



**GAR-3...**  
**THE**  
**SUPER**  
**FALCON**



### GAR-3 . . . THE SUPER FALCON

Fourth in the Falcon family and newest armament for the advanced Century Series all-weather interceptors, the *Super Falcon* further extends the striking power of the Nation's defense . . . helps make the entire sky our "safety zone." Like its predecessors — the GAR-1, GAR-1D and GAR-2A Falcons — the *Super Falcon* climbs far beyond the interceptor's ceiling to destroy enemy bombers in any kind of weather, day or night.

Technically, the GAR-3 *Super Falcon* is a "semi-active radar seeker" missile. Locked on its target by the interceptor's armament-control system, the *Super Falcon* is automatically launched at a precisely computed time. Almost immediately it begins following a "proportional navigation" course, i.e., a continuously corrected path which will diagonally intercept that of the target, regardless of the latter's maneuvers.

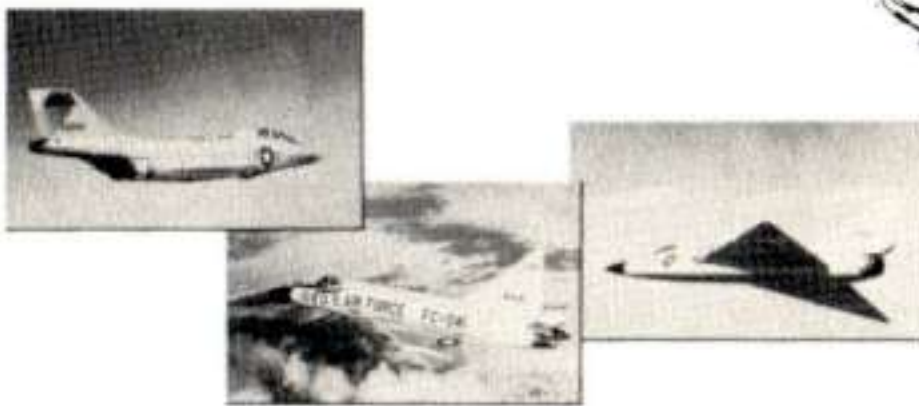
One of the principle differences between the *Super Falcon* and earlier models is its distinctive white plastic nose cone, longer and more pointed than the rounded radomes of earlier "birds." The nose cone itself represents a significant achievement in basic materials research and enables the *Super Falcon* to adjust to a wide variety of environments. Other external changes in the GAR-3 — greater length, control-surface span, and extension of stabilizers beyond the center of the airframe — increase its performance. In addition, the thrust of its new, longer-lived solid propellant rocket engine, combined with the supersonic speed of its carrying interceptor, gives it a longer, higher, deadlier range than that of any other air-to-air guided missile.



## MISSILE . . . AIRCRAFT . . . ELECTRONICS

*Super* Falcons, as well as their earlier cousins, the GAR-1, GAR-1D, and GAR-2A, are one of three primary components of the all-weather interceptor weapon system, a completely integrated combination of missile, aircraft and electronic controls. Each such system is the product of extremely close cooperation, carrying through from drawing board to operational takeoff.

A partnership of the military, science and industry, calling on almost every known technology and skill, provides long-range planning. At closer range, the working team is one of the plane maker and the designer-manufacturer of the missile and the electronics which fires and controls it and its carrying interceptor. Following through are production and support teams which assure reliability so high that despite the complexity of these weapons systems, they are ready at all times to do the job they were designed to do – at the instant they are needed.



*Super* Falcons and Falcons are carried by the Century Series fighter-interceptors – F-101B's, F-102A's and F-106's. The even longer-range fighter-interceptors of tomorrow will carry not only the birds of the Falcon family but increasingly sophisticated Hughes missiles – now being designed – of even greater range and destructive power.







SUPER FALCONS AND FALCONS ARE MANUFACTURED  
IN THE 660,000 SQ. FT. HUGHES-TUCSON FACILITY.

The name Falcon is particularly appropriate for the attacking guided missile. Taking their quarry on the wing, falcons are among the most powerful of birds. Trained to hunt, they will, when released by the falconer, *intelligently* seek out their quarry, outmaneuver it and strike it to the ground. Falconry as a sport dates back at least four thousand years. Although its popularity waned with the development of firearms, it has never been even temporarily extinct.

Hughes Falcons and *Super* Falcons — which perform in much the same way as a falcon hawk — evolved from the need to extend the striking capabilities of interceptor aircraft. When the modern falconer — the interceptor pilot — fires his “birds” at the quarry, he does so in the deadly earnest business of defending strategic areas from aerial attack.

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