

HOW TO UPDATE SOFTWARE, FIRMWARE & CONFIRM SOFTWARE/FIRMWARE VERSION

SmartLink IV Tuning Manual Excerpt Pages 159-170 SOFTWARE Version 2008.1.14 For ThunderMax High Resolution ECM For 2001-2009 Delphi®-Based Air Cooled Motorcycles (Except 2008-09 Touring Models) Manual V.20090528

The ThunderMax EFI controller is not legal for use or installation on motor vehicles operated on public highways in the State of California or other States where similar emission control laws may apply.

The user shall determine suitability of the product for his or her use. The user shall assume all risk and liability in violation of regulations and any incurred financial obligations due to vehicle inspections or emissions tests.

Email Technical Questions to: <u>ProductSupport@ZippersPerformance.com</u> <u>www.Thunder-Max.com</u>

Section 6: Updates

An Internet Connection is required for all updates.

SMARTLINK UPDATES OVERVIEW

There are two methods of updating the software, firmware, and EFI Map library; through the SmartLink software's update features, and through the ThunderMax website. **Occasionally some customers have issues updating their software through the integrated SmartLink update functions; however it is rarely the fault of the SmartLink software.** The main reason for problems is quite simple, for some reason, your computer is not allowed to send and receive automatic requests for information from an outside FTP server. Since this is a function that's automatically contacting an FTP server for information, some networks or computers will deny the SmartLink request for data transfer before it's even allowed to contact the FTP server.

Key reasons for not being able to update through the integrated Update functions are as follows:

1.) Your network is highly secured and does not allow automatic requests for unknown FTP servers.

2.) Your computer has a security or firewall setting that is not allowing SmartLink to automatically send information to and from the SmartLink FTP server.

3.) You are using your office computer that was setup by your professional IT department. Many of the updating problems that are seen by Product Support are related to "business" computers where the user (you) does not have administrator privileges, and many network features are locked out.

These are simply not problems that the SmartLink support staff can help you with, given the number of operating systems in use today, and the complexity of modern network security. If your computer is administered by your IT department, you need to make them aware of the problem, but only if they are ok with you having personal (non business related) programs installed on the computer. Otherwise, you will need to purchase your own computer, and your own internet connection, to take advantage of the automatic update functions. However, this is completely unnecessary! ALL updates are available through any web browser.

If you are experiencing problems with the automatic update functions through the software, you are not out of luck! Simply go to the ThunderMax website (<u>www.Thunder-Max.com</u>), and manually download the latest Software, Firmware, or Tuning Manual release. It is not worth the effort if you cannot get the update function to work and do not know enough about your computer or network to correct the problem. If you do not control the computer or network settings, you will never solve the problem on your own, and there's nothing that the Product Support team can do to help.

UPDATING THE SMARTLINK SOFTWARE

To maintain the most current version of SmartLink IV, use the update function in the software. An Internet Connection is required for all updates.

Select **Configure > SmartLink Update** to begin the update process, as shown below.



The following window will appear:

Software Updates	
Check to see if you need updates for your software.	
Click Check to search for updates, Cancel to Exit.	
Check	Cancel

One of two choices will appear:

	Installing Updates
Software is up to date!	There are no updates currently available for download.
No action required.	
	Finish
	Review and Install Updates
New Software	Review and Install Updates Download Size (total) : 14.93 MB
Available!	WebUpdate2008_1_7 (Update 1 of 1)
Proceed Forward with the Update	
Process	Updates found
	Install

Follow the instructions provided by the SmartLink IV update windows to update your version of SmartLink IV. When complete, open SmartLink IV and select **Help > About SmartLink...** to check the version number that is currently installed on your computer.

UPDATING THE BASE MAP DEFINITIONS

To ensure that you have the complete and up to date Base Map Library, select the "Check Internet for Updates" button on the "Base Map Name Encoding" window, as shown below.

