



The model in full dress. WW II invasion stripes and the AAF stars are easily applied decorations which provide a colorful craft. Airline markings can be substituted if desired

Build Your Own DOUGLAS C-47

By WALTER A. MUSCIANO

World's Most Famous Plane

No other airplane has ever made more flights, carried more people or lasted so long as the world-famous and never-to-be-forgotten Douglas DC-3, or military C-47. When President Eisenhower named the four weapons that, in his opinion, won World War II, the C-47 was among them.

Developed from the earlier and smaller DC-2, in 1935, the DC-3 was handling 93 percent of all the world's air travel by 1939. The commercial DC-3 is credited with bringing standardization to the airlines which accounted for much of the growth of air transportation. C. R. Smith, president of American Airlines, claims that the DC-3 was the first airplane to be able to make money just by hauling passengers.

The 10,691 commercial and military versions built varied in weight from 23,624 lbs. to 34,162 lbs., in speed from 206 mph to 230 mph, and in power from a total of 1,800 hp to 2,400 hp. Operating best at levels between 10,000 and 14,000 feet, this "work

horse" could easily climb to 20,000 feet.

With the advent of WW II the DC-3 was given many military duties. It hauled gliders and carried paratroopers over every front, it dropped food and ammunition to surrounded troops, it ferried supplies to the various battlefronts. Carrying important military personnel as well as U.S.O. entertainers and mail were among this plane's varied duties.

The DC-3 bore numerous military designations. Christened the R4D by the Navy and Marines, the DC-3 was called C-41a, C-47A to D, C-48 to C-48C, C-49 to C-49K, C-50 to C-50D, C-51, C-52 to C-52C, C-53 to C-53D, and C-117A by the A.A.F. and the Air Force. Those aircraft fitted for paratroopers were called "Skytroopers."

Before we describe our 1/2 in. to 1 ft. scale control line model of this famous plane we would like to thank "Red" Rehfield and Don Black of Douglas Aircraft Company for their kind cooperation that made this model possible.

Any two engines of from .14 to .23 cubic inch displacement can be successfully installed in our model C-47. These powerplants can be installed inverted, upright or in pancake fashion, either beam or bulkhead mounted. We used O.K. Cub .19 engines and these powered the model in a most realistic manner. When either engine stops the craft does not drop sharply but can actually sustain flight if it is "led" slightly by the flyer.

Despite the four-foot wingspan the model does not appear cumbersome and therefore we felt it was not necessary to install removable wings, etc.

This craft is no harder to construct than the conventional single-engine scale control liner. The first item to make is the center section of the wing. Trace the ribs onto the sheet balsa and cut them to shape with a single-edge razor blade. Now, cut the spars to the correct size. The center section covering should be cut to shape from sheet balsa. It will be necessary to butt-join at least three sheets of balsa to form the correct wing chord. Cement the two spars to the lower covering, followed by the ribs. Do not neglect to allow a space for the outer wing spar stubs which slide in place later. The covering is held to the spars and ribs with straight pins until the cement is dry.

Bend the 1/8" landing gear to shape with pliers. Each main gear is bent in one piece. The ends meet in the wheel hub. Install the wheel and then bend the 1/16" wire strut in the shape of a fork and bind and solder it to the main gear. The landing gear is attached to the center section by means of a plywood sandwich. Note that these plywood pieces are

not of the same width because of the lower camber of the wing.

Cement the main landing gear strut between the plywood and clamp together until dry. Cement this assembly firmly to the lower covering and forward spar. Plenty of the adhesive should be used in order to insure a secure installation. It will be found that it is necessary to cut two 1/8" wide notches in the covering in order to allow the landing gear strut to fit in its proper location. The auxiliary 1/16" strut should not be firmly attached to the wing but should merely pierce the lower covering in order to be able to move when the main gear flexes during take-offs and landings.

While the landing gear installation is drying thoroughly, the upper covering should be prepared. Bevel the leading and trailing edges of the lower covering so as to fair with the rib upper camber. Cement the covering to the front spar, holding in place with pins. Apply plenty of cement to the ribs, spar and bevel on the after end of the center section and cement the covering to it, again holding in place with pins until dry. Repeat this for the forward portion of the center section.

Trace and cut the keel and formers to shape from sheet balsa and firmly cement the keel to the exact center of the center section. When cutting the keel make certain that the notches for the stabilizer, wing and bellcrank are cut out as shown. The first two must be done very accurately in view of the fact that the wing and tail angles of incidence depend on these cut-outs. Cement the fuselage formers to the keel at this time.



WORLD'S MOST FAMOUS PLANE



With ballast replacing engines, Douglas craft became the CG-17, a troop carrying glider for towing by another C-47. Test pilots declared it one of the most stable gliders!



