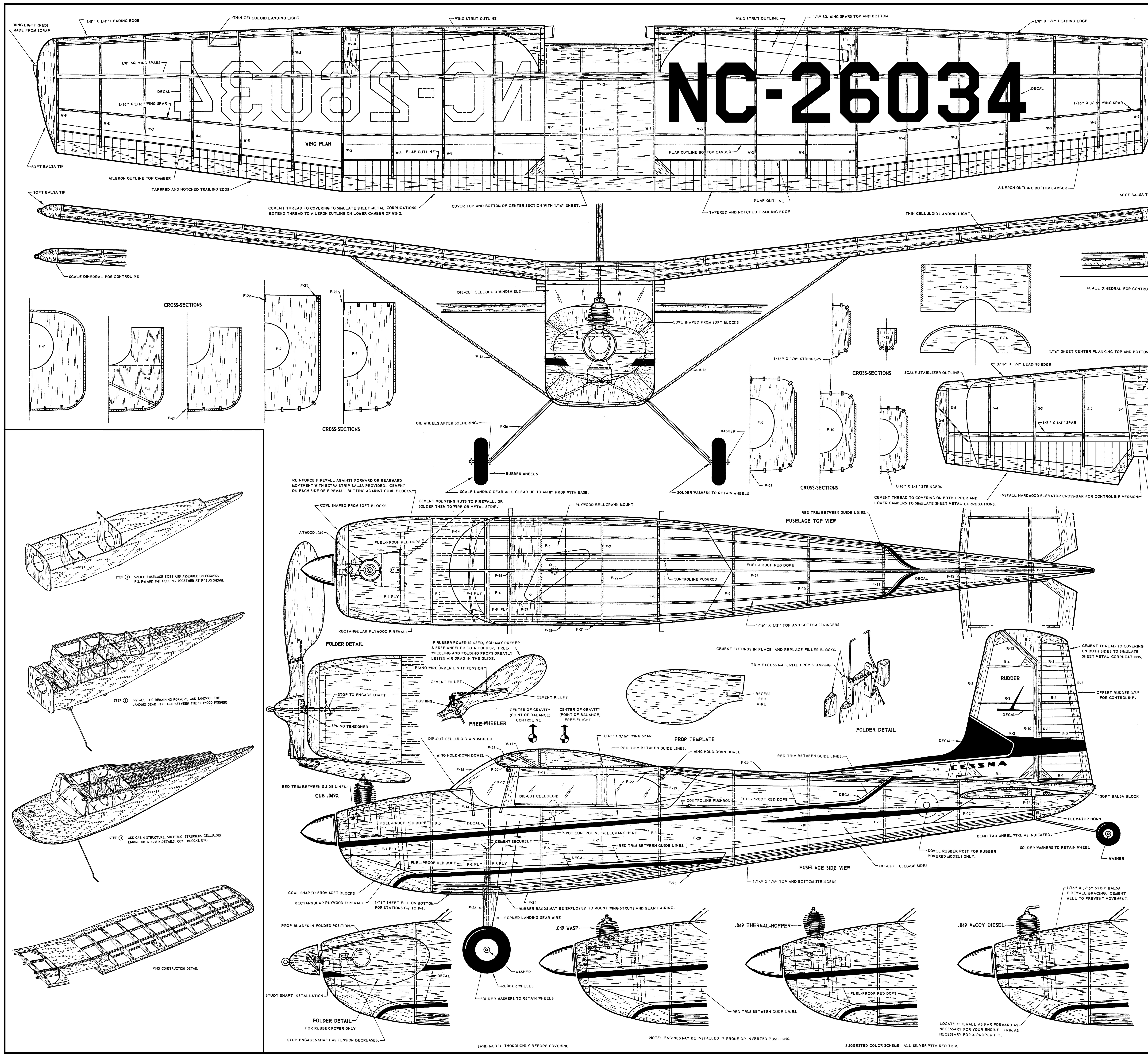
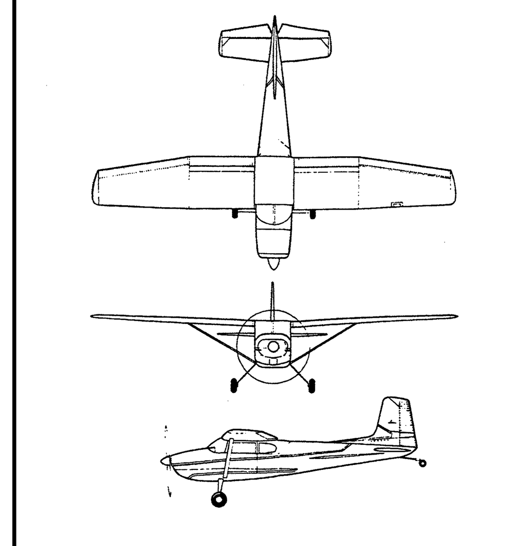


