

# **SCANTEAM<sup>®</sup> 5750**

Industrial Laser  
Decoded Output



## **User's Guide**

**HAND HELD<sup>®</sup>  
PRODUCTS**  
a WelchAllyn<sup>®</sup> affiliate

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Web Address: <http://dcd.welchallyn.com>

## Statement of Agency Compliance

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

### FCC Class B Compliance Statement

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio or television technician for help.

**Caution:** Any changes or modifications made to this device that are not expressly approved by Welch Allyn, Inc. may void the user's authority to operate the equipment.

**Note:** To maintain compliance with FCC Rules and Regulations, cables connected to this device must be *shielded* cables, in which the cable shield wire(s) have been grounded (tied) to the connector shell.

### Canadian Notice

This equipment does not exceed the Class B limits for radio noise emissions as described in the Radio Interference Regulations of the Canadian Department of Communications.

Le present appareil numerique n'emet pas de bruits radioelectriques depassant les limites applicables aux appareils numeriques de la classe B prescrites dans le Reglement sur le brouillage radioelectrique edicte par le ministere des Communications du Canada.

LR 89329



### C.S.A. Statement

This product must be used with a certified Class 2 power supply or be powered by a certified SELV (Safety Extra Low Voltage) output.

### CDRH Statement

This product complies with 21 CFR Part 1040. This product is a Class II (Class III for 5750ALR) laser product with a maximum output of 1.0 mW (1.5 mW for 5750ALR) at 630–670 nanometers and continuous wave.

## ***Statement of Agency Compliance***



The CE mark on the product indicates that the system has been tested to and conforms with the provisions noted within the 89/336/EEC Electromagnetic Compatibility Directive and the 73/23/EEC Low Voltage Directive.

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United Kingdom

Welch Allyn shall not be liable for use of our product with equipment (i.e., power supplies, personal computers, etc.) that is not CE marked and does not comply with the Low Voltage Directive.

### **Patents**

The SCANTEAM 5750 product is covered by one or more of the following U.S. Patents:

4,360,798; 4,369,361; 4,387,297; 4,496,831; 4,593,186; 4,603,262; 4,607,156; 4,652,750; 4,673,805; 4,736,095; 4,816,660; 4,845,350; 4,896,026; 4,923,281; 4,992,717; 5,017,765; 5,047,617; 5,113,445; 5,140,144; 5,149,950; 5,168,148; 5,168,149; 5,180,904; 5,247,162; 5,250,792; 5,262,627; 5,280,163; 5,280,164; 5,304,786; 5,304,788; 5,367,151; 5,373,148; 5,396,053; 5,408,081; 5,410,139; 5,436,440; 5,468,949; 5,479,000; 5,942,741.

Other U.S. and foreign patents pending.

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### **UL and cUL Statement**

UL listed UL1950 and CSA 22.2 No.950. cUL listed UL1950 and CSA 22.2 No 950.

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### **TÜV Statement**

TÜV or GS marked to EN60950 and EN60825-1.



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## **Introduction**

Your scanner provides industrial strength durability for a wide variety of bar code data collection applications. The scanner contains Welch Allyn's Instant Interface module, which integrates aggressive ("snappy") decoding, advanced data editing and formatting capabilities, and multiple interface connectivity.

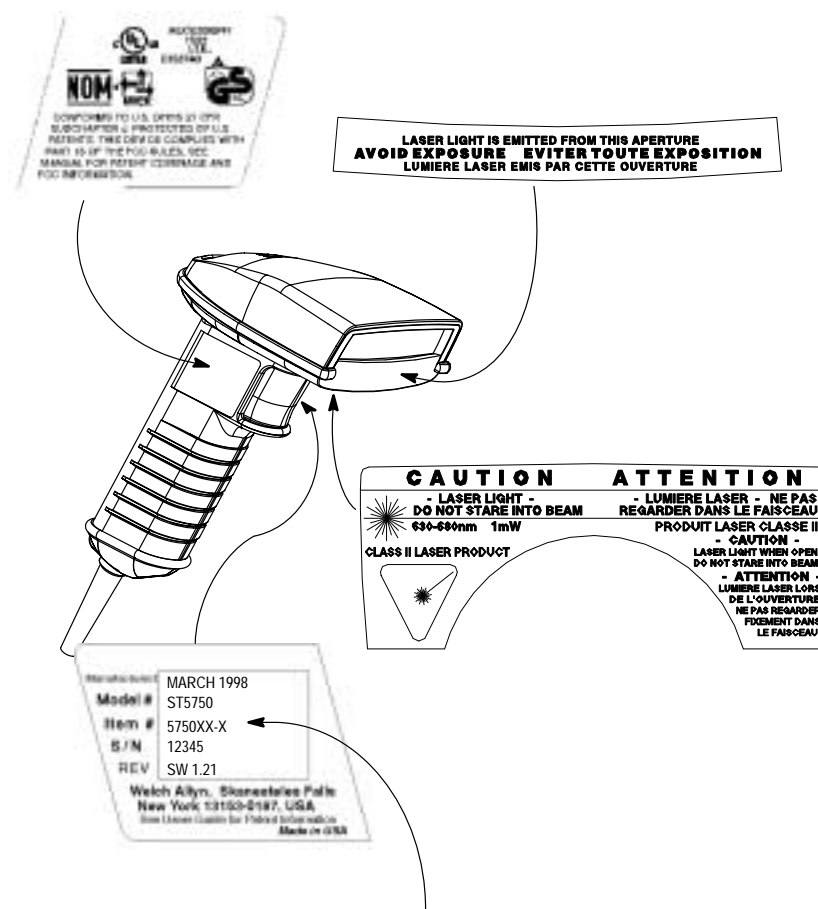
The scanner recognizes and decodes 14 industry-standard bar code symbologies.

The scanner can be programmed for many communications parameters and input/output protocols compatible to the host. Programming is accomplished by using the single programming bar codes in this menu. Use this chapter to program your laser scanner to work with your terminal/computer.

This programming section contains the following:

- Getting Started Information
- Plug and Play Selections
- Terminal Interface Selections
- Main Menu Selections
- Dual Interface Selections

# Getting Started



## SCANTEAM 5750 Identification Labels

Model Number 5750A-12

Engine Type ①	Auto Trigger Option ②	Interface Option ③
A = Standard Performance HD = High Density ALR = Long Range	1 = Hands Free Auto Trigger feature included*	Option Wand TTL Keyboard Emulation RS-232 Wedge
		2 • • Various

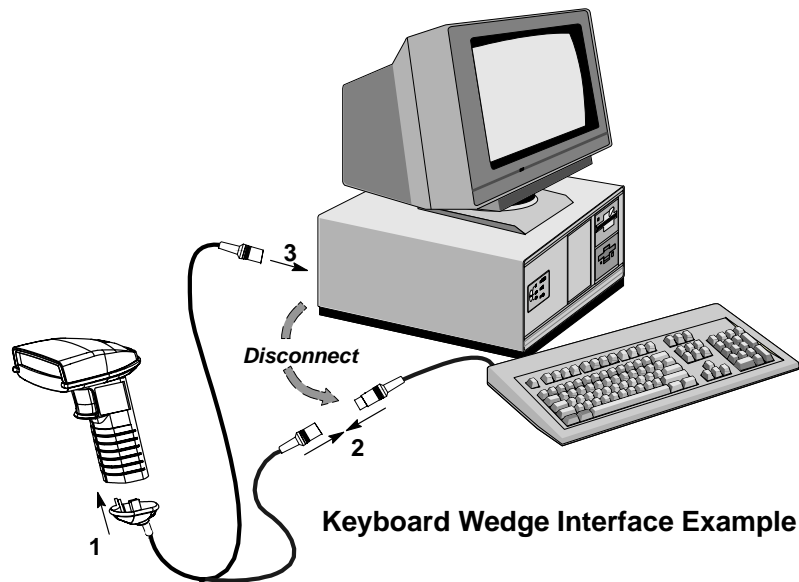
\* To use the Auto Trigger feature place the scanner in the Document Stand.

# Getting Started

## Connecting the Scanner

Install the scanner by following the steps shown below:

- ❶ Turn off the power to the host system.
- ❷ Connect the interface cable to the scanner and to the terminal/computer.



**Keyboard Wedge Interface Example**

*(Cable, Keyboard, and Terminal will vary.)*

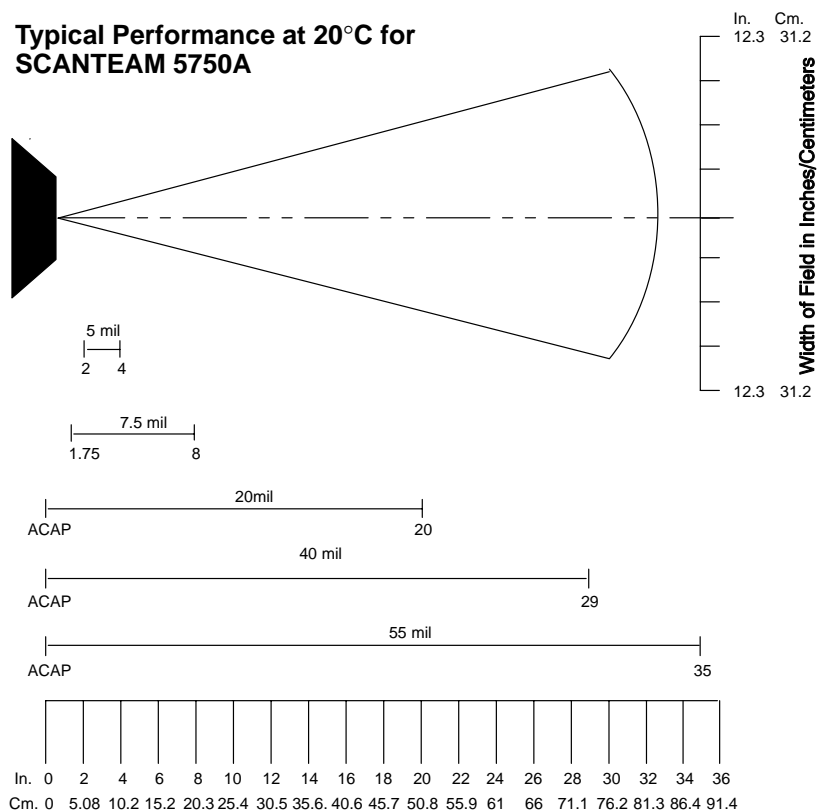
- ❸ Turn on the power to the host system.
- ❹ Program your scanner to work with your terminal or computer by scanning the Terminal Set-Up Codes. Either scan the Plug and Play codes (page 1-7) or use the Supported Terminal list (page 1-8) to determine your Terminal ID.

With Plug and Play programming, you connect the scanner and scan *only* one bar code to program the scanner to work with a designated interface, including any required prefixes and suffixes.

