Instruction Manual



AEM Infinity V96.2 Update Notes



STOP!

THIS PRODUCT HAS LEGAL RESTRICTIONS. READ THIS BEFORE INSTALLING/USING!

THIS PRODUCT MAY BE USED <u>SOLELY</u> ON VEHICLES USED IN SANCTIONED COMPETITION WHICH MAY NEVER BE USED UPON A PUBLIC ROAD OR HIGHWAY, UNLESS PERMITTED BY SPECIFIC REGULATORY EXEMPTION. (VISIT THE "EMISSIONS" PAGE AT <u>HTTP://</u> WWW.SEMASAN.COM/EMISSIONS FOR STATE BY STATE DETAILS.)

IT IS THE RESPONSIBILITY OF THE INSTALLER AND/OR USER OF THIS PRODUCT TO ENSURE THAT IT IS USED IN COMPLIANCE WITH ALL APPLICABLE LAWS AND REGULATIONS. IF THIS PRODUCT WAS PURCHASED IN ERROR, <u>DO NOT</u> INSTALL AND/OR USE IT. THE PURCHASER <u>MUST</u> ARRANGE TO RETURN THE PRODUCT FOR A FULL REFUND.

THIS POLICY ONLY APPLIES TO INSTALLERS AND/OR USERS WHO ARE LOCATED IN THE UNITED STATES; HOWEVER CUSTOMERS WHO RESIDE IN OTHER COUNTRIES SHOULD ACT IN ACCORDANCE WITH THEIR LOCAL LAWS AND REGULATIONS.

WARNING: This installation is not for the tuning novice! Use this system with EXTREME caution! The AEM Infinity Programmable EMS allows for total flexibility in engine tuning. Misuse or improper tuning of this product can destroy your engine! If you are not well versed in engine dynamics and the tuning of engine management systems DO NOT attempt the installation. Refer the installation to an AEM-trained tuning shop or call 800-423-0046 for technical assistance.

NOTE: All supplied AEM calibrations, Wizards and other tuning information are offered as potential starting points only. IT IS THE RESPONSIBILITY OF THE ENGINE TUNER TO ULTIMATELY CONFIRM IF THE CALIBRATION IS SAFE FOR ITS INTENDED USE. AEM holds no responsibility for any engine damage that results from the misuse or mistuning of this product!

AEM Performance Electronics AEM Performance Electronics, 2205 126th Street Unit A, Hawthorne, CA 90250 Phone: (310) 484-2322 Fax: (310) 484-0152 http://www.aemelectronics.com Instruction Part Number: N/A Document Build 12/28/2015

The Infinity ECU contains two separate microcontrollers, a primary and a peripheral controller. The v96.2 update includes a firmware change for the peripheral microcontroller as well as the primary. *The new peripheral microcontroller firmware is not compatible with certain older primary microcontroller firmware.*

- This means that once the new v96.2 pakgrp file is loaded, you cannot simply reload a pakgrp file older than v96.1 in one step. *Reverting to an older version requires a two step process.*
- Pakgrp files prior to the v96.1 update did not contain peripheral microcontroller firmware as this file is loaded onto the hardware as part of the final QC process at AEM.
- The ECU will not function properly if certain old pakgrp files are reloaded after upgrading to a v96.2 pakgrp. The ECU will not respond correctly to the ignition switch input.

In the unlikely event that a pakgrp file older than v96.1 must be loaded, you must follow a two step process. First, the ECU must be updated with a different peripheral microcontroller firmware version that is compatible with older primary microcontroller firmware versions. Next, the older pakgrp file can be loaded. The legacy version of the peripheral microcontroller firmware is available at aeminfinity.com. The procedure is included in the <u>Troubleshooting</u> 14 section.

ECU P/Ns 30-7100 serial numbers 230 and below ECU P/Ns 30-7101 serial numbers 142 and below

If your ECU falls into this range, the legacy peripheral microcontroller firmware file must be loaded first before proceeding to load any other v96.2 firmware file.

