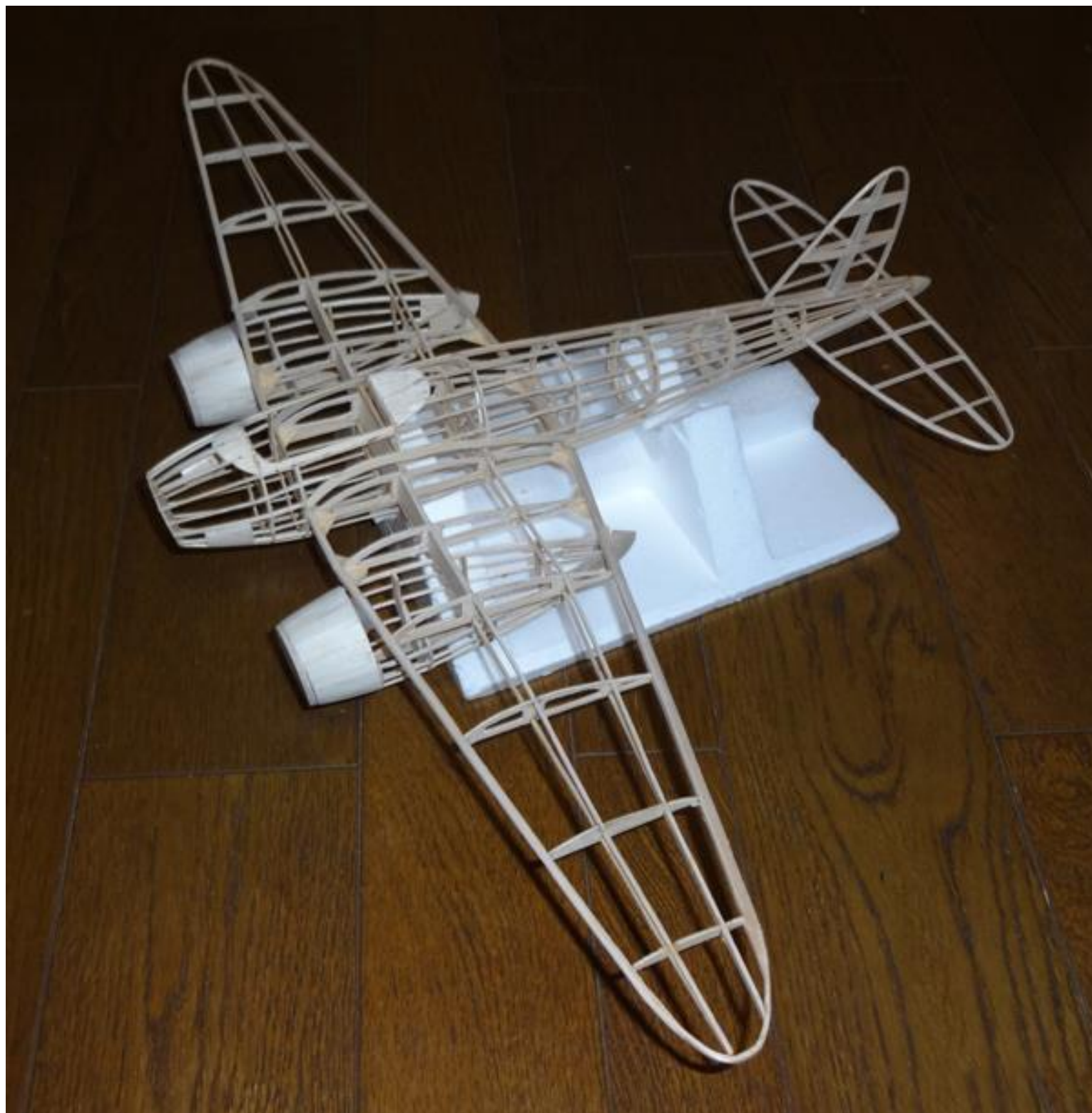
