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</tr>
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INTRODUCTION

Your new scanner has been configured at the factory with a set of default communication protocols. Since many host systems have unique formats and protocol requirements, Metrologic provides a wide range of configurable features that may be selected with the use of this bar code configuration guide.

Once the configuration is completed, the scanner stores the settings in nonvolatile memory or NOVRAM. NOVRAM saves the settings when the power is turned off.

### Symbol Key

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>* (asterisk)</td>
<td>Default Feature</td>
</tr>
<tr>
<td>~ (tilde)</td>
<td>Feature requires the Multi-Code Configuration Method, see Bar Code Configuration Methods on page xii.</td>
</tr>
<tr>
<td><img src="image" alt="i" /></td>
<td>Important!</td>
</tr>
<tr>
<td><img src="image" alt="note" /></td>
<td>Note</td>
</tr>
</tbody>
</table>
BAR CODE CONFIGURATION METHODS

Metrologic scanners can be bar code configured in two ways: the Single-Code Method and the Multi-Code Method.

**Single-Code Method**

Most features can be enabled or disabled using the Single-Code Method.

1. Power up the scanner.
2. Scan the bar code(s) for the desired feature(s).
3. Observe a multi-toned, "save setting" beep that indicates the configuration has been saved to NOVRAM.

**Multi-Code Method**

All features can be enabled or disabled using the Multi-Code Method. A feature marked with a "~" requires the Multi-Code Method.

1. Power up the scanner.
2. Scan the *Enter/Exit Configuration Mode* bar code. [3 beeps]
3. Scan the bar code(s) for the desired feature(s). [1 beep]
4. Scan the *Enter/Exit Configuration Mode* bar code [3 beeps] and save new configuration.

To abort a configuration change, power off the scanner before scanning the *Enter/Exit Configuration Mode* bar code.
NEED TO START OVER?

Scan the Recall Default bar code. This will erase all previous settings and return to the scanner’s default communications protocol.

- Keyboard Wedge interface scanners will load keyboard wedge defaults.
- All other scanners will load RS232 defaults.

Metrologic manufactures custom OEM scanners, which load the OEM’s defaults. For further information on the affects they have on Metrologic default communications protocols refer to Section N, Custom Defaults.
SECTION A

UPC/EAN

* Enable UPC/EAN

Disable UPC/EAN

* Enable UPC-A

Disable UPC-A

* Enable UPC-E

Disable UPC-E
SECTION A  UPC/EAN

* Enable EAN-13

<table>
<thead>
<tr>
<th>Code Type</th>
<th>Barcode</th>
</tr>
</thead>
<tbody>
<tr>
<td>EAN-13</td>
<td><img src="#" alt="Barcode" /></td>
</tr>
<tr>
<td>Disable</td>
<td><img src="#" alt="Barcode" /></td>
</tr>
</tbody>
</table>

* Enable EAN-8

<table>
<thead>
<tr>
<th>Code Type</th>
<th>Barcode</th>
</tr>
</thead>
<tbody>
<tr>
<td>EAN-8</td>
<td><img src="#" alt="Barcode" /></td>
</tr>
<tr>
<td>Disable</td>
<td><img src="#" alt="Barcode" /></td>
</tr>
</tbody>
</table>

* Enable Auto Redundancy UPC-E

<table>
<thead>
<tr>
<th>Code Type</th>
<th>Barcode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enable</td>
<td><img src="#" alt="Barcode" /></td>
</tr>
<tr>
<td>Disable</td>
<td><img src="#" alt="Barcode" /></td>
</tr>
</tbody>
</table>
SECTION A  

**CODE 128**

* Enable Code 128

```
1 0 0 0 1 1 3
```

Disable Code 128

```
1 0 0 1 0 3
```

Enable UCC/EAN-28 'C1' Code Formatting

```
1 0 0 3 1 4
```

Disable UCC/EAN-128 'C1' Code Formatting

```
1 0 0 3 0 4
```

For Coupon Code 128, see Section B, page 5.
**SECTION A**

**CODE 39**

* Enable Code 39

![Barcode](image1.png)

**Disable Code 39**

![Barcode](image2.png)

* Enable MOD 43 Check on Code 39

![Barcode](image3.png)

**Disable MOD 43 Check on Code 39**

![Barcode](image4.png)

The scanner will only scan Code 39 bar codes that have a valid Modulo 43 check digit.

The scanner will not test Code 39 bar codes for a modulo 43 check digit.

* Transmit Mode 43 Check Digit on Code 39

![Barcode](image5.png)

**Do Not Transmit Mode 43 Check Digit on Code 39**

![Barcode](image6.png)

This feature works in conjunction with Mode 43 Check on Code 39. Both options must be enabled for this feature to work.

This option will not transmit Code 39's Mod 43 check character.
Enable Full ASCII Code 39

* Disable Full ASCII Code 39

Enable PARAF Support
(Italian Pharmaceutical Codes)

* Disable PARAF Support

The scanner will convert Code 39 bar codes to PARAF format.

The scanner will not convert code 39 bar codes to PARAF format.

Enable TRI-OPTIC Code

* Disable TRI-OPTIC Code

Code Types & Decode Rules A 5
**SECTION A**

### INTERLEAVED 2 OF 5

- **Enable Interleaved 2 of 5 (ITF)**
  - [Barcode Image]
  - The scanner will only scan Interleaved 2 of 5 (ITF) Bar codes that have a Modulo 10 check digit.

- **Disable Interleaved 2 of 5 (ITF)**
  - [Barcode Image]
  - The scanner will not test Interleaved 2 of 5 (ITF) bar codes for a Modulo 10 check digit.

- **Enable MOD 10 Check on ITF**
  - [Barcode Image]
  - The scanner transmits Interleaved 2 of 5 (ITF) MOD 10 check character.

- **Disable MOD 10 Check on ITF**
  - [Barcode Image]
  - The scanner will not transmit Interleaved 2 of 5 (ITF) MOD 10 check digit characters. This feature works in conjunction with Mod 10 Check on ITF. Both must be enabled for this feature to work.

- **Transmit MOD 10 Check Digit on ITF**
  - [Barcode Image]

- **Do Not Transmit MOD 10 Check Digit on ITF**
  - [Barcode Image]
### SECTION A

**INTERLEAVED 2 OF 5**

<table>
<thead>
<tr>
<th>Code Types &amp; Decode Rules</th>
<th>A</th>
<th>7</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Feature</th>
<th>Barcode Pattern</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enable ALT Check Digit ITF</td>
<td><img src="image" alt="Barcode Pattern" /></td>
<td>* Disable ALT Check Digit ITF</td>
</tr>
<tr>
<td>Enable 12 Digit ITF Check Digit at 1</td>
<td><img src="image" alt="Barcode Pattern" /></td>
<td>* Normal Check Digit</td>
</tr>
<tr>
<td>Enable ITF/Code 39 Filter</td>
<td><img src="image" alt="Barcode Pattern" /></td>
<td>* Disable ITF/Code 39 Filter</td>
</tr>
</tbody>
</table>

This feature requires an **MOD 10 ITF Check Digit** to be enabled. The 12-character ITF check digit calculation will start with 1 instead of 0.

**Supports Code 39/ITF filters.**

This feature may adversely affect reading Codabar, Code 93 and some other non-standard symbologies.
SECTION A

INTERLEAVED 2 OF 5

~ ITF Symbol Length
Lock 1 †

To specify a 1st ITF symbol length lock, scan the above bar code and the appropriate code bytes located in Section M. †

~ ITF Symbol Length
Lock 2 †

To specify a 2nd ITF symbol length lock, scan the above bar code and the appropriate code bytes located in Section M. †

~ ITF Minimum Symbol Length †

To specify a minimum number of ITF characters to be decoded, scan the above bar code and the appropriate code bytes located in Section M. †

† Refer to the Multi-Code Configuration Method on page xii.
To specify a minimum number of ITF characters to be decoded, scan the above bar code and the appropriate code bytes located in Section M.†

† Refer to the Multi-Code configuration method on page xii.
SECTION A

Enable Matrix 2 of 5

Enable 15 Digit Airline 2 of 5

* Disable Matrix 2 of 5

* Disable 15 Digit Airline 2 of 5
SECTION A

Enable 13 Digit Airline 2 of 5

Enable Hong Kong 2 of 5

OTHER 2 OF 5 CODES

Disable 13 Digit Airline 2 of 5

Disable Hong Kong 2 of 5
SECTION A

CODABAR

* Enable Codabar

```
1 1 0 0 1 1 4
```

* Disable Codabar

```
1 1 0 0 1 0 4
```

Enable Dual Field Codabar

```
1 1 0 0 0 1 2
```

* Disable Dual Field Codabar

```
1 1 0 0 0 0 2
```

Enable Tab in Dual Codabar

```
1 1 0 0 1 1 2
```

* Disable Tab in Dual Codabar

```
1 1 0 0 0 0 2
```

This feature requires Dual Field Codabar to be enabled. The scanner will insert a tab between the fields of the dual field Codabar.
**SECTION A**  

**CODE 93 AND CODE 11**

* Enable Code 93

```
1 0 0 1 1 2
```

* Disable Code 93

```
1 0 0 1 0 2
```

Enable Code 11

```
1 0 0 0 1 3
```

* Disable Code 11

```
1 0 0 0 0 3
```
SECTION A

**TELEPEN**

Enable Telepen

```
1 0 0 0 1 7
```

* Disable Telepen

```
1 0 0 0 0 7
```

Enable ALPHA Telepen

```
1 0 0 0 1 8
```

* Disable ALPHA Telepen

```
1 0 0 0 0 8
```
**SECTION A**

**Plessey Codes**

*Enable MSI Plessey*

Enable MSI Plessey MOD 10/10 Check Digit

Enable MSI Plessey MOD 10 Check Digit

The scanner will test MSI Plessey bar codes for a double Modulo 10 check digit.

*Disable MSI Plessey*

*No MSI Plessey Check Digit*

The scanner will not test MSI Plessey bar codes for a check digit.

*Enable MSI Plessey MOD 10 Check Digit*
**SECTION A**

**PLESSEY CODES**

<table>
<thead>
<tr>
<th>Transmit MSI Plessey Check Digit</th>
<th>Do Not Transmit MSI Plessey Check Digit</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Barcode" /></td>
<td><img src="image2.png" alt="Barcode" /></td>
</tr>
</tbody>
</table>

*This option works in conjunction with one or both of the Enabled MSI Plessey Mode options.*

<table>
<thead>
<tr>
<th>Enable UK Plessey</th>
<th>Disable UK Plessey</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image3.png" alt="Barcode" /></td>
<td><img src="image4.png" alt="Barcode" /></td>
</tr>
</tbody>
</table>

*The scanner will not transmit MSI Plessey check digit characters.*

<table>
<thead>
<tr>
<th>Enable UK Plessey A to X Conversion</th>
<th>Disable UK Plessey A to X Conversion</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image5.png" alt="Barcode" /></td>
<td><img src="image6.png" alt="Barcode" /></td>
</tr>
</tbody>
</table>

*
**SECTION A**

**OTHER DECODE FEATURES**

Enable Double Border
Required/Large
Inter-Character Space

![Barcode Image]

Disable Double Border
Required/Large
Inter-Character Space

![Barcode Image]

~ Minimum
Symbol Length †

![Barcode Image]

Omnidirectional default is 4.
Combine this code with the proper Code Bytes, to specify the minimum number of characters in all non-UPC/EAN bar codes.†

~ Symbol Length Lock †

![Barcode Image]

This code combined with the proper Code Bytes, locks the bar code’s length into place.†

† Refer to the Multi-Code Configuration Method on page xii.
SECTION A  

**CONFIGURABLE CODE LENGTHS**

There are seven bar code lock lengths available. Specific code types can be assigned to a lock length using the *Multi-Code* configuration method.

**Example:**

1. Scan the enter/exit configuration bar code.
2. Scan the *code length lock #1* bar code.
3. Scan the three Code Bytes that represent the code length.
4. Scan the matching code type lock #1 bar code.
5. Scan the three code bytes that represent the code type.
   - Refer to the *Code Type Table* in Section M.
6. Repeat steps 2 through 5 for lock lengths 2 through 7 if desired.
7. Scan the enter/exit configuration bar code when finished to save settings.
SECTION A       CONFIGURABLE CODE LENGTHS

~ Code Length
Lock #3

~ Code Type
Lock #3

~ Code Length
Lock #4

~ Code Type
Lock #4

~ Code Length
Lock #5

~ Code Type
Lock #5
SECTION A

CONFIGURABLE CODE LENGTHS

~ Code Length
Lock #6

~ Code Type
Lock #6

~ Code Length
Lock #7

~ Code Type
Lock #7
SECTION A

RSS 14 FEATURES

Enable RSS 14

1 0 0 4 1 9

* Disable RSS 14

1 0 0 4 0 3

* Transmit
RSS 14 Check Digit

1 1 4 9 0 0

Do Not Transmit
RSS 14 Check Digit

1 1 4 9 1 0
SECTION A

* Transmit
RSS 14 Application ID

Application identifier "01" is transmitted by default.

Do Not Transmit
RSS 14 Application ID

* Transmit
RSS 14 Symbology ID

Symbology identifier "Je0" is transmitted by default.

Do Not Transmit
RSS 14 Symbology ID
**SECTION A**

**RSS LIMITED FEATURES**

- Enable RSS Limited
  - 1 0 0 4 1 4

- * Disable RSS Limited
  - 1 0 0 4 0 4

- * Transmit
  - RSS Limited Check Digit
  - 1 1 4 9 0 3

- Do Not Transmit
  - RSS Limited Check Digit
  - 1 1 4 9 1 3
SECTION A

** RSS LIMITED FEATURES **

* Transmit RSS Limited Application ID

<table>
<thead>
<tr>
<th>barcode image</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 1 4 6 0 4</td>
</tr>
</tbody>
</table>

Application identifier "01" is transmitted by default.

