FINAL PROJECT

PROTOTYPE OF INTRODUCING FINGER ALPHABET FOR DEAF PEOPLE BASE MICROCONTROLLER ATMEGA 32

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ABSTRACT

The aim of making prototype of introducing finger alphabet for deaf people base ATmega 32 is to make a device that can help the deaf people in learning alphabet by using the view of graphic LCD as a media to show the picture of finger sign. The making of this device is also to know the work way's of components that used as the main composer of this device.

This prototype is made especially to help the deaf people in learning alphabet by using the view of graphic LCD as a media to show the picture of finger sign. This device will work when the system being on. Then graphic LCD will show the beginning view. Furthermore, the instruction focused on keypad metrics as an alphabet input. The instruction is keypad code with its function in each knob. After that, the graphic LCD will show the picture character’s of finger sign and the character of alphabet according on the pressing the knob. The method that used in making prototype of introducing finger alphabet base ATmega32 base microcontroller ATmega32 is experimental. This method consists of some steps, they are as follows: (1) Identification of needs, (2) Analysis of needs, (3) Program of hardware and software, (4) Making the device, (5) Testing the device, (6) Operation the device, and (7) Input of the expert. The hardware consists of (1) The minimum system of ATmega 32 as the main controller, (2) Metrics keypad as the input of alphabet, (3) Graphic LCD as media of showing the picture character’s and the finger alphabet, and (4) Knob on/off to make on or off the system. The software consists of (1) The definition of processor, (2) The participation of function, (3) The definition of port, variable declaration and (4) The main function.

According to the testing result that was done, it can conclude that this prototype can work well. Prototype of introducing alphabet can show 26 pictures character finger alphabet, with alphabet information’s on the keypad. Beside, there is special knob to know the way of using the device or the guidance of using the device.

Key words: Metrics keypad, ATmega32, graphic LCD