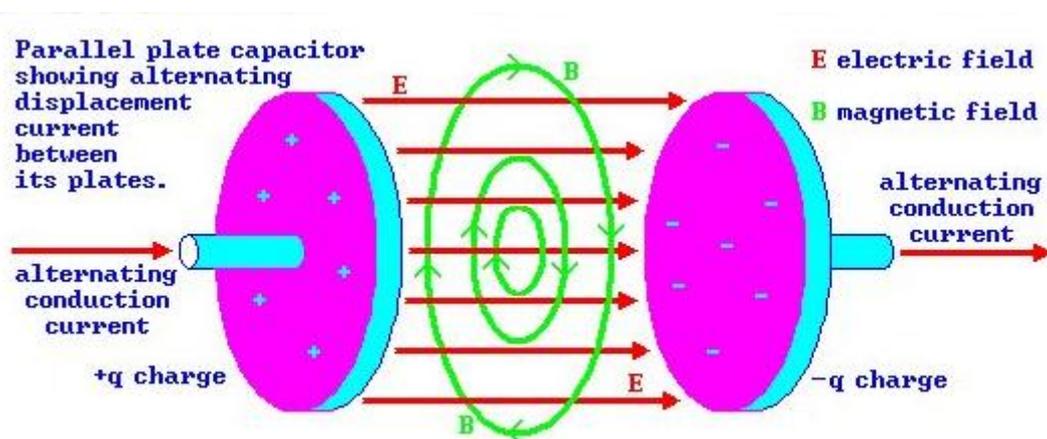
An also:

Displacement Current

The condition in which an alternating current can be maintained with no translational movement of charge carriers is found in a capacitor. A displacement current consists of the back and forth movement of bound charges within the lattice structure of a non-conducting dielectric material.

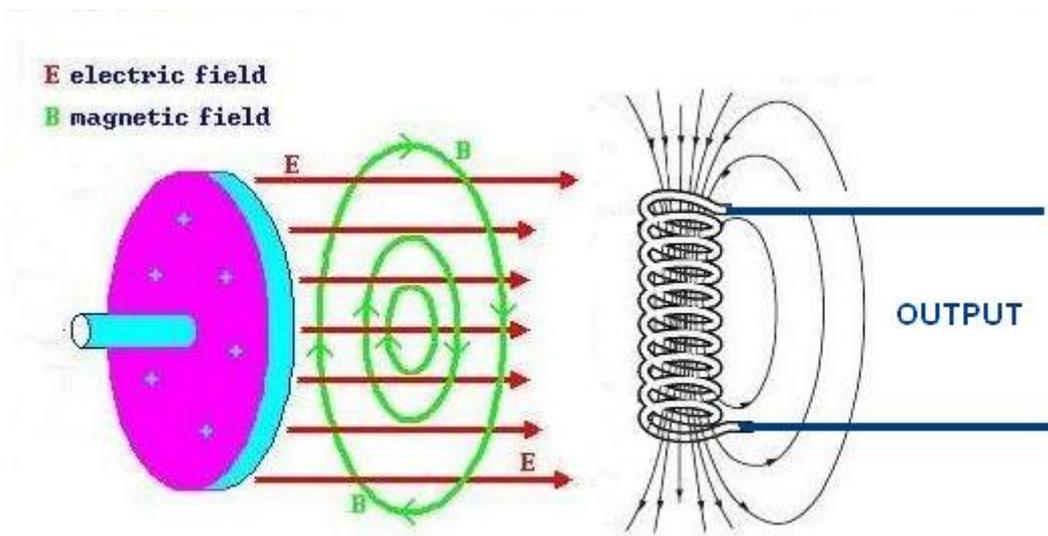
No work would be done if the device operated with a displacement current. If a large voltage displaced a small amount of bound charge, the power requirements of a load, like a light bulb, would be met with no conduction current, therefore, with no expenditure of energy.

