

PINEY MOUNTAIN AIR FORCE

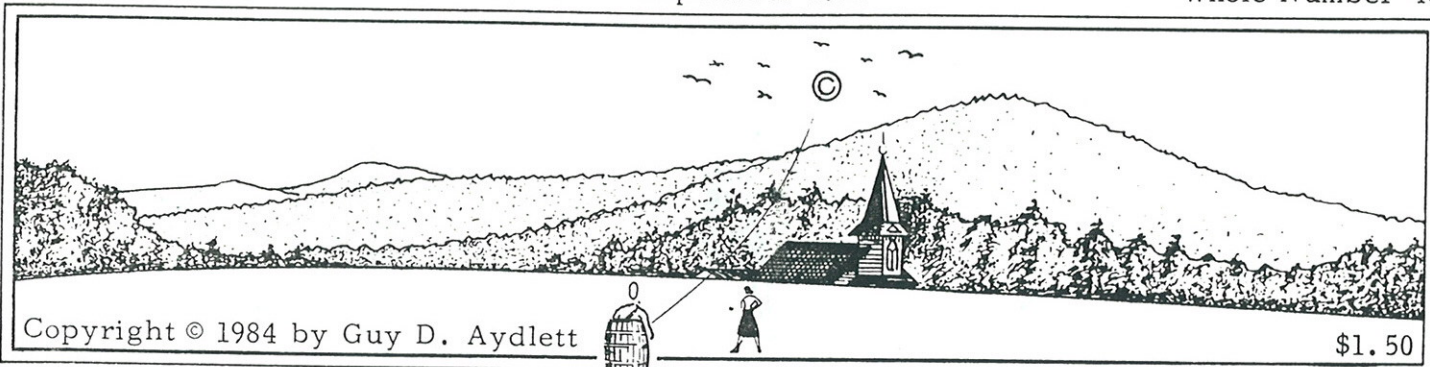
Box 7304 * Charlottesville * Virginia * 22906-7304

DATA ☆ LETTER

VOLUME III, No. 9

September 1984

Whole Number 46



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\$1.50

LITHO IN U.S.A.

SEPTEMBER 1984

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30						

Birthstone: Sapphire

- 3rd — Labor Day: Be diligent
- 8th — Birthday: V. Mary and Betty Lewis
- 10th — Full Harvest Moon
- 22nd — Autumn Equinox
- 27th — Rosh Hashanah and The Hegira
- 28th — American Indian Day
- 30th — Fast of Gedaliah

*
MARTY SHIGEO SASAKI, editor of *Flypaper* [ugh!], the spirited newsletter of Kites Over New England (K.O.N.E.), is entangled in a rete of sticks and strings: "*Tensegrity Kite Frames*," a palpable descriptive geometry exercise influenced by his exposure to the arts and witchcraft of Buckminster Fuller. Marty has braved courageously the hazards of hiccoughs, nerve glitches, strabismus, logus of the bogus, and the seven-year itch: all are likely to afflict any kite designer who strays into the arcane paths of the Devil and Beauforce Stringfellow. Remember the *Klein Flask*, the *Möbius Strip*, and the *Stringfellow Giant Re-entrant Tri-Squid* in past PMAF hi-jinks?

TENSEGRITY, TENSional intEGRITY, is a qualifying name for a structure ingeniously

fashioned of rigid parts in pure compression balanced by flexible parts (string) loaded in pure tension.

In *Flypaper Volume 2, Number 1*, Marty reveals how one may make a simple tensegrity from three 12-inch dowels and nine pieces of string, each 8 inches long. The result is a wood-and-string space lattice that is light in weight and wonderfully strong: the sticks appear to float in the string-bounded volume.

Marty promises "some equations for figuring out the tendon and strut lengths, tensegrities with more than three sides [sticks?] and two hexagonal box kites" in *Vol. 2, # 2*.

Send \$5.00 to K.O.N.E., 24 Henshaw Terrace, West Newton, MA 02165; you'll receive a year's worth of *Flypaper* [ugh!]-4 copies.

*

SEE THAT LITTLE CEE IN THE CIRCLE? FRIENDLY READERS sometimes wonder why clever, syndicated cartoons depicting amusing kite-related activities are not to be seen in *PMAF DATA LETTER*. Here's the reason: the artist, publisher, and/or syndicate have exclusive rights in the work. The © symbol means the copyrighted work is registered—or about to be—with the Copyright Office. Even if the © is not displayed, all published works since 1977 are protected by an *implied copyright*; and unauthorized users of published works risk being fined or imprisoned.

