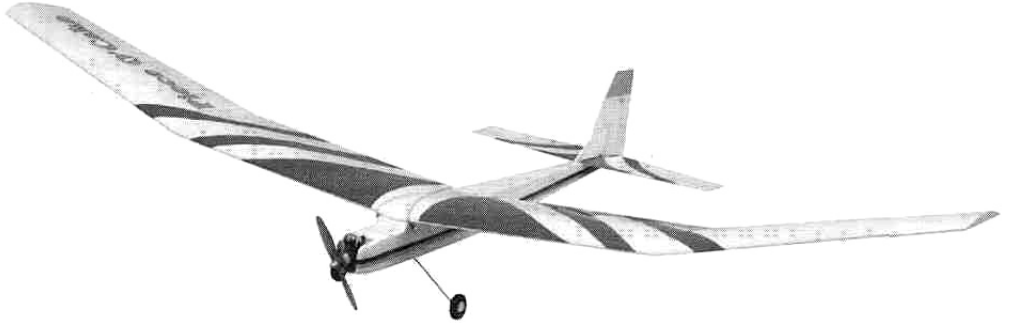
Dynaflite™

PIECE O' CAKE™

• EASY TO BUILD...EASY TO FLY
• FORGIVING FLIGHT CHARACTERISTICS
LARGE WINGSPAN • LIGHT WING LOADING

READ THROUGH THIS INSTRUCTION MANUAL FIRST. IT CONTAINS IMPORTANT INSTRUCTIONS AND WARNINGS CONCERNING THE ASSEMBLY AND USE OF THIS MODEL.

.049 POWERED MOTOR GLIDER



Instruction Manual

WARRANTY

Dynaflite guarantees this kit to be free from defects in both material and workmanship at the date of purchase. This warranty does not cover any component parts damaged by use or modification. In no case shall Dynaflite's liability exceed the original cost of the purchased kit. Further, Dynaflite reserves the right to change or modify this warranty without notice. In that Dynaflite has no control over the final assembly or material used for final assembly, no liability shall be assumed nor accepted for any damage resulting from the use by the user of the final user-assembled product. By the act of using the user-assembled product, the user accepts all resulting liability. If the buyer is not prepared to accept the liability associated with the use of this product, return this kit immediately in new and unused condition to the place of purchase.

MADE IN USA

POCKP03 Printed in USA

TABLE OF CONTENTS

INTRODUCTION

Congratulations and thank you for purchasing the Dynaflite Piece 0' Cake. The Piece 0' Cake is a "powered sailplane" or "motor glider" and is an ideal model to learn radio controlled flying - especially if you are not able to locate an experienced flight instructor and must try it on your own. Because of its large wingspan and light wing loading, the Piece 0' Cake is a gentle model that will give you time to think and react. For the same reasons/ you must reserve first flight attempts for a calm day - more on that in the "Flying" section at the end of the manual. The Piece 0' Cake does not require a powerful engine. Any .049 will do the job - all the engine has to do is provide a little thrust and the large wing will do the rest!

The way you fly the Piece 0' Cake is to let it climb (it will do that almost by itself with just a little guidance from you) and fly it around rather like a sailplane. This doesn't sound like much action but don't worry; if you're a beginner you'll be busy. Most important, you'll develop the hand/eye coordination required to fly traditional sport/trainers. Enough said. Please read the rest of the preliminary information thoroughly, then let's get started!

PROTECT YOUR MODEL, YOURSELF & OTHERS... FOLLOW THESE IMPORTANT SAFETY PRECAUTIONS

Your Piece 0' Cake is not a toy, but a sophisticated working model that functions like a full-size airplane. Because of its performance, if you do not assemble and operate the Piece 0' Cake correctly, you could possibly injure yourself or spectators and damage property. **To make your R/C modeling experience totally enjoyable, we recommend that you get assistance with assembly and your first flights from an experienced, knowledgeable modeler.** You'll learn faster and avoid risk to your model before you're truly ready to solo. Your local hobby shop has information about flying clubs in your area whose membership includes qualified instructors.

You can also contact the national Academy of Model Aeronautics (AMA), which has more than 2,300 chartered clubs across the country. We recommend you join the AMA, which will provide you with insurance coverage at AMA club sites and events. AMA Membership is required at chartered club fields where qualified flight instructors are available.

Contact the AMA at the address or toll-free phone number below.

Academy of Model Aeronautics
5151 East Memorial Drive
Muncie, IN 47302
(800) 435-9262
Fax (317) 741-0057

1. You must assemble the plane according to the instructions. Do not alter or modify the model, as doing so may result in an unsafe or unflyable model. In a few cases the instructions may differ slightly from the photos or plan. In those instances the text should be taken as correct.

2. You must take time to build straight, true and strong.

3. You must install all R/C and other components so that the model operates properly on the ground and in the air.

4. You must test the operation of the model before the first and each successive flight to insure that all equipment operates correctly. You must also make certain that the model has remained structurally sound.

NOTE: We, as the kit manufacturer, can provide you with a quality kit and great instructions, but ultimately the quality and flyability of your finished model depends on how you assemble it; therefore, we cannot in any way guarantee the performance of your completed model and no representations are expressed or implied as to the performance or safety of your completed model. Please inventory and inspect all parts carefully before starting to build! **If any parts are missing, broken or defective or if you have any questions about building or flying this model, please call us at (217) 398-8970 and we'll be glad to help.** If you are calling for replacement parts, please look up the part numbers and have them ready when you call.

PREPARATIONS

REQUIRED ACCESSORIES

These are the items not included with your kit that you will need to purchase separately. Items in parentheses (OSMG2691) are suggested part numbers recognized by distributors and hobby shops and are listed for your ordering convenience. **GPMis** the Great Planes® brand, **TOP** is the Top Flite® brand and **HCA** is the Hobbico® brand.

- ❑ 2 or 4 Channel Aircraft Radio System with 2 standard servos and a square battery*
- ❑ .049 Engine with appropriate fuel and glow plug clip

- ❑ Engine Mount (DAVG3005)
- ❑ Propellers - Refer to your engine's instructions for proper size
- ❑ 1 roll of Covering Film; See Covering Tips (page 30)
- ❑ 1 /4" Latex Rubber Padding (HCAQ1000)
- ❑ 1/16" Foam Wing Seating Tape (GPMQ4422)
- ❑ (2) 1-1/2" Wheels (GPMQ4243)
- ❑ (2) 3/32" Wheel Collars (GPMQ4302)
- ❑ #64 Rubber Bands (1 /4 lb box - HCAQ2020)
- ❑ (4) #2 x 3/8" Screw for mounting your engine
- ❑ Self-Adhesive Lead Weight (GPMQ4485)

*If your radio includes a "flat" style battery for the receiver, ask your hobby dealer if you can swap it for a square style. The square style battery fits in the fuselage better than a flat one.

SETTING UP SHOP

If this is your first model there are a few supplies and tools that you should gather before you begin. The most important item is a **flat** table that you can build your models on. You can turn a solid core door into a building table, but avoid hollow core doors because they warp easily. If possible, locate your building table in an area that is not in the way of other projects or household activities. Cover your building table with a board that you can stick pins into. The back of a 2' x 4' ceiling tile works well or you can cut a piece to fit your table from a 4' x 8' sheet of Celotex insulation board available from a home improvement store.

REQUIRED SUPPLIES AND TOOLS

These are the building tools and adhesives that you will need to build your Piece 0' Cake.

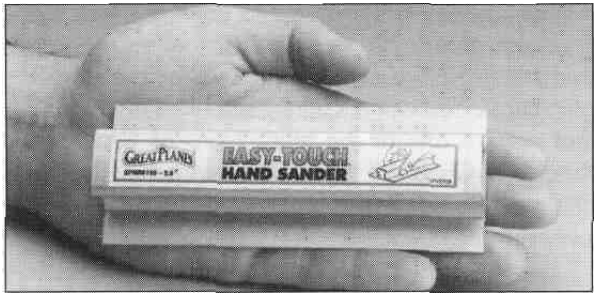
We recommend Great Planes Pro™ CA and Epoxy

- ❑ 2 oz. Thin CA Adhesive - (GPMR6003)
- ❑ 2 oz. Medium CA+ Adhesive (GPMR6009)
- ❑ CA Activator - (GPMR6035)
- ❑ 30-Minute Pro Epoxy - (GPMR6047)
- ❑ #1 Hobby Knife Handle (XACR4305)
- ❑ #11 Blades (Qty. 100 - HCAR0311) or (Qty.5-XACR2911)
- ❑ Hobbico (or similar) Builders Triangle (HCAR0480)
- ❑ Medium T-pins (HCAR5150)
- ❑ Wax Paper
- ❑ Electric Drill
- ❑ Drill Bits: 1/16", 3/32"/ 1/8"/ 3/16"
- ❑ Masking Tape
- ❑ String for aligning the stabilizer
- ❑ #1 Phi Hips Screwdriver
- ❑ Top Flite Covering Iron (TOPR2100)
- ❑ A building board that you can stick pins into (see "Setting Up Shop")

OPTIONAL ACCESSORIES

You can build your Piece 0' Cake without these items but they will make the job much easier and provide you with better results. These are things you will accumulate **as** your building "career" progresses anyway.

- ❑ Razor Plane (MASR1510)
- ❑ Single-Edge Razor Blades (100, HCAR0312)
- ❑ CA Applicator Tips (HCAR3780)
- ❑ Hot Sock™ (for your covering iron, TOPR2175)
- ❑ 6-Minute Pro Epoxy (GPMR6045)
- ❑ Trim Seal Tool™ (TOPR2200)
- ❑ Heat Gun (TOPR2000)
- ❑ Straightedge (Fourmost Non-Slip, FORR2149)
- ❑ Denatured or Isopropyl Alcohol (for epoxy clean-up)
- ❑ HobbyLite™ Balsa Filler (HCAR3401)
- ❑ Epoxy Brushes (GPMR8060)
- ❑ CA Debonder (GPMR6039)
- ❑ Powered hand tool with Sanding Drum and Cut-off Wheel
- ❑ Bar Sander or Sanding Block and Sandpaper (coarse, medium, fine grit)*
- ❑ Microballoons Filler (TOPR1090)



*A flat, durable, easy-to-handle sanding tool is a necessity for building model airplanes. Great Planes makes a complete range of Easy-Touch™ Bar Sanders and replaceable Easy-Touch adhesive-backed sandpaper. For the Piece 0' Cake all that is required is the short 5-1/2" Bar Sander (GPMR6169) and two assortment packages of adhesive-backed sandpaper (GPMR6189).

For future reference, here's a list of Easy-Touch Bar Sanders and adhesive-backed sandpaper:

5-1/2" Bar Sander (GPMR6169)
11 "Bar Sander (GPMR6170)
22" Bar Sander (GPMR6172)

Assortment pack of 5-1/2" strips (GPMR6189)

12' Roll of adhesive-backed sandpaper,
80-grit (GPMR6180)
150-grit (GPMR6183)
220-grit (GPMR6185)

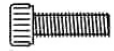
BUILDING NOTES

- There are two types of screws used in this kit:

Sheet metal screws are designated by a number and a length.

For example #2 x 3/8"

Machine screws are designated by a number, threads per inch and a length.



For example 2-56 x 3/8"

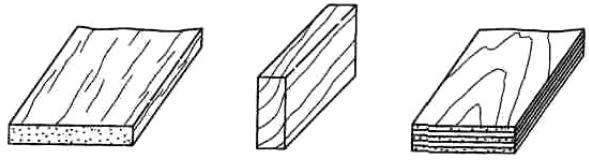
- When you see the term "test fit" in the instructions, it means you should first position the part on the assembly **without** using any glue, then slightly modify or "custom fit" the part as necessary for the best fit.

- Whenever just "epoxy" is specified you may use either 30-minute epoxy or 6-minute epoxy. When 30-minute epoxy is specified, it is highly recommended that you use only 30-minute epoxy because you will need either the working time and/or the additional strength.

COMMON ABBREVIATIONS

Fuse = Fuselage
Stab = Horizontal Stabilizer
LE = Leading edge (front)
TE = Trailing edge (rear)
Ply = Plywood
" =Inches

TYPES OF WOOD



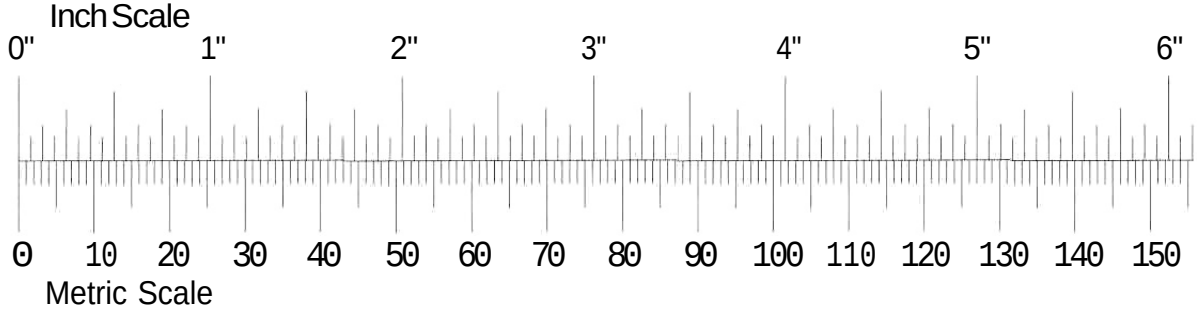
Balsa **Basswood** **Plywood**

CYANOACRYLATE GLUE

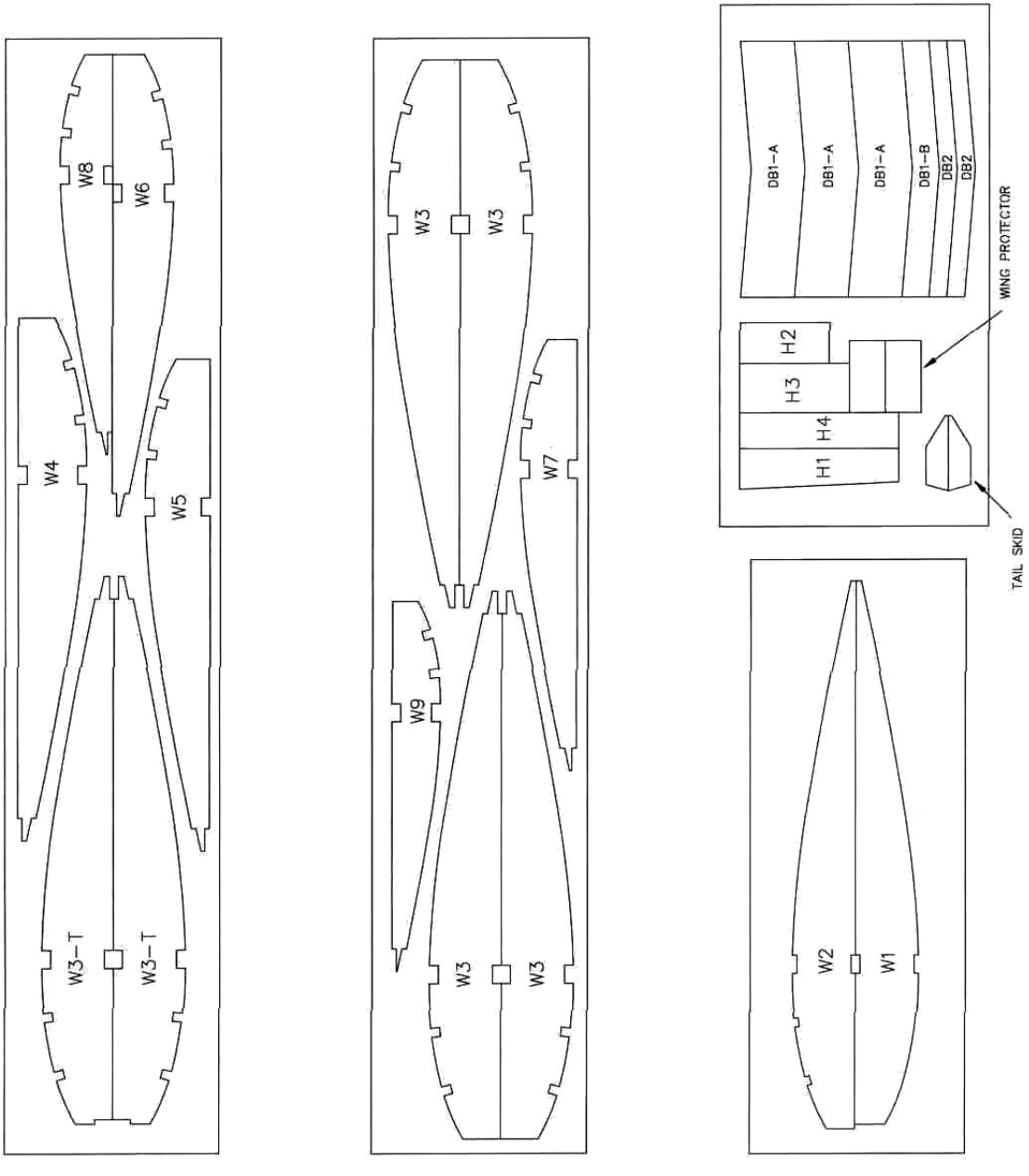
The most popular type of glue modelers use for general construction of R/C models is cyanoacrylate or CA glues. Modelers build with CA because it cures fast (immediately in some cases) and the pieces do not have to be clamped or pinned together as they do with traditional adhesives. CAs do, however, have their own set of special procedures and precautions that you should follow. Always use CA in a well ventilated area. Open some windows or place a fan in the room to circulate the air. Do not lean directly over your work when you use CA and look away while it cures or "sets off." CA can cure immediately upon contact with skin so if you accidentally bond your fingers, do not use vigorous motion to separate them. Use CA Debonder (GPMR6039) or acetone (nail polish remover) or soak your fingers in warm water for a few minutes. **Never** point the tip of a CA bottle toward your face and be especially careful when you unclog a CA tip. Hobbico CA Applicator Tips (HCAR3780) are highly recommended and will help keep the bottle from clogging. Keep paper towels or tissues close by to immediately absorb excess CA dropped on your model or work area. **Read all the warning labels on your CA bottle.**

There are different viscosities of CAs intended for different conditions you will encounter when you build. Thin CA is great for "tack-gluing," for glue joints that fit well and for parts that are already joined but need to be permanently bonded. Medium CA is used for general construction where you apply glue to one part, then join it to another. Thick CA is great for glue joints that don't fit perfectly or parts that require a little time for positioning before the glue cures. You will encounter many other conditions that require one or the other types of CA. For the Piece 0' Cake all you really need is thin and medium CA.

CA Accelerator is a chemical that you can spray over uncured CA to make it cure immediately. A mist spray of accelerator will do the job. **Do not** inhale the vapors! Some modelers "preprime" the parts to be glued with accelerator, join them, then add the CA. This way the CA is guaranteed to cure immediately. This prepriming is especially handy when you use thin CA because it will cure before all of the glue soaks into the wood away from the glue joint. We do **not** recommend you build your entire model with this method. Use accelerator only when necessary. Often, overspray from accelerator used hours or even days earlier on nearby glue joints will cause the CA you use on the next step to cure prematurely and unexpectedly - so be careful!



