

PLURAL STAGE

Programmer's Guide

***Plural Stage
Programmer's Guide***

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Symbol Technologies, Inc.
One Symbol Plaza
Holtsville, New York 11742-1300
<http://www.symbol.com>

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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 modes and Plural Stage defaults.
- [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 Bar Codes](#) provides alphanumeric keypad bar codes.

Notational Conventions

The following conventions are used in this document:

- 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

Related Documents

Symbol Technologies' 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 Symbol Technologies' scanner *Product Reference Guides* go to: <http://www.symbol.com/manuals>.

Service Information

If you have a problem with the equipment, contact the [Symbol Support Center](#) for your region. See contact information for the Symbol Support Centers below. Before calling, have the model number of the scanner, serial number and several bar code symbols at hand.

Call the Support Center from a phone near the scanning equipment so that the service person can try to talk you through the problem. If the equipment is found to be working properly and the problem is symbol readability, the Support Center will request samples of bar codes for analysis at our plant.

If the problem cannot be solved over the phone, you may need to return the equipment for servicing. If that is necessary, you will be given specific directions.



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Symbol Support Center

For service information, warranty information or technical assistance contact or call the Symbol Support Center in:

United States

Symbol Technologies, Inc.
One Symbol Plaza
Holtsville, New York 11742-1300
1-800-653-5350

United Kingdom

Symbol Technologies
Symbol Place
Winnersh Triangle, Berkshire RG41 5TP
United Kingdom
0800 328 2424 (Inside UK)
+44 118 945 7529 (Outside UK)

Australia

Symbol Technologies Pty. Ltd.
432 St. Kilda Road
Melbourne, Victoria 3004
1-800-672-906 (Inside Australia)
+61-3-9866-6044 (Outside Australia)

Denmark/Danmark

Symbol Technologies AS
Dr. Neergaardsvej 3
2970 Hørsholm
7020-1718 (Inside Denmark)
+45-7020-1718 (Outside Denmark)

Canada

Symbol Technologies Canada, Inc.
2540 Matheson Boulevard East
Mississauga, Ontario, Canada L4W 4Z2
905-629-7226

Asia/Pacific

Symbol Technologies Asia, Inc (Singapore Branch)
230 Victoria Street #05-07/09
Bugis Junction Office Tower
Singapore 188024
Tel: +65-6796-9600
Fax: +65-6337-6488

Austria/Österreich

Symbol Technologies Austria GmbH
Prinz-Eugen Strasse 70 / 2.Haus
1040 Vienna, Austria
01-5055794-0 (Inside Austria)
+43-1-5055794-0 (Outside Austria)

Europe/Mid-East Distributor Operations

Contact your local distributor or call
+44 118 945 7360

Finland/Suomi

Oy Symbol Technologies
Kaupintie 8 A 6
FIN-00440 Helsinki, Finland
9 5407 580 (Inside Finland)
+358 9 5407 580 (Outside Finland)

Germany/Deutschland

Symbol Technologies GmbH
Waldstrasse 66
D-63128 Dietzenbach, Germany
6074-49020 (Inside Germany)
+49-6074-49020 (Outside Germany)

Latin America Sales Support

2730 University Dr.
Coral Springs, FL 33065 USA
1-800-347-0178 (Inside United States)
+1-954-255-2610 (Outside United States)
954-340-9454 (Fax)

Netherlands/Nederland

Symbol Technologies
Kerkplein 2, 7051 CX
Postbus 24 7050 AA
Varsseveld, Netherlands
315-271700 (Inside Netherlands)
+31-315-271700 (Outside Netherlands)

France

Symbol Technologies France
Centre d'Affaire d'Antony
3 Rue de la Renaissance
92184 Antony Cedex, France
01-40-96-52-21 (Inside France)
+33-1-40-96-52-50 (Outside France)

Italy/Italia

Symbol Technologies Italia S.R.L.
Via Cristoforo Colombo, 49
20090 Trezzano S/N Naviglio
Milano, Italy
2-484441 (Inside Italy)
+39-02-484441 (Outside Italy)

