Thank you for your purchase.

Please read the complete installation instructions or view the video instructions on YouTube before attempting to install this product.

⚠️ If not installed properly, PowerMAX will not function and may be damaged. View install videos at *www.jms-powermax.com*

PowerMAX Voltage Booster-Regulator will increase the output of *any* fuel pump or ignition system. The PowerMAX unit has been designed to be mounted inside the vehicle cabin (*under a seat*) or in the trunk. Install the unit so it does not come into direct or prolonged contact with water or extreme engine heat (*+250F*).

Reasons to choose PowerMAX!

|	FuelMAX Single PM-2000	FuelMAX Boost-Single PM-2009-B	FuelMAX Dual-Pump PM-2020	FuelMAX Dual-Boost PM-2029-B	SparkMAX 25V PM-2100	SparkMAX 31V - Race PM-2100-R31	SparkMAX Boost - 25V PM-2109-B
Ford • Plug and Play	X	X	X	X			
User Adjustable Output Voltage & Voltage Ramp In/Out Rate	X	X	X	X	X	X	X
Highest Voltage Output & Highest Amperage Output	X	X	X	X	X	X	X
Single Output Wiring • Fuel Pump or Ignition • 40AMP Fuse	X	X			X	X	X
Dual Fuel Pump Wiring • 80AMP Fuse			X	X			
Heaviest Gauge Wiring & Highest Capacity Fuse • 40/80AMP	X	X	X	X	X	X	X
Enable via Ground or via (0-5v) External Voltage • via MAP, TPS or PPS Sensor	X		X		X	X	
Voltage Ramp In/Out • User Selectable • Adjustable Based on Time or Voltage	X		X		X	X	
JMS Exclusive • Digital Technology	X	X	X	X	X	X	X
Enable via Internal Boost Sensor • Pressure Range (1-29psi)		X		X			X
Voltage Ramp In/Out • User Selectable • Adjustable Based on Time or Boost		X		X			X
Widest Pressure Adjustment Range Available • (1-29psi)		X		X			X
Industrial Heat-Sink • Heavy-Duty Construction	X	X	X	X	X	X	X
Easy to Use • Instructions On the Unit	X	X	X	X	X	X	X
Option • Remote Knob	X		X		X	X	

The concept behind boosting the voltage of your fuel pump or fuel pump driver?

• Reliably use the factory fuel pump to support additional horsepower.

- • 2011+ Mustang GT customers have reported making +925rwhp with the stock fuel pump and a FuelMAX.
- • Shelby GT500 customers have reported making +1050rwhp with the stock fuel pumps and dual FuelMAX.
- • SVT Raptor customers have reported making +750rwhp with the stock fuel pump and a FuelMAX.
- • Camaro customers have reported making +800rwhp with the stock fuel pump and a FuelMAX.
- • Nissan GTR customers have reported making +1000rwhp with the stock fuel pump and a FuelMAX.

• Boost fuel pump voltage *ONLY* when the extra fuel volume is needed.

- • Keep your fuel cool and reduce or eliminate the chance of vapor lock.
- • No need to upgrade the factory fuel pump or fuel lines.
- • Eliminate the gasoline smell associated with aftermarket fuel systems.
- • Enable Voltage Boosting via either Ground and external pressure switch or via external 0-5 volt sensor signal

• Simple to install: Choose from either *Universal Single Wire* splice in design or *Plug and Play*.

- • Universal: If you can cut and splice a single wire then you can install a universal PowerMAX FuelMAX.
- • Universal units activate voltage boosting via Ground or a monitored 0-5 volt sensor signal
- • Plug and Play for most 2011-2014 Fords: Mustang GT and Shelby (Anyone can quickly and easily install)
- • Plug & Play units activate voltage boosting via Accelerator Pedal Position (Can also use ground activation)

• When to use a GM or Standard Voltage Output?

- • If you have a GM that is 2010 or newer, you must use the GM specific unit.
- • Starting in 2010 the fuel pump driver modules on GM vehicles are powered ON all of the time.
- • JMS offers a special GM version of the FuelMAX for 2010+ GM vehicles.
- • Use the Standard option ONLY if your vehicle utilizes "Key-ON +12v" to power the Fuel Pump or Pump Driver.

• Single or Dual Outputs • Which unit is right for you?

- • Single Unit: For use on all vehicles that only have a SINGLE Fuel Pump or Fuel Pump Driver Module.
- • Dual Unit: Use on vehicles that have Dual Fuel Pumps or Dual Fuel Pump Driver Modules (Shelby GT500).

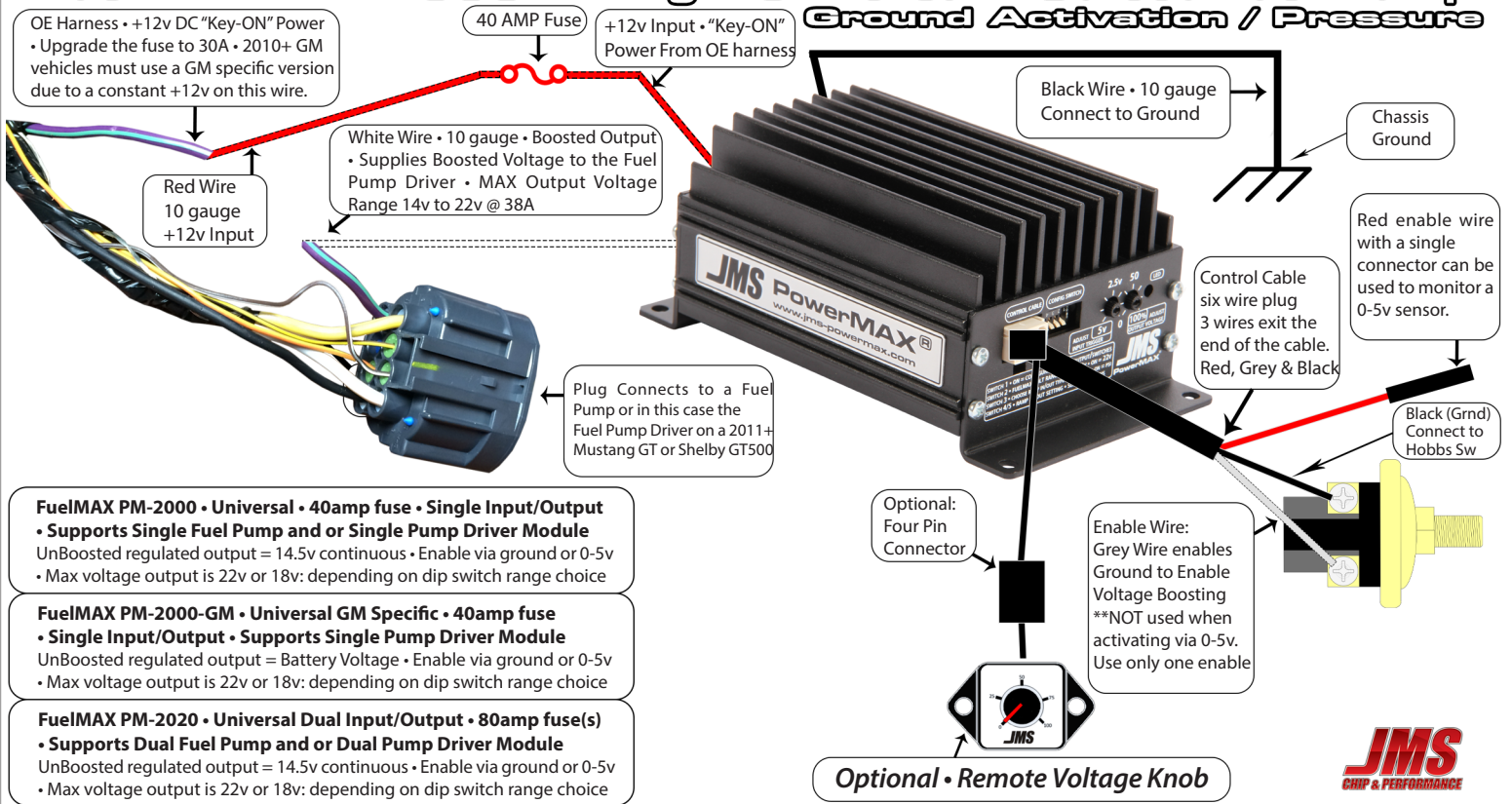FuelMAX
Single
Input/Output
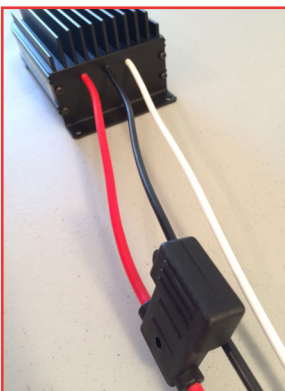
FuelMAX
Dual
Input/Output

