

# **Monitor FSUIPC Data**

**Version 4.0**

## **User Manual**

Copyright © 2009 Ruscool Electronics Limited

### **Table of Contents**

**Settings**  
**View Data**  
**Send Data**

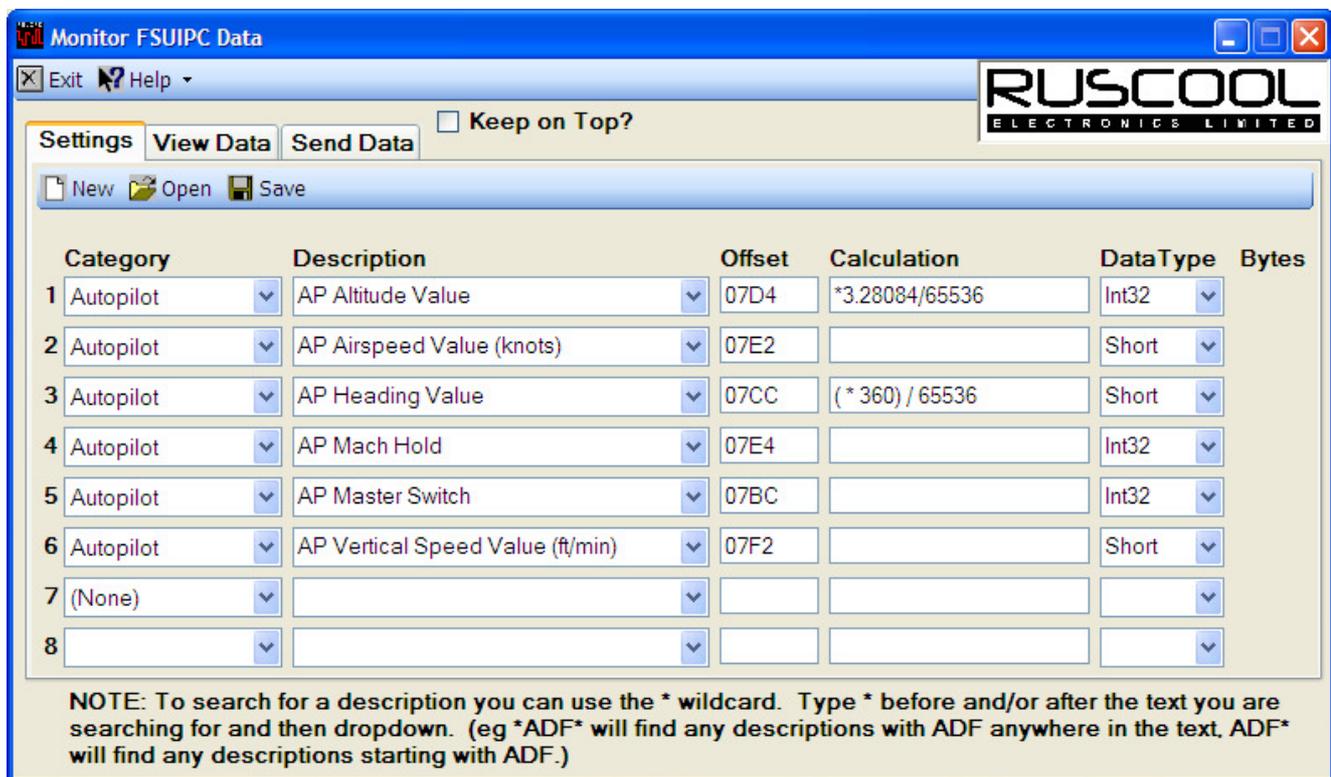
## Settings

- Click on the "Category" drop-down and select the relevant category, select '(All)' to show a complete list of descriptions or select '....Custom....' to type in your own details.
- Click on the "Description" drop-down and select the item required. The program will show you the "Offset", "Calculation", "Data Type", and "Bytes" as used by FSUIPC.

Note: Bytes are only required if the Data Type is a "String".

It is not necessary to use all of the descriptions, so they can just be ignored if they are blank. However, if they have been previously configured and you now want them to be unused, select (None) from the "Category" drop-down.

If you can't find a description by using the dropdown, you can search by using the '\*' wildcard character. EG \*altitude\* will find any description with the word 'altitude' present, and altitude\* will find any description starting with the word 'altitude'.



Click on the "Save" button if you want to save your settings for later use. Multiple groups of settings can be saved with different names to make identifying them easier when opening them.

