

WHAM

NEWS, VIEWS and REVIEWS

Issue JE-104
July 15, 2013

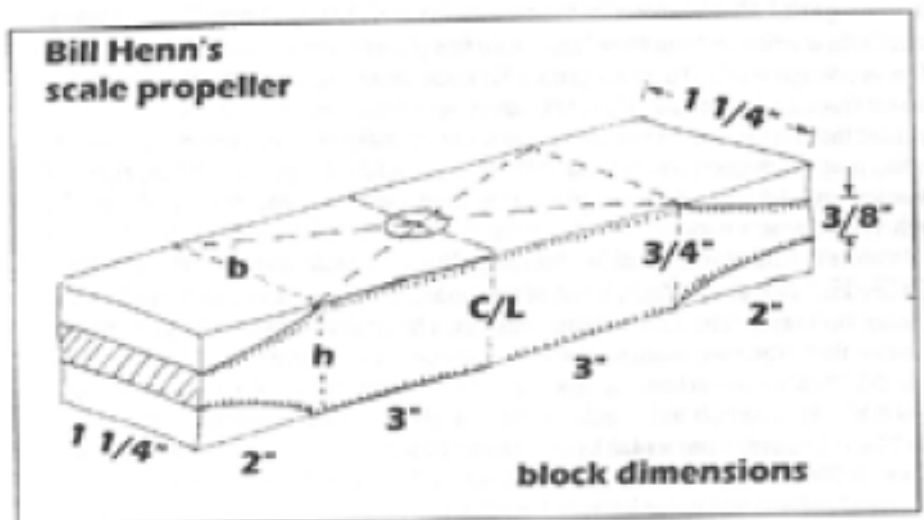
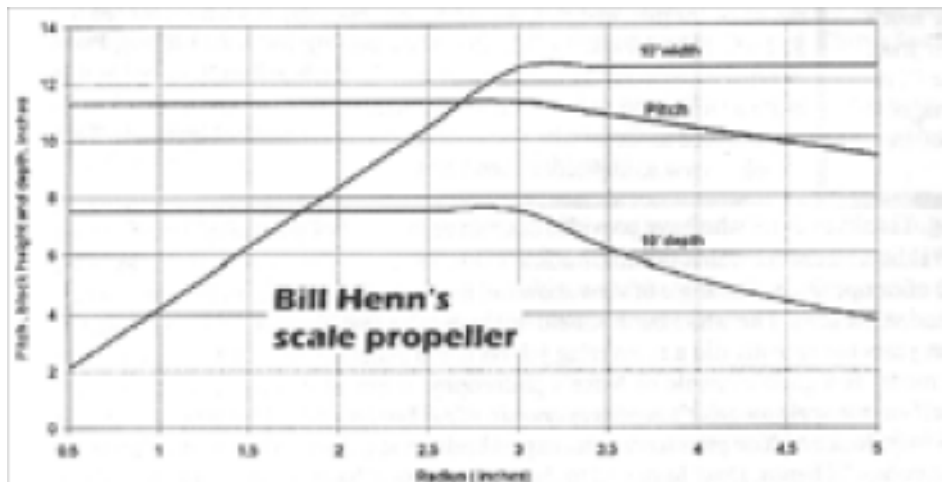
Official Publication of the Wichita Historical Aircraft Modelers, SAM 56,
and the Kansas Sunflower Squadron, FAC Squadron #23

BILL HENN'S SCALE PROPELLER

"Ever since I began to fly free-flight scale, more than 30 years ago, I have been experimenting with various propeller pitches. About five years ago I settled in on this design and now scale it up or down for use on all models. It seems to work well using the 15% motor weight rule used in the NE as well as with unlimited motor weights. It should be realized that the subjects I choose to model have rather clean lines and I avoid draggy models such as biplanes. However, I believe this prop would work well on them also. Notice that the pitch diminishes from 60% radius* to the tip. This is in concert with the props such as the Andrukirov which have become the standard with FIB and FIG flyers. Few use helical pitch any more. I have noticed that the diameter of the props used on many scale models is too small for optimum performance. The old rule that the diameter of the prop should equal 1/3 of the wingspan is greatly flawed. There are some equations for calculating prop diameter that may be very useful

