



Welcome to Apache Country

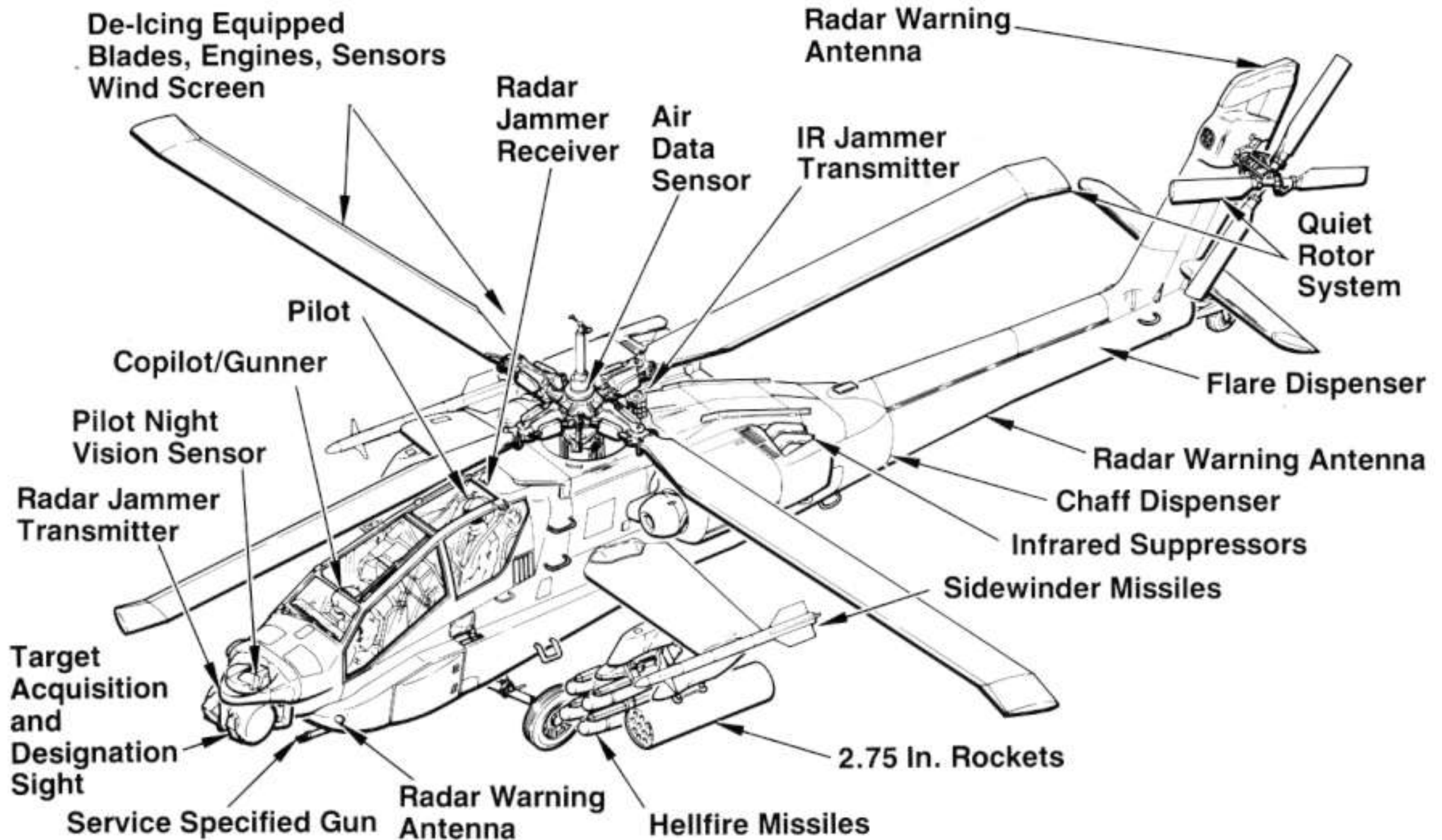


The Apache Advantage



AH-64

General Configuration



AH-64

Integrated Attack Systems

- **Night/Adverse Weather**

- **TADS/PNVS**

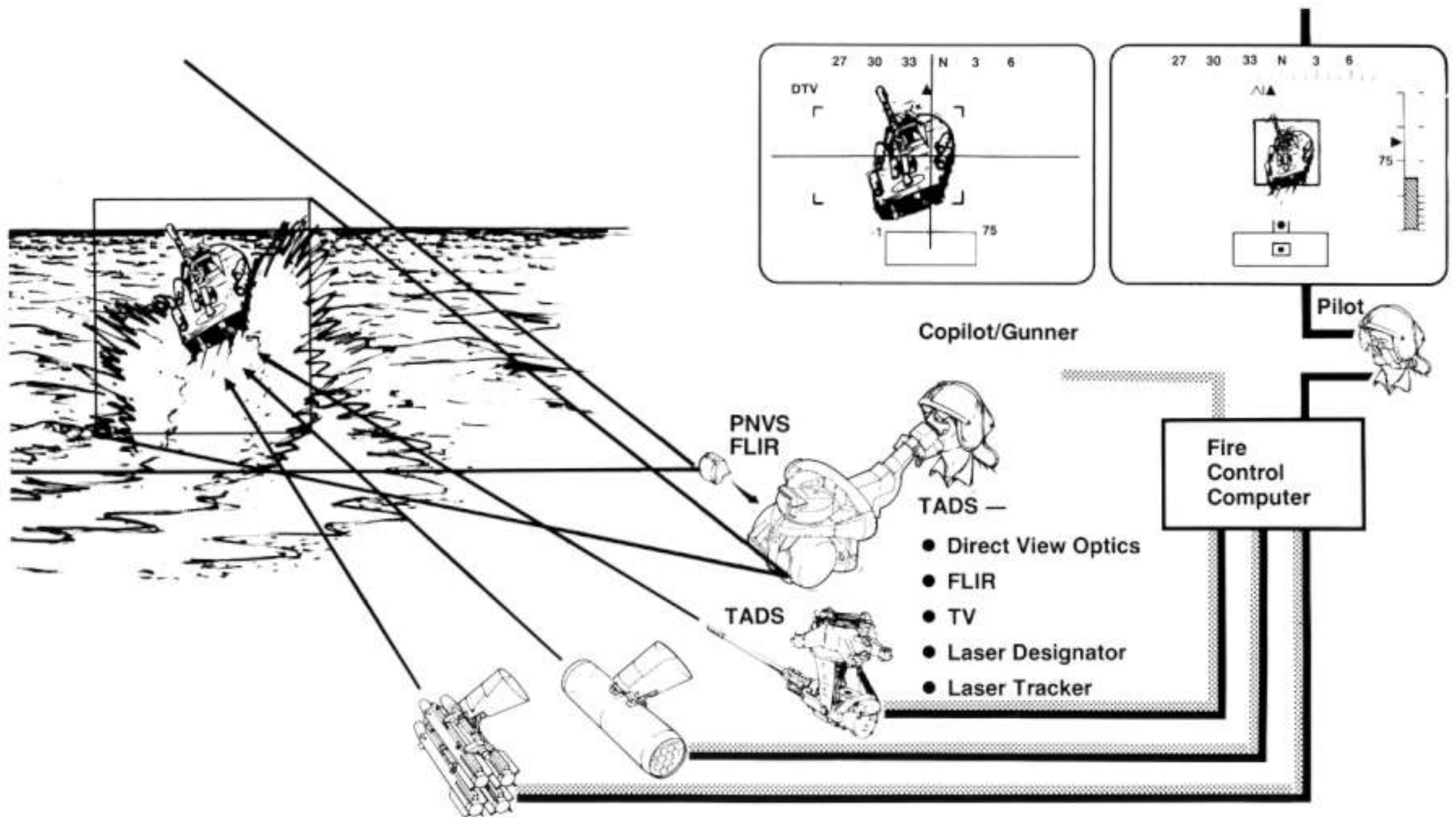
- **Day TV Optics (120 Power)**
- **Forward Looking Infrared Optics (36 Power)**
- **No Ambient Light Required**
- **Video Recorder**
- **Direct View Optics (16 Power)**

- **Total System**

- **Integrated Cockpit**
- **Integrated Fire Control System**
- **Autonomous and Remote Laser Designation**
- **Laser Range Finder**
- **Integrated Navigation System**
- **Integrated Helmet and Display Sub-System**

