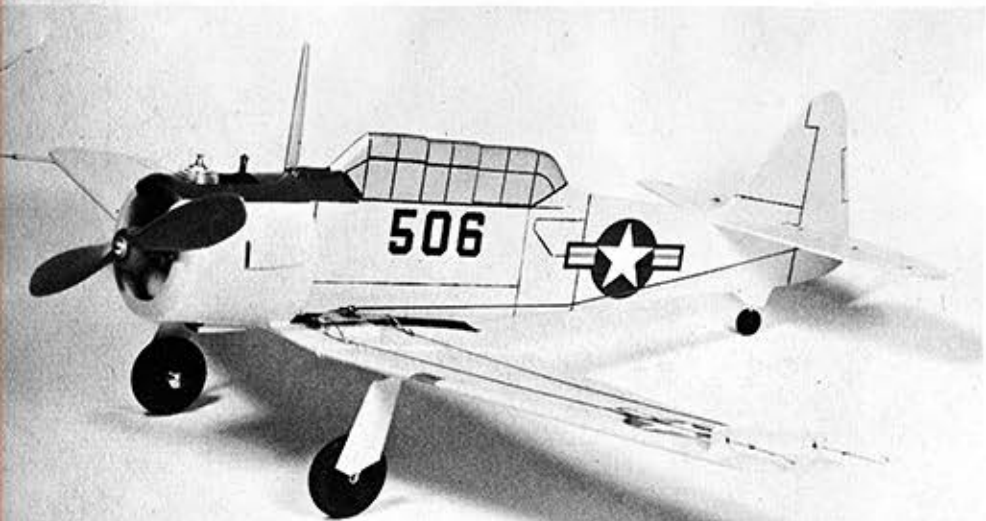




Pretty is not the best way to describe any model, but in its yellow finish and scale trim it really is.

FAMOUS IS CORRECTLY USED FOR OUR CONTROL LINER—THE SNJ. KNOWN BY MANY DESIGNATIONS, THIS NORTH AMERICAN TRAINER PRODUCED IN GREATER NUMBERS THAN ANY OTHER SINGLE AIRCRAFT, ALSO PRODUCED MORE PILOTS.



Even with bellcrank, leadouts and pushrod mounted externally, it still is a good scale job.

Designed for quick building, the SNJ is an excellent beginner model for the new scale enthusiast.



# famous profiles

by  
Paul  
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► The SNJ basic trainer of World War II fame is the Navy counterpart of the Air Force's famed "Texan". Both, of course, were manufactured by North American, and many thousands saw service.

