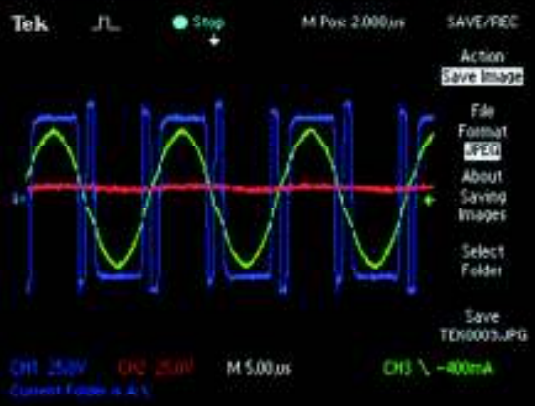
Singing Tesla Coil

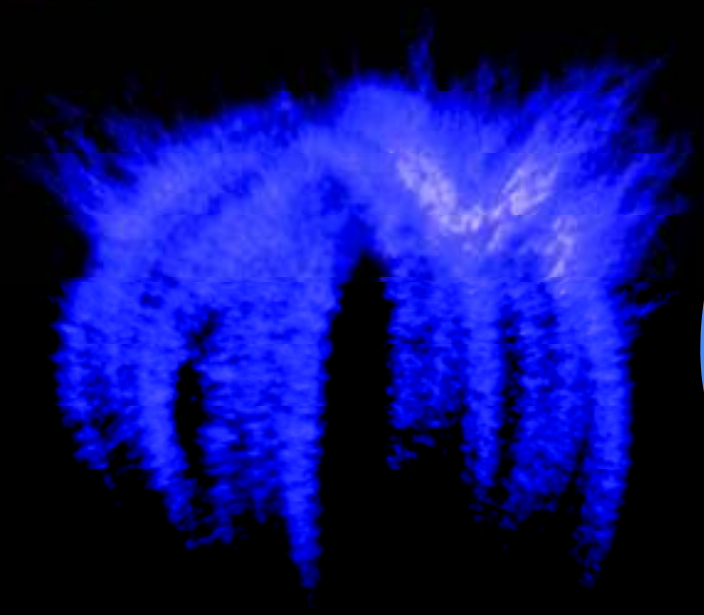
A Giant Reborn

Final Year Project
David Petzer

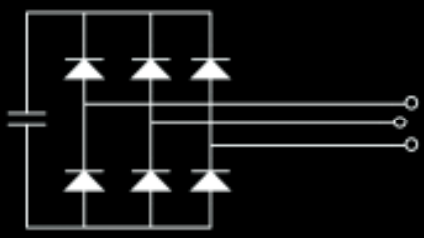


Output Voltage(Blue) 350V and Current (Green) 15A 60kHz

Tesla Coil in 1984

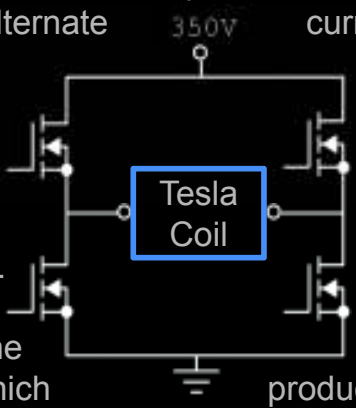


Optical audio and frequency control signals



3 phase AC
350Vl-l

H-Bridge, which uses four high power IGBT switches provides the Tesla coil with a square wave AC voltage at its resonant frequency of 60kHz. The dead time between alternate current directions is the time when all the switches are turned off and any current is conducted by the free wheel diodes. This dead time is modulated according to an audio signal. This in turn modulates the size and intensity of the electrical discharges which produces the sound.



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GO Boldly.