Upgrade Feature/Change Summary

This incremental update will add features and improve functionality of the base v96 firmware. Several new timing patterns have been added along with CAN receive support for AEM's new line of X-Series products. The firmware update dialog functionality has been improved to work better with inconsistent PC connections. Power sequencing response to noisy ignition switches has been improved. Several changes were made to Infinity Tuner that improve usability.

New vehicle/application timing support:

- 2004-2006 Suburu WRX STI
- 2009-2012 GEN 3 Hemi
- 2013 and newer GEN 3 Hemi

Bug Fixes:

2

- Fixed a problem that sometimes occurred during the firmware upgrade process where the PC would not reconnect with the ECU consistently.
- Fixed a coil output problem that caused one or more coil output waveforms to drop out under very specific engine acceleration rates and certain ignition timing and dwell values.
- Fixed a problem causing the Infinity Tuner controls to 'flash' while being edited.
- Infinity-508 now includes VW 1.8T CAN dash control support.
- Power sequencing features adjusted to respond more consistently to electrically noisy ignition switch inputs. This would sometimes cause the ECU to hang ON when the ignition switch was turned OFF.
- Ford Coyote timing pattern support adjusted to allow more speed variation during cranking. This makes it easier to start certain high compression engines.
- Fixed a bug that may have allowed a small amount of fuel to flow through injectors 7, 8, 9 or 10 even though the

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injector may have been disabled using the Setup Wizard Coils/Injectors page.

• Fixed a bug in the CAN transmit function. Error flags for throttle, coolant temp, MAP and certain other sensors were not functioning as intended. Ethanol content was transmitting incorrect scaling.

Compatibility with old layouts:

New models and session files should be compatible with older layouts. There were no channel naming changes to break existing layouts.

v96.2 Models/Tuning Changes:

- Add support to receive AEM X-Series CAN messages.
- Additional digital inputs now allowed for 3StepSwitch and ShiftSwitch tables.
- VTEC logic adjusted to avoid high RPM cycling on certain applications.
- LeanProtect function now allows the use of Lambda3/4 external inputs.

v2.96 Infinity Tuner Changes:

- Admin level automatically detected. User notified if changes are necessary to allow USB port access and connectivity.
- New feature adding dedicated save paths for layouts, sessions, logs and themes.
- Auto save log path now displayed in the window header.

v2.96 Setup Wizard Changes:

• Fuel properties now exposed in Setup Wizard allowing the user to adjust specific gravity and stoichiometric ratio individually.

Description of files available on aemfinity.com

The following example shows a typical list of available files on aeminfinity.com. This particular examples shows files available for an Infinity-506 ECU (part number 30-7106).

Available Softv	vare:		
File	Infinity Engine Manager Configuration	Created	
Download	v96.2 Inf-506 Universal	12/28/2015 4:11:19 PM	
Download	v96.2 Inf-506 Semi-Seq	12/28/2015 4:11:19 PM	
Download	v96.2 Inf-506 Mazda Rotary	12/28/2015 4:11:19 PM	 v96.2 files (the latest version)
Download	v96.2 Inf-506 Diagnostics	12/28/2015 4:11:19 PM	
Download	v96.2 Inf-506 Hayabusa	12/28/2015 4:11:19 PM	
Download	v96.1 Inf-6 Universal	6/22/2015 11:04:08 AM	
Download	v96.1 Inf-6 Semi-Seq	6/19/2015 1:06:48 PM	
Download	v96.1 Inf-6 Mazda Rotary	6/19/2015 1:06:48 PM	 Old file versions
Download	v96.1 Inf-6 Hayabusa	6/19/2015 1:06:48 PM	
Download	v96.1 Inf-6 Diagnostics	6/19/2015 11:23:23 AM	
Download	pre-v96.1 Legacy Peripheral Firmware	6/19/2015 11:23:23 AM	 Peripheral Micro firmware compatible with pre v96.1 versions

The files listed in the top highlighted box are the latest files with all latest features available for this hardware platform. There are four options.