- ❺ To determine if your scanner is set up correctly, scan one of the sample bar codes on the back cover of this guide.

# Scan Maps

## Typical Performance at 20°C for SCANTEAM 5750A

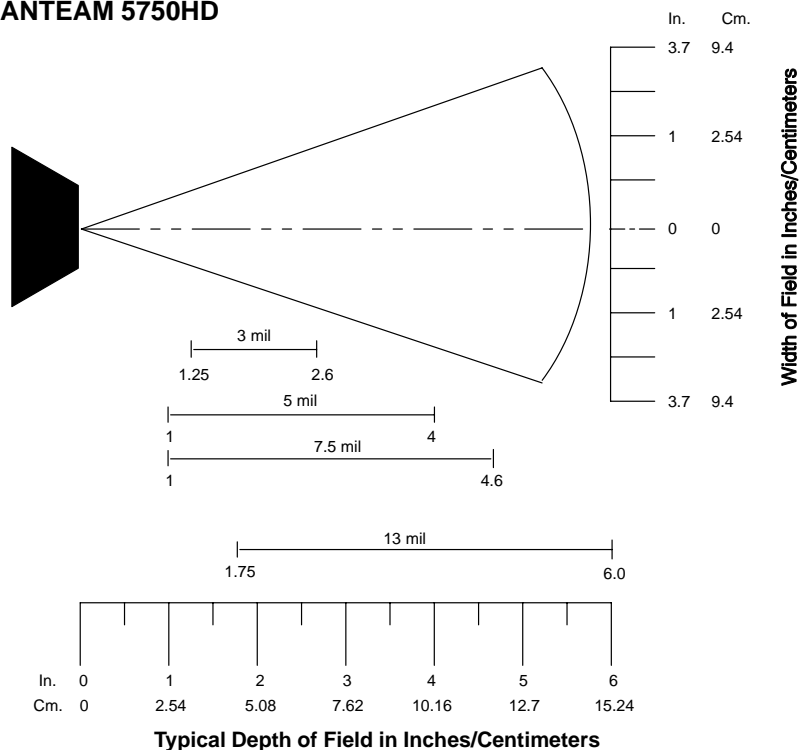


**Typical Depth of Field in Inches/Centimeters**

ACAP = Minimum distance determined by symbol length and scan angle.

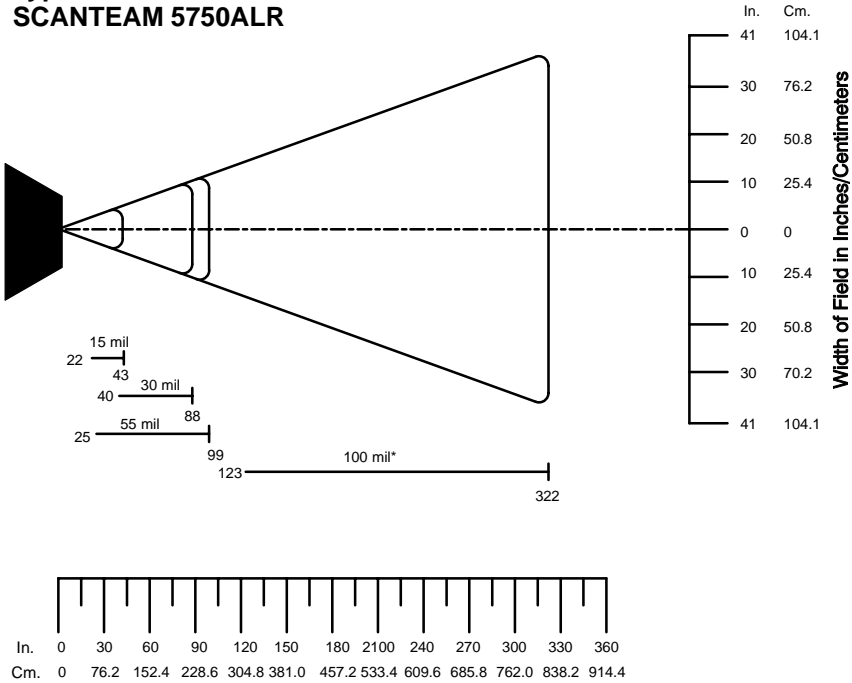
# Scan Maps

Typical Performance at 20°C for  
SCANTEAM 5750HD



# Scan Maps

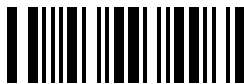
Typical Performance at 20°C for  
SCANTEAM 5750ALR



\*100 mil retroreflective

# Plug and Play Selections

## IBM PC Interface



IBM PC AT and Compatibles Interface (Default)  
(also PS/2 30-286, 50, 55SX, 60, 70, 70-061, 70-121, 80)



IBM PS/2 and Compatibles Interface  
( for PS/2 25, 30 models)



IBM PC XT and Compatibles Interface

*These bar codes **also** program a carriage return (CR) suffix.*



RS-232 Interface

*The bar code above **also** programs the following parameters:*

Programmable Option	Setting
Baud Rate	9600 bits per second
Parity	even
Data Format	7 data bits, parity bit, 1 stop bit (8 Bit Data)



***End of “Plug and Play” programming...***

## Terminal Interface Selections

If your terminal is not one of the Plug and Play options, you must program one of the terminals listed below. To program the terminal interface, scan the Program Terminal Interface bar code below, then scan the appropriate two digit Terminal I.D. code from the Programming Chart on the inside back cover of this manual.



Program Terminal Interface

### Supported Terminals

Terminal	Model(s)	Terminal I.D.
ADI	1496	72
Apple Desktop Bus ADB	MAC Classic, SE SE30, II (All)	49
Bull	BDS-7 (HDS-7)	35
Esprit	200, 400	05
Falco	5220	47
IBM	PC XT	01
IBM	PS/2 25, 30	02
IBM	AT, PS/2 30-286, 50, 55SX, 60, 70, 70-061, 70-121, 80	03*
IBM 102 Key	3151, 3161, 3162, 3163, 3191, 3192, 3196, 3197, 3471, 3472, 3476, 3477	06
IBM 122 Key	3179-1, 3191, 3192, 3471, 3472, 3194	07
IBM 122 Key	3196, 3197, 3476, 3477, 3486, 3488, 3482	08
IBM 122 Key	3180	24
RS232 TTL		00
Telex 88 Key	078A, 078, 79, 80, 191, 196, 1191, 1192, 1471, 1472, 1476	25
Telex 102 Key	078A, 078, 79, 80, 191, 196, 1191, 1192, 1471, 1472, 1476	45
Telex 122 Key	078A, 078, 79, 80, 191, 196, 1191, 1192, 1471, 1472, 1476	46
WYSE	WY-30	13
WYSE ANSI	WY 60, 120, 150, 160	15
WYSE ASCII	WY 60, 120, 150, 160, 99GT	14
WYSE Enhanced PC	WY 60, 120, 150, 160	18



## Main Menu Selections

### Reset Factory Settings

Scanning the **Factory Default Settings** bar code resets the scanner to the original factory settings, clearing any programming changes you may have made.



Factory Default Settings

### Status Check

Scan the **Show Software Revision** bar code to transmit the software revision level to the host terminal. The software revision will be printed out as "WA34863XXX." (The "X's" will vary according to the firmware ID.)



Show Software Revision

### Quick Suffix Selections

If your application requires it, scan the **Program Carriage Return Suffix** bar code to program a carriage return (CR) suffix for all enabled bar code symbologies. **Scanning this bar code clears all previously programmed prefixes and suffixes.**

Scan the **Clear Bar Code Suffix** bar code to disable (or clear) all previously programmed prefixes and suffixes (e.g., the carriage return suffix).



Program Carriage Return Suffix



Clear Bar Code Suffix

## Secondary Interface Selections

### Code 39 Wand Emulation Selection



★ Code 39 Wand Emulation Selection

### Same Code Wand Emulation Selection

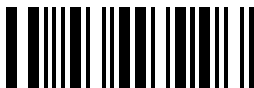


Same Code Wand Emulation Selection †

The Wand Emulation bar codes above **also** program the following parameters:

Programmable Option	Setting
Transmission Rate	40 inches per second
Output Polarity	White high
Power Mode	Switched power (low power)
Beeper Volume	Off

### RS-232 Selection



RS-232 Selection

† Supports Code 39, UPC, EAN, Code 128, Interleaved 2 of 5, and Codabar.  
All other codes output as Code 39.

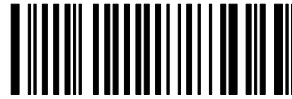
## *Secondary Interface Selections*

### Switched Power Mode Selections

When this feature is enabled, the unit consumes less than 50 uA from its power line when the trigger is not pulled. When the trigger is pulled, it consumes normal power. This feature is used for battery powered devices to save power. If power savings is not an issue and speed is, disable this feature for better performance.



★ Switched Power (Low Power) Mode



Constant Power Mode



## Introduction

Use this chapter to program the output parameters for the Hand-Held Laser Scanner.

This programming section contains the following menuing selections:

- Prefix and Suffix
- Output
- Serial Communication (RS-232)
- Data Formatter

# Prefix / Suffix Selections

## Primary Interface Prefix and Suffix

The scanner transmits a decoded message after every successful bar code read. Prefix and Suffix characters are data characters you may assign to be sent before and after the transmitted bar code data.

**Transmitted data frame** → 

Prefix	Bar Code Message	Suffix
--------	------------------	--------

Characters for the Prefix and Suffix are selected by their hexadecimal ASCII value, up to 12 characters each. Prefix and Suffix characters may be sent for a specific symbology, or may be sent with all bar code scans.

*Default Prefix = none. Default Suffix = none.*

---

### Programming Steps to Add a Primary Interface Prefix / Suffix:

- ❶ To add a Prefix, scan the **Add Primary Prefix** programming bar code. To add a Suffix, scan the **Add Primary Suffix** programming bar code.
- ❷ Refer to the Symbology Chart (page 2–7) to find the Hex value that represents the symbology(s) you want transmitted with one or more Prefixes or Suffixes. Scan the two digits on the Programming Chart (on the inside of the back cover of this menu).
- ❸ Refer to the Hex ASCII Chart (page 2–7) to find the Hex value that represents the ASCII characters you wish to transmit with the bar code data. Use the Programming Chart (inside back cover) to scan the alphanumeric combination that represents the ASCII characters.
- ❹ To complete Prefix / Suffix programming, scan either:
  - **Save Current Prefix or Suffix Changes**<sup>†</sup> programming bar code. This exits, saving the Prefix / Suffix selections you just assigned.
  - **Discard Current Prefix or Suffix Changes** programming bar code. This exits without changing the Prefix / Suffix.

<sup>†</sup> You may also start scanning bar codes; your Prefix / Suffix selections will be saved.