Copyright law also guards the rights of an individual contributor to a collective work.

Recently, an agent of the AKA hierarchy—or of its management corporation—distressed us by ignoring our ©. ("*Hot Potatoes*," p. 4)

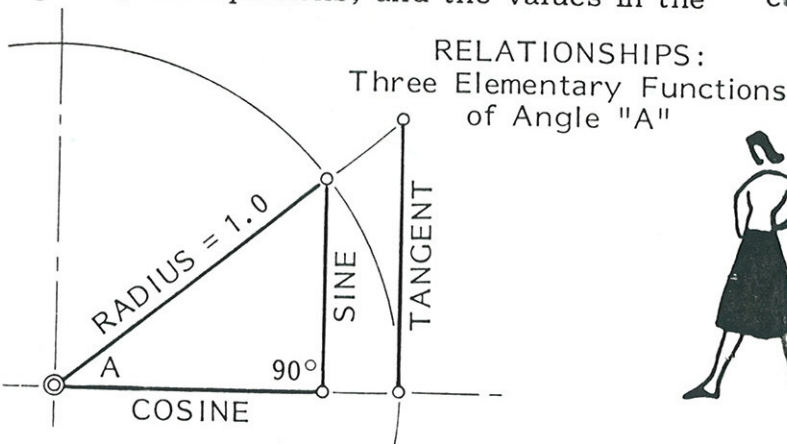
A TRIGONOMETRY REFRESHER ON ONE PAGE

by G. Ompter

A missing dimension in a kite plan may be calculated if it can be identified as a part of a right triangle in which—exclusive of the 90° angle—two other parts are known. The two figures, the equations, and the values in the

table of basic trig functions (below) are all that you need to resolve the lines and angles.

Even the table is not necessary if you own one of the wonderful, accurate, scientific calculators that can be bought for about \$10.00.



$$a = c \times \text{Sin } A \quad a^2 = c^2 - b^2$$

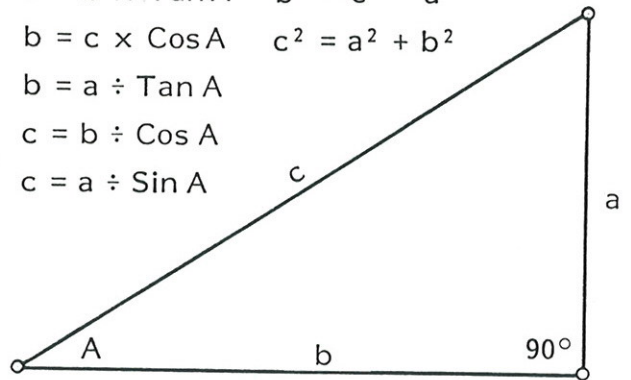
$$a = b \times \text{Tan } A \quad b^2 = c^2 - a^2$$

$$b = c \times \text{Cos } A \quad c^2 = a^2 + b^2$$

$$b = a \div \text{Tan } A$$

$$c = b \div \text{Cos } A$$

$$c = a \div \text{Sin } A$$

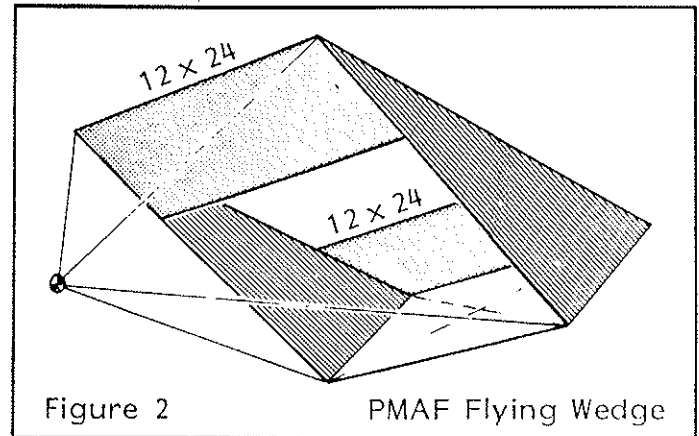
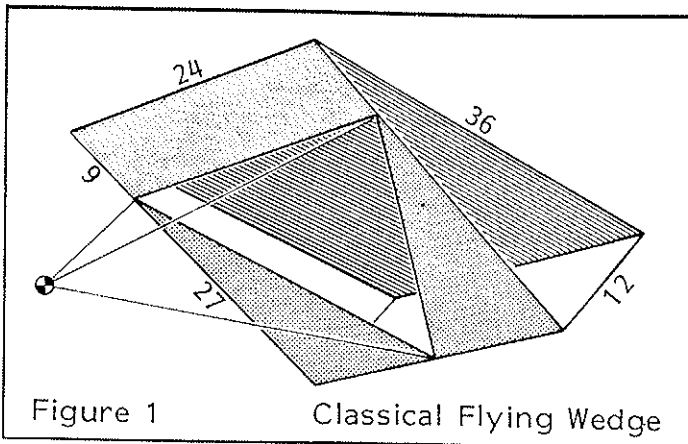


