

MILITARY



Polhemus Owner and CEO, Al Rodgers, working in the field on an F-106 Aircraft, circa 1975

THE TRUSTED MILITARY RESOURCE FOR OVER 40 YEARS

MARKET OVERVIEW

Polhemus has been working with prime contractors and military entities since 1969. Our systems have flown on U.S. Air Force, Navy, and Army fixed and rotary wing aircraft including: F-4, F-14, F-15, F-16, F-18, F-101, UH-60, MH-60, AH-1, AV-8B, MH-53, Comanche, AT-6, A-10 and C-130. Available for F-22 and F-35 consideration, please contact Polhemus for a more complete resume of aircraft and simulator experiences.

Currently fielded on active A-10, F-16 and C-130 combat aircraft, our very best [precision helmet tracker, SCOUT](#), offers the highly acclaimed accuracy and performance noted by the U.S. Government, Thales Visionix (the fielded tracker for Scorpion HMCS), Raytheon, Lockheed Martin, NAVAIR, Rockwell Collins and other customers requiring the absolute best. SCOUT offers top gun helmet tracker performance with the benefit of low risk, solid-state, progressive technology for which Polhemus is known.

THE PIONEERS IN MOTION TRACKING

As the pioneer of [AC electromagnetic tracking technology](#), Polhemus has received numerous landmark patents which continue to define state-of-the-art products. Polhemus has been continuously involved in the design and development of tracking technology as applied to helmet-mounted cueing systems and head tracking. Through focused IRAD efforts, Polhemus continues to raise the performance bar with advancements in electromagnetic physics, computational algorithms, digital signal processing and mechanical techniques. The results set new standards in tracking accuracy and ease of system integration.

Always moving forward with next generation innovations, our high precision trackers have been installed and utilized in simulators of most airframe manufactures and in laboratories such as Wright Patterson AFB, NAWC, NAVAIR, Fort Rucker, NASA and DARPA. Additional installations and use have occurred at Fort Sill, Fort Irwin and AATC.

Today, Polhemus technology can be employed in ground vehicles, fixed wing, rotary wing, high fidelity training simulators, human-wearable 3D input devices, and cost effective desktop trainers. At Polhemus, we take pride in the work we do with government and military forces and look forward to bringing you the very best in motion tracking solutions.

WHY MAGNETIC TRACKING?

Magnetic motion tracking clearly has undisputed advantages over other tracking models. Polhemus uses proprietary [AC electromagnetic tracking technology](#) because of the advantages it offers over pulsed DC magnetic tracking. Polhemus originated the DC concept but elected not to pursue it because of overall performance penalties. Some of the strengths of Polhemus Magnetic Tracking are listed below:

- No LOS (Line-of-Sight) optical occlusion constraints as you would see in optical tracking
- No acoustic constraints as would be seen in DC Magnetic or Ultrasonic Tracking
- No IR or thermal limitations typically associated with lens-based systems
- No drift characteristics as would be seen in tracking system using inertial gyros – Polhemus provides repeatable results every time
- Fast – Polhemus LIBERTY™ has a 240Hz update rate for all sensors running simultaneously
- 6 Degree-Of-Freedom measurements (x, y, z, yaw, pitch, roll) is native to our technology
- Enables real-time measurement of trainee orientation
- Measurement accuracy is precise and repeatable
- No user calibration is required in most environments
- Does not require RF transmission regulatory exception in the US and elsewhere
- Does not require scrutiny of wideband RF interference impact by spectrum authority