MODEL WORLD

MW2768

Piper Tripacer

Designed by Keith Humber

A delightful semi-scale model of this classic aircraft.

CONTROL THROWS

Aileron: 3/4" up and 5/8" down
Elevator: 3/4" up and 3/4" down
Rudder: 1 1/2" both ways
CAR used on Prototype

1/8" Ply Wingscreen Cabin Riblet
1/8" Dowel
3/16" Ply Cabin Front Top Wing Fixing Plate
1/4" dia wing retaining dowels
CG range
1/8" Ply Cabin Top basic Wing Seat
4mm Nylon Wing Bolts
Former T1
3/16" x 1/4" Balsa Spine
1/16" Balsa top sheeting
Balsa Infill to underside of wing
Spruce Spreader
Balsa reinforcing gussets
1/16" sheet internal stiffener
1/16" Ply sheet to Cowl top
Perspex Windscreen
1/8" balsa
1/8" Ply
1/8" balsa planking
D1
1/8" balsa
1/8" Ply Wing Mount
1/8" Sheet balsa sides doubled with further 1/8" sheet on inside
C2
Mylar Cowl Hinges
C3
C1
1/4" x 1/4"
Perspex Windows
3/16" x 3/8" Stringer
2" Spinner
F1
Datum Line
F2
F3
F4
F5
Datum Line
1/2" x 9/16" Beech Engine Bearers
Upthrust 3°
Basic 1/4" x 1/4" box fuselage thus:
1/4" sq. basic box fuselage
3/16" x 3/8" Stringer
Fuselage Cut Line ('X' - 'X')
Laminate Nose Cowl
1/8" balsa sheeting outlined thus:
1/4" x 3/16" hardwood Servo beareres
1/16" sheet Stiffeners
Beech Torsion Bar block
6 swg nose leg torsion bar
Beech Torsion Bar block
1/4" dia U/C band retaining Dowel
1/4" sq. box fuselage thus
1/4" sheet reinforcing
Block in compound curves here
1/4" dia U/C band retaining Dowel
1/16" sheet internal stiffener
Block Chin Air Intake
X
X
6 swg wire nose leg bind with soft wire. Simulate Oleos with Litho Plate.
1/8" Ply Undercarriage Mount
1/16" Dural U/C Detailed on PLAN 2.
8 swg wire Axle retaining leg. Detailed on PLAN 2.
1/4" x 1/4" hard Balsa Longerons and Spacers

Nose Leg (scale 1:1.3)

Torsion Blocks. Epoxy to Engine Bearers and Formers
6 swg Nose Leg Torsion Bar
Windscreen cabin riblet
Slot 1/8" wide to mate with F5.
1/8" Ply Cabin Top basic Wing Seat
Y
Y
4" (100mm) Dubro Wheel.
reinforcing gusset
NOTE. Top Half Plan ViewThus
T1
1/16" Balsa sheet top
3/16" x 1/4" Balsa Spine
Beech Engine bearers
D1
3/16" Ply cabin front top
F1
C1
C2
F2
C3
F3
4" (100mm) Dubro Wheels.
NOTE. Engine Bay / Cowl shown from Top View
1/8" Ply Undercarriage Mounting Plate. Alternatively use 1/8" balsa faced with 1/16" Ply.
NOTE. Lower Section Half Thus
Tank Here
6 swg Nose Leg Torsion Bar
1/16" sheet balsa Internal Stiffener
Built-up Nose Cowl

TRI-PACER PLAN 1 of 2 - Sheet 1

T1 - 1/8" Balsa

T2 - 1/8" Balsa

T3 - 1/8" Balsa

Former C2 - 1/8" Ply (or hard Balsa)

Former C3 (1/8" Ply) shown with dashed line

Windscreen Cabin Riblet 1/8" Ply (2 No.) Shown in dashed line

Former F3 1/8" Ply

Slots for 6 swg wire

5/8" x 1/2" Beech Torsion Bar block 'A' (2 No.) Shown in dashed line

Wingscreen Cabin Winglet - 1/8" Ply

1/4" (6mm) dia. hole for wing dowel

Cabin Front Top Wing Fixing Plate 3/16" Ply (4mm)

