

eCtune ISR version 3.2

Rom Information:

Table sizes: 20 row 24 columns

Primary tables:

Low Cam Ign
High Cam Ign
Low Cam Fuel
High Cam Fuel

Primary tables:

Low Cam Ign
High Cam Ign
Low Cam Fuel
High Cam Fuel

ISR:

Port settings: 38400 8N1

ISR will reply with 0x0EEh when something is wrong(wrong command etc)

Description:	Command Length	Commands:	Return Bytes:	Retrun value:
Handshake	0x01h	010h	0x01h	0xCDh(on succes)
Datalogging table Main	0x01h	020h	0x026h	See below
Datalogging table Sec	0x01h	030h	0x00Fh	See below
Clear MIL memory	0x01h	050h	0x001h	0x50h(on succes)

Datalogging table 1(Main):

Length: 38 bytes

Desc: All data

Checksum: byte 37 (8-bit ADD)

Byte: Description:

Byte:	Description:	Formula
00	ECT	volt = val * (5f/255f) and lookup in pdf
01	IAT	volt = val * (5f/255f) and lookup in pdf
02	02(volt)	o2 volt = value * (5f/255f)
03	BARO	baro volt = value * (5f/255f)
04	MAP	map volt = value * (5f/255f)
05	TPS	tps = (value-25) / 2.04
06	RPM LSB	----
07	RPM MSB	rpm = 1875600/rpm_word
08	INPUTS 2	if bit = 1 then option is active
	bit 0= PostFuel Active	
	bit 1= SCC routine	
	bit 2= IGN cut	
	bit 3= VTS maps	
	bit 4= fuel cut 2	
	bit 5= fuel cut 1	
	bit 6= AT 2	
	bit 7= AT 1	
09	LOW CAM ROW	current low cam rpm row
10	HIGH CAM ROW	current high cam rpm row
11	COLUMN	current map column
12	ERROR REG 1	if != 0 = error

13	ERROR REG 2	if != 0 = error
14	ERROR REG 3	if != 0 = error
15	ERROR REG 4	if != 0 = error
16	VSS	val = speed in kmh
17	INJECTOR LSB	----
18	INJECTOR MSB	$\text{duration}(\text{ms}) = ((\text{val}/4.0) * 3.2F) / 1000;$
19	IGNITION FINAL	$\text{ign}(\text{degrees}) = (\text{value} * 0.25) - 6$
20	IGNITION TABLE	$\text{ign}(\text{degrees}) = (\text{value} * 0.25) - 6$
21	INPUTS 1	if bit = 1 then option is active
	bit 0= park/neutral input	
	bit 1= brakeswitch	
	bit 2= AC switch	
	bit 3= VTP	
	bit 4= Startsignal	
	bit 5= SCC	
	bit 6= VTS Feedback	
	bit 7= PSP	
22	OUTPUTS 1	if bit = 1 then option is active
	bit 0= FuelPump	
	bit 1= AT lockup	
	bit 2= IAB	
	bit 3= AT lockup	
	bit 4= FanControl	
	bit 5= Alt Control	
	bit 6= Purge	
	bit 7= ACC	
23	OUTPUTS 2	if bit = 1 then option is active
	bit 0= empty	
	bit 1= empty	
	bit 2= empty	
	bit 3= empty	
	bit 4= P1.46	
	bit 5= Mil	
	bit 6= o2 heater	
	bit 7= VTS	
24	ELD	
25	BATTERY	$\text{battery volt} = 26 * \text{val} / 270$
26	INPUT BYTES 1	if bit = 1 then option is active
	bit 0= ftl input	
	bit 1= fts input	
	bit 2= EBC input	
	bit 3= EBC Hi input	
	bit 4= GPO1 input	
	bit 5= GPO2 input	
	bit 6= GPO3 input	
	bit 7= MBoost Input	
27	ACTIVE BYTES 1	if bit = 1 then option is active
	bit 0= ftl	
	bit 1= anit-lag	
	bit 2= fts	
	bit 3= boost cut	
	bit 4= EBC active	
	bit 5= Secondary Maps	

