

About

ACES Fuel Injection specializes in developing and manufacturing state-of-the-art performance-engine management systems and ignition components geared toward do-it-yourself automotive enthusiasts. Our company was founded on an electromechanical engineering background, and our talented staff always keeps a grip on the newest technology available. We use our expertise to guarantee top-notch quality components and constant innovation of new products and services for car and truck enthusiasts around the world.

Our greatest advantage is the overall simplicity of our products. From a painless installation to real-time tuning in just hours, our fuel injection systems offer a great advantage over the competition. Our JACKPOT[™] series GM LS EFI system features a built-in interface that allows users to have full control of the engine without the need of a PC. This allows you to install the system at home without the need of special tools or software. We also offer several other components to help seamlessly integrate our advanced technology into your LS-based vehicle.

Our craftsmanship and technology are built upon a foundation of extreme performance. With a history of producing winning results in a wide variety of applications, our pedigree offers proof of our commitment to attain the best results, wherever we compete. With more than 10 years of experience developing and designing high-performance products, ACES Fuel Injection has a product to fit your needs.

Mission

Research, innovate, and develop real, efficient, quality solutions, making engine management technology the key factor of success, and bring pride and satisfaction to customers by integrating them into the ACES Fuel Injection Team.

Vision

Become the world's leading company in engine management technology.

Values

Ethics, commitment, professionalism, teamwork, quality, pioneering spirit, creativity, continuous innovation, pursuit of results and customer satisfaction.

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1. Overview

This software is designed to enable customers to quickly and conveniently monitor and calibrate various parameters of the product in real time.

2. Functional Architecture



3. Software use

3.1 Monitoring

Real-time monitoring of a certain parameter of the product.

- 3.1.1 showing monitored parameters in text
- 3.1.1.1 Real-time monitoring a certain set of parameters
- 1) Open the software, select the corresponding product and click "open".



2) Different approaches to set up the monitored parameters for each window.

Approach One: Click """ to enter the setting interface to make selection.

Approach Two: Right-click each window and it will pops up the monitoring group for making selection.

Serior Sten Time			Sensor Error	•	revel	ADC Sampling	•	100
Engine stop time	•		BAT Error Count	•	Count		0	ADC
Run Time	0		IAT Free Count	0	count		0	ADC
Rat Vol	0	•	ECT Error Count	0	count	ECT AD	0	ADC
ICT	0	DeaC	TPS Error Count	0	count	BAR AD	0	ADC
BAP		Koa	BAP Error Count		count	TPS AD	0	ADC
TPS	0	Deg				TPS RD AD	0	ADC
WB1 Vol	0	v				PPS AD	0	ADC
TPS State		OPEN				PPS RD AD	0	ADC
Key State	0	OFF				TPS Zero	0	ADC
Engine State		STOP						
						ridie Target RPM		
RPM	٥	RPM	Dec Flag	٥	bool	Idle Target RMP	0	RPM
Rev Count	0	count	Coast Flag	0	bool	PID Target RMP	0	RPM
Idle Target RPM		RPM	Stop Time			Idle Soft Target RPM		RPM
Start To Ilde RPM		RPM	Stop To Startup		val	Soft Target Enable		bool
Run Time			Startup To Stop		val	Soft Target Step Size		RPM
Power On Time			Startup To Idle		val	Idle Base RPM		RPM
Start To Idle Timer		ms	Idle To Startup		val	BAT Add RPM		RPM
atore no nois miner								
Engine State		STOP	Idle To Push	•	Val			

3) After entering the setting interface, you can select different monitoring groups and also select different Unit type.

Monitoring groups: Up to six different groups can be monitored at the same time. Click "OK" to complete the setting up.

Unit: Imperial units or Metric units

M SetGrou	p		
Group	GroupBox1:	ADC Sampling A	~
	GroupBox2:	Sensors B	~
	GroupBox3:	Sensors C	~
	GroupBox4:	Fuel Inj PW B	~
	GroupBox5:	Ignition Timing B	~
	GroupBox6:	Push Bypass Air	~
_ Unit -			
	Туре:	Imperial	~
			OK

4) Connect one end of the USBCAN box to the product's wiring harness and the other end to USB port of computer. Turn the key to "ON", and click the "2" in the toolbar, wait for it to turn green "2" which means the connection is successful. If the pop-up window prompts that it fails, please check the USBCAN connection and installation of USBCAN driver (If it is connected, ignore this step).

Note: At the first connection, please be patient to wait for the calibration data of the controller to be uploaded first. A pop-up window will prompt no matter the connection succeeds or fails.



5) After successful connection, click ", and wait it to turn to become ", then real-time monitoring data will be displayed in the text box on the interface.

