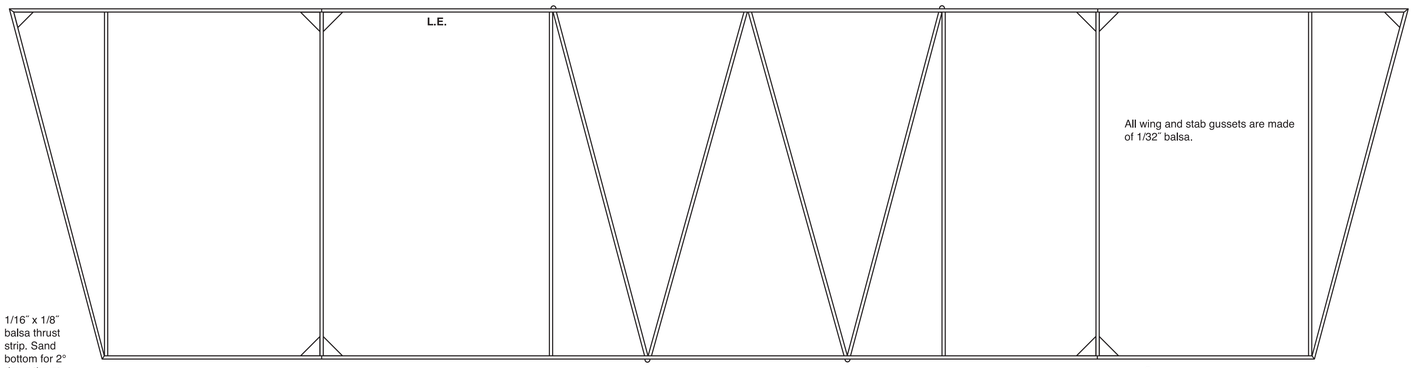
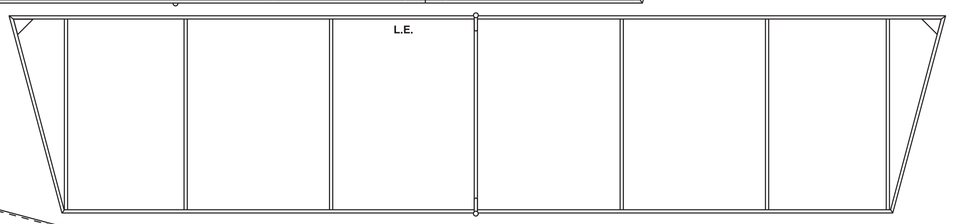
Plan Number 480



All wing and stab gussets are made of 1/32″ balsa.

1/16″ x 1/8″ balsa thrust strip. Sand bottom for 2° down thrust.

Wing and Stab outlines made from hard 1/16″sq. balsa strip.
Tip dihedral = 2″.



FUSELAGE:
OPTION #1: Roll 1/43″-1/32″, 5-7#, C grain balsa around a 1/4″ dia. rod. Tail boom tapers from 1/4″ID to 1/16″ ID.

OPTION #2: For those of you who would rather not beat yourself up with the rolling rig-a-marole, you may substitute 3/16″ x 5/16″, 7-10# stick stock. With this option you can expect a 3-5g. weight penalty.

1/16″ x 3/4″ L.G. sandwich slot. Top and Bottom.

1/4″ dia. x 3/4″ balsa dowel reinforcement.

NOTE: Binding and rubber hook omitted for clarity.

1/16″ ID tissue tube stab post receivers.

Make nose propeller/thrust plugs from 5/16″ dia. x 3/4″ balsa dowel. Turn down insert end to 1/4″ dia. Glue a 1/8″ x 1/16″ strip on bottom for bearing mount. Sand for 2° down thrust. Make note of right and left plug shapes for proper 3° left thrust from both motor sticks.

1/16″ ID tissue tube wing post receivers.

L.G. sandwich formers. Make 2 from 1/32″ sheet.

NOTE:
Notch all wing and stab posts to make flat gluing surfaces for solid mounting joints.