Universal
Install Kit
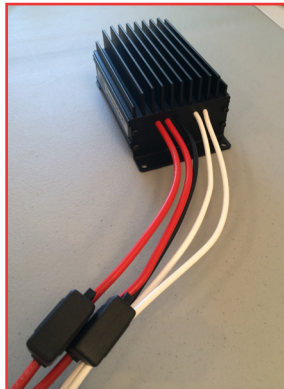
JMS PowerMAX
Universal
Installation Kit

Install Kit: 1 - Hobbs Switch Preset @ 5psi (user adjustable 3-7psi), 1 - Fitting 1/8npt Female to 3/16" Male Barb, 1 - Vacuum Tee 3/16" x 3/16" x 3/16", 1 - Vacuum Tee 1/4" x 1/4" x 3/16", 1 - Vacuum Tee 3/8" x 3/8" x 3/16", 1 Foot of 5/32" vacuum hose, 1 - 30amp mini-fuse, solder, 2 - 10/12gauge Heat Shrink Butt Splices, 2 - #8 stud 18/22 gauge wire Heat Shrink Ring Terminal, 1 - 10 gauge Heat Shrink Ring Terminal, 6 - Zip Ties, 6 - Self drilling hex screws, mini screw-driver

FuelMAX PM-2000 Wiring • Universal • Street Fuel Pump
Ground Activation / Pressure

OE Harness • +12v DC "Key-ON" Power • Upgrade the fuse to 30A • 2010+ GM vehicles must use a GM specific version due to a constant +12v on this wire.

40 AMP Fuse

+12v Input • "Key-ON" Power From OE harness

Red Wire 10 gauge +12v Input

White Wire • 10 gauge • Boosted Output • Supplies Boosted Voltage to the Fuel Pump Driver • MAX Output Voltage Range 14v to 22v @ 38A

Plug Connects to a Fuel Pump or in this case the Fuel Pump Driver on a 2011+ Mustang GT or Shelby GT500

Black Wire • 10 gauge Connect to Ground

Chassis Ground

Red enable wire with a single connector can be used to monitor a 0-5v sensor.

Control Cable six wire plug 3 wires exit the end of the cable. Red, Grey & Black

Black (Grnd) Connect to Hobbs Sw

Optional: Four Pin Connector

Enable Wire: Grey Wire enables Ground to Enable Voltage Boosting **NOT used when activating via 0-5v. Use only one enable
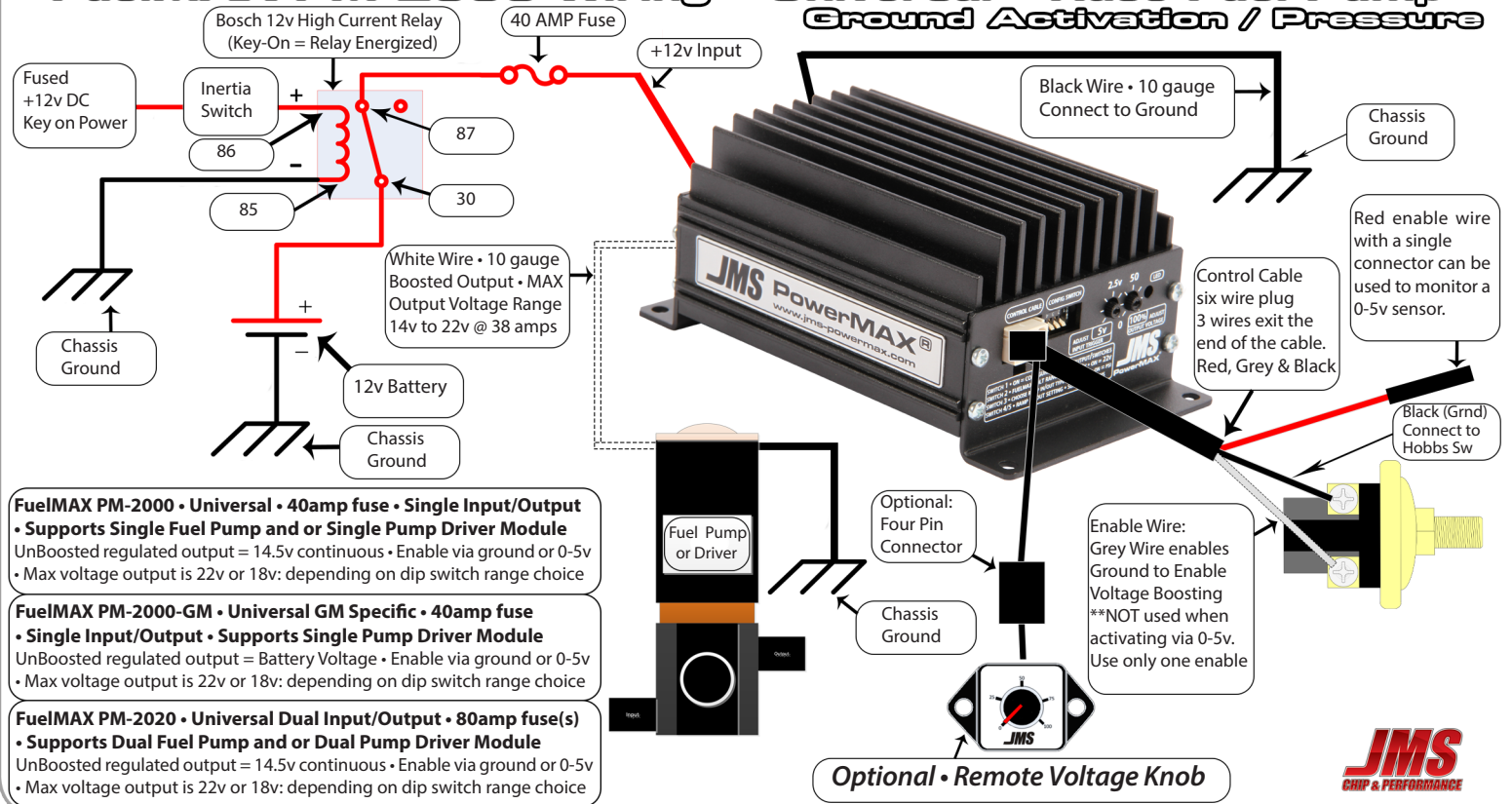
FuelMAX PM-2000 • Universal • 40amp fuse • Single Input/Output • Supports Single Fuel Pump and or Single Pump Driver Module UnBoosted regulated output = 14.5v continuous • Enable via ground or 0-5v • Max voltage output is 22v or 18v: depending on dip switch range choice