AH-64

Target Acquisition



Agile and Hostile



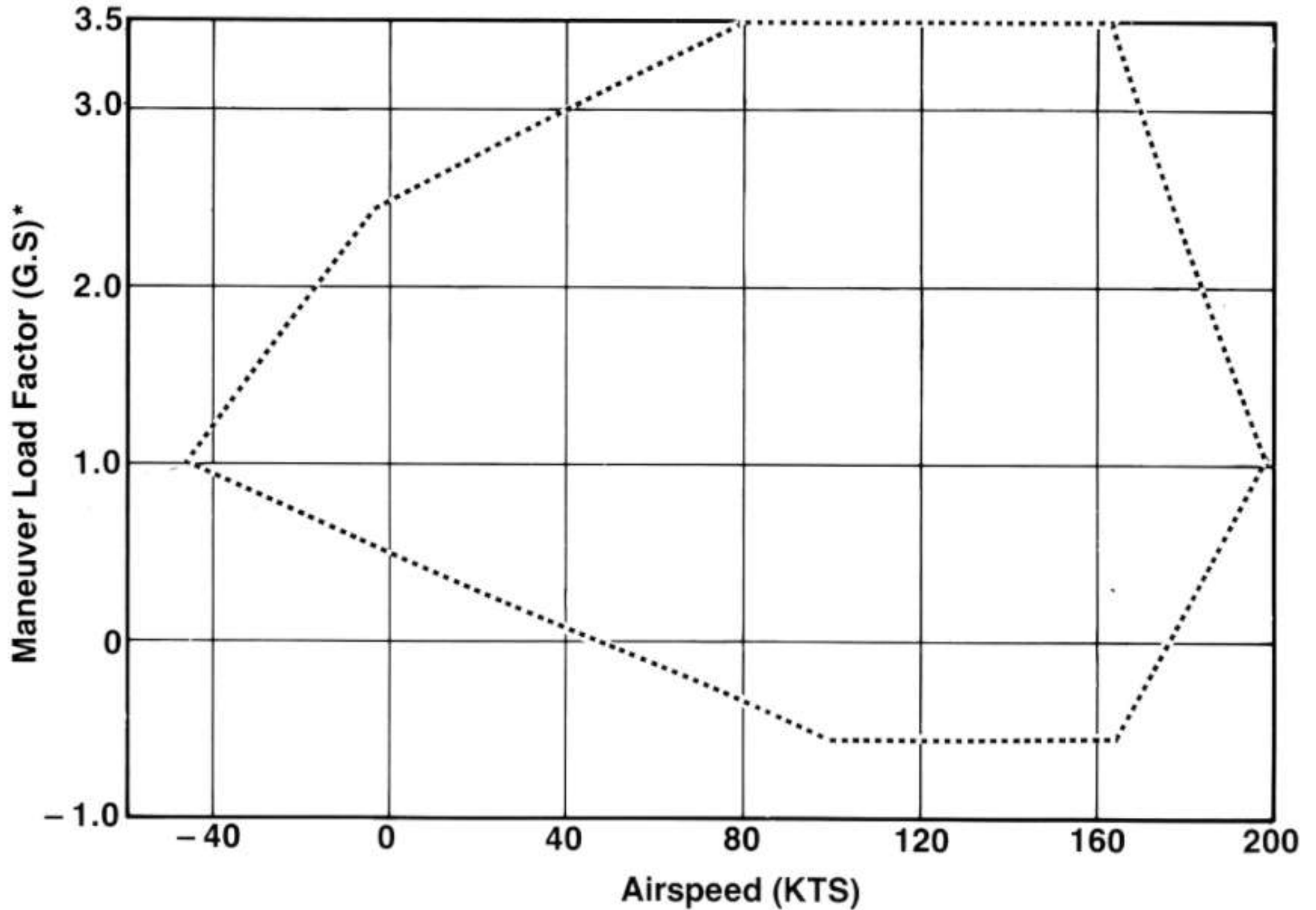
AH-64

Superior Flight Performance

- **V_{ne} 197 Knots With Wing Stores**
- **g Envelope – 0.5g to + 3.5g**
- **Roll Rate 130° Per Second**