* Transmit RSS Limited Symbology ID

<table>
<thead>
<tr>
<th>barcode image</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 1 4 9 0 5</td>
</tr>
</tbody>
</table>

Symbology identifier "Je0" is transmitted by default.

Do Not Transmit RSS Limited Application ID

<table>
<thead>
<tr>
<th>barcode image</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 1 4 6 1 4</td>
</tr>
</tbody>
</table>

Do Not Transmit RSS Limited Symbology ID

<table>
<thead>
<tr>
<th>barcode image</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 1 4 9 1 5</td>
</tr>
</tbody>
</table>
Enable RSS Expanded

* Disable RSS Expanded

³100415 ³100405

³114906

Symbology identifier "e0" is transmitted by default.

* Transmit RSS Expanded Symbology ID

Do Not Transmit RSS Expanded Symbology ID

³114916
**SECTION B**

**SUPPLEMENTS/REDUNDANCY**

Enable Two Digit Supplements

* Disable Two Digit Supplements

³101217
³101207

* Enable Two Digit Redundancy

Disable Two Digit Redundancy

³101212
³101202

Twice before accepting data, the scanner will scan the bar code plus the two digit add on.

When scanned, will not implement the two digit redundancy feature.

Enable Five Digit Supplements

* Disable Five Digit Supplements

³101216
³101206
**SECTION B**

**SUPPLEMENTS/REDUNDANCY**

Enable Five Digit Redundancy

```
1 0 2 1 1
```

Twice before accepting data, the scanner will scan the bar code plus the five digit add on.

* Disable Five Digit Redundancy

```
1 0 1 2 0 1
```

The scanner will not implement the five digit redundancy feature.

Supplements are Required

```
1 0 1 2 1 3
```

All UPC/EAN labels that are scanned must have a supplement.

* Supplements are not Required

```
1 0 1 2 0 3
```

UPC/EAN labels do not require a supplement to be scanned.

Enable Remote Supplemental Requirement

```
1 0 1 4 1 3
```

* Disable Remote Supplemental Requirement

```
1 0 1 4 0 3
```
Enable Bookland (978) Supplement Requirement

* Disable Bookland (978) Supplement Requirement

The scanner will require a 2-digit supplement be scanned when an EAN-13 code begins with 977.

Enable 977 (2 digit) Supplemental Requirement

* Disable 977 (2 digit) Supplemental Requirement

The scanner will not require a 2-digit supplement be scanned whenever an EAN-13 code begins with 977.

Enable 378/379 French Supplement Requirement

* Disable 378/379 French Supplemental Requirement
Enable 434/439 German Supplemental Requirement

Disable 434/439 German Supplemental Requirement

Enable 414/419 German Supplemental Requirement

Disable 414/419 German Supplemental Requirement

Enable # System 2 Requires Supplements

Disable # System 2 Requires Supplements
Enable # System 5 Requires Supplements

Enable # System 5 Requires Supplements

* Disable # System 5 Requires Supplements

Enable 8711685 Requires 5-Digit Supplement

Enable 8711685 Requires 5-Digit Supplement

* Disable 8711685 Requires 5-Digit Supplement

The scanner will require a 5-digit supplement to be scanned when an EAN-13 code begins with 8711685.

The scanner will not require a 5-digit supplement to be scanned when an EAN-13 code begins with 8711685.

This feature is not available with all models.

Enable Coupon Code 128

Enable Coupon Code 128

* Disable Coupon Code 128
Enable Code 128 "C1"
Extended Code Format

1 0 1 4 1 1

The scanner will transmit a "C1" at the beginning of the code 128 portion of the coupon code.

* Disable Code 128 "C1"
Extended Code Format

1 0 1 4 0 1

The scanner will not transmit a "C1" at the beginning of the code 128 portion of the coupon code.

Enable 128 Group Separators

1 0 1 4 1 4

"GS" (1DH) character will be transmitted with coupon Code 128 codes.

* Disable 128 Group Separators

1 0 1 4 0 4

"GS" (1DH) character will not be transmitted with coupon Code 128 codes.

* 100 msec to Find Supplemental

1 0 1 3 1 0

The scanner will allot 100 milliseconds to "find" an add on after a main UPC/EAN bar code has been scanned.

200 msec to Find Supplemental

1 0 1 3 2 0

The scanner will allot 200 milliseconds to "find" an add on after a main UPC/EAN bar code has been scanned.
400 msec to Find Supplemental

![Barcode Image](30 14 40)

The scanner will allot 400 milliseconds to “find” an add on after a main UPC/EAN bar code has been scanned.

Enable Code ID’s with Supplements

![Barcode Image](10 12 14)

Disable Code ID’s with Supplements

![Barcode Image](10 12 04)

Allow 2/5 on 977 Bar Code

![Barcode Image](12 48 11)

This feature allows either 2 or 5 digit supplements if 977 mode is active.

Allow 2 on 977 Bar Code

![Barcode Image](12 48 01)

This feature allows 2 digit supplements if 977 mode is active.
**SECTION B**

* Beep Once on Supplements

Enable ISBN Check Digit Transmission

This feature is not available with all models.

---

**SUPPLEMENTS**

Beep twice on Supplements

Disable ISBN Check Digit Transmission
Enable Bookland to ISBN Conversion

* Disable Bookland to ISBN Conversion

This feature is not available with all models.

Enable ISBN Re-Formatting

* Disable ISBN Re-Formatting

This feature is not available with all models.
<table>
<thead>
<tr>
<th>Enable ISSN Check Digit Transmission</th>
<th>* Disable ISSN Check Digit Transmission</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="115115" alt="Barcode" /></td>
<td><img src="115105" alt="Barcode" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Enable ISSN Re-Formatting</th>
<th>* Disable ISSN Re-Formatting</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="115116" alt="Barcode" /></td>
<td><img src="115106" alt="Barcode" /></td>
</tr>
</tbody>
</table>

Transmit a hyphen with the barcode.

<table>
<thead>
<tr>
<th>Enable 977 to ISSN Conversion</th>
<th>* Disable 977 to ISSN Conversion</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="115117" alt="Barcode" /></td>
<td><img src="115107" alt="Barcode" /></td>
</tr>
</tbody>
</table>

Convert 977 periodicals to ISSN format.

Do not convert 977 periodicals to ISSN format.
Enable Number System 4 Coupon Code 128

Supports Coupon Code 128 for Number System 4 bar codes.

Enable UPC Discard

Supports UPC discard if the Code 128 portion of the Coupon Code 128 is scanned.

Allow Supplements and UPC in Same Line

This feature requires 2 digit supplements be enabled as well as required redundancy and supplements.
<table>
<thead>
<tr>
<th>Setting</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enable RS-232</td>
<td>The scanner will work with RS-232 ±12V serial output.</td>
</tr>
<tr>
<td>Load Keyboard Wedge Defaults</td>
<td>Scan this before selecting Normal or Stand Alone Mode.</td>
</tr>
<tr>
<td>Enable Light Pen/Wand Communication</td>
<td>Use this option if a scanner is used in place of a light pen.</td>
</tr>
<tr>
<td>Enable Keyboard Wedge Emulation</td>
<td>Select if the scanner provides keyboard emulation by converting the scanned bar code data to the PC keyboard scan code equivalent.</td>
</tr>
<tr>
<td>Enable Stand-Alone Keyboard Scanner</td>
<td>Allows the scanner to be used without an external keyboard.</td>
</tr>
</tbody>
</table>
SECTION C

COMMUNICATIONS

Load OCIA Defaults

Scan this before selecting Enable OCIA output.

Enable OCIA Output

Select this option if the communications requirement is an Optically Coupled Interface Adapter (OCIA). This is a docked (by the host) serial interface.

Load IBM 46xx Defaults

Scan this before selecting Enable IBM 46xx Communication

Enable IBM 46xx Communication

Select this option for IBM 46xx SI0C/RS485 communications.

Not all scanners support this interface. The correct interface board is required.
### Section C

**Communications**

<table>
<thead>
<tr>
<th>Setting</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Load Low Speed <strong>External</strong></td>
<td></td>
<td>Refer to Section P for full speed USB options.</td>
</tr>
<tr>
<td><strong>USB Defaults</strong> †</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enable Low Speed <strong>USB</strong> †</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Load Low Speed <strong>Internal</strong></td>
<td></td>
<td>Select this option if the scanner does not interface with the host device.</td>
</tr>
<tr>
<td><strong>USB Defaults</strong> †</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enable No Communication Mode</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reserved</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reserved</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

† Refer to Section P for full speed USB options.
SECTION D

CONFIGURATION MODE OPTIONS

Allow Configuration Mode on Power-Up

* Allow Configuration Mode Anytime

The scanner can only enter MetroSet® mode before any bar codes are scanned.

Allow Configuration Codes on Power Up

* Allow Configuration Codes Anytime

Once a product bar code is scanned after power-up, the scanner will not accept configuration bar codes.

Enable Single Code Configuration

Disable Single Code Configuration

Scanner Operation
The scanner will scan one bar code in the scan field and not scan again until the bar code is removed from the scan field for the duration of the same symbol time out.

The scanner will scan 2 bar codes in the scan field one time each. These 2 bar codes will not be scanned again until they are removed from the scan field for the duration of the same symbol time out.

Same function as 2 Scan Buffers, but 3 bar codes are in the scan field.

Same function as 2 Scan Buffers, but 4 bar codes are in the scan field.
SECTION D

SCAN BUFFERS

5 Scan Buffers

Same function as 2 Scan Buffers, but 5 bar codes are in the scan field.

6 Scan Buffers

Same function as 2 Scan Buffers, but 6 bar codes are in the scan field.

7 Scan Buffers

Same function as 2 Scan Buffers, but 7 bar codes are in the scan field.

8 Scan Buffers

Same function as 2 Scan Buffers, but 8 bar codes are in the scan field.
SECTION D

REDUNDANT SCANS

0 Redundant Scans

Requires 1 good decode for a “good scan”.

1 Redundant Scans

Requires 2 consecutive decodes of the same bar code data for a “good scan”.

2 Redundant Scans

Requires 3 consecutive decodes of the same bar code data for a “good scan”.

3 Redundant Scans

Requires 4 consecutive decodes of the same bar code data for a “good scan”.

4 Redundant Scans

Requires 5 consecutive decodes of the same bar code data for a “good scan”.

5 Redundant Scans

Requires 6 consecutive decodes of the same bar code data for a “good scan”.

SECTION D

Redundant Scans

6 Redundant Scans

Requires 7 consecutive decodes of the same bar code data for a “good scan”.

7 Redundant Scans

Requires 8 consecutive decodes of the same bar code data for a “good scan”.

In-Store Redundancy

Enable redundancy of EAN-13 Sys2 & UPCA sys2 & Sys4 (store printed barcodes).

* Disable In-Store Redundancy

Disable redundancy of EAN-13 Sys2 & UPCA sys2 & Sys4 (store printed barcodes).
**SECTION D**

**MISCELLANEOUS DECODE FEATURES**

- **Enable Segmented UPC Decoding**
  
  Enabling segmented UPC decoding aids in deciphering damaged or incomplete bar codes.

- **Disable Segmented UPC Decoding**
  
  Disable this feature when bar codes are in good reading condition. This will speed up decoding and improve overall accuracy.

- **Enable Piece In-Store Bar Codes**
  
  Enable piece EAN-13 Sys2, and UPCA Sys2 and Sys4 (store printed barcodes).

- **Disable Piece In-Store Bar Codes**
  
  Disable piece EAN-13 Sys2, and UPCA Sys2 and Sys4 (store printed barcodes).

- **Optional Same Symbol Check**
  
  Requires 1 different character between successive bar codes to consider the bar code "new".

- *** Normal Same Symbol Check**
  
  Requires 3 different characters between successive bar codes to consider the bar code "new".
Do not change these settings unless instructed by a Metrologic representative.

* Optimize for Low Density Codes †

Optimize for High Density Codes †

Fixed for High Density Codes †

Fixed for Medium Density Codes †

Fixed for Low Density Codes †

† For use with omnidirectional scanners only.
## SECTION D

### SAME SYMBOL TIME OUTS

These numbers determine the length of time before a bar code can be rescanned after it is removed from the scan field. Single code fixed settings in msecs of No, 50, 100, 200, 500, 1200 (1.2 sec), 2000 (2.0 sec) and infinite are available. User configurable values can be set in user-configurable increments of 50 msecs to 6350 msecs (6.35 sec).

<table>
<thead>
<tr>
<th>No Same Symbol Time Out</th>
<th>Same Symbol Time Out</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 msecs</td>
<td>100 msecs</td>
</tr>
<tr>
<td>200 msecs</td>
<td>500 msecs</td>
</tr>
<tr>
<td>1200 msecs</td>
<td>2000 msecs</td>
</tr>
</tbody>
</table>

Here are the barcode representations for the settings:

1. **No Same Symbol Time Out 100 msecs**
   - No Same Symbol Time Out
   - 100 msecs

2. **Same Symbol Time Out 200 msecs**
   - Same Symbol Time Out
   - 200 msecs

3. **Same Symbol Time Out 500 msecs**
   - Same Symbol Time Out
   - 500 msecs

4. **Same Symbol Time Out 1200 msecs**
   - Same Symbol Time Out
   - 1200 msecs

5. **Same Symbol Time Out 2000 msecs**
   - Same Symbol Time Out
   - 2000 msecs

6. *** Same Symbol Time Out Infinite**
   - * Same Symbol Time Out
   - Infinite
Infinite
Same Symbol Time Out

The scanner will not repetitively scan the same bar code.

This option overrides the symbol rescan time-outs.

