SparkAmp Series

USER MANUAL

@ECOignition
JOIN THE PLASMA REVOLUTION

AQUAPULSER.com
SparkAmp X40 / X60

Master Power Switch

12V DV Connector

12V Indicator

Fuse Ok Indicator

Charge Indicator

Failure Indicator

Internally Bussed (Shorted) Plasma Outputs

Polarity Markings

Engine Block Ground Wire

Notes
- Connecting to one or both outputs will produce the same plasma discharge triggered by a single fire spark
- Both outputs have the same polarity
- Ground to Engine Block only to avoid malfunction and excessive RF noise
SparkAmp X60 Waste Spark
(2 simultaneous sparks in two cylinders, one in power stroke and one in exhaust stroke)

Notes
- Channel 1 and Channel 2 outputs have opposite polarity and CANNOT be ‘bussed’ shorted
- Positive channel output connects to the cylinders firing a positive HV spark
- Negative channel output connects to the cylinder firing a negative spark
- Ground to Engine Block only to avoid malfunction and excessive RF noise

Recommendations for Installation
- Use a highvoltage diode (20kV or higher) to determine the polarity of the spark fired by the coil pack on a per cylinder basis, and use the molded plasma ignition cable of the same polarity to connect that cylinder’s spark plug to the coil pack output and the plasma output

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SparkAmp X80

Notes
- Channel 1 and Channel 2 outputs can be externally ‘bussed’ (shorted) to behave as a single channel output box with double the power
- Ground to Engine Block only to avoid malfunction and excessive RF noise

Recommendations for high RPM engines
- Connect even firing cylinders to Channel 1 output
- Connect odd firing cylinders to Channel 2 output

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SparkAmp Distributed Ignition Wiring Diagram

Ground to Engine Block

Plasma Bus Harness (Copper Core High Temp. Wire)

To distributor / coil output

Wire Splice
Ideally add solder and wrap with insulating high temperature tape

Spark plug

To distributor / coil output

Spark plug

Spark plug

Spark plug

To distributor / coil output

Spark plug

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SparkAmp X80 Wiring 8cyl Race setup

Ground to Engine Block

Plasma Bus Harness (Copper Core High Temp. Wire)

Channel 1 Output

Channel 2 Output

Even Firing Cylinders

Odd Firing Cylinders

Spark plug

Spark plug

Spark plug

Spark plug

Spark plug

Spark plug

Spark plug

Spark plug

Spark plug

Spark plug

Spark plug

Spark plug

Spark plug

To distributor / coil output

To distributor / coil output

To distributor / coil output

To distributor / coil output

To distributor / coil output

To distributor / coil output

To distributor / coil output

To distributor / coil output

To distributor / coil output

To distributor / coil output

To distributor / coil output

To distributor / coil output

To distributor / coil output

Wire Splice. Ideally add solder and wrap with insulating high temperature tape.

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Plasma Bus Harness
(Copper Core High Temp. Wire)

SparkAmp X80 Wiring 8cyl Ultra High Discharge

Ground to Engine Block

Channel 1 Output

Channel 2 Output

Plasma Bus Harness
(Copper Core High Temp. Wire)

Channels 'Bussed' (shorted) using heavy gauge wire

Wire Splice
Ideally add solder and wrap with insulating high temperature tape

To distributor / coil output

To distributor / coil output

To distributor / coil output

To distributor / coil output

To distributor / coil output

To distributor / coil output

To distributor / coil output

To distributor / coil output

To distributor / coil output

To distributor / coil output

Spark plug

Spark plug

Spark plug

Spark plug

Spark plug

Spark plug

Spark plug

Spark plug

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