


## Installation Instructions • PM-2100 • SparkMAX 31v Universal Splice-In

### 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](http://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).



**WARNING** - SparkMAX is designed to activate and be used at wide open throttle or full throttle.

### Reasons to choose PowerMAX!

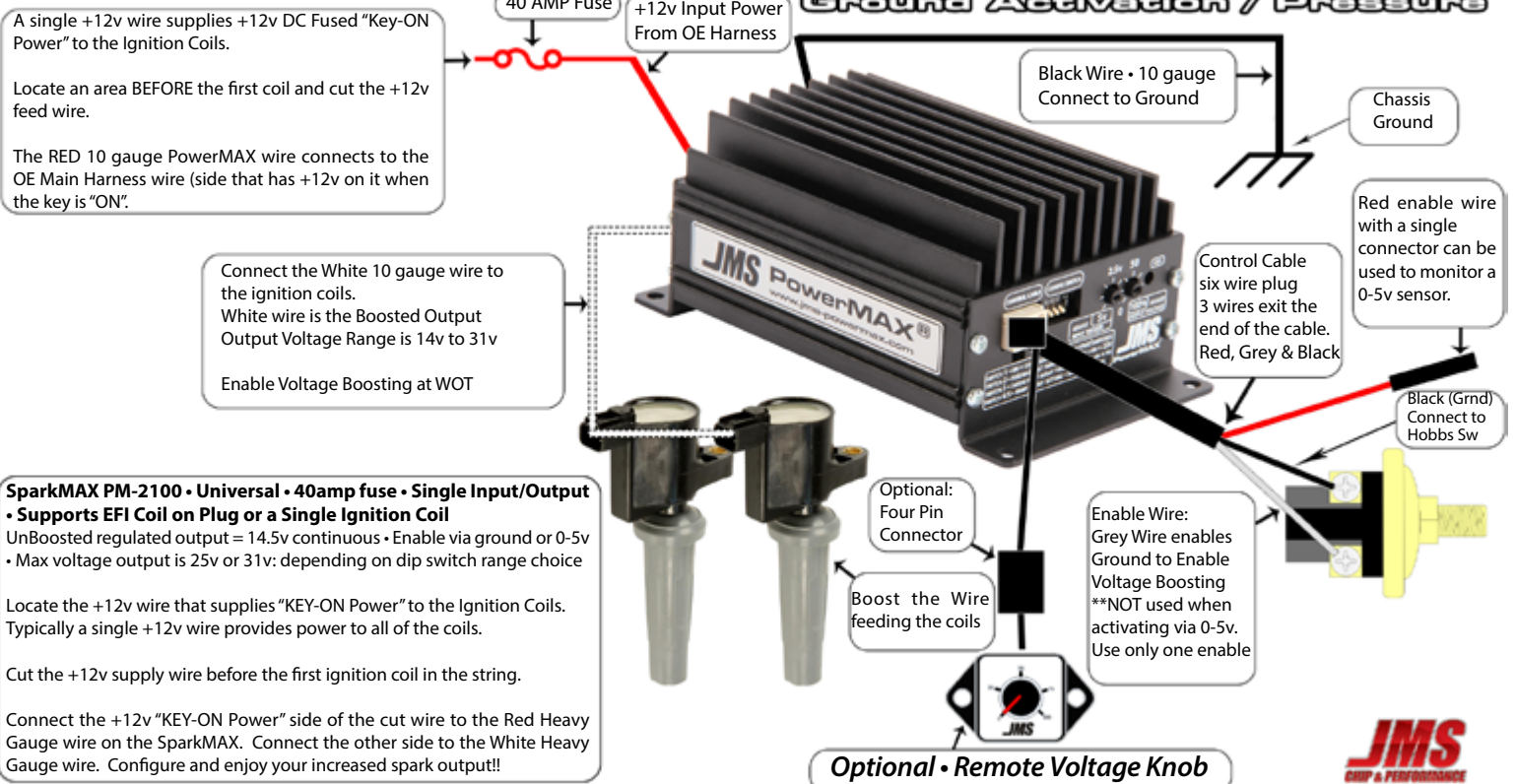
	FuelMAX Single PM-2000	FuelMAX Boost-Single PM-2009-B	FuelMAX Dual-Pump PM-2020	FuelMAX Dual-Boost PM-2029-B	SparkMAX 25V PM-2100	SparkMAX 31V - Race PM-2100-R31	SparkMAX Boost - 25V PM-2109-B
Ford • Plug and Play	X	X	X	X			
User Adjustable Output Voltage & Voltage Ramp In/Out Rate	X	X	X	X	X	X	X
Highest 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	

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### The concept behind boosting the voltage to your ignition coils?

