

The image features a dark grey background with a faint, white line-art outline of a rugged handheld device. The device has a large screen at the top, a numeric keypad below it, and a circular navigation pad with four directional arrows. The text is overlaid on the bottom half of the image.

ULTRA-RUGGED
FIELD PC
BAR CODE EXPANSION POD

Bar Code Expansion Pod

Using the Bar Code Expansion Pod with a Field PC offers the convenience of scanning bar codes and receiving the scanned data, all in a single handheld unit. With the Bar Code Expansion Pod, there are no extra cables that could get in the way. The Bar Code Expansion Pod includes a bar code scanner integrated on the Field PC and the Bar Code Reader program. The Bar Code Reader program is used to set up the scanner and to transfer the scanned data to a data collection program.

The Bar Code Expansion Pod integrates the laser bar code scanning technology of Symbol SE 1224 high-performance laser scan engine with the Field PC. It features:

- High performance bar code scanning in bright, outdoor light
- Scanning distances of 1 to 3 feet from the Field PC
- Excellent scan capability for poorly printed or low contrast bar codes
- Low power performance
- Compatible with nine different bar code symbologies

Bar Code Reader Program

The Bar Code Expansion Pod is shipped with a *Bar Code Reader* program factory installed on your Field PC. This program scans bar codes with the press of a button. The

scanned bar code can be transferred to any application program on your Field PC.

The Bar Code Reader has the following options available:

- Help
- Begin Scan
- Bar Code Setup
- Exit

The *Help* option on the *Bar Code Reader* title bar opens a drop down menu with an *About* option. Tapping on the *About* option accesses a pop up screen showing the *Bar Code Reader* version number and copyright.

The *Begin Scan* button enables the expansion pod to being scanning bar codes. It takes scanned data and enters it into an opened data collection program on your Field PC. The *Begin Scan* wedges the bar code scan into your running application.

The *Bar Code Setup* button opens the *Bar Code Setup* program. This setup contains selectable options to set up the scanner to operate according to your needs.

The *Exit* button at the bottom of the program screen closes the *Bar Code Reader* program.

To begin using your Field PC's Bar Code Expansion Pod, follow the instructions under the *Getting Started*, *Bar Code Setup*, and *Begin Scan*.

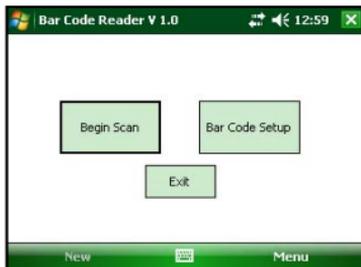
Getting Started

Before you begin using your Bar Code Expansion Pod to scan bar codes, open the Bar Code Reader program and set up the scanner's functions. To open the Bar Code Reader program, complete the following steps:

1. Turn on your Field PC.
2. Go to *Start > Programs > Bar Code Reader*.

An *Initializing Bar Code Scanner* message box pops up, as the *Bar Code Reader* program loads and the *Bar Code Reader* program opens.

3. Tap on the *Bar Code Setup* button.



Bar Code Setup

Before you begin scanning, use the *Bar Code Setup* program to configure the bar code scanner according to your needs. The Bar Code Setup options are described

throughout this section.

The *Bar Code Setup* program can be personalized using the following options:

- User
- Scanner
- Data Format
- Code Type
- Defaults

The *Bar Code Setup* program has many options that are enabled and disabled by tapping on small boxes next to the option. When an option is selected, a checkmark appears in the box. When the option is disabled, the checkmark disappears.

To set up and save your bar code scanning options, complete the following steps:

1. Read the following set up sections: *User*, *Scanner*, *Data Format*, *Code Type*, and *Defaults*.
These sections describe the functions in the *Bar Code Setup* program informing you of the options that best suit your bar code scanning needs.
2. Select the settings you want to scan bar codes.
3. Tap on the *Exit Setup* button to save your bar code settings and return you to the *Bar Code Reader* screen.
4. Go to *Begin Scan* section of this chapter and follow the directions there to begin scanning bar codes.

User Setup

The *User* tab contains the options that effect how you use and interact with the bar code scanning program. These options include targeting and scanning key selections, and audio and visual confirmation if a scan is successful or not.

To target bar codes, the scanner emits a small laser beam showing a red dot where the scan takes place. This target beam allows you to line up the scanner with the bar code.

To scan bar codes, the scanner emits a laser as a thin red line that covers the entire length of a bar code. In the scanning process, the bar code is read, decoded, and then transferred to a data collection program open on your Field PC.

