



DESCRIPTION

Pro-Link is a programmable protocol whose messages can be programmed into the controller. Using Pro-Link, an HAI controller can send commands to and interpret commands from systems that are not programmable, such as lighting controls and infrared controls.

The RS-232 interface is configured as DTE (data terminal equipment). This is the same configuration as provided on a typical personal computer. Data is transmitted asynchronously using standard nonreturn-to-zero (NRZ) format (one start bit, eight data bits, and a single stop bit) at up to 9600 baud.

The Pro-Link protocol allows you to send and receive predefined text messages through an HAI serial interface. Each message can be up to 15 ASCII characters long. Several messages can be strung together and sent as one long message. Messages can be sent using any system trigger (timed, event, or macro) just like any other item in the controller.

Pro-Link also monitors each serial interface for incoming messages. Incoming ASCII strings that match stored messages in the controller can be used to activate macros. When a message is matched, the Program Command (macro) corresponding to the matching message is activated. When receiving an ASCII message that is over 15 characters, the HAI controller only processes the last 15 characters of the message.

SEND MESSAGE COMMAND

Use the Message Menu to send a message through the serial port.

*Note: prior to sending and receiving messages, each message must be defined under **Setup / Names / Message** in the controller.*

To enter the Message menu, from the top-level display or from the main menu, press the 8 (MESSAGE) key on the console keypad.

```
MESSAGE
1=SHOW  2=LOG   3=CLEAR↓
4=SEND
                               ↑
```

The 4 (SEND) key allows you to send any of the preprogrammed text messages through the Pro-Link serial port. You are first prompted to specify the desired serial port.

```
SERIAL PORT:
1-4
```

Next, select the message to be sent. You may enter the message number followed by the '#' key to send that message, or simply press the down arrow key to scroll through a list of messages. Press the '#' key to send the selected message:

```
MSGNAME
ENTER MESSAGE:      ↓
```

The message is sent out through the specified Pro-Link port exactly as the message was entered in **Setup / Names / Message**.

Carriage returns and line feed characters are not automatically appended to the end. To send ASCII control as part to the message, use the caret "^" character in the message. This character specifies that the next character is to be interpreted as an ASCII control character, such as "^M" to represent a carriage return.

Other useful sequences would be "^J" for a line feed character and "^G" for a bell character. To include an actual "^" character in the message, enter it twice as in "^^".

Each message can be up to 15 characters long. To send a longer message, simply program two messages to be sent one after the other.

RECEIVE MESSAGE ACTIVATED BUTTON

The When Button Program menu has been expanded to add the 8 (MSG) button.

Pro-Link also has the capability to monitor the serial port for incoming text messages. When a text message is received, Pro-Link searches through all preprogrammed messages looking for a matching message. If one is found, the Program Command (macro) corresponding to the matching message is activated.

From the Edit Program When menu, press the 2 (BUTTON) key to set up a program to be activated when a particular button is run or a particular event occurs. The user is prompted to specify the button/event that activates the program:

```
BUTTON:  
ENTER BUTTON    #=MENU ↓
```

Pressing the '#' key first will bring up a menu of button types:

```
BUTTON TYPE  
1=CTRL  2=SEC   3=ZONE ↓  
  
4=ALL   5=ALARM 6=X-10  
7=MISC  8=MSG           ↑
```

Pressing the 8 (MSG) key allows you to select the button for a "receive message" activated event. You are prompted to enter the desired message:

```
MESSAGE:  
ENTER MESSAGE           ↓
```

The message may be entered by entering the message number followed by the '#' key or by using the arrow keys to scroll through the list of messages.

Pro-Link determines that a message has been received when:

- One or more characters have been received followed by 100 ms of silence
- One or more characters followed by a carriage return character are received
- One or more characters followed by a line feed character are received

It is not necessary to enter the terminating carriage return or line feed character as part of the message name.