GUILLOWS KITS

By Roger Teegarten

The reason I build the smaller Guillow kits is because their angles and dangles are for the most part very close to what a small free flight model needs to be flight stable. They also provide great decals and decent canopies. While these models are designed for the small internal engine which is no longer manufactured, even the company is out of business their models can be easily modified for rubber or CO-2 power. The best feature is plans are complete and they are cheap to build. The canopy on my F6F has graced three fuselages.

Most of the time I use the fuselage formers, much lightened and my own stringers. I have been tending to build full former without the usual heavy keels. But omitting the heavy keels allows the fuselage to warp. The stringers tend to straighten the fuselage once it is off the jig so be careful in this regard. The savings in weight, I think more than makes up for the extra caution involved.

The small Guillow kits usually have plastic nose cowls. Unless I am installing a CO-2 motor I do not use them. They are not strong enough to withstand the tension of a wound rubber motor. So we normally use them for patterns. We lay up cross grained sheet wood that's bigger than the nose and carve and sand until the new wood cowl matches the model's contours. Once this is done we cut it off the model and then hollow it so the rubber motor and shaft have enough clearance. We also lay on a thin piece of ply for the plastic nose button to pass through and sit on.

Once that is done some method of allowing the motor to be stretched wound and replaced as needed is made. We usually make wooden nose blocks removable. They are most of the time held in place by wooden dowels fitted into holes which are let into the firewall. The fire wall is usually a lamination of two pieces of 1/16 balsa sheet, again these are laid cross grained.

The kits wing material is replaced with my own wood. Most of the time the wing will not fit the kit's saddle so check this area. I normally build small wings using rectangular rib blanks and carve and block sand the entire wing to shape. The leading edge material is packed up a bit so the Clark-Y rib can be easily carved in. The leading edge is a tapered piece compensating for the unneeded wood at the tip of the wing. The bottom spars are laid down and the balsa blank ribs are notched to fit and glued in place. The ribs are then blocked sanded to a taper being careful to maintain the same height left and right. The tops of the ribs are then notched and the top spar is fitted and glued. The dihedral is next. I always pack up the tips equally for proper dihedral. If needed anti-warp strakes are the last major pieces to fit in. Once all the pieces are in place and dry, including gussets as needed the wing is off the board where it is carved and sanded to shape. This method makes a better wing and takes less time than you would think.

The tail pieces are also replaced with lighter weight wood. I make mine using 3/32 wood which is the lightest I can find. There are also fewer pieces as I rely on the extra size to make up for the difference. These members are sanded to shape sans any hint of an airfoil shape on the elevator. Most of the time, I make adjustable elevators and an adjustable rudder. I find this makes the dynamic flight trimming easier.