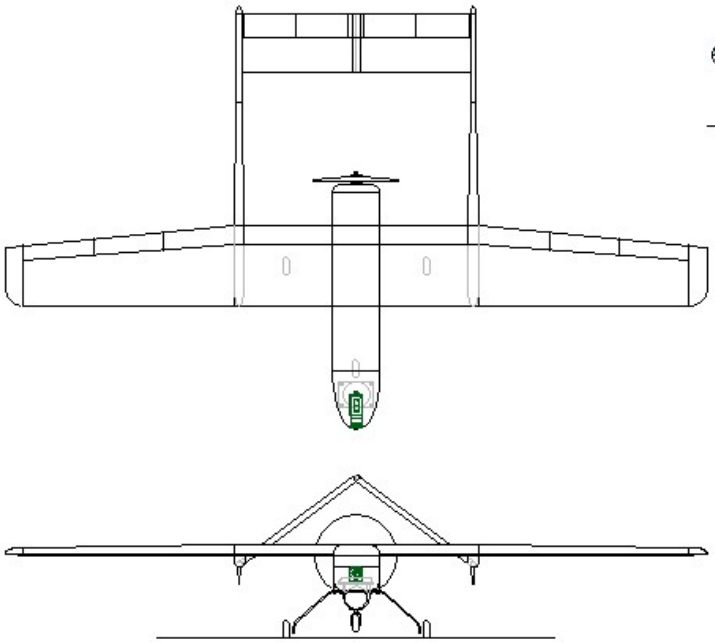
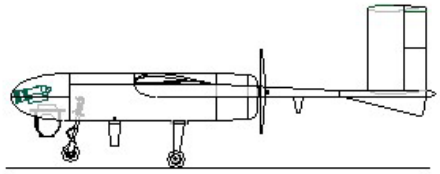
Description of Aircraft System





Wing Span	20 ft.
Length	11.8 ft.
Height	4.6 ft.
Wing Area	42.4 sq. ft.
Empty Weight	215 lbs.
Gross Weight	350 lbs.
Max Speed	80 kts.
Cruise Speed	55 kts.
Stall Speed (clean)	30 kts.
Rate of Climb	550 ft./min.

The SIERRA airframe is constructed from wood, fiberglass, foam and carbon fiber. The forward nose cone bay is designed to accommodate various research payloads and sensors.

The aircraft uses a 25 Hp twin cylinder 2-cycle engine that runs on a gasoline/oil mix. The maximum capacity of the fuel tank is 10.5 gallons.

The electrical system uses a 28 volt lead acid battery with an alternator run off the engine. The flaps, ailerons, ruddervators, nose gear steering and brakes are actuated by electric linear actuators from CK Design Technologies. The throttle is actuated by a ¼ scale RC servo.