Assembly Instructions

Your Astra Spaceman rocket kit consists of the following parts as shown in figure 1. Check to be sure your kit is complete, then read the entire instructions before starting assembly.

A. Body tube Part #BT-60
B. Engine holder tube Part #BT-20J
C. Nose cone (head) Part #BNC-20P
D. Launching lug Part #LL-1B
E. Balsa stock Part #BFS-20
F. Pattern sheet Part #SP-1

In addition to the parts included in the kit, you will also need scissors, a knife or razor blade, glue, sandpaper, and paint or dope.

6) Check to be sure the spacers will fit inside the BT-60N body tube. If they stick out too far, sand them lightly until a proper fit is obtained. Apply glue to the outside edges of all four spacers and slide the body into position around them. (See fig. 5.) The bottom of the body should be even with the very end of the spacers. Using a toothpick or a scrap of balsa, work more glue into and around the joints to provide an extra strong bond.

7) Apply glue to edge B of one leg piece. Attach it to the body to match the shoulder spacer as shown in fig. 4. Check its alignment by sighting along the body. Repeat this procedure for the other leg and set the assembly aside to dry.

8) Glue one upper arm to one of the lower arms as shown in figure 5. Make sure the proper edges are glued together as in the illustration. Repeat with the other arm pieces. Set aside to dry.

9) After the glue on the legs and arms has dried, glue the arm assembly to the body and legs as shown in figure 6.

10) Sand a 45 degree bevel in each end of each base piece as shown in fig. 7.

11) Glue two of the base pieces together as shown in figure 6. Set the assembly on one side as in the illustration, and while the glue
is still soft, adjust the angle of the joint until the
far ends of the two pieces just match the opposite
points on the leg pieces. Repeat with the other two
base pieces and let dry.

12) Prop the assembled body and
leg assembly up vertically as in
figure 9. Glue the base pieces to
the legs. The joint should re-
semble that shown in figure 17. When the glue has
dried, the man should look like figure 10.

13) Apply glue to the opposite
ends of the braces and attach them
between the corners of the base
and the outside of the body over
the internal spacers as in fig. 11.

14) Glue the nose cone (head)
into the top end of the engine
holder tube as in figure 12.
To do this, simply apply glue
to the inside of the engine
holder tube at the top and in-
sert the head.

15) Apply a liberal amount of
glue to one side of the launching lug. Attach this side
of the lug to the inside of the body at a joint between
a spacer and the body as in figure 15.

16) If desired, scraps of balsa may be cut and glued
to the head to make the ears and nose. Use your own
favorite shapes here.

17) When all glue joints have dried thoroughly, the
man is ready for sanding and decorating. Sand all ex-
posed balsa parts to a smooth finish using extra fine
sandpaper. Apply sanding sealer or a light coat of
glossy white paint, let dry thoroughly, and sand all
surfaces with extra fine sandpaper. Brush or blow any
dust off of the surfaces and repeat the procedure until

all pores in the balsa are closed. Apply several light
coats of white paint or dope to give a smooth, white
undercoat.

18) Sketch out on a piece of paper possible designs for
the features of the man. The man on the front of these
instructions was simply painted with black details over
the white undercoat. For more realism, the face may be
painted light tan, the eyes, hair, cuffs, belt, tie,
pocket outline, and other details painted black, the
shirt red, and the pants brown or gray. If the white
undercoat is an enamel paint and covers the man com-
pletely inside and out, tempera paints or water colors
may, if carefully applied, be used to put in the fin-
ishings touches. One advantage of this is the ease with
which the water-base paints may be washed off in case
of error. Under no circum-
tances, however, should too
much water be used in the paint, and the rocket must
not be soaked.

The Astron Spaceman rocket should be flown first with
1/2A or A engines. The featherweight recovery system
is used. In this system, the engine separates from the
rocket at peak altitude, and both parts return safely,
the engine due to the high drag induced by its insta-
ibility, and the rocket is slowed down due to its low
weight (under 1/2 oz.) and relatively high frontal area
and drag. The featherweight system should only be used
with rockets under 1/2 oz. and with blunt nose cones.

When placing the Astron Spaceman on the launcher,
be careful to pass the launcher leads directly up from
underneath to the engine, so they will not catch on the
base of the rocket when it is launched. Use only elec-
trically operated launching systems with this rocket.