

# GOLDEN WINGS CLUB PAGES



Are you between 10 and 16 years of age? Then don't delay, join today

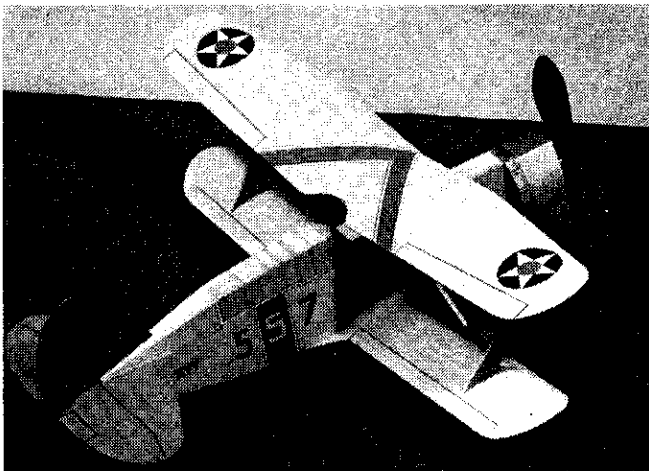
**Plans this month for a simple all-sheet model of a famous biplane, designed by Ray Malmström**

## Curtiss SBC-3

THE REAL CURTISS SBC-3, in service with American carrier-based squadrons around 1936 was a compact colourful biplane and was described in September '68 issue by George Cox. This easy-to-build, all-sheet model follows in the gay, fast-flying aerial footsteps of its big brother. Spend a couple of evenings building this little job and brighten up the sky over your favourite flying field.

The colour scheme is shown on the plan. It is advisable to colour all parts before assembly. A word of warning. Avoid using enamels or coloured dopes. The new way of colouring sheet balsa, pioneered by the writer uses oil pastels (oil colours in stick form). Obtainable in boxes at any art shop. Apply the pastel to the balsa sheet and then spread evenly with a soft rag. That's all! Quick, colourful – and *no* added weight! Use Sellotape masking for sharp clear edges. Avoid applying oil pastels to parts that are to be cemented.

Construction is not difficult if you follow these notes, the plan and sketches. Care and accuracy will ensure your Curtiss SBC-3 looks – and flies as well. Use *medium* (NOT hard) grade balsa sheet. Cut two fuselage sides, add 1/16 in. sq. strips and nosepieces, drill 1/16 in. dia. hole, reinforce with 1/32 in. sheet for rear motor peg. Join sides with 1/16 in. sq. pieces. Cement in pieces Y for wing mounts and W for undercarriage assembly. Add top and bottom 1/32 in. sheet covering pieces, but not piece



Almost the last of the great biplanes of the United States Navy, the SBC-3 also 'joined' the Royal Air Force and was called the 'Cleveland'. It makes a most attractive subject, even for the simplified techniques used for this 13 in. wingspan all sheet balsa flyer.

Dear John Bridge,

I am between 10 & 16 years of age and would like to become a member of the "Golden Wings Club". With this application I enclose postal order (International Money Order) for 2/6d. to cover cost of the enamel club badge, two coloured transfers and membership card.

NAME IN FULL .....

ADDRESS .....

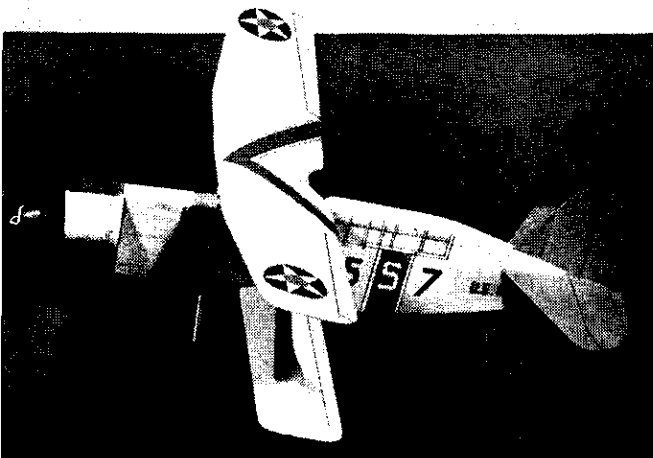
YEAR OF BIRTH ..... SCHOOL .....

NAME OF ANY OTHER CLUB OR CLUBS TO WHICH I BELONG (if any) .....

SEND TO: GOLDEN WINGS CLUB, AEROMODELLER, 13-35, BRIDGE STREET, HEMEL HEMPSTEAD, HERTS

### How to Join . . .

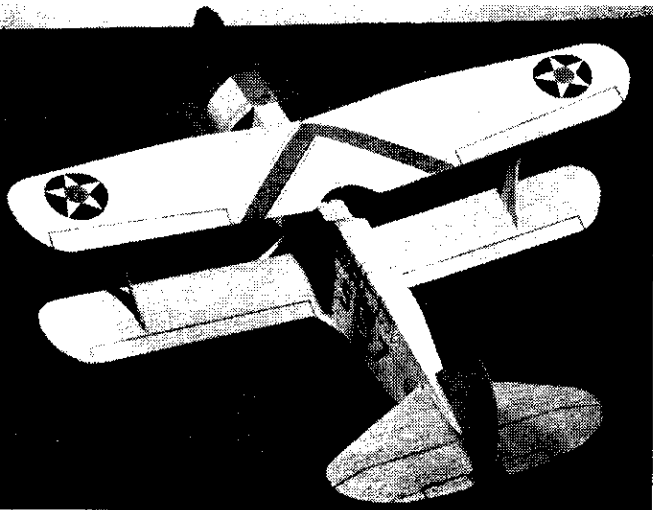
To join, fill in the handy membership coupon and send with a postal order/money order or cheque to the value of 2/6d. made payable to 'Aero Modeller'. Post to Golden Wings Club, Aero Modeller, 13-35 Bridge Street, Hemel Hempstead, Herts. Each member will receive his own badge – depicting 'Golden Wings', a membership card, and two transfers to decorate his model or model box, and will make him a member of the largest modelling club of all time. **John Bridge**