FuelMAX PM-2000-GM • Universal GM Specific • 40amp fuse • Single Input/Output • Supports Single Pump Driver Module UnBoosted regulated output = Battery Voltage • Enable via ground or 0-5v • Max voltage output is 22v or 18v: depending on dip switch range choice

FuelMAX PM-2020 • Universal Dual Input/Output • 80amp fuse(s) • Supports Dual Fuel Pump and or Dual Pump Driver Module UnBoosted regulated output = 14.5v continuous • Enable via ground or 0-5v • Max voltage output is 22v or 18v: depending on dip switch range choice

Optional • Remote Voltage Knob

FuelMAX PM-2000 Wiring • Universal • Race Fuel Pump
Ground Activation / Pressure

Bosch 12v High Current Relay (Key-On = Relay Energized)

40 AMP Fuse

+12v Input

Fused +12v DC Key on Power

Inertia Switch

86
85
87
30

Chassis Ground

12v Battery

Chassis Ground

White Wire • 10 gauge Boosted Output • MAX Output Voltage Range 14v to 22v @ 38 amps

Black Wire • 10 gauge Connect to Ground

Chassis Ground

Red enable wire with a single connector can be used to monitor a 0-5v sensor.

Control Cable six wire plug 3 wires exit the end of the cable. Red, Grey & Black

Black (Grnd) Connect to Hobbs Sw

Fuel Pump or Driver

Optional: Four Pin Connector

Chassis Ground

Enable Wire: Grey Wire enables Ground to Enable Voltage Boosting **NOT used when activating via 0-5v. Use only one enable

FuelMAX PM-2000 • Universal • 40amp fuse • Single Input/Output • Supports Single Fuel Pump and or Single Pump Driver Module UnBoosted regulated output = 14.5v continuous • Enable via ground or 0-5v • Max voltage output is 22v or 18v: depending on dip switch range choice

FuelMAX PM-2000-GM • Universal GM Specific • 40amp fuse • Single Input/Output • Supports Single Pump Driver Module UnBoosted regulated output = Battery Voltage • Enable via ground or 0-5v • Max voltage output is 22v or 18v: depending on dip switch range choice

FuelMAX PM-2020 • Universal Dual Input/Output • 80amp fuse(s) • Supports Dual Fuel Pump and or Dual Pump Driver Module UnBoosted regulated output = 14.5v continuous • Enable via ground or 0-5v • Max voltage output is 22v or 18v: depending on dip switch range choice

Optional • Remote Voltage Knob

PowerMAX® Version 2

Installation Instructions • PM-2000 • PM-2020 • FuelMAX Universal Splice-In

| Make	Vehicle	Model Year	Fuel Pump +12v Wire Color	Location to find fuel pump +12v wire and location to mount FuelMAX
Cadillac	CTS-V	2009 - 2013	Red/White Stripe	Connect GM unit fuel pump module +12v • Mount in trunk
Chevy	Camaro	2010 - 2013	Red/White Stripe	Connect GM unit fuel pump module +12v • Mount in trunk
Chevy	Camaro	1996 - 2002	Grey	Connect directly to the fuel pump +12v • Mount in trunk
Chevy	Corvette - ZR1	2009 - 2013	Red/White Stripe	Connect GM unit fuel pump module +12v • Mount in trunk
Chevy	Corvette - Z06/LS3/LS2	2005 - 2013	Grey	Connect GM unit fuel pump module +12v • Mount in trunk
Chevy / GMC	CK Trucks	1999 - 2013	Primary Tank = Grey Secondary = Light Green	Connect GM unit to fuel pump module +12v • Mount in cabin
Ford	Raptor / F150	2010 - 2014	Violet with Green Stripe	Connect to fuel pump module +12v • Mount in vehicle cabin
Ford	Shelby GT500	2011 - 2014	FPDM1=Violet/Green Stripe FPDM2=Violet/Green Stripe	Connect dual unit to fuel pump module +12v • Mount in trunk
Ford	Shelby GT500	2010	FPDM1=Violet/White Stripe FPDM2=Brown/Violet Stripe	Connect dual unit to fuel pump module +12v • Mount in trunk
Ford	Shelby GT500	2007 - 2009	FPDM1=White FPDM2 = Red	Connect dual unit to fuel pump module +12v • Mount in trunk
Ford	GT SuperCar	2005 - 2006	FPDM1=Pink/Black Stripe FPDM2=Brown/Pink Stripe	Connect dual unit to fuel pump module +12v • Mount in front
Ford	Mustang GT 5.0L 4v & V6	2011 - 2014	Violet/Green Stripe	Connect to fuel pump module +12v • Mount in trunk Note: Early Convertibles may use Orange/Red Stripe
Ford	Mustang GT 4.6.L & V6	2010	Violet/White Stripe	Connect to fuel pump module +12v • Mount in trunk
Ford	Mustang GT 4.6L & V6	2005 - 2009	White	Connect to fuel pump module +12v • Mount in trunk
Ford	Mustang Cobra • SC	2003-2004	Green/Yellow Stripe	Connect to fuel pump module +12v • Mount in trunk
Ford	Mustang GT 4.6.L & V6	1999 - 2004	Pink/Black Stripe	Connect to fuel pump module +12v • Mount in trunk
Ford	Mustang Cobra • NA	1999 - 2001	Pink/Black Stripe	Connect to fuel pump module +12v • Mount in trunk
Ford	Mustang • GT/Cobra/V6	1994 - 1998	Pink/Black Stripe	Connect to fuel pump +12v • Mount in trunk
Ford	Mustang 5.0L Windsor	1991 - 1993	Green/Yellow Stripe	Connect to fuel pump +12v • Mount in trunk
Ford	Mustang 5.0L Windsor	1986 - 1990	Pink/Black Stripe	Connect to fuel pump +12v • Mount in trunk
Ford	Taurus SHO	2010 - 2014	Violet/Green Stripe	Connect to Fuel Pump Module, Mount in vehicle cabin
Ford	F150 Ecoboost 3.5L	2011 - 2014	Violet/Green Stripe	Connect to Fuel Pump Module, Mount in vehicle cabin
Ford	F150 Truck	2009 - 2014	Violet/Green Stripe	Connect to Fuel Pump Module, Mount in vehicle cabin
Ford	F150 Truck	2004 - 2008	White	Connect to Fuel Pump Module, Mount in vehicle cabin
Ford	F150 Truck	1997 - 2003	Pink/Black Stripe	Connect to Fuel Pump +12v, Mount in vehicle cabin
Ford	Lightning Truck • SC	1999 - 2004	Red & Brown/White	Connect to Fuel Pumps +12v , Mount in Passenger side footwell Connect BOTH Red and Brown/White
Nissan	GTR	2007 - 2014	Yellow	Connect to fuel pump module • Mount in cabin
Pontiac	G8	2008 - 2009	Grey	Connect directly to the fuel pump +12v • Mount in trunk
Pontiac	GTO	2004 - 2006	Grey	Connect directly to the fuel pump +12v • Mount in trunk
Pontiac	Firebird	1998 - 2002	Grey	Connect directly to the fuel pump +12v • Mount in trunk

STEP 1 - LOCATE THE FUEL PUMP WIRE TO BOOST

• Verify that the vehicle is turned off (no key in ignition).