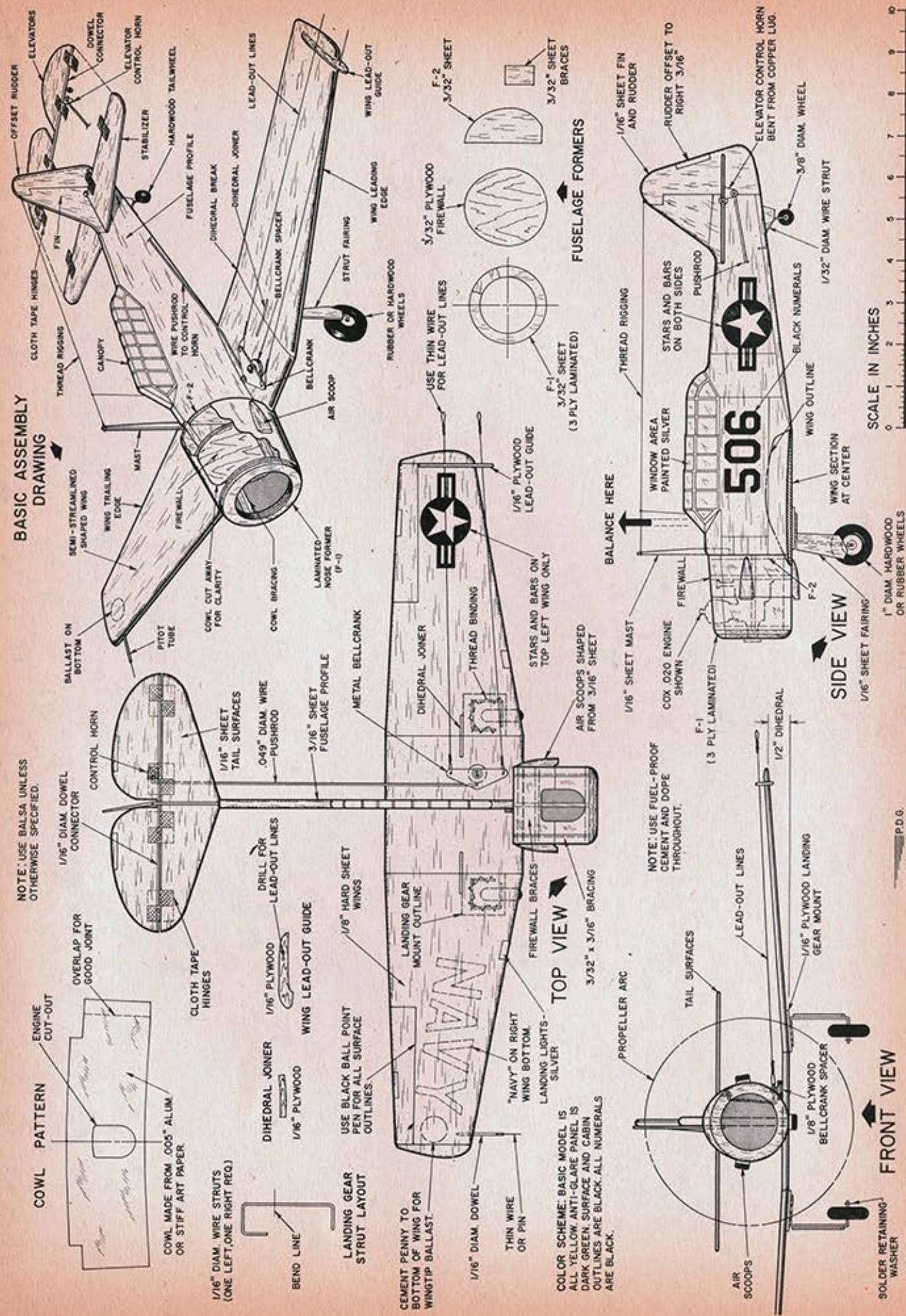
In the Korean conflict these airplanes did such a tremendous job in the low level reconnaissance that they were nicknamed "Mosquitos". Actually, these were remanufactured and modernized versions of the SNJ. Given the more powerful Pratt and Whitney R-1340 engine, top speed was increased to 212 mph and service ceiling to 24,750 feet.

Most distinctive features of the SNJ, or Texan, were the swept-back outer wing panels, distinctive fin-and-rudder shape, widespread landing gear legs, and the tandem cockpit canopy. All these features are effectively pointed up in this realistic "profile" model powered by the Cox .02 engine.

Don't underestimate the performance of our SNJ with this powerplant. It has power to spare for snappy take-offs, good speed and maneuverability. Our SNJ will not "sag" on the downwind side of the circle and it is fast enough to maintain good line pull so essential to adequate control.

**CONSTRUCTION:** A good job begins with careful selection of the balsa wood. Although the fuselage requires hard balsa, the model will be plenty light provided that the wood is selected according to the notes on the plan. And just a word of warning about painting. Everybody likes to color dope their models but do not overdo it—follow instructions—and your ship will not take on extra weight which decreases its performance potential.

**FUSELAGE:** Study the cowl sketch and assembly illustration before you begin work. (Continued on page 51)



## Famous Profiles

(Continued from page 28)

Note that the profile proper begins at the firewall (section B). After drawing the profile on the 3/16" balsa sheet, cut out the fuselage with a balsa knife using a straight edge for a guide. Make light cuts and repeat as necessary—don't try to make it in one heavy cut. Note how the profile is notched to provide a platform for cementing both wing and stabilizer.

**TAIL SURFACES:** Trace the outlines of both vertical and horizontal tail surfaces on your 1/16" thick sheet balsa and carefully cut to outline. Note that both elevators are joined at the center by means of a 1/16" dia. dowel, to which they are cemented. Sand the finished surfaces, then attach the elevators to the stabilizer by means of cloth tape hinges (see assembly drawing).

The stabilizer cements to the fuselage top before the fin-and-rudder are cemented in place. Note how the fin is cut out so that the elevator dowel can turn freely. Sand round the edges of all tail surfaces. Score and crack the rudder—see top view—and cement the crack after bending the rudder 3/16" off-center to the right. This offset helps keep the model out at the end of the lines when being flown. Cement the fin on top of the stabilizer and be sure that these surfaces line up accurately before the glue dries.

**WING:** Outline the wing shape on your 1/8" sheet balsa then cut out with balsa knife and straight edge. With a large sanding block or sanding board, shape the top surface to get the cross section seen on the side view. Sand the wing with fine paper and round off the leading edge and the wing tips (see front view).

