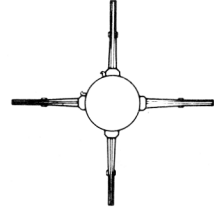
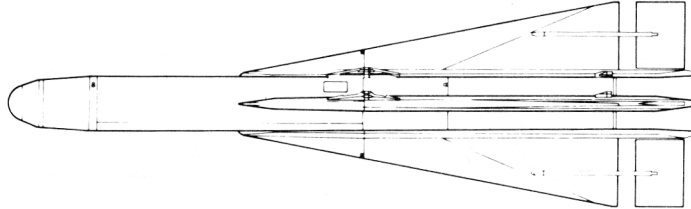


Characteristics Summary

GUIDED AIRCRAFT ROCKET GAR-4

Deleted
Terminated
5th Ed, Add Mr 13
1 Jun 59



FALCON

HUGHES

Wing Area Not Applicable Length 82.5 in
Span 24.0 in Height 24.0 in

AVAILABILITY

PROCUREMENT

Number available			Number to be delivered in fiscal years			
ACTIVE	RESERVE	TOTAL				

STATUS

1. Extension of GAR-2 development initiated in March 1954
 2. Improved warhead, power supply, and electronic circuitry
 3. Improved performance characteristics
 4. In Service: Mid 59
- Navy Equivalent: None Mfr's Model: GP

POWER PLANT

(1) Two-level Thrust Boost-sustain
Solid Rocket XM18E4

Hughes Aircraft Co.

THRUST RATINGS

S.L.S. @70°F LB - SEC

Nominal (Average) -

High Thrust Level: 4470-0.61

Low Thrust Level: 670-3.06

High Thrust Level: 4550-0.61

Low Thrust Level; 685-2.95

FEATURES

- Passive Infrared Seeker
- Faired Sphere Quartz Nirdome
- Cruciform Surface Arrangement
- "Roll-rate-limiting" Aileron Control
- Blast Type Warhead
- Contact Fuze
- Turbine-driven Electrical and Hydraulic Power Supply
- Miniaturized Precision Components and Circuitry
- Simplified Fire Control System Capability
- Snap-up Capability
- Maximum Fuel . . . 23.3 lb

GUIDANCE

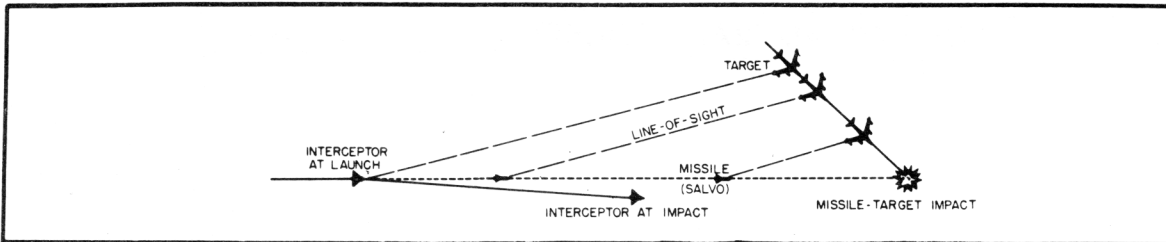
- INITIAL (BOOST PHASE)—
None; Tracking Only
- MID-COURSE AND
TERMINAL—
Homing, Passive Infrared
Target Seeker, Proportional
Navigation

CONTROL

- Hydraulically Actuated Rear
Control Surfaces Provide
Necessary Steering and
Damping
Steering Signals Generated by
Target Seeker Tracking
Motion

CLASSIFICATION (REVISED)
(OR CHANGE TO UNCLASSIFIED)
BY AUTHORITY OF (OR WRITTEN AUTHORITY)
BY A.R. Lovelace 30 July 70 (DATE)
DO NOT WRITE IN THESE SPACES

Characteristics Summary Basic Mission GAR-4



PERFORMANCE		
T A R G E T S	R A N G E	S P E E D
Subsonic propeller-driven 'or jet bombers Supersonic jet bombers Subsonic or supersonic jet fighters	Nominal missile launch range: 1000 ft to 35,000 ft	MAX Launching aircraft speed plus 1200 fps
LAUNCHING	F L I G H T T I M E	A L T I T U D E
Short-length tracks (4) extended from F-106A fuselage bay 16 sec minimum preparation time from AI radar detection Salvos of 2 missiles	Nominal missile flight time: 3.5 sec to 22.0 sec	Effective up to 70,000 ft
L O A D	W E I G H T S	T A R G E T A C C U R A C Y
Warhead and Fuze (installed) 10.3 lb Explosive 5.00 lb Motor (loaded) 39.4 lb Useful Fuel 23.3 lb	Empty 94.8 lb Pre-launch 132.0 lb End of Boost Phase . . . 119.3 lb Burnout 108.4 lb	P_k — 0.87 for salvo of 2 missiles in rear hemisphere attacks against subsonic and supersonic bombers

- N O T E S**
1. Performance Basis:
 - (a) Calculation based on experimental FALCON flight tests, component tests, and estimated data.
 - (b) NACA standard atmospheric conditions.
 2. Revision Basis: To change characteristics data.
 3. Probability of kill (P_k) value is based upon 90% missile reliability and 0.90 kills per hit.
 4. Nominal values correspond to idealized operation of the fire control system.