

Actisense[®]

Award Winning NMEA Specialists



EMU Configuration Manual for The Actisense Toolkit

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Using the EMU-1 Configuration options in the Actisense Toolkit

Before getting started The EMU-1 needs to be powered up as per the [user manual](#). Please **note** that if a single EMU-1 is used for more than one engine, the engines **must** have a common ground and there must be **no** chance for a ground loop to be introduced through the EMU-1 interconnections.

- The EMU-1 needs to be connected to a working NMEA 2000 network (or bus) which fulfills the minimum network requirements (refer to EMU-1 user manual for guidelines).
- Connect an [Actisense NGT-1](#) to both the NMEA 2000 network and a PC running Microsoft Windows (Windows XP, Vista, 7, 8, 8.1, or 10).
- If using the USB variant of the NGT-1 (product code: NGT-1-USB) the latest Actisense USB drivers must be installed. If there is a working internet connection in the PC when the NGT-1-USB is plugged in, and if the operating system settings allow automatic updates from Windows, the latest USB drivers will download automatically. If this fails, the same USB driver files are available as a pre-installer on the CD provided or from the [Actisense website](#).
- Check that Actisense NMEA Reader has been installed. This powerful diagnostics software tool is freely available from the [Actisense website](#). Check that the NGT-1 COM port is not in use by another software application (e.g. NMEA Reader).

Connecting the EMU-1 to the NGT-1

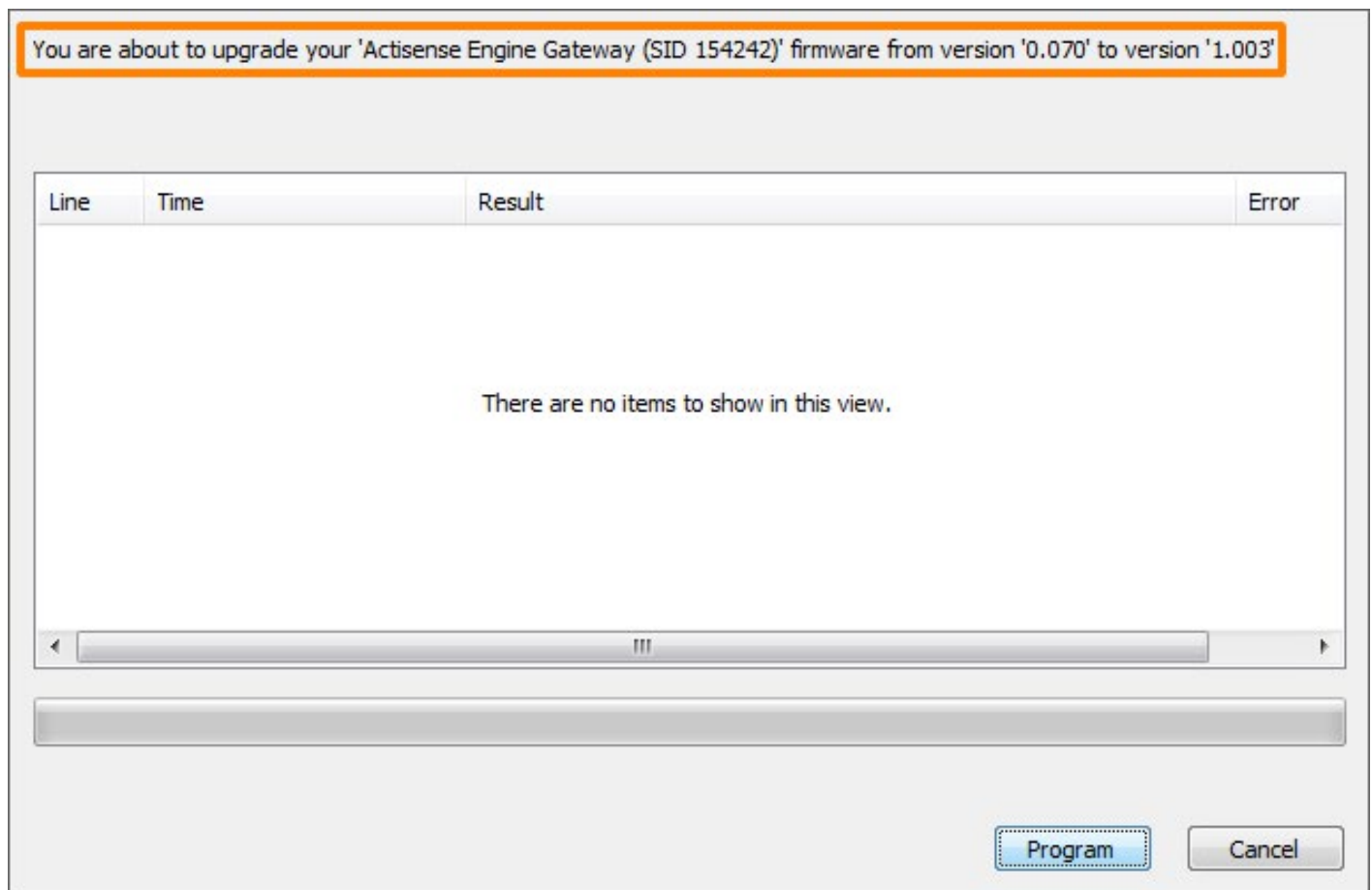
1. Launch Actisense Toolkit.
2. Select the "Actisense NGT" from the 'COM ports' list. The selected NGT-1 COM port will be remembered for all future sessions but it can be changed at any time if required.
3. Select the correct baud rate for the NGT-1. Default baud rate is 115200. However, on a busy NMEA 2000 bus (with load above 40%) the NGT-1 will need to be configured to use the maximum NGT-1 baud rate of 230400. The NGT-1 baud rate can be modified using the 'Hardware Config' tab in NMEA Reader.
4. Select the EMU-1 to be configured/updated in the 'Network List View' window.

Useful Tip: Instead of closing the Actisense Toolkit (and needing to re-load configuration settings), select 'Offline' in the COM port's drop down list so that the NGT-1 COM port is closed, allowing it to be used/opened by another program such as NMEA Reader.

Updating or Downgrading the EMU-1 Firmware Using Actisense Toolkit

The [EMU-1 firmware 'Release Notes'](#) document (that details all EMU-1 firmware changes) and the [Actisense Toolkit 'Release Notes'](#) document (that details all changes to Toolkit plus a complete list of the product firmware updates available) can be found on the EMU-1's Download page.

- To **upgrade** the EMU-1 firmware (to the latest version available to Toolkit), click the 'Update firmware' button followed by 'Program'. The firmware version being updated to can be seen at the top of the programming window visible during the upgrade process.



- To **downgrade** the EMU-1 firmware (to an older version that is still compatible), click the arrow under the 'Downgrade firmware' button and select the version required. Follow the on screen instructions and if acceptable, click the 'Program' button.

