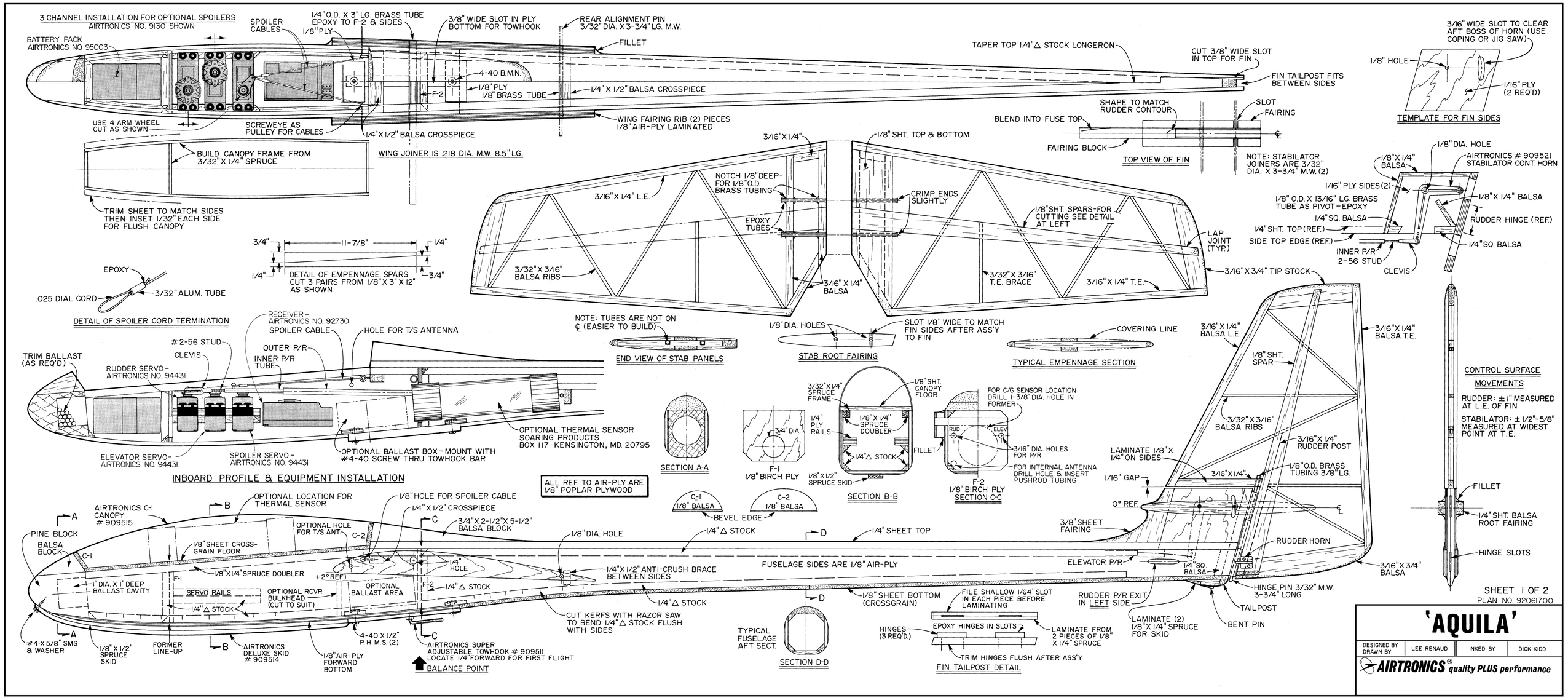
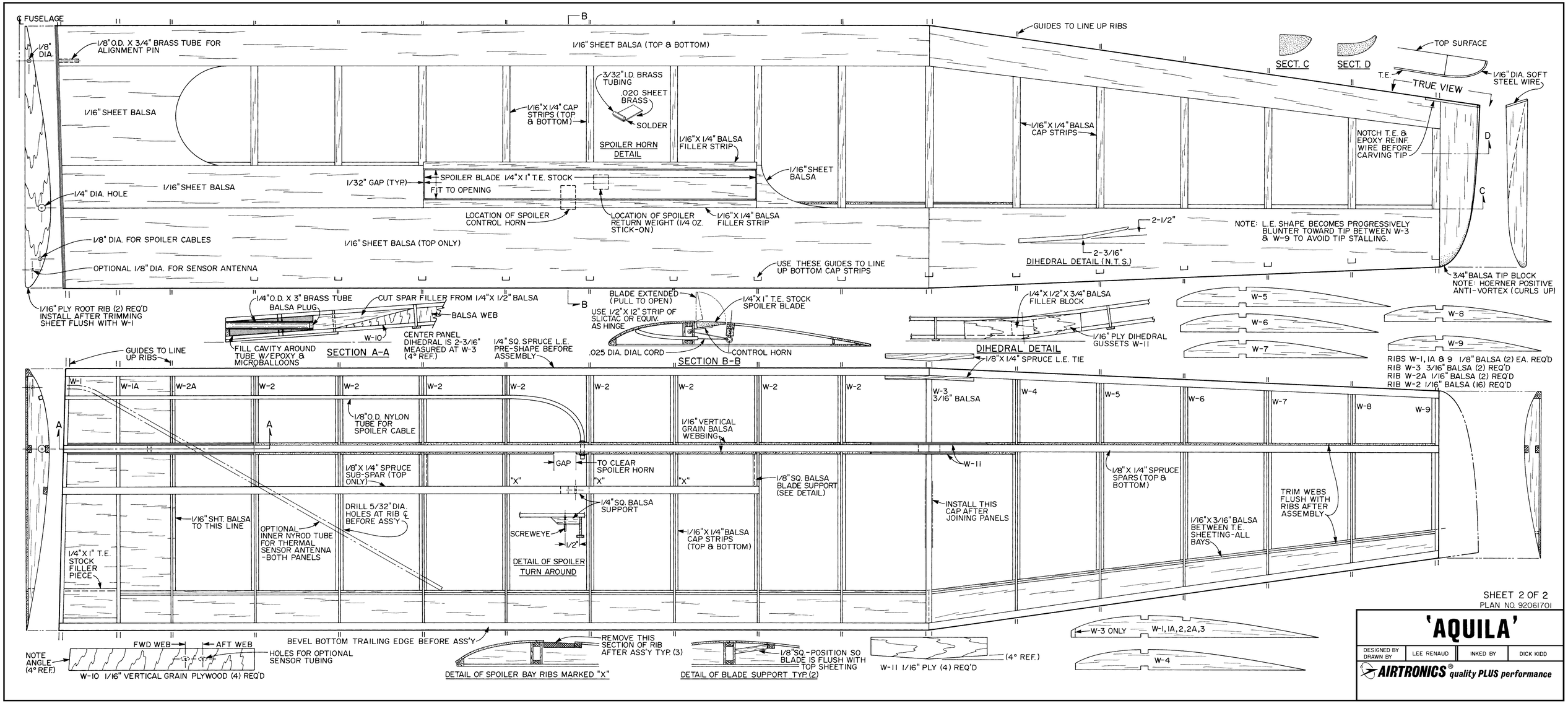

3 CHANNEL INSTALLATION FOR OPTIONAL SPOILERS
AIRTRONICS NO. 9130 SHOWN
BATTERY PACK AIRTRONICS NO 95003
SPOILER CABLES
1/4" O.D. X 3" LG. BRASS TUBE EPOXY TO F-2 & SIDES
1/8" PLY
3/8" WIDE SLOT IN PLY BOTTOM FOR TOWHOOK
REAR ALIGNMENT PIN 3/32" DIA. X 3-3/4" LG. M.W.
FILLET
TAPER TOP 1/4"Δ STOCK LONGERON
CUT 3/8" WIDE SLOT IN TOP FOR FIN
FIN TAILPOST FITS BETWEEN SIDES
4-40 B.M.N.
1/8" PLY
1/8" BRASS TUBE
F-2
1/4" X 1/2" BALSA CROSSPIECE
USE 4 ARM WHEEL CUT AS SHOWN
SCREWEYE AS PULLEY FOR CABLES
1/4" X 1/2" BALSA CROSSPIECE
WING FAIRING RIB (2) PIECES 1/8" AIR-PLY LAMINATED
WING JOINER IS .218 DIA. M.W. 8.5" LG.
