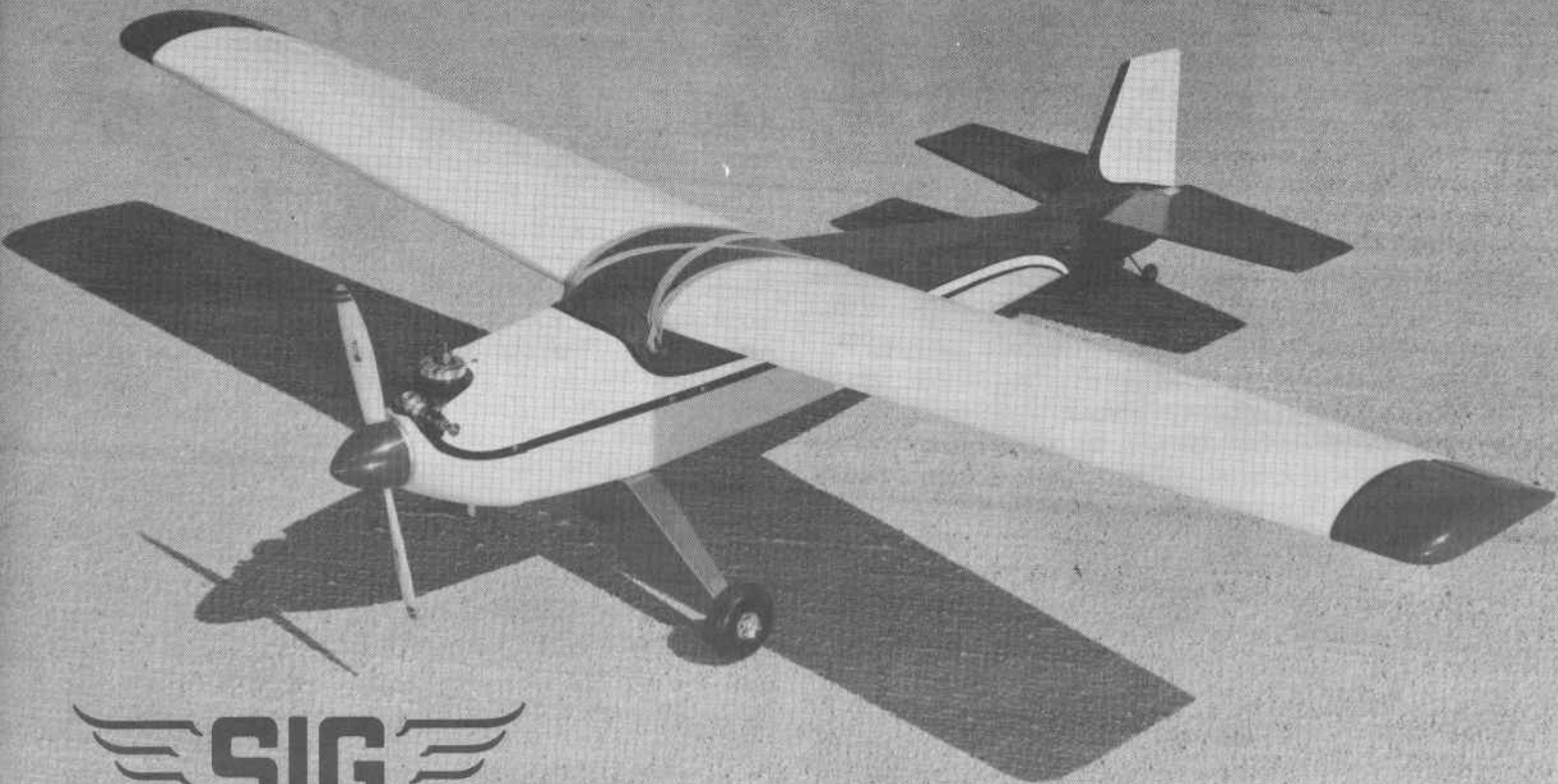


SUPER SPORT



BUILDING AND FLYING INSTRUCTIONS



 **SIG** 

SUPER SPORT

KIT NO. RC-37

By Mike Gretz

ABOUT BALSA WOOD:

We do our best to put as good a grade of balsa in our kits as the supply situation permits. The world-wide increase in demand for balsa has made it impossible to obtain as high an average quality as used to be the case.

Every piece of balsa supplied cannot be 100% perfect or kit prices would have to be greatly increased. Mineral stains or small knots do not affect wood strength. Even with the very best grades of balsa, there is a natural tendency for some sticks or sheets to immediately bow upon being cut off from a perfectly square block because of built-in stresses. In most cases, these can be bowed back into alignment during building. True up the edges of bowed sheets by trimming, using a metal straightedge.

The Super Sport is an easy to build 3-channel sport model designed with stable and docile flight characteristics tailored to the "Sunday flyer". Although it is not recommended as a trainer, it can be handled by relatively inexperienced pilots with a low number of RC flying hours. Engines from .09 through .15 cu. in. are ideal for the Super Sport.

For best results, we recommend that you install 3 channel radio equipment in your Super Sport to operate the rudder, elevator, and engine throttle. Or you can install 4 or more channel equipment and use only 3 of the channels (see RADIO INSTALLATION section on page 10). The fuselage is large enough to carry a standard size battery pack and servos.

1 or 2 channel radio equipment could also conceivably be used in the Super Sport but with much less flexibility in control (rudder and elevator control only with 2 channels, and rudder control alone with 1 channel equipment). We DO NOT RECOMMEND 1 or 2 channel operation except by fliers who are well experienced with that type of limited control.

FOAM WING INSTRUCTIONS

Bottom of Wing

IMPORTANT NOTE:

For extra strength, two strips of 3/4" wide "Filament Tape" should be applied spanwise across the bottom of the wing as shown. (See SIG catalog for "Nylon Filament Tape", SH-571, 3/4" x 18' roll.) If you paint your wing as outlined further on in the instructions, do not apply the tape until after the painting is complete and dry. Patches of filament tape can also be put around the trailing edge of the wing for reinforcement at the points where the wing hold-down rubber bands will be located. Other brands of non-stretchable, tear-resistant tape (such as 3M "Scotch Filament Tape") would also be satisfactory.

USE # 64 RUBBER BANDS FOR
WING HOLD DOWN

USE TAPE TO PROTECT
THE TRAILING EDGE

Do not let solvent base model cement, dope or fiberglass resin come in contact with the foam wing. These products will all melt foam on contact. Epoxy glues may be used on the wing if repairs become necessary.

FINISHING THE FOAM WING

The wing is fuel resistant and can be left unpainted. However, this is not recommended as painting will greatly increase the life of the wing. The wing of the prototype model was painted with SIG PLASTINAMEL. This paint is ideal for the Super Sport wing as it is completely compatible with foam and provides a glossy and fuel-proof finish.

First use a sanding block with 250-400 grit sandpaper to remove any mold flash from the leading and trailing edges of the wing. Avoid sanding too long or too hard in one spot and changing the shape of the airfoil. Next very lightly sand over the entire wing surface with very fine 400-600 grit paper to knock off the tiny molding marks. On the prototype, after sanding the entire wing was painted overall with white Plastinamel. The Plastinamel must be applied with a brush, but smoothes out readily after application. It will also go through a "ruling" pen (as used in mechanical drawing), so that the trim color decorations can be drawn on the model with a ruler and French curves. Because of the beaded surface of the foam, masking tape does not work very well for trimming and therefore drawing the color scheme on and then filling in between the lines with a brush is the recommended procedure.

CAUTION: Do not use any other paint on the foam wing other than PLASTINAMEL without careful testing for compatibility first on a scrap piece of foam. Don't use iron-on covering materials on the foam wing as the heat from the iron will damage it.

Dear Super Sport Builder,

We want to have the instructions for building this model as clear as possible. While building you may feel that there are some areas of assembly that could use further explanation with additional drawings or written instructions. Any suggestions or comments about how the model builds and flies will be greatly appreciated.

Sig Manufacturing Co., Inc.