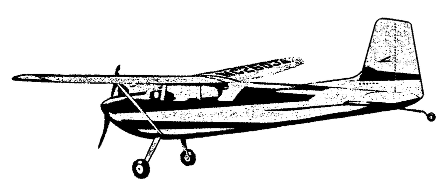


3 VIEW DETAIL

CHAMPIONSHIP SCALE MODEL ACCESSORIES

"A" ACCESSORIES: For a rubber powered model. Includes a 10½" special machine cut prop; folding blade hinges; prop shaft and rubber tensioner. 25c.

"B" ACCESSORIES: For a control-line model. Includes a bellcrank, elevator horn and balloon cloth for hinges. 25c.



BUILDING AND FLYING INSTRUCTIONS:

This particular airplane was selected for kit production because its proportions are ideal for scale model flying. It embodies the features for gas model free-flight and controline flying. In addition, it can also be rubber powered.

The kit includes all the basic material for constructing the free-flight gas model. Separate accessories for controline flying or rubber power can be obtained from your dealer.

Before beginning the actual construction of the model, look over the plans and details carefully. If any difficulties appear, try to construct the model as far as possible. We have tried to give as many instructions as possible directly on the plan. In all cases, take your time, making sure that all parts are correctly cut and aligned. Select a flat workboard for layout work. It is best to have a model knife, pliers, and sandpaper handy.

FUSELAGE:
See the "Construction Details" at the left and follow step-by-step instructions. Be sure you decide on engine installation before cementing up the cowl blocks.

WING & TAIL SURFACES:
See "Wing Construction Detail". At this point you must determine if the model is to be used for free-flight or controline flying. Controline flying requires less dihedral than free-flight. Also, the elevator must be made moveable for controline model and the rudder must be off-set. The rudder is cemented to the fin in its proper position.

COVERING & ASSEMBLY:
Sandpaper the entire framework thoroughly to remove any rough spots. Cement the cabin windows and windshield in position. Be careful when cementing the celluloid as it dissolves in cement. Use only a small quantity of cement and be sure it does not smear. Note that the wing is removeable and is held to the fuselage with rubberbands over the dowel pegs.

The covering material included with this kit is "Silkspan" or "Skysail". Both of these papers are water insoluable and may be applied to the framework slightly dampened. Attach the paper with clear dope to which a little model cement has been added, sticking the paper only along the outlines. Coat all wood parts with several coats of dope to protect them. Use fuel proof dope exclusively.

The decals are applied in the usual manner by soaking in water and sliding directly on the doped covering. The decals are "fuel-proof" with many of the present fuels but it is best to test them with your particular fuel. If they smear, apply a coat of clear fuel-proofer that does not react with your fuel.

FLYING:
For all types of free flight flying, test glide the model in tall grass and adjust for a smooth descent.

FREE FLIGHT GAS:
This model should fly perfectly if properly built. The point of balance for free flight flying should be approximately at the point shown. If the model banks severly to either side, check the wing and tail for warps. Stalling or diving characteristics can be corrected by adding weight either in the cowl or as far back in the fuselage as possible to bring the point of balance to the indicated position.

If the model still has stalling or diving tendencies, use a 1/16" balsa wedge between the wing mount and the fuselage. Put the wedge under the main spar if the model dives and under the trailing edge if it stalls.

Power-on, Power-off flight characteristics can be altered by changing the thrust line of the engine.

RUBBER-POWERED:
A standard Berkeley Rubber-Powered Accessory Package can be obtained from your dealer. Modify the nose to hold the prop bearing and install a 3/16" dowel at the rear of the fuselage reinforcing the fuselage at the peg and cutting away bottom stringers for access to the rubber.

