



Instruction Manual for the Seagull Jet ECU Interfaces

Document Version 1.2

Model #'s ECU-JETCAT, ECU-AMT, ECU-FADEC

Thank you for your purchase! This instruction manual will guide you through the installation and operation of your Seagull Jet ECU Interface. ***Please read the entire manual carefully before proceeding.*** If, after you read the manual (including the Troubleshooting section!!), you have further questions or problems, see the Support page on <http://www.eagletreesystems.com> for additional information, or email us at support@eagletreesystems.com.

Features and Benefits of the Jet ECU Interface

The Jet ECU Interface, in conjunction with our Seagull Pro Flight System, provides real-time data and audible feedback about the state of your Model Jet, while you are flying! Think of the Jet ECU Interface as a Wireless Engine Data Terminal/GSU for your Jet.

Data such as ECU Turbine RPM, Turbine temperature, Throttle %, ECU Pack and Pump Voltage, and ECU status messages are retrieved from your ECU and transmitted wirelessly to the Seagull Dashboard. Audible alarms can be programmed for low Turbine RPM and temperature for early flameout alert, and for ECU pack voltage for low battery indication. All these parameters are in addition to the standard data parameters that are available on the Pro System.

In addition to display on the LCD screen of the Wireless Dashboard, if the Dashboard is connected to a laptop via USB, all the ECU data are available live with the Windows Virtual Cockpit application!

Packing List

Your package should include the following: Jet ECU Interface Cable (either AMT Netherlands, JetCat or FADEC), and a printed version of this manual. Please check your box for printed addenda to this manual which may be included if changes were made after printing.

Requirements

The Jet ECU Interface requires a **Seagull Pro Flight System**, with Windows application version 3.39 or later. The latest version is available on the support page of our website. The Recorder and Dashboard firmware needs to be updated using "Tools, Firmware Control."

For JetCat users, version 4.00g of the JetCat ECU is required. For AMT Netherlands users, the Recorder must be powered with a 4 cell (4.8v pack).

Do you have an ECU that is not currently supported? If so, email us at info@eagletreesystems.com and we may be able to help!

How the Jet ECU Interface Works

The Jet ECU Interface cable plugs between the Pro Flight Recorder the data/telemetry port of your ECU. After simple Windows configuration, the Recorder reads the ECU parameter data and transmits it to the Wireless Dashboard.

Installing and Powering the Recorder in Your Jet

First, read the Seagull Pro Flight System user manual for overall Seagull installation information.

The Recorder can be powered from your Jet's receiver battery pack, via the included Y cables, or from its own battery, plugged into one of the Pro system's servo connectors.

The AMT Netherlands ECU Interface **REQUIRES** a 4.8v battery pack. The other ECU Interfaces should operate correctly on either a 4.8v or 6v pack. See the Seagull Pro Flight System user manual for more information on powering the recorder.

Connecting the Jet ECU Cable

The Jet ECU Interface cable connects to the "GPS/EU Tx" port on the Pro Recorder, with the Brown wire to the left, as shown in Figure 1.

NOTE: If you have the EU TX, you must connect the TX to the "FCC" port, as shown in the figure. Before doing so, the recorder must be configured for this mode. Please see your Seagull Pro Flight System manual for information on how to do this, under the "Connecting the Seagull Transmitter to your Data Recorder" under the "Using GPS" subsection.

The other end of the cable plugs into your ECU as follows:

JetCat: the cable plugs into the Data Bus port of your ECU, or into the Data Bus port of your ECU sensor board. Additionally, the cable can be plugged into the second port of your GSU, if you desire to see both GSU and Seagull information about the ECU on the ground.

AMT Netherlands: the cable plugs into the 3 pin Telemetry wire of the ECU. If desired, a standard servo Y cable (NOT the custom Y cables included with the Recorder) can be used to 'Y' the Data Terminal and the Seagull simultaneously.

FADEC: The cable plugs into the data port of the ECU. It might be possible to build a Y cable to allow simultaneous Data Terminal and Seagull operation, but we have not tested this.

Note: it is fine to hot plug and unplug the Seagull ECU cable to/from the ECU, as desired.

Configuring the Jet ECU Interface with the System

Configuration of the Seagull Pro system with the ECU Interface is straightforward.

First, make sure you have installed our latest application from the website, and updated the firmware on the Recorder and Dashboard, as described above in the Requirements section.

