

CipherLab User Guide

ScanManager for Scanner Configuration

1000 / 1090+ / 1100 / 1105 / 1166 / 1200
& 1266
Barcode Scanner

Version 3.00



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RELEASE NOTES

Version	Date	Notes
3.00	Aug. 13, 2010	New layout ▶ Modified: 1.5 Auto Sense (1100 Only)
2.01	Jan. 25, 2007	ScanManager.exe, all-in-one version, except for Scan1300.exe

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INTRODUCTION

ScanManager software is a convenient utility that helps you configure the following CipherLab Barcode Scanners. It provides two ways to change or update your scanner configuration – (1) download the new settings directly to scanners, and (2) print out the setup barcodes that can be read by scanners anytime anywhere, in order to load new settings or restore defaults.

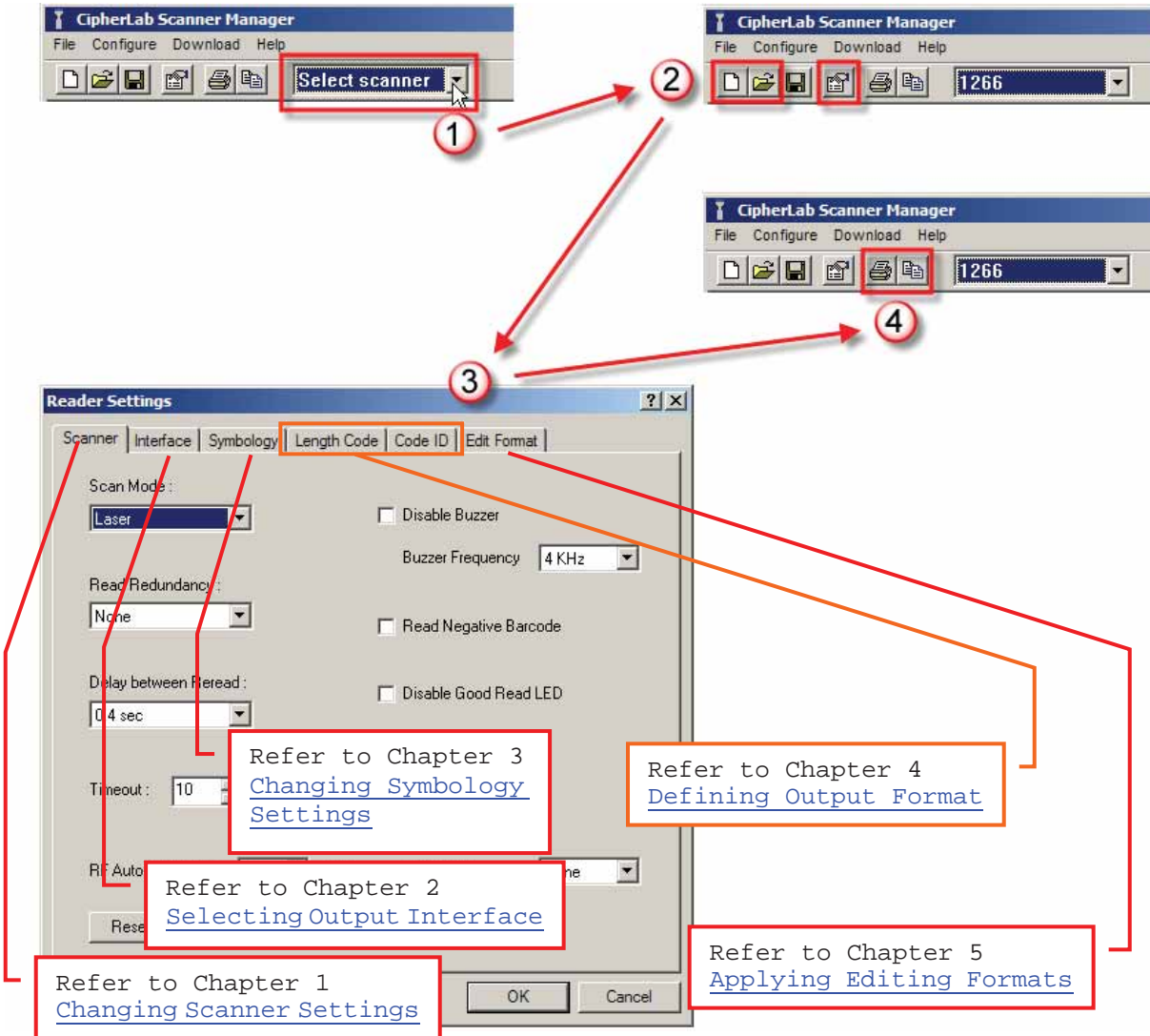
- ▶ 1000
- ▶ 1090+
- ▶ 1100
- ▶ 1105
- ▶ 1166
- ▶ 1200
- ▶ 1266

This user guide contains information on using ScanManager. We recommend that you read it thoroughly before use and keep it at hand for quick reference.

Thank you for choosing CipherLab products!

USING SCANMANAGER

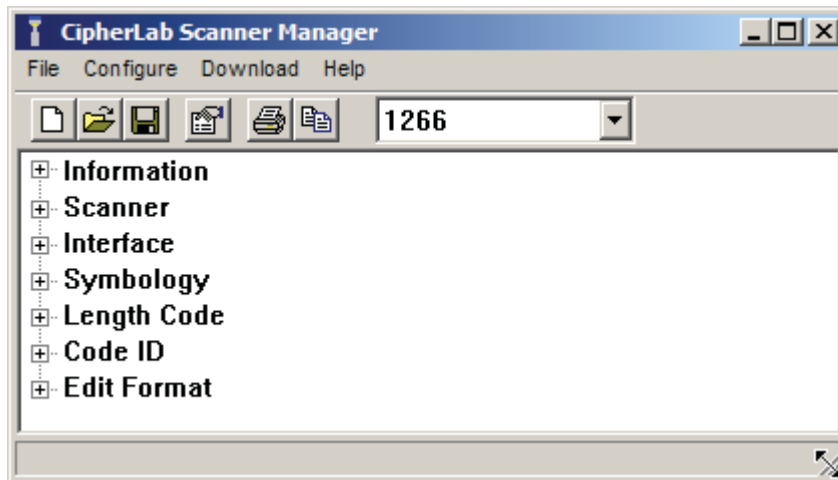
The **ScanManager** package includes two programs, **ScanManager.exe** and **PrintBarcode.exe**, which can be used to configure scanners. First, run **ScanManager.exe** on your computer. Select the scanner you want to configure, and its settings can then be configured by (A) starting a new configuration, (B) opening an existing configuration file, or (C) reading configuration from a scanner. Then, download the current configuration to other scanners directly, or generate a file named *Barcode.prn* to keep a copy of the setup barcodes for the current configuration.





Note: If you wish to keep the Barcode.prn file, you must rename it; otherwise, it will be automatically overwritten as long as you choose to generate setup barcodes. Once you have a *.prn file, you can print the setup barcodes at any time by running PrintBarcode.exe.

HOW TO CONFIGURE THE SCANNER?

- 1) Run **ScanManager.exe** on your computer.
- 2) Click the drop-down menu of [Select Scanner] on the toolbar, and select the scanner you want to configure. If you are using ScanManager for the first time, click to expand the [Scanner Information](#) by category so that the default settings of the scanner can be viewed.



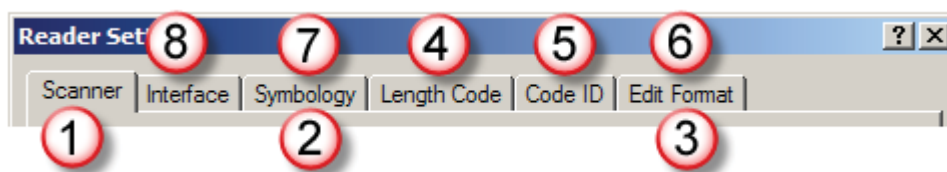
- 3) To create a new configuration file, click  or  on the toolbar.

To open an existing configuration file, click  on the toolbar.


To clone configuration from another scanner, click **Configure | Read Scanner Settings**. This scanner has to be connected to the host computer via RS-232 or Virtual COM (BT SPP or USB VCOM).

Note: If you are using USB Virtual COM for the first time, you must install its driver from the CD-ROM. Driver version 5.3 or later is required. Please remove older versions!

- 4) Proceed to configure the scanner. The data process is illustrated below.



1. The scanner will work with the settings specified on the Scanner tab.
2. It will read barcodes only if their symbologies are enabled, and output data in the desired letter case as selected on the Symbology tab.
3. It will perform character substitution as defined on the Format Editing tab.
4. It will add 2-digit length code to desired symbologies as selected on the Length Code tab.

5. It will add 1- or 2-character identifier to desired symbologies as selected on the Code ID tab.
 6. It will apply editing formats on desired symbologies that meet the criteria set out on the Format Editing tab.
 7. It will add prefix/suffix code to enabled symbologies as selected on the Symbology tab.
 8. Finally, it will output data via the desired interface.
- 5) If the scanner is connected to the host computer via RS-232 or Virtual COM (BT SPP or USB VCOM), you can directly download the settings. Otherwise, you can click  to print out setup barcodes and load settings to the scanner by reading setup barcodes.

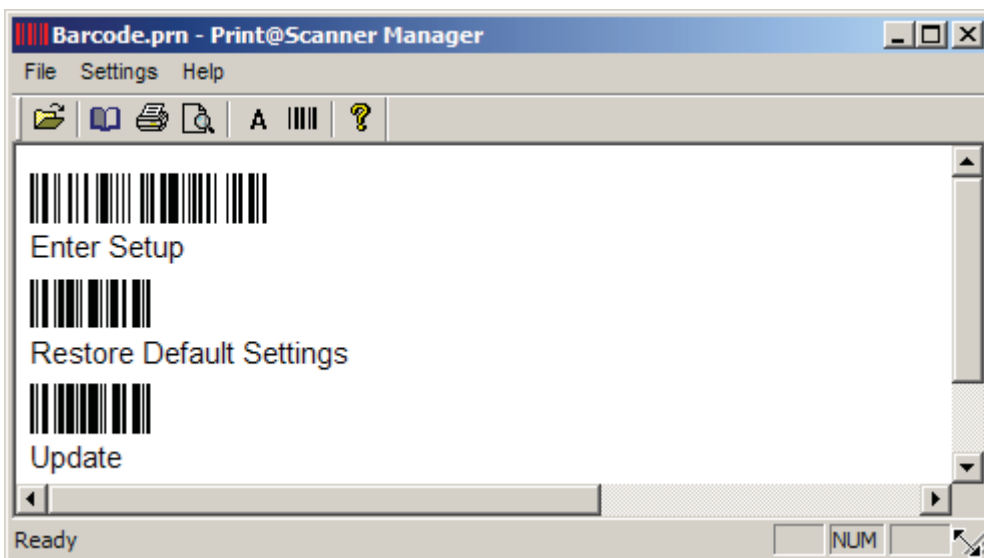
Note: The program PrintBarcode.exe must be in the same folder of ScanManager.

- 6) When the scanner is configured successfully, connect it to the host computer via a proper interface: Keyboard wedge, RS-232, Wand Emulation, BT HID, BT SPP, USB HID, or USB Virtual COM.

Note: If the scanner is set to the Wand Emulation mode, you need to connect it to a portable data terminal or a decoder that is expecting input from a wand scanner.

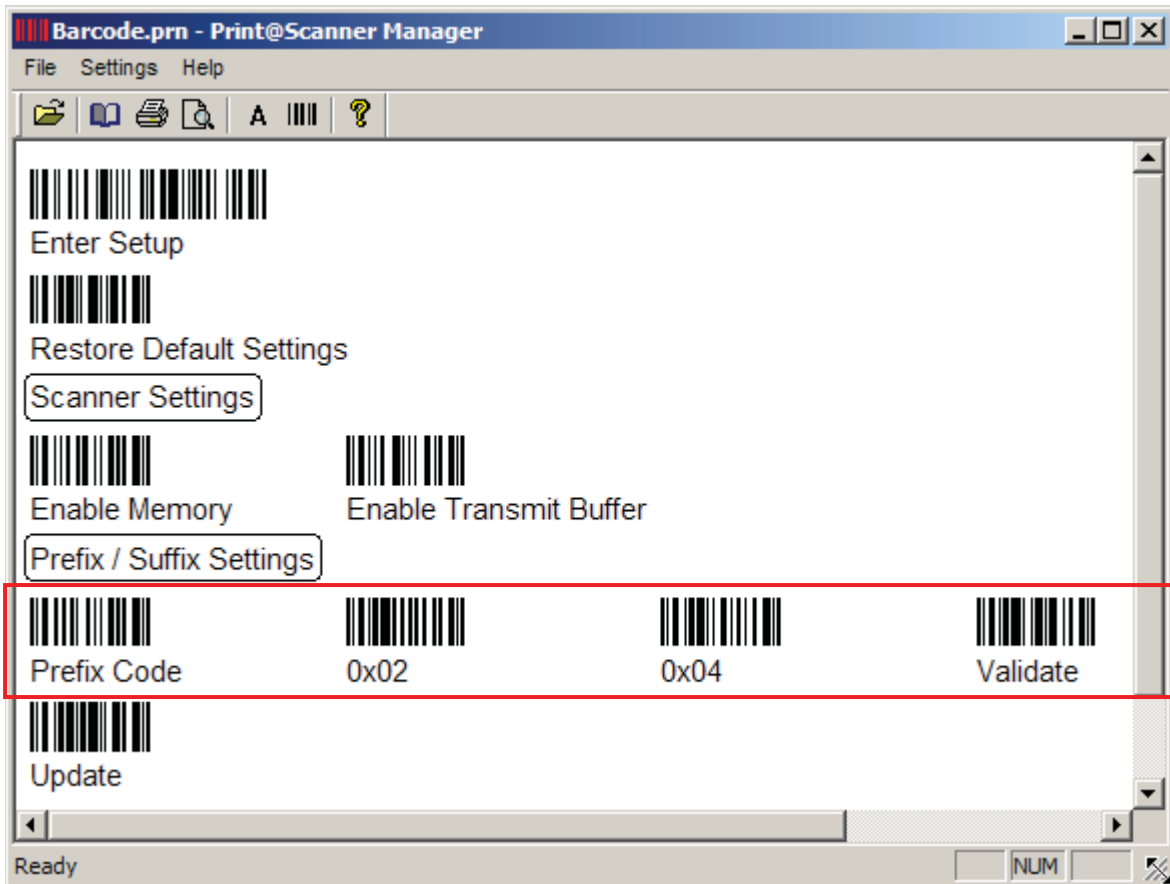
SETUP BARCODES

If you want to restore default settings, scan these barcodes one by one.



Setup Barcodes	Indication
<i>Enter Setup</i>	Scan this barcode to enter the configuration mode – <ul style="list-style-type: none"> ▶ it will respond with six beeps (high-low tone repeats three times), and ▶ the LED indicator will become flashing red
<i>Restore Default Settings</i>	Scan this barcode to restore the default settings. When the scanner has successfully read the barcode – <ul style="list-style-type: none"> ▶ it will respond with two beeps (high-low tone)
<i>Update</i>	Scan this barcode to confirm the updating – <ul style="list-style-type: none"> ▶ it will respond with six beeps (high-low tone repeats three times), and ▶ the LED indicator will go off. <p>When the scanner has successfully updated the settings, it will restart itself and respond with one long beep.</p>

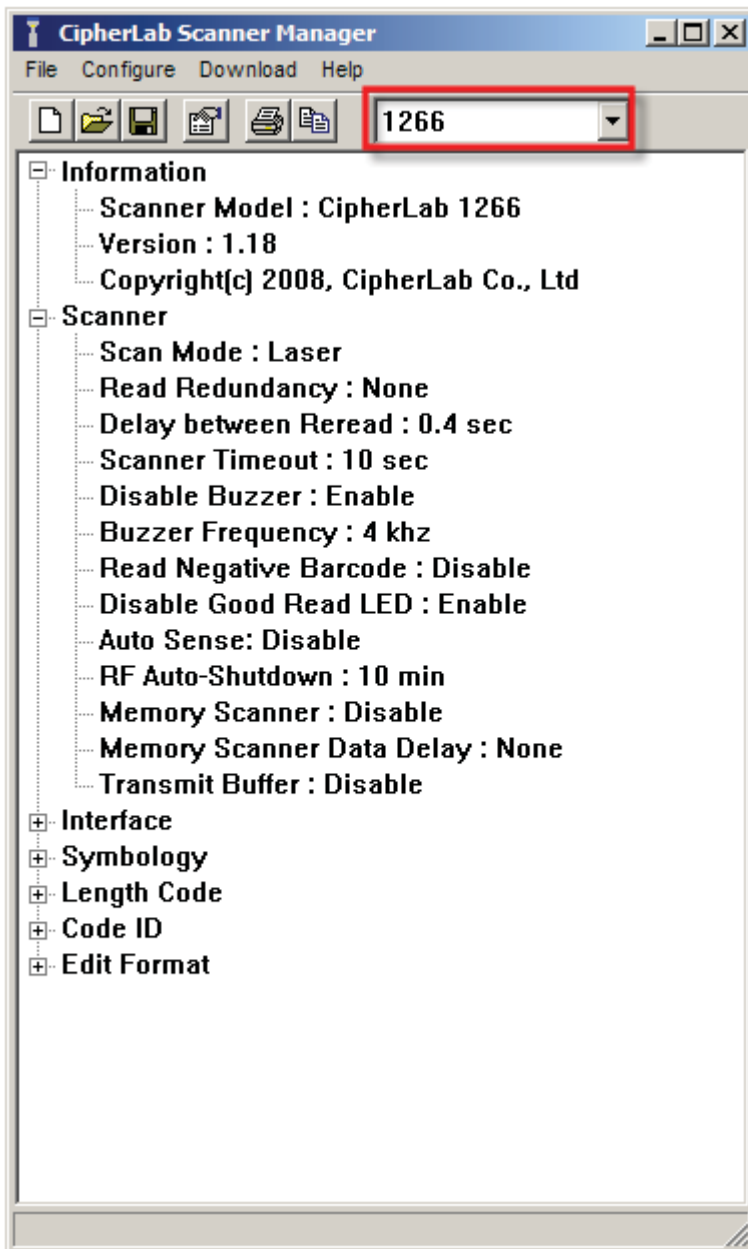
If you want to load new settings, scan associated barcodes. Take the screenshot below for example.



- ▶ You can always restore the default settings.
- ▶ The setup barcodes are categorized into groups of related settings, such as Scanner Settings, Prefix/Suffix Settings, Interface Settings, Code ID Settings, etc.
- ▶ After having made any changes to settings, you need to scan the "Update" barcodes to confirm such action. However, if a decimal or hexadecimal value is involved in the setting, you need to scan the "Validate" barcode before the "Update" barcode.