(1.) PRELIMINARY

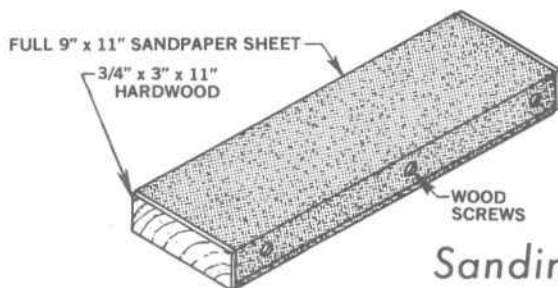
This kit is arranged so that no separate full-size plan is needed. The center section of the booklet does show some full-size patterns which will be helpful during construction. A preliminary study of the instructions and drawings of the construction steps will make it clear where several building operations may be accomplished at the same time. While one part is drying, another part can be started. References to right and left refer to your right and left as if you were seated in the cockpit facing forward.

Cut all long pieces of balsa first, followed by medium lengths, before cutting up any full length strips into short pieces. Remove die-cut pieces from the sheets carefully. If difficulty is encountered, do not force the part from the sheet. Use a modeling knife to cut it free. Leave parts in the sheets until needed in construction.

A jig saw is best for cutting out the printed sheet parts. Cut just outside the lines, leaving all of the line on the part. When fitting into place in the structure of joining with an adjacent part, use the sanding block to bring the edges to an exact fit. If an X-Acto knife is used, don't cut too close to the lines but leave enough margin to true up and finish the edge with a sanding block. It is easier to cut at an angle with a knife so more tolerance may be needed for final fitting with a block.

A piece of Celotex-type wallboard makes a handy building board, into which pins can easily be pushed. Lay the building board on a table with a flat and untwisted top. Pins can be pushed through all pieces of balsa in the kit without any lasting harm. The holes will fill during sanding and doping.

A valuable construction tool is a sanding block large enough to take a full sheet of 80 grit garnet paper. Use several screws along one side of the block to hold sheet in place. The screws allow for easy replacement of sandpaper.



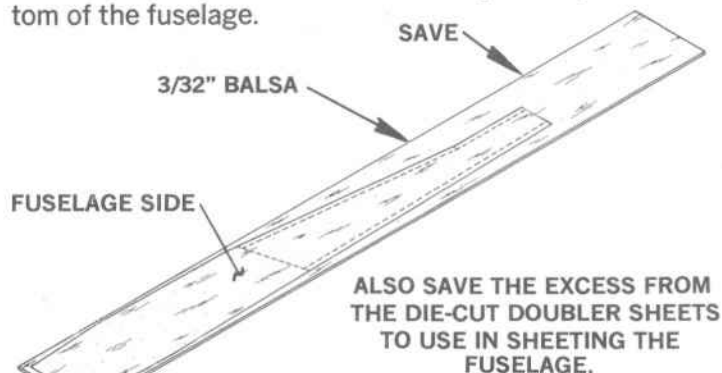
Sanding Block

GLUES: The framework may be glued with either Sig-Bond aliphatic resin glue or Sig-Ment solvent type

cement. Areas subject to unusual strain, exposed to fuel or oil, or including metal pieces, should be glued with Sig Epoxy Glue or Sig Kwik-Set 5 Minute epoxy.

(2.) PRINTED FUSELAGE SIDES

The internal framework of the fuselage is built directly on the printed balsa sides. Cut out the right and left fuselage sides from the sheets. Don't cut too close to the printed outline - leave a little wood for trimming and sanding down flush with the framework after it is glued in place on the side. Be sure to save the ends of the sheets to use later in sheeting the top and bottom of the fuselage.



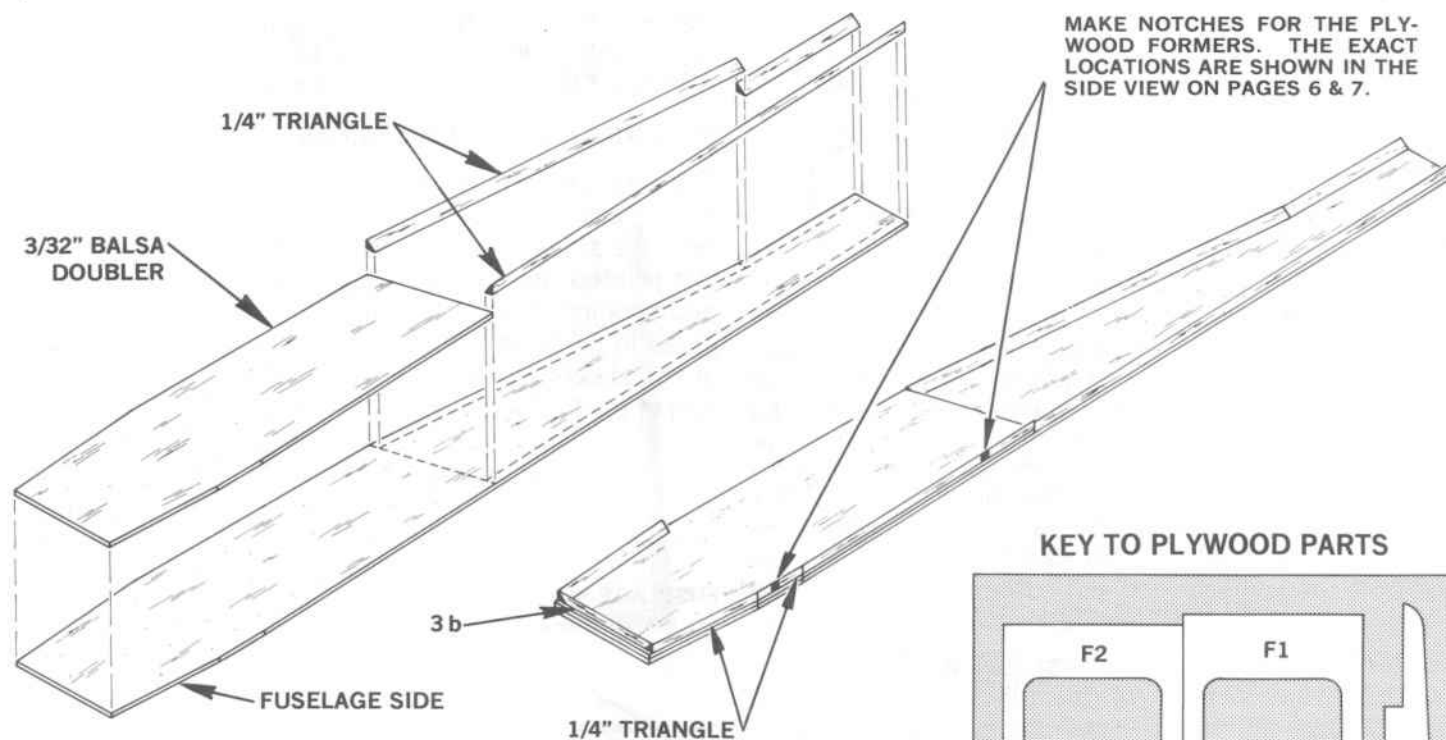
(3.) FUSELAGE CONSTRUCTION

(a.) Glue the die-cut balsa doublers to the inside of the fuselage sides. Assemble and pin on a flat building board.

(b.) Cut to length, pin and glue in place the 1/4" triangle pieces. Note that the firewall will require that the triangle be stopped 1/8" short of being flush with the front of the fuselage sides. When thoroughly dry, remove the sides from the building board and trim the 3/32" side wood flush with the framework.

(c.) Carefully join the fuselage sides with the plywood formers F1 & F2. Note, because of the "cutaway" in the drawing of the side view on pages 6 & 7, that the exact location for former F1 should be measured from the front of the fuselage side, and the location for former F2 should be measured from the back end of the 3/32" balsa doubler. Make certain that the formers are square with the fuselage sides and parallel with each other before gluing them solidly.

(d.) While the formers are drying, prepare the firewall for installation. First check the dimensions of the plywood firewall. It should measure 2-5/16" x 3-3/16" to allow the cowl to fit properly after the fuselage is assembled. If the plywood in your kit is slightly over-size, sand it down to the correct dimensions. Now use the full size pattern in the booklet center section to locate and mark the vertical center line and the thrust line on the front of the firewall. Check the width of the engine that you intend to use to determine the exact spacing between the engine mounts. Then locate the mounts on the firewall accordingly. Mark the locations of the mount holes and drill out to accept the 4-40 blind nuts. Epoxy the blind nuts to the back of the firewall to retain the mounts.