---

### Programming Steps to Clear (or Delete) One Prefix / Suffix Entry:

- ❶ To clear the Prefix entry for a specific symbology, scan the **Clear One Primary Prefix** programming bar code. To clear the Suffix entry for a specific symbology, scan the **Clear One Primary Suffix** programming bar code.
- ❷ Refer to the Symbology Chart to find the Hex value representing the symbology's entry you want cleared. Scan the two digits on the Programming Chart (on the inside of the back cover of this menu).
- ❸ You don't need to scan **Save Current ... Changes** or **Discard Current ... Changes** programming bar codes to complete programming.

---

**Other Programming Selections:** Scanning the **Clear All Primary Prefixes** or **Clear All Primary Suffixes** bar code deletes all Primary Prefix or Suffix selections. You don't need to scan the **Save Current ... Changes** or **Discard Current ... Changes** programming bar code to complete programming.

<b>Note:</b> Prefix / Suffix programming examples may be found on page 2–6.
---

# *Prefix / Suffix Selections*

## Primary Interface Prefix Selection



Add Primary Prefix ‡



Clear All Primary Prefixes



Clear One Primary Prefix ‡

## Primary Interface Suffix Selection



Add Primary Suffix ‡



Clear All Primary Suffixes



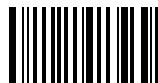
Clear One Primary Suffix ‡

## Exit Selection for Prefix / Suffix

*Save Current Prefix or Suffix Changes*



*Discard Current Prefix or Suffix Changes*



‡ One or more two-digit numbers are required after scanning this programming bar code. Please scan your selection on the Programming Chart (inside back cover).

## Prefix / Suffix Selections

### Secondary (Dual) Interface Prefix and Suffix

The scanner will transmit a decoded message after every successful bar code read. Prefix and Suffix characters are data characters you may assign to be sent before and after the transmitted bar code data.

**Transmitted data frame** → 

Prefix	Bar Code Message	Suffix
--------	------------------	--------

Characters for the Prefix and Suffix are selected by their hexadecimal ASCII value, up to 12 characters each. Prefix and Suffix characters may be sent for a specific symbology, or may be sent with all bar code scans.

*Default Prefix = none. Default Suffix = none.*

---

#### Programming Steps to Add a Secondary (Dual) Interface Prefix / Suffix:

- 1 To add a Prefix, scan the **Add Secondary Prefix** programming bar code. To add a Suffix, scan the **Add Secondary Suffix** programming bar code.
- 2 Refer to the Symbology Chart (page 2–7) to find the Hex value that represents the symbology(s) you want transmitted with one or more Prefixes or Suffixes. Scan the two digits on the Programming Chart (on the inside of the back cover of this menu).
- 3 Refer to the Hex ASCII Chart (page 2–7) to find the Hex value that represents the ASCII characters you wish to transmit with the bar code data. Use the Programming Chart (inside back cover) to scan the alphanumeric combination that represents the ASCII characters.
- 4 To complete Prefix / Suffix programming, scan either:
  - **Save Current Prefix or Suffix Changes**<sup>†</sup> programming bar code. This exits, saving the Prefix / Suffix selections you just assigned.
  - **Discard Current Prefix or Suffix Changes** programming bar code. This exits without changing the Prefix / Suffix.

<sup>†</sup> You may also start scanning bar codes; your Prefix / Suffix selections will be saved.

---

#### Programming Steps to Clear (or Delete) One Prefix / Suffix Entry:

- 1 To clear the Prefix entry for a specific symbology, scan the **Clear One Secondary Prefix** programming bar code. To clear the Suffix entry for a specific symbology, scan the **Clear One Secondary Suffix** programming bar code.
- 2 Refer to the Symbology Chart to find the Hex value representing the symbology's entry you want cleared. Scan the two digits on the Programming Chart (on the inside of the back cover of this menu).
- 3 You don't need to scan **Save Current ... Changes** or **Discard Current ... Changes** programming bar codes to complete programming.

---

**Other Programming Selections:** Scanning the **Clear All Secondary Prefixes** or **Clear All Secondary Suffixes** bar code deletes all Secondary Prefix or Suffix selections. You don't need to scan the **Save Current ... Changes** or **Discard Current ... Changes** programming bar code to complete programming.

<b>Note:</b> Prefix / Suffix programming examples may be found on page 2–6.
---



# *Prefix / Suffix Selections*

## Secondary Interface Prefix Selection



Add Secondary Prefix ‡



Clear All Secondary Prefixes



Clear One Secondary Prefix ‡

## Secondary Interface Suffix Selection



Add Secondary Suffix ‡



Clear All Secondary Suffixes



Clear One Secondary Suffix ‡

## Exit Selection for Prefix / Suffix

*Save Current Prefix or Suffix Changes*



*Discard Current Prefix or Suffix Changes*



‡ One or more two-digit numbers are required after scanning this programming bar code. Scan your selection on the Programming Chart (inside back cover).

# Prefix / Suffix Selections

## Prefix and Suffix Examples

### Example 1: Add Suffix for Specific Symbology

You want to send a CR (carriage return) Suffix for UPC only.

- Scan the **Add Suffix** Suffix Selection bar code.
- The Symbology Chart indicates that the Hex value of UPC is "63". Scan **6** and **3** on the Programming Chart (inside back cover).
- A "CR" is equivalent to "0D" (see the Hex ASCII Chart). Scan **0** and **D** on the Programming Chart.
- Scan the **Save Current Suffix Changes** Exit Selection bar code.

### Example 2: Add Suffix for ALL Symbologies

You want to send a CR (carriage return) Suffix for all symbologies.

- Scan the **Add Suffix** Suffix Selection bar code.
- The Symbology Chart indicates that the Hex value for All Symbologies is "99". Scan **9** and **9** on the Programming Chart.
- A "CR" is equivalent to "0D". Scan **0** and **D** on the Programming Chart.
- Scan the **Save Current Suffix Changes** Exit Selection bar code.

### Example 3: Add Prefix for Specific Symbology / Suffix for ALL Symbologies

You want to send a HT (tab) Prefix for UPC only and a CR / LF (carriage return / line feed) Suffix for all symbologies.

- Scan the **Add Prefix** Prefix Selection bar code.
- The Symbology Chart indicates that the Hex value of UPC is "63". Scan **6** and **3** on the Programming Chart.
- An "HT" is equivalent to "09". Scan **0** and **9** on the Programming Chart.
- Scan the **Add Suffix** Suffix Selection bar code.
- The Symbology Chart indicates that the Hex value for All Symbologies is "99". Scan **9** and **9** on the Programming Chart.
- A "CR" is equivalent to "0D" and an "LF" is "0A". Scan **0**, **D**, **0**, and **A** on the Programming Chart.
- Scan the **Save Current Prefix / Suffix Changes** Exit Selection bar code.

### Example 4: To Clear a Specific Prefix Entry

You've programmed the scanner to send a CR / LF (carriage return / line feed) Prefix for all symbologies (Hex value, 99). This is one Prefix entry. You've also programmed a "#" Prefix for UPC (Hex, 63). You decide that you want to clear the UPC entry, but not the Prefix entry for all symbologies.

- Scan the **Clear Specific Prefix** Prefix Selection bar code.
- The Symbology Chart indicates that the Hex value for UPC is "63". Scan **6** and **3** on the Programming Chart.

## Prefix / Suffix Selections

Symbology Chart					
Symbology	Code ID †	Hex Value	Symbology	Code ID †	Hex Value
Codabar	a	61	Code 11	h	68
Code 39	b	62	Code 93	i	69
UPC	c	63	Code 128	j	6A
EAN	d	64	Matrix 2 of 5	m	6D
Interleaved 2 of 5	e	65	Plessey	n	6E
Code 2 of 5	f	66	All Symbologies (Prefix/Suffix Programming <b>only</b> .)		99
MSI	g	67			

Hex to ASCII Conversion Chart							
ASCII	Hex	ASCII	Hex	ASCII	Hex	ASCII	Hex
NUL	00	DLE	10	SP	20	0	30
SOH	01	DC1	11	!	21	1	31
STX	02	DC2	12	"	22	2	32
ETX	03	DC3	13	#	23	3	33
EOT	04	DC4	14	\$	24	4	34
ENQ	05	NAK	15	%	25	5	35
ACK	06	SYN	16	&	26	6	36
BEL	07	ETB	17	'	27	7	37
BS	08	CAN	18	(	28	8	38
HT	09	EM	19	)	29	9	39
LF	0A	SUB	1A	*	2A	:	3A
VT	0B	ESC	1B	+	2B	;	3B
FF	0C	FS	1C	,	2C	<	3C
CR	0D	GS	1D	-	2D	=	3D
SO	0E	RS	1E	.	2E	>	3E
SI	0F	US	1F	/	2F	?	3F
						@	40
						A	41
						B	42
						C	43
						D	44
						E	45
						F	46
						G	47
						H	48
						I	49
						J	4A
						K	4B
						[	5B
						\	5C
						]	5D
						^	5E
						_	5F
						P	50
						Q	51
						R	52
						S	53
						T	54
						U	55
						V	56
						W	57
						X	58
						Y	59
						Z	5A
						a	61
						b	62
						c	63
						d	64
						e	65
						f	66
						g	67
						h	68
						i	69
						j	6A
						k	6B
						l	6C
						m	6D
						n	6E
						o	6F
						p	70
						q	71
						r	72
						s	73
						t	74
						u	75
						v	76
						w	77
						x	78
						y	79
						z	7A
						{	7B
							7C
						}	7D
						~	7E
						DEL	7F

**Note:** Prefix / Suffix entries for specific symbologies override the universal (All Symbologies, 99) entry.

**Note:** Adding a Prefix or a Suffix appends that Prefix / Suffix to any existing entries for the symbology(s) you've chosen. For example, if you've already programmed and saved a CR / LF (carriage return / line feed) and add a "#" Prefix, the "#" will be sent after the CR / LF.

If you add a Prefix / Suffix but want existing entries cleared, you'll need to use the **Clear Specific Prefix / Suffix** programming selection first. Then use the **Add Prefix / Suffix** programming selection to program your new Prefix / Suffix.

## Output Selections

★ *Default All Output Settings* ★



## Beeper Volume Selection



Off



Low



Medium



★ High

## Output Delays Selection

This selection provides control of the time delays between data output by the scanner to the host terminal. The actual delay is 5 milliseconds multiplied by the programmed value (00 – 99). *Default = 00.*

**Intercharacter Delay** is the time delay between data characters output by the scanner to the host terminal.

**Interfunction Delay** is the time delay between function (key) codes output by the scanner to the host terminal.

**Intermessage Delay** is the time delay between data messages or records output by the scanner to the host terminal.

Example: You need a 45 millisecond delay. Scan the **Intercharacter Delay** bar code. Then scan "0" and "9" on the Programming Chart (09 x 5ms = 45 ms).



Intercharacter Delay (x5mS) ‡



Interfunction Delay (x5mS) ‡



Intermessage Delay (x5mS) ‡

‡ A two-digit number is required after scanning this programming bar code. Please scan your selection on the Programming Chart (inside back cover).

