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Please read through the manual carefully before using the product and operate it according to the manual. It is advised that you should keep this manual for future reference.

Do not disassemble the device or remove the seal label from the device, doing so will void the product warranty provided by Fujian Newland Auto-ID Tech. Co., Ltd.

All pictures in this manual are for reference only and actual product may differ. Regarding to the product modification and update, Fujian Newland Auto-ID Tech. Co., Ltd. reserves the right to make changes to any software or hardware to improve reliability, function, or design at any time without notice. The information contained herein is subject to change without prior notice.

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## Revision History

<table>
<thead>
<tr>
<th>Version</th>
<th>Description</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>V1.0</td>
<td>Initial release.</td>
<td>April 1, 2015</td>
</tr>
<tr>
<td>V1.1</td>
<td>Added the “Data Port Pinout” and “Dimensions” sections in Chapter 6.</td>
<td>June 24, 2016</td>
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1. NLS-FR20 desktop barcode scanner

2. USB cable

3. Quick Start Guide
1. RS-232 cable

2. 5V power adapter

You should retain proof of purchase and ask your dealer for a warranty card.

Note: You should check to make sure that everything on the standard configuration list is present and intact after opening the package. If any contents are damaged or missing, please keep the original package and contact your dealer immediately for after-sales service.
Chapter 3 Safety Information

Precautions

■ Disassembly and retrofit
  ➢ Do not disassemble or retrofit the device yourself. Artificial damages caused by failure to observe this precaution are not covered by the warranty.

■ External power supply
  ➢ Use only the supplied power adapter. Otherwise there is a risk of damage to the scanner.

■ Abnormal situation
  ➢ Keep the scanner away from fire or heat sources. If there is unusual odor, overheating or smoke, immediately cut off the power and disconnect the power adapter, and contact your dealer or Newland customer service center. Continued use in this case may result in fire or electric shock.

■ Drop damage
  ➢ If the scanner is damaged due to a drop from high place, immediately cut off the power and contact your dealer or Newland customer service center.

■ Mounting location
  ➢ Do not place the scanner on unstable or uneven surfaces.
  ➢ Do not expose the scanner to humidity, dust or direct sunlight.

Maintenance

➢ The scan window should be kept clean using soft cloth or lens cleaning tissue. Do not use detergent to clean it.

➢ Do not scratch the scan window.

➢ Sudden temperature drops may cause condensation on the shell which could degrade the performance of the device. If condensation occurs, dry the device before use.
Chapter 4 Product Features

Designed primarily for such applications as electronic tickets/coupons, mobile marketing and office automation, the NLS-FR20 desktop barcode scanner is able to read barcodes from paper and mobile phones.

It boasts the following features:

1. Digital barcode data capture
   Capable of reading 1D and 2D barcodes off mobile phones.

2. Printed barcode data capture
   Capable of reading 1D and 2D barcodes printed on paper.

3. Swift scanning
   Delivers effortless, snappy and accurate reading of barcodes on various mobile phone LCD screens with different contrast ratios, colors and reflectances.

4. Easy to use
   Simple configuration by scanning the programming barcodes provided in the user guide.
# Chapter 5 Technical Specifications

<table>
<thead>
<tr>
<th><strong>Processor</strong></th>
<th>IOTC 0370 CHIP</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Interface</strong></td>
<td>RS-232 (9.6~115.2Kbps)</td>
</tr>
<tr>
<td></td>
<td>USB 1.1 (HID-KBW, HID-POS)</td>
</tr>
<tr>
<td><strong>Image Sensor</strong></td>
<td>640×480 CMOS</td>
</tr>
<tr>
<td><strong>Symbologies</strong></td>
<td>2D: PDF417, Data Matrix, QR Code</td>
</tr>
<tr>
<td></td>
<td>1D: EAN-13, EAN-8, UPC-A, UPC-E,</td>
</tr>
<tr>
<td></td>
<td>ISSN, ISBN, Codabar, Code 128,</td>
</tr>
<tr>
<td></td>
<td>Code 93, ITF-6, ITF-14, Interleaved 2 of 5, Industrial 2 of 5, Standard 2 of 5, Matrix 2 of 5, GS1 Databar (RSS-Expand, RSS-Limited, RSS-14), Code 39, Code 11, MSI-Plessey, Plessey</td>
</tr>
<tr>
<td><strong>Scan Mode</strong></td>
<td>Sense mode, Continuous mode</td>
</tr>
<tr>
<td><strong>Resolution</strong></td>
<td>10 mil</td>
</tr>
<tr>
<td><strong>Light Source</strong></td>
<td>White LED</td>
</tr>
<tr>
<td><strong>Scan Window</strong></td>
<td>52mm*69mm</td>
</tr>
<tr>
<td><strong>PCS</strong></td>
<td>≥30%</td>
</tr>
<tr>
<td><strong>FOV</strong></td>
<td>Diagonal: 68°, Horizontal: 42°, Vertical: 54°</td>
</tr>
<tr>
<td><strong>Ambient Light</strong></td>
<td>0 ~ 100,000 LUX</td>
</tr>
<tr>
<td><strong>Power Consumption</strong></td>
<td>1W (max.)</td>
</tr>
<tr>
<td><strong>Power Adapter</strong></td>
<td>Output: DC5V, 0.5A, Input: AC100<del>240V, 50</del>60Hz</td>
</tr>
<tr>
<td><strong>Notification</strong></td>
<td>Beep and LED indicator</td>
</tr>
<tr>
<td><strong>Dimensions</strong></td>
<td>127.3mm(L) X 111.5mm(W) X 94mm(H)</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>300g</td>
</tr>
<tr>
<td><strong>Operating Temperature</strong></td>
<td>-10°C to + 50°C</td>
</tr>
<tr>
<td><strong>Storage Temperature</strong></td>
<td>-20°C to + 60°C</td>
</tr>
<tr>
<td><strong>Humidity</strong></td>
<td>5% - 95% (non-condensing)</td>
</tr>
<tr>
<td><strong>Certification</strong></td>
<td>FCC Part15 Class B, CE EMC Class B</td>
</tr>
</tbody>
</table>
Chapter 6 FR20 Scanner

