



D.S.K. AIRCRAFT CO.

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THE DUSTERS ARE HERE! 100 THE FIRST YEAR

Hank Thor and Ben Jansson, both aeronautical engineers, introduced the BJ-1B "Duster" in the May, 1971 issue of Soaring, and the response certainly has made it seem worth the effort. The Duster was eight years in development, from design studies to the flight testing of the second prototype.

The Duster was designed specifically for the home builder. Using plywood ribs and bulkheads, it goes together quickly. No component is over 18 feet long. It can be built and stored in a garage.

It is assembled on a simple table made from a 2" x 12", 18 feet long. If you build from the Wood Workers Kit, the only power tools necessary are disc sander, 3/8" drill, and a saber saw.

Flying the Duster is a fun experience; big control surfaces give beautiful response, like a $2\frac{1}{2}$ second roll rate from 45 to 45 bank. An aspect ratio of 17.7 to 1, lets the Duster move out when you put the nose down. 6 FPS sink comes at 83 m.p.h.

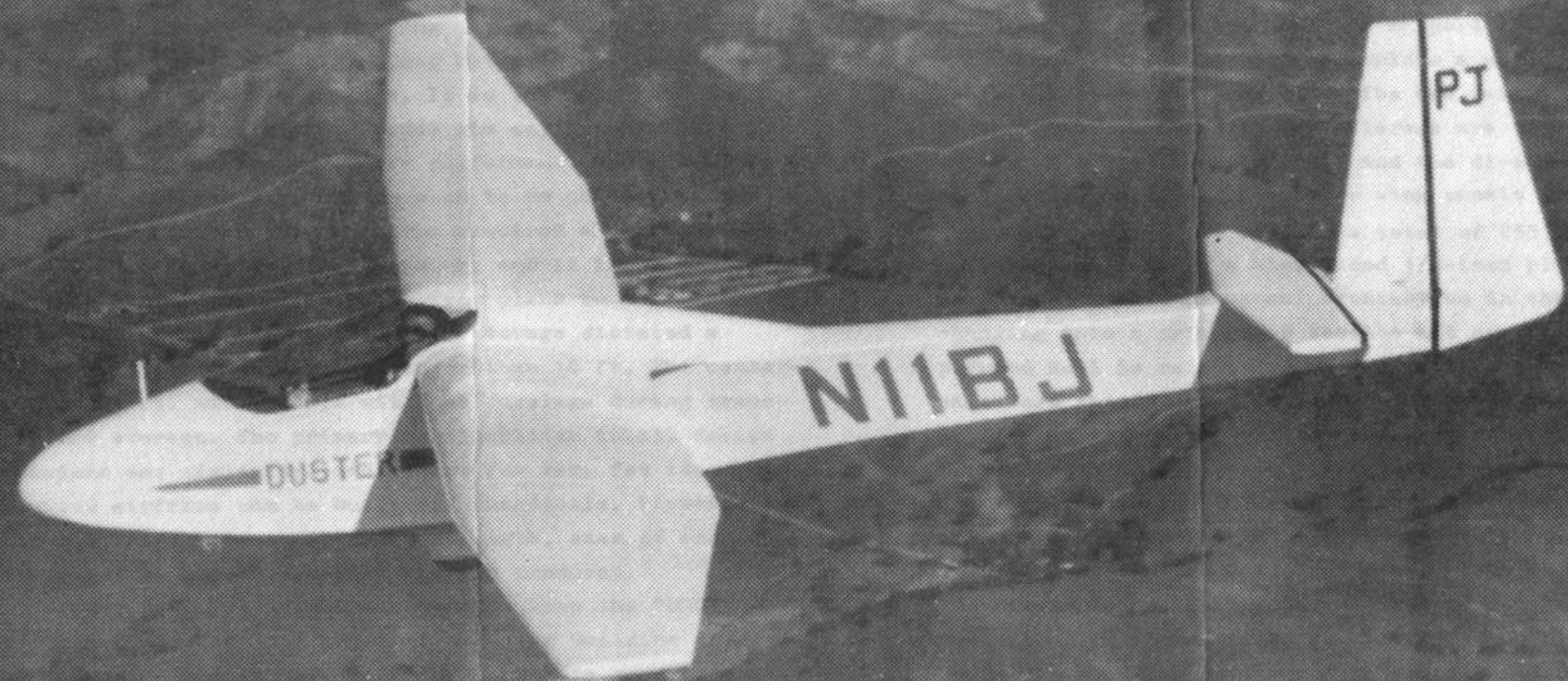
Walt Mooney of San Diego flew the "B" prototype in the region 12 Championships at El Mirage in August of 1972, and finished No. 22 out of 34. He flew the only wooden 13 meter sailplane, and finished ahead of twelve aluminum and glass machines, of 15 meters and up.