BUILD CANOPY FRAME FROM 3/32" X 1/4" SPRUCE
TRIM SHEET TO MATCH SIDES THEN INSET 1/32" EACH SIDE FOR FLUSH CANOPY
BLEND INTO FUSE TOP
SHAPE TO MATCH RUDDER CONTOUR
SLOT
FAIRING
FAIRING BLOCK
TOP VIEW OF FIN
3/16" WIDE SLOT TO CLEAR AFT BOSS OF HORN (USE COPING OR JIG SAW)
1/8" HOLE
1/16" PLY (2 REQ'D)
TEMPLATE FOR FIN SIDES
3/16" X 1/4"
1/8" SHT. TOP & BOTTOM
3/16" X 1/4" L.E.
NOTCH 1/8" DEEP FOR 1/8" O.D. BRASS TUBING
EPOXY TUBES
CRIMP ENDS SLIGHTLY
1/8" SHT. SPARS-FOR CUTTING SEE DETAIL AT LEFT
LAP JOINT (TYP.)
3/32" X 3/16" BALSA RIBS
3/16" X 1/4" BALSA
3/32" X 3/16" T.E. BRACE
3/16" X 1/4" T.E.
3/16" X 3/4" TIP STOCK
NOTE: STABILATOR JOINERS ARE 3/32" DIA. X 3-3/4" M.W. (2)
1/8" DIA. HOLE
AIRTRONICS # 909521 STABILATOR CONT. HORN
1/8" X 1/4" BALSA
1/16" PLY SIDES (2)
1/8" O.D. X 13/16" LG. BRASS TUBE AS PIVOT-EPOXY
1/8" X 1/4" BALSA
1/4" SQ. BALSA
RUDDER HINGE (REF.)
1/4" SHT. TOP (REF.)
SIDE TOP EDGE (REF.)
1/4" SQ. BALSA
INNER P/R 2-56 STUD
CLEVIS
3/4"
11-7/8"
1/4"
DETAIL OF EMPENNAGE SPARS CUT 3 PAIRS FROM 1/8" X 3" X 12" AS SHOWN
EPOXY
.025 DIAL CORD
3/32" ALUM. TUBE
DETAIL OF SPOILER CORD TERMINATION
NOTE: TUBES ARE NOT ON ℄ (EASIER TO BUILD)
END VIEW OF STAB PANELS
1/8" DIA. HOLES
SLOT 1/8" WIDE TO MATCH FIN SIDES AFTER ASS'Y TO FIN
STAB ROOT FAIRING
COVERING LINE
TYPICAL EMPENNAGE SECTION
RECEIVER - AIRTRONICS NO. 92730
SPOILER CABLE
HOLE FOR T/S ANTENNA
#2-56 STUD
CLEVIS
OUTER P/R
INNER P/R TUBE
TRIM BALLAST (AS REQ'D)
RUDDER SERVO - AIRTRONICS NO. 94431
OPTIONAL THERMAL SENSOR SOARING PRODUCTS BOX 117 KENSINGTON, MD. 20795
ELEVATOR SERVO - AIRTRONICS NO. 94431
SPOILER SERVO - AIRTRONICS NO. 94431
OPTIONAL BALLAST BOX - MOUNT WITH #4-40 SCREW THRU TOWHOOK BAR
INBOARD PROFILE & EQUIPMENT INSTALLATION
SECTION A-A
3/32" X 1/4" SPRUCE FRAME
1/8" SHT. CANOPY FLOOR
1/8" X 1/4" SPRUCE DOUBLER
1/4" PLY RAILS
1/4"Δ STOCK
FILLET
1/8" X 1/2" SPRUCE SKID
SECTION B-B
FOR C/G SENSOR LOCATION DRILL 1-3/8" DIA. HOLE IN FORMER
RUD
ELEV
3/16" DIA. HOLES FOR P/R
FOR INTERNAL ANTENNA DRILL HOLE & INSERT PUSHROD TUBING
F-2
1/8" BIRCH PLY
SECTION C-C
3/4" DIA.
F-1
1/8" BIRCH PLY
ALL REF. TO AIR-PLY ARE 1/8" POPLAR PLYWOOD
C-1
1/8" BALSA
BEVEL EDGE
C-2
1/8" BALSA
3/16" X 1/4" BALSA L.E.
3/16" X 1/4" BALSA T.E.
1/8" SHT. SPAR
3/32" X 3/16" BALSA RIBS
3/16" X 1/4" RUDDER POST
LAMINATE 1/8" X 1/4" ON SIDES
1/8" O.D. BRASS TUBING 3/8" LG.
1/16" GAP
3/16" X 1/4"
0° REF.