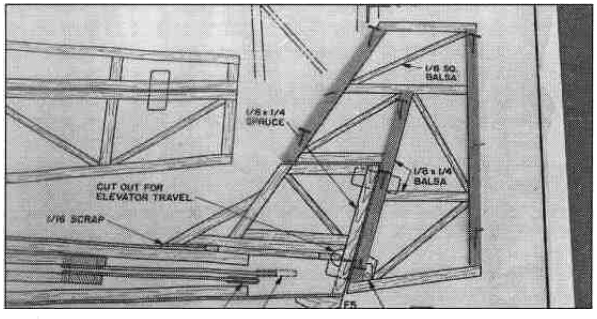
DIE-CUT PATTERNS



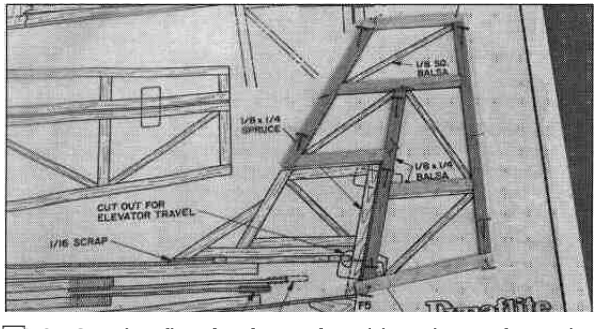
BUILD THE TAIL SURFACES

Place your building board on top of your **flat** building table. Unroll the plan sheet, then reroll it the opposite way so it will lay flat. Position the rudder and fin drawing over your flat building board. You may separate the wing portion from the plan, or fold the plan in half to make it easier to work with. Cover the rudder and fin drawing with wax paper so the glue will not stick to the plan.

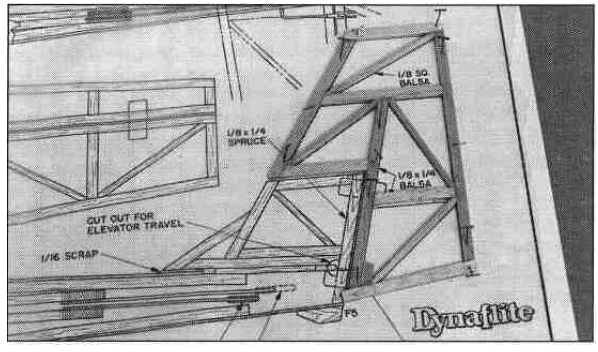
BUILD THE RUDDER



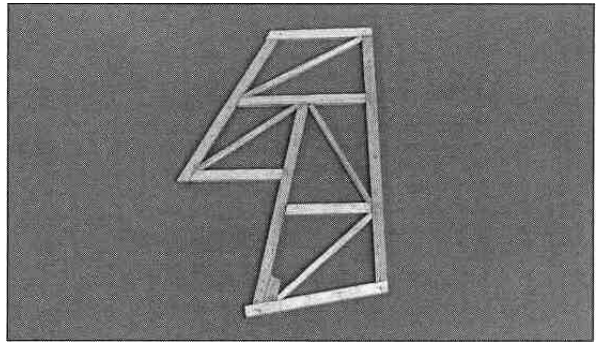
❑ 1. Accurately cut the three **vertical** rudder pieces including the **leading edge** (LE), **rudder post** (the middle part) and the **trailing edge** (TE) from a 1 /8" x 1/4" x 36" balsa stick. Then pin them over their locations on the plan with small T-pins. Many modelers find that they can more accurately cut small balsa sticks with a single-edge razor blade instead of a hobby knife.



❑ 2. Cut the five **horizontal** rudder pieces from the same 1/8" x 1/4" balsa stick, then glue them in position with medium CA. Where possible, **cut the** sticks slightly too *long* so you can trim them to exact length as you complete the assembly. You can cut the tip and bottom pieces too long, and trim them after you remove the rudder from the plan.

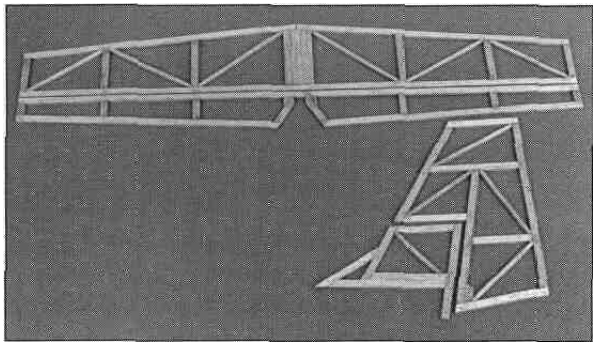


❑ 3. Make the rudder **horn mount plate** from the 1/8" x 1/4" balsa stick, then glue it in position with medium CA. Accurately cut the **"braces"** from a 1/8" x 1/8" x 36" balsa stick, then place them in the frame and glue them in position with thin CA.



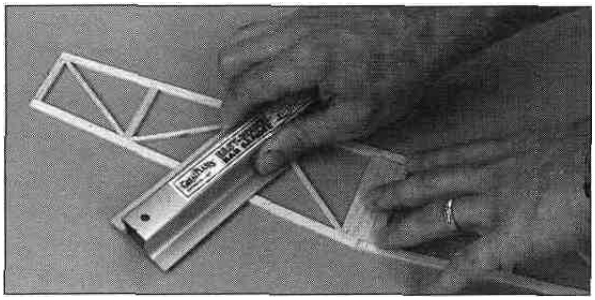
❑ 4. Remove the T-pins, then lift the rudder from your building board and peel off the wax paper. Reinforce glue joints that don't look strong with medium CA, then set the rudder aside and continue with the rest of the tail pieces.

BUILD THE FIN, STABILIZER & ELEVATOR



❑ 1. Use the remainder of the 1/8" x 1/4" balsa stick plus three more 1 /8" x 1 /4" x 36" balsa sticks, and the remainder of the 1/8" x 1/8" balsa stick plus a second 1/8" x 1/8" x 36" balsa stick, to build the **fin, stab** and **elevator** the same way as the rudder. Remember, **where possible** it's easier if you cut the sticks slightly long so you can trim them to exact length after you remove the assembly from your building board. After you complete each assembly, remove it from your building board and reinforce any glue joints that don't look strong with medium or thin CA.

Note: Make sure you use the 1/8" x 1/4" x 3-1/2" **basswood** stick for the **fin trailing edge.** Make the **stab center** from the 1 /8" x 1" x 2-3/4" balsa sheet. Cut the angles to match the leading edge first, then trim the stab center to the length shown on the plan.



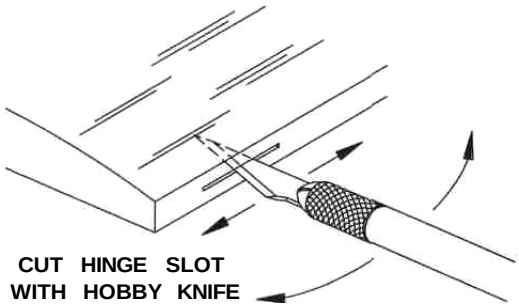
A note about sanding "built-up" tail surfaces: Use care when you sand a lightweight balsa structure made up of "sticks." The part flexes and moves while you sand, and it can be difficult to keep your sanding block flat so you do not snag any of the small braces, or over-sand one area and make it thinner than another. Due to the design and slow flying speed of the Piece 0' Cake, **a perfectly smooth finish** is not necessary. For this model, the purpose of sanding is just to remove any glue bumps or uneven edges. Stop sanding when you have reduced most of the high spots. Use a large sanding block or a flat bar sander, and do not apply much pressure while you sand, *Enjoy it's not a racing plane - it's a floater.*

❑ 2. Use a ballpoint pen to *lightly* mark the location of the hinges on the control surfaces where shown on the plan.

FINISH THE TAIL SURFACES

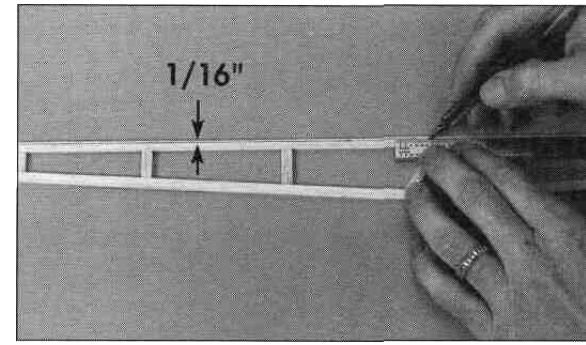
❑ 1. See the note below/ then use your bar sander or a sanding block and 220-grit sandpaper to even the edges and blend the LE's, TE's and "braces" **of** all the tail surfaces so they are flat and smooth.

❑ 3. Use a hobby knife with a #1 1 blade to carefully make the hinge slots. The first several cuts should be just deep enough to make a **shallow** slit to establish the hinge slot **location.**

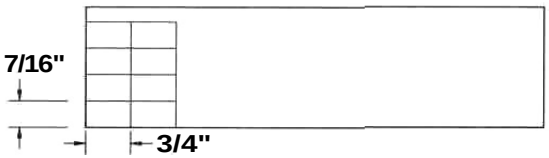


CUT HINGE SLOT WITH HOBBY KNIFE AND No. 11 BLADE

After the first shallow cuts, make several more cuts going slightly deeper each time. Move the knife from side to side and widen the slot as you cut.

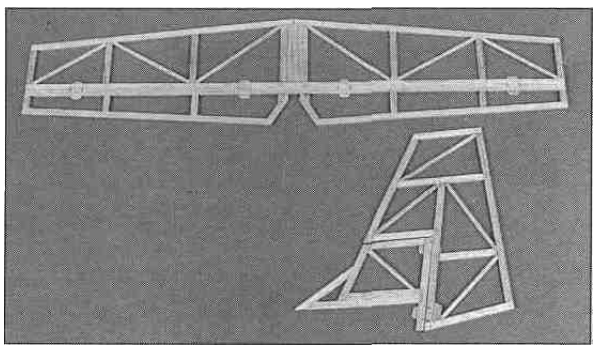


❑ **6. Carefully** separate the elevator from the stab. Then use a ballpoint pen and a straightedge to *lightly* draw a line 1/16" from the leading edge on both sides of the elevator.



MAKE SIX 7/16" X 3/4" HINGES FROM THE 2" X 9" HINGE STRIP PROVIDED

❑ 4. Cut six hinges from the hinge material supplied as shown in the sketch. Snip the corners off so the hinges go into the slots easier.



❑ 5. Test join the elevator to the stab, and the rudder to the fin with the hinges. Adjust the hinge slots if necessary so the control surfaces fit well.

❑ 7. Use the lines as a guide to bevel the leading edge of the elevator to a "V" with a hobby knife or a bar sander and 220-grit sandpaper.

❑ 8. Bevel the leading edge of the rudder the same way you did the stab.

❑ 9. Use your bar sander and 220-grit sandpaper to round the perimeter of the tail surfaces as shown on the plan (except of course, the edges that are joined by hinges).

There, that was a "piece o' cake," wasn't it? Set the tail surfaces aside for now while you build the wing and the fuselage.

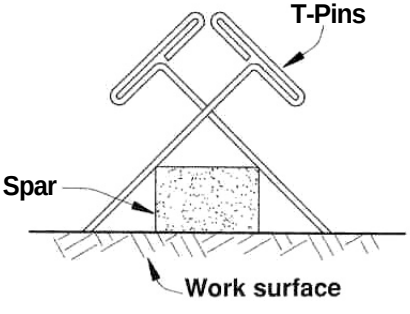
BUILD THE WING

BUILD THE INNER WING PANEL

❑ 1. Before you remove the the die-cut 3/32" balsa ribs and the die-cut 1/16" plywood parts from their die sheets, mark them with a ballpoint pen as shown on page 7. If you plan on covering the wing with transparent film, neatly mark all the ribs in the same location, or mark them in an inconspicuous location **so** the marks will not be seen through the covering.

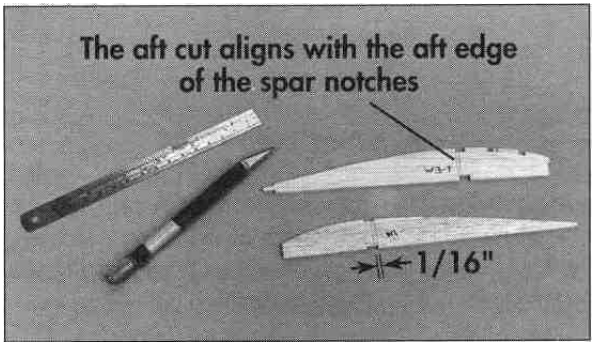
❑ 2. Carefully remove all the ribs and the plywood parts from their die sheets. If a rib will not easily come out of the die sheet, do not force it but use a sharp #11 blade to cut the wood where necessary. Use a bar sander and 220-grit sandpaper to remove any slivers or die-cutting irregularities.

❑ ❑ 3. Build the **right inner** wing panel first so your progress matches the photos. Cut the wing portion from the plan, or fold the plan so the right wing panel is on top. Lay the right wing plan over your building board, then cover it with wax paper.

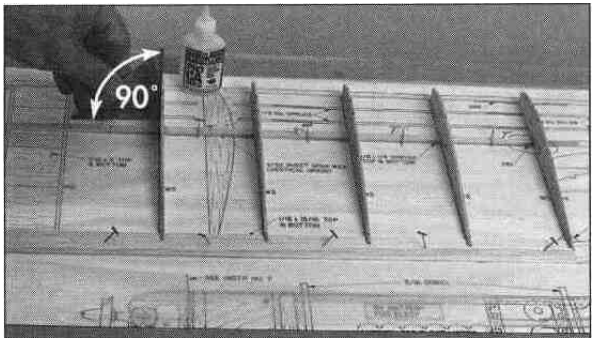


❑ ❑ 4. Pin a 1/8" x 1/4" x 18-1/4" **basswood** bottom **spar** over its location on the plan so the root end accurately aligns with the centerline of the wing at rib **W1** on the plan. Do not insert T-pins through the spar but install them in a "criss-cross" pattern.

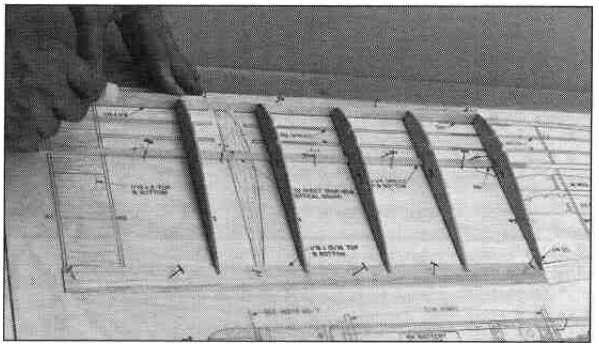
❑ ❑ 5. Accurately cut a 1/16" x 15/16" x 36" balsa sheet to a length of 1 8". Then pin it in position over the **trailing edge** of the plan so the root end aligns with the centerline.



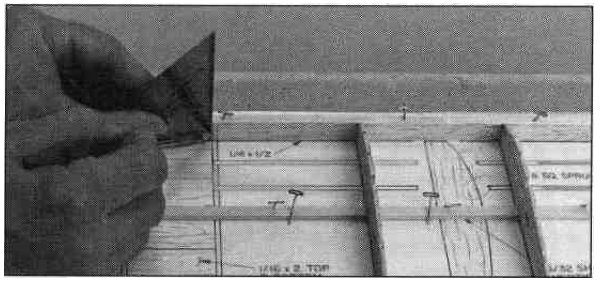
❑ ❑ 6. Use a straightedge and a hobby knife to cut **halfway** through one W1 rib and one W3-T rib along a line connecting the aft edge of the spar notches. Cut another line 1 /16" ahead of the first on both ribs. Make the slots on the side of the rib that will be visible when you glue the ribs in position. The ribs in the photo are for the right wing panel. It is *easier to align these ribs and glue them in position if they are in one piece instead of cutting all the way through. These slots are for the plywood joiners and will be cut all the way through later.*



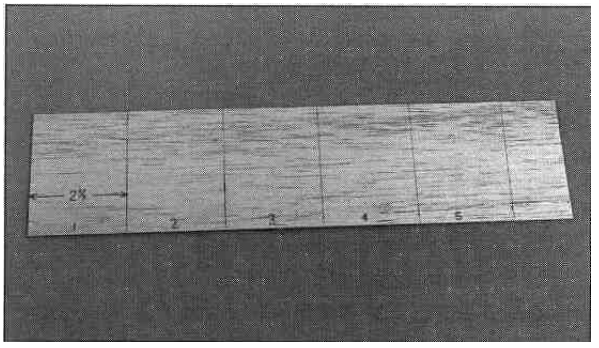
❑ ❑ 7. Test fit four **W3** ribs and one **W3-T** rib to the bottom spar and bottom TE over their locations on the plan. If necessary, adjust the notches in the ribs so they fit the spar and bottom TE. Then use a builder's triangle to make sure the ribs are perpendicular as you glue them in position with thin or medium CA.



❑ ❑ 8. Position a 1/4" x 1/2" x 18" balsa **leading edge** over its location on the plan so the root aligns with the centerline of the wing. Securely pin the LE to the building board so it tightly contacts the wing ribs. Then glue it in position with thin CA.

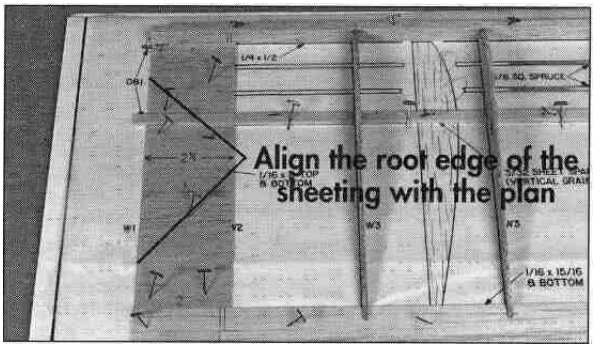


❑ ❑ 9. Mark the location of rib W2 on the leading edge and trailing edge.



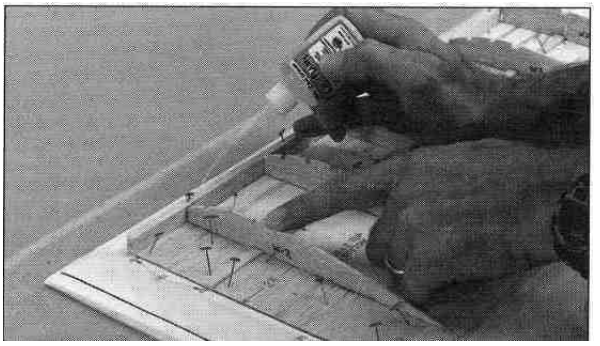
❑ ❑ 10. Cut three 2-1/8" wide strips from the 1/16" x 3" x 30" balsa sheet. Glue two of the strips together to make the 2-1/8" **x** 6" **aft bottom sheeting** that fits behind the bottom spar.

❑ ❑ 11. Trim the 2-1/8" x 6" sheet you just made so it fits between the bottom main spar and the bottom trailing edge sheet. **Accurately** trim the root edge of the sheet (the ***left*** edge if you are building the right wing panel, the ***right*** edge of the sheet if you are building the left wing panel) so it aligns with the centerline of the wing. It's okay if the other edge of the sheet extends past rib W2. Pin the sheet in position but do not glue it to the wing yet.



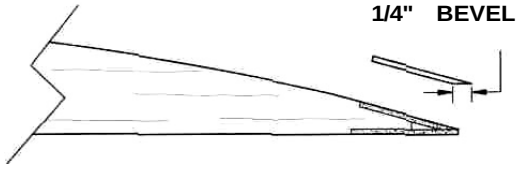
❑ ❑ 12. Trim the third 1/16" x 2-1/8" x 3" sheet to fit between the leading edge and the bottom spar so the root end accurately aligns with the wing centerline.

Note: It is important that the root edges of the bottom sheeting accurately align with the wing centerline because those edges will be used as a guide to determine the position of rib W-1.



❑ ❑ 1 3. Use the lines you marked as a guide to glue rib W-2 in position with medium CA. Then glue the forward and aft 1/16" bottom center section sheeting to the spar, LE, TE and rib W-2.

