ECUMASTER ADU

Application Note

MoTec M4/M48 DATA SET 5

Revision 1.00

1. Copyright and trademarks

2. Introduction

This application note explains how to connect and configure the ADU with MoTec M4/ M48 using serial protocol called Telemetry Data Set 5 at 19200kbsp speed.

3. Electrical connection

To connect to Motec M4/48 ECU the serial connection is required. In the casue of using M48 model or M4 with the serial number lower than 3000 the Motec PCI cable or Motec CIM Module is required.

Motec M48 / M4 (serial < 3000)

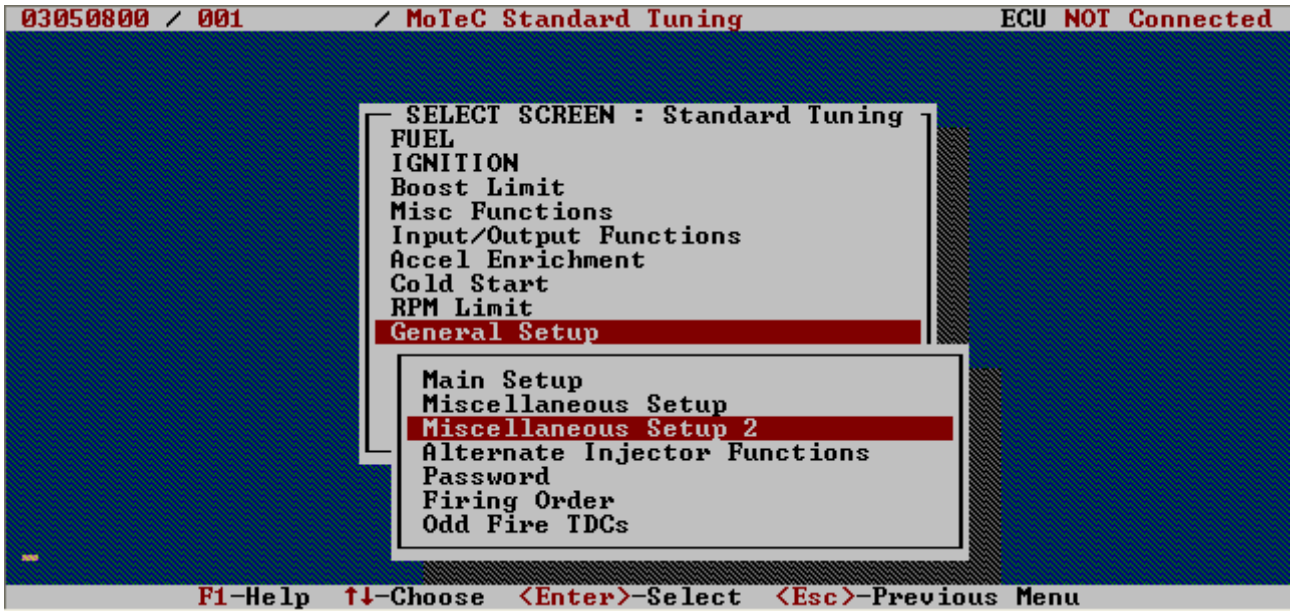
M4/M48	ADU	Comment
DB9 TERMINAL 2	7	Serial RS232

Motec M4 (serial > 3000)

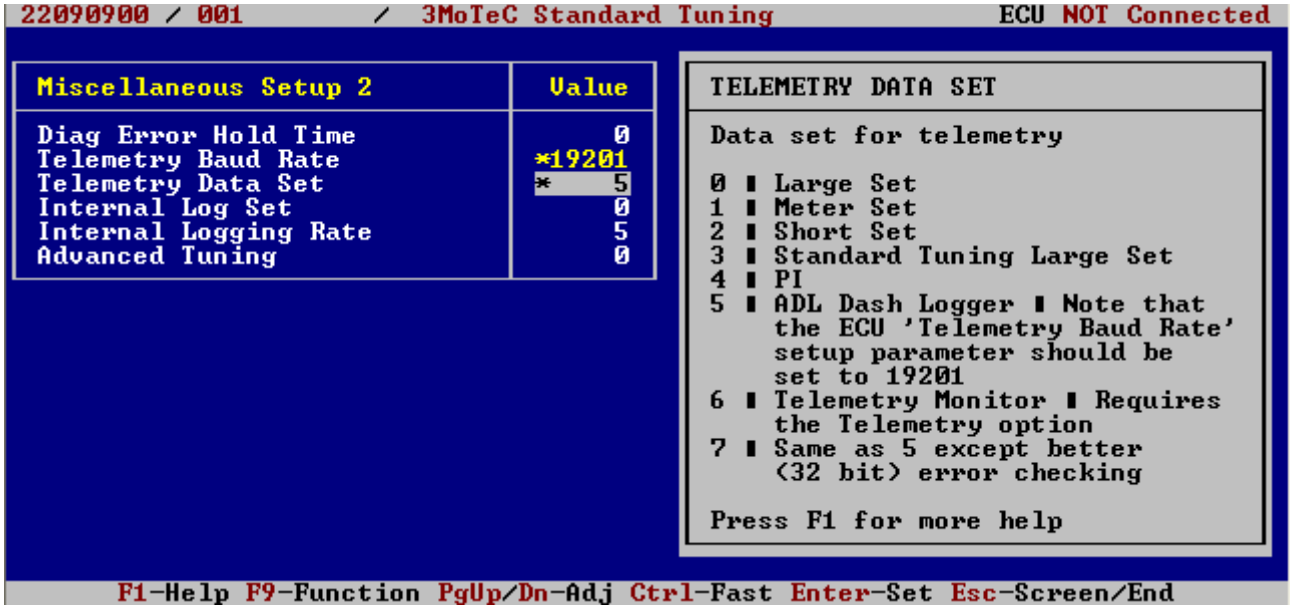
M4	ADU	Comment
Terminal 22 of ECU connector	7	Serial RS232