The Prop must have down-thrust and right thrust to give proper performance. Use about 12 strands of 3/16" rubber for power, winding with a mechanical winder.

CONTROLINE:
Install the control mechanism before covering. Be sure that the entire system operates freely. Install lead-in wires from the bell crank through the wing tip guide. Attach to the flying wires with clips or snap swivels. Use 35-foot lines for the first test flight. Standard controline flying procedure information can be obtained from your dealer.

1" Scale—Free-Flight, Rubber or Controline

CESSNA "180"

DESIGNED AND DRAWN BY: PAUL DELGATTO
KIT ENGINEERED BY: BILL EFFINGER

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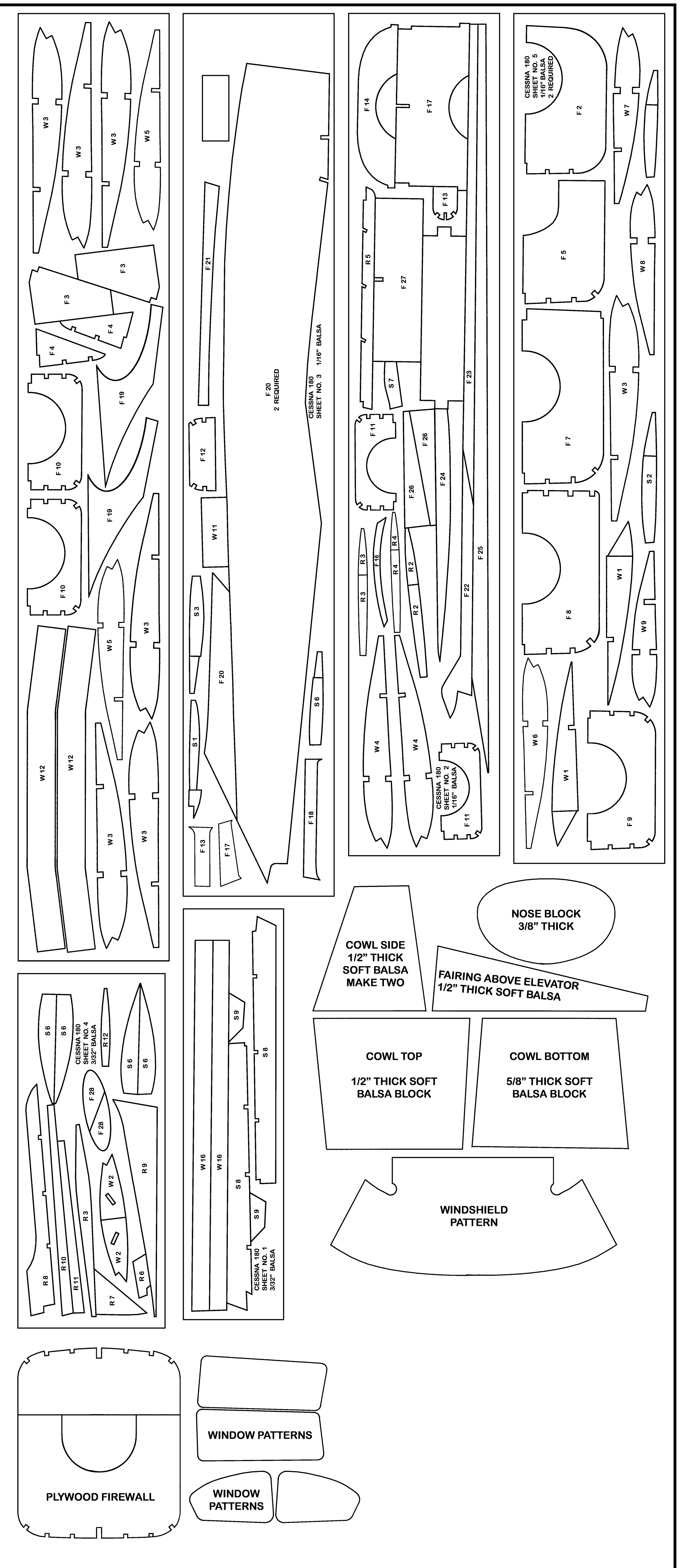
FULL SIZE PLANS
.035 - .049 ENG. FREE-FLIGHT
.049 - .099 ENG. CONTROLINE
36" WINGSPAN

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