

PLURAL STAGE **PROGRAMMER'S GUIDE**

PLURAL STAGE PROGRAMMER'S GUIDE

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Revision A

May 2017

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Revision History

Changes to the original guide are listed below:

| Change | Date | Description |
|-----------|--------|--|
| -01 Rev A | 4/2004 | Initial release |
| -02 Rev A | 3/2005 | Corrected 4-Stage, Row 2, Code 1 Characters bar code |
| -03 Rev A | 2/2012 | Motorola branding; changed defaults for Timeout Between Full Stage Decodes, Inter-Decode Wait Time, and Same Single Symbol Timeout |
| -04 Rev A | 4/2015 | Zebra branding |
| -05 Rev A | 5/2017 | Added a new note for Same Single Symbol Timeout. |

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ABOUT THIS GUIDE

Introduction

This Programmer's Guide provides the bar codes necessary to program the appropriate scanner to decode Plural Stage bar codes and enable Supplemental Recognition Characters.

Chapter Descriptions

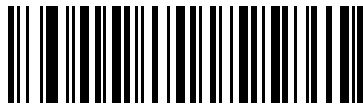
Topics covered in this guide are as follows:



- [Chapter 1, PLURAL STAGE BAR CODE DECODING](#) provides information about Plural Stage bar codes and modes.
- [Chapter 2, PROGRAMMING BAR CODES](#) provides the programming bar codes required to decode Plural Stage bar codes.
- [Chapter 3, SUPPLEMENTAL RECOGNITION BAR CODES](#) provides information for programming and enabling Supplemental Recognition Characters.
- [Appendix A, NUMERIC BAR CODES](#) provides numeric keypad bar codes and the Cancel bar code.
- [Appendix B, ALPHANUMERIC KEYBOARD CODES](#) provides alphanumeric keypad bar codes.

Notational Conventions

The following conventions are used in this document:

- Courier New font is used for code segments.
- *Italics* are used to highlight:
 - Chapters and sections in this and related documents
 - Dialog box, window and screen names
 - Drop-down list and list box names
 - Screen field names
 - Check box and radio button names
 - File names
 - Directory names.
- **Bold** text is used to highlight:
 - Parameter and option names
 - Icons on a screen
 - Key names on a keypad
 - Button names on a screen.
- bullets (•) indicate:
 - Action items
 - Lists of alternatives
 - Lists of required steps that are not necessarily sequential
- Sequential lists (e.g., those that describe step-by-step procedures) appear as numbered lists.
- Throughout the book, asterisks (*) are used to denote default parameter settings for programming bar codes.



* Indicates Default  **Disable 2-Stage Decoding**  Feature/Option

- Notes, caution and warning statements appear as follows:



NOTE This symbol indicates something of special interest or importance to the reader. Failure to read the note will not result in physical harm to the reader, equipment or data.



CAUTION This symbol indicates that if this information is ignored, the possibility of data or material damage may occur.



WARNING! This symbol indicates that if this information is ignored the possibility that serious personal injury may occur.

Related Documents

Zebra scanner Product Reference Guides provide programming bar codes and general information to help the user get started with the scanner. It also includes basic set-up and operation instructions.

For the latest versions of scanner Product Reference Guides go to: <http://www.zebra.com/support>.

Service Information

If you have a problem using the equipment, contact your facility's technical or systems support. If there is a problem with the equipment, they will contact the Zebra Technologies Global Customer Support Center at: <http://www.zebra.com/support>.

When contacting Zebra support, please have the following information available:

- Serial number of the unit
- Model number or product name
- Software type and version number

Zebra responds to calls by e-mail, telephone or fax within the time limits set forth in service agreements.

If your problem cannot be solved by Zebra support, you may need to return your equipment for servicing and will be given specific directions. Zebra is not responsible for any damages incurred during shipment if the approved shipping container is not used. Shipping the units improperly can possibly void the warranty.

If you purchased your business product from a Zebra business partner, please contact that business partner for support.

CHAPTER 1 PLURAL STAGE BAR CODE DECODING

Introduction

This chapter provides general information about Plural Stage bar codes and modes.

Plural Stage Bar Code Decoding

A Plural Stage bar code is defined as multiple bar codes printed in close proximity to each other. They are usually arranged vertically (i.e., one above the other), although this is not a requirement.

[Table 1-1](#) lists the two supported Plural Stage decoding modes.