To be true scale, the wing must have dihedral—the amount is shown on the front view. To incorporate this dihedral, the wing is cut into three sections (see the dihedral-break lines just inboard of the landing gear on the top view). The mating edges of the outer panels—where they meet the center section—are slightly beveled so that the correct dihedral results when the parts are re-assembled.

To do this, pin the center section on the board over wax paper, then cement and block up to the required angle, both outer panels. It is wise to double-cement these mating edges. Cement the wood once, let dry, then put more cement on when you put the parts together.

When the work is dry the landing gear and bellcrank assemblies can be attached.

**LANDING GEAR:** Note the front view pattern of the wire, then see how it looks on the top view. After shaping the .049 music wire pieces, bend one forward and the other backward at the "bend line" given with the pattern. Each gear piece is then tied to the 1/16" plywood mount, which is cemented to the wing after completion. Use thread or soft copper wire. It may be necessary to cut out some wood to allow the wire to fit flush against the bottom of the wing. To retain the wheels on the axles wrap the axle ends with some turns of thread and cement the thread, or just add a drop of solder on the end.

Mount the bellcrank as seen on the top view, with its 1/16" thick plywood support which is on the bottom of the wing; be sure the bellcrank swivels freely.

**ASSEMBLY DETAILS:** Shape the three air scoop blocks from soft balsa scraps. Bend the 1/32" wire tail wheel axle, mount the wheel, then attach the wire to the fuselage, sticking the sharp end into wood about 1/4 inch. Note the 1/32" sheet tail-wheel axle fairing. Cut out but do not attach the 1/32" landing gear cover pieces (see side view). Mount the engine; being careful when threading the bolts into the blind nuts that the nuts are not forced out of place. Engage the nuts lightly until the bolt thread picks up and turn the bolt without pushing it too hard.

**FINISHING:** Give all surfaces two coats of clear dope. When dry lightly sand the wood areas, then follow with two thin coats of colored dope. However, before using colored dope study the color scheme. The ship is an over-all bright yellow. The canopy is painted silver, the "anti-glare" panel in front of the canopy is dark green. After putting on the yellow, use masking tape to get sharp edges for the remaining colored area. Decals for the insignia can be purchased at the hobby shop. Letters can be cut from black decal sheet. All control surfaces can be outlined by a black ball-point pen.

Cut out the line guide, make the holes for the leadouts. Paint the guide, the air scoops and the pitot tube before cementing them in position. Having painted the landing gear covers, cement them to the wire struts.

Bend and install the pushrod, making sure the bellcrank is exactly parallel to the fuselage side when the elevators are in neutral. Bend the pushrod while it is off the airplane, then slip it into place. Vary the elevator control horn position slightly to adjust for the correct distance between bellcrank and horn. Use masking tape to hold the horn temporarily until its location is determined, then cement it in place.

The lead-outs are light music wire or Dacron control line thread just tied through the bellcrank holes. Do not fly with more than 35-foot lines; 30 is best for all-round conditions. Although it is not advisable to fly in the wind, use 25-foot lines for windy weather operation. Never fly in a strong wind with so small a model.

For best results the model should balance at the leading edge but never further back than the front bellcrank hole. Add some solder inside the cowl if needed to achieve proper balance.

Don't try to hand launch a model this small. Always let it takeoff. If any wind is blowing, take off directly down wind. When the model comes into the wind, avoid climbing. Make all climbs going into the downwind side of the circle. Climbing high into the wind means that the lines may go slack and you will lose control.

If you have not flown control-line before make your first control movements by

raising the arm for climb, and lowering it for descent. The change in position of your hand while it holds the handle, automatically tilts the handle for moderate control.

### BILL OF MATERIAL

- (Balsa unless otherwise specified)
- (1) 1/16" x 3" x 12" (med.)  
Tail surfaces and wheel fairings
  - (1) 3/32" x 2" x 12" (med.)  
Fuselage formers, fuselage braces
  - (1) 1/8" x 3" x 24" (hard)  
Wing
  - (1) 3/16" x 3" x 12" (med.)  
Fuselage profile, air scoops
  - (1) 1/16" diam. dowel (8" length)  
Elevator connector and pitot tube
  - 3/32" plywood firewall; 1/16" plywood landing gear and bellcrank mounts; .049" diam. wire pushrod; 1/16" diam. wire struts; cloth tape hinges; thread for binding; stiff art paper for cowl; 1" diam. hardwood or rubber wheels; nut, bolt and washers; bellcrank; elevator control horn; .020 engine; fuel-proof clear and colored dopes; fuel-proof cement; 1/8" x 3/16" for cowl braces; fuel-proof decals