SCANNER INFORMATION

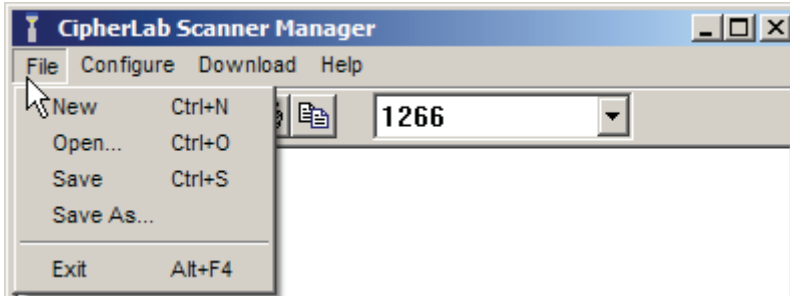
After selecting the scanner, click to expand the scanner information by category so that the default settings of the scanner can be viewed. If you open an existing configuration file or change the current settings, they will be updated accordingly.



MENU BAR

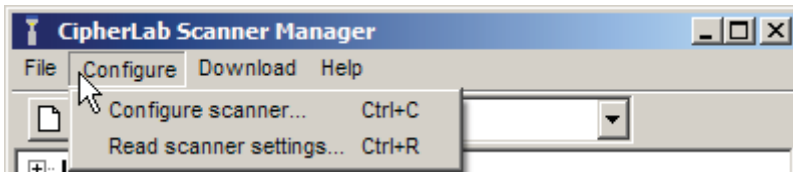
The menu bar contains a number of menus that specify which task you want the system to perform. Each menu contains a list of commands. Some of the options carry out commands immediately, and others display a window so that you can enter additional information. If an option is followed by [...], it will display a window. Otherwise, the command is carried out immediately.

FILE MENU



Command	To Do...																														
<i>New</i>	To create a new configuration file.																														
<i>Open</i>	To open an existing configuration file. File path needs to be specified. <table border="1" data-bbox="446 997 1372 1501"> <thead> <tr> <th>Scanner series</th> <th>Filename extension</th> <th>Remark</th> </tr> </thead> <tbody> <tr> <td>1000</td> <td>*.100</td> <td></td> </tr> <tr> <td>1090+</td> <td>*.090</td> <td></td> </tr> <tr> <td>1100/1105</td> <td>*.110</td> <td></td> </tr> <tr> <td>1166</td> <td>*.166</td> <td></td> </tr> <tr> <td>1200</td> <td>*.120</td> <td></td> </tr> <tr> <td>1266</td> <td>*.266</td> <td></td> </tr> <tr> <td>1160</td> <td>*.116</td> <td rowspan="4">Product line discontinued</td> </tr> <tr> <td>1260</td> <td>*.126</td> </tr> <tr> <td>14XX</td> <td>*.140</td> </tr> <tr> <td>1045</td> <td>*.045</td> </tr> </tbody> </table>	Scanner series	Filename extension	Remark	1000	*.100		1090+	*.090		1100/1105	*.110		1166	*.166		1200	*.120		1266	*.266		1160	*.116	Product line discontinued	1260	*.126	14XX	*.140	1045	*.045
Scanner series	Filename extension	Remark																													
1000	*.100																														
1090+	*.090																														
1100/1105	*.110																														
1166	*.166																														
1200	*.120																														
1266	*.266																														
1160	*.116	Product line discontinued																													
1260	*.126																														
14XX	*.140																														
1045	*.045																														
<i>Save</i>	To save the current settings.																														
<i>Save As</i>	To save the current settings to a new configuration file.																														
<i>Exit</i>	To close the ScanManager program.																														

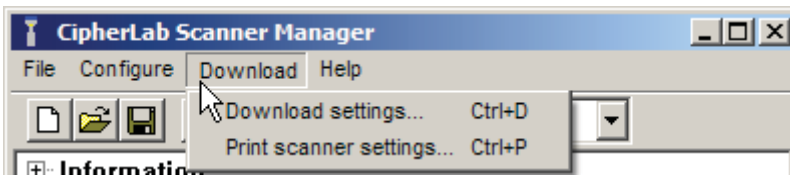
CONFIGURE MENU

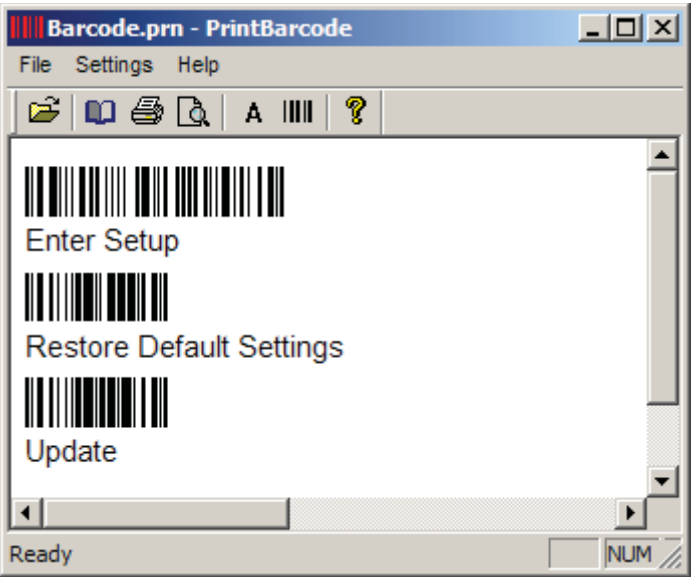


Command	To Do...
<i>Configure Scanner</i>	<p>Configure the current settings for the target scanner.</p> <p>Refer to the following sections –</p> <ul style="list-style-type: none"> ▶ Chapter 1 – Changing Scanner Settings ▶ Chapter 2 – Selecting Output Interface ▶ Chapter 3 – Changing Symbology Settings ▶ Chapter 4 – Defining Output Format ▶ Chapter 5 – Applying Editing Formats
<i>Read Scanner Settings</i>	<p>To clone settings or simply modify them, upload the current settings from the target scanner.</p> <ul style="list-style-type: none"> ▶ A dialog box will pop up for configuring the COM port properties on your computer. For BT SPP or USB Virtual COM, specify COM port for connection and ignore the rest settings.

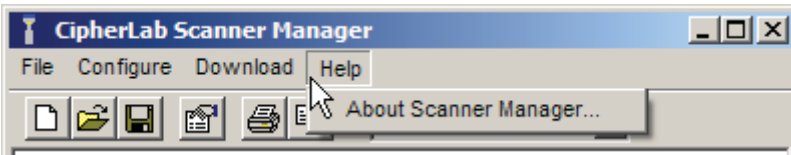
Note: To clone settings, first read settings from a specific scanner, and then download these settings to other scanners.

DOWNLOAD MENU



Command	To Do...
<i>Download Settings</i>	<p>Download the settings to the target scanner if it is connected to the host computer via RS-232 or Virtual COM (BT SPP or USB VCOM).</p> <ul style="list-style-type: none"> ▶ A dialog box will pop up for configuring the COM port properties on your computer. For BT SPP or USB Virtual COM, specify COM port for connection and ignore the rest settings.
<i>Print Scanner Settings</i>	<p>Run PrintBarcode.exe to print out the Setup Barcodes, which will be automatically saved in the Barcode.prn file.</p>  <p>If the scanner is not connected to the host computer via RS-232 or Virtual COM (BT SPP or USB VCOM), scanner configuration can be changed by scanning the setup barcodes.</p> <ul style="list-style-type: none"> ▶ The setup barcodes are categorized into groups of related settings.

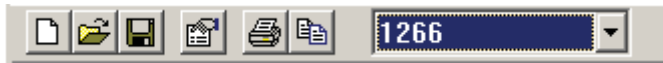
HELP MENU









Command	To Do...
<i>About ScanManager</i>	Provide version information of the software.

TOOLBAR

The toolbar allows quick access to most commands.



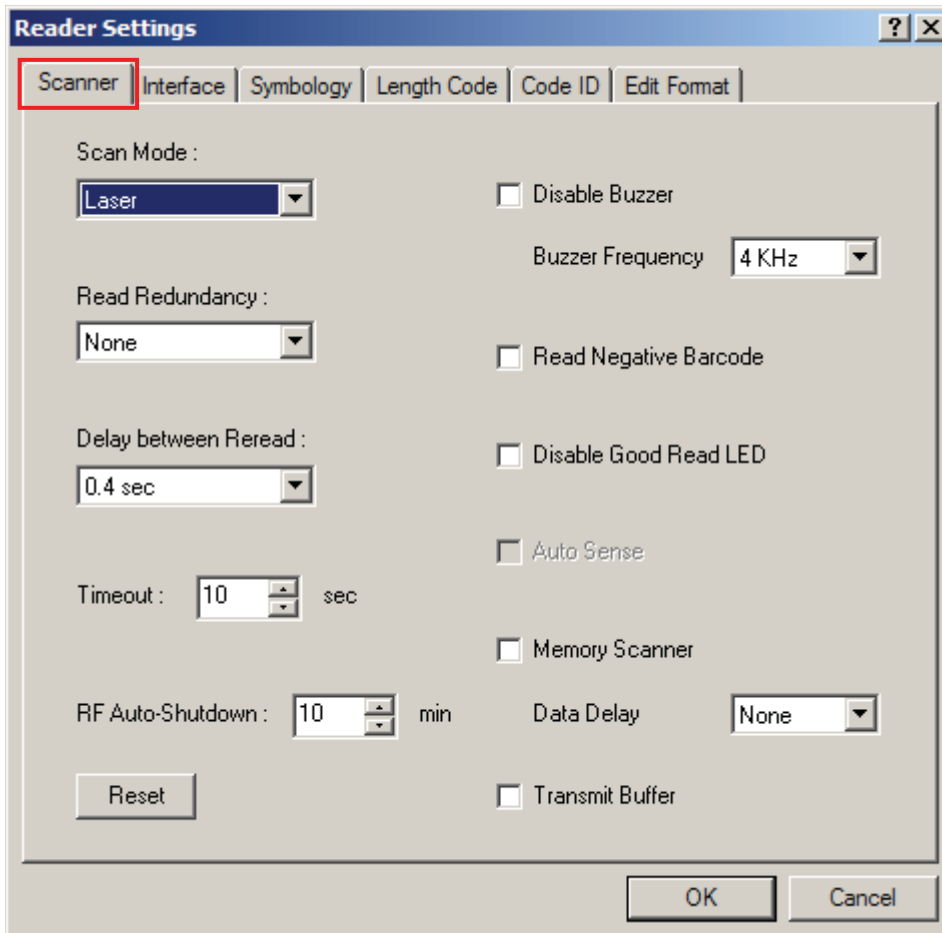
From left to right, the icons stand for the following commands:

	▶ New
	▶ Open
	▶ Save
	▶ Configure
	▶ Print
	▶ Download Settings
Select scanner ▼	▶ Select one of the scanners
1000	CCD scan engine, contact type, width of field 65 mm
1090+	CCD scan engine, contact type, width of field 90 mm
1100/1105	Linear imaging scan engine
1160 ^{Note}	BT scanner with linear imaging engine, fixed battery
1166	BT scanner with linear imaging engine, replaceable battery
1200	Laser scan engine
1260 ^{Note}	BT scanner with laser engine, fixed battery
1266	BT scanner with laser engine, replaceable battery
14xx ^{Note}	Fixed linear imaging module
1045 ^{Note}	Fixed linear imaging scan engine

Note: The product lines have been discontinued.

CHANGING SCANNER SETTINGS

You may configure scanner settings of the target scanner. The available options may be slightly different for each model.



Basically, the default settings for each model are the same except for the following:

Scanner Model	Scan Mode	Auto Sense	RF Auto-Shutdown	Memory Scanner	Transmit Buffer
1000	Auto Off	N/A	N/A	N/A	N/A
1090+	Auto Off	N/A	N/A	N/A	N/A
1100 /1105	Laser	Disabled	N/A	N/A	N/A
1160 ^{Note}	Laser	Disabled	10 min.	Disabled	N/A
1166	Laser	Disabled	10 min.	Disabled	Disabled
1200	Laser	N/A	N/A	N/A	N/A
1260 ^{Note}	Laser	N/A	10 min.	Disabled	N/A
1266	Laser	N/A	10 min.	Disabled	Disabled
14XX ^{Note}	Continuous	Disabled	N/A	N/A	N/A
1045 ^{Note}	Continuous	Disabled	N/A	N/A	N/A

Note: The product lines have been discontinued.

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1.1 SCANNING MODE

Different scan modes are supported – select the scan mode that best suits the requirements of a specific application. Refer to the comparison table below.

Scan Mode	Start to Scan				Stop Scanning			
	<i>Always</i>	<i>Press trigger once</i>	<i>Hold trigger</i>	<i>Press trigger twice</i>	<i>Release trigger</i>	<i>Press trigger once</i>	<i>Barcode being read</i>	<i>Timeout</i>
<i>Continuous mode</i>	✓							
<i>Test mode</i>	✓							
<i>Laser mode</i>			✓		✓		✓	✓
<i>Auto Off mode</i>		✓					✓	✓
<i>Auto Power Off mode</i>		✓						✓
<i>Alternate mode</i>		✓				✓		
<i>Repeat mode</i>	✓							
<i>Momentary mode</i>			✓		✓			

Note: By default, the scan mode is set to Laser mode for all scanners but
 (1) 1000/1090+: Auto Off mode
 (2) 14XX/1045: Continuous mode

Handheld Scanner	Default Scan Mode
1000	Auto Off mode
1090+	Auto Off mode
1100 / 1105	Laser mode
1160 ^{Note}	Laser mode
1166	Laser mode
1200	Laser mode
1260 ^{Note}	Laser mode
1266	Laser mode
Fixed Scanner	Default Scan Mode
14XX ^{Note}	Continuous mode
1045 ^{Note}	Continuous mode

Note: (1) The product lines have been discontinued.
 (2) For fixed scanners, only Continuous and Testing modes can be selected. For other modes, an external trigger or button is required.

Continuous Mode

The scanner is always scanning.

- ▶ To decode the same barcode repeatedly, move away the scan beam and target it at the barcode for each scanning.

Note: Refer to “Delay between Re-read”.

Test Mode

The scanner is always scanning.

- ▶ Capable of decoding the same barcode repeatedly, for testing purpose.

Laser Mode

The scanner will start scanning once the trigger is held down.

- ▶ The scanning won't stop until (1) a barcode is decoded, (2) the pre-set timeout expires, or (3) you release the trigger.

Note: Refer to “Scanning Timeout”.

Auto Off Mode

The scanner will start scanning once the trigger is pressed.

- ▶ The scanning won't stop until (1) a barcode is decoded, and (2) the pre-set timeout expires.

Note: Refer to “Scanning Timeout”.

Auto Power Off Mode

The scanner will start scanning once the trigger is pressed.

- ▶ The scanning won't stop until the pre-set timeout expires, and, the pre-set timeout period re-counts after each successful decoding.

Note: Refer to “Delay between Re-read” and “Scanning Timeout”.

Alternate Mode

The scanner will start scanning once the trigger is pressed.

- ▶ The scanning won't stop until you press the trigger again.

Repeat Mode

The scanner is always scanning.

- ▶ To decode the same barcode repeatedly, press the trigger again within one second after a successful reading, the same data will be re-transmitted without actually reading the barcode. Such re-transmission can be activated as many times as needed, as long as the time interval between each triggering does not exceed one second.

Note: It will decode once for the same barcode and allow for re-transmission when you press the trigger again within one second.

Momentary Mode

The scanner will start scanning once the trigger is held down.

- ▶ The scanning won't stop until you release the trigger.

Note: Refer to "Delay between Re-read".

1.1.1 SCANNING TIMEOUT

Specify the scanning time interval (1~255 sec.; 0= disable) when the scan mode is set to any of the following scan mode –

- ▶ Laser mode
- ▶ Auto Off mode
- ▶ Auto Power Off mode

1.1.2 RE-READ DELAY

This is also referred to as the "Blocking Time", which is used to prevent the scanner from accidentally reading the same barcode twice when the scan mode is set to any of the following scan mode —

- ▶ Continuous mode
- ▶ Auto Power Off mode
- ▶ Alternate mode
- ▶ Momentary mode

1.1.3 READ REDUNDANCY

Select the level of reading security. For example,

- ▶ If "No Redundancy" is selected, one successful decoding will make the reading valid and induce the "READER Event".
- ▶ If "Three Times" is selected, it will take a total of four consecutive successful decodings of the same barcode to make the reading valid. The higher the reading security is (that is, the more redundancy the user selects), the slower the reading speed gets.

It is obvious that the more redundancy you select, the higher the reading security is, and thus, the slower the reading speed becomes. You will have to compromise between reading security and decoding speed.

1.2 POWER MANAGEMENT (1166/1266)

The scanner will stay active at power-on for 1 minute, which will be followed by different power-saving mechanism.

- ▶ Power-Saving: When the scanner fails to connect within 1 minute, it will enter power-saving mode automatically.
- ▶ RF Auto-Shutdown (1~255 min.; 0= Disable): By default, when the scanner is idle for 10 minutes, it will automatically stop RF connectivity. If this feature is not desired, set it to 0.

Before establishing a WPAN connection successfully...

1. The scanner will stay active for a preset period of time (1 minute) for the following scenarios. Its LED is flashing blue (On/Off ratio 1:1).
 - (a) waiting for a connection request from the host (BT SPP Slave Mode)
 - (b) trying to connect to the host (BT HID)
 - (c) trying to connect to 3666
2. If it fails to connect within 1 minute, the scanner will become inactive to save power, and its LED will turn off.

Press the trigger to wake up the scanner when it becomes inactive, and the scanner will stay active again.

Note: For scenarios (a) and (b) in step 1, on your computer you may need to search for the scanner again.

After establishing a WPAN connection successfully...

1. Once a WPAN connection is established successfully, the scanner will stay active for data transmission. Its LED is flashing blue (On/Off ratio 1:6).
2. With the use of 3666, the scanner will automatically stop RF connectivity when it is idle for the specified time interval for RF Auto-Shutdown. You will hear three short beeps, tone descending from high to low, and its LED will turn off.

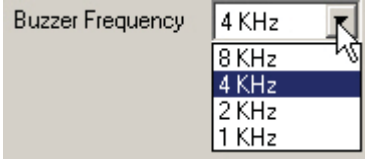
Press the trigger to wake up the scanner when it becomes inactive, and the scanner will stay active again.

 - ▶ For BT HID or SPP, there is no implementation of RF Auto-Shutdown.

1.3 STATUS INDICATOR

1.3.1 BUZZER

The buzzer of the scanner beeps differently to indicate various operating conditions. Select the check box if audible signals are not desired.