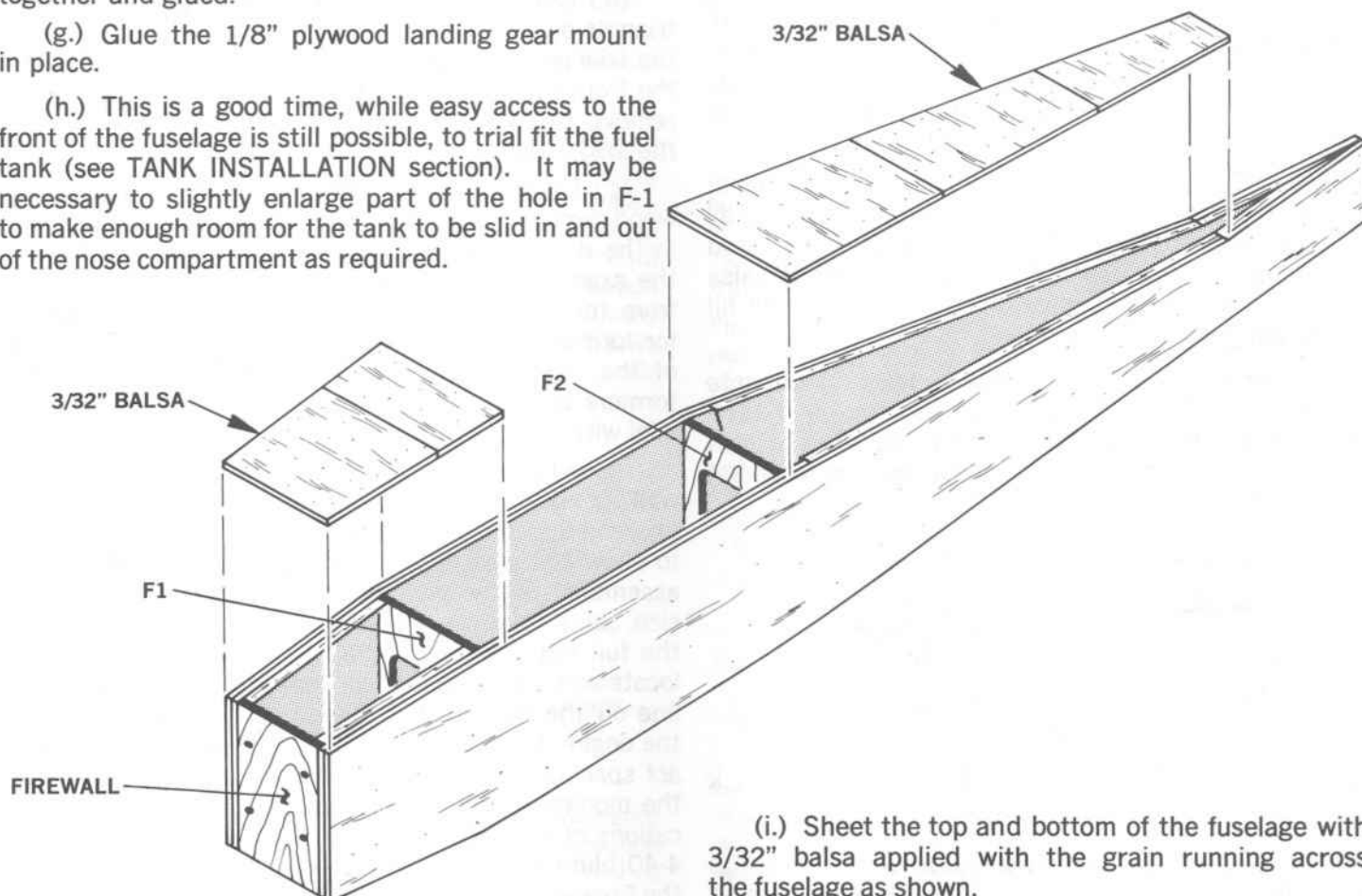


(e.) Glue the firewall in place between the fuselage sides.

(f.) Taper the 1/4" triangle at the rear of the fuselage enough to allow the fuselage sides to be pulled together and glued.

(g.) Glue the 1/8" plywood landing gear mount in place.

(h.) This is a good time, while easy access to the front of the fuselage is still possible, to trial fit the fuel tank (see TANK INSTALLATION section). It may be necessary to slightly enlarge part of the hole in F-1 to make enough room for the tank to be slid in and out of the nose compartment as required.



(j.) Set the wing in place on the fuselage and taper the balsa fairing block to fit between the wing leading edge and the fuselage top. When you are satisfied with the fit, glue the block in place on the fuselage.

(k.) Carve and sand the entire fuselage to contour. Refer to the cross sections for the general shape. Trial fit the cowl and wing occasionally while working in those areas to get the exact shape.

(l.) Drill $3/16"$ holes through the fuselage sides in the locations shown for the two $3/16"$ wing hold down dowels. Glue the dowels securely in place.

BALSA
FAIRING BLOCK

$3/16"$ WING DOWELS

$3/16"$ BALSA
TAIL SURFACES

$3/16"$ BALSA
ELEVATORS

$1/16"$ JOINER WIRE

RETAINING PLATE

CONTROL
SURFACE

CONTROL HORN

2 SHEET METAL SCREWS

(4.) TAIL SURFACES

(a.) The parts of the tail surfaces are printed on $3/16"$ balsa sheet. Cut them out with a sharp modeling knife or saw out on a jig saw. Dress down the mating edges with a sanding block so that a neat fitting seam is achieved. Pin down the sections of the tail surfaces on a flat surface and glue them together. Connecting key letters appear on the patterns to aid alignment of the mating parts.

(b.) When dry, sand the tail surfaces smooth and shape as shown in the side view.

(c.) Join the two elevators with the $1/16"$ connector wire. Epoxy the wire into the elevators.

(d.) With the wing in place on the fuselage, align the stabilizer by sighting from the front of the airplane. If it doesn't sit squarely on the tail platform of the fuselage, sand the platform until it does. Glue the stabilizer in place when you have the alignment correct.

(e.) Glue the fin in place on the stabilizer. Check the alignment before the glue dries.

(f.) Hinge the elevators to the stabilizer and the rudder to the fin as described by the drawing.

FULL SIZE DRAWINGS

WARNING-DANGER!

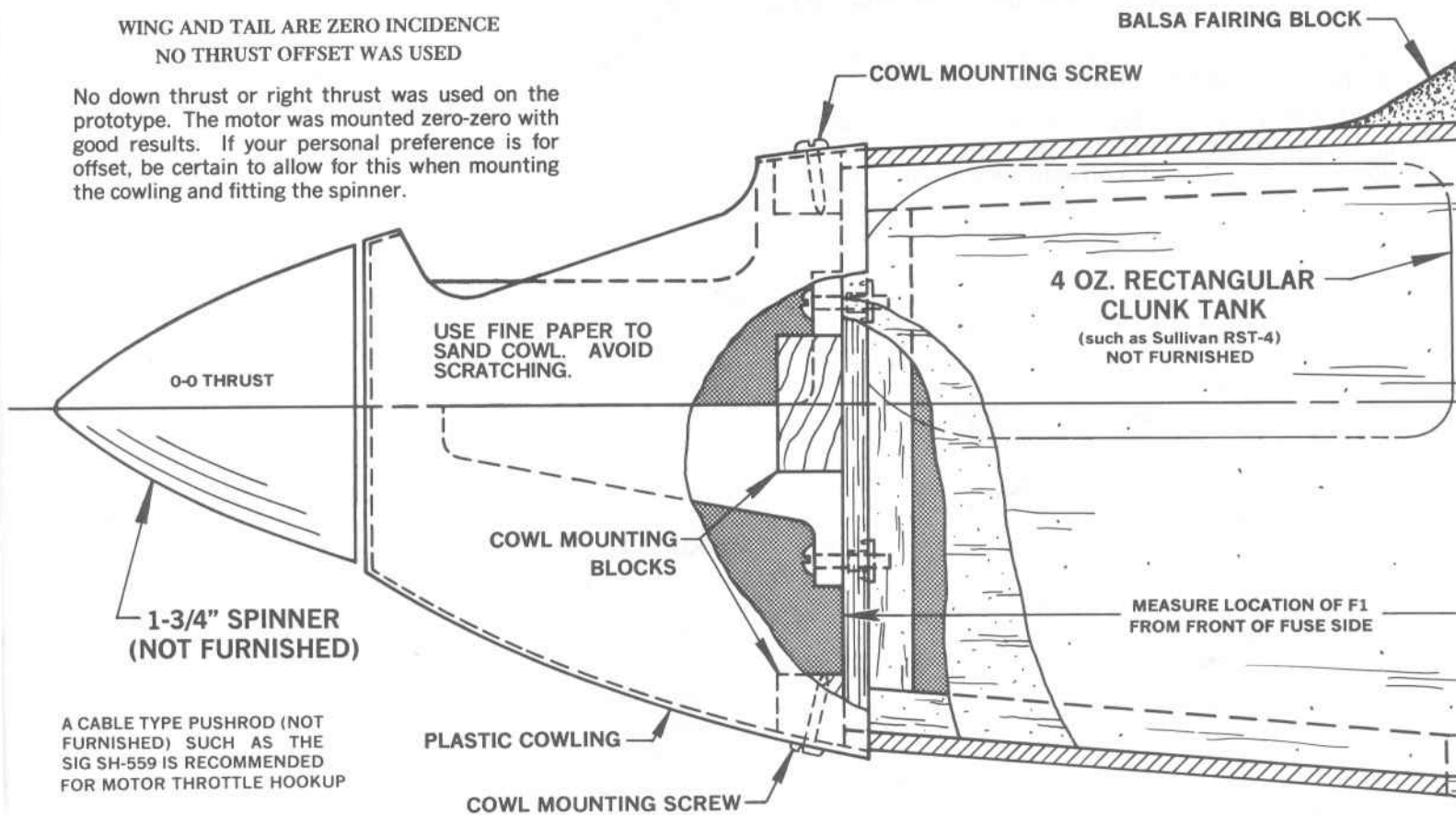
DO NOT FLY MODEL AIRPLANES NEAR ELECTRIC POWER LINES. INSTANT DEATH CAN RESULT FROM CONTACT WITH, OR FLYING TOO CLOSE TO, ELECTRIC POWER LINES.

