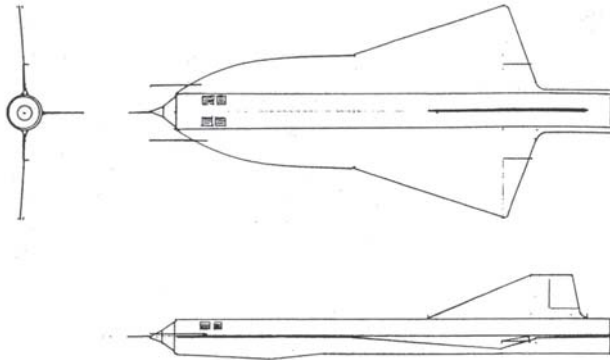


GRD-21

Users: U.S. Air Force

Manufacturer: Lockheed Martin (Skunk Works)

Inventory: 38 Delivered/TBD Planned



Background. The GRD-21A was designed to be carried on, and launched piggyback from, an M-12 (a modified A-12/SR-71), but this approach was abandoned after its fourth launch collided with its mother ship. Its first free flight occurred in Mar 1966. After the collision, the GRD-21B was modified with a booster rocket to allow it to be launched from a B-52 wing pylon. Its first free flight was in Nov 1967. At the end of flight, it was designed to discard its airframe and have its film capsule recovered by having a C-130 snag its parachute in midair. It flew four operational reconnaissance missions over China in 1969-1971 before being retired. None of the four missions successfully returned their film capsules. It established altitude and speed records for unmanned aircraft that remained unbroken until the X-43 (for speed, 2004) and the Helios (for altitude, 2001).

Characteristics:

	GRD-21B		GRD-21B
Length	43 ft 2 in	Wing Span	19 ft
Gross Weight	20,000 lb	Payload Capacity	
Fuel Capacity		Fuel Type	JP
Engine Make	1xMarquardt RJ43	Power	12,000 lb
Data Link(s)	none	Frequency	n/a

Performance:

Endurance	2	Max/Loiter Speeds	Mach 3.35
Ceiling	90,000+ ft	Radius	1700 nm
Takeoff Means	Air launched	Landing Means	Parachute/midair
Sensor	Film camera	Sensor Make	