Mexico/México

Symbol Technologies Mexico Ltd.
Torre Picasso
Boulevard Manuel Avila Camacho No 88
Lomas de Chapultepec CP 11000
Mexico City, DF, Mexico
5-520-1835 (Inside Mexico)
+52-5-520-1835 (Outside Mexico)

Norway/Norge

Symbol's registered and mailing address:
Symbol Technologies Norway
Hoybratenveien 35 C
N-1055 OSLO, Norway

Symbol's repair depot and shipping address:
Symbol Technologies Norway
Enebakkeveien 123
N-0680 OSLO, Norway

+47 2232 4375

South Africa

Symbol Technologies Africa Inc.
Block B2
Rutherford Estate
1 Scott Street
Waverly 2090 Johannesburg
Republic of South Africa
11-809 5311 (Inside South Africa)
+27-11-809 5311 (Outside South Africa)

Sweden/Sverige

"Letter" address:

Symbol Technologies AB
Box 1354
S-171 26 SOLNA
Sweden

Visit/shipping address:

Symbol Technologies AB
Solna Strandväg 78
S-171 54 SOLNA
Sweden

Switchboard: 08 445 29 00 (domestic)

Call Center: +46 8 445 29 29 (international)

Support E-Mail: Sweden.Support@se.symbol.com

Spain/España

Symbol Technologies S.L.
Avenida de Bruselas, 22
Edificio Sauce
Alcobendas, Madrid 28108
Spain
91 324 40 00 (Inside Spain)
+34 91 324 40 00 (Outside Spain)
Fax: +34.91.324.4010

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Plural Stage Bar Code Decoding

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Introduction

This chapter provides information about Plural Stage modes and Plural Stage defaults.

Plural Stage Bar Code Decoding

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

There are two supported Plural Stage decoding modes.

Table 1-1. Plural Stage Modes

Mode	Description
RC Mode (Recognition Code mode)	Requires the use of Recognition Codes in order to decode Plural Stage bar codes. Row Recognition Codes can be programmed by the user for use when the scanner is in RC Mode. Details of the Recognition Code format are provided in this document. 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 separate bar codes that make up the Plural Stage bar code set).
NRC Mode (Non-Recognition Code mode)	Does not require the use of Recognition Codes. In this mode, the number of bar codes that the scanner must decode prior to transmitting is based on the NRC Mode Plural Stage Select parameter. This parameter can be set from 2 to 5 bar codes.

When the data is transmitted, formatted row 1 data is sent first, formatted row 2 data is sent second and so on. Row data formatting is explained in detail in [Table 1-2](#).

Custom Default Parameter Settings

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



Scanning **Set Defaults** from a standard Symbol Technologies scanner *Product Reference Guide* does not restore the row Recognition Codes and associated location values to the defaults shown in the table. To clear stored Recognition Code characters, see [Clearing Recognition Codes on page 2-53](#).

Table 1-2. Custom Default Parameter Settings

Parameter	Default Value
Plural Stage Mode	Use Recognition Codes (RC Mode)
Decode 2-Stage bar codes (Applies to RC Mode) When Decode 2-Stage bar codes are enabled, the following parameter values are set: 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
Decode 3-Stage Bar Codes (Applies to RC Mode)	Disable
Decode 4-Stage Bar Codes (Applies to RC Mode)	Disable
NRC Mode Plural Stage Select (Applies to NRC Mode)	2

Table 1-2. Custom Default Parameter Settings (Continued)

Parameter	Default Value
Transmit Plural Stage Recognition Codes	Enable
Row 1 Data Format	<Row 1 Data><Row 1 Suffix>
Row 2 Data Format	<Row 2 Data><Row 2 Suffix>
Row 3 Data Format	<Row 3 Data><Row 3 Suffix>
Row 4 Data Format	<Row 4 Data><Row 4 Suffix>
Row 5 Data Format	<Row 5 Data><Row 5 Suffix>
Prefixes and Suffixes for Rows 1-5	7013 (CR/LF for serial devices, ENTER Key for others)
All Row Recognition Codes	None (i.e., Not Set)
All Position Values	0 (i.e., Not Set)
All Relative Start Position Settings	From Left
Decode Inhibit Timeout	0.2 sec
Inter-Decode Wait Time	1 sec
Same Single Symbol Timeout	2 sec