Overview

Scan Window
LED Indicator
Data Port
Trigger
## Data Port Pinout

<table>
<thead>
<tr>
<th>PIN</th>
<th>Definition</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>NC</td>
<td>-</td>
<td>Not connected</td>
</tr>
<tr>
<td>2</td>
<td>NC</td>
<td>-</td>
<td>Not connected</td>
</tr>
<tr>
<td>3</td>
<td>VCC</td>
<td>P</td>
<td>Power+ (+5V)</td>
</tr>
<tr>
<td>4</td>
<td>TXD</td>
<td>O</td>
<td>RS-232 Output</td>
</tr>
<tr>
<td>5</td>
<td>RXD</td>
<td>I</td>
<td>RS-232 Input</td>
</tr>
<tr>
<td>6</td>
<td>NC</td>
<td>-</td>
<td>Not connected</td>
</tr>
<tr>
<td>7</td>
<td>NC</td>
<td>-</td>
<td>Not connected</td>
</tr>
<tr>
<td>8</td>
<td>GND</td>
<td>P</td>
<td>Ground</td>
</tr>
<tr>
<td>9</td>
<td>D-</td>
<td>I/O</td>
<td>USB signal</td>
</tr>
<tr>
<td>10</td>
<td>D+</td>
<td>I/O</td>
<td></td>
</tr>
</tbody>
</table>
Dimensions

Scan Window 52*69.5mm

111.5mm

127.3mm

94mm

RJ45 Port

Trigger
1. If your scanner is equipped with an RS-232 interface:

1) Plug the supplied cable’s RJ45 connector into the data port on the scanner.

2) Plug the cable’s RS-232 connector into the RS-232 port on PC.

3) Plug the power adapter into the cable’s power jack.

4) Connect the power adapter to a power outlet. After 0.5s the scanner will be powered on (indicator: beep and red LED) and then automatically enter standby mode.
2. If your scanner is equipped with a USB interface:

1) Plug the supplied cable’s RJ45 connector into the data port on the scanner.

2) Plug the cable’s USB connector into the USB port on PC.

3) After 0.5s the scanner will be powered on (indicator: beep and red LED) and then automatically enter standby mode.
Chapter 8 Scanning Instructions

Reading a Digital Barcode off Mobile Phone

1. Place the mobile phone screen as close as possible to the scan window and present the barcode to the center of the window.

2. For a successful read, the scanner will beep with its LED turning from red to green. After sending the data to the host, it will enter standby mode.

Reading a Barcode Printed on Paper

1. Place the paper as close as possible to the scan window and present the barcode to the center of the window.

2. For a successful read, the scanner will beep with its LED turning from red to green. After sending the data to the host, it will enter standby mode.
Illumination

**Always ON:** Illumination LED keeps ON after the scanner is powered on.

**Normal:** Illumination LED is turned on when the scanner is reading barcode.

**OFF:** Illumination LED is OFF all the time.
Notification

Mute Mode

Scanning the Enable Mute Mode/Disable Mute Mode can turn off/on all notification beeps.

Enable Mute Mode

** Disable Mute Mode

Good Read Beep

** Good Read Beep On

Good Read Beep Off
### Good Read Beep Frequency/Duration

<table>
<thead>
<tr>
<th>Barcode</th>
<th>Frequency</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>WFF09DA</td>
<td>Low Frequency</td>
<td></td>
</tr>
<tr>
<td>WFF094B</td>
<td>** Medium Frequency</td>
<td>** 80ms</td>
</tr>
<tr>
<td>WFF0925</td>
<td>High Frequency</td>
<td>40ms</td>
</tr>
<tr>
<td>WFF0A3E</td>
<td>** 80ms</td>
<td></td>
</tr>
<tr>
<td>WFF0A5D</td>
<td></td>
<td>120ms</td>
</tr>
</tbody>
</table>
Scan Mode

sense Mode

The scanner activates a decode session every time when it detects a change in ambient illumination and meets the requirement of the image stabilization timeout. Decode session continues until barcode is decoded or the decode session timeout expires.

Moreover, a trigger pull can also activate a decode session.

** Sense Mode

Decode Session Timeout**: This parameter sets the maximum time decode session continues during a scan attempt. It is programmable in 0.1s increments from 0.1s to 25.5s. If it is set to 0, the decode session timeout is infinite.

**Image Stabilization Timeout**: This parameter defines the amount of time that the scanner waits for the image to stabilize to a point that it can be decoded with more accuracy. It is programmable in 0.1s increments from 0.0s to 25.5s.

**Example: Set the Image Stabilization Timeout to 5s**

1. Scan the **Image Stabilization Timeout** barcode.
2. Scan the numeric barcodes “5” and “0”.
3. Scan the **Save** barcode.
**Sensitivity**: This parameter specifies the degree of acuteness of the scanner’s response to changes in ambient illumination. The higher the sensitivity, the lower requirement in illumination change to trigger the scanner. You can select an appropriate degree of sensitivity that fits the ambient environment.

![Barcode Image]

- **WFF0305**: High Sensitivity
- **WFF0310**: Medium Sensitivity
- **WFF0330**: Low Sensitivity
- **M00031A**: Custom Sensitivity

Sensitivity levels range from 0 to 255. The smaller the number, the higher the sensitivity.

**Example: Set the sensitivity level to 10**

1. Scan the **Custom Sensitivity** barcode.
2. Scan the numeric barcodes “1” and “0”.
3. Scan the **Save** barcode.
Continuous Mode

When enabled, the scanner activates decode sessions at user-specified intervals, i.e. the timeout between decodes. Each decode session lasts until barcode is decoded or the decode session timeout expires. To suspend/resume the operation, simply press the trigger.

Decode Session Timeout: This parameter sets the maximum time decode session continues during a scan attempt. It is programmable in 0.1s increments from 0.1s to 25.5s. If it is set to 0, the decode session timeout is infinite.

Example: Set the Decode Session Timeout to 5s

1. Scan the **Decode Session Timeout** barcode.
2. Scan the numeric barcodes “5” and “0”.
3. Scan the **Save** barcode.
**Timeout between Decodes:** When a decode session ends, next session will not happen until the timeout between decodes expires. It is programmable in 0.1s increments from 0s to 25.5s.

---

**Example: Set the Timeout between Decodes to 5s**

1. Scan the **Timeout between Decodes** barcode.
2. Scan the numeric barcodes “5” and “0”.
3. Scan the **Save** barcode.
Factory Defaults

Scanning the following barcode can restore the scanner to the factory defaults.

You may need to reset your scanner when:

1. scanner is not properly configured so that it fails to decode barcodes;
2. you forget previous configuration and want to avoid its impact;
3. functions that are rarely used have been enabled for the time being.