	bit 6= Fan control	
	bit 7= QuadBoostCtrl Active	
28	EBC BASE DUTY	duty cycle = val / 2
29	EBC BUTY	duty cycle = val / 2
30	EBC MAP TARGET	map volt = value * (5f/255f)
31	ACTIVE BYTES 2	if bit = 1 then option is active
	bit 0= output1	
	bit 1= output2	
	bit 2= output3	
	bit 3= QuadBoostCtrl stage2	
	bit 4= QuadBoostCtrl stage3	
	bit 5= QuadBoostCtrl stage4	
	bit 6= Overheat protection	
	bit 7= Lean protection	
32	EGR lift input	volt = value * (5f/255f)
33	B6 input	volt = value * (5f/255f)
34	Internal	
35	Internal	
36	Internal	

Datalogging table 2: (Secondary)

Length: 15 bytes

Desc: All data

Checksum: byte 14 (8-bit ADD)

Byte:	Description:	Formula
00	ECT FUEL CORRECTION	correction % = ((ve_corr/0x80)*100)-100
01	O2 TRIM SHORT LSB	---
02	O2 TRIM SHORT MSB	correction % = ((o2_word/0x8000)*100)-100
03	O2 TRIM LONG LSB	---
04	O2 TRIM LONG MSB	correction % = ((o2_word/0x8000)*100)-100
05	IAT FUEL CORRECTION LSB	---
06	IAT FUEL CORRECTION MSB	correction % = ((iat_word/0x8000)*100)-100
07	VE FUEL CORRECTION	correction % = ((ve_corr/0x80)*100)-100
08	IAT IGNITION CORRECTION	ign correctio(degrees) = 80h; ign = 0; val<080h; ign =(128-value) * -0.25F val>080h; ign =(value-128) * 0.25F
09	ECT IGNITION CORRECTION	ign correctio(degrees) = 80h; ign = 0; val<080h; ign =(128-value) * -0.25F val>080h; ign =(value-128) * 0.25F
10	GEAR IGNITION CORRECTION	ign correctio(degrees) = 80h; ign = 0; val<080h; ign =(128-value) * -0.25F val>080h; ign =(value-128) * 0.25F
11	GEAR FUEL CORRECTION	correction % = ((ve_corr/0x80)*100) - 100
12	IACV position MSB	pos % = ((Value/32768)*100)-100
13	IACV position LSB	----

Datalogging table 3:

Desc: Tuner frame(need for logging and plot o2 in grid)

Length: 16 bytes

Checksum: byte 17(8-bit ADD)

Byte:	Description:	Formula
00	ECT	volt = val * (5f/255f) and lookup in pdf
01	IAT	volt = val * (5f/255f) and lookup in pdf
02	O2	o2 volt = value * (5f/255f)
04	MAP	map volt = value * (5f/255f)
05	TPS	tps = (value-25) / 2.04
06	VSS	
07	LOW CAM ROW	current low cam rpm row
08	HIGH CAM ROW	current high cam rpm row
09	COLUMN	current map column
10	RPM LSB	----
11	RPM MSB	rpm = 1875600/rpm_word
12	INJECTOR LSB	----
13	INJECTOR MSB	duration(ms) = ((val /4.0) *3.2F) /1000;
14	IGNITION FINAL	ign(degrees) = (val * 0.25) - 6
15	INPUTS 1	if bit = 1 then option is active
	bit 0= park/neutral input	
	bit 1= brakeswitch	
	bit 2= AC switch	
	bit 3= VTP	
	bit 4= Startsignal	
	bit 5= SCC	
	bit 6= VTS Feedback	
	bit 7= PSP	
14	ACTIVE BYTES 1	if bit = 1 then option is active
	bit 0= ftl	
	bit 1= anit-lag	
	bit 2= fts	
	bit 3= boost cut	
	bit 4= ebc active	
	bit 5= Secondary Maps	
	bit 6= Fan control	
	bit 7= Mboost Active	