Click on the "Open" button to open previously saved settings. The last settings that were saved will automatically open when the program is started.

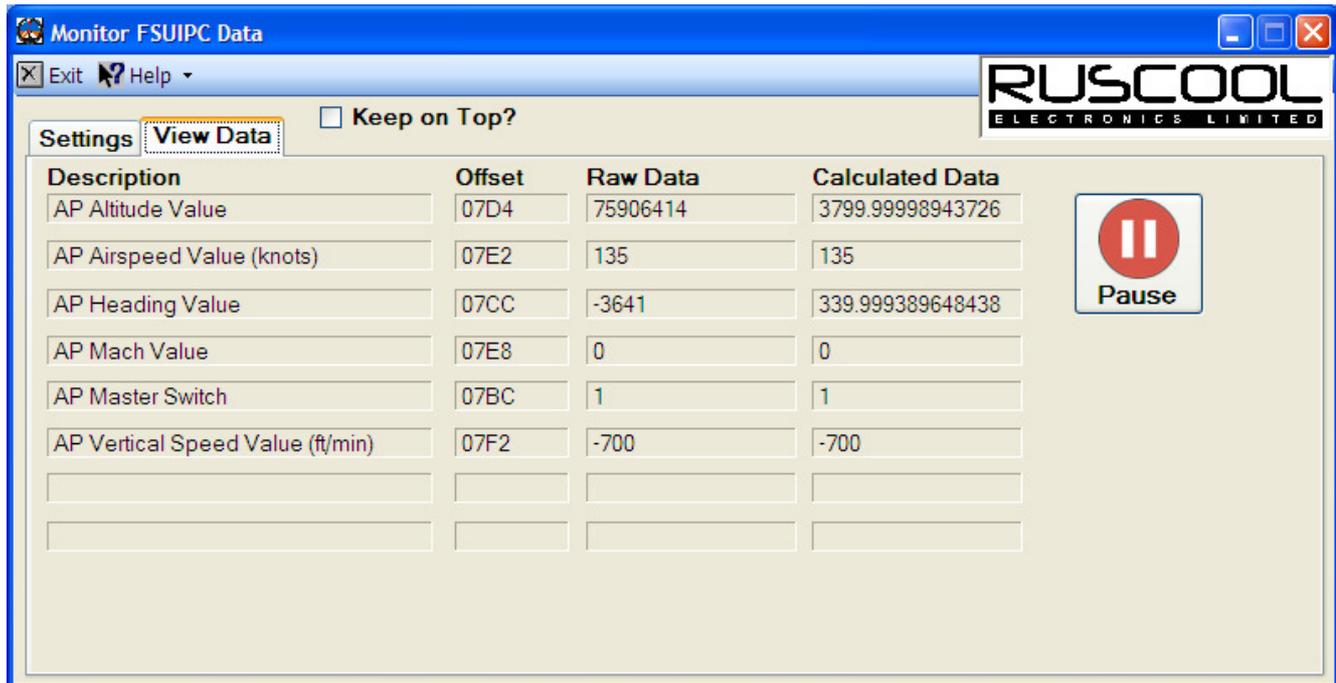
If you want to clear all settings, click on the "New" button.

## View Data

Once the settings have been completed (and saved, if required) click on the "View Data" tab to monitor Flight Simulator. (It is important that Flight Simulator is running, of course!!)

The Raw Data column shows the data exactly as it is returned from Flight Simulator, and the Calculated Data column shows the data after the FSUIPC calculation(s) have been applied.

While viewing the data, tick the 'Keep on Top?' tickbox to make the program always on top of any other programs (except when viewing Flight Simulator full screen - using Alt-Enter).



