

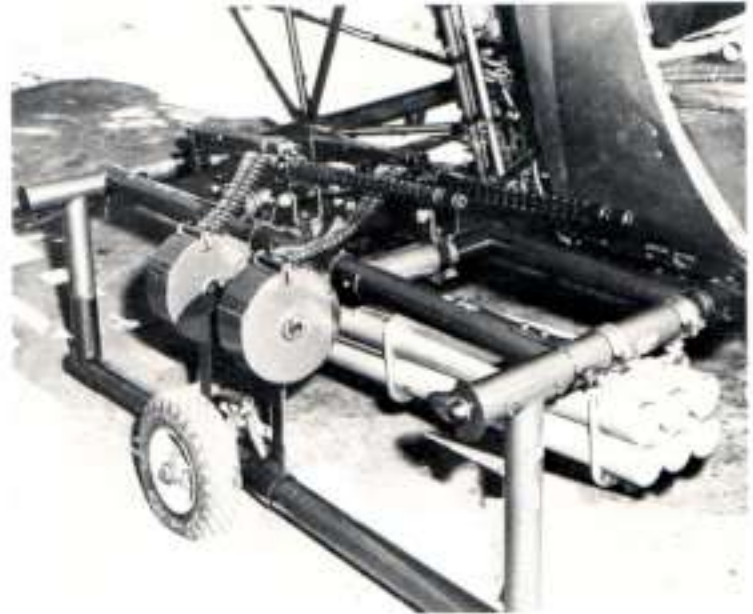
**THE  
COBRA  
TEAM**

# INTRODUCTION

Bell has led the development of helicopter weaponry for more than 20 years. The armament programs started in the 1940's with the OH-13 (Model 47) helicopter. Bazookas, .30/.50 caliber machine guns, and various rockets including SS-10 anti-tank guided missiles were installed and tested. The most important conclusion derived from these early trials was the requirement for integration of helicopter and weapon design. To be effective as a gunship the helicopter must be designed for the mission, and armament systems must be designed for the helicopter.



Introduction of the UH-1 helicopter in combat solidified the gunship requirement. It was possible to arm troop carrying helicopters, but effectiveness suffered. Armament weight and drag reduced payload, maneuverability and speed. Size increased vulnerability. Side by side seating of pilot and gunner reduced visibility and coordination. Ordnance selection was limited. The ability to meet tactical requirements was seriously impaired.



The AH-1G HueyCobra or AH-1J TwinCobra meet most armed helicopter requirements. They are fast, reliable and deadly. Tandem seating, virtually unlimited visibility, improved crew coordination, and slim silhouette are exclusive Cobra features. Ordnance payload can be varied in minutes to neutralize the threat. Survivability is increased by duplication of essential systems, crashworthy self-sealing fuel cells, IR suppression, and reduced vulnerable area. Cobras live and operate successfully in the field. Their record is supported by hundreds of thousands of combat flight hours—and that's a record.



# AH-1G

Tandem Seating  
XM-28 Flexible Turret  
featuring dual weapons  
Multiple Ordnance Options  
Redundant Essential Operating  
Systems  
Passive Defense



# AH-1J

Twin Engine Reliability  
High Altitude/High  
Temperature Performance  
Single Pilot Power  
Management  
Advanced Armament  
Management  
XM-197 20mm Turret