[Barcode Image]
WFFD980
Restore All Factory Defaults
Digit Barcodes

After scanning numeric barcode(s), you need to scan the Save barcode to save the data.
Save/Cancel Barcodes

After reading numeric barcode(s), you need to scan the **Save** barcode to save the data. If you scan the wrong digit(s), you can either scan the **Cancel the Last Digit** barcode and then the correct digit, or scan the **Cancel All Digits** barcode and then the digits you want.

For instance, after reading the **Decode Session Timeout** barcode and numeric barcodes “1”, “2” and “3”, you scan:

**Cancel the Last Digit**: The last digit “3” will be removed.

**Cancel All Digits**: All digits “123” will be removed.
Chapter 10 RS-232 Interface

When the scanner is connected to a host device through its RS-232 interface, serial communication is enabled by default. However, to ensure smooth communication and accuracy of data, you need to set the scanner’s communication parameters (including baud rate) to match the host’s settings. The default settings of the scanner are 9600bps, no parity check, 8 data bits and 1 stop bit.

- ** Baud Rate 9600
- Baud Rate 1200
- Baud Rate 2400
- Baud Rate 4800
- Baud Rate 14400
- Baud Rate 19200
- Baud Rate 38400
- Baud Rate 57600
- Baud Rate 115200
When the scanner is connected to a host device through its USB interface, **USB HID-KBW** is enabled by default. You may switch to **HID-POS** or **USB COM Port Emulation** by scanning the appropriate barcode below.

**HID-POS**

![Barcode for HID-POS](#)

**USB COM Port Emulation**

![Barcode for USB COM Port Emulation](#)

**USB HID-KBW**

![Barcode for USB HID-KBW](#)
Three methods of input are provided for USB HID-KBW: Standard Keyboard, Function Key Mapping, Emulate ALT+Keypad.

**Standard Keyboard**

**Function Key Mapping**

When Function Key Mapping is enabled, function character (0x00 - 0x1F) are sent as ASCII sequences over the numeric keypad.

1. CTRL Make
2. Press function key (Refer to the ASCII Function Key Mapping Table on the following page)
3. CTRL Break
## ASCII Function Key Mapping Table

<table>
<thead>
<tr>
<th>ASCII(HEX)</th>
<th>Function key</th>
<th>ASCII(HEX)</th>
<th>Function key</th>
</tr>
</thead>
<tbody>
<tr>
<td>00</td>
<td>2</td>
<td>10</td>
<td>P</td>
</tr>
<tr>
<td>01</td>
<td>A</td>
<td>11</td>
<td>Q</td>
</tr>
<tr>
<td>02</td>
<td>B</td>
<td>12</td>
<td>R</td>
</tr>
<tr>
<td>03</td>
<td>C</td>
<td>13</td>
<td>S</td>
</tr>
<tr>
<td>04</td>
<td>D</td>
<td>14</td>
<td>T</td>
</tr>
<tr>
<td>05</td>
<td>E</td>
<td>15</td>
<td>U</td>
</tr>
<tr>
<td>06</td>
<td>F</td>
<td>16</td>
<td>V</td>
</tr>
<tr>
<td>07</td>
<td>G</td>
<td>17</td>
<td>W</td>
</tr>
<tr>
<td>08</td>
<td>H</td>
<td>18</td>
<td>X</td>
</tr>
<tr>
<td>09</td>
<td>I</td>
<td>19</td>
<td>Y</td>
</tr>
<tr>
<td>0A</td>
<td>J</td>
<td>1A</td>
<td>Z</td>
</tr>
<tr>
<td>0B</td>
<td>K</td>
<td>1B</td>
<td>[</td>
</tr>
<tr>
<td>0C</td>
<td>L</td>
<td>1C</td>
<td>\</td>
</tr>
<tr>
<td>0D</td>
<td>M</td>
<td>1D</td>
<td>]</td>
</tr>
<tr>
<td>0E</td>
<td>N</td>
<td>1E</td>
<td>6</td>
</tr>
<tr>
<td>0F</td>
<td>O</td>
<td>1F</td>
<td>.</td>
</tr>
</tbody>
</table>
Emulate ALT+Keypad

When Emulate ALT+Keypad is enabled, any ASCII character (0x00 - 0xFF) is sent over the numeric keypad no matter which keyboard type is selected.

1. ALT Make
2. Enter the number corresponding to the ASCII character on the keypad.
3. ALT Break
USB Country Keyboard Types

1 - U.S.

2 - Belgium

3 - Brazil

4 - Canada

5 - Czech

6 - Denmark

7 - Finland

8 - France
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>19</td>
<td>Romania</td>
</tr>
<tr>
<td>20</td>
<td>Russia</td>
</tr>
<tr>
<td>21</td>
<td>Slovakia</td>
</tr>
<tr>
<td>22</td>
<td>Spain</td>
</tr>
<tr>
<td>23</td>
<td>Sweden</td>
</tr>
<tr>
<td>24</td>
<td>Switzerland</td>
</tr>
<tr>
<td>25</td>
<td>Turkey1</td>
</tr>
<tr>
<td>26</td>
<td>Turkey2</td>
</tr>
<tr>
<td>27</td>
<td>UK</td>
</tr>
<tr>
<td>28</td>
<td>Japan</td>
</tr>
</tbody>
</table>
Introduction

Every symbology (barcode type) has its own unique attributes. This chapter provides programming barcodes for configuring the scanner so that it can identify various barcode symbologies. It is recommended to disable those that are rarely used to increase the efficiency of the scanner.

Global Settings

Disable All Symbologies

If all symbologies are disabled, the scanner can only identify programming barcodes.

Enable All Symbologies
Enable 1D Symbologies

Enable 1D Symbologies

Disable 1D Symbologies

Disable 1D Symbologies

Enable 2D Symbologies

Enable 2D Symbologies

Disable 2D Symbologies

Disable 2D Symbologies
Code 128

Restore Factory Defaults

WFFD990

Restore the Factory Defaults of Code 128

Enable/Disable Code 128

** Enable Code 128

W011601

W011600

Disable Code 128
UCC/EAN-128 (GS1-128)

Restore Factory Defaults

WFFD991

Restore the Factory Defaults of UCC/EAN-128

Enable/Disable UCC/EAN-128

** Enable UCC/EAN-128

W011701

W011700

Disable UCC/EAN-128
AIM 128

Restore Factory Defaults

WFFD992

Restore the Factory Defaults of AIM 128

Enable/Disable AIM 128

W101610

** Enable AIM 128

W101600

Disable AIM 128
EAN-8

Restore Factory Defaults

restore the factory defaults of EAN-8

Enable/Disable EAN-8

** Enable EAN-8

** Disable EAN-8

Transmit Check Digit

EAN-8 is 8 digits in length with the last one as its check digit used to verify the integrity of the data.