Table 1-1 *Plural Stage Modes*

| Mode | Description |
|---|--|
| RC Mode (Recognition Code mode) | Requires Recognition Codes in order to decode Plural Stage bar codes. Program row Recognition Codes when the scanner is in RC Mode. See Plural Stage Row Recognition Codes on page 2-26 for details of the Recognition Code format. In RC Mode, scanners can support 2-stage, 3-stage, and 4-stage bar code reading, where the number 2, 3, or 4 refers to the number of bar codes that make up the Plural Stage bar code set. |
| NRC Mode (Non-Recognition Code mode) | Does not require Recognition Codes. In this mode, the parameter Plural Stage Decoding in NRC Mode on page 2-7 determines the number of bar codes (from 2 to 5) the scanner must decode prior to transmitting. |

When transmitting, the scanner sends formatted row 1 data first, formatted row 2 data second, etc.

[Table 2-1 on page 2-2](#) explains row data formatting.

✓ **NOTE** Enabling Plural Stage processing automatically disables Multicode mode.

Each decoded Plural Stage bar code has a maximum length of 54 bytes, including Symbol ID characters. If the decoded bar code length exceeds 54 bytes, it is processed as a normal bar code rather than a Plural Stage bar code.

CHAPTER 2 PROGRAMMING BAR CODES

Introduction

This chapter provides the programming bar codes required to decode Plural Stage bar codes.

Default Parameter Settings

[Table 2-1](#) lists the default parameter settings for both new and standard parameters.

- ✓ **NOTE** Scanning **Set Defaults** or **Set Factory Defaults** from a standard scanner product reference guide does not restore the row Recognition Codes and associated location values to the defaults shown in [Table 2-1](#). To clear stored Recognition Code characters, see [Clearing Recognition Codes on page 2-36](#).

Table 2-1 *Default Parameter Settings*

| Parameter | Default Value | Page |
|--|---|----------------------|
| Plural Stage Mode | Use Recognition Codes (RC Mode) | 2-4 |
| 2-Stage Decoding (RC Mode only) Enabling 2-Stage Decoding sets the following parameter values: 2-Stage, Row 1, Code 1 Characters: 97 2-Stage, Row 1, Code 1 position value - for first character 9 : 01 2-Stage, Row 1, Code 1 position value - for second character 7 : 02 2-Stage, Row 2, Code 1 Characters: 19 2-Stage, Row 2, Code 1 position value - for first character 1 : 01 2-Stage, Row 2, Code 1 position value - for second character 9 : 02 | Disable | 2-5 |
| 3-Stage Decoding (RC Mode only) | Disable | 2-5 |
| 4-Stage Decoding (RC Mode only) | Disable | 2-6 |
| Plural Stage Decoding in NRC Mode | 2 | 2-7 |
| Timeout Between Full Stage Decodes | 100 msec | 2-8 |
| Inter-Decode Wait Time | 3 sec | 2-8 |
| Same Single Symbol Timeout | 100 msec | 2-9 |
| First Row Data Format | <Row 1 Data><Row 1 Suffix> | 2-10 |
| Second Row Data Format | <Row 2 Data><Row 2 Suffix> | 2-11 |
| Third Row Data Format | <Row 3 Data><Row 3 Suffix> | 2-12 |
| Fourth Row Data Format | <Row 4 Data><Row 4 Suffix> | 2-13 |
| Fifth Row Data Format | <Row 5 Data><Row 5 Suffix> | 2-14 |
| Row Prefix/Suffix Values | 7013 (CR/LF for serial devices, ENTER key for others) | 2-15 |
| Transmit Plural Stage Row Recognition Codes | Enable | 2-23 |

Table 2-1 *Default Parameter Settings (continued)*

| Parameter | Default Value | Page |
|----------------------------------|----------------------|----------------------|
| Recognition Code Position Values | 0 (i.e., Not Set) | 2-26 |
| Recognition Codes | None (i.e., Not Set) | 2-27 |
| Position Value Placement | From Left | 2-38 |

Plural Stage Mode

Scan one of the following bar codes to set the Plural Stage mode:

- **Use Recognition Codes (RC Mode):** The scanner attempts to match scanned bar codes with stored Recognition Codes in order to decode and transmit Plural Stage bar codes.
- **Non-Recognition Code Mode (NRC Mode):** The scanner attempts to scan the number of bar codes specified by *Plural Stage Decoding in NRC Mode on page 2-7* before transmitting.



***Use Recognition Codes (RC Mode)**



Non-Recognition Code Mode (NRC Mode)

RC Mode Decoding

Scan the bar code(s) in this section to enable and disable Plural Stage decoding options in RC Mode.