Conditions	Description
Power On Beep	The scanner will generate a long beep to indicate it is turned on successfully.
Good Read Beep	The scanner will generate a beep to indicate it successfully reads a barcode. You may select other frequency than the default 4 KHz. 
Error Beep	The scanner will generate a long beep in the lower tone to indicate errors.
Enter Configuration Beep	The scanner will generate 6 beeps upon entering the configuration mode.
Update / Exit Configuration Beep	The scanner will generate 6 beeps followed by one long beep upon exiting the configuration mode.
Setup Beep	In configuration mode, the scanner will normally beeps twice when a setup barcode is read. When a particular parameter needs to make use of more than one setup barcode, the scanner will only generate a short beep to indicate there are more setup barcodes that need to be read in order to complete the current parameter setting.
Full Memory Beep	For 1166 and 1266: When "Memory Scanner" is enabled and the memory becomes full, the scanner will sound a warning, 3 beeps in the lower tone.

1.3.2 GOOD READ LED

There is a dual-color LED indicator on top of the scanner. Normally, it is off except for the following conditions:

Conditions	Description
Good Read	LED turns solid red
Configuration Mode	All models except for 1166 / 1266: LED turns solid green For 1166 / 1266 only: LED turns solid blue

1.4 READ NEGATIVE BARCODE

Normally, barcodes are printed with the color of the bars darker than that of the spaces. But for negative barcodes, they are printed in the opposite sense just like negative films. The spaces of negative barcodes are printed with a color darker than that of the bars. You can configure the scanner to be able to read negative barcodes.

1.5 AUTO SENSE (1100 ONLY)

This mode is only available when you want to seat the scanner in the Auto-Sense Stand. When you enable this mode, it will force the scanner to apply Laser mode as the scan mode. However, it works slightly different from the original Laser mode. Now the scanner will be scanning as long as it is seated in the stand. Whenever a barcode is brought within range, the scanner will be able to decode it.

Note: Auto-sense can only be enabled for CCD scanner and will force it to Laser mode.

1.6 MEMORY MODE (1160, 1166, 1260, 1266)

By default, memory mode is disabled. When the scanner is set to memory mode, it means a WPAN connection is disabled. You may set a delay between each data record while transmitting data back to the server.

- ▶ The cordless scanner keeps 128 KB flash memory for memory mode operation.

1.7 TRANSMIT BUFFER (1166, 1266)

By default, transmit buffer is disabled. You may enable it for use when the scanner is out of range. Upon reading a barcode successfully within range, the scanner responds with one short beep (high tone) and its LED indicator becomes solid red and goes off quickly. However, the host computer may not receive the data immediately if getting out of range.

- ▶ The cordless scanner keeps 4 KB transmit buffer. It can ignore the transmission status and keep on reading barcodes until the buffer is full.

Note: For 1160 or 1260, it will not be able to scan when out of range.

Transmit Buffer Enabled

- ▶ When transmit buffer is enabled and the scanner is out of range, the scanner will respond with two short beeps, high-low tone, upon reading a barcode successfully.
- ▶ When transmit buffer is full, the scanner will respond with one long beep (low tone) and its LED indicator will become solid red and go off quickly. You are advised to get back to range.

Transmit Buffer Disabled

- ▶ When transmit buffer is disabled and the scanner is out of range, the scanner will respond with one long beep (low tone). You are advised to get back to range.

SELECTING OUTPUT INTERFACE

There are four options for output interface, which depend on the scanner model you have:

Scanner Model	Keyboard Wedge	RS-232	Wand Emulation	BT Serial Port
1000	Default	optional	optional	N/A
1090+	Default	optional	optional	N/A
1100 /1105	Default	optional	optional	N/A
1160	Default	optional	N/A	optional
1166	Default	optional	N/A	optional
1200	Default	optional	optional	N/A
1260	Default	optional	N/A	optional
1266	Default	optional	N/A	optional
14XX	N/A	Default	optional	N/A
1045	optional	Default	optional	N/A

By default, the output interface is set to “Keyboard Wedge”. In order to establish a proper wired connection between your computer and the scanner, we suggest that you follow these instructions –

- 1) Turn off your computer or laptop.
- 2) Connect the provided interface cable between the scanner and your computer.

If using the RS-232 cable, join the power supply cord.

- ▶ If you are connecting the scanner to the USB port of the host computer via USB HID cable (part # 307), refer to [2.1 Keyboard Wedge](#) for related settings.
- ▶ If you are connecting the scanner to the USB port of the host computer via USB Virtual COM cable (part # 308), refer to [2.2 RS-232](#) related settings.
- ▶ If you are connecting the scanner to the IBM POS 4683/4694 via the converter cable (part # 346), refer to [2.1 Keyboard Wedge](#) for related settings.

- 3) Turn on your computer or laptop.

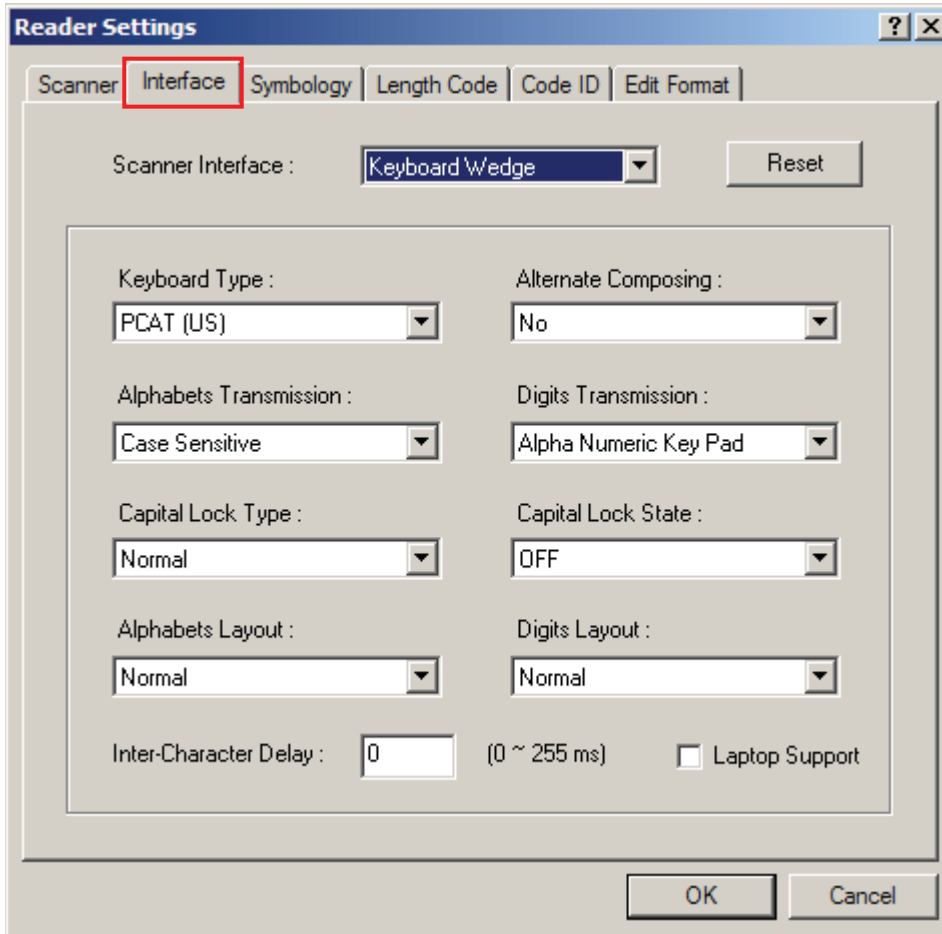
Note: For 1166/1266, it allows you to connect the RS-232 or Keyboard Wedge cable via 3666.

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2.1 KEYBOARD WEDGE

Use the "Y-shaped" keyboard wedge cable to connect the scanner or 3666 between the keyboard input port of the host computer and the keyboard. The scanned data will be transmitted to the host keyboard port as if it is manually entered via the keyboard.



2.1.1 KEYBOARD TYPE

By default, the keyboard type is set to PCAT (US). The following keyboard types are supported –

No.	Keyboard Type	No.	Keyboard Type
1	PCAT (US)	15	PS55 001-81
2	PCAT (French)	16	PS55 001-2
3	PCAT (German)	17	PS55 001-82
4	PCAT (Italian)	18	PS55 001-3
5	PCAT (Swedish)	19	PS55 001-8A

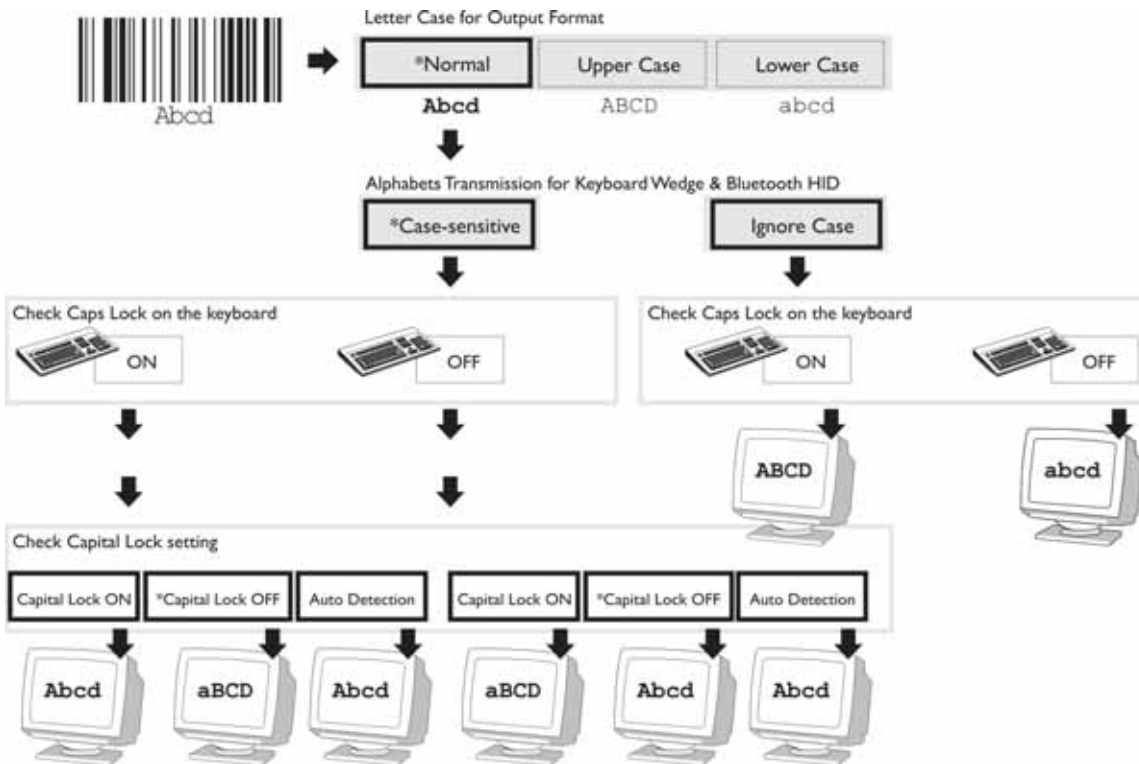
6	PCAT (Norwegian)	20	PS55 002-1, 003-1
7	PCAT (UK)	21	PS55 002-81, 003-81
8	PCAT (Belgium)	22	PS55 002-2, 003-2
9	PCAT (Spanish)	23	PS55 002-82, 003-82
10	PCAT (Portuguese)	24	PS55 002-3, 003-3
11	PS55 A01-1	25	PS55 002-8A, 003-8A
12	PS55 A01-2 (Japanese)	26	IBM 3477 Type 4 (Japanese)
13	PS55 A01-3	27	PS2-30
14	PS55 001-1	28	IBM 34XX/319X, Memorex Telex 122 Keys

2.1.2 ALTERNATE COMPOSING

By default, Alternate key composing is disabled. Select [Yes] to allow emulating Alternate key code of a specific keyboard character. For example, [Alt] + [065] will be sent to host for the character "A" regardless the keyboard type you are using.

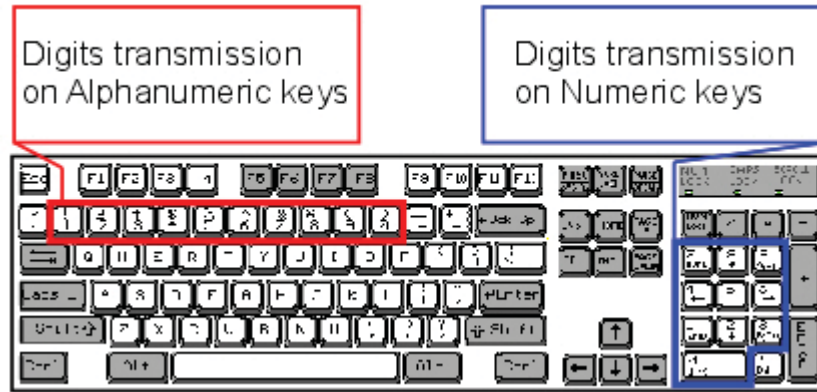
2.1.3 ALPHABETS TRANSMISSION

By default, the alphabets transmission is case-sensitive, meaning that the alphabets will be transmitted according to their original case, the status of Caps Lock on the keyboard, as well as the Capital Lock setting. Select [Ignore Case] to have alphabets transmitted according to the status of Caps Lock on the keyboard only.



2.1.4 DIGITS TRANSMISSION

By default, the alphanumeric keypad is used for transmitting digits. Select "Numeric Keypad" if you wish to use the keys on the numeric keypad.



Note: If you select "Numeric Keypad", the Num Lock status of the physical keyboard should be "ON".

2.1.5 CAPITAL LOCK TYPE

Cap Lock Type	Description
<i>Normal</i>	Normal type
<i>Capital Lock</i>	When enabled, the keys of alphabetic characters will be interpreted as capital letters. However, this does not affect the number or punctuation keys.
<i>Shift Lock</i>	When enabled, the keys of alphabetic characters will be interpreted as capital letters. In addition, this affects the number or punctuation keys.

2.1.6 CAPITAL LOCK STATE

In order to send the alphabets with correct case, the scanner needs to know the status of Caps Lock on the keyboard. Incorrect settings may result in reversed case of the alphabets being transmitted.

Capital Lock State	Description
<i>Capital Lock OFF</i>	Assuming that the status of Caps Lock on the keyboard is OFF, transmitted characters are exactly the same as in the barcode (when "case-sensitive" is selected for Alphabets Transmission).
<i>Capital Lock ON</i>	Assuming that the status of Caps Lock on the keyboard is ON, transmitted characters are exactly the same as in the barcode (when "case-sensitive" is selected for Alphabets Transmission). <ul style="list-style-type: none"> ▶ Refer to the Capital Lock Type above.

<i>Auto Detection</i>	The scanner will automatically detect the status of Caps Lock on the keyboard before data is transmitted; transmitted characters are exactly the same as in the barcode (when "case-sensitive" is selected for Alphabets Transmission).
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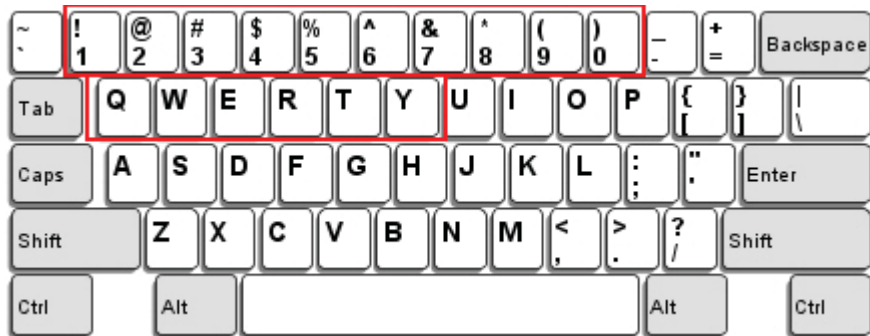
2.1.7 ALPHABETS LAYOUT

By default, the alphabets layout is set to normal mode, also known as the standard English layout. Select French or German keyboard layout if necessary.

The scanner will make adjustments when sending the "A", "O", "W", "Z", "Y", and "M" characters according to this setting.

US Keyboard Style – Normal

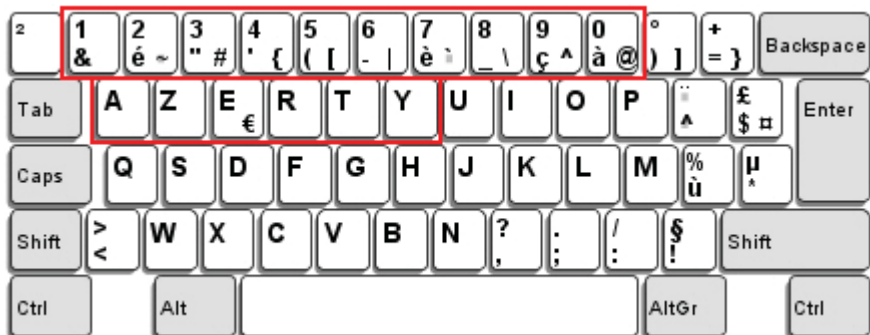
QWERTY layout, which is normally used in western countries.



- ▶ Select "Lower Row" for the "Digits Layout" setting for the upper row is for special characters.

French Keyboard Style – AZERTY

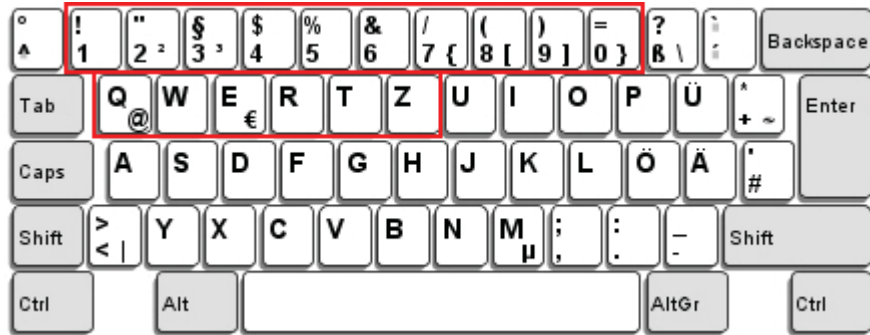
French layout; see below for French Keyboard Style.



- ▶ Select "Upper Row" for the "Digits Layout" setting for the lower row is for special characters.

German Keyboard Layout – QWERTZ

German layout; see below for German Keyboard Style.



- ▶ Select “Lower Row” for the “Digits Layout” setting for the upper row is for special characters.

Note: This setting only works when the keyboard type selected is US keyboard, such as PCAT (US). The Alphabets Layout and Digits Layout setting must match your keyboard.

2.1.8 DIGITS LAYOUT

Select a proper layout that matches the alphabets layout. The scanner will make adjustments according to this setting.

Options	Description
<i>Normal</i>	Depends on the [Shift] key or [Shift Lock] setting
<i>Lower Row</i>	For QWERTY and QWERTZ keyboards
<i>Upper Row</i>	For AZERTY keyboards

Note: This setting is meant to be used with the Alphabets Layout, and perhaps the Character Substitution setting when support to certain keyboard types (languages) is unavailable but required.