		Sensor Error			ADC Sampling		
	1	BAT Error Count	0	count	BAT_AD	446	ADC
6672	\$	MAP Error Count	0	count	MAP_AD	829	ADC
•		IAT Error Count	100	count	IAT_AD	1016	ADC
13.2	v	ECT Error Count	100	count	ECT_AD	1020	ADC
-40	DegC	TPS Error Count	0	count	BAP_AD	461	ADC
59.6	Kpa	BAP Error Count	0	count	TPS_AD	699	ADC
82.1	Deg				TPS_RD_AD	603	ADC
2.006	v				PPS_AD	1022	ADC
•	OPEN				PPS_RD_AD	1023	ADC
127	ON				TPS Zero	0	ADC
		Engine State Out			Idle Target RPM		
•	RPM	Dec Flag	0	bool	Idle Target RMP	1586	RPM
0	count	Coast Flag	0	0001	PID Target RMP	1586	RPM
1300	RPM	Stop Time	6672		fale sort l'arget RPM	1300	KPM
0	e a	Stop To Startup	0	wal	Soft Target Step Size	0	PPM
6472		Startup To Jdle			tille Base DBM	1100	DBM
0		Idle To Startup	0	wal	BAT Add PDM		PPM
	STOP	Idle To Push	0	val			
		Engine Dun State		STOP			
	0 1-20 59.6 82.1 2.005 0 127 0 1386 0 0 1386 0 0 6472 0 0	0 s 112 V 36 Days 256 Fpa 200 V 0 orient 127 Oth 0 orient 127 Oth 0 orient 128 State 0 orient 138 Roma 0	0 4 MI Tore Count 112 V HCT Tore Count 354 DippC TPE trave Count 12 OV DippC 2 OV Prove Count 3 TOPP DippTime 0 OVEN Count Hight Shate Out 135 DippTime Count Hight TopPT 0 OWENT Count Hight TopPT 0 APPM Hight TopPT 0 APPM Startup TopPT 0 APPM Startup TopPT 0 APPM Hight TopPub 0 TOPP Hight TopPub 0 TOPP Hight TopPub	0 1 10 100 112 V LT Time Count 100 46 DepC TPE time Count 0 154 Exp TPE time Count 0 154 Exp AP from Count 0 120 DepC AP from Count 0 120 ON AP from Count 0 121 ON AP from Count 0 122 ON AP from Count 0 121 ON AP from Count 0 122 ON AP from Count 0 123 Count Box Frage 0 123 Count Box Frage 0 123 Count Box Frage 0 124 Box Frage Box Frage 0 125 BPM Box F	0 s. Mitting Count 100 count 131 V ECT procount 00 count 143 Drogic This firm Count 0 count 143 Drogic This firm Count 0 count 143 Drogic This firm Count 0 count 120 V Progic No count 121 O V progic no count 122 O No progic no count 122 O No progic no count 123 O No progic no count 122 O No progic no progic progic no no 123 O No Progic no no no no 124 O No South Training No no no no 125 No South	0 s. MT fore Count 100 count MT AD 131 V HCT fore Count 00 count MP AD 143 Dogic HCT fore Count 0 count MP AD 141 Dogic HCT fore Count 0 count MP AD 141 Dogic HCT fore Count 0 count MP AD 12 O V V V V V 2 O V V V V V V 2 O V V V V V V V 2 O V	0 s MT Dark Count 100 - ownt T, D 17, D 171 131 V HCT Dark Count 00 - ownt 167, D 103 343 Days HCT Dark Count 0 - ownt 167, D 103 343 Cay HA Franc Count 0 - ownt 175, D 69 2.04 V - - - - 175, D 69 2.04 V - - - - 100 100 175, D 69 120 - V - - - - 100

3.1.1.2 show/hide monitored items list

Click "D" to view all the groups that can be monitored, click on the group to expand to view the specific monitoring parameters of the monitoring group.

is Stop Time On Time	« 🖶 🌣 🖲								
10									
\	Engine Stop Time	6825		BAT Error Count		count	BAT AD	446	ADC
	Power On Time	6825		MAP Error Count		count	MAP_AD	823	ADC
	Run Time			IAT Error Count	100	count	IAT_AD	1023	ADC
	Bat Vol			ECT Error Count	100	count	ECT_AD	1023	ADO
	ECT		DegC	TPS Error Count		count	BAP_AD	457	ADC
te .	BAP	59.4	Кра	BAP Error Count		count	TPS_AD	693	ADC
te	TPS	81.5	Deg				TPS_RD_AD	592	ADC
State	W81 Vol	2.006					PPS_AD	1023	ADC
Frror	TPS State		OPEN				PPS_RD_AD	1021	ADC
	Key State		ON				TPS Zero		ADO
ampling	Engine State		STOP						
State Out									
	RPM		RPM	Dec Flag		bool	Idle Target RMP	1586	RPN
orque MAP	Rev Count		count	Coast Flag		bool	PID Target RMP	1586	RPM
p And Idle Air	Idle Target RPM	1586	RPM	Stop Time	6825		Idle Soft Target RPM	1586	RPN
Mass Air	Start To Ilde RPM		RPM	Stop To Startup		val	Soft Target Enable		boo
	Run Time			Startup To Stop		val	Soft Target Step Size		RPN
irget RPM	Power On Time	6825		Startup To Idle		val	Idle Base RPM	1500	RPN
	Start To Idle Timer			Idle To Startup		val	BAT Add RPM		RPN
	Engine State		STOP	Idle To Push		val			
				Engine Run State		STOP			

3.1.1.3 Independent floating window

Click "💭" to float the current monitoring interface in front.

Engine Stop Time	6886		BAT Error Count	0	count	BAT_AD	448	ADC
Power On Time	6886	\$	MAP Error Count	0	count	MAP_AD	827	ADC
Run Time			IAT Error Count	100	count	IAT_AD	1015	ADC
Bat Vol			ECT Error Count	100	count	ECT_AD	1022	ADC
ECT		DegC	TPS Error Count		count	BAP_AD		ADC
BAP	59.6	Кра	BAP Error Count		count	TPS_AD	697	ADC
TPS	81.8	Deg				TPS_RD_AD	599	ADC
WB1 Vol	2.005					PPS_AD	1023	ADC
TPS State		OPEN				PPS RD AD	1023	ADC
Key State		ON				TPS Zero		ADC
RPM	٥	RPM	Dec Flag	0	bool	Idle Target RMP	1586	RPM
Rev Count		count	Coast Flag		bool	PID Target RMP	1586	RPM
Idle Target RPM	1586	RPM	Stop Time	6186		Idle Soft Target RPM	1586	RPM
Start To Ilde RPM	0	RPM	Stop To Startup		val	Soft Target Enable		bool
Run Time			Startup To Stop		val	Soft Target Step Size		RPM
Power On Time	6886		Startup To Idle	0	val	Idle Base RPM	1500	RPM
Start To Idle Times			Idle To Startup		val	BAT Add RPM		RPM
			And a little state to the second	•	val			
Engine State		STOP	Idle to Push					

3.1.2 showing monitored values in curve

3.1.2.1.Real-time monitoring of a certain parameter

1) After entering the monitoring interface, click " in the toolbar, the interface will jump to the curve monitoring interface.