2-Stage Decoding

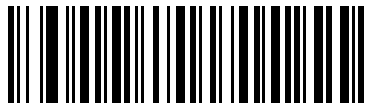


Enable 2-Stage Decoding



***Disable 2-Stage Decoding**

3-Stage Decoding



Enable 3-Stage Decoding



***Disable 3-Stage Decoding**

4-Stage Decoding



Enable 4-Stage Decoding



***Disable 4-Stage Decoding**

Plural Stage Decoding in NRC Mode

In NRC Mode, scan a bar code that corresponds to the number of unique bar codes the scanner attempts to decode before transmitting.



***Decode and Transmit Any 2**



Decode and Transmit Any 3



Decode and Transmit Any 4



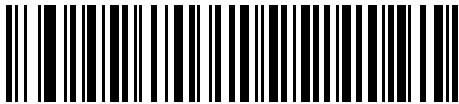
Decode and Transmit Any 5

Timeout Between Full Stage Decodes

This parameter sets the amount of time the scanner waits before resuming decode attempts after decoding a complete stage (i.e., reading all rows).

To set this parameter (programmable from 0.0 to 5.0 seconds in 0.1 second increments), scan the bar code below followed by two numeric bar codes beginning on page [A-1](#).

✓ **NOTE** The **Timeout Between Full Stage Decodes** must be less than or equal to the **Timeout Between Decodes, Different Symbol** value in the standard Zebra scanner product reference guides.



Full Stage Decode Timeout

Inter-Decode Wait Time

This parameter sets the amount of time the scanner attempts to decode the next Plural Stage bar code within a set after scanning a bar code in that set. If the scanner does not decode another bar code within this time, the previous decode(s) are invalid.

To select a wait time in the range of 0.0 to 5.0 seconds in 0.1 second increments, scan the bar code below followed by two numeric bar codes beginning on page [A-1](#).



Plural Stage Inter-Decode Wait Time

Same Single Symbol Timeout

This parameter sets the time the scanner waits after decoding a plural stage bar code to decode the same bar code. The scanner accepts decode data if it sees a new bar code, or after this timer expires.

To set this parameter (programmable from 0.0 to 5.0 seconds in 0.1 second increments), scan the bar code below followed by two numeric bar codes beginning on page [A-1](#).

✓ **NOTE** The **Same Single Symbol Timeout** must be less than or equal to the **Timeout Between Decodes, Same Symbol** value in the standard Zebra scanner product reference guides.

The **Same Single Symbol Timeout** must be less than or equal to the **Time Delay to Low Power Mode** value in the cordless Zebra scanner product reference guides.

Set the **Same Single Symbol Timeout** value to a minimum of 800 msec if the **Post Decode Illumination** parameter in the standard Zebra scanner product reference guide is set to **Always On**.



Plural Stage Same Single Symbol Timeout

Row Data Transmission Format

Scan the bar code(s) in this section that correspond to the desired data transmission format for each row.

First Row Data Format



<ROW 1 DATA>



<ROW 1 PREFIX><ROW 1 DATA>



* <ROW 1 DATA><ROW 1 SUFFIX>



<ROW 1 PREFIX><ROW 1 DATA>
<ROW 1 SUFFIX>

Second Row Data Format



<ROW 2 DATA>



<ROW 2 PREFIX><ROW 2 DATA>



* <ROW 2 DATA><ROW 2 SUFFIX>



<ROW 2 PREFIX><ROW 2 DATA>
<ROW 2 SUFFIX>

Third Row Data Format



<ROW 3 DATA>



<ROW 3 PREFIX><ROW 3 DATA>



* <ROW 3 DATA><ROW 3 SUFFIX>



<ROW 3 PREFIX><ROW 3 DATA>
<ROW 3 SUFFIX>

Fourth Row Data Format



<ROW 4 DATA>



<ROW 4 PREFIX><ROW 4 DATA>



* <ROW 4 DATA><ROW 4 SUFFIX>



<ROW 4 PREFIX><ROW 4 DATA>
<ROW 4 SUFFIX>

Fifth Row Data Format (NRC Mode Only)



<ROW 5 DATA>



<ROW 5 PREFIX><ROW 5 DATA>



* <ROW 5 DATA><ROW 5 SUFFIX>



<ROW 5 PREFIX><ROW 5 DATA>
<ROW 5 SUFFIX>

Row Prefix/Suffix Values

To set the prefix/suffix values for Plural Stage row data, scan the appropriate prefix/suffix bar code followed by four numeric bar codes beginning on page [A-1](#) that represent values corresponding to the various keystrokes listed in [Table 2-2 on page 2-18](#).



