

AIM Infotech

Link G4
CAN Bus Base protocol

Release 1.00



This tutorial explains how to connect Link G4 to AIM loggers using the CAN Bus base configuration. For any further information concerning ECU firmware / software settings and/or upgrading it is always recommended to address to the ECU dealer.

1 Prerequisites

Link G4 have a CAN Protocol. For it to correctly communicate with AIM loggers some pre-requisites are to be verified:

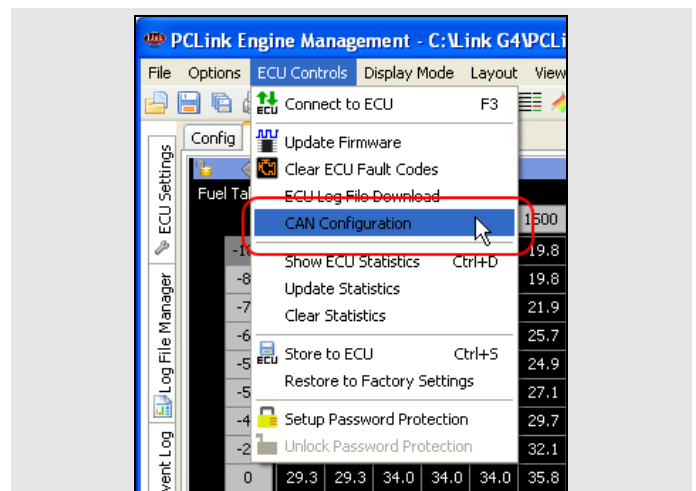
- ECU Firmware version is to be 4.8.0 or higher;
- ECU serial number is to be 10000 or higher;
- PC-Link software release is to be 4.8.xxx OR HIGHER.

2 Software setup

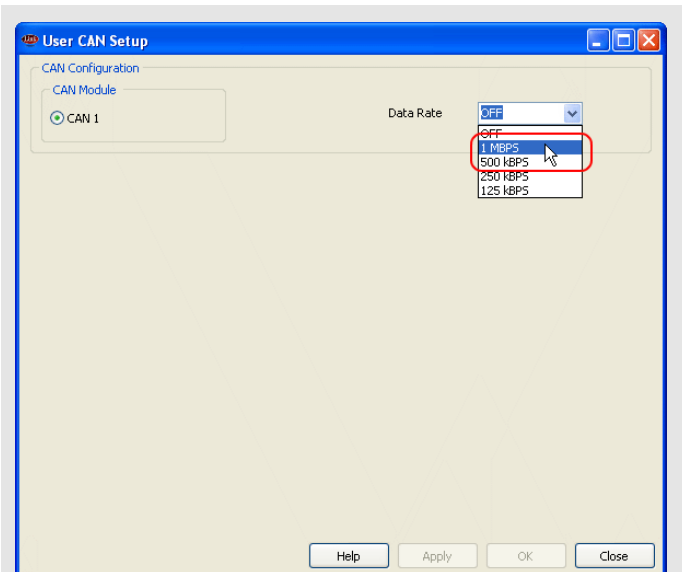
Link G4 ECUs are to be set using PC-Link software and AIM loggers are to be configured using Race Studio 2 software.

2.1 PC-Link Software setting

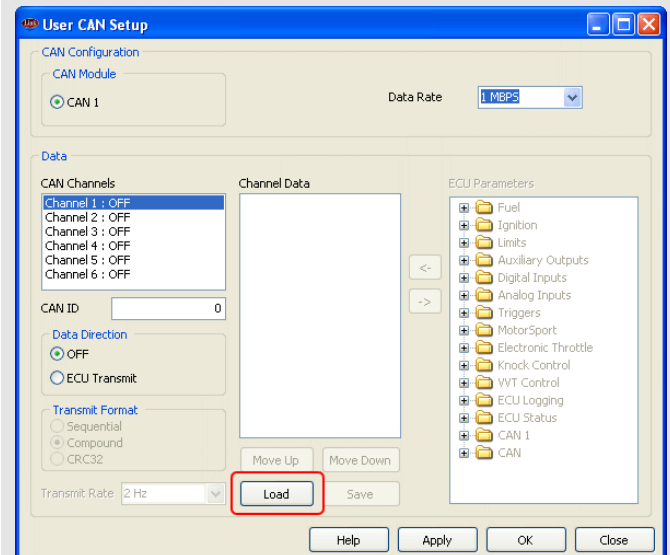
To set G4 ECU CAN Bus Base run the software, load a configuration (File → open) and follow this path:
ECU Controls → CAN Configuration as shown here on the right.