$$\text{Tan } A = \text{Sin } A \div \text{Cos } A \quad \text{Sin}^2 A + \text{Cos}^2 A = 1.0$$

A	Sin	Cos	Tan	A	Sin	Cos	Tan	A	Sin	Cos	Tan
1°	0.017	1.000	0.017	31°	0.515	0.857	0.601	61°	0.875	0.485	1.804
2	0.035	0.999	0.035	32	0.530	0.848	0.625	62	0.883	0.469	1.881
3	0.052	0.999	0.052	33	0.545	0.839	0.649	63	0.891	0.454	1.963
4	0.070	0.998	0.070	34	0.559	0.829	0.675	64	0.899	0.438	2.050
5	0.087	0.996	0.087	35	0.574	0.819	0.700	65	0.906	0.423	2.145
6°	0.105	0.995	0.105	36°	0.588	0.809	0.727	66°	0.914	0.407	2.246
7	0.122	0.993	0.123	37	0.602	0.799	0.754	67	0.921	0.391	2.356
8	0.139	0.990	0.141	38	0.616	0.788	0.781	68	0.927	0.375	2.475
9	0.156	0.988	0.158	39	0.629	0.777	0.810	69	0.934	0.358	2.605
10	0.174	0.985	0.176	40	0.643	0.766	0.839	70	0.940	0.342	2.747
11°	0.191	0.982	0.194	41°	0.656	0.755	0.869	71°	0.946	0.326	2.904
12	0.208	0.978	0.213	42	0.669	0.743	0.900	72	0.951	0.309	3.078
13	0.225	0.974	0.231	43	0.682	0.731	0.933	73	0.956	0.292	3.271
14	0.242	0.970	0.249	44	0.695	0.719	0.966	74	0.961	0.276	3.487
15	0.259	0.966	0.268	45	0.707	0.707	1.000	75	0.966	0.259	3.732
16°	0.276	0.961	0.287	46°	0.719	0.695	1.036	76°	0.970	0.242	4.011
17	0.292	0.956	0.306	47	0.731	0.682	1.072	77	0.974	0.225	4.331
18	0.309	0.951	0.325	48	0.743	0.669	1.111	78	0.978	0.208	4.705
19	0.326	0.946	0.344	49	0.755	0.656	1.150	79	0.982	0.191	5.145
20	0.342	0.940	0.364	50	0.766	0.643	1.192	80	0.985	0.174	5.671
21°	0.358	0.934	0.384	51°	0.777	0.629	1.235	81°	0.988	0.156	6.314
22	0.375	0.927	0.404	52	0.788	0.616	1.280	82	0.990	0.139	7.115
23	0.391	0.921	0.424	53	0.799	0.602	1.327	83	0.993	0.122	8.144
24	0.407	0.914	0.445	54	0.809	0.588	1.376	84	0.995	0.105	9.514
25	0.423	0.906	0.466	55	0.819	0.574	1.428	85	0.996	0.087	11.430
26°	0.438	0.899	0.488	56°	0.829	0.559	1.483	86°	0.998	0.070	14.301
27	0.454	0.891	0.510	57	0.839	0.545	1.540	87	0.999	0.052	19.081
28	0.469	0.883	0.532	58	0.848	0.530	1.600	88	0.999	0.035	28.636
29	0.485	0.875	0.554	59	0.857	0.515	1.664	89	1.000	0.017	57.290
30	0.500	0.866	0.577	60	0.866	0.500	1.732	90	1.000	0.000	∞

A SUCCESSFUL FLYING WEDGE KITE

by Sue D'Nimm



Since involvement in the present, popular Wedges of Sin Madness was thought to be an unseemly pursuit for septagenarian designers among the PMAF coven, I volunteered to see if a younger dogsbody—gofer, junior grade—might cope successfully with the challenge of attempting to design, make, and fly a reasonable facsimile of "the notorious non-flier."

