

Piccolo Development Interface

1 Introduction

The Piccolo Development Interface (DevInterface) application is a very useful tool for flight testing and simulation gain tuning as well as post flight analysis. It provides real-time strip charts of aircraft telemetry. You can also run this application while replaying a telemetry file in PCC.

1.1 Starting the Application

From your computer, go to **Start » Programs » Cloud Cap 2.x.x » Tools » DevInterface**. This button automatically launches the DevInterface application

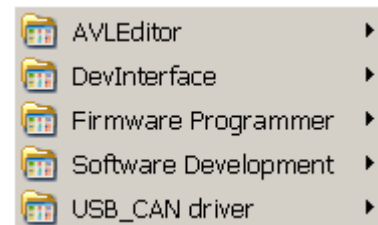


Figure 1 - Tools Menu

A communications dialogue opens and you can specify the machine (localhost/IP address/machine name) and port, or select a replay file.

This will connect to one instance of PCC running on the same machine. Alternately “localhost” can be replaced by the IP address or machine name of the machine running PCC.

Note: If you are running a Software- in-Loop simulation it may be necessary to use port 2001 instead of 2000.

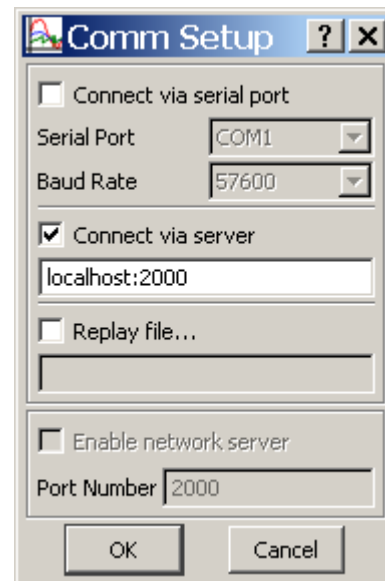


Figure 2 - Comms Window

If you are using v1.3.2 OI, the application is located in the **Tools** directory. You must first copy the directory to your local machine and run the **setup.bat** to install the chart control. Version v1.3.2 requires a command line, for example: “PiccoloDevInterface -SERVER=localhost:2000”. The most convenient thing to do is to create a batch file in the DevInterface directory with the command line in it.

2 Tabs and Menus

The top main tabs include Telemetry, Vibration, Nav Filter, and Fixed Wing Gen2



Figure 3 - Main Tabs

Note: The fast telemetry mode in the Telemetry tab is advantageous when flight testing or in simulation.

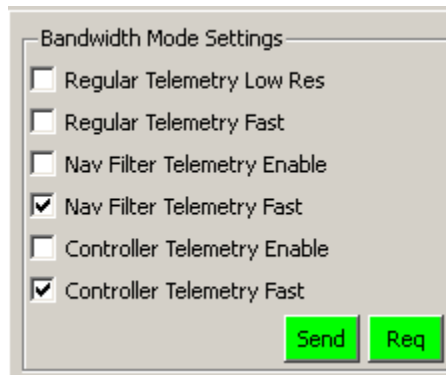


Figure 4 - Fast Telemetry

The DevInterface can display data from multiple aircraft using the Aircraft pull-down box to select the aircraft serial number.



Figure 5 - Aircraft Pull Down Menu

Tabs at the bottom of the initial screen contain strip charts of sensor data, attitude, airspeed, altitude, RPM, and control surface positions.

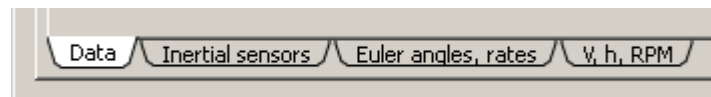


Figure 1 - Bottom Tabs



Click on one of the controls to scroll within the charts or change the vertical axis by clicking and dragging on each vertical axis. Right clicking on the axis also brings up tracking and zoom to fit options.

