
MISSILES 1958...

AIR TO AIR

AA.20

French Air Force and Navy (possibly to be adopted by other NATO countries).

Type: Command-guided air-to-air missile.
Drawing: p. 896.

DEVELOPED and manufactured by Nord Aviation S.N.C.A. as the Type 5103, this neat missile is exceptionally simple; thousands have been manufactured and many hundreds fired. Like the Nord S.S.11 anti-tank missile, the 5103 has a cruciform of fixed wings, canted slightly to impart spin, and no aerodynamic controls. Steering is effected by deflecting the jet from the solid sustainer (the first portion of which burns at high thrust as a booster), the guidance being radio command from a small cockpit joystick. Tracking is visual line-of-sight, the warhead finally being detonated by a proximity fuze.

More advanced versions of the 5103 are in advanced development. In addition, a SHAPE requirement exists for an air-to-surface weapon suitable for firing from the Fiat G.91, and the 5103 seems to fulfil this need admirably. Already the missile has been fired from the G.91 during development trials (and from almost all modern French fighters).

Nord AA.20: length, 8ft 2.4in; body diameter, 10.5in; wing span, 36in; firing weight, 298 lb; maximum flight speed, Mach 1.7; maximum effective range, about 2.5 miles.

CONTRAVES C.7

Italian Air Force.

Type: IR-homing air-to-air weapon of simple character.

CONTRAVES ITALIANA, the company developing this missile, ask us to exclude it from this review issue. Brief details were published in our 1957 missile issue.

DIAMONDBACK

United States Navy.

Type: Air-to-air missile.

AS stated in our 1957 review, this is reported to be the name of a development of Sidewinder (q.v.). Further information on this missile is expected to become available next year.

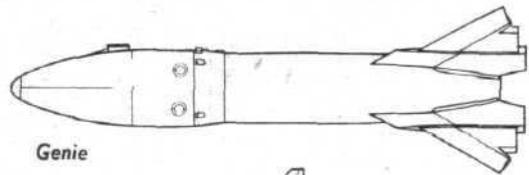
EAGLE

United States Navy.

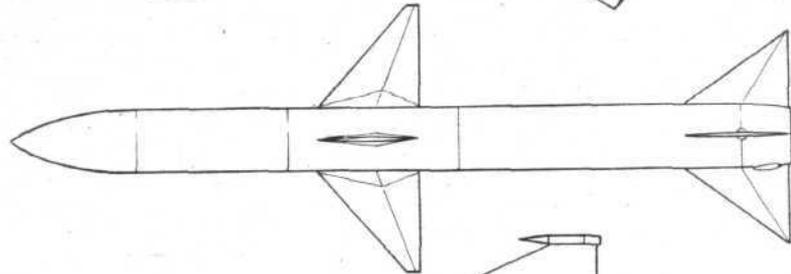
Type: Large, long-range air-to-air missile for launching from "stand-off" aircraft.

FOR at least a year the U.S. Navy have been attracted by the concept of defending a fleet by an aircraft/missile combination in which the burden of effecting the interception is transferred almost wholly to the unmanned portion. Eagle is to be the name of the missile concerned, and it is intended to have range and lethality so outstanding that it can be launched from a stand-off aircraft—such as a Grumman A2F—the sole task of which will be to lift the Eagle to a useful altitude and then conduct a standing patrol, without attempting to close with a target.

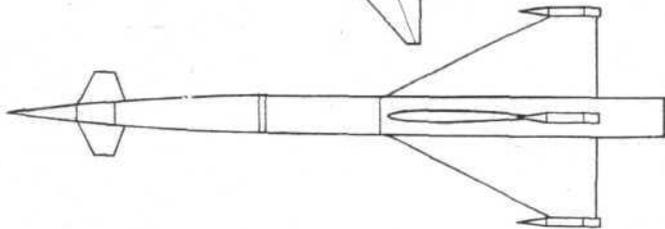
Should an enemy bomber be detected, the Eagle-carrier would fly towards it—with all speed—and at the earliest possible moment release its weapon. The Eagle would then fly a distance of at least 50 miles (and possibly as much as 100), using its own active-homing radar to complete the interception. Its warhead will be nuclear. It has been reported that most of the weapon system is being assigned to Northrop, except for the guidance and guidance check-out gear, which will be handled by Westinghouse. At present Eagle is politically involved in a battle with the GAR-9 of the U.S.A.F. and with the ever-present budget trouble.



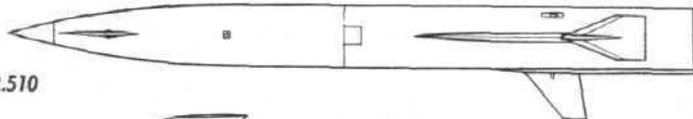
Genie



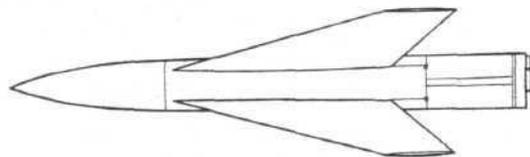
Sparrow III



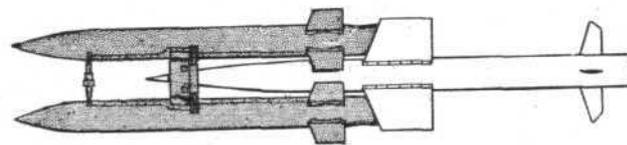
Robot 321A



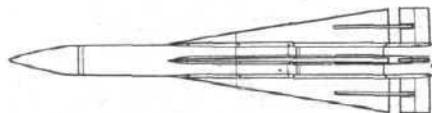
Matra R.510



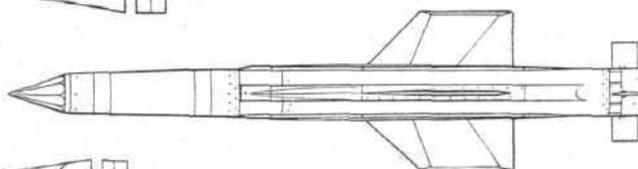
AA.20



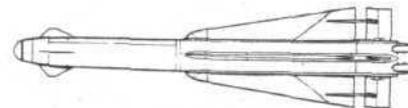
Fireflash



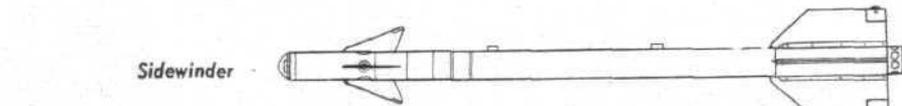
GAR-3



Firestreak



GAR-2



Sidewinder



FALCON

United States Air Force (Air Defense Command and Far East Air Force); the missile is designated GAR-1, 2, 3 or 4.

Type: Air-to-air missile with semi-active radar or IR homing. Drawing: above (GAR-2A and GAR-3).

MANY thousands of Falcons have now been delivered from the Hughes Aircraft plant in Tucson, Ariz., and output is probably about

one hundred per week. It is the most widely used air-to-air missile of Continental Air Defense Command, and is standard armament on all CADC interceptors (F-89H, J and K, F-101B, F-102A and F-106A and B).

History and description were published in our 1957 review. Production of the first two versions, GAR-1 (radar) and GAR-2 (infrared homer) is complete. The later sub-types of both versions have several improvements, among which may be listed a refined airframe, a motor with higher total impulse, and control