

# Capacitor Bank for Magnetizer Machine

As mentioned in the 2019 conference talk, it was stated that modern permanent magnets are made via capacitor bank discharge into a large inductance. A YouTube video seeing how this is done can be found here: [Magnetizer Machine](#)

In this machines, a capacitor bank is charged up to a high voltage. This charge is then dumped, usually by an large SCR. In electrical engineering, a capacitor's current is based upon the rate of change in voltage with respect to a change in time, or  $I = dV/dT$ . Therefore, a fast closure of a switch (SCR) causes this energy to be dumped into an inductance. We know from photos of the EPG, that all coils were wired in parallel. When coils are wired in parallel, their overall inductance is reduced to less than one of the inductances (same principle applies to resistors). This reduction in inductance presents a lower inductive reactance to the impulse current, which allows an intense Electromagnetic field to be produced, aligning the dipoles of whatever is placed within the center.

It should be understood that magnetism is an attribute of an object, not a principle. We can heat up NdFeB magnets, or C8 ferrite magnets and remove the magnetism. NdFeB/C8 magnets are magnetized in the same process as shown in the video. When these are pressed together to form neutral chunks of material, they're not magnets until after the process. Additionally, most magnets have ceramic or non-magnetic (but dielectric) materials within. This creates a lattice (like Argon and Iron) where ferromagnetic materials are separated via a insulative material.

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