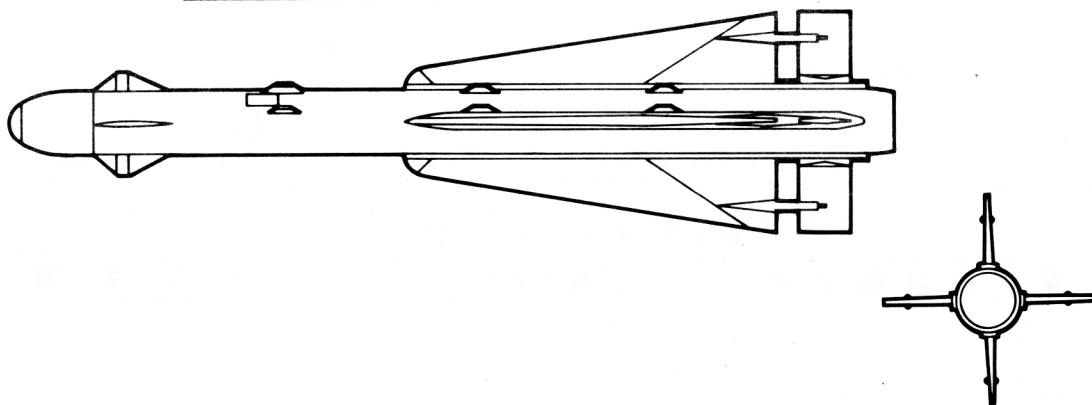


# Characteristics Summary

AIR INTERCEPT MISSILE ..... AIM-4D (GAR-2B)



FALCON

HUGHES

Wing Area ..... Not Applicable    Length ..... 79.2 in.  
Span ..... 20.0 in.    Height ..... 20.0 in.

*y. m. white 3/16/77*

## AVAILABILITY

## PROCUREMENT

Number available			Number to be bought in fiscal years		
TEST	INVENTORY	TOTAL	FY 63		
4	711	715	1300		

## STATUS

- |   |                                       |
|---|---------------------------------------|
| 1. Advanced version of the AIM-4C incorporating a long wavelength IR guidance head for improved background discrimination and countermeasure capability | 2. Project initiated (AIM-4D): Apr 62 |
|   | 3. First Air-to-Air Hit: Dec 62       |
|   | 4. In Service: Jul 63                 |
|   | 5. In Production: Feb 63              |

Navy Equivalent: None

Mfr's Model: FPc

## POWER PLANT

(1) Single-level Thrust  
Solid Rocket M58A2

Thiokol Chemical Corp.

### THRUST RATINGS

SLS @ 70°F    LB    -    SEC

Nominal:        4220 - 1.40

## FEATURES

Passive infrared seeker  
Spherical-nose silicon nirdome  
Cruciform surface arrangement  
"Roll-rate-limiting" aileron control  
Blast type warhead  
Contact fuze  
Batteries and compressed gas-hydraulic supply  
Miniaturized precision components and circuitry  
Simplified fire control system capability  
Snap-up capability

Maximum fuel . . 31.02 lb

## GUIDANCE

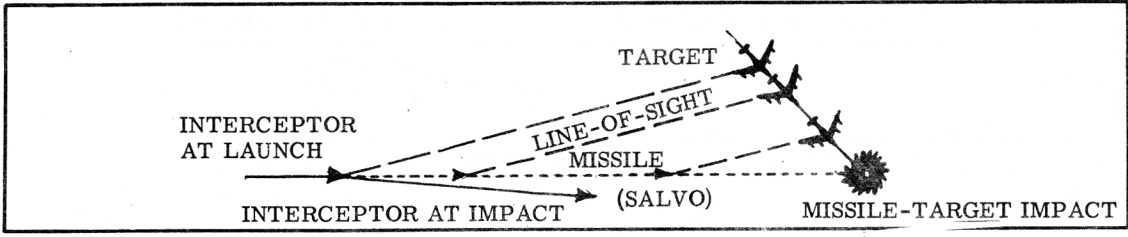
Homing  
Passive infrared target seeker  
Proportional navigation

## CONTROL

Hydraulically actuated rear control surfaces provide necessary steering and damping  
Steering signals generated by target seeker tracking motion

DOWNGRADED AT 3 YEAR INTERVALS;  
DECLASSIFIED AFTER 12 YEARS  
DOD DIR 5200.10

*Characteristics Summary Basic Mission* . . . . . AIM-4D (GAR-2B)



<b>PERFORMANCE</b>		
<b>T A R G E T S</b>	<b>R A N G E</b>	<b>S P E E D</b>
Subsonic propeller-driven or jet bombers  Subsonic or supersonic jet fighters and bombers	Nominal missile launch  range: 3500 ft to 35,000 ft	MAX: Launching aircraft speed plus 1700 fps
<b>L A U N C H I N G</b>	<b>F L I G H T T I M E</b>	<b>A L T I T U D E</b>
Short length track from F-102A fuselage bays  16 sec minimum preparation time from AI.  Salvos of 2 missiles (F-102A)	Nominal missile flight Time: 3 sec to 25 sec 11.0 sec	Effective up to 60,000 ft
<b>L O A D</b>	<b>W E I G H T S</b>	<b>T A R G E T A C C U R A C Y</b>
Warhead and Fuze (installed) . . . 8.4 lb  Explosive . . . . . 2.75 lb  Motor (loaded) . . . 45.50 lb  Useful Fuel . . . 31.02 lb	Empty . . . . . 124 lb  Pre-launch . . . 134 lb  Burnout . . . . . 103 lb  Limited by	$P_k$ - exceeds 0.9 for salvo of 2 missiles in rear hemisphere attacks against subsonic bombers

- N O T E S**
- Performance Basis:
    - Calculation based on experimental FALCON flight tests, component test, and estimated data.
    - NACA standard atmospheric conditions
  - Probability of kill ( $P_k$ ) value is based upon 90% missile reliability and 0.90 kills per hit.
  - Nominal values correspond to idealized operation of the fire control system.
  - Revision Basis: To reflect changes in "Availability".