2) Click "²" to enter the setting interface, which can support up to 10 parameters to be displayed in curve form at the same time.

- ∤ ⊢ Se	etCł	art			- ×
		ItemName	Y_min	Y_max	Color
▶ 1		Bat Vol	1	20	ffffff
2	\checkmark	МАР	1	1000	80ff00
3	\checkmark	IAT	-50	100	ff0000
4		MAP Error Count	1	100	008000
5		Run Time	1	100	008000
6		Run Time	1	100	008000
7		Run Time	1	100	008000
8		Run Time	1	100	008000
9		Run Time	1	100	008000
10		Run Time	1	100	008000
		O	(

3) Check one of the monitoring parameters in the second column of the setting table (check it if wants to monitor the item, uncheck it if do not want to monitor the item).

4) Double-click the third column of the setting table to enter the monitoring parameter selection interface. You can directly select a parameter in the list box with the mouse or enter the name of the parameter you need to monitor in the input box to search for it.

Serch		- ×
Variable:		
First Inj Flag TFS Coled Flag Key IO Dec Flag Stop To Startup Startup To Idle Idle To Startup Idle To Startup Idle To Push Follow To Idle Follow To Idle Follow To Idle Follow To Idle Key On Timer Off Remain Time Input RMM		<
	ОК	

5) Select an option in the fourth column and directly use keyboard to modify the minimum value of the Y-axis coordinate.

6) Select an option in the fifth column and directly use keyboard to modify the maximum value of the Y-axis coordinate.

7) Double-click an option in the sixth column of the settings table to select the curve color.

8) Click "OK" to confirm the modification of the setting.

9) Connect one end of the USBCAN box to the product's wiring harness and the other end to USB port of computer. Turn the key to "ON", and click the "2" in the toolbar, wait for it to turn green "2" which means the connection is successful. if the pop-up window prompts that it fails, please check the USBCAN connection and installation of USBCAN driver (If it is connected, ignore this step).



10) After successful connection, click "©", and when it changes to "□", a real-time monitoring curve displays in the curve interface.



3.1.2.2 set up scale view of the curve.

Click the drop-down box to select the corresponding visual range.



3.1.2.3 set up the type of curve

Click the drop-down box to set the curve to be displayed in the form of lines or points.





The current monitoring interface can be suspended in front by click"



3.1.3 Dashboard form monitoring

3.1.3.1. Real-time monitoring of a certain parameter

1) After entering the monitoring interface, click """ in the toolbar to jump to the dashboard monitoring interface.



2) Click ****** to enter the setting interface. Up to 8 parameters can be displayed in dashboard form at the same time. It supports up to three groups of free combination of parameters displayed in text form under the dashboard and each group has up to 10 parameters.

C SetDash																	- ×
			Г	ItemName					Mininmum	Maxi	im	un	n	TF	actor		
		▶ 1		Bat Vol					0	50				1			
		2	$\mathbf{\nabla}$	MAP					0	300				1			
	2 0 mm 3 1 km 4 kun Time 5 km Time 6 kun Time 7 1 TPS 8 kun Time 7 2 TPS 8 kun Time 7 2 C2								-50	100		-		1			
	4 Run Time 5 Run Time								0	100				1			
	5 Run Time 6 Run Time								0	100				1			
	6 Run Time 7 Z TPS								0	100	_	_		1			
	7 J TPS 8 Run Time								0	100				1			
	8 Run Time								0	100				1			
		¢	c2					M	м2						ммз		
[cc2 -						- MM	2-				וב	٢.	MM	3—			
		ItemNan	ne					ItemNar	ne			IC			ItemName		
▶ 1		MAP				▶ 1		MAP					⊳ 1		BAP		
2	\sim	ECT Error	Co	unt		2	\sim	TPS				1	2	\sim	IAT		
3	\sim	BAP				3	\checkmark	Bat Vol					3	\sim	BAT Error Co	unt	
4	\leq	Learn MA	AP (ЭК		- 4		Run Tim	e			_	4		Run Time		
5	\leq	MAP Erro	or C	ount		5		Run Tim	e			_	5		Run Time		
6	\sim	IAC Loop				6		Run Tim	e			_	6		Run Time		
7	\leq	WB UR E	rro	r Count		7		Run Tim	e			_	7		Run Time		
8	\leq	TPS AD				8		Run Tim	e			-	8		Run Time		
9	\sim	ECT vs M	AP	Adjust		9		Run Tim	e			-	9		Run Time		
10	\sim	Key State				10		Run Tim	e			IL	10		Run Time		
												L					
								011									
								OK									
	_		_								_	_		_			_

3) Dashboard and combo box settings

3-1.Dashboard settings

3-1-1.Check a monitoring parameter in the second column of the above setting table (check it to monitor the item, uncheck it if doesn't want to monitor the item)

3-1-2.Double-click the third column of the setting table to enter the monitoring parameter selection interface. Select a parameter in the list box with the mouse or enter the name of the parameter you need to monitor in the input box to search.