• Locate the Fuel Pump(s) or Fuel Pump Driver Module(s)

• The Fuel Pump or Fuel Pump Driver Module is typically located in the trunk or possibly in or near the fuel tank.

• Shelby GT500's utilize two fuel pump driver modules. Shelby's use pn: PM-2020 or PM-2020-PPS11 or two PM-2000's. We also offer a Shelby wiring upgrade for high hp vehicles.

• Tip: Typically newer cars (2000-up) utilize a fuel pump driver module to drive the fuel pump. FuelMAX boosts the voltage to the fuel pump driver module and this increases the fuel flow from the fuel pump.

Fuel Pump Driver Module

STEP 2 - CUT & SPLICE THE FUEL PUMP WIRE

• Identify the heavy gauge wire in the wire harness that provides +12v to the fuel pump or fuel pump driver module(s).

• Cut the +12v feed wire 6 inches before the Pump connector.

• Use the included Butt Crimp Splice to connect the +12v feed wire still connected to the OE harness to the Red Wire.
(If the key is turned on, the voltage on this wire will be +12v).

• Use the included Butt Crimp Splice to connect the 6 inch wire from the OE connector to the White Wire.

• Tip: Solder the wire connections if the OE +12v feed wire is a lot smaller than the PowerMAX Red/White wires.

PowerMAX Heavy Red to Harness

PowerMAX Heavy White to Connector (Pump or FPDM)
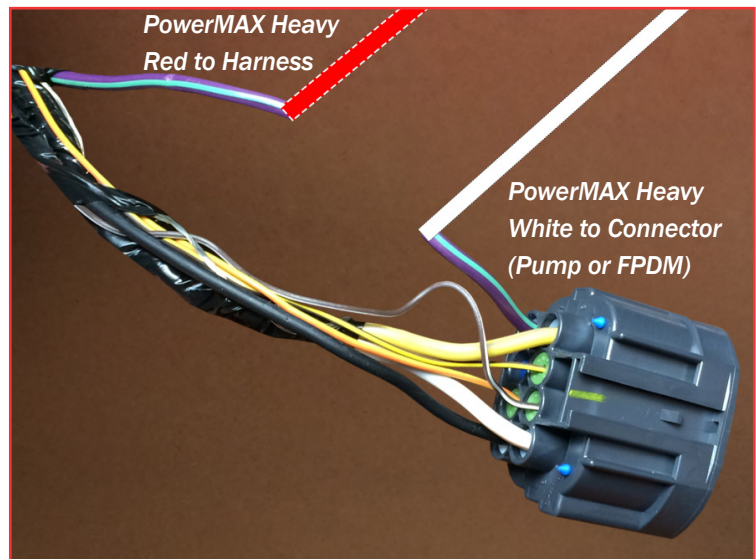
STEP 3 - CRIMP & SECURE THE GROUND WIRE

• Strip the Black Wire, and Crimp the Yellow Ground Ring to the BLACK Ground wire.

• Terminate the Black Wire to a factory ground chassis ground point.

• Tip: After you have crimped the wires, utilize a heat gun to shrink the crimped connector to the wire.

Secure the ground to a factory point

## STEP 4 - UPGRADE THE FUEL PUMP FUSE

• Most vehicles have a single pump and a single fuse.

• Locate and replace fuse or fuses that provide +12v to the fuel pump driver module(s). Replace the stock fuse or fuses with 30amp versions.

• Tip: 2007 - 2010 Shelby Vehicles utilize two fuses.

• Tip: 2011 - 2012 Shelby GT500 vehicle utilize a single fuse. To support big hp on the 2011-12 Shelby: Use the JMS Shelby Fuel Pump Wiring Upgrade. This upgrade easily supports the amperage requirements required to make big horsepower.

• Tip: 2013 - 2014 Shelby Vehicles utilize two fuses (circuit 13 & 14 shown in RED in the picture to the right)
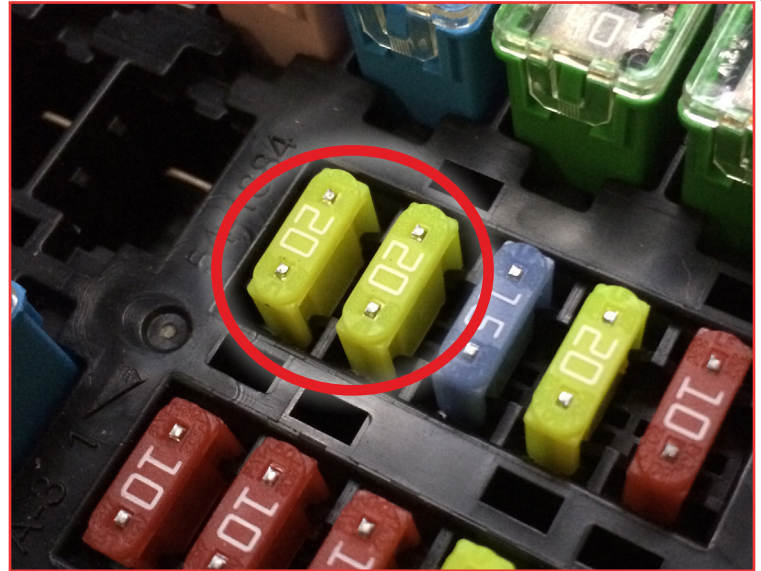
STEP 5 - MOUNT THE UNIT

• Install FuelMAX utilizing self-taping screws (included)
• Mount the unit so that the switches and knobs can easily be seen and adjusted by the user.
• Make sure that the mounting location leaves you with enough excess wire so none of the connections are under strain.
• Pay attention to where you are mounting the unit (avoid drilling into the factory fuel lines, brake lines or wire harness).
• Be sure to mount the unit away from extreme heat and direct contact with water.
• Typically the unit is mounted inside the vehicle cabin or trunk.
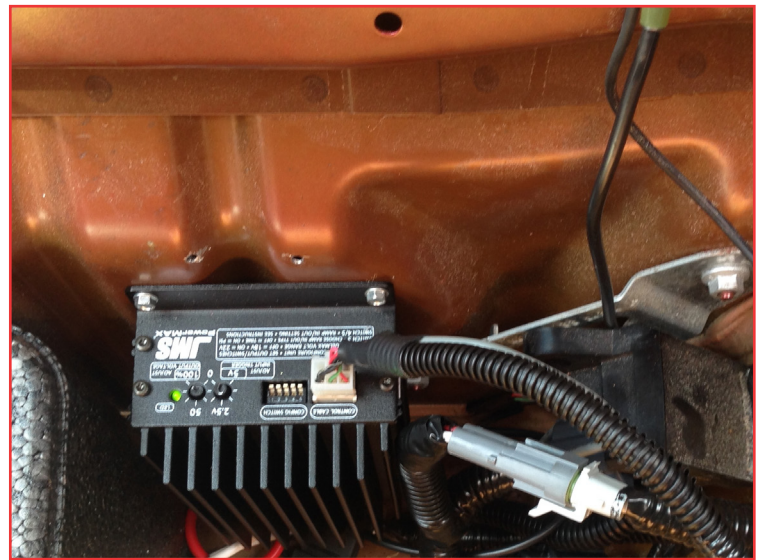
STEP 6 - CONNECT & ROUTE THE CONTROL CABLE

• Plug the six-wire control cable into the unit and route the wires to the front of the vehicle.