The *User* tab allows you to select which key your Field PC uses to initiate a scan, and if you want audio and/or visual confirmation is a scan is successful or not.



Only one Field PC key is used to both target and scan a bar code. Pressing on the scan key initiates the target beam first. The target beam stays on for a set time ranging from 0.0 to 9.9 seconds. You have the ability to set the target time, see *Scanner Setup*. As soon as the target beam turns off, the scan beam turns on. The scan beam remains on until a valid scan is completed or until the maximum scan time is reached.

Note: Holding the Scan Key down during a scan or pressing it multiple times during the scan does not affect the scan. The key presses are ignored.

Scan Key Selection

The *Scan Key* box allows the user to select which key is pressed to initiate a scan. To select the *Scan Key* you want to use, tap on the down arrow on the right side of the *Scan Key* box to access a drop-down menu listing all the available scan keys. Tap on the name of the key you want to use for scanning.

Beep Key Selection

The *Scan Key* box allows the user to select which key is pressed to initiate a scan. To select the *Scan Key* you want to use, tap on the down arrow on the right side of the *Scan Key* box to access a drop-down menu listing all the available scan keys. Tap on the name of the key you want to use for scanning.

Beep on Good Read

The bar code scanner program provides audio feedback to notify you on a successful scan. To activate the audio feedback, tap in the *Good Read* box in the *Beep On:* section so a checkmark appears. A single beep sounds at the completion of a successful scan.

Beep on No Read

The bar code scanner program provides audio feedback to notify you about an unsuccessful scan. To activate the audio feedback, tap in the *No Read* box in the *Beep On:* section so a checkmark appears. Two beeps sound when a scan is unsuccessful.

Good Read Message

The bar code scanner program provides visual feedback when a scan is successful. To activate this visual feedback, tap in the *Good Read* in the *Visual On:* section so a checkmark appears. A *Scan OK!* pop-up message displays on the screen approximately 1.5 seconds after each successful scan.



Scan OK!

No Read Message

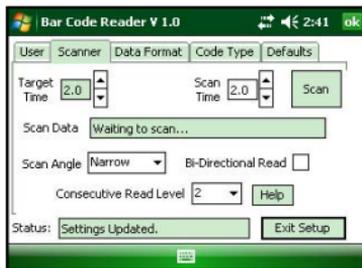
The bar code scanner program provides visual feedback when a scan is unsuccessful. To activate this visual feedback, tap in the *No Read* in the *Visual On:* section so a checkmark appears. A *Scan Failed!* pop-up message

displays on the screen approximately 1.5 sections after each unsuccessful scan.



Scanner Setup

The *Scanner* tab is used to configure the operation of the scan engine.



Target Time

The *Target Time* option allows you to set the amount of time the target beam is on before a scan is initiated.

The *Target Time* box shows the time, in seconds, that the target beam is on. The scroll buttons allow you to set the amount of time the target beam is on before a scan is initiated. The *Target Time* can vary from 0.0 to 9.9 seconds, in 0.1 second increments.

If you set the *Target Time* at 2.0, that means the target beam remains on for 2.0 seconds and then turns off as

the scan beam turns on. The scanner takes approximately .5 seconds to focus the target beam. Because of this, it is recommended that the minimum target time be set to 0.5 or longer than the desired target time.

Scan Time

The *Scan Time* option allows you to set up the amount of time the scan beam remains on to perform a bar code scan. The *Scan Time* window shows the time, in seconds, that the scan beams is on. The scroll buttons allow the user to set the amount of time the scan beam is on. The *Scan Time* can vary from 0.0 to 9.9 seconds, in the 0.1 seconds increments.

A scan terminates as soon as it successfully reads a bar code or when the scan time has reached the maximum scan time specified in Scan Time window.

Scan Button

The *Scan* button allows you to test the functionality of the scanner within the setup program. Pressing the *Scan* button turns the target beam on for the *Target Time* and then performs a scan.

Scan Data

The *Scan Data* field is used to display the results of scans initiated by the *Scan* button.

Scan Angle

The bar code scanner is capable of using two different scan angles. The *Scan Angle* determines the width of the scan beam.

Tap on the down arrow on the right side of the *Scan Angle* box to access a drop-down menu listing two available scan angles. Tap on the size of the angle you want to use for scanning. The wide scan angle is 40° and the narrow angle is 30°.