- 1. <u>v96.2 Inf-506 Universal</u> A universal pakgrp file that will work on a wide variety of different sequentially injected applications supporting up to 6 injectors and 6 coil outputs.
- 2. <u>v96.2 Inf-506 Semi Seq</u> Same universal above but able to support semi-sequential injection setups with no cam sync
- 3. <u>v96.2 Inf-506 Mazda Rotary</u> Same as universal above but able to support certain unique hardware I/O requirements of the Mazda rotary engine
- 4. <u>v96.2 Inf-506 Diagnostics</u> Unique model designed to provide custom diagnostics features for the Infinity-506 ECU.
- 5. <u>v96.2 Inf-506 Hayabusa</u> Same as universal above but able to support certain unique hardware I/O requirements of the Suzuki Hayabusa application.

The files listed on the second highlighted box are older files still available for download for this hardware platform. They do not have the latest features.

The file listed in the third highlighted box is new peripheral microcontroller firmware that is only necessary if reverting to older firmware versions after upgrading to v96.1 or later.

Minimum computer requirements:

OS - Windows XP with .NET 4.0 framework installed Ram - 2GB Processor - 1 GHz Free HD space - 600 Mb Connectivity - USB 2.0

All current Infinity Tuner software installations are available for download from AEM at http://www.aemelectronics.com/support/SoftwareDownloads

All current firmware pakgrp files are available for download from AEM at <u>http://www.aeminfinity.com</u>. You must download and save a valid pakgrp file before proceeding with the firmware update process.

- 1. Run the setup.exe. Hit Next> and follow the instructions on each page.
- 2. Read and accept the terms of agreement and pick your desired location for Infinity Tuner to be installed. Hit Next> and allow the software to complete installation.
- 3. You may now exit the Infinity Tuner installer. You can now run Infinity Tuner.

Firmware update window layout and definitions

Firmware Upgrade - [Automatic Mo	de]					×
Available Images Refresh	Target Info	В	С		D	
7101-0001-134	Serial Number: 01	10005B0 Firmware:	96.7115	Peripheral:	96.8185:96.	3185
7101-0001-92 A	Image Info Location: C:\Progr Name: 7101-0001	am Files (x86) \AEM \Infin	ity Tuner\7101-0001- Images: 4 G	-134.pakgrp Supported I	mages: 4	H
	Туре	Name	A	uthor	Version	Description
1	Dynamic Model	7101_6500a	A	EM_Production	96	No description.
J	Firmware	Version96_full.8192	A	EM_Production	96	No description.
K	Fixed Model	7101_6500f	A	EM_Production	96	No description.
L	Peripheral Contr	. Zuma_Venice.8185	A	EM_Production	96	No description.
	•					ł
Choose an image to use for upgrade.						
			M Keep	Calibration Da	ta	Begin

(A) - Available Images

A list of configuration (pakgrp) files compatible with a particular ECU. Each Infinity ECU is unique. Pakgrp files from one Infinity ECU can not be used on another Infinity ECU. Several pakgrp files are usually available for each Infinity hardware part number. Selecting one of the items in this list will populate the Image Info window with the descriptions of all files contained in the pakgrp. Appropriate files for your application must be downloaded from aeminfinity.com and saved on your PC in order to appear in this list.

(B) - Serial Number

This is a unique hardware identifier number for the ECU. Although they are related, it is not the same as the ECU serial number included on the serial number sticker.

(C) - Firmware

The version of the firmware on the primary microcontroller in the Infinity ECU. This is not necessarily the version of the firmware being loaded into the ECU. It is the version being upgraded from. In the example image above, the firmware version currently loaded on the ECU is 96.7115. The version being loaded into the ECU is 96.8192.

(D) - Peripheral

The Infinity ECU includes two different microcontrollers that require firmware. This is the version of the firmware loaded into the peripheral microcontroller.

(E) - Location

The directory location of the selected pakgrp file

(F) - Name

The file name of the selected pakgrp file

(G) - Images

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The number of files or "images" contained within the selected pakgrp file

(H) - Supported Images

The number of valid supported images contained within the selected pakgrp file

(I) - Dynamic Model

Infinity control model files are typically broken into two parts. The dynamic model file primarily contains tuning table data and calibration constants.

