

Figure 1: Versatile fuselage jig is adaptable to almost any fuselage.

# RCM Fuselage Jig

BY W.A. THIENES

The majority of RC'ers who build their airplanes try to devise building and finishing methods that will enable them to complete an airplane in a shorter time. Using conventional balsa and plywood fuselage construction methods, and assembling the fuselage sides and formers "in the air" using rubber bands, pins, diagonal braces and appropriate language, it is difficult, if not impossible, to obtain a properly aligned fuselage. This fuselage building jig will provide the means to obtain a straight centerline, no twist, and have all formers at 90 degrees to the centerline of the fuselage.

Figure No. 1 is a photo of the completed jig. The cost is very nominal, as all there is to it is a piece of 3/4" x 12" x 48" warp-free pine or

plywood, 16 five inch long 1/4" carriage bolts, washers and wing nuts, and some 1/8" hardboard and 1/4" plywood slotted jig blocks. The 12" x 48" base has a centerline the length of the board with three parallel guidelines on 1" spacing on either side of the centerline. Crosslines on 3" spacing are marked off at right angles to the centerline, this is a sufficient number of guidelines, although some builders may desire to add more guidelines, or actually glue a graph paper grid to the board. A carriage bolt is located every 6", starting on the first crossline from the end of the base board. The bolts are located 4" out from the centerline for the first five pair of bolts while the last three pair are located 3" out from the

centerline. The bolts are inserted from the underside of the board in 1/4" holes drilled through the board. This spacing should allow sufficient opening and closing of the slotted jig blocks to construct a fuselage for any of the R/C airplanes in the air today. The carriage bolts serve as guide pins for the 3/4" x 4" slotted jig blocks. Figure No. 2 is a drawing of the base board showing the alignment grid and the carriage bolt guides.

The slotted jig blocks are made from 1/8" hardboard with a 1/2" wide spacer of 1/4" plywood glued and nailed at each end of the spacer. The plywood spacer permits a nice smooth fit of the jig block over the carriage bolt guide. The 3/4" depth allows sufficient threads of the carriage bolts

