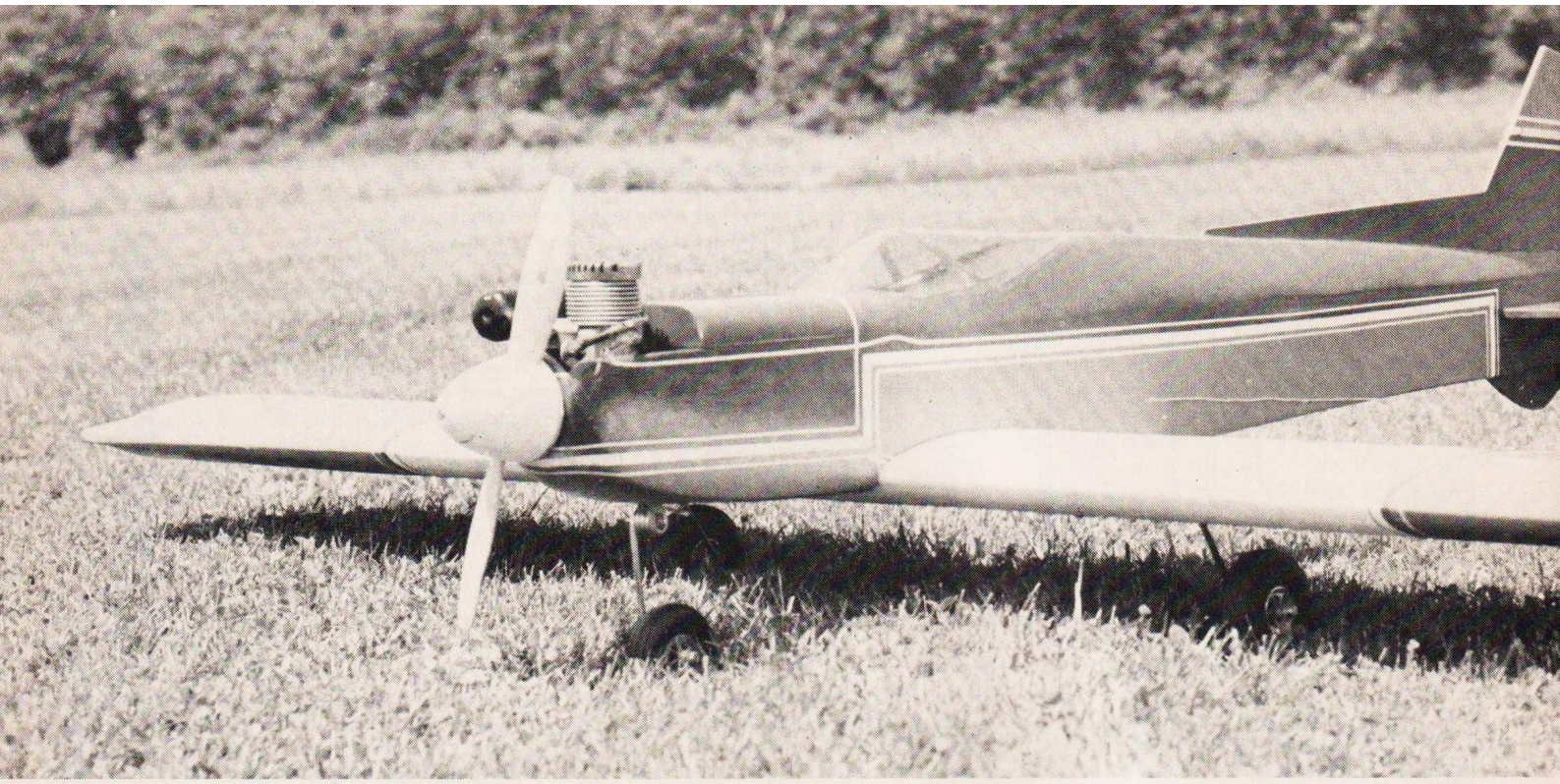


**An FM Product Review:**

# Sterling's SL-62 "Lancer"

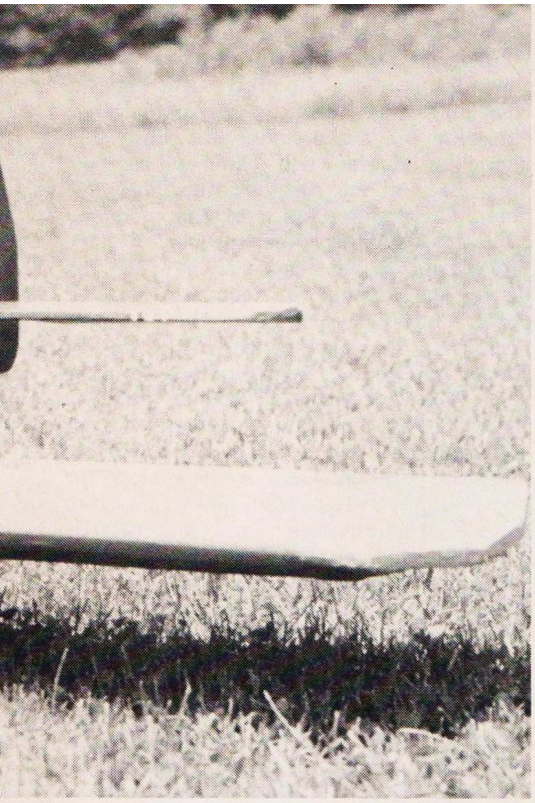
**by Frank Tiano**

**Conventional and well designed, the "Lancer" is capable of getting you into Pattern competition when you're ready.**

Ever since I was a little boy, I was always intrigued by the pretty pictures on the Sterling Models kit boxes. It seemed, however, that I could never make the finished stick model appear anything like the box art. After a few tries I gave up that type of model and progressed to other, simpler types. As I grew older, the intrigue returned, and I built a successful squadron of Sterling scale models—all rubber powered—that did look a great deal like the picture on the box, probably because my building skill had increased. Alas, they never flew that well unless great pains were taken to keep them extremely light. Later on I constructed a few control line models by the same company and always found them to be fine performing aircraft, but ones that required a lot more building than most models in their class—although the end result was usually well worth the extra effort. Its been a long time since I've tried a Sterling kit, so when the opportunity came to do a test on one, I readily accepted. I chose the "Lancer SL-62", a .60-sized version of Sterling's very popular .40-size "Lancer." The kit