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Introduction

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

Plural Stage Mode Select Bar Codes

Scan a bar code below to set the Plural Stage mode. In RC mode the scanner attempts to match scanned bar codes with stored Recognition Codes in order to decode and transmit Plural Stage bar codes. In NRC mode, the scanner attempts to scan the number of bar codes specified by the setting of the NRC Mode Plural Stage Select parameter ([page 2-7](#)) before transmitting.



* Use Recognition Codes (RC Mode)



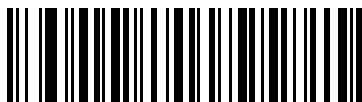
Non Recognition Code Mode (NRC Mode)

Enable/Disable Bar Codes (RC Mode Only)

Scan the following bar code(s) that correspond to the desired choice(s) for enabling and disabling Plural Stage decoding while in RC Mode.



Enable 2-Stage Decoding



*** Disable 2-Stage Decoding**

Enable/Disable Bar Codes (continued)

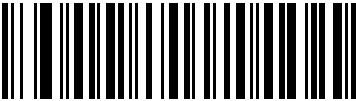


Enable 3-Stage Decoding



*** Disable 3-Stage Decoding**

Enable/Disable Bar Codes (continued)



Enable 4-Stage Decoding



*** Disable 4-Stage Decoding**

Plural Stage Select (NRC Mode Only)

When in NRC Mode, scan a bar code below that corresponds to the number of unique bar codes the scanner should attempt to decode before transmitting.



*** Decode and Transmit any 2**



Decode and Transmit any 3

Plural Stage Select (continued)



Decode and Transmit any 4



Decode and Transmit any 5

Inter-Decode Wait Time

When a bar code from a Plural Stage set is decoded, this parameter sets the amount of time an attempt is made to decode the next Plural Stage bar code within the set. If another bar code is not decoded before this time expires, the previous decode(s) is invalidated. To select a new wait time (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](#).



Plural Stage Inter-Decode Wait Time

Decode Inhibit Timeout Between Full Stage Decodes

This parameter sets the amount of time the scanner delays before resuming decode attempts after a complete stage was decoded (i.e., all rows were read). 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](#).



Plural Stage Decode Inhibit Timeout

Same Single Symbol Timeout

This parameter sets the time the scanner waits after a plural stage bar code is decoded to accept decodes of any of the single bar codes making up this plural stage bar code. The scanner accepts decode data if a new bar code is seen, or if this timeout has expired. 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](#).



Plural Stage Same Single Symbol Timeout

Row Data Transmission Format Options

Scan the bar code(s) below that corresponds to the desired data transmission format for each row.

First Row Format Options



<ROW 1 DATA>



<ROW 1 PREFIX><ROW 1 DATA>

First Row Format Options (continued)



* <ROW 1 DATA><ROW 1 SUFFIX>



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

Second Row Format Options



<ROW 2 DATA>



<ROW 2 PREFIX><ROW 2 DATA>

Second Row Format Options (continued)



* <ROW 2 DATA><ROW 2 SUFFIX>



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

Third Row Format Options



<ROW 3 DATA>



<ROW 3 PREFIX><ROW 3 DATA>

Third Row Format Options (continued)



* <ROW 3 DATA><ROW 3 SUFFIX>



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

Fourth Row Format Options



<ROW 4 DATA>



<ROW 4 PREFIX><ROW 4 DATA>

Fourth Row Format Options (continued)



* <ROW 4 DATA><ROW 4 SUFFIX>



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

Fifth Row Format Options (NRC Mode Only)



<ROW 5 DATA>



<ROW 5 PREFIX><ROW 5 DATA>

Fifth Row Format Options (continued)



* <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](#). The four numeric bar codes should represent the values that correspond to the various keystrokes listed in the [ASCII Character Set](#) table on [page 2-26](#).