# Output Selections

## Reread Delay Selection

This selection allows you to set a time period that must pass before the scanner can read the *same* bar code again. Setting a reread delay protects against accidental rereads of the same bar code. Longer delays are effective in minimizing accidental rereads at POS (point of sale) terminals. Use shorter delays in applications where repetitive bar code scanning is required.



★ Low (175 milliseconds)



Medium (450 milliseconds)



High (1.0 second)



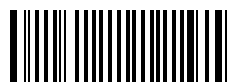
Extra High (2.0 seconds)

## Good Read Delay Selection

This selection allows you to set a time period that must pass before the scanner can read another bar code. Some terminals require a slower read rate. By setting a good read delay, you can ensure a good read.



★ None



Low (500 milliseconds)



Medium (1.0 second)



High (1.5 second)

## Laser Voting Selection

When Laser Voting is enabled, the scanner requires three (3) identical, consecutive scans before the bar code data will be accepted and transmitted to the terminal. When this selection is disabled, the bar code data will be transmitted following one (1) valid scan.



Enable



★ Disable

## Output Selections

### Buffered Scans Selection

When enabled, this selection allows the scanner to accept a second scan while the current scan is transmitted to the host terminal (buffering of scanned data). When disabled, the scanner cannot accept additional scans until the current scan is transmitted to the host. *Default = Enable.*



★ Enable



Disable

### Code I.D. Transmit Selection

This allows you to enable or disable transmission of a Code I.D. before the decoded bar code symbology. (See the Symbology Chart on page 2–7 for the single character code that identifies each symbology.)



Enable



★ Disable

### AIM I.D. Transmit Selection

This selection allows you to enable or disable transmission of an AIM I.D. before the decoded bar code symbology. (See AIM Guidelines on Symbology Identifiers for more information on the AIM symbology ID characters.) *Default = Disable.*



Enable



★ Disable

### Function Code Transmit Selection

When this selection is enabled, and function codes are contained within the scanned data, the scanner transmits the key code (which corresponds to the decoded ASCII function code) to the terminal. ASCII function codes are represented by the HEX values 00–1F. (Charts of these function codes are shown in Section 6, Supported Interface Keys.)



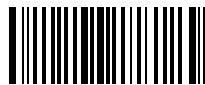
★ Enable



Disable

## Serial Communication Settings

★ Default All Serial Communication Settings ★



### CTS Check Selection

This selection allows you to select the software programming feature that checks for a CTS signal, if your application does not have a CTS I/O line. *Default = Disable.*



Enable



★ Disable

### Baud Rate Selection

This selection sets the baud rate from 300 bits per second to 38,400 bits per second. Programming baud rate causes the data to be sent at the specified rate. The host terminal must be set up for the same baud rate as the scanner, to ensure reliable communication. *Default = 9600 bps.*



300



600



1200



2400



4800



★ 9600



19200



38400

# Serial Communication Settings

## RS-232 Word Length Selection

This selection allows you to set the RS-232 word length at seven or eight bits of data per character. The number of start and stop bits is fixed at one each. If an application requires only ASCII Hex characters 0 through 7F decimal (text, digits, and punctuation), select 7 data bits. For applications requiring use of the full ASCII set, select 8 data bits per character.



★ 7 Data, 1 Stop



7 Data, 2 Stop



8 Data, 1 Stop

## Parity Selection

This selection provides a means of checking character bit patterns for validity. The scanner can be configured to operate under Even, Odd, Mark / None, or Space parity options. The host terminal must be set up for the same parity as the scanner, to ensure reliable communication.



None



Mark



Space



Odd



★ Even



# ***Serial Communication Settings***

## **Protocol Selection**

This selection allows you to program the scanner for the protocol required by your application. The protocol is a set of rules concerning the exchange of data between serially communicating devices. The scanner supports Record, Xon / Xoff, and Ack / Nak protocols when receiving data from an RS-232 device.



★ Record



Xon / Xoff



Ack / Nak

## *Data Formatter Selections*

### Data Format Editor

This selection provides editing of all input (scanned) data. All Industrial and Retail symbologies can be formatted. You may scan the **Clear Data Format** bar code if you are **certain** you want to delete or clear all formats.

To make Data Format Editor selections, you must know the terminal type, code I.D., code length, and editor commands your application requires. Use the Alpha-numeric bar codes (inside back cover) to scan these options.

Use the Data Format Editor by following the steps below:

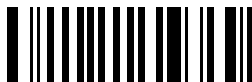
- ❶ Scan the **Enter Data Format** bar code.
- ❷ **Terminal Type**  
Scan two bar codes that represent the terminal type (00-99†, see page 1–8 for Terminal I.D. list.)
- ❸ **Code I.D.**  
Refer to the Symbology chart (page 2–7), then scan two bar codes from the “Hex Value” column that represent the Code I.D. of the symbology you want formatted. (“All Symbologies” – hex value 99 – is not supported by Data Formatter.)
- ❹ **Length**  
Scan two numeric bar codes (inside back cover) for the bar code length you require (00-99†). Be sure to include spaces.
- ❺ **Editor Command Sequences**  
Refer to the Format Editor Commands chart (page 2–16). Scan two bar codes that represent the command you need.
- ❻ **End Format (FF)**  
Scan “F” *twice* to end Data Format Editor programming.

† 99 is the Universal number, indicating all terminals and all code lengths.

## Data Formatter Selections

### Status Check

Scan the **Show Formats** bar code to transmit the existing Data Format Editor formats. One format per line will be printed out.



Show Formats

### Require Data Format

When disabled, the bar code data will be output to the host as scanned (including prefixes and suffixes). When enabled, all input data must conform to an edited format or the scanner will not transmit the input data to the host device.



Enable



★ Disable

### Data Format Editor

See pages 2–14 and 2–16 through 2–17 for a description of this selection and examples.



Enter Data Format



Clear All Data Formats

# Data Formatter Selections

## Format Editor Commands Chart

### Send Commands

- F1 Send all characters followed by "XX" key or function code, starting from current cursor position. **Syntax = F1XX** (XX = HEX ASCII character or function code 00–FE HEX).
- F2 Send "NN" characters followed by "XX" key or function code, starting from current cursor position. **Syntax = F2NNXX** (NN = number of characters 00–99 DEC, XX = HEX ASCII character or function code 00–EF HEX).
- F3 Send up to but not including "SS" character (Search and Send) starting from current cursor position, leaving cursor pointing to "SS" character followed by "XX" key or function code. **Syntax = F3SSXX** (SS = HEX ASCII Character 00–7F HEX, XX = HEX ASCII character 00–7F HEX).
- F4 Send "XX" character "NN" times (Insert) leaving cursor in current cursor position. **Syntax = F4XXNN** (XX = HEX ASCII character 00–7F HEX, NN = number of characters 00–99 DEC).

### Move Commands

- F5 Move cursor ahead "NN" characters from current cursor position. **Syntax = F5NN** (NN = number of characters 00–99 DEC).
- F6 Move cursor back "NN" characters from current cursor position. **Syntax = F6NN** (NN = number of characters 00–99 DEC).
- F7 Move cursor to the beginning of the data string. **Syntax = F7.**

### Search Commands

- F8 Search ahead for "XX" character from current cursor position, leaving cursor pointing to "XX" character. **Syntax = F8XX** (XX = HEX ASCII character 00–7F).
- F9 Search back for "XX" character from current cursor position, leaving cursor pointing to "XX" character. **Syntax = F9XX** (XX = HEX ASCII character 00–7F).

### Miscellaneous Commands

- FA Leading zero suppress on. Suppress leading zeroes from current cursor position until first non-zero character. **Syntax = FA.**
- FB Suppress "XX" character(s) (up to three) starting from current cursor position until suppress disable command "FC" or end of format. **Syntax = FBXXFB, FBXXXXFB, FBXXXXXXFB** (XX = ASCII character 00–7F).
- FC Disable suppress filter and clear all suppressed characters. **Syntax = FC.**
- FE Compare character in current cursor position to the character "XX." If characters are equal, increment cursor. If characters are not equal, no format match. **Syntax = FEXX** (XX = HEX ASCII character 00–7F).

## Data Formatter Selections

### Data Formatter Example

You are using an IBM PC AT and are scanning a UPC A bar code with a five digit addenda (shown below). The bar code has a total of 18 characters, including the number system, the check digits, and a space between the main bar code data and the addenda bar code data.



For your application, you don't want the space between the main bar code data and the addenda bar code data transmitted. You also want the bar code data followed by a carriage return (CR).

Refer to the Format Editor Commands Chart on page 2-16 to format the following example. The programming bar codes on pages 2-15, and the alpha-numeric bar codes on the inside back cover are used to program the data formatter.

- Scan the **Enter Data Format** bar code (page 2-15).
- Scan the **03** bar codes for PC AT Terminal Type.
- Scan the **63** bar codes, the Hex value for UPC symbology.
- Scan the **18** bar codes for the bar code length.

The following are the Editor Command Sequences:

- Scan the **FB** (suppress characters command) bar codes, scan **20** (the Hex value for a space), and then scan **FB** to frame (complete) the command.
- Scan the **F7** bar codes to move the cursor back to the beginning of the bar code data.
- Scan the **F1** and **0D** bar codes to send all the characters followed by a carriage return (CR= 0D in Hex value).
- Scan the **FF** bar codes to end Format Editor selection.

## ***Data Formatter Selections***

**Introduction**

Use this chapter to program the Hand-Held Laser Scanner for General Operating features.

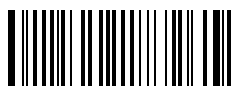
This programming section contains the following menuing selections:

- Laser Options
- Wand Emulation
- Country Code
- Keyboard

# Laser Options

## Marker Beam Selection

When enabled, the scanner shows a marker or locator beam before the red scan line opens across a bar code and the scanning process begins. The marker beam, emitted by centering the optical scan mirror, appears as a bright spot of illumination that serves as an aiming guide when bar code targets are at a distance from the scanner. **Note:** *Applies only to the 5750ALR product.*



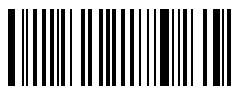
On



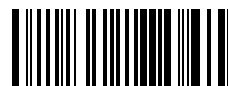
★ Off

## Marker Beam Delay

When the marker beam has been turned on, you may set a delay between the time the marker beam appears and the time the scanner reads the bar code.



