Slot Badge Scanner

Worth Data® SLx-USB Slot Badge Readers

Worth Data®
Slot Badge Bar Code Scanners

Models:
SLV-USB
SLI-USB

WORTH data

Owner's Manual

This Manual is for the following models:
SLV-USB & SLI USB

WARNING: This equipment generates uses and can radiate radio frequency energy. If not installed and used in accordance with the instruction manual, it may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user, at his own expense, will be required to take whatever measures may be required to correct the interference.

⚠**WARNING:** Cables, Cable Assemblies, and Printed Circuit Boards can expose you to chemicals including lead and lead compounds which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov

⚠**WARNING:** Electrical cords, cables, product cords, wire assemblies, and carrying cases made with PVC can expose you to chemicals including DEHP, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov

⚠**WARNING:** Plastic cases and product plastic housings made from polycarbonate or other plastics can expose you to chemicals including bisphenol A (BPA), which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov

Limited Warranty. (A) The SLI-USB & SLV-USB Products have a LIMITED WARRANTY of three years. Such warranty is against defects in materials and workmanship for the applicable warranty period which starts from the date of shipment, provided the hardware product remains unmodified and is operated under normal and proper conditions. The sole obligation of Seller for defective Hardware Products is limited to repair or replacement (at Sellers option) on a 'return to factory' basis with prior Seller's authorization. Shipment to Seller will be at be at Buyer's expense, unless it is within 30 days after the initial shipment of the Product to a U.S. location, in which case the Seller will offer to have the equipment sent back with a call tag at Seller's expense. Seller will return replaced or repaired equipment within warranty at Seller's expense. No charge will be made for repair or replacement parts for Products under warranty. (B) The aforementioned provisions do not extend the original warranty period of any Product that had either been repaired or replaced by Seller. (C) the above warranty shall not apply to any Product (i) which has been repaired or altered, except by Seller; (ii) which has not been maintained in accordance with any operating or handling instructions supplied by Seller, or (iii) which has been subjected to unusual physical or electrical stress, misuse, abuse, negligence or accident. EXCEPT FOR THE WARRANTY OF TITLE AND THE EXPRESS WARRANTIES STATED ABOVE, SELLER DISCLAIMS ALL WARRANTIES ON PRODUCTS FURNISHED HEREUNDER INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR USE. The stated express warranties are in lieu of all obligations or liabilities on the part of Seller for damages including but not limited to special or consequential damages arising out of or in connection with use or performance of the Product. Seller's liability for damages to Buyer or others resulting from the use of any Product or Service furnished hereunder shall in no way exceed the purchase price of said product or the fair market value said service, except in instances of injury to persons or property. Products for which warranty period has expired will be repaired at the price of materials plus the hourly rate for labor applied. For warranty question or support contact Worth Data at 831-458-9938.

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Chapter 1: *Introduction*

Worth Data's USB Slot Badge Bar Code Readers are bar code scanners that attach to a PC running Windows, macOS, Mac OS X, or Linux. Once installed the scanner provides bar code input data to any host computer program exactly as if the data had been typed at the keyboard, including function and control key support. USB Slot Badge Scanner features include:

• Scans Standard 1D Bar codes

These USB Scanners automatically read and auto-discriminate between Code 39, Full ASCII Code 39, STK Code, ITF Interleaved 2 of 5, Codabar, Code 128, EAN-13, EAN-8, UPC-E, UPC-A (with or without supplements), GS1 DataBar, MSI, LabelCode4, LabelCode5, Code 93, and Plessey.

• Choice of SLV-USB or SLI-USB

The SLV-USB Integrated USB Slot Badge Reader has a red Visible Light scanning element for standard bar code scanning – if you can see the bar code lines then you need the Visible light version.

The SLI-USB Integrated USB Infrared Slot Badge Reader with an Infrared (IR) scanning element for Security Badges. This allows the bar code to be hidden from the human eye but still visible to the bar code scanner. Typically, a secondary coating or ink covers the bar code on the badge - this cover is invisible to the IR scanner so all it sees is the hidden bar code underneath.

• Configuration is easy

The Reader is easily configured for your system by scanning a bar coded Setup Menu Card Deck. There are no dip switches, or programming that needs to be done from the computer to configure these scanners. All settings are saved in the unit until the operator makes any changes via the Setup Deck.

Chapter 2: *Installation*

Components of SLx-USB

In the event the shipping box shows damage on arrival, please note the damage on the carrier's receipt log. Open the box and inspect the contents for damage. If there is visible damage, or if the unit fails to work, contact us with the details of the trouble; we will be happy to send you a replacement.

The contents of your USB Scanner shipment should include some or all of the following:

1. USB Slot Badge Reader, **SLV-USB** or **SLI-USB**
2. The **C44-A USB** Cable hardwired into the unit (it is field replaceable in the future if needed)
3. Slot-Scanner Setup Card Deck - Used for setup changes

USB Installation for Windows, Linux or Mac

Step 1

The SLx-USB Slot Badge Readers have a USB cord that can be attached directly to the USB port on any PC running Windows, macOS, or Linux. The SLV-USB and SLI-USB use a hardwired **C44-A USB Cable**.

When you plug into the USB port on a computer running Windows 11, 10, 8, 7, Vista, XP, 2000, ME, 98SE, macOS, or Mac OS X, the operating system will sense the new device and proceed to install the necessary software for a HID USB Keyboard (Windows systems may ask for the original Windows installation media to install the needed USB drivers - be prepared). There are no additional drivers needed other than what is already standard in Windows or the macOS. To install the Integrated Reader on the USB port:

1. Plug the flat USB connector end of the **C44-A cable** into a USB port on the host computer or USB hub.
2. The computer will sense the USB device and install the necessary software. The necessary drivers are standard in both Windows and the Mac. In Windows, simply click “Next” or press ENTER at each prompt until the installation is complete.

If you have a problem with your USB installation, please see Chapter 6: USB Driver Issues for details

Step 2

Scanning Bar Codes

You can now scan a bar code badge and test the entry into your application or something like Notepad or Word. Anywhere you place your cursor and scan a badge the bar code data will be input just like keyboard entry. If you are not familiar with scanning bar codes, see ***Chapter 4: Slot Badge Scanning*** for details and suggestions.