Instances

When 'Instances' are discussed in this manual, this is referring to the PGN 'Instance' data field inside the PGN that is used to differentiate between multiple engines sending the same data values. The 'Instance' number that should be used is determined by NMEA definitions and the device used to display the data.

The primary and standard NMEA 2000 method for distinguishing between two (or more) engines is by configuring the **Engine Instance** value for each Engine. However, some older NMEA 2000 display devices use a secondary and more basic method of the **Device Instance** to distinguish each Engine. If it becomes necessary to set the EMU-1 **Device Instance**, Toolkit can perform this operation quickly and simply: click on the green box next to the 'Device Instance' column, typing the new instance value and hit enter to finish.

As the EMU-1 has a single NMEA Name, it can only be configured with a single **Device Instance**. Therefore, when a display device can only differentiate engines based on a unique **Device Instance**, the EMU-1 can only be used with a single engine.

In order to correctly generate NMEA 2000 PGNs, all configuration options for a single engine must share the same 'Instance' value.

Properties	
Property	Value
NMEA Name	
Name (64-bit)	C164A00222225A82
Industry Group	Marine (4)
System Instance	1 (0x01)
Device Class	Propulsion (50)
Device Function	Engine Gateway (160)
Device Instance	2 (0x02)
Manufacturer ID	Actisense (273)
Unique ID	154242 (0x25A82)
NMEA Product Info	
Database Version	2100
Product ID	24510 (No Decode)
Manu Model ID	"Engine Monitoring Unit (EMU-1)"
Manu Software Version	"1.030, 1.003"
Manu Hardware Version	"EMU-1"
Manu Model Serial	"154242"
Certification Level	2 (No Decode)
Load Equivalency Number	1 (50 mA)
Config	
Installation Detail 1	User field 1
Installation Detail 2	User field 2
Manu Information	Actisense +44-1202-746682 www.actisense.com The NMEA Specialists
Total	
Total Network LEN	100 mA Max. (from 2 devices)

Configuring the EMU-1 using Actisense Toolkit

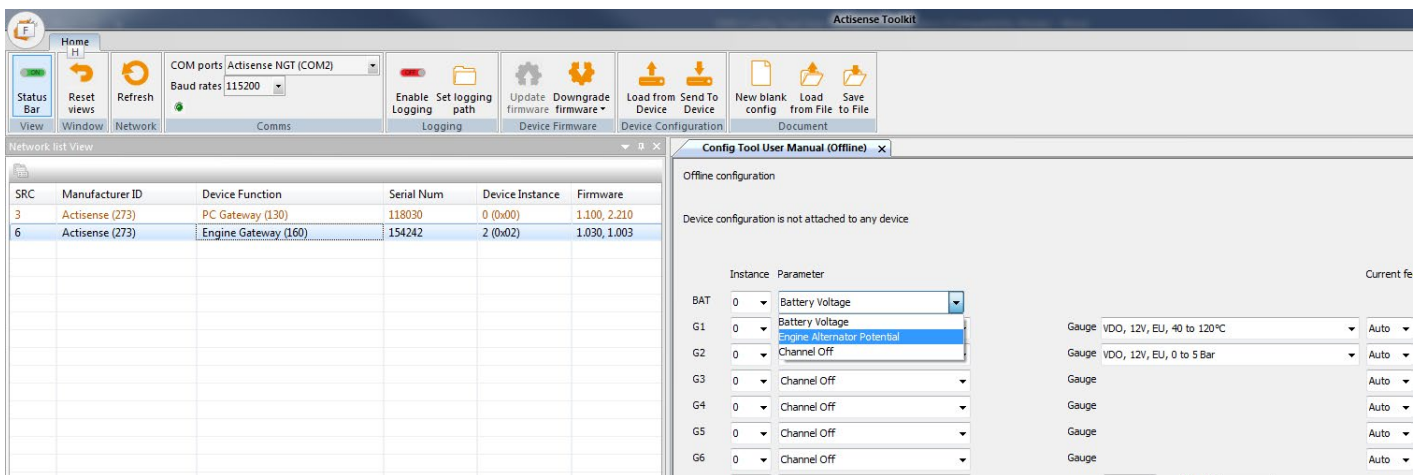
There are 3 options to start the configuration process:

- To view or make changes to the configuration currently inside the EMU-1, click the 'Load from Device' button (or right click on the device in the 'Network List View'). If the configuration in the EMU-1 has not been named previously, a configuration name will need to be given before the settings are displayed. To start a new configuration from the default settings, select 'New blank config' and name the configuration as required.
- To install a configuration that is saved on file, select 'Load from File'. If no further changes are required to be made to a previously saved configuration, simply select 'Send to Device'.

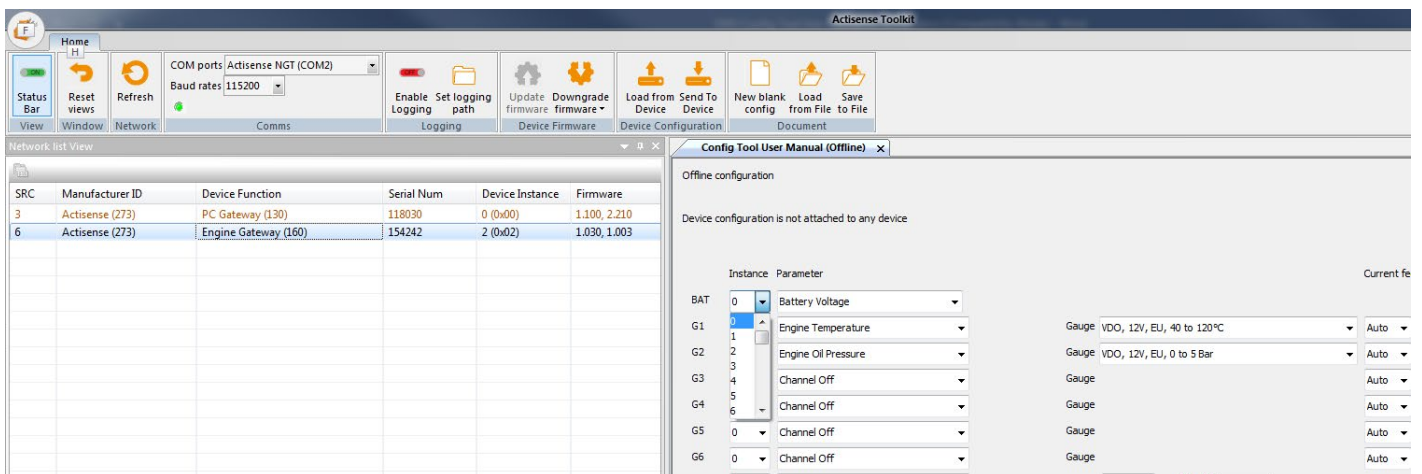
Configuring the Battery Power monitoring