(J) - Firmware

The firmware for the primary microcontroller contained within the pakgrp file. This is the version being upgraded to.

(K) - Fixed Model

Infinity control model files are typically broken into two parts. The fixed model file primarily contains control logic math expressions and non-modifiable tuning constants.

(L) - Peripheral Controller

The firmware for the peripheral microcontroller contained within the pakgrp file. This is the version being upgraded to.

(M) - Keep Calibration Data

Select to keep the existing calibration data and import it into the new configuration during the upgrade process.

Pakgrp files are available to registered Infinity users at aeminfinity.com. You must download and save your pakgrp file before proceeding with the firmware update process below.

BEFORE beginning the update process, be sure to have a saved copy of your tuned session file. If a power failure occurs during the update process, this is the only way to ensure that the calibration data is not lost. A power failure at certain critical points in this process could render the ECU inoperative, requiring return and repair at AEM. Ensure the PC has a full battery charge and/or is connected to AC power. This process can take <u>UP TO 4 MINUTES</u> to complete, especially if the peripheral microcontroller is updated at the same time.

If the firmware version on the ECU is older than the version supported by your current version of Infinity Tuner, a firmware upgrade will be required when you connect. Otherwise, follow the procedure outlined below.

Note: The firmware update utility is periodically revised and may not match the descriptions below. In the event of a conflict, please follow the instructions provided in the dialog windows themselves or supplemental instructions provided by AEM.

1) Connect to Infinity Tuner.

a. Plug the USB cable from the ECU into your computer USB port and key ignition ON.

b. Open Infinity Tuner.

2) Click the Target drop-down list and select "Upgrade firmware..."

File Connection	Target Layout Logging Wizards Help US	B: Infinity-8/10/12
Page 1 Page 2 Y	Undo [Ctrl Z]	-
	Redo [Ctrl Y]	
	Commit modifications [Ctrl Shift C]	
	Revert modifications [Ctrl Shift R]	
\rightarrow	Upgrade firmware	
	Lock with password	
	Unlock password	
	Clear password	

3) The ECU should not be running an engine at this time. Select "Yes" when the warning message appears.

7	WARNING	
	8	The target will stop running models (not function) while updating. Continue?
		<u>Y</u> es <u>N</u> o

Begin the Firmware Upgrade process.

- a. Select the desired Configuration "Image" on the left.
 - i. If no images are present check C:\Program Files (x86)\AEM\Infinity Tuner\ and verify .pakgrp file is there. If not, visit <u>http://www.aeminfinity.com</u>, log in, and download appropriate file.
- b. Ensure "Keep Calibration Data" check-box is marked to save current calibration.
- c. Click the "Begin" button to start the upgrade process.

-0001-134	Serial Number: 01	10005B0 Firmware	96.7115	Peripheral: 96	5.8185:96.	8185		
-0001-92 -0001-93	Image Info	Image Info						
	Location: C:\Progr	Location: C:\Program Files (x86)\AEM\Infinity Tuner\7101-0001-134.pakgrp						
	Name: 7101-0001-	Name: 7101-0001-134		Supported Ima	ages: 4			
	Туре	Name		Author	Version	Description		
	Dynamic Model	7101_6500a		AEM_Production	96	No description.		
	Firmware	Version96_full.8192		AEM_Production	96	No description.		
	Fixed Model	7101_6500f		AEM_Production	96	No description.		
	Peripheral Contr	Zuma_Venice.8185		AEM_Production	96	No description.		
	•							
4 4 50 0								

4) Follow the message at the bottom, and turn the ignition switch OFF when instructed to do so.