• Route the wires inside the car and through the firewall

• A grommet is recommended when going through a firewall.

• You can enable the unit via either the ground and 0-5v enable or via BOTH at the same time.

• Tip: It is recommended to use only a single enable.

STEP 7 - CHOOSE HOW TO ENABLE VOLTAGE BOOSTING

• Decide how you plan to enable voltage boosting (grounding the grey wire via external Hobbs Pressure Switch or via a 0-5v external sensor using the thin red wire)

• If enabling via ground, connect the grey wire to one side of the Hobbs Switch and the black wire to the other side.

• If enabling via 0-5v sensor: cut the terminals off of the grey and black wires so you don't accidentally enable the unit with a ground. Next connect the included short red jumper wire to a 0-5v sensor output and plug the single connector into the red control wire on the harness.

• If you choose to enable via 0-5v input skip steps 8 & 9.

YOU MUST CHOOSE BETWEEN ENABLE METHODS:

GROUND ENABLE VIA HOBBS PRESSURE SWITCH VIA GREY WIRE

OR

0-5V ENABLE VIA MONITORED EXTERNAL SENSOR VIA THIN RED WIRE WITH SINGLE CONNECTOR
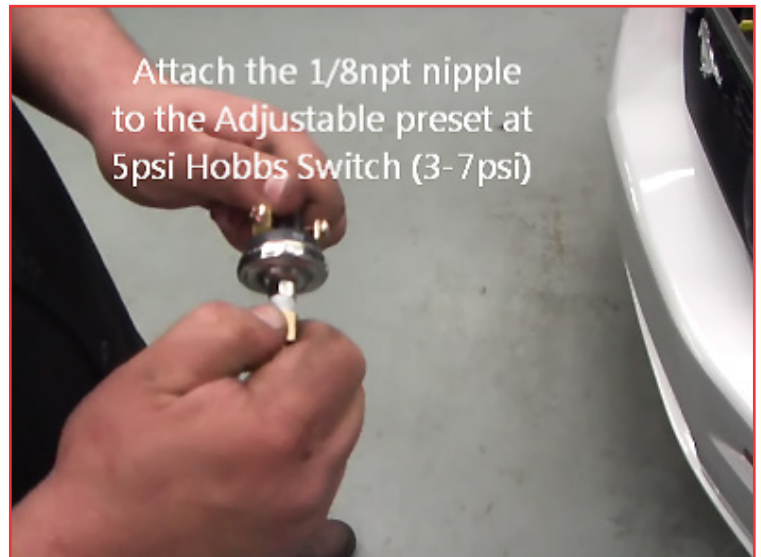
STEP 8 - HOBBS PRESSURE SWITCH SETUP

• Attach the 1/8npt to 3/16" barb nipple to the Hobbs Switch.

• Connect Grey ring terminal to one side & Black to the other.

• Decide if you need to adjust the Pressure Switch (typically this is not needed).

The included Hobbs switch is preset at 5psi. (User adjustable from 3-7psi) To adjust the setting remove the black plug from the back of the unit.

Insert a Allen wrench and turn. Clockwise = Higher Pressure.

When the desired pressure is reached the Hobbs Switch activates and the wires connected to the terminals are switched together.

Attach the 1/8npt nipple to the Adjustable preset at 5psi Hobbs Switch (3-7psi)

STEP 9 - INSTALL THE HOBBS PRESSURE SWITCH

• Find an appropriate vacuum / boost source.

• Cut the vacuum hose and install the appropriate sized vacuum tee and vacuum line from the installation kit.

Choose from one of three vacuum tee's:
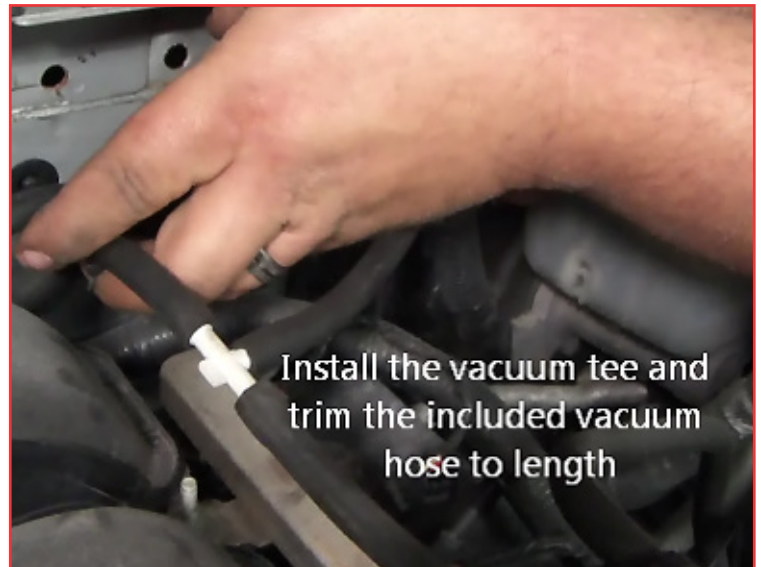3/16" x 3/16" x 3/16" tee
or
1/4" x 1/4" x 3/16" tee
or
3/8" x 3/8" x 3/16" tee

Secure the Hobbs Switch in place with the tie-wraps

Install the vacuum tee and trim the included vacuum hose to length

Rev: 1.1
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03/04/14

STEP 10 - VERIFY THAT THE UNIT POWERS ON

• Green LED will illuminate ON (solid), when the ignition key is set in the "ON" position.

• The Green LED will slowly blink when the unit is Enabled and Boosting Voltage.

Tip: You can quickly test and set the Boosted Voltage output by turning Dip switch 1 - ON, grounding the Grey Wire and adjusting the output voltage knob.
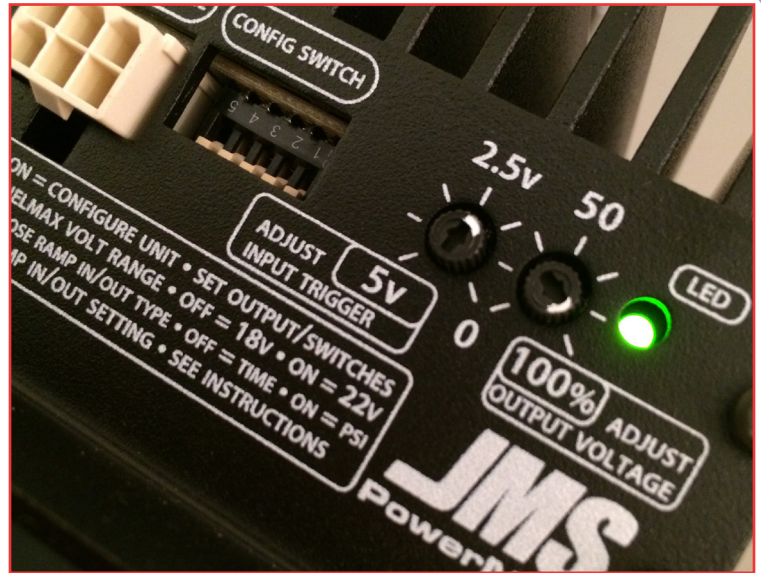
STEP 11 - ADJUST THE BOOST VOLTAGE AND RANGE

• Set the Boosted Output Voltage & options via the front panel configuration switches and knobs.