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Balsa Stern Post

Taper 3/16" x 3/8" Stringers at rear

1/16" Balsa top sheeting

3/16" x 1/4" Balsa Spine

X

Former T2

5/8" x 1 1/2" Beech Torsion Bar block 'B' (1 No.) Shown in dashed line

Former T3

Robart steel pin hinge or Mylar strip hinge

3/8" sheet Rudder

3/8" sheet Fin

Typical Rudder Section

1/16" sheet internal stiffener

3/8" sheet Balsa Tail mounted @ 3° incidence relative to Datum Line

1/4" dia. Dowel (Epoxy)

1/4" sheet Tail Saddle

Robart steel pin hinge or Mylar strip hinge

Cut-out for Elevator Joiner

1/16" Sheet Internal Stiffener

T2

1/16" top sheeting

Covering

3/16" x 3/8" Stringer

Fuselage Cut Line ('X' - 'X')

Datum Line

1/16" sheet stiffeners

1/4" sq. basic box Fuselage

1/4" sheet Balsa infill

Control Horns

Robart steel pin hinge or Mylar strip hinge

3/16" x 3/8" stringer

Basic 1/4" x 1/4" box fuselage thus

1/16" sheet internal stiffener

16 swg tail skid (bind and glue)

Former T3

1/4" sq. hard Balsa longerons and spacers

X

1/8" Balsa side sheeting

1/4" x 3/8" Balsa packing

1/8" Ply wing mount - See plan view for details

1/8" Ply U/C mount

1/4" x 1/4" basic fuselage side

Former F5 - 1/8" Ply

1/4" sq. Basic Fuselage side

Spruce Spreader

1/4" sq. cross brace

Top Half Plan View thus

Former C1 (1/8" Ply) shown in dashed line

To Suit Engine

Optional Exhaust Space

Cut-out for 8 oz.Tank

Former F2 1/8" Ply

Former T2

Torsion Bar block 'A'

Torsion Bar block 'B'

Torsion Bar block 'A'

Bottom Half Plan View Thus

Former F1 1/8" Ply

Cut-outs for Engine Bearers

This cut-out may be omitted. Please refer to article text.

Dashboard Former D1 1/8" Ply

6 swg Nose Legs

Hole for Torsion bar anchor

3/16" x 1/4" Balsa Spine

Former F4 1/8" Ply

Y

Plan View Cut-Line ('Y' - 'Y')