- Reliably use the factory ignition coils to support massive horsepower.
  - 2011+ Mustang GT customers have reported making +1100rwhp with the stock coils and SparkMAX.
  - Shelby GT500 customers have reported making +1250rwhp with the stock coils and SparkMAX.
  - SVT Raptor customers have reported making +750rwhp with the stock coils and a SparkMAX.
  - Camaro customers have reported making +800rwhp with the stock coils and a SparkMAX.
  - Nissan GTR customers have reported making +1000rwhp with the stock coils and a SparkMAX.
- Boost ignition voltage *ONLY* when extra spark energy is needed.
  - More than double the spark output of the factory ignition coils at Wide Open Throttle.
  - No need to replace the factory coils with unreliable aftermarket coils.
  - Enable Spark Boosting with a either Ground via an external pressure switch or via external 0-5 volt sensor signal
- Simple to install: *Universal Single Wire* splice in design
  - 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

### SparkMAX PM-2100 Wiring • Universal • OEM EFI Ignition Ground Activation / Pressure





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### STEP 1 - LOCATE THE +12v COIL WIRE TO BOOST

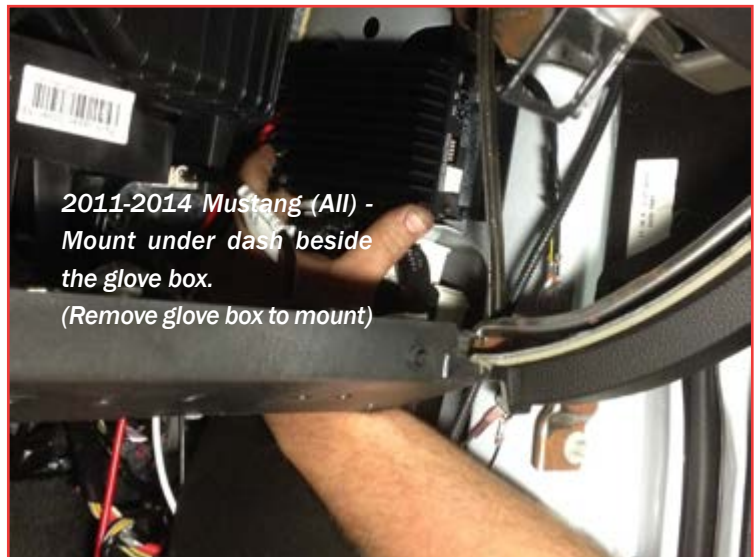
- Verify that the vehicle is turned off (no key in ignition).
- Locate the wiring harness and the single wire that supplies +12v "key on power" to all of the ignition coils.
- The ignition coils are usually located in or on top of the cylinder heads or intake.

Tip: Typically newer cars (2000-up) utilize a single ignition coil per cylinder. Normally a single +12v wire supplies voltage to all of the coils anytime the ignition key is set to the "On or Run" position. Before you cut, try to locate an area of the +12v feed wire that is well before the coils (so all of the coils can be supplied boosted voltage with a single connection).



### STEP 2 - MOUNT THE UNIT

- Install SparkMAX 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 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.



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### STEP 4 - EXTRA WIRE TO EXTEND THE SPARKMAX

- Included in the installation kit: Additional heavy gauge Red and White wire, wire loom and wire splices.
- If needed, add the wire extensions to the SparkMAX heavy gauge red and white wires.
- Strip the heavy gauge Red wires and firmly crimp together with the Yellow shrink wire splices.
- Strip the heavy gauge White wires and firmly crimp together with the Yellow shrink wire splices.
- Tip: After you have crimped the wires, utilize a heat gun to shrink the crimped connector to the wire.

SparkMAX Extension Harness Kit Contains: 4 feet of White and Red Wire, 5 feet of Wire Loom and two heat shrink wire splices.



Use the Extension Kit to locate SparkMAX inside the vehicle cab.

### STEP 5 - CONNECT & ROUTE THE CONTROL CABLE

- Plug the six-wire control cable into the unit and route the wires to the front of the vehicle.
- If enabling voltage boosting via ground and the Hobbs Pressure switch: Route the grey and black wires through the fire-wall alongside the heavy gauge Red/White wires.
- If enabling with a 0-5v sensor: Plug in the red wire jumper, add a bit of wire and route the thin red wire to the sensor.
- Secure all wires with the included tie-straps.