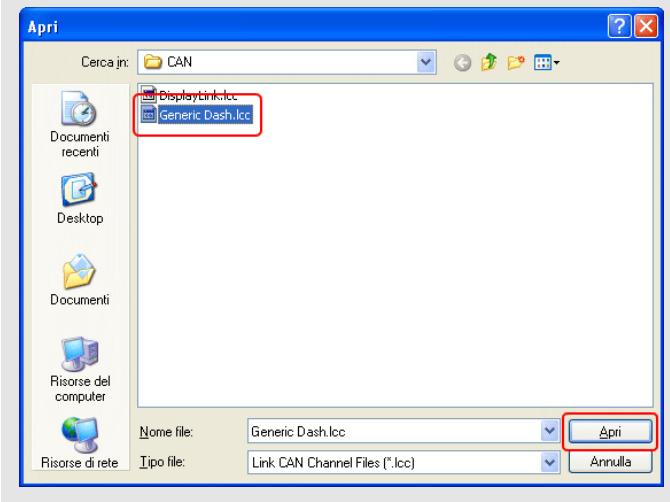
“User CAN Setup” panel appears: select Data Rate 1 MBPS.



The panel shows the selected CAN Setup. Press “Load”.



Select “Generic Dash.lcc” and press “Open”

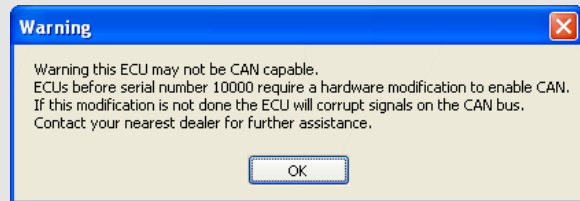
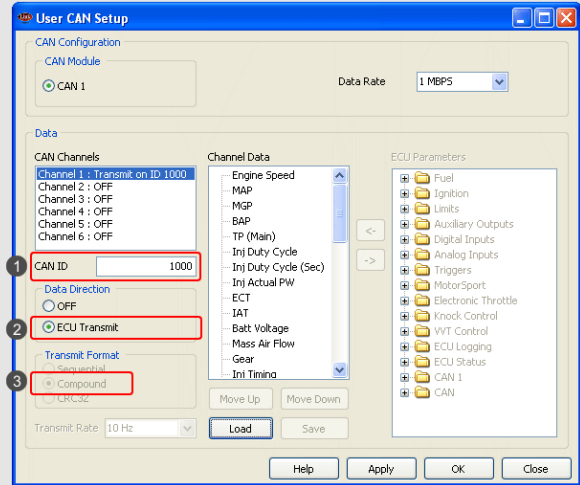


It is now necessary to check the following parameters settings:

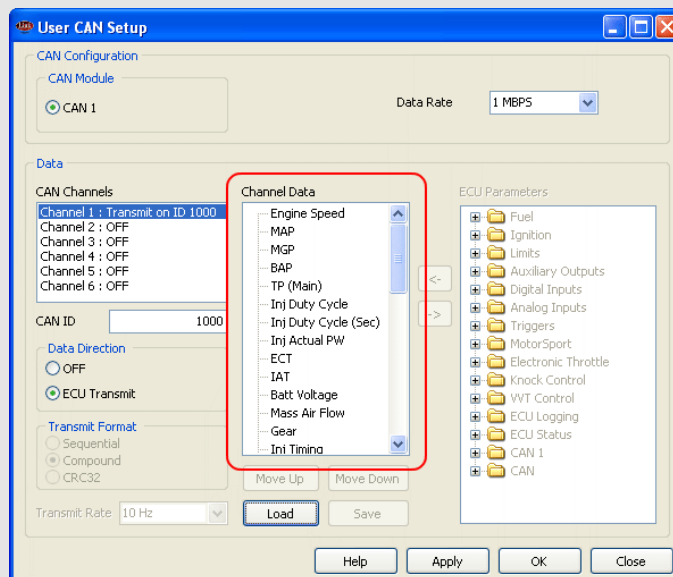
- CAN ID: 1000 (1);
- ECU Transmit flag: enabled (2);
- Compound flag: enabled (3).

Once these parameters verified press "Apply" and "OK"

The system warns you to check your ECU serial number to verify that it is 10000 or higher. Press "OK" and transmit the configuration to the ECU.