FLIGHT TRIMMING NOTE:
The four wing mounting posts turned out to make flight trimming a breeze with the original 2-Headed Penny. Wash-in and wash-out adjustments are made by simply sliding wing posts up or down in combination to make the desired adjustment. Similarly, the stab adjustments for incedence is just as slick. The original trimmed in 4 flights to turn in consistent 2 minute flights in Category I sites and flights longer than 6 minutes in Category IV sites.

Sliced Wing Rib Pattern or use A.A. Lidberg laser-cut ribs.

Make wing post gussets from 1/16″ scrap.

Make L.G. from .020 dia. M.W.

Make fin/rudder outline and formers out of .0416 x .0625 basswood strip. Wet-form around a 2.5″ diameter form.

1/16″ x 1/8″ balsa thrust strip. Sand bottom for 2° down thrust.

Wing posts are hard 1/16″ sq. rounded into dowels.

Stab posts are hard 1/16″ sq. rounded into dowels.

Make stab post gussets from 1/16″ scrap.

Stab rib pattern. Make 7 from 7# 1/16″ A/B grain balsa.

Rubber hook reinforcement. Make from 1/32″ scrap.

Make rubber hook from .020 dia. M.W. Hook services both motors. Glue and bind with thread, tissue or dental floss.

2 Ray Harlan thrust bearings. Glue with epoxy at 3° left and 2° down thrust and bind with thread, tissue or dental floss.
Use 1/32″ dia. Peck prop shafts with 2 small Teflon® thrust washers.
The original used 2 — 5 1/2″ dia. Peck red plastic propellers.

COVERING
Cover the top sides only for wing and stab.
Cover the left side only for the fin/rudder.
The original was covering in Esaki tissue in typical Penny Plane fashion. Since this plane does not prescribe to any particular formula rules, you can cover with your preferred material. Tissue, HPDE, Film or whatever.
The lighter you build, the better this bird will fly!

NOTE:
Notch all wing and stab posts to make flat gluing surfaces for solid mounting joints.

Make 2 —3/4″ dia. x 1/16″ wheels from cross-grain laminated 1/32″ sheet. Mount in a mandrel to turn and sand round in a Dremel® tool.
Make axle bearings from 1/16″ O.D. aluminum tubing.

2-Headed Penny
Indoor Rubber Sport

Wingspan: 18″	
Length: 19.5″	
Weight: 5.5 — 10.5 g.	"There's no school like the old school"

