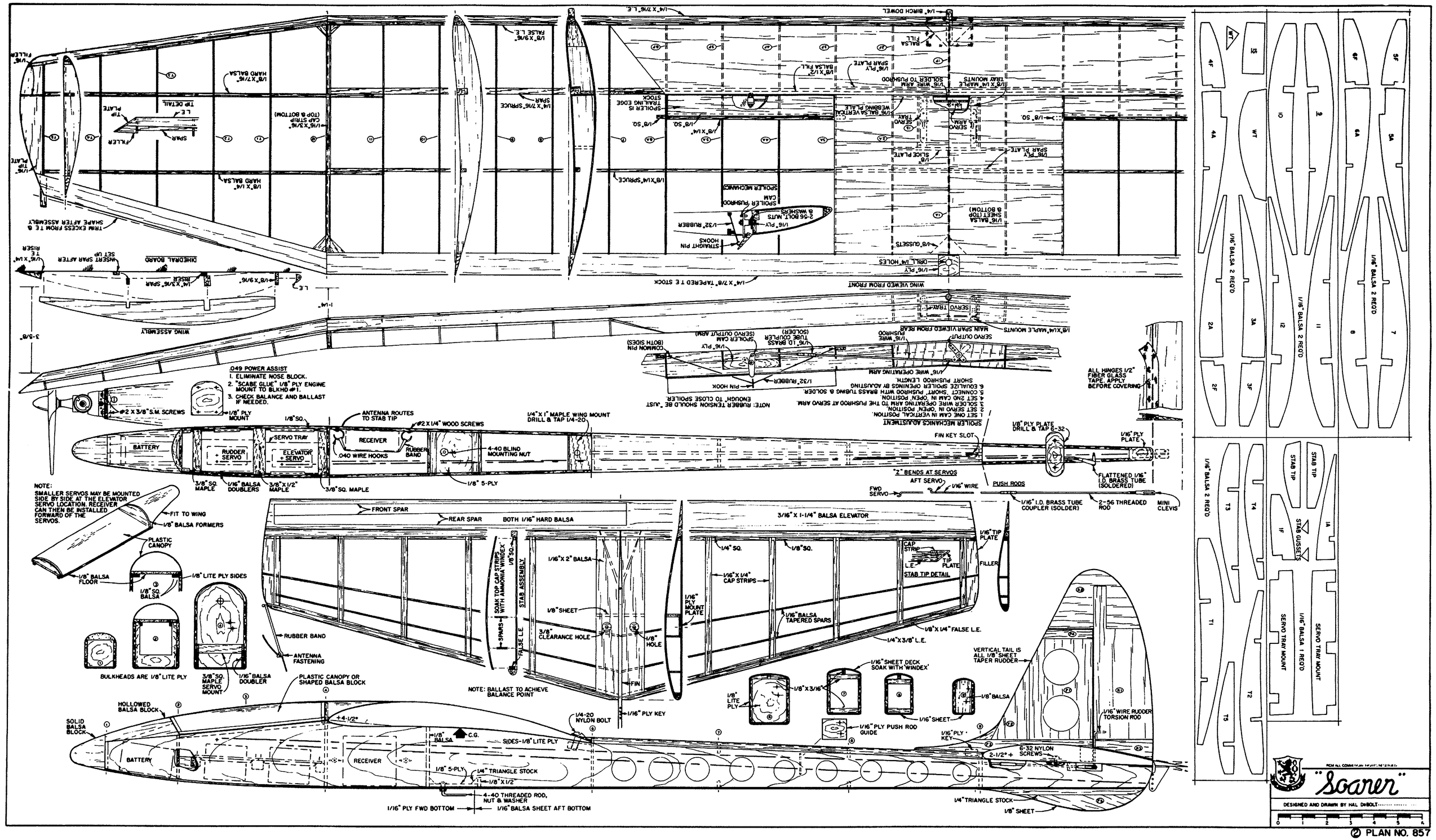
"Soarer"
DESIGNED AND DRAWN BY HAL DeBOLT
PLAN NO. 857
1/16" BALSA 2 REQ'D
1/16" BALSA 1 REQ'D
WING VIEWED FROM FRONT
1/4" X 7/8" TAPERED T E STOCK
1/4" BIRCH DOWEL
1/4" X 7/16" L.E.
1/8" X 9/16" FALSE L.E.
1/8" X 1/4" HARD BALSA
1/8" X 7/16" CAP STRIP (TOP & BOTTOM)
1/16" X 3/16" TIP PLATE
1/4" X 7/16" SPRUCE SPAR
1/8" X 1/4" SPRUCE
SPOILER MECHANICS
SPOILER PUSHROD CAM
2-56 BOLT, NUTS & WASHERS
1/16" PLY
1/32" RUBBER
STRAIGHT PIN HOOKS
1/16" BALSA SHEET (TOP & BOTTOM)
1/8" GUSSETS
DRILL 1/4" HOLES
1/16" PLY SPAR PLATE
1/8" SLICE PLATE
SERVO TRAY
SERVO ARM
1/8" X 1/4" MAPLE TRAY MOUNTS
1/16" WIRE ARM SOLDER TO PUSHROD
1/8" X 1/2" BALSA FILL
1/16" PLY SPAR PLATE
1/16" BALSA VERTICAL WEBBING PLATE
SPOILER IS TRAILING EDGE STOCK
1/8" X 1/4"
1/8" SQ.
