# SMITH MINIPLANE
## KIT NO. RC-38

**PLATE 1 OF 2**

*Designed and Drawn by Mike Gretz*

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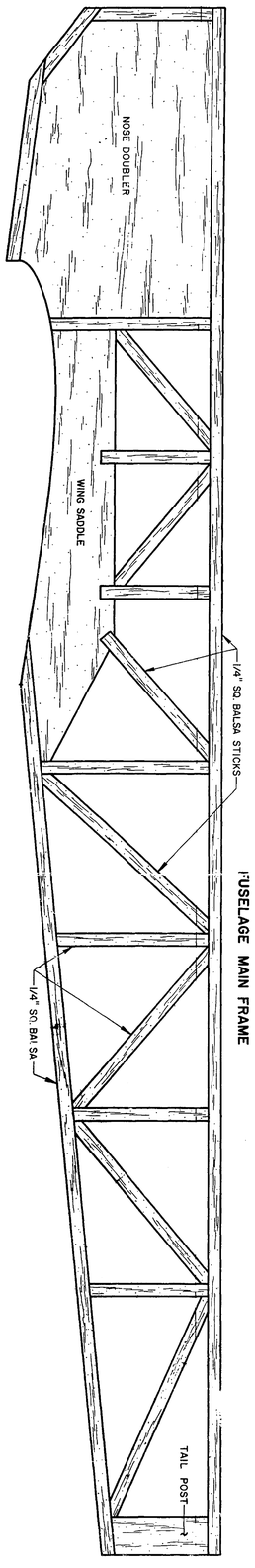
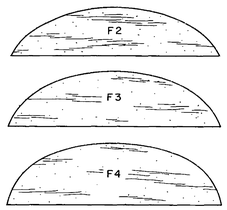
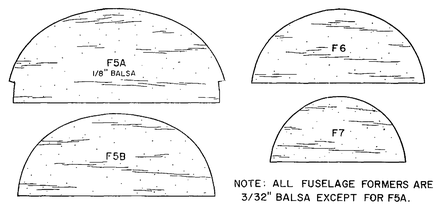
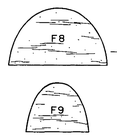




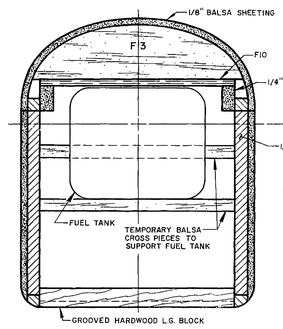




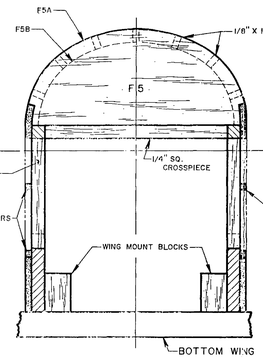

NOTE: ALL FUSELAGE FORMERS ARE 3/32" BALSA EXCEPT FOR F5A.

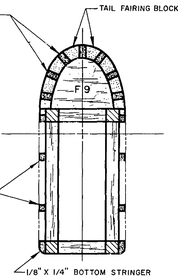
**FUSELAGE FORMER PATTERNS**

THIS PLAN PAPER CAN SHRINK OR EXPAND SLIGHTLY WITH TEMPERATURE AND HUMIDITY CHANGES. THIS WILL CAUSE MINOR MISMATCHING BUT WILL NOT SERIOUSLY AFFECT THE FIT OF THE PARTS. THE PATTERNS FOR ALL PARTS ARE TAKEN FROM THE MASTER INK DRAWINGS.

