PROGRAMMING SPECIAL VOLTAGES THROUGH NU-WAY STUDS¹

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Hoffman (1962) has previously reported a method for programming 110 v ac through Nu-Way snap studs. The problem is to insulate any part of the snap lead carrying a voltage which might either cause painful shock or short-circuiting. We have found another method, more convenient and less expensive, for programming all special voltages (e.g., 110 ac, 6.5 dc) through relays wired out to the customary snap studs on modular units mounted on power rods. A suitable insulating material is available in liquid form which, when applied to the backs of snap leads, hardens quickly into an insulating surface. Manufactured by the G. C. Electronics Co., a division of Textron Electronics, Inc., it is sold as Red Glyptal Insulating Varnish, #90-2. It may be thinned with G. C. #67 solvent. The varnish is supplied in 2-oz bottles and comes with a cap-mounted brush.

An insulated lead is made, as shown in Fig. 1, by making up a snap lead with wire and spaghetti insulation. A small piece of tape is then placed on the face of the snap. All exposed metal parts may now be coated by dipping the lead into the varnish or by applying the material by brush. Two coatings may be required. The masking tape may be removed from the face of the snap as soon as the material is tacky. Coated leads can be used within a few minutes by drying them in the warm air blast of an electric hand drying machine.

Relay panel studs not being used in a program which may occasionally carry the unusual voltage are protected by an insulated button placed over the unused stud. The wire clamp is cut from the snap and insulation is brushed on as above. It is also possible to make a stack of several leads: allow 3 in. or

4 in. of wire per lead, terminate each snap lead wire in a plastic-insulated inline connector, bond the snaps together into a stack with metallic adhesive between each lead, and insulate the entire stack as above.

When several different voltages are programmed on the ordinary relay panel or when different circuits must be discriminated, previously insulated leads may be color-coded with hobby enamels. The above methods have been used routinely for over a year, avoiding the expense of more costly relay panels with special connectors. However, such procedures as this are not to be recommended for student use or for laboratories in which equipment is programmed and reprogrammed by different individuals.

REFERENCE

- Hoffman, H. S. A method for programming 110 v ac through Nu-way Studs. *J. exp. Anal. Behav.*, 1962, 5, 534.

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