The voltage measured on the EMU-1's PWR connectors can be shared as either a **Battery Voltage** PGN (127508) instance or an **Engine Alternator Potential** PGN (127489) instance. If it is not required to share this information as an NMEA 2000 PGN select **Channel Off**:

EMU Configuration Manual for The Actisense Toolkit

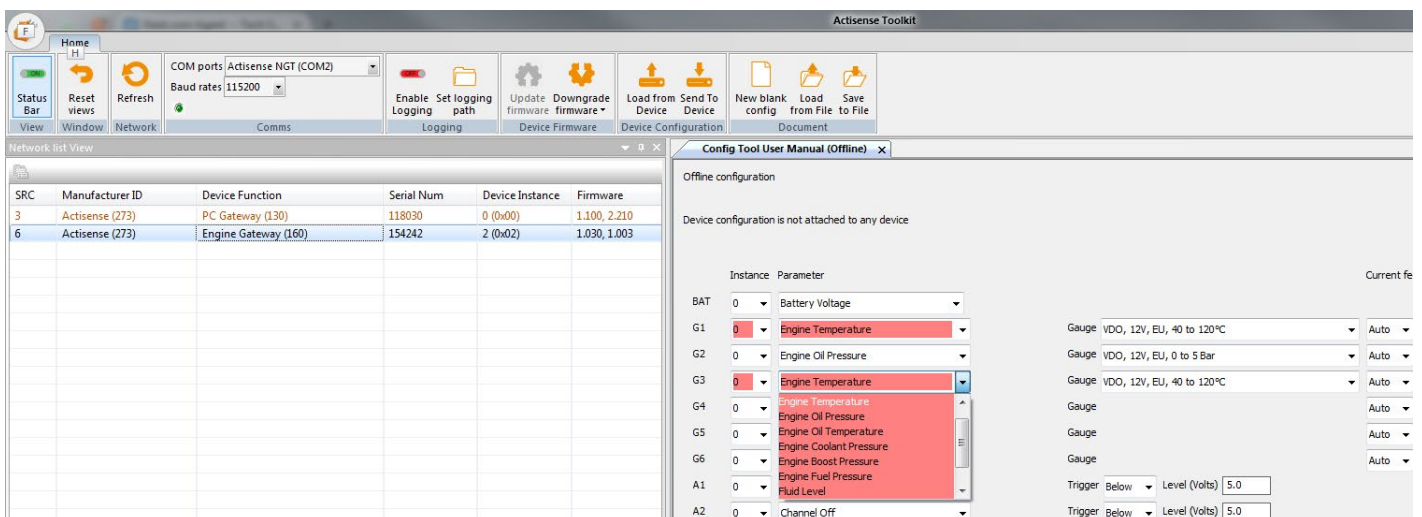


The BAT Instance selection becomes the Battery Instance in the Battery Voltage PGN (127508) or the Engine Instance in the Engine Alternator Potential PGN (127489). When Engine Alternator Potential is chosen, use Engine Instance 0 for the Port engine and 1 for the next engine (e.g. Starboard):

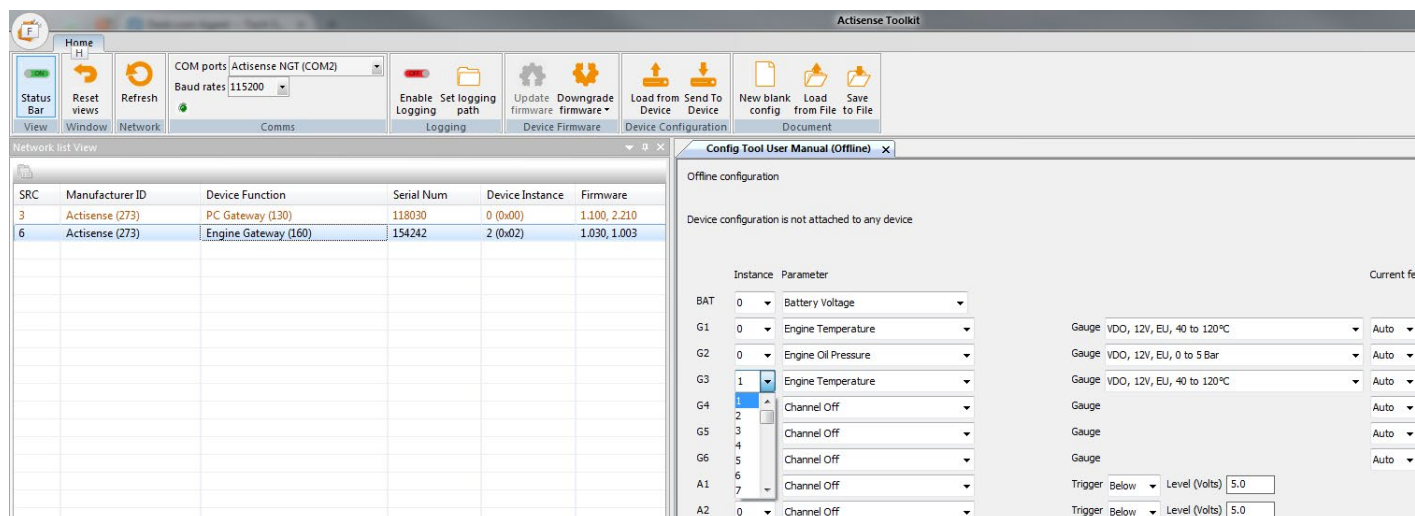


Configuring the Gauge Inputs

Select the required Parameter type and Instance for each of the G1 to G6 Gauge inputs. Set the Parameter type of any unused Gauge input to Channel Off. If a conflict is created by selecting a duplicate Parameter type and Instance setting for two or more Gauge inputs, they will be highlighted to the user in red until the selection is changed and the conflict removed. For example, two inputs cannot both be set to measure Engine Temperature with the same Engine Instance because a display device will not know how to differentiate between the two:



To remove the **red** highlighting, the second **Engine Temperature** input in the example shown is set to **Engine Instance 1** (for Starboard):



Actisense Toolkit

COM ports: Actisense NGT (COM2)
Baud rates: 115200

Network list View

SRC	Manufacturer ID	Device Function	Serial Num	Device Instance	Firmware
3	Actisense (273)	PC Gateway (130)	118030	0 (0x00)	1.100, 2.210
6	Actisense (273)	Engine Gateway (160)	154242	2 (0x02)	1.030, 1.003

Config Tool User Manual (Offline)