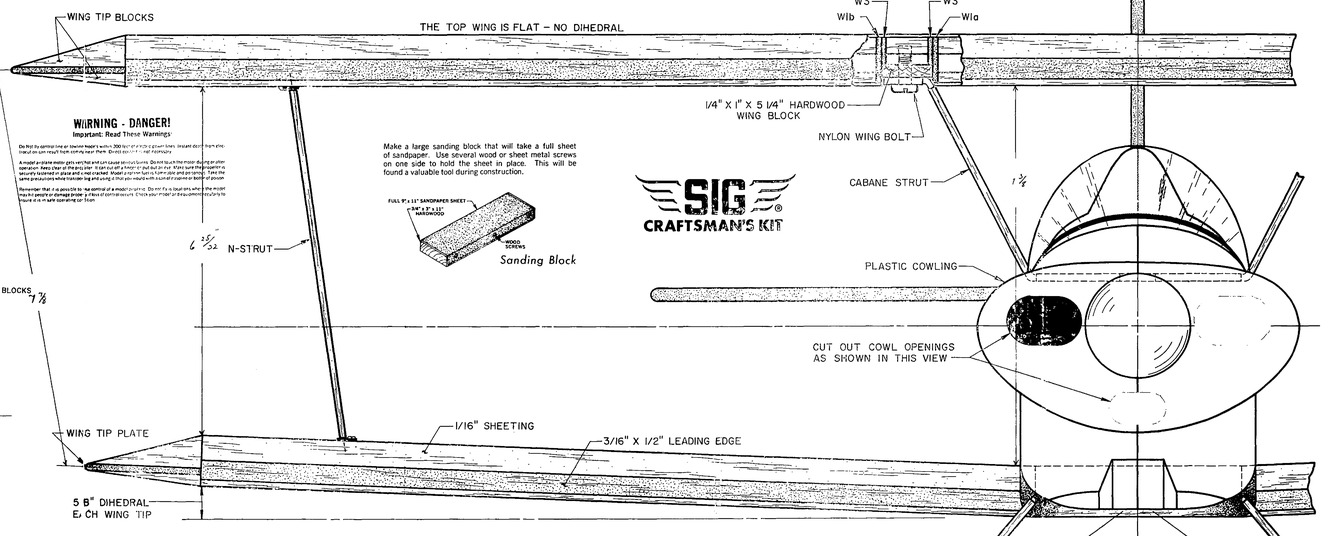



INSTALL THE FUEL TANK AFTER THE MODEL IS PAINTED. SUPPORT THE TANK ON BOTTOM AND REAR WITH TEMPORARY SCRAP BALSA PIECES. SEAL AROUND THE TANK VENTS AT THE FRONT OF THE FIREWALL WITH SILICONE SEAL.




IN ANY CONFLICT BETWEEN THE PLAN AND THE BOOKLET, FOLLOW THE BOOKLET INSTRUCTIONS. THEY ARE REVISED MORE FREQUENTLY THAN THE PLAN.




**WARNING - DANGER!**
**Important: Read These Warnings!**

Do not fly control line or towline models within 200 feet of electric power lines located downwind from the model site such that contact may occur. Even low-voltage lines are dangerous.

A model propeller motor gets very hot and can cause serious burns. Do not touch the motor during or after operation. Keep clear of the prop plane. It can cut off a finger or deal out an eye. Make sure the propeller is securely fastened in place and is not cracked. Model propellers turn at extremely high speeds and can be dangerous. Take the same precautions when hand-starting and running it that you would with a full-sized engine or gasoline powered model.

Remember that it is possible to lose control of a model in flight. Do not fly in built-up areas where the model may hit people or damage property. Fly in a field of adequate size. Check your model at frequent intervals in flight to insure it is in safe operating condition.

Make a large sanding block that will take a full sheet of sandpaper. Use several wood or sheet metal screws on one side to hold the sheet in place. This will be found a valuable tool during construction.

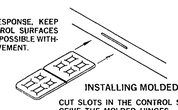



*Sanding Block*

SIG CRAFTSMAN'S KIT

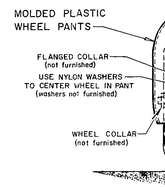



NOTE: FOR BEST CONTROL RESPONSE, KEEP THE GAPS BETWEEN THE CONTROL SURFACES AND THE MODEL AS NARROW AS POSSIBLE WITHOUT CAUSING A BIND IN THE MOVEMENT.

