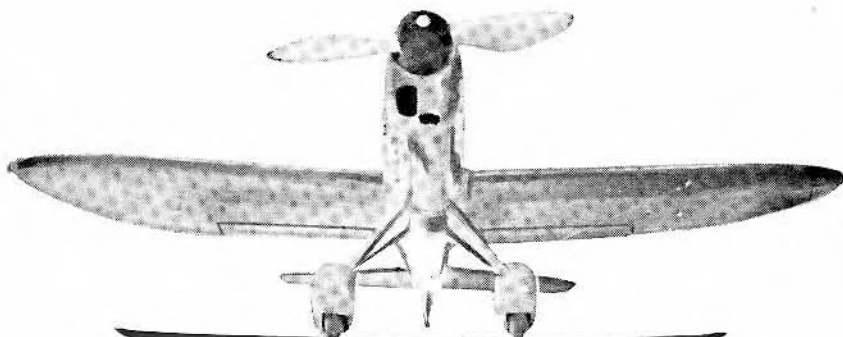
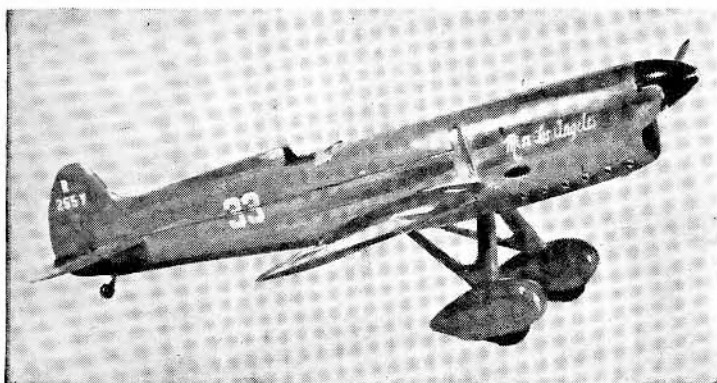


**BUILD  
THIS  
WINNER**

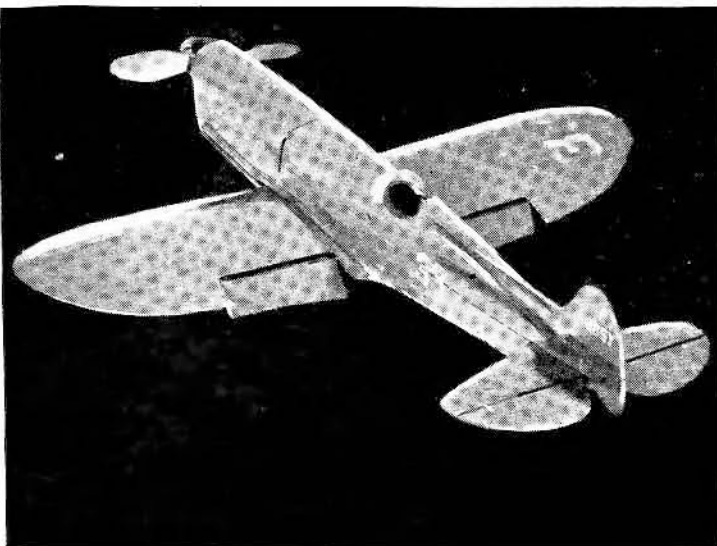
# Miss Los Angeles



by **GABRIEL BEDISH**



**An advanced design in 1934, this slick ship is still a modeler's favorite**



**D**ESIGNED by Lawrence W. Brown in 1934, *Miss Los Angeles*—one of the foremost in the ranks of immortal racing planes of pre-war days—was a challenge to the super-powered class of racers which dominated the events of that day by their brute speed.

Mr. Brown's protegy was an outstanding example of applied strategy and proved to be one of the most formidable contestants in racing competition for many succeeding years. This conception, though powered by a 300 hp Menasco *Buccaneer* as against the then conventional 1000 or more hp powerplants, gained her advantage through the use of lighter wing loading and cleaner design.

