



# SIMPLE

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■ Most control-line events nowadays are flown on 2 lines in a counter-clockwise direction. Did you ever try to find a trainer for this? There is one of course, but most have to be modified in some manner. Makes it a little rough on a beginner who is completely green about everything including the engine, tank and basic truths about yo-yo operation. Anyhow we decided to try one. The result was Simple Simone (she's a lady), one of the smartest li'l ole planes you'll ever meet.

Flown with a 19 engine it feels like an airplane, while not tearing around like a rocket powered bat. Speed isn't much over 45 per. Knows where the circle is and stays there, but won't break your arm. Takes off by itself and is steady enough for wheel rolling and handkerchief pickups. Excellent for balloon-busting, and it's cheap. Designed for the 19, it will handle a 35 with a thicker fuselage, although then it goes like a bat.

We just finished flying it with a new Fox 15 in a 20 mph wind, and it flew like a veteran. Of course this engine really puts out for its size. Both of my ships have been piled in many times with no significant damage . . . due largely to the fairly slow speed. A 35 would probably break it up if piled in 'cause that way it will turn over 70. We use 60 foot .012 dia. lines for everything which gives you a fairly slow revolution and very little dizziness.

Most fascinating aspect is that Roberts Throttle installation. We used the bellcrank, handle and three .010 dia. cables, coupled to Bob Smurthwaite's Vari-Speed throttle. (If you send him your engine and 4 bucks at 2460 Clark St., Baker, Oregon, he'll fix you up right—it isn't a home job unless you have proper equipment and a few years experience at machine operation.)

## CONTROL LINE TRAINER

By BILL NETZEBAND

With Bob's throttle, the flight patterns are infinite. For instance, it will slow-fly under 20 mph, land, stop, and take-off at your whim. The ship has no bad habits under any conditions of rpm or acceleration. It simply responds to a boot by speeding up smoothly. No wild climbs or dives from a misplaced thrust line.

Simone is simple to build and built to last. Makes an excellent club trainer; our throttle job has logged over 200 flights with 1500 landings and take-offs, and appears ready for 200 more. The youngsters put in as much as 2 hours a day without shutting the engine off. They even let ME fly it every now and then. So shall we cut wood?

Carefully trace the outline of the nose section on  $\frac{1}{2}$ " Fir Plywood. Cut out for engine to suit the one you've got. Mark the tank saddle holes, throttle slot and gear mounting holes. Do likewise for rear fuselage on  $\frac{1}{2}$ " x 4" medium balsa. Extreme accuracy is necessary on the surfaces to be glued together since they determine the wing incidence and angles. Do the job on a jig or band saw if at all possible. Check that they mate properly then sand rounded edges. Set these aside for a while.

Carve the wing as shown on plans. A model maker's plane is excellent for this. Try to shape as closely to plan as possible (make a template on cardboard to check with). The tips are shaped up from the bottom. Locate and cut the  $\frac{1}{2}$ " x  $\frac{3}{8}$ " notches at wing center and carve groove to fit plywood nose piece. Be certain these

are square with the leading edge. Groove out underside for the bellcrank platform; make another groove for the wing tip guide. Might as well make the guide now. Drill 2 or 3 holes depending on which type control system you've decided on. Cut out and drill your bellcrank platform and glue nuts on the back side of it to provide for blind mounting. Glue this platform into wing. Sand wing smooth and set aside temporarily.

The elevator and fin are shaped from  $\frac{1}{8}$ " medium balsa. Sand to streamline section and assemble elevator to stab with at least ten 1" wide tape hinges. After all these pieces are sanded and ready for assembly wipe a coat of cement on each of the mating surfaces, fuselage, wing, elevator and fin. We use Elmers Glue-All or other white glue for the fuselage splice and wing joints. Do not use one of the extra fast cements for this. Allow these pre-coated joints to "set up." You can bend the tailskid as shown and stick it into the rear end while waiting. Broken your engine in yet?

After all the shaping, assembly is sort of anti-climax. Glue the wing into the notch in the rear fuselage, then glue the nose fuselage into its notch. Press them firmly together and if you cut your notches properly the ballgame is won. Check it with a square to be sure, tho. Glue the elevator into its slot and pin the fin on top. Glue on the wing fillets and bingo!! Thar she is.

Locate and drill the engine bolt holes and landing gear holes. Or install the wire landing gear. If using wire gear drop it into the notch on top of fuselage and wrap the base together firmly with soft wire. Drive two screws behind the gear in lower portion of fuselage to brace against landing pressures. If using Fire Cat gear follow instructions in package. The holes are already on the plan. With