### STEP 6 - ROUTE WIRES THROUGH THE FIREWALL

- Route the heavy gauge Red and White Wires through the a firewall bulkhead grommet and up near location that feeds +12v to the coils.
- If utilizing control wires in the engine compartment (Hobbs Pressure Switch or other sensor), also route the Grey/Black/Red wires through the firewall bulkhead grommet.
- TIP: How to modify the factory 2011-2014 Mustang firewall grommet. Remove the passenger side inner-fender-liner and use a razor blade to cut off the nipple that sticks out of the grommet.



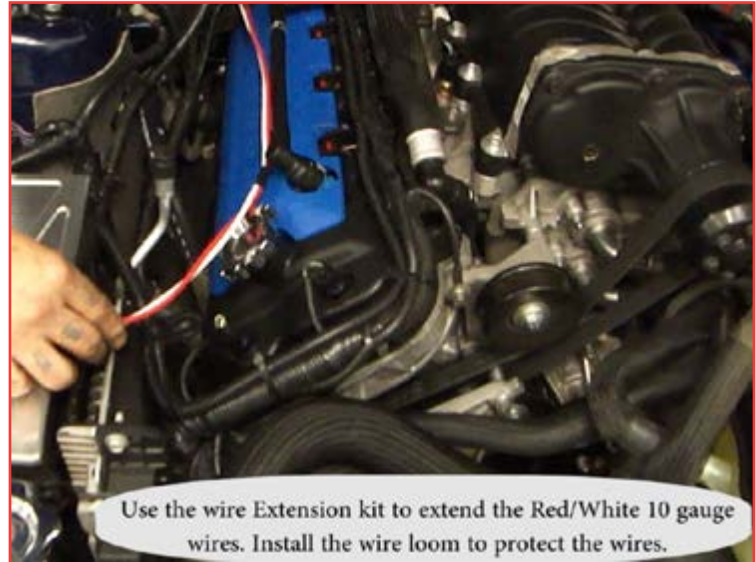
Route the thick Red, White wires and the Silver/Brown Control Wires through the modified firewall bulkhead grommet. To modify the grommet: Remove the Inner Fender Liner, use a razor blade to cut the nipple that sticks out of the grommet.



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### STEP 7 - CUT THE WIRES TO LENGTH

- Pull the wires through the firewall grommet.
- Route the wires up to the connection points and cut to length.
- Install the wires in the protective wire loom.
- If using a ground enable via Hobbs Pressure switch: route the thin grey and black wires up to the engine.



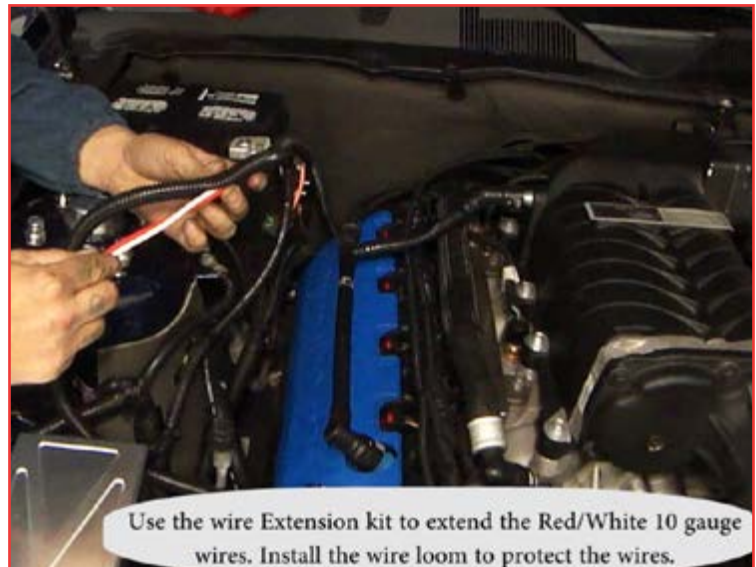
### STEP 8 - CUT & SPLICE THE IGNITION COIL +12V WIRE

- Identify the wire in the OE wire harness that provides +12v "key-on power" to the ignition coils.
- Cut the +12v "key on power" feed wire 4 inches before the connector that feeds power to the engine or the first coil in the coil group.
- Solder the +12v feed wire from the body wiring to the Red Wire (If the key is "ON" the voltage measured on this wire will be +12v).
- Solder the wire that is connected to the coils to the White Wire.



