

DAS BIPE STIK

Congratulations on your purchase of Das Bipe Stik. We at Midwest Products hope you enjoy building and flying Das Bipe Stik as much as we enjoyed bringing it to you.

Study the plans and illustrations before starting to build this model. For the more experienced modeler, there should be no problems at all, as the model has been designed for fast building.

All construction is straight forward and you will find Das Bipe Stik is quite a sturdy aircraft. Read the instructions and make sure the parts that are being cemented in place are the correct ones. Well, it's time to go to work on Das Bipe Stik.

WING ASSEMBLY

- 1. Start by tacking wax paper over the top wing portion of the plans. Cement and pin in place the 1/4" sq. spruce bottom spar. Cut a 45 degree angle on the 1/16" x 2" trailing edge sheet and pin in place over the plan. Do the same to the 5/8" Balsa trailing edge stock and cement in place to the rear part of the 1/16" balsa trailing edge sheets. This is step No. 1 and it should look like it when it has been done.
- 2. Carefully remove the ribs from the die cut sheets and cement them in place to the main spar only. After these have dried, remove pins from main spar and pivot the ribs back onto the trailing edge and cement the ribs in place to the trailing edge sheeting. From the 1/8" x 3/4" balsa furnished in the kit, cement as shown to the rear center of the top wing. This completes step #2.
- 3. Cement the 1/4" Sq. Balsa leading edge in place. The leading edge is also cemented at the center. Cut 1/16" Balsa top trailing edge at 45 degrees as was done on the bottom sheet and cement in place as shown. Cement the top spars in place into the notches provided.

Remove the wing from the building board and cement the bottom spars in place. Note at this time that all materials such as leading edges, spars, leading and trailing edge sheets butt at the center line of the wing. The only exception is the rear of the top wing. Glue the 1/8" x 1/4" balsa caps to the wing trailing edge. The only material that does not butt at the center line is the center wing planking as can be seen on step No. 4. This is true with the bottom wing also.
- 4. Cement the 1/8" balsa die cut gussets in place as shown on illustration on the bottom of the top wing. Cement the 7/16 x 3/4 x 5-7/8 maple blocks in place as shown. These blocks will extend out of the wing ribs, and 1/16" balsa sheet will be cemented in between these blocks. Cement the four 3/8" balsa triangles to these blocks. These can also be seen on the top wing plan.
- 5. To cement the 1/16" balsa leading edge sheets in place the wood will have to be a little wet on just one side. The wood will start to take a curve and will help in cementing the leading edge together. Pins will help hold the wood in place here. Plank the center section with 1/16" balsa top and bottom. Locate and cut slots in the cabane blocks. Cement wing tips in place and the wing can be sanded and made ready for finishing.

BOTTOM WING CONSTRUCTION

- 1. The bottom wing is built in the same manner as the top wing. First tape the over lay portion of the center section of the bottom wing in place matching the center line marks and the spars. Tack wax paper over the bottom wing plan and place the 1/4" sq. spruce spars in place.
- 2. Cement the plywood rib doublers to the front of the center rib on each side.
- 3. Pin the 1/16" trailing edge sheet and the 5/8" tapered trailing edge in the same manner that was done on the top wing. Cement ribs, spars, 1/4" sq. leading edge and top 1/16" balsa trailing edge sheets in place. Remove this from building board and finish the bottom of the wing, using the same method that was done on the top wing. Make the cut out for the aileron servo and add the front and rear ply spar braces. Drill a hole for the 1/4" dia. hardwood dowel. Epoxy this dowel in place after the wing is finished. Cut the bottom of the wing sheeting and recess the plywood inserts for the wing bolts. Cement the tips in place; shape the ailerons as per plans and then give the wing a good sanding to prepare it for covering. Fiberglass the center of both wings for added strength.

FUSELAGE CONSTRUCTION

- 1. Remove fuselage sides from die cut sheet and lightly sand edges with sanding block. Mark locations for fire wall and bulkheads. Using the fire wall pattern on the plans, locate and drill holes for engine mount and throttle exit hole. Drill hole for throttle push rod on bulkhead #2. Drill holes in bulkhead #3 for elevator and rudder push rods.

