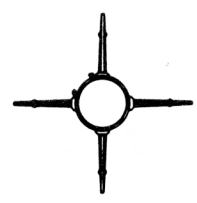
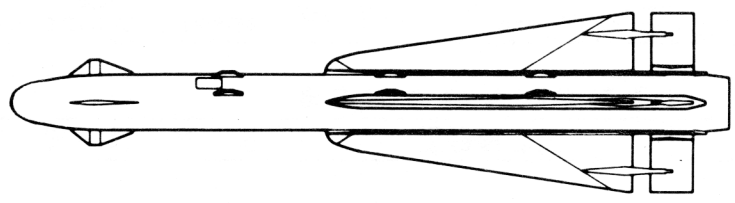


*unclassified*  
~~CONFIDENTIAL~~

*CS*  
*Falcon*  
*AIM-4C char*

# Characteristics Summary

AIR INTERCEPT MISSILE . . . . . AIM-4C (GAR-2A)



FALCON

HUGHES

Wing Area . . . . . Not Applicable      Length . . . . . 79.5 in.  
Span, . . . . . 20.0 in.      Height . . . . . 20.0 in.

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

## STATUS

1. Project initiated: Jul 52 (GAR-2)
  2. **First** Air-to-Air Hit: Sep 54
  3. **First** infrared Falcons in Service: Early 57
- Navy Equivalent: None      Mfr's Model: FPb

## POWER PLANT

(1) Single-level Thrust,  
Solid Rocket M58A 2

Thiokol Chemical Corp

**THRUST RATINGS**

S.L.S. @70°F    LB - SEC

Nominal:        4220 - 1.40

## FEATURES

Passive infrared seeker  
Blast type warhead  
Contact Fuze  
Batteries and compressed  
gas-hydraulic supply  
Miniaturized precision  
components and circuitry  
Simplified fire control  
system capability  
Snap-up capability  
Faired Sphere  
Spherical-nose quartz  
nirdome  
"Roll-rate-limiting"  
aileron control  
Cruciform surface ar-  
rangement  
Maximum fuel . . . . 31.02 lb

## GUIDANCE

INITIAL (BOOST PHASE)  
None: Tracking Only

MID-COURSE AND  
TERMINAL  
Homing, passive infrared  
target seeker, proportional  
navigation

**CONTROL**

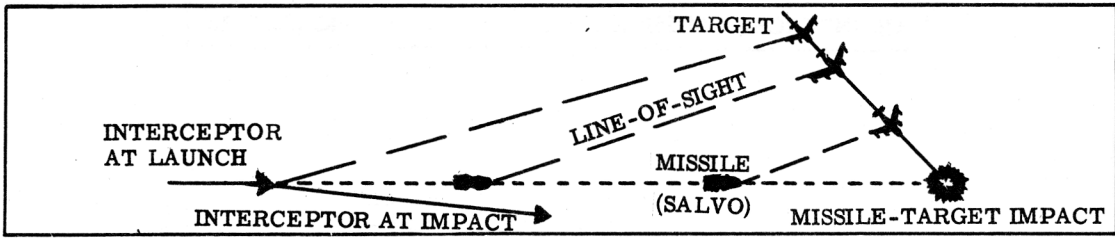
Hydraulically actuated rear  
control surfaces provide  
necessary steering and  
damping  
Steering signals generated  
by target seeker tracking  
motion

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

*J.M. White, 3/17/77*

*57WC-498B*

*Characteristics Summary Basic Mission* . . . AIM-4C (GAR-2A)



<b>PERFORMANCE</b>		
<b>TARGETS</b>	<b>RANGE</b>	<b>S P E E D</b>
Subsonic propeller-driven or jet bombers  Subsonic jet fighters	Nominal missile launch range: 3500 ft to 35,000 ft	MAX Launching aircraft speed plus 1900 fps
<b>LAUNCHING</b>	<b>FLIGHT TIME</b>	<b>ALTITUDE</b>
Short-length tracks (6) extended from F-89H wing-tip pods, F-102A and F-101B fuselage bays, or (4) from F-89J underwing pylons. 16 sec minimum preparation time from AI radar lock-on (F-89H) or detection (F-102A) 13 sec from lock-on (F-89J) Salvos of 2 (F-89J), or 3 (F-89H, F-102A and F-101B).	Nominal missile flight time: 3.2 sec to 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>TARGET ACCURACY</b>
Warhead and Fuze (installed) . . . 8.4 lb  Explosive . . . . . 2.75 lb  Engine (loaded) . . . 45.50 lb  Useful Fuel . . . . . 31.02 lb	Empty . . . . . 72.0 lb Pre-launch . . . . 128.0 lb Burnout . . . . . 97.0 lb	$P_k$ - 0.92 for salvo of 3 missiles in rear hemisphere attacks against subsonic bombers 0.82 for salvo of 2 missiles.

- N O T E S**
1. Performance Basis:
    - (a) Calculation based on experiential FALCON flight tests, component tests, and estimated data.
    - (b) NACA standard atmospheric conditions.
  2. Revision Basis: To reflect change in model designation (AFR 66-20).
  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.