2.1.9 LAPTOP SUPPORT

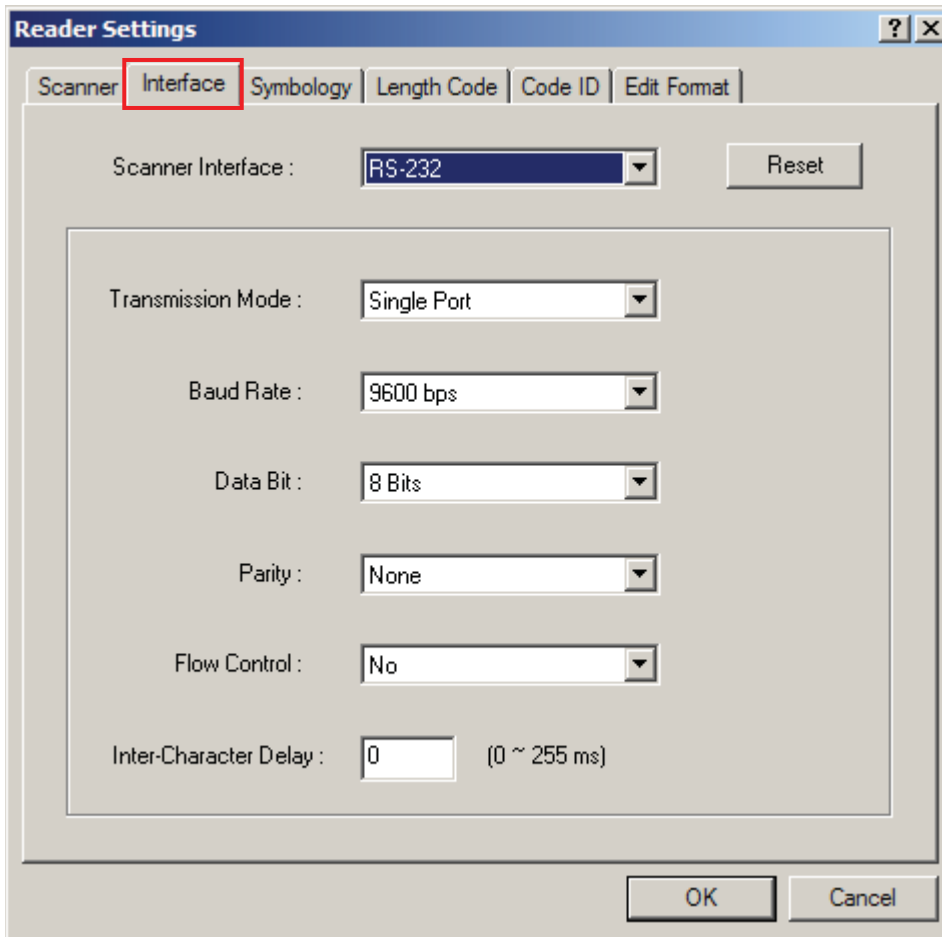
By default, laptop support is disabled. Select the check box if you connect the wedge cable to a laptop without an external keyboard being inter-connected.

2.1.10 INTER-CHARACTER DELAY

By default, the inter-character delay is set to zero. Enter a value, ranging from 0 to 255 in units of millisecond, to match the computer response time of the keyboard interface. Such delay time is inserted between every character being transmitted. The longer the delay time is, the slower the transmission speed will be.

2.2 RS-232

Connect the scanner or 3666 to the serial port of the host computer using the RS-232 cable and join the power adaptor to the RS-232 connector. The associated RS-232 parameters must match those configured on the computer. The scanned data will be transmitted to the serial port.



2.2.1 TRANSMISSION MODE

Always select "Single Port" because dual port options are not supported by scanner hardware.

2.2.2 BAUD RATE

By default, it is set 9600 bps. Select other value that matches your computer settings.

2.2.3 DATA BITS

By default, it is set 8 bits of data. Select 7 bits of data if necessary.

2.2.4 PARITY

By default, it is set no parity bit. Select other parity setting, even or odd parity bit.

2.2.5 FLOW CONTROL

By default, there is no flow control in use. Select the flow control (handshake) method.

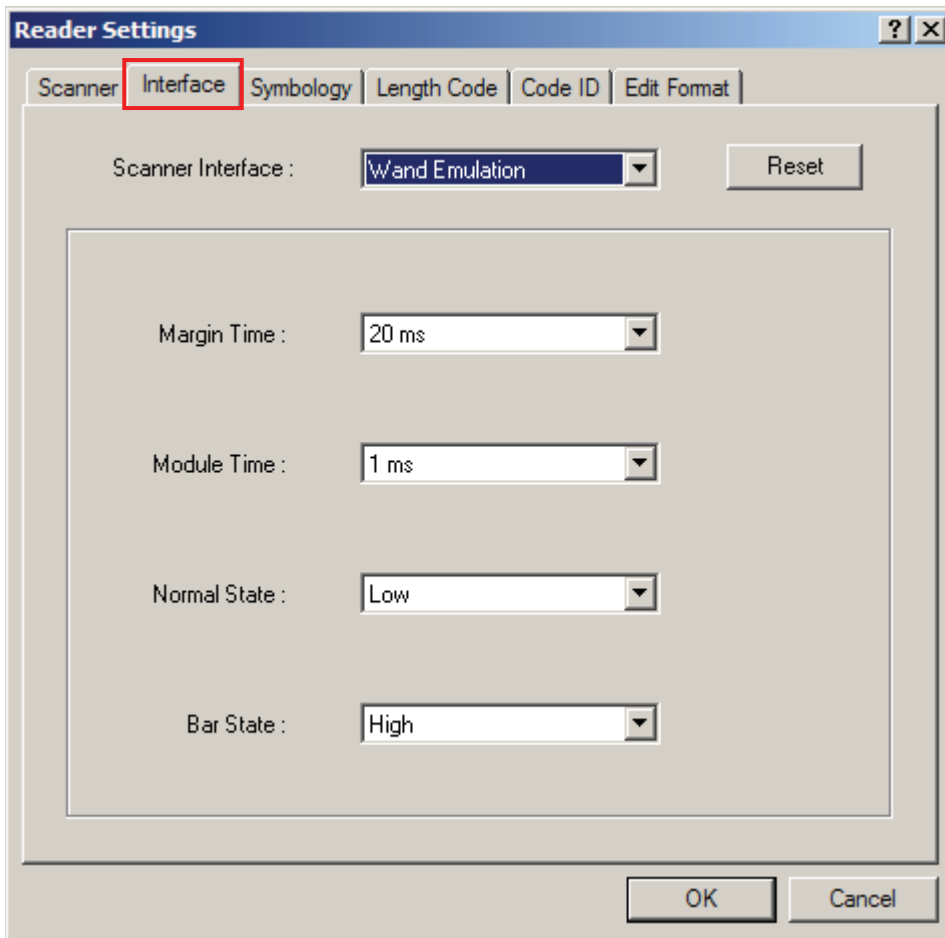
Options	Description
<i>No</i>	No flow control
<i>Scanner Ready</i>	The scanner will activate the RTS signal upon powering on. After each good read, the scanner will then wait for the CTS signal to become active. Data will not be sent until the CTS signal becomes active.
<i>Data Ready</i>	The RTS signal will be activated after each good read. The scanner will then wait for the CTS signal to become active. Data will not be sent until the CTS signal becomes active.
<i>Inverted Data Ready</i>	It works the same as the Data Ready flow control, except that the RTS signal level is inverted.

2.2.6 INTER-CHARACTER DELAY

By default, the inter-character delay is set to zero. Enter a value, ranging from 0 to 255 in units of millisecond, to match the computer response time of the RS-232 interface. Such delay time is inserted between every character being transmitted. The longer the delay time is, the slower the transmission speed will be.

2.3 WAND EMULATION

All batch scanners support wand emulation. Connect the scanner to a portable data terminal or decoder that is expecting input from a wand scanner.



Note: Wands are handheld optical character readers used to read typewritten fonts, printed fonts, OCR fonts, and barcodes.

2.3.1 MARGIN TIME

By default, it is set 20 milliseconds as the time span for the change in state for bar and space modules. Select other value for the margin time.

2.3.2 MODULE TIME

By default, it is set 1 millisecond as the time span for bar and space modules. Select other value for the module time, in units of micro-second or millisecond.

2.3.3 NORMAL STATE

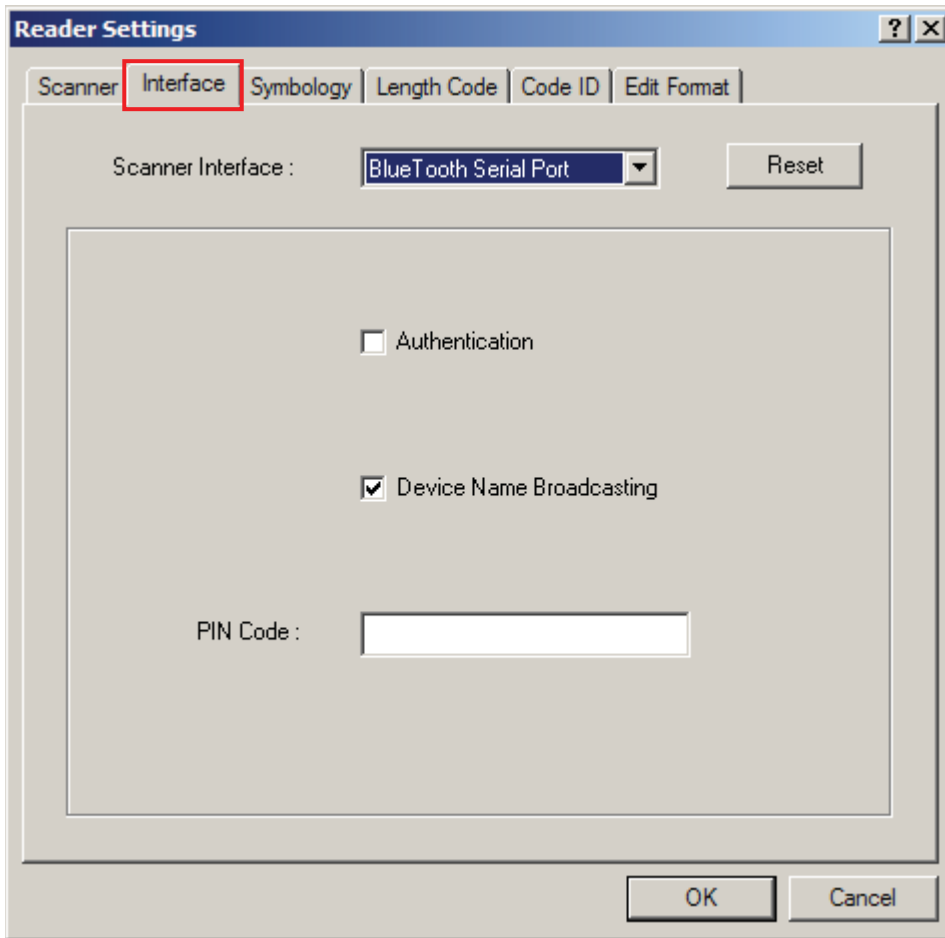
By default, the signal level is set "Low" for the normal state when not transmitting any barcode.

2.3.4 BAR STATE

By default, the signal level is set "High" for a bar when transmitting a barcode. Select "Low" for a bar if "High" for a space is desired.

2.4 BT SERIAL PORT

Only SPP Slave Mode is supported.



2.4.1 AUTHENTICATION

When any changes are made to authentication and PIN code on the scanner side, you will have to remove the scanner from the paired device list (called unpairing) and go through the whole process to re-establish the connection.

Enable Authentication with Preset PIN

Select the check box of "Authentication", and enter exactly the same string in the "PIN Code" field as the preset PIN for your computer or PDA to connect to the scanner. If the PIN or passkey is incorrect, any connection attempt will be turned down by the scanner.

It allows up to 6 characters for a PIN code:

Authentication

PIN Code :

No Authentication

By default, it is set to “No PIN”, which depends on the setting of the target device. (No PIN = No authentication.)

2.4.2 DEVICE NAME BROADCASTING

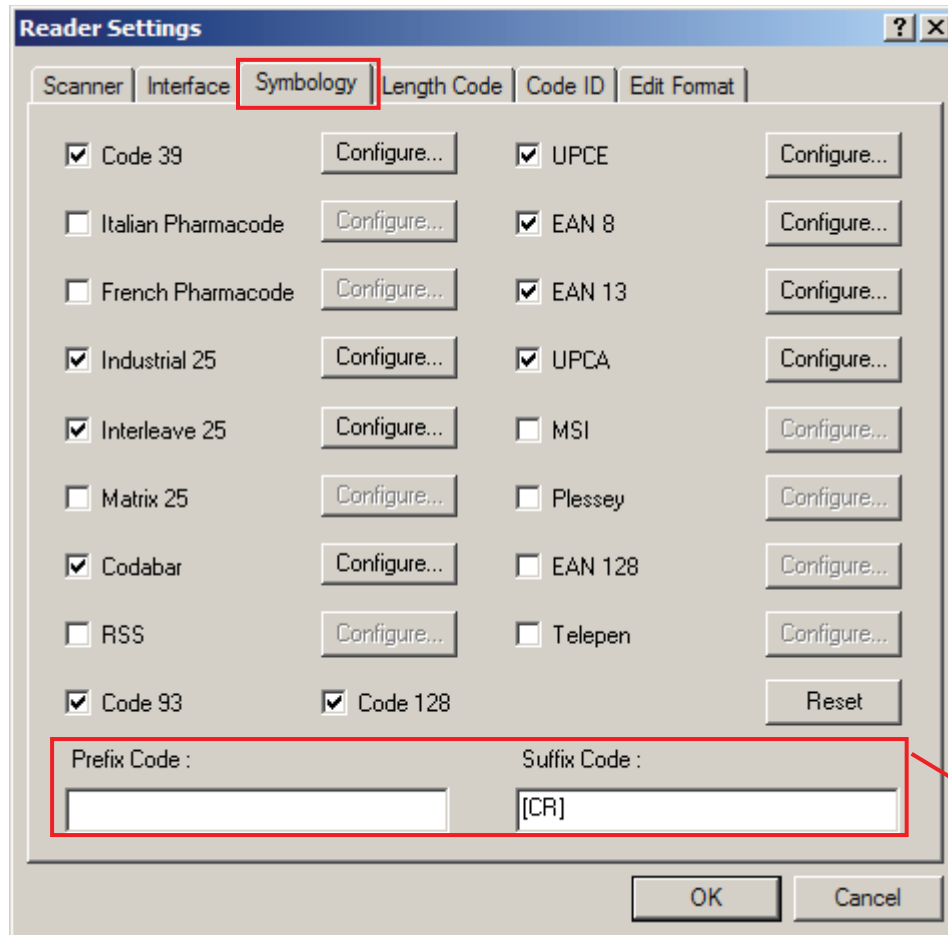
The scanner can be configured to hide itself from other devices equipped with *Bluetooth*[®] wireless technology. Simply disable the device name broadcasting setting so that it won't be discovered by any other computer or PDA. However, broadcasting must be enabled for establishing an initial connection with the scanner.

For example, you can disable device name broadcasting after successfully connecting the scanner to WorkStation1. Such connection will be maintained automatically unless the scanner is removed from the paired device list (called unpairing) by WorkStation1 or any changes made to authentication and the PIN code. If you want WorkStation2 to connect to the scanner, you will have to enable device name broadcasting first.

Note: By default, device name broadcasting is enabled (which is required for initial connection).

CHANGING SYMBOLOGY SETTINGS

Barcode symbologies are application-dependent. You may enable or disable any of them, and configure their parameters according to the requirements of a specific application.



Refer [4.2 Prefix/Suffix Code](#)

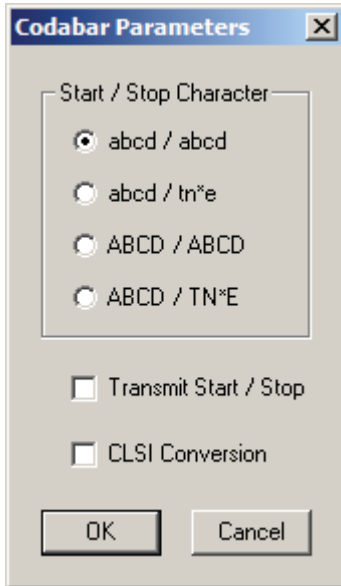
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3.1 CODABAR

By default, the scanner is set to read Codabar barcodes.

- ▶ Advanced settings are provided as shown below.



Start/Stop Character

Select one of the four different start/stop character pairs.

Transmit Start/Stop Character

Decide whether to include the selected start/stop characters in the data being transmitted.

CLSI Conversion

Decide whether to strip the start/stop characters and insert a space after the first, fifth, and tenth characters of a 14-character barcode.

- ▶ This applies to 14-character barcodes only; barcode length does not include the start and stop characters.

3.2 CODE 25 – INDUSTRIAL 25

By default, the scanner is set to read Industrial 25 barcodes.

- ▶ Advanced settings are provided as shown below.

Start/Stop Selection

Select a desired start/stop pattern. For example, flight tickets actually use an Industrial 25 barcode but with Interleaved 25 start/stop pattern. In order to read this barcode, the start/stop pattern selection of Industrial 25 should be set to Interleaved 25.

Verify Check Digit

Decide whether to verify check digit when decoding Industrial 25 barcodes. If the check digit is incorrect, the barcode will not be accepted.

Transmit Check Digit

The check digit will be included in the data being transmitted.

Cancel the check box if the check digit is not desired.

Length Qualification

Because of the weak structure of the 2 of 5 barcodes, it is possible to make a "short scan" error. To prevent the "short scan" error, configure the "Length Qualification" settings to ensure that the correct barcode is read by qualifying the allowable code length. The barcode can be qualified by "Fixed Length" or "Max/Min Length".

- ▶ For "Fixed Length", up to 2 fixed lengths can be specified.
- ▶ For "Max/Min Length", the maximum length and the minimum length must be specified. The scanner will only accept those barcodes with lengths that fall between max/min lengths specified.

3.3 CODE 25 – INTERLEAVED 25

By default, the scanner is set to read Interleaved 25 barcodes.

- ▶ Advanced settings are provided as shown below.

Start/Stop Selection

Select a desired start/stop pattern.

Verify Check Digit

Decide whether to verify check digit when decoding Industrial 25 barcodes. If the check digit is incorrect, the barcode will not be accepted.

Transmit Check Digit

The check digit will be included in the data being transmitted.

Cancel the check box if the check digit is not desired.

Length Qualification

Because of the weak structure of the 2 of 5 barcodes, it is possible to make a "short scan" error. To prevent the "short scan" error, configure the "Length Qualification" settings to ensure that the correct barcode is read by qualifying the allowable code length. The barcode can be qualified by "Fixed Length" or "Max/Min Length".

- ▶ For "Fixed Length", up to 2 fixed lengths can be specified.
- ▶ For "Max/Min Length", the maximum length and the minimum length must be specified. The scanner will only accept those barcodes with lengths that fall between max/min lengths specified.