Base Map Name Encod	ling			X
Engine Manufacturer Engine Type Family) []		G Notes E PRIVATE>	
Cylinder Head Type Piston Type Cam Exhaust Throttle	HD EVO Stock Generic 10.5:1 Red Shift TC 577 D+D Borzilla 101-105 50mm Zippers (4.22 Inj)	<	Date Created : Year/Model : I 1 - Manufacturer 2 - Engine Family : K 3 - CVI Head J - Piston I 6 - Exhaust 7 - Throttle Body 8 - Air Cleaner 9 - Muffler 10 - Keifenin	
Air Cleaner Muffler Modification Base Map Ele Hame Check Inte	Supertrapp FL Slip-Ons Production Baffle Gesmissi OE043008.slk rnet For Updates Select I Load E	Image: SaseMap	A 10 - Modification Q Notes Conditions when map was generated Date 4/30/2008	

You must be connected to the internet to update the Base Map Definitions as well as retrieving any available new Base Maps. The SmartLink IV Installation CD does contain the base map library; however it is only as current as the CD itself. Versions 2008 and later will automatically download any new base map files when the definition file is updated. Previous versions will only download a list of available base map choices. Again, an internet connection is a requirement for updating the SmartLink IV software / base maps.

It is simply good practice to update the definition file when searching for a new Base Map file. Not only are new maps constantly being created, but the older Base Maps are updated occasionally as well. Once updated, you may proceed with selecting an appropriate Base Map for the current engine combination you are working with.

If you are satisfied with the operation of your current Base Map, chances are a new Base Map will not make a significant difference to the operation of the motorcycle. Updated maps could contain spark curve or fuel management changes, or even different fuel economy strategies.

UPDATING THE FIRMWARE IN YOUR THUNDERMAX ECM

For any modules with a Firmware version of 3.2 or higher, you can update the firmware, if an update is available, through the SmartLink software. You must be linked to the ThunderMax ECM to update the firmware in the module. **An Internet connection is required to download the Firmware.** Once the firmware file is downloaded, you do not have to be connected to the internet to upload the new Firmware to the ThunderMax ECM. There are two stages in updating the Firmware in the ThunderMax ECM.

Stage 1: Check for an update, and download the latest Firmware onto your computer.

Stage 2: Link to the ThunderMax ECM and upload the newly downloaded Firmware to the module.

Both stages are fully covered in the following pages. Both require that you are linked to the ThunderMax ECM, and have read the module map and settings.

To begin the Firmware update procedure:

1.) Link to your ThunderMax ECM

Link

2.) Select File > Read Module Maps and Settings

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File EFI Maps	; Map Editing	Tools	Configure	Mo
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Open			Ctrl+O	빝
Close			aut a	Vol
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3 HDTSSJV(EE010307			Spa
4 HBUSSGS	GXE012406) de
READ Modu	le Maps and Set	tings:	Ctrl+R	e Sp
WRITE Mod	ule Maps and Se	ettings	Ctrl+W	
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Stage 1: Downloading an Updated Firmware

Select Configure > Firmware > Check for Firmware Upgrade to see if there is an updated Firmware available for your ThunderMax ECM.

🍟 SMLIV 🕴 Zippers End User	SFW7010-ZIPB - HOFJPTVCUC	G040307.SLK (FileBaseMap:H	
File EFI Maps Map Editing Tools	Configure Monitoring Window Help		
Tuning Mans	Select Com Port	The Maniton The Bu	
	Firmware 🕨 🕨	Check for Firmware Upgrade	
Front Cylinder Fuel F Bear Cylinder Fuel	Product Configurations	Upgrade Module Firmware Now	
IAC Curves	Closed Loop MODULE Settings	0.001#11	
	MODULE Settings	AFR Rear	
u Ignition Timing VS TPS	Smartl ink Lindate	9.30 AFR	
i ⊕ Air/Fuel-TPS @ rpm	псагсу, эрак жау.	AFR Target	

If an updated firmware is available for your ThunderMax ECM, the following window will appear:

Multiple	Files Found			×
	Select Desired Base M	ap File		
	EFI_THUNDERMAX-01	_Version4a_12-04-08.8	819 (Latest Version)	
		OK	Cancel	

If you select the "OK" button, the firmware download will begin. Once completed, the following window will appear.

Firmware Download Completed						
(į)	Firmware upgrade file saved: C:\Documents and Settings\All Users\Documents\Thunder Heart\SmartLinkIVZippers\FirmwareUpgrades\EFI_THUNDERMAX-01_Version4a_12-04-08.B19 From the main menu run 'Upgrade Module Firmware Now' to upgrade the module using this file.					
	(OK					

Stage 2: Uploading a New Firmware Version into the ThunderMax ECM

Link Link to the ThunderMax ECM, and Read Module Maps and Settings. SmartLink 2008.0.2 and newer will automatically read the map from your ECM before any firmware upgrade can begin.

