



BitField channel in Live Measures Mode

Question:

How the values of a Bitfield channel are displayed on AiM devices and on Race Studio 3 Live Measures mode and Race Studio Analysis?

Answer:

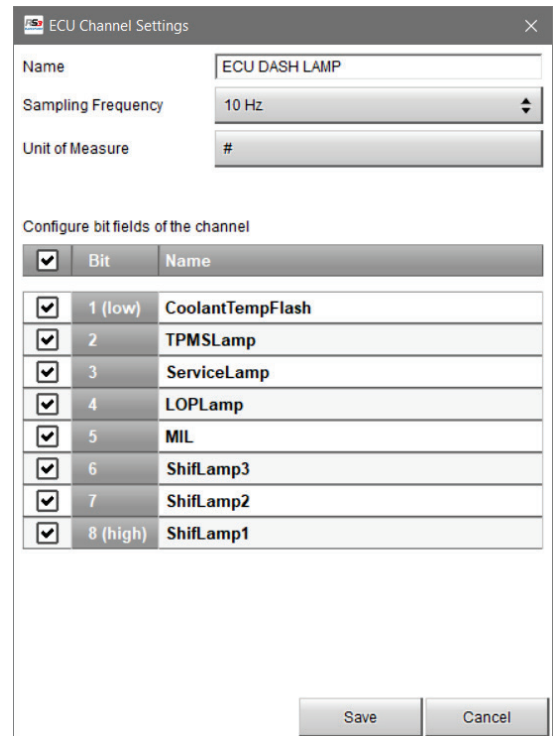
In Live Measures mode, the values of the Bitfield channels are not displayed as transmitted by the engine control unit (raw hexadecimal value), to simplify the reading of the data they are shown as active bits.

Example:

Simulating the maximum value of the channel FLAG FBX 5 "hexadecimal FF = 255", in the Live Measures mode will be shown "1,2,3,4,5,6,7,8", this value indicates that from the first to the eight bit they are all active.

Live Measures				Download	WiFi and Properties	Settings	Tracks	Counters	Logo	Firmware	Device Explorer	Demo
L GCU TORQ...	---	%	0 #	FLAG FBX R...	0 #	N FUEL	---	T FBX PCB	---	C	<div style="border: 1px solid black; padding: 5px; text-align: center;"> FLAG FBX 5 12345678 # </div>	
P INTAKE AIR...	---	%	#	FLAG ABS	#	V STW LIMIT	---	T AIR	---	C		
POS PEDAL	---	%	#	FLAG TCS OFF	#	TORQ ENG A...	---	T ENG AIR	---	C		
POS THROT...	---	%	0 #	FBX DEV1	0 #	TORQ ENG R...	---	T XAP PCB	---	C		
G CH X	---	g	---	FBX DEV2	---	FLAG ESP	---	T ENG OIL	---	C		
G CH Y	---	g	---	FBX DEV3	---	FLAG TCS	---	T GCU OIL	---	C		
A ECU IGN	---	deg	---	FLAG ENG E...	---	P TURBO	---	T ENG WATER	---	C		
A STE	---	deg	0 #	FLAG XAP C...	0 #	P DSG CLUT...	---	S ECU INJ	---	ms		
A ECU THERM	---	deg	0 #	FLAG XAP ST	0 #	P DSG CLUT...	---	S STW EOT	---	s		
W STE	---	deg/s	---	N XAP CNT	---	P GCU CLUT...	---	U GCU GEAR	---	mV		
W CH	---	deg/s	---	N XAP VERSI...	---	P ECU RAIL	---	U XAP BAT	---	mV		
FLAG GCU IN...	0 #		---	POS XAP POT	---	RPM ENG	---	FUEL CONS	---	l		
FLAG STW O...	0 #		---	POS XAP PO...	---	R DSG SHAFT1	---	FUEL LEVEL	---	l		
FLAG STW O...	0 #		---	TORQ ESP	---	R DSG SHAFT2	---	LAP CONS	---	l		
FLAG STW O...	0 #		---	XAP FREE1	---	V WHL FL	---	I FBX MAIN	---	A		
FLAG BRAKE	---	#	---	XAP FREE2	---	V WHL FR	---	I FBX TURNL...	---	A		
POS GCU GE...	---	#	---	S FUEL	---	V WHL REF	---	I XAP OUT	---	A		
FLAG FBX 5	12345678	#	---	TIP DOWN	---	V WHL RL	---	D ECU LAMB...	---	lambda		

If for example the following channel ECU DASH LAMP is indicating a low oil pressure (LOPLamp) alarm and a malfunction indicator lamp (MIL), the channel will report the code 45, that is warning on the fourth and fifth bits.



The image shows a software dialog box titled "ECU Channel Settings". It contains the following fields and controls:

- Name:** ECU DASH LAMP
- Sampling Frequency:** 10 Hz
- Unit of Measure:** #
- Configure bit fields of the channel:** A table with 8 rows, each representing a bit. All checkboxes are checked.

<input checked="" type="checkbox"/>	Bit	Name
<input checked="" type="checkbox"/>	1 (low)	CoolantTempFlash
<input checked="" type="checkbox"/>	2	TPMSLamp
<input checked="" type="checkbox"/>	3	ServiceLamp
<input checked="" type="checkbox"/>	4	LOPLamp
<input checked="" type="checkbox"/>	5	MIL
<input checked="" type="checkbox"/>	6	ShifLamp3
<input checked="" type="checkbox"/>	7	ShifLamp2
<input checked="" type="checkbox"/>	8 (high)	ShifLamp1

At the bottom right, there are "Save" and "Cancel" buttons.

If all warning lamps should stay on, the message would be 12345678, because every bit would be activated.

BitField channel in Race Studio Analysis

Answer:

Analyzing the channel ECU DASH LAMP on Race Studio Analysis, the reported values indicate the active bits.