Chapter 3: *SLx-USB Reader Setup*

Configuring the SLx-USB Reader

Turn on your computer: You should hear three beeps from the SLx-USB -- an indication that the reader is functioning correctly. The Power LED on the unit should also be red when powered up.

Find the ***SLx-USB Slot Badge Setup Deck*** - a deck of bar coded cards. This lets you easily configure the SLx-USB Reader to work with almost any computer system, and tailor its bar code reading and formatting characteristics precisely to your needs. To scan ***SLx-USB Slot Badge Setup Deck*** bar codes and configure your reader and you are new to bar code scanning be sure to read Chapter 4: Slot Badge Scanning.

These are the SLx-USB Reader's default settings. The SLx-USB Reader is shipped configured to these settings, and can be reset to them at any time by reading the Start Setup, Reset and End Setup bar codes on the Setup Cards. If you need to change any settings, or want to learn more about the SLx-USB Reader options, the next pages explain, step by step, how to set them and what they do.

Parameter	Default Setting	Parameter	Default Setting
Code 39	Code 39 enabled	MSI/Plessey	MSI/Plessey disabled
	Check Digit disabled		Check Digits not transmitted
	Start/Stop characters not		Label Code 4/5 disabled
	Accumulate Mode enabled		
	Caps Lock OFF		
2 of 5	I 2of 5 disabled	Code 128	Code 128 disabled
	6 digit code length		UCC-128/EAN disabled
	Check digit disabled		Bar Code ID's disabled
UPC/EAN	UPC/EAN enabled	Code 93	Code 93 disabled
	UPC Supplements disabled		Full ASCII extension disabled
	UPC-E compressed, NSC of 0		
	Transmit UPC-A in UPC-A format		
	ISBN conversion disabled		
	UPC-A NSC and EAN-13 first two characters and check digits transmitted		
	UPC-E NSC and EAN-8 first two characters and check digits not transmitted		
General			
Settings	NO preamble or postamble set		
	CR as Terminator Character Medium pitch beep tone		

Using the SLx-USB Slot Badge Setup Deck

To change setup you use the correct card from the SLx-USB Slot Badge Setup Deck included with your scanner. You can also download the Setup Deck Codes but you will need to cut out the sections to scan through the slot scanner - the page is formatted to print on Avery® Business Card Stock. You can find this PDF page on our website https://www.barcodehq.com/downloads.html

Find the ***SLx-USB Slot Badge Setup Deck*** - a deck of bar coded cards. This lets you easily configure the SLx-USB Reader to work with almost any computer system, and tailor its bar code reading and formatting characteristics precisely to your needs. To scan ***SLx-USB Slot Badge Setup Deck*** bar codes and configure your reader and you are new to bar code scanning be sure to read Chapter 4; Slot Badge Scanning.

1. If you have never scanned before, refer to **Chapter 4** for scanning instructions. To configure your reader using the **SLx-USB Slot Badge Setup Deck**, you must first scan the **Start Setup** card. Do this now. You'll hear two beeps. During Setup, nothing will be transmitted to your computer; the Setup Card Codes are strictly for configuring the reader. If you did not hear two beeps, try scanning the code again, until you hear the two beeps.
2. Next, choose the topic you want to change an option for, and scan its card. Let's use **Beep Tone** as an example. Scan the **Beep Tone** code now. You'll hear two beeps.
3. Then, choose the option you want to change, from the list next to the topic bar code you just scanned. For **Beep Tone**, the options range from **0** for the lowest pitch to **4** for the highest pitch. Using the "Barpad Card", scan the number or letter associated with the option you have selected. Let's change the beep pitch to **Highest**. Now scan the **4** on the Correct Barpad Card. You will again hear two beeps.
4. Now scan **End Setup Card** to complete the setup exercise. You'll hear three beeps. If you followed the instructions correctly and successfully changed beep tone to "highest", the three beeps will be higher in pitch than the other beeps had been. If they aren't higher in pitch, repeat the steps on this page until you are successful at changing the beep tone

Now that your beep tone is at the "highest" pitch, you may want to change it back to "medium" or a different setting. Repeat the steps above, selecting the option you prefer to "highest" in step 3. When you've successfully changed the beep pitch, and are ready to configure the reader for your specific application, scan **Start Setup** again. Continue scanning topics and options until you've made all the changes you desire, and then scan **End Setup** to complete setup.

The next section describes in detail each SLx-USB Reader option. Default settings are shown in bold in this manual and are marked with an * on the **SLx-USB Slot Badge Setup Deck**.

SLx-USB Setup Parameters

Beep Tone

Beep Tone	
Lowest	0
Low	1
Medium	**2**
High	3
Highest	4
Turn Beeper OFF, No “Laser Good” LED	5
Turn Beeper OFF, Yes “Laser Good” LED	6

The SLx-USB Reader gives you a choice of five different beep pitches.

Code 3 of 9 (Code 39)

Enable Code 39	**0**
Disable Code 39	1
Enable Full ASCII Code 39	**2**
Disable Full ASCII Code 39	3
Enable Code 39 Accumulate Mode	**4**
Disable Code 39 Accumulate Mode	5
Enable Start/stop character transmission	6
Disable Start/Stop character transmission	**7**
Enable Mod 43 Check Digit	8
Disable Mod 43 Check Digit	**9**
Enable Check Digit Transmission	A
Disable Check Digit Transmission	**B**
Caps Lock ON	C
Caps Lock OFF	**D**

For information about **Code 39, Full ASCII Code 39** and **Accumulate Mode**, see *Appendix A*. The Storage Tek variation of Code 39 is also supported any time Code 39 is enabled.

Enabling Start/Stop character transmission means that the WDP Reader will transmit the * Start/Stop characters to your computer along with the data. For example, data of 1234 would be transmitted as *1234*. Most people don't need this option, but it is useful if you want your software to be able to differentiate between keyboard and bar code data.

Enabling the Mod 43 Check Digit requires the units position of your data to match the calculation for the check digit explained in *Appendix A*. If you've enabled the check digit, **enabling Check Digit transmission** causes the reader to transmit the check digit to your computer along with the bar code data.

"**Caps Lock ON**" means that lowercase letters read as data will be transmitted as uppercase, and uppercase as lower. Numbers, punctuation and control characters are not affected. "**Caps Lock OFF**" means that letters will be transmitted exactly as read.