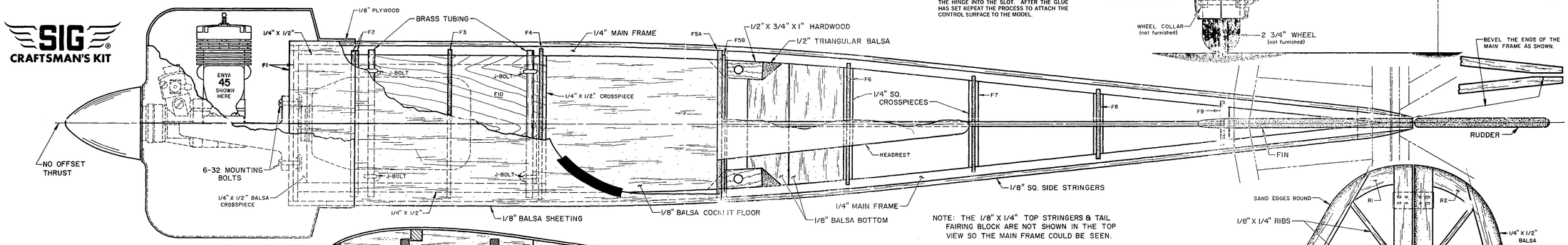


**INSTALLING MOLDED HINGES**

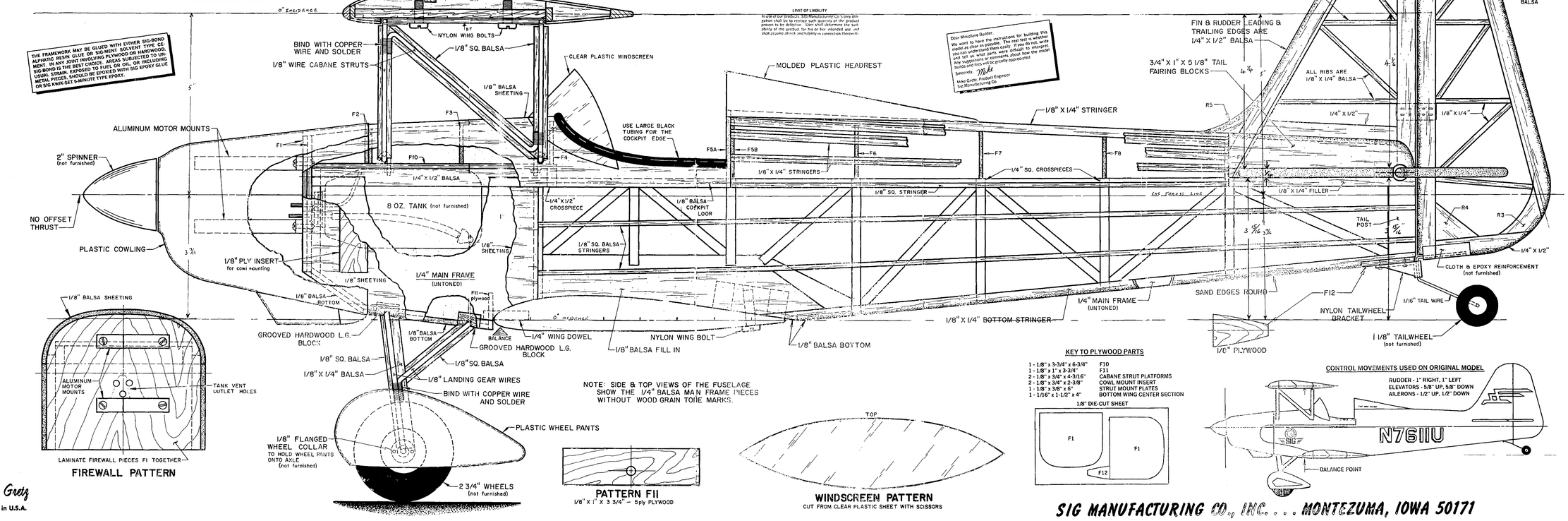
CUT SLOTS IN THE CONTROL SURFACE TO RECEIVE THE MOLDED HINGES. FILL THE SLOTS WITH SIG KWIK-SET EPOXY GLUE AND INSERT THE HINGE INTO THE SLOT. AFTER THE GLUE HAS SET REPEAT THE PROCESS TO ATTACH THE CONTROL SURFACE TO THE MODEL.




