Three photos: Leo Kohn and Experimental Aircraft Association.

Radio Control Scale Model

Stits Playboy

A quarter-scale R/C version of this popular, 22-foot, one-place home-built.

BUD ATKINSON

IN the long line of Ray Stits' home-builts, one of the first and most successful airplanes was the well-known Playboy. The prototype of the SA-3A was first flown in 1953. Since then more than 1,000 sets of plans have been sold.

The Playboy is a small, one-place, fully aerobatic compact airplane with 22 ft. span. It uses a 60- to 90-hp engine, and is in the 140-mph class with larger engines. The construction of the SA-3A used a welded-aircraft-tubing fuselage and tail with the wings, bulkheads and stringers of fabric-covered wood. The cowling on the original Playboy was modified from the Taylorcraft cowling and is distinctive in appearance.

Playboys can be seen at most any of the home-built fly-ins. They exist in many varieties of modifications, with bubble canopies, various rudder shapes, fiberglass cowls, and even with cantilever wings. Some have been seen with trike gears. Many of the magazines covering the fly-ins have pictures of the Playboy, so when building your model you have many subjects to pick from, and, of course, many color schemes. The original Playboy was red, trimmed with white.

I believe that, at some time or another, every modeler has the ambition to build a large R/C job. An easy scale to work from is quarter-scale, as it is simple to scale the plans from the full-size airplane to the model. Most airplanes at ¼-in.-to-the-foot scale work out rather large and have a wing span of 8 or 9 feet. The fuselage width is almost larger than the prop diameter.

The Playboy was a natural at ¼-scale with a 22 ft. span, which makes the model 66" in span. This is an easy one to haul out to the old flying patch, and, also, the wing can be built in one piece.

The fuselage on the full-size Playboy was very slim and streamlined for a home-built, so again, the quarter-scale of the fuselage works out at only 6" wide. This does not give that fat look that most scale airplanes have at quarter scale. The Playboy has over 800 sq. in. of wing area, so it can support considerable weight.

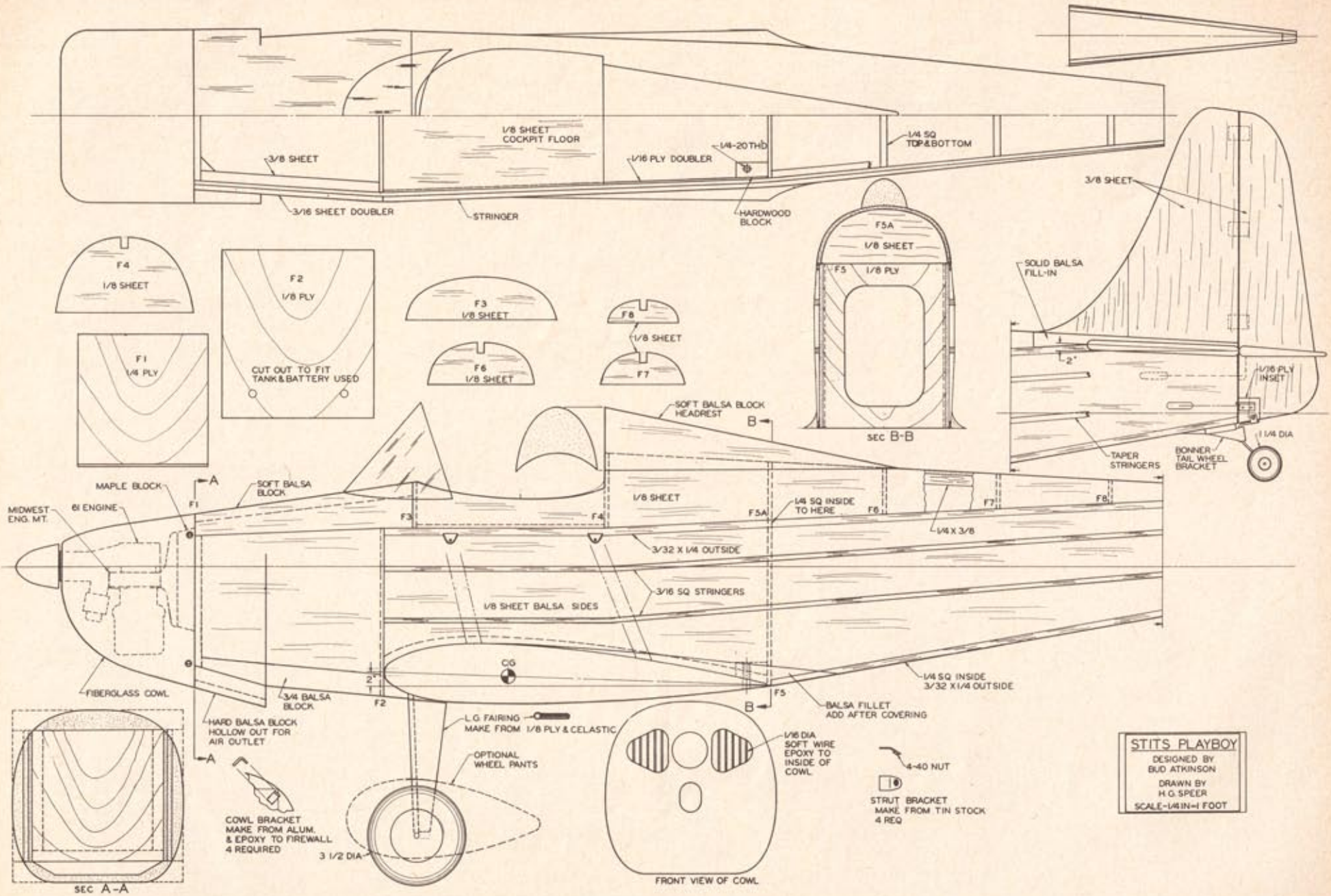
My Playboy weighs 8½ lbs. I'm sure it could be built much lighter, because I made no attempt to keep it light. The only deviation I made from scale was to increase the stabilizer. Most light, low-horsepower airplanes use small stabilizers, compared to what we use on our models, and since the idea behind the Playboy was to make a Sunday-flyer scale model for the average builder, the stabilizer area was increased to give more stability.