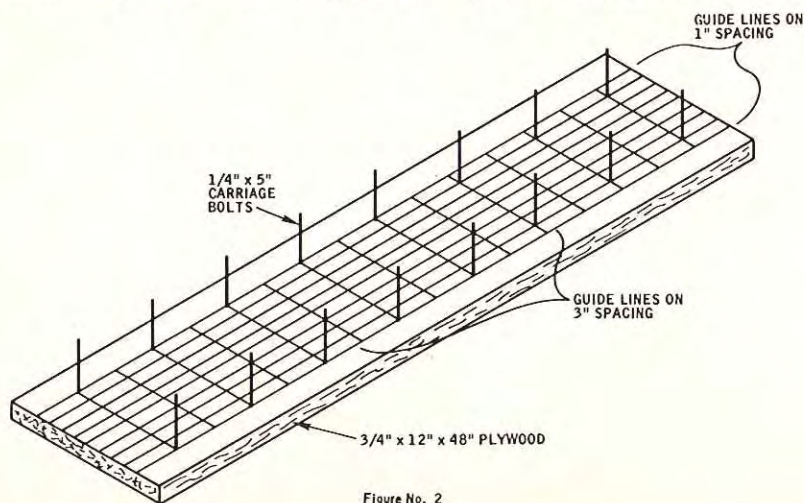


Figure No. 2

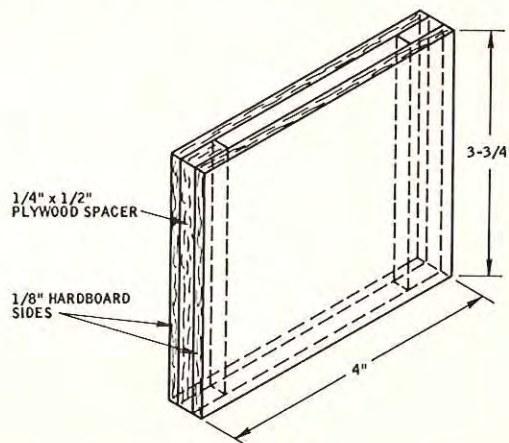


Figure No. 3



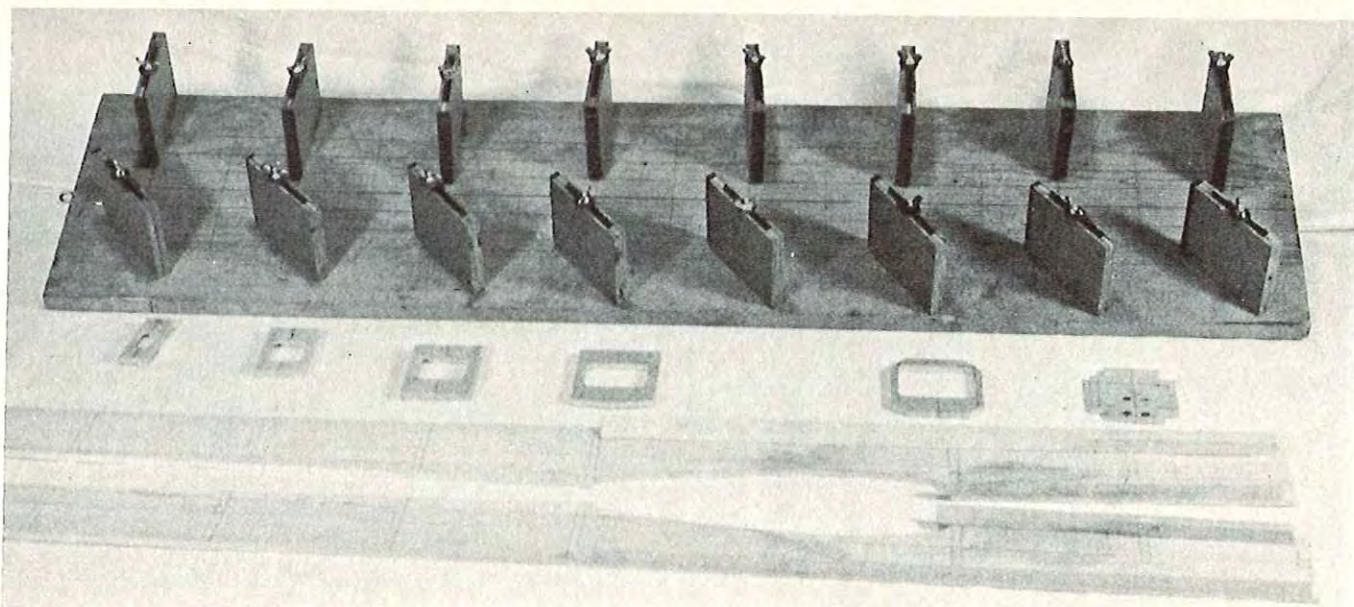


Figure 4: View of fuselage sides, formers, and RCM Building Jig.

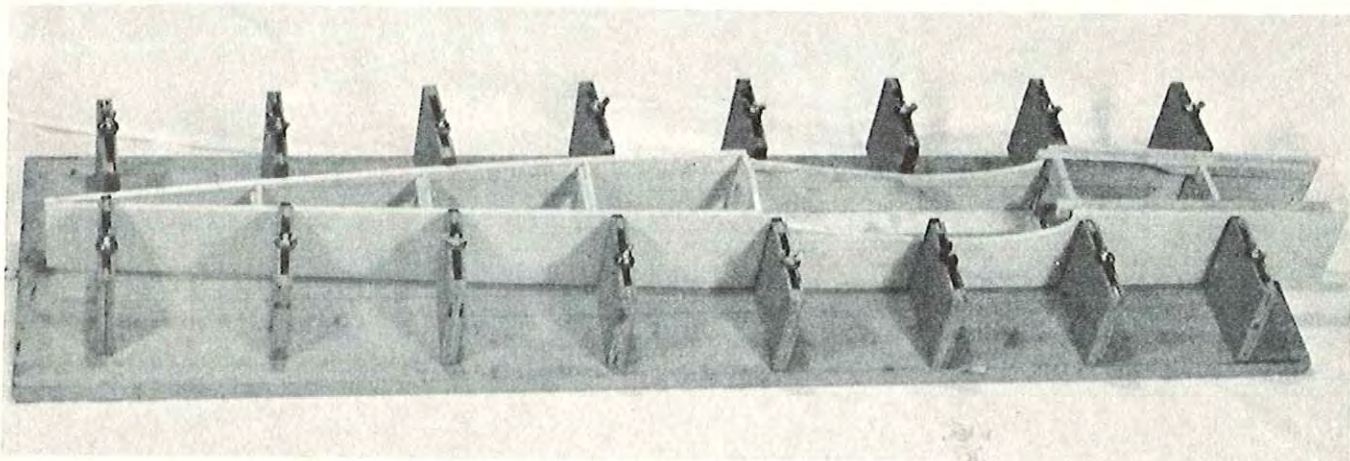


Figure 5: The fuselage placed in the jig and the blocks tightened.