LIMIT OF LIABILITY

In use of our products, SIG Manufacturing Co.'s only obligation shall be to replace such quantity of the product proven to be defective. User shall determine the suitability of the product for his or her intended use and shall assume all risk and liability in connection therewith.

WING AND TAIL ARE ZERO INCIDENCE
NO THRUST OFFSET WAS USED

No down thrust or right thrust was used on the prototype. The motor was mounted zero-zero with good results. If your personal preference is for offset, be certain to allow for this when mounting the cowl and fitting the spinner.



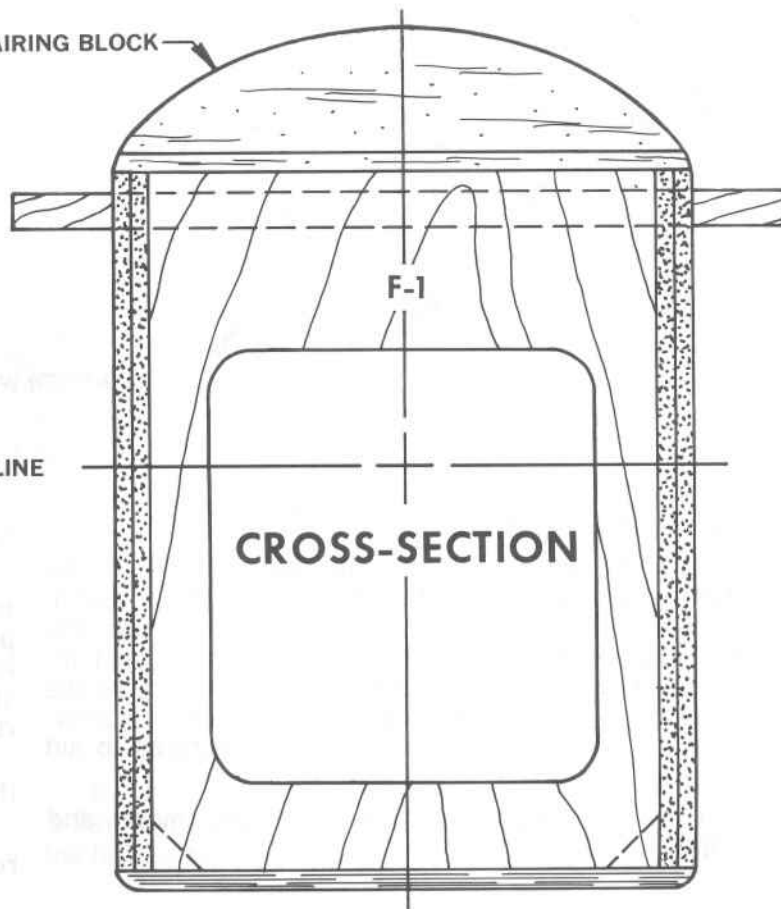
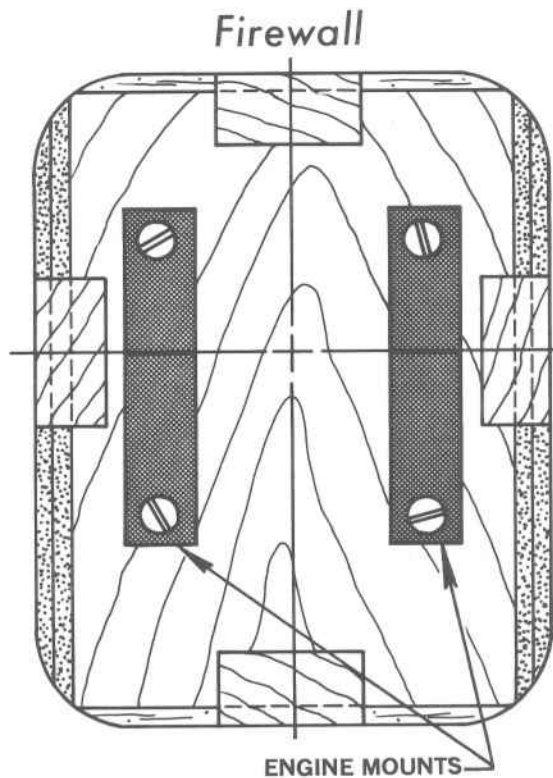
A CABLE TYPE PUSHROD (NOT FURNISHED) SUCH AS THE SIG SH-559 IS RECOMMENDED FOR MOTOR THROTTLE HOOKUP

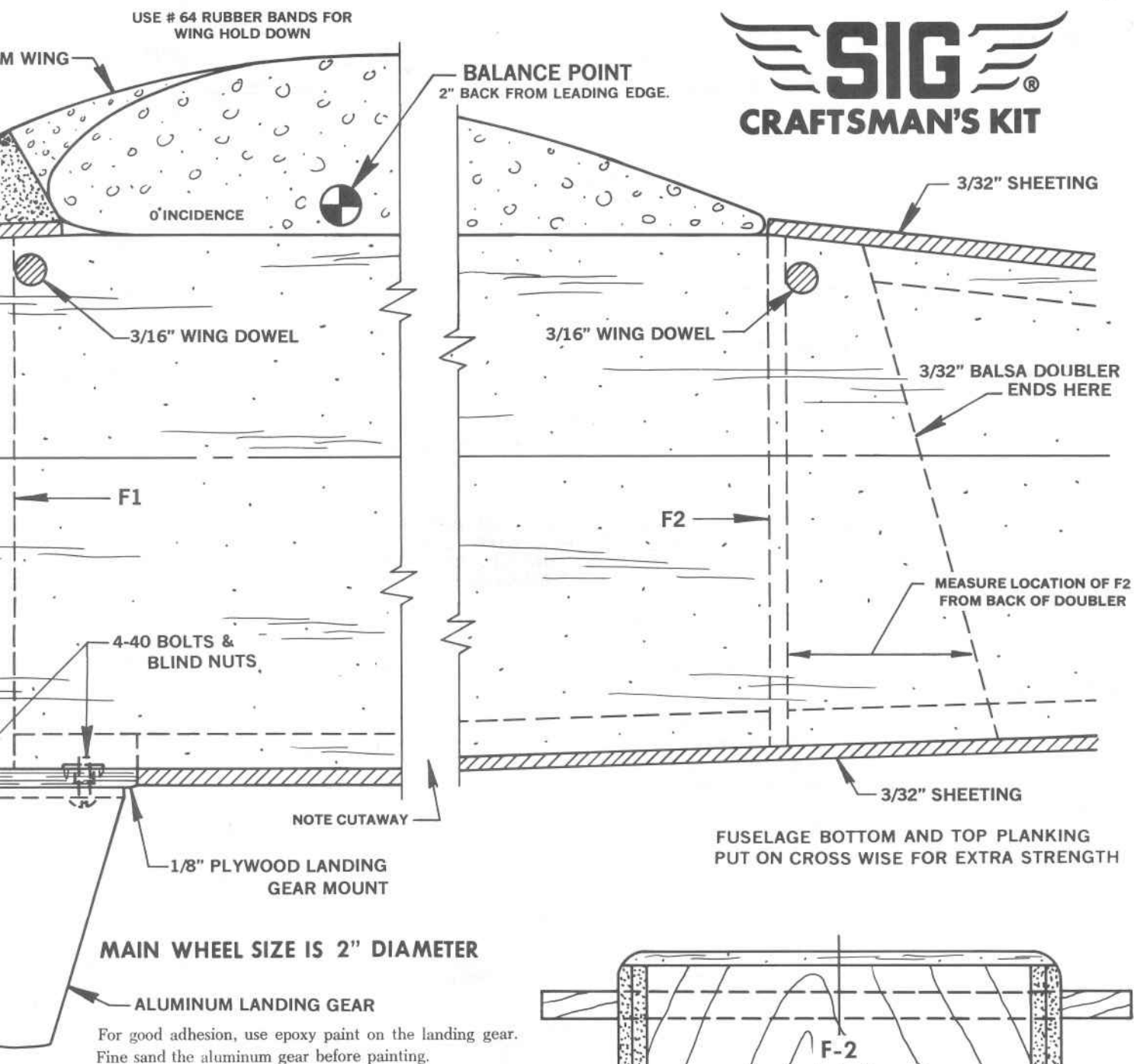
DON'T TRY TO COVER THE COWL WITH PLASTIC FILM--THE HEAT WILL DAMAGE THE PLASTIC.

