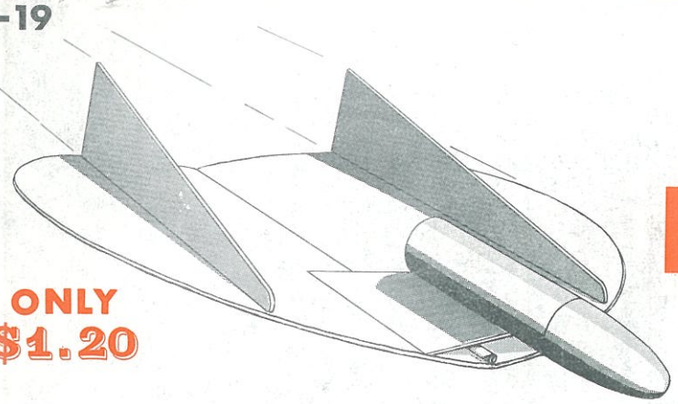
K-19



ONLY
$1.20

ASTRON INVADER!

Specifications

Length	11.8"	Body Dia.	.736"
Span	8.7"	Weight	.89 Oz.

ESTES INDUSTRIES, INC., Box 227, Penrose, Colorado

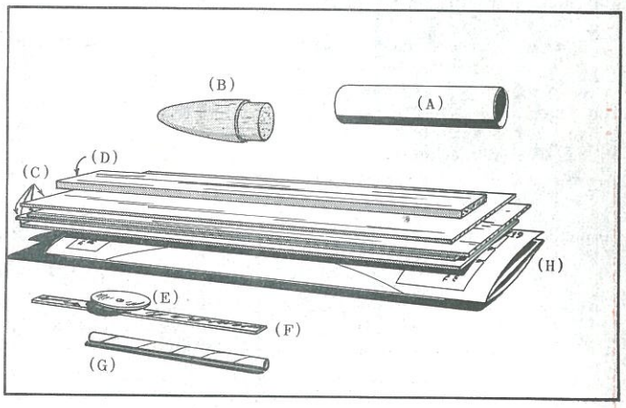
Assembly Instructions

Your Astron Invader rocket kit consists of the following parts as illustrated in the drawing at right:

(A) 1 body tube--Part #BT-20J
(B) 1 balsa nose cone--Part #BNC-20B
(C) 4 sheets balsa fin stock--Part #BFS-20
(D) 1 sheet balsa fin stock--Part #BFS-40S
(E) 1 nose cone weight--Part #NCW-1
(F) 1 balancing weight--Part #NCW-3
(G) 1 launching lug--Part #LL-2B
(H) 1 pattern sheet--Part #SP-19

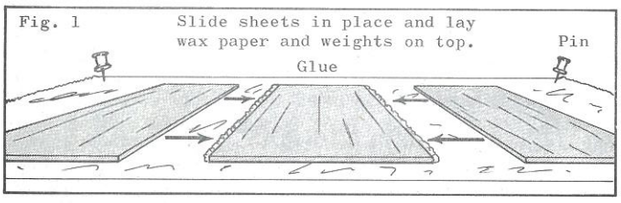
In addition to the materials included with your kit you will also need the following tools and supplies:

1) Waxed paper
2) Single edge razor blade or modelers knife
3) Scissors
4) Extra strong white glue
5) Ball point pen or pencil
6) Fine and extra fine grit sandpaper
7) Paint

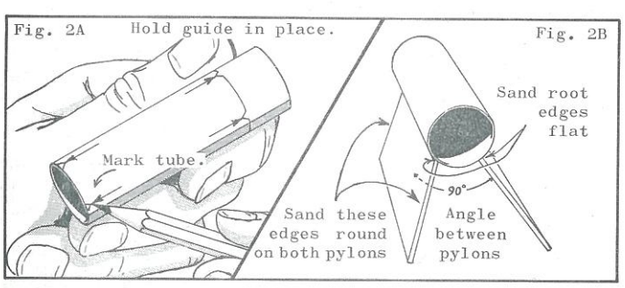


Read the entire assembly instructions carefully before beginning work on your rocket. Then start construction, following each step in order, checking off each step as it is completed.

☐ (1) Lay a 12" square sheet of waxed paper on a smooth, flat surface. Select three of the sheets of BFS-20 supplied that are most evenly matched in length and grain. Apply a liberal layer of glue to both side edges of one sheet of the balsa. Lay this sheet in the middle of the waxed paper and slide the other two sheets of BFS-20 against the edges of the first to form a square. Lay another 12" square of waxed paper over the balsa and place weights (books, tape dispenser, etc.) on top to hold the sheets flat while they dry.



☐ (2) Cut out the tube marking guide, wrap it around the body tube and mark the tube at each of the arrow points. Cut out the pylon and rudder patterns. Position them on the remaining sheet of BFS-20 as shown and trace out two copies of each. Cut out the pylons from the balsa and glue their root edges to the tube as shown in fig. 2B. Glue the nose cone weight to the nose cone but do not glue the nose cone itself in place.



☐ (3) When the balsa sheets for the wing have dried remove the weight and waxed paper. Draw a straight diagonal line from one corner of the balsa square to the opposite corner. Draw a second diagonal line between the remaining corners, but make it only 1/2" long so it just crosses the first line to find the center of the sheet.

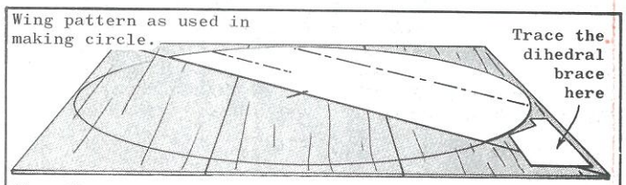


Fig. 3A

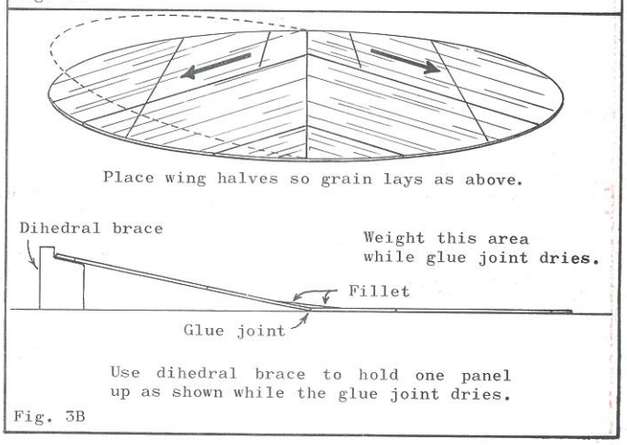


Fig. 3B

☐ (4) Cut out the wing pattern. Lay it on the balsa so the straight edge of the pattern is exactly on the diagonal line and the center mark on the pattern matches the center mark on the balsa. Draw around the outer edge of the pattern, shift the pattern around to the other half of the balsa, positioning it as before, and draw around the outer edge again to make an 8.8" diameter circle on the balsa. Cut out the brace pattern and trace it onto one corner of the left-over balsa.

☐ (5) Cut out the balsa circle and the dihedral brace. Cut the circle in half exactly on the diagonal line. Turn one half of the disc over so the grain of the two halves meets at a 90° angle as shown. Apply glue to the inside edge of one piece and place the other piece against it on the waxed paper. Support one wing tip 1-1/2" above the surface of the table with the dihedral brace. Place small weights over the joint between the two halves of the disc to hold the joint flat while it dries.