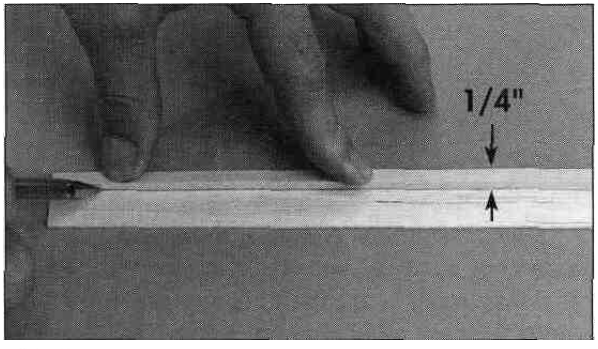
❑ ❑ 14. Remove the T-pins from the bottom TE sheeting. Then replace them in the aft end of the ribs to hold the rear of the wing panel securely to your building board.



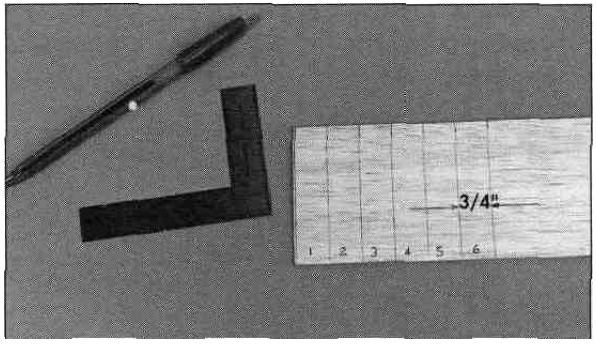
BEVEL THE UPPER TE TO FIT THE LOWER TE.

❑ ❑ 15. Test fit the other half of the 1/16" x 15/16" x 36" trailing edge sheet that you cut to a length of 18" in step 5. If necessary, adjust the notches in the ribs so the aft edge of the upper TE will align with the aft edge of the lower TE.

❑ ❑ 18. Glue the upper TE to the bottom TE and ribs with medium CA.

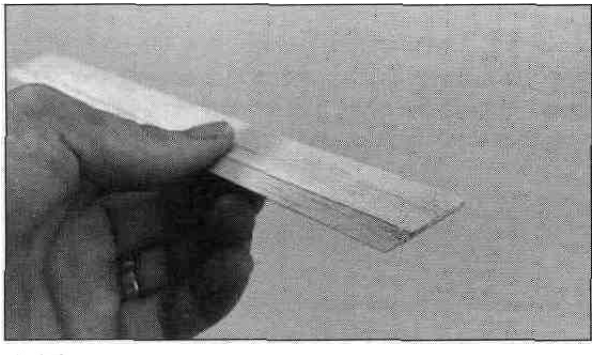


❑ ❑ 16. Use a 1/8" x 1/4" x 18-1/4" basswood spar as a guide to make a line 1/4" from one edge of the upper TE sheet with a ballpoint pen. See the sketch at step 18.

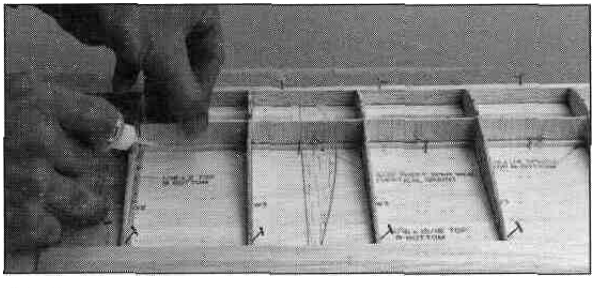


❑ ❑ 19. Use a builder's triangle or square and a ballpoint pen to mark, then cut, six 3/4" *vertical-grain* **shear webs** from the 3/32" x 3" x 15" balsa sheet.

❑ ❑ 20. Test fit but do not glue the shear webs between the ribs. If necessary, trim each shear web so the top spar will fully seat in the notches of the ribs and contact the tops of the webs.

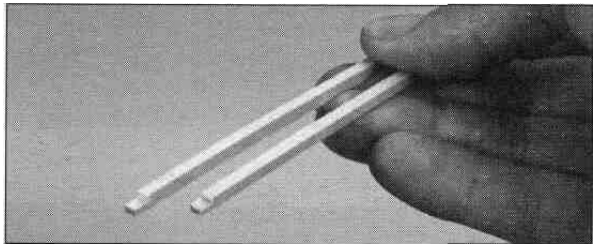


❑ ❑ 17. Use the line as a guide to bevel the aft edge of the sheet with your bar sander and 220-grit sandpaper.

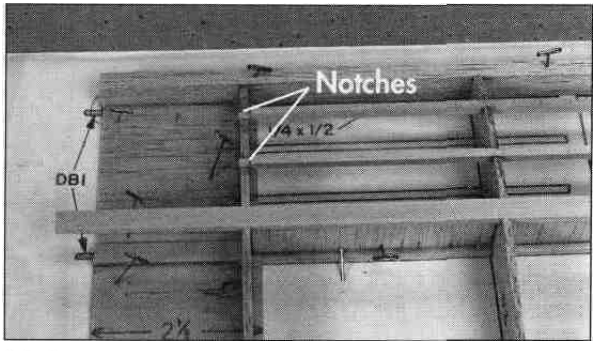


❑ ❑ 21. Use medium CA to glue **five** of the shear webs **in the center** of the bottom spar between all the ribs. You will have to temporarily remove the T-pins, then reinsert them through the shear webs to hold the wing to your building board.

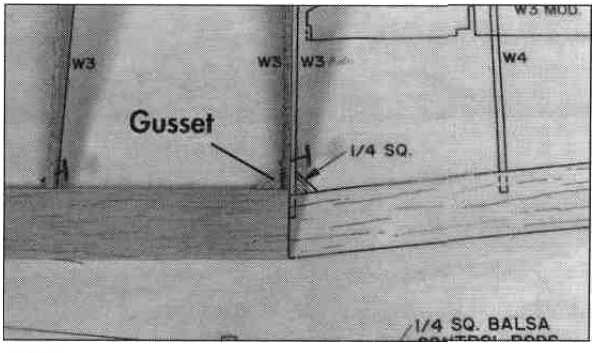
❑ ❑ 22. Test fit, then glue/ the 1/8" x 1/4" x 18-1 /4" basswood top spar to the ribs and shear webs with medium CA.



❑ ❑ 23. Cut a notch about 1/8" from the end of two 1/8" x 1/8" x 16-1/2" **basswood inner turbulator spars.** The notches should go halfway through the end of the turbulator spars.

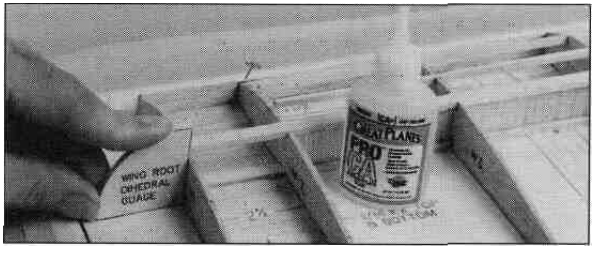


❑ ❑ 24. Glue the turbulator spars into the ribs so the notches at the ends of the spar extend approximately 1/32" to 1/16" past rib W2. Trim the ends of the turbulator spars so they are even with tip rib W-3.



❑ ❑ 25. Cut a small triangular piece from the end of the 1/4" x 1/4" x 15" balsa stick to make a **gusset,** then glue it in position with medium CA.

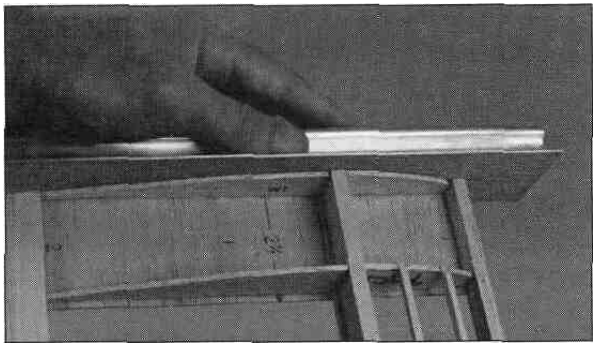
❑ ❑ 26. Cut along the dotted line of the **wing root** and **wing tip dihedral gauge templates** on the back cover of the manual. Then glue the templates with spray adhesive or rubber cement to a piece of balsa wood or thin card stock (such as from a cereal box). Use a #11 blade and a straightedge to accurately cut the templates from the card stock along the solid outline to make the dihedral gauges.



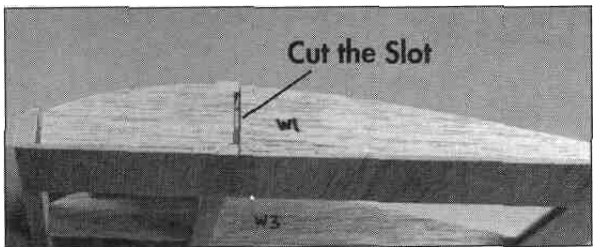
❑ ❑ 27. Test fit rib W-1 and if necessary, adjust the notches so it fits between the top and bottom spars. Accurately align the bottom of W-1 with the bottom sheeting. Then use the **wing root** dihedral gauge hold W-1 at the correct angle and glue it in position with medium CA.

❑ ❑ 28. Remove the T-pins, then lift your wing from your building board and peel off the wax paper. Inspect the wing panel and add CA to glue joints that don't look strong.

❑ ❑ 29. Trim, then fit, but **do not glue** the sixth shear web that you already cut, between ribs W-1 and W-2.



❑ ❑ 30. Use your bar sander and 150-grit sandpaper to sand the ends of the spars, bottom sheeting/ LE and TE's so they are even with rib W1 and W3-T.



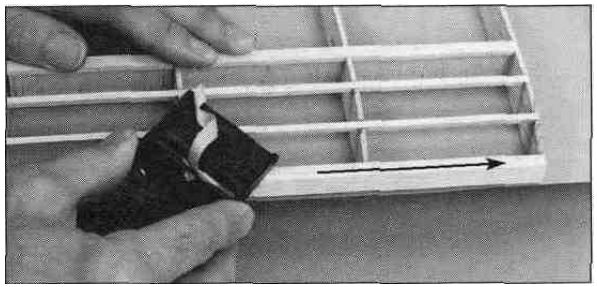
❑ ❑ 31. Use a sharp #11 blade to remove the portion of balsa between the lines you partially cut on ribs W1 and W3-T.

TIP: How To Use A Razor Plane

We highly recommend a razor plane to shape the LE's because it is the safest, fastest and most accurate method to remove large quantities of balsa.

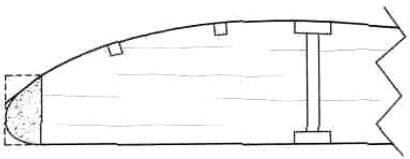
A. Adjust your razor plane so it removes about 1 /64" or less balsa at a time.

B. Position the LE of the wing panel at the edge of your work bench so it is supported and the bench does not interfere with the razor plane.



C. Hold the razor plane at an angle to the grain direction as shown in the photo.

D. Work slowly and inspect your work frequently - before you know it you will have shaved the LE down quite far.



❑ ❑ 32. See the "Tip" that follows. Then use a razor plane, a hobby knife with a carving blade, or a #11 blade to **roughly** carve the leading edge according to the sketch. **Note:** Leave the leading edge at least 1/16" high in front of ribs W1 and W2 to accommodate the top sheeting. You will final sand the LE after you join the inner panels to the outer panels and glue the top sheeting in position.

❑ ❑ 33. Use a bar sander and 220-grit sandpaper to *carefully* remove any glue blobs and blend all the ribs, spars, TE and LE.

❑ 34. Arrange the plan so the **left inner** wing panel is over your building board. Cover it with wax paper. Return to step 4 and build the left inner wing panel the same way as the right. **Don't forget to switch to the left wing panel plan so you do not build two right panels.**

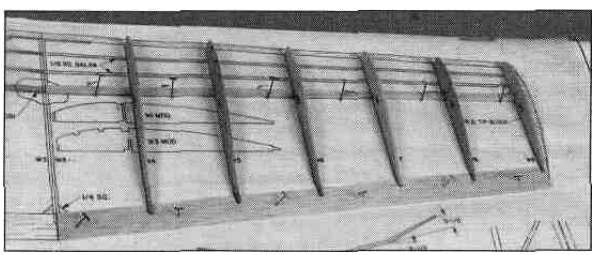
BUILD THE OUTER WING PANELS

Start with the **right** outer wing panel so your progress matches the photos.

❑ ❑ 1. Cover the outer panel of the right wing plan with wax paper. Use the "crossed T-pin" method to pin a 1/8" x 1/4" x 18-1/4" basswood bottom spar in position so the root end aligns with the centerline at W-3.

❑ ❑ 2. Accurately cut a 1/16" x 15/16" x 36" balsa sheet to a length of 18". Pin it in position over the plan so both ends extend past the ends of the TE on the plan. You will sand the ends of the TE sheeting flush with the end ribs later.

❑ ❑ 3. Use a straightedge and a hobby knife to cut **halfway** through one W3-T rib to accommodate the 1/16" dihedral brace the same way as you did at step 6 on page 11. Make the **slot** on the side of the rib that will be visible when the rib is in position.



❑ ❑ 4. Test fit ribs W3-T through W9 to the bottom spar and bottom TE over their locations on the plan. If necessary, adjust the notches in the ribs so they fit the spar and bottom TE.

❑ ❑ 5. Set rib W3-T aside and glue all the ribs **except W3-T** in position with thin or medium CA. Use a builder's triangle to make sure the ribs are perpendicular to the work surface as you glue them.

❑ ❑ 6. Position a 1/4" x 1/2" x 18" balsa **leading edge** over its location on the plan so the root aligns with the centerline at W3-T. Securely pin the LE to the building board so it tightly contacts the wing ribs. Then glue it in position with thin CA.

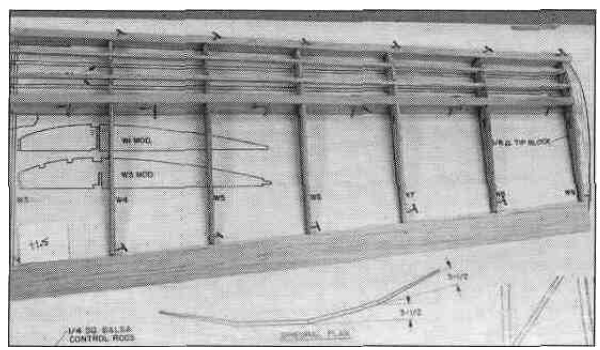
❑ ❑ 7. Remove the T-pins from the bottom TE sheeting. Replace them in the aft end of the ribs to hold the rear of the wing panel securely to your building board.

❑ ❑ 8. Test fit the other half of the 1/16" x 15/16" x 36" trailing edge sheet. If necessary, adjust the notches in the ribs so the aft edge of the upper TE will align with the aft edge of the lower TE.

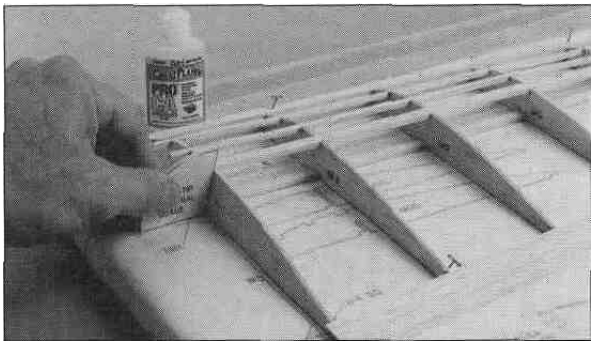
❑ ❑ 9. Use a 1/8" x 1/4" basswood spar to mark the guide line, then bevel the edge of the upper TE sheet.

❑ ❑ 10. Glue the upper TE to the bottom TE and ribs with medium CA.

❑ ❑ 11. Test fit, then glue, the 1/8" x 1/4" x 18-1/4" basswood top spar to the ribs with medium CA.



❑ ❑ 12. Cut a 1/8" x 1/8" x 36" balsa stick into two 18" long pieces. Test fit, then glue, the two 18" **outer turbulator spars** in the notches of ribs W4 through W9 so the ends align with W9.



❑ ❑ 13. Fit rib W3-T to the outer panel and accurately align it over its location on the plan. Use the **wing tip dihedral gauge** to set W3-T at the correct angle, then glue it in position with medium CA.

❑ ❑ 14. Make a gusset from the end of the 1 /4" x 1 /4" x 15" balsa stick. Glue it with medium CA at the position shown on the plan.

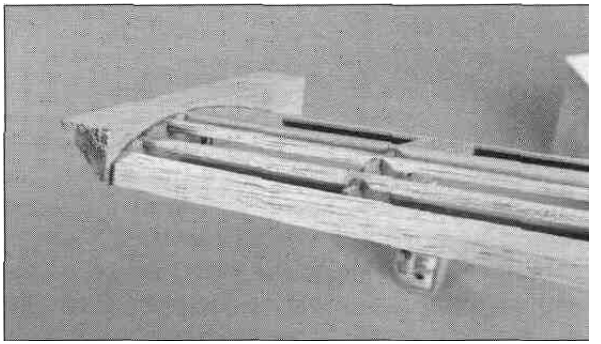
❑ ❑ 15. Remove the T-pins. Lift your wing from your building board and peel off the wax paper. Inspect the wing panel and add CA to glue joints that don't look strong.

❑ ❑ 16. Make a 3/32" x 3/4" shear web from the same balsa sheet you used to make the other shear webs (originally a 3/32" x 3" x 15" sheet). Then fit but **do not glue** it between ribs W3-T and W4.

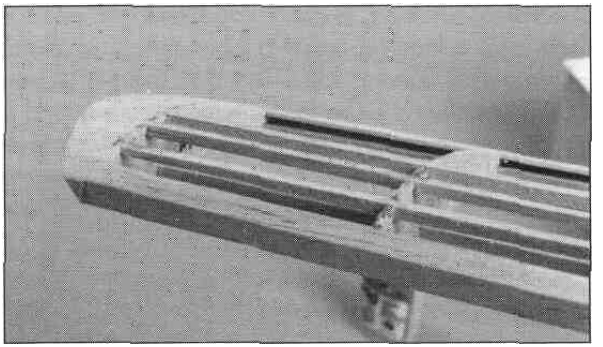
❑ ❑ 1 7. Use your bar sander and 150-grit sandpaper to sand the ends of the spars, LE and TE's so they are even with rib W3-T and W9.

❑ ❑ 18. Use a sharp #11 blade to remove the portion of balsa between the lines you cut with a straightedge on rib W3-T.

❑ ❑ 19. *Roughly* shape the LE the same way you did for the inner wing panels.



❑ ❑ 20. Cut the 3/4" x 12-1/4" balsa triangle stock into two 6-1/8" pieces to make the **wing tips.** Use medium CA to glue a tip to W9 so the **aft edge** of the triangle wing tip aligns with the **aft edge** of the TE.



❑ ❑ 21. *Roughly* carve the wing tip with a razor plane or a hobby knife, then final shape the tip and blend it to W9 with a bar sander and 150-grit sandpaper.

❑ ❑ 22. Use a bar sander and 220-grit sandpaper to *carefully* remove any glue blobs and blend all the ribs/ spars/ TE and LE.

❑ 23. Arrange the plan so the **left outer** wing panel is on your building board. Cover it with wax paper. Return to step 1 and build the **left** wing panel the same way as the right. **Don't forget to switch to the left wing panel plan so you do not build two right panels.**

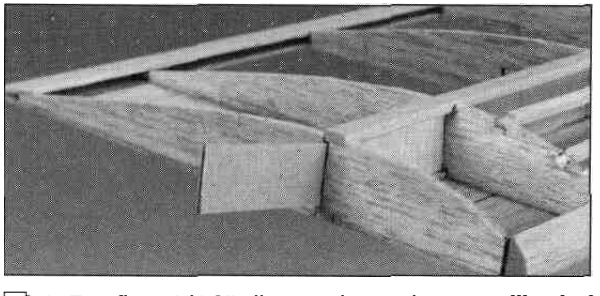
PREPARE THE PANELS FOR JOINING

❑ 1. Use your razor plane or a hobby knife to shave the sharp corners of the leading edge of one of the wing panels. Round and final shape the leading edge with a bar sander and 150-grit sandpaper according to the cross section on the right wing panel drawing on the plan. Shape the remaining wing panels the same way.

