

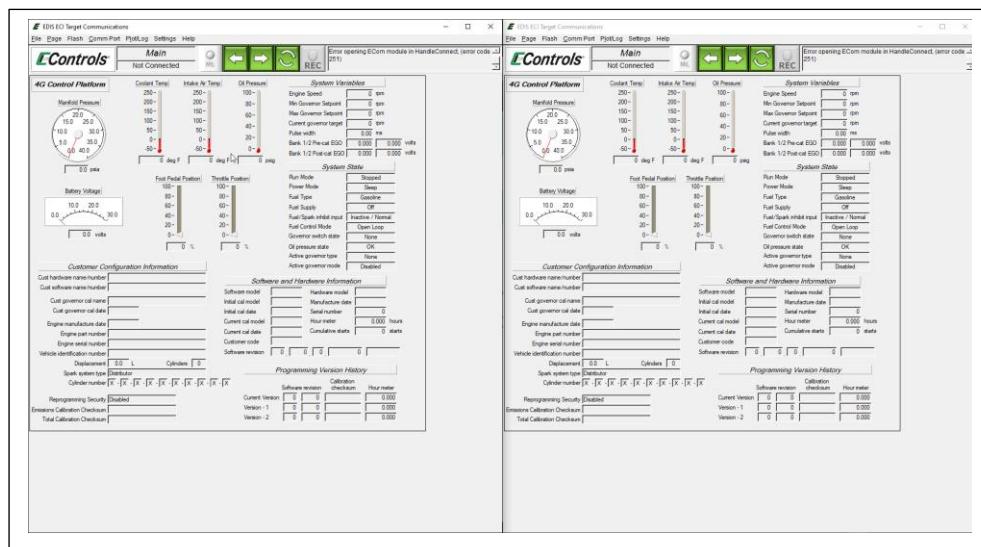
Connect to Primary and Secondary ECM's in 4G

Why is this needed?

Connecting to the primary and secondary ECM's on a 4G engine is needed for checking DTC's and for recording plot files. This should be done for every plot file request as it allows the reviewer to monitor both banks and compare their parameters to determine where the concern may be. The 14L/18L/22L/32L/40L/53L engines all share the same ECM configuration. They essentially run as two separate engines paired by a crankshaft, block, and CAN network. They have their own fuel trims, throttle controls, spark timing based on knock activity and much more. If a primary ECM shows a J1939 shutdown fault, that indicates a shutdown fault has been set on the secondary bank and a shutdown has been requested.

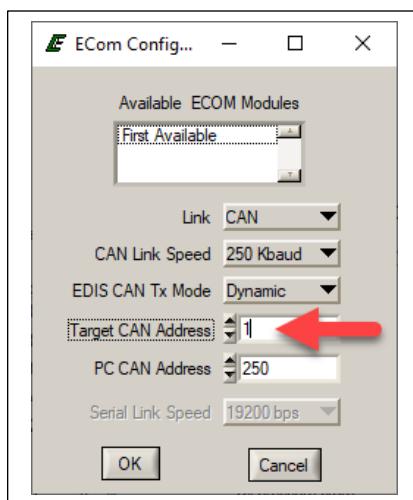
Get connected!

- 1) With the ECOM cable disconnected, open **TWO** 4G displays. Hold the shift key and double click on 4G Display icon again, this will open a second identical window.
- 2) Split the two displays on your screen. Preferred method is primary on left, secondary on right. (Select Display, hold Windows Key and Left/Right arrow) See below picture for reference.



3) On the Right (Secondary) screen:

- a. Select Comm Port on the top bar
- b. Select Configure ECOM
- c. Change the Target CAN Address from a 0 to a 1
 - i. This will allow the software to connect to the CAN network for the secondary bank



- 4) Connect the USB cable to the laptop and wake up the engine with a power cycle. The bar at the top of the screen will be green and say Connected.
- 5) Confirm the right screen is the secondary (slave) by reviewing the Marine page. Under Multi-Engine CAN Communication Status, Slave 1 will be green and the Multi-Engine Configuration status will show Slave 1. See picture on the next page for reference.

EDIS ECI Target Communications

File Page Flash Comm Port Plot/Log Settings Help

EControls by INNOVATION CONTROLS

Marine Connected MIL REC

Link error - attempting reconnected
USB CAN connected at 250 kbps

Marine Engine Operation

Engine Speed	0 rpm
Manifold Pressure	14.31 psia
Barometric Pressure	13.95 psia
Coolant Temperature	144.6 °F
Intake Air Temperature	111.1 °F
Spark Advance	0.0 °BTDC
Pulse width	0.0 ms
Vbat	25.0 volts
Vsw	0.0 volts
FPP command	0.0 %
TPS command	30.1 %

Multi-Engine CAN Communication Status

Master	Slave 1	Slave 2	Slave 3
None	None	None	None
32	2	0	0
191	0	0	0
30	30	0	0
13.9	4.1	0.0	0.0
145	45	-40	-40
0	0	0	0

Marine Speed Control (MSC) Network Information

MSC cruise command	Not Available
MSC increment/decrement status	Inactive
MSC set/clear status	Inactive
MSC multi-engine sync command	Not Available
MSC throttle override command	Not Available
MSC FPP non-linear mode	N/A - Use Default
MSC FPP non-linear mode idle latch	N/A - Use Default
MSC RPM target	0 rpm
MSC RPM accel target	0 rpm / sec
MSC KPH target	0.0 kph
MSC KPH accel target	0.00 kph / sec

Multi-Engine Configuration

Multi-engine selection: Aux PU2 Select

Multi-engine status: Slave 1

Multi-Engine Derate Coordination

Multi-engine derate coordination	Enabled
Multi-engine derate reset time	0.0 sec
Multi-engine derate logic state	Offline

Derate 1

Multi-engine Derate 1

Derate 2

Multi-engine Derate 2

Low rev limit

Multi-engine Low rev limit

Multi-Engine Gauge Driver Synchronization

ECT multi-engine gauge sync	Disabled
ECT gauge sync deadband	20 deg F
OIP multi-engine gauge sync	Disabled
OIP gauge sync deadband	20.0 psig

ECT gauge sync'd display value: 145 deg F

OIP gauge sync'd display value: 0 psig

Multi-Engine Speed Synchronization

Multi-engine speed sync	Disabled
Sync switch source	Normal
Sync command	None

Shift actuator controls

Transmission actuator controls

Transmission deactivation

Transmission shift

Transmission 1st gear

Transmission 2nd gear

Shift Actuator

Shift max engine

Shift engage delay

Target shift speed

Maximum troll speed

Shift actuator Kp

Shift actuator Ki

Shift integrator f

Shift integrator a

Shift voltage control

Shift control min

Shift control cmd

Shift I hardware

Shift actuator ref

Shift actuator K

Shift I estimate

Shift I estimate a

Shift position feed

Shift gear target

Shift gear target

Shift gear engage

Shift I park control

Shift I park limit

Shift I park delay

Shift I park ramp