OPERATOR INTERFACE PRODUCTS APPLICATION NOTE

Subject: Display Alphanumerics using ASCII with SoftScreen For DOS AN# 1055A
Date: March 24, 1997
Name: Shiu Moy
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Description: This sample application displays alphanumerics and special characters from PLC registers that support ASCII.

The first step in creating this application is to create the ASCII table using the message editor. Start the message editor by selecting MESSAGE-EDIT. The message editor is divided into two sections, the message number and the messages. The message number corresponds to the ASCII code's decimal equivalent. For example, the decimal equivalent for 4Ah is 74, therefore message number 074 will store the letter J. The following is a partial ASCII table created using the message editor. Message 031 is a comment line and message 032 is the space character.

#	Message
030	
031	**ASCII table begins with #032.**
032	
033	**!**
034	**“**
035	**#**

.
.
.

#	Message
070	**F**
071	**G**
072	**H**
073	**I**
074	**J**

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Now create a single character message display by selecting SCREEN-EDIT-DISPLAY-MORE-MESSAGE. Configure the message object with the following information:

MESSAGE LENGTH: 1
VALUE EXPRESSION: [PLC register]>>8 (Truncates the last two digits)
MINIMUM VALUE: 32 (Beginning of the ASCII table)
MAXIMUM VALUE: 122 (Last character of the ASCII table)

The *value expression* truncates the last two digits by shifting the eight most significant bits to the right by eight positions.

Create another single character message display. Configure the message object with the following information:

MESSAGE LENGTH: 1
VALUE EXPRESSION: [PLC register]&0xFF (Mask the first two digits)
MINIMUM VALUE: 32 (Beginning of the ASCII table)
MAXIMUM VALUE: 122 (Last character of the ASCII table)

The *value expression* masks the eight most significant bits by ANDing with zeros.

This example uses a 16-bit PLC register that contains two ASCII characters. The above procedure is a method to separate the two ASCII characters.