Welch Allyn ®

SCANTEAM® 6180 WAND

Programming Menu

NOTES

Please Note: The programming features on each menu page are not supported in all models and software revisions of the SCANTEAM 6180. Notations are included if the feature is available only in certain models. Contact your Welch Allyn Sales Coordinator for the revision/model to fit your needs.

The SAMPLE BAR CODES page (near the end of the programming menu) contains bar code symbols that you may use to verify that you have programmed your SCANTEAM 6180 correctly.

SHOW FIRMWARE REVISION LEVEL

Scan the bar code below to display the revision level of the SCANTEAM 6180 firmware.

For example: After scanning the Firmware Revision Level bar code, "(C) WA93C" is output to the terminal/host device. The "C" at the end indicates the firmware is at revision level C.
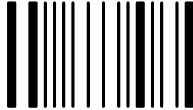
Firmware Revision Level

SHOW SOFTWARE NUMBER

Scan the bar code below to display the SCANTEAM 6180 software number. The resulting information will show if there is a special or custom download program resident in the scanner.

For example: After scanning the Software Number bar code, "33962001" is output to the terminal/host device. That number is the software number.
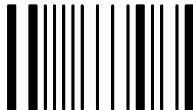
Software Number

SCANNER LABELING

The drawing below shows the serial number label that is attached to the scanner cord. The top number shows the SCANTEAM 6180 model number. This may also be a special 6 digit part number (custom orders). The serial number is on the second line. The "C" after the serial number indicates that the firmware Mask revision is C.

```
6180/J-2115N
J01   1234C
```

USER'S
NOTES

SYSTEM
GUIDE
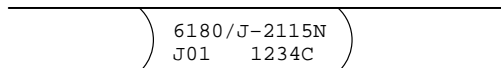
USE THIS PAGE
▪ As a general overview of the programming menu. The programming menu consists of two basic components as shown below.

SAMPLE MENU PAGE

Programming Menu

CODE SELECTION II (RETAIL)

USE THIS PAGE
▪ To select the pre-programmed astericked (*) values by scanning DEFAULT symbol.
▪ To enable or disable listed code selections.

scan ENTER

scan DEFAULT

scan EXIT

selections	scan	variables	scan	scan
UPC ID = c (HEX 63)	I	Version A	A	*Yes/No*
		Version D(2)	B	No*
		Version E0	C	*Yes/No*
		Version E1	D	*Yes/No*
		Check Digit Xmit	E	*Yes/No*
		Number System Xmit	F	*Yes/No*
		Version E Expand	G	Yes/No*
		2–Digit Addenda	H	*Yes/No*
		5–Digit Addenda	I	*Yes/No*
EAN ID = d (HEX 64)	II	EAN/JAN 13	A	*Yes/No*
		EAN/JAN 8	B	*Yes/No*
		Check Digit Xmit	C	*Yes/No*
		2–Digit Addenda	D	*Yes/No*
		5–Digit Addenda	E	*Yes/No*
UPC & EAN Addenda Req'd.	III	Enable		Yes/No*
MSI ID = g (HEX 67)	IV	Enable		Yes/No*
		Minimum Length	A	*04–Max
		Maximum Length	B	Min–48*
Plessey ID = n (HEX 6E)	V	Enable		Yes/No*
		Minimum Length	A	*04–Max
		Maximum Length	B	Min–48*

Notes:
(1) * Designates DEFAULT selections.
(2) UPC Version D is not supported at this time.

BAR CODE CHART

Programming Menu   **BAR CODE CHART**

USE THIS PAGE
▪ In combination with the adjoining menu pages to program the unit.
▪ The bar codes on this page correspond to symbols in shaded areas on adjoining menu pages. SCAN these bar codes in the sequence indicated on menu page to program desired selections and variables.

ROMAN NUMERALS	LETTERS	DIGITS	OTHERS
I	A	0 (YES)	ESCAPE
XI	B	1 (NO)	DEFAULT
II	C	2	W.A.
XII	D	3	
III	E	4	
XIII	F	5	
IV	G	6	
XIV	H	7	
V	I	8	
XV	J	9	
VI			
XVI			
VII			
XVII			
VIII			
XVIII			
IX			
XIX			
X			
XX			

MENU PAGE
▪ Each menu page represents one section of the programming menu. Use individual menu pages in combination with the bar code chart on the back page foldout to program the decoder.

