IDLE SETUP

NO.	Idle Se..(online)	RPM
01	Idle RPM Warm	730
02	Reset IAC Learn	0
03	Idle Screw Set Mode	Normal

ENGINE SETUP

NO.	Engine ..(online)	
01	Cylinders	8
02	Engine CID	383
03	Cam Mild-Wild 1-4	2
04	Rev Limit RPM	6400
05	Idle RPM Warm	750
06	Reset Fuel Learn	0

INITIAL SETUP

Calibration

1. Engine Setup
2. Fuel Setup
3. Idle Setup
4. Fan Setup
5. Reset Learn

FUEL SETUP

NO.	Fuel Se..(online)	%
01	Injector Flow lb/hr	71.1
02	Inj turn on offset	100.0
03	Regulator Reference	Yes

FAN SETUP

NO.	Fan Set..(online)	deg F
01	Fan 1 ON Temp	190
02	Fan 1 OFF Temp	190
03	Option Fan1 Enable	disable

RESET LEARN

NO.	Reset L..(online)	1clears
01	Fault Clear	0
02	Reset All Learn	0
03	Reset Fuel Learn	0
04	Reset IAC Learn	0
05	Reset TPS Learn	0

ACCEL PUMP

NO.	ACCEL P..(online)	%
01	Accel Pump 20F	0.0
02	Accel Pump 65F	0.0
03	Accel Pump 170F	0.0
04	Accel Decay 20F	0.0
05	Accel Decay 65F	0.0
06	Accel Decay 170F	0.0
07	Fast Accel 20F	0.0
08	Fast Accel 65F	0.0
09	Fast Accel 170F	0.0
10	Fast Decay 20F	0.0
11	Fast Decay 65F	0.0
12	Fast Decay 170F	0.0
13	dTPS Acc Gain	118.4
14	dTPS Acc Max	169.5
15	Tipout -20F	-61.96
16	Tipout 0F	-61.96
17	Tipout 40F	-59.61
18	Tipout 70F	-59.61
19	Tipout 120F	-54.90
20	Tipout 150F	-41.57
21	Tipout 185F	-39.22
22	Tipout 215F	-45.49

MAIN MENU

Main Menu

1. Dashboard
2. Large Gauges
3. Tuning
4. Initial Setup
5. Data Logging
6. Pro Tuning
7. Display Setup
8. Fault Code
9. Read Cal from ECU
10. Write Cal to ECU
11. ECU Programmer

ECU PROGRAMMER

Please choose one hex file

SR196e 20170529 default.hex

LARGE GAUGES

Name	Value	Unit
RPM	0	RPM
MAP	83.2	kPa
Vacuum	-4.2	inHg
Coolant Temp	50	F
AFR	14.8	AFR
Target AFR	12.89	AFR
AFR Trim %	0.0	%
AFR Learn %	0.0	%
Fans On	0	added
TPS	0.0	%
Fuel PW	56.91	ms
Inject Duty%	0.0	%dc
Target RPM	981	RPM
IAC Steps	185	step
IAC Learn	6	step
Idle PID	0	step
Air Temp	-40	F
Cylinder Temp	10	F
Battery	11.80	V
BARO	98.3	kPa
Alpha-N MAP	0.0	kPa
Run State	Stall	
Fault1	12	
Fault2	15	
Fault3	24	
Reserve		
Reserve		
Reserve		

TUNING

Name	State
RPM	Large
MAP	OFF
Vac	OFF
AFR	Large
Targ AFR	OFF
AFR Trim	Large
AFR Learn	OFF
Temp	OFF
Fan	OFF

DISPLAY SETUP

Name	State
Version of Software	Basic
Units of Display	English
Reset Defaults	Yes
Sleep Mode	Enable
PRO Calibration	Show
ECU Programmer	Show

FAULT CODE

Name	Value	Remark
DTC #1	P0108	MAP HIGH
DTC #2	P0122	TPS LOW
DTC #3	P0118	CTS HIGH
DTC #4		
DTC #5		
DTC #6		
DTC #7		

READ CAL FROM ECU

Choose file to save data

Backup 1 Summit.cal
Backup 2 Summit.cal
Backup 3 Summit.cal
Backup 4 Summit.cal
Backup 5 Summit.cal

WRITE CAL TO ECU

Choose file & Write to ECU

Backup 1 Summit.cal
Backup 2 Summit.cal
Backup 3 Summit.cal
Backup 4 Summit.cal
Backup 5 Summit.cal
default V8 T196e Summit 20170