ROW 1 PREFIX



ROW 1 SUFFIX

Row Prefix/Suffix Values (continued)



ROW 2 PREFIX



ROW 2 SUFFIX

Row Prefix/Suffix Values (continued)



ROW 3 PREFIX



ROW 3 SUFFIX

Row Prefix/Suffix Values (continued)



ROW 4 PREFIX



ROW 4 SUFFIX

Row Prefix/Suffix Values (continued)



ROW 5 PREFIX



ROW 5 SUFFIX

ASCII / Character Set

The values in [Table 2-1](#) can be assigned as prefixes or suffixes for ASCII character data transmission.

Table 2-1. 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
1028	%B	FS
1029	%C	GS
1030	%D	RS
1031	%E	US
1032	Space	Space

Table 2-1. ASCII Character Set

ASCII Value	Full ASCII Code 39 Encode Character	ASCII Character
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	:
1059	%F	;
1060	%G	<
1061	%H	=
1062	%I	>
1063	%J	?
1064	%V	@
1065	A	A
1066	B	B
1067	C	C

Table 2-1. ASCII Character Set

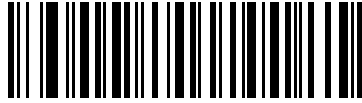
ASCII Value	Full ASCII Code 39 Encode Character	ASCII Character
1068	D	D
1069	E	E
1070	F	F
1071	G	G
1072	H	H
1073	I	I
1074	J	J
1075	K	K
1076	L	L
1077	M	M
1078	N	N
1079	O	O
1080	P	P
1081	Q	Q
1082	R	R
1083	S	S
1084	T	T
1085	U	U
1086	V	V
1087	W	W
1088	X	X
1089	Y	Y
1090	Z	Z
1091	%K	[
1092	%L	\
1093	%M]
1094	%N	^
1095	%O	_
1096	%W	`
1097	+A	a
1098	+B	b
1099	+C	c
1100	+D	d
1101	+E	e
1102	+F	f

Table 2-1. ASCII Character Set

ASCII Value	Full ASCII Code 39 Encode Character	ASCII Character
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
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 of Plural Stage data.

When any Plural Stage bar code is read (**When Plural Stage Scan Data**), the data is sent according to the specification (**Send Plural Stage Format**), i.e., the data is sent as follows:

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

where the row formatting is determined by the **Row Data Transmission Format Options** (see [Row Data Transmission Format Options on page 2-11](#)).

This new criteria allows the user to perform 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 the user to Send 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

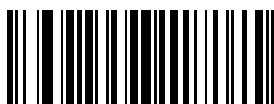
To change Scan Data Transmission Format, scan the **Normal Scan Data Transmission Option** bar code below (or the **ANY SOURCE** bar code, available in the *Symbol Omnidirectional Scanner Advanced Programmer's Guide*, p/n 70-15600-xx) instead of scanning **Scan Options**.

Scan Options is an ADF criteria bar code that sets a *When Scan Any* criteria. *When Scan Any* criteria is the highest priority criteria and overrides the *When Plural Stage Scan Data* criteria. If the user wants Plural Stage data formatted one way and normal bar code data formatted another way, **Normal Scan Data Transmission Option** or **ANY SOURCE** must be scanned when setting the Scan Data Transmission Format.

If normal data and Plural Stage data DO NOT need to be treated the same way, scan the **Scan Options** bar code below.



Normal Scan Data Transmission Option



Scan Options

Plural Stage Row Recognition Codes

Up to two different Recognition Codes can be programmed 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, a position value must be set to tell the scanner what position in the bar code to look for that character. The position value is programmed to be 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* beginning on [page 2-35](#).
2. Scan up to three alphanumeric bar codes from *Appendix B, Alphanumeric Keyboard Bar Codes*.
3. Scan *Recognition Chars Done on page 2-55*.

