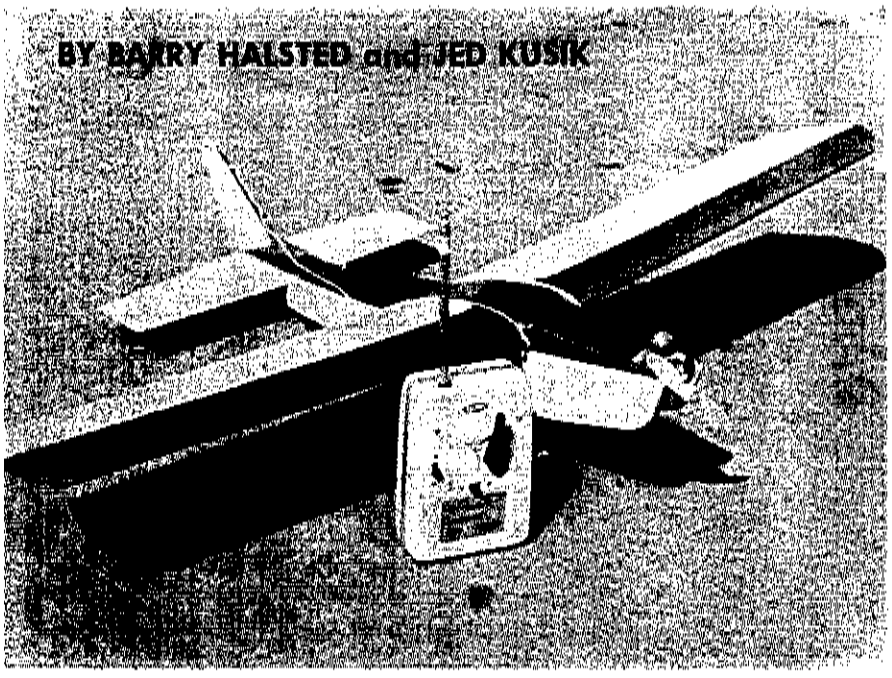


PADDY'S PIG

.09 sport trainer for single channel action . . .

"SOMEDAY they'll make an R/C unit that even a beginner can just strap in and fly . . . one that will eliminate confusing button pushing and let's me steer naturally. They'll make it so dependable that it works every time I go out to fly. It will be so rugged that it will be practically crash-proof. It'll be one I won't have to replace when I advance to more sophisticated flying. They'll make a low-cost R/C that comes with built in nickel cadmium batteries and charger, with a receiver so perfect that even if it crashes the factory will replace it instead of repair it!"

This is the Someday that Sterling Models said is here now, when they released their Command Master R/C System, designed to fill these "someday requirements" of the beginner and sport flyer. When the first production models came off the line, we asked for a unit to test, and one for which we could design —a simple to build, easy to fly and repair model which this same beginner or sport flier could build and fly with almost the same degree of built-in success.

Paddy's Pig is the result. The first part of the name was our Editor, and Fearless Leader's attempt to give it an Irish flavor, while the second part was his expression of its overall appearance! Needless to say, graceful lines and an ethereal look was not part of the design program for this model. Rather, it was designed as a simple, functional rudder-only airplane that would give the beginner a fighting chance to get his new equipment airborne in a minimum amount of time, and once there, keep him upstairs despite his own attempts to crash! The design is completely straightforward, with slab sides forming a "box," a simple, silkspan covered Clark Y airfoil, and a maximum amount of ruggedness in the areas generally affected by not-so-gentle contacts with the ground.

Flight characteristics can be summed up in one word — stable. There is very little tendency to drop a nose in the turn and no immediate tendency to go into a spiral dive when full command is held on the Command Master transmitter.