The classical dimensions and disposition of covering material (Fig. 1) almost shouted for the need of a stabilizing appendage (t--l) or a set of side curtains to provide some lateral resistance a la box kite.

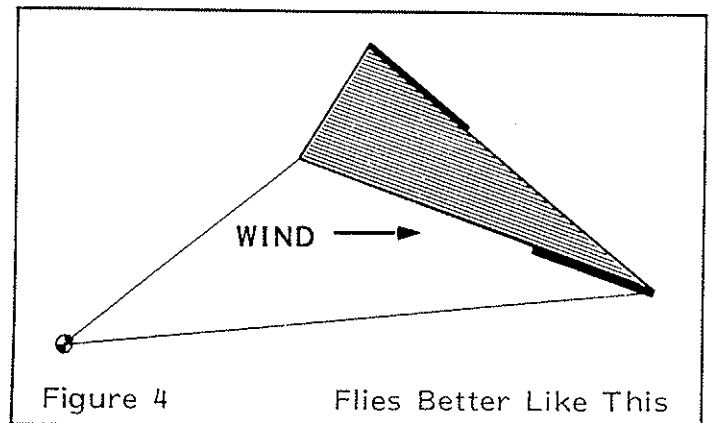
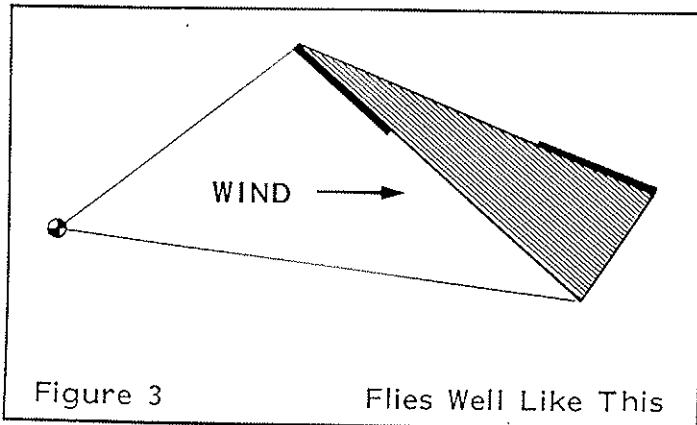
I kept the classical dimensions in my version of Flying Wedge; but I rearranged the covering, added the needed side-curtains, and created a demi box kite that flew well on its first trial flight (Fig. 2). (An old WW-II B-17 waist gunner tells me it reminds him of the B-26 "Baltimore Strumpet" —no visible means of support—but he uses a biblical noun of one rhyming syllable in lieu of "strumpet.") CONSTRUCTION: 5-mil Type 10 Tyvek® was spread smoothly on the work table and pieces of Sitka spruce, 1/8" x 1/4" in cross section, were fixed to the covering material with white glue. The resulting pairs of triangles and

rectangles were tied together and braced with 36# test squidding line diagonals and a 24" length of spruce.

A simple two-leg V-bridle, attached to the acute front corners, made the kite fly well; but two additional legs from the bottom, or back, corners damped out a tendency for the kite to bobble in pitch, or nod, while flying.

Figure 3 schematically displays the PMAF Flying Wedge in its flight attitude with respect to a wind vector. The bold lines at the top and bottom of the structure represent the edges of the near-horizontal lifting and stabilizing surfaces. Stabilizing? Yes. The plane surfaces effectively make a fore-and-aft dihedral angle that performs as a stabilizing couple just as surely as turned up wingtips bestow lateral stability on an aerovane. Even better is the fact that the longitudinal dihedral nullifies the nasty sink rate that afflicts most of the common box kites.