ROW 1 PREFIX



ROW 1 SUFFIX



ROW 2 PREFIX



ROW 2 SUFFIX

Row Prefix/Suffix Values (continued)



ROW 3 PREFIX



ROW 3 SUFFIX



ROW 4 PREFIX



ROW 4 SUFFIX

Row Prefix/Suffix Values (continued)



ROW 5 PREFIX



ROW 5 SUFFIX

ASCII / Character Set

Assign the values in [Table 2-2](#) as prefixes or suffixes for ASCII character data transmission.

Table 2-2 *ASCII Character Set*

| ASCII Value | Full ASCII Code 39 Encode Character | ASCII Character |
|-------------|-------------------------------------|-----------------|
| 1000 | %U | NUL |
| 1001 | \$A | SOH |
| 1002 | \$B | STX |
| 1003 | \$C | ETX |
| 1004 | \$D | EOT |
| 1005 | \$E | ENQ |
| 1006 | \$F | ACK |
| 1007 | \$G | BELL |
| 1008 | \$H | BCKSPC |
| 1009 | \$I | HORIZ TAB |
| 1010 | \$J | LF/NW LN |
| 1011 | \$K | VT |
| 1012 | \$L | FF |
| 1013 | \$M | CR/ENTER |
| 1014 | \$N | SO |
| 1015 | \$O | SI |
| 1016 | \$P | DLE |
| 1017 | \$Q | DC1 |
| 1018 | \$R | DC2 |
| 1019 | \$S | DC3 |
| 1020 | \$T | DC4 |
| 1021 | \$U | NAK |
| 1022 | \$V | SYN |
| 1023 | \$W | ETB |
| 1024 | \$X | CAN |
| 1025 | \$Y | EM |
| 1026 | \$Z | SUB |
| 1027 | %A | ESC |

Table 2-2 ASCII Character Set (continued)

| ASCII Value | Full ASCII Code 39 Encode Character | ASCII Character |
|-------------|-------------------------------------|-----------------|
| 1028 | %B | FS |
| 1029 | %C | GS |
| 1030 | %D | RS |
| 1031 | %E | US |
| 1032 | Space | Space |
| 1033 | /A | ! |
| 1034 | /B | " |
| 1035 | /C | # |
| 1036 | /D | \$ |
| 1037 | /E | % |
| 1038 | /F | & |
| 1039 | /G | ' |
| 1040 | /H | (|
| 1041 | /I |) |
| 1042 | /J | * |
| 1043 | /K | + |
| 1044 | /L | , |
| 1045 | - | - |
| 1046 | . | . |
| 1047 | /O | / |
| 1048 | 0 | 0 |
| 1049 | 1 | 1 |
| 1050 | 2 | 2 |
| 1051 | 3 | 3 |
| 1052 | 4 | 4 |
| 1053 | 5 | 5 |
| 1054 | 6 | 6 |
| 1055 | 7 | 7 |
| 1056 | 8 | 8 |
| 1057 | 9 | 9 |
| 1058 | /Z | : |

Table 2-2 *ASCII Character Set (continued)*

| ASCII Value | Full ASCII Code 39 Encode Character | ASCII Character |
|-------------|-------------------------------------|-----------------|
| 1059 | %F | ; |
| 1060 | %G | < |
| 1061 | %H | = |
| 1062 | %I | > |
| 1063 | %J | ? |
| 1064 | %V | @ |
| 1065 | A | A |
| 1066 | B | B |
| 1067 | C | C |
| 1068 | D | D |
| 1069 | E | E |
| 1070 | F | F |
| 1071 | G | G |
| 1072 | H | H |
| 1073 | I | I |
| 1074 | J | J |
| 1075 | K | K |
| 1076 | L | L |
| 1077 | M | M |
| 1078 | N | N |
| 1079 | O | O |
| 1080 | P | P |
| 1081 | Q | Q |
| 1082 | R | R |
| 1083 | S | S |
| 1084 | T | T |
| 1085 | U | U |
| 1086 | V | V |
| 1087 | W | W |
| 1088 | X | X |
| 1089 | Y | Y |

