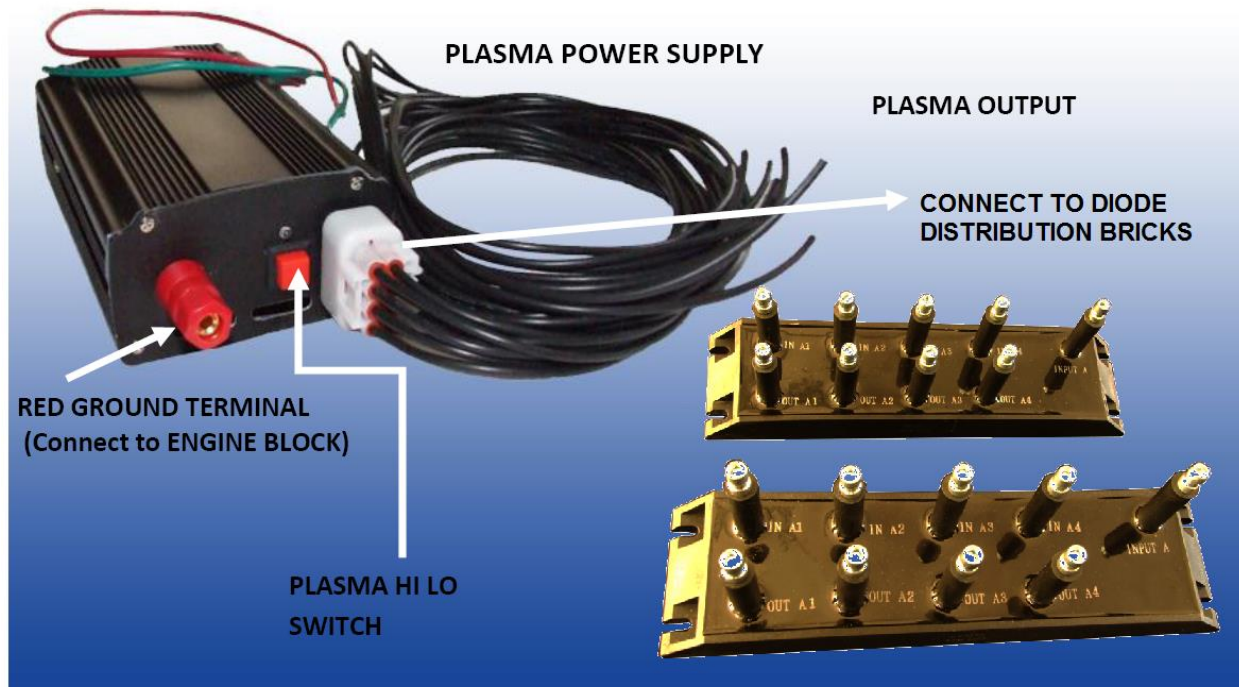


# PLASMA IGNITION MANUAL

The future of high energy performance ignition, Ionfire plasma amplifier is the world's first commercial plasma current amplification module that is designed to amplify milliamp high voltage current generated by an ignition coil to a high energy plasma discharge exceeding several hundred amps. The plasma module is designed to work with any Distributor based ignition system, single fire coil pack systems such as Chevy LS series motors.