UPC/EAN (GS1-12/GS1-13)

Enable UPC/EAN	**0**
Disable UPC/EAN	1
Enable UPC/EAN Supplements	2
Disable UPC/EAN Supplements	**3**
Enable transmission of UPC-A NSC and EAN-13 first two digits	**4**
Disable transmission of UPC-A NSC and EAN-13 first two digits	5
Enable transmission of UPC-A/EAN-13 Check Digit	**6**
Disable transmission of UPC-A/EAN-13 Check Digit	7
Enable transmission of UPC-E NSC and EAN-8 first digit	8
Disable transmission of UPC-E NSC and EAN-8 first digit	**9**
Enable transmission of UPC-E/EAN-8 Check Digit	A
Disable transmission of UPC-E/EAN-8 Check Digit	**B**
UPC-E Compressed	**C**
UPC-E Expanded	D
EAN-8 observes 9 and A above	**E**
EAN-8 if forced to transmit 8 digits	F
UPC-A transmitted in UPC-A format	**(see below)**
UPC-A transmitted in EAN-13 format	(see below)
ISBN conversion disabled	**(see below)**
ISBN conversion enabled	(see below)

For general information about UPC and EAN, see ***Appendix D***.

Enabling supplements allows you to read 2 and 5-digit supplemental codes used with magazines and books. This disallows right- to-left reading of UPC/EAN codes, to assure that the supplement doesn't get skipped. This setting also allows for reading of the *UCC/EAN 128 Extended Coupon Code*. The Extended Coupon Code consists of a UPC(must have NSC of 5) or an EAN (NSC of

99) code along with a Code 128 supplemental code right next to it. This setting allows you to read the Code 128 supplement as long as the correct NSC characters are present in the UPC or EAN code.

Enabling transmission of UPC or EAN NSC's (leading digits, 1 for UPC; 2 for EAN-13) or Check Digits means that these digits will be transmitted to your computer along with the rest of the UPC or EAN data.

UPC-E Compressed Format transmits UPC-E codes as is; Expanded Format adds zeros to make them the same length as UPC-A.

UPC-E can be used in either normal **UPC-E format** (implicit NSC of 0) or UPC-E1 format (NSC of 1). **UPC-E1** settings are found in the **2 of 5 Code** parameter. Setting **8** enables UPC-E1 reading while **9** disables UPC-E1 (**9** is the default). It is very easy to read an EAN-13 bar code partially as UPC-E1, so don't enable UPC-E1 when reading EAN-13.

If you wish the **UPC-A data to be transmitted in EAN-13 format**, (with an additional leading 0 for the USA's country code), you should scan Terminator Character and F. Scanning E, the default, sets UPC back to no country code transmitted.

ISBN bar codes are EAN-13 bar codes where the first three digits are the "Bookland" country code of 978 for books and 977 for periodicals, and the following nine are the first nine digits of the ISBN.The ISBN settings are located in the **Terminator Character** parameter. To enable transmission of ISBN bar codes in ISBN format (the nine ISBN digits plus a new calculated mod-11 check digit), scan **Terminator Character** and **D**. Scanning **C**, the default, disables conversion to ISBN format.

2 of 5 Code

Enable Interleaved 2 of 5	0
Disable Interleaved 2 of 5	**1**
Enable Interleaved 2 of 5 check digit	2
Disable Interleaved 2 of 5 check digit	**3**
Enable check digit transmission	4
Disable check digit transmission	**5**
Enable Standard 2 of 5	6
Disable Standard 2 of 5	**7**
Enable UPC-E1	8
Disable UPC-E1	**9**

For information about Interleaved 2 of 5, see ***Appendix C***.

Enabling the check digit requires that the data's units position (last character) match the calculation for the check digit explained in ***Appendix C***. If you have enabled the check digit and want to transmit the check digit to the computer along with the rest of the bar code data, choose "Enable check digit transmission".

See the UPC/EAN parameter for more information on UPC-E1 format.

2 of 5 Data Length

Default Length	**06**

2 of 5 Code is so susceptible to interpreting partial scans as valid reads that the Reader uses fixed-length data as a safeguard. To choose a data length, scan it as a two-digit number using the Barpad Table. For example, to select 8-digit data length, you would scan a 0 and then a 8. Because Interleaved 2 of 5 is required to be an even number of digits in length, you must use an even number. If you're unsure of your bar code length, temporarily set length to 00, read a bar code, and count its digits.

Variable-length 2 of 5 codes are very dangerous.

Codabar

Enable Codabar	0
Disable Codabar	**1**
Enable CLSI Codabar	2
Disable CLSI Codabar	**3**
Disable Start/Stop character transmission	**4**
Enable Start/Stop character transmission	5

For information about Codabar, see ***Appendix E***.

CLSI format is a form of Codabar often used by libraries

Enabling Start/Stop character transmission means that the Reader will transmit the Start and Stop characters to your computer along with the bar code data. Enable transmission if you are varying the Start and Stop characters according to label type in order to differentiate between bar code data and data from the keyboard. Most people do not need to transmit the Start/Stop characters.

Code 93

Enable	0
Disable	**1**
Enable Full ASCII	2
Disable Full ASCII	3

For more information about Code 93, See ***Appendix G***.

Code 128

Disable Code 128	**0**
Enable Standard Code 128	1
Disable UCC-128/EAN-128	**2**
Enable UCC-128/EAN-128	3
Bar Code ID's transmitted	E
Bar Code ID's not transmitted	**F**

See ***Appendix B*** for details on Code 128 and UCC-128/EAN-128.

Bar Code ID's are characters assigned to each bar code type to identify that particular type of code. These Bar Code ID's can be used to identify what type of bar code you are using when you are not sure or you want your application to differentiate between the different types. The Bar Code ID's are assigned as follows:

Bar Code	ID	Bar Code	ID
Codabar	a	Code 39	b
UPC-A	c	EAN-13	d
I 2 of 5	e	2 of 5 (standard)	f
Code 128	g	Code 93	i
MSI	j		
UPC-E(0)	n	UPC-E1 (1)	o
EAN-8	p	Storage Tek	s
Plessey	x	LabelCode 4	y
LabelCode 5	z	RSS-14	r

MSI & Plessey

Disable MSI and Plessey	**0**
Enable MSI with 1 Mod 10 check digit	1
Enable MSI with 2 Mod 10 check digits	2
Enable MSI with 1 Mod 11 and 1 Mod 10 check digit	3
Transmit no check digits	**4**
Transmit 1 Check digit	5
Transmit 2 Check digits	6
Enable Plessey Code	7
Enable LabelCode5	8
Enable LabelCode4	9

Plessey has two check digits which are not transmitted. MSI, Plessey, LabelCode4, and LabelCode5 are mutually exclusive. For information about MSI codes, see ***Appendix F***.

