PINEY MOUNTAIN AIR FORCE

Box 7304 * Charlottesville * Virginia * 22906-7304

DATA☆LETTER

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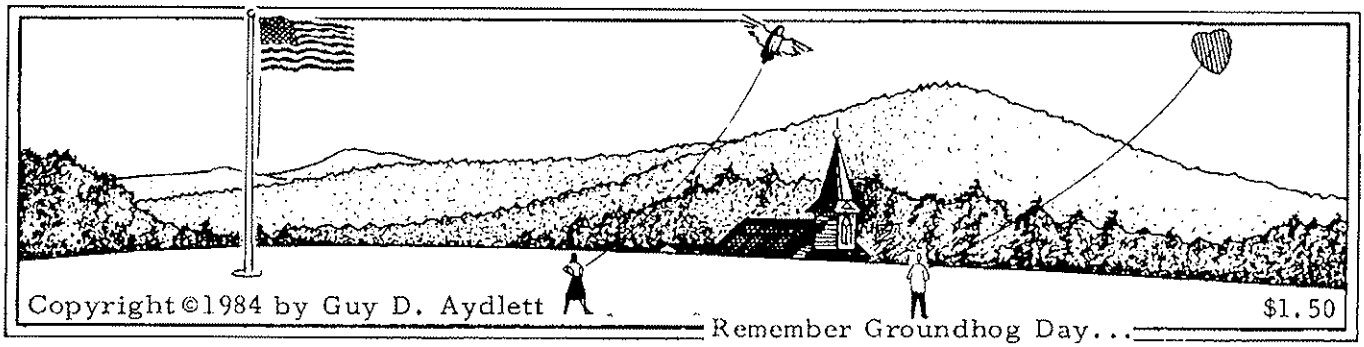


Remember Groundhog Day...

LITHO IN U.S.A.

FEBRUARY, The Second Month of this Orwellian year, gives us an extra day for a total of 29. Unless your timepieces have the perpetual calendar feature, beware: 1 March may arrive twenty-four hours too early.

DOROTHY DAY (St. Dorothea) is on the 6th.

ABRAHAM LINCOLN'S birthday is the 12th.

The 14th is the day to fly your valentine.

While full-mooning on the 16th, spare some time to celebrate the 47th anniversary of the patenting of nylon.

GEORGE WASHINGTON was born on the 22nd.

THE 29TH—Big Brother will watch us all day.

*

BOOK, MAGAZINE, OR PICTURE EXCHANGE

Do you want to sell, buy, or swap formerly published information about airplanes, autogyros, balloons, birds, boomerangs, helicopters, kites, ornithopters, or other aerovanes? If so, write to PMAF and we'll attempt to mix or match sellers, buyers, or swappers in a published list or by some more direct means.

Accurately describe the item that you want to buy, sell, swap, or give away. Include a stamped, self-addressed envelope if you ask for a direct reply to your letter of inquiry.

*

JON BURKHARDT, latest editor of Maryland Kite Society's *Windy Notice*, is a wordsmith of enviable heft. The evidence is to be seen in Volume 15, Nos. 5 and 6, the first efforts by the new editor in the new format. Just to keep him in housebroken balance, our PMAF denizens unanimously have made Jon our newest Troll of Full Fledge (Junior Grade. . .).

*

L. W. OSBORNE, Melbourne, Australia, sent this friendly note: ". . .Greetings from Australia. Thank you for making 1983 so full of kite news. Keep up the good work.

"Thought you might like to see the enclosed [photographs]. The kite is a small centipede brought back from China by a friend. . . .

"Best wishes. Keep us informed of all that is good in kiteflying. —Lonny Osborne."

[Lonny's centipede kite is a tiny, gem-like creation that appears to be about 1.5 metres long. Its articulation consists of nine disks for the body—about 13 cm in diameter—and a lavishly decorated dragon head.]

*

REDEYE WHEELER, the ever-faithful Connecticut Yankee, says: "Thanks for. . .three index entries for some feller alias Redeye!

"I have just learned of a benign affliction visited upon you: *opsimathy*, the ability to carry on your education in later years. I had to go all the way back to my Webster's First International, 1919, for the definition.

"P.S.: Don't collect any eonons, murrows, or portable rock maple fireplaces. —Redeye."