# TOW

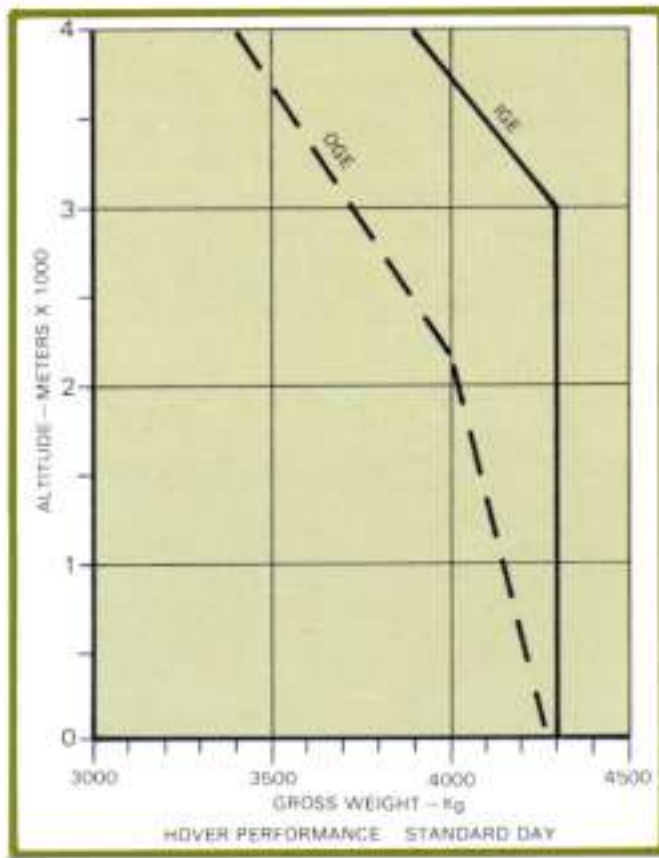
Stabilized Sighting Station  
1.5X and 13X Magnification  
4 or 8 TOW Missiles  
XM-28 Flexible Turret  
Helmet Sights





**AH-1G**  
**HUEYCOB**

RA



### SPECIFICATIONS

Max Gross Weight	4310 kg
Empty Weight	2638 kg
T53-L-13 Engine	1400 shp
Transmission	1100 shp
Max Airspeed (Vne)	190 kts
Operating Radius (SL)	148 N.M.
Maximum Endurance	3.0 Hrs.
Fuel Capacity (JP-4)	1014 l
Overall Length	16.15m
Overall Height	4.10m
Wing Span	3.15m

### PATROL MISSION

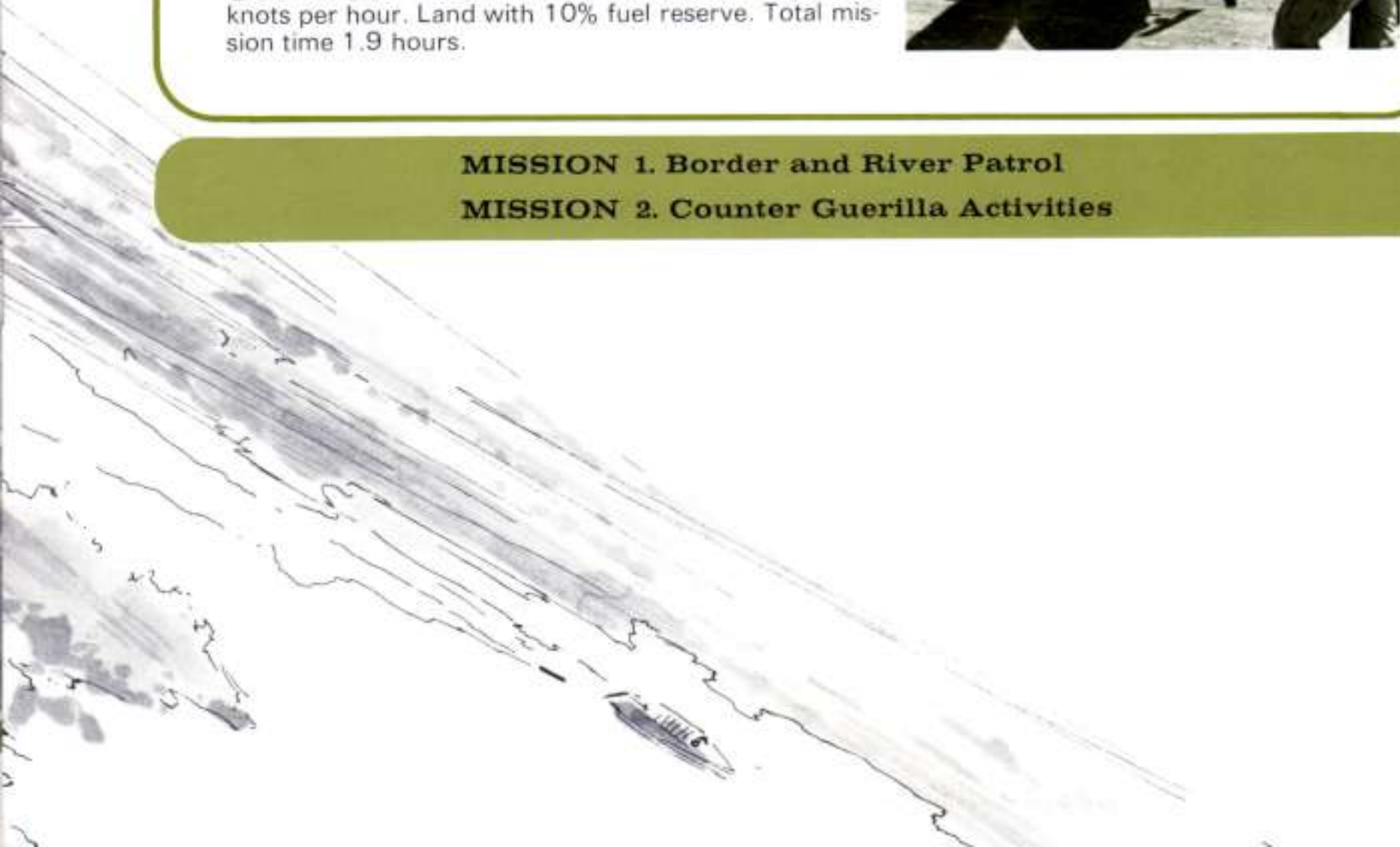
Sea Level—Standard Day  
 TOGW 4310 kg Fuel 665 kg