Y

TRI-PACER PLAN 1 of 2 - Sheet 2

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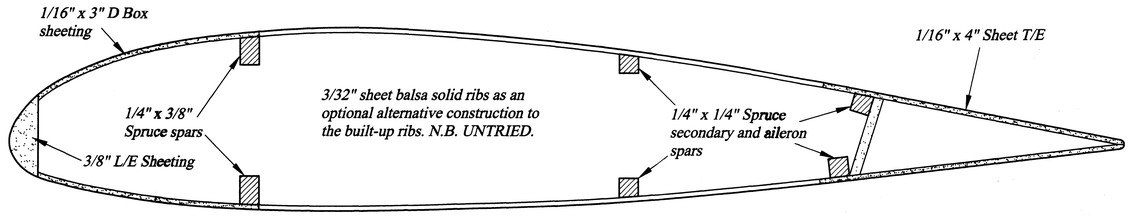
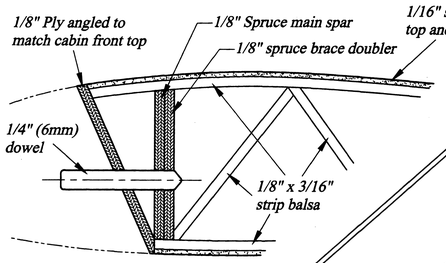
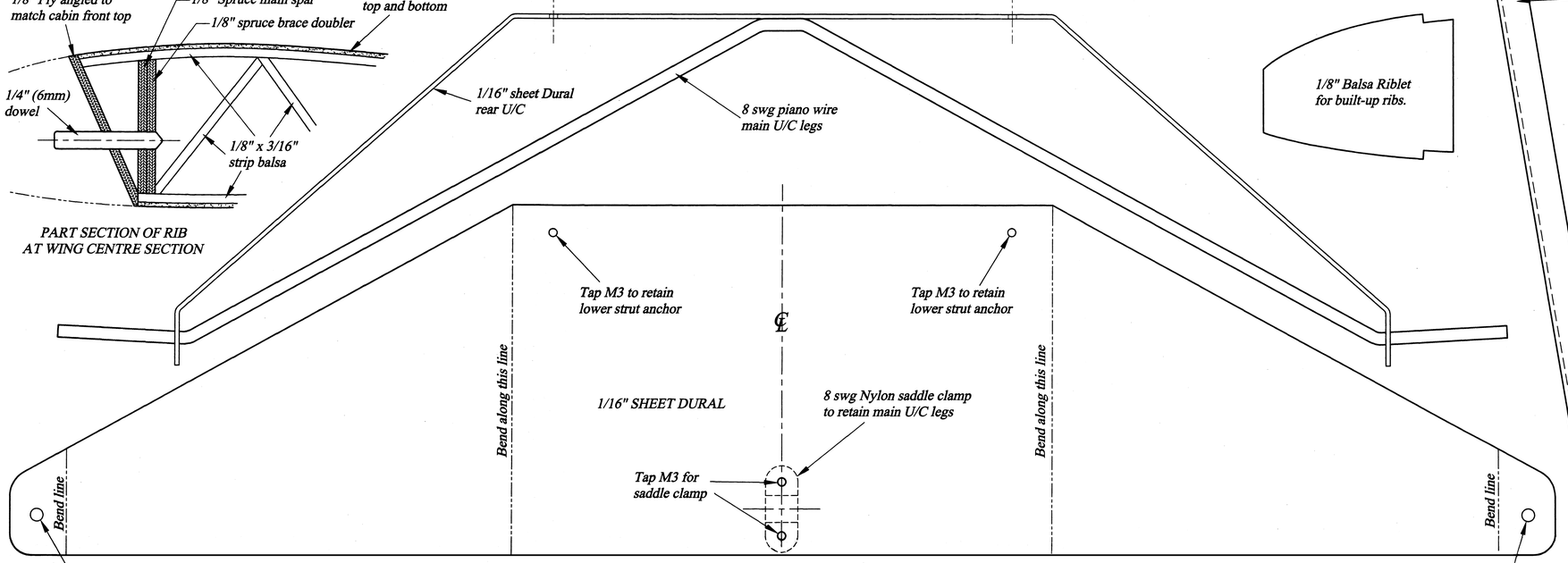
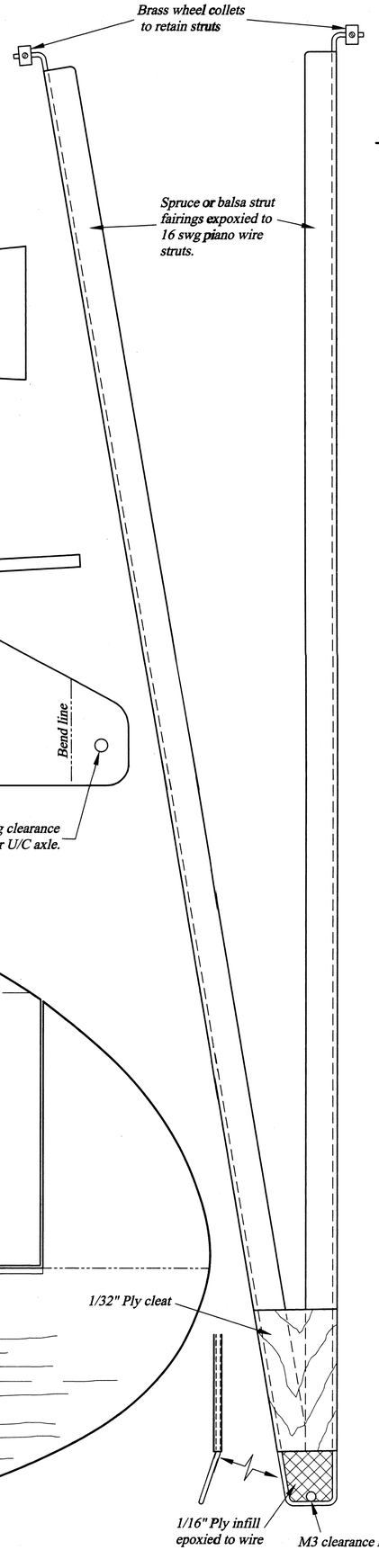
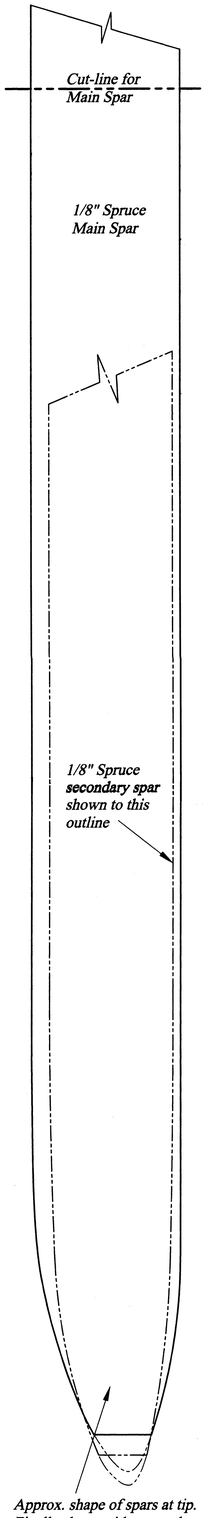