TUNING

Calibration

1. AFR TARGETS
2. ACCEL PUMP
3. CRANK and WARM-UP
4. IDLE CONTROL
5. FUEL CUT CONTROL

CRANK AND WARM-UP

NO.	Crank a..(online)	%
01	Prime Fuel Mult	91
02	Crank Fuel 20F	0.0
03	Crank Fuel 65F	-25.8
04	Crank Fuel 170F	-27.3
05	CRANK IAC	100.0
06	Afterstart 20F	0.0
07	Afterstart 65F	0.0
08	Afterstart 170F	0.0
09	Warmup 20F Fuel	0.0
10	Warmup 65F Fuel	0.0

IDLE CONTROL

NO.	IDLE CO..(online)	
01	Warm Idle Speed	710
02	IAC Rate UP	23
03	IAC Rate Down	11
04	Decel Open IAC	0.0
05	Reset IAC Learn	0
06	Reset TPS Learn	0
07	Idle crew set TPS	Normal

AFR TARGETS

NO.	AFR TAR..(online)	AFR
01	Idle AFR Target	13.80
02	1100 45kPa	14.00
03	3000 45kPa	14.40
04	6000 45kPa	13.40
05	1100 75kPa	13.70
06	3000 75kPa	13.85
07	6000 75kPa	13.00
08	1100 95kPa	12.80
09	3000 95kPa	12.75
10	6000 95kPa	12.65

SENSOR VOLTS

Name	Value	Unit
RPM	0	RPM
MAP	82	kPa
Fault[0]	12	code
counter[0]	0000	x
Fault[1]	12	code
counter[1]	0000	x
Fault[2]	12	code
counter[2]	0000	x
Fault[3]	12	code
counter[3]	0000	x
Fault[4]	12	code
counter[4]	0000	x
Fault[5]	12	code
counter[5]	0000	x

PRO TUNING

Calibration

1. BASIC SETTING
2. AFR TARGETS
3. ACCEL PUMP
4. FUEL CONTROL
5. REV LIMIT DECEL CUT
6. CRANKING FUEL
7. AFR CLOSED LOOP
8. IDLE CONTROL
9. FAN SETTINGS
10. LEARN DATA
11. ACCEL PUMP 3D TABLE
12. ACCEL DECAY 3D TABLE
13. CAM1 FUEL CONTROL
14. CAM2 FUEL CONTROL
15. CAM3 FUEL CONTROL
16. CAM4 FUEL CONTROL

FUEL CUT CONTROL

NO.	FUEL CU..(online)	
01	Rev Limit RPM	6500
02	Dfco Enable Temp	68
03	Decel Cut MAP	24.8
04	Decel Return MAP	26.8
05	DFCO Return Fuel	68.8

ACCEL PUMP

NO.	ACCEL P..(online)	%
01	Accel Pump 20F	0.0
02	Accel Pump 65F	14.8
03	Accel Pump 170F	27.3
04	Fast Accel 20F	0.0
05	Fast Accel 65F	20.3
06	Fast Accel 170F	25.8

PRODUCT INFO

Name	Value	Unit
RPM	0	RPM
MAP	82	kPa
AFR	14.7	AFR
Cal Code	7721	val
Software ID	19608	val
Total Run Time	1	min
Hardware ID	18001	val

DATA LOGGING

Monitor

1. Basic Sensors
2. Fuel Learn Values
3. Fuel Calculation
4. Idle Control
5. Accel and Tipout
6. Sensor Volts
7. Intermittent Faults
8. Confirmed Faults Data
9. Product Info

FUEL CALCULATION

Name	Value	Unit
RPM	0	RPM
MAP	83.0	kPa
Coolant Temp	50	F
IAC Steps	185	step
AFR	14.8	AFR
Lambda Target	87.67	lmb
VE mult	0	%
Base PW	0.00	ms
Fuel PW	56.91	ms
Warmup%	0.0	%
Startup%	100.0	%
Fuel Enrich %	100.0	%
Run Rev	0	revs
Transient Fuel	0.00	ms
Fuel Loop Avg	0	%
Learn Cell	0	cell
AFR Trim%	0.0	%
AFR Learn %	0.0	%
Skip Inj Mode	Every	mode
BARO Fuel	100.0	%
Dfco Exit Fuel	100.4	%
Dfco Cut RPM	0	RPM
Dfco Exit RPM	0	RPM
Dfco Cut MAP	0.00	kPa
Dfco Exit MAP	0.00	kPa
O2 Heat Status	0	3hot