### STEP 9 - SECURE THE HEAVY & THIN GAUGE WIRES

- Use tie-straps to secure the heavy gauge red/white wires away from sharp edges and heat sources.
- Install wire loom to help protect the wires from damage.
- Use either a factory or aftermarket grommet if the wires were passed through a firewall.



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### STEP 10- 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 11 & 12.

### 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**

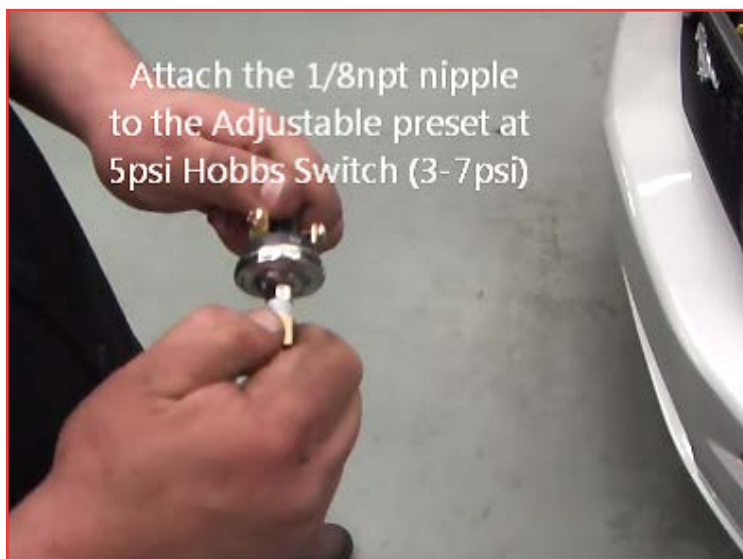
### STEP 11 - HOBBS PRESSURE SWITCH SETUP

- 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.*



### STEP 12 - 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





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### STEP 13 - 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 14 - 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 = 25v, ON = 31v
- Adjust Voltage Output - 0 = 14.5v, 100% = Maximum for the selected voltage range.



### STEP 15 - SAVE THE BOOST OUTPUT VOLTAGE SETTING

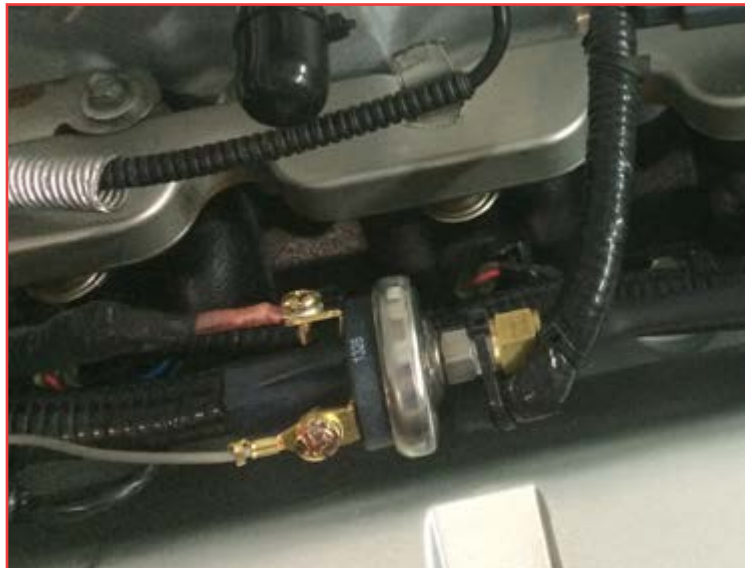
- Set Dip Switch 1 - "OFF" (When moved from ON to OFF, this Saves the current front panel switch and voltage settings & the LED twinkles while saving)
- Tip: When saving configuration settings, the unit must be powered ON and Dip Switch 1 set to ON, then make your changes and turn OFF Dip Switch 1 to 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.



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### STEP 16 - 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 2.5V 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 17 - OPTIONAL - CONFIG RAMP IN / RAMP OUT

- Configure the boosted voltage ramp-in/ramp-out rate.

Create a nice smooth voltage ramp in and out based on time or External Monitored Sensor Voltage

- Tip: Refer to the "Reference guide to the PowerMAX front panel" on page 9 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).