** Transmit Check Digit

Do Not Transmit Check Digit
2-Digit Add-On Code

An EAN-8 barcode can be augmented with a two-digit add-on code to form a new one. In the examples below, the part surrounded by blue dotted line is an EAN-8 barcode while the part circled by red dotted line is add-on code.

Enable 2-Digit Add-On Code

5-Digit Add-On Code

An EAN-8 barcode can be augmented with a five-digit add-on code to form a new one. In the examples below, the part surrounded by blue dotted line is an EAN-8 barcode while the part circled by red dotted line is add-on code.

Enable 5-Digit Add-On Code
EAN-8 Extension

**Disable EAN-8 Zero Extend**: Transmit EAN-8 barcodes as is.

**Enable EAN-8 Zero Extend**: Add five leading zeros to decoded EAN-8 barcodes to extend to 13 digits.

**Disable EAN-8 Zero Extend**
W401300

**Enable EAN-8 Zero Extend**
W401340
EAN-13

Restore Factory Defaults

![Barcode Image]

WFFD995

Restore the Factory Defaults of EAN-13

Enable/Disable EAN-13

![Barcode Image]

W011101

** Enable EAN-13

![Barcode Image]

W011100

Disable EAN-13

Transmit Check Digit

EAN-13 is 13 digits in length with the last one as its check digit used to verify the integrity of the data.

![Barcode Image]

W041104

** Transmit Check Digit

![Barcode Image]

W041100

Do Not Transmit Check Digit
2-Digit Add-On Code

An EAN-13 barcode can be augmented with a two-digit add-on code to form a new one. In the examples below, the part surrounded by blue dotted line is an EAN-8 barcode while the part circled by red dotted line is add-on code.

5-Digit Add-On Code

An EAN-13 barcode can be augmented with a five-digit add-on code to form a new one. In the examples below, the part surrounded by blue dotted line is an EAN-8 barcode while the part circled by red dotted line is add-on code.
ISSN

Restore Factory Defaults

W401140
Enable ISSN

WFFD996
Restore the Factory Defaults of ISSN

W401100
** Disable ISSN
ISBN

Restore Factory Defaults

![Barcode Image]

WFFD997

Restore the Factory Defaults of ISBN

Enable/Disable ISBN

![Barcode Image]

W011201

** Enable ISBN

![Barcode Image]

W011200

Disable ISBN

Set ISBN Format

![Barcode Image]

W041200

** ISBN-13

![Barcode Image]

W041204

ISBN-10
UPC-E

Restore Factory Defaults

WFFD998

Restore the Factory Defaults of UPC-E

Enable/Disable UPC-E

W011501

** Enable UPC-E

W011500

Disable UPC-E

Transmit Check Digit

UPC-E is 8 digits in length with the last one as its check digit used to verify the integrity of the data.

W041504

** Transmit Check Digit

W041500

Do Not Transmit Check Digit
2-Digit Add-On Code

A UPC-E barcode can be augmented with a two-digit add-on code to form a new one. In the examples below, the part surrounded by blue dotted line is a UPC-E barcode while the part circled by red dotted line is add-on code.

5-Digit Add-On Code

A UPC-E barcode can be augmented with a five-digit add-on code to form a new one. In the examples below, the part surrounded by blue dotted line is a UPC-E barcode while the part circled by red dotted line is add-on code.
Transmit System Character

Transmit System Character “0”

** Do Not Transmit System Character “0”

UPC-E Extension

Disable UPC-E Extend: Transmit UPC-E barcodes as is.

Enable UPC-E Extend: Extend UPC-E barcodes to make them compatible in length to UPC-A.

Enable UPC-E Extend

** Disable UPC-E Extend
UPC-A

Restore Factory Defaults

WFFD999

Restore the Factory Defaults of UPC-A

Enable/Disable UPC-A

W011401
** Enable UPC-A

W011400
Disable UPC-A

Transmit Check Digit

UPC-A is 13 digits in length with the last one as its check digit used to verify the integrity of the data.

W041404
** Transmit Check Digit

W041400
Do Not Transmit Check Digit
2-Digit Add-On Code

A UPC-A barcode can be augmented with a two-digit add-on code to form a new one. In the examples below, the part surrounded by blue dotted line is a UPC-E barcode while the part circled by red dotted line is add-on code.

Enable 2-Digit Add-On Code

** Disable 2-Digit Add-On Code

5-Digit Add-On Code

A UPC-A barcode can be augmented with a five-digit add-on code to form a new one. In the examples below, the part surrounded by blue dotted line is a UPC-E barcode while the part circled by red dotted line is add-on code.

Enable 5-Digit Add-On Code

** Disable 5-Digit Add-On Code
Transmit Preamble Character

Preamble characters (Country Code and System Character) can be transmitted as part of a UPC-A barcode. Select one of the following options for transmitting UPC-A preamble to the host device: transmit system character only or transmit system character and country code (“0” for USA).

- System Character & Country Code
- ** System Character
Interleaved 2 of 5

Restore Factory Defaults

Restore the Factory Defaults of Interleaved 2 of 5

Enable/Disable Interleaved 2 of 5

** Enable Interleaved 2 of 5

Disable Interleaved 2 of 5
Check Digit Verification

A check digit is optional for Interleaved 2 of 5 and can be added as the last digit. It is a calculated value used to verify the integrity of the data.

**Disable:** The scanner transmits Interleaved 2 of 5 barcodes as is.

**Do Not Transmit Check Digit after Verification:** The scanner checks the integrity of all Interleaved 2 of 5 barcodes to verify that the data complies with the check digit algorithm. Barcodes passing the check will be transmitted except the last digit, whereas those failing it will not be transmitted.

