

A RECAP OF THE HORNBEAM MARK I ALLIFLEX KITE

by Beauforce Stringfellow and Fline Kermud-Jinn

HORNBEAM MARK I continues to enjoy world-wide popularity because of its excellent flying characteristics and the ease with which it can be laid out, made, and flown by children or adults who have had little experience with the kiteflying sport or hobby. A noteworthy part of the charm of "THE HORNBEAM," as its host of friends like to call it, is its adaptability to being fabricated in a large range of sizes from readily found materials in the home, at school, at kite club seminars, and in the science museums of the world.

be appropriate here to mention briefly a few items of interest that have emerged during the course of seven years of flying Hornbeam:

The planform should not be altered.

Any flexible, lightweight covering seems to work well; but beginners who paste up paper, garbage bags, or Tyvek® often have better flight performance than experienced makers who sew together esoteric materials (here, it seems that the experts are hoist by their own sewing machines that turn out unsymmetrical coverings). Another fault of sewn Alliflexes

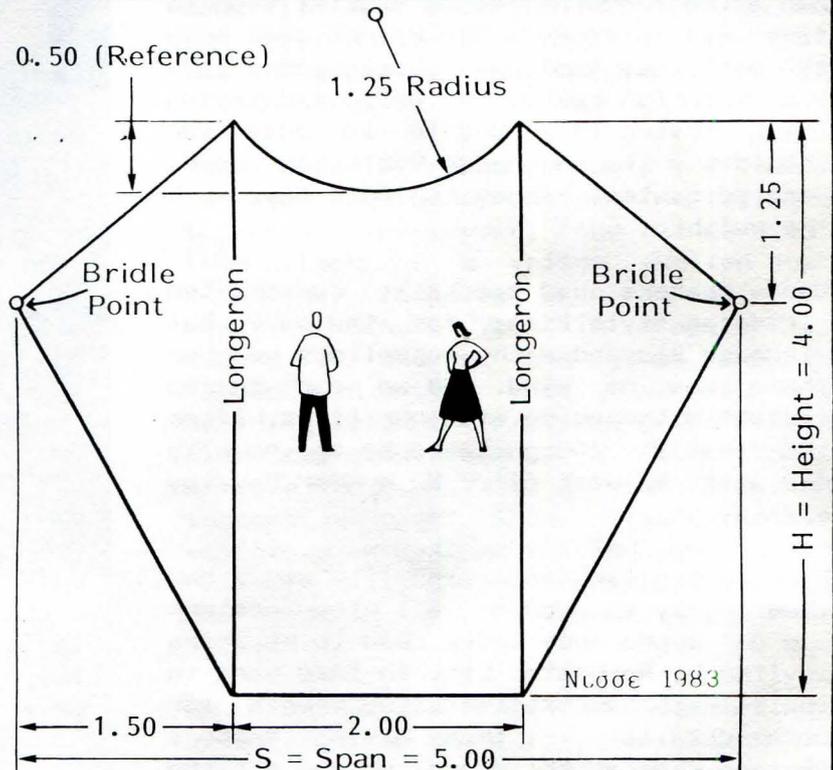
NOTES:

The drawing is dimensioned in arbitrary modules. Choose your own value for a module and multiply it by the numbers shown. Example: If you chose 10" for your module, the kite would be 40" high and 50" wide.

Make your longerons of any light weight, moderately flexible material. Small kites will fly well if a stapled or taped crease is made in the covering material at each longeron location. Allow extra material for the self-creases or pleats.

Make a two-branched V-bridle of stretch resistant braided line. Each branch should be about three modules in length. If your kite leans in flight, shorten the low-side branch.

Bridle points can be loops of line—or grommets—fixed to reinforced or hemmed covering at the corners.



HORNBEAM MARK I

$$\text{Area} = A = 0.83 \times H^2$$

As flown by Piney Mountain Air Force

$$\text{Aspect ratio} = \frac{S^2}{A} = 1.88$$

It is estimated that one-half million Hornbeams have been enjoyed by kitefliers since it was designed in the spring of 1976 (see *DL No. 2*).

For whatever reason, the occasional ersatz "Hornbeam" may be seen flying (often not too well) at a kite festival; and its maker often appears to believe he has the genuine article.

Therefore, we believe it is time to recap; time to encourage maintaining the purity of the Hornbeam planform.

Recapitulation bears with it the temptation to expand on the design theme, but it may

is leading edges that are too tight. Do NOT take darts in the leading edges to create an airfoil shape of compound curvature.

Longerons may be sprung, sleeved, glued, taped, or pocketed on either the front or the back of the covering—canopy—material.

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