- **Vertical Climb Rate of 2800 + FPM**
- **High Altitude, Hot Weather**
 - **3000 Feet + 91.5°F**
 - **HIGE 19,500 Lbs**
 - **HOGGE 17,200 Lbs**

AH-64

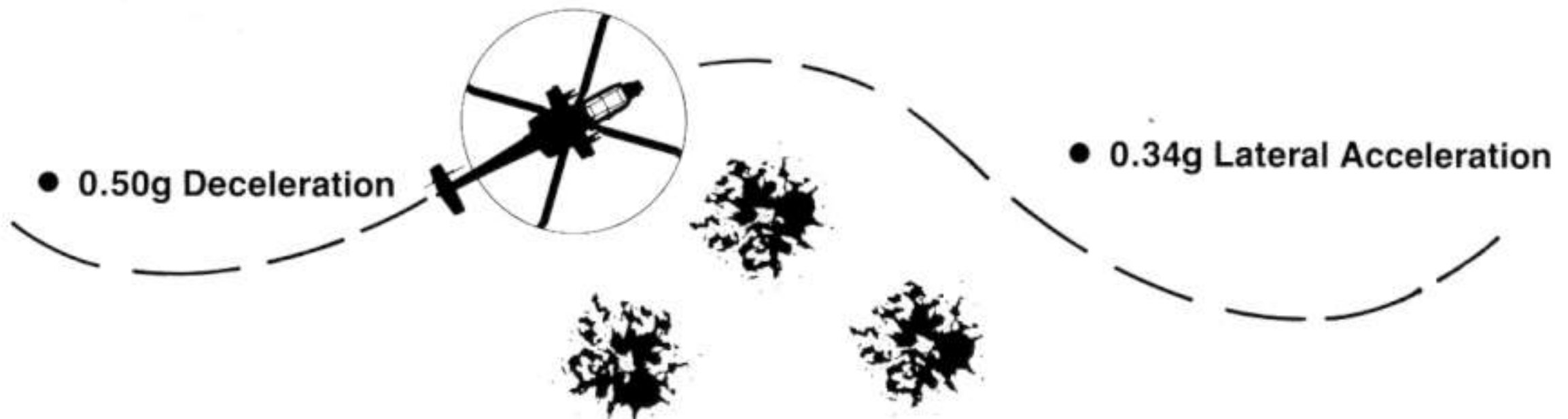
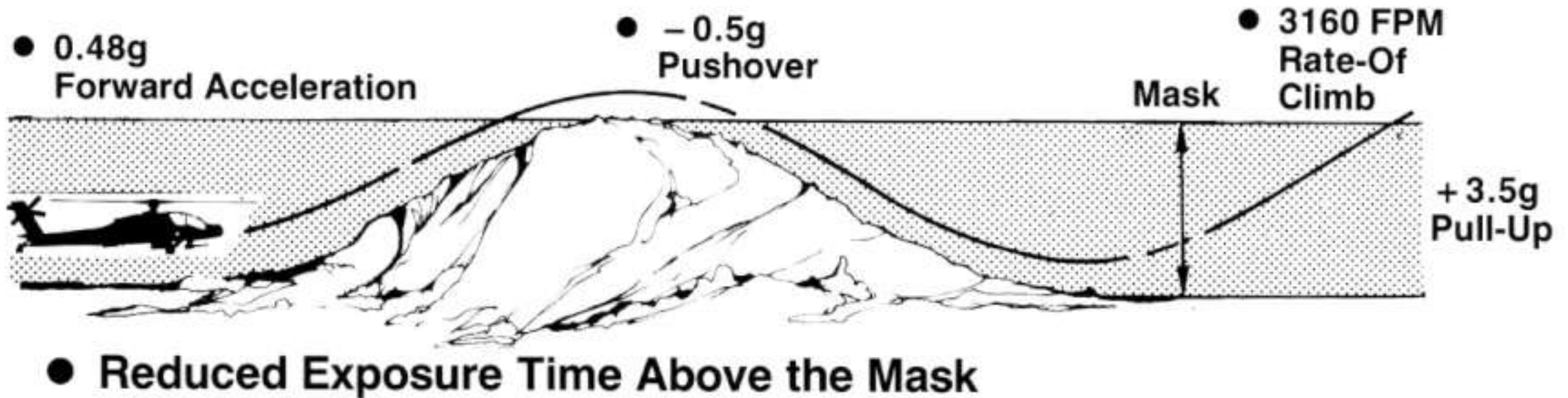
Maneuver Envelope