▪ **USE THIS PAGE –** is a summary of the programming options (parameters) of each menu page.

▪ **ENTER –** Each menu page has its own unique ENTER bar code; scan this bar code to activate desired menu page.

▪ **DEFAULT –** Most menu pages have a DEFAULT bar code which allows the user to independently default menu pages to astericked (*) values without affecting, in any way, the rest of the programming menu. Default values can be easily selected from the desired menu pages by scanning the bar code sequence ENTER, DEFAULT, EXIT. Individual defaults for a specific selection can be made by scanning ENTER, ROMAN NUMERAL, DEFAULT, EXIT.

▪ **EXIT –** To move from one menu page to another, scan the EXIT bar code. This bar code must be scanned to end programming selection on each menu page before beginning to program on a different menu page.

▪ **SELECTIONS/VARIABLES –** Lists all of the options available on each menu page. Following each option are symbols in shaded areas. These symbols correspond to bar codes on the adjoining bar code chart.

MENU PAGE FACING (Not Shown)
▪ The page facing the menu is often used to supplement or clarify the material presented on the front of each menu page. The information and examples found here are specific to the individual menu page and contain, in some cases, charts and diagrams that must be used in order to determine the correct programming sequence.

BAR CODE DATA CHART
▪ The bar codes on this chart are assigned to a ROMAN NUMERAL, DIGIT, LETTER OR YES/NO symbol. These bar codes correspond to the symbols in shaded areas on the menu pages and are scanned in various combinations to enter programming sequences to the decoder. Bar codes on this page are meaningless unless an ENTER bar code from one of the menu pages is first scanned. When an ENTER bar code is scanned, the bar code chart becomes specific to that menu page and remains so until the EXIT bar code is scanned or another menu page is selected.

ESCAPE ▪ Use this bar code to cancel current programming sequence. All parameters remain as they were. Scan ESCAPE.

W.A ▪ Used in conjunction with the DEFAULT bar code to set all decoder parameters to the DEFAULT values.

DEFAULT ▪ Used in conjunction with the W.A bar code. The scan W.A followed by DEFAULT will set all decoder parameters on both menu pages to their DEFAULT value.

INPUT/OUTPUT
PARAMETERS & FORMAT

Baud Rate – Baud rate is a means of expressing data transmission speed. This programming selection permits the user to select any of eight (8) values ranging from 150 to 19200 baud.

Parity – Provides a means of checking character bit patterns for validity. The scanner can be configured to operate under Mark, Space, Even or Odd parity options.

Preamble – When enabled, one or more characters are transmitted as a header immediately preceeding scanned bar code data. Up to five (5) preambles can be selected and will be transmitted in the order they are made.

Postamble – Postambles are programmable data identifiers which follow the scanned bar code data. Up to five (5) postambles can be programmed.

Intercharacter Delay – When enabled, an intercharacter delay of between 01 and 99 milliseconds can be programmed. Incoming messages may not have an intercharacter delay greater than (1) byte time at the programmed baud rate.

Indicator Control – This programming selection provides control of the Beeper. When "Beep on Reset" is enabled, the Beeper will beep each time the system is reset. If "Beep on Good Read" is enabled, the Beeper will beep following a scan when the data has been accepted by the Host.

Append Buffer – Controls state of Append Buffer. This buffer must be enabled if Code 3 of 9 symbology with Append Option has been selected.

RTS/CTS – This selection on will require RTS/CTS handshaking protocol for RS–232 communication.

Data Format – Provides a means to set data word length . The scanner may be programmed for 7 or 8 data bits and 1 or 2 stop bits.

Low Power – When enabled, this programming selection puts the wand scanner in a low power mode. The LED will be pulsed to conserve power and will "wake up" when a transistion from black to white is seen.

PREAMBLE/POSTAMBLE

Preambles and Postambles are characters added by the units to scanned bar code data. These characters are sent with the bar code data to the terminal. Use the Hex–ASCII table below to find the alpha–numeric code to be used for programming a particular Preamble or Postamble.

