Versatile Intelligent Performance Engine Controls

INSTALLATION INSTRUCTIONS FOR XPS-4 4 CHANNEL CAPACITOR DISCHARGE IGNITION

PLEASE REPORT ANY OMISSIONS OR
ERRORS TO INFO@Vi-PEC.COM

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CAUTION

THIS WIRING DIAGRAM IS APPLICABLE ONLY TO IGNITION SYSTEMS WITH THE SERIAL NUMBER PREFIX STARTING

41xxxx

INCORRECT INSTALLATION WILL VOID WARRANTY

IGNITION COILS

CAUTION

IGNITION COILS MAY BE DAMAGED INTERNALLY IF FIRED WITHOUT A GROUND RETURN PATH.

If your engine develops a misfire which can not be eliminated by other means try replacing the ignition coil on the suspect cylinder with one that is known to be good.

COP (coil on plug) coils with in built drivers are not suitable for cdi applications. Small COP ignition coils may overheat when used with a cdi system unless wired in parallel for wasted spark applications.

Most inductive ignition coils will work with CDI system however for best power select one with very low primary resistance and inductance with a turns ration between 75 and 100 to 1 such as the Bosch MEC717.

FERRITE COILS

Be aware when buying ferrite coils from other suppliers as not all companies have the knowledge to correctly prepare them for automotive use. Due to their fragile nature and poor quality control during manufacture it is easy to experience premature ignition coil failure and engine misfiring unless correctly assembled. All coils prepared by M&W are individually tested before assembly and sale.

IMPORTANT INSTALLATION NOTES

MOUNTING

Do not mount the unit where it will be exposed to water, select a location away from excessive heat and use rubber mounts to isolate from strong vibration. Mount with the connector end low and where possible provide a cooling air supply.

IGNITION LEADS & SPARKPLUGS

Do not use straight metal wire or carbon ignition leads. For best performance use leads with a premium quality silicone jacket and spiral wound metal core construction. Do not use resistor type spark plugs.

WIRING & POWER SUPPLY

Do not use a power supply above 16V. It is not only unnecessary but may activate the internal over voltage protection. Do not use a 'voltage booster' as most of them are unable to provide the instantaneous current required by the CDI. Connect the unit directly to the battery with the recommended wire gauge. Where possible crimp the connector terminals and do not solder them as this will make the wire prone to breaking. **IT IS MOST IMPORTANT TO MAKE SURE THE TRIGGER EDGE ON THE IGNITION SYSTEM IS SET THE SAME AS ON THE ECU.**

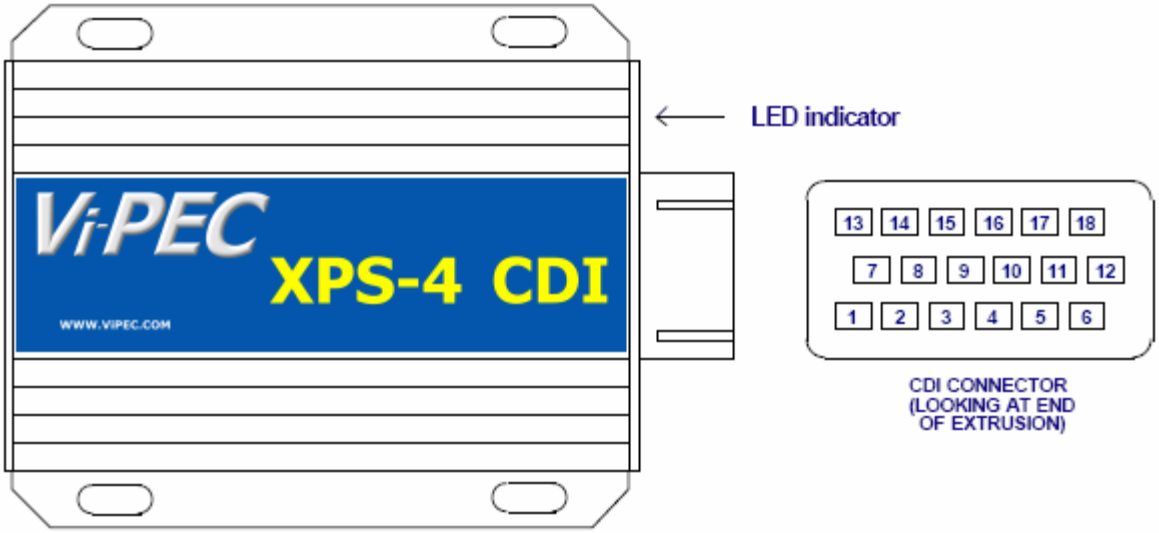
LED INDICATOR

Once the unit has been switched on the LED on the end of the box will illuminate for approximately 1 second and then extinguish. Each consecutive trigger input received after this will be indicated by a single short flash. A repeated double flash of the LED indicates the generator stage has been unable to reach correct operating voltage. This may be due to faulty wiring or an internal failure.