What is the effect of this "Displacement Current". Something like this:



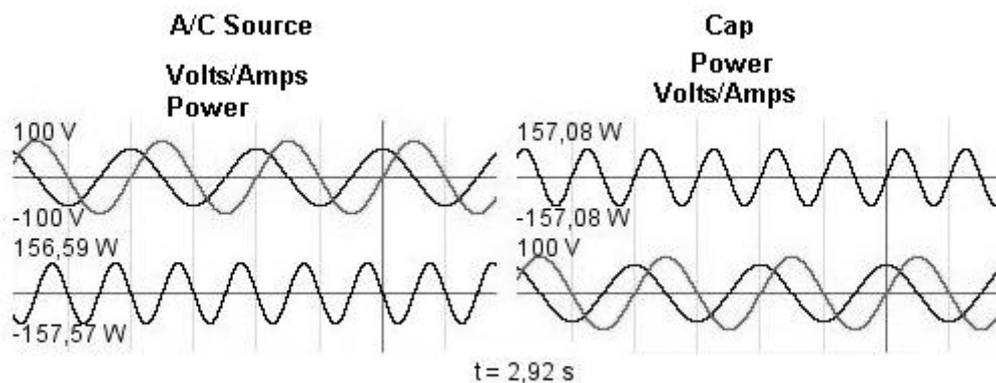
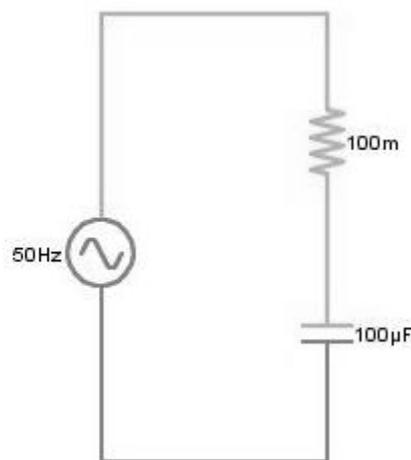
So, an alternative (variable/changing) **magnetic field** (B) is generated between the capacitor plates? And what is the effect of a changing B ? It produces a voltage. No?

So, the idea (not mine) is to replace one on both the capacitor plates with inductor(s). Something like:

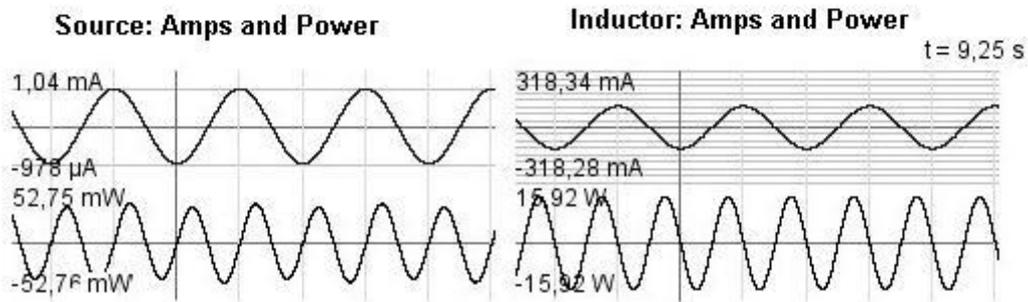
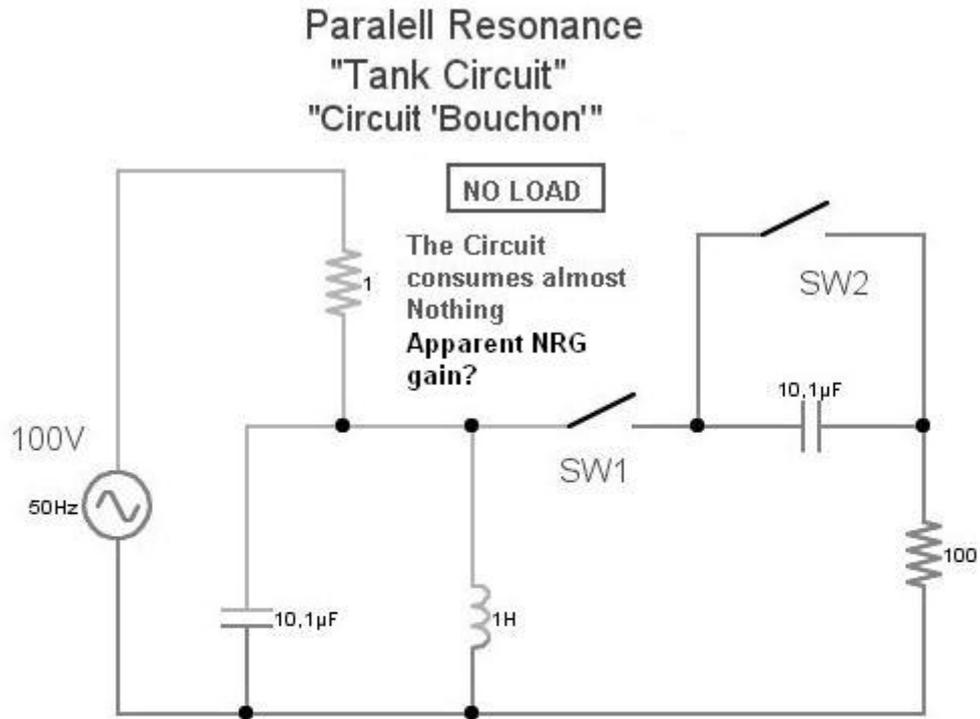