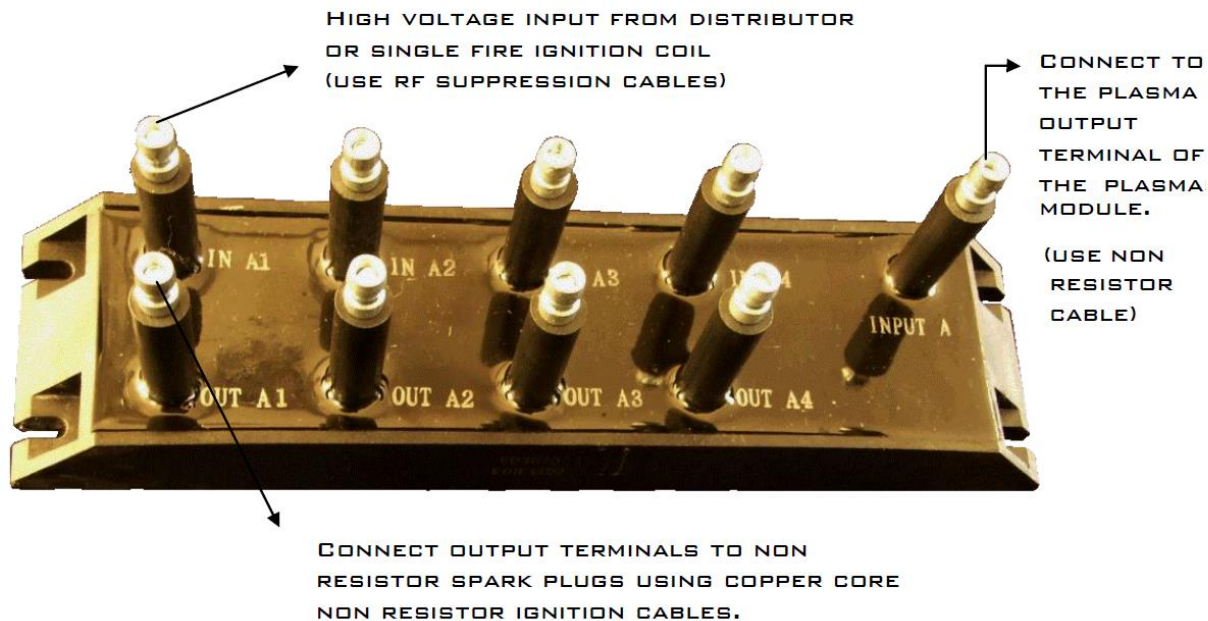


## PRODUCT SPECS :

**INPUT VOLTAGE: 12 VOLT DC**  
**CURRENT DRAW: 5 AMPS MAX**  
**OUTPUT VOLTAGE ~ 550 VOLTS**  
**DC PULSE CURRENT: 1000 amps +**

## SYSTEM REQUIREMENTS:

Any Distributor based ignition or single fire ignition coil system similar to Chevy LS engines. The distributor can be of any type, rotary, laser, magnetic. Non resistor plugs and non resistor racing ignition wires to connect to plug.