Table 2-2 *ASCII Character Set (continued)*

| ASCII Value | Full ASCII Code 39 Encode Character | ASCII Character |
|-------------|-------------------------------------|-----------------|
| 1090 | Z | Z |
| 1091 | %K | [|
| 1092 | %L | \ |
| 1093 | %M |] |
| 1094 | %N | ^ |
| 1095 | %O | _ |
| 1096 | %W | ` |
| 1097 | +A | a |
| 1098 | +B | b |
| 1099 | +C | c |
| 1100 | +D | d |
| 1101 | +E | e |
| 1102 | +F | f |
| 1103 | +G | g |
| 1104 | +H | h |
| 1105 | +I | i |
| 1106 | +J | j |
| 1107 | +K | k |
| 1108 | +L | l |
| 1109 | +M | m |
| 1110 | +N | n |
| 1111 | +O | o |
| 1112 | +P | p |
| 1113 | +Q | q |
| 1114 | +R | r |
| 1115 | +S | s |
| 1116 | +T | t |
| 1117 | +U | u |
| 1118 | +V | v |
| 1119 | +W | w |
| 1120 | +X | x |

Table 2-2 *ASCII Character Set (continued)*

| ASCII Value | Full ASCII Code 39 Encode Character | ASCII Character |
|-------------|-------------------------------------|-----------------|
| 1121 | +Y | y |
| 1122 | +Z | z |
| 1123 | %P | { |
| 1124 | %Q | |
| 1125 | %R | } |
| 1126 | %S | ~ |
| 1127 | | Undefined |
| 7013 | | ENTER |

Transmit Plural Stage Row Recognition Codes

Scan a bar code below to enable or disable the transmission of Recognition Code characters.



***Transmit Recognition Code
(Enable)**



**Do Not Transmit Recognition Code
(Disable)**

Plural Stage ADF Bar Codes

A new Advanced Data Formatting (ADF) criteria and action allow formatting Plural Stage data.

When a scanner decodes any Plural Stage bar code (**When Plural Stage Scan Data**), it sends the data according to the specification (**Send Plural Stage Format**), i.e., as follows:

<formatted 1st row><formatted 2nd row>
<formatted 3rd row><formatted 4th row>

where the *Row Data Transmission Format on page 2-10* determines the row formatting.

This new criteria allows applying standard ADF on Plural Stage bar codes by reading them as a single bar code.

Scan the **When Plural Stage Scan Data** and **Send Plural Stage Format** bar codes, followed by the **Save Rule** bar code, to recreate the default rule. This allows sending Plural Stage format after entering several ADF rules (some of which use the **When Plural Stage Scan Data** criteria) without erasing all rules to return to the default rule.

Criteria



When Plural Stage Scan Data

Action



Send Plural Stage Format



Save Rule

Changing Scan Data Transmission Format

Scan Options is an ADF criteria bar code that sets a **When Scan Any** criteria, the highest priority criteria which overrides the **When Plural Stage Scan Data** criteria. Scan **Scan Options** to format plural stage data and normal bar code data the same.

Scan **Normal Scan Data Transmission Option** to format normal bar code data differently than plural stage bar code data specified using the *Criteria* and *Action* bar codes on page 2-24.



Normal Scan Data Transmission Option



Scan Options

Plural Stage Row Recognition Codes

Program up to two different Recognition Codes for each row within each type of Plural Stage bar code (2-Stage, 3-Stage, or 4-Stage). A Recognition Code consists of 1 to 3 ASCII characters. For each character, set a position value to indicate what position in the bar code the scanner looks for that character. The position value is set relative to the left or right side of the bar code data.

Programming Recognition Code Characters

To program the Recognition Code character(s):

1. Scan the appropriate bar code from [Recognition Codes on page 2-27](#).
2. Scan up to three alphanumeric bar codes from [Appendix B, ALPHANUMERIC KEYBOARD CODES](#).
3. Scan [Recognition Characters Done on page 2-37](#).

Programming Recognition Code Position Values

To program the position values for a Recognition Code:

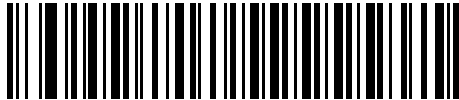
1. Scan the appropriate bar code from [Recognition Codes on page 2-27](#).
2. Scan a numeric bar code from page [A-1](#) to indicate the position of the character in the Recognition Code (e.g., first, second, third, etc.) for which a location value is being set.
3. Scan the **From Left** or **From Right** bar code from [Position Value Placement on page 2-38](#) to indicate whether the position value of the character is relative to the left side or the right side of the bar code data.
4. Scan two numeric bar codes from page [A-1](#) that represent the position value itself. The first bar code scanned represents the most significant digit. For example, to enter a position value of 10, scan 1, then 0.