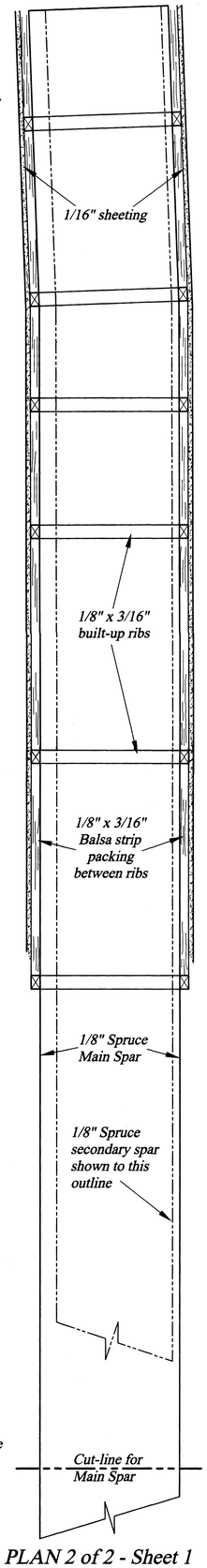


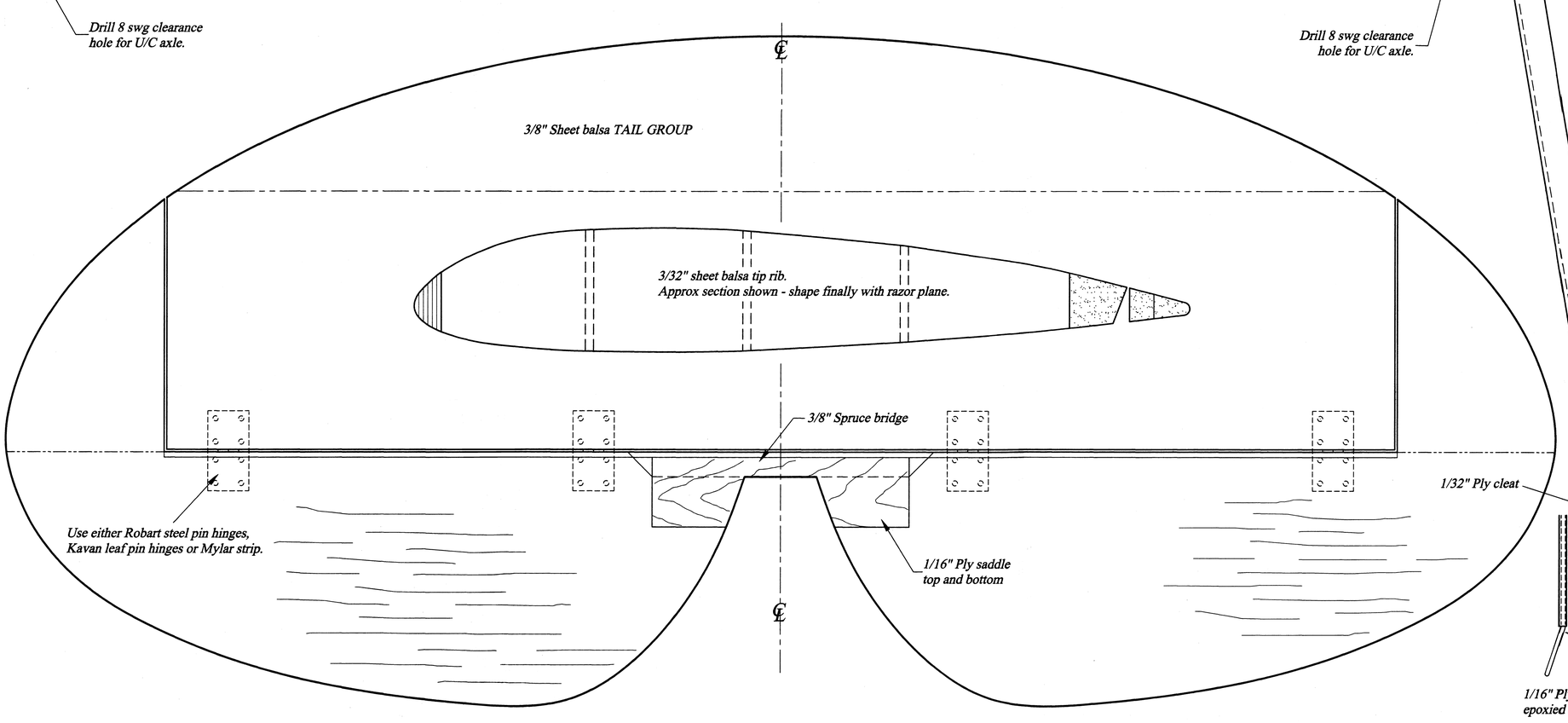
PART SECTION OF RIB AT WING CENTRE SECTION











TRI-PACER PLAN 2 of 2 - Sheet 1

Z

16 swg piano wire pushrods

90° Bellcrank

1/8" Ply plate

Clearance holes for M3 bolts

1/16" clearance hole for strut

M3 bolts

M3 bolts

1/16" Dural strut anchors bolted to spars

Notch spar on underside to clear pushrod.

3/8" balsa rib

1/8" Ply plate cut into aileron here for screwing horn to.

Hinge

1/16" sheet balsa top and bottom

3/8" sheet balsa aileron leading edge

1/8" Spruce full depth main spar

1/8" Spruce full depth secondary spar

3/8" sheet balsa leading edge

1/8"balsa ribs

Mylar or Kavan pinned hinges

1/16" sheet balsa leading edge D box - top and bottom.

1/8" Spruce full depth Aileron spar

1/8" balsa facing

laminate aileron tip from sheet balsa

Sheet balsa fill here

1/8" balsa riblet

Tip laminated from 1/16" x 1" balsa in six layers using PVA.

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NOTE.
38mm (1 1/2") Dihedral under each wing tip

Z

1/4" Birch Dowels

4mm Nylon wing bolts

Sheet balsa fairing

℄

1/8" Ply plate angled to mate with cabin top wing fixing plate

Aileron Servo mounted on blocks and beams

℄

1/8" Ply riblets angled to cabin front top

full depth 1/8" Spruce brace

Block in here

1/16" sheeting top and bottom to centre section

1/8" Spruce secondary spar

1/16" x 4" T/E sheeting (top and bottom)

1/8" Sheet Riblet

1/8" x 3/16"

3/8" sheet L/E

1/16" x 3" balsa D box sheeting

1/8" Spruce main spar

1/8" Spruce aileron spar

1/16" x 3/16" cap strips (top and bottom)

16 swg piano wire push rod

Z

Z

TRI-PACER PLAN 2 of 2 - Sheet 2