Card Reader Interface for OT802, OT805, and OT806 Operator Terminals

Setup and Operating Manual

Doc # L-806-1070
Rev. 00

System 5100

Link Electric & Safety Control Co.
444 McNally Drive
Nashville, TN 37211

Phone: (615) 833-4168
Fax: (615) 834-1984

© 2014

Table of Contents

Table of Figures

1   INTRODUCTION

The Card Reader Interface option for the OT802, OT805, and OT806 operator terminals allows external card reader and/or bar code readers to "log in" an operator for operations on the operator terminal. In other words, when the operator terminal in in a "code" mode of access control, instead of selecting the user and entering the code for that user when an operator wants to change a parameter, he can just use a card reader with his employee card to "log in".

- OT802 terminals can support one card reader.

- OT805 terminals can support one card reader. They will require the optional 805-3 communications card.

- OT806 terminals can support up to two card readers.

- Devices that can be connected via RS-232, RS-422, or RS-485 serial port are supported. This does not necessarily have to be a card reader. Most devices that send a series of serial characters (such as bar code readers or RFID readers) should work.

- The interface can be programmed to recognize up to 32 different cards per terminal.

- The interface can be programmed to match from 1 to 32 characters in the serial stream for each card.

- Each card can be programmed to "Log In" to one of the 16 user security profiles.

2 DEFINITIONS AND TERMINOLOGY

2.1 Operator Terminals

The Card Reader interface is supported by the OmniLink II LCD Operator terminal (OT802) shown in Figure 1, the OmniLink 805 Operator Terminal (OT805) shown in Figure 2, and the OmniLink 806 Operator Terminal (OT806) shown in Figure 3. The operation and configuration of the Card Reader interface is very similar on both of these terminals as the screen navigation and layout is nearly the same. Where differences exist, these will be spelled out by the model number of the terminal.

In this manual, the "OmniLink II LCD Operator Terminal" will be referred to as the OT802, the "OmniLink 805 Operator Terminal" will be referred to as the OT805 and the "OmniLink 806 Operator Terminal" will be referred to as the OT806.
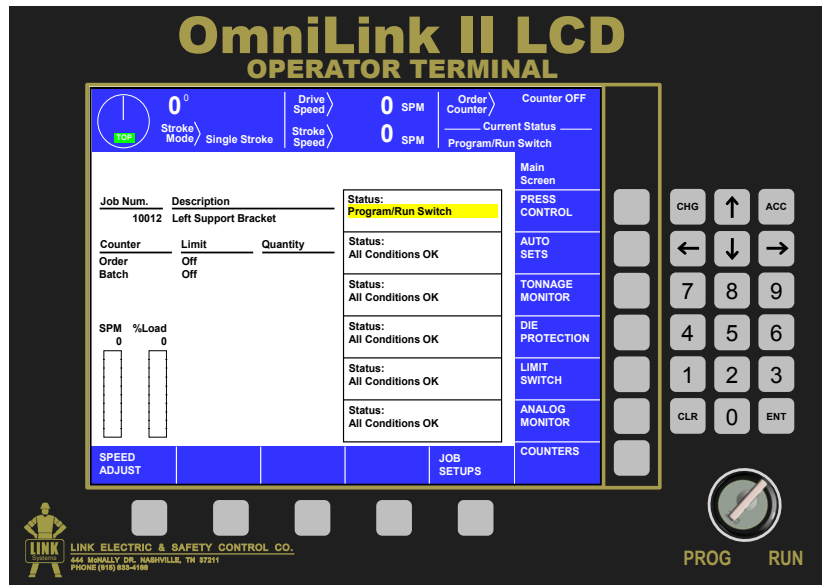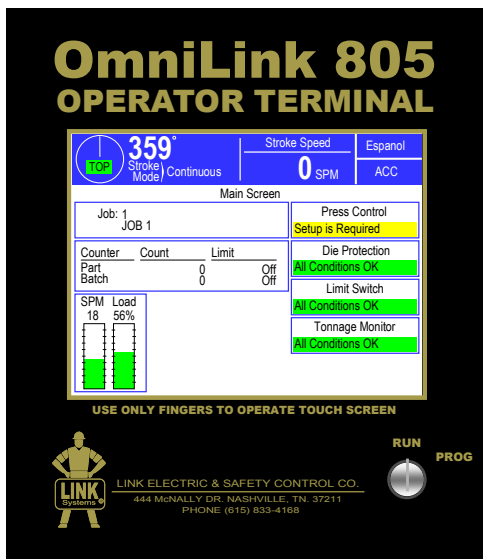