It cost almost nothing (NRG-wise) to charge and discharge a cap. On the other hand, a *normal* cap will give you nothing back...

One simulation:



We could also use parallel resonance:

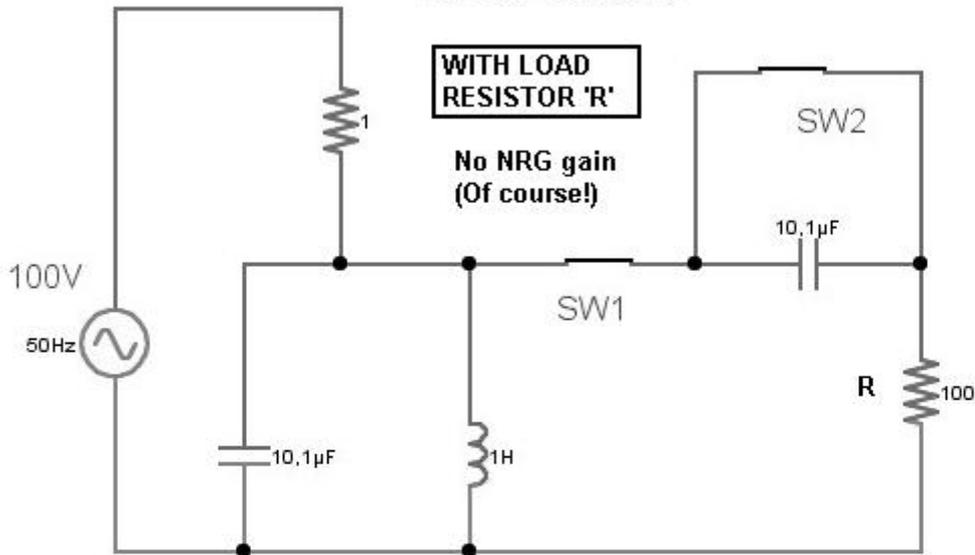


We can see that about 318 ma (peak to peak) are circulating in the inductor (and the capacitor) versus about only 1 ma from the source. A kinda amperage (power, as the voltage across the inductor (and the cap) is nearly the same as the source) multiplication?