**Transmit Check Digit after Verification:** The scanner checks the integrity of all Interleaved 2 of 5 barcodes to verify that the data complies with the check digit algorithm. Barcodes passing the check will be transmitted, whereas those failing it will not be transmitted.
ITF-6

Restore Factory Defaults

WFFD99B
Restore the Factory Defaults of ITF-6

Enable/Disable ITF-6

W011900
** Disable ITF-6

W051901
Enable ITF-6 But Do Not Transmit Check Digit

W051905
Enable ITF-6 and Transmit Check Digit
ITF-14

Restore Factory Defaults

WFFD99C
Restore the Factory Defaults of ITF-14

Enable/Disable ITF-14

W201800
Disable ITF-14

WA01820
Enable ITF-14 But Do Not Transmit Check Digit

WA018A0
** Enable ITF-14 and Transmit Check Digit
Matrix 2 of 5 (European Matrix 2 of 5)

Restore Factory Defaults

WFFD99F

Restore the Factory Defaults of Matrix 2 of 5

Enable/Disable Matrix 2 of 5

** Enable Matrix 2 of 5

W011A01

Disable Matrix 2 of 5

W011A00
Check Digit Verification

A check digit is optional for Matrix 2 of 5 and can be added as the last digit. It is a calculated value used to verify the integrity of the data.

**Disable**: The scanner transmits Matrix 2 of 5 barcodes as is.

**Do Not Transmit Check Digit After Verification**: The scanner checks the integrity of all Matrix 2 of 5 barcodes to verify that the data complies with the check digit algorithm. Barcodes passing the check will be transmitted except the last digit, whereas those failing it will not be transmitted.

**Transmit Check Digit After Verification**: The scanner checks the integrity of all Matrix 2 of 5 barcodes to verify that the data complies with the check digit algorithm. Barcodes passing the check will be transmitted, whereas those failing it will not be transmitted.
Industrial 25

Restore Factory Defaults

WFFD9A0

Restore the Factory Defaults of Industrial 25

Enable/Disable Industrial 25

** Enable Industrial 25

W081908

W081900

Disable Industrial 25
Check Digit Verification

A check digit is optional for Industrial 25 and can be added as the last digit. It is a calculated value used to verify the integrity of the data.

**Disable**: The scanner transmits Industrial 25 barcodes as is.

**Do Not Transmit Check Digit after Verification**: The scanner checks the integrity of all Industrial 25 barcodes to verify that the data complies with the check digit algorithm. Barcodes passing the check will be transmitted except the last digit, whereas those failing it will not be transmitted.

**Transmit Check Digit after Verification**: The scanner checks the integrity of all Industrial 25 barcodes to verify that the data complies with the check digit algorithm. Barcodes passing the check will be transmitted, whereas those failing it will not be transmitted.
Standard 25

Restore Factory Defaults

WFFD9A1

Restore the Factory Defaults of Standard 25

Enable/Disable Standard 25

W101A10

** Enable Standard 25

W101A00

Disable Standard 25
Check Digit Verification

A check digit is optional for Standard 25 and can be added as the last digit. It is a calculated value used to verify the integrity of the data.

**Disable**: The scanner transmits Standard 25 barcodes as is.

**Do Not Transmit Check Digit after Verification**: The scanner checks the integrity of all Standard 25 barcodes to verify that the data complies with the check digit algorithm. Barcodes passing the check will be transmitted except the last digit, whereas those failing it will not be transmitted.

**Transmit Check Digit after Verification**: The scanner checks the integrity of all Standard 25 barcodes to verify that the data complies with the check digit algorithm. Barcodes passing the check will be transmitted, whereas those failing it will not be transmitted.

---

![W401A00]

**Disable**

![WC01A40]

**Do Not Transmit Check Digit after Verification**

![WC01AC0]

**Transmit Check Digit after Verification**
Code 39

Restore Factory Defaults

![Barcode](WFFD9A2)

Restore the Factory Defaults of Code 39

Enable/Disable Code 39

![Barcode](W011C01)

** Enable Code 39

![Barcode](W011C00)

Disable Code 39

Transmit Start/Stop Character

Code 39 uses an asterisk (*) for both the start and the stop characters. You can choose whether or not to transmit the start/stop characters by scanning the appropriate barcode below.

![Barcode](W041C04)

Transmit Start/Stop Character

![Barcode](W041C00)

** Do Not Transmit Start/Stop Character
Enable/Disable Code 39 Full ASCII

The scanner can be configured to identify all ASCII characters by scanning the appropriate barcode below.

** Disable Code 39 Full ASCII

Enable Code 39 Full ASCII
Check Digit Verification

A check digit is optional for Code 39 and can be added as the last digit. It is a calculated value used to verify the integrity of the data.

**Disable**: The scanner transmits Code 39 barcodes as is.

**Do Not Transmit Check Digit after Verification**: The scanner checks the integrity of all Code 39 barcodes to verify that the data complies with the check digit algorithm. Barcodes passing the check will be transmitted except the last digit, whereas those failing it will not be transmitted.

**Transmit Check Digit after Verification**: The scanner checks the integrity of all Code 39 barcodes to verify that the data complies with the check digit algorithm. Barcodes passing the check will be transmitted, whereas those failing it will not be transmitted.
Codabar

Restore Factory Defaults

WFFD9A3

Restore the Factory Defaults of Codabar

Enable/Disable Codabar

W011E01

** Enable Codabar

W011E00

Disable Codabar
Check Digit Verification

Check digits are optional for Codabar and can be added as the last two digits, which are calculated values used to verify the integrity of the data.

**Disable:** The scanner transmits Codabar barcodes as is.

**Do Not Transmit Check Digit after Verification:** The scanner checks the integrity of all Codabar barcodes to verify that the data complies with the check digit algorithm. Barcodes passing the checks will be transmitted except the last two digits, whereas those failing them will not be transmitted.

**Transmit Check Digit after Verification:** The scanner checks the integrity of all Codabar barcodes to verify that the data complies with the check digit algorithm. Barcodes passing the checks will be transmitted, whereas those failing them will not be transmitted.
Transmit Start/Stop Character

Do Not Transmit Start/Stop Character

** Transmit Start/Stop Character

** ABCD/ABCD as the Start/Stop Character

ABCD/TN*E as the Start/Stop Character

abcd/abcd as the Start/Stop Character

abcd/tn*e as the Start/Stop Character
Code 93

**Restore Factory Defaults**

WFFD9A4

Restore the Factory Defaults of Code 93

**Enable/Disable Code 93**

W081208

*/ Enable Code 93

W081200

Disable Code 93
Check Digit Verification

Check digits are optional for Code 93 and can be added as the last two digits, which are calculated values used to verify the integrity of the data.

**Disable**: The scanner transmits Code 93 barcodes as is.

**Do Not Transmit Check Digit after Verification**: The scanner checks the integrity of all Code 93 barcodes to verify that the data complies with the check digit algorithm. Barcodes passing the checks will be transmitted except the last two digits, whereas those failing them will not be transmitted.