3/8" SHEET FAIRING
RUDDER HORN
ELEVATOR P/R
1/4" SQ. BALSA
3/16" X 3/4" BALSA
HINGE PIN 3/32" M.W. 3-3/4" LONG
TAILPOST
BENT PIN
LAMINATE (2) 1/8" X 1/4" SPRUCE FOR SKID
RUDDER P/R EXIT IN LEFT SIDE
CONTROL SURFACE MOVEMENTS
RUDDER: ± 1" MEASURED AT L.E. OF FIN
STABILATOR: ± 1/2"-5/8" MEASURED AT WIDEST POINT AT T.E.
FILLET
1/4" SHT. BALSA ROOT FAIRING
HINGE SLOTS
AIRTRONICS C-1 CANOPY # 909515
OPTIONAL LOCATION FOR THERMAL SENSOR
1/8" HOLE FOR SPOILER CABLE
1/4" X 1/2" CROSSPIECE
3/4" X 2-1/2" X 5-1/2" BALSA BLOCK
OPTIONAL HOLE FOR T/S ANT.
C-2
PINE BLOCK
BALSA BLOCK
C-1
1/8" SHEET CROSS-GRAIN FLOOR
1/8" DIA. HOLE
1/4"Δ STOCK
1/4" SHEET TOP
1/8" X 1/4" SPRUCE DOUBLER
+2° REF.
1/4" HOLE
1/4" X 1/2" ANTI-CRUSH BRACE BETWEEN SIDES
FUSELAGE SIDES ARE 1/8" AIR-PLY
1" DIA. X 1" DEEP BALLAST CAVITY
F-1
SERVO RAILS
OPTIONAL RCVR BULKHEAD (CUT TO SUIT)
OPTIONAL BALLAST AREA
F-2
1/4"Δ STOCK
1/4"Δ STOCK
1/8" SHEET BOTTOM (CROSSGRAIN)
CUT KERFS WITH RAZOR SAW TO BEND 1/4"Δ STOCK FLUSH WITH SIDES
#4 X 5/8" SMS & WASHER
1/8" X 1/2" SPRUCE SKID
FORMER LINE-UP
AIRTRONICS DELUXE SKID # 909514
1/8" AIR-PLY FORWARD BOTTOM
4-40 X 1/2" P.H.M.S. (2)
AIRTRONICS SUPER ADJUSTABLE TOWHOOK # 909511 LOCATE 1/4" FORWARD FOR FIRST FLIGHT
BALANCE POINT
TYPICAL FUSELAGE AFT SECT.
SECTION D-D
FILE SHALLOW 1/64" SLOT IN EACH PIECE BEFORE LAMINATING
HINGES (3 REQ'D.)
EPOXY HINGES IN SLOTS
LAMINATE FROM 2 PIECES OF 1/8" X 1/4" SPRUCE
TRIM HINGES FLUSH AFTER ASS'Y
FIN TAILPOST DETAIL
SHEET 1 OF 2
PLAN NO. 92061700
'AQUILA'
DESIGNED BY
DRAWN BY
LEE RENAUD
INKED BY
DICK KIDD
AIRTRONICS® quality PLUS performance


℄ FUSELAGE
1/8" DIA.
1/8" O.D. X 3/4" BRASS TUBE FOR ALIGNMENT PIN
1/16" SHEET BALSA (TOP & BOTTOM)
GUIDES TO LINE UP RIBS
SECT. C
SECT. D
TOP SURFACE
T.E.
TRUE VIEW
1/16" DIA. SOFT STEEL WIRE
1/16" SHEET BALSA
3/32" I.D. BRASS TUBING
.020 SHEET BRASS
SOLDER
1/16" X 1/4" CAP STRIPS (TOP & BOTTOM)
SPOILER HORN DETAIL
1/16" X 1/4" BALSA FILLER STRIP
1/16" X 1/4" BALSA CAP STRIPS
NOTCH T.E. & EPOXY REINF. WIRE BEFORE CARVING TIP
D
C
1/16" SHEET BALSA
1/32" GAP (TYP.)
SPOILER BLADE 1/4" X 1" T.E. STOCK FIT TO OPENING
1/16" SHEET BALSA
1/4" DIA. HOLE
LOCATION OF SPOILER CONTROL HORN
LOCATION OF SPOILER RETURN WEIGHT (1/4 OZ. STICK-ON)
1/16" X 1/4" BALSA FILLER STRIP
2-1/2"
NOTE: L.E. SHAPE BECOMES PROGRESSIVELY BLUNTER TOWARD TIP BETWEEN W-3 & W-9 TO AVOID TIP STALLING.