Using the Multi-Code Method (on page xii), scan this bar code and a code byte sequence from Section M to set the same symbol time-out duration. Values range from 001 to 127 (50 to 6350 msecs).

---

**Barcode Absence**

* Enable Bar Code Absence Detection †

† Excludes the MS2000 Stratos Series.

Enable Stratos Bar Code Absence Detection

The scan field must be free of data for 50 milliseconds to accept a new bar code.

~ Variable
Same Symbol Time Out

Enable Stratos Bar Code Absence Detection

* Disable Stratos Bar Code Absence Detection
SECTION D  LED OPTIONS

Flash Green LED if Rescan Allowed
Red = Laser On
Green = Good Read

This indicates same symbol timeout has elapsed.

* Do not flash Green LED if Rescan Allowed
Green = Laser On
Red = Good Read

Reverse LED Functions

Red = Laser On
Green = Good Read

Normal LED Functions

Enable scanner’s optional third LED.

This feature is not available with all models.

Enable 3rd LED

Disable 3rd LED

Disable scanner’s optional third LED.

This feature is not available with all models.
SECTION D

LED OPTIONS

* Laser LED High Intensity

![Barcode Image]

Laser LED Intensity is High or Normal.

Laser LED Low Intensity

![Barcode Image]

Laser LED is Low Intensity

This feature is not available with all models.

* Scan LED High Intensity

![Barcode Image]

Scan LED Intensity is High or Normal.

Scan LED Low Intensity

![Barcode Image]

Scan LED Intensity is Low Intensity

This feature is not available with all models.

Scan LED Off

![Barcode Image]

The scan LED does not signify barcode scanning. The LED will continue to light for all other functions.

This feature is not available with all models.

Laser LED Off

![Barcode Image]

The laser LED does not signify laser ON. The LED will continue to light for all other functions.

This feature is not available with all models.
SECTION D

BEEPER OPTIONS

* Normal Tone

Optional Tone 1

Optional Tone 2

Optional Tone 3

Optional Tone 4

Optional Tone 5
## Section D  

**Beeper Options**

**Optional Tone 6**

<table>
<thead>
<tr>
<th>Barcode</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>1316515</td>
<td>No Beep</td>
</tr>
</tbody>
</table>

**Enable Good Scan Beep**

<table>
<thead>
<tr>
<th>Barcode</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>141603</td>
<td>Enable good scan beep on power up.</td>
</tr>
</tbody>
</table>

**Disable Good Scan Beep**

<table>
<thead>
<tr>
<th>Barcode</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>141913</td>
<td>Disable good scan beep on power up.</td>
</tr>
</tbody>
</table>

**Enable Button Beep Controls**

<table>
<thead>
<tr>
<th>Barcode</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>159011</td>
<td>This feature is not available with all models.</td>
</tr>
</tbody>
</table>

**Disable Button Beep Controls**

<table>
<thead>
<tr>
<th>Barcode</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>159111</td>
<td>This feature is not available with all models.</td>
</tr>
</tbody>
</table>
SECTION D

**BEEPER OPTIONS**

Next Beep Tone

* Loudest Volume

2nd Loudest Volume

3rd Loudest Volume

No Volume
**SECTION D**

<table>
<thead>
<tr>
<th><strong>BEEPER OPTIONS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>* Beep Once on Supplements</td>
</tr>
<tr>
<td><img src="image1.png" alt="Barcode Image" /></td>
</tr>
<tr>
<td>Beep Twice on Supplements</td>
</tr>
<tr>
<td><img src="image2.png" alt="Barcode Image" /></td>
</tr>
<tr>
<td>Enable Fast Beep</td>
</tr>
<tr>
<td><img src="image3.png" alt="Barcode Image" /></td>
</tr>
<tr>
<td>* Disable Fast Beep</td>
</tr>
<tr>
<td><img src="image4.png" alt="Barcode Image" /></td>
</tr>
</tbody>
</table>
**SECTION D**

**BEEPER OPTIONS**

**Beep on BEL Command**

- 1 1 8 4 1 7

The scanner beeps when it receives a BEL character from the host. If a number is sent within 200 msecs before the BEL character, then the scanner will beep that number of times.

**Ignore BEL Command**

- 1 1 8 4 0 7

**Enable Light Pen Toggle During Beep**

- 1 1 6 9 1 3

The scanner will beep and toggle the light pen data line on a successful decode. This drives a "good read" indicator.

**Disable Light Pen Toggle During Beep**

- 1 1 6 9 0 3
Use these codes to select the amount of delay between sending data characters and "Bar Code" records from the scanner to the host. This helps prevent the scanner from overflowing host input buffers.

* 1 msec Inter-Character Delay

Scan this bar code and a sequence of code bytes in Section M to set the delay between characters sent to the host system. Delay range can be set from 1 to 255 msecs.

Refer to the Multi-Code Configuration Method on page xii.
SECTION D  INTER-CHARACTER DATA TRANSMISSION DELAYS

No Inter-Character Delay

INTER-RECORD DATA TRANSMISSION DELAYS

~ Variable Inter-Record Delay

Turn Off Laser During Inter-Record Delay

* Leave Laser On During Inter-Record Delay
SECTION D  COMMUNICATION TIME OUT OPTIONS

Enable Communications Time Outs

* Disable Communications Time Outs

* Beep Before Transmit
  
Scanner will beep before each label is transmitted.

Beep After Transmit

Scanner will beep after each label is transmitted.

~ Variable Communications Time Out

* Default Communications Time Out (2 secs)

Scanner Operation  D  19
## SECTION D  
**COMMUNICATION TIME OUT OPTIONS**

<table>
<thead>
<tr>
<th>Short Communications Time Out (1 sec)</th>
<th>Long Communications Time Out (4 secs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three Beeps on Time Out</td>
<td>* No Beeps on Time Out</td>
</tr>
<tr>
<td>Razzberry Tone on Time Out</td>
<td>* No Razzberry Tone on Time Out</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>8191200</td>
<td>8191800</td>
</tr>
<tr>
<td>118410</td>
<td>118400</td>
</tr>
<tr>
<td>118411</td>
<td>118401</td>
</tr>
</tbody>
</table>
Enable “D/E” Disable Command

The scanner will disable scanning after it receives an ASCII “D” from the host device. It will enable scanning when it receives an ASCII “E”.

* Disable “D/E” Disable

Do not monitor D/E commands.

Enable “Z/R” Type D/E Simulation

The scanner will disable scanning after it receives an ASCII “Z” from the host device. It will enable scanning when it receives an ASCII “R”.

* No “Z/R” Type D/E Simulation

Do not monitor Z/R commands.

Enable “F/L” Laser Command

The scanner will turn off the laser after receiving an ASCII “F” character. The laser will turn on after it receives an ASCII “L” character.

* Disable “F/L” Laser Command

Do not monitor “F/L” commands.
**SECTION D**

**HOST SCANNER COMMANDS**

Motor “On/Off” Using M/O Commands †

† For use with omnidirectional scanners only.

The scanner will turn the motor OFF after it receives an ASCII “O” character. The motor will turn ON after the scanner receives an ASCII “M” character. †

Enable I Command

Disable I Command

Do not monitor the M/O commands.

Enable i Command

Disable i Command
Enable S Command

Enable EM Commands

Enable SI/SO Command

Enable EM command. End of Medium (ctrl Y). The EM command sends an ID string then a scanner status spread over two bytes.

Enable SI/SO Command

Scanner Operation D 23
SECTION D

HOST SCANNER COMMANDS

Use
DTR Scan Disable

* Do not use
DTR Scan Disable

The scanner will monitor the
DTR input to determine if
scanning should be allowed. A
+12V “active” level enables
decoding. A -12V “inactive” level
disables decoding.

Enable Pass Through

Disable Pass Through

The AUX scanner must
be configured for the
same Baud rate as the
host, with STX prefix,
Nixdorf ID characters and
CR Terminator enabled.

* Blink LEDs on Disable

No Blink LEDs on Disable

When using CTS scan disable or
DTR disable, blink the LEDs that
signify the unit is disabled
(signal = off).

When using CTS scan enable or DTR disable, do
not blink the LEDs that
signify the unit is disabled
(signal = off).
**SECTION D**

**HOST SCANNER COMMANDS**

Activate on DC2 Character

```
1118110
```

* Do Not Activate on DC2 Character

```
118100
```

Transmit "NO READ" if DC2 Activated

```
1118111
```

Do Not Transmit "NO READ" if DC2 Activated

```
118101
```

No Green LED During "NO READ" Xmit

```
1118311
```

* Green LED During "NO READ" Xmit

```
118301
```
**SECTION D**

**POWER SAVE MODES**

<table>
<thead>
<tr>
<th>Always Power Save Mode†</th>
<th>No Power Save Mode†</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Barcode" /></td>
<td><img src="image2" alt="Barcode" /></td>
</tr>
<tr>
<td>The scanner enters power save mode immediately after power-up and after each bar code scanned. †</td>
<td>The scanner will never enter power save mode. †</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Power Save Mode in 1 minute †</th>
<th>Power Save Mode in 2 minutes †</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image3" alt="Barcode" /></td>
<td><img src="image4" alt="Barcode" /></td>
</tr>
<tr>
<td>The scanner enters power save mode when the scanner remains idle for 1 min. †</td>
<td>The scanner enters power save mode if the scanner remains idle for 2 min. †</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Power Save in 5 Minutes †</th>
<th>Power Save in 10 Minutes †</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image5" alt="Barcode" /></td>
<td><img src="image6" alt="Barcode" /></td>
</tr>
<tr>
<td>The scanner enters power save mode if the scanner remains idle for 5 min. †</td>
<td>The scanner enters power save mode if the scanner remains idle for 10 min. †</td>
</tr>
</tbody>
</table>
### Power Save Modes

<table>
<thead>
<tr>
<th>Power Save in 20 Minutes †</th>
<th>Power Save in 30 Minutes †</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Barcode" /></td>
<td><img src="image2.png" alt="Barcode" /></td>
</tr>
<tr>
<td>The scanner enters power save mode if the scanner remains idle for 20 min. †</td>
<td>The scanner enters power save mode if the scanner remains idle for 30 min. †</td>
</tr>
</tbody>
</table>

† For use with omnidirectional scanners only.

<table>
<thead>
<tr>
<th>Default Power Save Mode ††</th>
<th>Blink Power Save Mode ††</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image3.png" alt="Barcode" /></td>
<td><img src="image4.png" alt="Barcode" /></td>
</tr>
<tr>
<td>This feature is not available with all models.</td>
<td>The laser Blinks OFF &amp; ON after a configured period of non-use.</td>
</tr>
</tbody>
</table>

†† Some Metrologic scanners automatically 'wake' or exit from the power save mode if the IR detects movement. Other Metrologic scanners wake if their multi-Function Button is pressed. Please refer to the Installation and User's Guide specific to each product.

When the scanner recognizes a bar code it will exit the blink mode.

This feature is not available with all models.
**SECTION D**

**POWER SAVE MODES**

---

**Laser OFF Power Save Mode ††**

![Barcode]

The laser turns OFF after a configured period of non-use.

†† This feature is not available with all models.

**Dual #1 Power Save Mode ††**

![Barcode]

The laser blinks OFF & ON after a configured period of non-use then the laser and motor turn OFF at thirty-minute intervals.

Example 1:
Example of Dual #1 Power Save Mode with the power save timeout set to 15 minutes.

![LED States]

†† Some Metrologic scanners automatically 'wake' or exit from the power save mode if the IR detects movement. Other Metrologic scanners wake if their multi-Function Button is pressed. Please refer to the Installation and User's Guide specific to each product.

---

**Laser Motor OFF Power Save Mode ††**

![Barcode]

The laser and motor turns OFF after a configured period of non-use.

†† This feature is not available with all models.

**Dual #2 Power Save Mode ††**

![Barcode]

The laser turns OFF after a configured period of non-use then the motor turns OFF at thirty-minute intervals.

Example 2:
Example of Dual #2 Power Save Mode with the power save timeout set to 15-minutes.

![LED States]

†† This feature is not available with all models.
**POWER SAVE MODES**

* Enable Power Save Switch

![Barcode Image](Barcode1.png)

This feature is not available with all models.

Disable Power Save Switch

![Barcode Image](Barcode2.png)

This feature is not available with all models.

Enable Wake with Switch Only

![Barcode Image](Barcode3.png)

Only wake from power save using the multi-function button

Enable Wake with IR or Switch

![Barcode Image](Barcode4.png)

Wake using the IR or the multifunction button.
SECTION D  

JAPANESE DOUBLE FIELD SUPPORT

To support Japanese Double Field Bar Codes, first make sure you have your scanner configured to the following settings.

- Disable Segmented UPC Decoding
- Enable 2 scan buffers
- Disable bar code absence detection
- Enable normal code selects

Then, scan the **Enable Japan 2 Field** bar code.

Enable Japan 2 Field

Next, select the matching bar codes that are used for double field symbols.
Note that only UPC/EAN bar codes are allowed in double field mode.
Select at least two characters for each bar code. The maximum is 4 upper and 4 lower bar codes.