Programming Recognition Code Position Values

To program the position values for a Recognition Code:

1. Scan the appropriate bar code from *Recognition Codes* beginning on [page 2-35](#).
2. Scan a numeric bar code from *Numeric Bar Codes* beginning on [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 on [page 2-56](#) 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 *Numeric Bar Codes* beginning on [page A-1](#) to 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

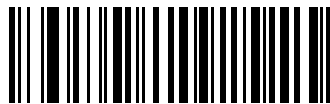


2-Stage, Row 1, Code 1 Position Values

Row 1 Codes - Second Code

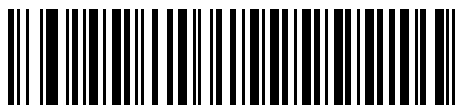


2-Stage, Row 1, Code 2 Characters



2-Stage, Row 1, Code 2 Position Values

Row 2 Codes - First Code

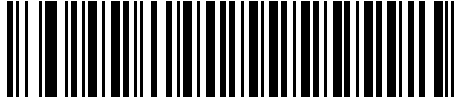


2-Stage, Row 2, Code 1 Characters



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

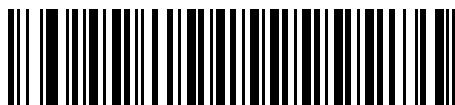


3-Stage, Row 1, Code 2 Characters



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



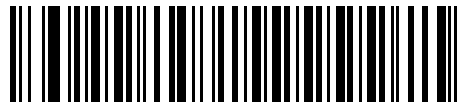
3-Stage, Row 3, Code 2 Characters



3-Stage, Row 3, Code 2 Position Values

4-Stage Recognition Codes

Row 1 Codes - First Code

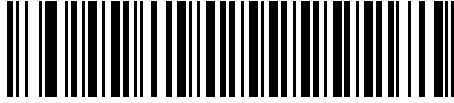


4-Stage, Row 1, Code 1 Characters



4-Stage, Row 1, Code 1 Position Values

Row 1 Codes - Second Code

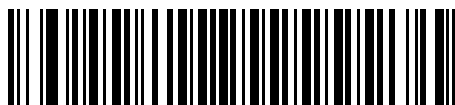


4-Stage, Row 1, Code 2 Characters



4-Stage, Row 1, Code 2 Position Values

Row 2 Codes - First Code



4-Stage, Row 2, Code 1 Characters

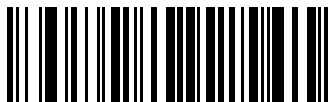


4-Stage, Row 2, Code 1 Position Values

Row 2 Codes - Second Code



4-Stage, Row 2, Code 2 Characters

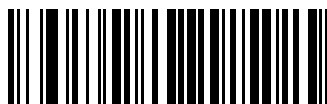


4-Stage, Row 2, Code 2 Position Values

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 the **Recognition Chars Done** bar code on [page 2-55](#).



Clear SRC Characters



Clear All Recognition Codes For All Plural Stage Types

Clearing Recognition Codes (continued)



Clear All 2-Stage Recognition Codes



Clear All 3-Stage Recognition Codes

Clearing Recognition Codes (continued)



Clear All 4-Stage Recognition Codes

Recognition Characters Done

Scan the bar code below when entering Recognition Code characters is complete.



Recognition Chars Done

Position Value Placement

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



*** From Left**



From Right

Supplemental Recognition Bar Codes

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Introduction	3-3
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Enable Supplemental Recognition Characters	3-4
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Step 1 - Programming First Three Supplemental Recognition Characters	3-6
Step 2 - Programming Fourth Supplemental Recognition Character	3-7

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. When this feature is enabled, and Supplemental Recognition Characters are programmed, the SRC is used to identify 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.

Enabling Supplemental Recognition Codes

- Plural Stage bar code decoding must be configured by enabling Plural Stage decoding while in RC Mode ([page 2-4](#)) or enabling Plural Stage Select while in NRC Mode. ([page 2-7](#)).
- Scan **Enable SRC** ([page 3-4](#)).
- Scan **Decode UPC/EAN Only With Supplemental** ([page 3-4](#)).
- To program Supplemental Recognition Characters with values other than the default values, follow the steps in [Programming Supplemental Recognition Characters on page 3-6](#).