number is FS30 and retails for a nominal $44.95. The "Lancer" has a 62" wingspan with 700 sq. inches of area. The overall length is 50", and all-up weight should be between 6¼-7 lbs. Even though it's intended for .60 engines, I really believe a good .45-.50 engine would handle it with ease. Sterling bills the SL-62 as a "contest-caliber sport flyer," and that's exactly what it is. After extensive testing, I would have to say that it may not be a competitive airplane for D-Expert Pattern, but it should be very competitive in the novice pattern classed. The design is a result of two years of design and testing to meet the "if they had only made it this way" suggestions directly from the RC flyers in the field.

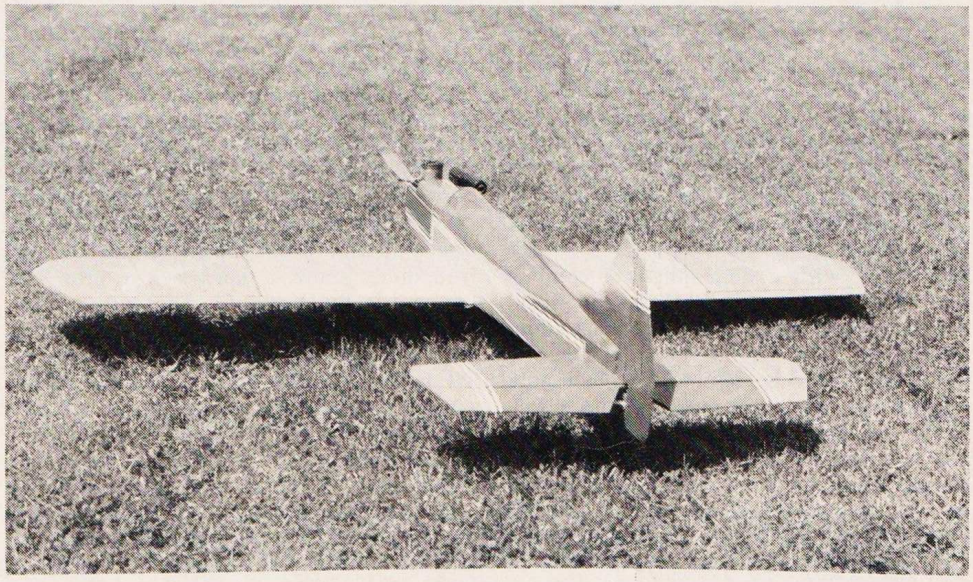
Removing the lid from the kit box will reveal Prime grade, density-selected balsa sanded to micrometer tolerances, imported Birch plywood, five accurately diecut balsa and plywood bulkheads, pre-shaped nose and cowl blocks, one-piece full-length fuselage sides with plywood doublers that extend past the wing saddle for additional strength, custom aluminum motor mounts, formed landing gear wires, and a complete hardware bag. All wing and stab ribs are cleanly die-cut. The plans are very easy to follow and are as complete and as accurate as anyone could ask for. The building instructions are printed directly on the plans.