To Clear Pre/Postamble: Scan: **Enter, III (or IV**), **Default**, and then **EXIT.**

PROGRAMMING EXAMPLE
To program a Horizontal TAB (HT) Postamble:

Scan: Enter, IV, D, 0, 9, EXIT.

HEX – ASCII CHART

NUL	00	DLE	10	SP	20	0	30	@	40	P	50	'	60	p	70
SOH	01	DC1	11	!	21	1	31	A	41	Q	51	a	61	q	71
STX	02	DC2	12	"	22	2	32	B	42	R	52	b	62	r	72
ETX	03	DC3	13	#	23	3	33	C	43	S	53	c	63	s	73
EOT	04	DC4	14	$	24	4	34	D	44	T	54	d	64	t	74
ENQ	05	NAK	15	%	25	5	35	E	45	U	55	e	65	u	75
ACK	06	SYN	16	&	26	6	36	F	46	V	56	f	66	v	76
BEL	07	ETB	17	'	27	7	37	G	47	W	57	g	67	w	77
BS	08	CAN	18	(	28	8	38	H	48	X	58	h	68	x	78
HT	09	EM	19	)	29	9	39	I	49	Y	59	i	69	y	79
LF	0A	SUB	1A	*	2A	:	3A	J	4A	Z	5A	j	6A	z	7A
VT	0B	ESC	1B	+	2B	;	3B	K	4B	[	5B	k	6B	{	7B
FF	0C	FS	1C	,	2C	<	3C	L	4C	\	5C	l	6C			7C
CR	0D	GS	1D	–	2D	=	3D	M	4D	]	5D	m	6D	}	7D
SO	0E	RS	1E	.	2E	>	3E	N	4E	^	5E	n	6E	~	7E
SI	0F	US	1F	/	2F	?	3F	O	4F	_	5F	o	6F	DEL	7F

USE THIS PAGE
■ To select baud rate and parity.
■ To add preambles, postambles, and/or code identification character to the bar code.
■ To set intercharacter delay to a specific value.
■ To control scanning indicator (beep &/or blink).
■ To enable the Append Buffer when Code 3 of 9 with append option is selected.
■ To enable CTS handshake, Data Format, Low Power features.

scan

ENTER

scan

DEFAULT

selections	scan	variables	scan	scan
BAUD RATE	I	150	A	
		300	B	
		600	C	
		1200	D	
		2400	E	
		4800	F	
		9600	G*	
		19200	H	
PARITY	II	Mark	A	
		Space	B	
		Even	C*	
		Odd	D	
PREAMBLE (up to 5 chars)	III	STX	A	
		Code ID	B*	
		Other ASCII	C	00–7F
POSTAMBLE (up to 5 chars)	IV	ETX	A	
		CR	B*	
		LF	C*	
		Other ASCII	D	00–7F
INTERCHAR. DELAY	V	No	A*	
		Yes	B	*00–99
INDICATOR CONTROL (4)	VI	Beep on Reset	A	*Yes/No
		Beep on Good Read	B	*Yes/No
APPEND BUFFER	VII	Enable		*Yes/No
RTS/CTS PROTOCOL (3)	VIII			Yes/No*
DATA FORMAT (5)	IX	7 Data, Parity, 1 Stop (8 Bit Data)	A*	
		7 Data, Parity, 2 Stop (8 Bit Data)	B	
		8 Data, Parity, 1 Stop (9 Bit Data)	C	
LOW POWER (5)	X			Yes/No*

scan

EXIT

Notes:

(1) * Designates DEFAULT selections.

(2) See facing page for more information and examples.

(3) This programming feature is not supported in all models/software revisions.

(4) This programming feature has been changed for Mask C. Refer to the cable labeling to determine which firmware you have.

(5) Available with Mask C **only**.