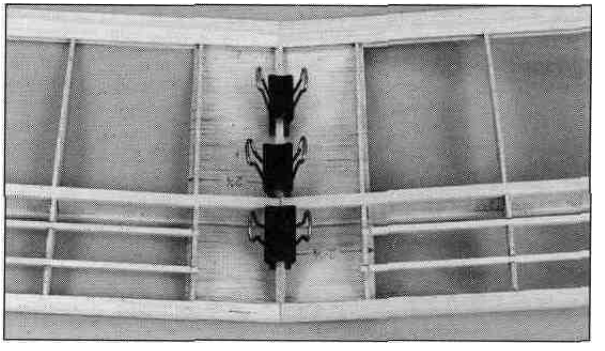
Note: The Piece 0' Cake is a motor glider, not a high performance acrobatic model - *it's named the "Piece 0' Cake" after all!* It is not critical that you shape the leading edges with the greatest precision. You probably would not notice a difference in the flight performance of a Piece 0' Cake with an accurately finished leading edge and a Piece 0' Cake with a leading edge roughly carved to shape with a hobby carving knife. This isn't to say that you should not always strive for building accuracy and a good finish, but don't worry if your LE's don't look perfect. Building a straight fuselage and flat, warp free wings are areas where you should concentrate most of your building efforts.

❑ 2. Use a sanding block or your 5-1/2" bar sander and 220-grit sandpaper on all four wing panels to remove any glue blobs and blend all the ribs to the spars/ LE and TE.

JOIN THE INNER WING PANELS



❑ 1. Test fit a 1/16" die-cut plywood **center dihedral brace DB1-A** in the left wing panel. Use a bar sander to decrease the height of the dihedral brace if needed so it fits between the top and bottom spar.



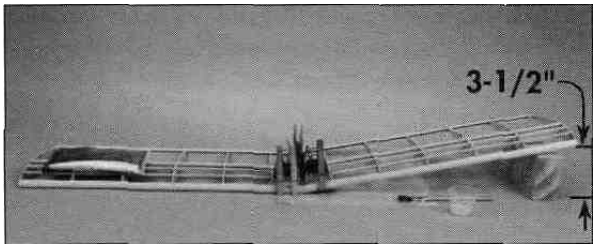
❑ 2. Test fit the dihedral brace in the other wing panel. **Without using any glue,** join the panels with the dihedral brace and the shear webs you cut earlier, then temporarily clamp them together with C-clamps, spring clips or clothespins. Make sure the tops of ribs W1 and the bottom sheeting of both wing panels align.

❑ 3. Test fit a 1/16" die-cut plywood **forward dihedral brace DB1-B** between the W1 ribs and the leading edges. The top of DB1-B should be 1/16" below the LE's to accommodate the 1/16" top center section wing sheeting that will be added later.

❑ 4. After making any adjustments required so the wing panels fit together and align, separate the wing panels. Remove the dihedral braces and the shear webs.

❑ 5. Gather a stack of books, balsa blocks or something similar to prop up the end of one of the wing panels 3-1/2".

❑ 6. Lay a piece of wax paper on your building table. Mix a batch of 30-minute epoxy. Coat all the joining surfaces with 30-minute epoxy, then join the inner wing panels with the dihedral braces and install the balsa shear webs. Place the wing on the wax paper on your building table. Immediately proceed to the next step.



❑ 7. Clamp the wing halves together. Then prop up one of the tips so it is 3-1/2" above your table.

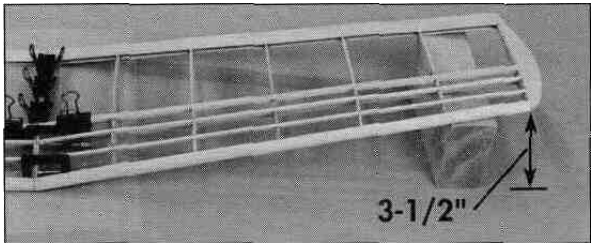
❑ 8. Wipe away excess epoxy before it cures and do not disturb the wing panel until the epoxy if fully cured.

JOIN THE OUTER AND INNER WINGPANELS

❑ ❑ 1. Test fit the left outer wing panel to the left inner panel with DB1-A , DB-2 and the shear webs. If needed, adjust the dihedral brace so they fit. Temporarily clamp the panels together with C-clamps, spring clips or clothespins and make sure ribs W3-T align.

❑ ❑ 2. After making any adjustments required so the wing panels fit together and align, separate the wing panels and remove the dihedral brace and the shear webs.

❑ ❑ 3. Lay a piece of wax paper on your building table. Mix a batch of 30-minute epoxy. Coat all the joining surfaces with 30-minute epoxy, then join the wing panels with the dihedral brace and install the balsa shear webs.



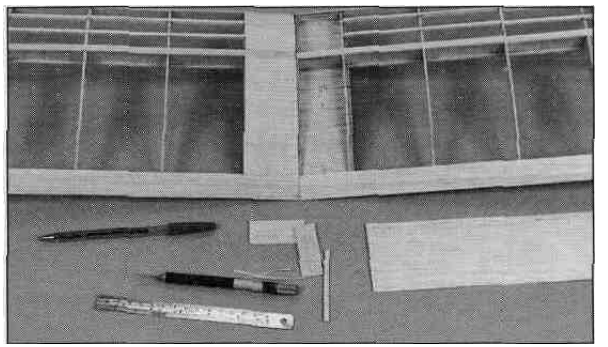
❑ ❑ 4. Clamp the wing halves together. Then prop up the tip so it is 3-1 /2" above your table.

❑ ❑ 5. Wipe away excess epoxy before it cures and do not disturb the wing panel until the epoxy is fully cured.

❑ 6. Return to step 1 and join the panels of the other wing half the same way.

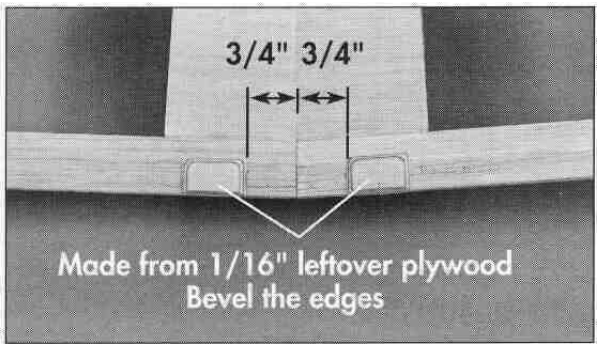
FINISH THE WING

❑ 1. Final-sand the wings with your bar sander and 320-grit sandpaper and blend the LE's where they meet at each panel joint.



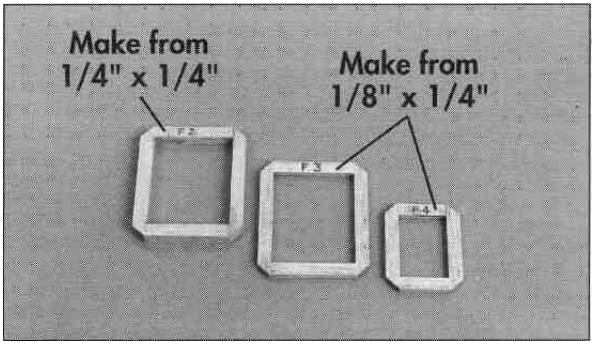
❑ 2. Use the remainder of the 1/16" x 3" x 30" balsa sheet you used to sheet the bottom center section of the inner panels to sheet the **top** center section of the inner panels.

❑ 3. Use your bar sander and 220-grit sandpaper to blend the top and bottom center section to the rest of the wing.



❑ 4. Use your bar sander to bevel the top edges of the die-cut plywood **wing protectors.** Glue the wing protectors to the top of the trailing edge of the wing with medium CA so the inner edges are 3/4" from the centerline of the wing.

❑ 4. Remove the T-pins, then lift F2 from the plan and peel off the wax paper. Reinforce the glue joints in the corners with medium CA.



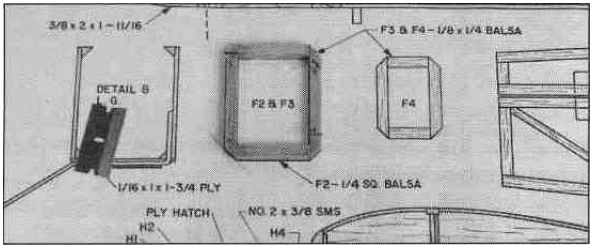
❑ 5. Build **F3** and **F4** from the 1/8" x 1/4" x 24" balsa stick the same way you built F2.

BUILD THE FUSELAGE

BUILD THE FORMERS

❑ 1. Arrange the plan so the fuselage drawing is over your building board. Then cover the drawings of **F2,F3** and **F4** with wax paper.

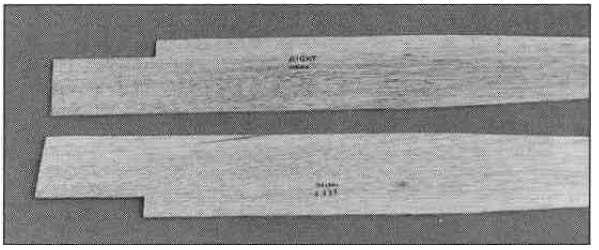
❑ 2. Make the two **vertical side pieces** of **F2** from the 1/4" x 1/4" x 15" balsa stick you used for the wing gussets. Pin them in position over the plan.



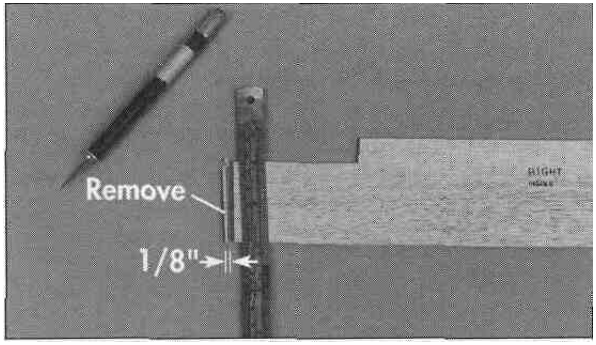
❑ 3. Cut the **horizontal pieces** or F-2 from the same balsa stick. Glue them in position with thin CA.

PREPARE THE FUSE SIDES

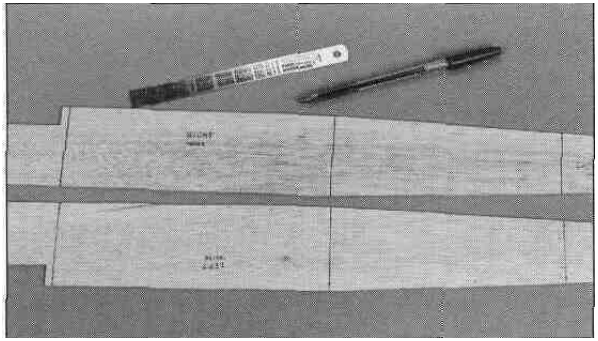
❑ 1. Remove the 3/32" die-cut balsa **fuselage sides** from their die sheets. Temporarily pin them together and use your bar sander and 150-grit sandpaper to remove slivers or die-cutting irregularities, and make sure the sides are identical.



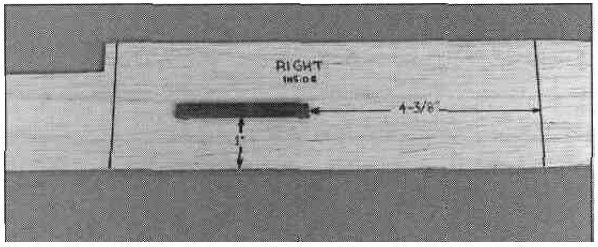
❑ 2. Separate the fuse sides, then lay them on your work bench as a *mirror image* and mark one as the ***right*** inside and the other as the ***left*** inside.



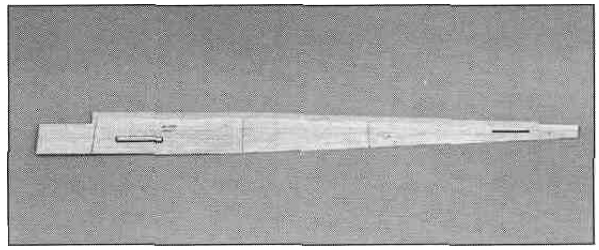
❑ 3. Use a sharp hobby knife and a straightedge to cut 1 /8" off the front of only the **right** fuselage side.



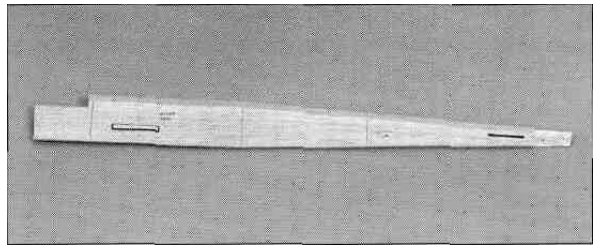
❑ 4. Push a large T-pin through the punch marks that are on the outside of the **right** fuselage side to transfer the punch marks to the inside. Use a straightedge to draw a line with a ballpoint pen connecting the punch marks that indicate where the formers are located on the inside of both fuselage sides.



❑ 5. Make two 2-1/2" long **servo rail supports** from the remainder of the 1/8" x 1/4" balsa stick you used to make fuselage formers F3 and F4. Glue the supports to the **inside** of both fuselage sides in the location shown on the plan and in the photo.



❑ 6. Glue a 1/4" x 30" balsa triangle stick to the inside right fuselage side top as shown on the plan. Note that the stick "ends" approximately 2-1/4" from the back of the fuselage and you will have to cut the stick into two pieces at the front of F3. **Do not** glue a triangle piece to the fuselage side at the top of the hatch compartment until instructed to do so.

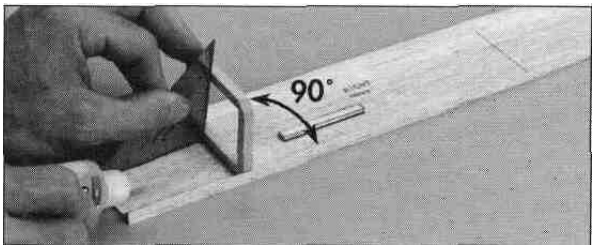


❑ 7. Glue a 1 /4" x 30" balsa triangle stick to the bottom inside of the right fuselage side as shown on the plan. The front of the stringer extends all the way to the front of the fuselage and like the top triangle stick, is cut into two pieces at the front of F3 and ends approximately 2-1/4" from the back of the fuselage.

❑ 8. Glue two more 1/4" x 30" balsa triangle sticks to the **inside** of the left fuselage the same way as the right.

JOIN THE FUSELAGE SIDES

❑ 1. Test fit but, **do not glue,** all three formers to the right, then the left fuselage side. If necessary, adjust the 45 degree angle on the corner of each former so the sides of the formers **fully contact** the fuselage sides.



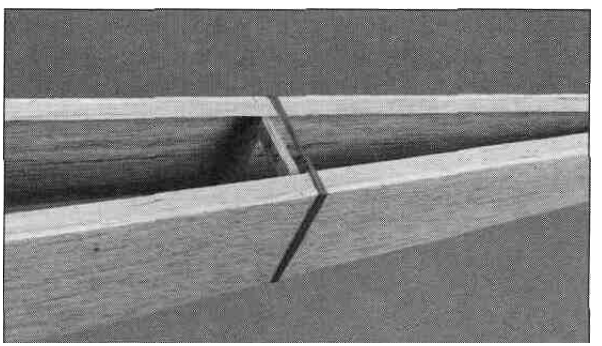
❑ 2. Position former F2 on the right fuselage side so the aft edge aligns with the guideline you made. Use a builder's triangle to hold the former perpendicular **to** the fuse side. Glue it in position with thin **CA.**

❑ 3. Glue former F3 to the right fuselage side the same way.

❑ 4. Without using any glue, join the left fuselage side to the right fuselage side. Then place the assembly over the top view of the fuselage plan.

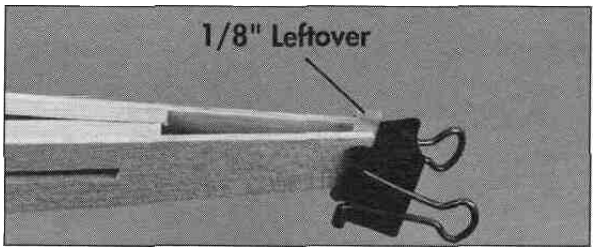
❑ 5. Align F2 and F3 and the fuselage sides *between* F2 and F3 with the plan. Align F2 and F3 with the guide lines on the left fuselage side, then hold the fuselage to the plan so the sides are parallel. Check and double check that everything aligns. Finally, use thin CA to tack glue the formers **to** the left fuselage side.

❑ 6. Inspect the fit and alignment of the fuselage sides and the formers, then securely glue the formers to the fuselage sides with medium CA.

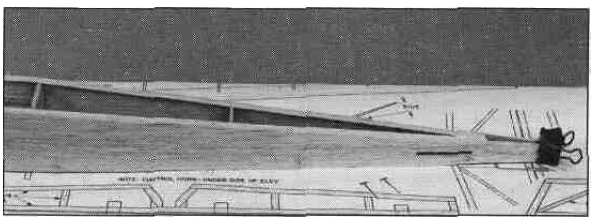


❑ 7. Position former F4 between the fuselage sides. Hold the rear of the fuselage sides together with a few small rubber bands.

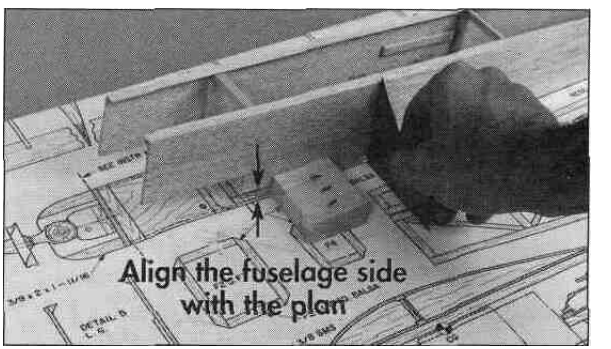
❑ 8. Accurately align F4 with the guidelines you drew and align the top and bottom of the aft fuselage sides. Glue F4 in position with thin CA.



❑ 9. Remove the rubber bands. Temporarily clamp the ends of the fuselage together with a piece of 1/8" x 1/4" balsa to simulate the spacing of the fin TE. If necessary, trim the triangle sticks at the aft ends so they do not interfere.



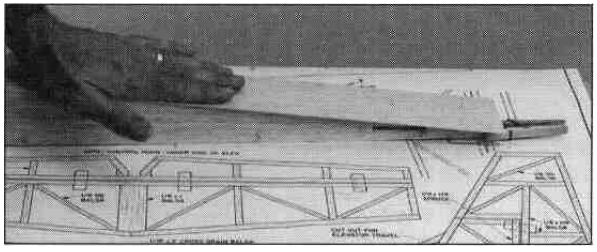
❑ 10. Position the 1/8" x 1/4" balsa spacer and the clamp so the **top** of the fuselage aft of F3 will **fully** contact the plan. Align the top of the fuselage sides aft of F3 with the plan, then pin the fuselage sides to your building board over the plan.



❑ 11. Use a builder's triangle to align the front of the fuselage over the plan, then use thick balsa blocks (you may use the cowl blocks) pinned to the building board to hold the front of the fuselage in alignment over the plan.

