Characteristics Summary

GUIDED AIRCRAFT ROCKET.....XGAR-1C

"FALCON"
HUGHES

Wing Area .................Not Applicable Length ......................83.4 in.
Span ......................24.0 in. Height ......................24.0 in.

AVAILABILITY

<table>
<thead>
<tr>
<th>ACTIVE</th>
<th>RESERVE</th>
<th>TOTAL</th>
</tr>
</thead>
</table>

PROCURMENT

Number available
Number to be delivered in fiscal years

STATUS

1. Similar to the GAR-1A except that a passive infra-red seeker system is installed in lieu of the semi-active radar system.
2. Design Initiated: 27 Jan 54
3. Test firing of GAR-1C from F-102A type aircraft is scheduled for: Late 1955

Navy Equivalent: None

POWER PLANT

(1) Solid Rocket Motor
Hughes Aircraft Co.

THRUST RATINGS

S.L.S.  LB  Duration (sec)

Nominal: 1  4700  0.8
2  500 to 0 - 4.0

Boost Phase
Sustaining Phase

FEATURES

Supersonic Guided Aircraft Rocket for destruction of Subsonic and Supersonic Bombers or Fighters

Blast Type Warhead
Infra-Red Target Seeker

Max Fuel Cap: .......24.7 lb

GUIDANCE

(a) INITIAL
None during boost phase

(b) MID-COURSE AND TERMINAL
Passive Infra-Red Seeker

CONTROL
Hydraulic: Initiated by the Error Signal from Target Seeker
## Characteristics Summary Basic Mission... XGAR-1C

### Performance

<table>
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<tr>
<th>Endurance</th>
<th>Range</th>
<th>Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOT APPLICABLE</td>
<td>3500 ft to 35,000 ft</td>
<td>Launching speed of aircraft plus 1200 ft/sec</td>
</tr>
</tbody>
</table>

### Launching

- **Short Length Rail:** Launched from missile bays of F-102B. Approximately 20 seconds required from time target is sighted to time rocket is launched.
  - NOT APPLICABLE

### Climb

- Effective up to 60,000 ft plus.
  - NOT APPLICABLE

### Altitude

- Effective up to 60,000 ft plus.

### Load Weights

<table>
<thead>
<tr>
<th>Warhead</th>
<th>. . . . . . . . 12 lb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel: (Thiokol)</td>
<td>. . . . . . 24.7 lb</td>
</tr>
</tbody>
</table>

- Burnout: . . . . . . 110.3 lb
- Launch: . . . . . . 135.0 lb

### Target Accuracy

- $P_k = 0.95$ for salvo of 3 rockets against subsonic and supersonic bombers.

### Notes

1. **Performance Basis:**
   - (a) Estimated data (Not substantiated by WADC)

2. **Revision Basis:** Initial Issue