BALSA FAIRING BLOCK

THRUST LINE

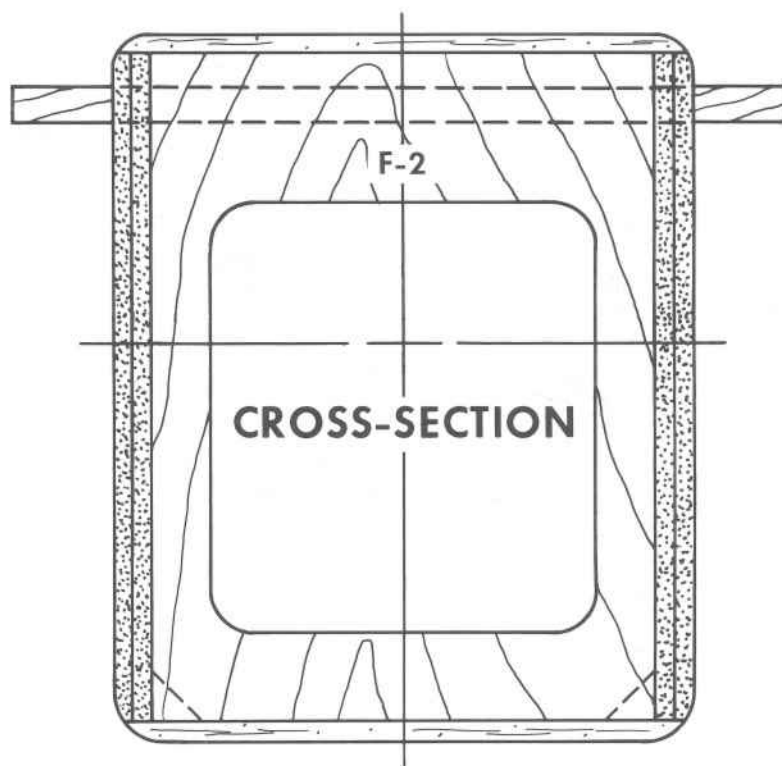
CROSS-SECTION



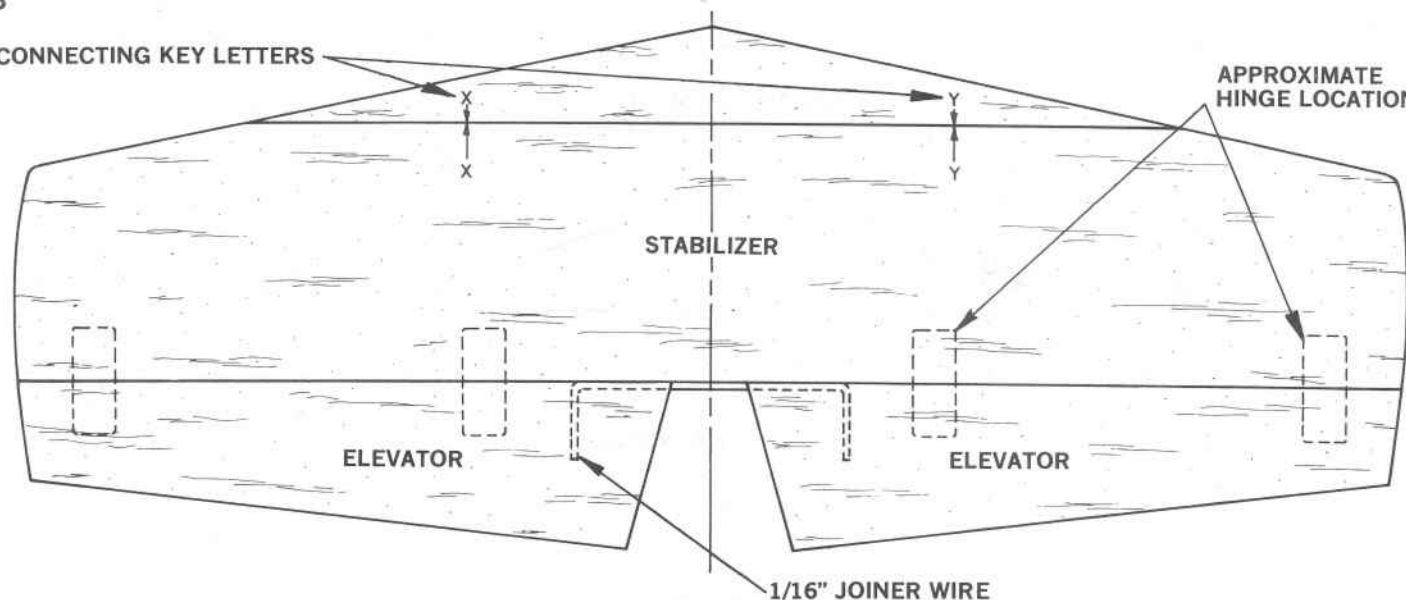


OIL PROOF YOUR MODEL!

One of the most destructive things that can happen to a model is allowing engine oil to soak into bare, untreated balsa or plywood. It will cause glue joints to loosen and the model is in a steady increase in weight. An oil soaked model will not be properly repaired or re-painted after a crackup, and the glue and finish will not hold. Cover all wood parts of the model and put on enough coats of finish so that oil can't soak in. Don't leave any exposed wood on the outside. On the nose and engine compartment, apply extra coats of oil proofing. Coating the firewall and front joints with epoxy glue is best, but several extra coats of dope or varnish will also do the job. Take special care during building to use plenty of epoxy glue to attach the firewall and coat the back of the firewall and the firewall braces with the epoxy. Fill any cracks with epoxy.



