

F88 CAN Datastream

(Default Settings)

2008-04-03



CAN Datastream Template

The F88 now allows the calibration engineer to configure a can datastream with flexible identifiers, transmission rates and content.

The datastream is always CAN2.0B using 11 bit identifiers at 1MHz. Data frames are always 8 bytes, consisting of four 16-bit quantities sent high byte first.

Up to 20 different frames can be defined. Each frame has configurable CAN identifier, transmission rate (up to 100Hz) and four transmitted quantities (selectable from all monitorable/loggable items within the ecu). Item names with suffix `_S` are signed, those with suffix `_U` are unsigned.

Default Settings

The default datastream defines 18 of the possible 20 frames. Identifiers are 600h through 611h to compliment those sent by the PDU (700h through 709h). Transmission frequencies vary from 5Hz to 50Hz.

Frame 1 / 600h / 50Hz

<code>rpm_S</code>	rpm	no transform
<code>ppsA_S</code>	%	divide by 81.92
<code>vbat_S</code>	V	divide by 1000
<code>longG_S</code>	G	divide by 1000

Frame 2 / 601h / 50Hz

<code>map1_S</code>	mBar	no transform
<code>prp1_S</code>	mBar	no transform
<code>turboSpeed1DeSpiked_S</code>	kRpm	divide by 100
<code>SPARE_U</code>	-	-

Frame 3 / 602h / 50Hz

<code>map2_S</code>	mBar	no transform
<code>prp2_S</code>	mBar	no transform
<code>turboSpeed2DeSpiked_S</code>	kRpm	divide by 100
<code>SPARE_U</code>	-	-

Frame 4 / 603h / 10Hz

<code>relFp1_S</code>	mBar	no transform
<code>lam1_S</code>	lambda	divide by 1000
<code>fuelMltCII1_S</code>	-	divide by 4096
<code>SPARE_U</code>	-	-

Frame 5 / 604h / 10Hz

<code>relFp2_S</code>	mBar	no transform
<code>lam2_S</code>	lambda	divide by 1000
<code>fuelMltCII2_S</code>	-	divide by 4096
<code>SPARE_U</code>	-	-

Frame 6 / 605h / 5Hz

act1_S	degC	divide by 10
ect1_S	degC	divide by 10
egt1_S	degC	divide by 10
SPARE_U	-	-

Frame 7 / 606h / 5Hz

act2_S	degC	divide by 10
ect2_S	degC	divide by 10
egt2_S	degC	divide by 10
SPARE_U	-	-

Frame 8 / 607h / 10Hz

ccp1_S	mBar	no transform
ccp2_S	mBar	no transform
ccp3_S	mBar	no transform
ccp4_S	mBar	no transform

Frame 9 / 608h / 10Hz

eop1_S	mBar	no transform
eop2_S	mBar	no transform
eop3_S	mBar	no transform
eop4_S	mBar	no transform

Frame 10 / 609h / 5Hz

eot_S	degC	divide by 10
ft_S	degC	divide by 10
ecp_S	mBar	no transform
bap_S	mBar	no transform

Frame 11 / 60Ah / 5Hz

engineEnable_U	-	0 = OK 1 = SWOFF 100 = EOPTRIP 101 = CCPTRIP
calSwitch_U	-	add 1
tcSwitch_U	-	add 1
pitSwitch_U	-	0 = OFF 1 = ON

Frame 12 / 60Bh / 5Hz

clutchSwitch_U	-	0 = OFF 1 = ON
manAutoSwitch_U	-	0 = MANUAL 1 = AUTO
wow_U	-	0 = OFF 1 = ON
autoStartState_U	-	0 = OFF 1 = ENA 2 = ARMED 3 = START 4 = FAIL

Frame 13 / 60Ch / 5Hz

fuelConsLR_U	Litres	divide by 10
sensorSwitch_U	-	0 = OFF 1 = ON
alsState_U	-	0 = OFF 1 = START 2 = ON 3,4 = SD 5 = TO 100 = DIS
wgcStrategyActive_U	-	0 = OLD 1 = NEW 2 = STD