Even though the "Lancer SL-62" may not be a beginners model, anyone with a bit of building experience should have no difficulty in assembling it. The fuselage features typical box-type construction with plywood doublers and top and bottom stringers. The fin, rudder and elevators are sheet balsa, while the stab is built up and sheet covered to keep it permanently flat. The wing is also built up, and the leading and trailing edges are covered with sheet balsa along with the center section. The wingtips are a bit unique as they are made up of laminated balsa pieces and are then locked into the last wing rib and the leading edge. For top performance, the wing is constructed flat on the workbench with the aid of breakaway feet attached to the wing ribs to insure perfect alignment. For strength, each wing panel has a hard ¼" square balsa top and bottom spar with a 22½" long, x¾" main (center) spar. The wing has no dihedral, and the center section, although strongly built, should be covered with a piece of 3" wide fiberglass cloth. The ailerons are preshaped and installed with the torque rods provided.



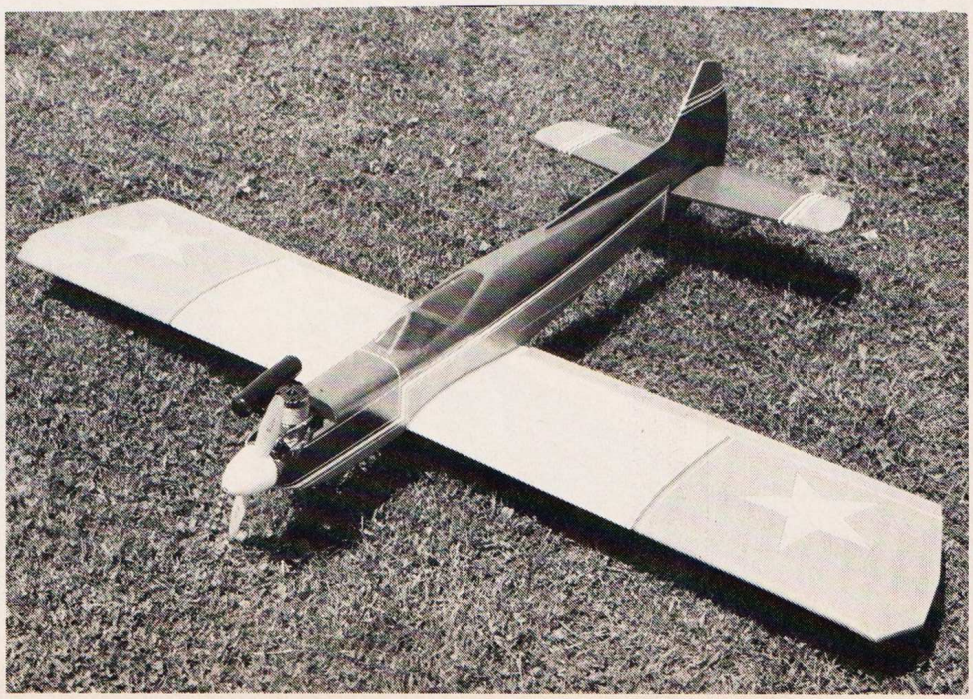
Photos: Frank Tiano

The lines of the .60-size "Lancer" are evident in these shots taken at the flying field. That is the author carrying the plane **above right.**



There are five major steps required to build the fuselage. In the first step, the firewall is laminated from three pieces of plywood, and strips of balsa are glued across the bulkheads to act as stiffeners. The second step has you cementing the plywood doublers to the fuselage sides with the ¼"-sq.bottom and 5/16"-sq. top stringers added. The third step requires installing the firewall and bulkheads with epoxy while steps four and five add the top and bottom sheeting along with the removable fuel tank hatch cover. Since all bulkheads have their centers removed, it's easy to install the pushrods after 80% of the fuselage is completed.