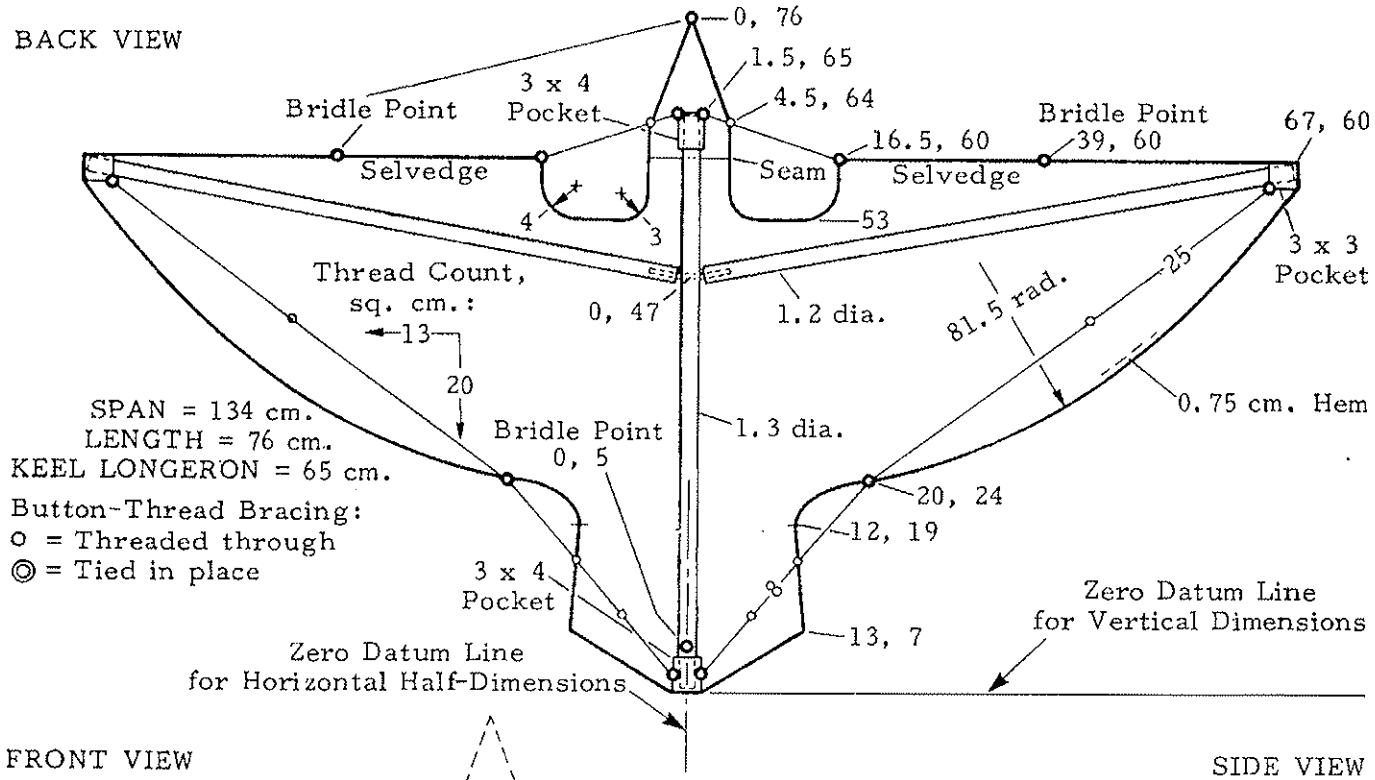
*

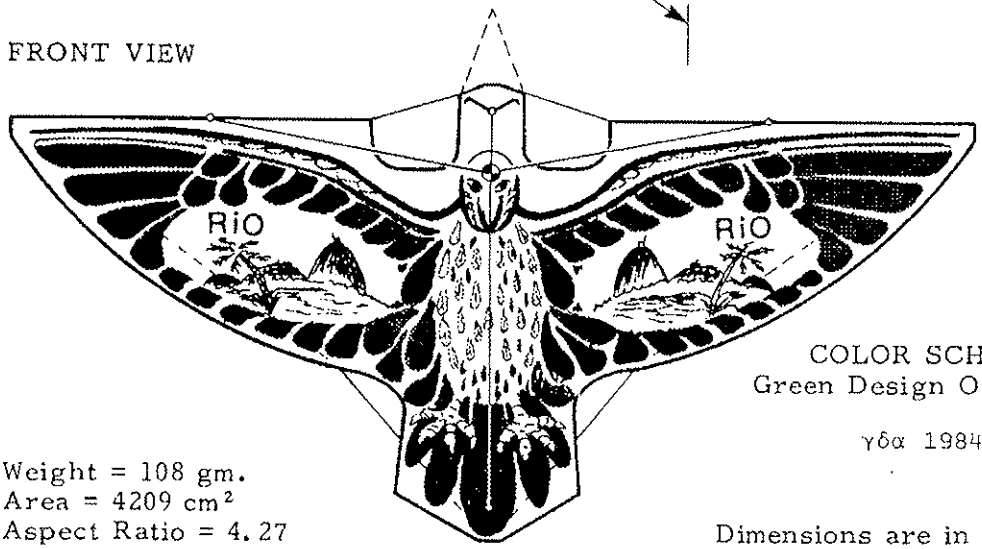
ARCHER NICKERSON, Duxbury, MA, offers: ". . .Re your writing about ultralights and the ownership of one by PMAF: I hope you will preach safety with every. . .discussion."

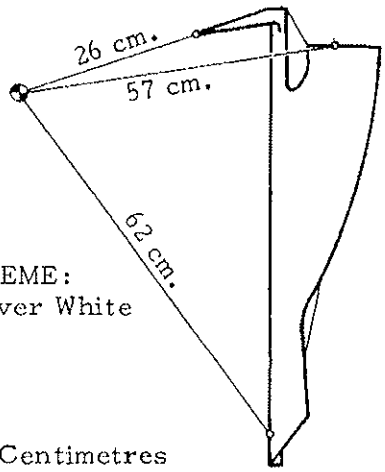
[See p. 4]

THE BRAZILIAN CLASSIC PAPAGAIO KITE

A Dimensional Analysis of the Brazilian Parrot, by Guy D. Aydlett







COLOR SCHEME:
Green Design Over White

γδα 1984

Weight = 108 gm.
Area = 4209 cm²
Aspect Ratio = 4.27

Dimensions are in Centimetres

PAPAGAIO was unknown to denizens of Piney Mountain until an excellent sample was given to our archives by JOHN DOUGLAS FORBES, AKA Life Member, U. of Va. Professor Emeritus, and resident of Charlottesville and San Francisco.

Our sample of the rare parrot kite is made entirely of biodegradable, natural materials: The canopy is woven of coarsely spun cotton fibers, open meshed, and with a low thread-count; the outlining string and the bridle—cotton, too—are about the gage of standard twisted button thread; and the keel longeron and spars are made of a remarkable reed-like material that has a continuous smooth, hard, load-bearing skin that encloses a lightweight core of pithy material not unlike styrofoam.

The inboard spar-ends are loose fits on the longeron junction cross-pin, and are held in place by the tension of the fabric; therefore, judicious bridling will control the amount of dihedral the kite will have in flight. The kite is a little tricky to rig and tune up for flight, but it flies very well, indeed—like a parrot.

