

GENERAL DYNAMICS

F-16

Fighting Falcon



The NEW STANDARD for
AIR SUPERIORITY and
STRIKE EFFECTIVENESS

F-16 *Fighting Falcon*



DOMINANT IN AIR COMBAT . . . SUPERIOR IN SURFACE ATTACK . . . reliable . . . maintainable . . . affordable . . . long range . . . high payload . . . high technology . . . all weather — all descriptors that the F-16 has earned, not just assumed. And the F-16 is operational. Hundreds of Fighting Falcons take to the sky every day — ready to fight — for the U.S. Air Force and our allies. This remarkable "no problems" fighter has everything it takes to win — the range to take the battle to the enemy, the right weapons to defeat him, the systems to pinpoint him and to deliver weapons with deadly accuracy, and the dependability to do it again and again.

And it's getting better . . . the U.S. Air Force has designated the F-16 as the fighter to receive future enhancements. Starting with deliveries in November 1981, Fighting Falcons will be equipped to accept tomorrow's systems — advanced all-weather air-to-air missiles, forward-looking infrared and terrain-following radar for all-weather attack, advanced radars, internal electronic countermeasures, satellite navigation, and others — as quickly as they are developed.

The best is here now . . .

Better is on the horizon . . .

And both are the F-16 Fighting Falcon.

High Technology Provides High Performance . . .

TECHNOLOGICAL INNOVATION applied to the F-16's airframe, engine, and flight control system results in high performance across the entire spectrum of fighter missions in a simple, inexpensive package.

AN AERODYNAMICALLY ADVANCED AIRFRAME

- Forebody strakes give more lift and control in extreme maneuvers.
- Blended wing-body reduces drag and weight and increases fuel volume.
- Automatic flap control assures the optimum wing shape for every flight condition.

A HIGHLY RELIABLE "FLY-BY-WIRE" FLIGHT CONTROL SYSTEM

- Tail provides lift to reduce drag and increase range.
- Relaxed stability provides unequalled quickness and precision in maneuvering.
- Automatic angle-of-attack- and g-limiting prevents stalls and overstress.

THE WORLD'S MOST EFFICIENT, HIGHEST THRUST-TO-WEIGHT FIGHTER ENGINE

- Low fuel consumption at intermediate power maximizes range.
- High thrust-to-weight ratio (8 to 1) provides exceptional acceleration and unequalled persistence in maneuvering.

All-Weather Avionics in an Advanced Cockpit

Over 500 pilots have flown the F-16, and their comments best tell the story . . .

"Incredible visibility . . . more comfortable at 9g's than most airplanes at 6 . . . the automatic g and AOA limiting allow heads-up flying . . . the radar, navigation, and weapon systems almost operate themselves . . . hands stay on the throttle and the side stick."

With today's systems, the F-16 has been called the *"world's best air combat fighter."* It has also demonstrated surface attack capability and accuracy that are equal to or better than those of any strike aircraft flying.

The systems planned for the F-16's future will widen its advantage. The addition of these new capabilities will not increase the pilot's workload.

Up-front control of comm-nav-ident functions, a more flexible, wider field-of-view head-up display and interactive multifunction displays will allow consolidation and simplification of many pilot tasks.

Current missions actually become easier and new missions . . . multi-target all-weather intercept, and low-level in-weather attack . . . remain within the current workload level.



Air Combat: superior performance

Small size and an excellent radar give the F-16 pilot the advantage of detecting opposing fighters before they can detect him. Even without this advantage of first detection, the F-16's acceleration, maneuverability, and persistence allow the pilot to rapidly convert from a potentially defensive to an offensive position. The F-16's integrated fire control system tracks the target flight path parameters and presents the information to the pilot on the head-up display to ensure that every missile launched or cannon round fired will count.



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All critical data is displayed on the HUD for head-up, hands-on combat



Radar locked-on . . .

Target in the tracking box in the LCOS (lead computing optical sight) Mode. F-16 pulling 3.2 g's at 370 kts CAS, 14,825-ft altitude.