All row 1 Recognition Codes (for any Plural Stage type) must be unique from all other Recognition Codes. Row 2, 3, or 4 Recognition Codes must only be different from the Recognition Codes set for the other rows within the same Plural Stage type (2-stage, 3-stage, or 4-stage). If an illegal entry is attempted, the scanner sounds an error beep.

Recognition Codes

2-Stage Recognition Codes

Row 1 Codes - First Code

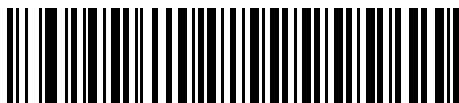


2-Stage, Row 1, Code 1 Characters



2-Stage, Row 1, Code 1 Position Values

Row 1 Codes - Second Code



2-Stage, Row 1, Code 2 Characters



2-Stage, Row 1, Code 2 Position Values

Row 2 Codes - First Code

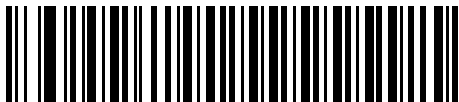


2-Stage, Row 2, Code 1 Characters



2-Stage, Row 2, Code 1 Position Values

Row 2 Codes - Second Code



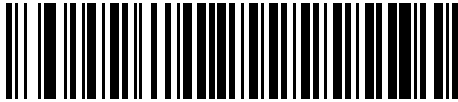
2-Stage, Row 2, Code 2 Characters



2-Stage, Row 2, Code 2 Position Values

3-Stage Recognition Codes

Row 1 Codes - First Code



3-Stage, Row 1, Code 1 Characters



3-Stage, Row 1, Code 1 Position Values

Row 1 Codes - Second Code



3-Stage, Row 1, Code 2 Characters



3-Stage, Row 1, Code 2 Position Values

Row 2 Codes - First Code

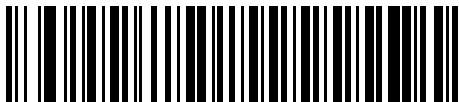


3-Stage, Row 2, Code 1 Characters



3-Stage, Row 2, Code 1 Position Values

Row 2 Codes - Second Code

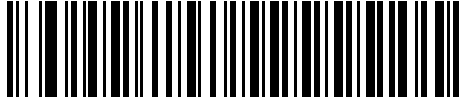


3-Stage, Row 2, Code 2 Characters



3-Stage, Row 2, Code 2 Position Values

Row 3 Codes - First Code



3-Stage, Row 3, Code 1 Characters



3-Stage, Row 3, Code 1 Position Values

Row 3 Codes - Second Code



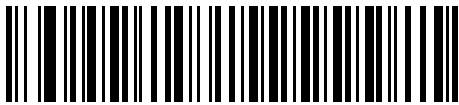
3-Stage, Row 3, Code 2 Characters



3-Stage, Row 3, Code 2 Position Values

4-Stage Recognition Codes

Row 1 Codes - First Code



4-Stage, Row 1, Code 1 Characters



4-Stage, Row 1, Code 1 Position Values

Row 1 Codes - Second Code

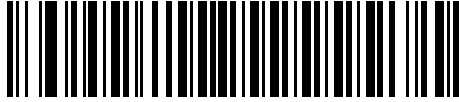


4-Stage, Row 1, Code 2 Characters



4-Stage, Row 1, Code 2 Position Values

Row 2 Codes - First Code

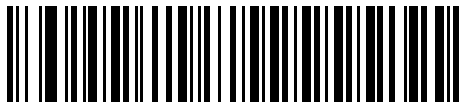


4-Stage, Row 2, Code 1 Characters



4-Stage, Row 2, Code 1 Position Values

Row 2 Codes - Second Code

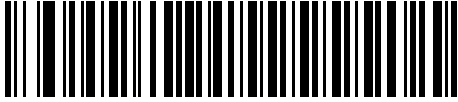


4-Stage, Row 2, Code 2 Characters

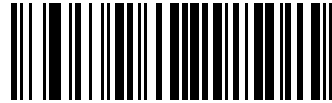


4-Stage, Row 2, Code 2 Position Values

Row 3 Codes - First Code

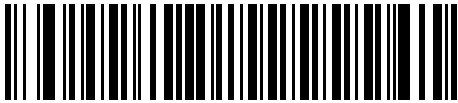


4-Stage, Row 3, Code 1 Characters



4-Stage, Row 3, Code 1 Position Values

Row 3 Codes - Second Code



4-Stage, Row 3, Code 2 Characters



4-Stage, Row 3, Code 2 Position Values

Row 4 Codes - First Code

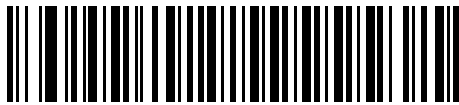


4-Stage, Row 4, Code 1 Characters



4-Stage, Row 4, Code 1 Position Values

Row 4 Codes - Second Code



4-Stage, Row 4, Code 2 Characters

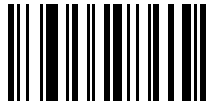


4-Stage, Row 4, Code 2 Position Values

Clearing Recognition Codes

Scan a bar code below to clear Supplemental Recognition Code (SRC) characters, clear all Recognition Codes, clear only 2-stage codes, clear only 3-stage codes, or clear only 4-stage codes.

To clear a single Recognition Code, scan the appropriate Recognition Code characters bar code followed by *Recognition Characters Done on page 2-37*.



Clear SRC Characters