1/8" X 1/4" MAPLE MOUNTS
SERVO OUTPUT
1/16" WIRE PUSHROD
1/16" TO BRASS TUBE COUPLER (SOLDER)
SPOILER CAM (SERVO OUTPUT ARM)
1/16" PLY
COMMON PIN (BOTH SIDES)
PIN HOOK
1/16" WIRE OPERATING ARM
NOTE: RUBBER TENSION SHOULD BE "JUST ENOUGH" TO CLOSE SPOILER.
SPOILER MECHANICS ADJUSTMENT
1. SET ONE CAM IN VERTICAL POSITION.
2. SET SERVO IN "OPEN" POSITION.
3. SOLDER WIRE OPERATING ARM TO THE PUSHROD AT SERVO ARM.
4. SET 2ND CAM IN "OPEN" POSITION.
5. CONNECT "SHORT" PUSHROD WITH BRASS TUBING & SOLDER.
6. EQUALIZE SPOILER OPENINGS BY ADJUSTING SHORT PUSHROD LENGTH.
ALL HINGES 1/2" FIBER GLASS TAPE. APPLY BEFORE COVERING
TRIM EXCESS FROM T E & SHAPE AFTER ASSEMBLY
TIP DETAIL
TIP PLATE
SPAR
FILLER
DIHEDRAL BOARD
INSERT SPAR AFTER SET UP
1/4" X 3/16" SPAR RISER
1/16" X 1/4" T E RISER
WING ASSEMBLY
3-5/8"
1-1/4"
.049 POWER ASSIST
1. ELIMINATE NOSE BLOCK.
2. "SCABE GLUE" 1/8" PLY ENGINE MOUNT TO BLKHD #1.
3. CHECK BALANCE AND BALLAST IF NEEDED.
#2 X 3/8" S.M. SCREWS
1/8" PLY MOUNT
1/8" SQ.
ANTENNA ROUTES TO STAB TIP
#2 X 1/4" WOOD SCREWS
1/4" X 1" MAPLE WING MOUNT DRILL & TAP 1/4-20
BATTERY
RUDDER SERVO
SERVO TRAY
ELEVATOR SERVO
RECEIVER
.040 WIRE HOOKS
RUBBER BAND
4-40 BLIND MOUNTING NUT
1/8" 5-PLY
3/8" SQ. MAPLE
1/16" BALSA DOUBLERS
3/8" X 1/2" MAPLE
3/8" SQ. MAPLE
FIN KEY SLOT
1/8" PLY PLATE DRILL & TAP 6-32
1/16" PLY PLATE
FLATTENED 1/16" I.D. BRASS TUBE (SOLDERED)
"Z" BENDS AT SERVOS
AFT SERVO
FWD SERVO
1/16" WIRE
PUSH RODS
1/16" I.D. BRASS TUBE COUPLER (SOLDER)
2-56 THREADED ROD
MINI CLEVIS
NOTE: SMALLER SERVOS MAY BE MOUNTED SIDE BY SIDE AT THE ELEVATOR SERVO LOCATION. RECEIVER CAN THEN BE INSTALLED FORWARD OF THE SERVOS.
FIT TO WING
1/8" BALSA FORMERS
PLASTIC CANOPY
1/8" BALSA FLOOR
1/8" SQ. BALSA
1/8" LITE PLY SIDES
BULKHEADS ARE 1/8" LITE PLY
3/8" SQ. MAPLE SERVO MOUNT
1/16" BALSA DOUBLER
PLASTIC CANOPY OR SHAPED BALSA BLOCK
HOLLOWED BALSA BLOCK
SOLID BALSA BLOCK
+4-1/2"
BATTERY
RECEIVER
1/8" BALSA
C.G.
SIDES-1/8" LITE PLY
1/8" 5-PLY
1/4" TRIANGLE STOCK
1/8" X 1/2"
4-40 THREADED ROD, NUT & WASHER
1/16" PLY FWD BOTTOM
1/16" BALSA SHEET AFT BOTTOM
1/4-20 NYLON BOLT
1/16" PLY KEY
FRONT SPAR
REAR SPAR
BOTH 1/16" HARD BALSA
3/16" X 1-1/4" BALSA ELEVATOR
1/16" X 2" BALSA
SOAK TOP CAP STRIPS WITH AMMONIA 'WINDEX'
1/8" SQ.
STAB ASSEMBLY
SPARS
FALSE L.E.
1/8" SHEET
3/8" CLEARANCE HOLE
1/8" HOLE
FIN
RUBBER BAND
ANTENNA FASTENING
NOTE: BALLAST TO ACHIEVE BALANCE POINT
1/4" SQ.
1/8" SQ.
1/16" X 1/4" CAP STRIPS
1/16" PLY MOUNT PLATE
1/16" BALSA TAPERED SPARS
1/8" X 1/4" FALSE L.E.
1/4" X 3/8" L.E.
1/16" TIP PLATE
FILLER
CAP STRIP
L.E.
TIP PLATE
STAB TIP DETAIL
1/16" SHEET DECK SOAK WITH 'WINDEX'
1/8" LITE PLY
1/8" X 3/16"
1/16" SHEET
1/16" PLY PUSH ROD GUIDE
1/16" PLY KEY
6-32 NYLON SCREWS
2-1/2"+
1/8" BALSA
VERTICAL TAIL IS ALL 1/8" SHEET TAPER RUDDER
1/16" WIRE RUDDER TORSION ROD
1/4" TRIANGLE STOCK
1/8" SHEET
STAB TIP
STAB GUSSETS
SERVO TRAY MOUNT
1/16" BALSA 1 REQ'D