To disable (default) this feature scan the **Disable SRC** bar code on [page 3-5](#).

Custom Default Parameter Settings

[Table 3-1](#) shows the custom default parameter settings for this feature.



Scanning **Set Defaults** from a standard Symbol Technologies 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 2-53](#).

Table 3-1. Custom Default Parameter Settings

Parameter	Options	Default Value
Enable SRC / Disable SRC	Enable / Disable	Disable
Set First Three Supplemental Characters	Up to 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.



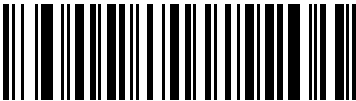
Enable SRC



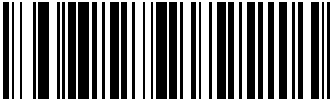
Decode UPC/EAN Only With Supplementals

Disable Supplemental Recognition Characters

Scan the bar codes below to disable Supplemental Recognition Characters.



*** Disable SRC**



Ignore Supplementals

Programming Supplemental Recognition Characters

Supplemental Recognition Characters are programmed by a two-step process. Step one includes programming the first three Supplemental Recognition Characters. Step two includes programming the fourth Supplemental Recognition Character. The fourth character is used to specify whether or not the bar code is read with supplementals.

If a Supplemental Recognition Code is programmed as "4910," then supplementals are read only in decoded bar codes that begin with "491" and include a "0" in the fourth position. The fourth character can be programmed with up to 10 alphanumeric characters 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, the Decode UPC/EAN Supplementals are temporarily set to decode with supplementals. When all characters do not match, the Decode UPC/EAN Supplementals are set to Ignore with Supplementals.



Supplemental Recognition Characters can be programmed when the feature is disabled. To read with supplementals the feature must be enabled. See [Enabling Supplemental Recognition Codes on page 3-3](#).

Step 1 - Programming First Three Supplemental Recognition Characters

To program three new Supplemental Recognition Characters:

- a. Scan **Set First Three Supplemental Characters** below.
- b. Scan up to three alphanumeric bar codes from [Appendix B, Alphanumeric Keyboard Bar Codes](#).
- c. Scan **SRC Done** below to store the characters.



Set First Three Supplemental Characters

Step 1 (continued) - Programming First Three Supplemental Recognition Characters



SRC Done

Step 2 - Programming Fourth Supplemental Recognition Character

To program the fourth new Supplemental Recognition Character:

- a. Scan **Set 4th Digit Supplemental Characters** below to set the fourth character for enabling supplementals.
- b. Scan up to 10 alphanumeric bar codes from [Appendix B, Alphanumeric Keyboard Bar Codes](#).
- c. Scan **SRC Done** below to store the characters.

Recognition characters are compared to the left-most characters in the decoded UPC/EAN bar code. When all four characters match, the Decode UPC/EAN Supplementals are temporarily set to decode with supplementals. When all four characters do not match, the Decode UPC/EAN Supplementals are set to Ignore with Supplementals. The default fourth character is programmed to "0" to allow for Japanese New Magazine code.



Set Fourth Supplemental Character

Step 2 (continued) - Programming Fourth Supplemental Recognition Character



SRC Done



Numeric Bar Codes

Contents

Introduction	A-3
Numeric Keypad Bar Codes	A-3
Cancel Bar Code	A-8

Introduction

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

Numeric Keypad Bar Codes (continued)



4



5

Numeric Keypad Bar Codes (continued)



6



7

Numeric Keypad Bar Codes (continued)



8



9

Cancel Bar Code



Cancel



Alphanumeric Keyboard Bar Codes

Contents

Introduction	B-3
Alphanumeric Keyboard	B-3

Introduction

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)



;



<

Alphanumeric Keyboard (continued)



=



>

Alphanumeric Keyboard (continued)



?