CONNECTING KEY LETTERS

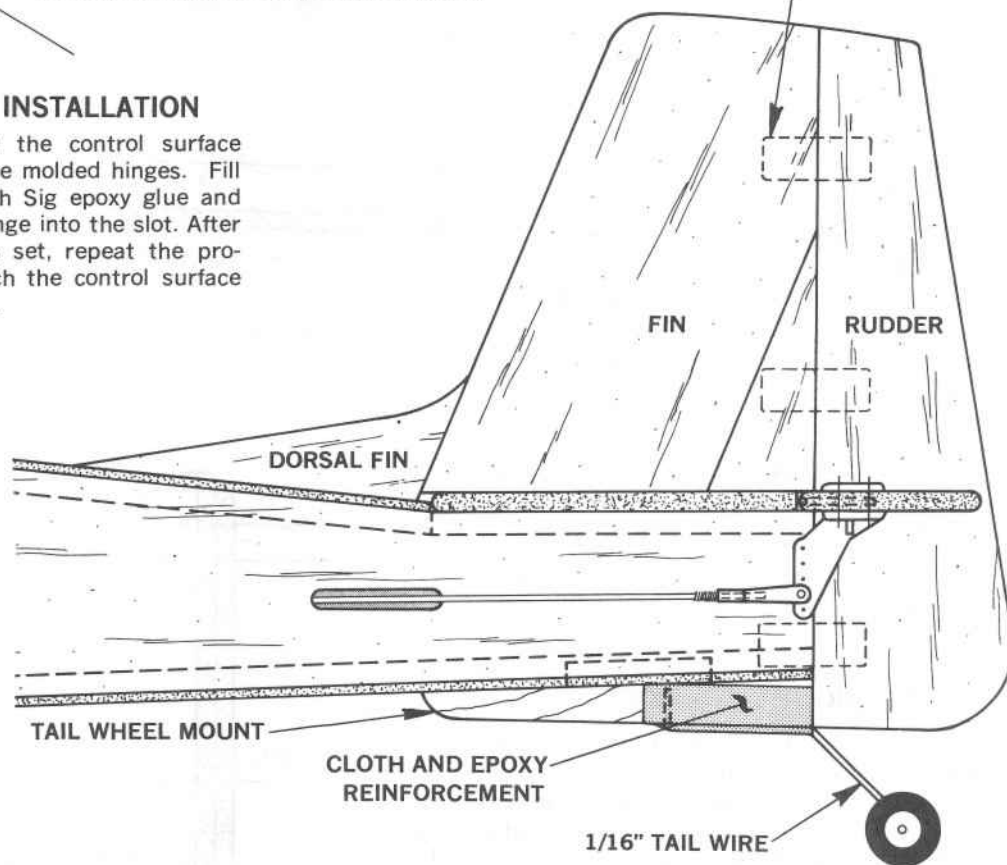
APPROXIMATE
HINGE LOCATIONS

NOTE: FOR BEST CONTROL RESPONSE, KEEP THE GAPS BETWEEN THE CONTROL SURFACES AND THE MODEL AS NARROW AS POSSIBLE WITHOUT CAUSING A BIND IN THE MOVEMENT.

APPROXIMATE
HINGE LOCATIONS

HINGE INSTALLATION

Cut slots in the control surface to receive the molded hinges. Fill the slots with Sig epoxy glue and insert the hinge into the slot. After the glue has set, repeat the process to attach the control surface to the model.

PLYWOOD TAIL
WHEEL MOUNTCUT SLOT TO
RECEIVE MOUNT

(5.) TAIL WHEEL MOUNT

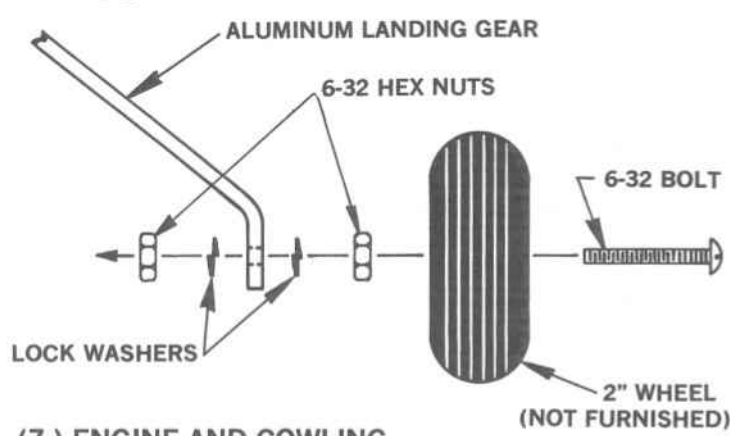
(a.) Cut a slot in the bottom of the fuselage as shown to accept the plywood tail wheel mount and glue the mount in place.

(b.) Drill a 1/16" hole through the plywood mount and epoxy the 1/16" tail wire into the hole. Reinforce the installation with cloth and epoxy.

(6.) MAIN LANDING GEAR

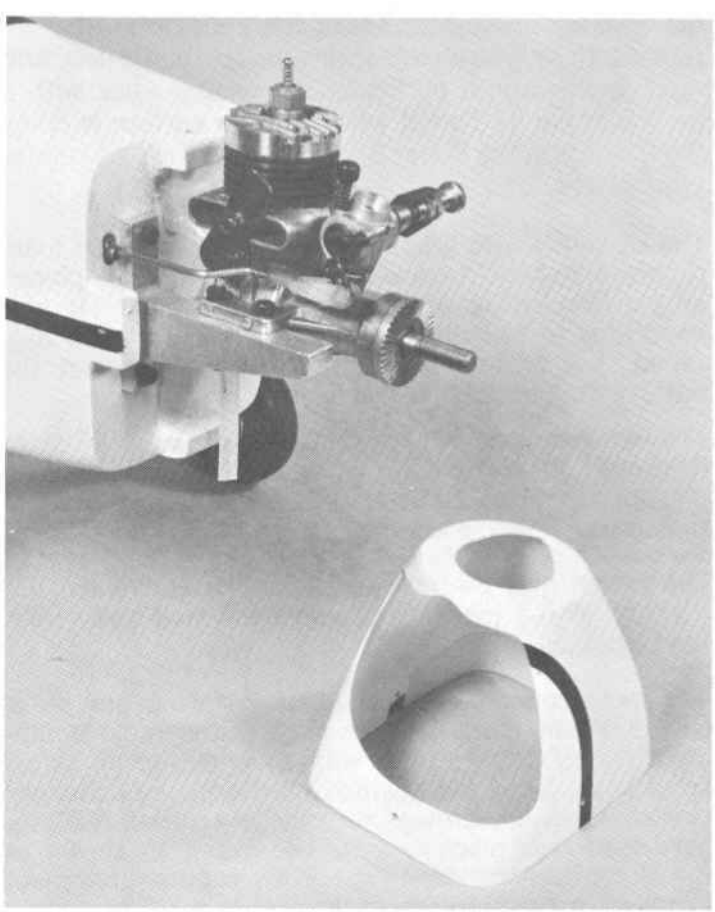
(a.) Hold the aluminum landing gear in place and drill through the 1/8" plywood mounting plate. Glue the 4-40 blind nuts in place on the inside.

(b.) Assemble the wheels, axles and the aluminum landing gear.



(7.) ENGINE AND COWLING

(a.) The engine should be mounted on the aluminum mounts so that the spinner backplate is about 1/16" to 3/32" ahead of the cowling. A 1-3/4" Goldberg spinner was used on the prototype model. Note that the backplate on the Goldberg spinner has a recessed back, so the engine must be mounted about 1/8" farther ahead on the mounts than when using other brands of spinners. This is not a problem, but it is best to have the spinner on hand - whatever the



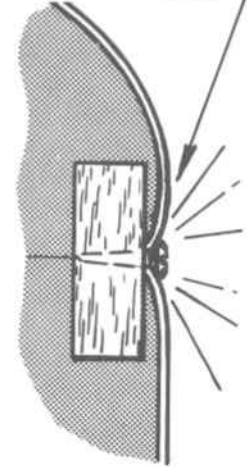
Engine Installation

brand - when installing the engine and cowl to be sure of good alignment. Drill out the mounts to match the engine being used. A No. 43 drill is the correct size, or a 3/32" diameter could be substituted. Tap the holes with a 4-40 tap.

(b.) Make a cut out in the cowling to clear the engine by making a series of holes about 1/8" in diameter around the area you want to remove. Have the holes almost touching each other. Cut through the plastic from one hole to another with a knife and take out the part to be removed. Don't get hasty and attempt to cut the opening to its full finished size in one step. Start undersize and open it up slowly trail fitting over the engine as you go, so that it doesn't end up larger than necessary.

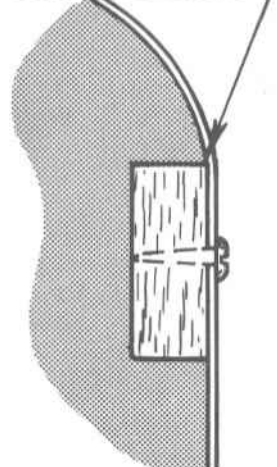
(c.) Glue the hardwood cowl blocks to the front of the firewall. Fit the cowl over them and, if necessary, sand the blocks down until they seat snugly against the inner surface of the cowl. The most common cause of plastic cowls cracking is distortion of the plastic from improper installation of the mounting blocks and screws. If the plastic is fully supported by the block underneath, no strain will occur when the screws are tightened down.