*At Structural Gross Weight of 14,660 lbs

AH-64

Agility-Maneuverability-Survivability



- Nap-of-the Earth Maneuverability for Obstacle Avoidance

AH-64

Aircraft Survivability Equipment

- **Radar Warning**
- **Radar Jammer**
- **Infrared Suppressor**
- **Infrared Jammer**
- **Chaff Dispenser**
- **Flare Dispenser**
- **Sidearm Anti-Radiation Missile**
- **Low Acoustic Signature**
- **Small Presented Area**

AH-64

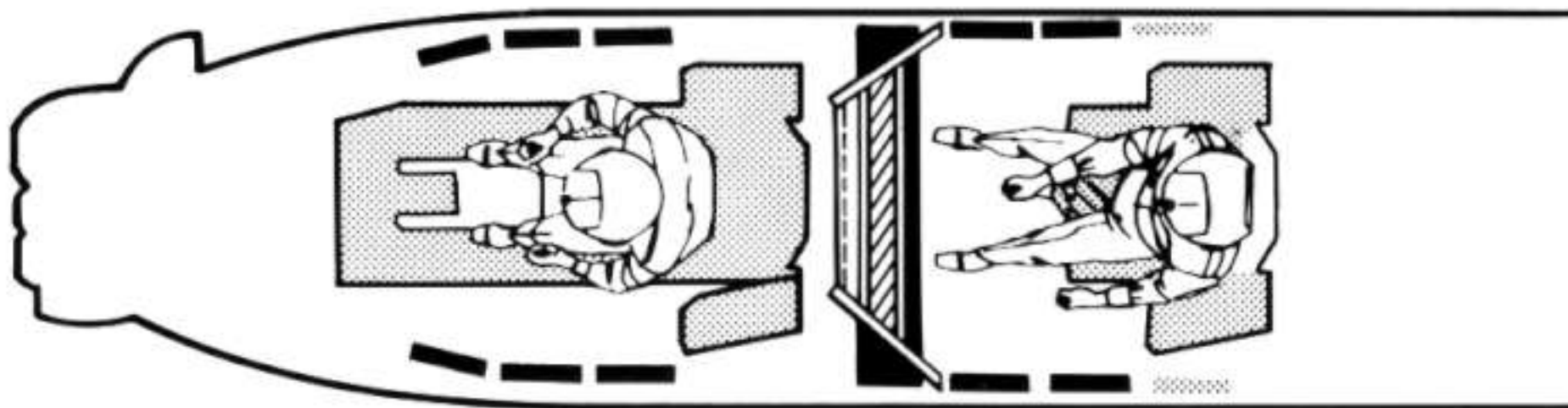
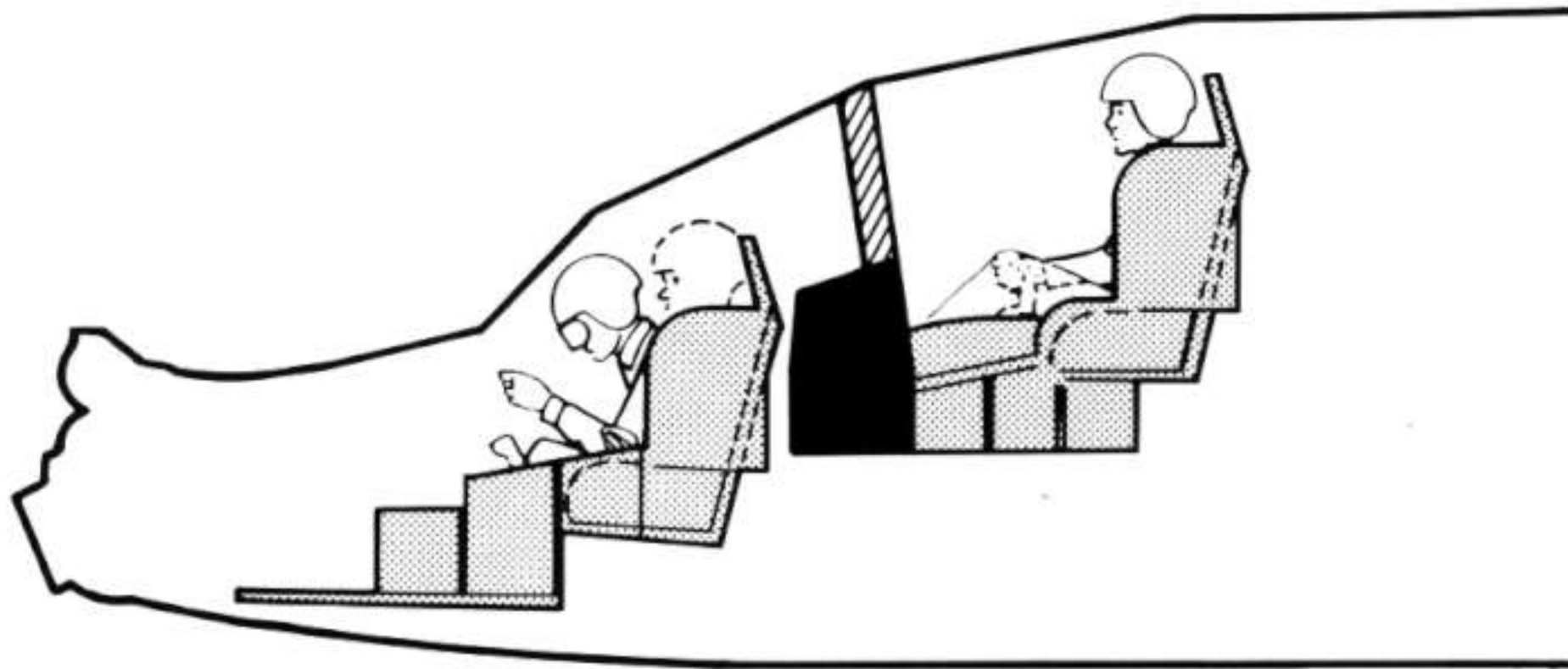
Battlefield Survivability

