

## **An adjustable HVDC power supply using integrated high voltage transformer with some protective & controlling features**

### **Abstract**

We can produce variable/adjustable HVDC with a little arrangement using Fly back Transformer (IHVT), Tesla coil, car ignition coil & other type of step-up auto transformer found in microwave oven, X-ray units & in similar devices. This arrangement of circuitry is very reliable & light weight. In our experiment we made a power supply using Integrated High Voltage Transformer & try to give it several protective & controlling features to its driver circuitry to increase the longevity of the power supply. As far as the general run of small-scale electronics is concerned, EHT (extra high tension)/HVDC power supplies are used mainly for cathode ray tube (CRT) anodes and for some specialized purposes such as Geiger-Muller counters and photomultipliers. None of these applications calls for a large current drain. As an example, X-ray equipment may require 100 kVDC at a current of less than 1 A. Some of these EHT supplies such as those used for radio transmitters or particle accelerators demand very substantial currents. As an example, large radio transmitters may call for a 20 kVDC supply at several amperes of current.