Please note: once "Generic Dash" file loaded, Channels Data" box, highlighted here below, must show exactly the list that follows





Channel Data list:

Engine speed	Inj Timing	Speed (DI #1)
MAP	Ign Angle	Speed (DI #2)
MGP	Inlet/LH Posn	Speed (DI #3)
BAP	Inlet/RH Posn	Speed (DI #4)
TP (Main)	Exh/LH Posn	Knk Level Cyl 1
Inj Duty Cycle	Exh RH Posn	Knk Level Cyl 2
Inj Duty Cycle (sec)	WideBand1	Knk Level Cyl 3
Inj Actual PW	WideBand2	Knk Level Cyl 4
ECT	Trig1 Err Counter	Knk Level Cyl 5
IAT	Fault Codes	Knk Level Cyl 6
Battery Voltage	Fuel Pressure	Knk Level Cyl 7
Mass Air Flow	Oil Temp	Knk Level Cyl 8
Gear	Oil Pressure	Limits Flags Word

2.3 AIM Logger configuration

Once the ECU connected to the logger, this last one is to be configured as connected to the ECU.

Run Race Studio 2 software and follow this path:

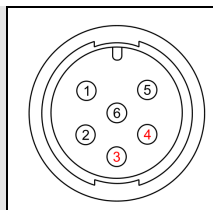
- Device Configuration -> Select the device you are using;
- Select the configuration or press "New" to create a new one;
- select ECU manufacturer "Link" and ECU Model "CAN_BUS_BASE_LCC";
- transmit the configuration to the device pressing "Transmit".

3 ECU-AIM devices wiring connection

Link G4 ECU CAN Bus is on the bottom right connector shown here below.



On this connector are both CAN and RS232 Protocol.
Here below is the connector pinout as well as the connection table.



ECU connector pin	Function	Cable colour	AIM cable
3	CAN High	White	CAN+
4	CAN Low	Green	CAN-



4

Available channels

Channels received by AIM loggers connected to Link G4 ECU are:

ID	CHANNEL NAME	FUNCTION
ECU_1	ECU_RPM	RPM
ECU_2	ECU_SPEED1	Speed 1
ECU_3	ECU_SPEED2	Speed 2
ECU_4	ECU_SPEED3	Speed 3
ECU_5	ECU_SPEED4	Speed 4
ECU_6	ECU_TPS	Throttle position sensor
ECU_7	ECU_ECT	Engine coolant temperature
ECU_8	ECU_IAT	Intake air temperature
ECU_9	ECU_OILT	Oil temperature
ECU_10	ECU_GEAR	Engaged gear
ECU_11	ECU_MAP	Manifold air pressure
ECU_12	ECU_MGP	Manifold gauge pressure
ECU_13	ECU_BARO	Barometric pressure
ECU_14	ECU_MAF_GR_SEC	Manifold air flow (g/sec)
ECU_15	ECU_OIL_PRESS	Oil pressure
ECU_16	ECU_FUEL_PRESS	Fuel pressure
ECU_17	ECU_VOLTS	Battery voltage
ECU_18	ECU_WBO2_LAM1	Lambda 1
ECU_19	ECU_WBO2_LAM2	Lambda 2
ECU_20	ECU_CAM_IN_LF	Camshaft left inlet position
ECU_21	ECU_CAM_IN_RH	Camshaft right inlet position
ECU_22	ECU_CAM_EX_LF	Camshaft left exhaust position
ECU_23	ECU_CAM_EX_RH	Camshaft right exhaust position
ECU_24	ECU_INJECT_TIM	Injection time
ECU_25	ECU_IGN_TIM	Ignition time



ECU_26	ECU_INJ_DC	Injection dwell counter
ECU_27	ECU_INJ_DC_SEC	Injection dwell counter in seconds
ECU_28	ECU_INJ_PULSE	Injection pulse
ECU_29	ECU_TRIG1_ERR	Trigger 1 error
ECU_30	ECU_FAULT_CODE	Fault code
ECU_31	ECU_KNOCK_LEV1	Knock level 1
ECU_32	ECU_KNOCK_LEV2	Knock level 2
ECU_33	ECU_KNOCK_LEV3	Knock level 3
ECU_34	ECU_KNOCK_LEV4	Knock level 4
ECU_35	ECU_KNOCK_LEV5	Knock level 5
ECU_36	ECU_KNOCK_LEV6	Knock level 6
ECU_37	ECU_KNOCK_LEV7	Knock level 7
ECU_38	ECU_KNOCK_LEV8	Knock level 8
ECU_39	ECU_RPM_LIM	RPM limiter
ECU_40	ECU_MAP_LIM	Manifold air pressure limiter
ECU_41	ECU_SPEED_LIM	Speed limiter
ECU_42	ECU_MAX_IGN	Maximum ignition