- 2. Epoxy the cabane mounting blocks to the fuselage sides exactly as per the plans. Once the epoxy has cured, drill a 5/32" hole through the fuselage sides using the cabane mounting blocks as a drill guide.
- 3. Cement the 3/16" sq. balsa, 3/8" triangle stock, and the wing saddle doublers in place to the fuselage sides as shown on step #3. Make sure you have made a right and left hand fuselage side.
- 4. Cement F-1, F-2, F-3 in place making sure they are square to the sides.
- 5. Lay the fuselage upside down over the top view of the plan and cement the tail of the fuselage together as shown. Cement tank floor in place. Cement 3/8" triangle stock in the corners and the bottom of the tank floor.
- 6. Epoxy the plywood landing gear plate in place. Make sure it is in secure. Drill holes through landing gear as per plans and drill and tap landing gear plate for 1/4-20 nylon screws. Now cement the 1/4" balsa bottom to the fuselage. Shape the 1/2" sq. maple blocks for rear wing hold down bolts and epoxy in place as shown. The blocks can be drilled and tapped for 10-32 nylon screws after the wing is squarely placed on the fuselage later. Install the pushrod guide at this time.
- 7. The bottom of the fuselage can now be planked with 3/32" balsa cross grained. Cement the 3/32" plywood tail wheel mount in place to complete the bottom of the fuselage.
- 8. The fuselage top is now planked with 1/8" balsa from F-2 back to the stab opening. Be sure to install the planking cross grained. Glue two 1/8 x 1/2 x 3 ply hatch hold down plates in place. Install the ply hatch with four #4 x 3/8" S.M.S. screws.
- 9. Place the four eyelets in the fuselage from the outside. These will be glued in later once the fuselage has been covered.
- 10. Place the 1/8" wire cabane struts in the fuselage sides and connect the front and rear cabane with 3/32" wire cabane brace. The top wing will come in handy here to locate the cabanes properly. Make sure that the cabanes are 90 degrees to the top of the fuselage. Wrap and solder the cabane struts as shown on the plans.

Note the rear cabane strut is slightly longer than the front. Be sure they are properly located before soldering. To remove the finished cabane struts, pull them out of the holes in the fuselage. This will make it easier for covering.
- 11. When installing the top wing, center the top wing slotted blocks on the cabane struts and drill small holes for the metal straps. These straps should be against the radius of the wire to keep the wing from sliding sideways. When installing the top wing it is easier to get at the screws with the bottom wing removed.
- 12. Cement the stab and fin together as shown on the plan. The rear section of the fin sits in between the two rear sections of the stab. This will accurately align the fin with the stab. Radius the edges as shown on the plan. Cut slots for all hinges in the rudder, elevators, and ailerons. Do not glue the hinges in till after the model is covered.
- 13. Bend the 1/16" dia. wire for the tail wheel making sure the nylon tail wheel bracket is on the wire.
- 14. Now, sit back and admire your work. It's almost finished. Sand the entire model smooth. Remember that the finish will only look good if the airplane is sanded properly since the covering will not hide your mistakes.
- 15. The airplane can now be covered. The framework is strong enough for all the mylar coverings such as Monokote, etc.
- 16. After the fuselage is covered epoxy the eyelets in the fuselage from the outside.
- 17. After the epoxy has cured, re-install the cabane struts and put a drop of "Hot Stuff" on the wires where they go into the eyelets. This will hold them securely.
- 18. Use the four flat washers for right thrust for the engine. Two of these washers go on the top left side of the motor mount and two on the bottom. See the top view of the plan.
- 19. When installing the radio and components, make sure the model balances on the C.G. marked on the plans. Complete the model with windshields and the machine gun.
- 20. The last thing to do is to call in your family and friends to show them what a fine job you did on the Das Bipe Stik.

Happy landings and we at Midwest wish you the best of luck flying Das Bipe Stik.