4. ADU and MoTec ECU configuration

The first step is to enable the MoTec standard output stream. This option is found in the "*Adjust / General Setup / Miscellaneous Setup 2"* menu.



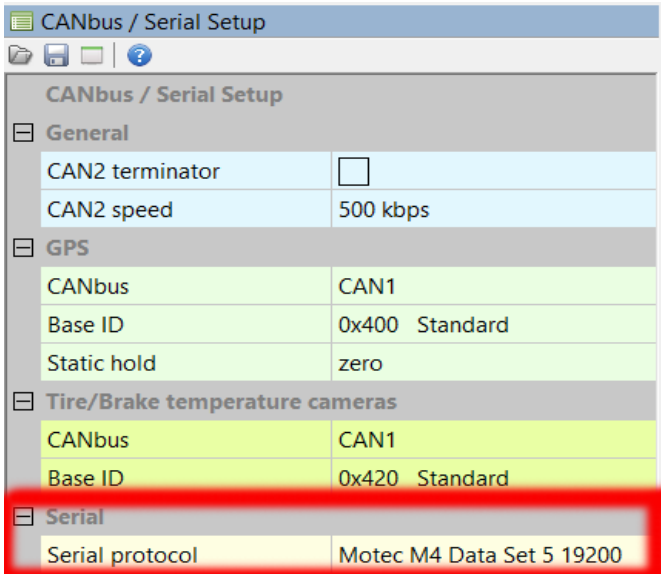
The following setup should appear:



The telemetry baud rate should be set to 19201 (19200, 1 stop bit). The Telemetry Data Set should be set to 5.

ADU firmware 89.0 or newer is required.

To configure the ADU, the Ecumaster serial protocol should be selected in "*CANBus / Serial Setup"*. To open the "*CANBus / Serial Setup"* press F9 to open the pane selector and then select "*General / CANBus Serial Setup"*. The Motec M4 Data Set 5 19200 must be selected.



To check the comunnication status the log channel ***serial.state*** should be observed. This channels has 3 states:

No Data – no data is sent to ADU serial port. Check wiring / ECU configuration

Rcv Ok – incomming data is correct, ADU process data

Rcv Err – incomin data is incorrect. Check if the ECU and ADU is properly configured.

5. Supported channels

ADU channel	Description
ecu.battery	Battery voltage
ecu.clt	Engine coolant temperature
ecu.ecuTemp	ECU internal temperature
ecu.errorFlags	The following flags are available: - cltSensor error - iatSensor error - mapSensor error - wboSensor error
ecu.fuelUsed	Fuel used
ecu.gear	Current gear
ecu.iat	Intake manifold temperature
ecu.ignAngle	Ignition advance
ecu.injDC	Injectors DC
ecu.injPW	Injectors pulse width
ecu.lambda1	Lambda from oxygen sensor #1
ecu.lambda1Trim	Current lambda #1 short fuel trim
ecu.map	Manifold absolute pressure
ecu.rpm	Engine RPM
ecu.speed	Ground speed
ecu.tps	Throttle position sensor
ecu.user1	Diagnostic group 2
ecu.user2	Diagnostic group 3
ecu.user3	Diagnostic group 4
ecu.user4	Diagnostic group 5
ecu.user5	Drive speed
ecu.user6	Auxiliary temperature
ecu.user7	Auxiliary voltage

6. Revision log