- **12.7mm Ballistic Tolerant - 99.8% Invulnerable**
- **23mm HEI-T Ballistic Tolerant**
 - **Hover Flight** **89.5% Invulnerable**
 - **Forward Flight** **93.5% Invulnerable**
- **Accomplished by Armor, Shielding, and Redundancy**

USA Ballistic Laboratory Study

AH-64

Crew Protection



Crew Compartment Armor



Transparent Blast Shield



Blast/Fragment Shield

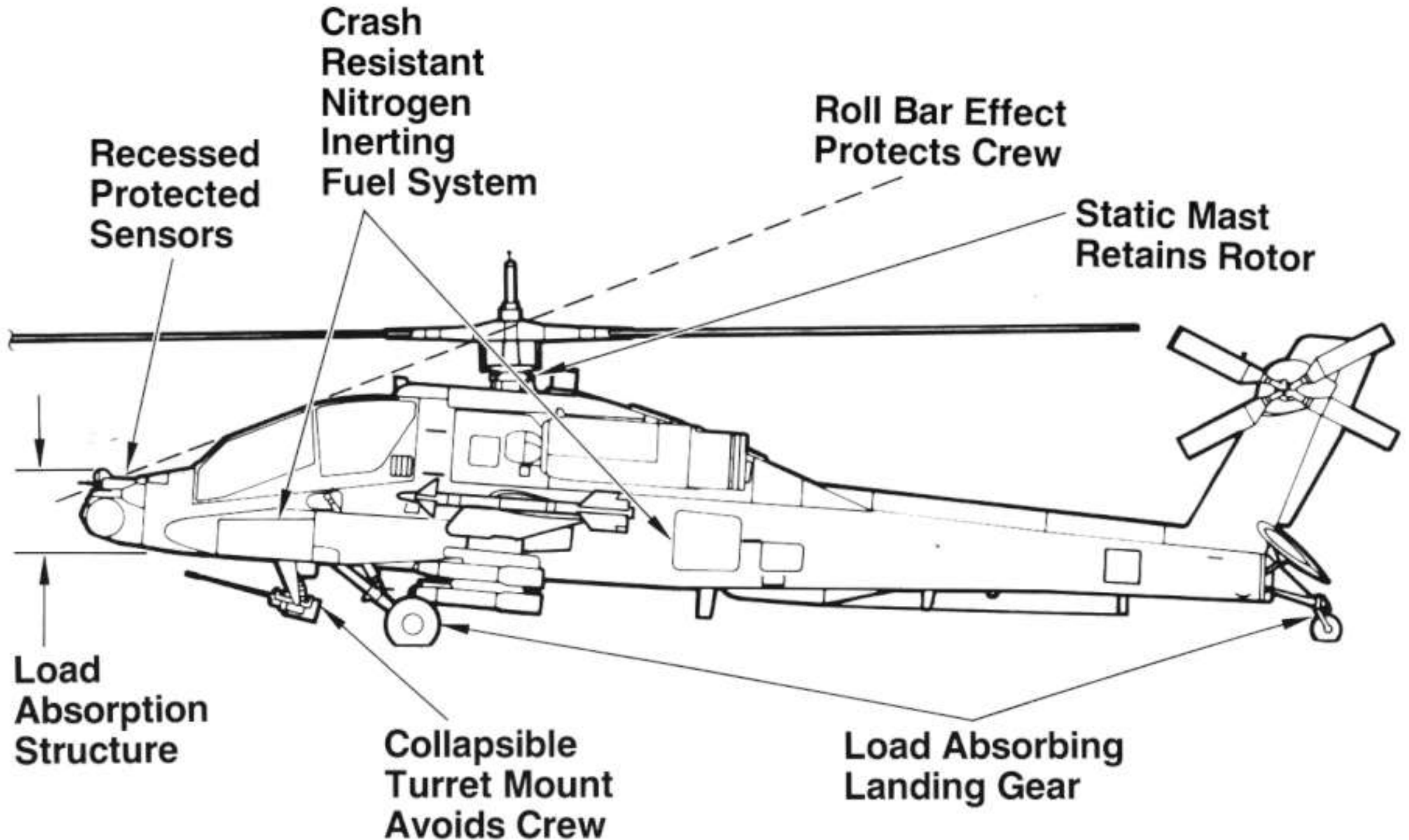
AH-64

Crashworthy

- **Vertical Impact 42 FPS**
- **Longitudinal Impact 20 FPS**
- **Lateral Impact 30 FPS**
 - **Accomplished by Impact Absorbing Landing Gear, Crush Spaces and Impact-Absorbing Crew Seat**