Fuselage: The sides are of ⅛" balsa sheet, with 3/16" square stringers which simulates the real thing when the fabric is applied. The fuselage is large and roomy; in fact, some of the new mini-gear is almost lost in it. The cowling is of fiberglass, much like the Taylorcraft, with grill bars of soft 1/16" wire epoxied to the inside of cowling. A built-up balsa cowling may be used if desired.

The wing and stab are set a ½" positive incidence with the engine zero to the thrust line of the fuselage. This worked out very well, and should not be changed. Balance point is about 40% of the wing chord.

The landing gear was made of 3/16" wire; most hobby shops have it. The full-size Playboy used a Cessna-type gear, attached

Our very real-looking Playboy is a typical radio design in its dimensions. The sturdy two-wheel landing gear causes no ground-looping difficulties. Model is of the original Ray Stits plane. Stits' home-built designs enjoy wide popularity.


1/8 SHEET COCKPIT FLOOR
3/8 SHEET
1/16 PLY DOUBLER
1/4-20 THD
1/4 SQ TOP & BOTTOM
3/16 SHEET DOUBLER
STRINGER
HARDWOOD BLOCK
F4 1/8 SHEET
F2 1/8 PLY
F3 1/8 SHEET
F8 1/8 SHEET
F1 1/4 PLY
CUT OUT TO FIT TANK & BATTERY USED
F6 1/8 SHEET
F7
F5A 1/8 SHEET
F5 1/8 PLY
SEC B-B
3/8 SHEET
SOLID BALSA FILL-IN
2"
1/16 PLY INSET
1 1/4 DIA
TAPER STRINGERS
BONNER TAIL WHEEL BRACKET
SOFT BALSA BLOCK HEADREST
B
MAPLE BLOCK
A
SOFT BALSA BLOCK
MIDWEST ENG. MT.
61 ENGINE
1/8 SHEET
1/4 SQ INSIDE TO HERE
1/4 X 3/8
3/32 X 1/4 OUTSIDE
3/16 SQ STRINGERS
1/8 SHEET BALSA SIDES
CG
1/4 SQ INSIDE 3/32 X 1/4 OUTSIDE
FIBERGLASS COWL
3/4 BALSA BLOCK
HARD BALSA BLOCK HOLLOW OUT FOR AIR OUTLET
L.G. FAIRING MAKE FROM 1/8 PLY & CELASTIC
OPTIONAL WHEEL PANTS
BALSA FILLET ADD AFTER COVERING
1/16 DIA SOFT WIRE EPOXY TO INSIDE OF COWL
4-40 NUT
STRUT BRACKET MAKE FROM TIN STOCK 4 REQ
COWL BRACKET MAKE FROM ALUM. & EPOXY TO FIREWALL 4 REQUIRED
3 1/2 DIA
SEC A-A
FRONT VIEW OF COWL
STITS PLAYBOY
DESIGNED BY BUD ATKINSON
DRAWN BY H.G. SPEER
SCALE-1/4 IN=1 FOOT