Bi-Directional Read Select

Selecting the *Bi-Directional Read* option sets up the scanner program to read the bar code in both directions before it is decoded.

Consecutive Read Level

When the bar code scanner performs a scan, it is performed in two stages. The first stage reads the bar code image and verifies it is a valid bar code. The second stage decodes the raw bar code data into ASCII characters that are sent back to the host application. The user can specify how many times a bar code is to be successfully read before it is decoded.

The scanner has four security levels or successful read levels. A *Help* button is located to the right of the *Consecutive Read Level* box and explains the four security levels.

Data Format Setup

The *Data Format* tab allows the user to specify the format of the data that is returned by the scanner.



Format

The *Format* drop-down box allows you to select if a prefix and/or suffix character are added to the bar code data. The prefix character is added before the bar code data. The *Suffix 1* character is appended to the end bar code data and the *Suffix 2* character is appended after the *Suffix 1* character. If *Suffix 1* is not selected, *Suffix 2* is appended to the end of the bar code.

Tap on the down arrow on the right side of the *Format* box to access a drop-down menu of the available data format. Tap on the format you want to use. The eight *Format* options are:

- Data
- Data, Suffix 1
- Data, Suffix 2

- Data, Suffix 1, Suffix 2
- Prefix, Data
- Prefix, Data, Suffix 1
- Prefix, Data, Suffix 2
- Prefix, Data, Suffix 1, Suffix 2
- Code ID

The scanner is capable of returning a Code ID character(s) for the bar code that is scanned. If a *Code ID* is selected, the Code ID character(s) is placed before the bar code data and the prefix character (if enabled).

There are two types of Bar Code ID's: Symbol and AIM. The Symbol Code ID is a single character code. The AIM Code ID contains three characters, a bracket ("]") is followed by a code character and a modifier character.

Symbol Code ID

A = UPC-A, UPC-E, UPC-E1, EAN-8, EAN-13

B = Code 39, Code 32

C = Codabar

D = Code 128, ISBT 128

E = Code 93

F = Interleaved 2 of 5

G = Discrete 2 of 5, or Discrete 2 of 5 IATA

J = MISI Plessey

K = UCC/EAN-128

L = Bookland EAN

M = Trioptic Code 39

N = Coupon Code

Prefix and Suffix

The *Prefix*, *Suffix 1*, and *Suffix 2* character selection pull-down window lists the characters that can be used as a prefix or suffix. Only the prefix or suffix pull-down windows that are enabled are shown. The prefix and suffix options are:

Option Description

None No function is performed.

<LF> <LF>=Line Feed, which moves the cursor down to the same column on the next line.

<CR> <CR>=Carriage Return, which causes the cursor to move to the left margin, often used with line feed to start a new line of output.

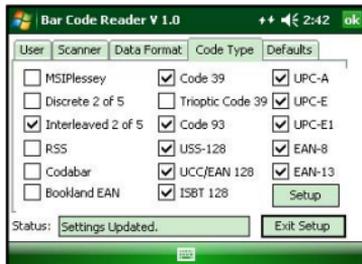
Adds a # sign before or after the scanned bar code (depending on suffix or prefix)

Tab Performs a Tab key function, which moves the cursor over to the next column.

Code Type Setup

The *Code Type* tab lists the bar code types that the scanner can read. You can enable (box checked) and disable (box

not checked) each of these bar code types. The *Setup* button at the bottom right corner of the screen is used to set up more detailed parameters for the bar code types in the *Setup* section below.



Setup

Tapping on the *Setup* button opens the *Additional Parameter Setup* screen, accessing the following seven bar code setup options:

- UPC/EAN 1
- UPC/EAN 2
- Code39
- MSI Plessey
- Interleaved
- RSS/Code93/Discrete
- Codabar

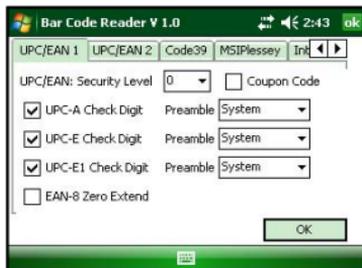
To access one of these options, select the tab with the bar code type you want to enhance. The tabs are located along

the top of the setup window. The additional tabs can be accessed using the scroll buttons on the upper right of the screen. For more information about each of the accessible bar code types, go to the following Web site and read the *Symbologies (Bar Code Fonts)* section.