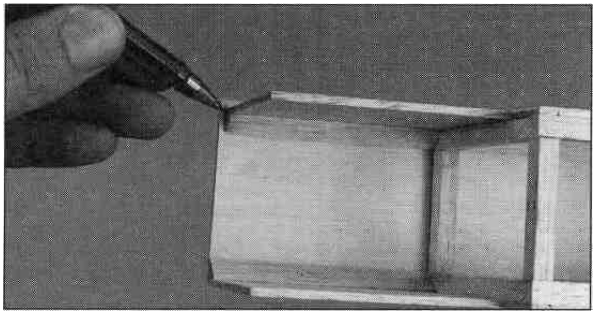
❑ 12. Use your bar sander and 150-grit sandpaper to sand the bottom of the fuselage sides aft of F3 so the formers and fuselage sides are even. Make sure the clamp and the 1/8" x 1/4" spacer in the back of the fuselage sides will not interfere with the bottom sheeting (we had to replace the paper clamp shown in previous photos with a clothespin and shorten the balsa spacer).

SHEET THE BOTTOM OF THE FUSELAGE



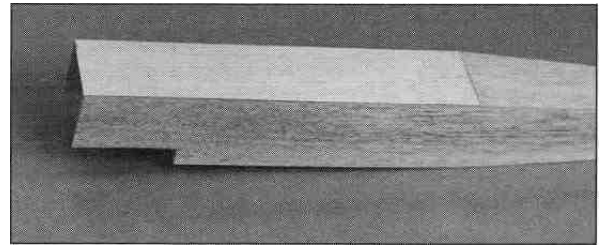
❑ 1. Test fit, then glue the 1/16" x 2-1/4" x 20" balsa sheet to the bottom of the fuselage so the front edge "ends" in the middle of F3.

❑ 2. Remove the T-pins, then lift the fuselage from the plan. Reinforce the joint between the aft fuse bottom and the triangle stock from inside the fuselage with thin CA. Use a hobby knife, then your bar sander with 150-grit sandpaper, to trim the excess bottom sheeting so it is flush with the fuselage sides.



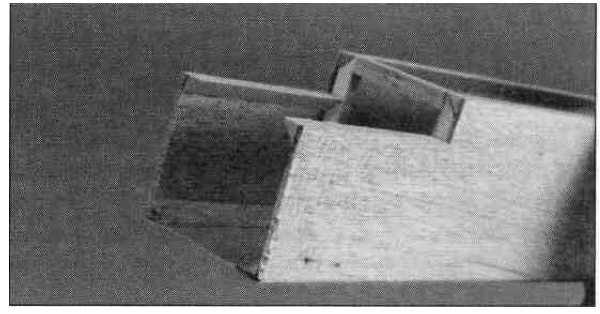
❑ 3. Position the 1/16" x 2-1/4" x 11-1/4" plywood **forward fuselage bottom** on the fuselage. Mark the front of the right fuselage side on the fuse bottom.

❑ 4. Use the mark as a guide to cut the angle for the *right thrust* at the front of the fuse bottom with a straightedge and a hobby knife. Test fit, then use medium CA to glue the forward fuse bottom in position.



❑ 5. Use your bar sander with 150-grit sandpaper to sand the edges of the forward fuse bottom so they are even with the fuselage sides.

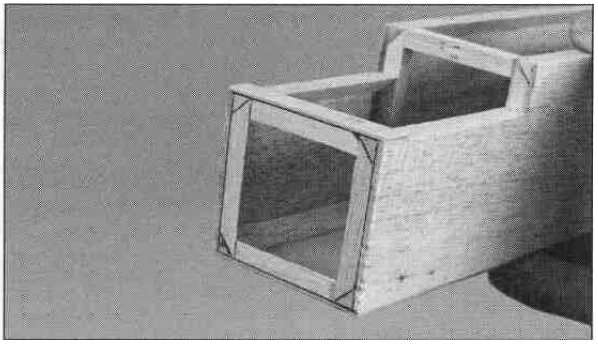
INSTALL THE FIREVVALL



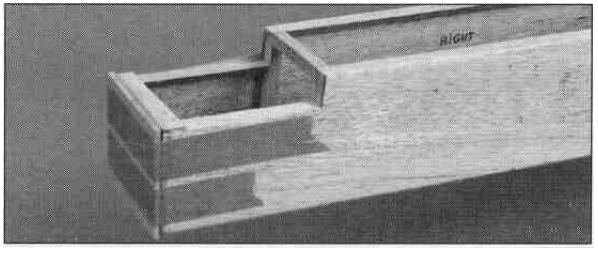
❑ 1. Cut two of the remaining pieces of 1 /4" triangle stock to the correct length. Glue them to the top of the hatch area in the front of both fuselage sides.

❑ 2. Cut, then glue the remaining pieces of 1/4" balsa triangle stock to the sides, then to the bottom of the front of the fuselage.

❑ 3. Glue the die-cut 1/16" plywood **H1 forward hatch compartment top** in position. Cut and glue the last piece of 1/4" triangle stock underneath it. *The top and bottom triangle pieces are a little difficult to make fit perfectly because of the "double taper" required in the comers, but don't worry - most of the strength is gained along the sides of the triangle pieces.(See the photo that follows.)*



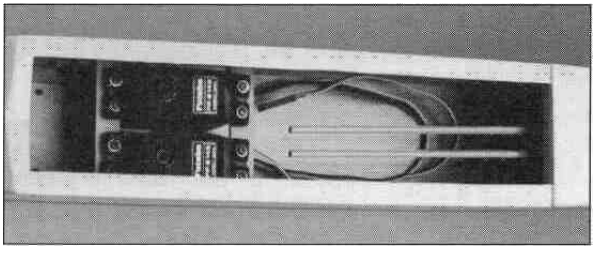
❑ 4. Use a large sanding block and 150-grit sandpaper to sand the triangle pieces, fuselage sides, fuselage top and fuselage bottom so they are all flat and even.



❑ 5. Glue the 1/8" plywood **firewall F1** to the front of the fuselage with 30-minute epoxy. Use masking tape to securely hold the firewall to the front of the fuselage until the epoxy fully cures.

❑ 6. Use your bar sander and 150-grit sandpaper to sand the edges of the firewall flush with the fuselage sides, top and bottom.

INSTALL THE SERVOS & PUSHROD GUIDES



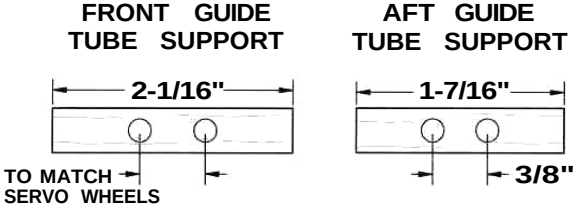
Refer to this photo for the following three steps.

❑ 1. Use the 1/8" x 3/8" x 12" plywood stick to make two **servo rails** that rest upon the servo rail supports between the fuselage sides. Fit but do not glue the servo rails in position, then place your servos on the rails.

❑ 2. Place servo wheels or short servo arms on your servos, then position the servos so the arms or wheels will not interfere. Adjust the servo rails so they are parallel and allow enough space for you to remove the servos. Carefully (without gluing the servos to the rails) glue the rails to the rail supports with medium CA.

❑ 3. Remove the servos, then securely glue the rails to the rail supports and the fuselage sides with additional medium CA. Reinstall the servos, then drill 1/16" holes through the rails and mount the servos with the wood screws included with your radio.

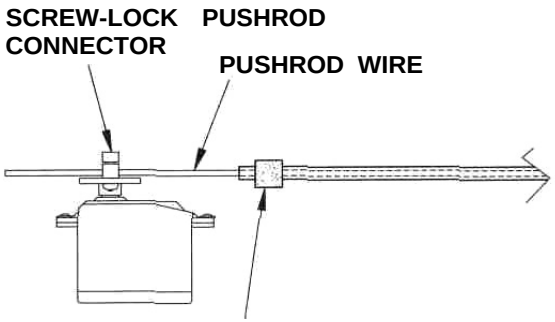
❑ 4. From the remaining piece of the 1/4" x 1/4" balsa stick, make a **forward** and an **aft pushrod guide tube support** to fit between the fuselage sides in the location shown on the plan. Test fit the supports to make sure they are the correct length.



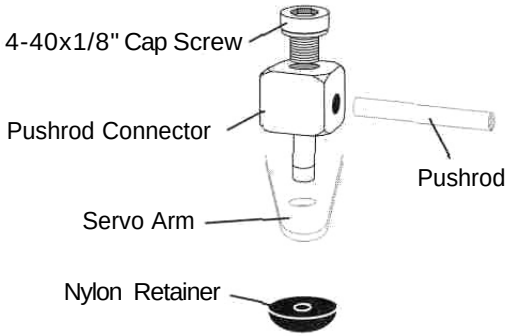
MAKE FROM 1/4" X 1/4" BALSA. DRILL TWO 9/64" HOLES EVENLY SPACED.

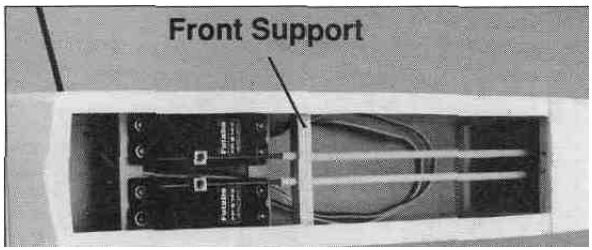
❑ 5. Drill 9/64" holes through the supports in the locations shown in the sketch. The holes in the front support should match the spacing of the holes you will connect your pushrods to in your servo wheels. If you do not have a 9/64" drill bit, you may use a 1/8" drill instead, but insert one of the outer guide tubes in the holes and spin it around to enlarge the hole so the guide tubes can slide through a little easier.

❑ 6. Reinstall, but do not glue, the guide supports in the fuselage, then cut the 36" outer guide tubes into two 23" long pieces. Roughen the outside of the guide tubes with 150-grit sandpaper so glue will stick. Then slide them through the slots in the back of the fuselage and route them through the guide supports.



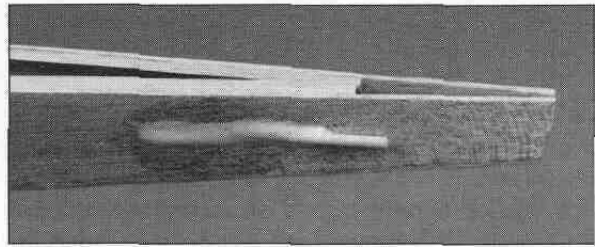
POSITION THE FRONT GUIDE TUBE SUPPORT SO THE PUSHROD WIRES ALIGN WITH THE SCREW-LOCK PUSHROD CONNECTORS.



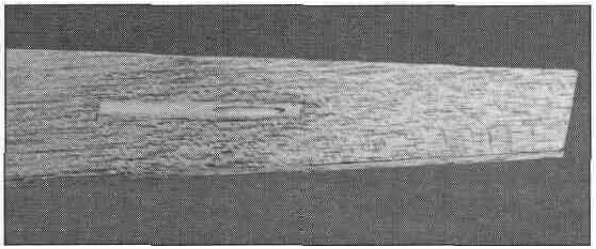


❑ 7. Insert a Screw-Lock Pushrod Connector in both servo wheels. Slide the 1/16" x 36" **pushrod wires** included with this kit through the guide tubes and accurately align the front support so the wires pass through the pushrod connectors. Use thin CA to glue the front support to the fuselage sides.

❑ 8. Position the aft support so the guide tubes make a smooth transition from the slots at the back of the fuselage to the front support. Glue it to the fuselage sides and F4 with thin CA.



❑ 7. due the guide tubes to the slots in the back of the fuselage with microballoons and epoxy. Microballoons are a powder that you can mix with epoxy to make a sandable filler where a bond is required. If you do not have microballoons, glue the tubes to the fuselage sides with medium CA, then fill the rest of the slot with HobbyLite filler.

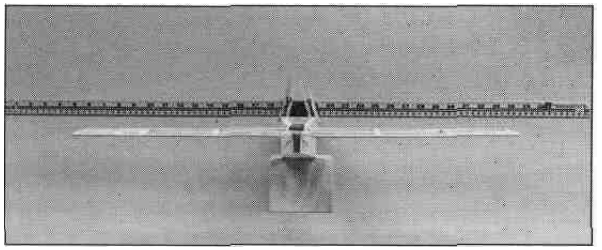


❑ 10. Use your bar sander and 80-grit sandpaper to sand the guide tubes and filler flush with the fuselage sides.

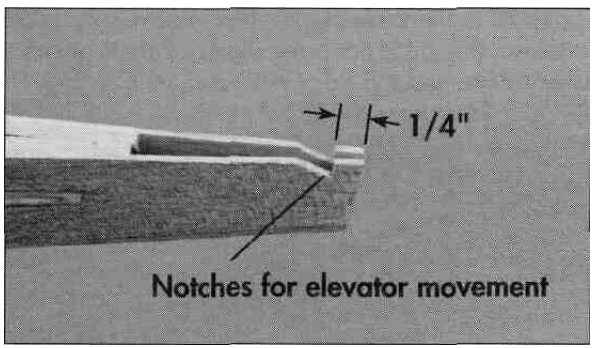
❑11. Glue the pushrod guide tubes to the supports with medium CA.

SHEET THE TOP OF THE FUSE

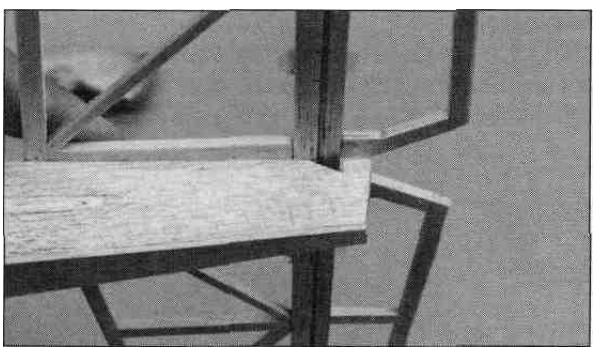
❑ 1. Use your bar sander and 80-grit sandpaper to sand the tops of the fuselage sides and the tops of the formers so they are even. Clip clothespins to the top of the fuselage sides in the wing saddle area, then place a long straightedge such as a metal ruler on the saddle leaning against the clothespins.



❑ 2. Place the stab on the back of the fuselage with a small weight on top of the middle of the stab. Stand back from the fuselage and view the straightedge and the stab. If necessary, use your bar sander with 80-grit sandpaper to carefully sand the tops of the fuselage sides until the stab aligns with the straightedge.

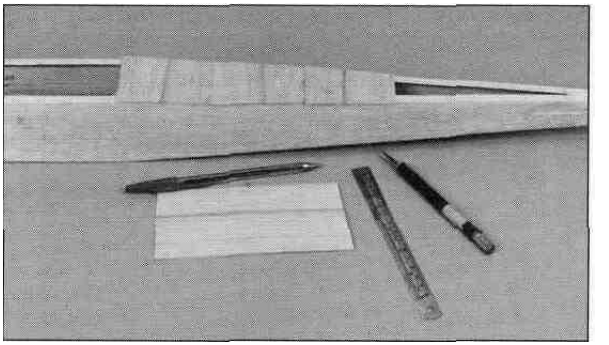


❑ 3. Mark the top of the fuse sides 1/4" from the end. Use the marks as a guide to cut a notch **for** the leading edge of the elevator.

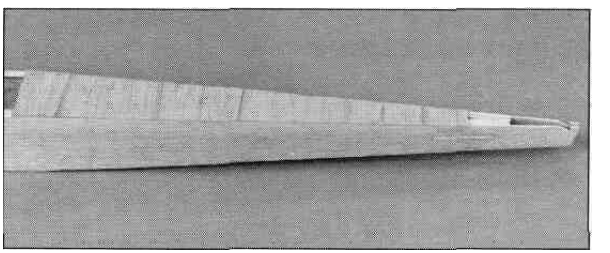


❑ 4. Place the stab and elevator on the fuselage so the **aft edge** of the elevator leading edge is 5/16" in front of the aft end of the fuse. Move the elevator up and down to adjust the notch if the fuselage interferes with the elevator LE.

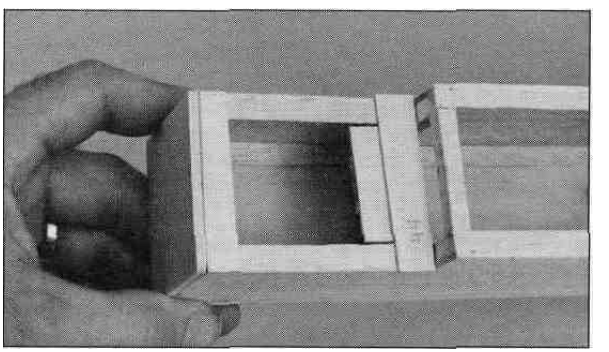
❑ 5. With the stab in position on the fuselage, use a ballpoint pen to mark the location of the leading edge of the stab on the top of the fuselage sides. This indicates where the top fuselage sheeting "ends."



❑ 6. Sheet the top of the fuselage with the 1/16" x 3" x 12" balsa sheet between F3 and the marks indicating the LE of the stab. Apply the sheeting in "planks" running cross-grain as shown on the fuselage plan.



❑ 7. Use your bar sander and 150-grit sandpaper to sand the edges of the fuselage top even with the fuselage sides.

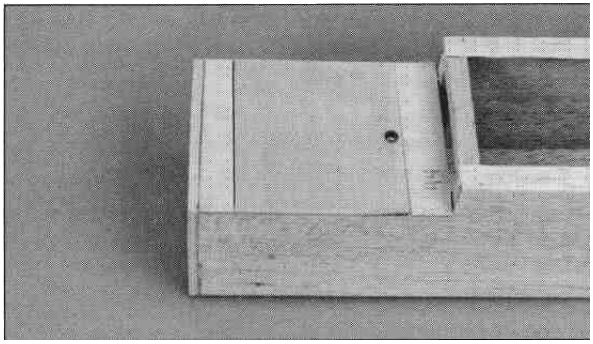


❑ 8. Use medium CA to glue the die-cut 1/16" plywood **H4 aft hatch compartment top** to the

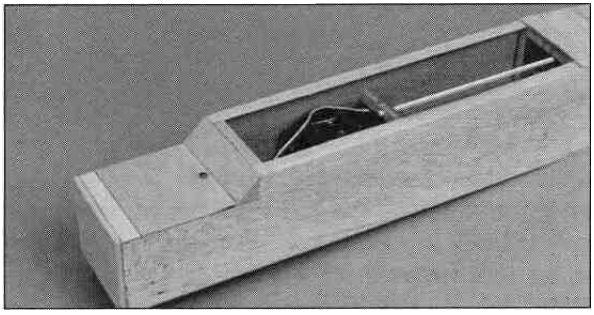
fuselage. Then glue the 1/16" die-cut plywood **H3 hatch ledge** to the bottom of the aft hatch compartment top so 3/8" protrudes in front of H4. Glue a piece of 1/16" leftover plywood to the bottom of the ledge for the hatch screw.

❑ 9. Trim the 1/16" plywood **hatch** to it fits between the front and aft hatch compartment tops. Don't make it fit too tight; leave a little space for the iron-on covering.

❑ 10. Glue the plywood **H2 hatch tab** to the bottom of the hatch so only 1/8" of the tab protrudes past the front of the hatch. Fit the hatch to the compartment, then drill a 1/16" hole through the hatch and the ledge.

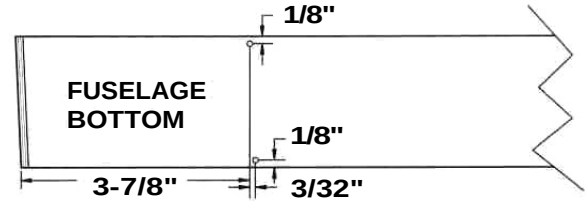


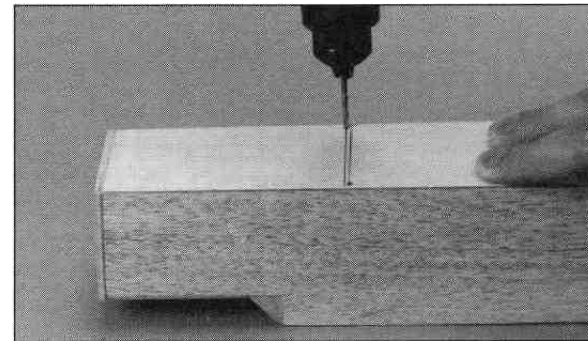
❑ 11. Remove the hatch and enlarge the hole **in the hatch only** with a 3/32" drill bit. Reinstall the hatch, then secure it to the fuselage with a #2 x 3/8" screw. Sand the edges of the hatch even with the fuse sides.