but I have never used them and simply go with about +/- 40% of the wingspan depending on the area. I generally start with 40% of the wingspan. If the subject has a slim, high aspect ratio wing such as the FW 152H, I reduce the prop size to about 35%. With subjects that have broad, low aspect ratio wings, prop size is increased to more than 40%, as with my Chambermaid P-Nuts and 22" wingspan versions. Both use props that have a diameter of 45% of the wingspan. The best prop is not going to work unless it is hitched to the right motor. There must be a

means to calculate the number, width and length of the strands for optimum performance, but I have always used the trial-and-error method. With the 10" diameter propeller, six strands of 1/8" rubber works out quite well. With long-nosed subjects, a motor that weighs 40%-50% of the weight of the model can be used without having to add an amount of ballast which will raise the wing loading excessively. To simplify matters I generally design and build my models to a size and weight to accommodate the 10" prop and six strand motor. This combination is used in my twins as well as my single-engine *(Editor's note: The "60%" radius" above refers to the 3" radius on a 10" prop. In the graph below, The "10" width" is the width of the block for the 10" prop, and the "10" depth" is the block depth on the 10" prop.) An article published in the August 2007 issue of Windy Sock, Joe Joseph, editor



May 18, 2013 Meeting Minutes

ATTENDEES:

Mary Kay & George Avila, Paula & Jeff Englert, Jane & Earl Griffith, Regina & Marty Kline, Marty & Jim O'Reilly, Eleanor Phelps, Linda & Chuck Powell, Marilyn & Bill Schmidt, Cindy & Dan Walton

President Avila called the meeting to order.
The previous meeting minutes were approved.
The treasurer's report was presented by Jim O'Reilly.

OLD BUSINESS:

None.

NEW BUSINESS:

Earl Griffith is applying for a CD and needs references.

Jim O'Reilly will CD the SAM FF Champs in 2014.

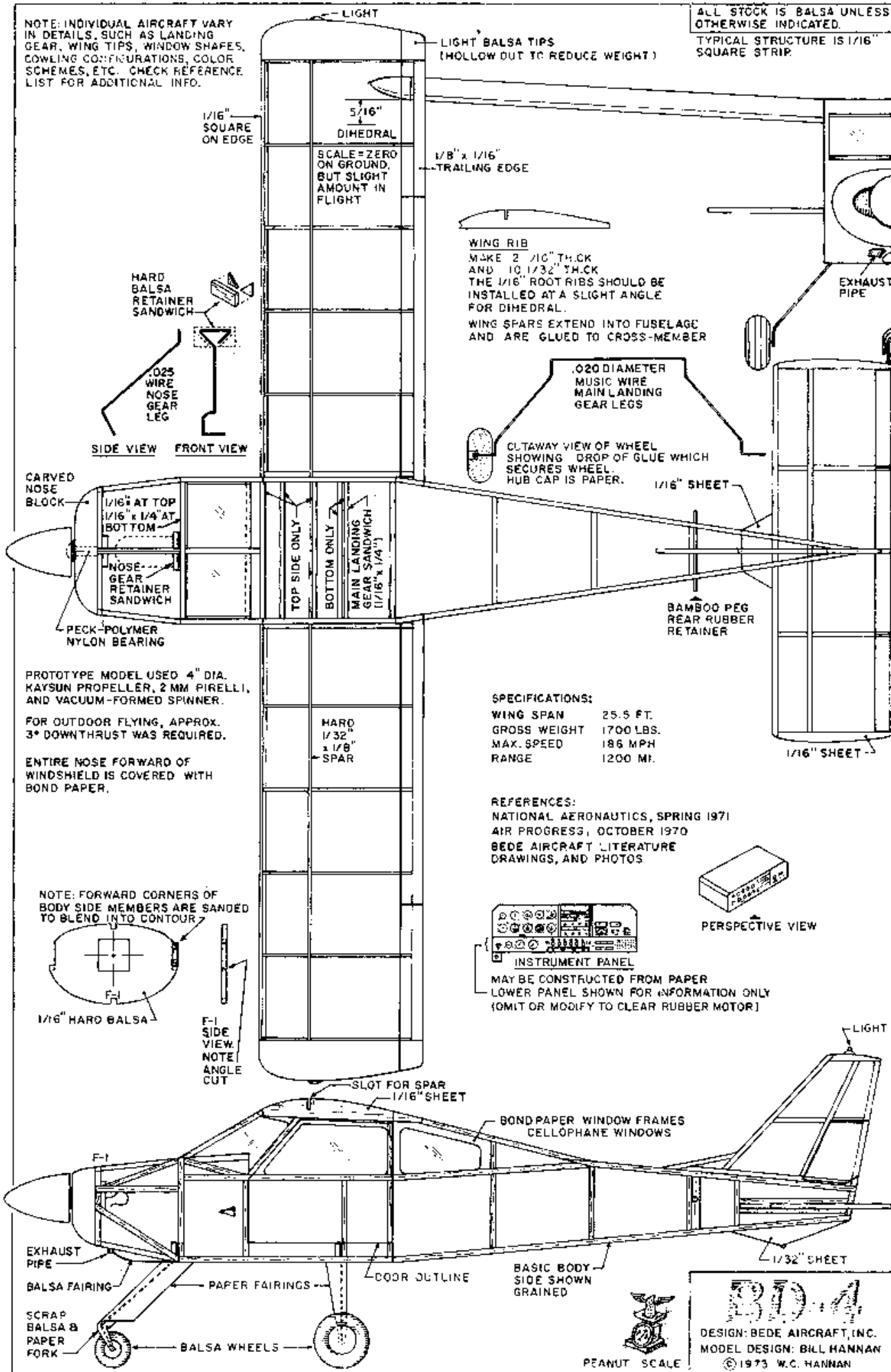
SHOW AND TELL:

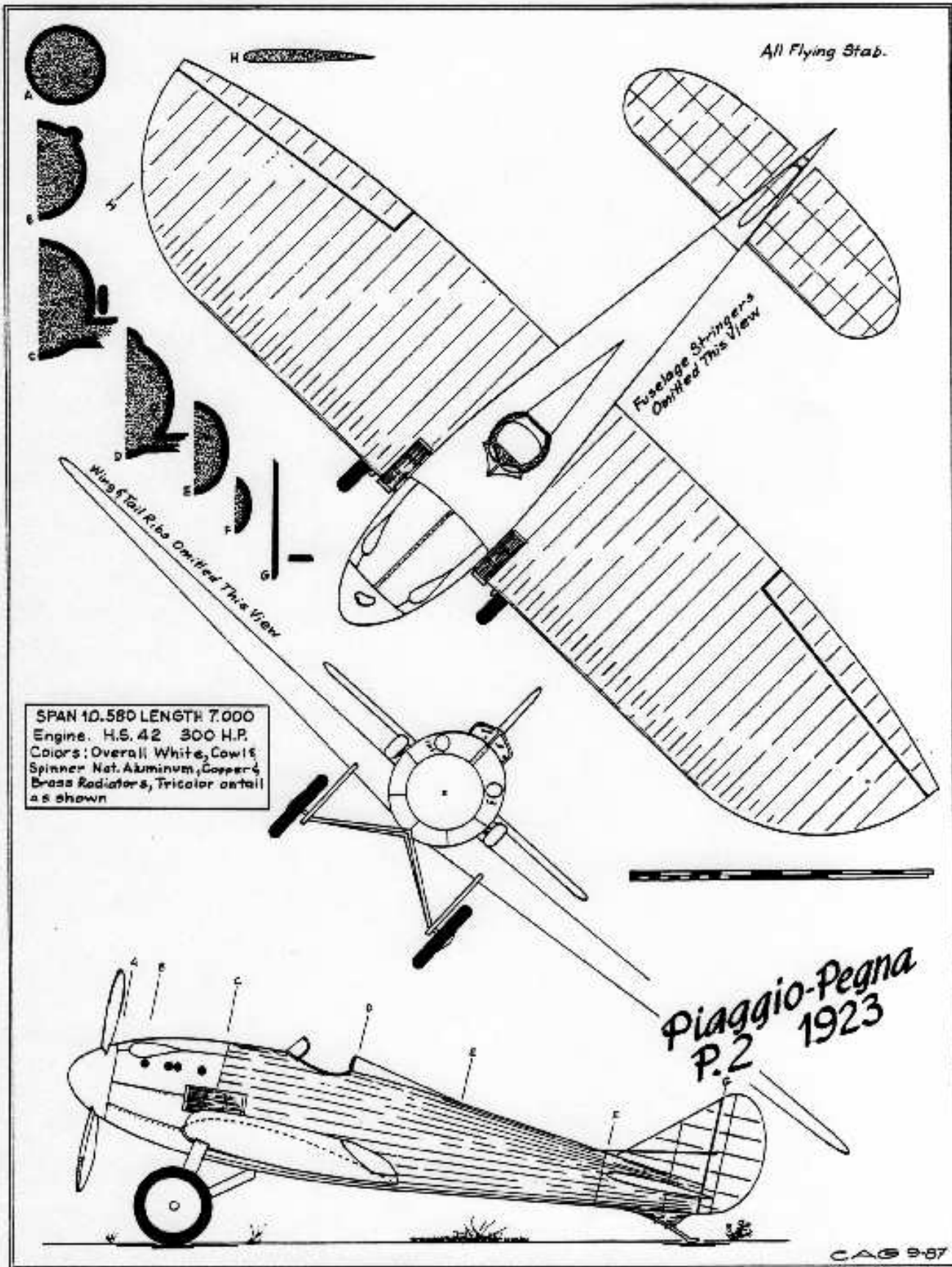
Earl Griffith brought in his A sized T-Bird, never flown it was given to Marty Kline as a new member incentive.