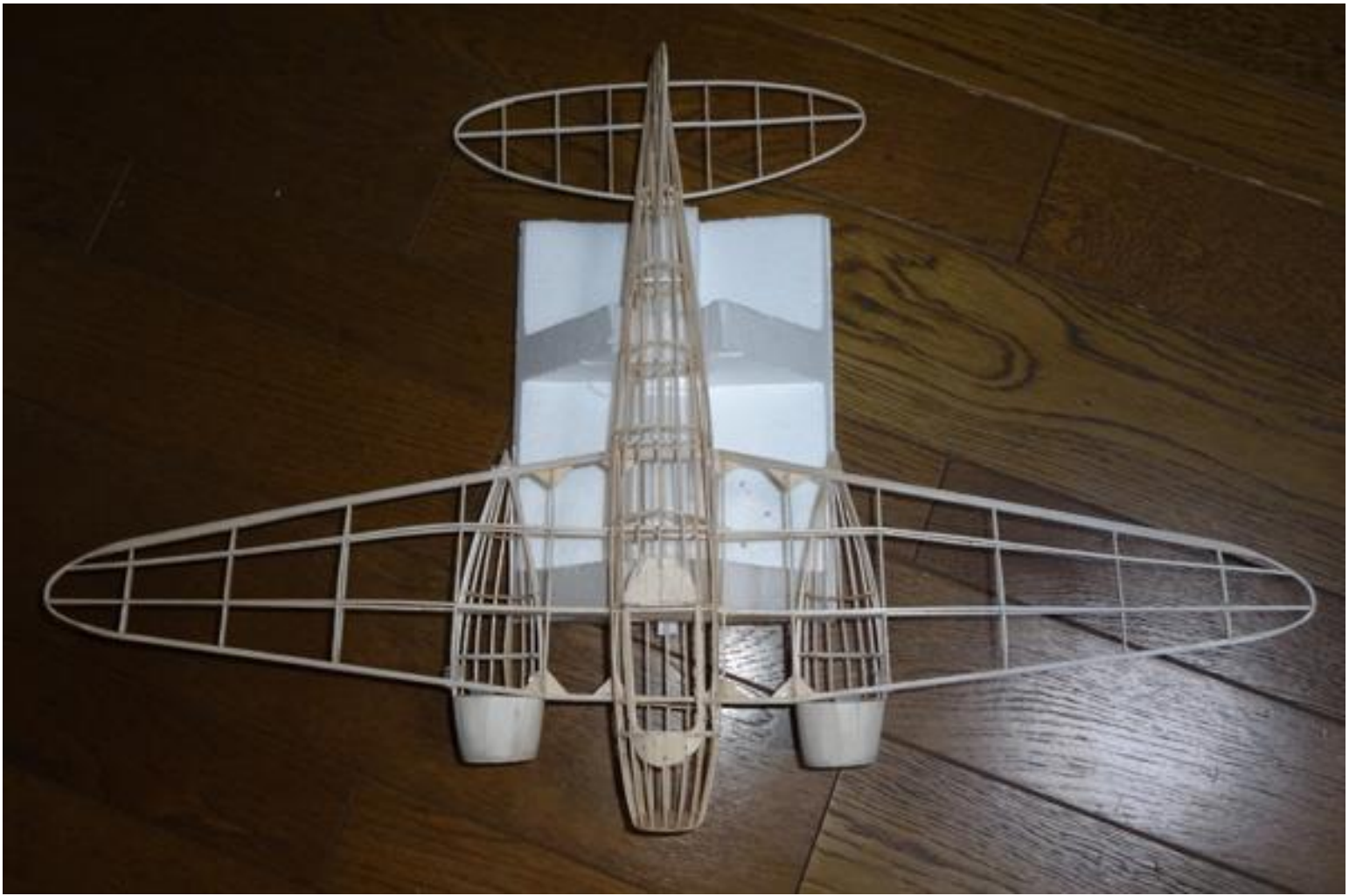