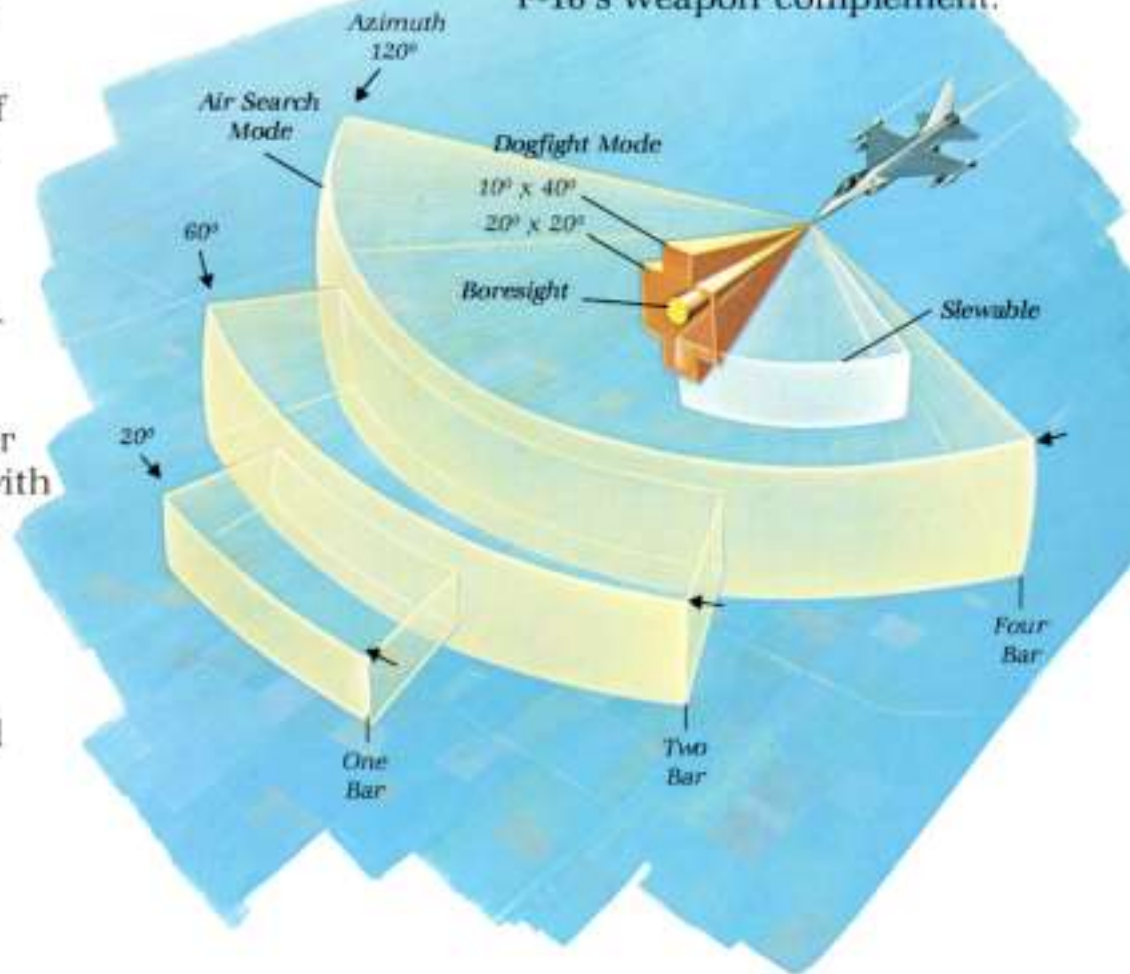
Pipper on the target . . . Fire!

.. and fire control

The new radar missile being developed for use on the F-16 will allow it to intercept and destroy targets at standoff ranges in all weather conditions. When combined with the improved, programmable APG-66 radar, the F-16 pilot will be able to detect, track, prioritize, and engage multiple, beyond-visual-range targets simultaneously.

Detection and engagement ranges for head-on intercepts are extended with the improved radar without sacrificing tail-chase detection and track ranges. This state-of-the-art radar gives the F-16 an all-aspect capability that is unique among modern air superiority fighters. Integrated cockpit displays and controls permit all-environment intercept while maintaining superior 'head-up' situation awareness.

Radar Range and Field of View are well matched to the tactical situations most frequently encountered and to the F-16's weapon complement.



F-16 Firing an Advanced BVR Missile During Integration Tests

Surface Strike: role flexibility...



What makes a great strike fighter? Long range - a large, versatile payload - the ability to penetrate defenses and find the target - accurate weapons delivery. The F-16 has demonstrated all these characteristics and more. With comparable loads, it has more than twice the F-4's range. Payloads of over 12,000 lb (5,400 kg), ranging from simple bombs to sophisticated air-to-surface missiles, can be carried with full internal fuel. Loading and release of stores is facilitated by the F-16's integrated, digital stores management system. The system permits precise pilot control of impact pattern and spacing for each type of weapon.