7

SYMBOLOGY SELECTION
INDUSTRIAL

SCANTEAM 6180 Programming Menu
Information and Examples

INDUSTRIAL CODE OUTPUT FORMATS

CODABAR	aSX . . . XS
Code 3 of 9	bSXX . . XXCS
INTERLEAVED 2 of 5	eXX . . . XXC
2 of 5	fXX XX
MSI	gXX . . . XX
Code 11	hXX . . . XXCC
Code 93	iXX XX
Code 128	jXX XX

Where: a = Codabar Code ID
b = Code 3 of 9 ID
e = Interleaved 2 of 5 ID
f = 2 of 5 ID
g = MSI (Plessey)
h = Code 11 ID
i = Code 93 ID
j = Code 128 ID
S = Start/Stop Character
X = Data Character
C = Checksum Character

NOTE: Proper parameters must be turned on for code identification. Start/stop and Checksum characters to be transmitted. **For maximum data security, disable the Codes not used.**

FULL ASCII CODE 3 OF 9 CHARACTERS

If full ASCII Code 3 of 9 decoding is enabled, certain character pairs within the bar code symbol will be interpreted as a single character. For example: $V will be decoded as the ASCII character SYN and /C will be decoded as the ASCII character #.

FULL ASCII CODE 3 OF 9 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	_	%0	o	+O	DEL	%T%X%Y%Z		

Character pairs /M and /N decode as a minus sign and period respectively.
Character pairs /P through /Y decode as 0 through 9.

MIN/MAX LENGTH

These variables are used to require that bar code symbols contain a character count within a certain range. Bar codes with counts outside this range will not be decoded.

EXAMPLE: Decode only those bar codes with a count of 9–20 characters.
Min. length = 09
Max. length = 20

EXAMPLE: Decode only those bar codes with a count of 15 characters.
Min. length = 15
Max. length = 15

USE THIS PAGE
- To specify desired bar code symbologies.
- To select symbology options.

scan

ENTER

scan

DEFAULT

selections		scan	variables	scan	scan
CODABAR	(ID = a)	I	Enable		*Yes/No
			Minimum Length	A	*01–MAX
			Maximum Length	B	Min–48*
			S/S Xmit	C	*Yes/No
CODE 39	(ID = b)	II	Enable		*Yes/No
			Minimum Length	A	*00–MAX
			Maximum Length	B	Min–48*
			S/S Xmit	C	Yes/No*
			Check Char. Req'd	D	Yes/No*
			Xmit Check Char.	E	Yes/No*
			Full ASCII	F	*Yes/No
			Append Option	G	Yes/No*
UPC	(ID =c)	III	Version A	A	*Yes/No
			Version E	B	*Yes/No
			(Version E Expand)	C	Yes/No*
			Number System Xmit	D	*Yes/No
			Check Digit Xmit	E	Yes/No*
EAN	(ID = d)	IV	EAN/JAN 13	A	*Yes/No
			EAN/JAN 8	B	*Yes/No
UPC &/or EAN			2–Digit Addenda	F	*Yes/No
			5–Digit Addenda	G	*Yes/No
INTERLEAVED	(ID = e)	V	Enable		*Yes/No
2 OF 5			Minimum Length (2)	A	02–MAX
			Maximum Length	B	Min–64*
			6, 14 & 16 Only	C	Yes/No*
			Check Digit Req'd	D	Yes/No*
			Xmit Check Char.	E	Yes/No*
CODE 2 OF 5	(ID = f)	VI	Enable		*Yes/No
			Minimum Length (2)	A	02–MAX
			Maximum Length	B	Min–64*
MSI	(ID = g)	VII	Enable		*Yes/No
			Minimum Length	A	*04–MAX
			Maximum Length	B	Min–48*
CODE 93	(ID = i)	VIII	Enable		*Yes/No
			Minimum Length	A	*00–MAX
			Maximum Length	B	Min–60*
CODE 128	(ID = j)	IX	Enable (All Modes)		*Yes/No
			Mode A	A	*Yes/No
			Mode B	B	*Yes/No
			Mode C	C	*Yes/No
			Minimum Length	D	*00–Max
			Maximum Length	E	Min–80*
			Leading <FNC1> Req'd.	F	Yes/No*
CODE 11 (3)	(ID = h)	X	Enable		*Yes/No
			2 Check Digits (N=1)	A	Yes/No*
			Xmit Check Char.	B	Yes/No*
			Minimum Length	C	*01–MAX
			Maximum Length	D	Min–48*

scan

EXIT

Notes:

(1) * Designates DEFAULT selections.
(2) The DEFAULT Minimum Length for 2/5 codes is 4 Characters.
(3) This programming feature is not supported in all models/software revisions.