Image Info Location: C:\Program Files (x86)\AEM\Infinity Tuner\7101-0001-134.pakgrp					
Name: 7101-0001-	134	Images: 4	Supported Ima	ges: 4	
Туре	Name		Author	Version	Description
Dynamic Model Firmware	7101_6500a Version96_full.8192		AEM_Production AEM_Production	96 96	No description. No description.
Fixed Model Peripheral Contr	7101_6500f Zuma_Venice.8185		AEM_Production AEM_Production	96 96	No description. No description.
•					
·					
	Location: C: \Progr Name: 7101-0001- Type Dynamic Model Firmware Fixed Model Peripheral Contr	Location: C:\Program Files (x86)\AEM\Inf Name: 7101-0001-134 Type Name Dynamic Model 7101_6500a Firmware Version96_full.8192 Fixed Model 7101_6500f Peripheral Contr Zuma_Venice.8185	Location: C:\Program Files (x86)\AEM\Infinity Tuner\7101-00 Name: 7101-0001-134 Images: 4 Type Name Dynamic Model 7101_6500a Firmware Version96_full.8192 Fixed Model 7101_6500f Peripheral Contr Zuma_Venice.8185	Location: C:\Program Files (x86)\AEM\Infinity Tuner\7101-0001-134.pakgrp Name: 7101-0001-134 Images: 4 Supported Images Type Name Author Dynamic Model 7101_6500a AEM_Production Firmware Version96_full.8192 AEM_Production Fixed Model 7101_6500f AEM_Production Peripheral Contr Zuma_Venice.8185 AEM_Production	Location: C:\Program Files (x86)\AEM\Infinity Tuner\7101-0001-134.pakgrp Name: 7101-0001-134 Images: 4 Supported Images: 4 Type Name Author Version Dynamic Model 7101_6500a AEM_Production 96 Firmware Version96_full.8192 AEM_Production 96 Fixed Model 7101_6500f AEM_Production 96 Peripheral Contr Zuma_Venice.8185 AEM_Production 96

5) Follow the message at the bottom, and turn the ignition switch back ON when instructed to do so.

vailable Images Refre	Serial Number: 01	0005B0 Firmware	96.7115	Peripheral: 96	5.8 <mark>185:</mark> 96.	8185		
01-0001-92	Image Info	Image Info						
01000135	Location: C:\Progra	Location: C:\Program Files (x86)\AEM\Infinity Tuner\7101-0001-134.pakgrp						
	Name: 7101-0001-	134	Images: 4	Supported Ima	ages: 4			
	Туре	Name		Author	Version	Description		
	Dynamic Model	7101_6500a		AEM_Production	96	No description.		
	Firmware	Version96_full.8192		AEM_Production	96	No description.		
	Fixed Model	7101_6500f		AEM_Production	96	No description.		
	Peripheral Contr	Zuma_Venice.8185		AEM_Production	96	No description.		
	•	111						
rade (1 of 2): Successful	I Please switch target on to va	lidate upgrade	N					

If Keep Calibration Data is checked, the system will upgrade and load all usable calibration data as shown below.

Vailable Images Refre: 101-0001-134 101-0001-92	Serial Number: 01000580 Firmware: 96.7115 Peripheral: 96.8185;96.8185 Image Info
/101-0001-93	Location: C:\Program Files (x86)\AEM\Infinity Tuner\7101-0001-134.pakgrp Name: 7101-0001-134 Type Version Dynamic Model Importing N2O_lgn [deg] table data. Fixed Model 7101-0001 Peripheral Contr Zuma_Venice.8185
ogr <mark>ade (1 of 2):</mark> Converting	g and Importing Calibration Data

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Available Images Refresh	Image Info					
1000206_96.1	Location: C:\Program Files (x86)\AEM\Infinity Tuner\01000206_96.1_bootadded.pakgrp					
1000206_96.1_bootadded	Name: 01000206_96.1_bootadded Images: 5 Supported Images: 5					
	Туре	Name	Author	Version	Description	_
	Boot Module	Zuma3.6869	AEM_Production	none	No description.	
	Dynamic Model	v96.1_7100_Inf10_SVN6105d	AEM_Production	96	No description.	
	Firmware	Version96_full.8155	AEM_Production	96	No description.	
	Fixed Model	v96.1_7100_Inf10_SVN6105f	AEM_Production	96	No description.	
	Peripheral Contr	. Zuma_Venice_8157	AEM_Production	96	No description.	
	•	m				,

Note: at certain points in the process, the Infinity ECU will re-boot and attempt to connect with the PC. The time it takes to connect might vary for different PCs. If the process appears to hang at this stage, simply unplug and replug the USB comms connector. Often this will force the PC to re-enumerate the USB port and connect.