1/8" DIA. FOR SPOILER CABLES
1/16" SHEET BALSA (TOP ONLY)
2-3/16"
DIHEDRAL DETAIL (N.T.S.)
OPTIONAL 1/8" DIA. FOR SENSOR ANTENNA
USE THESE GUIDES TO LINE UP BOTTOM CAP STRIPS
3/4" BALSA TIP BLOCK
NOTE: HOERNER POSITIVE ANTI-VORTEX (CURLS UP)
1/16" PLY ROOT RIB (2) REQ'D INSTALL AFTER TRIMMING SHEET FLUSH WITH W-1
1/4" O.D. X 3" BRASS TUBE
BALSA PLUG
CUT SPAR FILLER FROM 1/4" X 1/2" BALSA
BALSA WEB
W-10
CENTER PANEL DIHEDRAL IS 2-3/16" MEASURED AT W-3 (4° REF.)
FILL CAVITY AROUND TUBE W/EPOXY & MICROBALLOONS
SECTION A-A
BLADE EXTENDED (PULL TO OPEN)
USE 1/2" X 12" STRIP OF SLICTAC OR EQUIV. AS HINGE
1/4" X 1" T.E. STOCK SPOILER BLADE
1/4" SQ. SPRUCE L.E. PRE-SHAPE BEFORE ASSEMBLY
.025 DIA. DIAL CORD
CONTROL HORN
SECTION B-B
1/4" X 1/2" X 3/4" BALSA FILLER BLOCK
1/16" PLY DIHEDRAL GUSSETS W-11
DIHEDRAL DETAIL
1/8" X 1/4" SPRUCE L.E. TIE
W-5
W-6
W-7
W-8
W-9
RIBS W-1, 1A & 9 1/8" BALSA (2) EA. REQ'D
RIB W-3 3/16" BALSA (2) REQ'D
RIB W-2A 1/16" BALSA (2) REQ'D
RIB W-2 1/16" BALSA (16) REQ'D
GUIDES TO LINE UP RIBS
W-1
W-1A
W-2A
W-2
W-3 3/16" BALSA
W-4
A
1/8" O.D. NYLON TUBE FOR SPOILER CABLE
1/16" VERTICAL GRAIN BALSA WEBBING
GAP
TO CLEAR SPOILER HORN
W-11
1/8" X 1/4" SPRUCE SUB-SPAR (TOP ONLY)
"X"
1/8" SQ. BALSA BLADE SUPPORT (SEE DETAIL)
1/8" X 1/4" SPRUCE SPARS (TOP & BOTTOM)
TRIM WEBS FLUSH WITH RIBS AFTER ASSEMBLY
1/4" SQ. BALSA SUPPORT
DRILL 5/32" DIA. HOLES AT RIB ℄ BEFORE ASS'Y
INSTALL THIS CAP AFTER JOINING PANELS
1/16" SHT. BALSA TO THIS LINE
OPTIONAL INNER NYROD TUBE FOR THERMAL SENSOR ANTENNA -BOTH PANELS
SCREWEYE
1/2"
1/16" X 1/4" BALSA CAP STRIPS (TOP & BOTTOM)
1/16" X 3/16" BALSA BETWEEN T.E. SHEETING-ALL BAYS
1/4" X 1" T.E. STOCK FILLER PIECE
DETAIL OF SPOILER TURN AROUND
BEVEL BOTTOM TRAILING EDGE BEFORE ASS'Y
W-3 ONLY
W-1, 1A, 2, 2A, 3
W-4
NOTE ANGLE (4° REF.)
FWD WEB
AFT WEB
HOLES FOR OPTIONAL SENSOR TUBING
W-10 1/16" VERTICAL GRAIN PLYWOOD (4) REQ'D
REMOVE THIS SECTION OF RIB AFTER ASS'Y TYP. (3)
DETAIL OF SPOILER BAY RIBS MARKED "X"
1/8" SQ.-POSITION SO BLADE IS FLUSH WITH TOP SHEETING
DETAIL OF BLADE SUPPORT TYP. (2)
(4° REF.)
W-11 1/16" PLY (4) REQ'D
SHEET 2 OF 2
PLAN NO. 92061701
'AQUILA'
DESIGNED BY DRAWN BY
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