★ 1.25 Sec Delay



500 mSec Delay



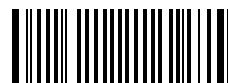
# Wand Emulation Selections

## Transmission Rate Selection

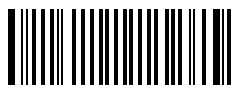
This programming selection sets the transmission rate from 10 ips (inches per second) to 300 ips if the scanner is in Wand Emulation mode. Programming the transmission rate causes the data to be sent at the specified rate. The programmed transmission rate must be compatible with the device receiving the bar code data. *Default = 40 ips (inches per second).*



10



25



★ 40



80



120



150



200



300

## Wake Up Pulse Selection

This selection provides a “wake up” pulse on the sync line from the scanner to a portable terminal. This feature extends battery life of the portable terminal by waking up the terminal only when data is ready to be sent. Bar code data follows the wake up pulse after a 0.2 second delay. *Default = Disable.*



Enable



★ Disable

## Output Polarity Selection

This selection allows you to set the output logic convention for the digital output. The choices are White High (“Laser” output) and Black High. *Default = White High.*



★ White High



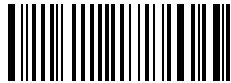
Black High

# ***Wand Emulation Selections***

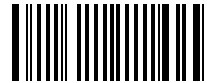
## Quiescent State Idle Selection

This sets the state of the video signal in idle mode. The scanner must be in Constant Power mode to use the quiescent state idle.

*Default = Quiescent State High.*



★ Quiescent State High



Quiescent State Low

# Country Code Selections

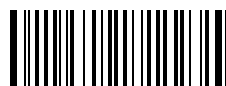
## Foreign Keyboard Selection

This programming selection allows you to re-map the keyboard layout for the selected country. As a general rule, the following characters are not supported by the scanner for countries other than the United States:

@ | \$ # { } [ ] = / ' \ < > ~



★ United States



Belgium



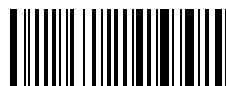
Denmark, Finland, Norway, Sweden



France



Germany, Austria



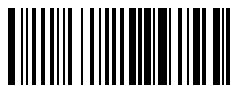
Italy



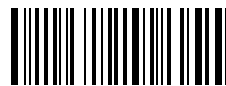
Switzerland



United Kingdom



Denmark (*Wyse only*)



Norway (*Wyse only*)

# Keyboard Selections

## Keyboard Style Selections

### Keyboard Style Selections

This programming selection allows you to program special keyboard features, such as Caps Lock and Shift Lock.

**Regular** is used when you normally have the Caps Lock key off.

**Caps Lock** is used when you normally have the Caps Lock key on.

**Shift Lock** is used when you normally have the Shift Lock key on. (Not common to U.S. keyboards.)

**Automatic Caps Lock** is used if you change the Caps Lock key on and off. The software tracks and reflects if you have Caps Lock on or off (AT and PS/2 only). This selection can only be used with systems that have an LED which notes the Caps Lock status.

**Emulate External Keyboard** should be scanned if you do not have an external keyboard (IBM AT or equivalent).



★ Regular



Caps Lock



Automatic Caps Lock



Shift Lock



Emulate External Keyboard

# Keyboard Selections

## Keyboard Style Modifiers

### Keyboard Style Modifiers

This programming selection allows you to program special keyboard features, such as CTRL+ codes and Turbo Mode.

**Default All** – This sets all Keyboard Style Modifiers to their default states (Control + ASCII Mode Off, Turbo Mode Off, Numeric Keypad Mode Off).

**Control + ASCII Mode On** – If you scan this selection, the scanner sends key combinations for ASCII control characters for values 00–1F. Refer to page 6–1 for CTRL+ Values. *Default = Off*

**Turbo Mode** – Selecting Turbo Mode On, (for the IBM AT only), programs the scanner to send characters to the terminal faster. *Default = Off*

**Numeric Keypad Mode** – Selecting Numeric Keypad Mode On sends numeric characters as if entered from a numeric keypad. *Default = Off*

**Automatic Direct Connect** – When Emulate External Keyboard has been selected (page 3–6), Automatic Direct Connect Mode keeps the integrated keyboard from becoming permanently disabled. *Default = Off*

**Note:** This selection disabled the keyboard for the entire duration of the bar code transmission.



Default All



Control + ASCII Mode On



★ Control + ASCII Mode Off



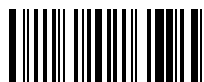
Turbo Mode On



★ Turbo Mode Off



Numeric Keypad Mode On



★ Numeric Keypad Mode Off



Automatic Direct Connect  
Mode On



★ Automatic Direct Connect  
Mode Off



### Introduction

Use this chapter to program the Hand-Held Laser Scanner for Industrial and Retail Symbology selections.

This programming section contains the following menuing selections:

- Codabar Selections.
- Code 39 Selections.
- Code 93 Selections.
- Interleaved 2 of 5 Selections.
- Code 2 of 5 Selections.
- Matrix 2 of 5 Selections.
- Code 11 Selections.
- Code128 Selections.
- Code 16K Selections.
- Code 49 Selections.
- EAN Selections.
- UPC Selections.
- MSI Selections.
- Plessey Selections.

# Industrial Symbology Selections

★ Default All Codabar Settings ★



## Codabar Selection



★ On

*Codabar*



Off



Transmit

*Start / Stop  
Characters*



★ Don't Transmit



★ Adaptive

*Decoding*



Traditional



Minimum ‡

*Message  
Length*



Maximum ‡

‡ A two-digit number is required after scanning this programming bar code. Scan your selection on the Programming Chart (inside back cover).

**Programming Tip:** If a symbology will not be used, we recommend turning it off to minimize the chance of a misread.



# Industrial Symbology Selections

## Codabar Selection, *continued*

### Check Character



★ No Check Character



Validate, But Don't Transmit



Validate, And Transmit

---

### Concatenation

Codabar supports symbol concatenation. When you **Allow** concatenation, the reader will look for a Codabar symbol having a “D” start character, adjacent to a symbol having a “D” stop character. In this case the two messages are concatenated into one with the “D” characters omitted.



Select **Require** to prevent the reader from decoding a lone Codabar symbol.

### Concatenation



Don't Allow (Concatenation Off)



★ Allow

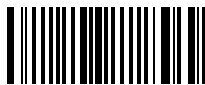


Require

**Programming Tip:** If a symbology will not be used, we recommend turning it off to minimize the chance of a misread.

# Industrial Symbology Selections

★ Default All Code 39 Settings ★



## Code 39 Selection



★ On

*Code 39*



Off



Transmit

*Start / Stop  
Characters*



★ Don't Transmit



★ Enable

*Full ASCII*  
Refer to the Full ASCII  
Chart on page 4–6.

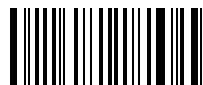


Disable



Enable

*Append*



★ Disable

‡ A two-digit number is required after scanning this programming bar code.  
Scan your selection on the Programming Chart (inside back cover).

**Programming Tip:** If a symbology will not be used, we recommend turning it off to minimize the chance of a misread.

# *Industrial symbology Selections*

## *Code 39 Selection, continued*



★ Adaptive

*Decoding*



Traditional



Minimum ⚡

*Message  
Length*



Maximum ⚡

*Check Character*



★ No Check Character



Validate, But Don't Transmit



Validate, And Transmit

**Programming Tip:** If a symbology will not be used, we recommend turning it off to minimize the chance of a misread.

# Industrial Symbology Selections

★ Default All Code 93 Settings ★



## Code 93 Selection



★ On

Code 93



Off



Minimum ‡

Message  
Length



Maximum ‡

## FULL ASCII CHART †

NUL	%U	DLE	\$P	SP	SPACE	0	0	@	%V	P	P	'	%W	p	+P
SOH	\$A	DC1	\$Q	!	/A	1	1	A	A	Q	Q	a	+A	q	+Q
STX	\$B	DC2	\$R	"	/B	2	2	B	B	R	R	b	+B	r	+R
ETX	\$C	DC3	\$S	#	/C	3	3	C	C	S	S	c	+C	s	+S
EOT	\$D	DC4	\$T	\$	/D	4	4	D	D	T	T	d	+D	t	+T
ENQ	\$E	NAK	\$U	%	/E	5	5	E	E	U	U	e	+E	u	+U
ACK	\$F	SYN	\$V	&	/F	6	6	F	F	V	V	f	+F	v	+V
BEL	\$G	ETB	\$W	'	/G	7	7	G	G	W	W	g	+G	w	+W
BS	\$H	CAN	\$X	(	/H	8	8	H	H	X	X	h	+H	x	+X
HT	\$I	EM	\$Y	)	/I	9	9	I	I	Y	Y	i	+I	y	+Y
LF	\$J	SUB	\$Z	*	/J	:	/Z	J	J	Z	Z	j	+J	z	+Z
VT	\$K	ESC	%A	+	/K	;	%F	K	K	[	%K	k	+K	{	%P
FF	\$L	FS	%B	,	/L	<	%G	L	L	\	%L	l	+L		%Q
CR	\$M	GS	%C	-	-	=	%H	M	M	]	%M	m	+M	}	%R
SO	\$N	RS	%D	.	.	>	%I	N	N	^	%N	n	+N	~	%S
SI	\$O	US	%E	/	/O	?	%J	O	O	_	%O	o	+O	DEL	%T

† This chart is used for encoding the above characters in Full ASCII when using Code 39 bar codes. For example, to get a "<", encode %G (which is 25 47 on the Hex ASCII chart in the Prefix / Suffix Programming section).

‡ A two-digit number is required after scanning this programming bar code. Scan your selection on the Programming Chart (inside back cover).

# Industrial Symbology Selections

★ Default All Interleaved 2 of 5 Settings ★



## Interleaved 2 of 5 Selection



★ On

*Interleaved  
2 of 5*



Off



★ Adaptive

*Decoding*



Traditional



Minimum ‡

*Message  
Length*



Maximum ‡

*Check Digit*



★ No Check Digit



Validate, But Don't Transmit



Validate, And Transmit

‡ A two-digit number is required after scanning this programming bar code. Scan your selection on the Programming Chart (inside back cover).

**Programming Tip:** If a symbology will not be used, we recommend turning it off to minimize the chance of a misread.

## ***Industrial Symbology Selections***

★ *Default All Matrix / Code 2 of 5 Settings* ★



### Code 2 of 5 Selection



★ On

*Code  
2 of 5*



Off



Minimum ‡

*Message  
Length*



Maximum ‡

### Matrix 2 of 5 Selection

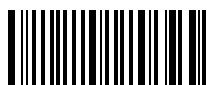


★ On

*Matrix  
2 of 5*



Off



Minimum ‡

*Message  
Length*



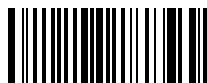
Maximum ‡

‡ A two-digit number is required after scanning this programming bar code. Scan your selection on the Programming Chart (inside back cover).

**Programming Tip:** If a symbology will not be used, we recommend turning it off to minimize the chance of a misread.

# Industrial Symbology Selections

★ Default All Code 11 / Code 128 Settings ★



## Code 11 Selection



★ On

*Code 11*



Off



★ 2 Check Digits

*Check Digits  
Required*



1 Check Digit



Minimum ‡

*Message  
Length*



Maximum ‡

## Code 128 Selection



★ On

*Code 128*



Off



Minimum ‡

*Message  
Length*



Maximum ‡

‡ A two-digit number is required after scanning this programming bar code. Scan your selection on the Programming Chart (inside back cover).