Offline configuration

Device configuration is not attached to any device

Instance Parameter

BAT 0 Battery Voltage

G1 0 Engine Temperature

G2 0 Engine Oil Pressure

G3 1 Engine Temperature

G4 2 Channel Off

G5 3 Channel Off

G6 4 Channel Off

A1 5 Channel Off

A2 6 Channel Off

Current fe

Gauge VDO, 12V, EU, 40 to 120°C

Gauge VDO, 12V, EU, 0 to 5 Bar

Gauge VDO, 12V, EU, 40 to 120°C

Gauge

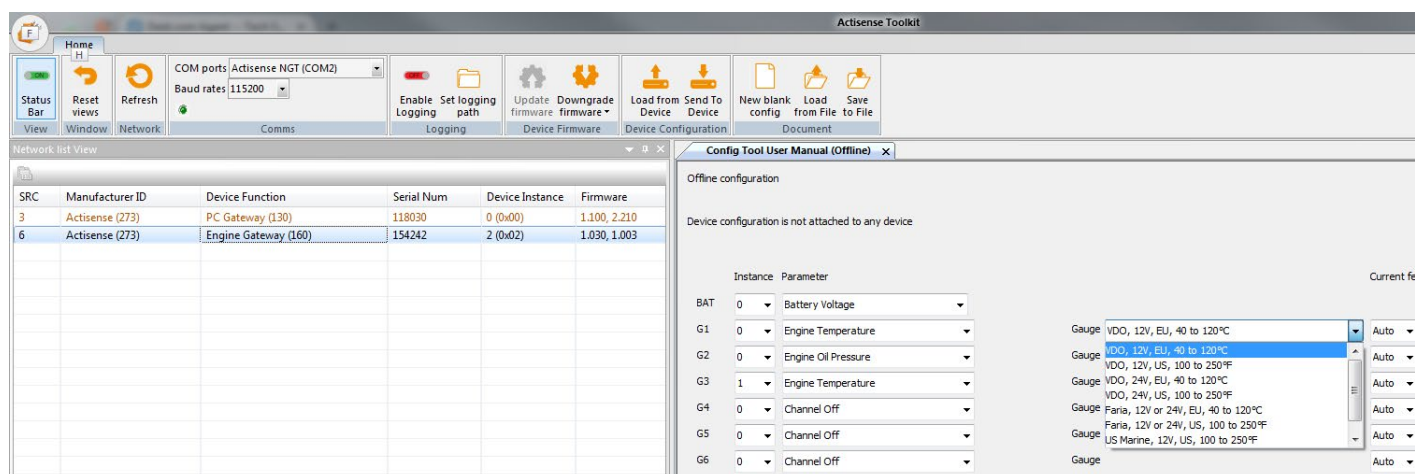
Gauge

Gauge

Trigger Below Level (Volts) 5.0

Trigger Below Level (Volts) 5.0

All Gauge Inputs with the same **Engine Instance** will be sent in the same **Engine Parameters, Dynamic PGN (127489)**.



Actisense Toolkit

COM ports: Actisense NGT (COM2)
Baud rates: 115200

Network list View

SRC	Manufacturer ID	Device Function	Serial Num	Device Instance	Firmware
3	Actisense (273)	PC Gateway (130)	118030	0 (0x00)	1.100, 2.210
6	Actisense (273)	Engine Gateway (160)	154242	2 (0x02)	1.030, 1.003

Config Tool User Manual (Offline)

Offline configuration

Device configuration is not attached to any device

Instance Parameter

BAT 0 Battery Voltage

G1 0 Engine Temperature

G2 0 Engine Oil Pressure

G3 1 Engine Temperature

G4 0 Channel Off

G5 0 Channel Off

G6 0 Channel Off

Current fe

Gauge VDO, 12V, EU, 40 to 120°C

Gauge VDO, 12V, EU, 100 to 250°F

Gauge VDO, 24V, EU, 40 to 120°C

Gauge VDO, 24V, US, 100 to 250°F

Gauge Faria, 12V or 24V, EU, 40 to 120°C

Gauge Faria, 12V or 24V, US, 100 to 250°F

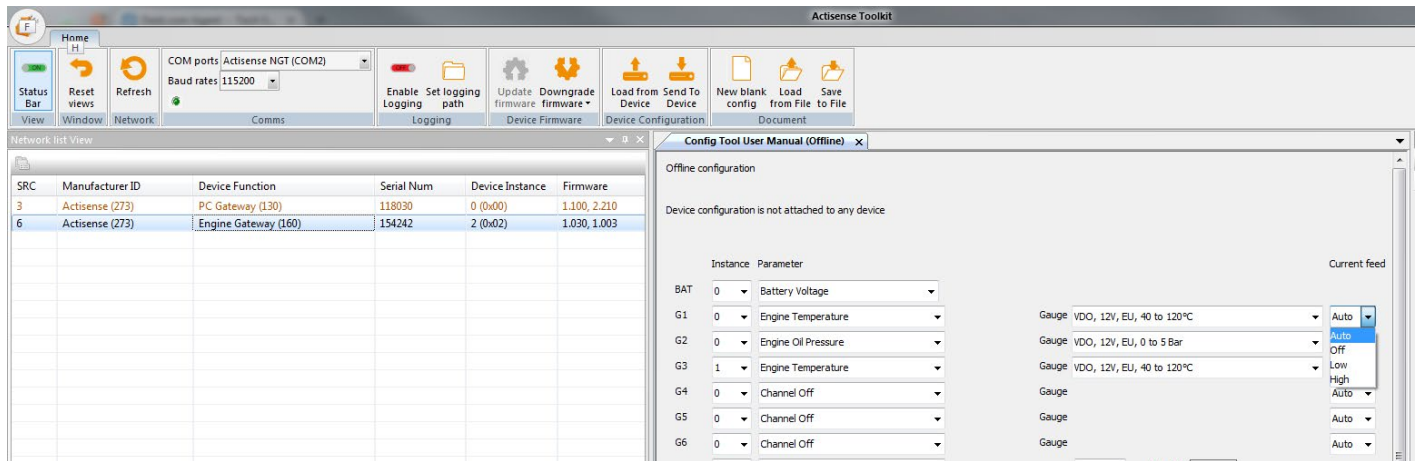
Gauge US Marine, 12V, US, 100 to 250°F

Gauge

Note: EMU-1 firmware prior to v1.010 limits the number of Gauge Inputs that can be configured to the same **Parameter type** (e.g. **Engine Temperature**) to 3, with the exception of **Fluid Level Parameter type** which has no limit. EMU-1 firmware v1.010 and above has no such limits.

