

# THE DAWN OF A NEW ERA

IN TACTICAL FLIGHT TRAINING



AUTHENTIC TACTICAL FIGHTING SYSTEM  
**ATFS-400**<sup>™</sup>





# THE DAWN OF A NEW ERA

## IN TACTICAL FLIGHT TRAINING

The dawn of a new era in tactical flight training has arrived, ushered in by the introduction of the most technologically advanced 5<sup>th</sup> generation aircraft - **The F-35 Lightning II**.

Modern tactical aircraft present many new training challenges. To be effective, training must be challenging and realistic. Ever tightening budgets and rising aircraft acquisitions and operation costs are forcing alternative approaches to tactical flight training than what currently exists.

Through years of experience, research and study of the trends and requirements of tactical flight operations and training, Environmental Tectonics Corporation (ETC<sup>®</sup>) has created cutting edge flight simulators to meet the needs of aviators and air forces around the world.

ETC is proud to offer a family of tactical flight simulators that provide realistic physiological training at a fraction of the cost of operating an aircraft for this purpose. These simulators can enhance safety and operational readiness, while reducing training costs by a factor of greater than 30:1.

With the goal of ensuring that each fighter and fast jet pilot is operationally ready in the most successful, efficient and cost effective manner, ETC proudly makes these innovative tactical flight simulators available to the world.

# G-TOLERANCE AND G-READINESS - ARE YOU COMBAT READY?

## THE ALTERNATIVE APPROACH -

Training in the Authentic Tactical Fighting System 400 (ATFS-400) flight simulator provides an alternative, realistic, high sustained G-flight environment that allows pilots to maintain requisite G-tolerance and G-readiness without the use of a live aircraft.

Facilitating the ability to explore the entire flight envelope versus the 1/3 that is typically flown, the pilot is able to physiologically experience the actual physical stresses of flight in the entire flight envelope providing confidence and a point of reference when adverse flight conditions are experienced in a tactical environment.