Colourful (see text for teacher Ray's handy hints on a new method of glamorising sheet balsa) and purposeful with its tapered top wing and rearward cabin for the crew, the prototype 'Helldiver' stands ready for a flip round the park.

A at this stage. (The long piece from nose to cabin, drawn separately at top of plan). Cut out tailplane, noting 1/16 in. sq. strips and cement in position, followed by fin. Check for correct alignment. Add 1/16 in. sheet tailwheel. Make noseblock from 1/4 in. sheet. Note cut-out in the spigot which forms the rear part of the nose-block. This is a weight recess to help balance your Curtiss SBC-3. Drill the nose-block to take a 20 s.w.g. brass bush. Before inserting the bush, cement 1/32 in. plywood pieces at front and rear of nose-block. These ply pieces hold the bush firmly in position. Form a hook on one end of 2 1/2 in. length of 20 s.w.g. wire. Mount on to this shaft a KeilKraft plastic propeller (from your model shop) that has been cut as shown on plan to 4 1/2 in. dia.; then two small cup washers, the nose-block, finally forming the rubber motor hook. Bend undercarriage wire to shape and cement to 1/16 piece V. Hold firm with two

Large tail surfaces and useful area in the two wings give the SBC-3 a light wing loading (unless you select heavy grade wood) and make 350 ft. flights an easy target, even for the rawest novice. We fancy that the structure and size will also attract the more expert modellers to make indoor round-the-pole Cox .010 or electric power variations.



layers of tissue doped on. Make the wheels from 1/4 in. sheet and retain on axles with close fitting valve tubing or a blob of cement. Undercarriage is a push-fit between pieces W. Model may be flown with or without U/C. Add cowling pieces. Cut upper and lower wing panels (separate halves for each) from 1/32 in. sheet. Ribs are all 1/16 in. sheet. Mark the position of the ribs on the underside of all wing panels. Cement ribs in position holding the sheet to the ribs with modelling pins carefully inserted. Please note that all wing root ribs are angled for dihedral. Use the root-rib template Z as shown in the sketch. Check that panels are free from warps. Holding for a few moments in the steam from a kettle, removing and holding for another minute or so in the correct position will remove any warps that may have crept in during wing construction. Cement wing panels together and check for equal dihedral on both sides. Bend the front and rear top wing mounts from 22 s.w.g. wire. Form these accurately over the plan, otherwise when you come to mount the top wing on them you will be in difficulties. Cement piece V to the wing mounts and hold with layers of tissue as for the U/C. Cement the completed wing mount assemblies between pieces Y on top of fuselage (see sketch). Add front fuselage top piece (A).

The top wing is held to the wing mounts with two layers of tissue paper doped on. The bottom wing is cemented into the cut-out on the bottom of the fuselage. Check at all stages for correct alignment of upper and lower wings. Add fillets to lower wing roots. Use thin notepaper for wing mounts struts and U/C legs. Cut two interplane struts from 1/16 in. sheet, sand edges round and cement between wings as shown. Check for accurate fit before finally cementing struts.

Make up a 9 in. loop of 3/16 in. flat strip, lubricate (Humbrol rubber lubricant, Is. tube from your model stockist) and install in model. This is a test motor and with it in position you can balance your model correctly. Suspend the model from a length of thread and a pin pushed into the top wing centre rib at the position shown on the plan (*balance point*). The model **MUST** hang level. You will most likely need a small piece of lead or folded empty cement tube cemented into the noseweight recess on the rear of the nose-block. Correct balance is all-important for good flying, so *please don't skip it!*

## Flying

Test glide on a calm day over long grass. Get a good straight shallow glide (from a shoulder-high launch your Curtiss SBC-3 should land about 20 ft. in front of you). When glide is O.K. cement a small length of 1/16 in. sq. strip down the *left* hand side of the front of the fuselage (model viewed from rear). You can now try a power test-hop. The 9 in. test motor is good for 200 hand turns approx. This will give you a short flight to see if all is well. Your Curtiss should fly steadily away from your hand touching down a hundred yards or so ahead. Have with you the flight motor. This is a loop, 16 in. long, of well-lubricated 3/16 in. flat strip rubber. Install this if your test-hops are O.K. Remember to correct any turning tendency by *gently* warping the rear of the fin in the opposite direction to the turn. Climb is controlled by warping the rear of the tailplane, *up* for more climb, *down* for less. Wind the flight motor with a geared winder, stretching the rubber out as you put on turns. Increase the number of winder-turns with each successful flight. Maximum turns on the 16 in. loop is around 200-220 with a winder geared 3 1/2:1.

All the best to you with this colourful, fast-flying little Curtiss SBC-3!