For finishing, I strongly recommend that Trico fiberglass cloth or a layer of medium weight silkspan be applied to the fuselage and stab. Tests have shown that the upper portion of the fuselage sides are prone to cracking after a hard landing or after doing any manuevers which put undue stress on the structure. The wing may be covered with any of the iron-on materials or silked, whichever you wish. I tried the new Perma-Gloss Coverite once again, and found it a little bit easier to use over the large open areas, but in time the seams have gradually lifted apart. I used the white PermaGloss this time and found that the blue dope on the outboard panels adhered well with no surface preparation necessary. The covering looks good from about ten feet away, but as you get closer a few areas that sag are apparent. I'm still waiting for some sort of improvement in this product before I will use it again. Until then, I'll stick to Silkspun Coverite or Super Coverite, which I believe to be the best coverings on the market.



There are really no areas of construction on the "Lancer" that need any criticism or alterations. A few hints that may be followed would have to include test-fitting the engine used early in construction because the nose, although wide, won't accommodate super-wide .60's unless some modifications are made. You may want, as I did, a quicker roll rate; to achieve this, the torque rods should be replaced with a type that permits more adjustment than the ones supplied in the kit. At any rate, make certain that all control surfaces fit snugly with no slop or flutter. The extreme rearward rake of the main gear should not be altered, as it provides good ground handling characteristics. The fuselage is definitely wide enough for any modern radio. In fact, my Royal Classic fit with room to spare. The Royal servos were mounted in a servo tray, and then the tray was mounted in the fuselage right at the center of gravity. The battery pack was placed under the fuel tank and the "Lancer" balanced perfectly.

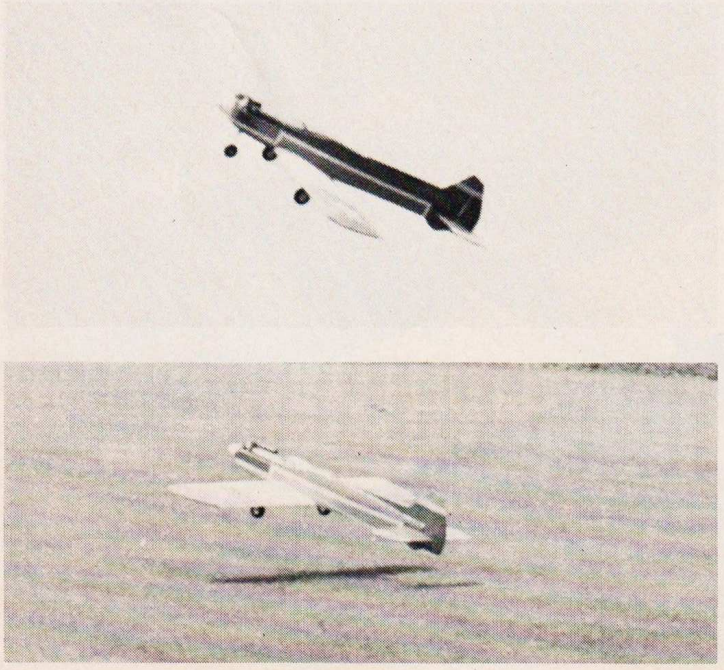
The engine used for the "SL-62" was the new 1975 version, OPS Ursus .60 available for $119.00 from Shamrock Competition Imports, P.O. Box 26247, New Orleans, LA 70186. The name "Ursus" means "Bear," and that's exactly what this engine is! The Urus is a little larger and, at 17.5-oz., a bit heavier than most .60 engines, but it's also a whole lot more powerful than most of them. Features of this motor include Schnuerle porting, ABC piston and sleeve design, twin ball bearing shaft, and cast piston of high silicone alloy that is tempered and aged. The rod is forged aluminum with a sintered brass bushing, and the head is a squish-band type with a hemispherical combustion chamber. It's bright red anodized. A Perry carburetor is mounted for added reliability. The Ursus' bore is .94 in., while its stroke is .87 in. The most amazing thing about this engine is its horsepower rating: 1.55 h.p. at 15,500 r.p.m., and you can believe it. Even Peter Chin has stated that it's one of the most powerful engines in its class, with only the Webra Speed .61 being comparable. Using the muffler supplied from Shamrock Competition, we ran some tests "right out of the box," the results are shown here.