• Set the Ignition Key to the "ON" position • (Power ON = Green LED is ON [illuminated ON])

• Set Dip Switch 1 - "ON"   (Switch 1 "ON" - Enables the configuration of the front panel switches and knobs)

• Set Dip Switch 2 - Choose the voltage output range. OFF = 18v,   ON = 22v

• Adjust Voltage Output - 0 = 14.5v, 100% = Maximum for the selected voltage range.

STEP 12 - SAVE THE BOOST OUPUT VOLTAGE SETTING

• Set Dip Switch 1 - "OFF"   (When moved from ON to OFF, this Saves the current front panel switch and voltage settings & the LED twinkles while saving)

• Tip: When saving configuration settings, the unit must be powered ON and Dip Switch 1 set to ON, then make your changes and turn OFF Dip Switch 1 to save your switch settings/changes. (Notice that the LED will twinkle when Switch 1 is Turned OFF and the config values are saved).

• Tip: When saving, you must leave Switch 1 ON for a few seconds before you can turn it off and update the Saved Config values.
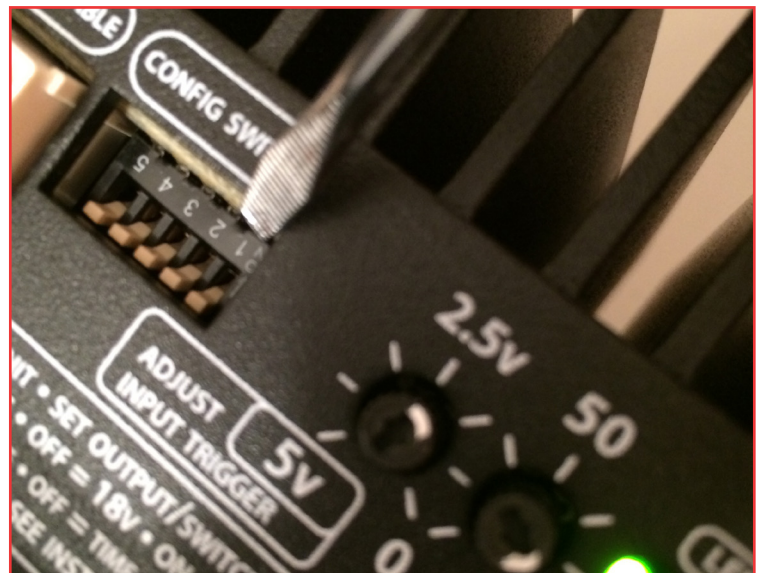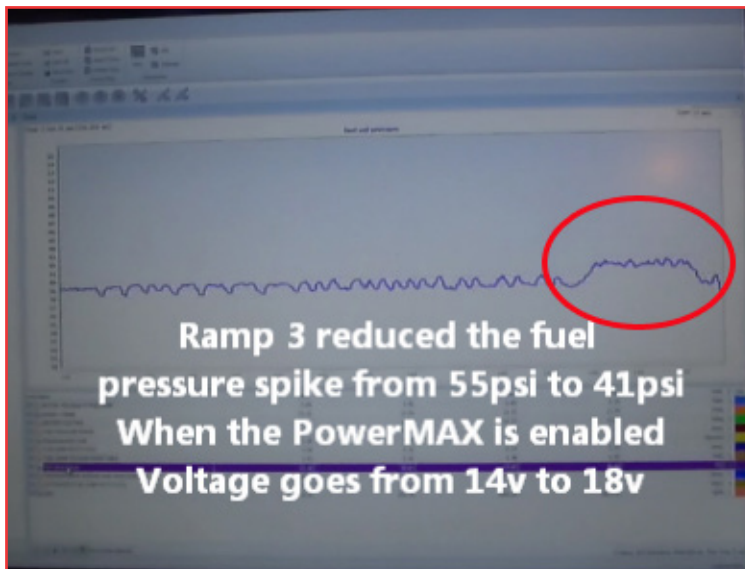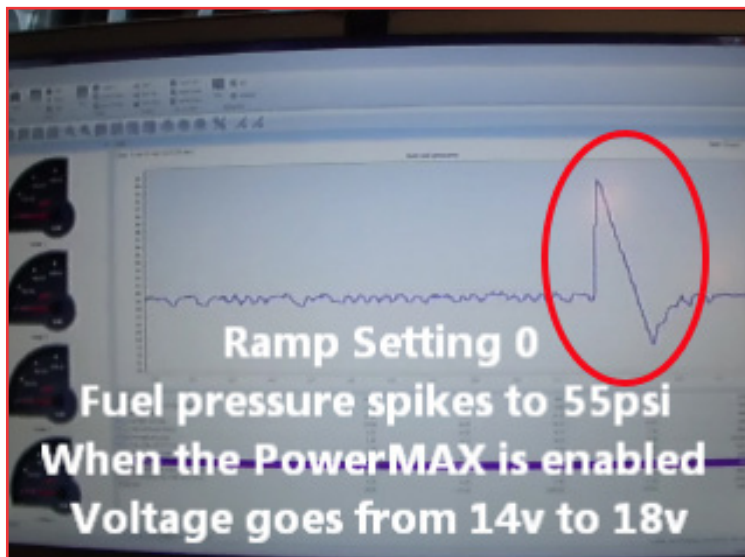
STEP 13 - VERIFY VOLTAGE OUTPUT

• Enable the unit (via grounding the Grey Wire or via supplying the appropriate 0-5v signal)

• The LED will start blinking slowly when the unit is enabled and boosting voltage.

• Verify that the boosted voltage output is what was expected.

• **Be aware:** If utilizing the 0-5v Enable Input and the ramp in/out is 0-5v voltage based then your output voltage will be proportional to your 0-5v input voltage value. Example: If you choose a 2.5V enable and you have a 0.8V ramp: At 2.51V the unit output will just start to boost voltage, at 2.9v you will have 50% output and at 3.3v the max output will occur. (2.5v+0.8v)
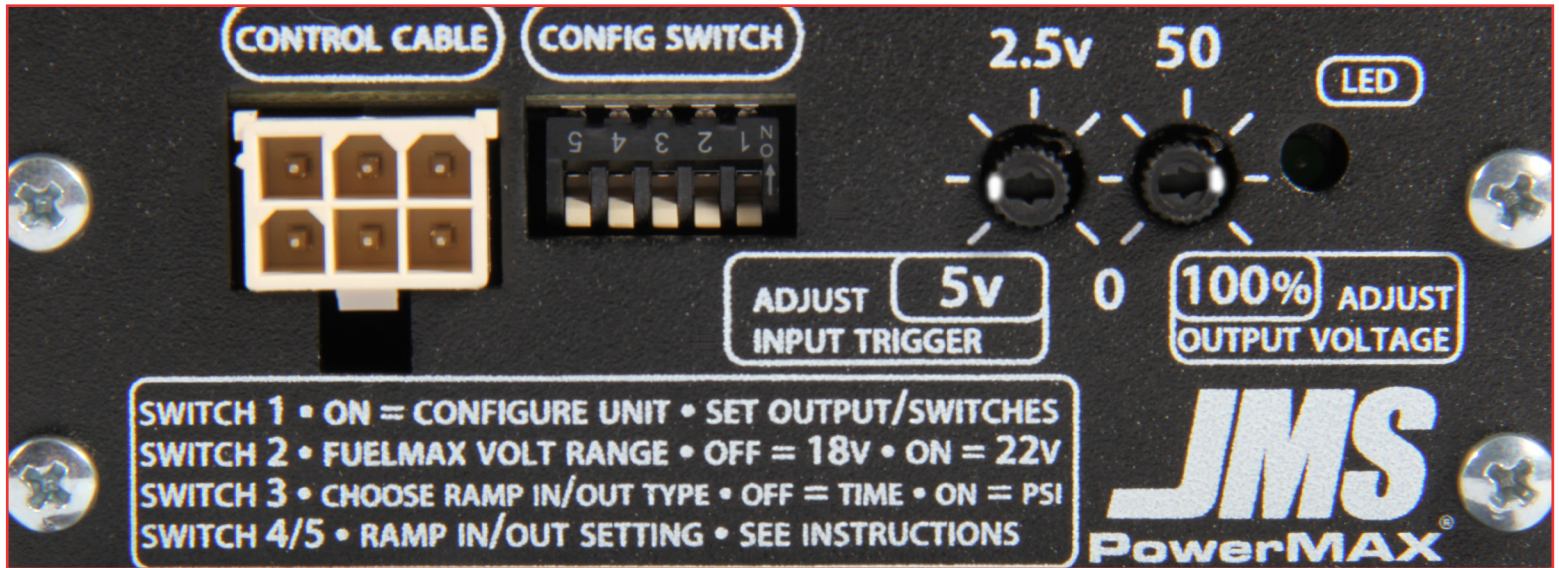
STEP 14 - OPTIONAL - CONFIG RAMP IN / RAMP OUT

