R&D CONTES

ACTIVATOR TUBE

1st!

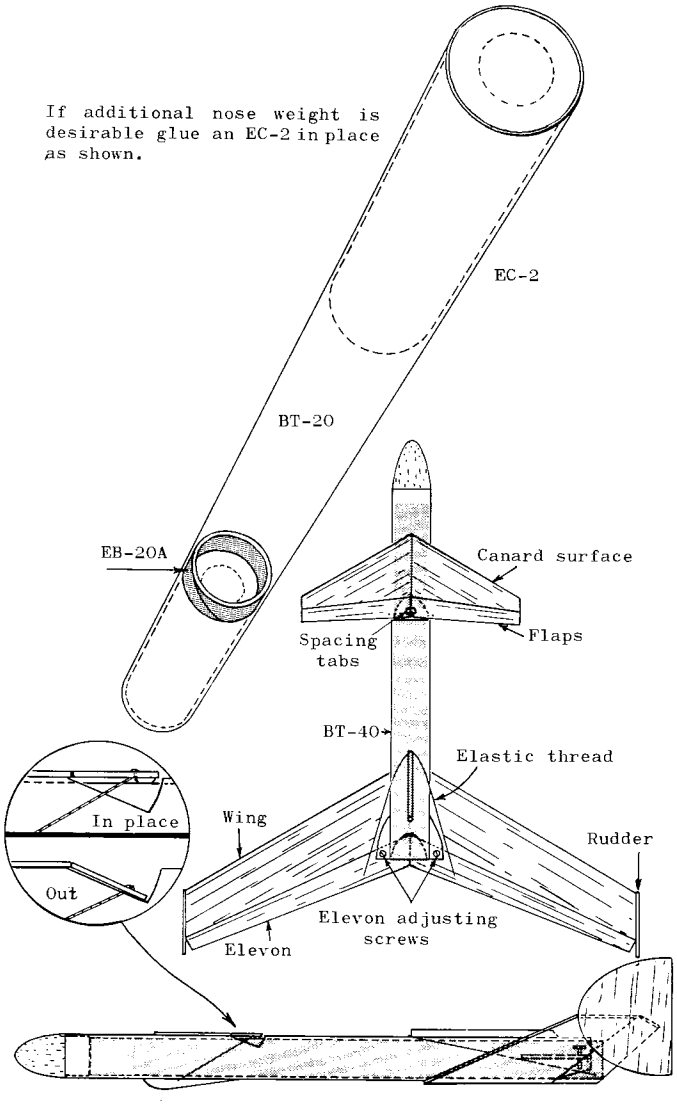
by Ron Burri

The activator tube system solves two problems which frequently arise with rear engine boost-gliders. First, it provides a neat and reliable method for activating canard flaps. In addition, it allows adding a removable weight to the nose of the model during the boost phase to give greater stability and a straighter ascent.

The activator tube itself must be large enough to hold an engine, yet small enough to slide freely (but not too loosely) inside the body of the model. A typical combination uses a BT-20 activator tube in a BT-40 model. BT-10 activator tubes can be used inside BT-30, but it is necessary to protect the mylar tube from the ejection charge by inserting a paper liner inside it.

The drawings below illustrate the construction of activator tubes and a vehicle designed to make use of the features of the activator tube. The tube should be painted a bright color to aid in locating it after flight. In addition, the engine must fit tightly in the activator for proper operation.

Typical Activator Tube



Place	Winner	Project
1st	Ron Burri, Kansas City, Mo.	Activator Tube
2nd	Larry Renger, Palos Verdes, Calif.	Pop Pod
3rd	Chris Carstensen, Brookfield, Wisc.	Whirlibird
4th	Steven M. Davis, Oak Ridge, Tenn.	Parallel Boosters
5th	Jim Merriman, E. St. Louis, Ill.	UFO

POP POD

2nd!

by Larry Renger

The Pop-Pod, developed by the "Father of the front-engine boost-glider," represents a significant advance in the design of models for high performance and competition use. This system reduces weight and drag for the glide phase, provides a soft return for the pod and engine, and allows the use of one engine holder unit with several gliders.

The pod itself is a 5" piece of BT-20 with a BT-20B nose cone. The bypasses are carved from spruce or hard balsa and coated heavily on the inside with white glue followed by high heat aluminum paint. In operation the ejection charge forces the engine rearward in the tube. The shock of the engine stopping against the wire hook separates the pod from the glider. With the engine in its rearward position the rear vents of the bypass are uncovered, allowing the ejection gases to travel forward to the parachute compartment. The nose cone is then forced off and the 'chute expelled.

The mounting lug on the pod must be fitted to the slot on the glider carefully. It must stay in place during powered flight but separate easily at ejection.

Pop Pod in Action