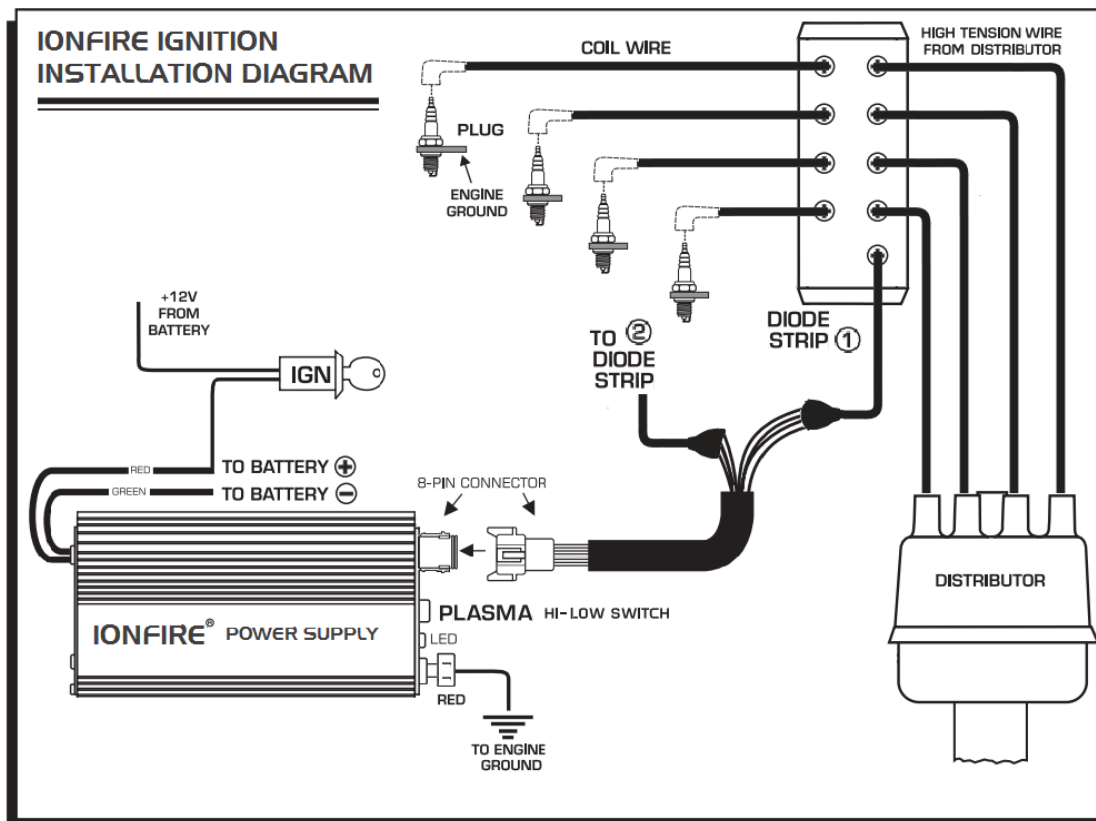


### Components Required for Plasma Spark Ignition

- **High Voltage Source:** Distributor based Ignition system or single fire ignition coil
- **Non Resistor Spark plug:** Any high quality non resistor spark plugs made used in Racing.
- **Non Resistor Spark Plug Wires:** Low resistance, 7 - 8 mm copper core wires from Accel or any other brand.

### INSTALLATION INSTRUCTIONS:

1. Connect the HV output from the distributor or single fire ignition coil of the vehicle to the HV IN male plug terminal of the plasma distribution DIODE STRIP. You can use RF suppression cables for this connection.
2. Group any 4 wires from 8 PIN PLASMA OUTPUT terminal of the Ionfire supply and connect it to the 5<sup>th</sup> input Terminal of the DIODE STRIP. (Note: The plasma input terminal does not have a paired output terminal) For 8 cylinder install, group the remaining 4 wires and connect it to the Plasma input Terminal of the second DIODE STRIP. In the case of 4 cyl install you can group all the 8 wires or terminate the unconnected 4 wires from the 8 pin plasma output terminal of the Ionfire power supply.
3. Connect the HV OUT male terminal of the plasma distribution DIODE STRIP to a non resistor spark plugs using very low resistance copper core cables.
4. Connect the PLASMA GROUND WIRE of the plasma ignition module ( RED TERMINAL) to the engine block (This must be the same as spark plug ground).



5. Connect the 12 VDC power supply cables of the plasma Ignition module to the vehicles battery or a 12VDC supply
6. Once all the above connections are made turn the plasma Ignition power supply ON.
7. DO NOT EXCEED RECOMMENDED STOCK SPARK PLUG GAP SETTINGS.
8. PLASMA LO setting is recommended for minimizing plug wear but for racing always leave it at HI.

**Single Fire Install:** The system can be used on engines that have external ignition coils firing sequentially. However the install will depend on the engine type and valve covers that may prevent the diode strip from being installed. In the case of single fire systems, the non resistor wire connecting to the spark plugs must be kept as short as possible to reduce and eliminate EMI. EMI will vary depending on the vehicle and ignition control system. We do not offer refunds if you do not want the system because of EMI issues. This is a high energy plasma ignition system and it assumed you are aware of that when you made your purchase.

## How to test if the plasma Ignition MODULE is working?

1. Disconnect the spade connector from the PLASMA output terminal of the Plasma ignition module.
2. Connect the Red probe of the MULTIMETER that can read DC voltage higher than 600V to any of the spade connectors on the Plasma Ignition module.
3. Connect the Black probe (COM) of the MULTIMETER to the RED Plasma Ground Terminal.
5. Make sure the MULTIMETER is set to read the DC voltage upto 600 Volts.
6. Connect a 12VDC power supply to the Plasma module and turn the power switch on.
7. Once the power supply is switched on, The MULTIMETER should read a voltage -500VDC or higher (NEGATIVE POLARITY). The unit is functioning normally. Please note in LO setting the unit will read around -350V DC.
10. Do not short the probes or metallic parts of probes while the unit is powered on. Capacitor high current impulse discharge will damage equipment and cause physical injury.