**Transmit Check Digit after Verification**: The scanner checks the integrity of all Code 93 barcodes to verify that the data complies with the check digit algorithm. Barcodes passing the checks will be transmitted, whereas those failing them will not be transmitted.

---

**W201200**

Disable

**W601220**

**Do Not Transmit Check Digit after Verification**

**W601260**

Transmit Check Digit after Verification
Code 11

**Restore Factory Defaults**

WFFD9A5

Restore the Factory Defaults of Code 11

**Enable/Disable Code 11**

W011D01

** Enable Code 11

W011D00

Disable Code 11
Check Digit Verification

Check digits are optional for Code 11 and can be added as the last one or two digits, which are calculated values used to verify the integrity of the data.

If the Disable option is enabled, the scanner transmits Code 11 barcodes as is.

- **Disable**
  - W1C1D00
  - W1C1D04
    - **One Check Digit, MOD11**
  - W1C1D08
    - Two Check Digits, MOD11/MOD11
  - W1C1D0C
    - Two Check Digits, MOD11/MOD9
  - W1C1D10
    - One Check Digit, MOD11 (Len <= 11)
    - Two Check Digits, MOD11/MOD11 (Len > 11)
  - W1C1D14
    - One Check Digit, MOD11 (Len <= 11)
    - Two Check Digits, MOD11/MOD9 (Len > 11)

- Do Not Transmit Check Digit
  - W201D00
  - W201D20
    - **Transmit Check Digit**
**Plessey**

**Restore Factory Defaults**

- **WFFD9A6**
  - Restore the Factory Defaults of Plessey

**Enable/Disable Plessey**

- **W011F01**
  - Enable Plessey
- **W011F00**
  - Disable Plessey
Check Digit Verification

Check digits are optional for Plessey and can be added as the last one or two digits, which are calculated values used to verify the integrity of the data.

**Disable:** The scanner transmits Plessey barcodes as is.

**Do Not Transmit Check Digit after Verification:** The scanner checks the integrity of all Plessey barcodes to verify that the data complies with the check digit algorithm. Barcodes passing the checks will be transmitted except the last two digits, whereas those failing them will not be transmitted.

**Transmit Check Digit after Verification:** The scanner checks the integrity of all Plessey barcodes to verify that the data complies with the check digit algorithm. Barcodes passing the checks will be transmitted, whereas those failing them will not be transmitted.
MSI-Plessey

Restore Factory Defaults

WFFD9A7

Restore the Factory Defaults of MSI-Plessey

Enable/Disable MSI-Plessey

W081F08

** Enable MSI-Plessey

W081F00

Disable MSI-Plessey
Check Digit Verification

Check digits are optional for MSI-Plessey and can be added as the last one or two digits, which are calculated values used to verify the integrity of the data.

If the Disable option is enabled, the scanner transmits MSI-Plessey barcodes as is.

- **Disable**
  - W301F00

- Two Check Digits, MOD10/MOD10
  - W301F20

- Do Not Transmit Check Digit
  - W401F00

- **One Check Digit, MOD10**
  - W301F10

- Two Check Digits, MOD10/MOD11
  - W301F30

- **Transmit Check Digit**
  - W401F40
RSS-14

**Restore Factory Defaults**

- **Restore the Factory Defaults of RSS-14**

---

**Enable/Disable RSS-14**

- **Enable RSS-14**
  - W011B01
- **Disable RSS-14**
  - W011B00

---

**Transmit Application Identifier “01”**

- **Transmit Application Identifier “01”**
  - W041B04
- **Do Not Transmit Application Identifier “01”**
  - W041B00
RSS-Limited

Restore Factory Defaults

WFFD9A9

Restore the Factory Defaults of RSS-Limited

Enable/Disable RSS-Limited

W081B08

** Enable RSS-Limited

W081B00

Disable RSS-Limited

Transmit Application Identifier “01”

W201B20

** Transmit Application Identifier “01”

W201B00

Do Not Transmit Application Identifier “01”
RSS-Expand

Restore Factory Defaults

WFFD9AA

Restore the Factory Defaults of RSS-Expand

Enable/Disable RSS-Expand

W401B40

** Enable RSS-Expand

W401B00

Disable RSS-Expand
PDF417

**Restore Factory Defaults**

WFFD9B0

Restore the Factory Defaults of PDF417

**Enable/Disable PDF417**

W010C01

** Enable PDF417

W010C00

Disable PDF417

**Macro PDF417**

W100C10

Enable Macro PDF417

W100C00

** Disable Macro PDF417
Data Matrix

Restore Factory Defaults

WFFD9B1
Restore the Factory Defaults of Data Matrix

Enable/Disable Data Matrix

W080C08
** Enable Data Matrix

W080C00
Disable Data Matrix

Enable/Disable Mirrored DM

W0C4A0C
Enable Mirrored DM

W0C4A00
** Disable Mirrored DM
Rectangular Barcodes

Data Matrix has two formats:

Square barcodes having the same amount of modules in length and width: 10*10, 12*12.... 144*144.

Rectangular barcodes having different amounts of models in length and width: 6*16, 6*14... 14*22.

** Decode Rectangular Barcodes

Do Not Decode Rectangular Barcodes
QR Code

**Restore Factory Defaults**

![QR Code](WFFD9B2)

Restore the Factory Defaults of QR Code

**Enable/Disable QR Code**

**Enable**

![QR Code](W800D80)

**Disable**

![QR Code](W800D00)

**Enable**

**Disable**

**Micro QR**

This parameter is valid only when QR Code is enabled.

**Enable Micro QR**

![QR Code](W049904)

**Disable Micro QR**

![QR Code](W049900)
AIM ID Prefix

AIM (Automatic Identification Manufacturers) IDs define symbology identifiers and data carrier identifiers. For the details, see the AIM ID Table. If AIM ID prefix is enabled, the engine will add the symbology identifier before the scanned data after decoding.