❑ 12. Trim the front of the 9/16" x 2-1/4" balsa **windshield** so it does not interfere with the hatch when positioned on the fuselage. Use medium CA to glue the windshield in position. Then sand the edges flush with the fuselage.

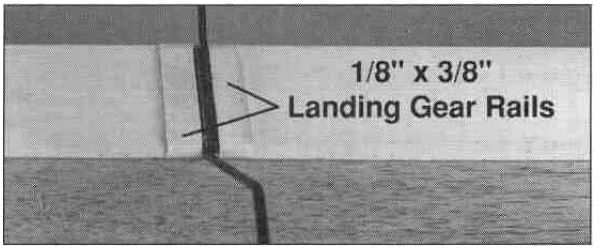
MOUNT THE LANDING GEAR





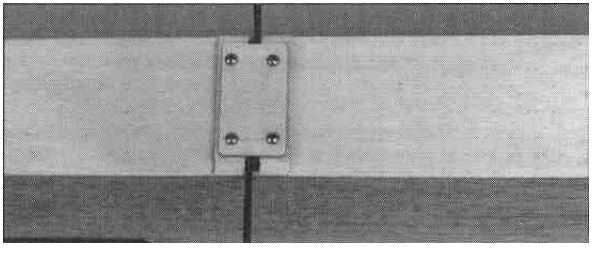
❑ 1. Drill 3/32" holes for the landing gear in the fuse bottom where shown in the sketch. Bevel the inner edges of the holes on the fuse bottom so the landing gear will rest flush.

❑ 2. Cut two 2-1/4" **landing gear rails** from the remainder of the 1/8" x 3/8" plywood stick you used for the servo rails. Fit the landing gear in the fuselage, then use medium CA to glue the rails to the fuse bottom behind and in front of the landing gear. (See the following photo.)

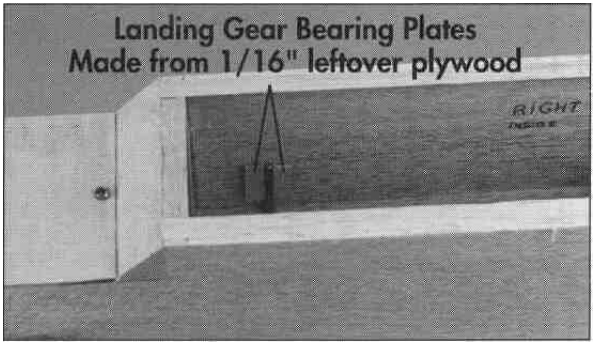


❑ 3. Use your bar sander with 80-grit sandpaper to sand the ends of the landing gear rails so they are flush with the fuselage sides. Bevel the corners for a neater appearance.

❑ 4. Center the 1/16" plywood **landing gear plate** on the landing gear rails. Drill four 1/16" holes evenly spaced 1/4" from both ends of the plate. Remove the plate, then enlarge the holes **in the plate only** with a 3/32" drill bit.

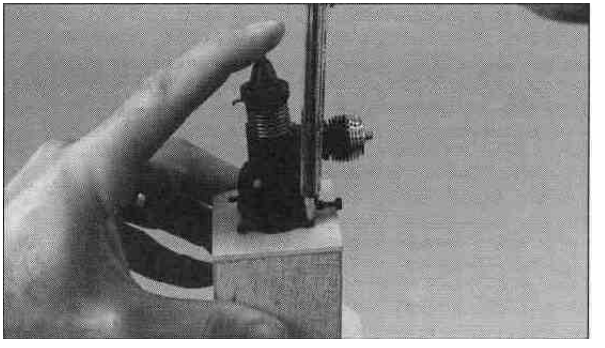


❑ 5. Temporarily mount the landing gear in the fuselage with the landing gear plate and four #2 x 3/8" screws.



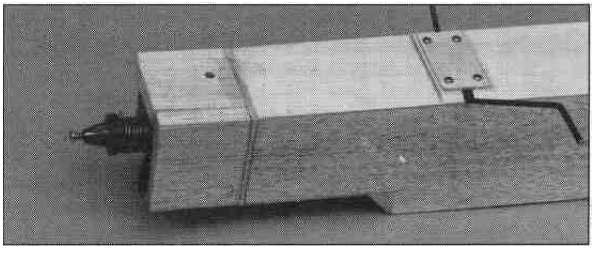
❑ 6. Make four 1/4" x 5/8" **landing gear bearing plates** from leftover 1/16" plywood. Use medium CA to glue them to the fuselage sides next to the landing gear. Make sure the landing gear is straight and perpendicular to the fuse bottom.

MOUNT YOUR ENGINE

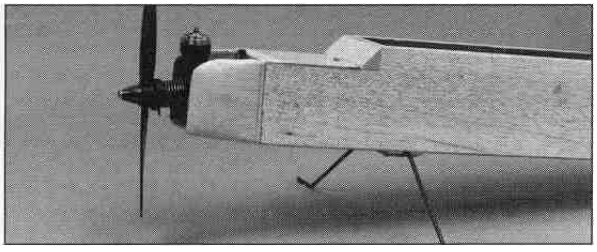


❑ 1. Center your engine on the firewall, then mark the location of the mounting holes. Drill 1/16" holes at the marks and temporarily mount your engine with #2 x 3/8" screws (not included).

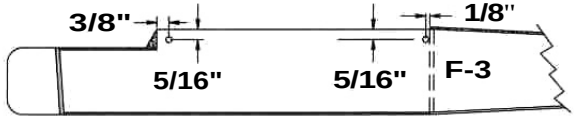
❑ 2. Glue both 3/8" x 2" x 1-7/8" **cowl side blocks** to the firewall with medium CA.



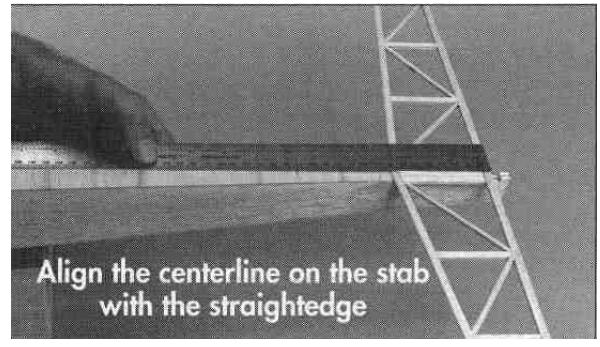
❑ 3. Test fit and shape a 3/8" x 1-1/2" x 1-3/4" **cowl bottom block** so it fits between the side blocks on the bottom of the fuselage. Lightly push the bottom block into the bottom vent tube on the engine so the tube leaves a mark on the block, then drill a 3/16" hole through the block at the mark. Glue the block in position with medium CA.

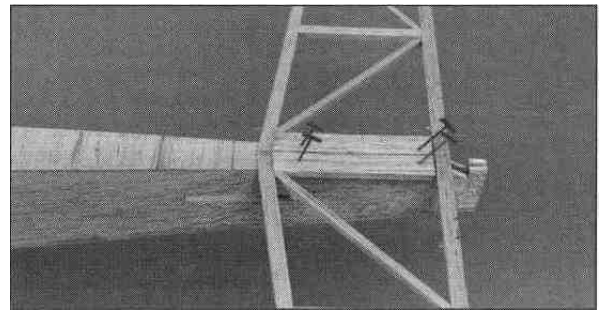


❑ 4. Remove the engine (so it does not get balsa dust in it), then sand the cowl blocks so they are flush with the fuselage. Round the front edges of the cowl blocks for a finished appearance. Start with your bar sander and 80-grit sandpaper, then finish by hand-sanding with 320-grit sandpaper. Reinstall your engine just to see how it looks!



❑ 5. Drill 3/16" holes in the fuselage sides at the locations shown in the sketch for the wing dowels. Cut the 6-1/2" dowel in half. Use sandpaper to chamfer the ends of the wing dowels, then test fit them in the fuselage, but do not glue the dowels in place until instructed to do so.

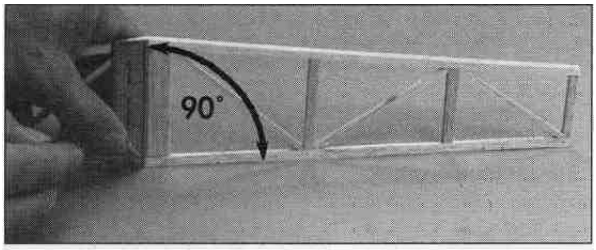




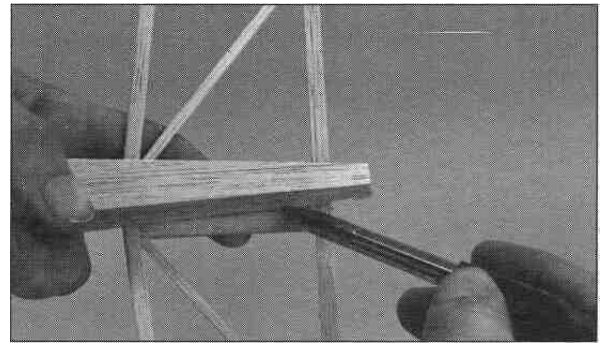
❑ 2. Accurately mark the center of the fuselage top sheeting at the front over F3 and at the rear. Position a straightedge on the fuse top and align it with the centerlines you marked. Then place the stab on the fuselage and align the centerline of the stab with the straightedge. Temporarily attach the stab to the fuselage with T-pins.

ALIGN THE TAIL GROUP

ALIGN THE STAB



❑ 1. Remove the elevator from the stab, then mark the center of the stab. Use a builder's triangle to mark a centerline on the top of the stab at the mark.

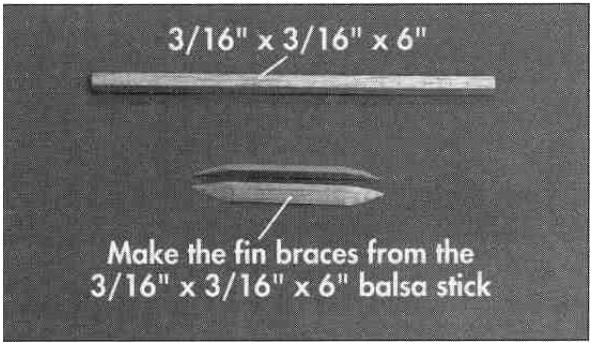


❑ 3. Carefully turn the fuselage over and lightly mark the outline of the fuselage sides on the bottom of the stab. This line indicates where to apply the covering "up to" and apply glue when it is time to glue the stab to the fuse.

❑ 4. Align your straightedge with the marks on the fuse top again, then lightly mark a 1" long centerline on the fuse top in front of the LE of the stab.

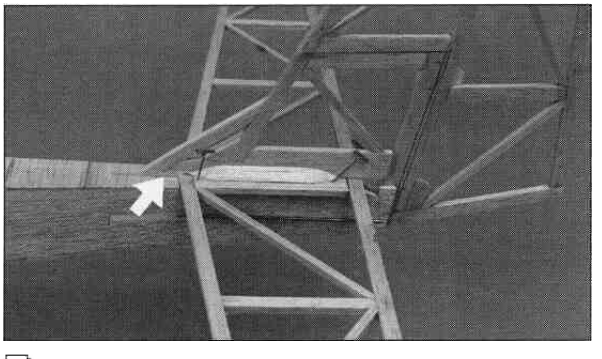
ALIGN THE FIN

❑ 1. Position the fin on the stab with the trailing edge of the fin between the fuse sides.

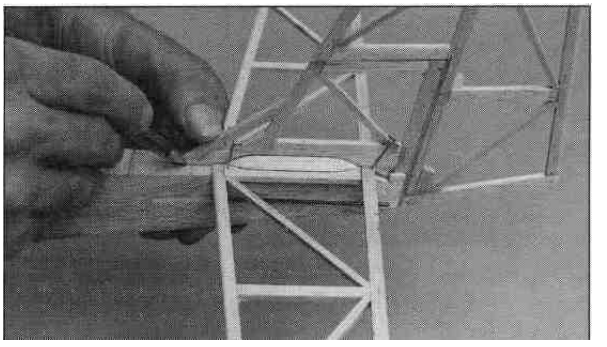


❑ 2. Cut the 3/16" x 3/16" x 6" balsa stick into two 2-1/2" long pieces. Use your hobby knife to carve them into triangle pieces (like the 1/4" triangle stock used in the fuselage), then round the ends. These are the **fin braces.**

❑ 3. Temporarily place the fin braces on the fin and the stab.



❑ 4. Use medium CA to glue a piece of leftover 1/16" balsa to the bottom of the fin in front of the stab to fill the space.



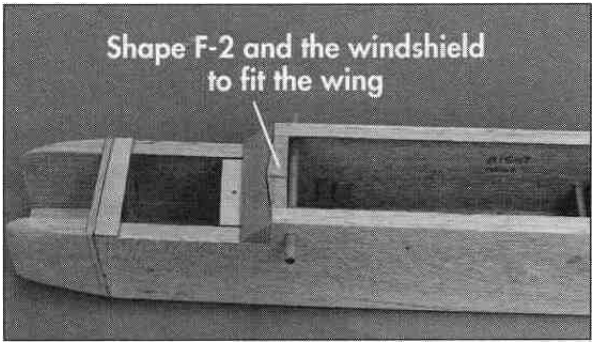
❑ 5. Align the fin with the centerline you marked on the top of the fuselage, then pin the front of the fin to the fuse sheeting with one small T-pin. *Lightly* trace the outline of the fin on the fuse top and the outline of the fin and triangle fin braces onto the stab, and trace the outline of the fin braces onto the fin. These lines will be guide lines for covering so you can glue the fin and triangle pieces to bare balsa after you cover them.

❑ 6. Cut the notch in the fin the same as you did on the fuselage to allow the elevator to move up and down.

COVERING

PREPARE THE MODEL FOR COVERING

❑ 1. Remove the fin and stab from the fuselage. Inspect the wing, fuselage, and tail surfaces for glue joints that don't look strong and reinforce them with thin or medium CA.



❑ 2. Test fit the wing on the fuselage. Use a hobby knife and a bar sander with 150-grit sandpaper to shape the top of F2 and the windshield so the wing fits.

❑ 3. Remove the engine, pushrods, landing gear, hatch, wing dowels and any other hardware that may interfere with covering.

❑ 4. Fill dents, scratches and glue joints on the surface of the model that may show through the covering with HobbyLite filler. Slightly round the top and bottom corners of the fuselage and the windshield with your bar sander and 220-grit sandpaper, then sand the fuselage so it is smooth and even.

COVERING TIPS

We recommend you cover your Piece 0' Cake with **Top Flite EconoKote®** iron-on model covering film. EconoKote film is similar to famous **Top Flite MonoKote®** covering film except that EconoKote film is lighter weight, requires less heat to apply and does not pull on the airframe as much as MonoKote film. Therefore, EconoKote film is ideal for lighter weight structures like your Piece 0' Cake, especially the tail surfaces.

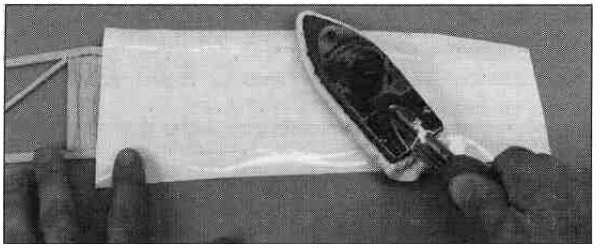
If this is the first time you have covered a model refrain from attempting a complicated trim scheme. Add stripes, graphics, and various designs to your Piece 0' Cake cut from different colors of EconoKote film, then iron them directly over the base color. Self-adhesive trim sheets may also be used. Try only a single color base (usually a lighter color such as white or yellow) with perhaps a single stripe, your AMA number, or even some stick-on graphics. A simple trim scheme will get you in the air faster and look much better than a model that was difficult **to** cover because of a complicated trim scheme.

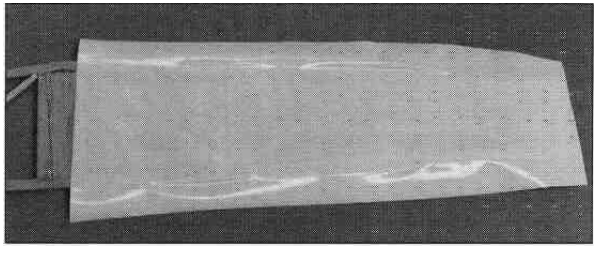
HOW TO COVER YOUR MODEL

We *will use the stabilizer as an example because the techniques shown apply to the rest of the Piece 0'Cake.*

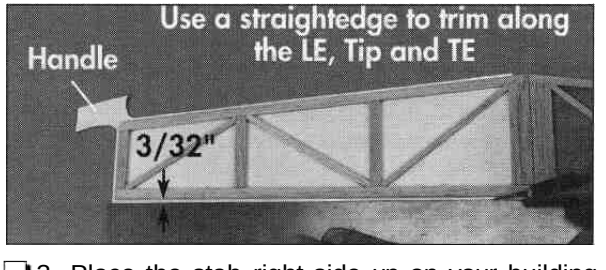
❑ 1. Here is a "rule of thumb" to keep in mind before you begin: Where possible, apply the covering so all seams face downward or rearward. You can do this by covering the bottom (of the wing, fuse, stab, etc.) first.

Never cut the covering after you iron it to the wood except near the tips. Modelers who do this may weaken the structure which could cause it to fail during flight.

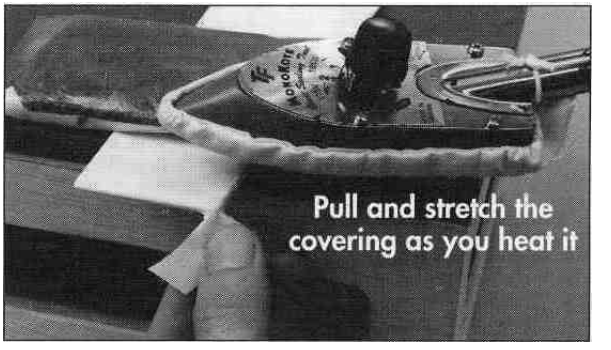




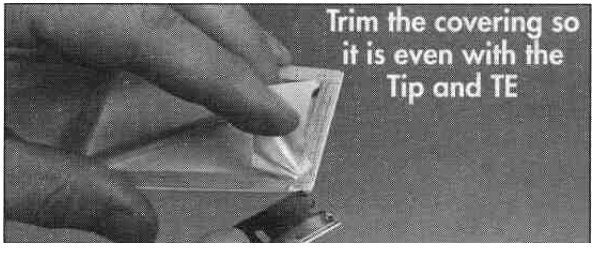
❑ 2. Cut the covering for one half of the bottom of the stab so it is approximately 2" oversize. Use a straightedge to cut the end that aligns with the lines you drew that indicate the fuselage. Use a Top Flite MonoKote Iron with a Hot Sock to securely bond the covering to the perimeter (LE, TE, tip, middle) of the stab.