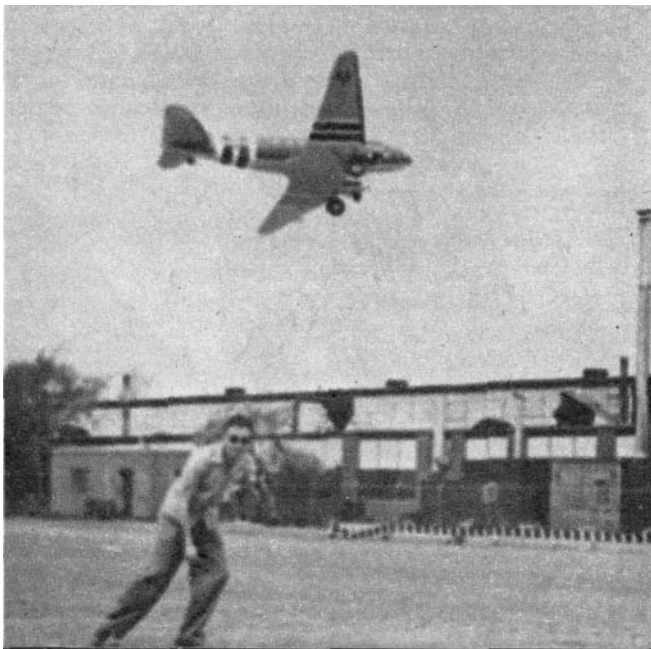
Later C-47's delivered to Air Force were recognizable by unpainted surfaces. This is an Air Transport Command craft that was succeeded by the present well known MATS.

The stabilizer should now be constructed. After all of the ribs and the spar have been cut out, the ribs are cemented to the spar. While this is drying, the covering should be cut to shape. First cement both the upper and lower covering to the spar. This is followed by cementing the coverings, one at a time, to the ribs and to each other at the leading edge. Bevel the spar as shown to facilitate the elevator movement.

Solid sheet balsa is used for the elevator halves. After these are cut to outline shape

with a coping saw, they should be carved and sanded to a streamline shape. Now, carefully cut a groove into the leading portion of the elevators to accommodate the dowel joiner. This joiner must be cemented to the elevators very securely, since much depends upon it. When thoroughly dry, firmly fasten the commercial control horn to the dowel joiner. Join the elevator assembly to the stabilizer by means of cloth or other hinges.

Complete construction details are available on the full-size plans.



President Eisenhower listed the C-47 as one of the four major weapons of WW II! Walt's control line scale model is one you will want to add to your fleet. Now's the time to start work.

Fitted with special doors and jumping equipment, the Douglas became C-53 paratrooper transport of the Army's air arm (below). Painted surfaces and insignia design mark this as early job.