Figure 1: OT802 Operator Terminal

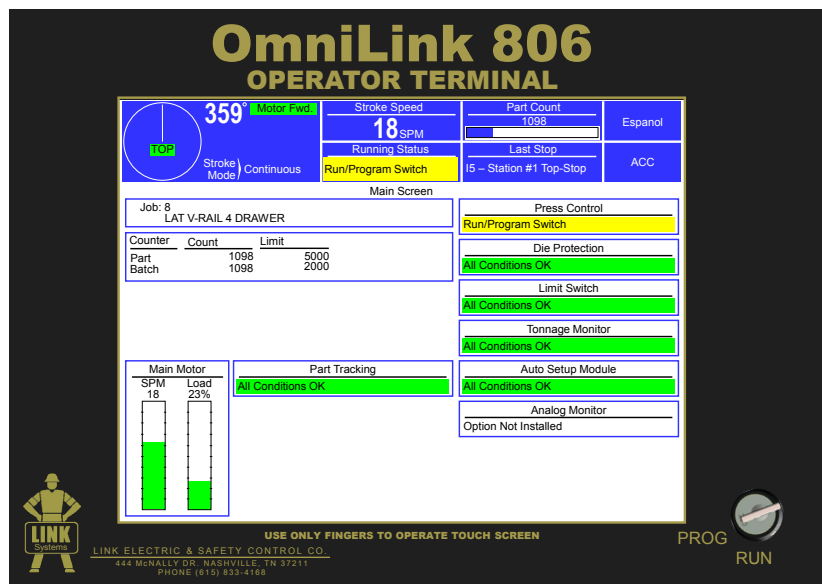**Figure 2: OT805 Operator Terminal**

Figure 3: OT806 Operator Terminal

3 OPERATION

3.1   The Card Reader Interface Operator Screen

The operator terminal main screen (See Figure 2 and Figure 3 on page 4) shows the current status of the different options connected to the system. For the OT802, OT805, and the OT806, pressing the **ACC** softkey (near the upper right of the screen) will bring up the "Quick Access" screen. This softkey is available in almost any screen the operator terminal is on (basically as long as you are not already in the "Quick Access" screen or one of the screens accessed from it).

Once in the "Quick Access" screen, press the **Auxiliary Comm** softkey. The "Auxiliary Comm" screen shows all auxiliary communication interfaces that have been configured, including feed interfaces, LinkNet interfaces, and any Card Reader interfaces.

For the OT802 operator terminal:
   Each interface has a softkey on the right side of the screen and its status is shown to the left of the key. Press the softkey to go to the operation screen for that interface.

For the OT805 and OT806 operator terminals:
   Each interface has its own box with its name and status. Press inside the box to go to the operation screen for that interface.

> **NOTE:**   The Card Reader interface is optional. No Card Reader interface screen will appear unless the Card Reader interface is enabled at the factory or through a Challenge/Response activation method in the field.

Each Card Reader interface will have its own box and its own statistics and diagnostic counters. Note that a Card Reader interface will only appear if enabled and set up on a serial port as described in Section 4.1.

When the inside of a Card Reader Interface box shown on the "Auxiliary Comm." screen is touched, a screen with diagnostic items will appear. The diagnostic counters for Card Reader interface are:

Character Count   The total number of bytes received on the serial port from the card reader device.

Message Count   The number of messages received from the card reader device. A message consists of all the characters that were sent for one card.

Last Card Read   This will show the index and name of the last card that was read by the interface. If no card has been read since power-up, it will display "None". If the last card read does not match a card configured in the interface, this will display "Unknown Card".

The **Reset** softkey will set the character and message counters back to 0.

4   CONFIGURATION

Before the Card Reader operation screens will appear in the "Auxiliary Comm" area, the Card Reader interfaces must be configured.

> **NOTE:**   The Card Reader interface is optional. No Card reader interface screen will appear unless the Card Reader interface is enabled at the factory or through a Challenge/Response activation method in the field.

> **NOTE:**   An access code is required to reach the configuration menus. The code is provided separately from this manual for administrative control.

4.1   Card Reader Configuration

To get to the auxiliary communications configuration screen:

For the OT802 operator terminal:

- From the main screen, go to "Brake Monitor" or "Press Control", depending on the system the OT802 is installed on.

- Press the **Configure** softkey. This key is visible only when the RUN/PROG key in the PROG position. Enter the configuration code when prompted.

- Press the **Operator Terminal** softkey.

- Press the **Auxiliary Comm Setup** softkey.