**Programming Tip:** If a symbology will not be used, we recommend turning it off to minimize the chance of a misread.

# *Industrial Symbology Selections*

## Code 128 Function Character Selection

When Code 128 Function Character is enabled, the scanner can substitute a <GS> for function character 1. To enable the <GS> substitution, you must scan the Code 128 Function Character On bar code, and the <GS> Substitution On bar code.

**Note:** For complete Code 128 support, the AIM ID Transmit selection should also be enabled. Refer to page 2–10.



On

*Code 128  
Function  
Character*



★ Off



On

*<GS>  
Substitution*

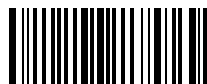


★ Off



# Industrial Symbology Selections

★ Default All Code 16K / Code 49 Settings ★



## Code 16K Selection †



On

*Code 16K*



★ Off



Minimum ‡

*Message  
Length*



Maximum ‡

## Code 49 Selection †



On

*Code 49*



★ Off



Minimum ‡

*Message  
Length*



Maximum ‡

† Not in standard product. Contact your Welch Allyn Sales Coordinator.

‡ A two-digit number is required after scanning this programming bar code. (16K may accept a 3-digit number.) Scan your selection on the Programming Chart (inside back cover).

**Programming Tip:** If a symbology will not be used, we recommend turning it off to minimize the chance of a misread.

## ***Retail Symbology Selections***

★ *Default All EAN / UPC Settings* ★



### EAN Selection

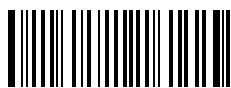


★ On

*EAN /  
JAN 13*



Off



★ On

*EAN /  
JAN 8*



Off

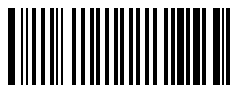


★ Transmit

*Check  
Digit*



Don't Transmit



Enable

*ISBN*



★ Disable

**Programming Tip:** If a symbology will not be used, we recommend turning it off to minimize the chance of a misread.

## Retail Symbology Selections

★ Default All UPC / EAN Settings ★



### UPC Selection



*UPC A*

★ On



Off



*UPC E0*

★ On



Off



*UPC E1*

On



★ Off



*Check  
Digit*

★ Transmit



Don't Transmit



*Number  
System*

★ Transmit



Don't Transmit



*Version E  
Expand*

Expand



★ Don't Expand

**Programming Tip:** If a symbology will not be used, we recommend turning it off to minimize the chance of a misread.

## Retail Symbology Selections



Require

*EAN / UPC  
Addenda*



★ Don't Require



No Space

*EAN / UPC  
Addenda  
Format*



★ Space

### EAN Addenda Selection



Enable

*Two Digit  
Addenda*



★ Disable



Enable

*Five Digit  
Addenda*



★ Disable

### UPC Addenda Selection



Enable

*Two Digit  
Addenda*



★ Disable



Enable

*Five Digit  
Addenda*



★ Disable

## Retail Symbology Selections

★ Default All MSI & Plessey Settings ★



### MSI Selection



On

*MSI*



★ Off



Minimum ‡

*Message  
Length*



Maximum ‡

### Plessey Selection



On

*Plessey*



★ Off



Minimum ‡

*Message  
Length*



Maximum ‡

‡ A two-digit number is required after scanning this programming bar code. Scan your selection on the Programming Chart (inside back cover).

**Programming Tip:** If a symbology will not be used, we recommend turning it off to minimize the chance of a misread.



## Introduction

The scanner's internal operational firmware is contained in a "Flash EEPROM" (a programmable / erasable ROM – Read Only Memory). This enables you to download new firmware upgrades, without opening the scanner or changing a chip (IC). A download kit that includes the software (in DOS or Windows versions) and an instruction manual is available from your sales distributor.

The scanner also has a special "cloning" capability. Cloning provides a quick, convenient way to re-program installed scanners from a master unit containing new or updated firmware, eliminating the need to use a PC for each serial download. After upgraded firmware is downloaded into the master unit, the master may be used to program other scanners. (A cloning cable is used, and may be ordered from your distributor.)

This programming section contains the following menuing selections:

- Downloading Utility.
- Uploading Utility.
- Cloning Utility.
- Temporary Serial Communication Configuration.

## ***Firmware Utilities***

### Downloading Utility

Scanning the **Download New Firmware** bar code prepares the scanner to be downloaded with new firmware. New firmware is downloaded by using the Quick\*Load application software (in the download kit). Quick\*Load can perform firmware uploads (reading the device's memory) and downloads (writing to the device's memory). The Quick\*Load application will prompt you to scan the symbol (shown below) at the appropriate time.



Download New  
Firmware

### Uploading Utility

Scanning the **Memory Upload** bar code sends the entire contents of ROM to the host terminal. The data is transmitted serially, as INTEL-formatted ASCII text strings, at 19,200 baud, no parity, 8 data bits, and 1 stop bit.



Memory Upload



# Firmware Utilities

## Cloning Utility

Scanning the **Clone Master** bar code will transfer the firmware contents of the “master” unit to the “destination” or installed unit. First, you must follow the steps below to initiate the cloning procedure:

- 1) Connect the destination (installed) unit to one of the 8 pin modular connectors on the cloning cable.
- 2) Connect the master unit (containing the new or updated software) to the remaining 8 pin modular connector on the cloning cable.
- 3) Make sure that both units are powered **On**, and then scan the **Clone Destination** bar code with the destination unit.



Clone Destination

- 4) Now scan the **Clone Master** bar code with the master unit.



Clone Master

- 5) The master unit will start transferring its firmware contents to the installed / destination unit.
- 6) When cloning is complete, the master unit will double beep. This process takes about 30 seconds.

## Temporary Serial Communication Configuration

For quick download communication configuration, scan the **W + A** bar code to temporarily configure the scanner for 9600 baud rate, no parity, 8 data bits, and 1 stop bit. Standard receive (RX) and transmit (TX) voltages are also selected. RTS / CTS handshaking is disabled. This change is *temporary*. The next time the scanner is powered down and then up, its serial communication settings are restored to the programmed settings.



W + A

## ***Firmware Utilities***

### Keyboard Function Relationships

The following Keyboard Function Code, Hex/ASCII Value, and Full ASCII "CTRL" + "CTRL"+ relationships apply to all terminals that can be used with the Hand-Held Decoded Output Laser scanner.

Function Code	HEX/ASCII Value	Full ASCII "CTRL" +
NUL	00	2
SOH	01	A
STX	02	B
ETX	03	C
EOT	04	D
ENQ	05	E
ACK	06	F
BEL	07	G
BS	08	H
HT	09	I
LF	0A	J
VT	0B	K
FF	0C	L
CR	0D	M
SO	0E	N
SI	0F	O
DLE	10	P
DC1	11	Q
DC2	12	R
DC3	13	S
DC4	14	T
NAK	15	U
SYN	16	V
ETB	17	W
CAN	18	X
EM	19	Y
SUB	1A	Z
ESC	1B	[
FS	1C	\
GS	1D	]
RS	1E	6
US	1F	-

The last five characters in the Full ASCII "CTRL"+ column ([ \ ] 6 -), apply to US only. The following chart indicates the equivalents of these five characters for different countries.

Country	Codes				
United States	[	\	]	6	-
Belgium	[	<	]	6	-
Scandinavia	8	<	9	6	-
France	^	8	\$	6	=
Germany		Ä	+	6	-
Italy		\	+	6	-
Swiss		<	·	6	-
United Kingdom	[	'	]	6	-
Denmark	8	\	9	6	-
Norway	8	\	9	6	-
Spain	[	\	]	6	-

# Interface Keys

## Supported Interface Keys

<i>Supported Interface Keys</i>		IBM AT/XT and PS/2 Compatibles, WYSE PC/AT	IBM XTs and Compatibles	IBM, Memorex Telex
NUL	00	Reserved	Reserved	Reserved
SOH	01	Enter (KP)	CR/Enter	Enter
STX	02	Cap Lock	Caps Lock	F11
ETX	03	ALT make	Reserved	F12
EOT	04	ALT break	Reserved	F13
ENQ	05	CTRL make	Reserved	F14
ACK	06	CTRL break	Reserved	F15
BEL	07	CR/Enter	CR/Enter	New Line
BS	08	Reserved	Reserved	F16
HT	09	Tab	Tab	F17
LF	0A	Reserved	Reserved	F18
VT	0B	Tab	Tab	Tab/Field Forward
FF	0C	Delete	Delete	Delete
CR	0D	CR/Enter	CR/Enter	Field Exit/New Line
SO	0E	Insert	Insert	Insert
SI	0F	Escape	Escape	F19
DLE	10	F11	Reserved	Error Reset
DC1	11	Home	Home	Home
DC2	12	Print	Print	F20
DC3	13	Back Space	Back Space	Back Space
DC4	14	Back Tab	Back Tab	Backfield/Back Tab
NAK	15	F12	Reserved	F21
SYN	16	F1	F1	F1
ETB	17	F2	F2	F2
CAN	18	F3	F3	F3
EM	19	F4	F4	F4
SUB	1A	F5	F5	F5
ESC	1B	F6	F6	F6
FS	1C	F7	F7	F7
GS	1D	F8	F8	F8
RS	1E	F9	F9	F9
US	1F	F10	F10	F10

\* IBM 3191/92, 3471/72, 3196/97, 3476/77, Telex (all models).