Serch			- ×
Variable:	IAT		
IAT IAT Error Count IAT Error Flag IAT_AD IAT Air IAT IAT Gain Trans IAT Gain			
		ОК	

3-1-3. Select an option in the fourth column and modify the minimum value displayed on the dashboard (integer multiples of 10 are recommended)

3-1-4. Select an option in the fifth column and modify the maximum value displayed on the dashboard (integer multiples of 10 are recommended)

3-1-5. Select an option in the sixth column and modify the scale of the instrument panel scale.

3-2.Combo box settings

3-2-1.Select the title input box in the middle to set the title of the combo box.

		Π	ItemName					Mininmum	Maxi	m	um	ĪF	Factor			
	▶ 1		Bat Vol					0	50			1				
	2	\leq	MAP					0	300			1				
	3	\leq	IAT	_				-50	100	_		1				
	4		Run Time					0	100			1				
	5		Run Time					0	100			1				
	6		Run Time					0	100			1				
	7	\sim	TPS		0			100			1					
8 🗖 Run Time						0 100				1						
		-2						10					1442			
cc2					101012								MIMI3			
_ cc2					- MM	2-				1	- MM	3—				
	ItemName				ItemName								ItemName			
D 1 🗹	MAP			▶ 1 ☑ MAP					▶ 1		BAP					
2 🗹	ECT Error	Co	unt		2 🗹 TPS						2	IAT TAI				
3 🗹	BAP				3	\sim	Bat Vol				3	BAT Error Count				
4 🗹	Learn MA	NP C	ок		4		Run Tim	e			4	Run Time				
5 🗹	MAP Erro	or C	ount		5		Run Tim	e			5		Run Time			
6 🗹	IAC Loop				6		Run Tim	e			6		Run Time			
7 🗹	WB UR E	rror	Count		7		Run Tim	e			7		Run Time			
8 🗹	TPS AD				8		Run Tim	e			8	닉	Run Time			
9 🗹	9 Z ECT vs MAP Adjust				9		Run Tim	e			9	님	Run Time			
	Key State			T	10		Run Tim	e		J	10		Run Time			
				JΙ												
							OK									
							OK									

3-2-2. Check one of the monitoring parameters in the second column of the setting table below (check it to monitor the item, uncheck it to not monitor the item)

3-2-3.Double-click the third column of the setting table to enter the monitoring parameter selection interface. Select a parameter in the list box with the mouse, or enter the name of the parameter you need to monitor in the input box to search.

4) Click "OK" to save and exit the setting interface.

5) Connect one end of the USBCAN box to the product's wiring harness and the other end to USB port of computer. Turn the key to "ON", and click "²" in the toolbar, wait for it to turn green "²" which means the connection is successful. If the pop-up window prompts that it fails, please check the USBCAN connection and installation of USBCAN driver (If it is connected, ignore this step).

6) After successful connection, click "O", when it turns to "O", real-time monitoring data displays in the dashboard and combo box in the dashboard interface.



4.1.3.2 Independent suspension monitoring

The current monitoring interface can be suspended in front by click"



4.1.4.monitoring data record

1) Click the "
"
"
icon on the toolbar, enter the file save path selection, and enter the saved file name

		-				
🎪 Save As						× .
$\leftarrow \rightarrow \neg \uparrow \stackrel{\bullet}{=} \rightarrow \text{This}$	s PC > Windows (C:) >			v õ	,0 Search Windows (C:)	
Organize - New folder	r				10 ·	0
	Name	Date modified	Type	Size		-
INSPC	041-074-044	10/10/00/11/04 114	Che de bleve			
30 Objects	2005 de	2/1/2020 11:04 AM	File folder			
Desitop	InstallShield 2020 Projects	9/7/2021 3-09 PM	File folder			
Documents	Intel	9/8/2021 8:48 AM	File folder			
Downloads	KDubeSoftDownloads	12/1/2020 9:19 AM	File folder			
Music	KingsoftData	1/13/2021 4/04 PM	File folder			
E Pictures	PerfLogs	12/7/2010 5:14 PM	File folder			
🔚 Videos	Program Files	9	File folder			
Windows (C:)	Program Files (x86)	9/7/2021 10:49 AM	File folder			
DATA1 (D:)	ProgramData	9/7/2021 10:49 AM	File folder			
and here and	UserGuidePDF	11/17/2020 3x41 PM	File folder			
Pretwork	Users	2/3/2021 9:53 AM	File folder			
~	Inde	9/8/2021 8:48 AM	File folder			
File name: CalDat	, 					~
Security 109/						~ 1
Diversitive 1014						
 Hide Folderr 					Save Cano	et 1
A HIGE FORDES						
	Engine	Dun Stata 0	STOP			
	Light	Full State	2100			
	Engine	Run State 0	STOP			

2) Click Save to exit the path setting interface. At this time, "
"
"
is in green. In this state, the data will continue to be recorded. And in this state, it is forbidden to enter the setting interface.