If you've enabled the Mod 10 or Mod 11 check digit(s), enabling transmission of one or two check digits causes the WDP Reader to transmit it/them to your computer along with the bar code data.

Enabling check digit transmission (if check digit(s) are enabled) causes the WDP to transmit it/them to your computer along with bar code data.

GS1 DataBar

Disable GS1 DataBar RSS-14	**0**
Enable Standard 14 digits	1
Enable 14 plus Identifiers	2
Enable 14 plus UCC 128 Emulation	3

By default, standard GS1 DataBar (RSS-14) is disabled, scan 1 to enable. Options 3 and 4 enable the alternate GS1 DataBar formats. For more information on GS1 DataBar, see the GS1 website at https://www.gs1.org/standards/barcodes/databar

Preamble

A "Preamble" is a user-specified data string transmitted at the beginning of each bar code. For example, if you specify the preamble **@@** and read data of **123456**, "**@@123456**" would be transmitted to your computer.

The default is no preamble. To select a preamble, scan up to 15 characters from the "**Full ASCII MENU**" (available at the end of this manual), and then scan **SET** when you're done. To return to the no preamble setting, scan **CLEAR** here instead of scanning **SET** or any characters from the **Full ASCII MENU**.

You can trim 1-15 leading characters from bar code codes by scanning a ~ (tilde -- ASCII 126) followed by a single digit, 1 through F (A through F are for 10 to 15), as part of the Preamble. (Bar codes which are shorter than the amount-to-trim are transmitted with no trimming.) Consider the examples in the following table to understand how trimming works:

Bar Code Data	Preamble	Data Transmitted
123	XYZ	XYZ123
12345678	~3XYZ	XYZ45678
12345678	~9	12345678
12345	~A	~A12345
123456	~5	6

You can also trim selectively by bar code type. For example, you can trim 2 characters from Code 39 and a different amount from other bar code outputs. This is done by using the bar code ID character in conjunction with the tilde (~). A pre-amble of **~b2~c1** says trim **2** characters from the front of **Code 39** output and trim **1** character from the front of **UPC-A**. Refer to the Code 128 parameters previous discussion for a list of the ID character associated with each bar code type.

Emulating special keys in the Preamble:

Programmers and other advanced users can also embed keyboard codes in the preamble, for emulation of key presses specific to their computers, such as the left shift key or F12 key. This is done by specifying the ASCII or Unicode codes for one or more keys.

Below is an example of entering a Unicode character **ß (alt+0223)** - this can be done by scanning the following codes:

RS(Alt-ON) then **DC2(Ins)** then **NAK(↓)** then **NAK(↓)** then **FF(Pg Dn)** then **US(Alt-OFF)**

This replicates holding the **alt key** and typing **0223** on the ***number pad*** on the computer keyboard. You need to scan the characters for the Arrow Keys, Page Up, Page Down etc..to create the right Key - a 2 is the down arrow key or **NAK(↓)**.

RS (Alt-ON) and the other bar codes above are found on the **Full ASCII MENU**

For more details on the how to do this please see Chapter 5: Function and Control Key Support

You can also ***combine the Postamble & Preamble*** to make a longer string in the Preamble or Postamble using the 4 or 5 options in the **Terminator Characters** setting for details

A final use of the Preamble/Postamble is to enter a minimum/maximum length check for bar code data read. Use the Preamble or Postamble by entering **|*nnmm*** where "|" is ASCII 124, "***nn***" is the two digit minimum to be read and "***mm***" is the two digit maximum to be read.

For more information on the which key mapping to use please see Section: Function and Control Key Support

Postamble

"Postamble" refers to a user-specified data string transmitted at the end of each bar code. For instance, if you specify the postamble **@@** and read data of **123456**, "**123456@@**" would be transmitted to your computer.

To select a postamble, scan up to 15 characters from the "**Full ASCII MENU**", scanning **SET** when done. To return to no postamble (the default setting), scan **CLEAR** here instead of scanning **SET** or any characters from the **Full ASCII MENU**.

You can trim 1-15 trailing characters from bar code codes by scanning a ~ (tilde -- ASCII 126) followed by a single digit, 1 through F (A through F are for 10 to 15). (Bar codes which are shorter than the amount-to-trim are transmitted without trimming.) Consider the examples in the following table to understand the options of the Postamble:

Bar Code	Postamble	Data Transmitted
123	XYZ	123XYZ
12345678	~3XYZ	12345XYZ
12345678	~9	12345678
12345	~A	12345~A
123456	~5	1

Bar codes which are shorter than the sum of the Postamble trimming and Preamble trimming will be transmitted without trimming.

You can also trim selectively by bar code type. For example, you can trim 2 characters from Code 39 and a different amount from other bar code outputs. This is done by using the bar code ID character in conjunction with the tilde (~). A postamble of

~b2~c1 says trim **2** rightmost characters from **Code 39** output and trim **1** rightmost character from the **UPC-A**. Refer to the Code 128 parameters previous discussion for a list of the ID character associated with each bar code type.

Emulating special keys in the Postamble:

Programmers and other advanced users can also embed keyboard codes in the postamble, for emulation of key presses specific to their computers, such as the left shift key or F12 key. This is done by specifying the ASCII or Unicode codes for one, or more keys.

Below is an example of entering a Unicode character **ß (alt+0223)** - this can be done by scanning the following codes:

RS(Alt-ON) then **DC2(Ins)** then **NAK(↓)** then **NAK(↓)** then **FF(Pg Dn)** then **US(Alt-OFF)**

This replicates holding the **alt key** and typing **0223** on the ***number pad*** on the computer keyboard. You need to scan the characters for the Arrow Keys, Page Up, Page Down etc..to create the right Key - a 2 is the down arrow key or **NAK(↓)**.

