

Altimatic IIIB Pitch Operation

Pitch Mode-The Pitch Mode Switch engages the AutoPilot pitch servo and makes the AutoPilot responsive to the Pitch Attitude of the Gyro Horizon and the commands of pitch command disk. Attitude changes may be made by rotating the pitch command disk in the appropriate direction. Design of the system is such that commanded attitudes remain constant throughout power changes and gear and flap transitions.

Altitude Selector Mode-Engagement of the altitude preselect will remove the pitch command disk from control of the AutoPilot and make pitch responsive to the Altitude Selector. When the Altitude Selector Mode is engaged, the airplane will fly and maintain the indicated altitude selected on the altitude drum. Altitude changes may be commanded while this mode is engaged, and the transition to the transition to the newly selected altitude will be smooth. The Pitch Command Disk may be used to increase or decrease the angle of climb or descent as desired during preselect function. Rate of climb and descent are controlled as always, by throttle settings or engine power. It is important to note that the AutoPilot is connected only to the airplane control system and not the throttles.

Altitude Selector-The Piper Altimatic IIIB offers altitude preselect as in previous Piper pitch axis Automatic Flight Control Systems equipment. The altitude selector features altitude hold which occurs when the altitude preselect function is engaged. With the Altitude preselect function engaged, the altitude selected on the altitude dial will be maintained.

Altimatic IIIB Pitch-Prior to engagement of the Pitch section, the Trim Meter will indicate the direction in which the airplane will move upon engagement and can be centered by adjustment of the Pitch Command knob.

After engagement of the Pitch section, the Trim Indicator transfers to the Altitude Selector and will indicate whether the Airplane is above or below the selected altitude. An "UP" indication can be centered by dialing the Altitude Selector downward.

With the console Altitude Button and the Pitch Engage Button in the "OFF" position, center Trim Indicator by rotating the Pitch Command Disk.

Roll must be engaged for the Trim Indicator and the Pitch Axis of the Altimatic IIIB to be operative.

Engage the PITCH BUTTON. Rotate the PITCH COMMAND DISK as necessary to maintain level flight. Center Trim Indicator by rotating the Altitude Selector Knob.

If an "UP" indication is observed at the Trim Indicator, this would indicate a signal from the Altitude Selector is calling for a nose up condition. To center the Trim Indicator, the Altitude Selector Knob would have to be turned down or counterclockwise.

With the Trim Indicator showing level flight, calibrate the Altitude Selector Dial to read the flight altitude recorded on the Altimeter.

Push the Console ALTITUDE BUTTON "IN". Allow the airplane to stabilize on altitude and observe that Trim Indicator needle remains centered.

Rotate the Attitude Calibration Disk as required, so setting on the Altitude Dial reads the flight altitude recorded on the altimeter.