Bill Schmidt presented his Curtiss Goshawk, FIIC, built from a Dallaire plan. And a Curtis Helldiver, SBC-3, from a Dave Livesay plan.

NOTE: INDIVIDUAL AIRCRAFT VARY IN DETAILS, SUCH AS LANDING GEAR, WING TIPS, WINDOW SHAPE, COWLING CONFIGURATIONS, COLOR SCHEMES, ETC. CHECK REFERENCE LIST FOR ADDITIONAL INFO.

ALL STOCK IS BALSA UNLESS OTHERWISE INDICATED. TYPICAL STRUCTURE IS 1/16" SQUARE STRIP.





D.H. 108 SWALLOW

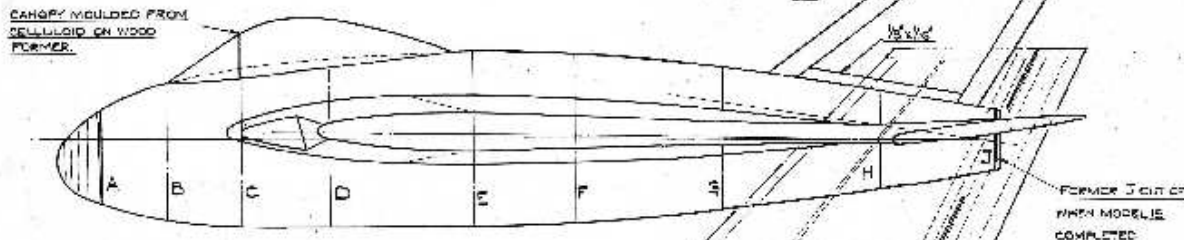
ROCKET PROPELLED MODEL

SCALE 1/2" = 1'-0"

DESIGNED BY:-

Howard Boyd

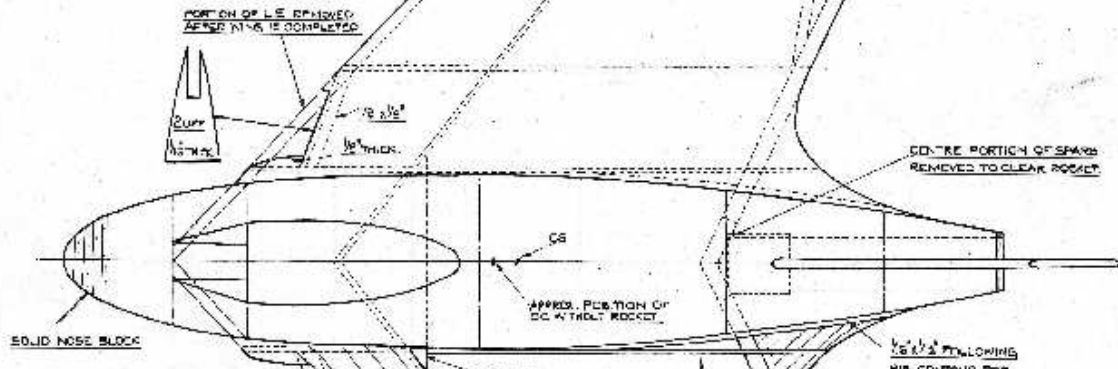
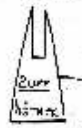
CANOPY MOLDED FROM
CELLULOID ON WOOD
FORMER.