Possessed of a much higher degree of maneuverability than her competitors, the craft, with a top speed of only slightly over 270 mph, gained a decisive advantage on turns and other situations in which a high degree of maneuverability could be exercised to advantage. With this ability the craft could outstrip the field by twenty miles. Its general specifications were:

WING SPAN .....	19 ft. 3 in.
WING LOADING.....	21.65 lbs./sq. ft.
WING AREA .....	60 sq. ft.
TOTAL LENGTH.....	19 ft. 10 in.
POWER LOADING.....	4.33 lbs.
GROSS WEIGHT.....	1,299 lbs.

Landing flaps produced a low landing speed of 60 mph with flaps fully extended.

A great deal of time and effort were expended through the preparation of two model designs, the latter an improved version of the former and shown here. The inherent beauty of the model in itself is more than sufficient to tantalize the scale advocate, while performance will remove any skepticism which the hot-rod advocate may harbor. Fidelity to scale between the model and prototype was kept almost exact, the general proportions of aircraft of this type being ideally suited for control line work.

Operating landing flaps of a foolproof design, working in conjunction with the ignition timer, provide an accessory that greatly increases the thrill of flying *Miss Los Angeles*, as well as greatly simplifying the landing operation. Following the tripping of the third line, the flaps lower and a few seconds later the engine cuts.

A new type control system emphasizing a more gradual control and reducing the danger of overcontrolling was instituted with results of a superior nature. Its compact size is also an asset.

Wire bracing of the structure not only increases its beauty by producing a higher degree of scale effect but imparts such great strength to the model that it is almost indestructible. Bracing installation is purely up

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to the builder's discretion, however, the model having been designed with more than enough strength to get by well without it.

The first step in construction is to enlarge the plans. This operation requires pencils, eraser, ruler and, if possible, proportional dividers and draftsman's curves. Wrapping paper of store variety is a reliable surface on which to work.

**FUSELAGE.** It was desired to maintain simplicity of structure throughout while still incorporating a high degree of fidelity to scale, great strength and light-weight, as well as securing ease of operation and maintenance of the components. A vertical split cowling for the engine provides a smooth appearing yet readily accessible covering of the powerplant. Through use of slots at rear of the cowl high engine operating temperatures are prevented.

It will be noted that the engine is completely cowed, except for the operating mechanism and the necessary exhaust outlet. If you want to retain this feature, choose an engine that will fit the space available. We found that a sideport *Ohlsson 23* fitted in very nicely.

The top rear half of the fuselage is completely removable to permit ready access to the operating units. These in turn are as conveniently arranged as the weight factor allows.

Mark off the lengths between fuselage formers by measuring directly from the plans onto two hard balsa strips of equal size, which act as longerons.

First cement the rear of these together; then, working from rear to front, insert

the fuselage formers in their predetermined positions. Following their drying, attach the lower keel strip, wing fairing block with its plywood mounting ribs and the fuselage stringers. From tough, springy steel wire fashion the wire landing gear to shape, binding the connecting joints of the two legs with thin copper wire followed by solder. Install this in its illustrated position with thread binding and a generous amount of cement.

If the builder plans to install wire bracing on his model he should attach the wire studs with a wire and solder binding as shown.

At this time mount the rubber-tired wheels solidly between soldered washer retainers. The laminated sheet balsa wheel pants may now be formed and installed; then in a like manner position the strut fairings. A 1/64" break is maintained where the strut meets the fuselage to allow for future absorbing of landing shocks without splintering the fairings.

A weak point on many scale control line models today is the landing gear. Either it is structurally inadequate to meet the rigors of flight or it is so far from scale appearance that it is a liability to the model's beauty. Here we have tried to correct this defect and from all indications have succeeded.

From a solid medium-hard balsa block prepare the top fuselage cover using a try and fit method to secure a smooth fitting joint. The vertical fin is glued into place and the entire unit sanded smooth in preparation to covering.