BASIC SETTING

NO.	BASIC S..(online)	
01	Cylinders	8
02	Engine CID	383
03	Cam Mild-Wild 1-4	2
04	Rev Limit RPM	6500
05	Idle Speed Warm	710
06	Fault Clear	0
07	Reset All Learn	0
08	Reset Fuel Learn	0
09	Reset IAC Learn	0
10	Reset TPS Learn	0

REV LIMIT DECEL CUT

NO.	REV LIM..(online)	
01	Rev Limit RPM	6500
02	Dfco Enable Temp	68
03	Dfco Cut Fuel MAP	24.75
04	Dfco Return MAP	26.75
05	Dfco Return Fuel	68.8
06	Dry Ring Fill PW	4.99
07	Max drpm Drop rate	-220
08	Trim delay after cut	500
09	Fault Rev Limit	9000
10	Dfco Exit Enrich %	10.2
11	Dfco Exit Enrich T	0
12	Rev lim offset -22	2000
13	Rev lim offset -4	2000
14	Rev lim offset 41	1000
15	Rev lim offset 72	0
16	Rev lim offset 122	0
17	Rev lim offset 158	0
18	Rev lim offset 187	0
19	Rev lim offset 212	0

IDLE CONTROL

NO.	IDLE CO..(online)	
01	Warm Idle Speed	710
02	Reset IAC Learn	0
03	IAC Learn MAX	48
04	IAC Learn MIN	1
05	IAC Rate UP	23
06	IAC Rate Down	11
07	Fan RPM Adder	15
08	Fan IAC Steps	8
09	Decel Open IAC	0.0

FUEL CONTROL

NO.	FUEL CO..(online)	
01	Fuel -20F Cyl	-3.1
02	Fuel 5F Cyl	-1.6
03	Fuel 32F Cyl	3.1
04	Fuel 70F Cyl	6.3
05	Fuel 85F Cyl	9.4
06	Fuel 105F Cyl	10.9
07	Fuel 130F Cyl	12.5
08	Fuel 195F Cyl	12.5
09	Afterstart 20F	0.0
10	Afterstart 65F	0.0
11	Afterstart 170F	0.0
12	Warmup 20F	0.0
13	Warmup 65F	0.0
14	Inj turn on offset	100.0

ACCEL AND TIPOUT

Name	Value	Unit
RPM	0	RPM
MAP	82	kPa
AFR	14.7	AFR
AFR Trim %	0.0	%
AFR Learn %	0.0	%
Transient Fuel	0.00	ms
Trans fuel PW1	-43.69	ms
Map Accel	0.00	ms
Fast Accel	0.00	ms
Map Decel	0.00	ms
Fast Decel	0.00	ms
Map Decay	0	%
Fast Decay	0	%
Accel RPM	0	%

FUEL LEARN VALUES

Name	Value	Unit
RPM	0	RPM
MAP	83.0	kPa
Coolant Temp	50	F
AFR Trim %	0.0	%
AFR Learn %	0.0	%
AFR	14.8	AFR
Target AFR	12.89	AFR
VE mult	0	%
Fuel Loop Avg	0	%
Idle Fuel Learn	64.8	%
1200 35kPa	66.3	%
1200 50kPa	77.7	%
1200 75kPa	79.0	%
1200 100kPa	106.0	%
1800 35kPa	64.8	%
1800 50kPa	79.9	%
1800 75kPa	95.4	%
1800 100kPa	110.3	%
3000 35kPa	68.9	%
3000 50kPa	64.8	%
3000 75kPa	99.3	%
3000 100kPa	113.7	%
4000 35kPa	95.9	%
4000 50kPa	97.9	%
4000 75kPa	102.7	%
4000 100kPa	105.5	%
5500 35kPa	98.9	%
5500 50kPa	100.0	%
5500 75kPa	101.0	%
5500 100kPa	105.6	%

ACCEL DECAY 3D TABLE

NO.	ACCEL D..(online)	%
01	Decay 800 -22F	65
02	Decay 800 -4F	63
03	Decay 800 41F	62
04	Decay 800 72F	64
05	Decay 800 122F	64
06	Decay 800 158F	64
07	Decay 800 187F	53
08	Decay 800 212F	49
09	Decay 1200 -22F	61
10	Decay 1200 -4F	58
11	Decay 1200 41F	57
12	Decay 1200 72F	57
13	Decay 1200 122F	56
14	Decay 1200 158F	56
15	Decay 1200 187F	48
16	Decay 1200 212F	40
17	Decay 2300 -22F	40
18	Decay 2300 -4F	41
19	Decay 2300 41F	41
20	Decay 2300 72F	44
21	Decay 2300 122F	44
22	Decay 2300 158F	43
23	Decay 2300 187F	37
24	Decay 2300 212F	37
25	Decay 3500 -22F	41
26	Decay 3500 -4F	41
27	Decay 3500 41F	41
28	Decay 3500 72F	37
29	Decay 3500 122F	37
30	Decay 3500 158F	37
31	Decay 3500 187F	37
32	Decay 3500 212F	37