Sensors			Sensor Error			ADC Sampling		
Engine Stop Time	7335	4	BAT Error Count	٥	count	BAT_AD	445	ADC
Power On Time	7335	\$	MAP Error Count	0	count	MAP_AD	823	ADC
Run Time			IAT Error Count	100	count	IAT_AD	1023	ADC
Bat Vol	13.2	v	ECT Error Count	100	count	ECT_AD	1023	ADC
ECT	-40	DegC	TPS Error Count		count	BAP_AD	464	ADC
BAP	59.7	Кра	BAP Error Count		count	TPS_AD	693	ADC
TPS	82.0	Deg				TPS_RD_AD	594	ADC
WB1 Vol	2.006	v				PPS_AD	1023	ADC
TPS State		OPEN				PPS_RD_AD	1021	ADC
Key State	127	ON				TPS Zero	0	ADC
Engine State IN —			Engine State Out					
RPM	0	RPM	Dec Flag	0	bool	Idle Target RMP	1586	RPM
Rev Count	0	count	Coast Flag	0	bool	PID Target RMP	1586	RPM
Idle Target RPM	1586	RPM	Stop Time	7335		Idle Soft Target RPM	1586	RPM
Start To Ilde RPM	0	RPM	Stop To Startup	0	val	Soft Target Enable	0	bool
Run Time	0		Startup To Stop	0	val	Soft Target Step Size	0	RPM
Power On Time	7335	\$	Startup To Idle	0	val	Idle Base RPM	1500	RPM
Start To Idle Timer	•	ms	Idle To Startup	0	val	BAT Add RPM	5	RPM
Engine State	0	STOP	Idle To Push	0	val			
			Engine Run State	0	STOP			

3) Click "
again to end the data recording and save the current record, and a prompt message will pop up.



4.2.Calibration

Real-time calibration of a certain parameter of the product.

4.2.1 To write calibration data.

4.2.1.1 To write value and state type calibration data.

All values and state type parameters of each calibration group are calibrated in one calibration interface.

1) Connect one end of the USBCAN box to the product's wiring harness and the other end to USB port of computer. Turn the key to "ON", and click the "2" in the toolbar, wait for it to turn green "2" which means the connection is successful. If the pop-up window prompts that it fails, please check the USBCAN connection and installation of USBCAN driver (If it is connected, ignore this step).

	, ANK	\$	%	Ø,	F	6	J	, M	M	₼ 🖸 🖬	1
-) ^{NK}		%	K	ŀ	9	Ň	i T	M	₩0	1

2) By clicking the calibration shortcut button in the tool bar, can jump to the corresponding calibration group conveniently and quickly. When you are in the calibration interface, you can also use the calibration list on the left, click the group name to expand, and click the specific calibration parameter to quickly jump to the location.

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> System Setting	M + +							
> Semans								
> 1db								
2 fearly	1. 4L80/5E Gear Ratio1	248.2			TOC Disable	NO		
Grad	4L80/55 Gear Ratio2				Unlock TCC During Upshift			
A turnshing	5. 10/5E Cear Ratio3	100.0			Unlock TCC During Downshift	ND	~	
A Server ID	4. 4LH, E Gear Ratio4					NO		
2 bellow	5. 1-2 WOT Upshift	5000	RPM		Transmission Type	GM 4LB0/SE	~	
	6. 2-3 WOT Upshilt		RPM					
	7. 3-4 WOT Upshift	6000	RPM					
	8. 4L60/SE Gear Ratio1							
	9. 4L60/SE Gear Ratio2	175.0						
	10. 4L60/5E Gear Ratio3							
	11. 4L60/SE Gear Ratio4	70.0						
	12. Tire Diameter							
	11. Rear Gear Ratio							
		43						
	15. VSS Correction							
			geer					
	17. Minimum RPM TCC Enable	1750	RPM					
	18. Below RPM Disable TCC	1250						
	19. TCC Enable Maximum TPS		Deg					
								+ •

3) Definitions in the calibration table:

1st column: serial number 2nd column: the name of the parameter in the group 3rd column: parameter value

4th column: unit (state value)

4) Select a parameter that needs to be calibrated, enter the value with the keyboard or select the corresponding state with the mouse, and the value will turn green after the modification is completed.

System Setting	🗌 « 🖻 📓 🔸 🛧				
> Sensors					
> Idle					
> Spark	6. Firing Order_2			1. Crankshaft Type L5 x 24 Tooth v	
Fuel	7. firing Order_3			2. Dual WBOS Dual WBOS V	
Transmission				3. Drive By Wire NO v	
System IO	9. Firing Order_5				
Fuel Pump	10. Firing Order_6	4		5. Transmission Type GM 4L80/5E v	
	11. Firing Order_7				
				P 7. Key Off Clear Learn Data YES v	
	13. Fan1 On ECT	88	DegC		
		93	DegC		
	15. Fan1 Off ECT		DogC		
	16. Fan2 Off ECT		DegC		
	17. Fan1 On Delay Time				
	18. Fan2 On Delay Time	1.0			
	19. AC Fan On Delay Time	1.0			
	20. Knock Sensor Number	5 2	number		
	21. Knock Fregence	7.30	KHz		
	22. Knock Detect Max Spe	rd 6000	RPM		
	23. Knock Detect Min Spee	d 800	RPM		
	24 Knock Datast Min MAR	27.0	Koa		

5) Click "💵", and the writing is completed after the bottom progress bar is reset.

Note: Each writing is to write the calibration data of all the parameters in the interface instead of a single parameter.