The tail wheel fork is bent to shape and installed with thread and cement binding. The wheel is permanently affixed between two soldered washers.

Further construction on the fuselage should be halted here and resumed later, as the text will indicate.

**WING.** Medium-hard balsa will be used throughout this portion. First cut out the ribs and tip pieces from their respective sizes of sheet balsa. Working directly over the drawings, lay out the wing outlines and follow through by inserting the ribs. When thoroughly dried, remove the assembly from the plan and insert wing spars into their respective positions. Planking of leading edges with the proper material comes next.

The wing flaps themselves are carved from solid block balsa to the illustrated pattern and sanded smooth. Attach wing panels to the main fuselage structure by inserting the spars into the slots exposed in the stub ribs. After placing the required degree of dihedral in each panel, apply cement to the joining rib and spar. Use a thread binding on the spar and former joint to secure a strong mounting.

With plenty of cement, attach the three tubes for the control lines. Sandpaper these surfaces in preparation to covering them.

**EMPENNAGE ASSEMBLY.** Since the vertical fin has been previously constructed the only remaining portion of this component to be built up is the rudder. This is accomplished by fashioning it from sheet balsa and attaching it to the main fuselage structure.

The stabilizer is formed as a single piece; after it has been cut from sheet balsa it is cemented into place.

The elevator surfaces are also formed from sheet balsa and attached to the hardwood dowel joining piece. For further clarification of this, consult the drawings.

**CONTROL & IGNITION HOOKUPS.** At this time the elevator actuating connections should be installed. First install the roller and its base, fastening most solidly. Next comes the rod hook-up between roller and elevator. Thread stranded control line cable through one inlet in the wingtip, wrap and affix it to the roller assembly, then thread it back through the remaining inlet tube.

The gumwood motor mounts may now be installed as well as the ignition coil, battery box and ignition timer.

The simple wire arrangement for operating the wing flaps is then positioned. Reference may be made to the drawings for any assistance one may need in carrying this out. Adjust the wire guides to have the landing flaps fully lowered a few seconds before the timer breaks the ignition circuit. Thread fish line through to act as the timer pull line in much the same manner as that used in installing the control wire.

With sparing use of adhesive, spot-cement the fuselage top cover and the engine cowling in place. Finish with varying grades of sandpaper, from coarse to fine, and prepare the entire model for covering and finishing.

**COVERING, FINISHING & ASSEMBLY.** A fairly heavy mixture of clear dope and cement makes the ideal mixture for sticking the wet, heavyweight Silkspan to the structure. By use of the wet covering system a far more beautiful job will result.

All portions of the model are covered, not only to provide a smooth surface over the porous balsa but to increase the strength and resistance to splitting, abrasion, etc., that unshielded balsa has. After applying two coats of clear dope over the Silkspan surface, sand it smooth with fine granite paper.

Five thin coats of flaming red dope are next put over the entire model, brushing each coat crosswise to the previous one and sanding well between each coat. The entire trim of the model is done in gold and best applied through use of a gummed cellophane called "Zipatone," or through use of stencils. At this time a hand rubbed finish may be applied for those who are willing to expend a little extra effort. A very fine grain rubbing compound with a thin oil base, followed by several thin coatings of well worked polishing wax, will entirely change the whole appearance of the model.

If it is desired to have the wire wing bracing incorporated in your model, it should be attached at this time.

Install the engine and complete the ignition hookup. When you have attached the celluloid windshield the model is completed.

**FLYING.** The subject of control line flying has been covered to such an extent that all participating in it should be fairly well acquainted with the fundamental principles involved. It may be stated, however, that this model is by no means sluggish on control and has all the speed and maneuverability one would care to handle.

With a little smooth handling that comes with practice, your *Miss Los Angeles* will undoubtedly be one of the most interesting models at any competition event or flying congregation.