

MAXimum Performance From Your EFI

When You Ride, Where You Ride, Every Ride!

THUNDER MAX

EFI made simple.

Would you like to have full control of your EFI system, freedom to make major or minor adjustments without a master's degree in electronics and computers? **Here is a simple solution—ThunderMax with AutoTune!** The ThunderMax is a completely new product that replaces the factory module, not an add-on box or signal modifier. The ThunderMax is purpose-built to deliver uncompromising performance but you don't have to be a rocket scientist to program it or make adjustments.

Just how easy is it? Installation is a straightforward replacement of the factory module and oxygen sensors^{*1}. The ThunderMax SmartLink software contains hundreds of base maps that cover over 80% of popular factory and aftermarket combinations, dyno-developed by Zipper's on real motorcycles. Choosing a map is a quick and easy process thanks to SmartLink's sorting filters; loading a map takes less than a minute. After that, you're ready to start the motorcycle. Once running, let the bike warm up at idle to operating temperature while the Smartlink software automatically dials in idle and warm-up settings for that particular engine and you're ready to ride! During your ride, every time you ride, the ThunderMax AutoTune module analyzes the air/fuel ratio read by the wide-band oxygen sensors at warp speed after every cylinder fire and makes any necessary adjustments to the injector pulse width to achieve the desired air/fuel ratio while compensating for variations in injectors, fuel pressure or exhaust flow. With every tank of fuel, at any temperature or elevation. That's it! All you have to do is ride.

As simple as we've made it to install and use, don't be fooled into thinking that this not one of the most sophisticated systems you can buy for your Harley®. Using the supplied SmartLink software, you can adjust or monitor virtually every parameter of the system:



- Closed Loop AFR Targets
- Decel Pop Control
- Engine Temp Alarm
- Digital Tech Compatible
- Idle Speed
- Read Diagnostic Codes
- Injector Size Compensation
- Nitrous Compatible^{*2}
- Rev Limit
- Running Statistics / Logs
- Live Engine Tuning
- Supercharger Compatible
- Igniting Timing
- Accel Pump Simulation
- Live Monitoring
- Warm-up Settings
- Speedometer Calibration
- Start Fuel Pulse
- Live Recording
- *And Many More*

The ThunderMax makes more sense in the long run as the system can grow and change as your engine does—just load a new map! ThunderMax software, firmware and maps updates are accessible 24/7 with an Internet connection so you're only a mouse click away from the latest available data. The ThunderMax is designed and manufactured right here in the USA and backed by a 3-year warranty!



PART NO.	DESCRIPTION
#309-362 ^{*3}	ThunderMax w/AutoTune '08-up Touring models (Throttle By Wire)
#309-360	ThunderMax w/AutoTune '01-up Softail®, '04-up Dyna®, '02-'07 Touring
#309-365	ThunderMax w/AutoTune for '07-'09 Sportster® Models
#309-385 ^{*4}	ThunderMax w/AutoTune for 2010 Sportster® Models
#309-364 ^{*4}	ThunderMax w/AutoTune for '08-up XR1200 Models
#309-366	ThunderMax w/AutoTune for '02-up V-Rod® Models



*1 – 2006 and earlier bike require installation of oxygen sensor bungs in exhaust pipes

*2 – Except V-Rod® models

*3 – 2010 models with stock exhaust require oxygen sensor bung port modification to 2009 location, or 2009-style exhaust system

*4 – Includes Pigtail Communication Harness

USB/Serial Port Adapter If your laptop or PC does not have a serial port, this inexpensive adapter will instantly add a serial port to your computer for communicating with the ThunderMax® EFI controller (36 pin connector models only; not required for #309-362). Supports 1.0 and 2.0 USB ports, Windows 98/2000/ME/XP/Vista/7. Includes driver installation software. **#372-000**

ThunderMax® Pigtail Harness This pigtail harness allows a second port for the communication cable connection to the ThunderMax. It is installed to the bike's wiring harness at the 36-pin ECM connector. Handy for motorcycle models with tight clearances around the ECM such as Dyna®, Softail® Rocker® and 2002-2005 V-Rod® models. Requires ThunderMax® ECM with serial number 114000 or higher (produced beginning August 2008). Will not work on previous model ThunderMax® ECM's or 2008-up Touring models. Included with ThunderMax® systems #309-364 (XR1200), #309-385 (2010 XL). **#309-324**

Products on this page are not for sale or use on pollution controlled vehicles.

ThunderMax⁵⁰: Street Legal Performance

ARB E.O. #'s D-644, K-001, K-001-1, K-001-2



ThunderMax[®] 50 represents the future in development of Smart Aftermarket Products. ThunderMax[®] 50 provides excellent performance while meeting the tough emissions standards of California Air Resources Board. With its intelligent design, ThunderMax[®] 50 is continually

tuning the engine, adjusting all points of the base map to meet the Air/Fuel targets. Wide-Band sensors provide feedback to the ThunderMax[®] AutoTune module for automatic AFR adjustments. This proven system provides excellent performance under any riding conditions. **ThunderMax[®] 50 is the one that WORKS!**

You will immediately notice an improvement in throttle response and a sharper exhaust note. As you continue to ride, you will enjoy cooler, more stable engine temperatures with dramatic improvement in acceleration and a smoother idle.