• Configure the boosted voltage ramp-in/ramp-out rate. Eliminate fuel pressure spikes by ramping the voltage in and out based on time or External Monitored Sensor Voltage

• Tip: Refer to the "Reference guide to the PowerMAX front panel" on page 10 for details on each dip switch setting.

• **Ground Enable** via Hobbs Pressure Switch: If utilizing a GROUND to enable voltage boosting, it is recommended to set the ramp in/out dip switches as follows: Switch 3 "OFF" & Switch 5 "ON". These settings, configure the ramp/in ramp out rate based on TIME and to occur over 1.5 seconds.

• **0-5v Monitored Voltage Enable** via External Sensor: If utilizing a 0-5v monitored sensor signal to enable voltage boosting, it is recommended to set the ramp in/out dip switches as follows: Switch 3 "ON", Switch 5 "ON". These settings configure the Boost ramp in/ramp out rate to be based on the Monitored Sensor Voltage and to occur over 0.8v range.

• Tip: 0-5v Monitored Voltage Enable Don't forget to set the threshold voltage that enables the unit via the Input Trigger Adjustment Pot.

• Tip: When Editing and saving configuration settings • Be sure to edit and save settings with the unit powered ON and with Dip Switch 1 ON. Turn Dip Switch 1 OFF to save your configuration changes. (LED will twinkle when turned off).

Ramp Setting 0
Fuel pressure spikes to 55psi
When the PowerMAX is enabled
Voltage goes from 14v to 18v

Ramp 3 reduced the fuel pressure spike from 55psi to 41psi
When the PowerMAX is enabled
Voltage goes from 14v to 18v

Reference guide to the PowerMAX front panel

CONTROL CABLE CONFIG SWITCH 2.5v 50 LED

ADJUST INPUT TRIGGER 5v 0 100% ADJUST OUTPUT VOLTAGE

JMS PowerMAX®

SWITCH 1 • ON = CONFIGURE UNIT • SET OUTPUT/SWITCHES
SWITCH 2 • FUELMAX VOLT RANGE • OFF = 18v • ON = 22v
SWITCH 3 • CHOOSE RAMP IN/OUT TYPE • OFF = TIME • ON = PSI
SWITCH 4/5 • RAMP IN/OUT SETTING • SEE INSTRUCTIONS

Set Dip Switch 1 ON to ADJUST boosted output voltage: Set via Adjust Output Voltage Knob.
Adjust Output Voltage: 0 = 14.5v boosted output; 100% = 18v or 22v boosted output (depending on the range: dip switch 2)

Remember: Dip Switch 1 must be ON to ADJUST dip switches or knob settings on the front panel.

When Dip Switch 1 is turned OFF: LED will twinkle and ALL of the front panel settings are saved.

Dip Switch 1	Dip Switch 2	Dip Switch 3	Dip Switch 4	Dip Switch 5
Configure Unit	*Set Voltage Range*	*Choose Ramp Type*	*Depends on SW 3*	*Depends on SW 3*
OFF = Save Settings	OFF = 18V Range	OFF = Time Based	See tables below	See tables below
ON = Set Voltage/Config	ON = 22v Range	ON = 0-5v Based	See tables below	See tables below

Time Based Voltage Ramp Works with either Gnd or 0-5v	Dip Switch 3	Dip Switch 4	Dip Switch 5	Ground Enable	Voltage Enable
Time - Immediate Ramp 0	OFF - 3	OFF - 4	OFF - 5	YES	YES
0.75 second Ramp 1	OFF - 3	ON - 4	OFF - 5	YES	YES
1.50 second Ramp 2	OFF - 3	OFF - 4	ON - 5	YES	YES
2.25 second Ramp 3	OFF - 3	ON - 4	ON - 5	YES	YES

0-5v Based Voltage Ramp Works ONLY with 0-5v enable	Dip Switch 3	Dip Switch 4	Dip Switch 5	Ground Enable	Voltage Enable
0-5v - Immediate Ramp	ON - 3	OFF - 4	OFF - 5	NO	YES
Base enable v + 0.4v Ramp	ON - 3	ON - 4	OFF - 5	NO	YES
Base enable v + 0.8v Ramp	ON - 3	OFF - 4	ON - 5	NO	YES
Base enable v + 1.2v Ramp	ON - 3	ON - 4	ON - 5	NO	YES

PM-2999

Optional
Remote Voltage Knob
• Overrides front panel voltage setting when connected to the harness.

TROUBLESHOOTING POWERMAX

• Power Issue -> LED is OFF and the unit does not Output Voltage
    1) Key-ON Power (+12v) is not available on the Heavy Gauge Red Input Wire
        • Verify that +12v KEY-ON Power is applied to the Red Wire (check the fuse for this power wire)
    2) Blown Fuse (check the 40amp Heavy Gauge Red Wire Input Fuse)
    3) The Black Ground wire is not connected to Chassis Ground.

• Ground Enable Issue -> LED is ON and the unit does not ENABLE (LED does not blink)
    • Ground Enable -> Temporarily connect the Grey Wire to Chassis Ground.
        • If the LED does NOT blink, Next verify that you are connecting to a Chassis Ground Point
            • If this is still an issue, check for a broken wire in the six pin control wire harness.

• 0-5v Enable Issue -> LED is ON and the unit does not ENABLE (LED does not blink)
    • 0-5v -> Temporarily connect the Red Wire to +12v DC.
        • If the LED does NOT blink, check for a broken wire in the six pin control wire harness.

