1 ½" Vinyl tape is used to seal the aileron gaps. Attach the fairings with Tinnerman nuts and sheet metal screws, Or nutplates, if you desire.

Stringers- Fuselage shape is largely derived by the stringers. We use 3/8" .035 wall 6061-T-6 aluminum tubing for the stringers, but have also used 3/8"x 3/8" hardware store aluminum angles- Some builders of my designs use wood for stringers, and this is fine, but a bit heavier than the other methods. The stringers are largely attached with thin Stainless safety wire- Wrap Vinyl tape around any tubular structural member where the stringer and the safety wire will contact. The fabric on the belly needs to JUST clear the Control system torque tube, asit swings back and forth, and foreward to aft, so carefully lay out the belly stringers to provide clearance. Do not install the stringers until the fuselage is done, epoxy coated, with control system installed. We use the Stits light green epoxy for the fuselage tubing. It does not soften when the fabric attach glues are applied to the structure.

Windshield- The windshield is a flat-wrap- single curvature piece of Lexan Polycarbonate. We use 1/16" thickness, and attach it to the small fuselage tabs with large headed 1/8" aluminum pop-rivets. The exact shape is optional, but make sure it is within 4" of the bottom of the top wing. Line the back edge with rubber grommett material, glued on. The Lexan can be drilled easily. Just keep it away from fuel spillage. That will ruin it.

Firewall/Cowling work- Ideally, .016 Galvanized steel should be used for the firewall. Stainless steel is too heavy, and Aluminum melts at lower temps. A simple flange bent up 90 deg. On the sides, and notched flanges around the top will allow you to place tinnerman nuts on the flange to hold the main cowls in place- The firewall is held on by the Motor Mount bolts. Wherever a cable, wire or line pass thru use rubber Grommets, and high temp. red Silicon sealer. No attachment screws need to be any closer than 2 ½" to 3" apart. The cowling sketches on the three view dwg., and on the plans are general suggestions. Every engine type of installation is slightly different, and here is where the homebuilder can add his or her personal touch to the Zipster. Just remember, provide 30% more exit opening than inlet in any cooling ram air area. Air expands when it gets hot, and you do not want any backpressure coming out of the fwd. End of a cowl inlet!! The minimum thickness for cowl panels should be .016" The fins on free air engines must be baffled as the fins are at an angle to the slipstream on the Rotax or Hirth. You need to bend the baffle to direct the air along the fins, then exit it in back in an expanding exit. Fan- Cooled Rotax 277 engines are much easier to baffle and cool. Just direct a soop of air to the back side inlet fan, and cut a hole in the top of the cowl for the hot air exit shroud. These engines can be run on the ground for long periods of time without getting hot. The small cowl panels on the fuselage between the firewall and instrument panel are .016" flat-wrap pieces, aluminum pop-riveted together, and to a few Steel tabs welded to the fuselage. The foreward belly pan is optional, and is not needed unless you will need to maintain a brake system, or want to remove your landing gear. Remember- fabric is lighter than metal panels, screws, rivets, and tabs! The fabric can be glued around the gear legs in a fairly neat fashion, and can be pulled back, cut away, and patched, if you ever bend or have to remove the gear for any reason. I always paint the inside surface of my cowlings white, which makes cleanup, and visibility under the cowl better.

The instrument board is a light piece of plywood, cut out as shown on the drawings to provide visibility to the fuel gauge. It is shock mounted with rubber hose and ty-raps, but only a few basic instruments are used- A C.H.T., an E.G.T., a Tachometer, a couple switches, and the Hall Airspeed tube on the lift strut make up the instrumentation. For fly-by flying at airshows, I use a wrist mounted Hiker's Altimeter. The floorboards are flat pieces of 1/4" Luan, ty-rapped

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