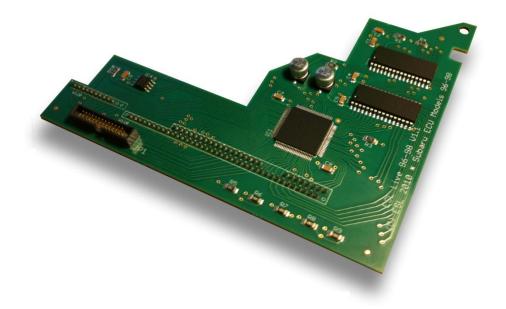


Introducing the New Enduring Solutions ECU System For Subaru with JECS ECUs 1992-1998



e Connection Grid User Views	Loggin																		a
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	Fuel I	gnition	Boost	Limits	Loggin	g Add	Page												
- 60 Fuel Map - 60 Injector Scale	Fuel Map X: Engine Speed (RPM) Y: Engine Load ()																		
- Per Map Fuel Scale																			
- 🙆 ReInjection	: 🛄 🗠	El 🐐	0																
Fuel Trims		800	1200	1600	2088	2400	2800	3200	3600	4000	4400	4800	5200	5600	6000	6400	6800		
Closed Loop Fuel Disable		16.0	14.3	144	14.3	14.5	14.6	14.7	14.5	14.0	14.5	14.5	14.2	14.0	14.1	14.2	14.0		
Ignition Boost					_	_	-	-						-			No. of Concession, Name		
Knock Control	9	14.5	14.5			_	14.6	14.8	14.8	14.9	14.5	14.5		14.0	14.1	14.3			
Sensors	12	14.3	14.7	14.7	14.6	14.8	14.7	14.9	14.9	14.9	14.5	14.4	14.4	14.0	14.3	14.5	14.4		
Limits	15	15.1	14.7	14.7	14.7	14.8	14.7	14.9	15.1	14.9	14.5	14.4	14.4	14.4	14.3	14.5	14.4		
Mafless Only	18	12.7	14.7	14.7	14.7	14.7	14.7	14.9	15.1	14.9	14.4	14.4	14.4	14.4	14.3	14.5	14.0		
CEL Map Switching	19	12.4	13.1	14.1	14.6	14.7	14.7	14.9	15.1	14.9	14.3	14.3	14.4	14.4	14.3	14.3	137		
a map senicring	21	12.4					14.4	14.5	14.4	14.4	14.1	14.3	14.4	14.3					
					_	-					-								
	24	12.4	12.7			-	14.4	14.3	14.4	14.4	14.1	14.3	14.0	13.5					
	27	12.4	12.7		13.9		14.3	14.3	14.4	14.4	14.1	14.1	13.4	13.0					
Data Logger	30	12.4	12.7	12.8	13.9	14.0	13.9	14.3	14.3	14.4	13.7	13.7	13.0	12.6	12.8	12.5	12.1		
Data Logger All	33	12.4	12.7	12.8	13.9	14.0	13.5	14.3	14.0	13.8	13.4	13.1	12.8	12.5	12.4	12.5	12.1		
Engine Load	36	12.4	12.7	12.8	13.9	14.0	13.3	13.8	13.4	13.3	12.8	12.8	12.5	12.0	12.1	12.4	12.1		
- 🗹 Throttle Position	39	12.4	127	12.8	13.9	14.0	13.3	134	131	12.9	12.5	125	12.1	117	11.7	122	11.8		
Manifold Pressure	42		12.7			and the second second		1000	12.7		12.3				11.6				
→ Wastegate Duty → True Ignition																			
- Inderightion	44		12.7		13.9	14.0	13.3			12.5					11.6				
Injector Opening Lag	46	12.4	12.7	12.8	13.9	14.0	13.3	12.9	12.4	12.3	11.9	11.8	11.5	11.5	11.5	11.9	11.3		
MAF Signal						_	_	_	_	_	_	_	_	_	1440	ymanganaag	-	4	
	🔛 ReInj			it Temp)										-				
Throttle Rate	1	3	U																
Temp Correction	3200 3	200 3	200 3	100 2	975 2	850 2	750 2	700	2575	2258	2188	1858	1500	1586	1588	1500			
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Fine Fuel Correction	1		0																
E- Intering Fine Ign Correction E- Interior Int	1.00																		
E Venice speed																			
Max Lambda																			
🛛 🗹 Min Lambda 🛛 🛁																			
🛛 🔽 Coarse Fuel																			



Hardware Feature List (Not Exhaustive):

- Live, on the fly, engine running, per-value mapping
- Low cost (GBP295/USD450)
- Suitable for all turbocharged Imprezas
- Only option for Legacy RSB/GTB
- Only option for AT Forester
- MAF or MAFless load calculation
- User Switchable Maps (Full, not offsets)
- Closed Loop Knock Control
- Closed Loop Idle and Fuel
- Injector overrun cut off
- Factory drive quality out of the box
- Comprehensive closed loop knock control
- 3D boost mapping no boost controller required
- Can be remapped to incorporate further modification
- Full OEM Diagnostic control codes
- International dealer support network
- Standard hot and cold start compensations.
- Closed loop narrowband lambda control (idle and light cruise)
- No additional harness
- Installation Service available
- Motorsport features to follow: ALS, LC, Flat Shift
- All Sensors and actuators exposed, will work with any specification

Software:

- Free Windows Software
- MMI designed with ease of use in mind
- Integrated Logging with CSV file output
- Fully Integrated copy and paste functionality
- MAF/MAFless load switchable in software
- ECU Auto-detection
- ECU parameter and Log Trees
- Fully Customisable User Views with Multiple Tab Pages
- Live Cursor, Ghost Trace and Trail
- Robust, pulling cable out during write will not result in ECU failure.
- Developed on the most modern Microsoft SDK
- Multi-threaded , Object-Oriented
- Live updates

System Description:

Enduring Solutions Limited manufactures and sells Electronic Engine Control Units (ECUs) for turbocharged Subaru Imprezas through a Global Distribution network of aftermarket tuners.

When installed, the system allows complete control of fuelling, ignition timing and boost pressure as well as the ability to recalibrate for different sensors and actuators, such as air pressure and flow sensors, fuel injectors, turbochargers and intercoolers.

For the end user, this results in a more powerful (or economical) state of tune that will result in acceleration times similar to high end sportscars for a relatively small outlay.

For the distributor and tuner, the lack of a capital barrier to ownership makes the system an attractive and inexpensive route for generating repeat business amongst the aftermarket tuning community.

Why are we different?

We use the expansion port in the existing ECU to install a daughter board. This exposes the control and data portions of the code to modification. We write our own control code which allows feature development such as multiple maps and MAP based load. As a result, our offering is very much more cost effective than the competition and utilises the significant investment Subaru made in their control unit.

ECU	Hardware Cost (ex tax)	Twin Map	MAF/MAP load switch	Closed Loop Idle	Knock Control	3D Boost Control	Diagnostic Codes
Motec M4	£995						
Арехі	£727 (Nengun)						
ESL	£295						

Comparison Matrix:



"ESL version 3/4 boards have been a long time coming but definitely worth the wait. Really loving mapping them with the new ESL software. This works similarly to the newage software with good datalogging and real time monitoring but with real time amendments too."

"Great live mapping, twin maps, mafless or maf based, datalogging and all the factory cold start, idle and very important knock control. Perfect !"