To upload the new Firmware to the ThunderMax ECM, select Configure > Firmware > Upgrade Module Now, as shown below. You must be linked to the ThunderMax ECM to perform any firmware upgrades.

Ť	SMLIV Zippers End	User	SFW7010-ZIP	PB - H	OFJPT	VCUG	6040307.SLK	(FileBaseMa	ap:l
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	Tuning Mane		Select Com P	Port		►	nk Moni	ton Tac	
			Firmware			•	Check for Firmv	vare Upgrade	
Front Cylinder Fuel Pro		Product Conf	figurations		- • i	Upgrada Moduli	a Firmuara Nou		
	🛨 Rear Cylinder Fuel		Authorize Pro	oduct			opgi ade Moduli		
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	Enderstand Liming			ungs			9.30	AFB	
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	🖽 Alf/Fuel-1 FS @ tpm			- neare	yı. opun	our.	AFR 1	arget 📘	

The following notice will appear, prompting you to continue:

Firmware Upgrade - Module Read
You are about to perform a firmware upgrade to the module. The current module map and configuration will be READ before performing this upgrade. Continue with the firmware upgrade now?
<u>Y</u> es <u>N</u> o

Once selected, the following window titled "Module Detection" will appear:

Module Detection
To Initialize the Firmware Upgrade Process
 Turn the MODULE power OFF for 20 seconds. Turn the MODULE power ON. The software will continue automatically.
PLEASE CYCLE THE MODULE POWER NOW!
If MODULE DETECTION fails to occur
1. The module/firmware may be corrupted. 2. The module/firmware ∨ersion DOES NOT allow upgrade.
Please contact the manufacturer to upgrade or repair the module.
Cancel

Follow the instructions on the "Module Detection" window:

- 1.) Turn off the Ignition Switch for 20 seconds.
- 2.) Turn on the Ignition Switch

The update process will now automatically begin. The following window will appear, allowing you to select the most recent version of the Firmware that you've downloaded onto your computer. Select the most recent version of the firmware, and select the "Open" button, as circled below.



Once the file has been opened, the following window will appear titled "Module Detection." Follow the prompts to continue the firmware upgrade for your ThunderMax ECM.

Module Detection
You are about to begin the 'Firmware Upgrade Process'.
Current Module Firmware: 0x48 - 06-03-2008 Update To This Firmware: 0x4A - 12-04-2008
 Turn the MODULE power OFF for 20 seconds. Turn the MODULE power ON.
Firmware Upgrade will continue automatically
<u>{</u>
Cancel

Follow the instructions on the "Module Detection" window:

- 1.) Turn off the Ignition Switch for 20 seconds.
- 2.) Turn on the Ignition Switch

If the Firmware upgrade process is successfully initiated, you will see the following status window appear, titled "Transferring Data."

Transferring Data	
Firmware Download	

Once the transfer completes, the "Module Detection" window will appear again.

Module Detection								
Firmware Upgrade Completed Normally								
 Turn the MODULE power OFF for 20 seconds. Turn the MODULE power ON. The software will continue automatically. 								
PLEASE CYCLE THE MODULE POWER NOW!								
Cancel								

Follow the instructions on the "Module Detection" window:

- 1.) Turn off the Ignition Switch for 20 seconds.
- 2.) Turn on the Ignition Switch

The software will automatically "WRITE Module Maps and Settings" to complete the Firmware Upgrade process.

The Firmware is now upgraded in your ThunderMax ECM. To check the firmware version on your ThunderMax ECM, simply open SmartLink IV, Link to the ECM, and select **Help > About SmartLink...**, as shown below. The "SMLIV" window that pops up will display the current software and firmware versions.

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	Erront Cylinder Fuel		ШГ	В	attery Volta	Onlin	Online Help Documents			
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	under Finling ⊕ Ignition Timing VS TPS				7.00 deg	Prepa	Prepare and Send, Module Data Email			
	Air/Fuel-TPS @ rpm Module Configuration			Rear Cyl. Spark		Create and Send, Monitor Log Email				_
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