THE PLATONIC SWEETHEART

A Tailless Cardioid Kite by Hornbeam Thatch

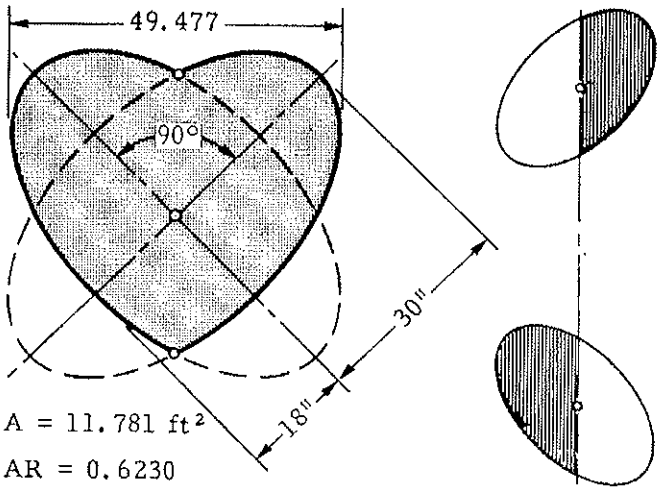


Figure 1: Ellipse Halves Make a Heart Shape

THE LAYOUT

HEART-SHAPE GEOMETRY for a Valentine's Day kite is a bit of a stumper; there appears to be no international standard for that symbol of affection. The *cardioid* curve of geometers, $r = a(1 + \cos\Theta)$, yields a fubsy glob that lacks finesse; and even paired spirals--logarithmic, hyperbolic, or Archimedian—do not have the aesthetic appeal of the freehand sidewalk chalkings of a smitten 5th-grader.

The paired demi-ellipses in Figure 1 make a tolerably pleasant shape that can be laid out in Cartesian coordinates; the area, too, can be calculated exactly. Here are layout ways:

1. Refer to Figure 2, which shows how the Cartesian x-y coordinates listed in Table I are used to plot a series of points that will define an accurate one-quarter of an ellipse. Make a pattern of cardboard or stiff paper that can be conveniently laid and traced upon a piece of covering material.

Area of the Heart Shape:

$A = \pi ab = \pi \times 30" \times 18"$

$A = 1,696 \text{ in}^2 = 11.78 \text{ ft}^2$

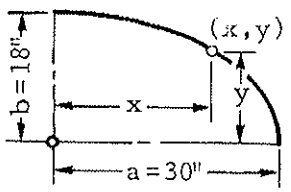


Figure 2: Quarter Layout

TABLE I

X	Y	X	Y	X	Y
0.00	18.00	15.00	15.59	27.00	7.85
3.00	17.91	18.00	14.40	28.00	6.46
6.00	17.64	21.00	12.86	29.00	4.61
9.00	17.17	24.00	10.80	29.50	3.27
12.00	16.50	26.00	8.98	30.00	0.00

2. Use the string-and-foci trick *(DL # 13)*.

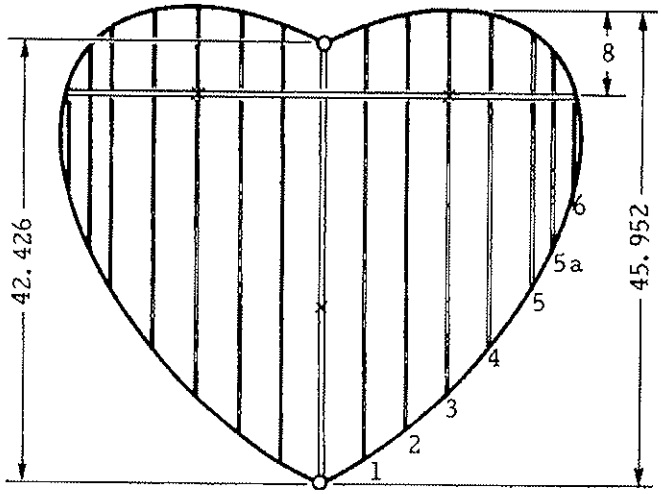


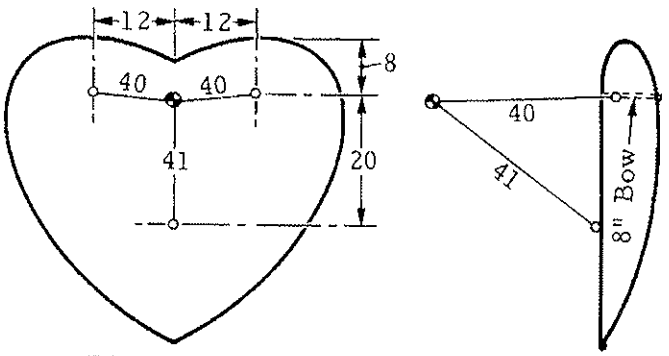
Figure 3. Arranging Battens, Keel, and Spar

CONSTRUCTION AND BRIDLING

1. Use the pattern and cut out the heart-shaped canopy in a covering material of your preference. Allow extra margin if you intend to hem the kite perimeter.

2. Refer to Figure 3, backside of the kite, and glue, tape, or sleeve—on 4" centers—six longitudinal battens on each side of the keel. Use 1/8" dia. birch dowels or 1/8" sq. Sitka spruce for the battens. Note that the short batten, 5a, is placed halfway between 5 & 6. Make the keel batten of 1/4" square spruce.