» 🥙 🕻	a 🗐 🕂 🕈 👘						
	Firing Order_2				Crankshart Type	LS x 24 Tooth V	
	Firing Order_3		val		Dual WBOS	Dual WBOS V	
	8. Firing Order_4			P 3	Drive By Wire	NO	
	9. Firing Order_5		val		Transmission Control	NO V	
	10. Firing Order_6			5	Transmission Type	GM 4L80/SE V	
	11. Firing Order_7		val		Force TPS Zero Learn	NO V	
	12. Hot Idle Speed		RPM		Key Off Clear Learn Data	YES V	
	13. Fan1 On ECT		DegC				
	14. Fan2 On ECT		DegC				
	15. Fan1 Off ECT	86	DegC				
		90	DegC				
	17. Fan1 On Delay Time						
	18. Fan2 On Delay Time						
	19. AC Fan On Delay Time						
	20. Knock Sensor Numbers						
	21. Knock Fregence	7.30	KHz				
	22. Knock Detect Max Spee	sd 6000	RPM				
	23. Knock Detect Min Spee	d 800	RPM				
	24 Knock Detect Min MAR	37.0	X				
	24. KNOCK Detect Min NGP						

4.2.1.2 Write PT type calibration data

The current interface only calibrates one PT type parameter each time.

1) When the computer is not connected with the product, refer to step 1 in 4.2.1.1 (Ignore this step if connected) .

2) Click the group name to expand, then click the PT type parameter that needs to be calibrated, and it will jump to the calibration interface of the parameter.



3) Parameters can be modified in three ways. After completing modification, the value turns green. Approach 1: Move the mouse to a certain point of the curve that needs to be modified, hold down the left button and move the mouse up and down to change the value of the parameter.

> Approach 2: Select a cell in the table above and directly enter the value with the keyboard. Approach 3: Select a row in the numeric value list on the right to directly enter the numeric value with the keyboard.

4) Click "**J**" in the numerical list on the right to write the parameter calibration data, and the writing will be completed after the progress bar is reset.



4.2.1.3 Write 1D type calibration data

The current interface only calibrates one 1D type parameter each time. Please refer to instructions of calibrating PT type parameters for the calibration interface and calibration methods of ID type parameters.



4.2.1.4 Write 2D type calibration data.

The current interface only calibrates one 2D type parameter at a time. The calibration interface and calibration method of the 2D type is same as 1D type and you can refer to the 1D type calibration method for calibration.

1) When the computer is not connected with the product, refer to step 1 in 4.2.1.1 (Ignore this step if it is connected).

2) Click group name to expand, then click the 2D type parameter that needs to be calibrated, and the calibration interface will jump to the calibration interface of the parameter.

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	1.8	1%	/ N	-1-1	01		1									
Kenck Detect Max Speed			-													
Knock Detect Min Speed	° ≪.≘	3 8 4														
Knock Detect Min MAP																
Rev Limiter Type																
Konck Detect Enable																
Launch Retard Enable	X: N	MAP x Poir	it 0~500 (Kp	a)												
N2O Retard Enalbe	Y: Ig	gnition RP	M 0-15000	(RPM)												
Boost Retard Enalbe	Z: N	ABT Timing	g -50~52 (D													
Gear Shift Retard Enalbe																
MAP x Point					1500	2000	2500	1000	1500	4000	4500	5000	5500	6000	7000	8000
ECT x Point		P 100	15.00	15.00	15.00	19.05	19.00	19.00	19.00	19.00	11.00	19.00	19.00	19.00	19.00	19.00
Idle MAP x Point		20.0	15.00	15.00	35.00	19.00	19.00	19.00	59.00	39.00	58.00	55.00	1900	19:00	19.00	19.00
Idle RPM Error		30.0	15.00	15.00	15.00	17.00	19.00	39.00	39.00	39.00	19.00	39.00	29.00	19.00	19.00	19.00
IAT x Point		40.0	1500	15.00	35.00	17.00	17.00	3800 0	38.00	38.00	\$8.00	\$8.00	38.00	18.00	38.00	94.00
Ign Startup RPM		50.0	7.87	13.87	33.00	2642	15.00	35.00	35.00	35.00	3500	35.00	15.00	15.00	35.00	35.00
Idle RMP x Point		60.0	675	10.87	30.00	31.00	31.50	32.00	32.62	32.52	32.62	32.62	32.62	32.62	32.52	32.62
Follow RPM		70.0		5.62	25.00	28.00	29.00	29.00	2900	29.00	29.00	29.00	29.00	29.00	29.00	29.00
Ignition RPM		80.0	100	450	19.00	23.00	24.50	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00
Boost Pressure		90.0			13.50	16.00	21.00	25.00	25.00	25.00	25.00	26.30	26.30	26.90	26.90	2630
Idle RPM Fast Adjust		100	\$ 3.00	3.00	13.50	15.00	20.00	24.50	24.50	2450	2450	2450	25.60	25.60	25.60	25.60
IAT Adjust																
I die ECT Adjust																
Boost Retard																
MBT Timing																
Startup Base Timing																
Idle Base Timing																
Follow Base Timing																
> Fuel																
> Transmission																
> System IO																+ Graph
> Fuel Pump	~															

3)Select the cell in the 2D table that needs to be modified, then enter the value with the keyboard, and the color of the modified value will be green.

4)Click" Graph" to view the smoothness of the three-dimensional graph of the table for better calibration of the parameters.