Conversion of the Mosquito Bomber for rubber powered flight





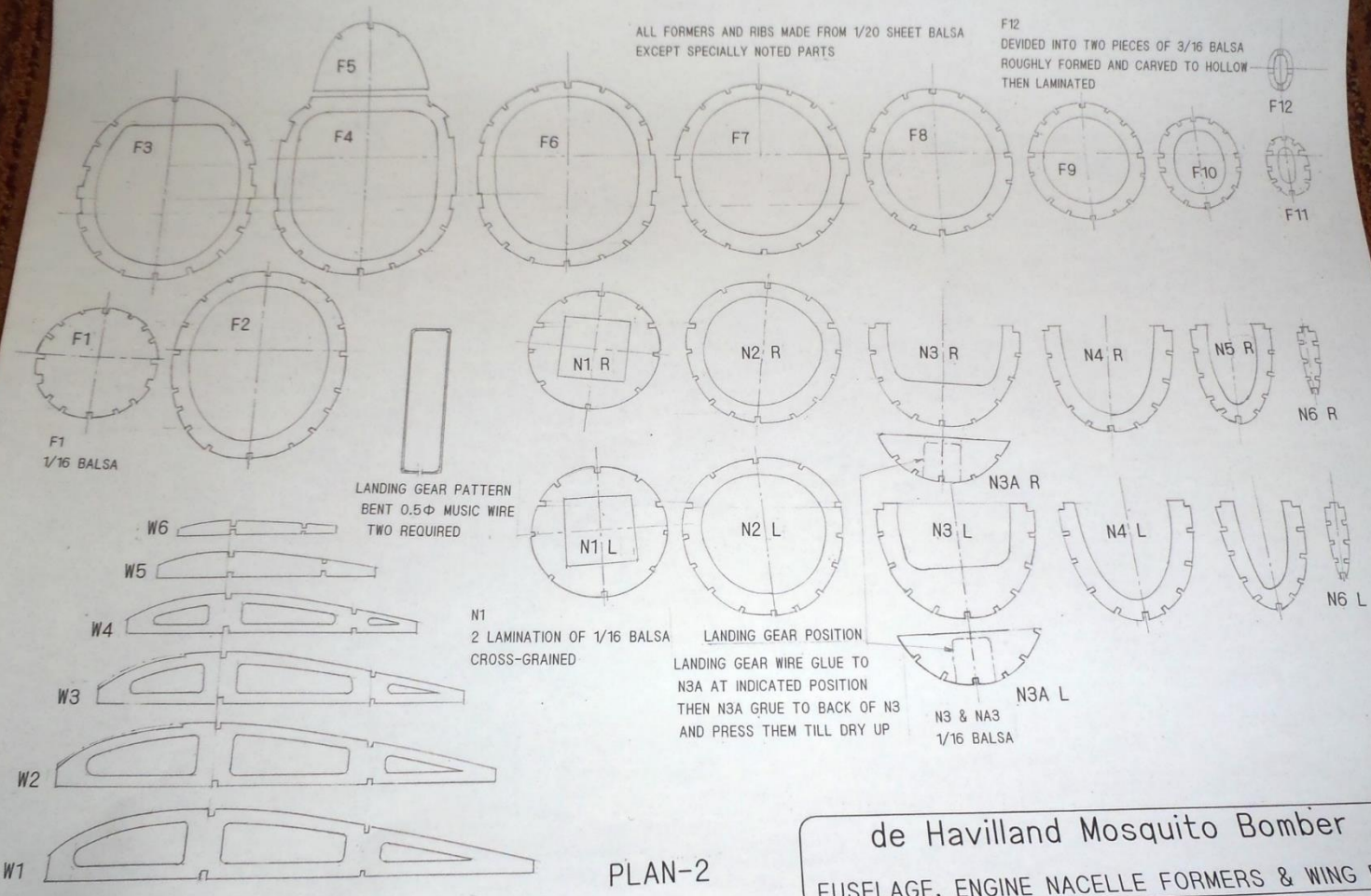
You can see just how much the plane has been lightened by removing much of the framework.

Awesome!
Flying with rubber power.