**EXAMPLE**

**To select 54 as the first two characters in the Upper Code pair 1:**
1. Scan the **Upper Code 1 Character 1** bar code *(shown on page D 31)*
2. Determine the correct Code Byte Value for the character 5 in 54 (Refer to Section M's ASCII Reference Table, starting on page M 6)
   a. Scan Code Byte 0
   b. Scan Code Byte 5
   c. Scan Code Byte 3
3. Scan the **Upper Code 1 Character 2** bar code *(shown on page D 31)*
4. Determine the correct Code Byte Value for the character 4 in 54.
   a. Scan Code Byte 0
   b. Scan Code Byte 5
   c. Scan Code Byte 2

**To select 18 as the first two characters in the Lower Code pair 1:**
1. Scan the **Lower Code 1 Character 1** bar code *(shown on page D 31)*
2. Determine the correct Code Byte Value for the character 1 in 18 (refer to Section M's ASCII Reference Table starting on page M 6)
   a. Scan Code Byte 0
   b. Scan Code Byte 4
   c. Scan Code Byte 9
3. Scan the **Lower Code 1 Character 2** bar code *(shown on page D 31)*
4. Determine the correct Code Byte Value for the character 8 in 18.
   (Refer to Section M's ASCII Reference Table, starting on page M 6)
   a. Scan Code Byte 0
   b. Scan Code Byte 5
   c. Scan Code Byte 6
SECTION D

JAPANESE DOUBLE FIELD SUPPORT

Upper Code 1 Character 1

Upper Code 1 Character 2

Lower Code 1 Character 1

Lower Code 1 Character 2

Upper Code 2 Character 1

Upper Code 2 Character 2
<table>
<thead>
<tr>
<th>Upper Code 4 Character 1</th>
<th>Upper Code 4 Character 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>009312</td>
<td>009313</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lower Code 4 Character 1</th>
<th>Lower Code 4 Character 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>009314</td>
<td>009315</td>
</tr>
</tbody>
</table>
Japanese Trial Time

Scan the above bar code followed by the 3 code bytes in Section M that represent the timeout value desired if in special code select mode.

1 is equal to 100 milliseconds

Example:
If a 500 millisecond timeout is desired, scan the above code followed by code byte 0, code byte 0 and code byte 5.

Transmit Top Code Select

Transmit the highest priority code select if all are not found.

Enable Error Tone

Adds ability to sound RAZZ error tone when special code selects fail.

Enable Code Selects

Transmit All Code Selects

Transmit all code selects.

* Transmit

* Disable Error Tone
**SECTION D**

**TEST MODES**

Scanability ON

The scanner will enter scanability test mode.

Do not enable unless instructed to by a Metrologic representative.

Scanability OFF

Scan Count Mode ON

The scanner will enter scan count test mode and the scanner's firmware number will transmit to the host.

Do not enable unless instructed to by a Metrologic representative.

Scan Count Mode OFF

Temporary Symbologies

The Temporary Symbologies test code enables all major types of bar code symbologies, reduces the minimum number of characters required to 1, sets the minimum ITF characters required to 2, and adds the symbology name as a prefix to the transmission. This feature is disabled when power to the scanner is cycled OFF and ON.

Temporary Symbologies OFF
Scan the *Enter/Exit Configuration Mode* bar code before trying to set this feature. Please refer to the Multi-Code method on page xii.

A prefix ID can be added and assigned for data transmission. Use this code with a 3-code byte sequence from Section M that represents the desired character.

Assigns a 2nd configurable prefix character.

Assigns a 3rd configurable prefix character.

Assigns a 4th configurable prefix character.

Assigns a 5th configurable prefix character.
**SECTION E**

**CONFIGURABLE PREFIXES, ALL DATA**

~ Configurable Prefix Character #6

![Barcode]

Assigns a 6th configurable prefix character.

~ Configurable Prefix Character #7

![Barcode]

Assigns a 7th configurable prefix character.

~ Configurable Prefix Character #8

![Barcode]

Assigns a 8th configurable prefix character.

~ Configurable Prefix Character #9

![Barcode]

Assigns a 9th configurable prefix character.

~ Configurable Prefix Character #10

![Barcode]

* Clear all User Configurable Prefixes

![Barcode]
SECTION E  CONFIGURABLE ID CHARACTERS, CODE SPECIFIC

* Use Configurable Code ID Bytes as Prefixes

1 0 5 2 7

User configured, code specific ID bytes are transmitted before the data.

If using prefixes, user configured suffixes can not be used.

E 3

Use Configurable Code ID Bytes as Suffixes

1 0 5 8 1 7

User configured, code specific ID bytes are transmitted after the data.

If using suffixes, user configured prefixes can not be used.

IDENTIFIERS CHARACTER

~ Configurable UPC-A ID †

9 0 5 6 0 0

~ Configurable UPC-E ID †

9 0 5 7 0 0

† While using the Multi-Code method, scan this bar code followed by the 3 code byte bar codes in Section M that represent a unique ID character to be associated with this bar code type. (Refer to the Multi-Code Method on page xii.)
† While using the Multi-Code method, scan this bar code followed by the 3 code byte bar codes in Section M that represent a unique ID character to be associated with this bar code type. (Refer to the Multi-Code Method on page xii.)
While using the Multi-Code method, scan this bar code followed by the 3 code byte bar codes in Section M that represent a unique ID character to be associated with this bar code type. (Refer to the Multi-Code Method on page xii.)
SECTION E  CONFIGURABLE ID CHARACTERS, CODE SPECIFIC

~ Configurable
Standard 2 of 5 ID †

~ Configurable
Interleaved 2 of 5 ID †

† While using the Multi-Code method, scan this bar code followed by the 3 code byte bar codes in Section M that represent a unique ID character to be associated with this bar code type. (Refer to the Multi-Code Method on page xii.)

~ Configurable
Matrix 2 of 5 ID †

~ Configurable
Airline 2 of 5 ID †
SECTION E  CONFIGURABLE ID CHARACTERS CODE SPECIFIC

~ Configurable
MSI Plessey ID †

~ Configurable
UK Plessey ID†

† While using the Multi-Code method, scan this bar code followed by the 3 code byte bar codes in Section M that represent a unique ID character to be associated with this bar code type. (Refer to the Multi-Code Method on page xii.)

~ Configurable
Codabar ID †

* Clear all Configurable Code Specific ID’s †
SECTION E

STANDARD PREFIX CHARACTERS

Enable STX Prefix  *  Disable STX Prefix

The scanner will transmit a Start of Text (ASCII 02H) before each bar code.

Will not transmit a Start of Text (ASCII 02H) before each bar code.

Enable Rockford-Thompson Mode  *  Disable Rockford-Thompson Mode

Enable AIM ID Characters  *  Disable AIM ID Characters

The scanner will transmit AIM symbology identifiers.

Some scanner models may not support this feature.

The scanner will not transmit AIM symbology identifiers.
SECTION E  STANDARD PREFIX CHARACTERS

Enable UPC Prefix ID

| 1 | 1 | 6 | 6 | 1 | 7 |

When enabled, the scanner will transmit a prefix before any UPC/EAN bar code.

The prefixes are as follows:
- A (UPC-A),
- E0 (UPC-E),
- F (EAN-13), and
- FF (EAN-8).

Enable NCR Prefix ID

| 1 | 0 | 7 | 9 | 1 | 1 |

When enabled, the scanner will transmit a prefix before the following code types.

The prefixes are as follows:
- A (UPC-A),
- E0 (UPC-E),
- FF (EAN-8),
- F (EAN-13),
- B1 (Code 39),
- B2 (ITF) and
- B3 (Code 128 & other codes).
## STANDARD PREFIX CHARACTERS

<table>
<thead>
<tr>
<th>Enable Nixdorf ID Characters</th>
<th>* Disable Nixdorf ID Characters</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Barcode" /></td>
<td><img src="image2.png" alt="Barcode" /></td>
</tr>
<tr>
<td>This option transmits code identifiers before each bar code for many Siemens/Nixdorf registers.</td>
<td>This option will not transmit Siemens/Nixdorf code identifiers.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Enable SANYO ID Characters</th>
<th>* Disable SANYO ID Characters</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image3.png" alt="Barcode" /></td>
<td><img src="image4.png" alt="Barcode" /></td>
</tr>
<tr>
<td>Transmit Sanyo ID Characters.</td>
<td>Do not transmit Sanyo ID Characters.</td>
</tr>
</tbody>
</table>
**SECTION E**

**STANDARD PREFIX CHARACTERS**

Enable TEC Register Format ID Characters

```
0124710
```

Disable TEC Register Format ID Characters

```
0124700
```

Enable TEC MA1530 ID Characters

```
0108010
```

Disable TEC MA1530 ID Characters

```
0108000
```

Enable Symbology Prefix

```
0105514
```

Disable Symbology Prefix

```
0105504
```

This option adds a symbology description in front of the bar code transmission.

Do not add a symbology description in front of the bar code transmission.
### SECTION E

**STANDARD PREFIX CHARACTERS**

<table>
<thead>
<tr>
<th>Enable Manufacturer ID Prefix</th>
<th>* Disable Manufacturer ID Prefix</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Barcode 1" /></td>
<td><img src="image2.png" alt="Barcode 2" /></td>
</tr>
<tr>
<td>Transmits “METROLOGIC” before all bar code data to identify the scanner as a Metrologic Scanner.</td>
<td>The scanner will not transmit the manufacturer identification string.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Enable “C” Prefix</th>
<th>* Disable “C” Prefix</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image3.png" alt="Barcode 3" /></td>
<td><img src="image4.png" alt="Barcode 4" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Enable “$” Prefix ID for UPC/EAN</th>
<th>* Disable “$” Prefix ID for UPC/EAN</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image5.png" alt="Barcode 5" /></td>
<td><img src="image6.png" alt="Barcode 6" /></td>
</tr>
</tbody>
</table>
SECTION E  STANDARD PREFIX CHARACTERS

Enable Tab Prefix

```
1 1 1 0 6 1 1
```

The scanner will transmit a TAB (ASCII 09H) before each bar code.

* Disable Tab Prefix

```
1 1 0 6 0 1
```

The scanner will not transmit a TAB.

Enable SNI Beetle Mode

```
1 1 0 1 1 1
```

* Disable SNI Beetle Mode

```
1 1 0 1 0 1
```

Enable Cipher 1021 IDs

```
1 1 0 1 1 5
```

* Disable Cipher 1021 IDs

```
1 1 0 1 0 5
```
### Section E

#### Standard Suffix Characters

<table>
<thead>
<tr>
<th>Suffix</th>
<th>Barcode</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Enable CR Suffix</strong></td>
<td>![Barcode]</td>
<td>The scanner will transmit a Carriage Return after each bar code.</td>
</tr>
<tr>
<td><strong>Disable CR Suffix</strong></td>
<td>![Barcode]</td>
<td>The scanner will not transmit a Carriage Return after each bar code.</td>
</tr>
<tr>
<td><strong>Enable LF Suffix</strong></td>
<td>![Barcode]</td>
<td>The scanner will transmit a Line Feed after each bar code.</td>
</tr>
<tr>
<td><strong>Disable LF Suffix</strong></td>
<td>![Barcode]</td>
<td>The scanner will not transmit a Line Feed after each bar code.</td>
</tr>
<tr>
<td><strong>Enable Tab Suffix</strong></td>
<td>![Barcode]</td>
<td>The scanner will transmit a TAB (ASCII 09H) after each bar code.</td>
</tr>
<tr>
<td><strong>Disable Tab Suffix</strong></td>
<td>![Barcode]</td>
<td>The scanner will not transmit a TAB (ASCII 09H) after each bar code.</td>
</tr>
</tbody>
</table>

* This feature is Disabled when keyboard wedge defaults are loaded.
**SECTION E**

**STANDARD SUFFIX CHARACTERS**

Enable ETX Suffix

![Barcode Image](image1)

The scanner will transmit End of TeXt (ASCII 03H) after the bar code data.

Disable ETX Suffix

![Barcode Image](image2)

The scanner will not transmit End of TeXt (ASCII 03H).

Enable UPC Suffix ID

![Barcode Image](image3)

The scanner will transmit a suffix after any UPC/EAN bar code.

The suffixes are as follows:
A (UPC-A),
E (UPC-E),
F (EAN-13) and
F (EAN-8).

Disable UPC Suffix ID

![Barcode Image](image4)

The scanner will not transmit a suffix after UPC/EAN bar codes.
SECTION E  
LONGITUDINAL REDUNDANCY CHECK (LRC)

Enable Transmit of LRC Calculation

Start LRC on First Byte

The scanner outputs an LRC check character after the bar code.

* Disable Transmit of LCR Calculation

Start LRC on Second Byte

* Start LRC on First Byte

The scanner will not output an LRC (check character) after the bar code.

The scanner will calculate the LRC check digit starting with the first character.

The scanner will calculate the LRC check digit starting with the second character.
Scan the Enter/Exit Configuration Mode bar code before trying to set this feature. Refer to the Multi-Code Method on page xii.

A suffix ID can be added and assigned for data transmission. Use this code with a 3 code byte sequence from Section M that represents the desired character.

Assigns a 2nd configurable suffix character.

Assigns a 3rd configurable suffix character.
**SECTION E**

**CONFIGURABLE SUFFIXES, ALL DATA**

~ Configurable Suffix
Character #4 †

```
9 0 4 8 0 0
```

Assigns a 4th configurable suffix character.

~ Configurable Suffix
Character #5 †

```
9 0 4 9 0 0
```

Assigns a 5th configurable suffix character.

† While using the Multi-Code method, scan this bar code followed by the 3 code byte bar codes in Section M that represents the desired character. (Refer to the Multi-Code Method on page xii.)

~ Configurable Suffix
Character #6 †

```
9 0 5 0 0 0
```

Assigns a 6th configurable suffix character.

~ Configurable Suffix
Character #7 †

```
9 0 5 1 0 0
```

Assigns 7th configurable suffix character.
SECTION E  CONFIGURABLE SUFFIXES, ALL DATA

~ Configurable Suffix Character #8 †

assigns an 8th configurable suffix character.

~ Configurable Suffix Character #9 †

assigns a 9th configurable suffix character.

~ Configurable Suffix Character #10 †

assigns a 10th configurable suffix character.

† While using the Multi-Code method, scan this bar code followed by the 3 code byte bar codes in Section M that represent the desired character. (Refer to the Multi-Code Method on page xii.)

