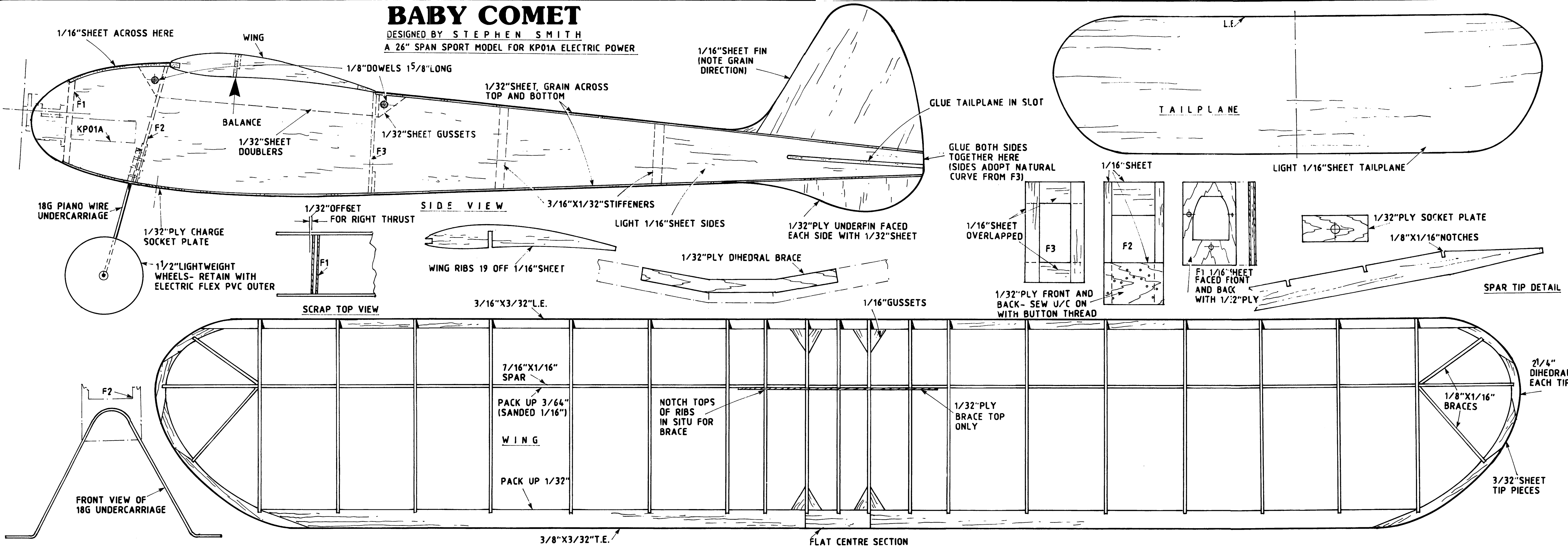


BABY COMET

DESIGNED BY STEPHEN SMITH
A 26" SPAN SPORT MODEL FOR KP01A ELECTRIC POWER



Baby Comet

BUILD
FROM OUR
FULL SIZE
PLANS!

Try this delightful wafter
for the Knight & Pridham
electric unit, designed by
Stephen Smith

I quickly took to the KP01 electric flight unit; what a pleasant change to have a quiet engine that started instantly, every time, and not have to wipe off any oily gunge after an afternoon's flying. The main problem as I saw it was the general lack of sport free flight designs that are the right size and weight to suit such a power unit – hence Baby Comet! Baby Comet uses the KP01a three cell version, and was designed with the following in mind;

- Simple construction
- Reasonable looks and performance
- Cheap to make

I wanted to invoke memories of the kind of model flown in the 30's and 40's, without imitating any specific design. The construction makes much use of sheet balsa, with a mini-



minute charge (Best flight so far has been 3.1/2 minutes). Each model has weighed 2.1/2 ounces, and is sensitive to the weakest lift. Once the power has wound down, the glide is 'floaty', and all-in-all, good value for the small constructional effort involved.