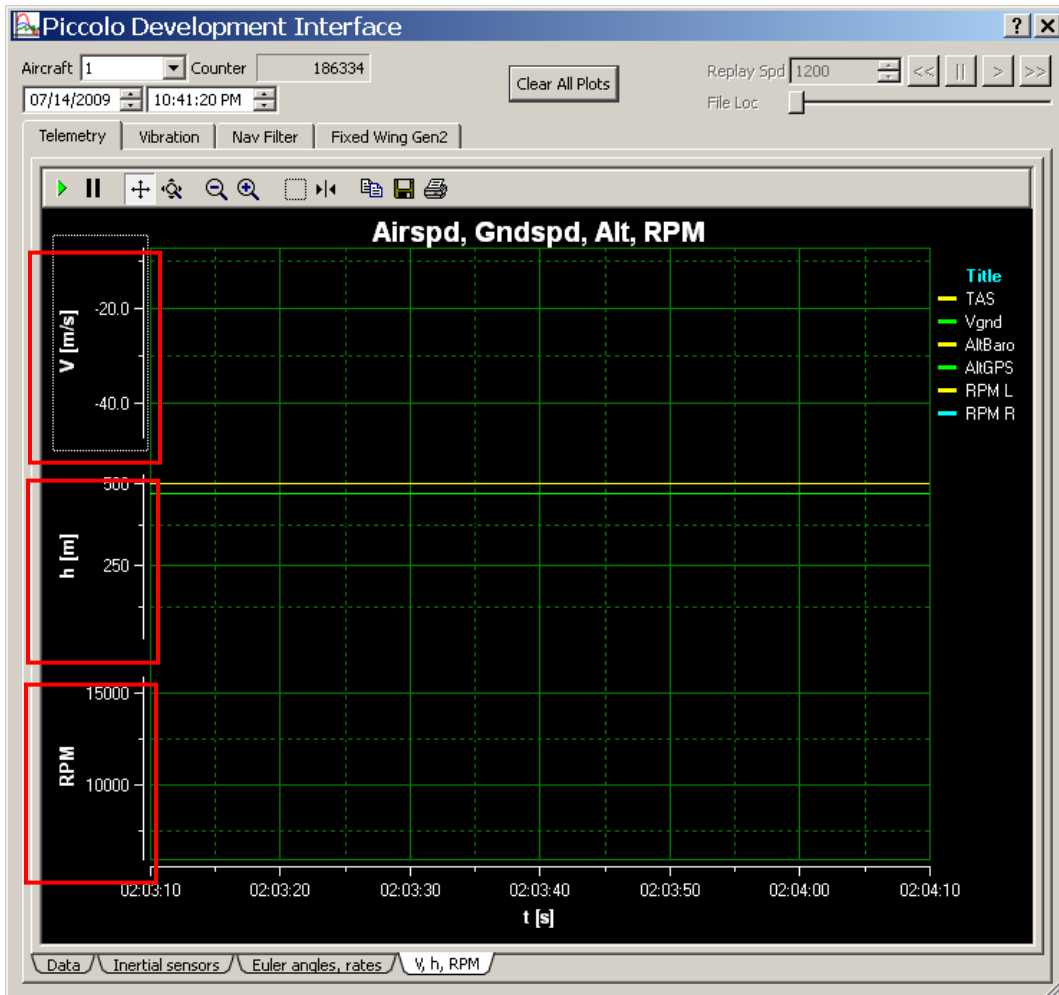


Figure 6 - Zoom and Scroll Axes

The Piccolo Autopilot avionics system and all of its versions (such as Piccolo, Piccolo Plus, Piccolo II, Piccolo LT, and Piccolo SL) were designed for use **only** on un-manned aircraft. **USE OF THESE PICCOLO AUTOPILOT PRODUCTS IN AIRCRAFT WITH HUMAN OCCUPANTS IS PROHIBITED BY THE FEDERAL AVIATION ADMINISTRATION.** Cloud Cap Technology, Inc. is not permitted to sell the Piccolo Autopilot to any customer that intends to use the product on aircraft with human occupants.