ALL MATERIAL IS BALSAM

CUT OUT WING RIBS & SPARS & GLUE TOGETHER OVER PLAN VIEW OF MODEL, BUILDING EACH WING SEPARATELY, USING SLICES OF EQUAL THICKNESS BETWEEN THE RIBS ROUND THE NOSE & GLUE ON THE UNDERSIDE BALSAM COVERING PACK UP THE TIP AT THE TRAILING EDGE 3/16" TO GIVE THE WING A TWIST & GLUE ON THE TOP BALSAM COVERING GLUE IN THE SPARS MARKED A & B BUT DO NOT GLUE THEM TOGETHER. ADD THE 1/8" W/4 SUPPORT RIBS & BUILD FUSelage IN TWO HALVES ON THE TWO VIEWS USING 1/8" X 1/8" STRIPPERS THE TWO HALVES ARE GLUED TOGETHER & THE WINGS ADDED SOME STRIPPERS WILL HAVE TO BE CUT BETWEEN D & E TO CLEAR THE MAIN SPARS BUT THE L.C. L.T.E. SPARS WILL REST ON TOP OF A STRIPPER CALL THE SPARS TOGETHER AT THE CENTRE & SUPPORT THE WING TIPS TO MAINTAIN THE WING FLAT WHILE THE GLUE SETS. GLUE IN THE SPLIT PAPER TUBE & THE ROCKET WITH PLANK WITH SHEET BALSAM USING THE FORMER OF D & E & 1/8" X 1/8" ADD SOLID NOSE & CUT OFF FORMER. BUILD FIN FLAT ON PLAN & ADD TO FUSelage. ADD CANOPY COVER WITH TISSUE & DONE. ADD WEIGHT TO NOSE TO BRING C.G. TO POSITION SHOWN WEIGHT WITHOUT ROCKET 1.75 OZS.

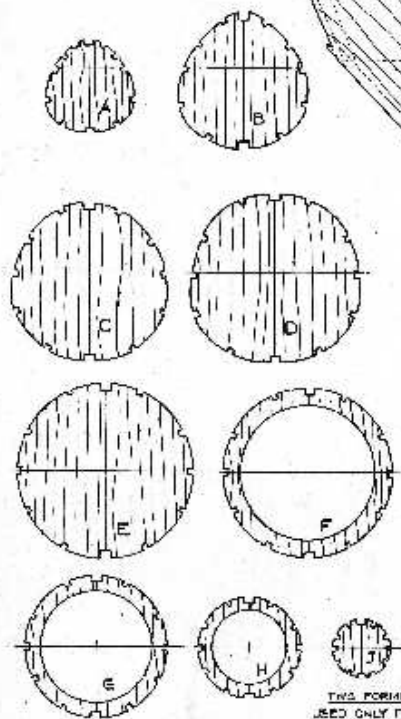
PORTION OF L.C. STRIPPER ADDED AFTER FIN IS COMPLETED



SOLID NOSE BLOCK

APPROX. POSITION OF C.G. AT 1/4" FROM ROCKET

CENTRE PORTION OF SPARS REMOVED TO CLEAR ROCKET



FUSelage FORMERS 1/8" THICK
1/2" EACH REQUIRED

THIS FORMER USED ONLY FOR BUILDING

1/4" X 1/8" NOSE ROUNDED & THINNED TO 1/16" AT T.C.F.

THESE 2 LINES CUT THROUGH AFTER WING HAS BEEN COMPLETED

THE FRONT SPARS MAY BE FINISHED WITH ALUMINUM FOR TRIMMING THEN SWUNG AT THE CORRECT ANGLE TRIM THE MODEL FOR A GOOD SPLIT CANOPY SLIDE WITH A FULL ROCKET UNIT IN POSITION

FORMERS 1/8" THICK 2 OF EACH

ROCKET STOP 1/8" THICK

ROCKET POSITION

1/8" X 1/8" FOLLOWING RIB CONTOUR TOP & BOTTOM

1/8" THICK

2 1/2" X 1/8" T.C.