- **Ballistic Tolerant Crashworthy Fuel Cells**
- **Nitrogen Inerting Fuel System**

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Crashworthiness

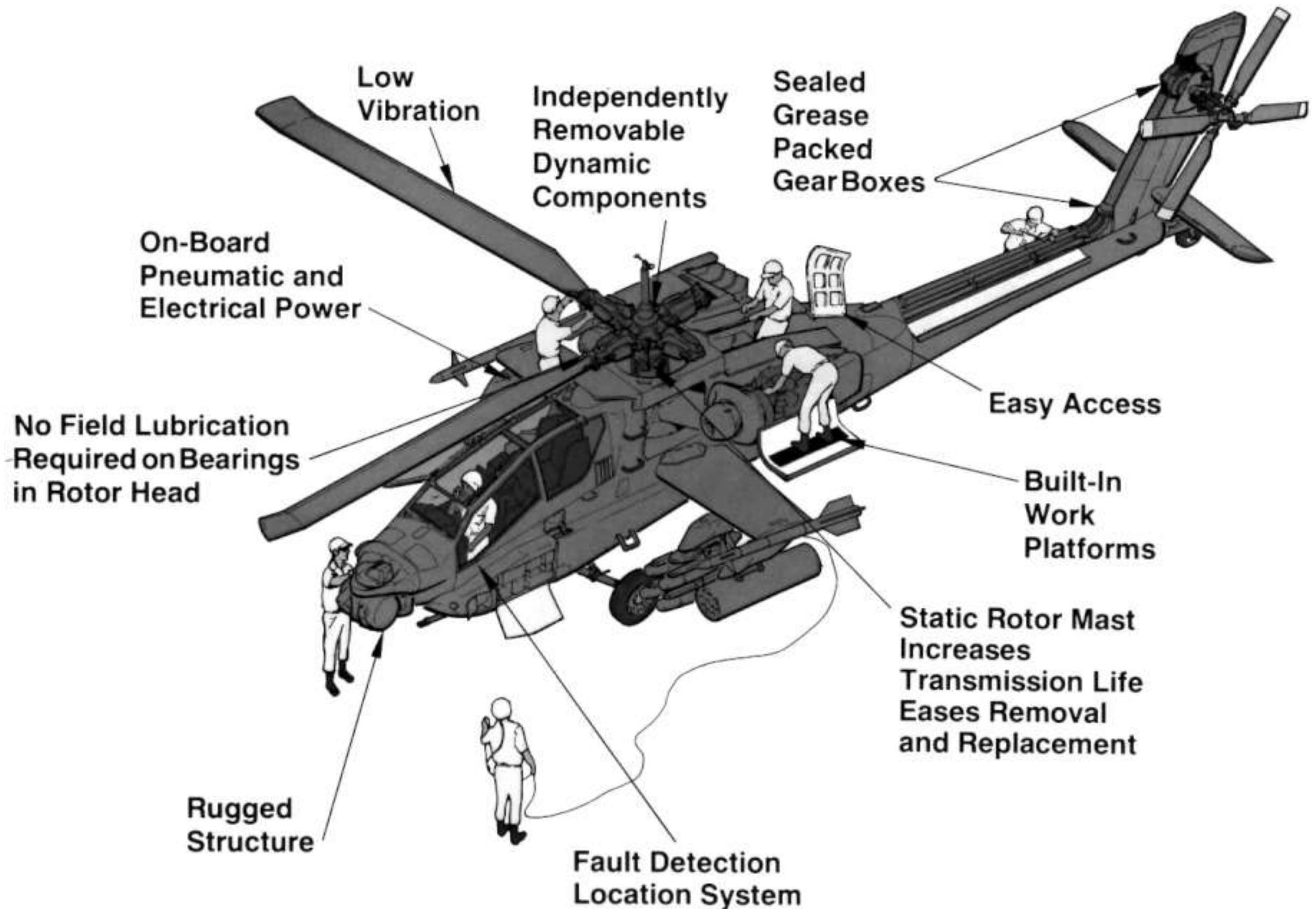


AH-64

Maintainability

- **Fewer Parts**
- **Fewer Inspections**
- **Longer Component Life**
- **Greater Availability**
- **Fewer Maintenance Manhours Per Flight Hour**
- **Minimum Special Tool Requirements**
- **Easy Access to All Major Components**
- **Built-In Work Platforms**
- **Built-In Test Fault Detection Location System**