For the OT805 and OT806 operator terminals:

- From nearly any screen in the operator terminal, press the **ACC** softkey (near the upper right-hand corner of the display). If this key is not visible, the operator terminal is already in the Quick Access area or a sub-screen of it. Hit **Exit** until the key appears.

- Press the **Auxiliary Comm.** Softkey.

- Press the **Configure** softkey. This key is visible only when the RUN/PROG key in the PROG position. Enter the configuration code when prompted.

The Auxiliary Comm. Configuration screen shows the serial ports on the operator terminal and what communications function is currently running on each port.

To select the Card Reader communications function:

For the OT802 operator terminal:

- Use the up and down arrow keys to highlight the serial port you want to run the card reader interface on.

- Press the **Change Comm Task** softkey to cycle through the available communication tasks. Stop when you see "Card Reader Interface".

- Press the Configure Comm Task softkey to enter the Card Reader Configuration screen.

For the OT805 and OT806 operator terminals:

- Press inside the blue bordered box to the right of the serial port you want to use to bring up a list of the available communication functions that can be run on the port. For OT806 operator terminals, there are 2 different Card Reader interfaces available to assign to serial ports. For OT805 terminals, there is one Card Reader interface available. Select the "Card Reader Interface" from the list.

- Press the **Configure** softkey to the right of the port to go to the Card Reader configuration screen.

The items on this screen are:

Baud Rate	The Baud Rate of the serial port. This must match the serial settings of the card reader device.
Parity	The Parity of the serial port. This must match the serial settings of the card reader device.
Data Bits	The Data Bits of the serial port. This must match the serial settings of the card reader device.
Stop Bits	The Stop Bits of the serial port. This must match the serial settings of the card reader device.
Message Separation	This sets the minimum length of time that must occur with no characters received between messages. This allows the interface to separate one message from another. Another way to look at this parameter is that it is the "quiet space" that must exists between card reads. 2000 milliseconds (2 seconds) should be a reasonable starting point for this parameter.
Character Timeout	Once the interface determines that a message has started, each additional character must be received within this time or the message is considered to be ended. 200 milliseconds should be a reasonable starting point for this parameter.
Message Offset	The interface will match a maximum of 32 characters from the data received from the card to determine if it has a match. Some cards may have more than 32 characters of data on the front end before they get to the part that uniquely identifies each card. This parameter sets the number of characters to skip on the front of the message before collecting data to compare.

At the bottom of the screen is an area that shows the last captured data. Readable characters are shown directly and others are shown in hexadecimal inside brackets. When you scan a card to test the settings, pay particular attention to the message count. One card should generate one message. If it generates more than one message count, then you need to increase the "Character Timeout".

This screen also has a **Card List** softkey. Pressing this key will display a screen with a list of the cards that can be configured. Use the **Next Page** and **Previous Page** softkeys to see all 32 entries. The cards are listed with a number, a name, and whether or not they are used (enabled).

For the OT802 operator terminal:
   Use the up and down arrow keys to highlight the card you need to edit and press the **Edit Card** softkey to bring up a screen where the particulars for the card can be configured.

For the OT805 and OT806 operator terminals:
   Press the **Edit** softkey to the right of the card you want to edit to bring up a screen where the particulars for the card can be configured.

The items on this screen are:

Name	The Name to display for this card. This is what will show up in "Last Card Read" in the operation screen.
Security Profile	The user security profile to "Log In" when the card is read. Selecting this parameter will present a list of the enabled security profiles. Only security profiles that are "Used" will appear in this list.
Data Length	This is the number of characters to match from the data read from the card. The card might send 25 characters, but if the card identifying number occurs in the first 10 characters, this can be set to 10. The maximum length is 32.
Data Sequence	This is the data sequence the interface associates with this card. When the first "Data Length" characters of the data sent from the card reader match this sequence, the interface considers the card to have been matched and "Logs In" the "Security Profile". Readable characters are displayed as they are, and others are displayed in hexadecimal enclosed in braces. For example, "ABC123" followed by a carriage return would be displayed as ABC123{13}" and would have a "Data Length" of 7. Note that this parameter cannot be directly entered by the user but is set by using the **Set Data Sequence** softkey.
Set Data Sequence softkey	When pressed this softkey will set the "Last Captured Data" as the "Data Sequence" and "Data Length" after confirmation by the user. If no card has been captured, a message will appear informing the user that a card must be read first.
Last Captured Data	This area at the bottom of the screen shows the last captured data from the card reader. This is the same information shown at the bottom of the first configuration screen where you set up the baud rate, etc.