Once this is complete, run the application, connect the Recorder to USB, and choose "Tools, Jet ECU Setup." Select the type of ECU you have, and click "OK.". The application will then prompt you to attach the Dashboard to USB, and the "Seagull Dashboard Data Setup Utility" application page should appear, as shown below:

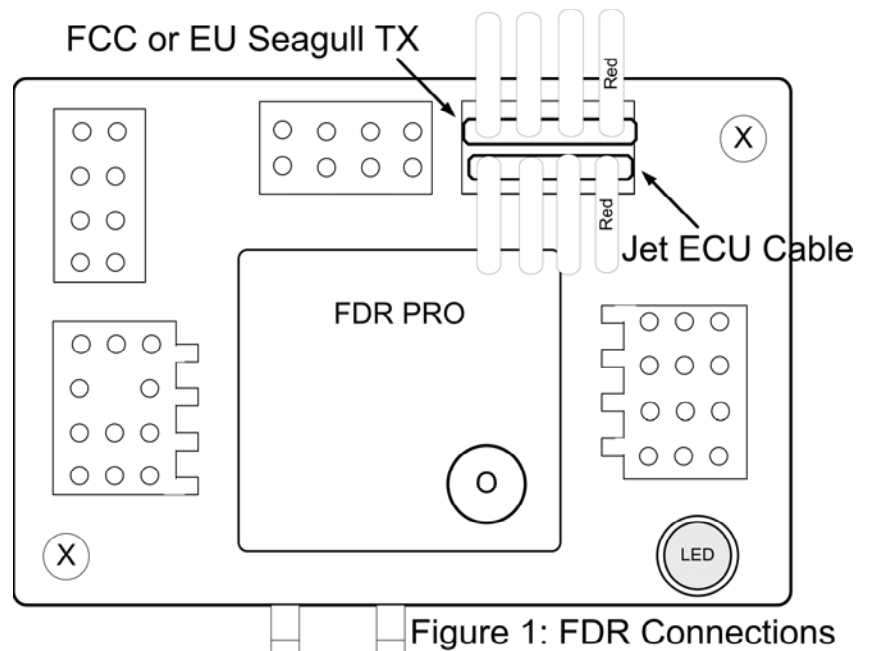


Figure 1: FDR Connections

Now, you should see the list of ECU parameters that can be displayed on the Dashboard, as well as the other Seagull Parameters. Select the desired parameters and configure alarms on the new ECU parameters as described in your Seagull Pro Flight System manual.

Here is specific information about the ECU parameters:

ECU Throttle % - this indicates the throttle deflection percentage

ECU Turbine Temperature – this indicates the turbine temperature. Note that it is ALWAYS in Degrees C on the Dashboard, even if English units are selected in the application

ECU Turbine RPM – this indicates the turbine RPM. **IMPORTANT:** please make sure that you place the RPM display on either the left upper or left lower display location (not on the right side of the screen). This is because RPM can go about 99,999, which means it won't display properly on the right side.

ECU Status – this page on the Dashboard indicates the status of the ECU. The messages vary depending on which ECU you have, and should be similar to the messages your Data Terminal/GSU currently displays. When no ECU is detected, “ECU NOT DETECTED” is displayed on the ECU status page of the dashboard.

ECU Pack Voltage – this indicates the voltage of the ECU's main power supply.

ECU Pump Voltage – this indicates the current pump voltage. NOTE: on the FADEC, this indicates the pump duty cycle.

Live Mode Application Display

All of the ECU parameters can be displayed in application Live Mode, when either the Dashboard or the Recorder is connected to your PC/Laptop via USB. To configure the parameters to display in Live Mode, click “Tools, Choose Instruments to Display on PC Screen” and the ECU options should appear on the righthand side of this page.