**Armament:**

- Two XM-157 pods—Fourteen 2.75" Rockets
  - Two XM-18 minigun pods—3000 rds 7.62mm
  - XM-28 Turret—250 rds 40mm, 4000 rds 7.62mm
- Warmup and take-off within 2 minutes. Climb to 300m @ 420 m/minute. Cruise 248 nautical miles at 135 knots per hour. Land with 10% fuel reserve. Total mission time 1.9 hours.



**MISSION 1. Border and River Patrol**  
**MISSION 2. Counter Guerilla Activities**



TOW is being qualified on the AH-1G by a U. S. Army development program. This anti-tank system can stop any known armored vehicle. A magnified (1.5X or 13X) stabilized sight lets the Cobra operate at maximum stand-off range. The gunner simply trains his telescope on the tank, fires, and continues to keep the target in the cross-hairs. The

missile, following automatic guidance signals, impacts the target. Complete training is accomplished and proficiency maintained without firing a single round. Conventional gun or rocket pods can be used in conjunction with or in place of TOW.

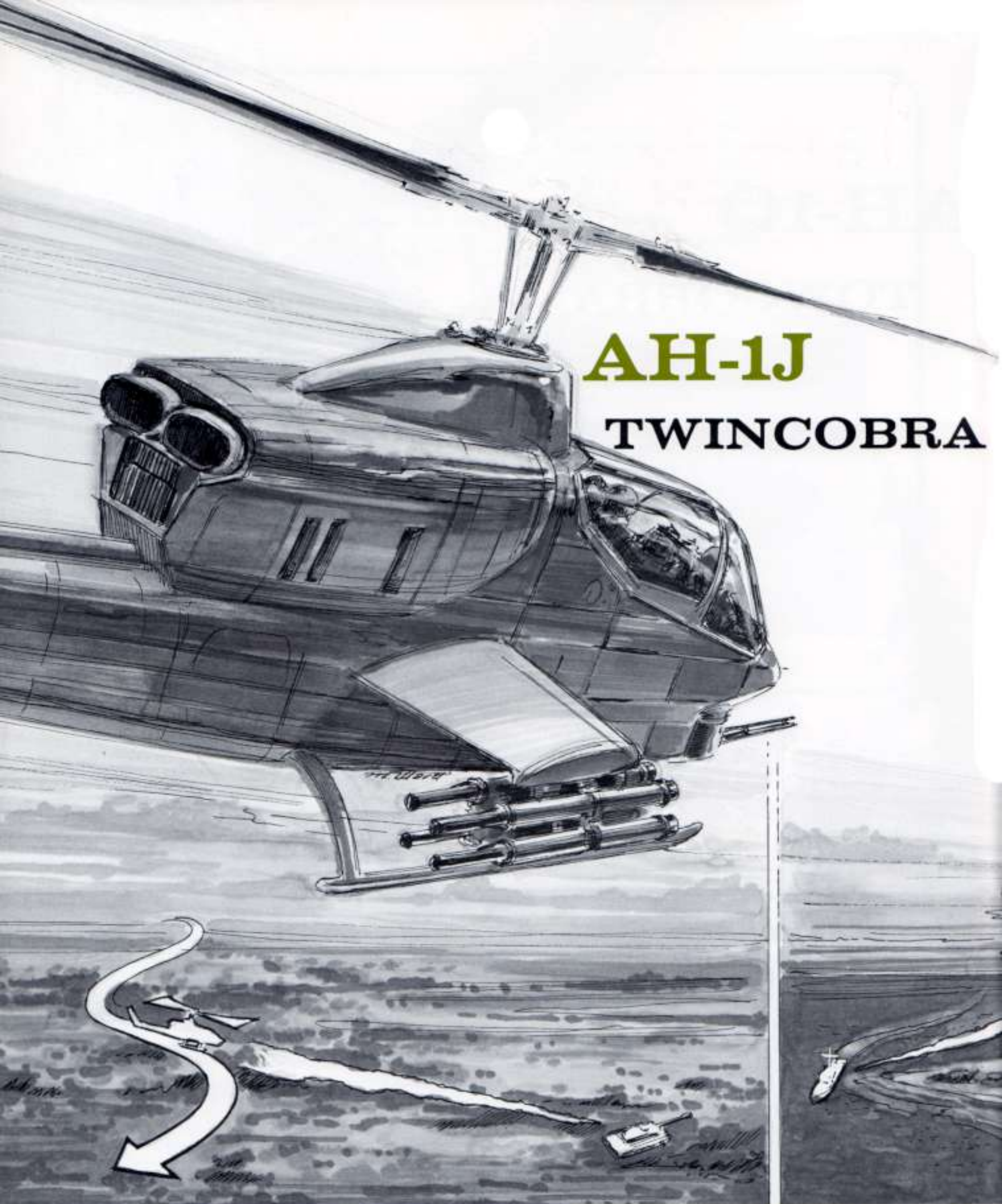
The TOW system is compatible with the AH-1J.