3.4 CODE 25 – MATRIX 25

Select the check box so that the scanner can read Matrix 25 barcodes.

- ▶ Advanced settings are provided as shown below. Refer to Industrial 25.

Start/Stop Selection

Select a desired start/stop pattern.

Verify Check Digit

Decide whether to verify check digit when decoding Matrix 25 barcodes. If the check digit is incorrect, the barcode will not be accepted.

Transmit Check Digit

The check digit will be included in the data being transmitted.

Cancel the check box if the check digit is not desired.

Length Qualification

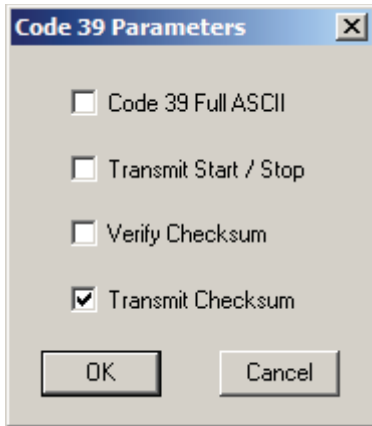
Because of the weak structure of the 2 of 5 barcodes, it is possible to make a "short scan" error. To prevent the "short scan" error, configure the "Length Qualification" settings to ensure that the correct barcode is read by qualifying the allowable code length. The barcode can be qualified by "Fixed Length" or "Max/Min Length".

- ▶ For "Fixed Length", up to 2 fixed lengths can be specified.
- ▶ For "Max/Min Length", the maximum length and the minimum length must be specified. The scanner will only accept those barcodes with lengths that fall between max/min lengths specified.

3.5 CODE 39

By default, the scanner is set to read Code 39 barcodes.

- ▶ Advanced settings are provided as shown below.



Code 39 Full ASCII

Decide whether to support Code 39 Full ASCII that includes all the alphanumeric and special characters.

Transmit Start/Stop

Decide whether to include the start/stop characters in the data being transmitted.

Verify Check Digit

Decide whether to verify check digit when decoding Code 39 barcodes. If the check digit is incorrect, the barcode will not be accepted.

Transmit Check Digit

The check digit will be included in the data being transmitted.

Cancel the check box if the check digit is not desired.

3.6 CODE 93

By default, the scanner is set to read Code 93 barcodes.

- ▶ No advanced settings are available.

3.7 CODE 128

By default, the scanner is set to read Code 128 barcodes.

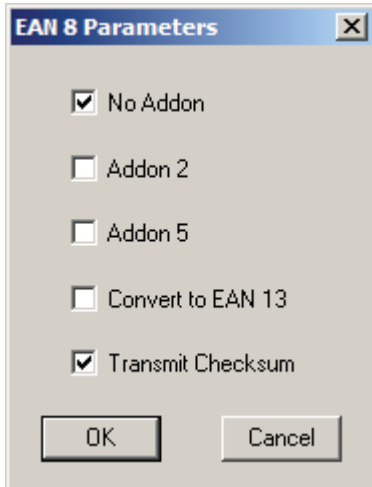
- ▶ No advanced settings are available.

3.8 EAN-8

By default, the scanner is set to read EAN-8 barcodes. (= No Addon)

Options of 2-digit and 5-digit extensions are available. Select the check box so that it can read Addon 2 and/or Addon 5.

- ▶ Advanced settings are provided as shown below.



EAN-8 Family

Select the check box to enable at least one type of the EAN-8 barcodes.

- ▶ EAN-8 (No Addon)
- ▶ EAN-8 Addon 2
- ▶ EAN-8 Addon 5

Convert to EAN-13

Decide whether to expand the read EAN-8 barcode, as well as its addons, into EAN-13.

- ▶ After conversion, the data follows EAN-13 format and is affected by EAN-13 programming selections (e.g. Check Digit).

Transmit Check Digit

The check digit will be included in the data being transmitted.

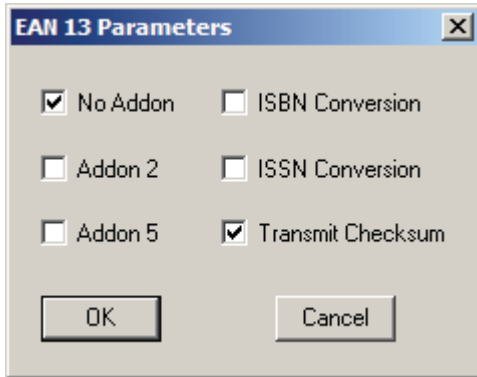
Cancel the check box if the check digit is not desired.

3.9 EAN-13

By default, the scanner is set to read EAN-13 barcodes. (= No Addon)

Options of 2-digit and 5-digit extensions are available. Select the check box so that it can read Addon 2 and/or Addon 5.

- ▶ Advanced settings are provided as shown below.



EAN-13 Family

Select the check box to enable at least one type of the EAN-13 barcodes.

- ▶ EAN-13 (No Addon)
- ▶ EAN-13 Addon 2
- ▶ EAN-13 Addon 5

ISBN Conversion

Decide whether to convert the read EAN-13 barcode, which starts with 978 and 979, to ISBN.

ISSN Conversion

Decide whether to convert the read EAN-13 barcode, which starts with 977, to ISSN.

Transmit Check Digit

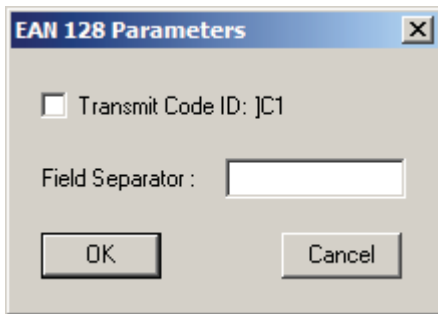
The check digit will be included in the data being transmitted.

Cancel the check box if the check digit is not desired.

3.10 GS1-128 (EAN-128)

Select the check box so that the scanner can read GS1-128 (= EAN-128) barcodes.

- ▶ Advanced settings are provided as shown below.



Warning: Code 128 must be enabled first!

Transmit Code ID

Decide whether to include the default Code ID ("]C1") in the data being transmitted.

Field Separator

The FNC1 character is used to separate fields in the barcode. It is not represented in the readable text. To replace the FNC1 character with readable characters, click the field and choose characters from the pop-up window of Grid Control (see [Appendix I Grid Control](#)).

- ▶ Up to 2 characters can be chose from the Grid Control.

Note: GS1-128 barcodes start with the FNC1 control character to distinguish themselves from other uses of Code 128. FNC1 is also used to separate data fields in the GS1-128 barcodes.

3.11 MSI

Select the check box so that the scanner can read MSI barcodes.

- ▶ Advanced settings are provided as shown below.

The screenshot shows the 'MSI Parameters' dialog box. It is divided into three main sections:

- Checksum Verification:** Contains three radio button options: 'Single Modulo 10' (selected), 'Double Modulo 10', and 'Modulo 11 & 10'.
- Checksum Transmission:** Contains three radio button options: 'Last digit not transmitted' (selected), 'Transmitted', and 'Last 2 digits not transmitted'.
- Length Qualification:** Contains two radio button options: 'Fixed Length' and 'Max / Min Length' (selected). To the right of these are two text input fields: 'Max Length' with the value '127' and 'Min Length' with the value '4'.

At the bottom of the dialog are 'OK' and 'Cancel' buttons.

Check Digit Verification

Select the calculation used to verify MSI barcodes. If the check digit is incorrect, the barcode will not be accepted.

Check Digit Transmission

Select the way the check digits will be included in the data being transmitted.

Length Qualification

Because of the weak structure of MSI barcodes, it is possible to make a "short scan" error. To prevent the "short scan" error, configure the "Length Qualification" settings to ensure that the correct barcode is read by qualifying the allowable code length. The barcode can be qualified by "Fixed Length" or "Max/Min Length".

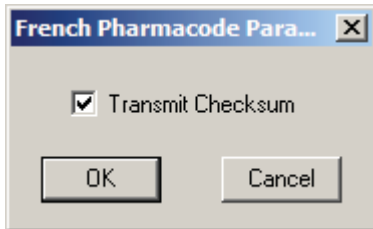
- ▶ For "Fixed Length", up to 2 fixed lengths can be specified.
- ▶ For "Max/Min Length", the maximum length and the minimum length must be specified. The scanner will only accept MSI barcodes with lengths that fall between max/min lengths specified.

3.12 FRENCH PHARMACODE

Select the check box so that the scanner can read French Pharmacode barcodes.

- ▶ Advanced settings are provided as shown below.

Check digit verification will be performed when decoding French Pharmacode because a check digit is always included. However, it is optional to transmit the check digit.



Transmit Check Digit

The check digit will be included in the data being transmitted.

Cancel the check box if the check digit is not desired.

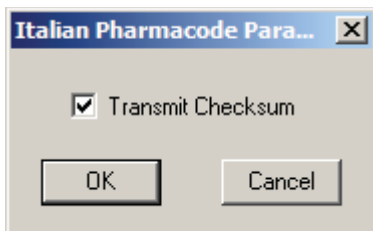
Note: These barcodes share the **Transmit Start/Stop** setting with Code 39.

3.13 ITALIAN PHARMACODE

Select the check box so that the scanner can read Italian Pharmacode barcodes.

- ▶ Advanced settings are provided as shown below.

Check digit verification will be performed when decoding Italian Pharmacode because a check digit is always included. However, it is optional to transmit the check digit.



Transmit Check Digit

The check digit will be included in the data being transmitted.

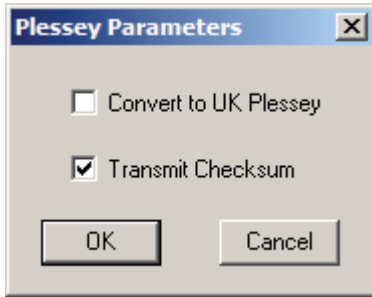
Cancel the check box if the check digit is not desired.

Note: These barcodes share the **Transmit Start/Stop** setting with Code 39.

3.14 PLESSEY

Select the check box so that the scanner can read Plessey barcodes.

- ▶ Advanced settings are provided as shown below.



Convert to UK Plessey

Decide whether to change each occurrence of the character "A" to character "X" in the barcodes.

Transmit Check Digit

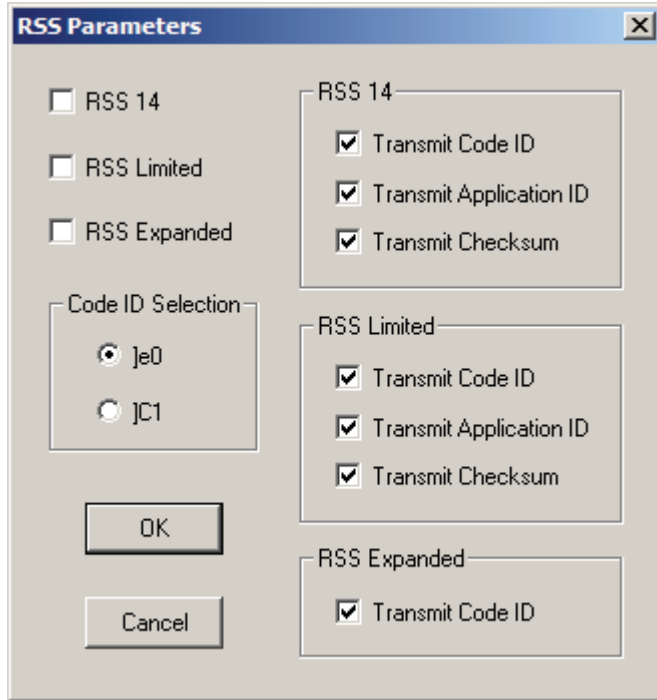
The two check digits will be included in the data being transmitted.

Cancel the check box if the check digits are not desired.

3.15 GS1 DATABAR (RSS FAMILY)

Select the check box so that the scanner can read GS1 DataBar (also known as RSS) barcodes.

- ▶ Advanced settings are provided as shown below.



GS1 DataBar (RSS Family)

Select the check box to enable at least one type of the GS1 DataBar barcodes.

- ▶ GS1 DataBar Omnidirectional (= RSS-14)
- ▶ GS1 DataBar Limited (= RSS Limited)
- ▶ GS1 DataBar Expanded (= RSS Expanded)

Code ID Selection

By default, the Code ID of GS1 DataBar (RSS) barcodes is "Je0". You may select to use "JC1" instead.

- ▶ "JC1" is the Code ID of GS1-128 (EAN-128) barcodes.

Transmit Code ID

The selected Code ID will be included in the data being transmitted.

Cancel the check box if the Code ID is not desired.

Transmit Application ID

The Application ID will be included in the data being transmitted.

Cancel the check box if the Application ID is not desired.

Transmit Check Digit

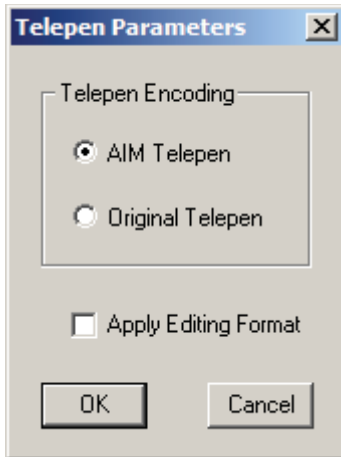
The check digit will be included in the data being transmitted.

Cancel the check box if the check digit is not desired.

3.16 TELEPEN

Select the check box so that the scanner can read Telepen barcodes.

- ▶ Advanced settings are provided as shown below.



Telepen Full ASCII or Numeric

Select whether AIM Telepen (Full ASCII) or Original Telepen (Numeric) is supported.

Apply Editing Format

Select the check box to apply editing format to Telepen, if there is any. Refer to [5.2.1 Applicable Conditions](#).

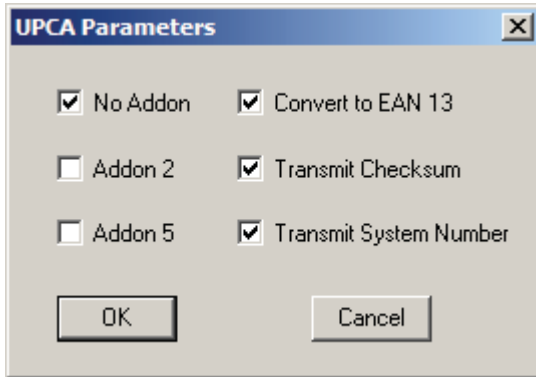
Note: Telepen is not supported on the 14XX module.

3.17 UPC-A

By default, the scanner is set to read UPC-A barcodes. (= No Addon)

Options of 2-digit and 5-digit extensions are available. Select the check box so that it can read Addon 2 and/or Addon 5.

- ▶ Advanced settings are provided as shown below.



UPC-A Family

Select the check box to enable at least one type of the UPC-A barcodes.

- ▶ UPC-A (No Addon)
- ▶ UPC-A Addon 2
- ▶ UPC-A Addon 5

Convert to EAN-13

Expand the read UPC-A barcode, as well as its addons, to EAN-13. After conversion, the data follows EAN-13 format and is affected by EAN-13 programming selections (e.g. Check Digit).

Cancel the check box if such conversion is not desired.

Transmit Check Digit

The UPC-A check digit will be included in the data being transmitted.

Cancel the check box if the check digit is not desired.

Transmit System Number

The system number will be included in the data being transmitted.

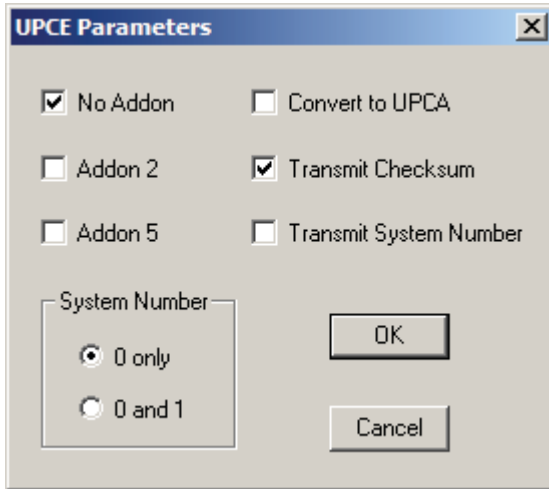
Cancel the check box if the system number is not desired.

3.18 UPC-E

By default, the scanner is set to read UPC-E barcodes. (= No Addon)

Options of 2-digit and 5-digit extensions are available. Select the check box so that it can read Addon 2 and/or Addon 5.

- ▶ Advanced settings are provided as shown below.



UPC-E Family

Select the check box to enable at least one type of the UPC-E barcodes.

- ▶ UPC-E (No Addon)
- ▶ UPC-E Addon 2
- ▶ UPC-E Addon 5

System Number

By default, the scanner is set to read the ordinary UPC-E barcodes (= UPC-E0 only). You may change it to read both UPC-E0 and UPC-E1 barcodes.

Convert to UPC-A

Decide whether to expand the read UPC-E barcode, as well as its addons, to UPC-A.

- ▶ After conversion, the data follows UPC-A format and is affected by UPC-A programming selections (e.g. System Number, Check Digit).

Transmit System Number

Decide whether to include the system number in the data being transmitted.

Transmit Check Digit

The check digit will be included in the data being transmitted.

Cancel the check box if the check digit is not desired.

DEFINING OUTPUT FORMAT

You may configure in which format the collected data will be output to the host computer. Barcode read by the scanner will be processed in the following sequence –

- 1) Perform character substitution on the data scanned.
- 2) Add [Code ID](#) and [Length Code](#) to the front of the data: [Code ID][Length Code][Data]
- 3) Process the whole data in step 2 with user formats. Data is now divided into fields by user specified rules.
- 4) Add [Prefix Code](#) and [Suffix Code](#) before transmission: [Prefix Code][Processed Data][Suffix Code]

Refer to [How to Configure the Scanner](#) for the flow chart of data process.

