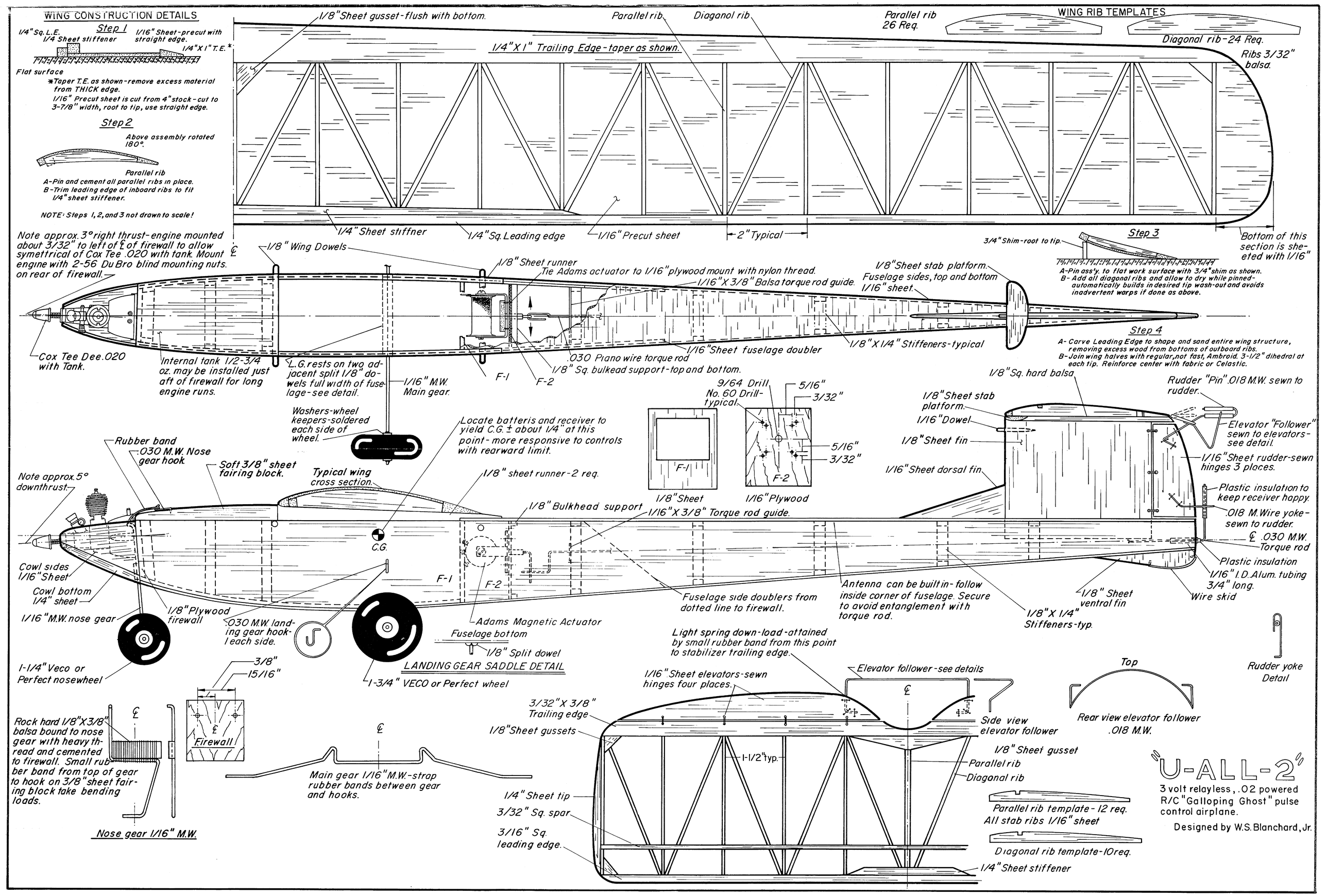
WING CONSTRUCTION DETAILS
Step 1
1/4" Sq. L.E.
1/4 Sheet stiffener
1/16" Sheet-precut with straight edge.
1/4" X 1" T.E.*
Flat surface
*Taper T.E. as shown-remove excess material from THICK edge.
1/16" Precut sheet is cut from 4" stock-cut to 3-7/8" width, root to tip, use straight edge.
Step 2
Above assembly rotated 180°.
Parallel rib
A-Pin and cement all parallel ribs in place.
B-Trim leading edge of inboard ribs to fit 1/4" sheet stiffener.
NOTE: Steps 1, 2, and 3 not drawn to scale!
1/8" Sheet gusset-flush with bottom.
Parallel rib
Diagonal rib
Parallel rib 26 Req.
WING RIB TEMPLATES
Diagonal rib-24 Req.