# Interface Keys

## Supported Interface Keys

<b>Supported Interface Keys</b>		<b>IBM, Memorex Telex (102)*</b>	<b>Memorex Telex (88)**</b>	<b>WYSE</b>
NUL	00	Reserved	Reserved	Reserved
SOH	01	Enter	Enter	Enter
STX	02	F11	PF10	PF1
ETX	03	F12	PF11	PF2
EOT	04	F13	PF12	PF3
ENQ	05	F14	Reserved	PF11
ACK	06	F15	Reserved	PF12
BEL	07	New Line	New Line	New Line
BS	08	F16	Field Forward	PF4
HT	09	F17	Field Forward	TAB
LF	0A	F18	Reserved	F13
VT	0B	Tab/Field Forward	Field Forward	F14
FF	0C	Delete	Delete	Remove
CR	0D	Field Exit	New Line	New Line
SO	0E	Insert	Insert	Insert Here
SI	0F	Clear	Erase	Cursor Up
DLE	10	Error Reset	Error Reset	Cursor Left
DC1	11	Home	Reserved	Cursor Down
DC2	12	Print	Print	Cursor Right
DC3	13	Back Space	Back Space	Delete
DC4	14	Back Tab	Back Field	Print
NAK	15	F19	Reserved	F15
SYN	16	F1	PF1	F1
ETB	17	F2	PF2	F2
CAN	18	F3	PF3	F3
EM	19	F4	PF4	F4
SUB	1A	F5	PF5	F5
ESC	1B	F6	PF6	F6
FS	1C	F7	PF7	F7
GS	1D	F8	PF8	F8
RS	1E	F9	PF9	F9
US	1F	F10	Home	F10

\* IBM 3196/97, 3476/77, 3191/92, 3471/72, Memorex Telex (all models) with 102 key keyboards

\*\* Memorex Telex with 88 key keyboards

# Interface Keys

## Supported Interface Keys

<i>Supported Interface Keys</i>		Esprit 200, 400 ANSI	Esprit 200, 400 ASCII	Esprit 200, 400 PC
NUL	00	Reserved	Reserved	Reserved
SOH	01	New Line	New Line	New Line
STX	02	N/A	N/A	N/A
ETX	03	N/A	N/A	N/A
EOT	04	N/A	N/A	N/A
ENQ	05	N/A	N/A	N/A
ACK	06	N/A	N/A	N/A
BEL	07	New Line	New Line	New Line
BS	08	N/A	N/A	N/A
HT	09	Tab	Tab	Tab
LF	0A	N/A	N/A	N/A
VT	0B	Tab	Tab	Tab
FF	0C	N/A	N/A	Delete
CR	0D	New Line	New Line	New Line
SO	0E	N/A	N/A	Insert
SI	0F	Escape	Escape	Escape
DLE	10	F11	F11	F11
DC1	11	Insert	Insert	Home
DC2	12	F13	F13	Print
DC3	13	Back Space	Back Space	Back Space
DC4	14	Back Tab	Back Tab	Back Tab
NAK	15	F12	F12	F12
SYN	16	F1	F1	F1
ETB	17	F2	F2	F2
CAN	18	F3	F3	F3
EM	19	F4	F4	F4
SUB	1A	F5	F5	F5
ESC	1B	F6	F6	F6
FS	1C	F7	F7	F7
GS	1D	F8	F8	F8
RS	1E	F9	F9	F9
US	1F	F10	F10	F10

# Interface Keys

## Supported Interface Keys

<i>Supported Interface Keys</i>		<b>Bull BDS-7 (Honeywell HDS-7)</b>	<b>HP 700/92</b>	<b>WYSE WY-60/150 (ASCII/ANSI keyboards)</b>
NUL	00	Reserved	Reserved	Reserved
SOH	01	Transmit	Enter	Enter
STX	02	Reserved	Caps	PF1
ETX	03	Reserved	Reserved	PF2
EOT	04	Reserved	Reserved	PF3
ENQ	05	Backtab	Reserved	PF11
ACK	06	Reserved	Reserved	PF12
BEL	07	Carriage Return	Reserved	New Line
BS	08	Back Space	Back Space	PF4
HT	09	Tab	Tab	TAB
LF	0A	F11	Reserved	F13
VT	0B	F12	Reserved	F14
FF	0C	Delete Character	Reserved	Remove
CR	0D	Carriage Return	Return	New Line
SO	0E	Insert	Reserved	Insert Here
SI	0F	Clear	Reserved	Cursor Up
DLE	10	Error Reset	Home	Cursor Left
DC1	11	Home	Reserved	Cursor Down
DC2	12	Delete Line	Reserved	Cursor Right
DC3	13	Erase EOP	Reserved	Delete
DC4	14	Erase EOF	Reserved	Print
NAK	15	Insert Line	Clear Screen	F15
SYN	16	F1	F1	F1
ETB	17	F2	F2	F2
CAN	18	F3	F3	F3
EM	19	F4	F4	F4
SUB	1A	F5	F5	F5
ESC	1B	F6	Escape	F6
FS	1C	F7	F6	F7
GS	1D	F8	F7	F8
RS	1E	F9	F8	F9
US	1F	F10	Reserved	F10

# Interface Keys

## Supported Interface Keys

<b>Supported Interface Keys</b>			<b>WYSE WY-30</b>
NUL	00		Reserved
SOH	01		Enter
STX	02		Reserved
ETX	03		Reserved
EOT	04		Reserved
ENQ	05		Reserved
ACK	06		Reserved
BEL	07		Return
BS	08		Reserved
HT	09		Tab
LF	0A		Line Feed
VT	0B		Reserved
FF	0C		Reserved
CR	0D		Return
SO	0E		Reserved
SI	0F		Cursor Up
DLE	10		Cursor Left
DC1	11		Cursor Down
DC2	12		Cursor Right
DC3	13		Back Space
DC4	14		Reserved
NAK	15		Reserved
SYN	16		F1
ETB	17		F2
CAN	18		F3
EM	19		F4
SUB	1A		F5 (CTRL F1)
ESC	1B		F6 (CTRL F2)
FS	1C		F7 (CTRL F3)
GS	1D		F8 (CTRL F4)
RS	1E		F9 (SHIFT F2)
US	1F		F10 (SHIFT F3)



**SCANTEAM 5750 Product Specifications**

<i>Parameter</i>	<i>Specification</i>
Dimensions Weight Length Height Width	7 ounces (196 g) 5.5 inches (14 cm) 5.5 inches (14 cm) 3 inches (7.6 cm)
Light Source	630–670 nm visible laser diode (VLD)
Scan Rate	36 $\pm$ 3 scans per second
Print Contrast	Minimum Reflective Difference (MRD) = 25%– 5750A; MRD = 40% – 5750ALR, 5750HD
Skew Angle	$\pm$ 65 degrees (from perpendicular) – 5750A $\pm$ 60 degrees (from perpendicular) – 5750HD $\pm$ 30 degrees (from perpendicular) – 5750ALR
Pitch Angle	$\pm$ 55 degrees (left/right from perpendicular) – 5750A, 5750ALR $\pm$ 65 degrees (left/right from perpendicular) – 5750HD
Operating Voltage	5VDC
Power Consumption	Measured at 5VDC 200 mA maximum
Temperature Ranges	Operating 32° F to +122° F (–0° C to +50° C) Storage –22° F to +158° F (–30° C to +70° C)
Humidity	5 to 95% non-condensing
Mechanical Shock	26 drops from 6 feet (1.8m) to concrete
ESD Sensitivity	15 kV to any external surface
Agency Compliance	FCC Class B, CE, LVD, CDRH Class II, UL, cUL, TÜV, C–TIC. 5750ALR is a Class III laser device.



## Maintenance

The Hand-Held Decoded Output Laser Scanner provides reliable and efficient operation with a minimum of care. Although specific maintenance is not required, the following periodic checks insure dependable scanner operation:

### *Cleaning the Scan Window*

Scanning performance may degrade if the scan window is not clean. If the window is visibly dirty, or if the scanner isn't scanning well, clean the scan window with a soft cloth or facial tissue dampened with water (or a mild detergent– water solution). If a detergent solution is used, rinse with a clean tissue dampened with water only.

*The scanner housing may also be cleaned the same way.*



### **Warning:**

**Do not submerge the scanner in water. The scanner's housing is not water-tight.**

**Do not use abrasive wipers or tissues on the scan window: abrasive wipers may scratch the window.**

**Never use solvents (alcohol or acetone) on the housing or window: solvents may damage the finish or the window.**

**Do not open the scanner. There are no serviceable parts inside.**

### *Inspecting Cords and Connectors*

Inspect the scanner's interface cable and connector for wear or other signs of damage. A badly worn cable or damaged connector may interfere with scanner operation. Contact your Welch Allyn distributor for information about cable replacement.

### *Examining the Scanner Housing*

Routinely examine the scanner housing for signs of damage. A damaged housing may cause the internal components to move and may result in a malfunctioning scanner.

### *To Reset Factory Settings*

If you aren't sure *what* programming options have been set up in your scanner, or you've changed some options and now want the factory settings restored, refer to Main Menu Selections in Section 1 and scan the **Factory Default Settings** bar code.

# Maintenance & Troubleshooting

## Troubleshooting

The Hand-Held Decoded Output Laser scanner automatically performs self-tests whenever you turn it on. If your scanner is not functioning properly, review the following Troubleshooting Guide to try to isolate the problem.

### *Troubleshooting Guide*

#### *Is the power on? Is the red illuminated beam on?*

If the red scan beam on the scanner isn't illuminated, check that:

- ❶ the cable is connected properly.
- ❷ the host system power is on (if external power isn't used).

#### *Is the scanner having trouble reading your bar codes?*

If the scanner isn't reading bar codes well, check that the bar codes:

- ❶ aren't smeared, rough, scratched, or exhibiting voids.
- ❷ aren't coated with frost or water droplets on the surface.
- ❸ are enabled in the scanner or the decoder the scanner is connected to.

#### *Is the bar code displayed but not "entered"?*

The bar code is displayed on the host device correctly, but you still have to press a key to enter it (*the Enter/Return key or the Tab key, for example*).

*You need to program a suffix.*

Programming a suffix enables the scanner to output the scanned bar code *plus* the key you need (such as a "CR," carriage return) to enter the bar code into your application. (See *Suffix Selection in Section 3, Output Parameters Menu*.)

# Maintenance & Troubleshooting

## Does the scanner read your bar code incorrectly?

If the scanner reads a bar code (*one beep for a good read*), but the bar code is not displayed correctly on the host screen:

- ❶ The scanner may not be programmed for the appropriate terminal interface.

**Example:** You scan “12345” and the host displays “@es%.”

Reprogram the scanner with the correct “Plug and Play” or Terminal Selection bar code (see Section 1).

- ❷ The scanner may not be programmed to output your bar code properly.

**Example:** You scan “12345” and the host displays “A12345B.”

Reprogram the scanner with the proper Symbology selections (see Section 4, Symbology Menu).

## The scanner won't read your bar code at all?

If the scanner will not read your bar code:

- ❶ Try scanning the Sample Bar Codes (*found on the back cover of the User's Guide*).

If the scanner reads the Sample Bar Codes, check that your bar code is readable. (See “Is the scanner having trouble reading your bar codes” on the previous page.)

Verify that your bar code symbology is enabled. (See Sections 4, Symbology Menu.)

If the scanner does not read the Sample Bar Codes either, continue to #2, below...

- ❷ If the scanner won't read the Sample Bar Codes either:

Verify that the bar code symbologies are enabled. (See Sections 4, Symbology Menu.)

Scan the “Default All...” bar code on each symbology menu page in Section 4 to enable most symbologies. (*MSI and Plessey will have to be enabled individually, as they are defaulted Off.*)



## Obtaining Factory Service

Welch Allyn provides service for all its products through a service center located at its manufacturing facilities in Skaneateles, New York. To obtain warranty or non-warranty service, return the unit to Welch Allyn (postage paid) with a copy of the dated purchase record attached.

In the United States, please contact the Welch Allyn Product Service Department at the address/telephone number listed below to obtain a Return Material Authorization number (RMA #).