**AH-1Q**

**TOWCOBRA**





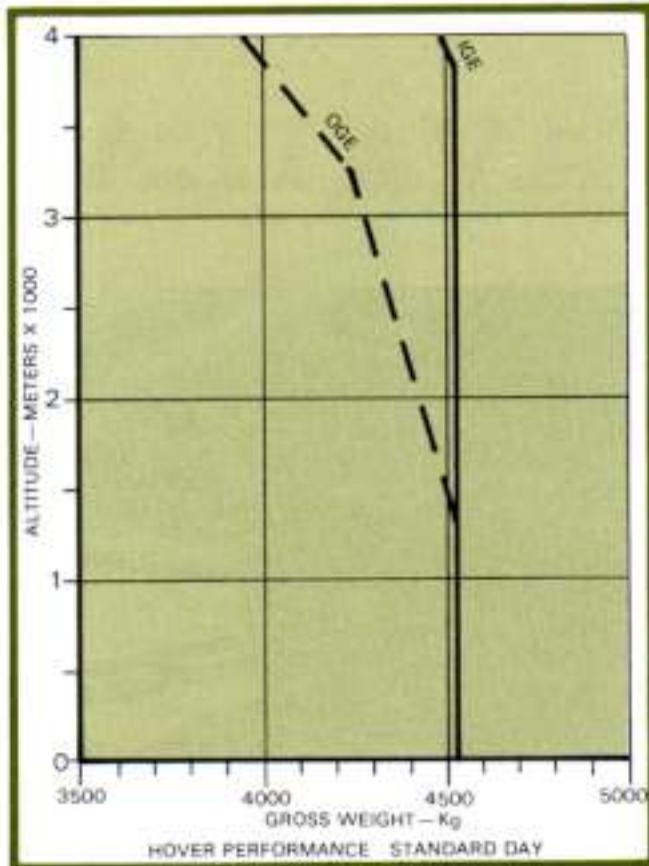
# AH-1J

## TWINCOBRA

MISSION 1. Anti-Armor

MISSION 2.