Clear All Recognition Codes For All Plural Stage Types



Clear All 2-Stage Recognition Codes

Clearing Recognition Codes (continued)



Clear All 3-Stage Recognition Codes



Clear All 4-Stage Recognition Codes

Recognition Characters Done

Scan the bar code below when finished entering Recognition Code characters.



Recognition Characters Done

Position Value Placement

Scan a bar code below to indicate relative to the left side or the right side when entering a position value.



*** From Left**



From Right

CHAPTER 3 SUPPLEMENTAL RECOGNITION BAR CODES

Introduction

This chapter provides information about programming Supplemental Recognition Characters and enabling the Supplemental Recognition Code (SRC).

Supplemental Recognition Codes

An SRC consists of four Supplemental Recognition Characters. After enabling SRC and programming Supplemental Recognition Characters, the SRC identifies auto detection and/or omission of supplementals in plural stage bar code data. For example, if bar code data begins with "4910" and the SRC is set to "4910," then the supplementals are read with this bar code. If supplementals are not found, the bar code won't be read. The scanner does not attempt to read supplementals for any other bar code, whether the bar code has supplementals or not. Supplemental Recognition Codes only apply to EAN-13 bar codes.

Enabling Supplemental Recognition Codes

1. To configure Plural Stage bar code decoding, enable [RC Mode Decoding on page 2-5](#) or enable [Plural Stage Decoding in NRC Mode on page 2-7](#).
2. Scan [Enable SRC on page 3-3](#).
3. Scan [Decode UPC/EAN Only With Supplementals on page 3-3](#).

To program Supplemental Recognition Characters with values other than the default values, see [Programming Supplemental Recognition Characters on page 3-4](#).

To disable (default) this feature scan * [Disable SRC on page 3-3](#).

Default Parameter Settings

Table 3-1 lists the default parameter settings for supplemental recognition codes.

- ✓ **NOTE** Scanning **Set Defaults** or **Set Factory Defaults** from a standard scanner product reference guide does not restore SRC characters to the defaults shown in this table. To clear SRC characters, see [Clearing Recognition Codes on page 2-36](#).

Table 3-1 *Default Parameter Settings*

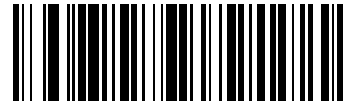
| Parameter | Options | Default Value |
|---|----------------------------------|---------------|
| Enable SRC / Disable SRC | Enable / Disable | Disable |
| Set First Three Supplemental Characters | Three alphanumeric characters | 491 |
| Set Fourth Supplemental Character | Up to 10 alphanumeric characters | 0 |

Enable Supplemental Recognition Characters

Scan the bar codes below to enable Supplemental Recognition Characters.



Enable SRC



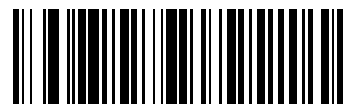
Decode UPC/EAN Only With Supplementals

Disable Supplemental Recognition Characters

Scan the bar codes below to disable Supplemental Recognition Characters.



*** Disable SRC**



Ignore Supplementals

Programming Supplemental Recognition Characters

When setting Supplemental Recognition Characters, first program the first three characters, then program the fourth. The fourth character specifies whether or not to read the bar code with supplementals.