CAM2 FUEL CONTROL

NO.	CAM2 FU...(online)	%
01	VE 500rpm 20kPa	40.1
02	VE 500rpm 40kPa	36.6
03	VE 500rpm 60kPa	41.6
04	VE 500rpm 80kPa	55.9
05	VE 500rpm 100kPa	82.3
06	VE 900rpm 20kPa	30.0
07	VE 900rpm 40kPa	30.5
08	VE 900rpm 60kPa	44.2
09	VE 900rpm 80kPa	62.5
10	VE 900rpm 100kPa	85.3
11	VE 1800rpm 20kPa	43.2
12	VE 1800rpm 40kPa	52.3
13	VE 1800rpm 60kPa	66.5
14	VE 1800rpm 80kPa	86.3
15	VE 1800rpm 100kPa	100.0
16	VE 2700rpm 20kPa	62.5
17	VE 2700rpm 40kPa	66.5
18	VE 2700rpm 60kPa	74.6
19	VE 2700rpm 80kPa	81.3
20	VE 2700rpm 100kPa	89.9
21	VE 3600rpm 20kPa	75.7
22	VE 3600rpm 40kPa	83.8
23	VE 3600rpm 60kPa	90.4
24	VE 3600rpm 80kPa	91.9
25	VE 3600rpm 100kPa	95.0
26	VE 5000rpm 20kPa	71.1
27	VE 5000rpm 40kPa	81.8
28	VE 5000rpm 60kPa	90.9
29	VE 5000rpm 80kPa	91.4
30	VE 5000rpm 100kPa	92.9
31	VE 6000rpm 20kPa	82.8
32	VE 6000rpm 40kPa	89.4
33	VE 6000rpm 60kPa	90.9
34	VE 6000rpm 80kPa	90.9
35	VE 6000rpm 100kPa	92.9
36	VE 7000rpm 20kPa	85.8
37	VE 7000rpm 40kPa	90.4
38	VE 7000rpm 60kPa	91.4
39	VE 7000rpm 80kPa	91.4
40	VE 7000rpm 100kPa	97.5

ACCEL PUMP 3D TABLE

NO.	ACCEL P..(online)	
01	Accel 800 -22F	285.5
02	Accel 800 -4F	285.5
03	Accel 800 41F	285.5
04	Accel 800 72F	269.8
05	Accel 800 122F	243.1
06	Accel 800 158F	232.2
07	Accel 800 187F	197.6
08	Accel 800 212F	188.2
09	Accel 1200 -22F	235.3
10	Accel 1200 -4F	227.5
11	Accel 1200 41F	218.0
12	Accel 1200 72F	191.4
13	Accel 1200 122F	191.4
14	Accel 1200 158F	185.1
15	Accel 1200 187F	125.5
16	Accel 1200 212F	106.7
17	Accel 2300 -22F	166.3
18	Accel 2300 -4F	122.4
19	Accel 2300 41F	103.5
20	Accel 2300 72F	100.4
21	Accel 2300 122F	102.0
22	Accel 2300 158F	86.3
23	Accel 2300 187F	56.5
24	Accel 2300 212F	56.5
25	Accel 3500 -22F	156.9
26	Accel 3500 -4F	105.1
27	Accel 3500 41F	89.4
28	Accel 3500 72F	84.7
29	Accel 3500 122F	76.9
30	Accel 3500 158F	47.1
31	Accel 3500 187F	42.4
32	Accel 3500 212F	42.4

AFR CLOSED LOOP

NO.	AFR CLO..(online)	
01	Fuel Trim Max	50
02	Fuel Trim Min	-43.8
03	Fuel Trim RPM Max	7000
04	Fuel Trim RPM Min	400
05	AFR Loop Speed	44.5
06	Idle Trim Rate Pos	38
07	Idle Trim Rate Neg	10
08	Idle Trim Jump Pos	29
09	Idle Trim Jump Neg	6
10	Trim up limit low MAP	113.3
11	Trim dn limit low MAP	90.6
12	Loop MAP low	21.00
13	Fuel Learn Rate	29.7
14	Idle fuel Learn rate	9.0
15	Fuel Learn Max	29.7
16	Fuel Learn Min	-35.2
17	Fuel learn max RPM	7000
18	Fuel learn min RPM	550
19	Fuel learn OFF 1	0
20	Fuel Loop OFF 1	0
21	Reset Fuel Learn	0
22	Display AFR filter	32
23	Disp AFR filt idle	24
24	Preheat WB02 Stall	Off