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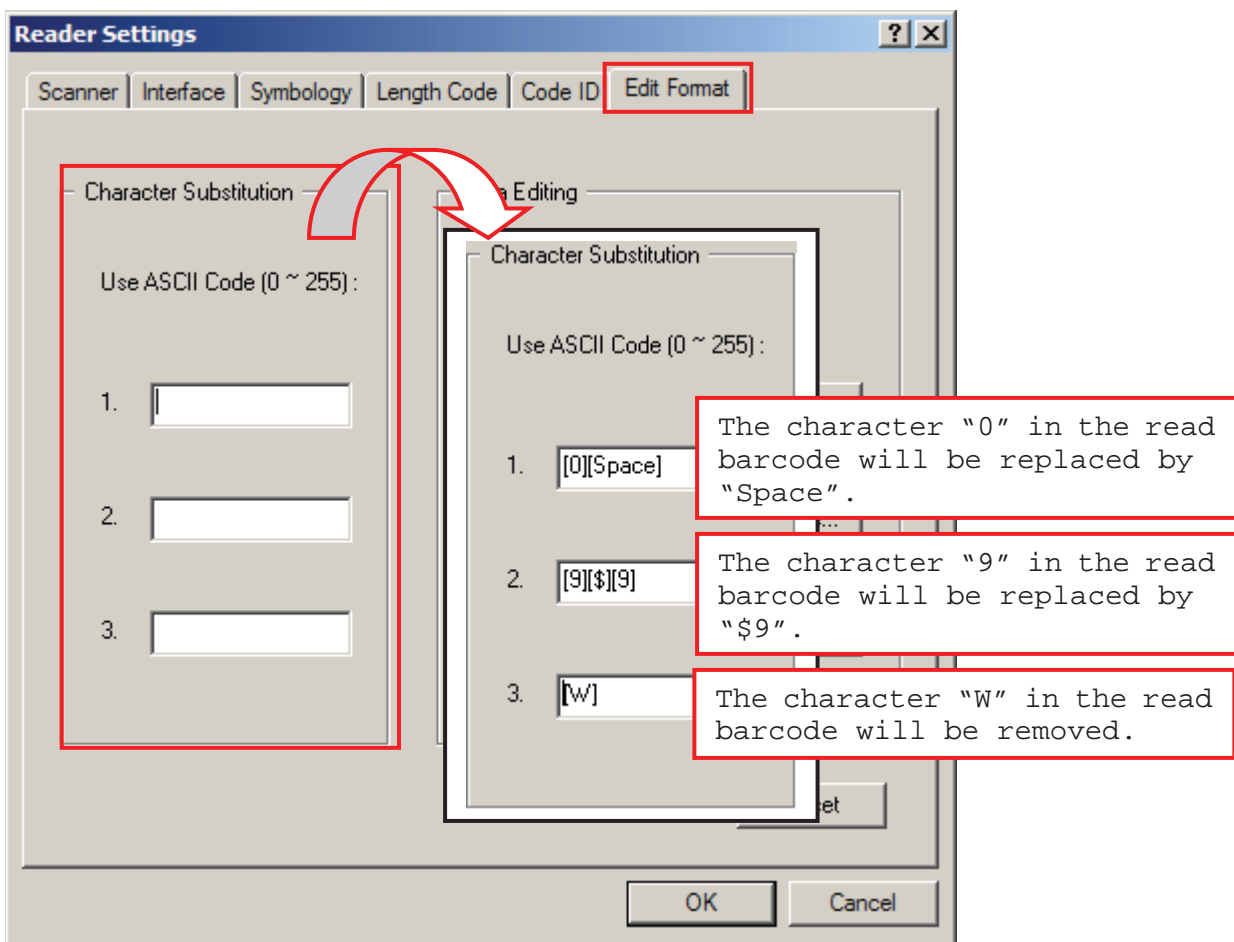
4.1 Character Substitution	56
4.2 Prefix/Suffix Code	57
4.3 Code ID	59
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4.1 CHARACTER SUBSTITUTION

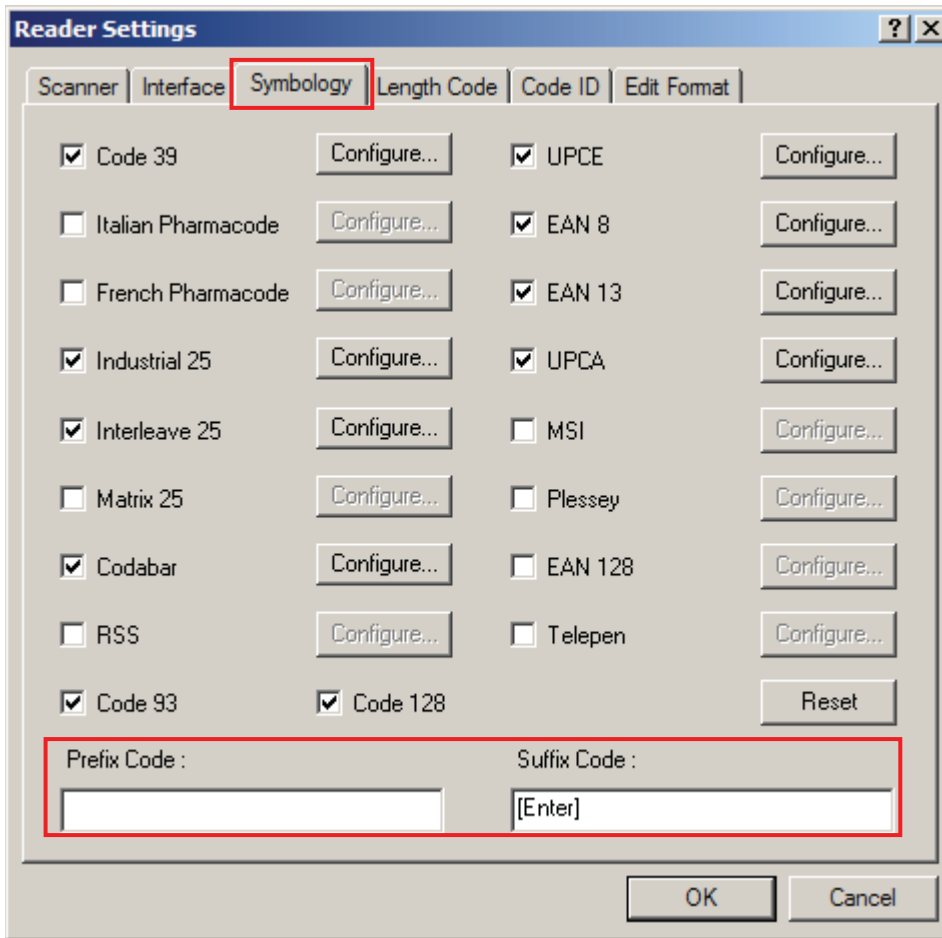
Character substitution is performed on every occurrence of the first character entered. Click the field to choose characters from the pop-up window of Grid Control (see [Appendix I Grid Control](#)). If only one character is entered, every occurrence of that character in the barcode will be taken away.

- ▶ The first character will be replaced by the second character(s).
- ▶ Up to three sets of character substitution can be configured.

Note: (1) Character substitution will be performed on all symbologies.
(2) Character substitution is performed only on the barcode itself and before the processing of editing formats. It is not applicable to the Prefix/Suffix Code, Code ID, Length Code, or any Additional Field.



4.2 PREFIX/SUFFIX CODE



Click the Prefix Code or Suffix Code field so that you can choose characters from the pop-up window of Grid Control (see [Appendix I Grid Control](#)).

- ▶ Prefix Code: None
- ▶ Suffix Code: By default, [ENTER] or [CR] (Carriage Return) is entered.

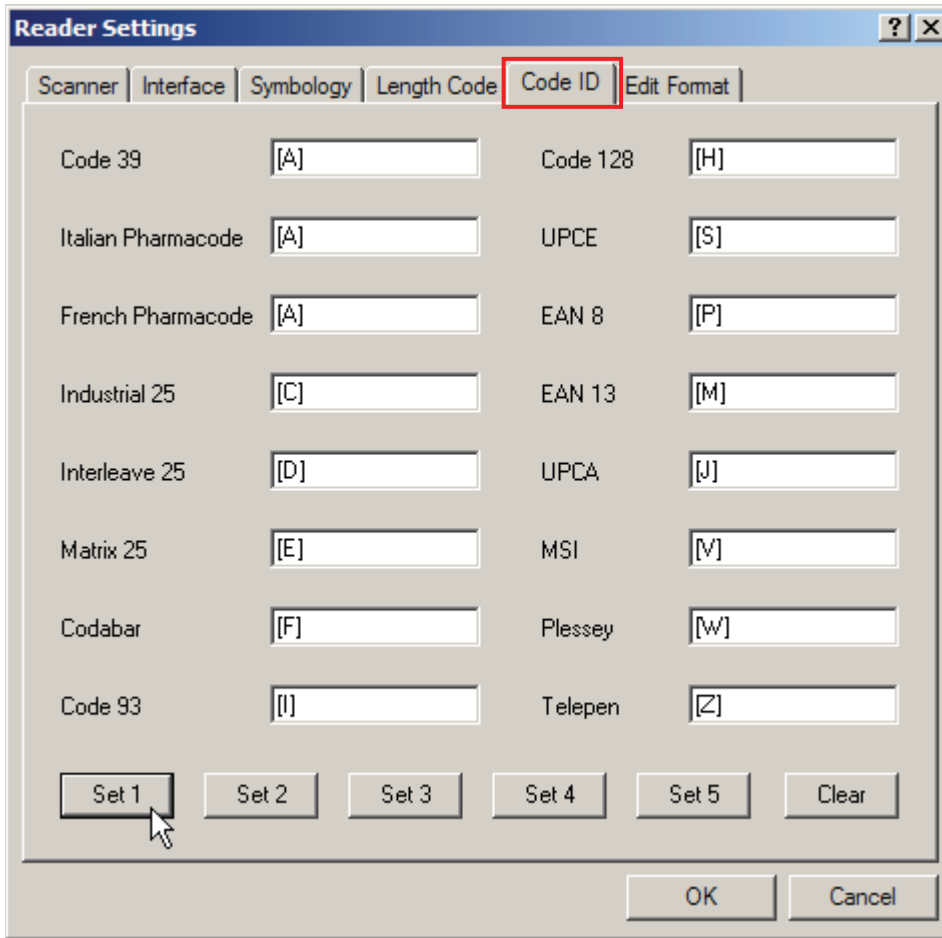
Originally, "Normal Key" is in use by default, Up to eight characters can be chose from the Grid Control. For example, "Barcode_", and you will have the string appear in front of the barcode read, like this — "Barcode_1234567890".

If "Keyboard Wedge", "BT HID" or "USB HID" is configured for interface, Key Type and Key Status will then become applicable. Decide whether or not to apply Key Status when "Normal Key" is selected for Key Type.

Key Type	Key Status
Scan Code	N/A
Normal Key	<ul style="list-style-type: none">▶ Add Shift▶ Add Left Ctrl▶ Add Left Alt▶ Add Right Ctrl▶ Add Right Alt▶ Add Break <p>For example, select one of the above keys, say, [Add Shift], and choose the character [A] from the Grid Control.</p>

4.3 CODE ID

To make the Code ID configuration easier, we provide five pre-defined Code ID sets that you can make necessary changes.



Note: “[C]1” is the Code ID of GS1-128 (EAN-128) barcodes; “[e]0” is the default Code ID of GS1 DataBar (RSS) barcodes.

4.3.1 CODE ID SET 1~5

Code ID options	Set 1	Set 2	Set 3	Set 4	Set 5
<i>Code 39</i>	A	C	Y	M	A
<i>Italian Pharmacode</i>	A	C	Y	M	A
<i>French Pharmacode</i>	A	C	Y	M	A
<i>Industrial 25</i>	C	H	H	H	S
<i>Interleaved 25</i>	D	I	Z	I	S
<i>Matrix 25</i>	E	G	G	G	S
<i>Codabar</i>	F	N	X	N	F
<i>Code 93</i>	I	L	L	L	G
<i>ISBT 128</i>	H	K	K	K	C
<i>Code 128</i>	H	K	K	K	C
<i>UPC-E</i>	S	E	C	E	E
<i>EAN-8</i>	P	B	B	FF	E
<i>EAN-13</i>	M	A	A	F	E
<i>UPC-A</i>	J	A	A	A	E
<i>MSI</i>	V	V	D	P	M
<i>Plessey</i>	W	W	E	Q	P
<i>Telepen</i>	Z	---	---	---	---

4.3.2 CHANGE CODE ID

To modify the Code ID, click the field next to a symbology. Then, choose your Code ID from the pop-up window of Grid Control (see [Appendix I Grid Control](#)).

Up to two characters for Code ID can be configured for each symbology.

If "Keyboard Wedge", "BT HID" or "USB HID" is configured for interface, Key Type and Key Status will then become applicable. Decide whether or not to apply Key Status when "Normal Key" is selected for Key Type.

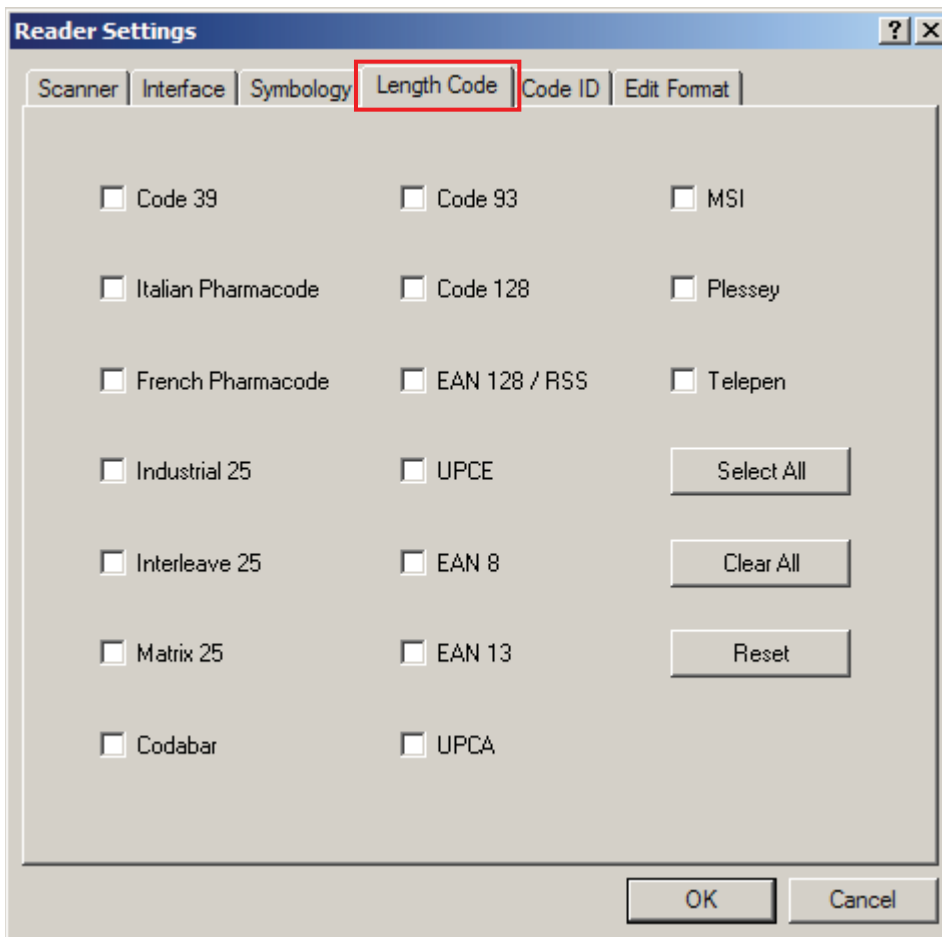
Key Type	Key Status
Scan Code	N/A
Normal Key	<ul style="list-style-type: none"> ▶ Add Shift ▶ Add Left Ctrl ▶ Add Left Alt ▶ Add Right Ctrl ▶ Add Right Alt ▶ Add Break <p>For example, select one of the above keys, say, [Add Shift], and choose the character [A] from the Grid Control.</p>

4.3.3 CLEAR

Click this button to clear the current settings. Default settings will be loaded. That is, the Code ID settings are empty.

4.4 LENGTH CODE

A two-digit code representing the length of barcode data (character count) can be inserted in front of data being transmitted. Such length code can be individually enabled or disabled for each symbology. By default, no length code is added to output data for all symbologies.



APPLYING EDITING FORMATS

The scanner allows advanced data editing by applying user-configured editing formats. Data is divided into fields by user-specified rules. These fields together with the user-configurable additional fields consist of the data actually sent to the host computer.

- ▶ Up to three different formats can be specified.

IN THIS CHAPTER

5.1 Format Selection	64
5.2 Configure Editing Format	65

5.1 FORMAT SELECTION

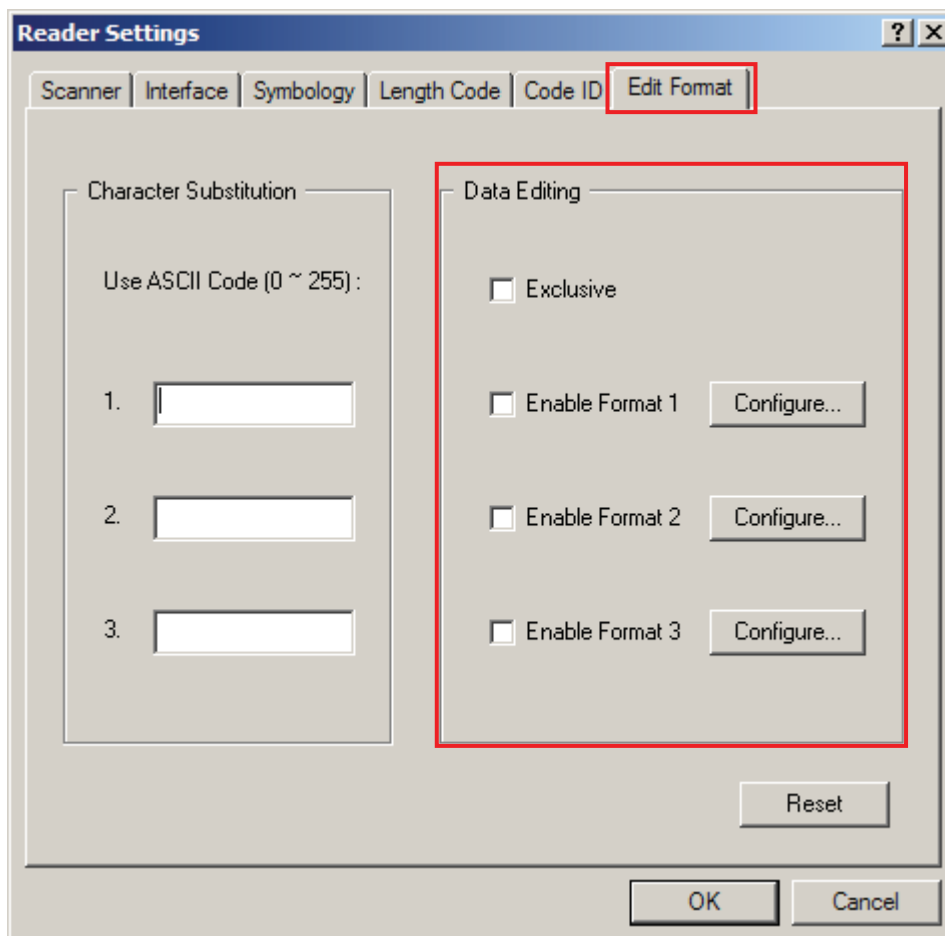
5.1.1 ENABLE EDITING FORMATS

If you have already configured any editing format before, you may directly apply the editing format. If not, you must start with configuring an editing format first, and then, select the check box to enable any of the three editing formats when it is desired in use.