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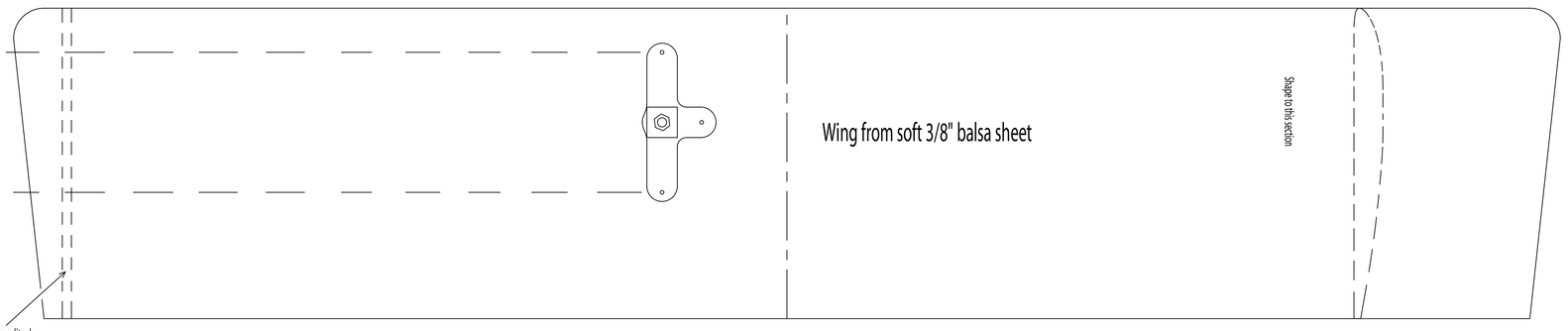
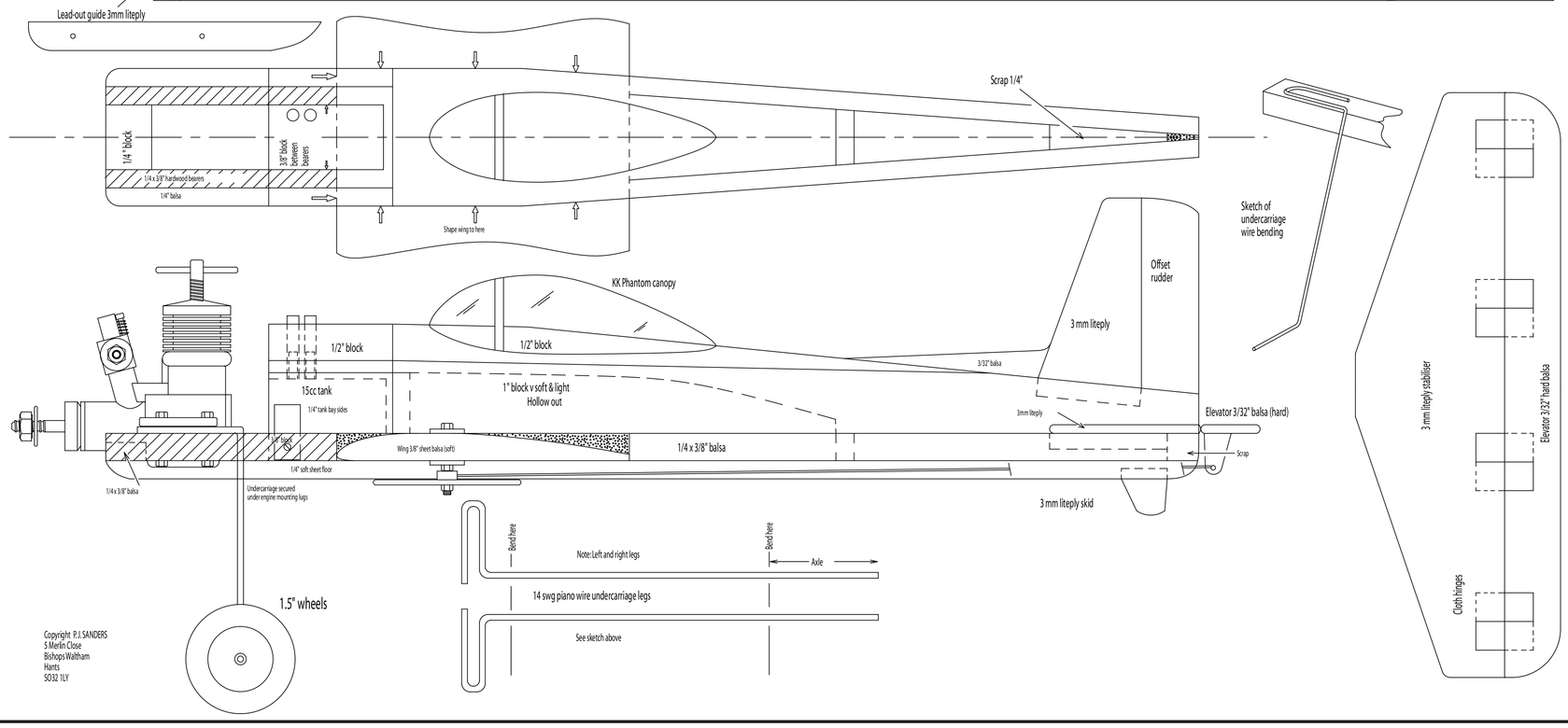
Plan Number 481

COLT mk. II
20" Wingspan Control-Line Trainer
For 1-1.5 cc diesel or .06-.09 glow

Developed by Peter Sanders

2012





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