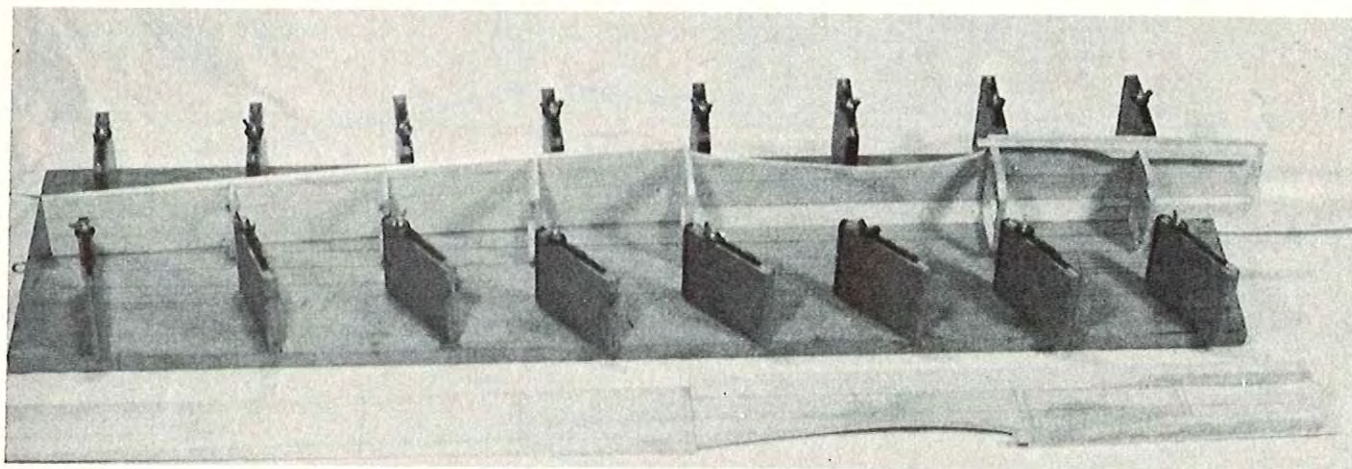


Figure 6: Jig blocks loosened on one side so that formers may be removed.

above the jig block for a washer and wingnut. Figure No. 3 shows a drawing of the slotted jig block. It is highly recommended that you find a friend with a good table saw or radial arm saw to cut the hardboard sides for the jig block to insure that they have 90

degree corners. After the jig blocks are assembled, automobile weather stripping can be glued to the end of the jig block that contacts the fuselage sides.

The jig is very easy to use in building a fuselage, especially the type that has a straight top or bottom. The

fuselage sides are prepared in the usual manner with all doublers, motor mounts, and edge strips glued in place and former locations marked on the inside of the sides. The formers should have a vertical centerline marked on

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the performance of the EK LRB proportional system. For less than \$150.00 you can have a racing vehicle which can perform with the best of them and provide many hours of challenging racing excitement. Jerobee, does in fact, put you "in the drivers seat" with their new Comando configurations. The instruction manual provided with the Comando is complete with explicit instructions and detailed drawings so that even a youngster could operate this car successfully. We would have to rate this car as outstanding in all respects from design and engineering through its quality craftsmanship and truly phenomenal performance. The same is true of the EK Little Red Brick proportional system which maintains the quality for which EK Products, Inc. has become internationally renowned. □

