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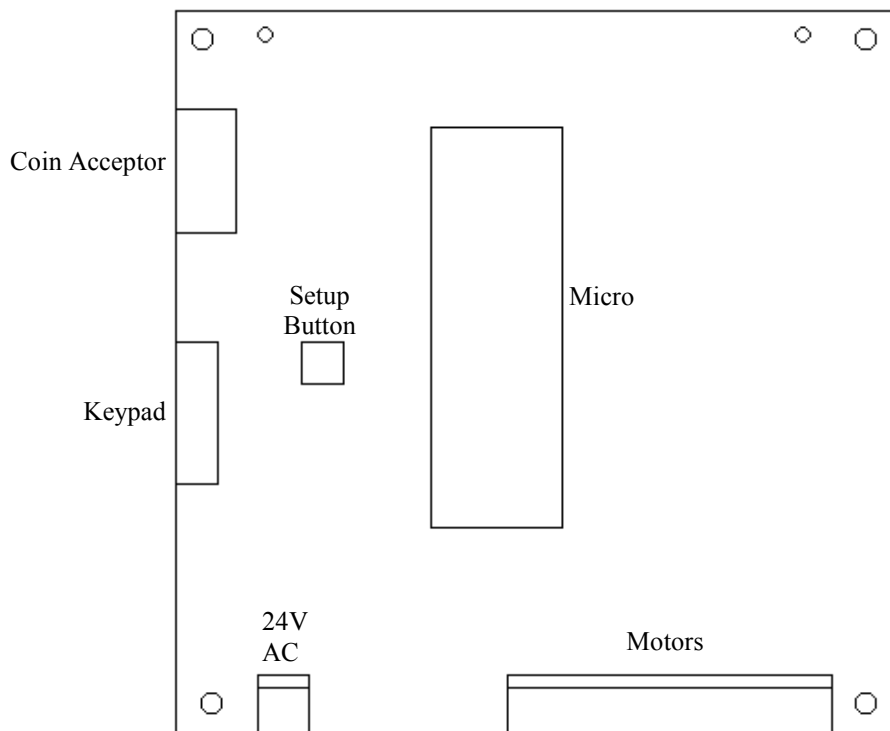
Preliminary

Small Vending Machine Controller

ARB-V13

DESCRIPTION

The ARB-V13 Vending Machine Controller is designed to control the operation of small Vending Machines that vend up to sixteen different products. The controller connects to a coin acceptor that supports the 212 Interface using a 10 conductor flat cable. The Controller will connect to and control a motor matrix with up to sixteen dispenser motors. An external keypad that mounts separately from the controller plugs into a connector on the back of the controller. The keypad is used for product selection, and together with the tactile setup button, on the back of the controller, is used for machine setup. A dual row 16 character LCD display is mounted on the front of the controller so that the controller may be mounted directly behind the display bezel of the machine.



Operation

When the controller is powered up, the message “Please, Select Product” will appear on the display, at this time acceptance is inhibited. Products are selected by entering the complete product code including any preceding ‘0’s; the controller will not allow invalid selections. The selected product’s number will be displayed on the first line with the price on the second. The selection can be cleared by pressing the ‘#’ button or by making another selection. Once a selection is made and the price is displayed, the controller will allow acceptance of money. The money accepted will be accumulated and displayed on the second line of the display following “Deposit:”. The product selection may be changed at any time, until the selected product’s price is reached. Once the selected product’s price is reached it will attempt to vend the product. If the user deposits more money than the product is worth, the controller will retain the extra credit after the product is dispensed, since the coin acceptor is unable to give change. If the user wishes to use these credits, he must select another product and possibly deposit more money reach this product’s price. If the remaining credits are greater than or equal to the price of the product that the user selects the product will be dispensed immediately. If the user does not wish to use the remaining credits they will be erased after 25 seconds and the controller will return to its initial state. If there are problems vending a product, the controller will display the message “This Product Is Not Available” and retain the user’s credit for another selection. The controller will remember that it has had a problem vending this product and will display the message “This Product Is Not Available” to anyone who subsequently selects it. This will message continue to appear until the problem is repaired and the controller is powered down and back up again.

Setting the Prices and the Number of Products

Before setting the prices, the number of products must first be set. To set the number of products press and hold the tactile button on the component side of the control board. The message “Quantity” will appear on the screen. Enter the number of products, from 01 to 16, using the keypad. If the number entered is larger than 16 the display will show the error message “ERR” and return to the initial state. If anyone tries to enter a product number larger than the largest product number, the control board will not allow the selection. To set the price, briefly press the tactile button on the component side of the control board. The control board will display the message “Product” on the first line and the messages “Price” and “cent” on the second line. To select the product whose price you wish to set, enter the two-digit product number. To set the price, enter the price on the keypad and press the ‘*’ button. The controller will accept up to five digits in the price, allowing prices of over \$100.00. To set a product to free vend, set the price to “0”. To disable a product, press the ‘*’ button after entering the product number without entering any price. To clear a number which has been entered press the ‘#’ button. “Price Set” mode will finish automatically if no buttons are pressed for five seconds. After setting the product prices, please wait five seconds before testing the machine

By default, the controller is set for 14 products with all prices set to \$0 or free vend.

NOTE: The wiring for the motors must always remain the same as on the wiring diagram regardless of the number of motors used in the system.