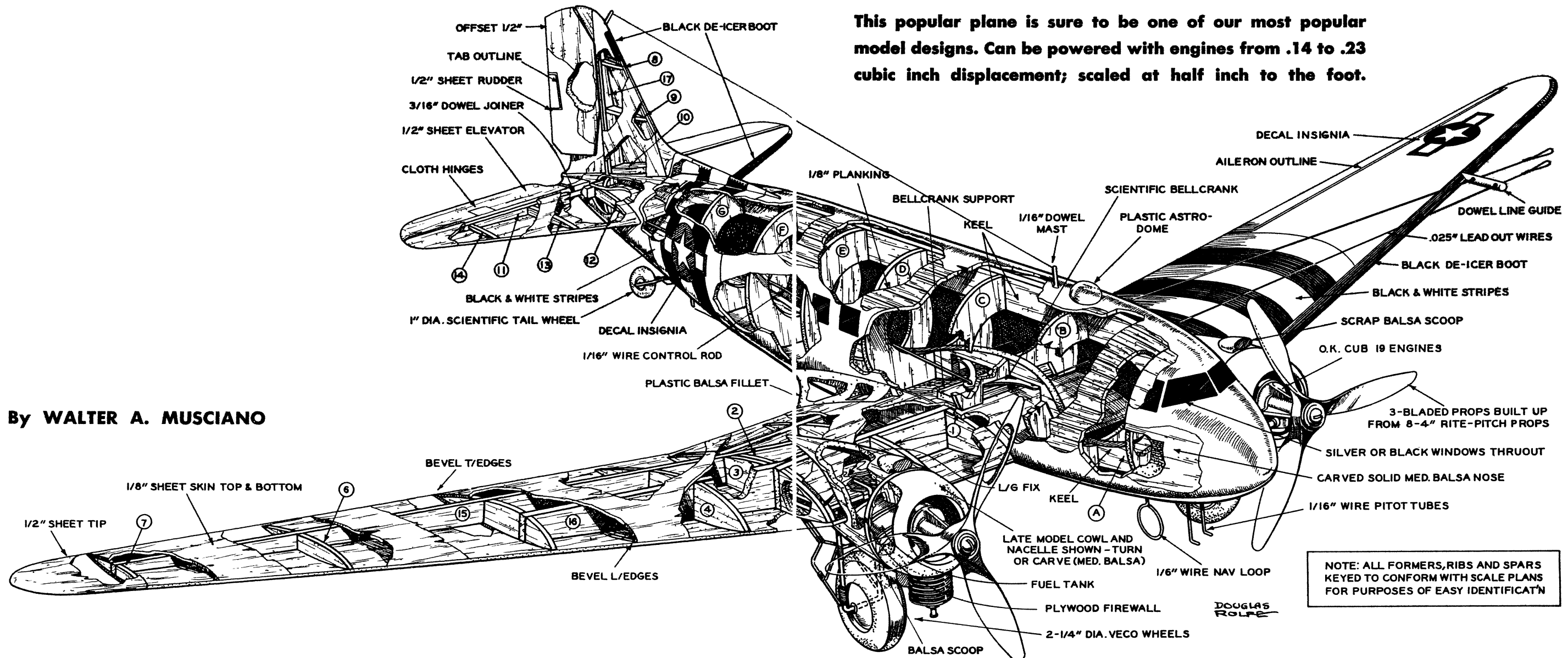


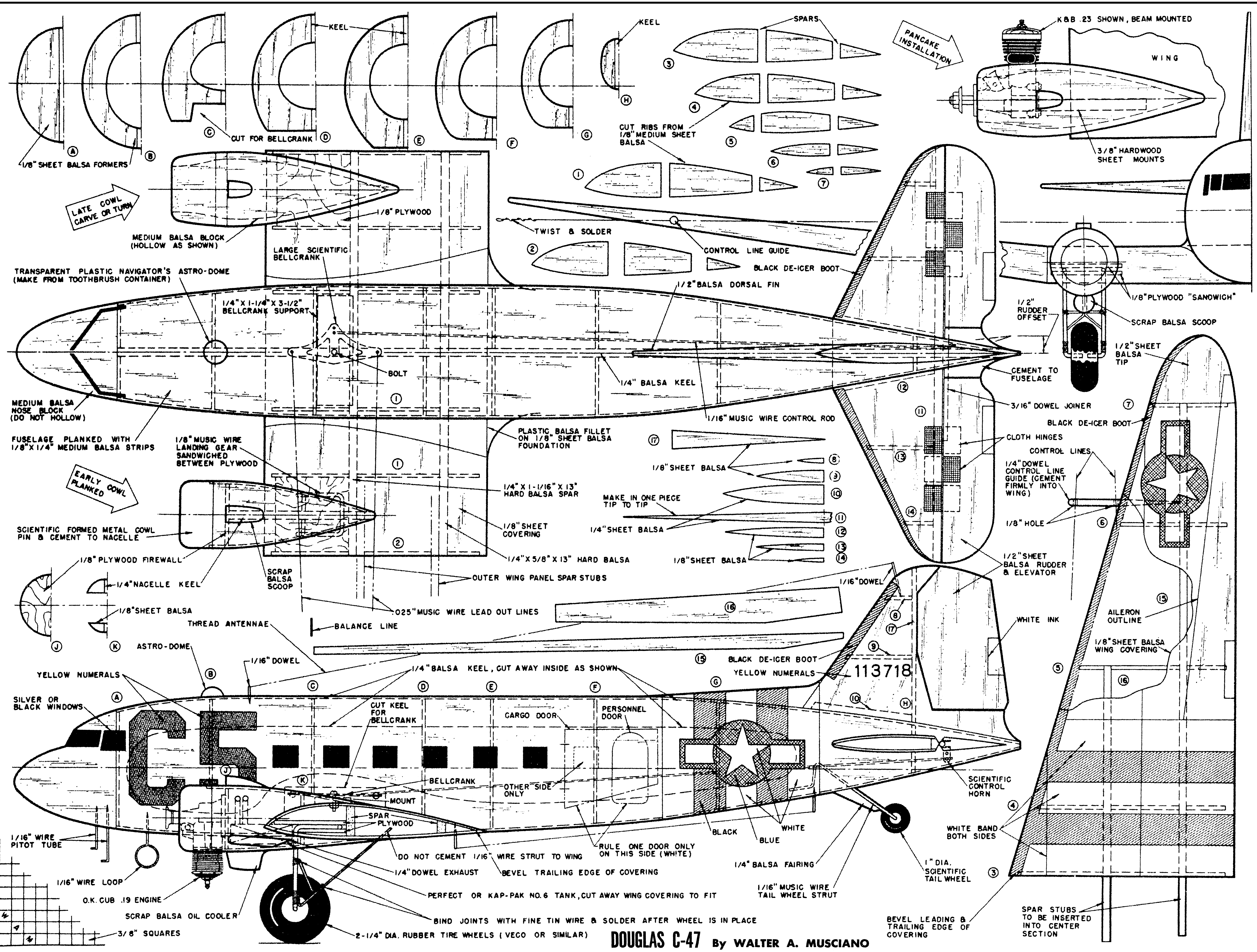
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Air Trails HOBBIES FOR YOUNG MEN

DECEMBER 1954

This popular plane is sure to be one of our most popular model designs. Can be powered with engines from .14 to .23 cubic inch displacement; scaled at half inch to the foot.





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