• Voltage Boosting Output Issue -> LED is Blinking Slowly and the unit is not putting out the expected voltage (white wire).
    1) Check to see if a manual over-ride knob is plugged into the unit (PM-2999 four pin flat connector)
        • When connected the manual over-ride knob "over-rides" the saved internal settings of the unit.
    2) The unit output voltage has never been programmed or was programmed with a LOW value.
        • Set Dip Switch 1 on, wait two seconds
        • Rotate the Adjust Output Voltage Pot to the FULL Clockwise position (100%)
        • Verify that the output voltage matches the range dip switch setting (see tables on Page 10)

• Voltage Boosting Ramp In / Ramp Out Issue -> Time Based Ramp: Fuel Pressure has a spike.
    1) Turn Dip Switch 1 ON and verify/adjust the Time Ramp Rate to it's maximum ramp.
        (Max Ramp = Dip Switch 3 - OFF, Dip Switch 4 - ON, Dip Switch 5 - ON) test to see if the issue still occurs.
            If it still occurs, delay the ground activation (via adjusting the HOBBS Sensor)
    2) Adjust the HOBBS Pressure Sensor - Remove the black plug, Insert an Allen Wrench and Turn Clockwise = Higher.
            Typically a higher enable pressure = less fuel pressure spike

• 0-5v Enable Issue -> LED is blinking slowly and unit is not putting out the expected voltage on the white wire.
    1) Turn Dip Switch 1 on and verify that both the range dip switch setting and the Adjust Output Voltage Pot are set
        correctly and then retest.
    2) Verify that the voltage output is not the result of the Ramp Input/Output being set to "Voltage"
        When this is set to voltage then the output will be proportional to the input (within the set voltage range).
        For example: If the unit is set to a output voltage range of 18v with a 100% Output Voltage setting along
        with a 2.0v enable threshold and 1.2v range, the approximate voltage output at 2.1v will be 14.5v, the
        approximate voltage output at 2.6v will be 16.1v and the approximate voltage output at 3.2v will be 18.25v.

• Can PowerMAX be enabled by BOTH Ground and 0-5v at the same time?
    Yes -> PowerMAX will continue to Boost Voltage until both inputs have stopped enabling the device.

• What if I enable PowerMAX via Ground but have it configured to a Voltage Ramp -> PowerMAX automatically defaults all ground enable events to use Time Based Voltage Ramps.

• What if I use a non-GM unit on a GM -> Worst case scenario is a dead battery. Please use a GM unit for a GM vehicle.

PowerMAX® Version 2

Installation Instructions • PM-2000 • PM-2020 • FuelMAX Universal Splice-In

Several different PowerMAX versions are available:

FuelMAX, SparkMAX, FanMAX & IntercoolMAX

The product guides below detail the different types of devices and their functions.

Product Guide • FuelMAX V2

	Single Pump	Dual Pump	Plug & Play	Setup for GM	Activate Gnd or 0-5v	Activate Int Boost	Remote Knob Option
PM-2000	X				X		X
PM-2000-GM	X			X	X		X
PM-2000-PPM11	X		X		X		X
PM-2009-BOOST	X					X	
PM-2009-BOOST-GM	X			X		X	
PM-2009-BOOST-PPM11	X		X			X	
PM-2020		X			X		X
PM-2020-PPS11		X	X		X		X
PM-2029-BOOST		X				X	
PM-2029-BOOST-PPS11		X	X			X	

Product Guide • SparkMAX V2

	Splice In Design	Single Output	Output 25v	Output 31v	Activate Gnd or 0-5v	Activate via Boost	Remote Knob Option
PM-2100	X	X	X		X		X
PM-2100-R31	X	X		X	X		X
PM-2109-BOOST	X	X	X			X	
PM-2109-BOOST-R31	X	X		X		X	

Product Guide • FanMAX 2200 V2 & IntercoolMAX V2

	Splice In Design	Single Output	Dual Output	Output 15v	Output 16v	Plug & Play	Remote Knob Option
PM-2200	X	X		X			
PM-2220	X		X	X			
PM-2300	X	X			X		
PM-2300-PPS13		X			X	X	

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For more than 20 years, JMS Chip & Performance has been an industry leader in late model domestic and import vehicle tuning. JMS brand electronics components are some of the most technologically advanced in the automotive industry and feature innovative high quality engineering, materials and workmanship. The JMS technical center in Lucedale, MS is one of North America's premier automotive and motorcycle tuning, manufacturing, and turn key automobile development facilities, producing numerous custom high performance vehicles each year. JMS is also a pioneer in domestic vehicle calibrations and highly regarded as a foremost expert in Ford, GM and Chrysler powertrain and drivetrain systems.

JMS TECHNICAL CENTER • LUCEDALE, MS

A state of the art facility that integrates custom and specialty vehicle manufacturing, race car production, electronics development and manufacturing, custom tuning and vehicle calibrations engineering, prototype development, and aftermarket component sales and distribution.

LIGHT VEHICLE ASSEMBLY

JMS produces countless custom or specialty vehicles ranging from contemporary late model domestic performance cars to full blown turn key race cars, each year. Our teams of professionals are experts in supercharging, turbocharging, engine assembly, chassis production, suspension upgrades, and specialty equipment integration.

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Since 1993, JMS has been a pioneer and industry-leader in Ford vehicle calibrations and instrumental in helping to develop the modern custom tuning aftermarket. Our tech center's tuning facility features two chassis dynamometers specifically for car and truck calibrations and engineering, and one motorcycle dyno to service the growing powersports market.

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TERMS OF SALE

JMS product orders are subject to our wholesale trade terms and conditions, which are located in the applicable price guide.

SHIPPING AND HANDLING

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PRICING

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SERVICE OR REPAIR:

Please contact JMS @ 601-766-9424 for a Return Authorization. All service returns should be sent freight pre-paid to: JMS SERVICE, 3247 HWY 63 S, Lucedale, MS 39452. The Return Authorization Number should be clearly written on the outside of the box, and in a letter that is included in the box. The letter should also list your contact phone number and a clear explanation of the exact problem.

JMS WARRANTY & CONTACT INFORMATION

JMS WARRANTS TO THE ORIGINAL PURCHASER THE FOLLOWING:

Your JMS Product will be free from defects in materials and workmanship for a period of twelve months from the original purchase date. The warranty only covers the product itself and not the cost of removal and re-installation of the product. JMS may extend the limited warranty on a case by case basis, based on the circumstances of the warranty claim. JMS products are designed exclusively for use in racing applications. JMS products that are not installed according to the supplied instructions, may not be covered by warranty.

SPECIFIC CONDITIONS THAT WILL VOID THE PRODUCT WARRANTY:

If the product case has been opened or the product has been modified or repaired.
If the product was not installed or used correctly.
If the product has been tampered with by: negligence, misuse or accident.
If the product is returned without explanation of the problem or Return Authorization.

CONTACT JMS @ 601-766-9424 FOR A RETURN AUTHORIZATION NUMBER:

All warranty returns should be returned freight pre-paid and should include inside of the box: Proof of Purchase and a Letter that contains both the Return Authorization Number and a Clear Explanation of the EXACT problem. The Return Authorization Number should also be clearly written on the outside of the box.

SEND ALL RETURNS TO:

JMS Returns, 3247 HWY 63 S, Lucedale, MS 39452

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TECHNICAL SUPPORT & CONTACT INFORMATION:

JMS 3247 Hwy 63 S, Lucedale, MS 39452

601-766-9424

Technical Support Hours: Monday - Friday 9:00am - 5:00pm (Central Standard Time)

CONFIGURATION AND INSTALLATION VIDEOS ARE AVAILABLE ONLINE: WWW.YOUTUBE.COM/JMSCHIP

If you have any questions, please contact JMS technical support via email: **jms@jmschip.com**

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