** Disable AIM ID Prefix

Enable AIM ID Prefix
<table>
<thead>
<tr>
<th>Symbology</th>
<th>AIM ID</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code 128</td>
<td>JC0</td>
<td>Standard Code 128</td>
</tr>
<tr>
<td>UCC/EAN 128 (GS1-128)</td>
<td>JC1</td>
<td>FNC1 is the character right after the start character</td>
</tr>
<tr>
<td>AIM 128</td>
<td>JC2</td>
<td>FNC1 is the 2nd character after the start character</td>
</tr>
<tr>
<td>EAN-8</td>
<td>JE4</td>
<td>Standard EAN-8</td>
</tr>
<tr>
<td></td>
<td>JE4...JE1...</td>
<td>EAN-8 + 2-Digit Add-On Code</td>
</tr>
<tr>
<td></td>
<td>JE4...JE2...</td>
<td>EAN-8 + 5-Digit Add-On Code</td>
</tr>
<tr>
<td>EAN-13</td>
<td>JE0</td>
<td>Standard EAN-13</td>
</tr>
<tr>
<td></td>
<td>JE3</td>
<td>EAN-13 + 2/5-Digit Add-On Code</td>
</tr>
<tr>
<td>ISSN</td>
<td>VX5</td>
<td></td>
</tr>
<tr>
<td>ISBN</td>
<td>VX4</td>
<td></td>
</tr>
<tr>
<td>UPC-E</td>
<td>JE0</td>
<td>Standard UPC-E</td>
</tr>
<tr>
<td></td>
<td>JE3</td>
<td>UPC-E + 2/5-Digit Add-On Code</td>
</tr>
<tr>
<td>UPC-A</td>
<td>JE0</td>
<td>Standard UPC-A</td>
</tr>
<tr>
<td></td>
<td>JE3</td>
<td>UPC-A + 2/5-Digit Add-On Code</td>
</tr>
<tr>
<td>Interleaved 2 of 5</td>
<td>JI0</td>
<td>No check digit verification</td>
</tr>
<tr>
<td></td>
<td>JI1</td>
<td>Transmit check digit after verification</td>
</tr>
<tr>
<td></td>
<td>JI3</td>
<td>Do not transmit check digit after verification</td>
</tr>
<tr>
<td>ITF-6</td>
<td>JI1</td>
<td>Transmit check digit</td>
</tr>
<tr>
<td></td>
<td>JI3</td>
<td>Do not transmit check digit</td>
</tr>
<tr>
<td>ITF-14</td>
<td>JI1</td>
<td>Transmit check digit</td>
</tr>
<tr>
<td></td>
<td>JI3</td>
<td>Do not transmit check digit</td>
</tr>
<tr>
<td>Matrix 2 of 5</td>
<td>JX1</td>
<td>No check digit verification</td>
</tr>
<tr>
<td></td>
<td>JX2</td>
<td>Transmit check digit after verification</td>
</tr>
<tr>
<td></td>
<td>JX3</td>
<td>Do not transmit check digit after verification</td>
</tr>
<tr>
<td>Industrial 25</td>
<td>JS0</td>
<td>Not specified</td>
</tr>
<tr>
<td>Standard 25</td>
<td>JR0</td>
<td>No check digit verification</td>
</tr>
<tr>
<td></td>
<td>JR8</td>
<td>One check digit, MOD 7; do not transmit check digit</td>
</tr>
<tr>
<td></td>
<td>JR9</td>
<td>One check digit, MOD 7; transmit check digit</td>
</tr>
<tr>
<td>Symbology</td>
<td>AIM ID</td>
<td>Remark</td>
</tr>
<tr>
<td>-------------</td>
<td>--------</td>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Code 39</td>
<td>JA0</td>
<td>Transmit barcodes as is; Full ASCII disabled; no check digit verification</td>
</tr>
<tr>
<td></td>
<td>JA1</td>
<td>One check digit, MOD 43; transmit check digit</td>
</tr>
<tr>
<td></td>
<td>JA3</td>
<td>One check digit, MOD 43; do not transmit check digit</td>
</tr>
<tr>
<td></td>
<td>JA4</td>
<td>Full ASCII enabled; no check digit verification</td>
</tr>
<tr>
<td></td>
<td>JA5</td>
<td>Full ASCII enabled; MOD43; transmit check digit</td>
</tr>
<tr>
<td></td>
<td>JA7</td>
<td>Full ASCII enabled; MOD43; do not transmit check digit</td>
</tr>
<tr>
<td></td>
<td>JF0</td>
<td>Standard Codabar</td>
</tr>
<tr>
<td></td>
<td>JF1</td>
<td>ABC Codabar</td>
</tr>
<tr>
<td></td>
<td>JF2</td>
<td>Transmit check digit after verification</td>
</tr>
<tr>
<td></td>
<td>JF4</td>
<td>Do not transmit check digit after verification</td>
</tr>
<tr>
<td>Codabar</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Code 93</td>
<td>JG0</td>
<td>Not specified</td>
</tr>
<tr>
<td>Code 11</td>
<td>JH0</td>
<td>One check digit, MOD11; transmit check digit</td>
</tr>
<tr>
<td></td>
<td>JH1</td>
<td>Two check digits, MOD11/MOD11; transmit check digit</td>
</tr>
<tr>
<td></td>
<td>JH3</td>
<td>Do not transmit check digit after verification</td>
</tr>
<tr>
<td></td>
<td>JH8</td>
<td>Two check digits, MOD11/MOD9; transmit check digit</td>
</tr>
<tr>
<td></td>
<td>JH9</td>
<td>No check digit verification</td>
</tr>
<tr>
<td>Plessey</td>
<td>JP0</td>
<td>Not specified</td>
</tr>
<tr>
<td>MSI-Plessey</td>
<td>JM0</td>
<td>One check digit, MOD10; transmit check digit</td>
</tr>
<tr>
<td></td>
<td>JM1</td>
<td>One check digit, MOD10; do not transmit check digit</td>
</tr>
<tr>
<td></td>
<td>JM7</td>
<td>Two check digits, MOD10 /MOD11; do not transmit check digit</td>
</tr>
<tr>
<td></td>
<td>JM8</td>
<td>Two check digits, MOD10 /MOD11; transmit check digit</td>
</tr>
<tr>
<td></td>
<td>JM9</td>
<td>No check digit verification</td>
</tr>
<tr>
<td>RSS-14</td>
<td>Je0</td>
<td>Standard</td>
</tr>
<tr>
<td></td>
<td>Je1</td>
<td>User-defined</td>
</tr>
<tr>
<td></td>
<td>Je2</td>
<td>User-defined</td>
</tr>
<tr>
<td></td>
<td>Je3</td>
<td>User-defined</td>
</tr>
<tr>
<td>RSS-Limited</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RSS-Expand</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PDF417</td>
<td>JL0</td>
<td>Comply with 1994 PDF417 specifications</td>
</tr>
<tr>
<td>Data Matrix</td>
<td>Jd0</td>
<td>ECC 000 - 140</td>
</tr>
<tr>
<td></td>
<td>Jd1</td>
<td>ECC 200</td>
</tr>
<tr>
<td></td>
<td>Jd2</td>
<td>ECC 200; FNC1 is the 1st or 5th character after the start character</td>
</tr>
<tr>
<td>Symbology</td>
<td>AIM ID</td>
<td>Remark</td>
</tr>
<tr>
<td>-----------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td></td>
<td>]d3</td>
<td>ECC 200; FNC1 is the 2nd or 6th character after the start character</td>
</tr>
<tr>
<td></td>
<td>]d4</td>
<td>ECC 200, ECI protocol supported</td>
</tr>
<tr>
<td></td>
<td>]d5</td>
<td>ECC 200; FNC1 is the 1st or 5th character after the start character; ECI supported</td>
</tr>
<tr>
<td></td>
<td>]d6</td>
<td>ECC 200; FNC1 is the 2nd or 6th character after the start character; ECI supported</td>
</tr>
<tr>
<td>QR Code</td>
<td>]Q0</td>
<td>QR1 (comply with AIM ISS 97-001 specifications)</td>
</tr>
<tr>
<td>QR Code</td>
<td>]Q1</td>
<td>QR2 (2005 symbol), ECI protocol not supported</td>
</tr>
<tr>
<td>QR Code</td>
<td>]Q2</td>
<td>QR2 (2005 symbol), ECI protocol supported</td>
</tr>
<tr>
<td>QR Code</td>
<td>]Q3</td>
<td>QR2 (2005 symbol), ECI protocol not supported; FNC1 is the character right after the start character</td>
</tr>
<tr>
<td>QR Code</td>
<td>]Q4</td>
<td>QR2 (2005 symbol), ECI protocol supported; FNC1 is the character right after the start character</td>
</tr>
<tr>
<td>QR Code</td>
<td>]Q5</td>
<td>QR2 (2005 symbol), ECI protocol not supported; FNC1 is the 2nd character right after the start character</td>
</tr>
<tr>
<td>QR Code</td>
<td>]Q6</td>
<td>QR2 (2005 symbol), ECI protocol supported; FNC1 is the 2nd character right after the start character</td>
</tr>
</tbody>
</table>
CODE ID Prefix