Available Images Refresh 7101-0001-134 7101-0001-92 7101-0001-93 7101-0001-93	Target Info Serial Number: 01 Image Info Location: C:\Progra Name: 7101-0001-	0005B0 Firmware am Files (x86)\AEM\Int 134	: 96.7115 inity Tuner \7101- Images: 4	Peripheral: 96 0001-134.pakgrp Supported Ima	5.8185:96. ages: 4	.8185
	Type Dynamic Model Firmware Fixed Model Peripheral Contr	Name 7101_6500a Version96_full.8192 7101_6500f Zuma_Venice.8185		Author AEM_Production AEM_Production AEM_Production	Version 96 96 96 96	Description No description. No description. No description. No description.
Upgrade (2 of 2): Installing new P	Peripheral Control Module in	mage	2	Keep Calibration Data	_	Begin

6. When the "Peripheral Control Module image" is updated, a full power reset may be required meaning either the battery needs to be disconnected and re-connected or all harness connectors need to be removed from the ECU for at least 5 seconds, then re-connected.

vailable Images Refresh	Image Info					
1000206_96.1	Location: C:\Progra	am Files (x86)\AEM\Infinity Tuner\0100	0206_96.1_bootadded.	pakgrp		
1000206_96.1_bootadded	Name: 01000206_96.1_bootadded Images: 5 Supported Images: 5					
	Туре	Name	Author	Version	Description	
	Boot Module	Zuma3.6869	AEM_Production	none	No description.	
	Dynamic Model	v96.1_7100_Inf10_SVN6105d	AEM_Production	96	No description.	
	Firmware	Version96_full.8155	AEM_Production	96	No description.	
	Fixed Model	v96.1_7100_Inf10_SVN6105f	AEM_Production	96	No description.	
	Peripheral Contr	Zuma_Venice_8157	AEM_Production	96	No description.	
	•	III				,
		·III				

7. When the message below is displayed, turn the ignition switch back on.

Available Images Refresh 01000206_96.1	Image Info Location: C:\Program Files (x86)\AEM\Infinity Tuner\01000206_96.1_bootadded.pakgrp						
01000206_96.1_bootadded	Name: 01000206_96.1_bootadded Images: 5			Supported Images: 5			
	Туре	Name		Author	Version	Description	
	Boot Module	Zuma3.6869		AEM_Production	none	No description.	
	Dynamic Model	v96.1_7100_Inf1	0_SVN6105d	AEM_Production	96	No description.	
	Firmware	Version96_full.81	55	AEM_Production	96	No description.	
	Fixed Model	v96.1_7100_Inf1	_SVN6105f	AEM_Production	96	No description.	
	Peripheral Contr.	Zuma_Venice_815	7	AEM_Production	96	No description.	
	•		11			F.	
Secondary Upgrade Successful! Pl	ease switch target on t	o validate secondary	upgrade				
				Keep Calibration Data		Begin	

8. When the message at the bottom indicates that it's safe to close the window, click "X" button on the top right of the window.

ailable Images Refre	sh Target Info Serial Number: 0	10005B0 Firmware	96.7115	Peripheral: 96	5.81 <mark>85:9</mark> 6.	8185		
01-0001-92	Image Info							
1-0001-95	Location: C:\Prog	Location: C:\Program Files (x86)\AEM\Infinity Tuner\7101-0001-134.pakgrp						
	Name: 7101-0001	Name: 7101-0001-134 Im		Supported Images: 4				
	Туре	Name		Author	Version	Description		
	Dynamic Model	7101_6500a		AEM_Production	96	No description.		
	Firmware	Version96_full.8192		AEM_Production	96	No description.		
	Fixed Model	7101_6500f		AEM_Production	96	No description.		
	Peripheral Contr	. Zuma_Venice.8185		AEM_Production	96	No description.		
rade (2 of 2): Validation	Successful! Safe to dose wind	low.						