Current Feed

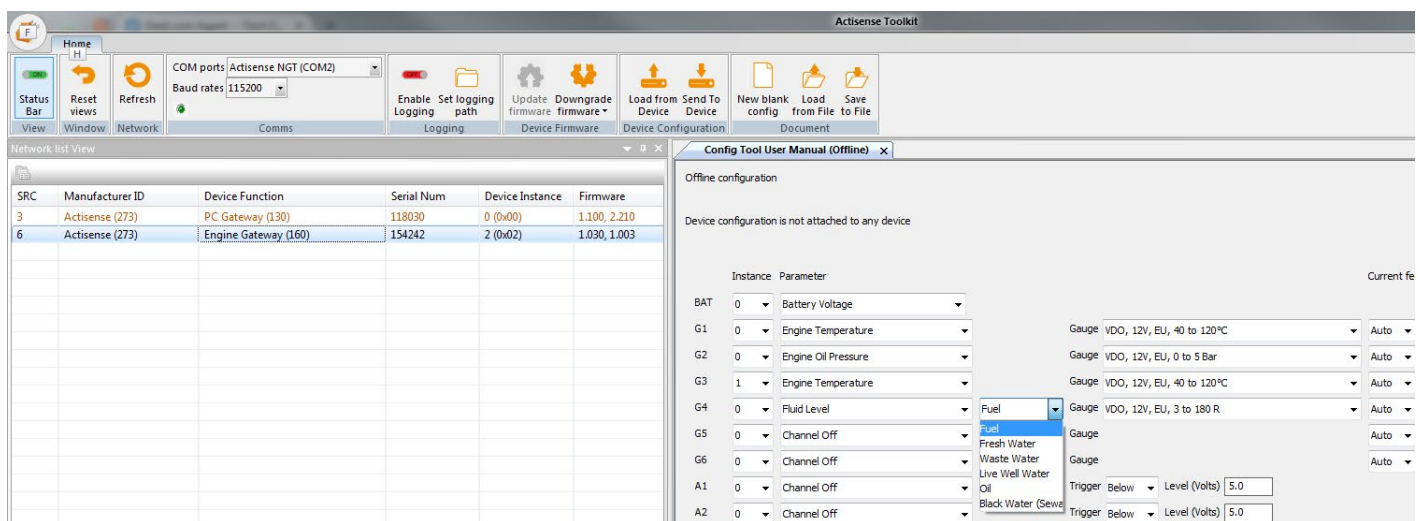
The **Current feed** setting should be left on the default '**Auto**' option for almost all installations. The **Auto** setting means that the EMU-1 automatically detects if there is a gauge present and only provides a current feed to the sender if a gauge is not detected. This automatic detection mechanism can be overridden to force the **Current feed** sent to the sender to **High current**, **Low current** or **Off**:



Note: Only change this setting from **Auto** if you are experiencing a 'pulsing' of the Gauge needle and/or have been instructed to do so by Actisense Tech Support.

Fluid Level Gauges

If **Fluid level** is selected as a Gauge Input, a secondary **Fluid Type** selection list appears to allow the user to choose one of the six **Fluid Types**. Any combination of **Fluid Types** and **Fluid Instances** can be configured (as long as each Gauge Input configuration is unique):



Configuring the Alarm Inputs

Select the required **Parameter type** and **Instance** for each of the **A1** to **A4** Alarm inputs. Set the **Parameter type** of any unused Alarm input to **Channel Off**. If a conflict is created by selecting duplicate **Parameter type** and **Instance** setting for two or more Alarm inputs, they will be highlighted to the user in **red** until the selection is changed and the conflict removed. For example, two inputs cannot be set to Alarm on **Over Temperature** with the same **Engine Instance** because a display device will not know how to differentiate between the two.

The point that an alarm will be indicated in the **Engine Discrete Status** fields of the **Engine Parameters, Dynamic PGN** (127489) can be configured as **Above** or **Below** a user defined voltage trigger level:

SRC	Manufacturer ID	Device Function	Serial Num	Device Instance	Firmware
3	Actisense (273)	PC Gateway (130)	118030	0 (0x00)	1.100, 2.210
6	Actisense (273)	Engine Gateway (160)	154242	2 (0x02)	1.030, 1.003

Instance	Parameter	Current fe
BAT	0 Battery Voltage	
G1	0 Engine Temperature	Gauge VDO, 12V, EU, 40 to 120°C Auto
G2	0 Engine Oil Pressure	Gauge VDO, 12V, EU, 0 to 5 Bar Auto
G3	1 Engine Temperature	Gauge VDO, 12V, EU, 40 to 120°C Auto
G4	0 Fluid Level	Fuel Gauge VDO, 12V, EU, 3 to 180 R Auto
G5	0 Channel Off	Gauge Auto
G6	0 Channel Off	Gauge Auto
A1	0 Channel Off	Trigger Below Level (Volts) 5.0
A2	0 Channel Off	Trigger Below Level (Volts) 5.0
A3	0 Channel Off	Trigger Below Level (Volts) 5.0
A4	0 Channel Off	Trigger Below Level (Volts) 5.0
T1	0 Engine Speed, RPM	Ratio (PPR) 11.78

The default trigger level is 5 volts but that can be configured to any value which falls within the Alarm input range (of 0.1 - 40.0 volts) by entering the desired voltage level in the text box:

SRC	Manufacturer ID	Device Function	Serial Num	Device Instance	Firmware
3	Actisense (273)	PC Gateway (130)	118030	0 (0x00)	1.100, 2.210
6	Actisense (273)	Engine Gateway (160)	154242	2 (0x02)	1.030, 1.003

Instance	Parameter	Current fe
BAT	0 Battery Voltage	
G1	0 Engine Temperature	Gauge VDO, 12V, EU, 40 to 120°C Auto
G2	0 Engine Oil Pressure	Gauge VDO, 12V, EU, 0 to 5 Bar Auto
G3	1 Engine Temperature	Gauge VDO, 12V, EU, 40 to 120°C Auto
G4	0 Fluid Level	Fuel Gauge VDO, 12V, EU, 3 to 180 R Auto
G5	0 Channel Off	Gauge Auto
G6	0 Channel Off	Gauge Auto
A1	0 Channel Off	Trigger Below Level (Volts) 5.0
A2	0 Channel Off	Trigger Below Level (Volts) 5.0
A3	0 Channel Off	Trigger Below Level (Volts) 5.0
A4	0 Channel Off	Trigger Below Level (Volts) 5.0
T1	0 Engine Speed, RPM	Ratio (PPR) 11.78

Note: EMU-1 firmware prior to v1.010 limits the number of Alarm Inputs that can be configured to the same **Parameter** type (e.g. **Over Temperature**) to 3. EMU-1 firmware v1.010 and above has no such limits.

Configuring the Tach Inputs

Select the required **Parameter** type and **Instance** for each of the **T1** and **T2** Tach inputs. Set the **Parameter** type of any unused Tach input to **Channel Off**. If a conflict is created by setting a duplicate **Instance** for the two Tach inputs, they will be highlighted to the user in **red** until the selection is changed and the conflict removed. Both Tach inputs cannot be set to the same **Engine Instance** because a display device will not know how to differentiate between the two.

The Engine Instance, can in theory be set to any value between 0 and 251, however to be compatible with the majority of NMEA 2000 devices the first engine (typically Port) needs to have **Instance 0** and the next engine (typically Starboard) needs to be **Instance 1**.