**WARNING** - SparkMAX is designed to activate and be used at wide open throttle or full throttle.

At the maximum setting (31v - Race) SparkMAX will more than DOUBLE the output of ignition system.

If used Incorrectly, damage to the device and/or vehicle components may occur.

#### Example of CORRECT use of this product:

**CORRECT** -> At a manifold pressure of +5psi or greater, or near Wide Open Throttle, the unit is enabled and boosting the voltage output to the ignition coils.

#### Example of INCORRECT use of this product:

**INCORRECT**-> SparkMAX wired ON to output maximum voltage to the ignition coils all of the time.



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### Reference guide to the PowerMAX front panel



**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% = 25v or 31v 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
<b>Configure Unit</b>	<b>Set Voltage Range</b>	<b>Choose Ramp Type</b>	<b>Depends on SW 3</b>	<b>Depends on SW 3</b>
OFF = Save Settings	OFF = 25V Range	OFF = Time Based	See tables below	See tables below
ON = Set Voltage/Config	ON = 31v 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
<b>Time - Immediate Ramp 0</b>	OFF - 3	OFF - 4	OFF - 5	YES	YES
<b>0.75 second Ramp 1</b>	OFF - 3	ON - 4	OFF - 5	YES	YES
<b>1.50 second Ramp 2</b>	OFF - 3	OFF - 4	ON - 5	YES	YES
<b>2.25 second Ramp 3</b>	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
<b>0-5v - Immediate Ramp</b>	ON - 3	OFF - 4	OFF - 5	NO	YES
<b>Base enable v + 0.4v Ramp</b>	ON - 3	ON - 4	OFF - 5	NO	YES
<b>Base enable v + 0.8v Ramp</b>	ON - 3	OFF - 4	ON - 5	NO	YES
<b>Base enable v + 1.2v Ramp</b>	ON - 3	ON - 4	ON - 5	NO	YES

**PM-2999**

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

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### 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, Voltage Ramping in too quickly
  - 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.



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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
<b>PM-2000</b>	X				X		X
<b>PM-2000-GM</b>	X			X	X		X
<b>PM-2000-PPM11</b>	X		X		X		X
<b>PM-2009-BOOST</b>	X					X	
<b>PM-2009-BOOST-GM</b>	X			X		X	
<b>PM-2009-BOOST-PPM11</b>	X		X			X	
<b>PM-2020</b>		X			X		X
<b>PM-2020-PPS11</b>		X	X		X		X
<b>PM-2029-BOOST</b>		X				X	
<b>PM-2029-BOOST-PPS11</b>		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
<b>PM-2100</b>	X	X	X		X		X
<b>PM-2100-R31</b>	X	X		X	X		X
<b>PM-2109-BOOST</b>	X	X	X			X	
<b>PM-2109-BOOST-R31</b>	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
<b>PM-2200</b>	X	X		X			
<b>PM-2220</b>	X		X	X			
<b>PM-2300</b>	X	X			X		
<b>PM-2300-PPS13</b>		X			X	X	

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### ABOUT JMS CHIP & PERFORMANCE

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.



### 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.



### 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 after-market component sales and distribution.



### CUSTOM ECU CALIBRATION ENGINEERING

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.



## **JMS POLICIES**

### **HOW TO ORDER**

Retail orders for JMS products can be placed through our website at: [www.jmschip.com](http://www.jmschip.com) or by calling us factory direct at (601) 766-9424. JMS products can also be purchased through our network of warehouse distributors, dealers, jobbers, and installers. To locate a wholesaler or installer in your area, please contact us or use the dealer locator on our website.

### **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**

JMS products are shipped F.O.B. Lucedale, MS via UPS or common freight carrier, and are subject to applicable shipping terms and charges. JMS does maintain a freight policy for warehouse distribution based on a minimum order qualification. Overseas order shipping via a common freight forwarding company or broker are the responsibility of the customer.

### **PRICING**

JMS maintains a *minimum advertised pricing policy* to protect product value, and maintain consistent and fair distribution or retail pricing points. JMS places high value on its brand and product integrity.

### **NON-JMS BRAND PARTS**

Aftermarket parts purchased from JMS are covered under the manufacturer's warranty, and are not covered under the JMS manufactured products warranty.

### **OFF-ROAD NOTICE AND TERMS & CONDITIONS**

JMS products are designed for Off-Road or Racing use only. JMS terms and conditions including: Pricing, specifications, warranty, and availability are subject to change without notice. Compliance with all federal, government, provincial, state or local laws are the responsibility of the customer or end-user. All claims of product performance are based on controlled testing conditions and real-time data, and results may vary based on your application or use. JMS shall not be liable for any fines or violations resulting from product use or installation.