Once the update is complete, it's good practice to cycle the ignition switch to reset the hardware. Once that is done, you can connect and begin monitoring data and/or tuning again. For applications that use a stepper motor idle valve, it's important that a full power reset be done prior to starting the engine. Turn the key off and wait at least 20 seconds before starting. This will allow the stepper valve to park and reset.

A firmware update will erase the USB log channel list stored in the ECU memory. This channel list will need to be reset before USB logging will function correctly. Go to Logging>USB Logging – Channel Setup. This dialog allows the user to select channels for USB logging. Manually select channels by left clicking on the check box or alternately by using the arrow keys to scroll through the list and the space bar key to select. Logging lists can be saved for later use by using the Save button. The Load button will load previously saved lists of channels. The Append button will append a different list of channels onto the existing list of selected channels. Note that the list of channels for logging is saved in ECU memory. Channels can't be selected offline. They can only be selected when connected to an ECU.

REFER TO THE FOLLOWING FOR TROUBLESHOOTING ONLY

Troubleshooting

If the process hangs at any point, wait at least one minute for it to continue. Some PCs take longer to reconnect to the ECU during this process. Some PCs may have other processes running that affect the response time of the USB ports. If the process has not continued as described above after one minute, do not cycle key power. Instead, remove the USB cable from the PC, wait a few seconds then plug it back in. Often this will force the OS to reset the port allowing the process to continue.

"Upgrade Failure! Could not delete Power control Module image!

If this message is displayed during the update process, be sure you have the latest Infinity Tuner software installed. It should be version 2.96.8202 or later. Once you have the right Infinity Tuner software installed, the following procedure must be followed to recover the ECU.

- 1) Disconnect all power from the ECU, including battery power and ignition switch power. Connect the ECU's flash enable pin to 12V (see your hardware pinout for details). All Infinity harnesses supplied by AEM come equipped with a "flash enable" jumper.
- 2) Connect and flash your old v96 pakgrp into the ECU.
- 3) After flashing the (v96 old version) into the ECU, disconnect the flash enable pin, power down the ECU.
- 4) Remove the flash enable connector
- 5) Power up the ECU and flash the legacy peripheral microcontroller file.
- 6) After all steps above are complete, you should be able to flash your new v96.1 or later pakgrp file.

Loading firmware files older than v96.1 after upgrading to v96.1 or later

AEM does not recommend reverting to older pakgrp files after updating to v96.1 or later versions. In the unlikely event that an old firmware version must be loaded after upgrading to a v96.1 or later version, the following two step procedure must be followed

Step 1 - Load Legacy Peripheral Microcontroller firmware

This pakgrp file, available at aeminfinity.com for each Infinity ECU contains only one file, the legacy peripheral microcontroller firmware.

1) Go to Target>Upgrade firmware...

R8C downgrade an	d v96 pa	kgrp insta	I					
File Connection	Target	Layout	Logging	Wizards	Help	USB: Infin	ity-8/1	0/12
Start V Idle VVE	Ur	ndo			[Ctrl Z] stPID	Y dew	y o
Text Grid	Re	do			[Ctrl Y] = [%]		
	Co	ommit mo	difications	[Ctr	l Shift C	j 5 0	105	10
	Re	evert modi	fications	[Ctr	l Shift R) ()	105	10
	U	ograde firm	nware			50	105	10
Lam	Lo	ck with pa	assword			0	105	10
LambdaT	Ur	nlock pass	word			0	105	10
Lampuara	CI	ear passwo	ord			0	105	10
			Lam		1111 2	; 140	104	10
		Coola	antTer	np [C]		120	102	10

2) Select the new Peripheral Legacy pakgrp from the list of available images. Note that it only contains one file. Do not check the Keep Calibration Data checkbox.

irmware Upgrade - [Automatic N Available Images Refresh 7100-0242-135 Periph_Legacy 7100-0242-88 7100-0242-89	Mode] Target Info Serial Number: 0 Image Info Location: C:\Progr	1000217 Firmwar ram Files (x86)\AEM\Ir	e: 96.8192 Ifinity Tuner (Periph	Peripheral: 96	5.8185:96.	8185
100-0242-89	Name: Periph_Leg	acy Name . Zuma_Venice_Lega	Images: 1	Supported Ima Author AEM_Production	eges: 1 Version 96	Description No description.
Choose an image to use for upgrad	de,			Keep Calibration Data		Begin

3) Click Begin and follow the displayed instructions. The first step is to turn the ignition switch OFF.