## SPECIFICATIONS

Max Gross Weight	4535 kg
Empty Weight	2925 kg
PT6T-3 Twin Pac Continuous Takeoff Power	1600 shp 1800 shp
Transmission Continuous Takeoff Power	1130 shp 1290 shp
Maximum Airspeed (Vne)	190 kts
Fuel Capacity (JP-4, JP-5)	1014 l
Special Features: Rotor Brake Radar Altimeter Canopy Jettison	

## FIRE SUPPORT MISSION

1200 meters—Standard Day  
TOGW 4535 kg Fuel 440 kg

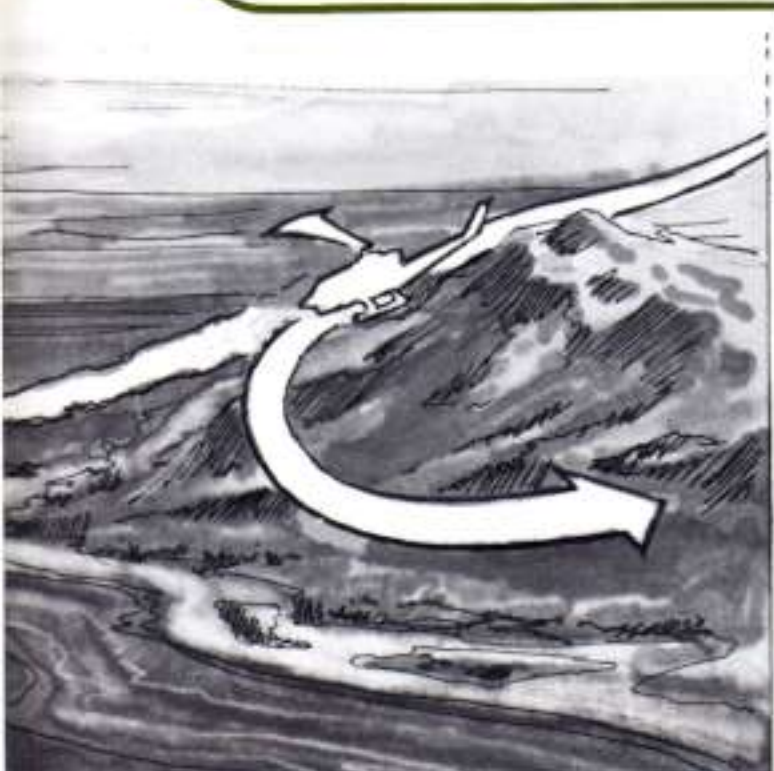
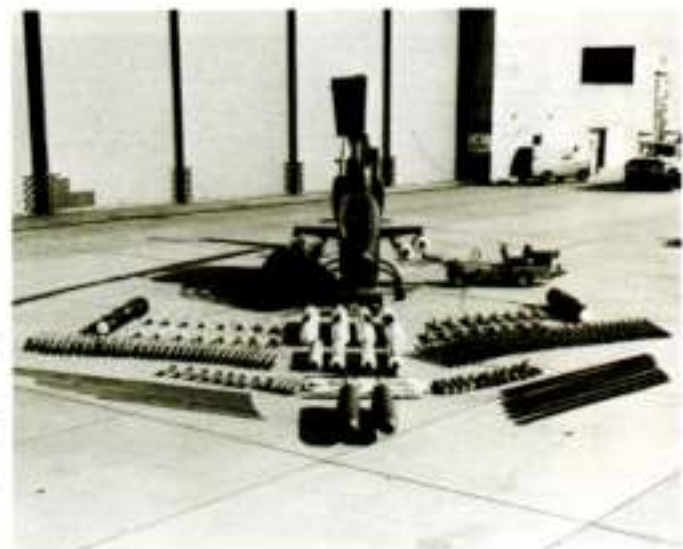
Armament:

Four LAU 61 A/A Pods—  
Sixty 2.75" Rockets

M197 Turret—230 rds 20 mm

Warm up and take-off within 2 minutes. Climb to 2450 meters attack altitude while enroute (46 N.Mi.) to attack zone. Loiter 30 minutes in area, attack 10 minutes expending all ammo. Return to base with 10% fuel reserve.