5.1.2 EXCLUSIVE DATA EDITING

By default, only barcodes found meeting with the criteria are processed by the editing formats. Those found not meeting with the criteria are processed normally.

Select the check box to apply "Exclusive Data Editing". When applied, all barcodes read by the scanner must be processed by the editing formats. If data is found excluded from all enabled editing formats (= not meeting with the specified criteria), the scanner will not accept the reading, and therefore, data will not be transmitted.

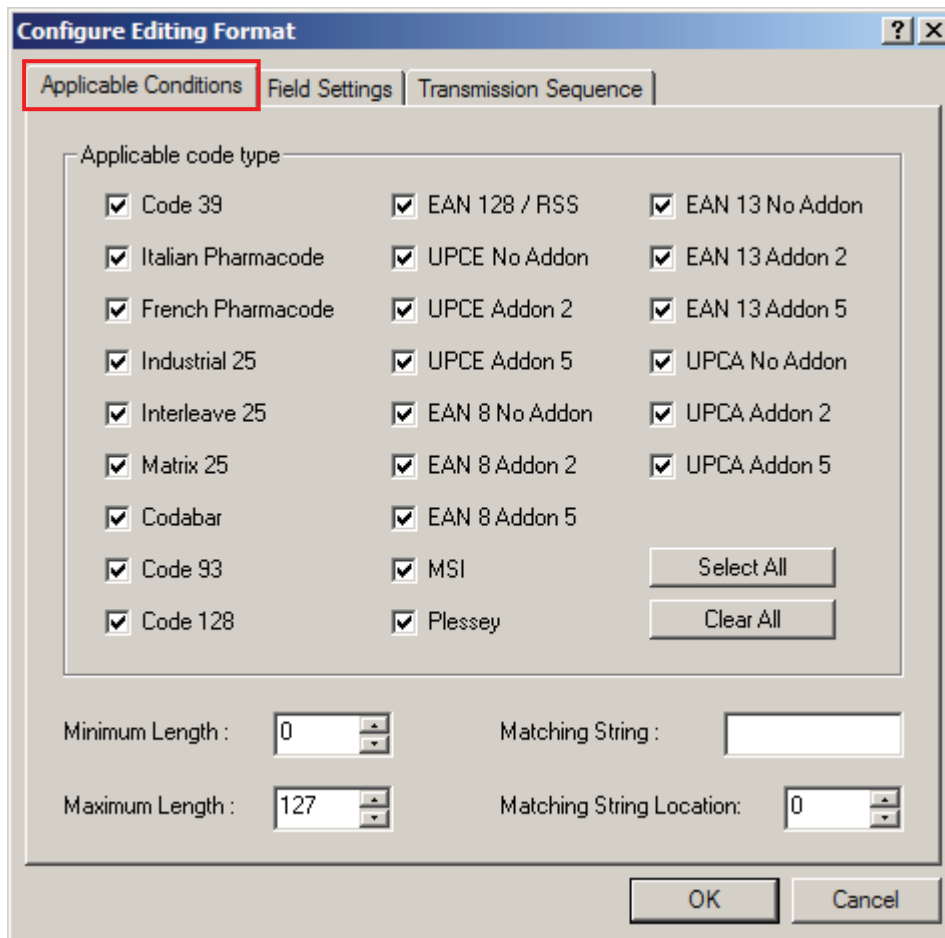


5.2 CONFIGURE EDITING FORMAT

Three applicable conditions can be configured to check whether the data read by the scanner can be processed by a particular editing format.

Note: Data editing cannot be performed unless the three conditions are all met.

5.2.1 APPLICABLE CONDITIONS



Applicable Code Type

By default, barcodes of all the supported symbologies are eligible for data editing.

- ▶ Cancel the check box next to a symbology for which data editing is not desired.

Data Length

The length must include prefix, suffix (0x0d by default), length code, etc. By default, barcodes with length (character count) ranging from 0 to 127 are eligible for data editing.

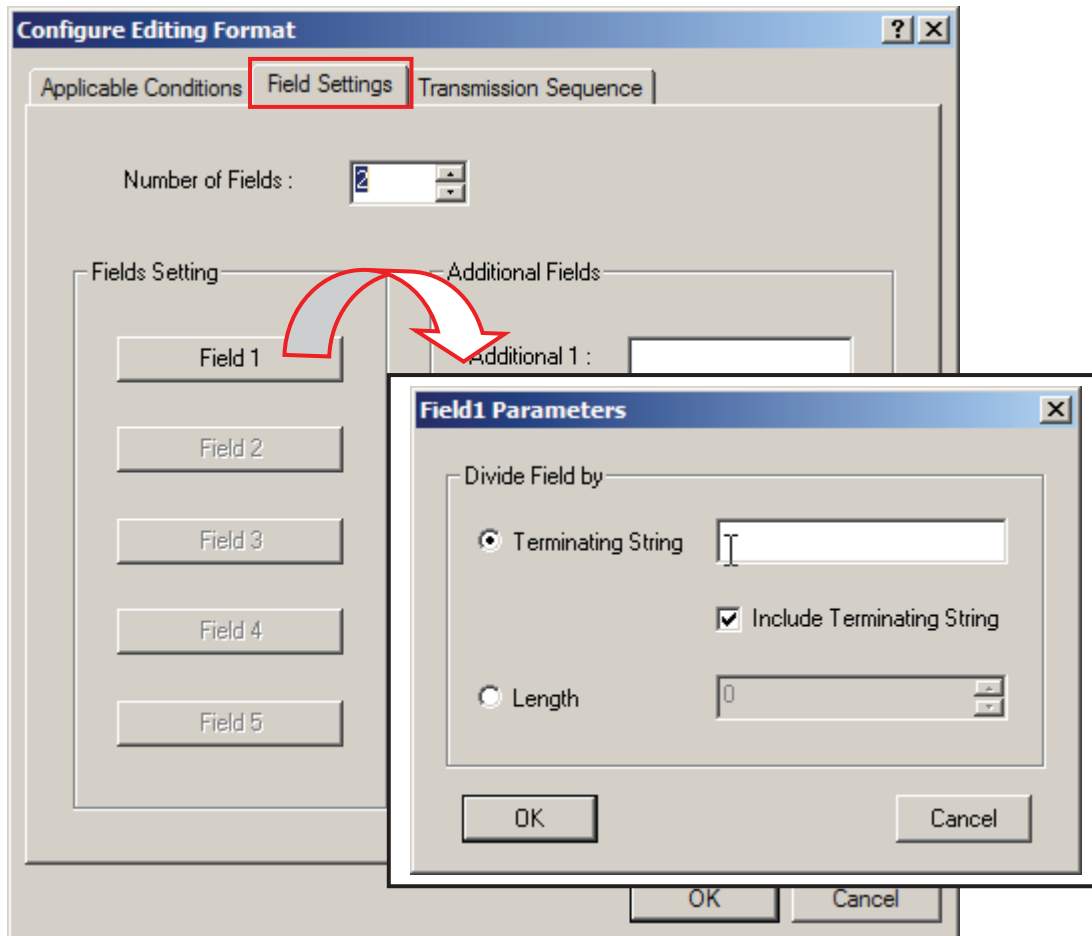
- ▶ Enter a value from 0 to 255.
- ▶ When zero is given to both, the scanner will not perform the length qualification.

Matching String & Location

By default, no matching string is entered, and therefore, it is disabled. You may enable this feature by entering a matching string. Choose up to four characters from the pop-up window of Grid Control (see [Appendix I Grid Control](#)).

- ▶ When the Matching String Location is zero, the scanner will only check for the existence of the matching string in the barcode data.
- ▶ Enter a value from 1 to 255 to indicate where the matching string starts in the barcode data.

5.2.2 FIELD SETTINGS



Number of Fields

Data can be divided into at most 6 fields; each of them is numbered from F1 to F6 accordingly. However, only F1~F5 can be configured.

- ▶ The total number of fields must be entered correctly. If three fields are configured for the editing format, the data characters after F3 will be assigned to F4 automatically. This feature is quite useful especially when data of variable lengths is processed by editing formats.

Field Setting

Data eligible for editing formats is divided into fields by user-specified rules – either using the field terminating string or specified field length.

Enter the field terminating string. Choose up to two characters from the pop-up window of Grid Control (see [Appendix I Grid Control](#)). The scanner will search for the occurrence of this particular string in the data. Alternatively, you may simply enter the field length. The scanner will assign the next specified number of characters into the field.

- ▶ By default, this terminating string, if exists, will be included in the field. If you wish to discard it, cancel the check box.

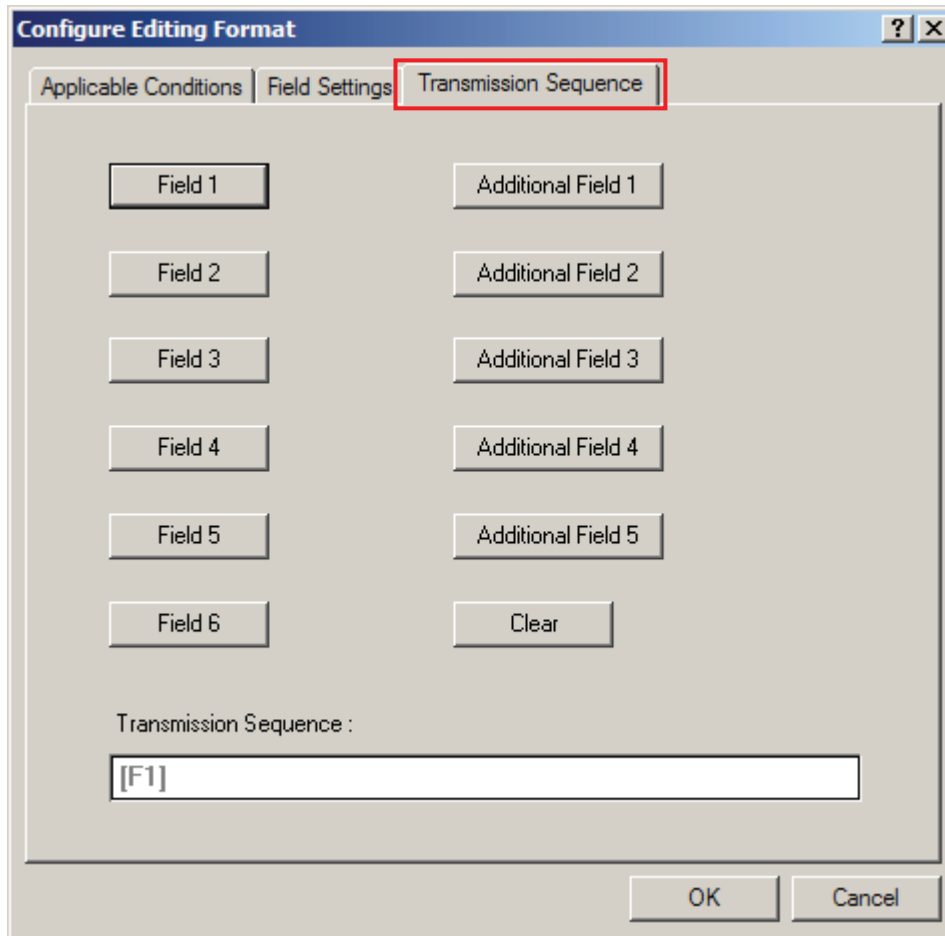
Additional Fields

Up to five additional fields can be created for each editing format; each of them is numbered from AF1 to AF5 accordingly. To configure the Additional Fields setting, click the associated field and choose up to four characters from the pop-up window of Grid Control (see [Appendix I Grid Control](#)).

Note: The number of configurable fields is always one less than the total number of fields specified. The extra data characters beyond the last field configured will be automatically assigned to the next field.

5.2.3 TRANSMISSION SEQUENCE

After configuring the data fields and additional fields, user can now program the transmission sequence of these fields that comprise the final data. Simply click on the buttons of these fields in sequence, and they will appear in the Transmission Sequence field. This field transmission sequence can be assigned in any desired order and fields can be assigned multiple times as well. The maximum number of fields can be assigned is twelve.

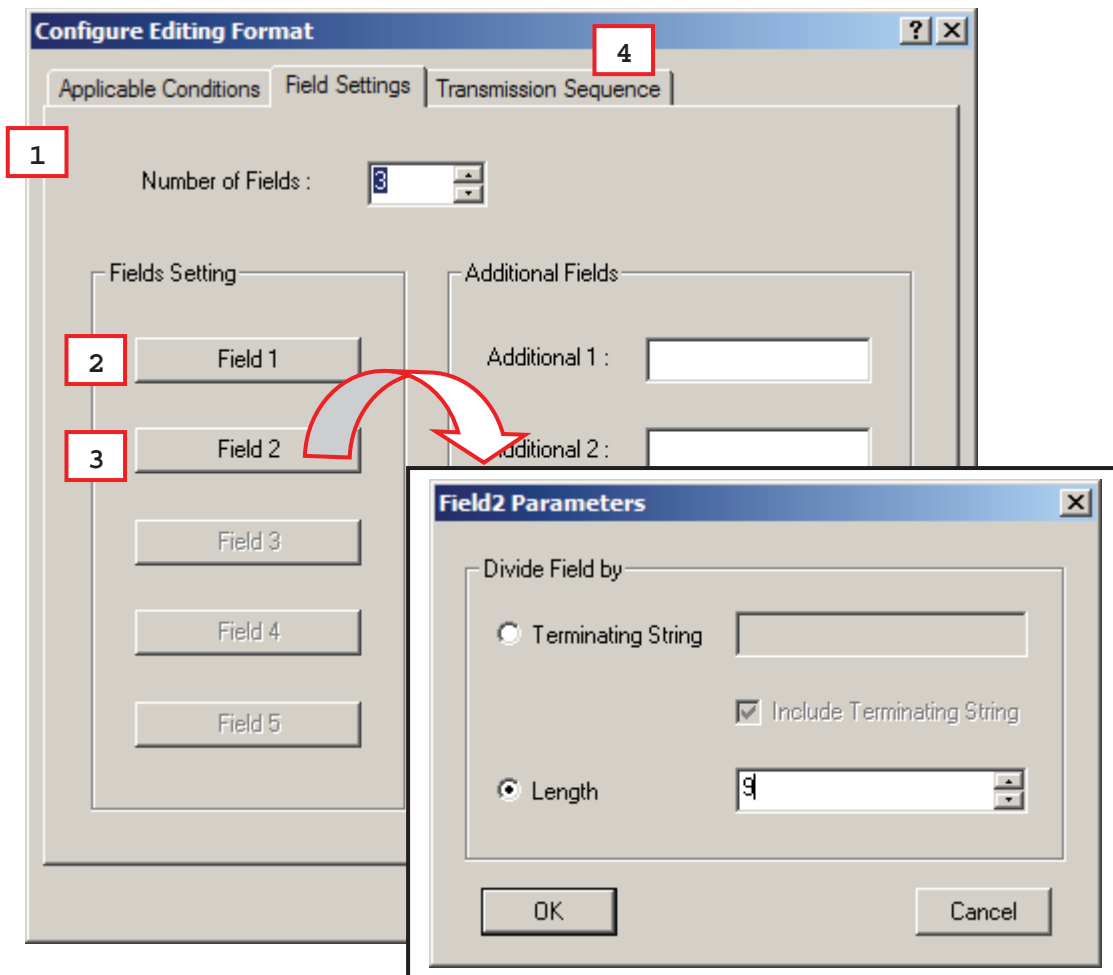


5.2.4 EXAMPLES

Example 1 – Extract data from the 10th character to the 19th character...

The editing format should be configured as follows:

1. Set Number of Fields to "3".
2. Set Field1 Parameters: divide field by Length, and set length to "10".
Field1 = from the 1st character to the 10th character
3. Set Field2 Parameters: divide field by Length, and set length to "9".
Field2 = from the 11th character to the 19th character
4. Set Transmission Sequence to transmit "F2" only.



Example 2 – Extract the date code, item number, and quantity information from barcodes.

Data is encoded in the barcode like this:

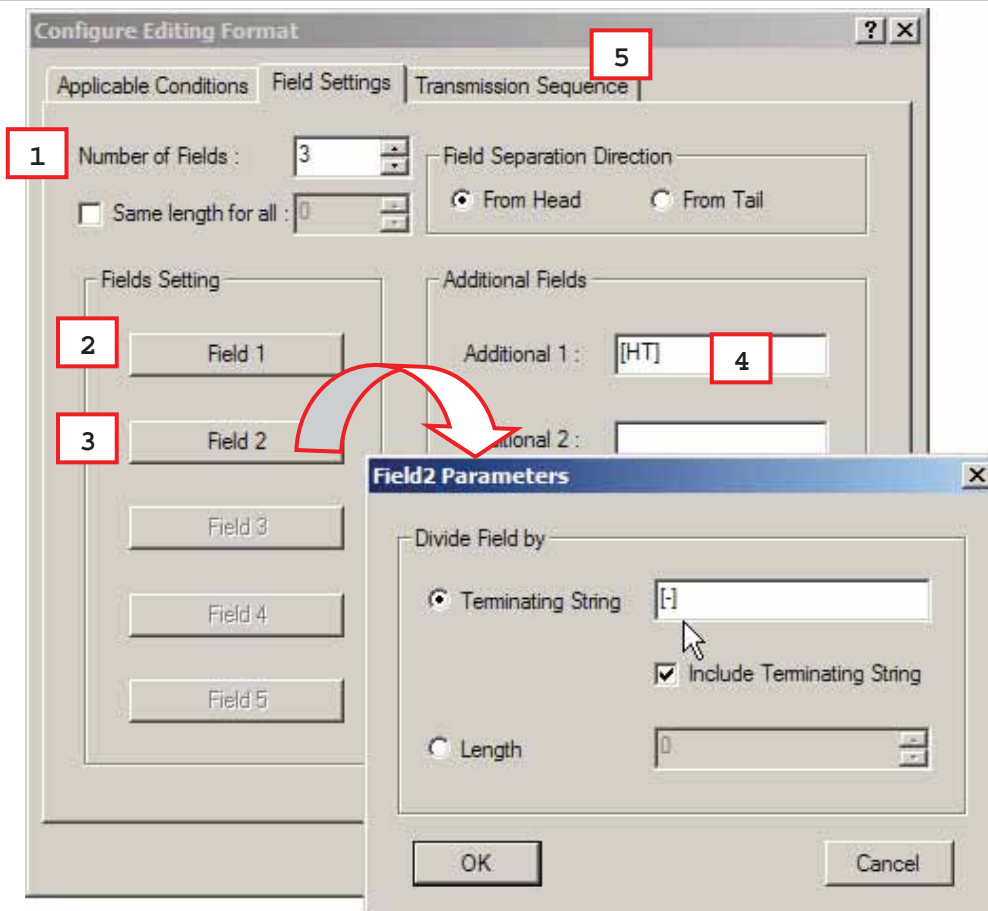
- From the 1st character to the 6th character is the date code.
- From the 7th character to the "-" character is the item number.
- After the "-" character is the quantity information.