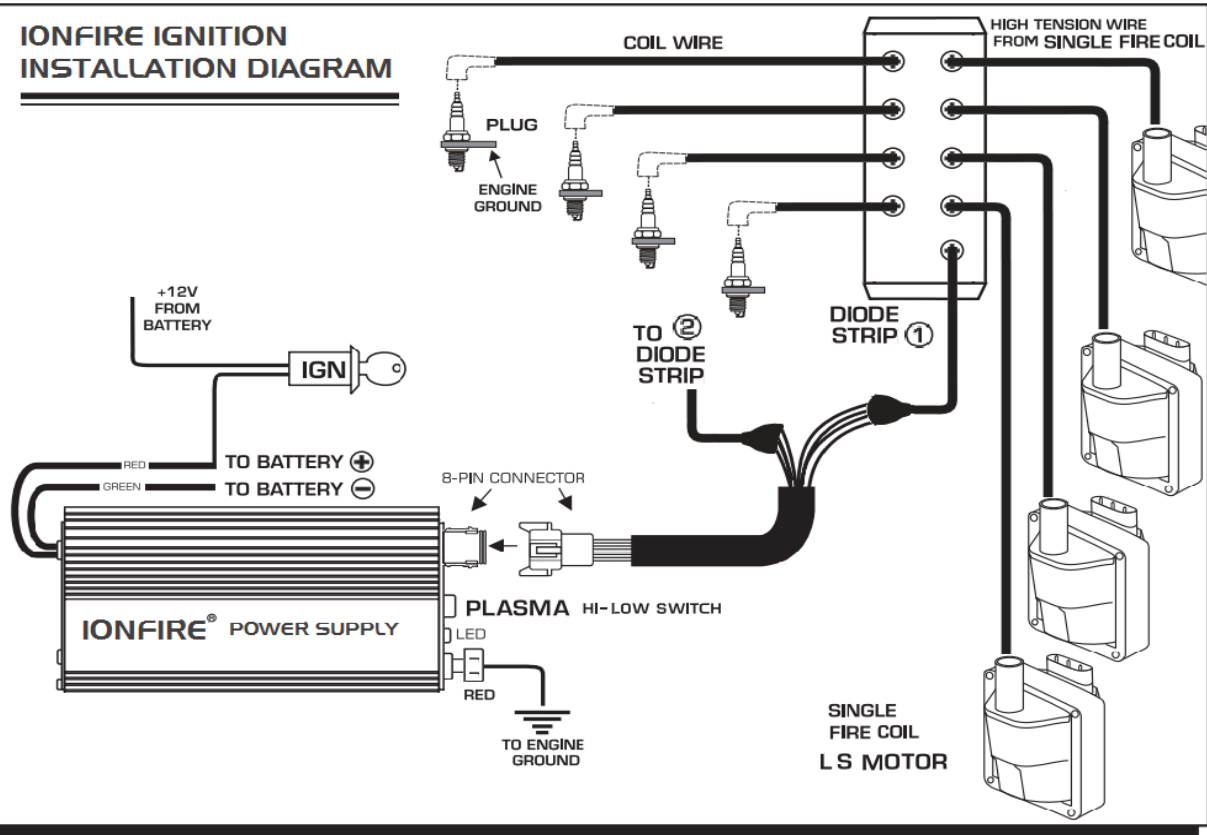
### **WARNING:**

**ONCE THE UNIT IS POWERED ON DO NOT TOUCH THE LIVE OUTPUT TERMINALS OF THE PLASMA IGNITION POWER MODULE AND THE METAL CASING OF THE PLASMA MODULE OR GROUND WIRE. DOING SO WILL RESULT IN AN ELECTRIC SHOCK !!! MAKE SURE THE IGNITION COIL PRIMARY WINDINGS ARE CONNECTED WITH THE CORRECT POLARITY.**

**IF YOU REVERSE THE PRIMARY WINDINGS POLARITY ON THE IGNITION COIL YOU WILL DAMAGE THE PLASMA DISTRIBUTION DIODE STRIP. MAKE SURE THE PLASMA DISTRIBUTION DIODE STRIP HV INPUT AND OUTPUT TERMINALS ARE NOT REVERSED.**

WARRANTY: The product is guaranteed to be free from manufacturing defects for a period of 1 year after purchase. The warranty does not cover units damaged as a result of incorrect wiring / installation, exceeding recommended stock spark plug gap settings by the buyer and failure to follow proper installation instructions. The buyer assumes all responsibility and liability for proper and safe handling of goods. Furthermore, the user indemnifies THE SELLER from all claims arising from the handling or use of the goods. It is the user's responsibility to take any and all appropriate precautions with regard to electrostatic discharge and high voltage generated by the ignition coil and the module. By purchasing the unit, the buyer agrees that the sole and exclusive maximum liability to THE SELLER arising from any product sold on the website shall be the price of the product ordered. In no event shall THE SELLER be liable for special, indirect, consequential, or punitive damages related to the products sold. **NO PARTY SHALL BE LIABLE TO ANY OTHER FOR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES.**

## IONFIRE IGNITION INSTALLATION DIAGRAM



## IONFIRE IGNITION INSTALLATION DIAGRAM