3. Use spruce 1/4" sq. x 48" long for the bow-spar; if it's pocketed or sleeved, it can be removed and the canopy rolled up for easy transportation.



FRONT VIEW SIDE VIEW

Figure 4. The 3-Branched Bridle Dimensions

4. Bridle the kite to the dimensions shown in Figure 4 for a first flight trial. Vary the bridle adjustments for refining flight characteristics; use approved Eddy-kite tuning procedures—a little bit at a time *(see DL #21)*.

ULTRALIGHT FLYING recently was given a subjective lambasting on national television.

Apprehensive kiteflier friends who saw that hardly unbiased presentation wrote letters to our ultralight pilot and voiced concern for the sanity and safety of we rash folk who fly rag= and-tubing contraptions that are laid on unwary aspirants by mad, greedy inventors who maliciously "sell you a construction kit that you put together and teach yourself to fly."

On balance, we think the inventors, manufacturers, and dealers are no more malicious than famous television persons who emphasize the negative aspects of the ultralight flying sport. As regards greed, it's an all-pervasive sin of humanity that even exceeds the making of graven images. We all recognize its existence—even in the ranks of TV idols—and we instinctively look for the profit motive when we have dealings with any person in business —even with saints who make and sell kites.

Caveat emptor is as valid a rule of life now as it was in the heyday of the Roman Empire. Remember this remark in *DL No. 26*? *"Ultralight airplanes. . .they are not everybody's dish of tea."* That caveat is as valid as the classic that warns the buyer to beware.

Operating *any* vehicle in three dimensions is hazardous; and an air pilot's poor judgement or lack of experience can encourage the earth to rush up at him with grievous effect.

An ultralight is not a toy; it can kill you a little; but so can a Cessna, a Piper, or any of the giant airliners. The degrees of risk in all aircraft are determined by weather, airworthiness of the hardware, and the objective judgements and experience of pilots.

Despite the distortions of doomsayers, the Federal Aviation Administration does regulate ultralight flying; but because the sport is a new one, the rules unquestionably are more lenient than those published for heavier craft (the heavier the vehicle, the heavier are the government regulations).

Part 103 of the Federal Aviation Regulations (FAR) limits a powered ultralight to a weight of 254 lbs. or less, and not more than 30 lbs. of gasoline may be carried. Even when pilot weight is added to that 284 lbs., the gross weight of the flying package is *very low*: low enough to make it highly sensitive to gusting winds, wind-shears, gradients, and rotors.

The ultralight pilot must know his micrometeorology; know and avoid unsafe weather conditions.

Ultralights have been defined by some wags as "reinvented airplanes," and there is much truth in the definition. In the absence of FAR criteria for the structural integrity of ultralights, each pilot is definitely "his own test pilot"; and he should learn all he can about airframes, fittings, controls, and basic aerodynamics before deciding to enter the sport.

Ultralight pilots have been credited with "reinventing the reasons for having bad accidents"; but that is an unfair indictment of many excellent pilots, because the reasons are as old as aviation itself. Pilot error most often is caused by low levels of education and flight experience.

We urge any aspiring ultralight pilot to see a certificated medical examiner; to pass the physical examination for a third class medical certificate; to enroll in a federally accredited private pilot ground school course. Choose an ultralight instructor who has a good reputation. Be ready to fire him if you dislike his methods or ethics. *Before you buy an ultralight, try to fly at least 20 hrs. of supervised solo. DO NOT TEACH YOURSELF TO FLY.*

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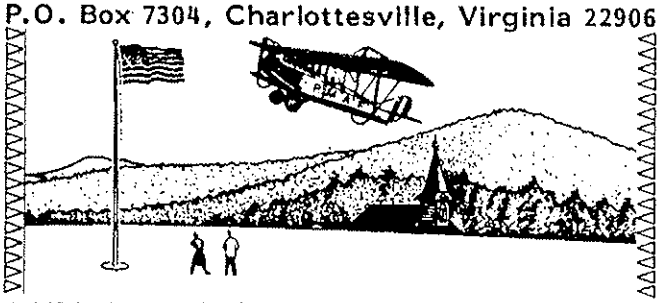

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