Figure 4, also a schematic, shows our kite flying with its broad end flying forward/up; it flies much better, too. The reasons may be that the principal lifting plane has better tip efficiency—end-plate effect—and the stabilizer plane benefits from its clean downwash.



HOT POTATOES

Guy D. Aydlett, Editor
PINEY MOUNTAIN AIR FORCE DATA LETTER
Box 7304, Charlottesville, Virginia 22906



American Kitefliers Association

AN OPEN LETTER TO:

2 July 1984

Carol T. Shaner, Administrator
AMERICAN KITEFLIERS ASSOCIATION
113 West Franklin Street
Baltimore, Maryland 21201

Dear Ms. Shaner:

The Newsletter Contributor patch that you mailed to me in your letter of 7 June is enclosed for return. It is an unearned honor; therefore, I cannot accept it.

In AKA NEWS, April-May 1984, an anonymous—possibly naive or uninformed—"editor" attached this "Editor's Note" at the beginning of the Page 16 article: ". . . The following article was originally featured in Guy Aydlett's PINEY MOUNTAIN AIR FORCE DATA LETTER. Both Mr. Aydlett and Mr. Sasaki have given AKA permission to use it."

That "permission" is news to me. If you think your position is secure, please send to me any copies of the permissions your "editor" mentioned; I should like to see them. In the past, I have expressed my willingness to permit non-profit clubs to reprint—with prior written permission and under definite conditions—some or most articles or plans in PMAF DATA LETTER; but carte blanche raids on the PMAF Pork Barrel were not anticipated. They compromise future uses of the copyrighted content of PINKY MOUNTAIN AIR FORCE DATA LETTER.

In the June-July 1984 AKA NEWS, another copyright infringement shows on Page 21: "DAD'S KITE"—this time without any pretense that prior permission was secured to use the material.

According to your 7 June letter: "Our 'future issues' file is full of articles and plans from the DATA LETTER which we hope to include in AKA NEWS one day."

Please heed this caveat: Do not publish any copyrighted material—from any source—without first having filed written permission from the owner or owners. Infringement penalty judgements usually are severe.

I cannot respect opportunistic, presumptuous, or careless acts performed by any person or agent who professes to be working in the best interests of AMERICAN KITEFLIERS ASSOCIATION.

Sincerely,
Guy D. Aydlett
Guy D. Aydlett
AKA Life Member

cc: C. James Summers, Esquire;
Buff, Summers & Childress

cc: Miller Makey
Jack Van Gilder
Brooks Leffler

Association Headquarters
113 W. Franklin Street
Baltimore, Maryland 21201
(301) 752-3320

Sincerely,

Carol T. Shaner

Carol T. Shaner
Administrator

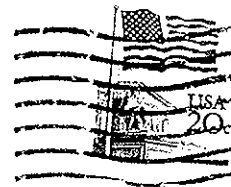
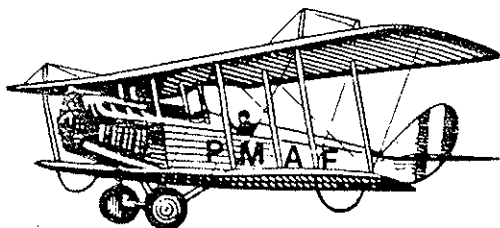
Your non-editor is not paid \$900 per month—plus expenses—to produce DATA LETTER or manage the affairs of Piney Mt. Air Force. On the contrary, our Charlottesville accountants can affirm that the costs of preparing and distributing DATA LETTER exceed the gross income by more than \$1,200 per year. That deficit is made up by scraping the lint from the bottom of the editorial pocket; and if the squandering of dollars, precious time, and thought do not equate with being happy "to share. . . knowledge of kiting to the ben-

efit of others," then Piney Mountain Air Force must bear the stigma of harboring the most Scroogeous of AKA life members.

The letter mentioned above as being "quoted selectively" was embarrassingly panegyric; tended to make The Oldest Troll feel as if he were the centerpiece of a wake attended by eulogy-laden, expectant heirs-apparent.

Comments from potato lovers re the bounty spread above will be welcome, particularly if they come from AKA officers or members who can positively identify the AKA NEWS editor.

PINEY MOUNTAIN AIR FORCE DATA LETTER
P.O. Box 7304, Charlottesville, Virginia 22906



Dec 1984
(R457)

Richard S. Robertson
5401 Shoalwood Avenue
Austin, TX 78756