CONFIRMED FAULTS DATA

Name	Value	Unit
RPM	0	RPM
MAP	82	kPa
AFR	14.7	AFR
Fault[0]	12	code
trips[0]	1	trip
recover[0]	0	trip
Fault[1]	12	code
trips[1]	1	trip
recover[1]	0	trip
Fault[2]	12	code
trips[2]	1	trip
recover[2]	0	trip
Fault[3]	12	code
trips[3]	1	trip
recover[3]	0	trip
Fault[4]	12	code
trips[4]	1	trip
recover[4]	0	trip
Fault[5]	12	code
trips[5]	1	trip
recover[5]	0	trip

IDLE CONTROL

Name	Value	Unit
RPM	0	RPM
MAP	82	kPa
Coolant Temp	50	F
Fans On	0	added
AFR	14.7	AFR
VE Mult	0	%
Target RPM	1001	RPM
IAC Steps	185	step
IAC PID Loop	6	step
Idle Learn	16	step
Base Step	180	step
Decel Steps	0	step
Step Up	116	step
Anti-Stall Step	0	step
Crank Step	116	step
Idle Learn 20F	16.0	step
Idle Learn 65F	16.0	step
Idle Learn 170F	16.0	step
TPS State	136	
IAC State	Crank	
Reserve		

BASIC SENSORS

Name	Value	Unit
RPM	0	RPM
MAP	83.0	kPa
Vacuum	-4.2	inHg
Coolant Temp	50	F
AFR	14.8	AFR
Target AFR	12.89	AFR
Lambda	100.59	lmb
Lambda Target	87.67	lmb
AFR Trim %	0.0	%
AFR Learn %	0.0	%
Idle Fuel Learn	64.8	%
Fans On	0	added
TPS	0.0	%
Fuel PW	56.91	ms
Inject Duty%	0.0	%dc
MAP Fueled	83.00	kPa
Transient Fuel	0.00	ms
Target RPM	981	RPM
IAC Steps	185	step
Idle PID	0	step
Air Temp	-40	F
Cylinder Temp	10	F
Battery	11.80	V
BARO	99.3	kPa
WB02 Temp	39	deg
Warmup%	0.0	%
Startup%	100.0	%
Run Rev	0	rev
Run State	Stall	
Fault1	12	
Fault2	15	
Fault3	24	
Reserve		
Reserve		
Reserve		

LEARN DATA

NO.	LEARN D..(online)	
01	Cal No-Save 196	16
02	TPS Zero Count	42
03	Fault Clear 1	0
04	Reset All Learn	0
05	Reset Fuel Learn	0
06	Reset IAC Learn	0
07	Reset TPS Learn	0

CRANKING FUEL

NO.	CRANKIN..(online)	
01	Prime Fuel Mult	91
02	Crank Open TPS Mu	-20
03	Prime Shot Delay	1.5
04	Prime Crank Revs	2
05	CRANK IAC Mult	0.0
06	Crank Fuel 20F	0.0
07	Crank Fuel 65F	-15.6
08	Crank Fuel 170F	-18.8
09	Afterstart 20F	0.0
10	Afterstart 65F	0.0
11	Afterstart 170F	0.0
12	Warmup 20F	0.0
13	Warmup 65F	0.0
14	Prime Shot Key On	On

FAN SETTINGS

NO.	Fan Set..(online)	
01	Fan 1 ON Temp	190
02	Fan 1 OFF Temp	190
03	Option Fan Enable	disable

SENSOR VOLTS

Name	Value	Unit
RPM	0	RPM
MAP	82	kPa
Alpha-N MAP	0.0	kPa
MAP Volts	5.00	kPa
Coolant Temp	50	F
AFR	14.7	AFR
IAC Actual	185	step
dPRM dt	-32768	RPM
dMAP dt	16384.0	kPa
Wideband Volt	1509	mV
O2 Heat Status	0	3hot
WB Diagnostic	0	0 Ok
WBO2 Temp	23	deg
Air Temp Volt	5.00	V
Coolant Volt	5.00	V
Throttle Volt	0.00	V
Battery	12.60	V
Fault1	12	
Fault2	15	
Fault3	24	
Fault4	0	

Summit® RACING EQUIPMENT

MAX-efi500

HANDHELD UNIT MAP