PROJECTS COMPLETED BY STUDENTS OF THE LEADERSHIP TRAINING PROGRAM IN THE AREA OF THE DEAF

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Basic Electronics by Karl H. May

Who Said You Couldn't Learn Electronics?

The student crossed his fingers and waited as the instructor began setting-up the test equipment. He had worked for three weeks on the construction of a baby cry signal lamp. Would it work? Would it really tell him if a baby cried? His baby? You see the student was a deaf parent who couldn't hear and therefore had to depend on some other means or device which would warm him if his baby cried and needed attention. The parent had read of a new course in electronics which was being offered to adult deaf.

And so begins our story of a new approach to the teaching of basic electronics with a group of deaf adults at a high school in Los Angeles. In the past, courses in electronics usually began with theory of various physical and electronic aspects. A great deal of the course work time was devoted to non-laboratory classroom instruction. The new approach used with the adult deaf begins immediately from a practical standpoint in the laboratory. It is felt that a much higher interest level is attained in this manner and therefore better attendence and learning. Perhaps the most important part of the course is the construction and maintenance of practical electronic devices which are a great help to

deaf individuals ~~in the class~~. These are devices of a simple nature which could be used in the home, at the office, or in the car. These devices include signal delayed-action lamps, speech indicators for using the telephone, and baby cry signal lamps. Knowledge of the automobile and home electrical systems is also made a part of the course. The range of previous experience in electronics of this year's class was from no experience what-so-ever to a fair amount. However, the most important asset has been a sincere willingness to learn.

At the first meeting of the class, various types of useful devices such as those mentioned above were discussed. Each person was then asked to select a device which he would like to have. It was at this point when a good deal of skepticism and misgivings were revealed. Various members of the class doubted their ability and felt they could never construct the device they desired to have. Their doubt was soon overcome.

Another aspect which made this class successful was a generous supply of electronic components donated to the school by various industries in the Los Angeles area. Without this source of free components it would have been quite impossible to conduct the course in the manner dedired.

A good deal of individualized help was given by the

different insturctors. During the construction of a particular device, students were helped as they encountered different problems. The instruction then was on a one to one basis. The teaching of a new concept or function was not given until there was an immediate need. Thus, the use of the soldering iron was not taught until the student was ready to solder. As various components were added physically, so were these components added to a schematic diagram which each student had to draw. In this manner, the student was able to visualize how each component in the diagram ~~in the diagram~~ related to its actual location in the device. It was felt that learning in this "reverse" manner was more meaningful. Students also realized that any one particular device could be assembled in a number of ways and also drawn in a number of different ways.

After a student completed construction of a particular device there came the "moment of truth". Would it work? Were all the electrical connections properly soldered? What would happen if a component was wired incorrectly? Or backwards? Except for some minor details and several defective components, not one device failed to work when initially tested! It was wonderful seeing the expressions on a student's face when he realized his project was a success.

Yes, It can be said with the greatest assurance -

the students received a bounty of information in the deaf adult education electronics course. They not only learned about electronics, but were able to construct devices which could be used upon completion. Perhaps somethings can be done better"backwards"?