Stores Management System Display

*Instant Selection
of Delivery Options*

Over twice the range of the F-4 — with the same payload



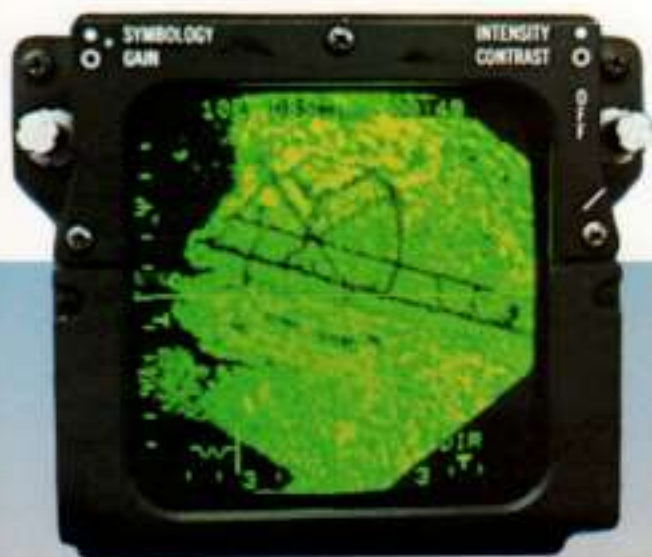
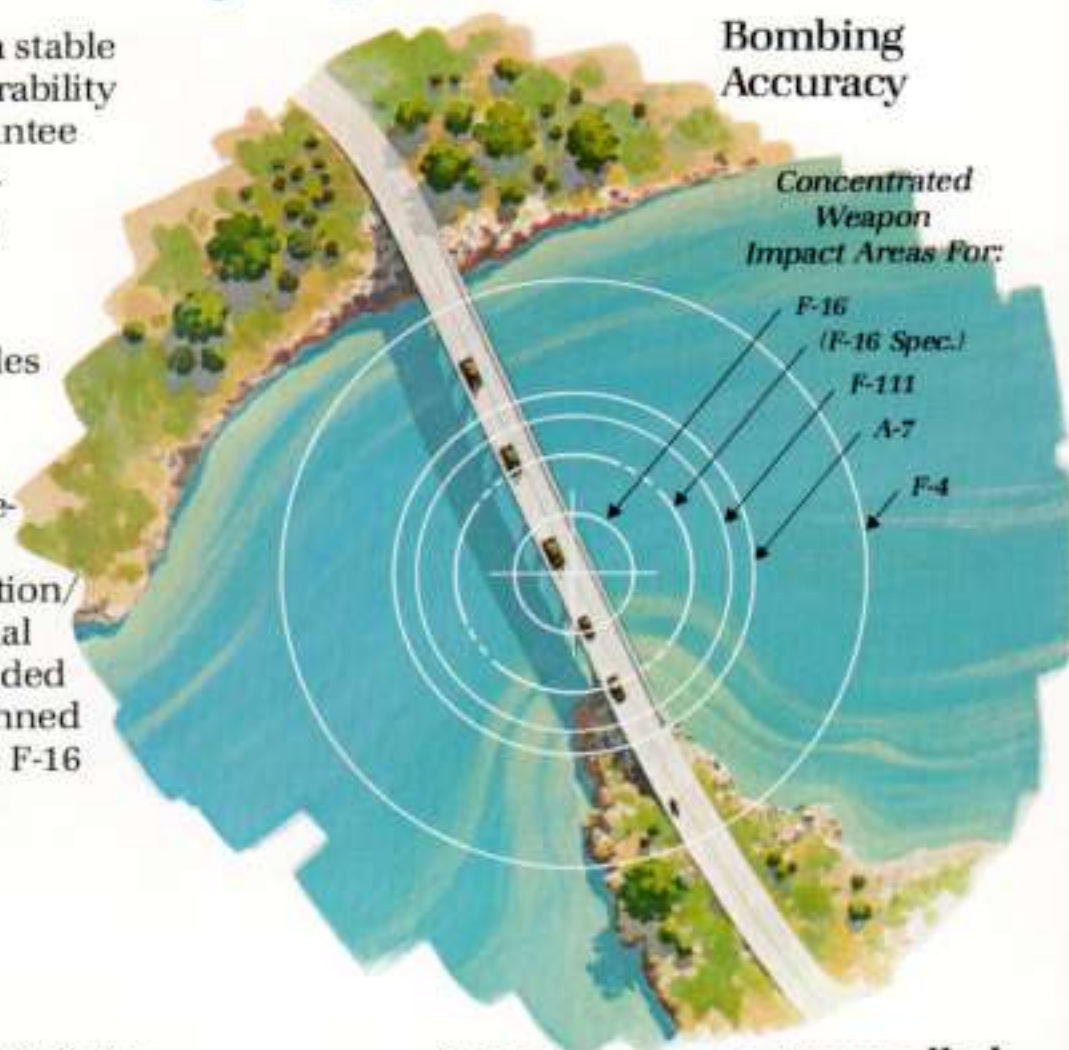
and accurate delivery systems

The latest in electronic threat warning, a stable ride at low altitude, superior maneuverability with stores and its air-to-air weapons guarantee successful penetration of enemy defenses.