CHECK IGNITION TIMING AFTER COMPLETING INSTALLATION

CAUTION!
HIGH VOLTAGE

DISCONNECT POWER BEFORE WORKING ON UNIT



KEEP ALL INPUTS WELL SEPARATED FROM COIL OUTPUTS

1 +12V (Battery)	7 Ground (Battery)	13 Trigger D
2 +12V (Battery)	8 Ground (Battery)	14 Trigger B
3 Trigger C	9 Trigger edge	15 Trigger A
4 Tacho	10 Trigger edge	16 Ignition switch
5 Coil C +	11 Coil B +	17 Coils C & D -
6 Coil A +	12 Coil D +	18 Coils A & B -

TRIGGER EDGE SELECTION

Falling edge ignition - leave pin #9 disconnected.

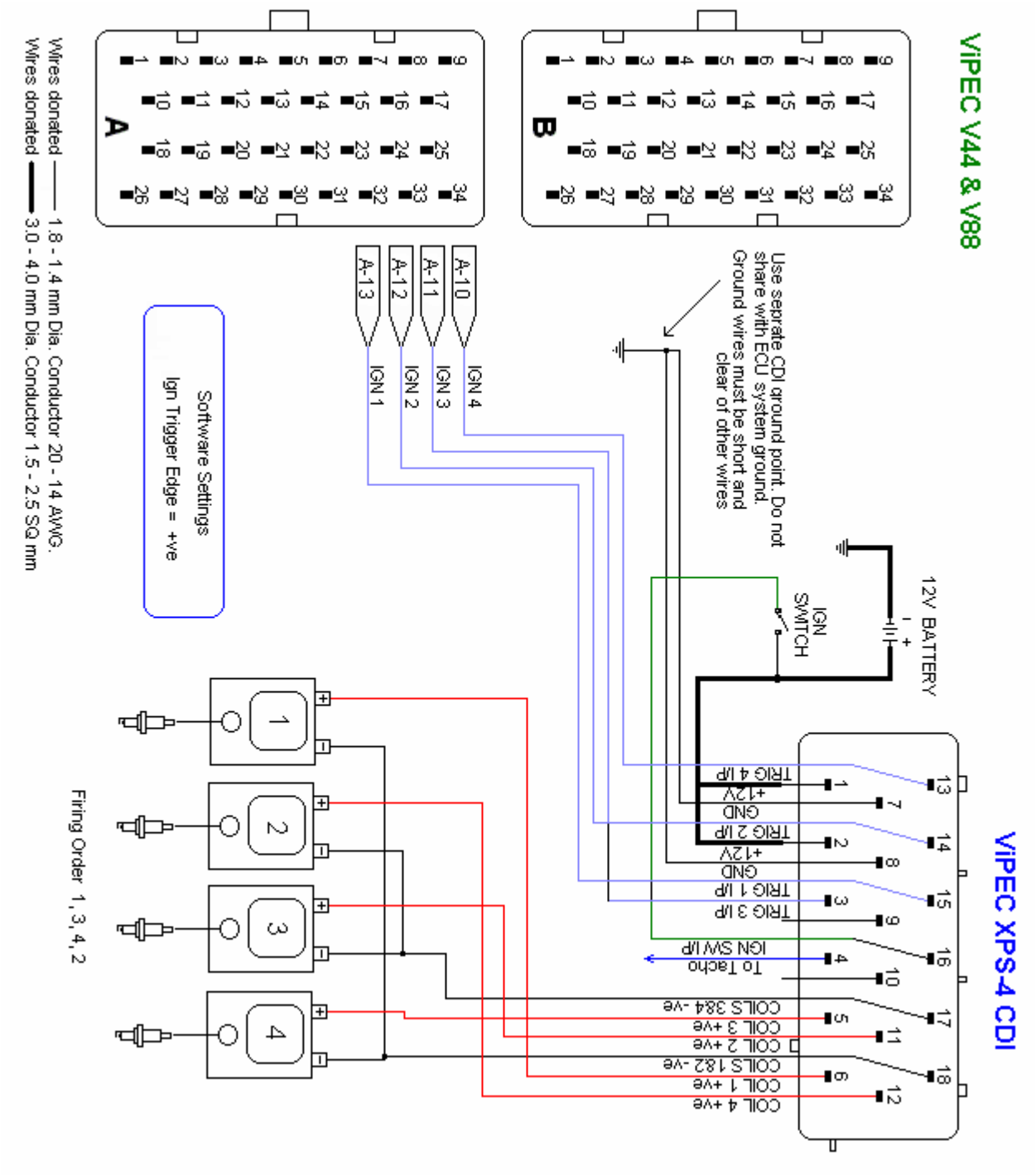
Rising edge ignition - connect pin #9 to pin #10.