The Tach input (and its defined **Engine Instance**) is used by the EMU-1 to increment the **Total Engine Hours** field in the corresponding instance of **Engine Parameters, Dynamic PGN** (127489).

The Pulses Per Revolution (PPR) ratio is either defined by the engine manufacturer in their documentation or by using the calculation methods detailed in the EMU-1 User Manual. Enter the required ratio value (with a maximum of two decimal places) in to the **Ratio (PPR)** text box:

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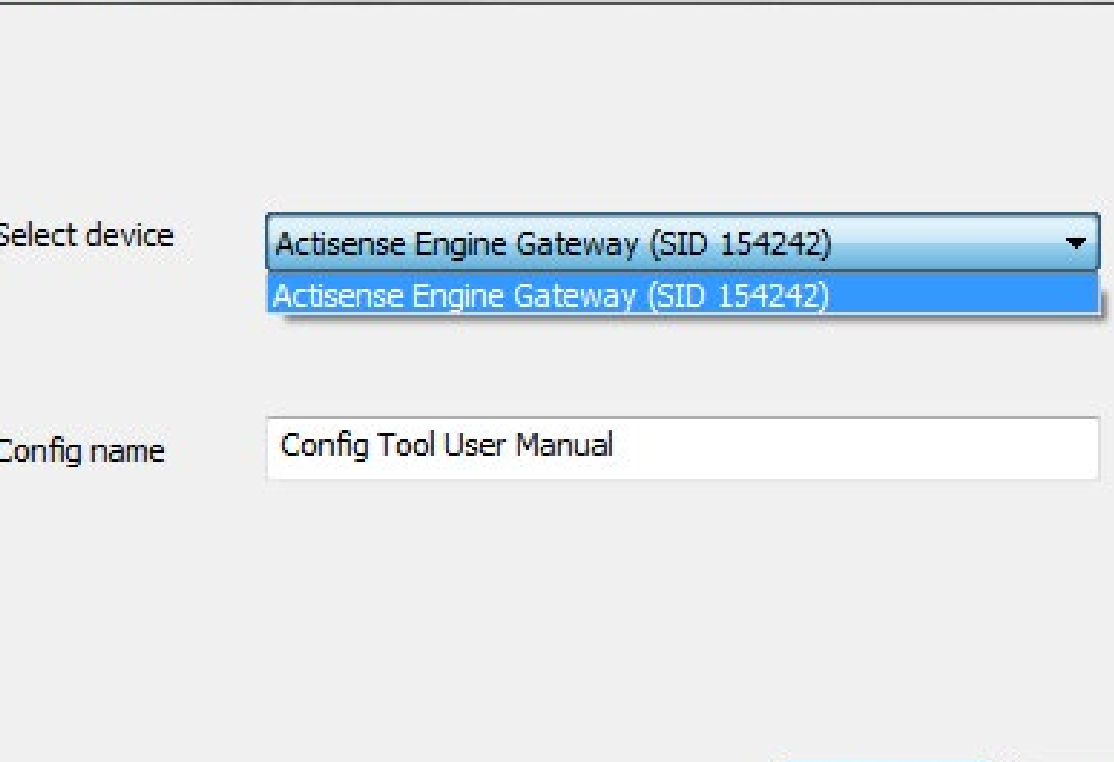
SRC	Manufacturer ID	Device Function	Serial Num	Device Instance	Firmware
3	Actisense (273)	PC Gateway (130)	118030	0 (0x00)	1.100, 2.210
6	Actisense (273)	Engine Gateway (160)	154242	2 (0x02)	1.030, 1.003

Device configuration is not attached to any device

Instance	Parameter	Current Value	Unit	Scale	Trigger	Level (Volts)	Ratio (PPR)
BAT	Battery Voltage						
G1	Engine Temperature				Gauge	VDO, 12V, EU, 40 to 120°C	
G2	Engine Oil Pressure				Gauge	VDO, 12V, EU, 0 to 5 Bar	
G3	Engine Temperature				Gauge	VDO, 12V, EU, 40 to 120°C	
G4	Fluid Level		Fuel		Gauge	VDO, 12V, EU, 3 to 180 R	
G5	Channel Off				Gauge		
G6	Channel Off				Gauge		
A1	Channel Off				Trigger	Below Level (Volts) 5.0	
A2	Channel Off				Trigger	Below Level (Volts) 5.0	
A3	Channel Off				Trigger	Below Level (Volts) 5.0	
A4	Channel Off				Trigger	Below Level (Volts) 5.0	
T1	Engine Speed, RPM						Ratio (PPR) 11.78
T2	Engine Speed, RPM						Ratio (PPR) 11.78

Completing the Configuration

Click on the **Send to Device** button to send the whole configuration to the selected EMU-1. Ensure the correct EMU-1 is selected in the drop down menu and that the configuration is named as required.



Send To Device

Select device: Actisense Engine Gateway (SID 154242)

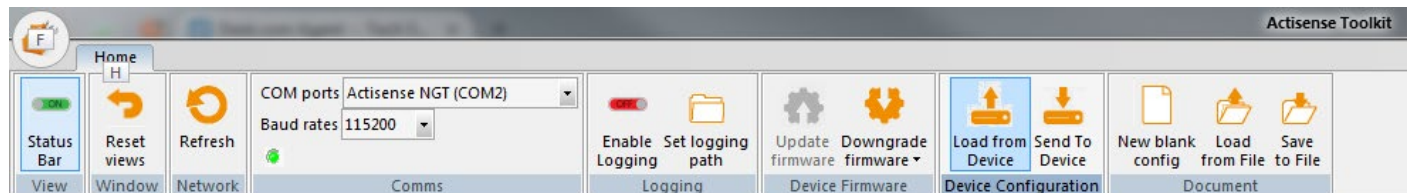
Config name: Config Tool User Manual

OK Cancel

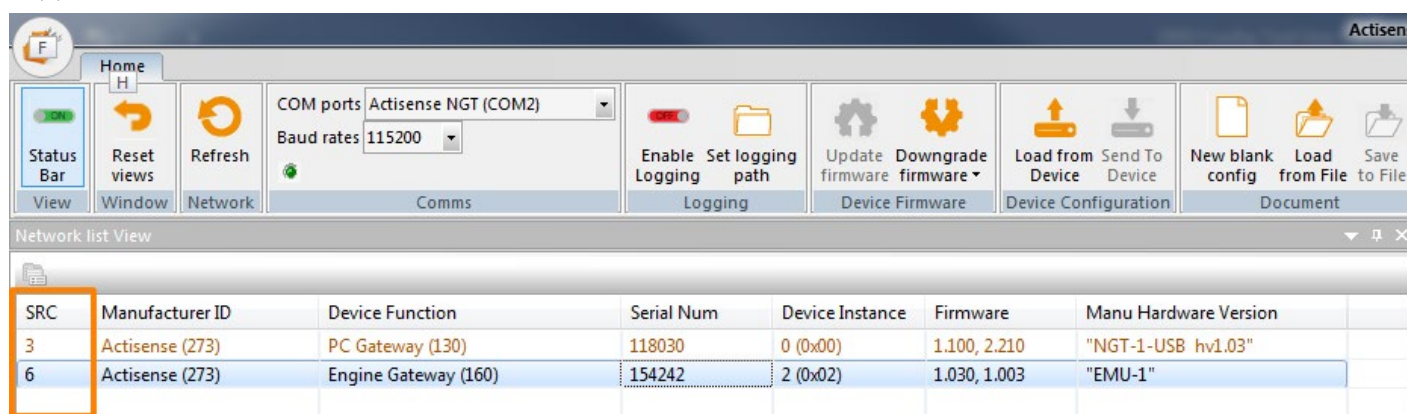
The green progress bar will fill from left to right, followed by a notification to signify that the EMU-1 has been configured successfully.