* Clear All User Configurable Suffixes

assigns all suffixes and suffix characters to their default values.
SECTION E

SPECIAL FORMATS

Enable SINEKO Mode

³107914

Enable Newcode Formatting Mode A

³116711

Enable Newcode Formatting Mode B

³116710

Disable SINEKO Mode

³107904

Disable Newcode Formatting Mode A

³116701

Disable Newcode Formatting Mode B

³116700
SECTION E

CHARACTER REPLACEMENTS

To replace a character:
1. Scan the *Enter/Exit Configuration Mode* bar code (located on page xii, at the front of this guide).
2. Scan the *Character to Replace Code* (shown below).
3. Scan the ASCII Code Byte value of the character you wish to replace (refer to the ASCII reference table in Section M).
4. Scan the *Replacement Character* bar code.
5. Scan the ASCII Code Byte value of the replacement character.
6. Scan the *Enter/Exit Configuration Mode* bar code (located on page xii, at the front of this guide).

<table>
<thead>
<tr>
<th>Character to Replace</th>
<th>No Replacement</th>
</tr>
</thead>
<tbody>
<tr>
<td>³938600</td>
<td>³838600</td>
</tr>
</tbody>
</table>

Replacement Character

<table>
<thead>
<tr>
<th>Replacement Character</th>
</tr>
</thead>
<tbody>
<tr>
<td>³938700</td>
</tr>
</tbody>
</table>
**SECTION F**

**UPC/EAN**

- *Transmit UPC-A Check Digit*
  - Transmit UPC-E
    - Transmit UPC-E to 12 Digits
      - Expand UPC-E bar codes to the 12 digit equivalent, UPC-A bar codes.
- *Do not Transmit UPC-A Check Digit*
  - Do not Transmit UPC-A
    - Do not Transmit UPC-E Check Digit
      - Do not expand UPC-E to the 12 digit equivalent, UPC-A bar code.
SECTION F  

UPC/EAN

Convert UPC-A to EAN-13

![Barcode]

The scanner converts UPC-A to EAN-13 by transmitting a leading zero before the bar code.

* Do Not Convert UPC-A to EAN-13

![Barcode]

The scanner will not convert UPC-A to EAN-13.

Transmit Lead Zero on UPC-E

![Barcode]

This option will transmit a zero before each UPC-E bar code.

Do Not Transmit Lead Zero on UPC-E

![Barcode]

This option will not transmit a zero before each UPC-E bar code.

Convert EAN-8 to EAN-13

![Barcode]

The scanner will transmit five zeros before the bar code to convert EAN-8 to EAN-13.

* Do Not Convert EAN-8 to EAN-13

![Barcode]

The scanner will not convert EAN-8 to EAN-13.
SECTION F

UPC/EAN

* Transmit UPC-A Number System

Do Not Transmit UPC-A Number System

³107511
³107501

Metrologic strongly discourages using this feature. Duplicate numbers may result in the database.

* Transmit UPC-A MFR #

Do Not Transmit UPC-A MFR #

³107611
³107601

* Transmit UPC-A ITEM #

Do Not Transmit UPC-A ITEM #

³107610
³107600
SECTION F

UPC/EAN

* Transmit EAN-8
Check Digit

Do Not Transmit
EAN-8 Check Digit

* Transmit EAN-13
Check Digit

Do Not Transmit
EAN-13 Check Digit

GTIN-14 Format

No GTIN-14 Format

This feature is not available with all models.
SECTION F  CODABAR

Transmit Codabar Start/Stop Characters

* Do Not Transmit Codabar Start/Stop

Transmits Codabar’s start/stop characters before and after each bar code.

Will not transmit Codabar’s start/stop characters before and after each bar code.

Convert Codabar Start/Stop Characters to Lowercase

* Do Not Convert Codabar Start/Stop Characters to Lowercase

Code Formatting F 5
**SECTION F**

**CODABAR**

Enable CLSI Editing

CLSI type editing will be done before the information is transmitted to the host.

This option will only work with 14 digit Codabar type lengths.

* Do Not Enable CLSI Editing

This option will not perform CLSI type editing before the information is transmitted to the host.
SECTION F

Enable MOD 43 Check on Code 39

```
1 0 0 2 1 3
```

The scanner will only scan Code 39 bar codes that have a valid Modulo 43 Check Digit.

* Disable MOD 43 Check on Code 39

```
1 0 0 2 0 3
```

The scanner will not test Code 39 bar codes for a Modulo 43 Check Digit.

Transmit Mod 43 Check Digit on Code 39

```
1 0 7 7 1 5
```

This feature works in conjunction with Mod 43 Check on Code 39. Both must be enabled for this feature to work.

* Do Not Transmit Mod 43 Check Digit on Code 39

```
1 0 7 7 0 5
```

This option will not transmit Code 39's Mod 43 check character.
SECTION F

TRANSMIT CODE 39 START/STOP CHARACTERS

The scanner transmits Code 39's start/stop characters before and after each bar code.

* DO NOT TRANSMIT CODE 39 START/STOP CHARACTERS

The scanner will not transmit Code 39's start/stop characters before and after each bar code.
**SECTION F**

**CODE 11 AND TELEPEN**

**Transmit Code 11 Check Digit**

```
1 0 7 7 1 3
```

The scanner will transmit Code 11 check characters when used with the Enable Code 11 feature in Section A.

**Do Not Transmit Code 11 Check Digit**

```
1 0 7 7 0 3
```

The scanner will not transmit Code 11 check characters.

**Enable Convert Telepen ^L to E**

```
1 0 7 8 1 4
```

**Disable Convert Telepen ^L to E**

```
1 0 7 8 0 4
```

**Code Formatting**

F 9
 SECTION F

Transmit
UK Plessey Check Digit

The scanner will transmit UK Plessey Check Digit characters when used with the Enable UK Plessey feature in Section A.

Enable
UK Plessey Special Format

Disable
UK Plessey Special Format

Handle Incorrect
UK Plessey Stop Character

* Normal UK Plessey Stop Character Handling

* Do Not Transmit
UK Plessey Check Digit

Will not transmit UK Plessey Check Digit characters.

* Enable
UK Plessey Special Format

* Disable
UK Plessey Special Format

* Handle Incorrect
UK Plessey Stop Character

* Normal UK Plessey Stop Character Handling

* Transmit
UK Plessey Check Digit

The scanner will transmit UK Plessey Check Digit characters when used with the Enable UK Plessey feature in Section A.
**No MSI Plessey Check Digit**

The scanner will not test MSI Plessey bar codes for a check digit.

**Enable MSI Plessey MOD 10/10 Check Digit**

The scanner will test MSI Plessey bar codes for a double Modulo 10 check digit.

**Transmit MSI Plessey Check Digit**

This option works in conjunction with one or both of the Enabled MSI Plessey Mode options.

**Enable MSI Plessey MOD 10 Check Digit**

The scanner will test MSI Plessey bar codes for a single Modulo 10 check digit.

**Do Not Transmit MSI Plessey Check Digit**

The scanner will not transmit MSI Plessey's check digit characters.
Enable Mod 10 Check on ITF

![Barcode]

1 0 0 3 1 0

The scanner will only scan Interleaved 2 of 5 (ITF) bar codes that have a Modulo 10 check digit.

* Disable MOD 10 Check on ITF

![Barcode]

1 0 0 3 0 0

The scanner will not test Interleaved 2 of 5 (ITF) bar codes for a Modulo 10 check digit.

Transmit Mod 10 Check Digit on ITF

![Barcode]

1 0 0 7 1 4

The scanner transmits Interleaved 2 of 5 (ITF) Mod 10 check character.

* Do Not Transmit Mod 10 Check Digit on ITF

![Barcode]

1 0 0 7 0 4

The scanner will not transmit Interleaved 2 of 5 (ITF) Mod 10 check digit character. This feature works in conjunction with Mod 10 check on ITF. Both must be enabled for this feature to work.

Transmit Matrix 2 of 5 Check Digit

![Barcode]

1 0 7 8 1 2

* Do Not Transmit Matrix 2 of 5 Check Digit.
Section G

Enable RS-232 Mode

When enabled the scanner will work with RS-232 ±12V serial output.
**SECTION G**

<table>
<thead>
<tr>
<th>Parity Features</th>
<th>No Parity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A parity bit is an extra data bit used to help catch data transmission errors. The scanner’s parity must match the host’s parity.</strong></td>
<td><img src="image" alt="No Parity Code" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Odd Parity</th>
<th>* Space Parity</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Odd Parity Code" /></td>
<td><img src="image" alt="Space Parity Code" /></td>
</tr>
<tr>
<td><em>Select Odd Parity to set the parity bit to either 1 or 0 to ensure an odd number of bits are 1's.</em></td>
<td><em>Select to set the parity bit always 0.</em></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Even Parity</th>
<th>Mark Parity</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Even Parity Code" /></td>
<td><img src="image" alt="Mark Parity Code" /></td>
</tr>
<tr>
<td><em>Select to set the parity bit to either 1 or 0 to ensure an even number of bits are 1's.</em></td>
<td><em>Select to set the parity bit always 1.</em></td>
</tr>
</tbody>
</table>
A “Baud” or “Baud Rate” is the speed at which data is transmitted. Select a Baud for the scanner that matches the host device.

115200 BAUD Rate

57600 BAUD Rate

38400 BAUD Rate

19200 BAUD Rate

14400 BAUD Rate
SECTION G

BAUD RATES

* 9600 BAUD Rate

4800 BAUD Rate

2400 BAUD Rate

1200 BAUD Rate

600 BAUD Rate

300 BAUD Rate
SECTION G

DATA/STOP BITS

* 7 Data Bits

1 Stop Bit

1 1 6 0 0 3

8 Data Bits

2 Stop Bits

1 1 6 0 1 3

Number of data bits transmitted for each character.
SECTION G  HARDWARE HANDSHAKING

Enable RTS/CTS Handshaking

Output a Request to Send (RTS) signal and wait for a Clear To Send (CTS) signal before transmitting data.

* Disable RTS/CTS Handshaking

Do not use RTS/CTS handshaking.

* Character RTS/CTS

Activate/Deactivate RTS signal for each character.

Message RTS/CTS

Activate RTS before sending the first character and leave it active until after the last character has been transmitted.

Invert RTS Polarity (RSV1)

+12V = Inactive
-12V = Active

* Standard RTS Polarity

Use standard RTS polarity

-12V = Inactive
+12V = Active
SECTION G

Invert CTS Polarity (RSV2)

- Standard CTS Polarity
  - +12V = Inactive, do not send
  - -12V = Active, OK to send

- Invert CTS Polarity
  - +12V = Active, OK to send
  - -12V = Inactive, do not send

Activate RTS, Do Not wait for CTS (RSV3)

- Activate RTS, Wait for CTS
  - +12V = Active, OK to send
  - -12V = Inactive, do not send

- Activate RTS for transmission but do not wait for CTS to send.

Test CTS Not Present Before RTS (RSV4)

- Do Not Test for CTS Present Before RTS
  - +12V = Active, OK to send
  - -12V = Inactive, do not send

- Do not activate RTS if CTS is already present.

Activate RTS without testing if CTS is already active.
**SECTION G**

**HARDWARE HANDSHAKING**

**CTS Scan Transmit**

- 0126417

The CTS line is used to allow a decoded bar code to be transmitted. Use reserved code 4 to ensure 1 bar code per CTS. This will prevent the scanner from gathering data until the CTS signal has been retracted.

- This feature is not available with all models.

**Enable DTR Support**

- 0116817

The scanner will stop scanning when the Data Terminal Ready (DTR) signal goes inactive.

**Enable RTS Counter Toggle**

- 0115915

The scanner will toggle the RTS line on a good decode.

**No CTS Scan Transmit**

- 0120417

Do not support CTS scan transmit.

**Disable DTR Support**

- 0115817

**Disable RTS Counter Toggle**

- 0115905
**SOFTWARE HANDSHAKING**

**Enable XON/XOFF Handshaking**

The scanner will stop transmission whenever an XOFF (ASCII 13H) is received. Transmission will resume after an XON (ASCII 11H) is received.

**Disable XON/XOFF Handshaking**

The scanner will not test for XON/XOFF.

**Enable ACK/NAK**

After transmitting data, wait for an ACK (06H) or a NAK (15H) response from the host.

If ACK is received, complete the communications cycle and look for more bar codes.

If NAK is received, retransmit the last set of bar code data and wait for ACK/NAK again.

**Disable ACK/NAK**

Do not support ACK/NAK handshaking.
 SECTION G SOFTWARE HANDSHAKING

Enable O/N Handshaking

Enable O/N Handshaking (page G 9) must be enabled for this feature to work.

Support BEL/CAN in ACK/NAK

When BEL (07H) is received, the scanner beeps 3 times and exits the communications loop. If a CAN (18H) is received, then the scanner will exit the communications loop, silently.

Enable Razz Command

When a z is received, the scanner will RAZZ once. Multiple razzes can be sounded if the character before the z is a number and is sent within 1 second of the z.

The normal BEL commands must be activated for feature.

Disable O/N Handshaking

Disable O/N Handshaking

Ignore BEL/CAN in ACK/NAK

Ignore BEL/CAN characters in communication loop.

Ignore z characters in communication loop.
SECTION G

SOFTWARE HANDSHAKING

Enable XON/XOFF
Scan Inhibit On

* Disable XON/XOFF
Scan Inhibit Off

This feature is not available with all models.

Enable 5 Retries on ACK/NAK Time Out

* Disable 5 Retries on ACK/NAK Time Out

Allow up to 5 NAK retransmissions of the data before dropping out of the communications loop.

Do not limit retransmission to 5 NAK cycles.

Enable 5 NAK Retries

Disable 5 NAK Retries

RS-232 G 11
Enable French PC Term

The scanner transmits PC type make/break scan codes instead of ASCII data characters. The scan codes match a WYSE French PC Terminal Emulation.