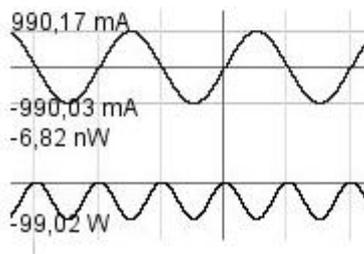
Come on! According to the books, It is just "reactive" stuffs.

This second picture will show this.

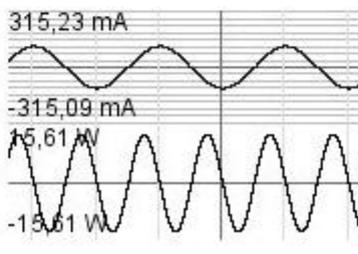
Paralell Resonance
 "Tank Circuit"
 "Circuit 'Bouchon' "



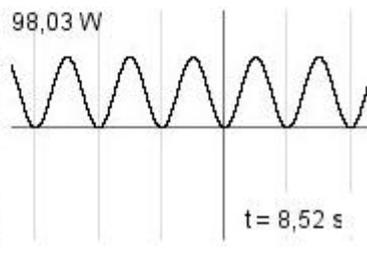
Source: Amps and Power



Inductor: Amps and Power

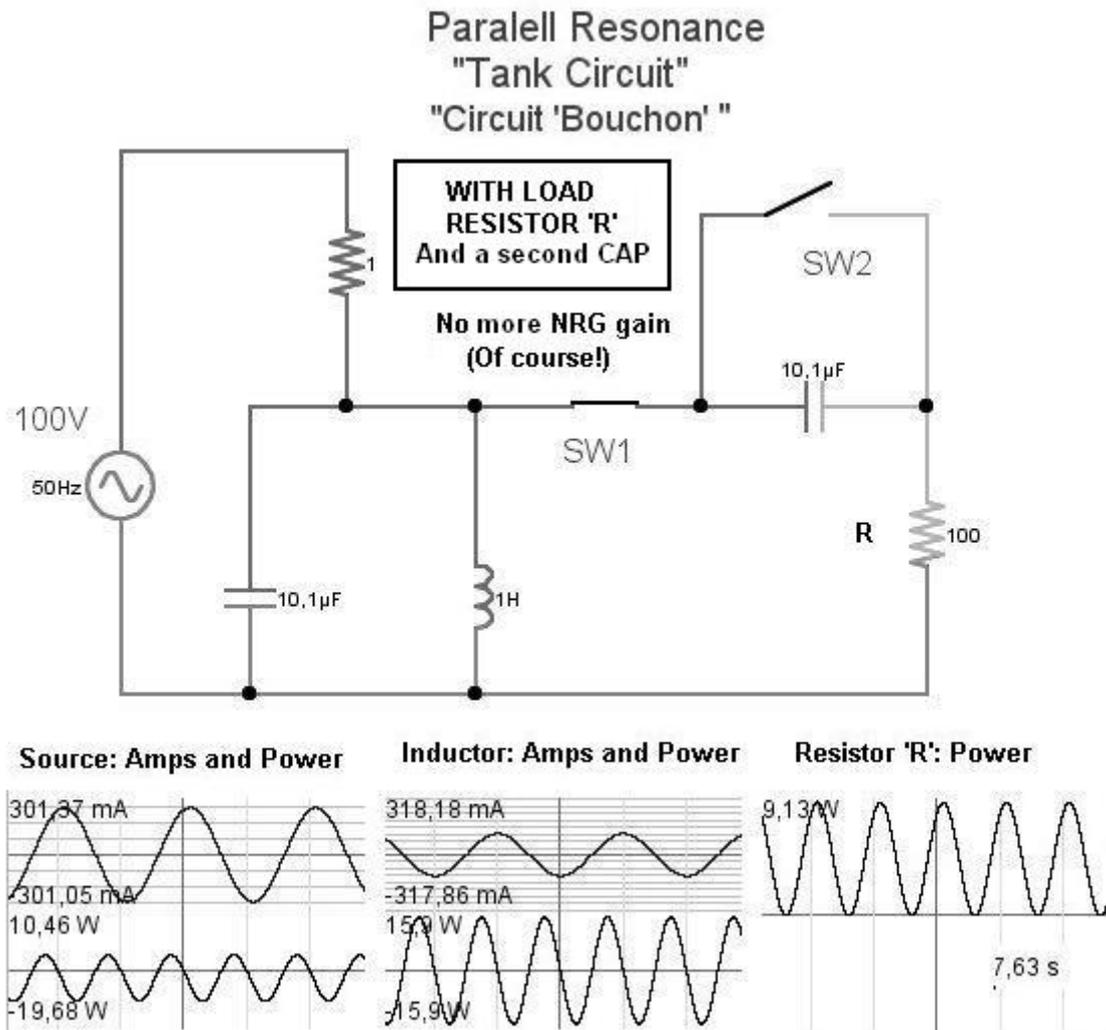


Resistor 'R': Power



As soon as you 'load' the circuit, that this "power multiplication" vanish.
 A very well known effect, indeed. Is it not Mr Lenz?

Perhaps, another cap would do any trick?



OU (Over-Unity)?

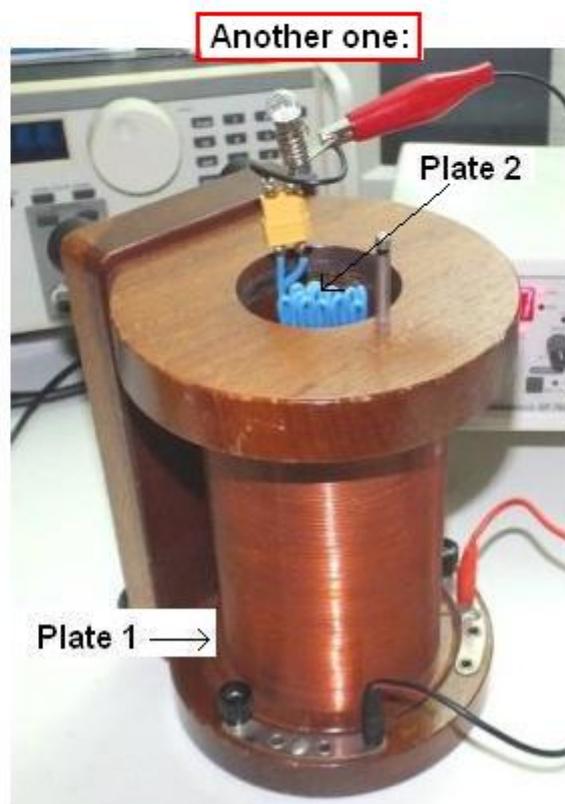
No way!

