pushbutton control

Combine control-line and free flight and what have you got? Radio control without radio! And, natch, no interference!

by J. L. McLarty

During the early part of World War II Allied shipping near Europe was being damaged and sunk by what appeared to be radio-controlled bombs. The enemy bombers were able to stay out of range of the AA fire yet could drop a winged bomb which they directed to the target. The Allies were not able to interfere with the bomb control, either by radio jamming or by trying to take over control, using very powerful radio equipment.

The reason for their failure was a very good one. The controlled bomb was directed by the bomber using signals which passed through insulated copper wires to the controls on the bomb. This cable of wires could be unreeled from the mother plane to a distance of five miles. The bomb was rocket-powered for the early part of its flight and glided on small wing and tail surfaces to the target.

Study of captured film indicates that a proportional type of control was used and that the percentage of hits was quite high. Fortunately, Allied bombers destroyed the manufacturing site of the glide bombs before many had been used.

The control system of the plane in the accompanying pictures was inspired by a showing of enemy films but was actually based upon similar work with a cable and solenoid operated controls on a large free-flight about 15 years ago.

The system, in brief, is to use copper wires instead of radio waves to carry signals between the ground operator and the model's control system. To install this system in an RC plane, a two-wire cable of No. 30 Formvar or nylon-covered copper wire with a two-strand length of...