SIG CRAFTSMAN'S KIT




NOTE: THE 1/8" X 1/4" TOP STRINGERS & TAIL FAIRING BLOCK ARE NOT SHOWN IN THE TOP VIEW SO THE MAIN FRAME COULD BE SEEN.







**FIREWALL PATTERN**



**PATTERN F11**
1/8" X 1" X 3 3/4" – 5ply PLYWOOD




**WINDSCREEN PATTERN**
CUT FROM CLEAR PLASTIC SHEET WITH SCISSORS

**KEY TO PLYWOOD PARTS**

| | |
|---|---|
| 1 - 1/8" x 3-3/4" x 6-3/4" | F10 |
| 1 - 1/8" x 1" x 3-3/4" | F11 |
| 2 - 1/8" x 3/4" x 4-3/16" | CABANE STRUT PLATFORMS |
| 2 - 1/8" x 3/4" x 2-3/8" | COWL MOUNT INSERT |
| 1 - 1/8" x 3/8" x 6" | STRUT MOUNT PLATES |
| 1 - 1/16" x 1-1/2" x 4" | BOTTOM WING CENTER SECTION |

1/8" DIE-CUT SHEET




**CONTROL MOVEMENTS USED ON ORIGINAL MODEL**

RUDDER - 1" RIGHT, 1" LEFT
ELEVATORS - 5/8" UP, 5/8" DOWN
AILERONS - 1/2" UP, 1/2" DOWN




LIMIT OF LIABILITY
The use of our products, SIG Manufacturing Co.'s only obligation shall be to replace such quantity of the product proven to be defective, or, at our option, refund the purchase price of the product for any of such defective use and shall assume all risk and liability in connection therewith.

Dear Miniplane Builder:
We want to have the instructions for building this model as clear as possible. The real test is whether you can understand them easily. If you do not, write and tell us what parts were difficult to interpret. Any suggestions or comments about how the model builds and flies will be greatly appreciated.
Sincerely, Mike
Mike Gretz, Product Engineer
SIG Manufacturing Co.