RS (Alt-ON) and the other bar codes above are found on the **Full ASCII MENU**

For more details on the how to do this please see Chapter 5: Function and Control Key Support

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A final use of the Preamble/Postamble is to enter a minimum/maximum length check for bar code data read. Use the Preamble or Postamble by entering **|*nnmm*** where "|" is ASCII 124, "***nn***" is the two digit minimum to be read and "***mm***" is the two digit maximum to be read.

For more information on the which key mapping to use please see Section: Function and Control Key Support

You can also combine the Postamble & Preamble to make a longer string in the Preamble or Postamble using the 4 or 5 options in the see the **Terminator Characters** setting for details.

A final use of the Preamble/Postamble is to enter a minimum/maximum length check for bar code data read. Use the Preamble or Postamble by entering **|*nnmm*** where "|" is ASCII 124, "***nn***" is the two digit minimum to be read and "***mm***" is the two digit maximum to be read.

Reset

Don't scan **Reset** unless you're sure you want to restore the SLx-USB Reader to its default settings (as described on page 2-1), erasing all changes you've made, because that's exactly what **Reset** will do.

Characters

This setup option allows you to output ASCII characters different from the ones scanned. (Don't use this option to configure the SLx-USB Reader for your non-US keyboard -- instead, use the *Keyboard Country* option described below.)

For example: Suppose you want the SLx-USB Reader to output a hex 92 character every time you scan a 1 (hex 31); you want to remap hex 31 to hex 92, (If you're using 8 data bits, output of 80-F8 codes is possible.) The Full ASCII Menu has ASCII and hex values for the 128 characters.

1) Scan the **Start Setup** Bar Code
2) Scan the **Characters** Bar Code on the Setup Sheet.
3) Scan **3 1** and **9 2** to output hex **92** when reading a "**1**".
4) Scan up to 7 other pairs of character reassignments.
5) Scan **Set** when complete.
6) Scan **End Setup** to exit setup mode.

You can also eliminate characters by reassigning hex codes to FF. For example, to strip all $ (dollar sign) characters from transmission, you would follow the above instructions and scan **2 4 F F** in step 3.

Keyboard Country

This option configures the SLx-USB Reader for your choice of 15 keyboard country settings, such as USA (the default), UK, French, German, etc.

Scan the keyboard country bar code and then the two-digit code for your keyboard country (listed on the Reader Setup Menu), such as 14 for UK.

USA	00	French	01	German	02	Belgian	03
Fr. Canadian	04	Danish	05	Dutch	06	Italian	07
Latin America	08	Norwegian	09	Portuguese	10	Spanish	11
Swedish	12	Swiss	13	U.K.	14		

Terminator Characters

Enter (carriage return)	**0**
None	1
Tab	2
Preamble & Postamble - Output Normally	**3**
Preamble transmits Preamble+Postamble	4
Postamble transmits Preamble+Postamble	5

Depending on your application, you may wish the SLx-USB Reader to transmit bar code data to your computer with an Enter (carriage return), a Tab at the end, or with no extra terminating character at all.

If you need a terminator character other than CR or HT (such as LF for LINUX/UNIX), you can get it by specifying **None** here and then selecting your desired terminator character(s) through the Postamble specification.

You can also combine the Postamble & Preamble to make a longer string in the Preamble or Postamble using the 4 or 5 options. The default mode 3 sends the Preamble and/or the Postamble out however it is setup. Option 4 changes the output of the Preamble to include both the Preamble+Postamble characters together as a longer Preamble. Option 5 changes the output of the Postamble to include the Preamble+Postamble characters together as a longer Postamble.

Chapter 4: *Slot Badge Scanning*

Slot Badge Scanners let the user slide a bar coded card through a slot, similar to using the familiar magnetic stripe card scanners. The bar code must be oriented and positioned correctly on the card for this scanner to work. Typical applications include club membership cards, security badges, and library cards. It can also be used for reading bar codes on file folders, envelopes and any other thin, flat surfaces with bar codes printed along an edge. There are two types of bar code slot scanners:

- The SLV-USB Bar Code Slot Scanner is a high-resolution scanner using visible-red light.
- The SLI-USB with a high-resolution infrared-light scanner. This is useful for hiding the bar code number for security.

To read a card or other object with the bar code slot scanner, orient the card so that its bar code faces the lighted side of the scanner. Now make a continuous wipe motion through the slot.

For optimum use with the slot scanner, bar codes should be printed or applied so that the center of the bar code is .5" from the edge of the card.

The Slot Scanner can be permanently mounted to a desk or wall with double sided tape. If you have ordered SLV-USB, or SLI-USB Integrated Slot Badge Reader model, you will need the **SLx-USB Slot Badge Setup Deck** for setup changes.

The SLV-USB and the SLI-USB are integrated models with the decoder built in to the slot scanner itself. They are available as a USB interface ONLY.

Chapter 5: *Special Features*

Function and Control Key Support

The **SLx-USB** Reader can also transmit key sequences for **function**, **control**, **alt** (**command** and **option** keys on Macs), **cursor** and **shift** keys, for ease of use with the many software packages using these keys for menus or commands. These "keystrokes" are scanned in to your Preamble or Postamble in order to add them to every scan from your reader. For this to work, you must have Full ASCII Code 39 enabled on your reader (this is the default setting). To use them in your Preamble or Postamble. Scan the corresponding bar code from the Full ASCII menu to emulate the chosen key.

PC Key	Mac Key	Full ASCII Menu Bar Code	PC Key	Mac Key	Full ASCII Menu Bar Code
F1	F1	SOH (f1)	Left Arrow*	Left Arrow+	DC3 ( )
F2	F2	STX (f2)	Rt Arrow*	Rt Arrow+	DC4 (→)
F3	F3	ETX (f3)	Dn Arrow*	Dn Arrow+	NAK ( )
F4	F4	EOT (f4)	Up Arrow*	Up Arrow+	SYN ( )
F5	F5	ENQ (f5)	Pg Up*	Pg Up+	VT (Pg Up)
F6	F6	ACK (f6)	Pg Dn*	Pg Down+	FF (Pg Dn)
F7	F7	BEL (f7)	Home*	Home+	ETB (Home)
F8	F8	SO (f8)	End*	End+	CAN (End)
Numpad 5*	Enter	LF	Shift ON	Shift ON	EM (Shift ON)
Enter	Return	CR	Shift OFF	Shift OFF	SUB (Shift OFF)
F9	F9	SI (f9)	Control On	Control On+	FS (Ctrl ON)
F10	Cmnd On	DLE (f10)	Control Off	Control Off+	GS (Ctrl OFF)
Del	Del	DC1 (Del)	Alt On	Option On	RS (Alt ON)
Insert	Cmnd Off	DC2 (Ins)	Alt Off	Option Off	US (Alt OFF)

refers to the keys on the Number pad on the far right side of a PC keyboard. To emulate any of the keys above, scan the appropriate bar code from the FULL ASCII MENU. For example, to emulate the F5 key, scan the ENQ bar code.

these keys apply to Mac ADB interface ONLY. For Mac USB, you must use the keys in the table below.