* Disable French PC Term

Do not transmit in French PC Term Mode.

Enable USA Wyse PC

Enables USA Wyse PC style keyboard PCTERM mode.

Disable USA Wyse PC

Disables USA Wyse PC style keyboard PCTERM mode.

* Enable Receive Data

Disable receive port after 5 seconds.

Disable Receive Data
SECTION H

ENABLE KEYBOARD EMULATION

Load Keyboard Wedge Defaults

Loads default settings for keyboard wedge mode.

---

Enable Stand-Alone Keyboard Emulation

Use this with special stand-alone models that are not cabled for an external keyboard. When the Stand-Alone Mode is enabled, the scanner will send keyboard “power on” information and configure hardware to simulate a constant keyboard connection.

Enable Keyboard Wedge Emulation

Use this with an external keyboard. Transmit in wedge mode to allow standard PC keyboards to communicate when no bar code data is available.

---

Keyboard H 1
**SECTION H**

**COUNTRY/SCAN CODE TABLE SELECTS**

- **USA Keyboard**
  - ³416260
  - Enable USA Keyboard.

- **Switzerland Keyboard**
  - ³416280
  - Enable Swiss Keyboard

- **Spain Keyboard**
  - ³416250
  - Enable Spanish Keyboard

- **Italy Keyboard**
  - ³416240
  - Enable Italian Keyboard

- **Germany Keyboard**
  - ³416230
  - Enable German Keyboard

- **France Keyboard**
  - ³416220
  - Enable French Keyboard
SECTION H  COUNTRY/SCAN CODE TABLE SELECTS

UK Keyboard
Enable UK Keyboard.

Belgium Keyboard
Enable Belgium Keyboard

Japanese Keyboard
Enable Japanese Keyboard

IBM 4700 Financial Keyboard
Enable IBM 4700 Financial Keyboard

Sweden/Finland Keyboard
Enable Sweden/Finland Keyboard

Keyboard  H  3
SECTION H

KEYBOARD/SYSTEM TYPE

* AT Keyboard

If using an AT computer, scan the above bar code.
(Includes IBM PS/2 and compatible models 50, 55, 60, 80)

XT Keyboard

If using an XT computer, scan the above bar code.

PS/2 Keyboard

Scan the above code for PS/2 computer. (Includes IBM PC and compatible models 30, 70 and 8556)

Terminal KB Emulation

Scan the above code to enable terminal keyboard emulation mode.
SECTION H  SPECIAL KEYBOARD FEATURES

Transmit
Make Code Only

* Transmit
Make/Break Code

Do not scan unless instructed by a Metrologic representative.

Do Not Transmit
F0H Break Code

* Transmit
F0H Break Code

The scanner will not transmit the F0H in the break-code sequence.

Transmit Cleanup Bit

* Do Not Transmit
Cleanup Bit

Use for certain NEC computers.
SECTION H  SPECIAL KEYBOARD FEATURES

Enable Alt Mode

1 1 6 2 1 7

The scanner will duplicate the following keyboard sequence:
Hold down ALT key and Type decimal number that corresponds to the appropriate character.

* Disable Alt Mode

1 1 6 2 0 7

Caution: If the host software application uses the right ALT key as a “Hot” key, ALT mode must be disabled.

Enable Auto Detect Mode (AT/PS2)

1 1 6 2 1 4

Automatically detects caps lock status.

* Disable Auto Detect Mode (AT/PS2)

1 1 6 2 0 4

The Auto Detect Caps Lock feature is not supported.
SECTION H

SPECIAL KEYBOARD FEATURES

Enable Caps Lock (XT)  *  Disable Caps Lock (XT)

³116214 ³116204

The Caps Lock feature is not supported.

Send Numbers as Keypad Data  *  Send Numbers as Normal Data

³116316 ³116306

All data is sent as if it has been entered on a keypad.

Enable Reserved Feature  *  Disable Reserved Feature

³116410 ³116400
**SECTION H**

**SPECIAL KEYBOARD FEATURES**

<table>
<thead>
<tr>
<th>* Use Extended ASCII to Send Extended Key Codes</th>
<th>Use Extended ASCII Characters as Extended ASCII</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Barcode" /></td>
<td></td>
</tr>
<tr>
<td><img src="image2" alt="Barcode" /></td>
<td></td>
</tr>
</tbody>
</table>

Use extended ASCII characters to send PC keyboard keys such as F1, F2, etc… See section M for details.

<table>
<thead>
<tr>
<th>* Character KB Inhibit</th>
<th>Message KB Inhibit</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image3" alt="Barcode" /></td>
<td></td>
</tr>
<tr>
<td><img src="image4" alt="Barcode" /></td>
<td></td>
</tr>
</tbody>
</table>

Transmit extended ASCII codes via ALT mode.
INTER-SCAN CODE DELAYS

SECTION H

Inter-Scan Code Delay
800 Microseconds

The time specified represents the amount of time between individual 9 bit-scan codes.

This parameter may need to be adjusted for operation with certain PC keyboard BIOS.

Inter-Scan Code Delay
7.5 msec

The time specified represents the amount of time between individual 9 bit-scan codes.

This parameter may need to be adjusted for operation with certain PC keyboard BIOS.

Inter-Scan Code Delay
15 msec

The time specified represents the amount of time between individual 9 bit-scan codes.

This parameter may need to be adjusted for operation with certain PC keyboard BIOS.

~ Variable Inter-Scan Code Delay msec

Refer to the Multi-Code Configuration Method on page xii.
In general, standard bar code symbologies will only encode the ASCII character set. Function keys, arrow keys and many other “extended” keys on an IBM compatible keyboard do not translate to ASCII characters. One method of “bar coding” the extended keys is to substitute the extended key codes when a specific ASCII control character found in the bar code stream. The Control Sets are specific translation of the ASCII (HEX) set.

**CONTROL SET #1**

Enable Control Set #1

```
4104 04 04
```

Disable Control Set #1

```
4106 40 4
```
<table>
<thead>
<tr>
<th>ASCII (HEX)</th>
<th>ASCII Control</th>
<th>Extended Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>00H</td>
<td>Null</td>
<td>Numeric Keypad</td>
</tr>
<tr>
<td>01H</td>
<td>SOH</td>
<td>Num Lock</td>
</tr>
<tr>
<td>02H</td>
<td>STX</td>
<td>Down</td>
</tr>
<tr>
<td>03H</td>
<td>ETX</td>
<td>Numeric Keypad</td>
</tr>
<tr>
<td>04H</td>
<td>EOT</td>
<td>Insert</td>
</tr>
<tr>
<td>05H</td>
<td>ENQ</td>
<td>Delete</td>
</tr>
<tr>
<td>06H</td>
<td>ACK</td>
<td>System Request</td>
</tr>
<tr>
<td>07H</td>
<td>BEL</td>
<td>←</td>
</tr>
<tr>
<td>08H</td>
<td>BS</td>
<td>→</td>
</tr>
<tr>
<td>09H</td>
<td>TAB</td>
<td>Tab</td>
</tr>
<tr>
<td>0AH</td>
<td>LF</td>
<td>Caps Lock</td>
</tr>
<tr>
<td>0BH</td>
<td>VT</td>
<td>Shift Tab</td>
</tr>
<tr>
<td>0CH</td>
<td>FF</td>
<td>Alt</td>
</tr>
<tr>
<td>0DH</td>
<td>CR</td>
<td>Enter</td>
</tr>
<tr>
<td>0EH</td>
<td>SO</td>
<td>Control</td>
</tr>
<tr>
<td>0FH</td>
<td>SI</td>
<td>Up Arrow</td>
</tr>
<tr>
<td>10H</td>
<td>DLE</td>
<td>F1</td>
</tr>
<tr>
<td>11H</td>
<td>DC1</td>
<td>F2</td>
</tr>
<tr>
<td>12H</td>
<td>DC2</td>
<td>F3</td>
</tr>
<tr>
<td>13H</td>
<td>DC3</td>
<td>F4</td>
</tr>
<tr>
<td>14H</td>
<td>DC4</td>
<td>F5</td>
</tr>
<tr>
<td>15H</td>
<td>NAK</td>
<td>F6</td>
</tr>
<tr>
<td>16H</td>
<td>SYN</td>
<td>F7</td>
</tr>
<tr>
<td>17H</td>
<td>ETB</td>
<td>F8</td>
</tr>
<tr>
<td>18H</td>
<td>CAN</td>
<td>F9</td>
</tr>
<tr>
<td>19H</td>
<td>EM</td>
<td>F10</td>
</tr>
<tr>
<td>1AH</td>
<td>SUB</td>
<td>Home</td>
</tr>
<tr>
<td>1BH</td>
<td>ESC</td>
<td>Esc</td>
</tr>
<tr>
<td>1CH</td>
<td>FS</td>
<td>Page Up</td>
</tr>
<tr>
<td>1DH</td>
<td>GS</td>
<td>Page Down</td>
</tr>
<tr>
<td>1EH</td>
<td>RS</td>
<td>Print Screen</td>
</tr>
<tr>
<td>1FH</td>
<td>US</td>
<td>End</td>
</tr>
</tbody>
</table>

Keyboard  

| H | 11 |
SECTION H  3151 TERMINAL KEYBOARD

3151 Terminal Keyboard
SECTION I

Load OCIA Defaults

Enable OCIA

Select this option if communications require OCIA (Optically Coupled Interface Adapter).

This serial interface is clocked by the host.

Enable DTS/Siemens

* Enable DTS/Nixdorf

Enable NCR-S

Enable NCR-F
**Enable Light Pen Mode**

Scan the code below to enable light pen mode.

```
4 1 5 5 2 4
```

Select this option if the scanner will be used in place of a light pen. It provides light pen emulation of each bar code scanned.

**Bars High**

Scan the code below to set bars high.

```
1 1 6 9 1 7
```

**Spaces High**

Scan the code below to set spaces high.

```
1 1 6 9 0 7
```

**Transmit Code 39**

Scan the code below to transmit code 39.

```
1 1 6 9 1 6
```

All bar codes will be decoded then transmitted as code 39 bar codes.

**Transmit as Scanned**

Scan the code below to transmit as scanned.

```
1 1 6 9 0 8
```

All bar codes will be decoded and transmitted in their original symbology.

**Light Pen/Laser Emulation**

```
J 1
```
SECTION J  LIGHT PEN/SET NARROW ELEMENT BORDER

Poll Light Pen Source

1 1 6 9 1 5

The scanner waits for an active source voltage before transmitting data.

Do Not Poll Light Pen Source

1 1 6 9 0 5

The scanner will not wait for an active source voltage before transmitting data.

Enable Light Pen a Extra Toggle

1 1 6 9 1 1

The scanner beeps and toggles the light pen data line with an extra data pulse to condition the decoder.

Disable Light Pen Extra Toggle

1 1 6 9 0 1

10x Narrow Element Border

1 1 6 9 1 2

This bar code allows the transmission of Light Pen/Wand emulation using a 10x border.

50x Narrow Element Border

1 1 6 9 0 2

This bar code allows the transmission of Light Pen/Wand emulation using a 50x border.
SECTION J  SET NARROW ELEMENT WIDTH /LASER EMULATION

* 1 ms Narrow Element Width
This option allows the transmission of Light/Pen Wand emulation a 1 ms narrow element width.

60 µs Narrow Element Width
This transmits at 60 µs narrow element width.

100 µs Narrow Element Width
This transmits at 100 µs narrow element width.

500 µs Narrow Element Width
This transmits at 500 µs narrow element width.

~ Variable Narrow Element Width †
Sets the minimum x-dimension in 6 µs increments. Scan this code followed by a 3 digit code byte sequence found in Section M.
† Refer to the Multi-Code Method on page xii.

Laser Emulation
SECTION K  IBM 46xx CONFIGURATION/IBM PORTS

Load IBM 46xx Defaults

Load default format settings for IBM 46xx systems.

Enable IBM 46xx Communication

Select this option for IBM 46xx SIOC/RS485 communication.

Not all scanners support this interface. The correct interface board is required.

IBM Port 17B
3687-2 In Counter

IBM Port 5B
1520 HH Laser

IBM Port 9B
4500 CCD HH BCR1

IBM Port 9B
4501 CCD HH BCR2

IBM 46xx Configuration K 1
SECTION K

IBM RESERVE CODES

IBM Reserve #1

IBM Reserve #2

IBM Reserve #3

IBM Reserve #5
SECTION M  
CODE BYTE USAGE

User configurable prefixes, symbol length and other features that use these code bytes for configuration, require that the scanner be in configuration mode. Scan the Enter/Exit Configuration Mode bar code before starting the configuration cycle. Single code configuration mode does not work for these multi-code sequences.

EXAMPLE

User configurable prefix/suffix characters (Section E) can be saved into the scanner by scanning the 3 digit decimal equivalent of the ASCII character into the appropriate character location with the code byte bar codes.

To add an asterisk (*) as a prefix scan the following bar codes in order:

1. Enter/Exit Configuration Mode  (3 beeps)
2. Configurable Prefix 1  (1 beep)
3. Code Byte 0  (1 beep)
4. Code Byte 4  (2 beeps)
5. Code Byte 2  (3 beeps)
6. Enter/Exit Configuration Mode  (3 beeps)
SECTION M

CODE BYTES 0-5

Code Byte 0

Code Byte 1

Code Byte 2

Code Byte 3

Code Byte 4

Code Byte 5
SECTION M  RESERVED CODES

~ Enable Reserved Code

Contact a Metrologic customer service representative for additional details on this feature.