Viewing EMU-1 Configuration using Actisense Toolkit

Ensure the correct EMU-1 is selected in the Toolkit 'Network List View' tab and click the 'Load from Device' button at the top of the window (or right click on the device in the 'Network List View'). The configuration will need to be named before the settings can load if a name has not been allocated previously.

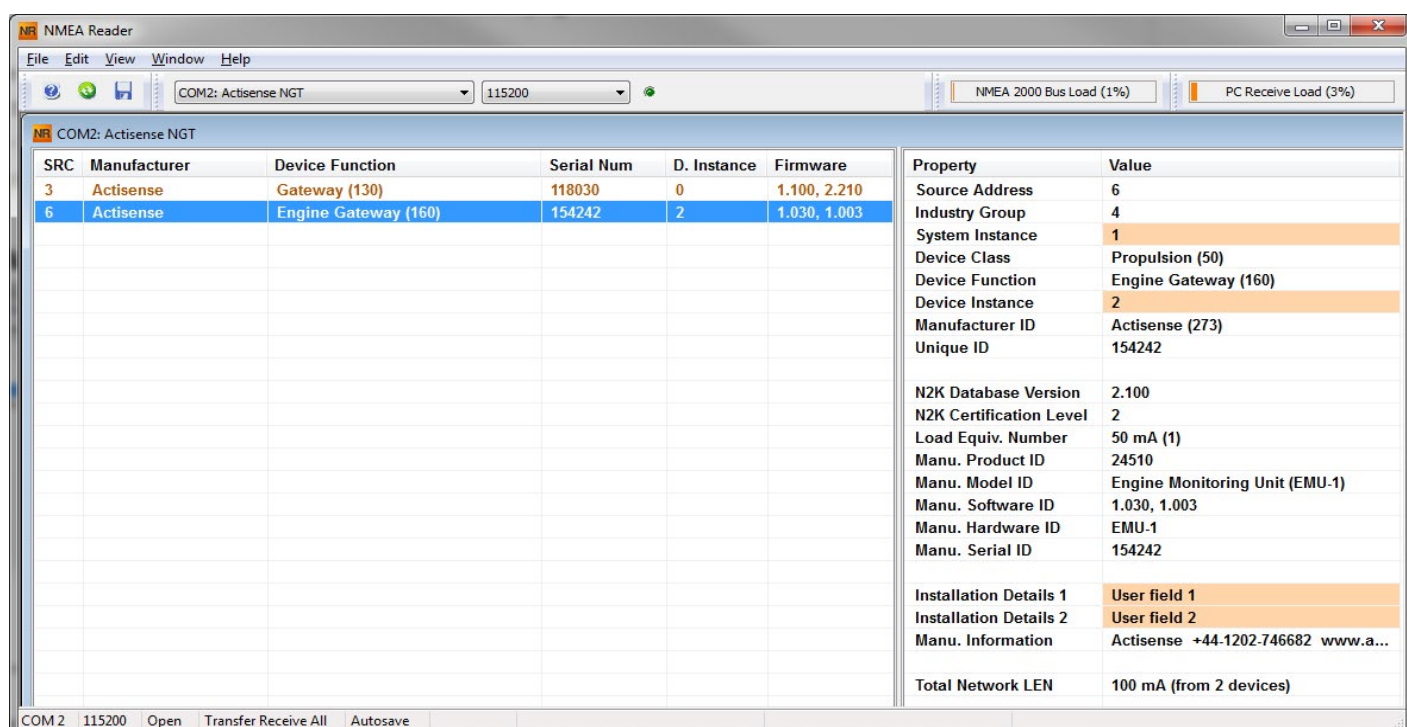


In the left hand pane, the column **SRC** shows the **Source Address** of each Device. As discussed in the **Instances** section above, the **Device Instance** column is different from the **Engine Instance** numbers configured in the EMU configuration tab/panel. The **Serial Number** is a manufacturer unique device identifier and is required when contacting Actisense Tech Support.



The **Firmware** column details the relevant device firmware versions which should be known before contacting Actisense Tech Support for any help. All Actisense devices have two firmware numbers e.g. 1.030, 1.003 - the first is the Bootloader firmware version and the second is the Main Application version that can be upgraded or downgraded using Toolkit.

Viewing NMEA 2000 data



EMU Configuration Manual for The Actisense Toolkit

NMEA Reader is used to view all the NMEA 2000 messages on an NMEA 2000 network. This feature will be integrated in to Toolkit in a future update. If the same NGT-1 is to be used for viewing data in NMEA Reader as well as using Toolkit, the **COM port** in Toolkit will need to be closed (set to '**Offline**') before it can be opened in NMEA Reader.

Once the NGT-1 COM port is opened successfully, select the **Data View** and **Details** tabs. The decoded details of the selected message in the **Data View** tab are shown field by field in the **Details** tab. For all Engine PGNs, **Field 1: Engine Instance** (in the **Details** tab) is the very same **Engine instance** that was set in the EMU configuration tab/panel.

In the example shown, an EMU-1 is on Source Address (**SRC**) 6 and is sending an **Engine Parameters, Rapid Update** PGN 127488 for the Port Engine (**Engine Instance** = 0) that indicates its **Tach input 1** is measuring the Port Engine running at a speed of 2610 RPM:

The screenshot shows the NMEA Reader interface with the following data:

Line	PGN	SRC	DST	Name	Time	Interval	Data
1	127488	6	255	Engine Parameters, Rapid Update	11:38:25:803	0.10	00 CA 28 FF FF 7F FF FF
2	127488	6	255	Engine Parameters, Rapid Update	11:38:25:803	0.10	01 00 00 FF FF 7F FF FF
3	127508	6	255	Battery Status	11:38:24:798	1.50	00 B6 04 FF 7F FF FF 1D
4	127489	6	255	Engine Parameters, Dynamic	11:38:25:798	0.50	00 88 13 FF FF CB 66 FF ...
5	127489	6	255	Engine Parameters, Dynamic	11:38:25:801	0.50	01 FF FF FF FF CB 66 FF ...
6	60928	6	255	ISO Address Claim	11:38:05:391		82 5A 22 22 02 A0 64 C1
7	126720	6	255	Manu. Proprietary fast-packet addressed	11:38:25:396	1.00	11 99 A2 23 01 01 18 00 ...
8	127505	6	255	Fluid Level	11:38:23:804	2.50	00 A8 61 FF FF FF FF FF
9	126996	6	255	Product Information	11:38:07:076		34 08 BE 5F 45 6E 67 69 ...
10	126998	6	255	Configuration Information	11:38:07:202		0E 01 55 73 65 72 20 66 ...