PC Key	Mac Key	Full ASCII Menu Bar Codes	PC Key	Mac Key	Full ASCII Menu Bar Codes
Insert	Ins	NUL 0	Right Arrow	right arrow	NUL 6
Delete	del	NUL . (period)	Home	home	NUL 7
End	end	NUL 1	Up Arrow	up arrow	NUL 8
Down Arrow	down arrow	NUL 2	Page Up	page up	NUL 9
Page Down	page down	NUL 3	Windows ON	control ON	NUL C
Left Arrow	left arrow	NUL 4	Windows OFF	control OFF	NUL D
Line Feed	Line Feed	NUL 5	ENTER (num)	ENTER (num)	NUL E

This chart corresponds to the small center section of keys between the main letter keys and the Numeric keypad on the right of the keyboard and requires you to scan two bar codes from the FULL ASCII MENU - the NULL bar code and then the appropriate character. For example, to emulate the END key, scan the NULL bar code, then the 1 bar code.

Function keys F1 through F10, and numeric-pad keys

Function keys F1 through F10, and numeric-pad keys (such as Left Arrow and Del), are encoded by a single control character as shown in the table above. Simply scan the correct bar code from the Full ASCII MENU.

For example, if the SLx-USB reads the bar code **SOH** (ASCII 001 -- a control-A) from the Full ASCII MENU, it will transmit an F1 key sequence to your computer.

Function keys F11 and F12

Function keys F11 and F12 require two bar codes to be scanned to make these functions keys. The F11 key is created by combining the **Null** and **SOH**. The F12 key is created by combining the **Null** and the **STX** .

Shift, Ctrl and Alt keys

Shift, Ctrl and Alt keys require three sequences

1) The ON code generated when the Shift, Ctrl or Alt key is pressed.
2) The other key to be used in conjunction with the Shift, Ctrl or Alt key.
3) The OFF code generated when the Shift, Ctrl or Alt key is released.

For example, to properly emulate the keystrokes for Ctrl-C, you would scan the bar code for Control ON (**FS**), **C**, and Control OFF (**GS**).

Windows Key

The Windows key on a Windows keyboard is transmitted by scanning 4 bar codes - **NULL** and **C** for *Windows On* (pressing down) and **NULL** and **D** for *Windows Off* (releasing the key).

Macintosh Command and Option Keys on USB

When you have a SLx-USB Reader attached to a Macintosh Computer's USB port, to emulate the Command key, use the Windows key ON/OFF bar codes **NULL, C** (Command ON) and **NULL, D** (Command OFF) For the Option Key ON/OFF use **RS** (Option On) and **US** (Option Off).

Transmitting any ASCII character using its 3-digit ASCII code

You can also transmit any ASCII character from 000 to 255 by emulating the PC technique of typing a character's ASCII number on the numeric pad while holding down the Alt key. For example, to transmit ß (ASCII 225), you would scan the bar codes for:

Alt ON	**RS**
Down Arrow (*2 on the numeric pad*)	**NAK**
Down Arrow (*2 on the numeric pad*)	**NAK**
Numpad 5	**LF**
Alt OFF	**US**

Transmitting any Unicode character using its 4-digit code

You can also transmit any Unicode character by emulating the PC technique of typing a character's Unicode number on the numeric pad while holding down the Alt key. For example, to transmit ß (Unicode 0223), you would scan the bar codes for:

Alt ON	**RS**
Ins (*0 on the numeric pad*)	**DC2**
Down Arrow (*2 on the numeric pad*)	**NAK**
Down Arrow (*2 on the numeric pad*)	**NAK**
Pg Dn (*3 on the numeric pad*)	**FF**
Alt OFF	**US**

Note that Unicode takes more characters than ASCII - Alt+0223 in Unicode is ASCII 225 or Alt+225

Accumulate Mode

Accumulate Mode is an option (which can be enabled or disabled using the Reader Setup Menu's Code 39 section) allowing the reader to accumulate multiple bar codes in its buffer, then transmit them to the computer as if they had been a single bar code. This is useful for entering quantities and other variable data.

It works with Code 39 only, and can't be used with a check digit. When the reader reads a bar code with a leading space, it beeps and buffers the data with-out transmission. It continues to read and buffer bar codes (up to 40 characters) until it reads a bar code without a leading space. Then the entire buffer (including that last code) is transmitted as one long bar code. A bar code of a double minus (--) sign clears the buffer. Scanning a backspace code ($H) backspaces in Full ASCII mode. A handy code for Enter (as seen on the "Barpad" below) is a Start/Stop only. (No data.) If you don't have a Terminator Character programmed, you will have to scan a CR (see the Full ASCII menu) instead of the Enter bar code shown below.

This numeric "Barpad" illustrates Accumulate Mode. Scan 5, 3, 8, and Enter. The reader transmits a single message of 538.

1

2

3

3

4

5

6

7

8

9

Clear

Backspace

Enter

Chapter 6: *Troubleshooting*

General Troubleshooting

The reader initializes and then turns off.

- There is not enough power available on the USB port. If you are connected to a USB port on the keyboard or other peripheral, try connecting to a USB port on the main PC itself. You may need to buy a powered USB Hub with its own power supply - you can pick them up inexpensively at your nearest computer store.

Using USB, the reader powers up and beeps when a bar code is scanned but no data is transmitted.