In the target area, the F-16's radar ground mapping modes provide pinpoint target location. The weapons delivery system offers both blind and visual bombing modes with accuracy equal to or better than the best strike fighters flying today.

There's more. The planned radar enhancements add photographic-quality ground mapping and ground moving target indication/track modes. Combined with the additional navigation and targeting capabilities provided by the forward-looking infrared system planned for the F-16, these radar additions give the F-16 flexible attack options for all threats and weather conditions.

Bombing Accuracy



Radar/EO Display
(Ground Map Mode Shown)

F-16 Accuracy is Unexcelled

High-Resolution, All-Weather Radar Bombing



The Fighting Falcon strikes hard today and even harder tomorrow.

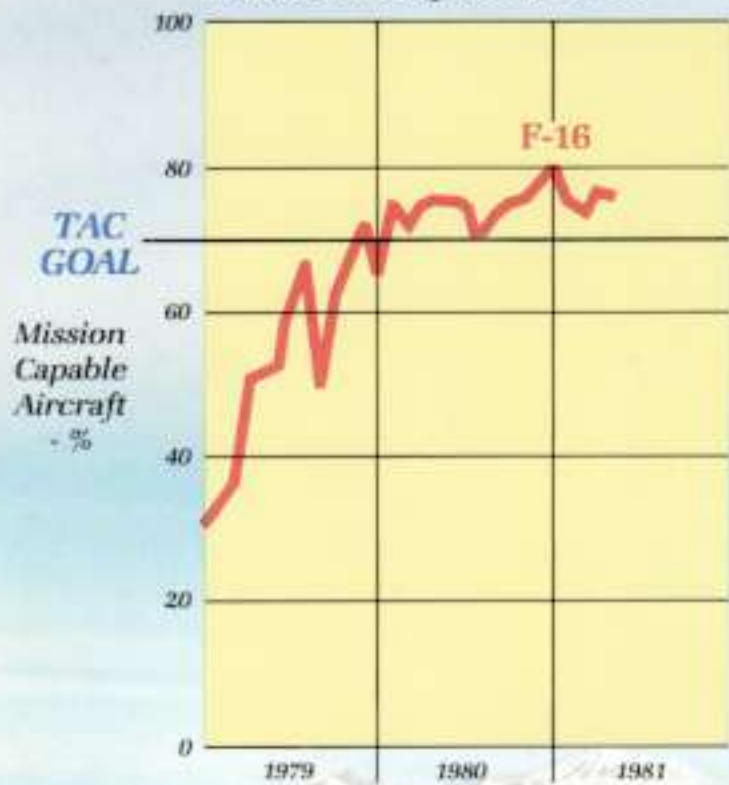
Easy Maintenance and Outstanding Readiness

Just two years after its introduction, the F-16 has become the USAF's most ready fighter. By the end of 1980, the F-16 had achieved three times the reliability of the F-4 with half the maintenance time per flight hour. This did not happen by accident; these achievements are the payoff for the "investments" in reliability and maintainability dating from the F-16's conception. F-16 designers pioneered the concept that reliability and maintenance should receive just as much emphasis as performance and cost and that the airplane should be designed for the field and not the laboratory. The result can be seen daily in the skies over America, Europe, and the Middle East. F-16s are flying while other aircraft are down for maintenance.

The F-16's easily operated systems and low fuel consumption mean that F-16 pilots will become proficient quickly and will be able to get the flying time they need to stay proficient. Its designed-in interoperability, reliability, and ease of maintenance permit deployment to and operation from barren, remote airstrips. With bases in seven countries, the F-16 is making a uniquely flexible and cost-effective contribution to allied defense.



Mission Capable Rate



During 1980, the F-16 achieved the highest Mission Capable Rate in the USAF's Tactical Air Command (TAC) . . . and was the only multirole aircraft to exceed TAC's 70% goal



F-16... the Choice of Seven Nations

Belgium



Denmark



The Netherlands



Norway



Israel



Egypt



The United States



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F16-520
1 June 1981
ASD81-0867