ALL FORMERS AND RIBS MADE FROM 1/20 SHEET Balsa
EXCEPT SPECIALLY NOTED PARTS

F12
DIVIDED INTO TWO PIECES OF 3/16 Balsa
ROUGHLY FORMED AND CARVED TO HOLLOW
THEN LAMINATED



PLAN-2

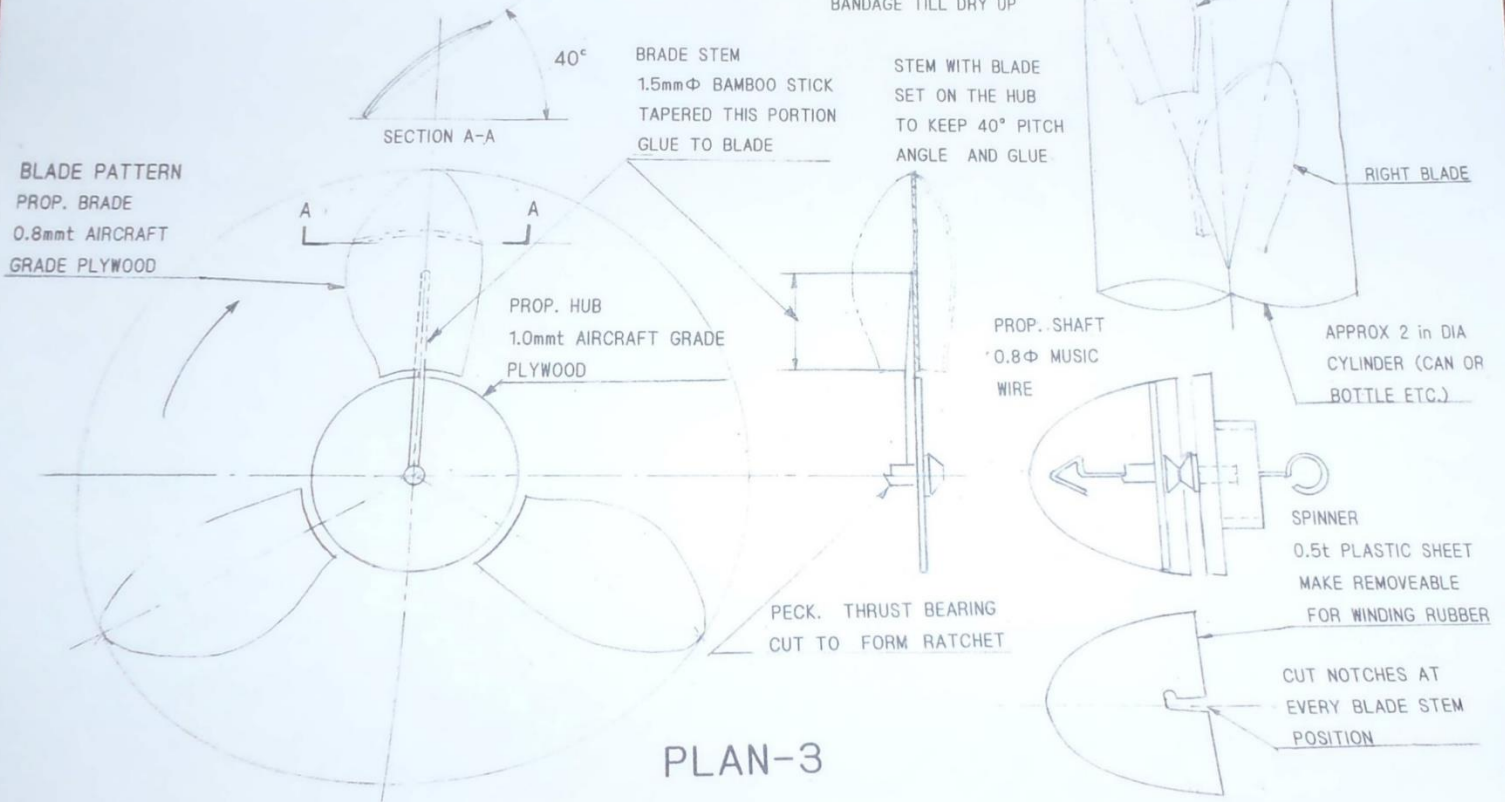
de Havilland Mosquito Bomber
FUSELAGE, ENGINE NACELLE FORMERS & WING RIBS

de Havilland Mosquito Bomber

PROPELLER CONSTRUCTIONS (EXAMPLE)

THIS PLAN SHOWS RIGHT HAND PROP. (SEEING FROM FRONT)
LEFT HAND PROP. MAKE OPPOSITE FOR COUNTER ROTATION

EVERY BLADE SOAK
IN WATER TO SOFTEN
THEN PLACE ON CYLINDER
AS SHOWN IN ILLUSTRATION
AND TIGHTLY WRAP WITH
BANDAGE TILL DRY UP



Easy Built Models
PO Box 681744
Prattville, AL 36068-1744
U.S.A

January. 29, 2015

Dear Sirs

Mosquito was one of the aircraft which I have been desired to make it as a rubber powered F/F model, but the suitable documents or plans had not been readily found. At last I found it Easy Built Models kit D-1 at a web site!

Of course, I recognized the model cannot be expected long flight time due to its small propellers dia. and short rubber motors. But I also thought feeling of satisfaction must be provided much more than merely watched even the flight of less than 20 seconds. Then I converted the design mainly for weight reduction. My model weight was 56.6gr including rubber (5.8gr) and balance weight (7.5gr), as a result it's wing loading is approx. 10gr/dm².