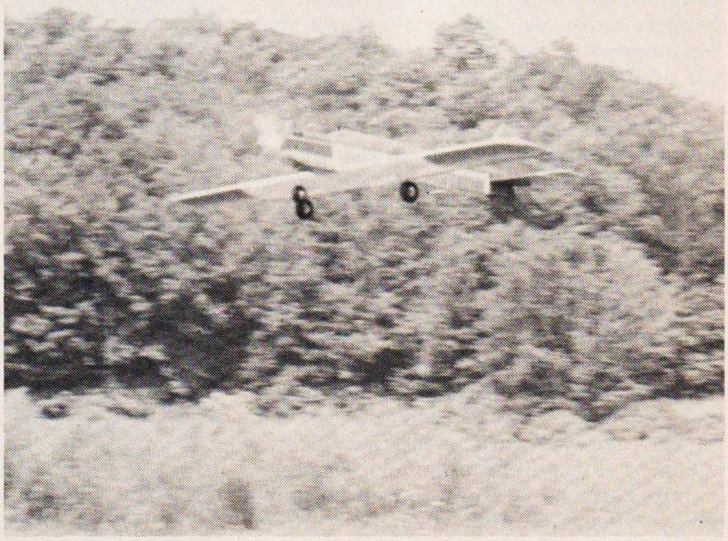
| Size | Brand | R.P.M. |
|---|---|---|
| 10¼x7 | Top Flite Power Prop | 14,000 |
| 11x6 | Top Flite Power Prop | 14,000 |
| 11x7 | Top Flite Power Prop | 13,000 |
| 11x7½ | Top Flite Power Prop | 12,200 |
| 11x8 | Top Flite Power Prop | 12,000 |
| 13x5 | AHM | 10,500 |
| 14x6 | Top Flite | 9,500 |

Please note that all these figures were taken with the engine running very rich and with break-in fuel having a low nitro content. Because of the timing and porting of this engine, it's a little more difficult to tell when it's in a two cycle operation. It doesn't have the telltale sound that most engines do. Another amazing thing is that one can actually hear this baby "unload" while it's in the air. It makes the most remarkable screaming sound you've ever heard. In fact a couple of times I had to land the airplane to see if the needle valve had somehow worked its way to a leaner setting, but it hadn't. The OPS company lets the modeler know in its instruction booklet that this engine enjoys running on a smaller prop than most other .60's. In fact, they recommend using 10¼ diameter props instead of the usual 11-inch. I have found that the engine will really put out on a Rev-Up 11x6. In fact, the Rev-Up added about 700 revs to the Top Flite 11x6 prop. Lately I've been getting just about 14,600 revs on the ground with the Rev-Up 11x6 without really tweaking it. The reason why I said that you can well believe the 1.55 h.p. figure is because the tests were conducted at the Kavan factory using one of their special horsepower props. In case you don't know, a horsepower prop will automatically determine the output of an engine according to the revs per minute that the engine wings it. For instance, if an average .60 were to swing one of these special props at 12,000 r.p.m.'s the chart would show that it would have to be putting out 1.1 horses. Once the Perry carb is set up and a pressure line run from the muffler to the fuel tank, the engine is very responsive through all throttle settings. Without pressure, I found that it would load up occasionally when going from idle to full power, many times stopping completely. The engine runs surprisingly cool, but for some reason eats glow plugs like they were candy. My particular engine will chew up a new plug after about eight or ten flights. I personally don't mind the extra expense of additional plugs as I feel the performance the engine delivers more than makes up for the extra couple of dollars.

From the very beginning, the "Lancer" performed flawlessly with only a bit of aileron and rudder trim required to make it track well through all manuevers. The OPS would carry the "Lancer" almost vertically until out of sight. As I said before, the ailerons were a little slow for my liking, but the other fellows that tried the ship thought they were just fine. If you like a little more sensitive ship, I would suggest substituting a different pair of torque rods for the ones supplied in the kit to give more room for adjustment. Because of its large side area and rudder, the "Lancer" does excellent knife-edge manuevers and stall turns. After setting up for a landing, only the elevator need be adjusted to provide a smooth touchdown. Unless there is a bad crosswind, the "Lancer" will remain steady throughout its final approach. Once the "Lancer" is set down, there is no tendency for it to hop back in the air. I believe the low-slung raked gear has a lot to do with this. The "Lancer" will do all AMA Pattern maneuvers at an acceptable level if you power it with the right engine.

If what you need is a reasonably priced, solid, quick building, pattern ship to be used for practice or for a backup ship—or for just a plain great sport flyer—the "Lancer" could be what you're looking for. I'm sure most local hobby shops have at least one in stock, but if not, order direct from Sterling Models, 3620 G. Street, Philadelphia PA 19134. As for the OPS Ursus, $119.00 may seem a bit much to pay, but then, the old saying "you get what you pay for" really does hold true. Try one in your next eight-pound pattern and I think you'll be in complete agreement with me.





Up in the air where it belongs, Tiano's "Lancer" goes through its paces and proves to be a plane that will "groove" right where you want it.