

***NORTHROP GRUMMAN***

*Ideal for retrofit, the LTR-97 LHAS offers users of B-747, L-1011, DC-10, and A300 aircraft a cost-effective, advanced technology replacement for their antiquated, failure-prone mechanical Vertical Gyro/Directional Gyro (VG/DG) systems*

## **LTR-97 LHAS Fiber Optic Gyro Heading and Attitude System**



### **The accuracy and reliability of fiber optics**

The LTR-97 LHAS uses Fiber Optic Gyro (FOG) technology in a strapdown configuration to provide superior aircraft attitude and heading.

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Based on Northrop Grumman's LTR-97 VG/DG replacement system, the LTR-97 LHAS provides up to ten times the Mean Time Between Failure (MTBF) of mechanical VGs/DGs, thus improving dispatch reliability and reducing maintenance costs. The LTR-97 LHAS is ARINC 561 compatible and includes synchro outputs to support the VG/DG installations on its target aircraft.

The LTR-97 LHAS was designed for easy installation. It uses existing aircraft power and requires minimum changes to the aircraft wiring.

## LTR-97 LHAS Fiber Optic Gyro Heading and Attitude System



### Technical Characteristics

#### Weight

25 lb (11.3 kg)

#### Dimensions (per ARINC 561)

- Width 10.1 in. (25.7 cm)
- Height 8.5 in. (21.6 cm)
- Length 20.0 in. (50.8 cm)

#### Primary Power

Main Input 115 Vac, 400 Hz, 80W (61 VA) - unloaded

#### Synchro Power

Main Input 26 Vac, 400 Hz

#### Reliability

MTBF >10,000 flight hours

#### Accuracies (2 $\sigma$ )

- Attitude
  - Static 0.5°
  - Dynamic 1.0°
- Heading
  - DG Mode - Dynamic 1.3°/hour (excluding earth rate)

#### Outputs

- Synchro 3 pitch, 3 roll, 1 heading
- Analog 50/200 mV ac pitch and roll
- Discretes ATT and HDG warns

#### Qualifications

- DO-160D including HIRF and lightning
- DO-178A, Level 1 for flight critical software

#### Certifications

TSO C4c, C5e, C6d

*For more information, please contact:*

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