- Go to the **Control Panel**, then to **System**, then **Device Manager**. Check your **HID** devices. Right click on the **HID** device to see if the device is working properly. If it is not, click on **Driver** and proceed to reinstall the driver. **See Appendix I for details for your operating system.**

The reader won't beep when reading bar codes

- Recheck all the connections using the installation section as a guide. Try reading a known good bar code - the test label on page 3-2, following the steps for scanning in **Chapter 4**; *Slot Badge Scanning*. If you're trying to read Code 39 bar codes with leading spaces (such as the Barpad on page 4-3) and have enabled **Accumulate Mode**, those bar codes will not be transmitted to your computer until you read a bar code without a leading space. Try reading the Test Label on page 3-2 as an example of a known good label.
- If the read failure is on Interleaved 2 of 5 codes, make sure the data length is the same that you selected on the Reader Setup Menu. Be sure you don't have the check digit enabled for Code 39 or Interleaved 2 of 5 if you're trying to read data without check digits.

Extra characters at the beginning or end of your bar code data

- Clear the Preamble and Postamble.
- Make sure you haven't enabled transmission of any start/stop characters, checksums, leading digits or terminator characters that you don't want transmitted. For UPC-E, select Compressed transmission if you don't want it padded with extra zeros.

The reader transmits incorrect data to the screen

- If the reader is transmitting punctuation characters (!@#$%^&*) when reading numeric bar codes, or transmitting letters in the wrong (upper/ lower) case, you may have a Num Lock, Caps Lock, shift or timing problem. Check your keyboard to see if the Num Lock or Caps Lock keys have been activated.
- If you're using Code 39, read page 2-4 to see if you've set Caps Lock properly for your application. If your Code 39 bar codes include punctuation characters %, $, / or +, the reader is seeing them as part of Full-ASCII Code 39 sequences. Using the Reader Setup Deck, disable Full ASCII Code 39.

Poor read rate

- Examine your bar codes to make sure they have dark bars, clearly defined bars and white spaces, and a "quiet zone" of at least 1/4 inch to the left and right. If the bars are grey, or so dark that they "bleed" into the white spaces, the person or organization printing them will need to adjust the printer or get a new ribbon or toner cartridge for it.
- Carefully follow the scanning instructions in **Chapter 4** when reading any and all bar codes. As straightforward as scanning may seem, many people who call Worth Data with a complaint about poor read rate are simply not doing it correctly.
- If you're using the **SLI-USB Infrared Slot Badge Scanner**, be sure the bar codes you're trying to read were printed with infrared-quality ink. Also, make sure if the bar code is hidden behind another ink printed over the bar code - or another laminate material covering the bar code - that the covering ink or material is *invisible* to Infrared. This enables the bar code to be hidden from eyesight, but still visible to the scanner.

Chapter 6: *USB HID Driver Issues*

The SLx-USB Slot Badge scanners do not need a special driver. They use the HID Keyboard driver built into most systems. The HID driver installation is usually automatic: A Windows, or macOS, pop up indicating that a new hardware device has been found will pop up and then shortly disappear. In some situations, the required files for the HID driver are not all found on the computer and the user may be prompted for their original Windows installation media. If the user **cancels** the HID driver installation at this point, the SLx-USB will not function properly and Windows **does not** automatically initiate a re-install.

Updating the driver in the Control Panel | Device Manager (varies with operating system) is required to re-install the HID driver.

Resolving incomplete, aborted or incorrect HID driver installation

The HID driver is built in to most versions of Windows as well as Mac OS 9.0, Mac OS X, and macOS systems, so driver installation is easy if not automatic. It is possible for the user to cancel the HID driver installation before it is completed and this results in problems.

For Windows HID Installation:

Restarting Windows and re-attaching the SLx-USB may initiate a re-installation. The SLx-USB still still may not work and you may need to update the driver. The user must then go into the device management utility in Windows. Location and operation of the device management utility is different depending on the version of Windows:

Windows 11 & 10:

1. Click the Windows **Start Menu**
2. Select **Settings**
3. At the Windows Settings Type: **Device Manager** into the “Find a setting” Box
4. Select **Device Manager** under the Search Box
5. Double Click on **Human Interface Devices**
6. Locate the USB Human Interface Device with a **!** in the icon.
7. Click on **Update Driver**
8. Follow instructions.

If Windows fails to find the driver on the computer's hard disk, you may have to insert and point to the original Windows installation media, or DVD, to complete the installation. However, the HID Keyboard driver is a standard component of the Windows Operating System so you should just be able to select “Use Best Available Driver” and it will install the correct driver by default. **Also make sure you have rights to add new hardware to your computer - many Windows installations problems can be solved by logging in as the Administrator of the computer which allows the user to add new Hardware**. In the Windows Control Panel you may need to change the User Account Settings using the User Account icon in the Control Panel.

Windows 8, 8.1:

1. Navigate to the Desktop Portion of Windows 8 (Click on the **Windows Key** or the **Desktop Tile**)
2. Open the **Charms Bar** by moving your Mouse to the Right Corner of the Screen
3. Click **Settings**
4. Click **Control Panel** - or Type ***Device Manag***er in the Search Box
5. Select **Hardware** tab.
6. Select **Device Manager** - If you do not see Device Manager click the "View by:" drop down and select "Small icons"
7. Double Click on **Human Interface Devices**
8. Locate the USB Human Interface Device with a **!** in the icon.
9. Click on **Update Driver**
10. Follow instructions.

If Windows 8 fails to find the driver on the computer's hard disk, you may have to insert and point to the original Windows 8, CD-ROM or DVD to complete the installation. The HID Keyboard driver is a standard component of the Windows Operating System so you should just be able to select “Use Best Available Driver” and it will install the correct driver by default. Also make sure you have rights to add new hardware to your computer - many Windows 8 installations problems can be solved by logging in as the Administrator of the computer with Hardware Installation Rights. In order to install new hardware in Windows 8 you may need to turn off the UAC (User Account Control). UAC is turned off using the User Account icon. UAC is turned on using
the Security Center icon.

Windows 7 & Vista:

1. Go to the **Start menu.**
2. Select **Control Panel**.
3. Switch to **Classic View** if you are in **Category View.**
4. Select **System**.
5. Select **Hardware** tab.
6. Select **Device Manager.**
7. Double Click on the" *Human Interface Devices*".
8. Right Click on the icon with a ! in the icon and select "**Properties**".
9. Click on **Update Driver.**
10. Follow instructions.