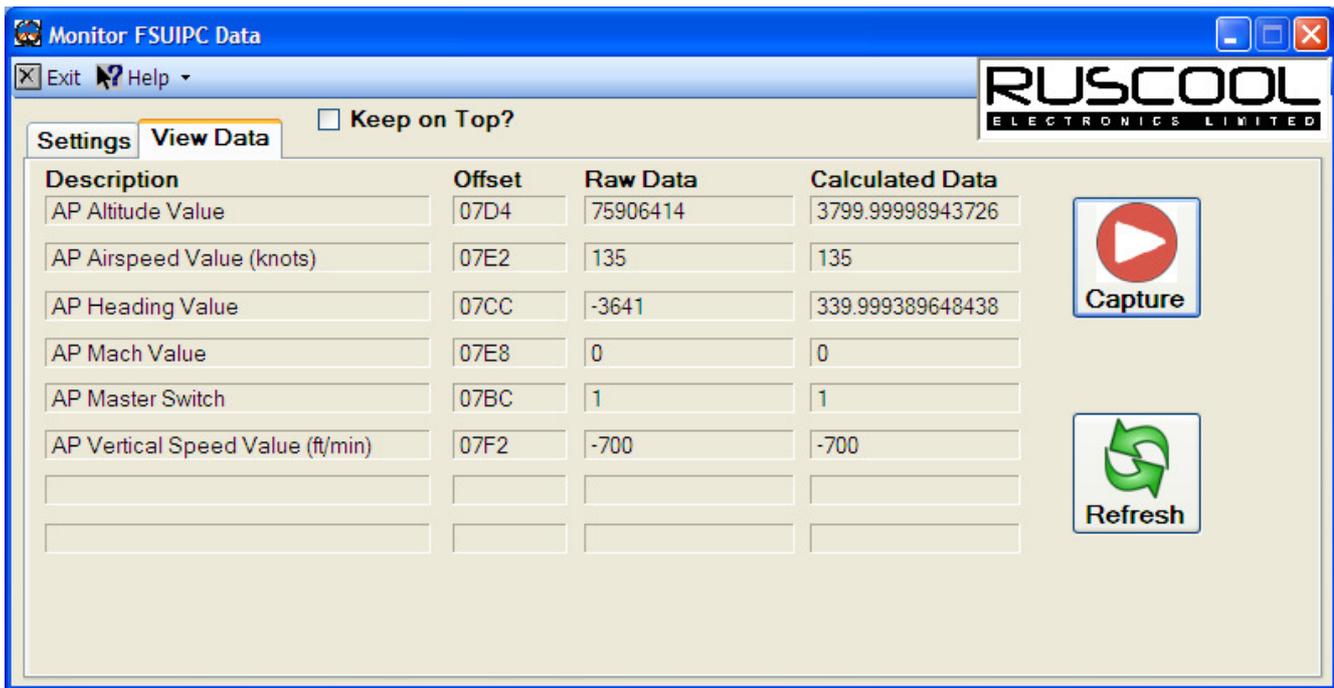
The screenshot shows the "Monitor FSUIPC Data" application window. The window title is "Monitor FSUIPC Data" and it includes a menu bar with "Exit" and "Help". The "View Data" tab is selected, and the "Keep on Top?" checkbox is unchecked. The window displays a table with the following data:

Description	Offset	Raw Data	Calculated Data
AP Altitude Value	07D4	75906414	3799.99998943726
AP Airspeed Value (knots)	07E2	135	135
AP Heading Value	07CC	-3641	339.999389648438
AP Mach Value	07E8	0	0
AP Master Switch	07BC	1	1
AP Vertical Speed Value (ft/min)	07F2	-700	-700

A "Pause" button is located on the right side of the window.

The data is continually updated from Flight Simulator so that you can see the data changing. Note that this may reduce the frame-rate as the data is being captured 10 times a second.

To stop the real-time monitoring, click on the "Pause" button and the monitoring can then be resumed by clicking on the "Capture" button or you can get a one-off update by clicking on the "Refresh" button.



You can return to the settings page by clicking on the "Settings" tab, make any required changes and the information will be updated as soon as you click on the "View Data" tab again.

Note that when this program has focus, Flight Simulator is paused so will not continue to update data until it is running again.

We have purposely left all data in it's full length so that you can see precisely what is being sent. Most programs that use this data will actually round it off to useable values of course.