Frame 14 / 60Dh / 5Hz

gearCutDogKickCount_U	-	-
gearCutFailCount_U	-	-
dbwStatus_U	(bit flags)	B0 = PPS B1 = TPS1 B2 = TPS2 B3 = DBW1 B4 = DBW2
knockStatus_U	(bit flags)	B0 = cyl1 B1 = cyl2 etc

Frame 15 / 60Eh / 50Hz

gearV_U	V	divide by 1000
gear_S	-	0 = U 1 = R 2 = N 3 = 1 4 = 2 5 = 3 6 = 4 7 = 5 8 = 6 9 = 7 10 = 8
paddleSwitch_U	-	0 = NONE 1 = DOWN 2 = UP 3 = BOTH
gsp_S	mBar	no transform

Frame 16 / 60Fh / 50Hz

flSpeed_S	kph	multiply by 0.036
frSpeed_S	kph	multiply by 0.036
rlSpeed_S	kph	multiply by 0.036
rrSpeed_S	kph	multiply by 0.036

Frame 17 / 610h / 50Hz

swa_S	deg	divide by 32
latG_S	G	divide by 1000
vehicleSpeed_S	kph	multiply by 0.036
drivenSpeed_S	kph	multiply by 0.036

Frame 18 / 611h / 50Hz

wheelSpin_S	%	divide by 10.24
tcSpinTarg_S	%	divide by 10.24
tcSpinErr_S	%	divide by 10.24
tcTrq_S	%	divide by 10.24

Abbreviations

rpm	Engine Speed
ppsA	Pedal Position
vbat	Supply (Battery) Voltage
longG	Longitudinal G
map1/map2	Manifold Absolute Pressure
prp1/prp2	Post-Restrictor Pressure
turboSpeed1DeSpiked/turboSpeed1DeSpiked	Turbocharger Shaft Speed

relFp1/relFp2	Relative Fuel Pressure
lam1/lam2	Fuel Air Ratio (Lambda)
fuelMltCll1/fuelMltCll2	Fuel Correction for Closed-Loop Lambda
act1/act2	Air Charge Temperature
ect1/ect2	Engine Coolant Temperature
egt1/egt2	Exhaust Gas Temperature
ccp1/ccp2/ccp3/ccp4	Crank Case Pressure
eop1/eop2/eop3/eop4	Engine Oil Pressure
eot	Engine Oil Temperature
ft	Fuel Temperature
ecp	Engine Coolant Pressure
bap	Barometric Absolute Pressure
engineEnable	Overall Engine Enable Status
calSwitch	Calibration Switch Position
tcSwitch	Traction Control Switch Position
pitSwitch	Pit Limit Switch Position
clutchSwitch	Clutch Depressed Switch Position
manAutoSwitch	Manual / Auto Gearshift Switch Position
wow	Weight On Wheels
autoStartState	Automatic Engine Starting System State
fuelConsLR	Low Resolution Fuel Consumption
sensorSwitch	Redundant Sensor Set Preference Switch Position
alsState	Anti Lag System State
wgcStrategyActive	Active Wastegate Strategy
gearCutDogKickCount	Count of Closed-Loop Gearcut Kicks
gearCutFailCount	Count of Closed-Loop Gearcut Failures
dbwStatus	Drive By Wire System Status
knockStatus	Knock Detection Sensor Status
gearV	Gear Position Sensor Voltage
gear	Gear Position
paddleSwitch	Paddle Shift Switches Position
gsp	Gearshift System Pressure
flSpeed	Front Left Wheel Speed
frSpeed	Front Right Wheel Speed
rlSpeed	Rear Left Wheel Speed
rrSpeed	Rear Right Wheel Speed
swa	Steering Wheel Angle
latG	Lateral G
vehicleSpeed	Vehicle Speed
drivenSpeed	Driven Wheel Speed
wheelSpin	Wheel Spin
tcSpinTarg	Traction Control Wheel Spin Limit
tcSpinErr	Traction Control Wheel Spin Error
tcTrq	Traction Control Torque Control Request