DISTORTION CAUSES PLASTIC FATIGUE



WRONG

BLOCK FULLY SUPPORTS PLASTIC



RIGHT

(d.) Slide the cowl in place and install the spinner on the engine. Using the spinner as a guide, align the the cowling on the fuselage. Drill a pilot hole through the cowl and into the mounting blocks. Remove the spinner and cowl, and open up the holes in the cowling so that they are large enough to pass the mounting screws.

(8.) FINISHING

The ABS plastic cowling may be finished with Sig Supercoat Dope. The cowl should be sanded to remove the gloss on the surface of the plastic before it is painted. Use very fine sandpaper on the cowl so that it doesn't get deeply scratched. Deep scratches can open up during doping and become prominent.

It isn't necessary to put any base or filler coats on the cowling. But care should be taken not to apply heavy, wet coats of color dope to the plastic. Put on a very light coat and allow it to dry thoroughly before applying a second coat. Do not use paints other than dope on the cowling without first testing their compatibility with the ABS plastic on a scrap piece.

All wood parts of the model should be covered with silkspan. This not only strengthens the wood but it seals off the wood grain to give a better finish. It isn't necessary to have elaborate spraying equipment to put on a good finish. If you brush, just be sure to thin the dope or sanding sealer until it flows out smoothly. Many paint jobs are ruined by trying to brush dope without thinning properly.

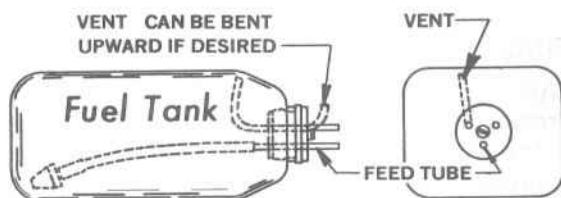
The wood parts are first prepared with two brushed on coats of Sig Lite-Coat (low shrink) clear dope. Sand each coat when dry. Cut a piece of silkspan about 1" larger than the area to be covered. Dip in water and apply. Work around the edges, pulling out all the wrinkles and stretching it smooth. Brush around the edges with clear dope and it will soak through the covering and adhere to the dope underneath. After drying, trim off the edges with a sharp razor blade. Redope any loose edges that have not completely adhered. Apply two coats of clear dope to the covered parts. Sand lightly with fine sandpaper. Apply a coat of Sig Sanding Sealer.

When dry, sand the majority of sanding sealer away with fine sandpaper. Hold the model up to a light occasionally while sanding and you can see the low spots appear. If you can't sand these spots away without sanding into the silkspan, then you need another coat of sealer. Remember that the purpose of the sanding sealer is only to fill in the low spots, not to build up the high ones. With thorough surface preparation, two coats of Supercoat Color Dope will usually give good coverage.

See page 2 for instructions on painting the molded foam wing.

(9.) TANK INSTALLATION

NOTE: The Super Sport's engine is not fully enclosed in the cowling, so only one vent line is needed in the fuel tank. With a single vent set-up refuel the tank by disconnecting the fuel feed tube from the carburetor and put the fuel into the tank thru it. When fuel runs out the vent tube, the tank is full.



(a.) A 4 oz. rectangular plastic clunk-type fuel tank (such as Sullivan RST-4) fits best in the Super Sport. The tank can be mounted two ways: by either boring a 7/8" dia. Hole thru the firewall to allow the entire tank cap to stick thru; or by making 2 smaller holes to allow only the brass tubing to stick thru the firewall. The prototype used the latter method with no problems. Whichever is used, keep the tank centerline as high as possible.

(b.) Temporary cross-pieces of scrap balsa should be glued across the fuselage to support the rear and bottom of the tank. Or it may be kept in place by stuffing foam rubber under and around it.

(10.) RADIO INSTALLATION

If your Super Sport is flown with 4 or more channel radio equipment (using 3 servos for elevator, rudder and engine), plug the rudder servo into the receiver outlet usually used for the ailerons. This will enable you to develop the proper left and right reactions that will later be needed when advancing to an aileron-controlled model. On an aileron model, the rudder is used only for ground steering and some specialized aerobatic maneuvers. Getting used to this extra function, using your other hand, is a much easier transition from three to four channel operation than would be the case if you had to change hands on the primary turning function. (Which would be required if you had been flying the Super Sport with the rudder servo plugged into the "rudder" output socket of the receiver.) The important thing you are learning is automatic left and right reaction on a particular transmitter stick with a particular hand. Forget which control surface is doing the turning on the Super Sport, assume that the rudder is an aileron.

The receiver battery pack should be wrapped in foam rubber sheet, held on with rubber bands and placed as far forward as possible, under the tank. It is a good idea to put the package in a small plastic bag, taped shut around the battery cable to protect the battery from accidental fuel leakage.

The receiver should be similarly wrapped in foam to protect it from engine vibrations. Cover it with a plastic bag also. Stow this package just in front of the servos.

The switch may be mounted wherever convenient on the side of the model, preferably the side away from the engine oil.

The most convenient method of installing servos is on the plastic mounts which most of the radio equipment manufacturers offer with their outfits or as an accessory. Servos for which plastic mounts are not available can be screwed directly to at least 3/8" sq. hardwood rails placed across the cabin, as shown in the accompanying drawing. With rubber grommets installed in the servo mounting holes, mark the spots for drilling pilot holes for screws. Space the servos

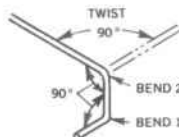
at least 1/8" apart and do not have them contacting the hardwood mounting rails except on the grommets. Using a washer on the wood screws mount the servos to the rails. Do not tighten the screws down against the grommets since this will cause vibration to be transferred to the servos. The washer should just rest against the grommet without compressing it.

The pushrods are made from firm 1/4" sq. balsa. The 1/16" wire ends are wrapped with thread and coated with glue. Use the R/C links at the tail end so that trimming adjustments can be quickly made. A variety of quickly detachable pushrod retainers are available from the Sig Catalog for hooking the pushrods to the servos. Another method is to make a "Z" bend as shown. Always avoid metal-to-metal contact in linkages because this may produce harmful radio interference.

A flexible steel cable pushrod with nylon outer tubing (not furnished) is recommended for hookup of the throttle to the motor control servo.

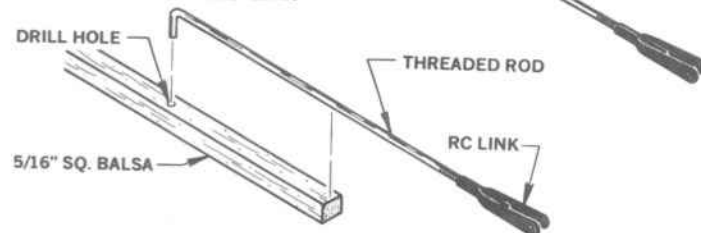
"Z" BEND

AFTER MAKING BENDS 1 AND 2 WITH PLIERS, CLAMP IN VISE TO TWIST.



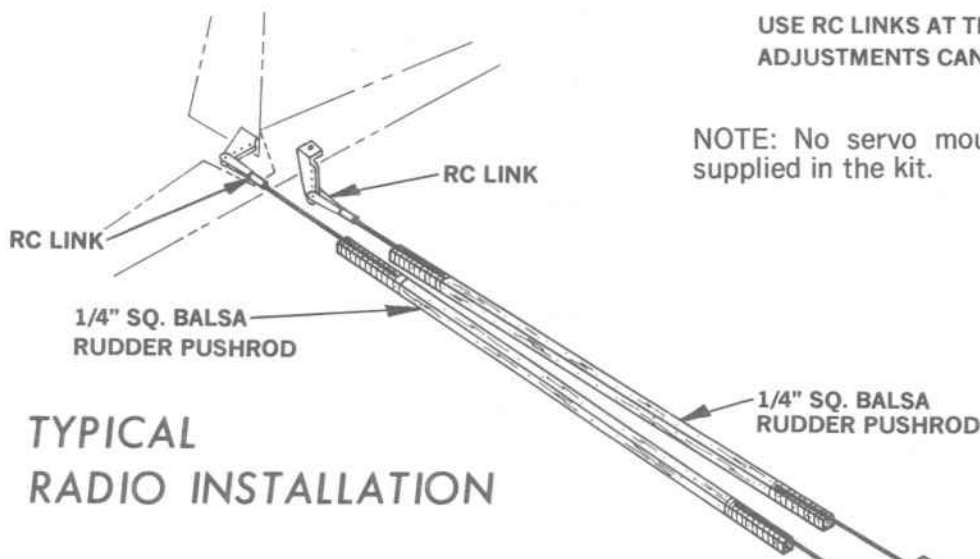
"Z" BENDS CAN BE USED INSTEAD OF SERVO CONNECTORS TO HOOK PUSHRODS TO SERVOS.