You will immediately notice an improvement in throttle response and a sharper exhaust note. As you continue to ride, you will enjoy cooler, more stable engine temperatures with dramatic improvement in acceleration and a smoother idle.



ThunderMax[®] 50 is the most powerful, cost effective, compliant tuning device in the industry!

Features:

- Increased torque and power over the stock system
- Maintains excellent fuel economy
- System properly self tunes aftermarket exhaust systems
- Adjustable rev limiter
- Provides access to read vehicle diagnostic trouble codes

PART NO. DESCRIPTION

- #309-370 Fits: '02-'05 Touring, '01-'05 Softail[®] and '04-'05 Dyna[®] Models w/ 88" EFI Engines
- #309-373 Fits: '06 Touring and Softail[®] Models w/ 88" EFI Engines
- #309-375 Fits '08-'10 Big Twins except Throttle By Wire Touring & FXDF (Fat Bob[®]) models w/96" engine

ThunderMax[®] Components

ThunderMax[®] ECM Only

Can be used for replacement or as an open loop application without AutoTune module (with no AutoTune module installed, ThunderMax[®] operates in open loop). Three year warranty.

PART NO. DESCRIPTION

- #309-340 ThunderMax[®] ECM only, for '01-'10 Softail[®], '02-'07 Touring, '04-'10 Dyna[®], '07-'09 XL
- #309-341 ThunderMax[®] ECM only, for '02-'10 V-Rod[®]
- #309-342 ThunderMax[®] ECM only, for '08-up XR1200
- #309-343 ThunderMax[®] ECM only, for 2010 Sportster[®]



ThunderMax[®] AutoTune Only

Can be used to add AutoTune to any 2006 or newer ThunderMax open loop system (requires firmware version 3.2 or higher). Two versions available (applications listed below); functionality is the same for both, the difference is the physical housing for mounting purposes.

PART NO. DESCRIPTION

- #309-302 Gen I AutoTune with O2 sensors. For use with earlier (pre-2007) Generation I version ThunderMax[®], Marelli conversions, Gen II V-Rods[®] and '07-'09 XL models.
- #309-350 Gen II AutoTune with O2 sensors. Modular version, attaches to Gen II (#309-340) ThunderMax[®] open loop modules. For '02-'07 Touring, all Softail[®] and Dyna[®] models.
- #309-355 Replacement oxygen sensor, all ThunderMax[®] models. Sold each.



Some products on this page are not for sale or use on pollution controlled vehicles.

ThunderMax Marelli EFI Conversion Kit

Stop cussing that early EFI system, just replace it! It's no secret that the earlier Magnetti-Marelli EFI used on Evolution® and '99-'01 TC88 baggers has 'issues'—hard starting, erratic idle, harder yet to tune...if these are issues with your MM bike, this kit will solve them! We've taken our ThunderMax® EFI electronics and throttle body (with the help of some specially made parts) and developed this conversion kit for bikes with the earlier systems. This kit allows you to retain the original wiring harness and gas tank, while upgrading to the same components used in our popular high performance Muscle series EFI engine kits for Delphi®-equipped bikes...

Instant starting! Consistent idle! Superb performance! It's all here in this kit, and our expansive library of high-resolution base maps will have you up and running in no time. Adding optional AutoTune transforms this system to full closed-loop automatic air/fuel ratio correction, maintaining your custom tune no matter what the ambient conditions or elevation you choose to ride in!

Includes detailed installation instructions and SmartLink software. Available with OE 44mm, ThunderMax® 50mm or 54mm throttle bodies.

You'll fall in love with your bike all over again!



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PART NO. THUNDERMAX MARELLI CONVERSION KIT

- #517-098*1 '99-'01 TC 44mm Conversion kit (88"-95")
- #117-050*1 '99-'01 TC 50mm Conversion kit (95"-103")
- #117-054*1 '99-'01 TC 54mm Conversion kit (107"-up)
- #117-051*2 '95-'98 EV 50mm Conversion kit (80"-up)
- #117-055*2 '95-'98 EV 54mm Conversion kit (107"-up)
- #309-302*3 AutoTune for Marelli conversion kit



- *1 - 2000 models require adding a VSS wire to the ECM harness (instructions included)
- *2 - 1995-96 models require adding a ground wire to the ECM harness (instructions included)
- *3 - Data port plug 12v power wire must be rewired for use with AutoTune (instructions included)

ThunderMax EFI System for JIMS 120/131" Engines



Got your eye on a JIMS/Screamin' Eagle® engine? Here's the quick and easy way to simplify installation and tuning on an EFI bike!