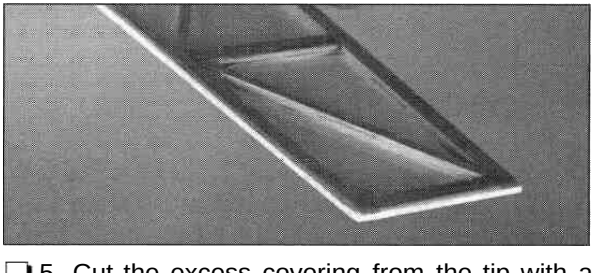


❑ 3. Place the stab right side up on your building table (preferably on a cutting mat if you have one) and use a straightedge to trim the covering about 3/32" from the LE, TE and tip, but leave a "handle" at the corner so you can stretch the covering around the tip as you heat it.



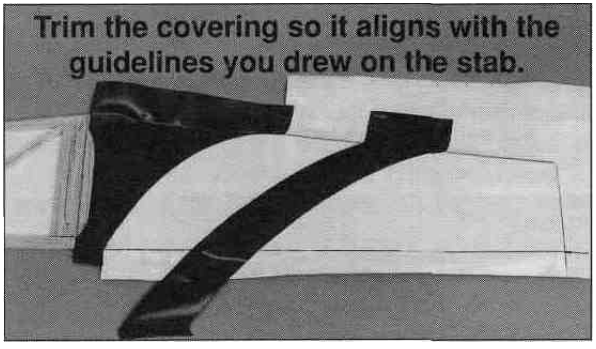
❑ 4. Seal the front, rear and tip of the covering to the stab. Then heat the covering as you pull and stretch it around the tip. It takes a little practice to get all the wrinkles out so don't be discouraged if it doesn't look perfect on your first attempt (or the second or third time). You can reheat and stretch the covering many times. It helps to place the stab on your work bench or a stand so the tip is over the edge, and place a weight on top of the stab to hold it down. This will allow you to pull the covering with one hand and hold the iron in your other hand.



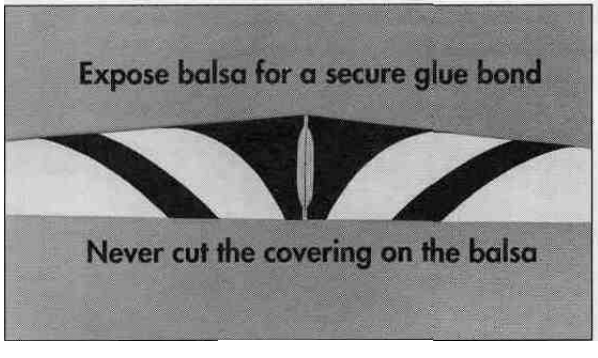


❑ 5. Cut the excess covering from the tip with a single-edge razor blade or a sharp hobby knife.

❑ 6. Cover the other bottom stab half the same way.

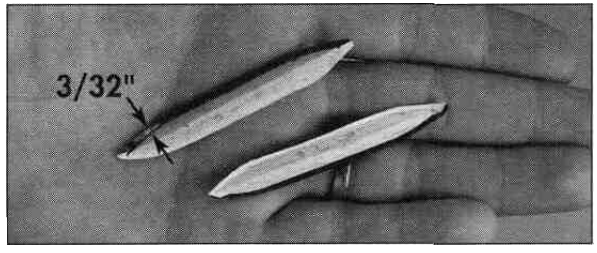


❑ 7. Cut the covering for one half of the top of the stab so it is approximately 2" oversize. Before you iron it down, trim the covering so it aligns with the lines you marked indicating the fin and triangle fin reinforcement. This will allow you to glue the fin reinforcements directly to the bare wood and **avoid cutting the covering directly on the wood** after you iron it down.



❑ 8. Iron the piece of covering you just "custom cut" to the top of the stab. Then make the other side the same way and iron it in position.

❑ 9. Align the elevator with the stab, then transfer the hinge slots from the elevator (since they are visible and you have not yet covered over them) to the stab by marking them on the covering with a felt-tip pen.



❑ 10. Cover the triangular fin reinforcements. Trim the excess so it "overhangs" the edges by approximately 3/32". Don't iron it down yet. This way all you have to do is glue the fin reinforcements to the fin and stab and seal the edges with the iron.

❑ 11. Use the same methods described above to cover the rest of the model using the correct Covering Sequence.

COVERING SEQUENCE

Tail Surfaces:
1. Elevator bottoms, then tops
2. Fin right, then left
3. Rudder right, then left

Fuselage:
1. 1/8" Plywood landing gear mounts on the bottom of the fuselage
2. Bottom behind the landing gear mounts, then in front of the landing gear mounts
3. One side, then the other
4. Top forward, then aft of the wing saddle
5. Front windscreen area
6. Hatch
7. Landing gear plate (or you could paint it instead)

Wings;
1. Tips
2. Bottom inner panels
3. Bottom outer panels
4. Top inner panels
5. Top outer panels

FINAL CONSTRUCTION

SHAPE THE FLYING SURFACES

❑ 1. Due to the lightweight structure of the Piece 0' Cake and the shrinkage of the covering, the wing, fin, rudder, elevator and stab can warp or twist. Correct the twists by carefully twisting the part in the opposite direction of the built-in twist, then heat the covering with your iron or heat gun until the twist is removed and the part is flat.

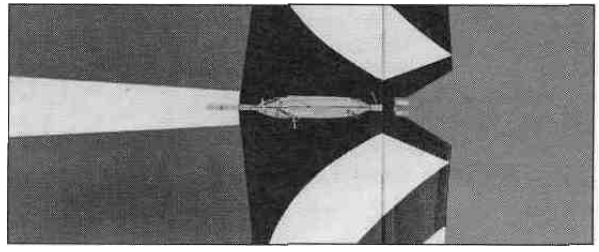
Add "washout" to the wing tips. Washout is where the trailing edge of the wing at the tip is twisted upward. This gives the wing tip a lower angle of attack than the rest of the wing and will reduce the tendency for the wing to "tip stall."

❑ 2. Lay the outer panel of the right wing on your building table. Place a 1/4" piece of balsa under the wing tip at the trailing edge. Heat the covering until the wrinkles disappear and the wing will stay twisted without the shim. You may have to heat the bottom of the outer wing panel too.

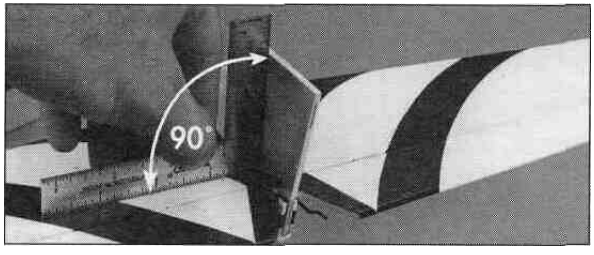
❑ 3. Add washout to the left outer panel the same way. Make sure the inner wing panels are flat and warp free as described in step 1.

JOIN THE TAIL SURFACES TO THE FUSELAGE

❑ 1. Test fit the stabilizer and fin to the fuselage to make sure none of the covering interferes with the glue joints and areas that are exposed balsa.

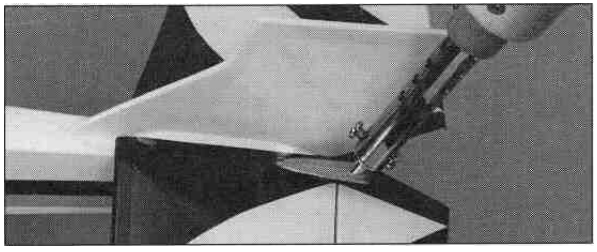


❑ 2. Apply a film of 30-minute epoxy to the exposed balsa on the bottom of the stab and the stab saddle area of the aft fuse. Then position the stab on the fuse. Use the centerlines on the top of the stab and fuse, and the exposed balsa on the bottom of the stab, as a guide to align the stab with the fuse. Use T-pins, weights or clamps to hold the stab to the fuse until the epoxy **fully cures.** Use a cloth dampened with alcohol to wipe away excess epoxy **before** it cures.



❑ 3. Use epoxy to glue the fin to the stab and fuse. While you align the fin, use a builder's triangle to make sure the fin is perpendicular. Use T-pins to hold the fin in position until the epoxy fully cures. Some modelers may prefer to glue the fin in position with medium CA and this is acceptable as long as you can achieve proper alignment before the CA cures.

❑ 4. Test fit the fin reinforcements to the fin and stab/ then glue them in position with medium CA.

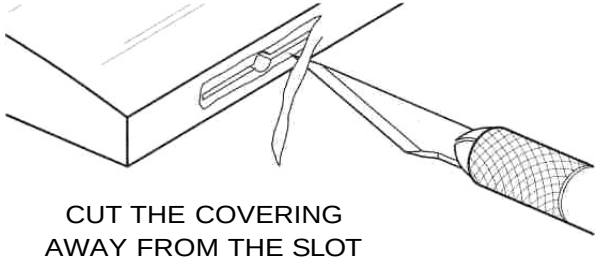


❑ 5. Use a Trim Seal Tool or a MonoKote Iron to seal the perimeter of the covering on the reinforcements to the fin and stab.

❑ 6. If necessary, cut 1/4" strips of covering and use your Trim Seal Tool to iron the strips in the "corners" where the bottom of the stab meets the fuse and the fin meets the top of the fuse.

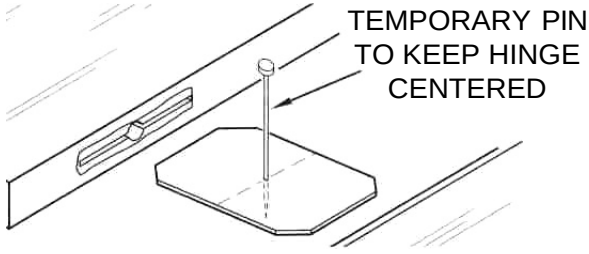
HINGE THE CONTROL SURFACES

Make sure you join the elevator to the stab first, *then* join the rudder to the fin.



CUT THE COVERING AWAY FROM THE SLOT

❑ 1. Use your hobby knife and a sharp #11 blade to remove a small strip of covering from the hinge slots to expose them.



❑ 2. Join the elevator to the stab with the hinges. If the hinges will not stay centered, stick a pin through the center of the hinge, then join the surfaces and remove the pins.

❑ 3. Confirm that the ends of the elevator align with the ends of the stab, that the hinges are centered, and there is a small gap between the stab and elevator (just enough to see light). A **small** gap is desirable so you do not inadvertently glue the elevator to the stab.

❑ 4. Carefully apply 4-6 drops of thin CA to both sides of the hinges. Keep a cloth handy to wipe away excess CA. If you spill a few drops of CA on the covering, you can use CA Debonder (GPMR6039) to remove it, or carefully peel it off with a hobby knife after it fully cures.

Do not use accelerator on any of the hinges. Do not glue the hinges with anything other than thin CA and do not attempt to glue one half of the hinge at a time with medium or thick CA. They will not be secure and the controls could separate while the model is flying.

❑ 5. Let the CA fully cure, then carefully flex the elevator several times to check the movement.

❑ 6. Hinge the rudder the same way as the stab.

FUELPROOFING

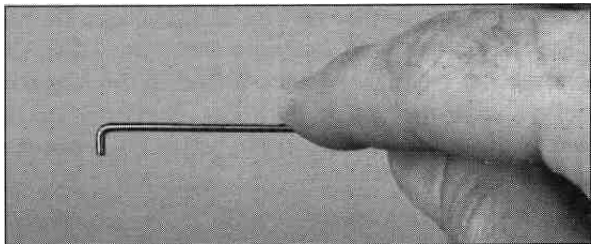
Use 30-minute epoxy thinned with alcohol or fuelproof model airplane paint to coat areas that may be exposed to raw fuel or exhaust residue. These areas include the firewall, inside the cowl sides and bottom, the underside of the hatch, the landing gear plate (if you did not cover it with iron-on film), and inside the fuselage around the wing saddle area.

FINAL HOOKUPS & CHECKS

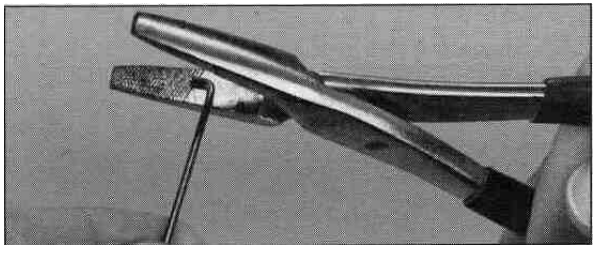
CONNECT THE SERVOS

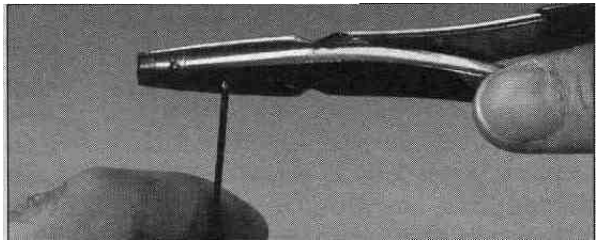
❑ 1. Use "Z-Bend" pliers or read the following procedure to make a "Z-bend" in the end of one of the 1/16" x 36" pushrod wires.

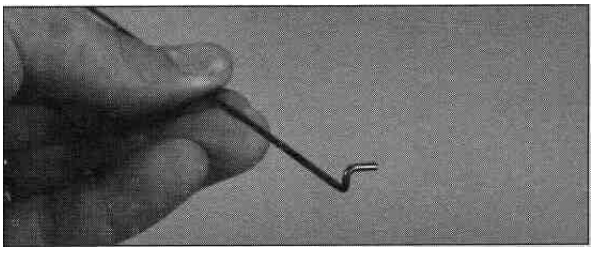
How To Make A Z-Bend In A Pushrod Wire With Regular Pliers



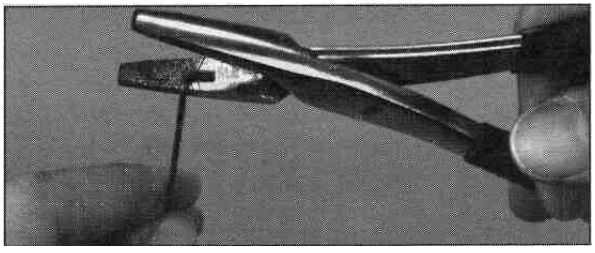
A. Make a sharp "L-Bend" 1/8" from the end of the wire.

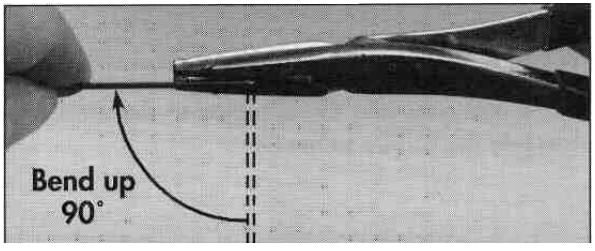


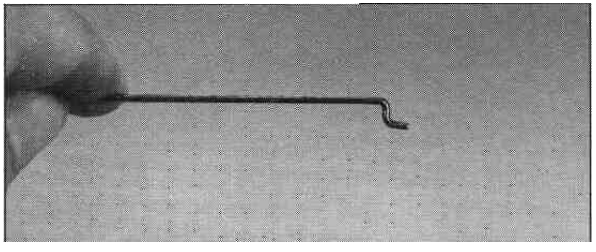




B. Grip the first bend in your piiers and make another 90 degree bend in the wire 1 /8" behind the first.

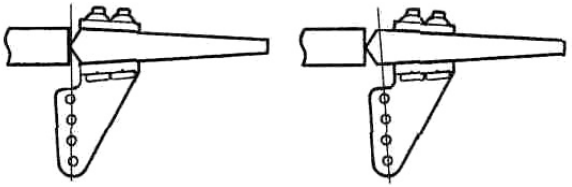






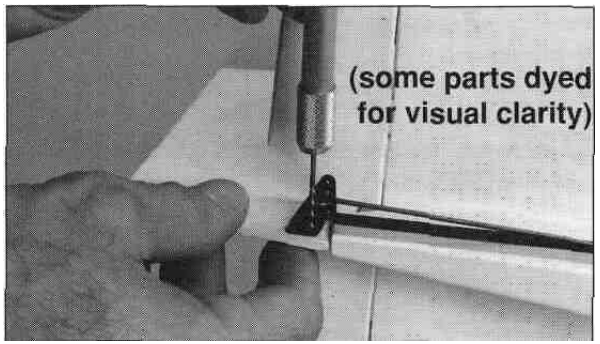
C. Hold the "bends" in the pliers, then make a third bend aligning the first two bends to make the Z-bend.

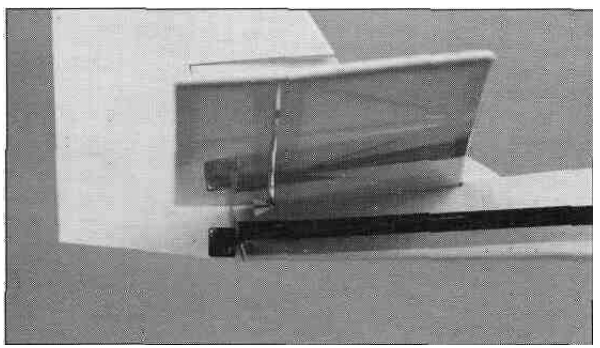
❑ 2. Use a new #11 blade to cut the covering from the pushrod guide tube exits in the rear of the fuselage, then temporarily mount a Screw-Lock Pushrod Connector to the rudder servo wheel. Slide the pushrod wire with the Z-bend into the pushrod guide tube through the back of the fuselage and into the pushrod connector on the elevator servo. Connect a small **control horn** to the pushrod wire.



RIGHT **WRONG**

❑ 3. Position the control horn on the **right side** of the rudder so the holes in the control horn align with the hinge gap.





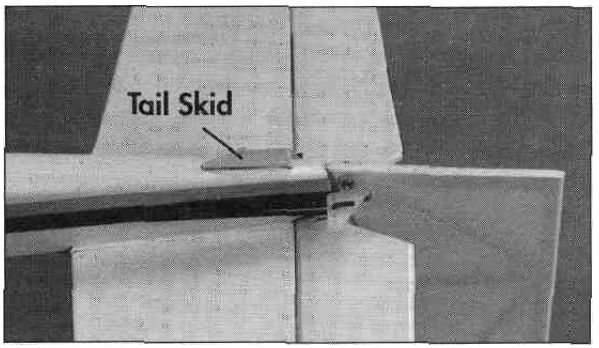
❑ 4. Use the holes in the base of the control horn as a guide to drill two 1/16" holes through the rudder, then mount the control horn with two 2-56 x 3/8" screws and the nylon **control horn plate.**

❑ 5. Make a Z-bend in the other pushrod and connect the elevator servo to the elevator with the pushrod connector and a control horn the same way you did the rudder.

❑ 6. Cut the wires so they protrude from the pushrod connector by 3/8".

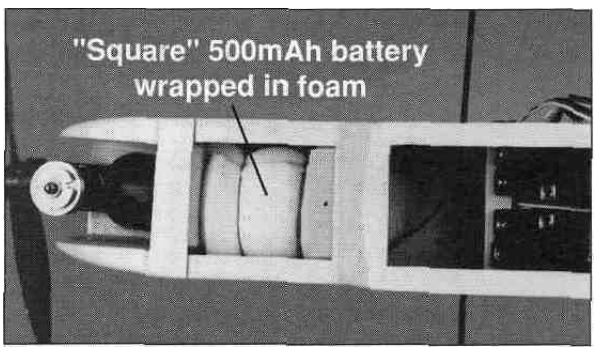
❑ 7. Mount the engine to the firewall.

❑ 8. Mount the landing gear in the fuselage with the mount plate and four #2 x 3/8" screws, then mount a 1-1/2" wheel with a 3/32" wheel collar (not included, GPMQ4302) on each landing gear wire.



❑ 9. Use a sharp hobby knife to *lightly* cut a small strip of covering from the bottom of the fuselage where the die-cut 1/16" plywood **tail skid** is to be located. In the *Covering* section of the manual we discourage the practice of cutting the covering directly on the balsa, but it is okay to do for the tail skid since it is not structural. If you haven't already done so, cover the skid with the same iron-on film you used for the rest of the model, or just pant it. Use medium CA to glue the tail skid to the bottom of the fuselage.