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*= * / / *	: 1	6	M	1-1-1	00		1									
Knock Detect Max Speed						- 6										
Knock Detect Min Speed																
Knock Detect Min MAP																
Rev Limiter Type																
Konck Detect Enable			0. 500 //													
Launch Retard Enable	MAPX	Point	0~500 (Kpa	0												
N2O Retard Enalbe	Ignition	RPM	0-15000	(RPM)												
Boost Retard Enalbe	MBT TH	ming	-50~52 (De	9))												
Gear Shift Retard Enalbe																
PT MAP x Point							2500	3000	3500	4000	4500	5000	5500	6000	7000	8000
FT ECT x Point	Þ	10.0	15.00	15.00	15:00	19.00	19:00	39.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00
T Idle MAP x Point		20.0	15:00	15:00	35.00	19:00	19:00	39.00	59.00	19.00	59.00	39.00	19:00	19.00	19:00	1900
Idle RPM Error		30.0	15.00	15.00	15.00	17.00	19.00	39.00	39.00	19.00	19.00	19.00	19.00	19.00	29.00	19.00
IAT x Point		40.0	15.00	15:00	35.00	37.00	37.00	38000	38.00	38.00	38.00	\$8.00	38.00	38.00	38.00	38.00
🕶 Ign Startup RPM		50.0	7.87	13.87	33.00	26.62	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00
🕶 Idle RMP x Point		60.0	675	10.87	30.00	31.00	31.50	32.00	32.62	12.62	32.62	32.62	32.62	32.62	32.52	32.62
Follow RPM		70.0	412	5.62	25.00	28.00	29.00	29.00	29.00	29.00	29.00	29,00	29.00	29.00	29.00	29.00
Ignition RPM		80.0	3.00	450	19.00	23.00	2450	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27,00	27.00
Boost Pressure		90.0			13.50	16.00	21.00	25.00	25.00	25.00	25.00	26.30	26.30	26.30	26.30	2630
Idle RPM Fast Adjust			3.00	3.00	13.50	15.00	2000	2450	24.50	2450	2450	2450	25.60	25.60	25.60	25.60
IAT Adjust																
Idle ECT Adjust																
Boost Retard																
MBT Timing																
Startup Base Timing																
Idle Base Timing																
III Follow Base Timing																
> Fuel																
> Transmission																
> System IO																Graph
> Fuel Pump																

5) In the 3D graph interface, you can hold down the left mouse button and drag the 3D graph to rotate, or you can adjust the viewing angle through the function buttons on the upper right side.



6) Click "• in the numerical list on the right to write the parameter group, and the writing will be completed after the progress bar is reset.

4.2.1.5 Write all current parameter data

Write the calibration data of all the current parameters into the product at one time, and it is mostly used to import a new calibration data in order to write the new calibration data into the product.

1) Enter any calibration interface

2) When the computer is not connected with the product, refer to step 1 in 4.2.1.1 (Ignore this step if it is connected).

3) Click "**U**" at the top of the interface, and wait for the progress bar to complete and pop up the prompt message.

> System Setting		8+	*													
> Sensors																
> idle			<u> </u>													
> Spark	X: MAI		0~500 (Kp	a)												
N 500	Y: Igni	tion RPM		(RPM)												
	Z: MB1	Timing	-50~52 (De	g)												
> Transmission																
System IO				1000		2000	2500	2000		4000	4500	5000	5500	6000	2000	8000
> Fuel Pump		b 100	15.00	1500	1500	2000	2300	3900	3900	1000	8900	3000	3900	39.00	39.05	3900
		20.0	15.00	15.00	\$5.00	39.00	39.00	39.00	19.00	19.00	39.00	39.00	39.00	19.00	\$9.00	39.00
						28.00	29.00	29.00			< 29.00		29.00			
											27.00					
									Downlo	ad successeful	25.00					
											24.50					25.60
										OK						
																- Gran

4.2.2 read calibration data

When the software and the product are successfully connected, the calibration data in the product can be read and shown on the software interface.

4.2.2.1 Read calibration data of a certain group.

1) Click the calibration group name to expand, and click any parameter option to enter the calibration interface.

2) When the computer is not connected with the product, refer to step 1 in 4.2.1.1 (Ignore this step if it is connected).

3) Click "**D**" at the bottom of the calibration interface, and the upload is successful after the progress bar is reset. The interface will display the parameter value and state of the current group in the product.

K 🗟 🛱 🕹 🔶						
1. Number Of Cylinders		Cylinders		Crankshaft Type	LS x 24 Tooth	~
2. Engine Displacement				Dual WBOS	Dual WBOS	
3. Injector Flowrate	4500.00	mg/s	3	Drive By Wire	NO	~
4. Firing Order_0				Transmission Control		
5. Firing Order_1			5	Transmission Type	GM 4L80/SE	~
6. Firing Order_2						
7. Firing Order_3				. Key Off Clear Learn Data	YES	~
8. Firing Order_4						
9. Firing Order_5						
10. Firing Order_6						
11. Firing Order_7	3					
12. Hot Idle Speed		RPM				
13. Fan1 On ECT	88	DegC				
	93	DegC				
15. Fan1 Off ECT	86	DegC				
	90	DegC				
17. Fan1 On Delay Time	0.1					
18. Fan2 On Delay Time						
19. AC Fan On Delay Time	1.0					
20. Knock Sensor Numbers		number				

4.2.2.2 Read the calibration data of a certain PT type.

1) Click the calibration group name to expand, and click the name of the parameter to be read to enter the PT type calibration interface.

2) When the computer is not connected with the product, refer to step 1 in 4.2.1.1 (Ignore this step if it is connected).

3) Click "¹ at the bottom right of the calibration interface, and the upload is successful after the progress bar is reset. The interface will display the currently read PT type of calibration data in the product.



4.2.2.3 Read the calibration data of a certain 1D type

The reading method is same as that of reading a certain PT type calibration data, and please refer to 4.2.2.2 for how to read data.

4.2.2.4 Read calibration data of a certain 2D type

The reading method is the same as that of reading a certain PT type calibration data, please refer to 4.2.2.2 for how to read data.

4.2.2.5.Read all calibration data in the product

Read all data of all groups at one time.