In other words — an extremely stable trainer that will allow you to get airborne and put in enough flying time in which to build up your confidence to a degree where you will feel comfortable with a more maneuverable ship. This same design, however, can be modified for increased performance by adding elevators, and using anything from a galloping ghost servo up to six channel reeds. There is even enough room for a couple of smaller proportional servos. If you up the weight by using a heavier radio system, substitute a .10 or .15 mill for the Cox Medallion .09. These modifications are not recommended for the beginner nor for initial use with the Command Master system.

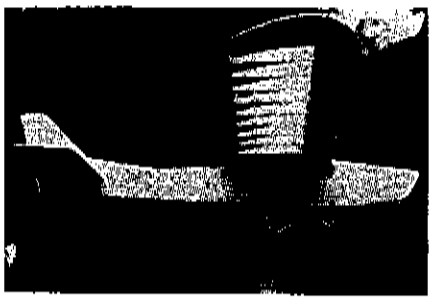
A word or two about the equipment itself. This pulse proportional, rudder-only system with its three position escapement throttle control, fulfills all of the claims made for it by the manufacturer. It had ample power for the control surface, plenty of range, and no interference problems were encountered. It was simply a matter of plugging it together and installing it in the plane — about a 30 minute job at the most. It works — and will continue to work and provide you with many, many hours of flying pleasure if — and we stress this point — if you don't take it apart or attempt to modify it to some way-out schematic you found in the pages of a model magazine. Leave it alone, and it will serve you well. Leave it alone, and take advantage of Sterling's unconditional 5-year guarantee. Enough said.

Construction

We're not going to go into extensive construction details, since for the experienced sport flier, the plans are completely self-explanatory, and for the beginner, we strongly suggest that he enlist the aid of a more experienced builder to help him out with this project.

Wing. The wing consists of 16 ribs from 3/32" sheet plus two center ribs from 1/4" sheet. Leading edge is 1/2" square with standard 1/4" x 1" tapered stock for the trailing edge. Upper leading edge sheeting is 1/16" x 2" with 3/16" sheeting in the center section. The single spar is hard 1/4" x 1/8" balsa stock. There is 2 1/2" dihedral under each wingtip. When completed, sand well, brush on a couple of coats of dope, and cover with heavy grade silkspan. Two coats of clear, plus two coats of sprayed Aero-Gloss balsa fillercoat with intermittent sanding will give you an acceptable surface for final color. Color scheme on the prototype was Sig yellow and green with white trim.

Fuselage. The fuselage is a "basic box" of 3/32" sides, top, and bottom, with the exception of the 1/32" ply doublers forward, the 1/16" balsa doublers aft, and the 1/8" forward bottom sheeting and 1/2" forward top sheeting. Contact cement is used for the doublers. 1/16" x 1/4" truss bracing is glued to the sides prior to assembly with the bulkheads. Join the bulkheads to the side with Franklin Titebond glue, and check with a triangle to assure that the sides are assembled in a true manner. Top and bottom sheeting is applied cross-grain for maximum strength and rigidity. For the Cox Medallion .09, a standard Tatone mount can be used. For the O.S. Max .10, mount the engine to a ply-



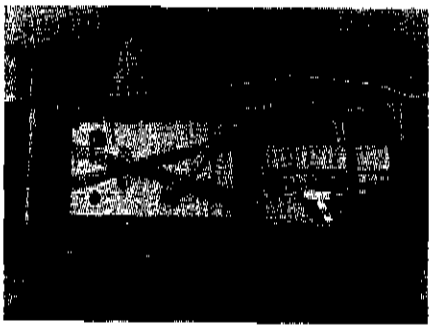
wood plate, then mount this plate, in turn, to the firewall, using rubber grommets or other spacers to achieve the required thrust adjustments.