TOTAL MISSION TIME 1.5 HOURS



Coastal Defense and Interdiction

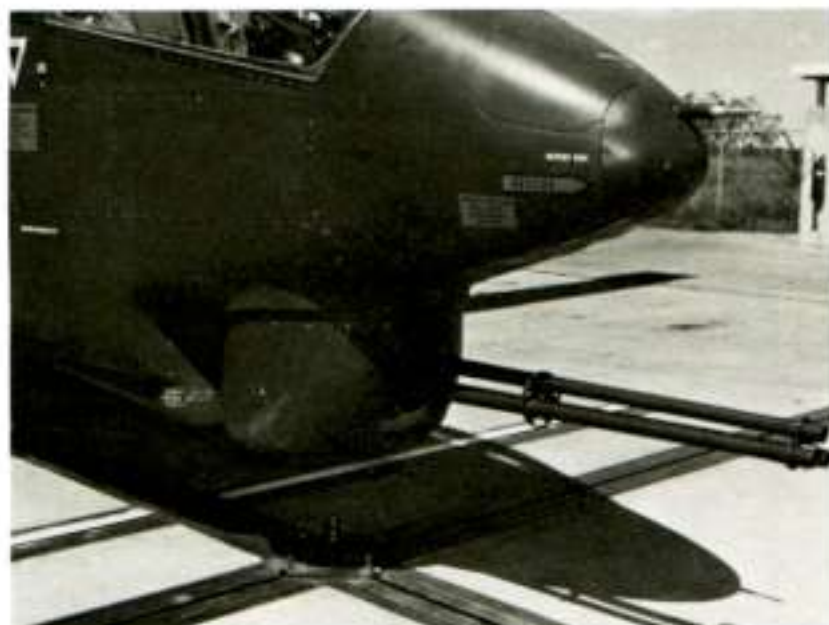


MISSION 3. Fire Support

# AVAILABLE

## **XM-197 Turret**

Housing a rotating three-barreled 20mm cannon, this turret provides the AH-1J with highly flexible directed fire at increased stand-off distances. Moving at 90 degrees per second, the gun can traverse 110 degrees left or right of center, depress 50 degrees and elevate up to 22 degrees. A palletized ammunition box carries 750 rounds, and the gun fires 750 shots per minute. Mechanical and electrical safety features automatically prevent the cannon from firing in modes that are either undirected by the sight or hazardous to the helicopter.



## **XM-28 Turret**

This dual-weaponed turret is the primary armament system of the AH-1G. Standard turret configuration is one 7.62mm minigun and one 40mm grenade launcher; however, the turret can be configured with two miniguns or two grenade launchers. Firing rate for the minigun is a nominal 2000 spm low rate, and 4000 spm high rate. The grenade launcher fires 400 spm. (Four-thousand rounds of 7.62mm and 350 rounds of 40mm ammunition are carried in palletized drums.) Turret travel is 115 degrees left and right of center, up to 25 degrees in elevation, and 50 degrees depression. Movement rate is 80° per second.

## **2.75" Rockets**

Both the AH-1G and AH-1J are capable of carrying either two or four 7-tube (LAU-68A/A, M157 or M158) or 19-tube (LAU61-A/A, M159 or M200A1) rocket launchers with maximum load being 76 rockets. AH-1G accepts the "M" series, or Army launchers, while the AH-1J mounts the LAU or Air Force/Navy series. The M series launchers require intervalometers which are supplied in the aircraft. Intervalometers are built into the LAU pods, which in turn are controlled by the Advanced Armament Management system in the AH-1J.



# ARMAMENT



## XM-35 Kit

A 20mm cannon kit, applicable only to the AH-1G, allows the Cobra to engage hard targets without sacrificing versatility. An M-61 six-barreled, gatling-type gun mounts on the left inboard stores station. Five-hundred round ammunition boxes attach to each side of the aircraft in saddle fashion, providing 1000-round capacity. Being fixed forward, the gun fires 750 shots per minute. Outboard stores stations remain open for use and can accommodate seven tube rocket launchers or minigun pods. The XM-28 turret remains fully operational.

