



**THOMAS C. HORNE**  
**SENIOR MANAGING CONSULTANT**

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Thomas Horne is a Senior Managing Consultant at Engineering Systems, Incorporated (ESi), where he uses his test piloting and aeronautical expertise to conduct aircraft accident analysis, reconstruction, flight tests and reporting. He is skilled in a number of areas of aviation as an FAA Flight Test Pilot Designated Engineering Representative (DER Part 23 and Part 25) and routinely advises, plans, conducts and reports on a variety of flight test programs. His expertise focuses mainly on the human factors aspects of avionics and autopilot systems as well as detailed design, fault hazard analysis, testing and certification of traditional mechanical flight control systems as well as software and hardware design, testing and certification of fly-by-wire aircraft flight controls.

Tom joined ESi after a 26-year career at Gulfstream Aerospace where he held positions as a Master Experimental Test Pilot, Chief Test Pilot, and Director of Flight Operations Test. Before his career at Gulfstream, he was a U.S. Air Force Experimental Test Pilot, Operations Officer, Squadron Commander, and Operations Group Commander for a variety of Air Force flight test programs.

Tom has a vast array of piloting experience with over 13,400 hours and 150 different aircraft types including jet fighters, turbo props, light aircraft, and large corporate aircraft. His primary piloting experience is in all Gulfstream types from the GII through GVIII, F16, F4, Beechcraft King Air, Cessna T210, Beechcraft Bonanza, Spartan Executive, and multiple aerobatic aircraft. He holds an Airline Transport Pilot, Commercial, Flight Instructor, multiple aircraft type ratings and an LOA for L39 airplanes. He regularly performs a variety of flight tests on a variety of aircraft types as a Consultant Flight Test Pilot DER.

**Areas of Specialization**

Aeronautical Engineering and Piloting Expertise  
Piloted Aircraft Design, Flight Testing and Certification  
Airplane Flight Manual Design, Drafting, and Certification  
Integrated Avionics Systems Design, Testing and Certification  
Fly-by-Wire and Mechanical Flight Controls Design, Testing and Certification  
Human Factors Experiment Designs and Analysis  
Fault Hazard Analysis and Testing  
DO-178 (Software) and DO-160 (Hardware) Design and Testing  
Mechanical Systems Design and Maintenance  
Aircraft Performance  
Aerobatics, Tail Wheel and Radial Engines  
Aircraft Accident Investigation and Reconstruction

*July 2023*

## **Education**

B.S., Aeronautical Engineering, Magna Cum Laude, North Carolina State University  
M.S., Engineering Management, University of South Florida  
USAF Test Pilot School  
FAA Organization Delegation Authority Unit Member Training  
USAF Undergraduate Pilot Training  
F16 Initial Training  
F16 Instructor Training  
Air Command & Staff College, USAF  
Air War College, USAF

## **Professional Affiliations/Honors**

### **Society of Experimental Test Pilots**

Fellow

### **Sigma Gamma Tau, Aerospace Engineering Honor Society**

Member

### **Experimental Aircraft Association**

Member

### **Daedalians Military Pilots Association**

Member

### **Cessna Pilots Society**

Member

### **Society of Experimental Test Pilots**

Fellow

### **USAF Test Pilot School**

Distinguished Graduate

### **Undergraduate Pilot Training**

Top Graduate

### **F16 Pilot Training**

Top Graduate

### **F16 Instructor Training**

Top Graduate

### **General Dynamics Technology Awards**

Synthetic Vision and PlaneView cockpit designs

### **Bendix Award**

Synthetic Vision

### **Collier Trophy**

G5 and G650 aircraft

### **National Aviation Association (NAA) Flight Achievement Record**

Around the World Record in the GVI (22)



## **NAA Outstanding Aviation Accomplishment**

2013 GVI Around the World Record

## **Runway overrun and runway takeoff performance monitoring and alerting**

Inventor with 6 patents

## **FAA Master Pilot**

## **Certifications**

FAA Designated Engineering Representative all areas of Flight Test Pilot Part 23 (small) and Part 25 (large) aircraft

Airline Transport Pilot, Flight Instructor, and flight instructor instrument ratings

Airframe and Powerplant Mechanic with Inspection Authorization

Letter of authorizations in L39

Aircraft type ratings in Gulfstream GII, GIII, GIV, GV, GVI, GVII aircraft

## **Positions Held**

### **Engineering Systems, Inc., Peachtree Corners, GA**

Senior Managing Consultant, 2023-present

### **Gulfstream Aerospace Corporation**

Chief Test Pilot and Director of Flight Test, 2016-2020

### **Gulfstream Aerospace Corporation**

Master Experimental Test Pilot and FAA Authorized Representative, 1997-2023

### **United States Air Force (USAF)**

Flight Test Wing Director of Operations, 1995-1997

Flight Test Squadron Commander, 1993-1995

Operations Officer, 1986-1990

Flight Test Engineer Electro Optical Systems, 1976-1979

### **General Dynamics**

Advanced Performance Engineer, 1975-1976