Designed to be Maintained



AH-64

Reliability, Availability, Maintainability

	U S Army Maturity Requirement	Operational Tests Results
Mission Reliability (MTBF)	19.50 hr	27.50 hr
Unscheduled Maintenance Reliability (MTBF)	2.80 hr	2.77 hr
MMH/FH	8.00 - 13.00 hr	5.65 hr
Availability	75 - 80%	80%

U.S. Army Proven

Shipboard Capable



AH-64

Deployability

- Deployment to Combat
- Self Deployable - 800 NM Ferry Range into 20 Knot Head Wind

— C-5 Six AH-64's



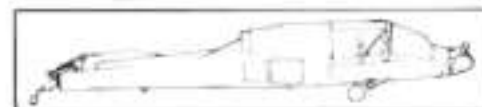
SIX AH-64's

— C-141 Two AH-64's



TWO AH-64's

— C-130 One AH-64



ONE AH-64

- Shipboard Capable 0.92 Shipboard Spotting Factor

AH-64
Grey Thunder



AH-64

Marinization

- **T700-GE-401 Engines**
- **Corrosion Preventive Measures**
- **Radhaz (Hero) Provisions**
- **Navigation System**
 - **Doppler/Inertial**
- **Automatic Blade Fold**
- **Floating Base Maintenance Requirements**
- **GSE Requirements**
- **Weapons Systems Capability**
 - **Service Specified Gun**
 - **TOW**
 - **Hellfire**
 - **2.75'' Rockets**
 - **5.00'' Rockets**
 - **Aim-9 Sidewinder**
 - **Stinger**
 - **Sidearm**
 - **Harpoon**
 - **Penguin**
 - **Search/Acquisition Radar**

AH-64

Missions

- **Anti-Ship**
- **Anti-Air**
- **Naval Gunfire Spotting**
- **Combat SAR Escort**

AH-64

Anti-Surface Ship Warfare (ASSW)



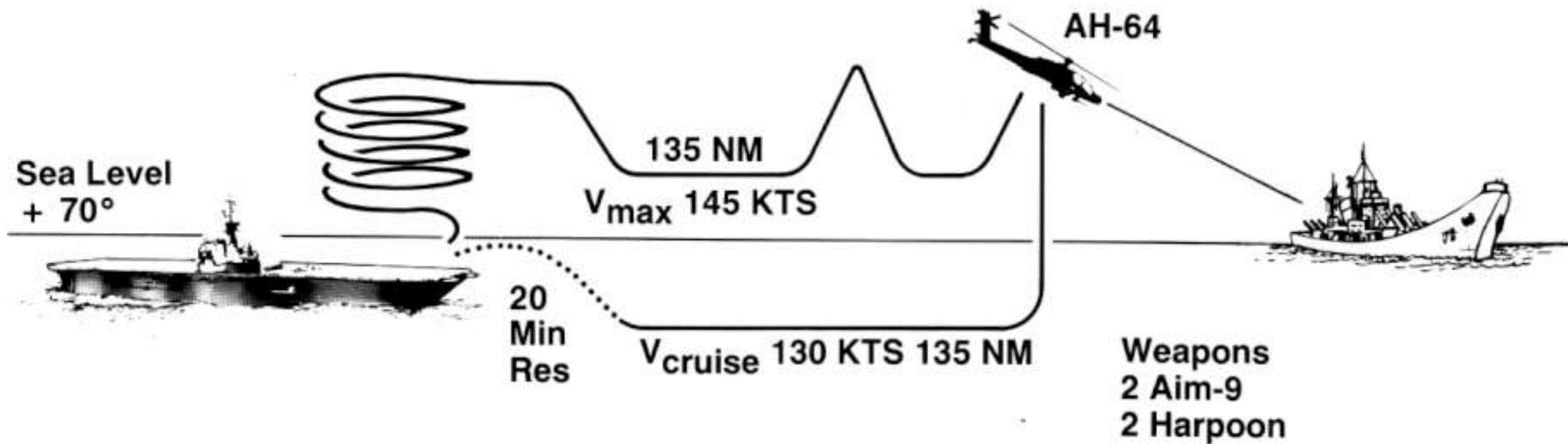
Right Wing Stores			Left Wing Stores				
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Wing Tip	Outboard	Inboard	Inboard	Outboard	Wing Tip	TOGW (lbs)	Radius (NM)
Aim-9	Harpoon	Harpoon	Harpoon	Harpoon	Aim-9	19982*	128
Aim-9	Harpoon	Fuel Tank	Fuel Tank	Harpoon	Aim-9	20667*	300
Aim-9		Harpoon	Harpoon		Aim-9	17332*	135