Details for NMEA 2000 PGN: 127488 (0x1F200):

- Name: Engine Parameters, Rapid Update
- Source = 6, Destination = 255
- Priority = 2, Length = 8
- Number Of Fields = 5
- Field 1: Engine Instance = 0
- Field 2: Engine Speed = 2610 Revs Per Minute
- Field 3: Engine Boost Pressure = Data not available
- Field 4: Engine tilt/trim = Data not available
- Field 5: Reserved field

The EMU-1 on Source Address (**SRC**) 6 is also sending an **Engine Parameters, Rapid Update** PGN 127488 for the Starboard Engine (**Engine instance** = 1) that indicates its **Tach input 2** is measuring the Starboard Engine running at a speed of 2612 RPM:

The screenshot shows the NMEA Reader interface with the following data:

Line	PGN	SRC	DST	Name	Time	Interval	Data
1	127488	6	255	Engine Parameters, Rapid Update	11:48:15:688	0.10	00 00 00 FF FF 7F FF FF
2	127488	6	255	Engine Parameters, Rapid Update	11:48:15:689	0.10	01 D2 28 FF FF 7F FF FF
3	127489	6	255	Engine Parameters, Dynamic	11:48:15:285	0.50	00 2F 0B FF FF 3A 8D FF ...
4	127489	6	255	Engine Parameters, Dynamic	11:48:15:288	0.50	01 FF FF FF FF CB 66 FF ...
5	126720	6	255	Manu. Proprietary fast-packet addressed	11:48:15:383	1.00	11 99 A2 1E 01 01 18 00 ...
6	127508	6	255	Battery Status	11:48:14:290	1.50	00 B6 04 FF 7F FF FF A9
7	127505	6	255	Fluid Level	11:48:13:791	2.50	00 A8 61 FF FF FF FF FF

Details for NMEA 2000 PGN: 127488 (0x1F200):

- Name: Engine Parameters, Rapid Update
- Source = 6, Destination = 255
- Priority = 2, Length = 8
- Number Of Fields = 5
- Field 1: Engine Instance = 1
- Field 2: Engine Speed = 2612 Revs Per Minute
- Field 3: Engine Boost Pressure = Data not available
- Field 4: Engine tilt/trim = Data not available
- Field 5: Reserved field

The EMU-1 on Source Address (SRC) 6 is also outputting **Engine Parameters, Dynamic** PGN 127489 and **Fluid Level** PGN 127505 as shown below:

The screenshot shows the NMEA Reader interface with the following data in the table:

Line	PGN	SRC	DST	Name	Time	Interval	Data
1	127488	6	255	Engine Parameters, Rapid Update	11:52:10:083	0.10	00 00 00 FF FF 7F FF FF
2	127488	6	255	Engine Parameters, Rapid Update	11:52:10:084	0.10	01 00 00 FF FF 7F FF FF
3	127489	6	255	Engine Parameters, Dynamic	11:52:09:780	0.50	00 EA 01 FF FF 57 91 FF ...
4	127489	6	255	Engine Parameters, Dynamic	11:52:09:783	0.50	01 FF FF FF FF CB 66 FF ...
5	126720	6	255	Manu. Proprietary fast-packet addressed	11:52:09:378	1.00	11 99 A2 1E 01 01 18 00 ...
6	127508	6	255	Battery Status	11:52:09:785	1.50	00 B6 04 FF 7F FF FF 49
7	127505	6	255	Fluid Level	11:52:08:786	2.50	00 A8 61 FF FF FF FF FF

On the right, the details for NMEA 2000 PGN: 127489 (0xF201) are shown:

- Name: Engine Parameters, Dynamic
- Source = 6, Destination = 255
- Priority = 2, Length = 26
- Number Of Fields = 14
- Field 1: Engine instance = 0
- Field 2: Engine oil pressure = 49000 Pascals
- Field 3: Engine oil temp. = Data not available
- Field 4: Engine temp. = 372.07 Kelvin (98.92 Degrees C)
- Field 5: Alternator potential = Data not available
- Field 6: Fuel rate = Data not available
- Field 7: Total engine hours = 100:51:39
- Field 8: Engine coolant pressure = Data not available
- Field 9: Fuel Pressure = Data not available
- Field 10: Reserved field
- Field 11: Engine Discrete Status 1 = 6
- Field 12: Engine Discrete Status 2 = 65535
- Field 13: Percent Engine Load = Data not available
- Field 14: Percent Engine Torque = Data not available

Any PGN fields that are not being monitored by the EMU-1 are correctly.

The screenshot shows the NMEA Reader interface with the following data in the table:

Line	PGN	SRC	DST	Name	Time	Interval	Data
1	127488	6	255	Engine Parameters, Rapid Update	11:53:48:881	0.10	00 00 00 FF FF 7F FF FF
2	127488	6	255	Engine Parameters, Rapid Update	11:53:48:882	0.10	01 00 00 FF FF 7F FF FF
3	127489	6	255	Engine Parameters, Dynamic	11:53:48:778	0.50	00 EA 01 FF FF 57 91 FF ...
4	127489	6	255	Engine Parameters, Dynamic	11:53:48:780	0.50	01 FF FF FF FF CB 66 FF ...
5	126720	6	255	Manu. Proprietary fast-packet addressed	11:53:48:376	1.00	11 99 A2 1E 01 01 18 00 ...
6	127508	6	255	Battery Status	11:53:48:783	1.50	00 B6 04 FF 7F FF FF 8B
7	127505	6	255	Fluid Level	11:53:48:784	2.50	00 A8 61 FF FF FF FF FF

On the right, the details for NMEA 2000 PGN: 127505 (0xF211) are shown:

- Name: Fluid Level
- Source = 6, Destination = 255
- Priority = 6, Length = 8
- Number Of Fields = 5
- Field 1: Fluid Instance = 0
- Field 2: Fluid Type = 0 (Fluid)
- Field 3: Fluid Level = 100.000 Percent
- Field 4: Tank Capacity = Data not available
- Field 5: Reserved field

Note: EMU curation options dot allow the shown in field 4 of the **Fluid Level** PGN 127505 to be specified. Tadded in a future.



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