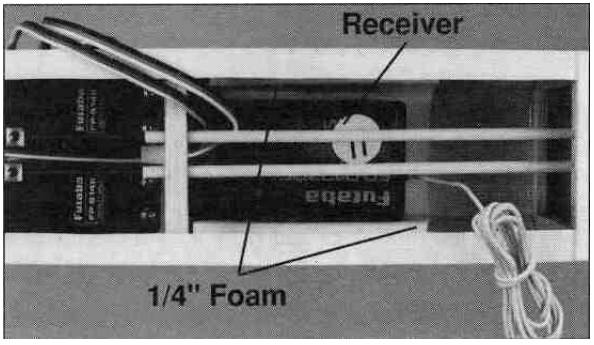
FINISH INSTALLING THE RADIO



❑ 1. Wrap your battery pack in 1 /4" foam rubber, then mount it in the fuselage in the location shown on the plan. Be certain the #2 x 3/8" screws that

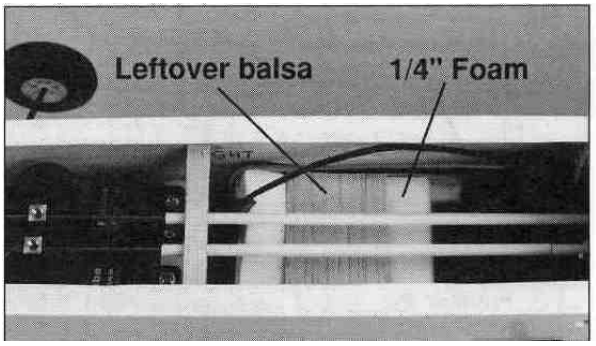
mount the engine to the firewall (and protrude from the back of the firewall) will not contact the battery pack. If the screws wear through the battery casing they could cause a short circuit and start a fire. To protect the battery pack, place a 1/8" piece of balsa between your battery pack and the firewall.

Note: Only a 500 mAh "square pack" (or smaller unit) will fit in the battery compartment of the Piece 0' Cake. You can purchase a square battery pack separately if you do not have one. Some hobby shops or electronics shops will convert a flat pack into a square pack.



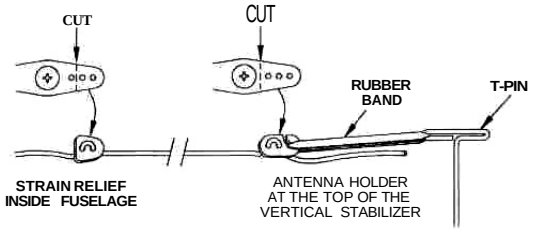
❑ 2. Place a piece of 1/4" foam rubber large enough to cushion the bottom and sides of your receiver in the bottom of the fuselage just behind the servos. Place your receiver in the foam. You may have to flex the pushrods to the side to slip your receiver past them.

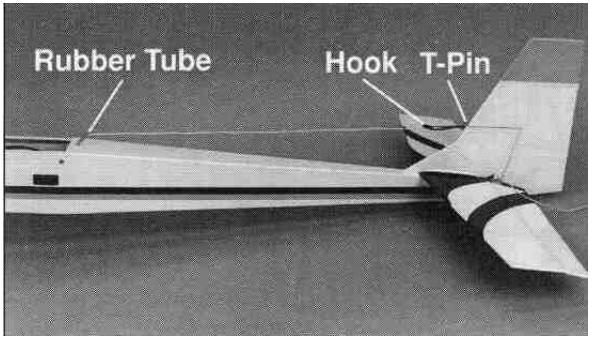
❑ 3. Plug the servos and the switch into the receiver. The Piece 0' Cake is a two channel model (where the *turning* function is the **rudder,** *not* ailerons) so connect the rudder servo into channel 1 (or the aileron channel) of your receiver.



Lay another piece of foam on top of the receiver, then glue a 1 /8" piece of leftover plywood or balsa to the fuselage sides on top of the receiver to hold it securely in position.

❑ 4. Mount the on/off switch in a location that will not interfere with the receiver or pushrods and will not become coated with exhaust residue.





❑ 5. Make a **strain relief** and an **antenna hook** from a cut off servo arm as shown in the sketch. Place the strain relief on the antenna about 3" from the receiver. Mount the antenna to the antenna hook and a T-pin inserted into the leading edge of the fin as shown in the photo and the sketch. Never shorten the antenna wire but let the excess wire "dangle" past the antenna hook.

❑ 6. Confirm that the battery pack and the receiver are adequately cushioned on all sides and securely mounted so they will not become dislodged during flight or a rough landing.

❑ 7. Cut a hole in the covering over the wing dowel holes in the fuselage, then install the dowels. Glue the dowels in position with medium CA, then coat the ends with epoxy or fuelproof paint.

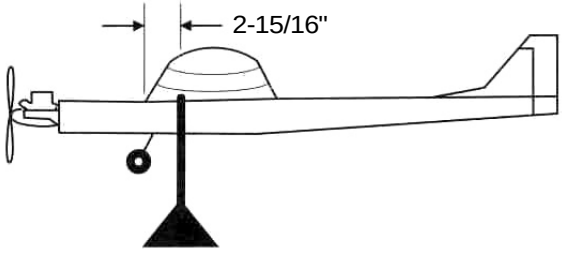
❑ 8. Apply 1/16" thick Great Planes Single-Sided Foam Tape (GPMQ4422) to the wing saddle of the fuselage.

BALANCE YOUR MODEL

This section is important and must NOT be omitted. A model that is not properly balanced will be unstable and possibly unflyable.

❑ 1. **Accurately** mark the balance point on the bottom of the wing near the fuselage sides with tape or a felt-tip pen. The balance point is shown on the plan and is 2-15/16" (75mm) aft of the leading edge.

❑ 2. Place the wing on the fuselage, then hold it in place with two or four #64 rubber bands. When it is time to fly your Piece 0' Cake, you should secure the wing with six rubber bands, crossing the last two.



❑ 3. Lift the model with your fingers at the balance point, or make a simple stand as shown in the sketch. If the tail drops, add additional weight to the nose. Use Great Planes Adhesive Lead Weights (GPMQ4485). Our prototype Piece 0' Cake required 6 oz. of Great Planes stick-on lead weight in the battery compartment to balance.

SET THE CONTROL THROWS

❑ 1. Center the servos before you measure the control throws. Temporarily remove the servo wheels from the servos, then turn on your transmitter and receiver. Set the trims on the transmitter to neutral, then reinstall the servo wheels on the servos.

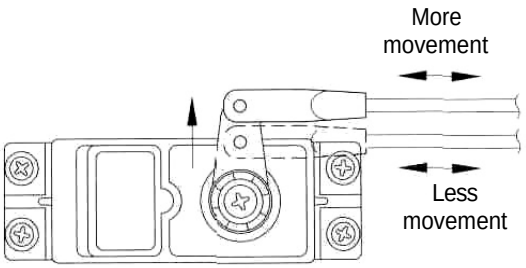
❑ 2. With the transmitter and receiver still on, neutralize the elevator and rudder on the model, then secure the pushrods to the Screw-Lock Pushrod Connectors with the 4-40 x 1 /8 screw and a drop of thread lock.

❑ 3. Measure the throws at the widest part of the trailing edge of the rudder and elevator. After a few flights you may change the throws to suit your flight style or the weather conditions.

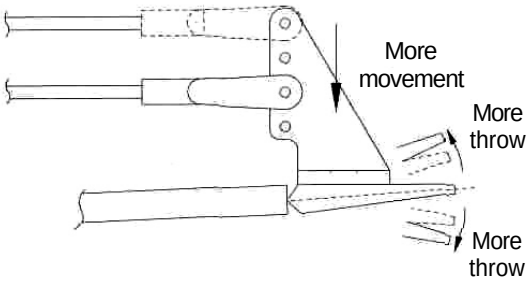
We recommend the following control surface throws:

Elevator 1 /2" up and down

Rudder 1" left and right



Moving the clevis outward on the **servo arm** results in more pushrod movement.



Moving the clevis inward on the control horn results in more throw.

The **closer** the Z-bend is to the **base** of the control horn **on the control surface,** and/or the **further** the pushrod is from the center of the **servo arm** (or wheel), the more control throw you will have. To **decrease** control throw, move the Z-bend on the control horn **outward,** and/or move the pushrod on the servo arm **inward.** Combinations of the above arrangements will provide the control throw you require. Of course, if your transmitter has ATV's (adjustable travel volume), use them to fine-tune the control throws.

❑ 4. After you set the control throws and position the pushrod connectors in the correct holes in the servo wheels, securely fasten the pushrod connectors to the servos with star washers on the bottom of both connectors. Install the screws that hold the servo wheels to the servos.

PREFLIGHT

CHARGE THE BATTERIES

Follow the battery charging instructions in the instruction manual that came with your radio control system. You should **always** charge your batteries the night before you fly.

GROUND CHECK THE MODEL

Inspect all nuts, screws and wheel collars. **Make sure you install the screw that holds the servo arm onto the servos** and the servo cords are securely connected to the receiver.

If you are not thoroughly familiar with R/C models, ask an experienced modeler to inspect your radio installation and make sure the control surfaces respond correctly. The engine must be "broken-in" according to the manufacturer's recommendations for break-in. Refer to the ***Engine Safety Precautions*** on page 41 before you start your engine. After you run the engine on the model make sure all screws remain tight, the hinges are secure and the prop is on tight.

GATHER YOUR TOOLS

Assemble a simple flight kit (a shoe box is fine to start with) which should include a 1-1/2 volt starting battery and glow plug clip, a "chicken stick" for flipping the prop, fuel and fuel pump or other means of filling the tank, a couple of small screwdrivers, #64 rubber bands, spare props and glowplugs, a pair of needle nose pliers and some CA for field repairs. In addition to tools, you should also take along some paper towels and spray window cleaner to remove exhaust residue from the model (and your

hands) after each flight. Store fuel soaked rubber bands in a container with talcum powder or corn starch to absorb the oil.

RANGE CHECK THE RADIO

Check the operational range of the radio before the first flight. **Before you turn your radio on the first thing you always must do is make sure no one else is on your frequency (channel).** Most model flying fields utilize frequency control so familiarize yourself with their system. Collapse your transmitter antenna and turn on the transmitter, then the receiver (preferably the receiver should never be on by itself). You should be able to walk at least 100 feet away from the model and still have control. Have an assistant stand by your model and tell you what the control surfaces are doing while you operate them from the transmitter.

Repeat this test with an assistant holding the model and **the engine running** at various speeds. If the control surfaces do not always respond correctly, **don't fly!** Find and correct the problem first. Look for loose servo connections or corrosion, loose fasteners that may cause vibration, a defective on/off switch, low battery voltage or a defective cell, a damaged receiver antenna, or a receiver crystal that may have been damaged from a previous crash.

ENGINE SAFETY PRECAUTIONS

NOTE: Failure to follow these safety precautions may cause severe injury to yourself and others.

Store model fuel in a safe place away from high heat, sparks or flames. Do not smoke near the engine or fuel as it is very flammable. Engine exhaust gives off a great deal of deadly carbon monoxide so **do not run the engine in a closed room or garage.**

Get help from an experienced pilot when you learn to operate engines.

Use safety glasses when you operate model engines.

Do not run the engine near loose gravel or sand; the propeller may throw loose material in your face or eyes.

When you start and run the engine, keep your face and body as well as all spectators away from the plane of rotation of the propeller.

Keep loose clothing, shirt sleeves, ties, scarfs, long hair or loose objects away from the prop. Be conscious of pencils, screwdrivers or other objects that may fall out of your shirt or jacket pockets.

Use a "chicken stick" or spring starter and follow the instructions to start your engine.

Make certain the glow plug clip is secure so that it will not pop off or get into the running propeller.

Ask an assistant to hold the model from the rear while you start the engine and operate the controls.

Make all engine adjustments from **behind** the rotating propeller.

The engine gets hot! Do not touch the engine during operation or immediately after you operate it.

To stop the engine, close the carburetor barrel (rotor) or pinch the fuel line to discontinue the fuel flow. Do not use your hands, fingers or any body part to stop the propeller.

Never throw anything into the prop of a running engine.

FLYING

FIND A SAFE PLACE TO Fly

The best place to fly your R/C model is at an AMA (Academy of Model Aeronautics) chartered club field. Ask your hobby dealer or the AMA if there is a club in your area and join it (The address and telephone number for the AMA is listed on page 3 of this instruction book). Club fields exist to make your R/C flying safe and enjoyable. We recommend that you join the AMA and a local club so you may have a safe place to fly and insurance in case of a flying accident.

If a club flying site is not available, find a large, grassy area at least 6 miles away from houses, buildings, streets and other R/C activity like boats and cars. Avoid flying R/C models near traffic or areas such as parks, school yards, office building lawns, etc. that may attract unrestrained observers. If you are a beginner, you are busy enough concentrating on your model without having to answer lots of questions and performing crowd control.

We *highly recommend that you get an experienced modeler to assist you with your flight training. An experienced modeler can fake your Piece 0' Cake up for the first time and make sure it performs correctly, then give you valuable flight instruction. He can hand you the transmitter when the Piece 0' Cake has climbed to a safe altitude, or connect your transmitter to his if both of your systems have trainer cord or "buddy box" capability. Assistance from an experienced modeler will make your modeling "career" progress faster (and cheaper). We do, however realize that some modelers are determined to learn on their own, or are not in a location where an instructor or flying club is available. Therefore, we have provided the following information to give you an idea of what to expect upon your first flight with your Piece 0' Cake. Flyers who plan to set out on their own* ***and*** *flyers who will have the help of an instructor should carefully read the following information.*

TAKEOFF

First flight attempts should be reserved for **calm days when the wind is five mph or less.** Although the Piece 0' Cake does have landing gear, it is not intended for taking off the ground so you or a helper should *hand launch* the Piece 0' Cake.

Always launch (takeoff) and land into the wind. Start the engine and hold the model overhead. Check the operation of all controls just before takeoff. This will eliminate the possibility of forgetting to turn on the receiver switch (it happens sometimes) or overlooking reversed or disconnected controls. Give an affirmative nod to your helper when you are ready for launch. Stand behind, or to the side and behind the model when your assistant launches it. Launch the model in an overhead motion (like a javelin throw) at a **level** or *slightly* nose-up attitude so it can climb gently under its own power. The Piece 0' Cake can only fly and climb so fast so if you throw the model too hard or at too great of an angle, it may stall (stop flying) and require time to gain airspeed before it can resume a climb. Just a little "oomph" on the hand launch is all your Piece 0' Cake needs. With neutral elevator trim the Piece 0' Cake should climb on its own without the help of your control. The idea is not to put the Piece 0' Cake into orbit, but to reach a safe altitude where you can execute your first turn.

FLIGHT

Allow the Piece 0' Cake to climb, then execute your first turn. Make a right or a left 180 degree turn (whichever direction will keep you from flying over head or over obstacles). Initiate the 180 degree turn by applying a little rudder in the direction you wish to turn, then apply a little up elevator to keep the nose **level.** You will find that once the turn is initiated, no more rudder is required to hold the turn but **opposite** rudder may be required to stop the turn and return the Piece 0' Cake to a straight and level attitude. At this time the Piece 0' Cake is flying "down wind" so it will gain speed and perhaps loose a little altitude. Just apply a little up elevator to maintain altitude.

Your next turn will be into the wind so it will be a little easier to maintain altitude and complete the turn. Apply rudder in the direction required to initiate the turn. Keep flying a "racetrack pattern" while you maintain altitude and make small corrections (as small as possible) to keep the desired heading.

Due to the nature of the design (a powered sailplane) the Piece 0' Cake should gently climb at all times, but if it seems to climb too rapidly, apply a little "down trim" to decrease the rate of climb. If your Piece 0' Cake requires you to hold up elevator all the time to get it to climb, apply a little "up trim" to resume a gentle climbing tendency.

Continue flying the "race track pattern," making adjustments to altitude, heading and speed until the engine quits. Once the engine quits you may even find some rising air currents and be able to keep your Piece 0' Cake in the air for several minutes.

LANDING

Landing your Piece 0' Cake is...a piece of cake. By now you have had a few minutes of flying time under your belt and you should be getting to know how the model behaves. After the engine quits your Piece 0' Cake may not necessarily come down immediately. If there are rising air currents about you may catch a ride and extend your flying time. When your Piece 0' Cake does eventually begin to descend, just keep circling around the upwind side of the flying field so you can land into the wind (the same way you launched). When you reach an altitude of about fifteen to twenty-five feet turn your Piece 0' Cake into the wind and begin your approach down the landing area. Keep the wings level and use the elevator to keep the Piece 0' Cake descending at a gentle rate. As the model approaches the ground gradually apply just enough up elevator to slow it down but not enough to gain altitude. The model will proceed (now inches off the ground) until it touches down - you've done it! Inspect the model, fill the fuel tank, and fly it again!

Remember, your Piece 0' Cake is a "powered sailplane" so it is going to react slowly (ideal for beginners) and require lots of space to maneuver.

We hope you have fun with your Piece 0' Cake and your first attempt at R/C airplanes is successful!

AMA
SINCE 1936

OFFICIAL IDENTIFICATION

Issued by the
ACADEMY OF MODEL AERONAUTICS

This is an experimental model which may be lost in flight. The fuel tank may contain gasoline or other flammable fluid, which should **be** drained before transporting or storing. Keep away from fire.

Finder should notify owner immediately. Model should not be given to any claimant unless positive identification is provided

License No.....

Name.....

Address.....

City.....**State**.....

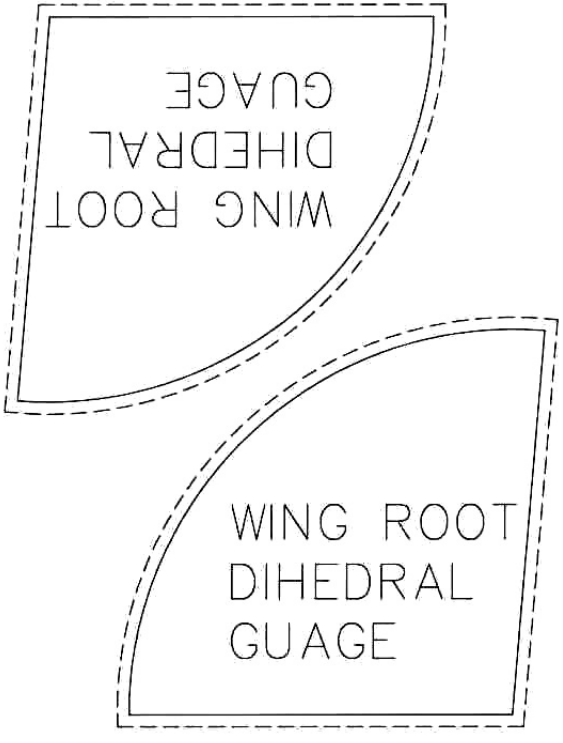
Phone.....

UNAUTHORIZED POSSESSION OF THIS MODEL CAN LEAD TO PROSECUTION UNDER LAW.

Dynaflite™

Fill in the information on the identification tag. You may want to protect the face of the tag to keep it from smearing. Cut out the tag and glue it to the inside of your model.

Using spray adhesive or rubber cement, glue the dihedral gauges (and the flight log if you like) to a piece of balsa wood or thin card stock. Trim them to size. Laminating the flight log makes it easy to carry in your flight box!



FLIGHT LOG

DATE	COMMENTS
/ /	Started Construction
/ /	Finished Construction
/ /	First Flight
/ /	
/ /	
/ /	
/ /	
/ /	
/ /	
/ /	
/ /	
/ /	
/ /	
/ /	
/ /	
/ /	
/ /	
/ /	
/ /	
/ /	
/ /	
/ /	