MAKE CONTROL SURFACE ENDS OF PUSHROD FIRST, FEED THROUGH FUSELAGE, HOOK RC LINK TO SURFACE, CUT SERVO END OF Balsa TO EXACT LENGTH NEEDED, MEASURE AND INSTALL SERVO CONNECTING WIRE END.

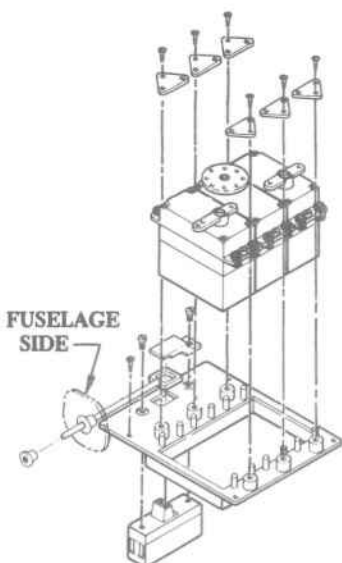


USE RC LINKS AT THE TAIL END SO THAT TRIMMING ADJUSTMENTS CAN BE MADE QUICKLY.

NOTE: No servo mounting material or hardware is supplied in the kit.

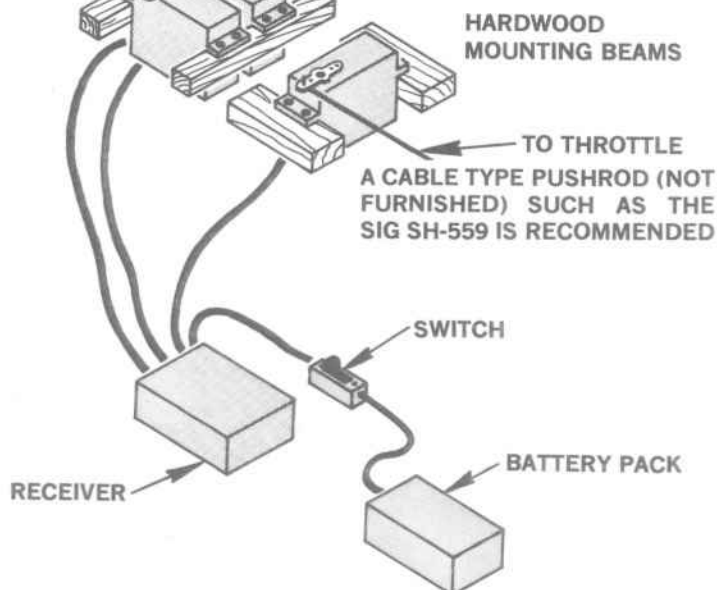


SOLDER LINKS, 1/16" WHEEL COLLARS, SIG NYLON PUSHROD KEEPERS, or "Z" BENDS CAN BE USED TO FASTEN THE PUSHRODS TO THE SERVO ARMS.



EK-Logictrol UM-11 Mount for 3 servos and switch

Most radio manufacturers supply or have available servo "trays" which hold one or more servos in position on the hardwood beams that are glued into the fuselage. There are several advantages to using a servo tray as opposed to mounting the servos individually as shown in the drawing above. The servos are mounted in the trays with rubber grommets, thus isolating them more effectively from harmful engine vibrations. Also, servo mounting and removal is simplified since only four screws are needed to hold the entire tray (with all 3 servos) in place, as opposed to four screws with washers and grommets for each servo when a tray isn't used. Usually fewer hardwood beams are needed. Some servo trays also have provisions for mounting the switch and charging plug. At left is a typical example of a servo tray suitable for use in the Super Sport.



(11.) PRE-FLIGHT

Be certain to carefully range check your radio equipment and see how it operates with the engine running before attempting test flights. A lot of problems can be avoided if the engine has been well broken-in and the idle adjustment perfected on a test block or in another airplane before installation in the model.

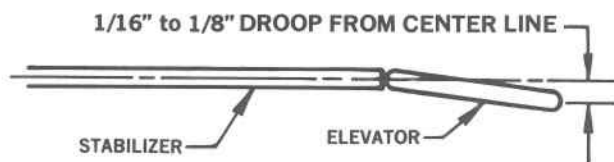
The Balance Point position is shown in the side view drawing in the center of this booklet. Do not balance any further back than this point even if lead must be added to the nose. Trying to fly with the Balance Point too far back is much more dangerous than the slight increase in wing loading caused by adding nose weight. Balance with an empty fuel tank. When slightly nose heavy the model will be a great deal more stable and less likely to stall or snap roll. The reaction to control movements is also less sensitive with a forward Balance Point so it is not so easy to overcontrol. Some aerobatic ability may be sacrificed with a forward Balance Point so you may wish after test and familiarization flights, to adjust the Balance slightly to suit your own preferences and conditions. Do this gradually and check results and control response in the air. In case all of this talk makes you somewhat uncertain, rest assured that the Balance Point shown in the side view has been thoroughly proven by test flying several prototype Super Sport models.

A properly balanced and aligned model with a reliable engine and radio is assured of successful flights.

IMPORTANT: ELEVATOR SETTING

On most Super Sports, the "neutral" or fly-level position of the elevator is with $1/16"$ to $1/8"$ of down elevator droop. To test fly, adjust the elevator pushrod link so that when the transmitter elevator trim lever is in full up position, the elevator is zero-zero or level with the stabilizer. Take off in this full up trim position. The model will climb steeply, so feed in down trim with the transmitter trim lever until the model flies level. Land and observe this position of the elevator. Adjust the elevator pushrod as required to keep this flight-checked "neutral" position when the transmitter elevator trim lever is centered.

TYPICAL "NEUTRAL" ELEVATOR SETTING



CONTROL MOVEMENTS.

For test flying, the following are suggested:
Rudder - $1/2"$ each way from neutral
Elevator - $5/16"$ each way from neutral

(12.) FLYING

As mentioned in the opening paragraph of this booklet, the Super Sport is not intended for use as an RC trainer. If you are a newcomer to RC model flying, we strongly recommend that you not attempt flying without the assistance of an experienced RC flyer. Contact your local model club or ask your hobby dealer for the names of good flyers in your area and a suitable location for flying. Many hours of work are involved in the construction of a model and it can all be lost in a moment of beginner's indecision. A skilled flier can help you get past the first critical test flights without damaging the model and give needed instruction in proper control.

If a good, smooth takeoff surface is not available, the Super Sport may be hand launched. We do not recommend that you attempt to launch your model with one hand and fly it at the same time. Enlist the aid of a modeler to launch your model so that you can have both hands free to concentrate on the control movements in the normal manner. The launcher should hold the model just behind the landing gear, run into the wind at a fast trot and thrust the model forward with the nose slightly down in a spear-throwing motion. It is not necessary to achieve a lot of velocity in the launch—it is more important that it be released smoothly and with wings level. The model may dip slightly and then should begin climbing at a slight angle. If it does not begin to climb after about fifty feet apply a small amount of up elevator to lift the nose.

Use the rudder to keep the wings level and headed straight into the wind until about 75 feet of altitude is obtained. Keep first turns gentle and not steeply banked. Stay up wind of the transmitter. Use trim levers on your radio equipment where necessary to obtain straight and level flight with the control sticks in neutral position but don't attempt to make these adjustments until the model is at a good altitude. Throttle back at altitude to find out the model characteristics in a gliding condition so that some indication is seen of what to expect during the landing approach. It is a good idea to make several practice landing approaches at a good altitude to get the feel of the model for this approaching critical maneuver. Make your final and complete landing approach while your engine still has plenty of fuel remaining so that the engine is not liable to stop before completion of the flight. This will allow application of power if the approach is being undershot.

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