~ Disable Reserved Code
### SECTION M

#### CODE BYTE/CODE TYPE TABLE

<table>
<thead>
<tr>
<th>CODE BYTE</th>
<th>CODE TYPES</th>
</tr>
</thead>
<tbody>
<tr>
<td>004</td>
<td>UPC-A</td>
</tr>
<tr>
<td>002</td>
<td>UPC-E</td>
</tr>
<tr>
<td>003</td>
<td>EAN-8</td>
</tr>
<tr>
<td>005</td>
<td>EAN-13</td>
</tr>
<tr>
<td>080</td>
<td>Code 39</td>
</tr>
<tr>
<td>081</td>
<td>Codabar</td>
</tr>
<tr>
<td>082</td>
<td>Interleaved 2 of 5</td>
</tr>
<tr>
<td>083</td>
<td>Code 128</td>
</tr>
<tr>
<td>084</td>
<td>Code 93</td>
</tr>
<tr>
<td>091</td>
<td>MSI Plessey</td>
</tr>
<tr>
<td>092</td>
<td>Code 11</td>
</tr>
<tr>
<td>093</td>
<td>Airline 2 of 5 (15 digits)</td>
</tr>
<tr>
<td>094</td>
<td>Matrix 2 of 5</td>
</tr>
<tr>
<td>095</td>
<td>Telepen</td>
</tr>
<tr>
<td>096</td>
<td>UK Plessey</td>
</tr>
<tr>
<td>098</td>
<td>Standard 2 of 5</td>
</tr>
<tr>
<td>097</td>
<td>Airline (13 digits)</td>
</tr>
<tr>
<td>099</td>
<td>TRI-OPTIC</td>
</tr>
</tbody>
</table>
## SECTION M

### ASCII REFERENCE TABLE

<table>
<thead>
<tr>
<th>HEX VALUE</th>
<th>DECIMAL VALUE/ CODE BYTE VALUE</th>
<th>CHARACTER</th>
<th>CONTROL KEYBOARD EQUIVALENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>00</td>
<td>000</td>
<td>NUL</td>
<td>@</td>
</tr>
<tr>
<td>01</td>
<td>001</td>
<td>SOH</td>
<td>A</td>
</tr>
<tr>
<td>02</td>
<td>002</td>
<td>STX</td>
<td>B</td>
</tr>
<tr>
<td>03</td>
<td>003</td>
<td>ETX</td>
<td>C</td>
</tr>
<tr>
<td>04</td>
<td>004</td>
<td>EOT</td>
<td>D</td>
</tr>
<tr>
<td>05</td>
<td>005</td>
<td>ENQ</td>
<td>E</td>
</tr>
<tr>
<td>06</td>
<td>006</td>
<td>ACK</td>
<td>F</td>
</tr>
<tr>
<td>07</td>
<td>007</td>
<td>BEL</td>
<td>G</td>
</tr>
<tr>
<td>08</td>
<td>008</td>
<td>BS</td>
<td>H</td>
</tr>
<tr>
<td>09</td>
<td>009</td>
<td>HT</td>
<td>I</td>
</tr>
<tr>
<td>0A</td>
<td>010</td>
<td>LF</td>
<td>J</td>
</tr>
<tr>
<td>0B</td>
<td>011</td>
<td>VT</td>
<td>K</td>
</tr>
<tr>
<td>0C</td>
<td>012</td>
<td>FF</td>
<td>L</td>
</tr>
<tr>
<td>0D</td>
<td>013</td>
<td>CR</td>
<td>M</td>
</tr>
<tr>
<td>0E</td>
<td>014</td>
<td>SO</td>
<td>N</td>
</tr>
<tr>
<td>0F</td>
<td>015</td>
<td>SI</td>
<td>O</td>
</tr>
<tr>
<td>10</td>
<td>016</td>
<td>DLE</td>
<td>P</td>
</tr>
<tr>
<td>11</td>
<td>017</td>
<td>DC1</td>
<td>Q</td>
</tr>
<tr>
<td>12</td>
<td>018</td>
<td>DC2</td>
<td>R</td>
</tr>
<tr>
<td>13</td>
<td>019</td>
<td>DC3</td>
<td>S</td>
</tr>
<tr>
<td>14</td>
<td>020</td>
<td>DC4</td>
<td>T</td>
</tr>
<tr>
<td>15</td>
<td>021</td>
<td>NAK</td>
<td>U</td>
</tr>
<tr>
<td>16</td>
<td>022</td>
<td>SYN</td>
<td>V</td>
</tr>
<tr>
<td>17</td>
<td>023</td>
<td>ETB</td>
<td>W</td>
</tr>
<tr>
<td>18</td>
<td>024</td>
<td>CAN</td>
<td>X</td>
</tr>
<tr>
<td>19</td>
<td>025</td>
<td>EM</td>
<td>Y</td>
</tr>
<tr>
<td>1A</td>
<td>026</td>
<td>SUB</td>
<td>Z</td>
</tr>
</tbody>
</table>
### SECTION M

#### ASCII REFERENCE TABLE

<table>
<thead>
<tr>
<th>HEX VALUE</th>
<th>DECIMAL VALUE/ CODE BYTE VALUE</th>
<th>CHARACTER</th>
<th>CONTROL KEYBOARD EQUIVALENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1B</td>
<td>027</td>
<td>ESC</td>
<td>[</td>
</tr>
<tr>
<td>1C</td>
<td>028</td>
<td>FS</td>
<td>\</td>
</tr>
<tr>
<td>1D</td>
<td>029</td>
<td>GS</td>
<td>^</td>
</tr>
<tr>
<td>1E</td>
<td>030</td>
<td>RS</td>
<td>_</td>
</tr>
<tr>
<td>1F</td>
<td>031</td>
<td>US</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>032</td>
<td>SP</td>
<td>space, blank</td>
</tr>
<tr>
<td>21</td>
<td>033</td>
<td>!</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>034</td>
<td>&quot;</td>
<td></td>
</tr>
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**Code Bytes**

M 7
### SECTION M

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## SECTION M

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## Section M

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* Example:

1st Configurable Prefix = 174
2nd Configurable Prefix = 065
Scanner will transmit <left ALT Make> "A" <Left ALT Break>
Metrologic manufactures several scanners for OEM applications. These scanners may use a different set of defaults than the standard Metrologic factory defaults. Scanning the following bar codes will restore the default factory settings.

Enable Factory Defaults

Scan this code followed by the “Recall Defaults” code to enable and load Metrologic factory defaults.
## Section N Custom Defaults

<table>
<thead>
<tr>
<th>Device</th>
<th>Barcode Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ruby Verifone Defaults</td>
<td>³84661280</td>
</tr>
<tr>
<td>RCH</td>
<td>³846610</td>
</tr>
<tr>
<td>Sanyo</td>
<td>³8466020</td>
</tr>
<tr>
<td>Gilbarco</td>
<td>³846630</td>
</tr>
<tr>
<td>ALT Defaults</td>
<td>³84660040</td>
</tr>
<tr>
<td>MS6750 Defaults</td>
<td>³84660080</td>
</tr>
</tbody>
</table>

Scan this code followed by the “Recall Defaults” code to enable and load Ruby Verifone Defaults.

Scan this code followed by the “Recall Defaults” code to enable and load RCH Defaults.

Scan this code followed by the “Recall Defaults” code to enable and load Sanyo Defaults.

Scan this code followed by the “Recall Defaults” code to enable and load Gilbarco Defaults.

Scan this code followed by the “Recall Defaults” code to enable and load ALT Defaults.

Scan this code followed by the “Recall Defaults” code to enable and load MS6750 Defaults.
<table>
<thead>
<tr>
<th>German Post Defaults</th>
<th>Wincor Nixdorf Defaults</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="https://example.com/barcode" alt="" /></td>
<td><img src="https://example.com/barcode" alt="" /></td>
</tr>
<tr>
<td>Scan this code followed by the “Recall Defaults” code to enable and load German Post Defaults.</td>
<td>Scan this code followed by the “Recall Defaults” code to enable and load Wincor Nixdorf Defaults.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Quantum Pharmacy Defaults</th>
<th>Korean Mental Defaults</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="https://example.com/barcode" alt="" /></td>
<td><img src="https://example.com/barcode" alt="" /></td>
</tr>
<tr>
<td>Scan this code followed by the “Recall Defaults” code to enable and load Quantum Pharmacy Defaults.</td>
<td>Scan this code followed by the “Recall Defaults” code to enable and load Korean Mental Defaults.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Wincor Nixdorf, QuantumE Defaults</th>
<th>Auxiliary Wincor Nixdorf Plus Markets Defaults</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="https://example.com/barcode" alt="" /></td>
<td><img src="https://example.com/barcode" alt="" /></td>
</tr>
<tr>
<td>Scan this code followed by the “Recall Defaults” code to enable and load Wincor Nixdorf QuantumE Defaults.</td>
<td>Scan this code followed by the “Recall Defaults” code to enable and load Auxiliary Wincor Nixdorf Plus Markets Defaults.</td>
</tr>
</tbody>
</table>
SECTION N

CUSTOM DEFAULTS

Custom 21 Defaults

Scan this code followed by the “Recall Defaults” code to enable and load Custom 21 Defaults.

Custom 22 Defaults

Scan this code followed by the “Recall Defaults” code to enable and load Custom 22 Defaults.

Custom 23 Defaults

Scan this code followed by the “Recall Defaults” code to enable and load Custom 23 Defaults.

Custom Terminal FR1

Custom Keyboard FR1
For Serial Configuration Mode, all commands must be framed by an STX (02 Hex) and ETX (03 Hex). To recall defaults:

1. Transmit <STX>999999<ETX> through the Serial Port. This will put the scanner in serial configuration mode. Scanning will be suspended and the scanner will respond with an ACK (06 Hex).

2. Transmit <STX>999998<ETX> through the Serial Port. This is the Recall Default bar code in the MetroSelect guide. The scanner will respond with an ACK (06 Hex).

3. Transmit <STX>999999<ETX> through the Serial Port. This will cause the scanner to exit configuration mode and save the new settings. The scanner will beep 3 times and send an ACK (06 Hex).

If at anytime, the scanner cannot recognize a command, it will respond with a NAK (15 Hex).

### Software/Serial Number

![Barcode Image]

**Software Number**

999965

The scanner will transmit its software revision.

**Scanner Information**

999928

This barcode will transmit the "main" & "interface coprocessor" software numbers as well as the scanner’s serial number.

The data is output as barcode (formatted) data (i.e. 15:xx:15:xx:9876543210, where x represents any non-numbered value).
The following section includes features that are not available with all Metrologic scanner models. Please contact a customer service representative for additional information and technical assistance.

When using a Metrologic device as a secondary:

Follow Step 1 to configure the auxiliary port to accept a Metrologic scanner as the secondary scanner. Then follow Step 2 to configure the secondary scanner to match the auxiliary port’s data format.

If the secondary scanner is not a Metrologic scanner go to page O-3 and follow the instructions under “When using a non-Metrologic RS-232 Device as a secondary”.

The auxiliary input port’s data format must match the main output format of the secondary scanner.

Step 1: Scan the following bar code to enable the auxiliary port on the primary scanner.

![Auxiliary Port Controls](image)
SECTION O  AUX PORT AND SECONDARY DEVICE DATA FORMATS

Step 2: Then scan the following bar codes, in order, to configure the secondary scanner.

1. Enable AUX Output

2. Secondary Scanner Data Format

3. Enable Comm Timeouts

4. Turn OFF Auxiliary Scanner's Beeper (Optional)
The following section includes features that are not available with all Metrologic scanner models. Please contact a customer service representative for additional information and technical assistance.

When using a non-Metrologic RS-232 device as a secondary:

Scan the following bar code to enable the auxiliary port on the primary scanner.

The auxiliary input port’s data format must match the main output format of the secondary device. The secondary device must be capable of RTS/CTS handshaking and have a carriage return (ASCII 0DH) terminator on the data.

The default settings for the AUX Port General RS-232 Format are:

- 38400 baud
- 7 data bits
- 2 stop bits
- Space parity
Auxiliary Port Controls

SECTION O

ADDITIONAL AUXILIARY PORT DATA FORMATS

The auxiliary input port’s data format must match the main output format of the secondary device.

Enable AUX Port with UPC Supplemental Data Format

Enable AUX Port with Code Select Data Format

Enable AUX Port with Tech 7, 8 Data Format

Enable AUX Port with Reserved 2 Data Format

Enable AUX Port with Beetle Mode Data Format

Enable AUX Port with Reserved 1 Data Format
Enable AUX Port with Stratos
Decode Data Format

**AUXILIARY PORT BAUD RATES**

- **AUX 115200 Baud Rate**
- **AUX 57600 Baud Rate**
- **AUX 38400 Baud Rate**
- **AUX 19200 Baud Rate**
### AUXILIARY PORT BAUD RATES

<table>
<thead>
<tr>
<th>AUX Baud Rate</th>
<th>3437060</th>
<th>3437050</th>
<th>3437040</th>
<th>3437030</th>
<th>3437020</th>
<th>3437010</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUX 14400 Baud Rate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AUX 9600 Baud Rate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AUX 4800 Baud Rate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AUX 2400 Baud Rate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AUX 1200 Baud Rate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AUX 600 Baud Rate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SECTION O

AUXILIARY PORT BAUD RATES

AUX 300 Baud Rate

AUXILIARY PORT PARITY

AUX No Parity

AUX Mark Parity

* AUX Space Parity
SECTION O

AUXILIARY PORT PARITY

AUX Even Parity

AUX Odd Parity

AUXILIARY PORT STOP BITS/DATA BITS

AUX 1 Stop Bit

AUX 2 Stop Bits

* AUX 7 Data Bits

AUX 8 Data Bits
**SECTION O**  
**AUXILIARY RTS/CTS AND MODE 7**

- **Enable AUX RTS/CTS Handshaking**
- **Disable AUX RTS/CTS Handshaking**

- **Message AUX RTS/CTS**
- **Character AUX RTS/CTS**

- **Enable AUX Port Mode 7**
- **Disable AUX Port Mode 7**

Mode 7 enables reception of prefix and suffix codes when AUX port RTS/CTS handshaking is disabled.
SECTION O

AUXILIARY D/E, F/L, AND M/O

Enable AUX "D/E" Commands

Enable AUX "F/L" Commands

Enable AUX "M/O" Commands

* Disable AUX "D/E" Commands

* Disable AUX "F/L" Commands

* Disable AUX "M/O" Commands
SECTION O  AUXILIARY XON/XOFF AND ACK/NAK

* Enable AUX XON/XOFF Handshaking

³137114

³137104

Disable AUX XON/XOFF Handshaking

³137113

³137103

* Enable AUX ACK/NAK Commands

³137113

³137103

Disable AUX ACK/NAK Commands

³137110

³137103
SECTION O

**AUXILIARY CTS AND RTS POLARITY**

* Normal
  - AUX CTS Polarity
  - Normal
  - Flip
  - AUX CTS Polarity

* Normal
  - AUX RTS Polarity
  - Normal
  - Flip
  - AUX RTS Polarity

**AUXILIARY SAME SYMBOL TIMEOUT**

* AUX has
  - Same Symbol Timeout
  - 1 3 7 3 0 4

This feature skips the same symbol timeout in the master when the auxiliary scanner scans (or repeats) faster than the same symbol timeout in the master scanner.