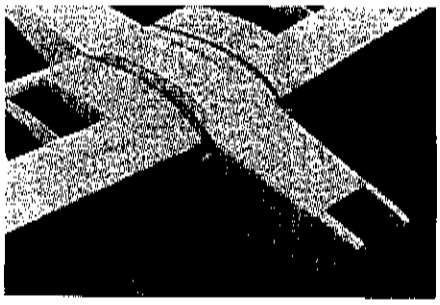
Tail group. The tail surfaces are fabricated from ⅛" sheet stock and glued to the fuselage. When the entire fuselage-tail structure is completed, sand well, apply several coats of dope and sanding sealer, then cover with silkspan. Apply several additional coats of AeroGloss balsa fillercoat, sanding between each, then finish off the undercoating with a coat of sprayed clear dope. Finish with color dope to suit.

Radio installation. Be sure there are no binds anywhere in the system linkages. Follow the manufacturer's instructions for installation and operation of the system, including vibration and range checks. Be sure to break-in your engine on the bench before flying. Check to make sure that your wing and stab incidences are correct, and that both are parallel to each other on the horizontal plane.

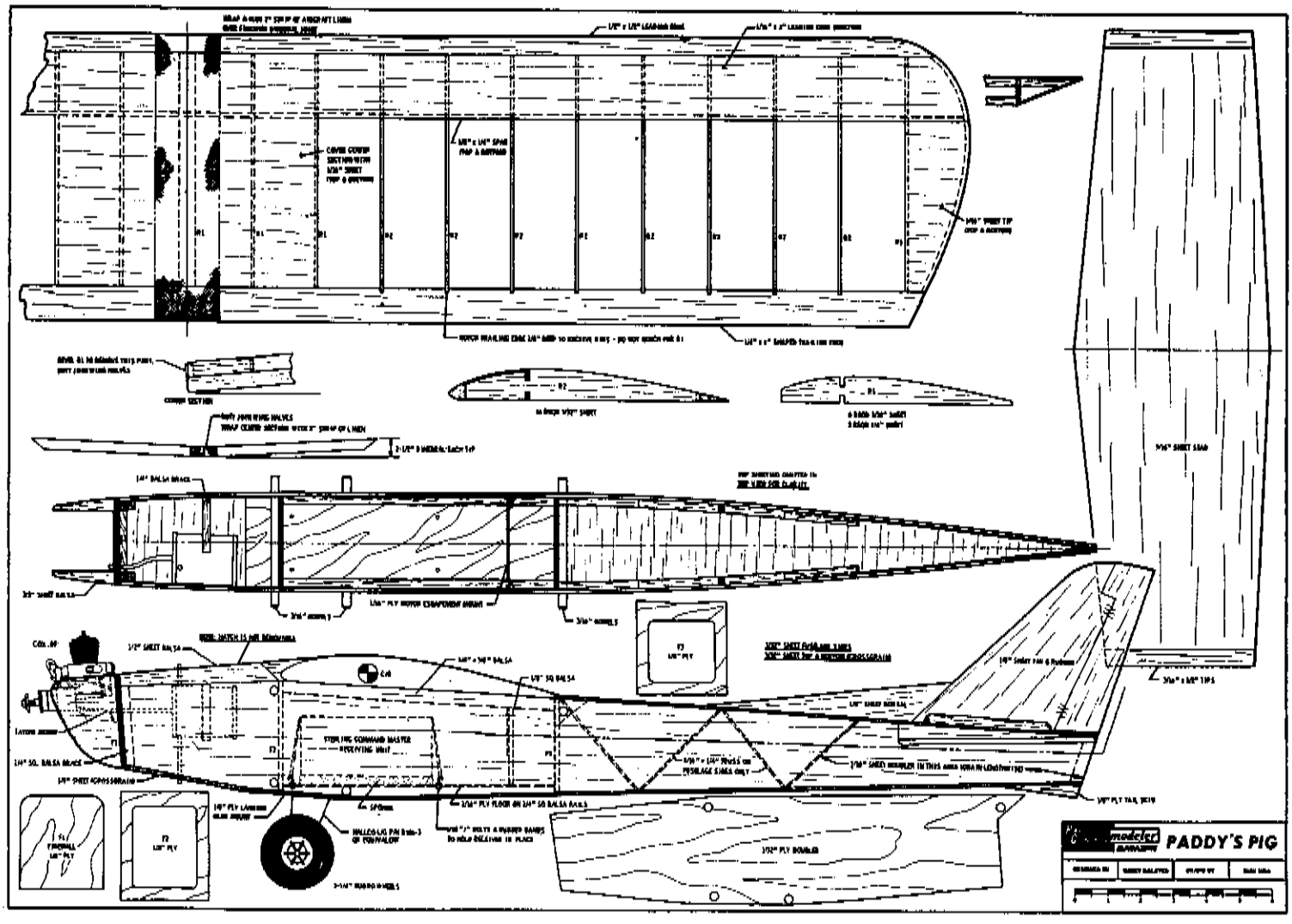
Paddy's Pig can be simply hand launched. Allow the model to gain sufficient altitude before trying out the Command Master Control Stick. Apply gentle pressure to the stick to correct any turning tendencies. Remember — this is proportional control, and you don't need to slam the stick to its extreme positions in order to obtain response from the aircraft.