Probably best of all, is that now with ²⁰⁰⁺~~100~~ Dusters building, we can have our own one-design class.

Join a fun class of small, inexpensive sailplanes!

CHRISTMAS BONUS**WOODWORKERS KIT ONLY**FOR THOSE ORDERING THE WOODWORKERS KIT, DSK AIRCRAFT WILL SUPPLY THE PLANS TO THE DUSTER BJ-1B FREE. FOR THOSE ALREADY OWNING A SET OF PLANS DSK AIRCRAFT WILL TAKE \$75.00 OFF THE PRICE OF THE WOODWORKERS KIT. THOSE OWNING PLANS BE SURE TO INCLUDE PLANS NUMBER ON ORDER FORM TO INSURE PROPER CREDIT.

OFFER EXPIRES JANUARY 1, 1975.



DUSTER

NIIBJ

PJ

BJ-1b "DUSTER"

(Featured in SOARING magazine, May -71)

BJ-1b, the result of eight years of design development and about 150 hours of flight testing at this time, was specifically intended to fill the gap between the trainer and the high-performance sailplane. It is THE SAILPLANE for the enthusiast with limited funds who still would like to enjoy encouraging cross-country performance and one-design class competition. Designed in wood to be constructed by the amateur builder the prototype required an expenditure of \$800.00 to complete from scratch, and it is estimated that the sailplane can be built from plans in about 600-700 hours. Garage construction and storage dictated a 3-piece wing with no element longer than 18 ft. The center-section, 7 ft. wide, stays with the fuselage during transport and storage. The primary consideration in all design decisions was simplicity, and except for very few items the all-wood airframe can be built with handtools. Plywood is used extensively because of its strength, ease of construction, and the smooth contours that it produces.

Every possible effort was made to keep the "DUSTER" aerodynamically "clean" short of creating building problems, and the sailplane is very quiet and exhibits good penetration. A laminar airfoil was intentionally avoided, because the amateur builder would be hard put to achieve a smooth enough surface to yield expected performance over the entire speedrange. Instead a 15% non-laminar section was developed to provide a reasonable performance compromise and, most important, have docile stall characteristics. For glide-path control "DUSTER" employs balanced trailing-edge dive-brakes designed for a 140 mph terminal velocity. The fast roll rate (about 2.5 sec.) makes this little bird a delight to handle. The outer wingpanels are washed out 2° at the tips and stalls are straight with no tendency to drop a wing. On the ground the small empty weight makes the "DUSTER"

nice to move around, and two people can assemble it in a few minutes without the need for support equipment.

The full cantilever wing employs a main spar of tapered solid spruce laminations, the ribs are 1/4-inch plywood, the skins 3/32-inch plywood, the ailerons are 1/16-inch plywood with a top-surface hinge, and the dive brakes are torque-tube operated. The outer wing panels weigh 90 lbs each, the center section 75 lbs for a total of 255 lbs.

The fuselage is a slab-sided 1/8-inch plywood shell with an elongated hexagonal crosssection in the cockpit area changing into a triangular section aft of the wing. A 1/4-inch plywood keel is reinforced by two intercostal bulkheads which are shaped to a reclining seat contour and support a floor-seat separating all controls from the cockpit. The frames are 3/4-inch plywood in the high-stress areas, 1/4-inch elsewhere. The aileron and elevator control systems are push-pull with the elevator trim integral. Cockpit layout is standard, and the sailplane can be flown open or closed. The canopy is a flat-wrapped 1/16-inch plexiglass bent sheet, the nose cone and fairings are fiberglass. The fuselage weighs about 125 lbs. The tail surfaces are skinned with 1/16-inch plywood and are removable by loosening one bolt.

An auxiliary power package is now being developed that will use a 26-HP powerplant. The plans detail all the hardware necessary to support the engine mount which can be added later at the owner's option without any changes in the airframe.

COMPLETE PLANS and BUILDING INSTRUCTIONS.....\$75.00
(The plans comprise 100 sq.ft. of professional drawings with all hardware detailed full size, and a booklet of step-by-step building instructions.)