*Includes Search/Acquisition Radar

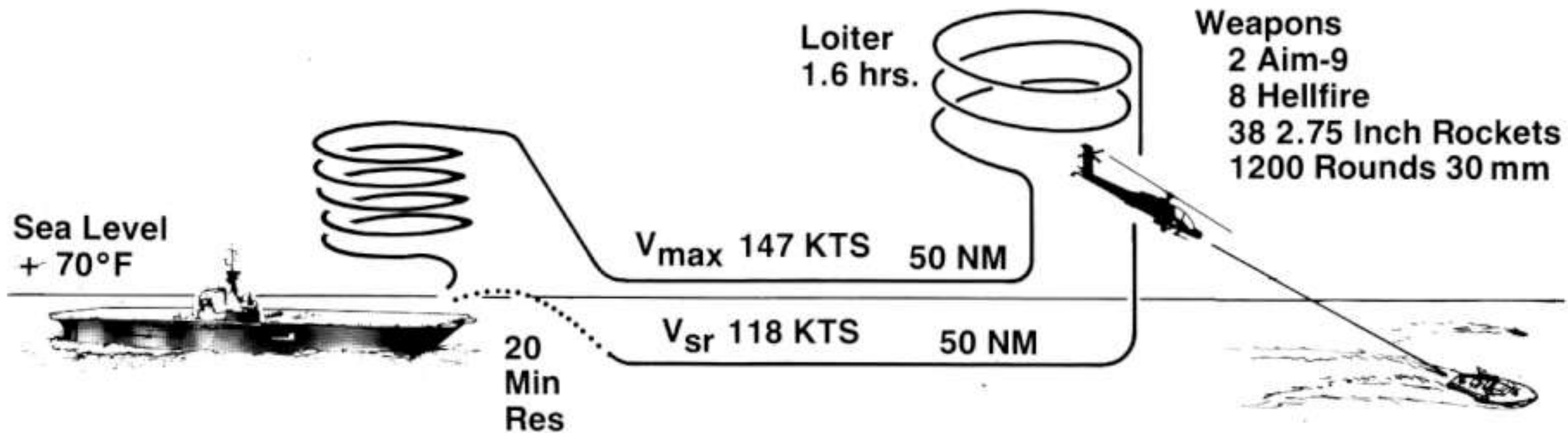
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Anti-Ship GW 17,332 Lbs



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Anti-Ship GW 18,209 Lbs

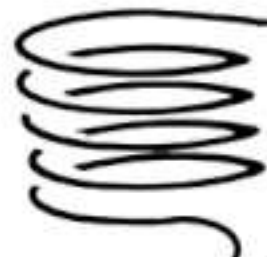


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Anti-Air Mission

GW 17,331 Lbs

Sea
Level and +70°F



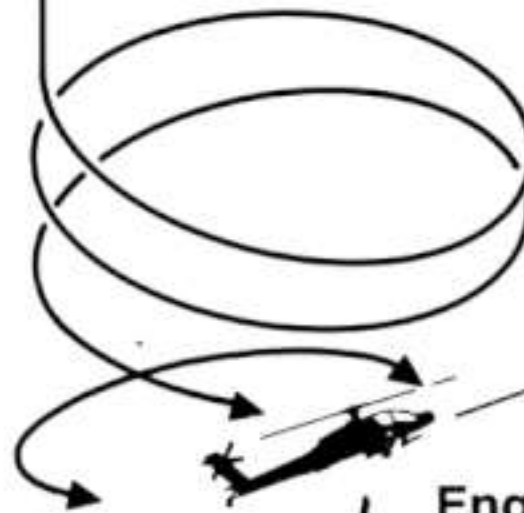
V_{max} 147KTS 50 NM

20 min
Res

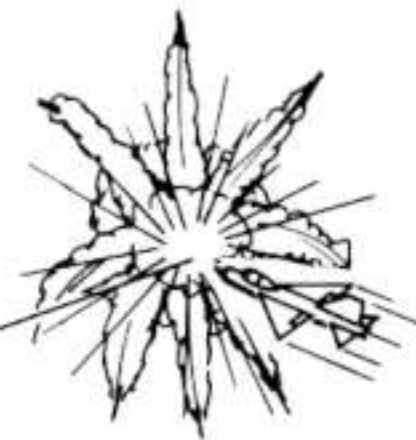
V_{sr} 115KTS 50 NM

Weapons
6 Aim-9
1200 Rounds 30mm

Loiter 1.5 hrs



Engage
15 min
IRP



AH-64

Benefits

- Fully Integrated Weapons System
 - Superior Performance
 - 24-Hour/Adverse Weather Capable
 - Survivable
 - Maintainable
 - Reliable
 - Responsive
 - Affordable

In Production-Ready for Combat

Hughes Presents the Apache's No. 1 Team

The Hughes Apache Team is Comprised of the Most Talented Aerospace Companies Ever Concentrated on a Helicopter Program. The Hughes Team is No. 1 in Technology, Management and Production.



MARTIN MARIETTA

TADS/PNVS



Power Generation System & Drive Shafts



Main Transmission & Engine Nose Gearbox



ASE, Multiplex & Symbology Gen.

Advanced Structures Division

Rotor Blades

Kearfott

A Division of The SINGER Company

Doppler Navigator



Airframe Structure



Pressurized Air, ECU & APU

RCA Automated Systems

Automatic Test Equipment

AIRCRAFT GEAR CORPORATION

Intermediate & Tail Rotor Gearbox



Landing Gear



Rockwell International
Missile Systems Div.
Defense Electronics Operations
HELLFIRE Missile & Equipment



Engines



Strapdown HARS



Hydraulic Actuators

Honeywell

Helmet Sight & 30mm Ammunition



Fire Control Computer



Hughes Helicopters, Inc.

A Subsidiary of McDonnell Douglas