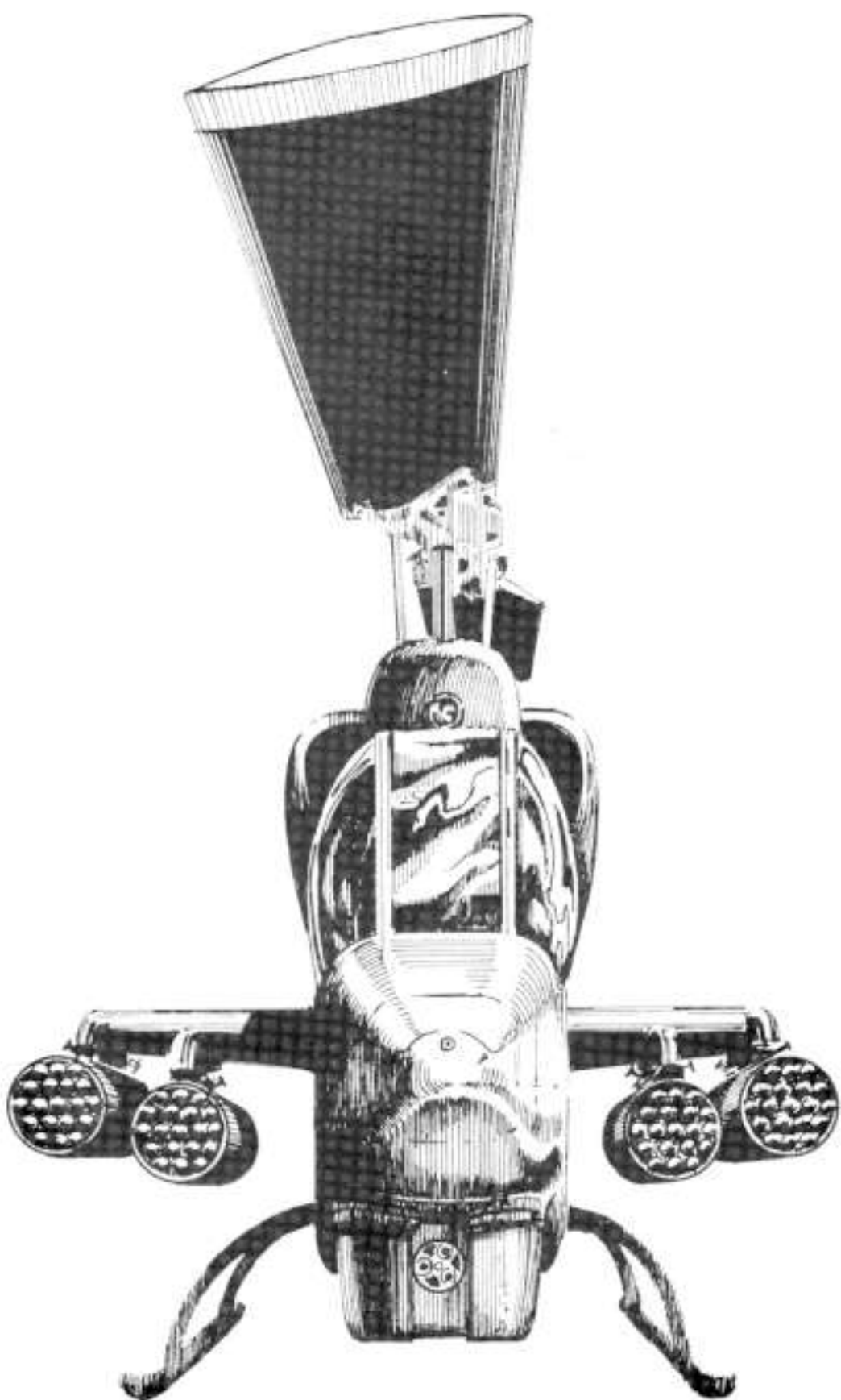
## Minigun Pods

Both the AH-1G and AH-1J accept the XM-18 series minigun pods. These self-contained pods feature a gatling-type 7.62mm machine gun, modular control sections, and linkless feed system. The 2000 to 6000 spm firing rate is ground adjustable. Firing voltage is supplied from an integral battery, so the pod relies on aircraft power only for recharging and firing signal. A full 1500 round complement of ammunition can be loaded in less than two minutes. These pods, mounted in pairs and used in conjunction with other wing-mounted ordnance, can be installed or removed in less than three minutes.



## OTHER ORDNANCE OPTIONS

OTHER ORDNANCE OPTIONS	<b>STATUS:</b>	
	Operational	Smoke Grenade Dispenser Lightweight 20mm Pod (300 rds) Helo Trap Weapon Fuel Air Explosive Bomb Napalm
	In Qualification	TOW (AH-1G)
	In Development	30mm Turret (AH-1G) 20mm Turret (AH-1G)
Feasibility Study	HOT Sparrow	



**BELL**

HELICOPTER

FORT WORTH, TEXAS 76101

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