9

SYMBOLOGY SELECTION
RETAIL

RETAIL CODE OUTPUT FORMATS

Non–Zero Suppressed UPC–A and UPC–E Output Format

UPC–A	cNXXXXXXXXXXC
UPC–A with 2 digit supplemental	cNXXXXXXXXXXC–SS
UPC–A with 5 digit supplemental	cNXXXXXXXXXXC–SSSSS
UPC–E	cNXXXXXXXXXXC
UPC–E with 2 digit supplemental	cNXXXXXXXXXXC–SS
UPC–E with 5 digit supplemental	cNXXXXXXXXXXC–SSSSS

Zero Suppressed UPC–A and UPC–E Output Format

UPC–A	cNXXXXXXXXXXC
UPC–A with 2 digit supplemental	cNXXXXXXXXXXC–SS
UPC–A with 5 digit supplemental	cNXXXXXXXXXXC–SSSSS
UPC–E	cNXXXXXXX
UPC–E with 2 digit supplemental	cNXXXXXXX–SS
UPC–E with 5 digit supplemental	cNXXXXXXX–SSSSS

EAN/JAN Output Format

EAN/JAN–13	dffXXXXXXXXXXC
EAN/JAN–13 with 2 digit supplemental	dffXXXXXXXXXX–SS
EAN/JAN–13 with 5 digit supplemental	dffXXXXXXXXXX–SSSSS
EAN/JAN–8	dffXXXXXC
EAN/JAN–8 with 2 digit supplemental	dffXXXXXC–SS
EAN/JAN–8 with 5 digit supplemental	dffXXXXXC–SSSSS

Where: c = UPC Code ID
d = EAN/JAN Code ID
N = Number System Character
f = Identification Flag
X = Data Character
C = Checksum Character
– = Space
S = Supplemental Character

NOTE: Proper parameters must be turned on for code identification, number system, checksum and supplemental characters to be transmitted. **For maximum data security, disable the Codes not used.**

UPC/EAN LENGTH CHART

selections	Basic Length	W/out Ck. Digit	W/out # Sys. Digit	W/2 Digit Addendum	W/5 Digit Addendum	TOTAL
UPCA	12	–01	–01	+02	+05	
UPCE [w/ 0's suppressed]	8	–01	–01	+02	+05	
UPCE [expanded]	12	–01	–01	+02	+05	
UPCD1	14	–01	–01	+02	+05	
UPCD2	20	–02	–01	+02	+05	
UPCD3	24	–02	–01	+02	+05	
UPCD4	28	–03	–01	+02	+05	
UPCD5	32	–03	–01	+02	+05	
EAN8	8	–01	N/A	+02	+05	
EAN13	13	–01	N/A	+02	+05	

USE THIS PAGE
- To specify desired bar code symbologies.
- To select symbology options.