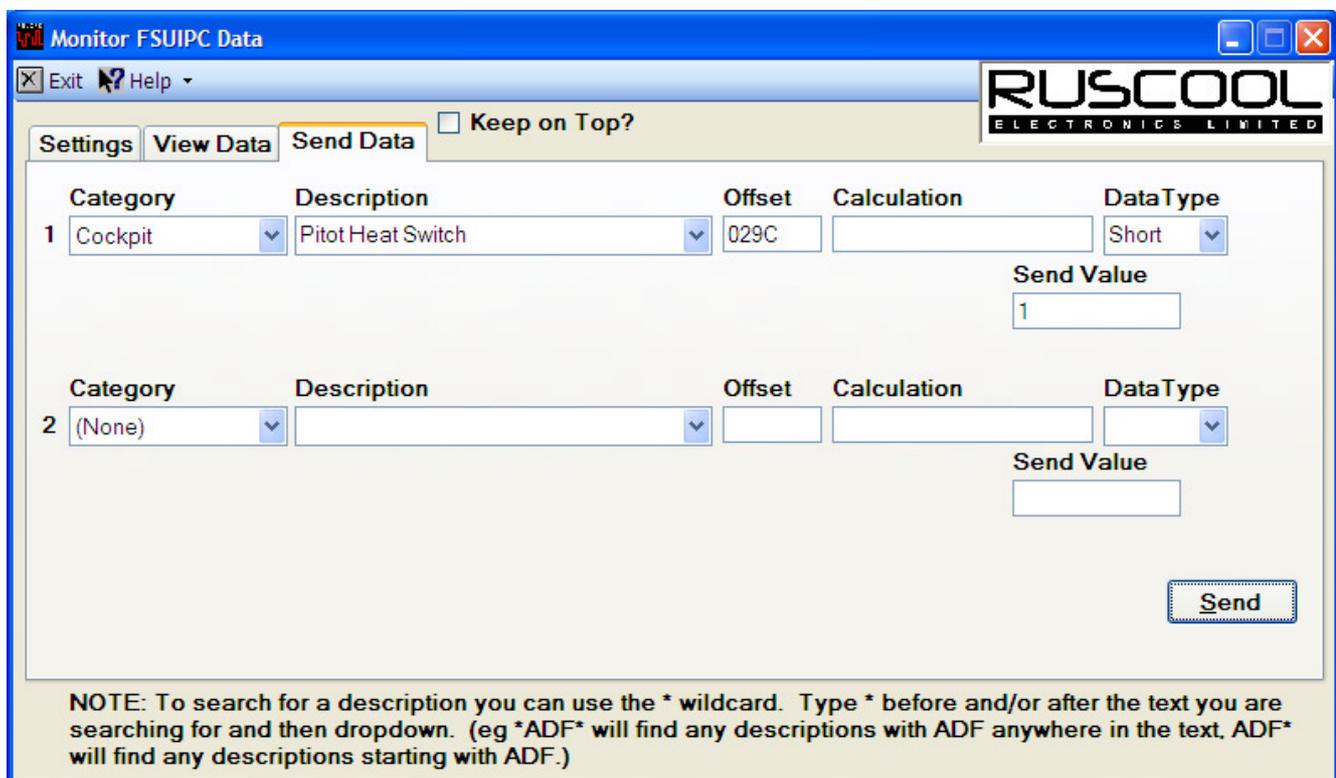
## Send Data

Testing how data is sent to and received by Flight Simulator can be useful when testing how other programs will respond to particular values.

- Click on the "Category" drop-down and select the relevant category, select '(All)' to show a complete list of descriptions or select '....Custom....' to type in your own details.
- Click on the "Description" drop-down and select the item required. The program will show you the "Offset", "Calculation", "Data Type", and "Bytes" as used by FSUIPC.

Note: Bytes are only required if the Data Type is a "String".

Enter a value in the 'Send Value' box and click on Send. The below example shows the vertical speed being sent and updated immediately in Flight Simulator. Any calculations will be applied before the data is sent so the value entered should be the actual value that you want to appear in Flight Simulator.



The screenshot shows the 'Monitor FSUIPC Data' application window. The title bar includes the application name and standard window controls. The menu bar has 'Exit' and 'Help'. The main area has three tabs: 'Settings', 'View Data', and 'Send Data' (which is active). A 'Keep on Top?' checkbox is present. The 'Send Data' tab contains two data entry rows. The first row is for 'Cockpit' with description 'Pitot Heat Switch', offset '029C', and data type 'Short'. The 'Send Value' field for this row contains the number '1'. The second row is currently empty, with 'Category' set to '(None)'. A 'Send' button is located at the bottom right of the data entry area. A note at the bottom of the window explains the wildcard search functionality for descriptions.