Available Images Refresh	Target Info							
7100-0242-135	Serial Number: 0	1000217 Firmware: 96.8	8192 Peripher	al: 96.8185:96	.8185			
eriph_Legacy 7100-0242-88 7100-0242-89	Image Info Location: C:\Prog	Image Info Location: C:\Program Files (x86)\AEM\Infinity Tuner\Periph_Legacy.pakgrp						
	Name: Periph_Leg	Name: Periph_Legacy Images: 1		Supported Images: 1				
	Туре	Name	Author	Version	Description			
	Peripheral Contr	. Zuma_Venice_Legacy	AEM_Produc	ction 96	No description.			
	•	m						
Please switch target off								

4) Turn the ignition switch back on when instructed to do so.

Target Info	05 0100		5.00 0105			
Serial Number: 01000217 Firmwa	re: 90.0192	Peripheral: 90.01	55:90.0105			
Image Info						
Location: C:\Program Files (x86)\AEM\Infinity Tuner\Periph_Legacy.pakgrp						
Name: Periph_Legacy	Images: 1	Supported Images	1			
Type Name	1	Author Ve	rsion Description			
Peripheral Contr Zuma_Venice_Lega	acy A	AEM_Production 96	No description.			
in secondary upgrade						
	Serial Number: 01000217 Firmwa Image Info Location: C:\Program Files (x86)\AEM\ Name: Periph_Legacy Type Name Peripheral Contr Zuma_Venice_Lega	Image Linto Serial Number: 01000217 Firmware: 96.8192 Image Info Location: C:\Program Files (x86)\AEM\Infinity Tuner\Periph_Leg Name: Periph_Legacy Type Name Peripheral Contr Zuma_Venice_Legacy Image Info III	Image Info Image Info Location: C:\Program Files (x86)\AEM\Infinity Tuner\Periph_Legacy.pakgrp Name: Periph_Legacy Images: 1 Supported Images: 1 Supported Images: 1 Supported Images: 1 Supported Images: 1 Name: Peripheral Contr Zuma_Venice_Legacy AEM_Production Images: 1 Images: 1 Supported Images: 1 Image: 1 Image: 1 Image: 1 Supported Images: 1 Image: 1<			

5) The new peripheral microcontroller firmware image will now be loaded.

vailable Images Refresh	Target Info			_					
100-0242-135	Serial Number: 01	000217 Firmware:	96.8192	Peripheral: 96	.8185:96.	8185			
riph_Legacy	Image Info								
100-0242-89	Location: C:\Progra	Location: C: \Program Files (x86) \AEM\Infinity Tuner \Periph_Legacy.pakgrp							
	Name: Periph_Legacy Images: 1		mages: 1	Supported Images: 1					
	Туре	Name		Author	Version	Description			
	Peripheral Contr	Zuma_Venice_Legacy		AEM_Production	96	No description.			
	•								
grade (1 of 1): Installing new P	eripheral Control Module in	mage							

6) The following window indicates that the file was loaded successfully. Click the red X to close the window.

Available Images Refresh 7100-0242-135	Serial Number: 01000217 Firmware: 96.8192 Peripheral: 96.8185:96.8185								
100-0242-89	Location: C:\Prog	Location: C:\Program Files (x86)\AEM\Infinity Tuner\Periph_Legacy.pakgrp							
	Name: Periph_Leg	Name: Periph_Legacy Im		Supported Ima	ages: 1				
	Туре	Name		Author	Version	Description			
	Peripheral Contr.	. Zuma_Venice_Lega	Υ.	AEM_Production	96	No description.			
	•						ł		

Step 2 - Load old pakgrp file

1) At this point, you can repeat the procedure to load an older pakgrp file.