### **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:**

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**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](http://WWW.YOUTUBE.COM/JMSCHIP)

If you have any questions, please contact JMS technical support via email: [jms@jmschip.com](mailto:jms@jmschip.com)

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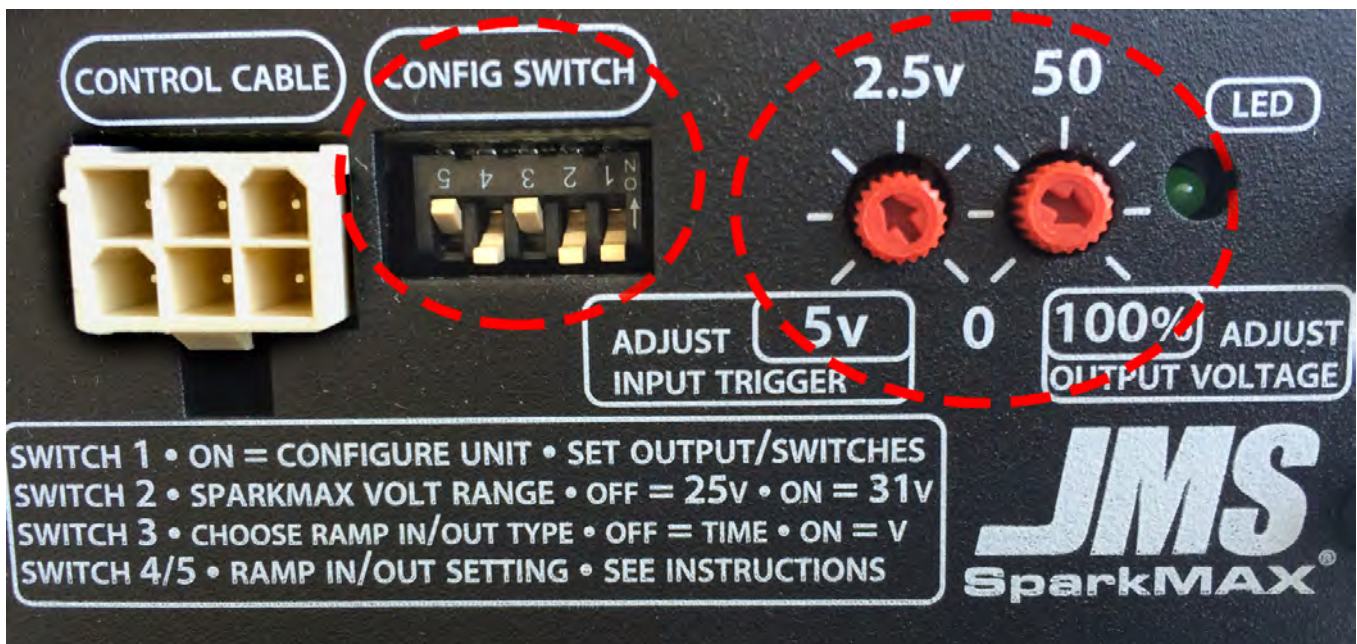
## Special Addendum – JMS SparkMAX V2 Installation on 2011-2014 Mustang

This special addendum applies to ALL 2011-2014 Mustangs (Shelby/GT/V6).

Video that details the V1 hard wire SparkMAX installation:

<http://www.youtube.com/watch?v=y3fPo46OfJk>

1. Find a location to Mount SparkMAX under the dash (see video link).
2. Ground the unit
3. Route the harness wires through the firewall (see video link).
4. Plug the SparkMAX Plug and Play Harness into the connector under the Hood near the ECU.
5. Connect the Plug and Play Harness into the Pedal Position Connector (above the accelerator pedal).



### Notes:

SparkMAX is factory pre-set with the above configuration. It is designed to use the accelerator pedal activation. The above setup enables when the pedal is just past 2/3 of the way to the floor. At 2/3 pedal the unit will start boosting Spark Voltage and the LED will blink. Output from that point will be linear with the pedal. Full Throttle = Full Voltage. The factory default voltage output is 24V.

To increase the output to 31V turn dip switch 1 – ON, wait one second, turn switch 2 – ON and adjust the output voltage via the Output Voltage POT then turn dip switch 1 – OFF (LED twinkles, switches are saved).