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them. Figure No. 4 shows the sides, formers and building jig. The slotted jig blocks are moved out a sufficient distance from the board centerline and the fuselage sides are placed against the jig blocks on their respective sides of the board centerline. The formers are put in place and the fuselage sides are placed against the former edges by moving the jig blocks in towards the centerline. The jig blocks are so adjusted that the fuselage sides and formers are symmetrical with the board centerline and the formers are parallel with the board crosslines. The fuselage sides and formers are now ready to be glued together. Figure No. 5 shows the fuselage placed in the jig. The jig blocks, on one side only, are loosened and moved away from the fuselage side so that the formers may be removed as shown in Figure No. 6. Your favorite glue is then applied to the former edges and the formers are inserted between the fuselage sides. The previously loosened jig blocks are then repositioned against the fuselage side and the formers aligned with the crosslines. By loosening the jig blocks on only one side, the fuselage will be back in the alignment determined prior to applying glue to the formers. The end result will be a fuselage that is straight with no twist. □

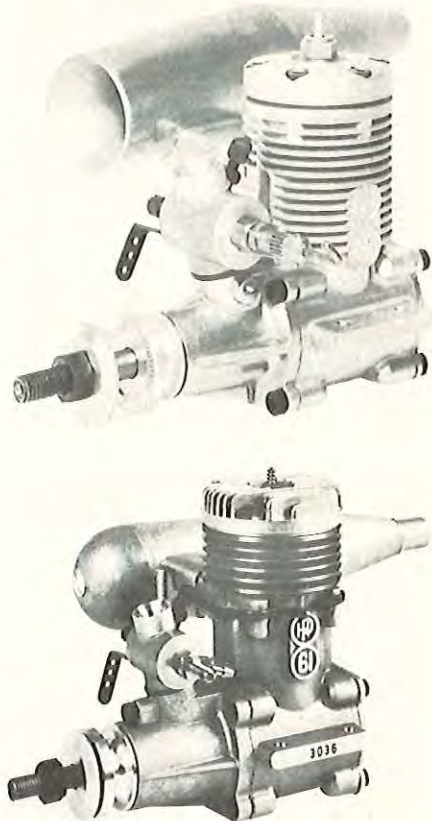
# TAKE A LOOK AT THIS..

Big is the only way to describe the new kit from Texas Models Unlimited, 1623 Dumas Dr., Amarillo, Texas 79107. The Big Daddy 88 sports a wing span of 88" and a total wing area of 1408 sq. in. The all-up flying weight of this shoulder wing design is approximately 11 lbs. and is designed for engines from .60 up. The kit includes all hardware, wheels, engine mount, with kit parts sanded and machine cut. Complete easy to follow assembly instructions are included. An original design by Texas Models Unlimited, price is \$89.50 for the Big Daddy, kit #RC-88.

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The new HP40FR (front rotor) and the HP61FR engines are now available from Nelson Model Products, 6929 West 59th Street, Chicago, Illinois 60638. These two engines are the only engines equipped with mufflers as standard equipment. Of special note is the fact that the HP61 engines were used by 25% of the entries at the 1971 World Championships at Doylestown, Pennsylvania. The HP61RR engines have been redesigned with all new internal parts and a completely new disc valve induction system. A marine version is also available. The HP40FR is quite a power house. It is capable of turning an 11-7 propeller equal to some of the .60 engines and it can be used to power any of the lighter weight .60 size aircraft. Their performance and dependability is such that it is well suited for competition performance in the pattern event. The HP40RR has created quite a controversy in the racing events. It seems that a stock out-of-the-box HP40RR is equalling the custom built tuned racing 40's now in use. Needless to say the HP40RR is going to be used by many of the racing experts next season. Many people have asked what is the difference between the 1971 and the 1972 HP61 engines. The following items are now utilized in the 1971 HP61FR engine: Sleeve now made from a casting; wrist pin held in with C-clips; connecting rod drop forged; cylinder head modified; piston modified; crankcase re-designed with different back plate cover; front housing manufactured differently; and the

cylinder head is anodized blue. For further information contact Nelson Model Products in Chicago, Illinois.



A number of modelers have written in, following the review of the Murphy Muffler featured in a previous Engine Clinic Column by Clarence Lee, asking where they could be obtained. Although these are normally available through dealers, they can be ordered direct from Murphy Mufflers, Inc., 5312 E. Beverly Blvd., Los Angeles, California 90022. Three sizes of mufflers are available which will fit all engines currently in production. All that is necessary is an adapter at \$1.95 each for your particular type of engine. A complete list of adapters is available from Murphy Mufflers. These mufflers have been Tested, Approved and Recommended by RCM.



A new product available from Pierce Hobby Supply, 6328 Parkview Way, Citrus Heights, California 95610,