1/8" X 1/8" SHAPED TO SUIT WING RIB

AS 1/8" THICK 4 OFF

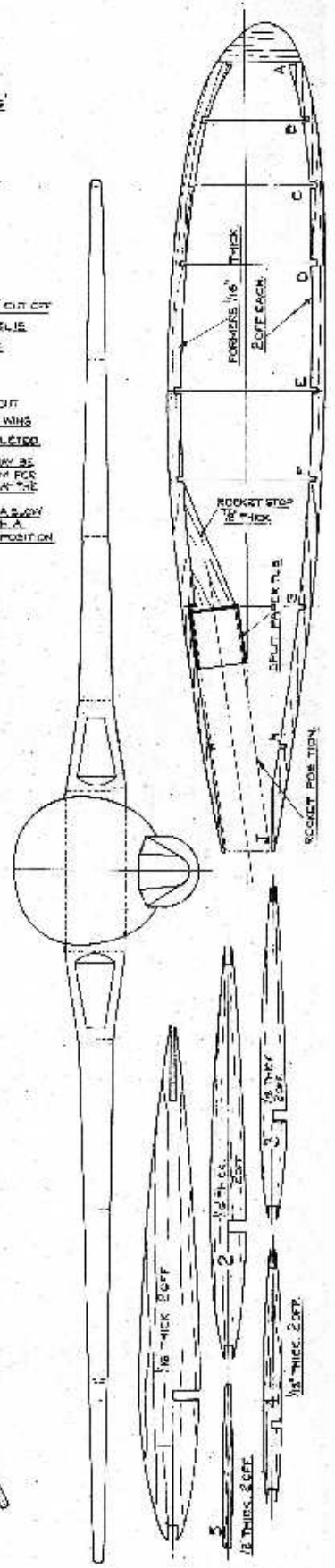
1/8" X 1/8" LEADING EDGE NOSE ROUNDED

1/8" X 1/8" LEVEL WITH 1/2" OF RIBS

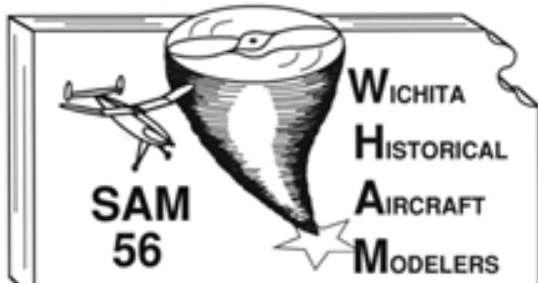
1/8" THICK SHEET COVERING TOP & BOTTOM FROM LEADING EDGE TO MAIN SPAR

THE SPLIT PAPER TUBE FOR JOINING THE ROCKET IS MADE BY WINDING SEVERAL LAYERS OF GUMMED PAPER ROUND A 1/16" OR 1/8" D.A. ROD IT IS THEN SPLIT & HELD CLOSED WITH A RUBBER BAND SO THAT IT JUST GRIPS A ROCKET UNIT.

MAIN SPAR 1/8" THICK 2 OFF REQUIRED



WHAM – News, Views and Reviews
Jeff Englert
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Wichita, KS 67205



**FLYING
ACES**



**Sunflower Squadron
Wichita, KS**

The next SAM 56 Dinner Meeting will be at:

Mediterranean Grill

335 S Towne East Mall Dr., Wichita, KS 67207

(316) 651-5599

Saturday, July 20, 2013

Social Hour @ 6:00 PM, Dinner @ 7:00 PM..

Upcoming events:

July 20, 21 - Fun fly, 12" cat glider, FAC moth, Small rubber.

Membership Information:

Open to all interested AMA members, founded to encourage and promote the model airplane building hobby. Member dues \$20 annually, Subscription only; \$12 annually, \$18 foreign.

Send checks to Jim O'Reilly, 4760 Battin, Wichita, KS 67220.

All memberships and subscription renewals are due January 1st of the new year.

Club Officers: President: George Avila, 683-1474 Vice-President: Bill Schmidt 744-0378,
Treasurer: Jim O'Reilly, 744-0856 Secretary: Jeff Englert, 722-7491