1) Enter any calibration interface.

2) When the computer is not connected with the product, refer to step 1 in 4.2.1.1 (Ignore this step if it is connected).

3) Click """ at the top of the interface, and wait for the progress bar to complete the prompt message.



4.2.3 Hide and show the calibration list

Click "

4.2.4 Save calibration data:

Save the current calibrated data locally.

1) Click """ at the top of the calibration interface, select the file path to save, enter the file name, and click "Save".



2) The interface pops up a prompt message box to complete the save.



4.2.5 Import the calibration data.

Can import locally saved historical calibration data as needed.

1) Click "¹ at the top of the calibration interface, select the file path, and click "Open".

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Pump		Fuel Pump		×
nable 🧼 🔶 🛧 📥 > This PC -	> Desktop >		✓ ひ ,으 Search Desktop	
c Sensor				
sor Limit				- •
ine State				
Torque MAP	l n			
Air SNPS网盘				
Loop 💻 This PC	ac cd	Devcon Caldata.edb		
tup Fuel				
C Evel		7		
Documents				
h Music				
Fictures				
😸 Videos				
Windows (C:)				
DATA1 (D:)				
· · · · · · · · · · · · · · · · · · ·				
File name:	Caldata.edb		~ 文档(*.EDB)	~
			Open Ca	ncel
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2) The interface pops up a prompt message box to complete the import. At this time, all the calibration data displayed on the calibration interface are the imported data.



4.3 Update software for controller

This is to update software for ACES controllers.

1) When the engine is stopped, connect one end of the USBCAN box to the system's wiring harness and the other end to the USB port of the computer, and turn the key to "ON".

2) Click "" and select correct .aen file which should match with the system you are using.

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≱⊙								
(Sensors A			Sensors B			Sensor C		
Run Time	0	Sec	Battery	0		Target AF (0	A/F
RPM	0	RPM	MAP	0	Psi	Actual / R1	0	A/F
Idle Target Speed		RPM	MAT			Actual FR2		A/F
IAC Position		Step	ECT	0	۹F	Inj PW	0	ms
IAC Loop			BAP		Psi	Inj Loop1 Percent		
Fuel Pump		OFF	TPS		Deg	Inj Loop2 Percent		%
Key State		OFF	WBOS1			Ign Advance		Deg
TPS State		OPEN	WBOS2		v	ign Dweil		ms
Fuel Loop1 State		Open Loop	PPS		Deg	Engine Stop Time		Sec
Fuel Loop2 State	0	Open Loop	ATF	0	*F	Power On Time	0	Sec
(Fuel Inj PW B			(Ignition Timi	ng B —		Push Bypass A	ir —	
Target AFR		A/F	Idle Base Adv		Deg	Battery		
Air Mol Mass	0	g/mol	Idle ECT Comp	0	Deg	RPM		RPM
VE Air Mass		mol	Idle BAP Comp		Deg	TPS		Deg
Final Air Mass		mg	Idle RPM Comp		Deg	ECT		*F
Injector Number		number	Knock Comp		Deg	TPS vs Air		bypass%
Injector Flowrate		lb/hr	WOT Comp		Deg	From Idle Air		bypass%
Base Inj PW		ms	MBT		Deg	Push Target Air		bypass%
Fuel Loop1 State		Open Loop	Ign Advance		Deg	Push Air		bypass%
Fuel Loop2 State		Open Loop				Follow Air		bypass%
Fuel Learn1 State	0	Disable						
Fuel Learn2 State	0	Disable						

3) Wait for software updating to complete and then a pop-up will prompt. If the pop-up prompts software updating fails, please check if the controller is powered on, the connection between the computer and the controller wiring harness is secure, or if the .aen file was selected correctly.

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t 🕑								
CSensors A ——			CSensors B			Sensors C		
Run Time	0	Sec	Battery	0	v	Target AFR	0	A/F
RPM	0	RPM	MAP	0	Psi	Actual AFR1	0	A/F
Idle Target Speed	0	RPM	MAT	0	۴F	Actual AFR2	0	A/F
IAC Position	0	Step	ECT	0	۴F	inj PW		ms
IAC Loop			BAP		Psi	Inj Loop1 Percent		
Fuel Pump		OFF	TPS		Deg	Inj Loop2 Percent		%
Key State		OFF	WBOS ⁴	0	N/	Ign Advance		Deg
TPS State		OPEN	WBOS			× Ign Dwell		ms
Fuel Loop1 State		Open Loop	PPS			Engine Stop Time		Sec
Fuel Loop2 State	0	Open Loop	ATF Controller software update succeeded!			Power On Time		Sec
CEuel Ini PW R			c lani			Push Bypass Air		
Target AFR	0	A/F	Idle Ba		确定	Battery	0	V
Air Mol Mass	0	g/mol	Idle EC		004	RPM	0	RPM
VE Air Mass	0	mol	Idle BAP Comp	0	Deg	TPS	0	Deg
Final Air Mass	0	ma	Idle RPM Comp	0	Dea	ECT		۹F
Injector Number	0	number	Knock Comp	0	Deg	TPS vs Air	0	bypass%
Injector Flowrate	0	lb/hr	WOT Comp	0	Deg	From Idle Air		bypass%
Base Inj PW		ms	MBT		Deg	Push Target Air		bypass%
Fuel Loop1 State	0	Open Loop	Ign Advance	0	Deg	Push Air		bypass%
Fuel Loop2 State		Open Loop				Follow Air		bypass%
Fuel Learn1 State		Disable						
Fuel Learn2 State	0	Disable						