1/4" X 1" Trailing Edge-taper as shown.
Ribs 3/32" balsa.
1/4" Sheet stiffner
1/4" Sq. Leading edge
1/16" Precut sheet
2" Typical
Bottom of this section is sheeted with 1/16"
Step 3
3/4" Shim-root to tip.
A-Pin ass'y. to flat work surface with 3/4" shim as shown.
B-Add all diagonal ribs and allow to dry while pinned-automatically builds in desired tip wash-out and avoids inadvertent warps if done as above.
Note approx. 3° right thrust-engine mounted about 3/32" to left of ℄ of firewall to allow symettrical of Cox Tee .020 with tank. Mount engine with 2-56 Du Bro blind mounting nuts. on rear of firewall.
1/8" Wing Dowels
1/8" Sheet runner
Tie Adams actuator to 1/16" plywood mount with nylon thread.
1/16" X 3/8" Balsa torque rod guide.
1/8" Sheet stab platform. Fuselage sides, top and bottom 1/16" sheet.
Cox Tee Dee .020 with Tank.
Internal tank 1/2-3/4 oz. may be installed just aft of firewall for long engine runs.
L.G. rests on two adjacent split 1/8" dowels full width of fuselage-see detail.
1/16" M.W. Main gear.
F-1
F-2
.030 Piano wire torque rod
1/8" Sq. bulkead support-top and bottom.
1/16" Sheet fuselage doubler
1/8" X 1/4" Stiffeners-typical
Step 4
A-Carve Leading Edge to shape and sand entire wing structure, removing excess wood from bottoms of outboard ribs.
B-Join wing halves with regular, not fast, Ambroid. 3-1/2" dihedral at each tip. Reinforce center with fabric or Celastic.
1/8" Sq. hard balsa
Rudder "Pin" .018 M.W. sewn to rudder.
9/64 Drill No. 60 Drill-typical
5/16"
3/32"
5/16"
3/32"
F-1
F-2
1/8" Sheet
1/16" Plywood
1/8" Sheet stab platform.
1/16" Dowel
1/8" Sheet fin
1/16" Sheet dorsal fin
Elevator "Follower" sewn to elevators-see detail.
1/16" Sheet rudder-sewn hinges 3 places.
Plastic insulation to keep receiver happy.
.018 M. Wire yoke-sewn to rudder.
℄ .030 M.W. Torque rod
Plastic insulation
1/16" I.D. Alum. tubing 3/4" long.
Wire skid
Washers-wheel keepers-soldered each side of wheel.
Locate batteris and receiver to yield C.G. ± about 1/4" at this point-more responsive to controls with rearward limit.
Rubber band
.030 M.W. Nose gear hook.
Soft 3/8" sheet fairing block.
Typical wing cross section.
1/8" sheet runner-2 req.
Note approx. 5° downthrust.
1/8" Bulkhead support
1/16" X 3/8" Torque rod guide.
C.G.
Cowl sides 1/16" Sheet
Cowl bottom 1/4" sheet
1/16" M.W. nose gear
1/8" Plywood firewall
.030 M.W. landing gear hook-1 each side.
F-1
F-2
Fuselage side doublers from dotted line to firewall.
Antenna can be built in-follow inside corner of fuselage. Secure to avoid entanglement with torque rod.
1/8" Sheet ventral fin
1/8" X 1/4" Stiffeners-typ.
Adams Magnetic Actuator
Fuselage bottom
1/8" Split dowel
LANDING GEAR SADDLE DETAIL
Light spring down-load-attained by small rubber band from this point to stabilizer trailing edge.
1-1/4" Veco or Perfect nosewheel
1-3/4" VECO or Perfect wheel
Rudder yoke Detail
3/8"
15/16"
Elevator follower-see details
1/16" Sheet elevators-sewn hinges four places.
℄
Top
Rear view elevator follower .018 M.W.
Rock hard 1/8" X 3/8" balsa bound to nose gear with heavy thread and cemented to firewall. Small rubber band from top of gear to hook on 3/8" sheet fairing block take bending loads.
Firewall
Main gear 1/16" M.W.-strap rubber bands between gear and hooks.
Nose gear 1/16" M.W.
3/32" X 3/8" Trailing edge
1/8" Sheet gussets
1-1/2" typ.
Side view elevator follower
1/8" Sheet gusset
Parallel rib
Diagonal rib
1/4" Sheet tip
3/32" Sq. spar
3/16" Sq. leading edge.
Parallel rib template-12 req.
All stab ribs 1/16" sheet
Diagonal rib template-10 req.
1/4" Sheet stiffener
"U-ALL-2"
3 volt relayless, .02 powered R/C "Galloping Ghost" pulse control airplane.
Designed by W.S. Blanchard, Jr.