Das Bipe Stik
Kit Number 153

Sheet 3
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Das Bipe Stik

WOOD PARTS LIST

2	Center Wing Planking	1/16 x 3 x 12	
4	Top & Bottom Trailing Edge Sheet	1/16 x 2 x 19	
2	Top Wing Leading Edge Top Sheeting	1/16 x 2-1/8 x 20-1/8	
2	Top Wing Leading Edge Bottom Sheeting	1/16 x 1-1/2 x 20-1/8	
4	Bottom Wing Trailing Edge Sheeting	1/16 x 2 x 17	
2	Center Section Planking	1/16 x 3 x 12	
2	Bottom Wing Top Leading Edge Sheeting	1/16 x 2-1/8 x 17	
2	Bottom Wing Bottom Leading Edge Sheeting	1/16 x 1-1/2 x 17	
6	Wing Ribs	3/32 x 3 x 18	Die-Cut
2	Bottom Fuse Planking	3/32 x 3 x 11-7/8	
2	Top Fuse Planking	1/8 x 3 x 14	
2	Wing Ribs and Tip Parts	1/8 x 3 x 15-3/4	Die-Cut
1	Wing Saddle Doubler	1/8 x 3 x 10-1/2	Die-Cut
1	Wing Tip Brace	1/8 x 2-7/8 x 13	Die-Cut
2	Wing Trailing Edge Caps	1/8 x 1/4 x 24	
1	Rear Top Wing Caps	1/8 x 3/4 x 9	
2	Tank Floors	1/8 x 3 x 3	
5	Fuse Stringers	3/16 x 3/16 x 24	
2	Stab Tips	1/4 x 1-19/32 x 5-1/4	
1	Shaped Forward Fin	1/4 x 2-9/16 x 4-7/16	
1	Shaped Aft Fin	1/4 x 3 x 5-19/32	
1	Shaped Rudder	1/4 x 2-7/8 x 7-3/32	
2	Elevators	1/4 x 1-1/2 x 8-5/8	
1	Fuselage Front Bottom	1/4 x 3-5/16 x 4-1/8	
4	Wing Tips	1/4 x 2-3/32 x 9-1/16	
2	Ailerons	1/4 x 1-9/32 x 17-1/4	
2	Top Wing Leading Edge	1/4 x 1/4 x 20-1/8	
2	Bottom Wing Leading Edge	1/4 x 1/4 x 17	
1	Stab Leading Edge	1/4 x 2-1/4 x 14	
2	Stab Trailing Edge	1/4 x 3 x 6-7/8	
2	Filler Pieces	3/8 Triangle x 9	
1	Cabane Mount Bracing	3/8 Triangle x 6	
2	Top Wing Trailing Edge	5/8 TTE x 19	
2	Bottom Wing Trailing Edge	5/8 TTE x 17	
4	Top Wing Top & Bottom Spars	1/8 x 1/8 x 20-1/8	Bass
4	Bottom Wing Top & Bottom Spars	1/8 x 1/8 x 17	Bass
2	Rear Cabane Mount	1/4 x 7/8 x 1-1/2	Bass
2	Front Cabane Mount	1/4 x 7/8 x 1-1/2	Bass
2	Fin Reinforcing	1/4 Cove x 5-1/4	Bass
1	Machine Gun	3/8 x 3/8 x 7/8	Bass
4	Top Wing Main Spar	1/4 x 1/4 x 20-1/8	Spruce
4	Bottom Wing Main Spar	1/4 x 1/4 x 17	Spruce
2	Servo Rails	3/8 x 3/8 x 3	Maple
2	Top Wing Mounting Blocks	7/16 x 3/4 x 5-7/8	Maple
2	Bottom Wing Hold Down	1/2 x 1/2 x 1-1/2	Maple
1	Bottom Wing Dowel	1/4 x 1-3/4	Dowel
1	Machine Gun Barrel	1/4 x 1-3/4	Dowel
1	Machine Gun Base	1/4 x 1/2	Dowel
1	Bottom Wing Bolt Reinforcing	1/16 x 1/2 x 1/2	Plywood
1	Tailwheel Mount	3/32 x 5/8 x 1-1/4	Plywood
2	Fuselage Sides	3MM x 4-1/4 x 32-5/8	Lite Ply - Die-Cut
2	Wing Ribs	3MM x 2-7/8 x 16-3/4	Lite Ply - Die-Cut
1	F-2 Bulkhead	3MM x 3 x 3-13/16	Lite Ply
1	F-3 Bulkhead	3MM x 3 x 3-11/16	Lite Ply
1	Front Top Hatch	3MM x 3-1/4 x 5-5/16	Lite Ply
1	Pushrod Guide	3MM x 7/8 x 2-3/4	Lite Ply
2	Hatch Hold Down	1/8 x 1/2 x 3	Plywood
1	Front Spar Brace	1/8 x 1-5/16 x 1-15/32	Plywood
1	Landing Gear Mount	1/4 x 1-9/16 x 3-9/32	Plywood
1	Firewall	1/4 x 2-29/32 x 3	Plywood