@

Alphanumeric Keyboard (continued)



[



\

Alphanumeric Keyboard (continued)



1



1

Alphanumeric Keyboard (continued)



-



-

Alphanumeric Keyboard (continued)

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



0



1

Alphanumeric Keyboard (continued)

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



2



3

Alphanumeric Keyboard (continued)

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



4



5

Alphanumeric Keyboard (continued)

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



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

Alphanumeric Keyboard (continued)



C



D

Alphanumeric Keyboard (continued)



E



F

Alphanumeric Keyboard (continued)



G



H

Alphanumeric Keyboard (continued)



I



J

Alphanumeric Keyboard (continued)



K



L

Alphanumeric Keyboard (continued)



M



N

Alphanumeric Keyboard (continued)



0



P

Alphanumeric Keyboard (continued)



Q



R

Alphanumeric Keyboard (continued)



S



T

Alphanumeric Keyboard (continued)



U



V

Alphanumeric Keyboard (continued)



W



X

Alphanumeric Keyboard (continued)



Y



Z

Alphanumeric Keyboard (continued)



Cancel



End Of Message

Alphanumeric Keyboard (continued)



a



b

Alphanumeric Keyboard (continued)



c



d

Alphanumeric Keyboard (continued)



e



f

Alphanumeric Keyboard (continued)



9



h

Alphanumeric Keyboard (continued)



i



j

Alphanumeric Keyboard (continued)



k



l

Alphanumeric Keyboard (continued)



m



n

Alphanumeric Keyboard (continued)



o



p

Alphanumeric Keyboard (continued)



q



r

Alphanumeric Keyboard (continued)



s



t

Alphanumeric Keyboard (continued)



u



v

Alphanumeric Keyboard (continued)



w



x

Alphanumeric Keyboard (continued)



y



z

Alphanumeric Keyboard (continued)



{



|

Alphanumeric Keyboard (continued)



}



~

Glossary

ASCII	American Standard Code for Information Interchange. A 7 bit-plus-parity code representing 128 letters, numerals, punctuation marks, and control characters. It is a standard data transmission code in the U.S.
Bar	The dark element in a printed bar code symbol.
Bar Code Density	The number of characters represented per unit of measurement (e.g., characters per inch).
Bar Height	The dimension of a bar measured perpendicular to the bar width.
Bar Width	Thickness of a bar measured from the edge closest to the symbol start character to the trailing edge of the same bar.
Character	A pattern of bars and spaces which either directly represents data or indicates a control function, such as a number, letter, punctuation mark, or communications control contained in a message.
Character Set	Those characters available for encoding in a particular bar code symbology.
Decode	To recognize a bar code symbology (e.g., UPC/EAN) and then analyze the content of the specific bar code scanned.
Decode Algorithm	A decoding scheme that converts pulse widths into data representation of the letters or numbers encoded within a bar code symbol.
NRC Mode	Non-recognition Code. Does not require the use of Recognition Codes.
Parameter	A variable that can have different values assigned to it.
Plural Stage Bar Codes	Multiple bar codes that are printed in close proximity to each other. They are usually arranged in a vertical fashion (i.e., one above the other), although this is not a requirement.
Recognition Bar Code	Parameter bar codes used to set the Recognition Code.

Recognition Code	A set of up to 3 Recognition Code Characters to identify a certain row of a plural stage data.
Recognition Code Characters	Make up a Recognition Code.
RC Mode	Requires the use of Recognition Codes.
SRC	Supplemental Recognition Codes.
Supplemental Recognition Characters	Used for Supplemental Recognition Codes (SRC) that are used to automatically enable/disable reading of supplementals in a bar code.
Symbology	The structural rules and conventions for representing data within a particular bar code type (e.g. UPC/EAN, Code 39).

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Did this manual meet your needs? If not, please explain.

What topics need to be added to the index, if applicable?

What topics do you feel need to be better discussed? Please be specific.

What can we do to further improve our manuals?

Thank you for your input—We value your comments.

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Symbol Technologies, Inc.
One Symbol Plaza
Holtsville, New York 11742-1300
<http://www.symbol.com>



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