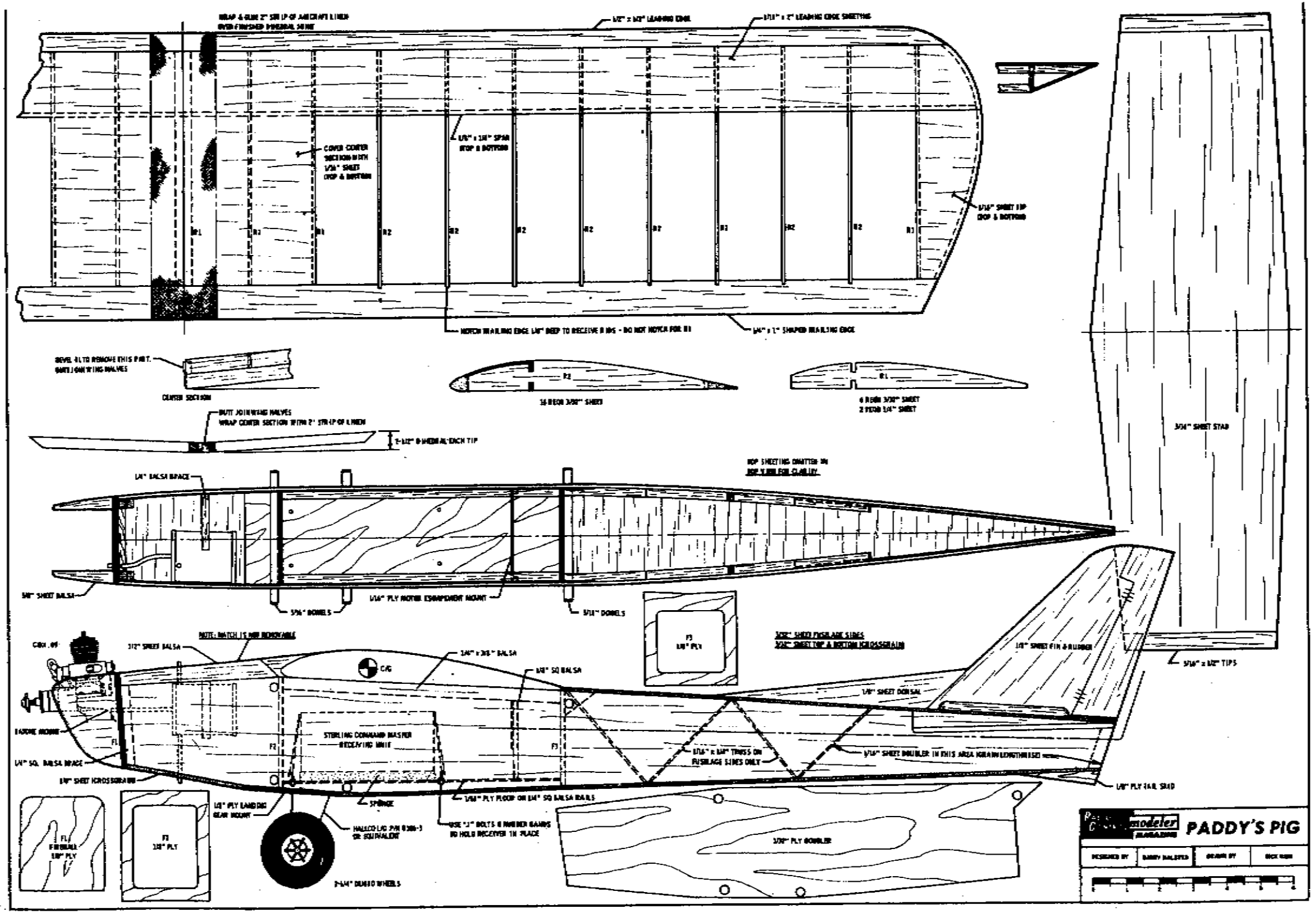
Paddy's Pig — it's simple, functional, relaxing, and fun to fly. Along with your Sterling Command Master System, you and the entire family will be in for many hours of pure flying pleasure.