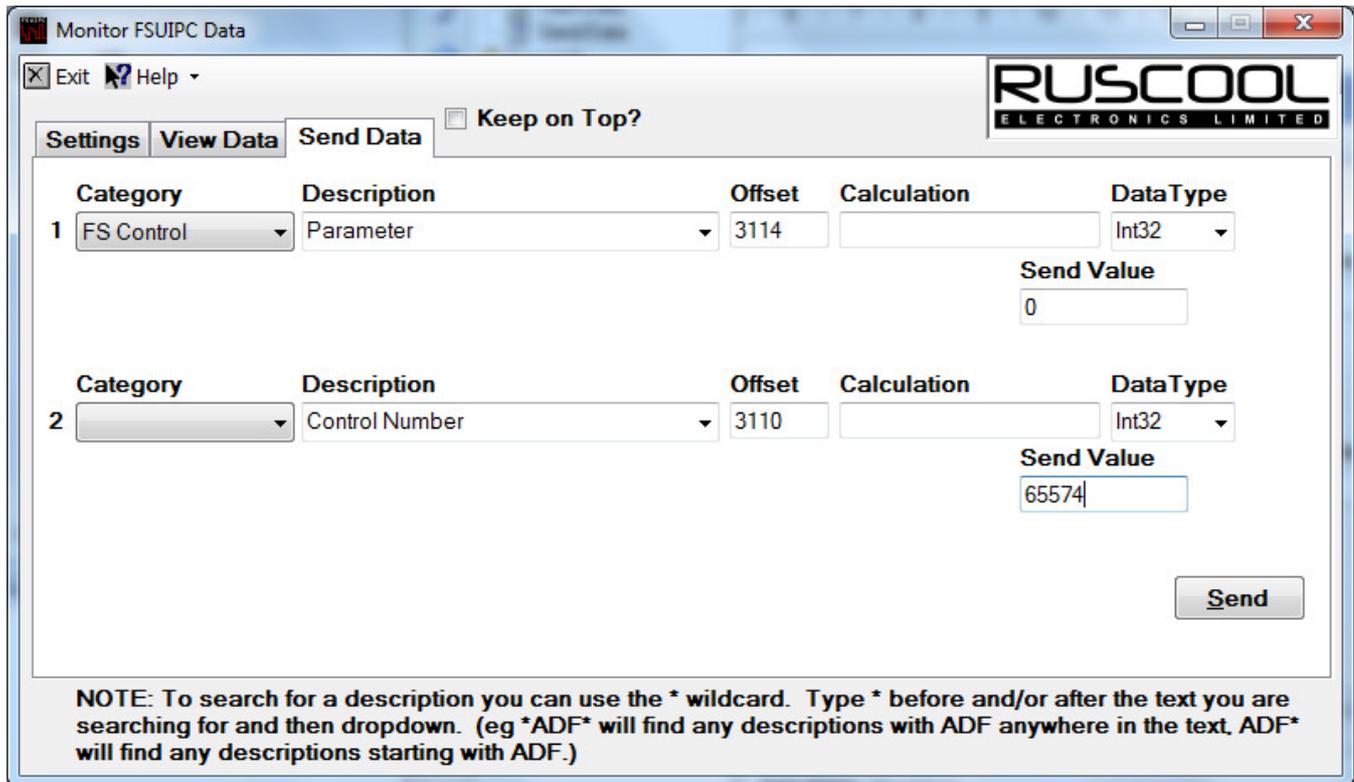
	Category	Description	Offset	Calculation	Data Type	Send Value
1	Cockpit	Pitot Heat Switch	029C		Short	1
2	(None)					

**NOTE:** To search for a description you can use the \* wildcard. Type \* before and/or after the text you are searching for and then dropdown. (eg \*ADF\* will find any descriptions with ADF anywhere in the text, ADF\* will find any descriptions starting with ADF.)

If Flight Simulator is not updated then either the Data Type/Calculation or Send Value are incorrect so it is recommended to view the data to make sure that the values are correct.

Some functions require writing to two different offsets, as in the below example. Enter the details in both send lines and then click on the 'Send' button for the commands to be sent together. The commands will be sent in order, so they need to be the correct way around.

An example of this is the FS Controls offset which is for anything that can be configured within the FSUIPC module in Flight Simulator. By selecting 'FS Control' from the 'Category' dropdown, the offset information is automatically entered in the correct order, and then just the control number (and any relevant parameter) needs to be entered in the 'Send Value' fields. The below example will send the "ALL LIGHTS TOGGLE" control to Flight Simulator. The FS Control list can be found within your FSUIPC documentation.



You can also test 'custom' offsets for anything that may not be present in the description dropdown, by selecting '... Custom ...' from the 'Category' dropdown and entering your own offset number and data type.