### **Main Office**

#### **Welch Allyn, Inc.**

Data Collection Division  
4619 Jordan Road  
P.O. Box 187  
Skaneateles Falls, New York 13153-0187

### *General Inquiries*

Telephone: (315) 685-8945  
Fax: (315) 685-3172

### *Product Service Department*

Telephone: (315) 685-4278 or 685-4360  
Fax: (315) 685-4156

For service in Europe, please contact your Welch Allyn representative (at address below) or your local distributor.

### **United Kingdom Office**

#### **Welch Allyn U.K., Ltd.**

1st Floor, Dallam Court  
Dallam Lane, Warrington  
Cheshire WA2 7LT  
United Kingdom

Telephone: Int+44-1925-240055  
Fax: Int+44-1925-631280

For service in Asia, please contact your Welch Allyn representative (at address below) or your local distributor.

### **Asia / Pacific Office**

#### **Welch Allyn**

10/F Tung Sun Commercial Centre  
194-200 Lockhart Road  
Wanchai, Hong Kong

Telephone: Int+852-2511-3050 or 2511-3132  
Fax: Int+852-2511-3557

## ***Customer Support***

For service in Japan, please contact your Welch Allyn representative (at address below) or your local distributor.

### ***Japan Office***

#### **Welch Allyn, Ltd.**

Bon Marusan 8F  
3-5-1 Kanda-Jinbocho  
Chiyoda-ku  
Tokyo 101, Japan

Telephone: Int+81-3-5212-7352

Fax: Int+81-3-3261-7372

For service in Latin America, please contact your Welch Allyn representative (at address below) or your local distributor.

### ***Latin America Office***

#### **Welch Allyn, Ltd.**

5150 North Tamiami Trail  
Suite 302  
Naples, FL 34103-2821

Telephone: (941) 263-7600

Fax: (941) 263-9689

### **Technical Support**

If, after reviewing the Troubleshooting Guide (page 8-2), you still need assistance installing or troubleshooting your scanner, please call your Distributor or Application Support or log onto our web site:

**Application Support Telephone: (315) 685-2476**

**Web: <http://dcd.welchallyn.com>**



# *Customer Support*

## **Limited Warranty**

Welch Allyn, Inc., hereby warrants its products to be functional and free from manufacturing defects at the time of delivery. Welch Allyn, Inc. further warrants that it will replace or repair, at its option, any unit that fails to perform according to Welch Allyn's published specifications during a period of two (2) years from the time of shipment by Welch Allyn, Inc. to the user at the time it is purchased from any of Welch Allyn Inc.'s Authorized Distributors. Any attempt on the part of the user to disassemble or service the equipment shall void the warranty.

The warranty does not apply to product which have been damaged by improper handling, shipping, or misuse. The warranty does not apply, if, in the sole opinion of Welch Allyn, Inc., the unit has been damaged by accident, misuse, neglect, improper shipping and handling. Since the unit is sensitive to static, the responsibility to protect it from static damage is solely that of the user. The warranty is valid only if the unit or scanner has not been tampered with or serviced by any party unauthorized by Welch Allyn, Inc. as a repair facility.

THE WARRANTIES SET FORTH HEREIN ARE IN LIEU OF ANY AND ALL OTHER WARRANTIES EXPRESSED OR IMPLIED INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE BUYER ACKNOWLEDGES THAT NO OTHER REPRESENTATIONS WERE MADE OR RELIED UPON WITH RESPECT TO THE QUALITY AND FUNCTION OF THE BOARD AND SCANNER HEREIN SOLD.

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This warranty gives you specific legal rights and you may also have other rights which vary from state to state or country to country.



# Default Chart

## Serial Interface Menu Defaults

The following chart lists the factory default Serial Interface Menu settings (indicated by a "★" on the programming menu pages).

<i>Parameter Name</i>	<i>Default Setting</i>	<i>Page Reference</i>
<b>Prefix / Suffix Selections</b>		
Primary Prefix	None	Page 2-3
Primary Suffix	None	Page 2-3
Secondary Prefix	None	Page 2-5
Secondary Suffix	None	Page 2-5
<b>Output Selections</b>		
Beeper Volume	High	Page 2-8
<b>Output Delays</b>		
Intercharacter Delay	00 (x5mS)	Page 2-8
Interfunction Delay	00 (x5mS)	Page 2-8
Intermessage Delay	00 (x5mS)	Page 2-8
Reread Delay	Low (175mS)	Page 2-9
Good Read Delay	None	Page 2-9
Laser Voting	Disable	Page 2-9
Buffered Scans	Enable	Page 2-10
Code I.D. Transmit	Disable	Page 2-10
AIM I.D. Transmit	Disable	Page 2-10
Function Code Transmit	Enable	Page 2-10
<b>Serial Communication Selections</b>		
CTS Check	Disable	Page 2-11
Baud Rate	9600	Page 2-11
RS-232 Word Length	7 Data Bits, 1 Stop Bit	Page 2-12
Parity	Even	Page 2-12
Protocol	Record	Page 2-13
<b>Data Formatter Selections</b>		
Require Data Format	Disable	Page 2-15

# Default Chart

## General Operating Menu Defaults

The following chart lists the factory default General Operating Menu settings (indicated by a "★" on the programming menu pages).

<i>Parameter Name</i>	<i>Default Setting</i>	<i>Page Reference</i>
<b>Laser Options</b>		
Marker Beam (5750ALR only)	Off	Page 3-2
Marker Beam Delay	1.25 Sec	Page 3-2
<b>Wand Emulation Selections</b>		
Transmission Rate	40 ips	Page 3-3
Wake Up Pulse	Disable	Page 3-3
Output Polarity	White High	Page 3-3
<b>Country Code Selections</b>		
Foreign Keyboards	United States	Page 3-5
<b>Keyboard Selections</b>		
Keyboard Style	Regular	Page 3-6
Keyboard Style Modifiers	Numeric Keypad Mode Off	Page 3-7

# Default Chart

## Symbology Menu Defaults – Industrial

The following chart lists the factory default Industrial Symbology Menu settings (indicated by a “★” on the programming menu pages).

<i>Parameter Name</i>	<i>Default Setting</i>	<i>Page Reference</i>
<b>Codabar Selections</b>		
Codabar	On	Page 4–2
Start / Stop Characters	Don't Transmit	Page 4–2
Decoding	Adaptive	Page 4–2
Message Length	Min = 4, Max = 60	Page 4–2
Check Character	No Check Character	Page 4–3
Concatenation	Allow	Page 4–3
<b>Code 39 Selections</b>		
Code 39	On	Page 4–4
Start / Stop Characters	Don't Transmit	Page 4–4
Full ASCII	Enable	Page 4–4
Append	Disable	Page 4–4
Decoding	Adaptive	Page 4–5
Message Length	Min = 0, Max = 48	Page 4–5
Check Character	No Check Character	Page 4–5
<b>Code 93 Selections</b>		
Code 93	On	Page 4–6
Message Length	Min = 0, Max = 64	Page 4–6
<b>Interleaved 2 of 5 Selections</b>		
Interleaved 2 of 5	On	Page 4–7
Decoding	Adaptive	Page 4–7
Message Length	Min = 4, Max = 80	Page 4–7
Check Digit	No Check Digit	Page 4–7
<b>Code 2 of 5 Selections</b>		
Code 2 of 5	On	Page 4–8
Message Length	Min = 4, Max = 48	Page 4–8
<b>Matrix 2 of 5 Selections</b>		
Matrix 2 of 5	On	Page 4–8
Message Length	Min = 4, Max = 80	Page 4–8

# Default Chart

## Symbology Menu Defaults – Industrial

The following chart lists the factory default Industrial Symbology Menu settings (indicated by a “★” on the programming menu pages).

<i>Parameter Name</i>	<i>Default Setting</i>	<i>Page Reference</i>
<b>Code 11 Selections</b>		
Code 11	On	Page 4–9
Check Digits Required	2 Check Digits	Page 4–9
Message Length	Min = 4, Max = 80	Page 4–9
<b>Code 128 Selections</b>		
Code 128	On	Page 4–9
Message Length	Min = 0, Max = 80	Page 4–9
<b>Code 128 Function Character Selection</b>		
Code 128 Function Character	Off	Page 4–10
<GS> Substitution	Off	Page 4–10
<b>Code 16K Selections †</b>		
Code 16K	Off	Page 4–11
Message Length	Min = 0, Max = 154	Page 4–11
<b>Code 49 Selections †</b>		
Code 49	Off	Page 4–11
Message Length	Min = 1, Max = 80	Page 4–11

† Not in standard product. Contact your Welch Allyn Sales Coordinator.

# Default Chart

## Symbology Menu Defaults – Retail

The following chart lists the factory default Retail Symbology Menu settings (indicated by a “★” on the programming menu pages).

<i>Parameter Name</i>	<i>Default Setting</i>	<i>Page Reference</i>
<b>EAN Selections</b>		
EAN / JAN 13	On	Page 4–12
EAN / JAN 8	On	Page 4–12
Check Digit	Transmit	Page 4–12
ISBN	Disable	Page 4–12
<b>UPC Selections</b>		
UPC A	On	Page 4–13
UPC E0	On	Page 4–13
UPC E1	Off	Page 4–13
Check Digit	Transmit	Page 4–13
Number System	Transmit	Page 4–13
Version E Expand	Don't Expand	Page 4–13
<b>EAN / UPC Addenda Selections</b>		
EAN / UPC Addenda	Don't Require	Page 4–14
EAN / UPC Addenda Format	Space	Page 4–14
<b><i>EAN Addenda</i></b>		
Two Digit Addenda	Disable	Page 4–14
Five Digit Addenda	Disable	Page 4–14
<b><i>UPC Addenda</i></b>		
Two Digit Addenda	Disable	Page 4–14
Five Digit Addenda	Disable	Page 4–14
<b>MSI Selections</b>		
MSI	Off	Page 4–15
Message Length	Min = 4, Max = 48	Page 4–15
<b>Plessey Selections</b>		
Plessey	Off	Page 4–15
Message Length	Min = 4, Max = 48	Page 4–15









# Programming Chart



0



1



2



3



4



5



6



7



8



9



A



B



C



D



E



F

# Sample Bar Codes

**Code 39**



TEST-SHEET

**Matrix 2 of 5**



6543210

**Code 128**



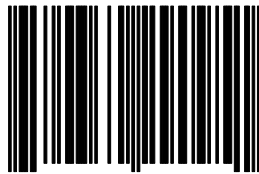
CODE 128

**Code 93**



123456-9\$

**EAN 13**



9 780330 290951

**Code 2 of 5**



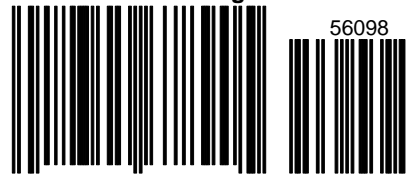
123456

**Interleaved 2 of 5**



1234567890

**UPC A with 5 digit addenda**



0 12345 67890 5

56098



5750/DO/UG

Rev B



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