

CAPABILITY STATEMENT

Core Competencies

- Wide variety of sensors and associated signal conditioning electronics that include force balance inertial-grade accelerometers and inclinometers, piezoelectric vibration and pressure sensors, strain gage aircraft mainframe fatigue sensors, precision linear variable differential transducers, and fiber optic sensors.
- Modifying or customizing an existing designed model series to fit your needs.
- Design qualifications to industrial, military, and aerospace standards.
- 20,000 square foot manufacturing and production space.
- 4,000 square foot machine shop which incorporates the latest in CNC milling and machining equipment.
- All products designed manufactured and assembled in-house.

Past Program Performance

- Columbia Research has been the sole source for a specialized High G Piezoelectric Impact Transducer manufactured since 1978 for the Air Force. This device is utilized as the Impact Sensor on the MK12A & MK21 Nuclear Missile Deterrent Force.
- Columbia is the sole source to Sandia National Labs, manufacturing a Piezoelectric Vibration Sensor and a Forced Balance Guidance Grade Accelerometer. These devices have been in production for over 30 years and are utilized to evaluate flight profiles as a JTA Instrumentation Package on our advanced Military Missile Systems.
- Columbia manufactures a specialized Strain Gage Sensor with a uniquely designed Strain Gage Amplifier for a Honeywell Military Missile Program. This system accurately monitors rocket motor housing expansion which is proportional to thrust and the Amplifier automatically auto-zeros thermal shifts based on launch altitude temperature changes.
- Columbia developed and manufactured a custom Piezoelectric Triaxial Vibration Sensor with integrated miniature electronics all packaged into a customer specific mechanical housing. This sensor was operational on the critical Trident Missile Program Internal Guidance Package and was compatible with submarine electrical interfaces.
- Columbia has designed and manufactured a custom Strain Sensor originally for Northrop to measure airframe fatigue on their Military Aircraft. The design configuration included attached lead wires with strain reliefs, internal zero temperature compensation vs airframe material and a cast housing that can be attached to the aircraft utilizing standard Strain attachment techniques. These are manufactured today for various Military and Commercial Aircraft to monitor and provide preventative maintenance data to the manufacturer and their operators.

Company Snapshot

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Company Data

- Woman Owned Small Business (WOSB)
- Incorporated in Pennsylvania in 1957
- ISO 9001:2015 w/Design & AS9100:2016 Certified
- RoHS and Reach Certified

Relevant Programs

- F117 Stealth Fighter
- Atlas V Rocket
- RUM-139 VL-ASROC
- F-18 Fighter Aircraft
- Space X Falcon 9

Present and Past Customers

Honeywell FM&T	Lockheed Martin
Sandia National Laboratories	Space X
Defense Logistics Agency (DLA)	Siemens
Northrop Grumman	BJG Electronics
United Launch Alliance (ULA)	Textron Aviation
Geophysical Supply Company	

NAICS CODES

- 334511 - Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument Manufacturing
- 334513 - Instruments and Related Products Manufacturing for Measuring, Displaying, and Controlling Industrial Process Variables
- 334515 - Instrument Manufacturing for Measuring and Testing Electricity and Electrical Signals
- 334519 - Other Measuring and Controlling Device Manufacturing