We've developed a ThunderMax EFI system with AutoTune just for the JIMS engines. Our ThunderMax 54mm (120") or 60mm (131") throttle body/manifold and air cleaner systems ensure enough airflow for these engines to reach their full potential. Just install the IAC, TPS, fuel rail assembly and injectors from your original system to the ThunderMax throttle body and the ThunderMax ECM and you're ready to go (kits for 2006-up bikes include 4.89/gps injectors, kits for '99-'01 models include a fully dressed throttle body and our Marelli conversion components). Our high resolution ThunderMax ECM with AutoTune takes the hassle out of AFR tuning.

Just ride the bike! It really is that easy!

PART NO.	DESCRIPTION
#117-250	'06-up*1 ThunderMax EFI system w/AutoTune f/JIMS 120
#117-252	'02-'05 ThunderMax EFI system w/AutoTune f/JIMS 120
#117-254	'99-'01 ThunderMax EFI system w/AutoTune f/JIMS 120
#117-260	'06-up*1 ThunderMax EFI system w/AutoTune f/JIMS 131
#117-262	'02-'05 ThunderMax EFI system w/AutoTune f/JIMS 131
#117-264	'99-'01 ThunderMax EFI system w/AutoTune f/JIMS 131

*1 - Does not fit 2008-up Touring models



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ThunderMax Nitrous Assist Dry System

Give Your Twin Cam® Some N.A.D.S.!



If you want to quickly add a lot of Horsepower to your ride here is the biggest bang for the buck you can buy! ThunderMax N.A.D.S. (Nitrous Assisted Dry system) for EFI Twin Cam® bikes! N.A.D.S. is a complete bolt-on “dry” system that requires no secondary fuel source for a clean, simple installation (ThunderMax ECM required). Nitrous distribution is ingeniously handled thru Smartlink software and ThunderMax for accurate control and distribution of fuel, nitrous and spark timing retard at the specific time you want the system to spray.

No bulky fuel pumps, fuel lines or sandwich plates required! The additional fuel the nitrous requires is introduced through the existing fuel injectors. N.A.D.S. kits include a specially designed air cleaner backing plate equipped with an arming switch, nitrous solenoid, injector nozzle and Zipper's high-flow air filter.

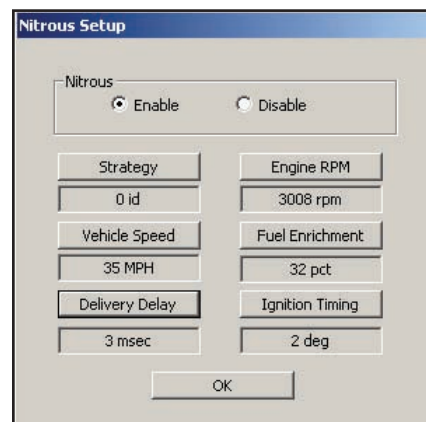
Installation is simple, requiring installation of the air cleaner back plate assembly and bottle kit with mounts designed to fit your bike.

Wiring the system in amounts to plugging two wires from the supplied harness into open ports in the ECM plug, and plugging the harness into the data port plug. After that, link to your ThunderMax and program your system settings and limits. Fill the bottle, turn on the arming switch and hang on tight!

Adjustments to your minimum rpm and vehicle speed nitrous activation points, along with fuel enrichment, ignition timing retard and nitrous delivery delay are configured within your ThunderMax ECM's SmartLink software. These menus are designed to allow the user to easily set up safe limitations for your engine. Show polished bottle and brackets kits are available to mount the 12-oz bottle to the chassis of Dyna®, Softail® and touring models. **Installation is quick and easy!**

The **N.A.D.S.** system is 95% pre-built and takes about 30 minutes to install. **Compatible with ThunderMax Open or Closed Loop EFI Systems** (sold separately) Order Two Part Numbers – (1) N.A.D.S. Main Component, and (2) Bottle/Bracket Kit for Your Bike

Note: Installation on modified or larger than 96" displacement engines will require larger injectors and custom mapping for proper and safe operation



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PART NO. KITS FOR BIKES EQUIPPED WITH STOCK THROTTLE BODIES

- #109-210 N.A.D.S. Kit (Main Component), for Big Twins w/cable-operated throttle bodies
- #109-214 N.A.D.S. Kit (Main Component) for '08-up Big Twins w/stock TBW throttle bodies
- #109-216 N.A.D.S. Kit (Main Component) for stock '07-up Sportster® XL models



PART NO. KITS FOR BIKES EQUIPPED WITH THUNDERMAX® THROTTLE BODIES

- #109-213 N.A.D.S. Kit (Main Component), Big Twins with ThunderMax® cable-operated throttle bodies)

PART NO. NADS BOTTLE/BRACKET/LINE KITS

- #109-220 N.A.D.S. '02-'08 Touring Model Bottle/Bracket Kit
- #109-222 N.A.D.S. '09-up Touring Model Bottle/Bracket Kit
- #109-230 N.A.D.S. Softail® Model Bottle/Bracket Kit
- #109-240 N.A.D.S. Dyna® Model Bottle/Bracket Kit
- #109-245 N.A.D.S. Sportster® Model Bottle/Bracket Kit
- #109-250 N.A.D.S. 12oz Bottle Only