This way, in that case,

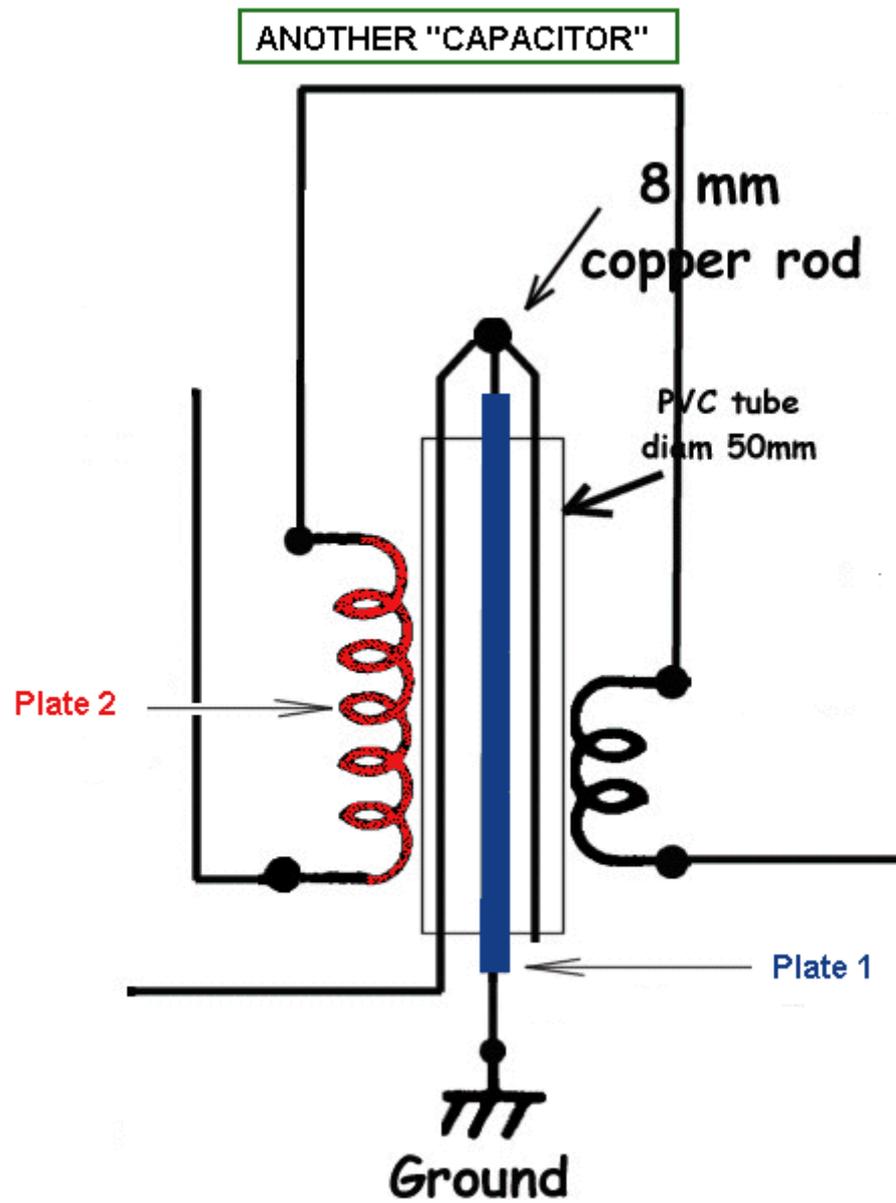
So, it sounds like that any "normal" capacitor can do any trick. meanwhile, I keep on seeing strange Caps in some devices claiming: abnormal behavior, great efficiency and even "OU".

Some examples:

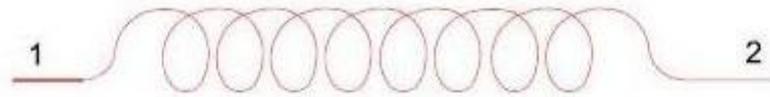
In the Jean Louis Naudin Website (NextGen)



In the same Website (Kapanadgen)

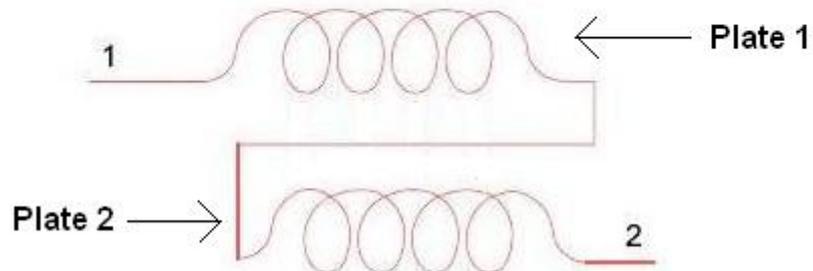


And even in another documents.



MONOFILAR COIL
STANDARD GEOMETRY

Yet Another Cap Or What?
(YACOW)



BIFILAR COIL
ALTERNATIVE GEOMETRY