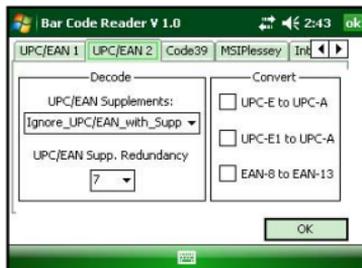
http://www.systemid.com/learning_center/

The setup parameters for each bar code type tab are accessed by using checkmark boxes or drop-down menus.

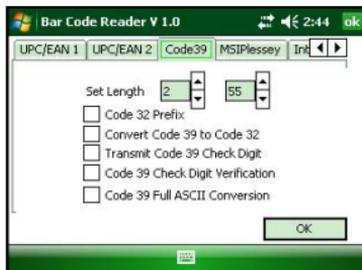
UPC/EAN 1



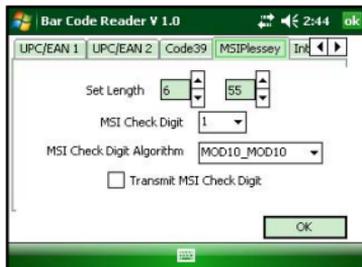
UPC/EAN 2



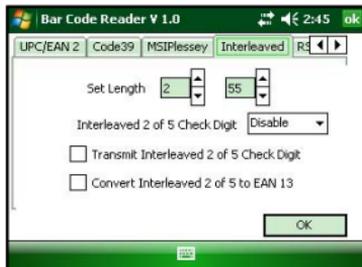
Code39



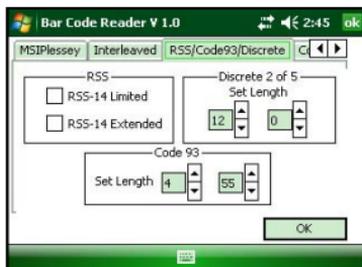
MSIPlessey



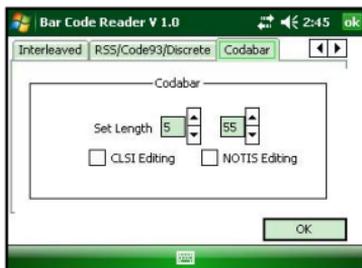
Interleaved



RSS/Code93/Discrete



Codabar



Defaults Setup

The *Defaults* tab is used to load either user-defined configuration parameters or factory-default parameters. The users can save and reload four different user

configuration files. The defaults are the settings that come installed on your Field PC when it is shipped.



Exit Setup

The *Exit Setup* button is available on every *Bar Code Setup* tab, allowing you to close the *Bar Code* program at any time. Tapping on the *Exit Setup* button saves all options you set up and takes you back to the *Bar Code Reader* screen.

Tap on *Begin Scan* to start the bar code scanning program. Tapping on the *Exit* or *X* button, in the top right corner, exits out of the *Bar Code Setup* program.

Begin Scanning

The bar code scanning program allows bar code data to be directly entered into an application program. The bar code data is entered into the data collection program as electronic data, as if it were typed on the keyboard.

When a scan is initiated, the bar code scanning program transfers the data into the data collection program you have open. The scanned data enters at the cursor's location in the data collection program. After each scan, place the cursor at the next location for scanned data entry.

To start the bar code scanning program and begin scanning, complete the following steps:

1. Tap on the *Bar Code Reader* icon on your Field PC's desktop and set up your scanner as outlined in the *Setup Bar Code* section. If this step is already completed, proceed to step 2.
2. Tap on *Begin Scan* button on the *Bar Code Reader* screen.
3. Open the data collection program you want to receive and store the scanned bar code data. Example: If you want your bar code scans placed in a Mobile Excel file, open your Field PC's Mobile Excel program.

Note: Keep the data collection program in the foreground of your Field PC when scanning; otherwise the scanned data is not entered.

4. Position the cursor in the data collection program in the cell you want the scanned data to enter.
5. Press your specified scan button to target, and then scan your bar code.

Sample Bar Codes

The following bar codes are samples for you to test your bar code scanner before taking it into the field. Under each bar code is the datum that should appear on your Allegro after a successful scan.

Code 39 Scan Sample



EAN-13 Scan Sample



EAN-8 Scan Sample



UPC-A Scan Sample



UPC-E Scan Sample



Bar Code Installation Program

The *Bar Code Setup* program is installed on your Field PC before it is shipped. In the event that the *Bar Code Setup* program gets removed from your Field PC and needs to be reinstalled, use the Bar Code installer on the User Documentation and Install CD shipped with the Field PC.