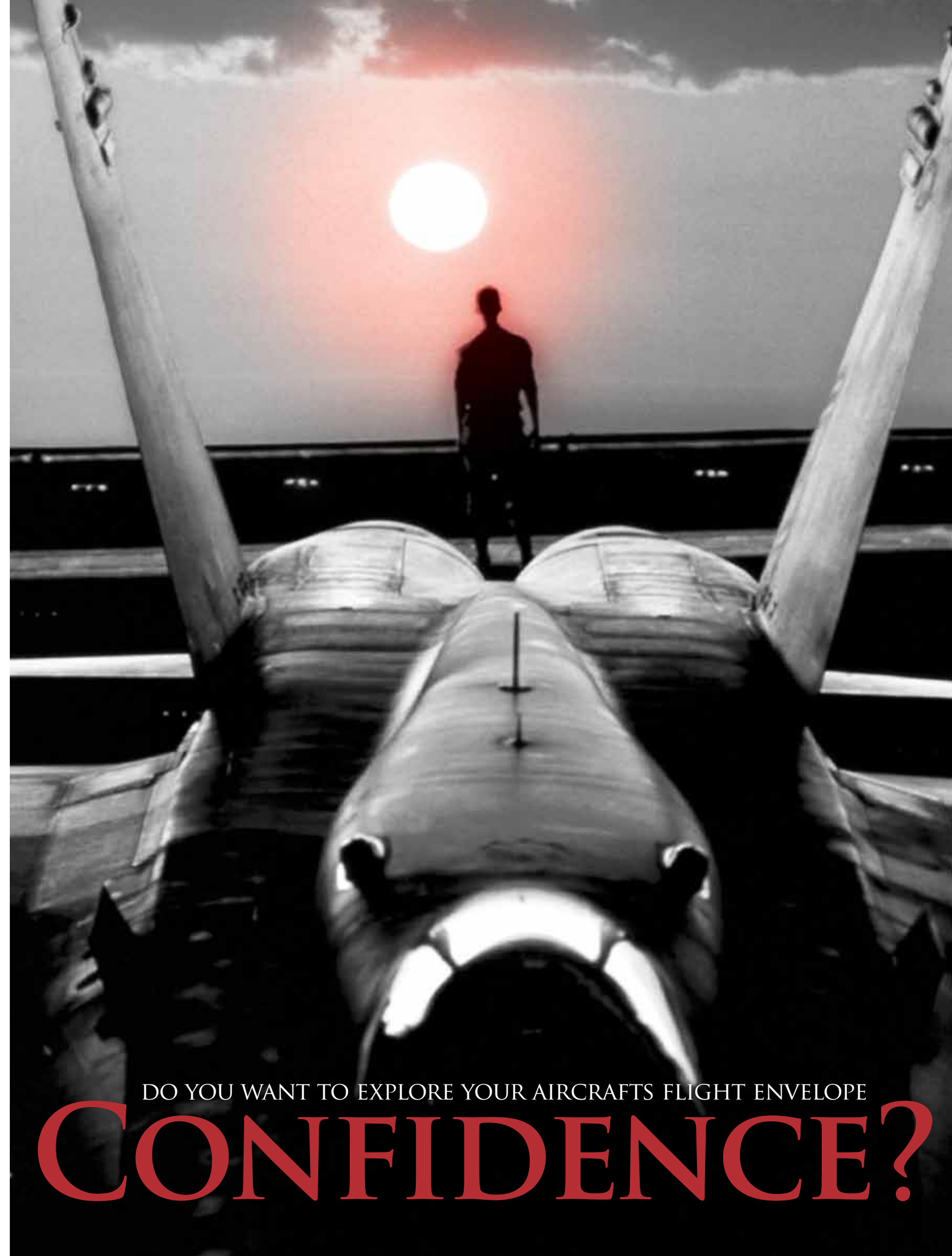


COMBAT READY



UNPREPARED

DO YOU WANT TO EXPLORE YOUR AIRCRAFTS FLIGHT ENVELOPE  
**WITH CONFIDENCE?**



# WHAT WILL REPLACE DUAL-SEAT AIRCRAFT FOR TACTICAL TRAINING?

## THE ALTERNATIVE APPROACH -

The F-35 Joint Strike Fighter is a single-seat aircraft that uses a unique Helmet Mounted Display (HMD). Additionally, there are no plans to build a dual-seat trainer. Transfer training quality may be questionable from Lead-In Fighter Training (LIFT) aircraft with a traditional HUD to the HMD.

An alternative approach for LIFT must be considered to properly and effectively prepare pilots to fly solo in the F-35. ATFS flight simulators offer the capability to safely perform flight training with authentic physiological effects for any tactical aircraft cockpit, including the F-35. Pilots can conduct currency training effectively and efficiently prior to flying in the single-seat F-35.



# DOES HUD TRAINING TRANSLATE WELL TO FLIGHT USING AN HMD?

## THE ALTERNATIVE APPROACH -

ATFS flight simulators offer dynamic flight training in conjunction with the use of the HMD. This configuration provides each pilot with the ability to practice "multi-place orientation", which is the ability of a pilot to effectively use the F-35's Distributed Aperture System (DAS) in conjunction with the HMD **while safely navigating and flying the aircraft**, in a safe, ground-based realistic flight environment. Current simulators do not offer this capability, which is needed to effectively prepare pilots from flying static flight simulators to flying the actual aircraft.



\*HUD: Head-up Display, HMD: Helmet Mounted Display

DO YOUR TRAINING  
AND OPERATIONAL  
MISSIONS ALLOW YOU TO  
**MAINTAIN**  
IDEAL SKILL AND READINESS  
LEVELS IN ALL REQUIRED  
MISSION AREAS?

THE ALTERNATIVE APPROACH -

Often times because of the operational mission that is directed, an aviator will only fly a limited set of the required mission areas, unintentionally forsaking the practice of skill sets in other required mission areas. The result can be a significant lack of preparedness when the aviator is called upon to perform one of the other required mission profiles.

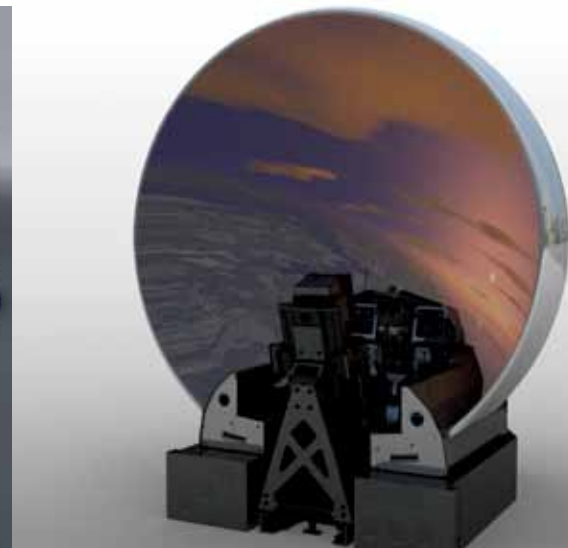
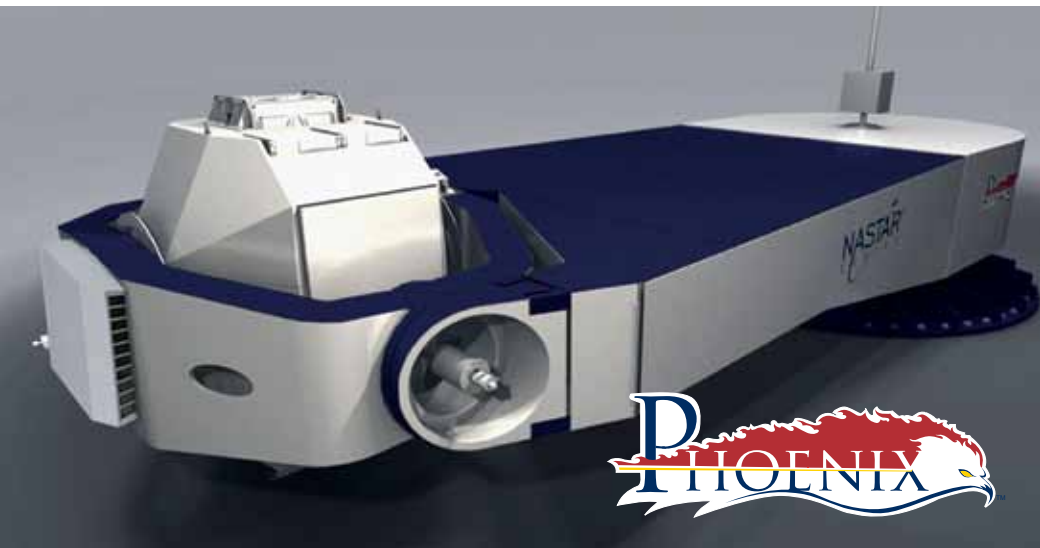
The ATFS family of flight simulators allows pilots to practice all mission profiles and training events in a realistic, cost effective, safe manner to maintain the pinnacle of operational readiness in all mission areas.



