

# Co-Pilot™ briefing

November, 2003

## New features in Co-Pilot™ version 2.2

### ■ Computer switches are active only in Setup Mode.

The Co-Pilot™ Computer “reads” the positions of the four configuration switches when you exit Setup Mode, then stores their settings in memory. This assures that Co-Pilot™ operation won’t be affected if the switches are accidentally moved—either by hand or during a rough landing—at other times.

Always check for correct control surface movements while in Setup Mode (this assures the configuration switches are in their proper positions).

### ■ Auto Trim control.

In previous versions, Auto Trim was always on. With version 2.2, you can choose whether Auto Trim is on or off. Follow these guidelines:

- Best for beginners: Auto Trim on. Take off with Co-Pilot™ on, and trim in the air with Co-Pilot™ on. With Auto Trim on, the plane stays in trim when Co-Pilot™ is turned off in the air.
- Best for experts: Auto Trim off. Take off with Co-Pilot™ off, and trim in the air with Co-Pilot™ off (since Auto Trim is off, it has no effect on trim). After turning on Co-Pilot™ for emergency recovery, don’t trim, or you must retrim when Co-Pilot™ is off.

To set Auto Trim:

1. As the last step in Setup Mode:  
For Auto Trim on, turn “Throw” fully clockwise.  
For Auto Trim off, turn “Throw” fully counterclockwise.
2. Exit Setup Mode. (The Co-Pilot™ Computer “reads” the position of the “Throw” control to determine whether Auto Trim should be on or off. It then stores this setting in memory, and the “Throw” control returns to its normal function.)
3. Reset “Throw” to the desired sensitivity.

## Tips

- For consistent Co-Pilot™ operation, keep the Sensor windows clean. Look at the windows as part of your normal pre-flight checks. If the windows are dirty, clean them with alcohol and a cotton-tipped applicator.
- Certain airplane designs require modifications to Co-Pilot™ installation and setup. Typically, this would be a low or mid wing plane, with a canopy and bottom exhaust. Instructions for handling this design are provided on the other side of this sheet.
- Mounting the Sensor with Velcro® requires roughening the airplane’s surface with sandpaper to assure the Velcro® sticks securely. But maybe you don’t want to roughen that nice covering on your airplane. An alternative method uses a small piece of trim sheet to protect the airplane’s finish:
  1. Cut a piece of self-adhesive trim sheet to about 1½" square.
  2. Roughen the trim piece with sandpaper, then clean it with alcohol.
  3. Using alcohol, clean the covering where you will be mounting the Sensor. Let dry.
  4. Peel the backing from the trim piece, then press it onto the airplane’s covering where the sensor will go.
  5. Attach a 1¼" piece of “stiff” Velcro® to the trim piece on the airplane.
  6. Attach a 1¼" piece of “fuzzy” Velcro® to the bottom of the Sensor.
  7. Mount the Sensor by pressing the two pieces of Velcro together.

Later, if you no longer need Co-Pilot™ on this airplane, you should be able to remove the trim piece to reveal the good-as-new covering underneath.

- Mount the Co-Pilot™ Computer in the fuselage using Velcro®. This makes a neat installation, while allowing you to easily remove the Computer.

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## Special installation and setup

Slightly different installation and setup procedures are required if your airplane...

- Has a low or mid wing, *and* exhaust flows under fuselage (the Sensor should be mounted on top of the fuselage to prevent exhaust from covering its windows); *and*
- Has a canopy (the Sensor must be mounted diagonally to prevent the canopy from obstructing the Sensor's view).

With this configuration, make the following changes:

### ■ Installation

- Step 1.a. (page 6): best location for Sensor is on top of the fuselage, behind the canopy.
- Step 1.f. (page 6): mount the Sensor diagonally behind the canopy, as shown at right.
- Step 4.c. (page 8): set switches like this:



### ■ Setup

- Step 4 (page 12):
  - a. Stand at the right front of the aircraft, then place your hand near the right front “P” window (this simulates the aircraft pitching down and rolling to the right).
  - b. The right aileron should move down and the elevator should move up. If the surfaces move incorrectly, change switches 1 and/or 2 on the Co-Pilot™ Computer until the surfaces move as shown in the photo to the right.
- Step 5 (page 12):
  - a. Press the Infrared Calibration Button to change to Roll Setup Mode.
  - b. Stand at the right rear of the aircraft, then place your hand near the right rear Sensor window (this simulates the aircraft pitching up and rolling to the right).
  - c. The right aileron should move down and the elevator should move down, as shown in the photo to the right. If the surfaces move incorrectly, change switch 4 on the Co-Pilot™ Computer (do not change switch 1 or 2 in this step).

**Note:** When performing these tests, if both ailerons and elevator are not moving, make sure switch 3 on the Co-Pilot™ Computer is off. You must complete step 4 first with the “P” sensor pair. You can change between sensors by pressing the Infrared Calibration Button.

- Step 8.d. (page 12): Set Throw to 50% (or to half of the setting you would otherwise use).

