

Our NEW patented* circuit; solid state managed; now driving all our Ignition Excitors using a "live for ever" arc conduit.

CIRCUIT DESCRIPTION

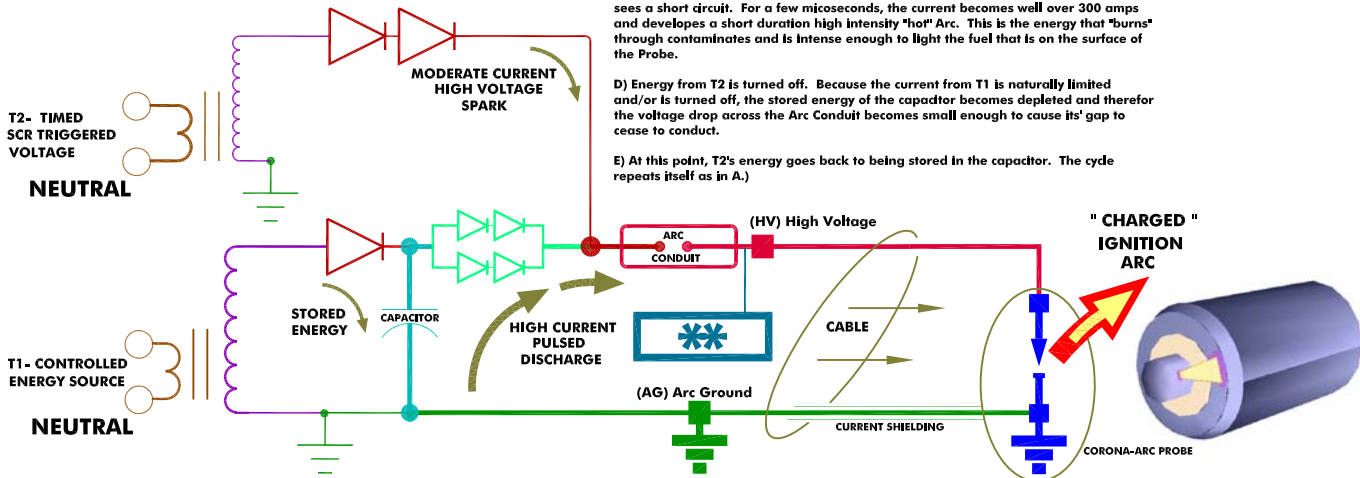
A) Energy from T1 is rectified and charges the capacitor. It is held back from discharging because of the non conducting gap in the Arc Conduit and the incongruent pathway of the T2 circuit.

B) A moderate duration very high voltage spark from T2 is generated and pluses through the Arc Conduit and the surface of the CoronaArc Probe.

C) Because there is now a conductive current pathway across the Arc Conduit and the CoronaArc Probe, the electrons stored in the capacitor now have a pathway to discharge. And since this path is a relatively low resistance, the capacitor effectively sees a short circuit. For a few microseconds, the current becomes well over 300 amps and develops a short duration high intensity "hot" Arc. This is the energy that "burns" through contaminants and is intense enough to light the fuel that is on the surface of the Probe.

D) Energy from T2 is turned off. Because the current from T1 is naturally limited and/or is turned off, the stored energy of the capacitor becomes depleted and therefore the voltage drop across the Arc Conduit becomes small enough to cause its gap to cease to conduct.

E) At this point, T2's energy goes back to being stored in the capacitor. The cycle repeats itself as in A.)



** Optional high voltage sink used only for "resistive electrodes" in PowerArc circuits.

* US Patents: 5,471,362; 5,793,585; 6,647,974; 6,805,109

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Frederick Cowan & Company, Inc.

48 Kroemer Ave.
Riverhead, LI, NY 11901
Phone: 631-369-0360
Fax: 631-369-0637
Toll free 877-369-4848
Info@fcowan.com