Data will be transmitted like this:

- The item number goes first, then a TAB character, followed by the date code, then another TAB character, and finally the quantity information.

The editing format should be configured as follows:

1. Set Number of Fields to "3".
2. Set Field1 Parameters: divide field by Length, and set length to "6".
Field1 = from the 1st character to the 6th character
3. Set Field2 Parameters: divide field by Terminating String, and set the string to "-".
Field2 = from the 7th character to the "-" character
4. Set Additional Field 1 to one "TAB" character.
5. Set Transmission Sequence to transmit "F2 A1 F1 A1 F3".

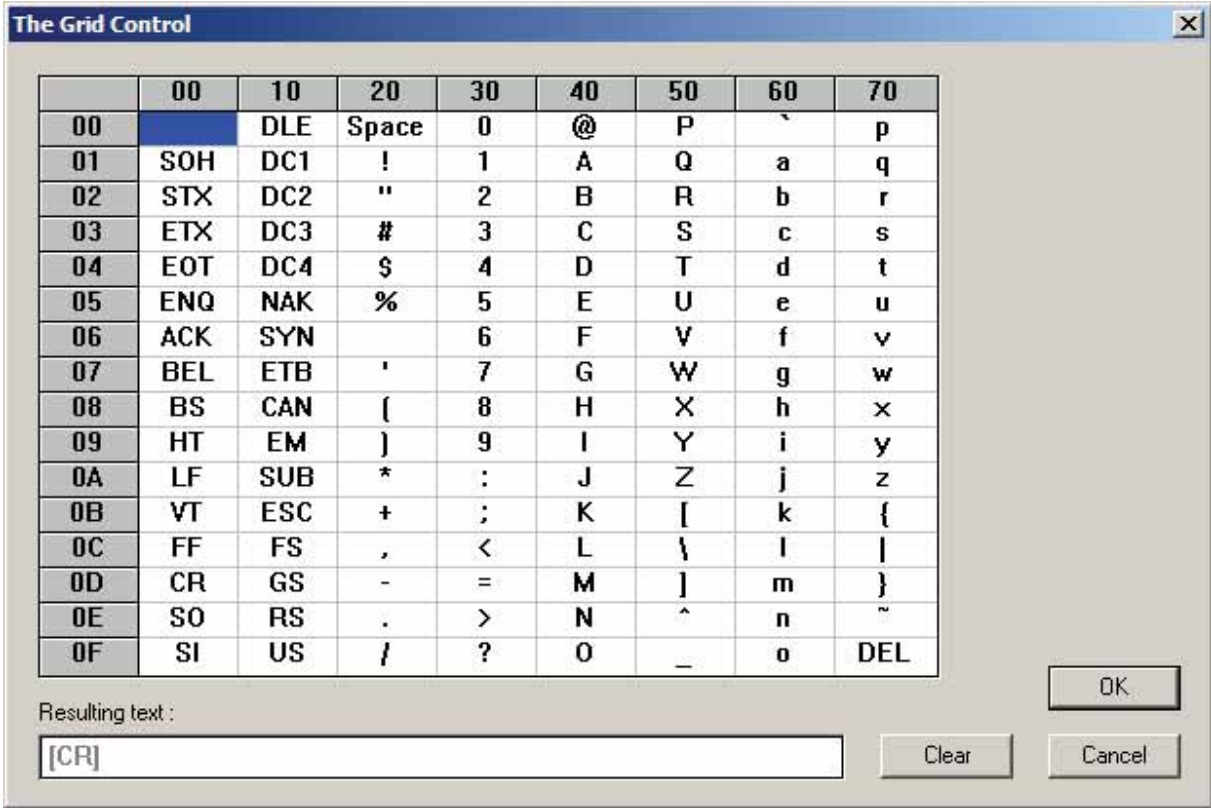


GRID CONTROL

ORIGINAL GRID CONTROL

This is used for the following settings:

- ▶ Field Separator for GS1-128
- ▶ Character Substitution



Note: For a TAB character, click "HT".

SPECIAL GRID CONTROL FOR KEYBOARD INTERFACE

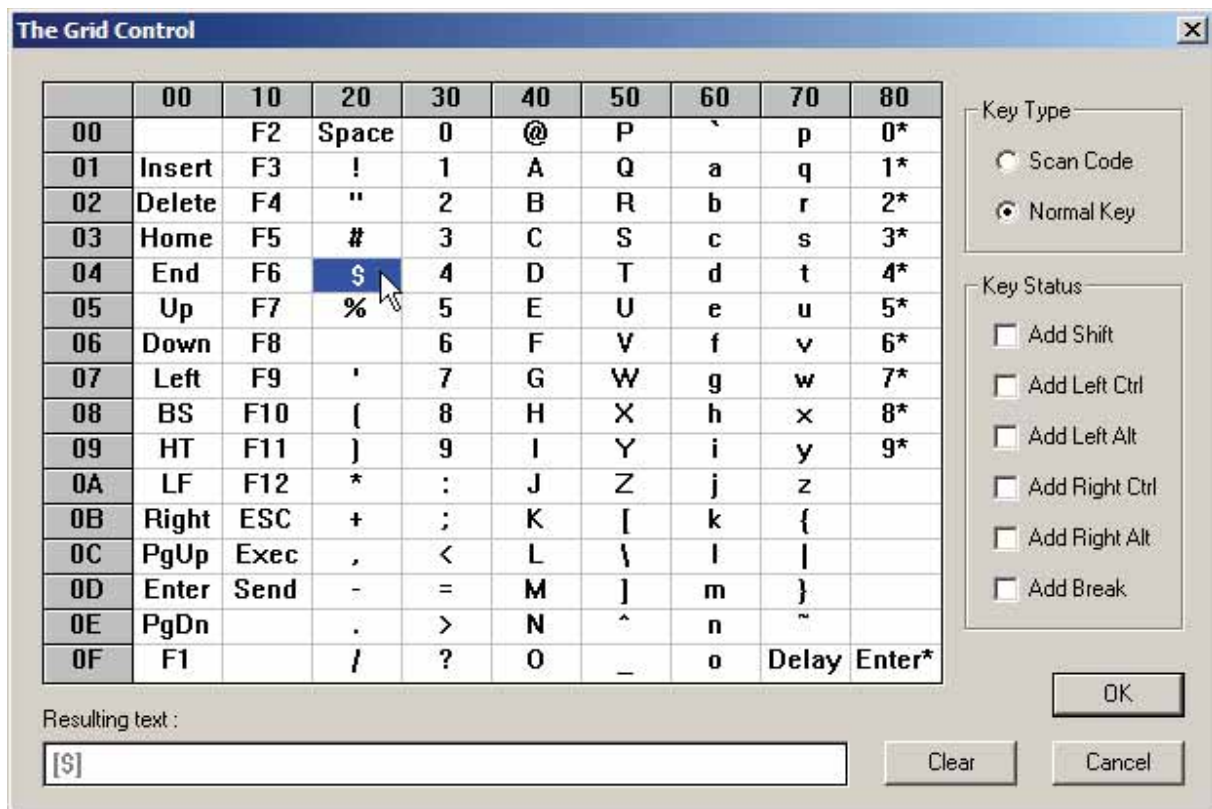
This is used for the following settings:

- ▶ Prefix/Suffix Code
- ▶ Code ID
- ▶ Additional Fields for configuring editing format

Note: This is available only when "Keyboard Wedge", "BT HID" or "USB HID" is selected for interface.

GRID CONTROL – NORMAL KEY

By default, each character programmed is a "Normal Key". Such a character can have associate status settings by adding the Shift/Control/Alternate keys.



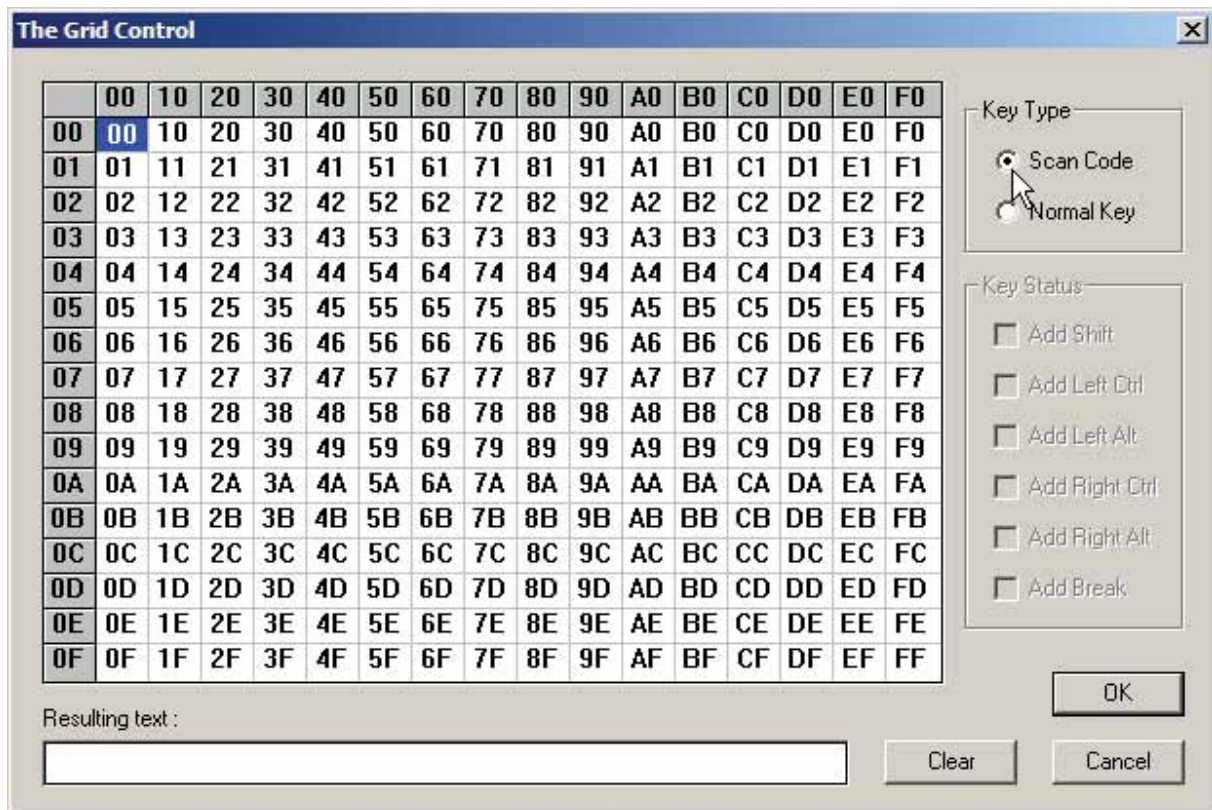
Note: For a TAB character, click "HT".

For example, if you want to program "Ctrl-Shift-B", "C" for Prefix Code, the programming sequence is as follows:

- 1) Click the Prefix Code field.
- 2) Select "Normal Key" for Key Type in the Grid Control window.
- 3) Select the check box of "Add Left Ctrl" and "Add Shift" for Key Status.
- 4) Choose "B" from the ASCII table.
- 5) Cancel the check box of "Add Left Ctrl" and "Add Shift".
- 6) Choose "C" from the ASCII table.
- 7) Click [OK] to confirm the setting.

GRID CONTROL – SCAN CODE

Select "Scan Code" so that the scanner is configured to program a character by its scan code value.



DEFAULT SETTINGS

1000/1090+ DEFAULTS

Scanner tab	Default Setting
Scan Mode:	Auto Off
Read Redundancy:	None
Delay between Reread:	0.4 sec
Timeout:	10 (sec)
Disable Buzzer:	Enabled, 4 KHz
Read Negative Barcode:	Disabled
Disable Good Read LED:	Enabled
Interface tab	Default Setting
Scanner Interface:	Keyboard Wedge
Keyboard Type:	PCAT (US)
Alternate Composing:	No
Alphabets Transmission:	Case-sensitive
Digits Transmission:	Alpha-numeric Keypad
Capital Lock Type:	Normal
Capital Lock State:	OFF
Alphabets Layout:	Normal
Digits Layout:	Normal
Inter-Character Delay:	0 (ms)
Laptop Support:	Disabled
Symbology	Default Setting
Code 39	Enabled
Italian Pharmacode	Disabled
French Pharmacode	Disabled
Industrial 25	Enabled
Interleaved 25	Enabled
Matrix 25	Disabled
Codabar	Enabled

Code 93	Enabled
Code 128	Enabled
EAN-128	Disabled
UPC-E	Enabled
EAN-8	Enabled
EAN-13	Enabled
UPC-A	Enabled
MSI	Disabled
Plessey	Disabled
RSS	Disabled
Telepen	Disabled
Prefix Code	None
Suffix Code	Enter
Code Length	Default Setting
Same as Symbology	All disabled
Code ID	Default Setting
Same as Symbology except for RSS, EAN-128	All disabled
Edit Format	Default Setting
Character Substitution	None
Data Editing	Disabled

1100/1105/1200 DEFAULTS

Scanner tab	Default Setting
Scan Mode:	Laser
Read Redundancy:	None
Delay between Reread:	0.4 sec
Timeout:	10 (sec)
Disable Buzzer:	Enabled, 4 KHz
Read Negative Barcode:	Disabled
Disable Good Read LED:	Enabled
Auto Sense (1100/1105 only):	Disabled
Interface tab	Default Setting
Scanner Interface:	Keyboard Wedge
Keyboard Type:	PCAT (US)
Alternate Composing:	No
Alphabets Transmission:	Case-sensitive
Digits Transmission:	Alpha-numeric Keypad
Capital Lock Type:	Normal
Capital Lock State:	OFF
Alphabets Layout:	Normal
Digits Layout:	Normal
Inter-Character Delay:	0 (ms)
Laptop Support:	Disabled
Symbology	Default Setting
Code 39	Enabled
Italian Pharmacode	Disabled
French Pharmacode	Disabled
Industrial 25	Enabled
Interleaved 25	Enabled
Matrix 25	Disabled
Codabar	Enabled
Code 93	Enabled
Code 128	Enabled
EAN-128	Disabled
UPC-E	Enabled

EAN-8	Enabled
EAN-13	Enabled
UPC-A	Enabled
MSI	Disabled
Plessey	Disabled
RSS	Disabled
Telepen	Disabled
Prefix Code	None
Suffix Code	Enter
Code Length	Default Setting
Same as Symbology	All disabled
Code ID	Default Setting
Same as Symbology except for RSS, EAN-128	All disabled
Edit Format	Default Setting
Character Substitution	None
Data Editing	Disabled

1160/1166/1260/1266 DEFAULTS

Scanner tab	Default Setting
Scan Mode:	Laser
Read Redundancy:	None
Delay between Reread:	0.4 sec
Timeout:	10 (sec)
Disable Buzzer:	Enabled, 4 KHz
Read Negative Barcode:	Disabled
Disable Good Read LED:	Enabled
Auto Sense (1166/1266 only):	Disabled
RF Auto-Shutdown	10 (min.)
Memory Scanner:	Disabled
Transmit Buffer (1166/1266 only):	Disabled
Interface tab	Default Setting
Scanner Interface:	Keyboard Wedge
Keyboard Type:	PCAT (US)
Alternate Composing:	No
Alphabets Transmission:	Case-sensitive
Digits Transmission:	Alpha-numeric Keypad
Capital Lock Type:	Normal
Capital Lock State:	OFF
Alphabets Layout:	Normal
Digits Layout:	Normal
Inter-Character Delay:	0 (ms)
Laptop Support:	Disabled
Symbology	Default Setting
Code 39	Enabled
Italian Pharmacode	Disabled
French Pharmacode	Disabled
Industrial 25	Enabled
Interleaved 25	Enabled
Matrix 25	Disabled
Codabar	Enabled
Code 93	Enabled

Code 128	Enabled
EAN-128	Disabled
UPC-E	Enabled
EAN-8	Enabled
EAN-13	Enabled
UPC-A	Enabled
MSI	Disabled
Plessey	Disabled
RSS	Disabled
Telepen	Disabled
Prefix Code	None
Suffix Code	Enter
Code Length	Default Setting
Same as Symbology	All disabled
Code ID	Default Setting
Same as Symbology except for RSS, EAN-128	All disabled
Edit Format	Default Setting
Character Substitution	None
Data Editing	Disabled

14XX DEFAULTS

Scanner tab	Default Setting
Scan Mode:	Continuous
Read Redundancy:	None
Delay between Reread:	0.4 sec
Timeout:	10 (sec)
Disable Buzzer:	Enabled, 4 KHz
Read Negative Barcode:	Disabled
Disable Good Read LED:	Enabled
Auto Sense:	Disabled
Interface tab	Default Setting
Scanner Interface:	RS-232
Transmission Mode:	Single Port
Baud Rate:	9600 bps
Data Bit:	8 Bits
Parity:	None
Flow Control:	No
Inter-Character Delay:	0
Symbology	Default Setting
Code 39	Enabled
Italian Pharmacode	Disabled
French Pharmacode	Disabled
Industrial 25	Enabled
Interleaved 25	Enabled
Matrix 25	Disabled
Codabar	Enabled
Code 93	Enabled
Code 128	Enabled
EAN-128	Disabled
UPC-E	Enabled
EAN-8	Enabled
EAN-13	Enabled
UPC-A	Enabled
MSI	Disabled

Plessey	Disabled
RSS	Disabled
Telepen	Not supported on the 14XX module
Prefix Code	None
Suffix Code	CR
Code Length	Default Setting
Same as Symbology	All disabled
Code ID	Default Setting
Same as Symbology except for RSS, EAN-128	All disabled
Edit Format	Default Setting
Character Substitution	None
Data Editing	Disabled

1045 DEFAULTS

Scanner tab	Default Setting
Scan Mode:	Laser
Read Redundancy:	None
Delay between Reread:	0.4 sec
Timeout:	10 (sec)
Disable Buzzer:	Enabled, 4 KHz
Read Negative Barcode:	Disabled
Disable Good Read LED:	Enabled
Auto Sense:	Disabled
Interface tab	Default Setting
Scanner Interface:	RS-232
Transmission Mode:	Single Port
Baud Rate:	9600 bps
Data Bit:	8 Bits
Parity:	None
Flow Control:	No
Inter-Character Delay:	0
Symbology	Default Setting
Code 39	Enabled
Italian Pharmacode	Disabled
French Pharmacode	Disabled
Industrial 25	Enabled
Interleaved 25	Enabled
Matrix 25	Disabled
Codabar	Enabled
Code 93	Enabled
Code 128	Enabled
EAN-128	Disabled
UPC-E	Enabled
EAN-8	Enabled
EAN-13	Enabled
UPC-A	Enabled
MSI	Disabled

Plessey	Disabled
RSS	Disabled
Telepen	Disabled
Prefix Code	None
Suffix Code	CR
Code Length	Default Setting
Same as Symbology	All disabled
Code ID	Default Setting
Same as Symbology except for RSS, EAN-128	All disabled
Edit Format	Default Setting
Character Substitution	None
Data Editing	Disabled