scan

```
[barcode]
```

ENTER

scan

```
[barcode]
```

DEFAULT

selections		scan	variables	scan	scan
CODABAR	(ID = a)	I	Enable		*Yes/No
			Minimum Length	A	*01–MAX
			Maximum Length	B	Min–48*
			S/S Xmit	C	*Yes/No
CODE 39	(ID = b)	II	Enable		*Yes/No
			Minimum Length	A	*00–MAX
			Maximum Length	B	Min–48*
			S/S Xmit	C	Yes/No*
			Check Char. Req'd	D	Yes/No*
			Xmit Check Char.	E	Yes/No*
			Full ASCII	F	*Yes/No
			Append Option	G	Yes/No*
UPC	(ID =c)	III	Version A	A	*Yes/No
			Version E	B	*Yes/No
			(Version E Expand)	C	Yes/No*
			Number System Xmit	D	*Yes/No
			Check Digit Xmit	E	Yes/No*
EAN	(ID = d)	IV	EAN/JAN 13	A	*Yes/No
			EAN/JAN 8	B	*Yes/No
UPC &/or EAN			2–Digit Addenda	F	*Yes/No
			5–Digit Addenda	G	*Yes/No
INTERLEAVED 2 OF 5	(ID = e)	V	Enable		*Yes/No
			Minimum Length (2)	A	02–MAX
			Maximum Length	B	Min–64*
			6, 14 & 16 Only	C	Yes/No*
			Check Digit Req'd	D	Yes/No*
			Xmit Check Char.	E	Yes/No*
CODE 2 OF 5	(ID = f)	VI	Enable		*Yes/No
			Minimum Length (2)	A	01–MAX
			Maximum Length	B	Min–64*
MSI	(ID = g)	VII	Enable		*Yes/No
			Minimum Length	A	*04–MAX
			Maximum Length	B	Min–48*
CODE 93	(ID = i)	VIII	Enable		*Yes/No
			Minimum Length	A	*00–MAX
			Maximum Length	B	Min–60*
CODE 128	(ID = j)	IX	Enable (All Modes)		*Yes/No
			Mode A	A	*Yes/No
			Mode B	B	*Yes/No
			Mode C	C	*Yes/No
			Minimum Length	D	*00–Max
			Maximum Length	E	Min–80*
			Leading <FNC1> Req'd.	F	Yes/No*
CODE 11 (3)	(ID = h)	X	Enable		*Yes/No
			2 Check Digits (N=1)	A	Yes/No*
			Xmit Check Char.	B	Yes/No*
			Minimum Length	C	*01–MAX
			Maximum Length	D	Min–48*

scan

```
[barcode]
```

EXIT

Notes:

(1) * Designates DEFAULT selections.
(2) The DEFAULT Minimum Length for 2/5 codes is 4 Characters.
(3) This programming feature is not supported in all models/software revisions.

USER'S
NOTES

USER'S
NOTES

USER'S
NOTES

14

USER'S
NOTES

BAR CODE CHART

USE THIS PAGE

■ In combination with the adjoining menu pages to program the 6180.
■ The bar codes on this page correspond to symbols in shaded areas on adjoining menu pages. SCAN these bar codes in the sequence indicated on menu page to program desired selections and variables.
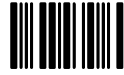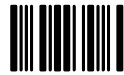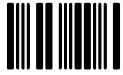
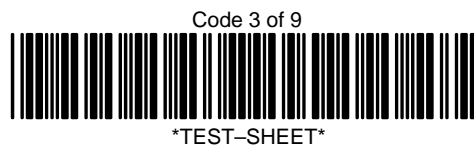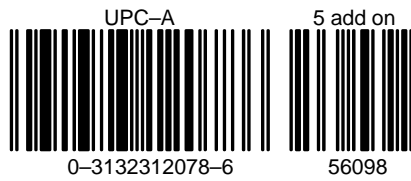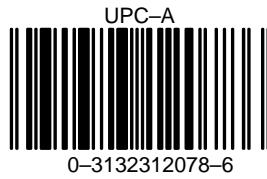| ROMAN NUMERALS		LETTERS	DIGITS	OTHERS
I	XI	A	ESCAPE	ESCAPE
II	XII	B	0 (YES)	DEFAULT
III	XIII	C	1 (NO)	W.A.
IV	XIV	D	2	
V	XV	E	3	
VI	XVI	F	4	
VII	XVII	G	5	
VIII	XVIII	H	6	
IX	XIX	I	7	
X	XX	J	8	
			9	
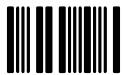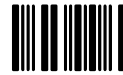
SAMPLE BAR CODES

■ This page contains bar code symbols in some of the most commonly used symbologies. You may use these codes to test that your system is properly programmed for a particular symbology.

UPC–A

0–3132312078–6

UPC–A   5 add on

0–3132312078–6   56098

EAN–13

97–8033029095–1

Code 128

CODE 128

Interleaved 2 of 5

1234567890

Codabar

B–:/.+00012B

Code 3 of 9

TEST–SHEET

WelchAllyn®