Range Checking and Flying

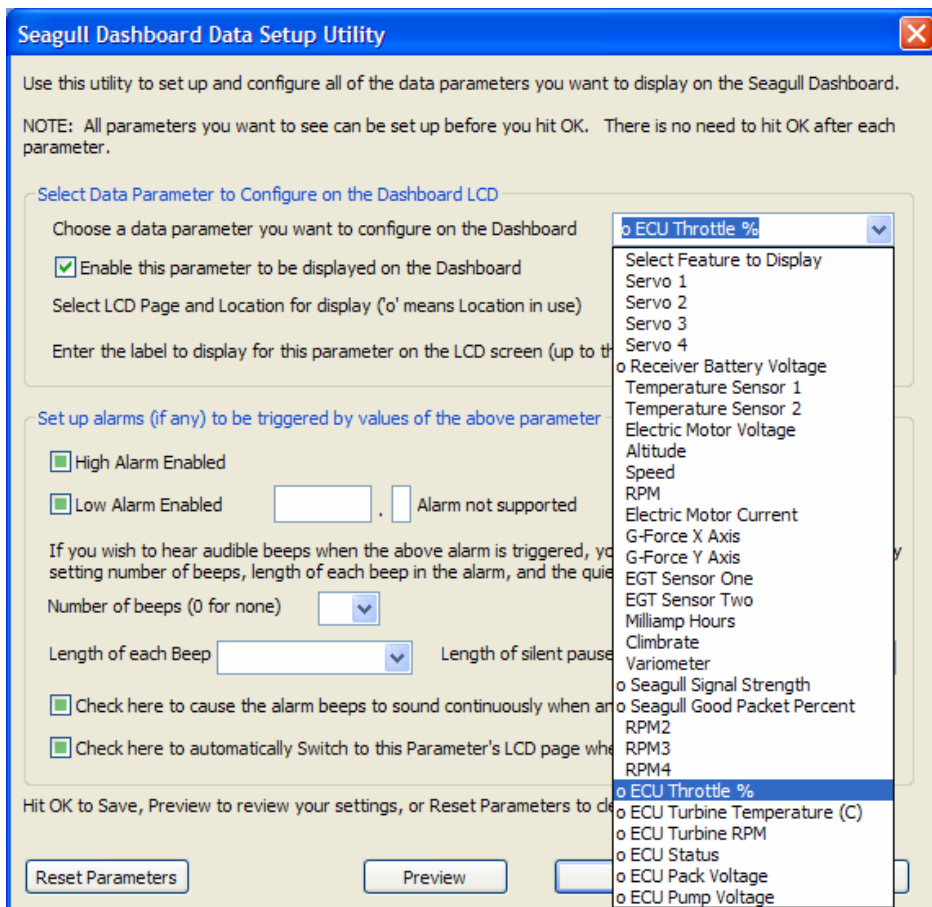
IMPORTANT: It is unlikely that the installation of the Eagle Tree system will cause problems with radio range. But, as always, it is critical to do an antenna-down range check, per your jet/radio manufacturer's instructions, after making any changes to your jet's electronics (and frankly before every flight session). Eagle Tree recommends that the range check be done with the turbine running, to completely verify operation (if this can be done safely).

Happy Flying! We'd love to see pictures of your installation and get your feedback. Just email us at info@eagletreesystems.com.

Troubleshooting

Below is a list of problems that may be encountered, and steps to remedy them. If your particular issue is not addressed by the below, see the Support page on <http://eagletreesystems.com> or email us at support@eagletreesystems.com.

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Include a full description of your problem, your machine configuration, brand/model/version of ECU, application version, Dashboard and Recorder firmware version and any other relevant details.

Issue: “ECU NOT DETECTED” appears on the ECU Status page of the LCD Dashboard, after configuration

Solution:

- Make sure you have downloaded the latest Windows application and installed the latest firmware, as described in the Requirements section above.
- Make sure you have followed the application configuration instructions above.
- Make sure that you have connected the ECU Interface cable appropriately, as described above.
- Plug in your Engine Data Terminal/GSU, if you have one, and verify that it is reading correctly.

Issue: I have reduced antenna-down range with the ECU Interface installed

Solution:

- Try isolating the problem – disconnect the ECU Interface cable, and see if the range improves. If it does not improve, please see the Troubleshooting section in the Seagull Pro Flight System user manual. If range does change when disconnecting the ECU Interface cable, please contact Eagle Tree Systems immediately.

Limited Warranty

Eagle Tree Systems, LLC, warrants the Jet ECU Interface Cable to be free from defects in materials and workmanship for a period of one (1) year from the date of original purchase. This warranty is nontransferable. If your unit requires warranty service during this period, we will replace or repair it at our option. Shipping cost to us is your responsibility.

To obtain warranty service, email us to request an RMA number. No returns will be accepted without this number.

This limited warranty does not cover:

- The Software included with the System. See the Software license agreement for more information on Software restrictions.
- Problems that result from:
 - External causes such as accident, abuse, misuse, or problems with electrical power
 - Servicing not authorized by us
 - Usage that is not in accordance with product instructions
 - Failure to follow the product instructions

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