Building

When selecting your 1/16in and 1/32in balsa sheet, it is essential that you pick the lightest, straight-grained stock you possibly can; heavy wood will be the surest route to mediocre performance.

The fuselage and tail are quite simple to make, so I won't go into detail, except to emphasise the need to check true alignment of the tail surfaces before the glue makes anything permanent. (Note the tailplane is glued into the fuselage at a very slight negative incidence). Former F1 is also angled slightly to provide right thrust (see plan).

The wing is built in three sections. I make the wingtips first, and then add these as a complete unit later on. Pin the mainspar over the plan, together with the 3/64in packing, making sure all is vertical. (I use sanded 1/16in strip for the packing). Then pin down the

trailing edge, noting the 1/32in packing on its front edge. All the ribs can now be slotted in. The leading edge can now be added, this being packed up 3/32in to prevent any built in warps. Finally, add the wingtip bows and braces. When

Baby Comet has simple structure and classic lines

all three sections are completed, pin down the centre section over the plan and glue the wing panels to this, noting the 2.1/4in dihedral at each tip. When dry, remove the whole wing and let the ply dihedral brace into the top surface.

Covering

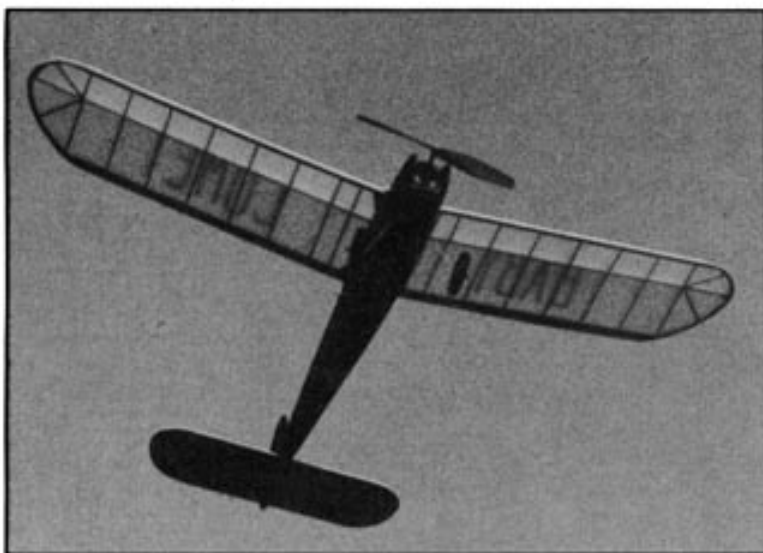
All Baby Comets have used lightweight modelspan throughout, with coloured tissue trim and lettering. After an airframe coating of thinned dope, the tissue for the fuselage and tail was attached with 50/50 dope/thinners. A final coat of 40/60 dope/thinners was then applied. The wing tissue was attached with paste, and given two coats of 40/60 dope/thinners. The trim and lettering could be attached with thinned dope or banana oil. Whichever covering you use, keep it *light* and be sure to attach the covering to the underside of each wing rib before doping in order to preserve the wing undercamber.

Engine installation

I simply attach the KP01 unit to F1 with three sub miniature screws. The charging socket is bolted through a 1/32in ply plate on the fuselage underside. That's all there is to it!

Flying

Make sure the wings balance, there are no warps anywhere, that all surfaces are 'true' to each other, and that the model balances on the dihedral brace just behind the main spar. Choose a calm day, and test glide. Aim for a floaty glide with a hint of a right tune. Gently bend the fin trailing edge and perhaps the tailplane trailing edge to achieve this. Now give Baby Comet a one minute charge, and release. All three models have exhibited a wide left hand turn under power, with an equally wide right hand glide. Once all this has been achieved, give progressively longer charges and put on your running shoes!



mum of components. The tail is particularly simple, with a complete absence of open structures. Only the wing is built up, but here again the component count is quite small.

Three built to date

Three Baby Comets have been built to date, and the performance of each has been very satisfying and great fun. They all routinely turn in flights of well over a minute from a three

Baby Comet gliding in from another good flight