A minimum expenditure of both time and money will produce a fine flying sport machine. Addition of elevators for GG poses no problem.




WRAP & GLUE 2" STRIP OF AIRCRAFT LINEN OVER FINISHED FUSELAGE SHELL
1/2" x 1/2" LEADING EDGE
3/16" x 2" LEADING EDGE SHEETING
COVER CENTER SECTION WITH 1/64" SHEET TOP & BOTTOM
1/8" x 1/4" SPAR TOP & BOTTOM
3/16" SHEET TIP TOP & BOTTOM
NOTCH TRAILING EDGE 1/8" DEEP TO RECEIVE RIBS - DO NOT NOTCH FOR R1
1/4" x 1" SHAPED TRAILING EDGE
3/16" SHEET STAB
5/16" x 1/2" TIPS
BEVEL TO REMOVE THIS PART. MATE JOINT WITH HALVES
CENTER SECTION
16 REQD 3/32" SHEET
6 REQD 3/32" SHEET
2 REQD 1/4" SHEET
BUTT JOINT WING HALVES
WRAP CENTER SECTION WITH 2" STRIP OF LINEN
2-1/2" DIHEDRAL EACH TIP
TOP SHEETING OMITTED IN TOP AREA FOR CLARITY
1/4" BALSA BRACE
3/8" SHEET BALSA
5/16" DOWELS
1/16" PLY MOTOR ESCAPEMENT MOUNT
5/16" DOWELS
F3 1/8" PLY
3/32" SHEET FUSELAGE SIDES
3/32" SHEET TOP & BOTTOM CROSSGRAIN
1/8" SHEET FIN & RUDDER
1/8" SHEET DORSAL
NOTE: HATCH IS NOT REMOVABLE
C/G
3/4" x 3/8" BALSA
1/8" SQ BALSA
STERLING COMMAND MASTER RECEIVING UNIT
1/16" x 1/4" TRUSS ON FUSELAGE SIDES ONLY
3/16" SHEET DOUBLER IN THIS AREA (GRAIN LENGTHWISE)
1/8" PLY TAIL SKID
1/4" SQ. BALSA BRACE
1/8" SHEET CROSSGRAIN
1/64" PLY FLOOR ON 1/4" SQ BALSA RAILS
SPRING
1/2" PLY LANDING GEAR MOUNT
HALLCO LAG PIN #306-3 OR EQUIVALENT
USE "J" BOLTS & RUBBER BANDS TO HOLD RECEIVER IN PLACE
3/32" PLY DOUBLER
2-1/4" DUBRO WHEELS
F1 FIREWALL 1/8" PLY
F3 1/8" PLY
Model Builder Magazine
PADDY'S PIG
DESIGNED BY
DRAWN BY