When triggering this unit of an existing ignition module or an ecu with built in igniters such as the Microtech 'MTX' series it may be necessary to select rising edge trigger.

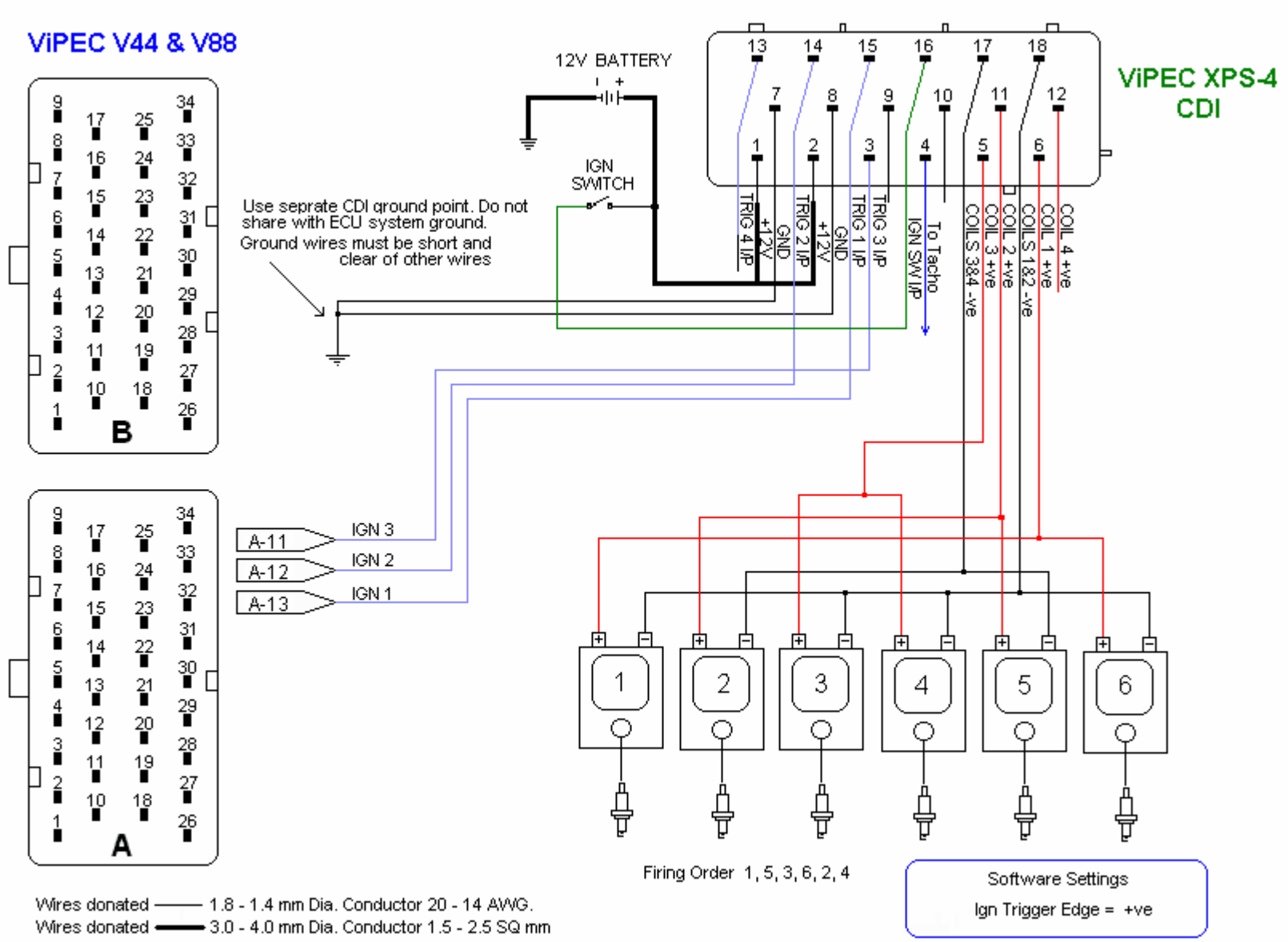
SPECIFICATIONS

Supply voltage = 13.8V DC negative ground
Operating voltage = +6V to +18V (Restrictions apply)
Maximum supply current = 7.5A
Maximum speed = 10,500 RPM
Coil primary voltage = 450V
Spark energy = 105 millijoules/plug
Trigger = 10mA open collector drive
Ignition split = 0 to infinity
Tacho = 12V, 25mA square wave
Maximum continuous operating temperature = 105°C
Dimensions = 150L * 130W * 50H
Weight = 870gm

Four Cylinder Four Coils



Six Cylinder Six Coils



Eight Cylinder Eight Coils

