

Airborne Instrumentation Systems

The Airborne Instrumentation Systems Division (AIS) instruments aircraft and weapons systems with technologically advanced telemetry and flight data recorder systems that ensure that decision-quality data is captured for customers.

Experienced AIS instrumentation personnel at China Lake and Point Mugu share their expertise to deliver instrumentation systems to the customer. The division uses the latest technology to design, develop, build, document and test instrumentation systems from end to end. Each design incorporates customized power supplies; sensor/avionics interfaces; signal conditioning; digital encoding/storage; encryption and transmission of data to a ground-based receiving site.

Types of instrumentation systems developed have broadened to include GPS/IMU (Global Positioning System/Inertial Measurement Unit) TSPI (Time Space Position Information), flight termination, optical tracking and ground support systems. The division has also developed high g-force subminiature telemetry encoders the size of a quarter, used in munitions testing. These tiny instrumentation packages are also being adapted for Unmanned Air Systems (UAS) applications where small size, weight and power are critical requirements.

In addition to delivering extremely reliable telemetry systems for aircraft and weapons customers, AIS provides flight test support through its small fleet of telemetry vans; and acceptance testing on critical instrumentation components such as transmitters and flight termination receivers.

AH-1Z Instrumentation Package



GPS/IMU Package



Secure Telemetry Systems



for more information

AIS Division Head
(760)939-6365

1 Administration Circle
China Lake, CA 93555

www.navair.navy.mil/ranges

Airborne Instrumentation Systems

in-house capabilities

System Design and Engineering

Mechanical and Electrical Design

- Solid Modeling
- Thermal & Structural Analysis
- Logical Call Array & Simulation
- Analog/Digital Design & Simulation
- Flight Termination System

Aircraft Modification

- Design & Installation
- Flight Clearance Release Authority
- Aircraft Modification Proposals

Antenna Design

- Wrap Around & Patch
- Couplers
- Anechoic Chamber
- Phase Center Measurements

Antenna Test & Measurement

- Anechoic Chamber
- Fully Automated

Rapid Prototyping

PWB Design and Layout

Fabrication and Assembly Laboratories

Wiring and Harness Assembly

Software and Ground Equipment Design

Auto Test Set Development

Environmental Test and Screening

Technical Data Packages

Test Specification Development

Comprehensive QA/QC/CM

advanced technologies

Miniaturization
GPS/IMU
Advanced Packaging
Encryption Interface
Fabrication & Inspection

programs supported

SPARROW	HYDRA-70	JSOW
SIDEWINDER	STANDARD MISSILE	DMGB
TOMAHAWK	F-18	RAM
AMRAAM	AV8B	ITPOD
STINGER	JAMI	ESSM
U.S. CUSTOMS	AARGM	SLAM-ER
HARPOON	HSTSS	HARM
PATRIOT	VLA	SPIKE

mobile test support

- | | |
|-----------------------|-----------------------|
| 4 Mobile TM Vans | System Testing |
| • Remote Support | • Aircraft |
| • Flight Line | • Automated |
| • Pre-Flight Checks | Environmental Testing |
| • Live Fire Data | • ESS |
| • Integration Testing | • Vibration |

Mobile Telemetry Truck