No AUX
  - Same Symbol Timeout
  - 1 3 7 3 1 4

Metrologic recommends turning off the auxiliary scanner’s beep if the AUX Same Symbol Timeout feature is disabled.
When a scanner is used as a secondary scanner to another scanner’s auxiliary input, the output data can be in one of the following formats.

**Reserve Code 32**

This is a quick method for setting reserve Code 32 in the secondary scanner using HoloTrak Decode Data Format.

*This code should not be used for the MS6720.*

**HoloTrak Decode Output AUX Data Format**

**UPC Supplemental Output AUX Data Format**

**Stratos Decode Output AUX Data Format**

**Code Select Output AUX Data Format**
SECTION O  MAIN OUTPUT PORT AUXILIARY DATA FORMATS

TECH 7 & 8 Output AUX Data Format

Reserved 1 Output AUX Data Format

Reserved 2 Output AUX Data Format

Beetle Mode AUX Data Format
## Section O

### Inter-Character Delays

<table>
<thead>
<tr>
<th>No AUX Port Inter-Character Delays</th>
<th>1 msec AUX Port Inter-Character Delay</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Barcode Image" /></td>
<td><img src="image2.png" alt="Barcode Image" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>10 msec AUX Port Inter-Character Delay</th>
<th>25 msec AUX Port Inter-Character Delay</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image3.png" alt="Barcode Image" /></td>
<td><img src="image4.png" alt="Barcode Image" /></td>
</tr>
</tbody>
</table>

~ Variable AUX Port Inter-Character Delay

The delay between characters being sent out of the auxiliary port can be set in 1 millisecond increments by scanning the Variable AUX Port Inter-character Delay barcode followed by a 3 character sequence of code bytes that range from 001 to 255 milliseconds.

Refer to the Multi-Code Configuration Method on page xii.
Prevent Beep From AUX

Prevent the main scanner from beeping when the barcode comes from the AUX port. This is the opposite of not beeping the AUX and letting the main scanner beep as verification of the barcode sent.

Allow Beep from AUX

Allow the main scanner to beep when the barcode comes from the AUX port. This is the default condition.
Enable Full Speed USB

Load Integrated Full Speed USB IBM/OEM Defaults
The following codes can be used if the Load Integrated Full Speed USB IBM/OEM Defaults bar code has not been scanned.

Enable USB IBM ID

```
    1 1 7 8 1 7
```

* Disable USB IBM ID

```
    1 1 7 8 0 7
```

* Enhanced Code IDs

```
    1 1 7 8 0 4
```

Legacy Code IDs

```
    1 1 7 8 1 4
```

Reserved

```
    1 1 7 8 1 6
```

* Normal USB Out

```
    1 1 7 8 0 8
```
The following codes can be used if the Load Integrated Full Speed USB IBM/OEM Defaults bar code has not been scanned.

**IBM OEM Scanner 4A00h**
Flatbed

**IBM OEM Scanner 4B00h**
Handheld

Full speed USB only.

**4A00h/6E00h**
Tabletop Scanner/Scale

* Enable USB Keyboard Emulation Mode

**Enable Uni-Directional USB Serial Emulation Mode**

**Enable Bi-Directional USB Serial Emulation Mode**
SECTION P

Enable Low Speed USB

Enable Low Speed USB POS Defaults

Load Low Speed External USB Defaults

Load Low Speed Internal USB Keyboard Defaults

Load Full Speed Keyboard Internal USB Defaults

For units labeled Low Speed (LS) USB.

For units labeled Full Speed (FS) USB.
The following bar codes are specific to the IS3480, MS3580 and the MS3780 unless otherwise noted.

**Button Modes**

* Button Click Pattern
  Switching Mode

```
1 2 3 8 0 6
```

Button Hold Pattern
  Switching Mode

```
1 2 3 8 1 6
```

**Button Click Delay**

15 Second Time Out †
```
3 5 2 3 8 3 0 0
```

10 Second Time Out †
```
3 5 2 3 8 2 0 0
```

* 5 Second Time Out †
```
3 5 2 3 8 1 0 0
```

Infinite Time Out †
```
3 5 2 3 8 3 1 0
```

† *This feature is not available for the MS3780.*
The following bar codes are specific to the IS3480, MS3580 and the MS3780 (in-stand) unless otherwise noted.

**Primary Scan Patterns**

* Primary Omni

![Primary Omni](image)

This bar code sets the primary pattern to all scan lines on for omnidirectional reading.

**Secondary Scan Patterns**

Secondary Omni

![Secondary Omni](image)

This bar code sets the secondary pattern to all scan lines on for omnidirectional reading.

Primary Raster

![Primary Raster](image)

This bar code sets the primary pattern to horizontal raster.

Secondary Raster

![Secondary Raster](image)

This bar code sets the secondary pattern to horizontal raster.

Primary Single-Line

![Primary Single-Line](image)

This bar code sets the primary pattern to single-line for menu reading.

Secondary Single-Line

![Secondary Single-Line](image)

This bar code sets the secondary pattern to single-line for menu reading.
The following bar codes are specific to the MS3780 (out-of-stand) unless otherwise noted.

<table>
<thead>
<tr>
<th>Primary Scan Patterns</th>
<th>Secondary Scan Patterns</th>
</tr>
</thead>
<tbody>
<tr>
<td>* Primary Omni, Out-of-Stand</td>
<td>Secondary Omni, Out-of-Stand</td>
</tr>
</tbody>
</table>

This bar code sets the **primary** pattern to all scan lines on for omnidirectional reading.

<table>
<thead>
<tr>
<th>Primary Raster, Out-of-Stand</th>
<th>Secondary Raster, Out-of-Stand</th>
</tr>
</thead>
</table>

This bar code sets the **primary** pattern to horizontal raster.

|-----------------------------------|------------------------------------|

This bar code sets the **primary** pattern to single-line for menu reading.
IS3480 / MS3580 / MS3780

SECTION R

The following bar codes are specific to the IS3480, MS3580 and the MS3780 unless otherwise noted.

**Sweet Spot Mode**

Enable Sweet Spot Mode

![Barcode Image](image1)

The sweet spot mode is used to determine where the maximum read rate point or "sweet spot" is located for a specific bar code type. Refer to the IS3480 Installation and User’s Guide (MLPN 00-02026) for a complete description of the sweet spot mode.

---

**CodeGate® (IS3480 / MS3580)**

* Enable CodeGate

![Barcode Image](image2)

This barcode is not for use with the MS3780. Please see page R 6 for CodeGate options specific to the MS3780.

Disable CodeGate

![Barcode Image](image3)

---

**Depth of Field**

* Normal Depth of Field

![Barcode Image](image4)

Reduced Depth of Field

![Barcode Image](image5)
The following bar codes are specific to the IS3480, MS3580 and the MS3780 unless otherwise noted.

**IR Activation**

- **IR Activation**
  - Code: ³123817

* Disable IR Activation
  - Code: ³123807

**TTL RS232**

The following bar codes are only valid for the TTL RS232 Quantum series (IS/MS3x80-102).

- **Enable TTL RS232**
  - Code: ³120311

- **Disable TTL RS232**
  - Code: ³120301

- **Invert TTL RxD and TxD**
  - Code: ³120312

- **Std. TTL RxD and TxD**
  - Code: ³120302

  The TTL RxD and TxD pins idle at 0V

  The TTL RxD and TxD pins idle at +5V
The following bar codes are specific to the MS3780 unless otherwise noted.

**CodeGate (MS3780)**

* Enable CodeGate
  Out-of-Stand,
  Primary Pattern Active

* Enable CodeGate
  Out-of-Stand,
  Secondary Pattern Active

* Disable CodeGate
  In-Stand

* Disable CodeGate
  In-Stand
The following bar codes are specific to the MS3780 unless otherwise noted.

**Modes (MS3780)**

- **Enable Normal Mode**
  
  ![Barcode Image](image1.png)

- **Enable IR Activation Mode**
  
  ![Barcode Image](image2.png)

- **Enable Trigger Mode**
  
  ![Barcode Image](image3.png)
The following barcodes may be used for the Stratos Series and some Fusion or Voyager models. Please contact a customer service representative for additional information and technical assistance.

* ROM Emulation Version 1

ROM emulation version 1 is the default ROM emulation. The default ROM emulation varies with each scanner. This feature sends the ROM version information when asked by the host system.

ROM Emulation Version 2

ROM Emulation Version 3

ROM Emulation Version 4

ROM Emulation Version 5

ROM Emulation Version 6
Worldwide Headquarters

Metrologic Instruments, Inc.
90 Coles Road  Blackwood, NJ 08012-4683
Email: info@metrologic.com  •  Tel:  856-228-8100  •  Customer Service:  1-800-ID-METRO
Fax: 856-228-6673 (Sales)  •  Fax: 856-228-1879 (Marketing)  •  Fax: 856-228-0653 (Legal/Finance)

Omniplanar
Tel: 856.537.6100
Fax: 856.537.6118
Email: info@omniplanar.com

Metrologic - The Americas

Headquarters
Tel: 1-856-537-5400
Fax: 1-856-537-6474
Email: info@us.metrologic.com

Metrologic Canada
Tel: 416.752.7190
Fax: 416.752.8080
Email: info@ca.metrologic.com

Metrologic do Brasil Ltda.
Tel: 55.11.5182.7273
Fax: 55.11.5182.7168
Email: info@sa.metrologic.com

Metrologic Mexico, S.A. DE C.V.
Tel: 55.5365.6247
Fax: 55.5362.2544
Email: info@mx.metrologic.com

Metrologic South America
Tel: 239.642.1958
Fax: 239.642.1959
Email: info@sa.metrologic.com

Metrologic - USA
Tel: 1-856-537-5400
Fax: 1-856-537-6474
Email: info@us.metrologic.com

Metrologic - EMEA

Headquarters
Tel: 49-69-89019-0
Fax: 49-69-89019-200
Email: info@europe.metrologic.com

Metrologic Eria France SA
Tel: +33 (0) 1 48.63.76.79
Fax: +33 (0) 1 48.63.24.94
Email: info@fr.metrologic.com

Metrologic Eria Iberica, SL
Tel: +34 913 272 400
Fax: +34 913 273 830
Email: info@es.metrologic.com

Metrologic Russia
Tel: +7 095 736 7424
Fax: +7 095 730 7425
Email: info@ru.metrologic.com

Metrologic Instruments GmbH
Tel: 49-69-89019-0
Fax: 49-69-89019-200
Email: info@eu.metrologic.com

Metrologic Instruments Italia
Tel: +39 0 57 6511978 or +39 051 6521337
Email: info@it.metrologic.com

Metrologic Instruments
Tel: +48 (22) 545 04 30
Fax: +48 (22) 545 04 31
Email: info@pl.metrologic.com

Metrologic Instruments UK Limited
Tel: +44 (0) 1258 365900
Fax: +44 (0) 1258 365665
Email: info@uk.metrologic.com

Metrologic - APAC

Headquarters
Tel: (06) 6842-7159
Fax: (06) 6842-7159
Email: info@sg.metrologic.com

Beijing Sales Office
Tel/Fax: 86 10 82253472
Email: info@cn.metrologic.com

Chengdu Sales Office
Tel/Fax: 86 28 86200109
Email: info@cn.metrologic.com

Guangzhou Sales Office
Tel: 02-20-38823479
Fax: 02-20-38823477
Email: info@cn.metrologic.com

India Sales Office
Tel: +91 90 51257118
Fax: +91 80 51256719
Email: info@in.metrologic.com

Koreas Sales Office
Tel: 82-0-4205-5379
Fax: 82-2-3444-3980
Email:
Scott.lee@kr.metrologic.com

Metrologic Asia (Pte) Ltd
Tel: (65) 6842-7155
Fax: (65) 6842-7166
Email: info@sg.metrologic.com

Metrologic Japan Co., Ltd.
Tel: 01-3-3839-8511
Fax: 01-3-3839-8519
Email: info@jp.metrologic.com

Metrologic Thailand
Tel: 081-614-2352
Email:
tawan.jendang@th.metrologic.com

MTLG Auto ID Instruments (Shanghai) Co., Ltd
Tel: 86-21-55807280
Fax: 86-21-55892788
Email: info@cn.metrologic.com

Suzhou Sales Office
Tel: 86-512-67622500
Fax: 86-512-67622560
Email: info@cn.metrologic.com

Taiwan Sales Office
Tel: 886-2-2381 0125
Email: john.chang@tw.metrologic.com