*SIG MANUFACTURING CO., INC. . . . MONTEZUMA, IOWA 50171*

SMITH MINIPLANE
KIT NO. RC-38
PLATE 2 OF 2
Designed and Drawn by Mike Gretz
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SIG MANUFACTURING CO., INC. . . . MONTEZUMA, IOWA 50171
SIG CRAFTSMAN'S KIT
WARNING-DANGER!
TOP WING RIB PATTERNS—3/32" BALSA
HARDWOOD INSERT LOCATION
REMOVING THE JIG TABS
N-STRUT CONSTRUCTION
CABANE WIRES
TOP VIEW CABANE WIRES & WING MOUNT PLATE
1/8" CABANE STRUT WIRE PATTERN
1/8" CABANE BRACE WIRE PATTERN
BOTTOM WING
TOP WING
SECTION SHOWING TORQUE ROD INSTALLATION
3/32" TORQUE ROD
WF (SHADED)
3/32" T.E. GUSSET
SCRAP BALSA TORQUE ROD BRACE
WD
THREADED ROD
RC LINK
AILERON CONNECTOR
3/32" TORQUE ROD
SCRAP BALSA FILL-IN FOR BRACING THE WING DOWEL
1/4" DOWEL
WA
1/16" PLYWOOD
TYPICAL AILERON SERVO INSTALLATION
NOTE: INSTALL AILERON HINGES BELOW 1/16" TOP SHEETING
HINGE
NOTE: FOR BEST CONTROL RESPONSE, KEEP THE GAPS BETWEEN THE CONTROL SURFACES AND THE MODEL AS NARROW AS POSSIBLE WITHOUT CAUSING A BIND IN THE MOVEMENT.
WA
WB
WC
WD
WE
WF
WG
BOTTOM WING RIB PATTERNS—3/32" BALSA
DANGER!
SIG
CRAFTSMAN'S KIT
ILLUSTRATIONS FOR
CUTTING OFF THE AILERONS
(SEE BOOKLET FOR DETAILED CONSTRUCTION SEQUENCE)
1
SAW AILERON OFF NEAR THE BACK OF THE REAR SPAR.
2
SAND WING OPENING FLUSH WITH THE SPAR
CUT THROUGH THE PLANKING AND RIBS IN LINE WITH THE DIE CUT SLITS. STRAIGHTEN WITH A SANDING BLOCK.
NOTE THAT THE 90° CORNER IS UP
3
GLUE 1/8" X 3/4" BALSA TO THE BACK OF THE WING OPENING AND TO THE FRONT OF THE AILERON.
TRIM AND SAND THE 1/8" X 3/4" PIECES TO WING CONTOUR.
4
TYPICAL WING TIP CROSS-SECTIONS
EDGE BRACES
OUTLINE OF PARTS BEFORE SHAPING
END RIB
T1
T3
T2
T4
WING TIP END VIEW
TOP BLOCK
BALSA FILL-IN BLOCKS
BOTTOM BLOCK
TIP PLATE
EDGE BRACES TOP AND BOTTOM
STABILIZER
ELEVATORS
1/4" X 1/2" LEADING EDGE
1/4" X 1/2" TRAILING EDGE
1/8" X 1/4" RIBS
1/4" DOWEL JOINER
SAND EDGES ROUND
S1
S2
S3
S4
SURROUND THE 1/4" DOWEL WITH SCRAP BALSA
1/4" DOWEL
AILERON SERVO MOUNTED ON HARDWOOD BLOCKS (MATERIALS NOT FURNISHED)
1/16" SHEETING
3/16" X 1/2" LEADING EDGE CAP
1/8" X 1/2" LEADING EDGE
WING TIP BLOCK
1/8" PLYWOOD STRUT MOUNTING PLATE
1/8" STRUT MOUNTING PLATE
1/16" X 3/16" CAPSTRIPS
ALL RIBS ARE 3/32" BALSA
5/16" SQ. TOP SPAR DOUBLER
5/16" SQ. TOP SPAR
3/16" X 5/16" BOTTOM SPAR
AILERON PUSHRODS
WING TIP PLATE
1/16" BALSA
3/16" X 3/8" REAR SPAR
1/8" X 3/4"
3/32" GUSSETS
3/32" TORQUE ROD WIRE
BRASS TORQUE ROD BEARING
FILL IN WITH SCRAP TRAILING EDGE STOCK
WING TIP BRACE T3 IS ON THE BOTTOM.
TIP BRACE T4 IS ON THE BOTTOM OF THE WING TIP PLATE AT THIS LOCATION.
TIP EDGE BRACES—ONE ON TOP & BOTTOM OF TIP PLATE
WING TIP BRACE PATTERNS—3/32" BALSA
T1– 4 REQ.
T3– 4 REQ.
T2– 4 REQ.
T4– 4 REQ.
SHAPED TRAILING EDGE
SCRAP BALSA TORQUE ROD BRACE
CLEARANCE HOLES FOR 1/4-20 NYLON BOLTS
1/16" X 1 1/2" X 4" PLYWOOD ON THE BOTTOM OF THE WING CENTER SECTION