For example, if you program a Supplemental Recognition Code as **4910**, the scanner reads supplementals only in bar codes that begin with **491** and include a **0** in the fourth position. Program up to 10 alphanumeric characters for the fourth character to specify supplementals in a bar code. For example, if a family of bar codes that begin with **4910**, **4916**, and **4918** have supplementals, the fourth character of each SRC should include a **0**, **6**, and **8** to read the bar codes with supplementals.

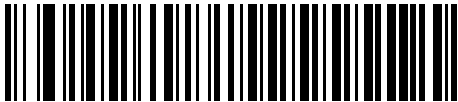
Recognition characters are compared to the left-most characters in the decoded UPC/EAN bar code. When all characters match, **Decode UPC/EAN Supplementals** temporarily sets to decode with supplementals. When all characters do not match, **Decode UPC/EAN Supplementals** sets to **Ignore with Supplementals**.

✓ **NOTE** Supplemental Recognition Characters can be programmed when the feature is disabled. Enable this to read with supplementals. See [Enabling Supplemental Recognition Codes on page 3-1](#).

Programming the First Three Supplemental Recognition Characters

To program three new Supplemental Recognition Characters:

1. Scan **Set First Three Supplemental Characters**.
2. Scan three alphanumeric bar codes from [Appendix B, ALPHANUMERIC KEYBOARD CODES](#).
3. Scan **SRC Done** to store the characters.



Set First Three Supplemental Characters



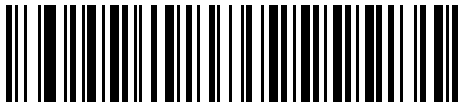
SRC Done

Programming Fourth Supplemental Recognition Character

To program the fourth new Supplemental Recognition Character:

1. Scan **Set Fourth Supplemental Character** to set the fourth character for enabling supplementals.
2. Scan up to 10 alphanumeric bar codes from [Appendix B, ALPHANUMERIC KEYBOARD CODES](#).
3. Scan **SRC Done** to store the characters.

The default fourth character is **0** to allow for Japanese New Magazine code.



Set Fourth Supplemental Character



SRC Done

APPENDIX A NUMERIC BAR CODES

Overview

This chapter provides numeric keypad bar codes and the **Cancel** bar code.

Numeric Keypad Bar Codes



0



1

Numeric Keypad Bar Codes (continued)



2



3



4



5

Numeric Keypad Bar Codes (continued)



6



7



8



9

Cancel Bar Code



Cancel

APPENDIX B ALPHANUMERIC KEYBOARD CODES

Overview

This chapter provides ADF alphanumeric keyboard bar codes.

Alphanumeric Keyboard



Space



#

Alphanumeric Keyboard (continued)



\$



%



*



+

Alphanumeric Keyboard (continued)

-



.



/



!

Alphanumeric Keyboard (continued)



“



&



’



(

Alphanumeric Keyboard (continued)

)



:



;



<

Alphanumeric Keyboard (continued)



=



>



?



@

Alphanumeric Keyboard (continued)

[



\



]



^

Alphanumeric Keyboard (continued)



—



,

Alphanumeric Keyboard (continued)

Bar codes on this page should not be confused with those on the numeric keypad.



0



1



2



3

Alphanumeric Keyboard (continued)

Bar codes on this page should not be confused with those on the numeric keypad.



4



5



6



7

Alphanumeric Keyboard (continued)

Bar codes on this page should not be confused with those on the numeric keypad.



8



9

Alphanumeric Keyboard (continued)



A



B



C



D

Alphanumeric Keyboard (continued)



E



F



G



H

Alphanumeric Keyboard (continued)



I



J



K



L

Alphanumeric Keyboard (continued)



M



N



O



P

Alphanumeric Keyboard (continued)



Q



R



S



T

Alphanumeric Keyboard (continued)



U



V



W



X

Alphanumeric Keyboard (continued)



Y



Z



Cancel



End Of Message

Alphanumeric Keyboard (continued)



a



b



c



d

Alphanumeric Keyboard (continued)



e



f



g



h

Alphanumeric Keyboard (continued)



i



j



k



l

Alphanumeric Keyboard (continued)



m



n



o



p

Alphanumeric Keyboard (continued)

q



r



s



t

Alphanumeric Keyboard (continued)



u



v



w



x

Alphanumeric Keyboard (continued)

y



z



{



|

Alphanumeric Keyboard (continued)



}



~

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