S-TEC 3100 Digital Flight Control System

PRECISE PERFORMANCE.
PROVEN EXPERIENCE.
PERSONALIZED ATTENTION.
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Digital Attitude Based Autopilot

Unlike traditional legacy autopilots that rely on roll information from a turn coordinator, and pitch information from a pressure transducer, the 3100 makes precise corrections based on very accurate AHRS data. This is most evident on windy days where the wind isn’t blowing perfectly down the runway. On approach, a legacy analog autopilot might hunt for the localizer or final approach course line, while the digital 3100 holds the course line like it’s locked into a tractor beam.

Compatibility

The S-TEC 3100 is a 2-Axis (3-Axis available on some models) Digital Flight Control System, with standard Automatic Pitch Trim. Whether you have advanced glass EFIS displays or the traditional 6-pack steam gauges, the S-TEC 3100 supports a wide variety of cockpit setups. An AHRS is built into the S-TEC 3100 and is utilized to drive the precise movements of the servos in aircraft lacking a digital EFIS display.

List of features of the S-TEC 3100 Digital Flight Control System:

- Flight Director
- Lateral and Vertical navigation functions including - LPV, HDG, GPSS, VOR, LOC, GS, ALT, GPS LNAV, GPS VNAV
- Vertical navigation targets set on the bezel or compatible EFIS
- Altitude Preselect* and Hold with Autotrim
- Vertical Speed Control (VS)
- Indicated Airspeed Control (IAS)

*Requires a baro corrected source

Dimensions

- Width: 6.25" (159mm)
- Height: 1.45" (37mm)
- Depth: 9" (229mm)

Weight

- 2.6 lbs (1.18 kg) (DFCS only)

TSOs

- TSO-C198 Automatic Flight Guidance and Control System Equipment (AFGCS)

Hardware

- RTCA DO-160G to meet TSO-C198

Software

- RTCA DO-178B

*See our website for a list of airframe installation STC's

Envelope Protection/Alerting

Loss of control is one of the largest contributors to general aviation accidents. The S-TEC 3100 DFCS helps minimize the chance of entering into an inadvertent stall, unusual attitude, over-speeds or excessive banking situation caused by aggressive autopilot inputs. For example, should your aircraft approach a stall while the S-TEC 3100 is engaged, the system will automatically alter the maximum pitch angle necessary to quickly return the aircraft to a safe speed. In addition, visual and aural annunciations will alert you to the situation.

Straight and Level Recovery

Should you inadvertently enter into an unusual attitude situation, the S-TEC 3100's Straight and Level button (LVL), delivers fast and simple automatic recovery to level flight from an unusual attitude no matter what the visibility. Once engaged, Straight and Level instantaneously overrides previous autopilot inputs to safely return and hold your aircraft at a neutral attitude while you get things sorted out.