Code ID can also be used to identify barcode type. For the details, see the CODE ID Table.

** Disable CODE ID Prefix

You can choose to transmit original CODE ID or visible CODE ID by scanning the appropriate barcode below.

** Original CODE ID

Visible CODE ID
<table>
<thead>
<tr>
<th>Symbology</th>
<th>Original Code ID</th>
<th>Visible Code ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code 128 FNC3</td>
<td>0x01</td>
<td>A(0x41)</td>
</tr>
<tr>
<td>Code 128</td>
<td>0x02</td>
<td>B(0x42)</td>
</tr>
<tr>
<td>UCC/EAN 128</td>
<td>0x03</td>
<td>C(0x43)</td>
</tr>
<tr>
<td>EAN-8</td>
<td>0x04</td>
<td>D(0x44)</td>
</tr>
<tr>
<td>EAN-13</td>
<td>0x05</td>
<td>E(0x45)</td>
</tr>
<tr>
<td>UPC-E</td>
<td>0x06</td>
<td>F(0x46)</td>
</tr>
<tr>
<td>UPC-A</td>
<td>0x07</td>
<td>G(0x47)</td>
</tr>
<tr>
<td>Interleaved 2 of 5</td>
<td>0x08</td>
<td>H(0x48)</td>
</tr>
<tr>
<td>ITF-14</td>
<td>0x09</td>
<td>I(0x49)</td>
</tr>
<tr>
<td>ITF-6</td>
<td>0x0A</td>
<td>J(0x4A)</td>
</tr>
<tr>
<td>Code 39</td>
<td>0x0D</td>
<td>M(0x4D)</td>
</tr>
<tr>
<td>Codabar</td>
<td>0x0F</td>
<td>O(0x4F)</td>
</tr>
<tr>
<td>Standard 25</td>
<td>0x10</td>
<td>P(0x50)</td>
</tr>
<tr>
<td>Code 93</td>
<td>0x11</td>
<td>Q(0x51)</td>
</tr>
<tr>
<td>AIM 128</td>
<td>0x15</td>
<td>U(0x55)</td>
</tr>
<tr>
<td>MSI-Plessey</td>
<td>0x16</td>
<td>V(0x56)</td>
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<tr>
<td>ISBN</td>
<td>0x17</td>
<td>W(0x57)</td>
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<td>Industrial 25</td>
<td>0x18</td>
<td>X(0x58)</td>
</tr>
<tr>
<td>Matrix 2 of 5</td>
<td>0x19</td>
<td>Y(0x59)</td>
</tr>
<tr>
<td>RSS-14</td>
<td>0x1A</td>
<td>Z(0x5A)</td>
</tr>
<tr>
<td>RSS-Limited</td>
<td>0x1B</td>
<td>](0x5B)</td>
</tr>
<tr>
<td>RSS-Expand</td>
<td>0x1C</td>
<td>(0x5C)</td>
</tr>
<tr>
<td>Code 11</td>
<td>0x1D</td>
<td>](0x5D)</td>
</tr>
<tr>
<td>Plessey</td>
<td>0x1E</td>
<td>^(0x5E)</td>
</tr>
<tr>
<td>ISSN</td>
<td>0x1F</td>
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</tr>
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</tr>
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<td>0x21</td>
<td>a(0x61)</td>
</tr>
<tr>
<td>Data Matrix</td>
<td>0x23</td>
<td>c(0x63)</td>
</tr>
</tbody>
</table>
Terminating Character Suffix

A terminating character such as carriage return (CR) or carriage return/line feed pair (CRLF) or horizontal tab (TAB) can be used to mark the end of data.
## Chapter 14  Troubleshooting

<table>
<thead>
<tr>
<th>Problem</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does not respond to input.</td>
<td>Disconnect the power adapter and then reconnect it.</td>
</tr>
<tr>
<td>Scanned data is not displayed on the host.</td>
<td>Ensure the scanner’s communication parameters (such as baud rate, interface) match the host’s settings.</td>
</tr>
<tr>
<td>Cannot read barcodes.</td>
<td>1. Follow the scanning instructions in this manual to scan barcode.</td>
</tr>
<tr>
<td></td>
<td>2. Ensure the barcode type is enabled.</td>
</tr>
<tr>
<td></td>
<td>3. Ensure the barcode is not defaced. Wrinkled, soiled or torn barcodes might be unreadable.</td>
</tr>
</tbody>
</table>
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