My model have not exceed flight time of 15 seconds yet. Therefore, if I classify this model in category, **Flyable Display Model** may be better than **Fling Model**.

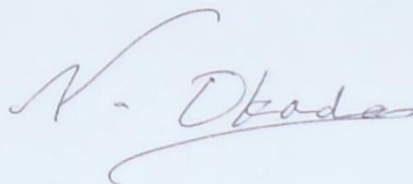
I think that I serve some kind of references if there is a person of the same interest elsewhere and send documents (drawings, building instruction, and photos) herein.

In addition, I leave this matter entirely to Mr. Shingo Kitaura who is a representative of our flying model club named **Uanosora** (上の空). So please keep in contact with him from now on.

I also have to say sorry to use a double unit of metric and ft./lbs. mixed in this plan. Because this is a result using some materials available in Japan, please understand it. Finally If you find something wrong in my documents (words, sentences etc) please correct them feel free.

Best regards

Nobuchika Okada



Building instructions

Fuselage

Assembling fuselage may be most tough work in this model building. Firstly cut off whole fuselage formers (except F5) shown in plan-2 along their vertical center line (shown by \checkmark mark on the plan-2) into two parts right and left. Top and bottom keel stringer (every 1/16 sq.) pin down on the plan-1. Previously this step, every stringer should be bent and frozen in form of fuselage curve, especially which are used around fuselage nose. This procedure is important to keep accurate form of fuselage after remove it from the plan by eliminating so called spring-back force of materials.

Set whole half of formers (except F5) in place exact vertically and glue to top and bottom keels. Next, install side keel (1/16 sq.) and wing hole reinforcement into their respective notches and glue to formers, then the rest of stringers are laid in.

Previously opposite side assembly work, it may helpful to put marks for position of formers on the side keel stringer (1/16 sq.). Every half of former set and glue on the top and bottom keels of another half, simultaneously install side keel to align positioning marks for formers. The rest of stringers are laid and F5 set in place. Finally fit propeller guard and canopy base made of balsa sheets between stringers as shown in the plan-1.

Engine nacelle

First of all, cut off upper half of nacelle former N 1 and N 2 along a line shown by \checkmark mark on the plan-2. Preformed upper end (1/61 sq.) stringers pin down on the plan-1. Every formers set and glue in place, then proceed assembly works applying similar procedures on the fuselage assembly. Remove the frame from plan, set and glue upper half of N 1, N2 and the rest stringers.

For planking nacelle nose, I recommend to use very light and soft (4lbs/ft³ class) balsa sheet and wood glue like Franklin's Titebond for instance. Planking of this portion is not essential, if you want to omit this process, add some more stringers between N 1 and N2.

Wing

Dihedral of the wing is slightly increased to original plan as a flying model. Share plate should be tightly laid between wing ribs so as to increase wing rigidity and dihedral sustainability. Wing chips were made of 0.5mm \times 2.5mm balsa strip three ply lamination. This was also applied for rudder and stabilizer.

Propeller

In combination with rubber band power strong enough to fly this model, broader blade and higher pitch propeller was inevitably needed. I think many modelers will have their own theory and practice for propeller design, so I present plan-3 as an example. In this design, I consider interchangeability of the blade and pitch angle, because there should be room for furthermore optimization.

Model Building

Previously tissue covering, please confirm that the wing can through hole of fuselage smoothly. If not, scrape upper reinforcement carefully until it is enabled. Don't touch lower reinforcement, because this is datum face for wing installation. Also confirm stabilizer can through slot of fuselage. The gap can be sealed with tissue strip after wing mounted. After covering, apply thinned dope. Engine nacelles set and glue in place of the wing after mount the wing on the fuselage. Then plank between N 2 and wing top with soft balsa sheet. Coloring and fitting miscellaneous parts except clear gun sight

as shown in plan-1 are final process for completion of your model.

Flying

For the time being, I applied two loops of 1/8in. TAN SUPER SPORT 20in. long for each nacelles and wound 600 turns. The lead balance weight was mounted on F1. Therefore clear gun sight must be attached after balance adjustment completion. I gave approx. 2 degree down thrust. In this model applied counter rotation prop. system, side thrust adjustment is not needed. But torque balance uniformity between right and left propellers is most important for keeping straight flight root. Turning can be done by attaching small tub on the tail end of rudder. Matching of propeller and rubber is not final, so please try and find best match for your model to extend flight time.