ARE YOU—THE PILOT—ABLE TO  
MAINTAIN OPERATIONAL AND  
COMBAT READINESS LEVELS  
**IN ALL MISSION AREAS?**

THE ATFS SERIES OF DYNAMIC FLIGHT SIMULATORS PROVIDE  
**AN ALTERNATIVE APPROACH  
TO FLIGHT TRAINING**

THE ATFS SERIES OFFERS AN APPROXIMATE  
**RETURN ON INVESTMENT OF 30:1**  
PER FLIGHT HOUR COMPARED TO TRAINING IN A TACTICAL AIRCRAFT.



### AUTHENTIC TACTICAL FIGHTING SYSTEM – ATFS-400™ PHOENIX

The ATFS-400 PHOENIX integrates a high fidelity, interchangeable, tactical aircraft cockpit with a state-of-the-art high performance “flyable” motion system. Its modular design enables the system to realistically simulate the cockpit, dynamic performance, mission systems and interactive elements of a specific type and model aircraft in any tactical environment. Pilot inputs are processed by the ATFS-400 PHOENIX aircraft-specific aeromodel to simultaneously drive the virtual (sight and sound) cues and command the multi-axis high performance motion system to correctly produce the correct inertial G forces, providing the physical stresses and sustained G forces experienced during combat maneuvers.

### COCKPIT MODULE

Cockpit Modules provide for unprecedented training flexibility, whether as standalone operational flight simulators (OFS), part of a network of data-linked Cockpit Modules operating in a common battlespace, or integrated into the ATFS-400 PHOENIX – in each case integrated into a Distributed Mission Training environment. Each Cockpit Module is a full-featured standalone, high-fidelity flight simulator featuring wide FOV, a customized visual database, an aircraft-specific aeromodel, and a user-defined virtual battlespace. Authentic flight controls, cockpit indicators, aircrew seat and harness, and a state-of-the-art visual display place pilots in a highly realistic environment.

### AUTHENTIC TACTICAL FIGHTING SYSTEM (ATFS) 300 PEREGRINE

The ATFS-300 PEREGRINE is a high-fidelity, single seat interactive motion platform providing users with 360° of continuous and simultaneous motion in 4 axes of motion (planetary, pitch, roll and yaw), with a maximum of 6 Gs. The ATFS-300 PEREGRINE can be used for tactical flight training in addition to its physiological research applications. The ATFS-300 PEREGRINE provides a realistic training environment with a full, high fidelity cockpit of the user’s choosing. Its flexibility allows the operator to pre-program flight scenarios for spatial disorientation and situational awareness flight training. The interchangeable cockpit modules add to the unit’s flexibility and the system can be used as a rotary aircraft simulator as well as a fixed wing aircraft flight simulator.

### GL-6000 GRYPHON

The undisputed and most notably unique characteristic of the GL-6000 GRYPHON tactical flight simulator is its’ state-of-the-art motion capability. Providing the most flexibility of any other flight simulator on the market today, it provides 360° of continuous rotation in four axes of motion (rotation, pitch, roll and yaw). In addition, two atypical axes of motion are included (vertical and horizontal), both of which are also capable of performing in conjunction with the 360° of rotation. The resulting motion platform yields a true six (6) axes of motion flight simulator. The GL-6000 GRYPHON provides realistic training for STOVL, VTOL and STOL aircraft, such as the F-35B Lightning II, Bell-Boeing MV-22 and CV-22 Osprey, and Bell-Augusta BA-609.

### FULLY CUSTOMIZABLE FOR ANY AIRCRAFT

F-15 › F-16 › F-35 › F-22 › TYPHOON › RAFALE › GRIPPEN › MIG-29 › SU-30 › CV-22 › BA609 › MV-22

# QUESTIONS



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**ISO Compliance 9000, 9001-2000, 9003**