If Windows 7 or Vista fails to find the driver on the computer's hard disk, you may have to insert and point to the original Windows 7 or Vista CD-ROM to complete the installation. The HID Keyboard driver is a standard component of the Windows Operating System so you should just be able to select "Use Best Available Driver" and it will install the correct driver by default. Also make sure you have rights to add new hardware to your computer - many Windows 7 or Vista installations problems can be solved by logging in as the Administrator of the computer with Hardware Installation Rights. In order to install new hardware in Windows 7 or Vista you may need to turn off the UAC (UserAccount Control). UAC is turned off using the User Account icon. UAC is turned on using the Security Center icon.

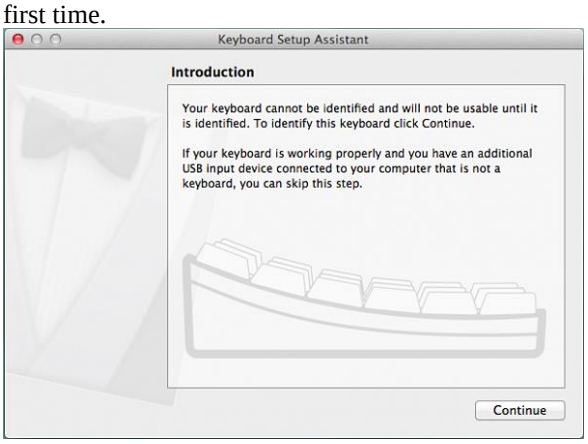
Windows XP:

1. Go to the *Start* menu.
2. Select *Control Panel*.
3. Switch to "*Classic View*" if in "*Category View*"
4. Select "*System*".
5. Select "*Hardware*" tab.
6. Select "*Device Manager*"
7. Double Click on the" *Human Interface Devices*"
8. Locate the USB Human Interface Device with a "!" in the icon.
9. Click on *Update Driver*
10. Follow instructions. If Windows fails to find the driver on the computer's hard disk, you may have to insert and point to the original Windows CD-ROM to complete the installation.
11. Click "*Finish*"

macOS Hid Keyboard Installation:

The SLx-USB uses the generic USB HID class (Human Interface Device) keyboard driver that is standard with Mac OS 9.0, Mac OS X, and macOS. All of these versions of the Macintosh operating system already include necessary files in the Mac System folders, so driver installation is easy if not automatic, and no downloads are required.

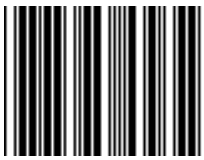
Because our scanners mimic keyboard input, your Mac may display a Keyboard Setup Assistant when plugging the scanner in for the first time.



If you do see a dialog like this appear, there is no configuration needed for the scanner, and no need to hit any keys on the keyboard. Simply close the Assistant window, and start scanning!

Appendix A: *Specifications for Code 39*

Code 39 (or Code 3 of 9) is the de facto standard of non-retail American industry. Code 39 is flexible, features a large character set, variable data length and density, and bi-directional readability. Code 39 is extremely accurate; substitution errors are almost nonexistent. Its character set consists of numbers **0** through **9**, upper case **A-Z**, and characters ***Space***, **$**, **%**. **/** **+** and **-**.



The name "Code 39" comes from both the fact that its character set originally contained 39 characters (it now has 43) and from its structure. Each character is formed of three wide and six narrow elements, made up of five bars and four spaces. Code 39's density can vary from a low of .75 characters per inch (cpi) to a high of 9.4 cpi. There should be a ¼" "***quiet zone***" (white space) to the left and right of the bar code. Code 39 uses an asterisk (*****) as a start and stop character. This character must precede and follow the data in the bar code. The TriCoder gives you the option of transmitting or not transmitting these characters when the bar code is read.

Exact specifications for Code 39 and other bar code symbologies can be obtained from ANSI at the address below:

American National Standards Institute
Customer Service
11 West 42nd St.
New York, NY 10036
http://web.ansi.org
document ANSI/AIM BC1-1995

Code 39 has several advanced features and functions that are discussed further in this appendix.

Code 39 Advanced Features and Functions

Mod 43 Check Character

Standard Code 39 can be printed with a "**Mod 43 Check Character**". This Mod 43 check character *cannot* be used with **Full ASCII Code 39**. The check character is derived by assigning a value to each character in the data to be bar coded from the table as follows:

Char	value	Char	value	Char	value	Char	value
0	0	B	11	M	22	X	33
1	1	C	12	N	23	Y	34
2	2	D	13	O	24	Z	35
3	3	E	14	P	25	-	36
4	4	F	15	Q	26	.	37
5	5	G	16	R	27	space	38
6	6	H	17	S	28	$	39
7	7	I	18	T	29	/	40
8	8	J	19	U	30	+	41
9	9	K	20	V	31	%	42
A	10	L	21	W	32		

Table A-1. Mod 43 Check character calculation for Code 39

Here is an example to illustrate how the check character is calculated for bar code data of **123XYZ**:

1. Take the sum of the values assigned to each character:
   1 + 2 + 3 + 33 + 34 + 35 = 108
   1 2 3 X Y Z
2. Divide the sum by **43**: (thus the name modulus 43)
   108/43 = 2 with a Remainder of 22

3. Find the character corresponding with the remainder.
   M (value 22) is the CHECK CHARACTER

The data becomes **123XYZM**, with **M** added as the Mod-43 check character.

Full ASCII Extension to Code 39

"**Full-ASCII Code 39**" expands the Code 39 character set to include all 128 ASCII characters. Symbols 0-9, A-Z and punctuation characters **.** and **-** are identical to their Code 39 representations. Lower-case letters, additional punctuation characters and control characters are represented by sequences of ***two Code 39*** characters.
This table depicts the Full ASCII character set as a function of Code 39 characters:

ASCII	Code 39	ASCII	Code 39	ASCII	Code 39	ASCII	Code 39
NUL	%U	SP	Space	@	%V	`	%W
SOH	$A	!	/A	A	A	a	+A
STX	$B	“	/B	B	B	b	+B
ETX	$C	#	/C	C	C	c	+C
EOT	$D	$	/D	D	D	d	+D
ENQ	$E	%	/E	E	E	e	+E
ACK	$F	&	/F	F	F	f	+F
BEL	$G	´	/G	G	G	g	+G
BS	$H	(	/H	H	H	h	+H
HT	$I	)	/I	I	I	i	+I
LF	$J	*	/J	J	J	j	+J
VT	$K	+	/K	K	K	k	+K
FF	$L	,	/L	L	L	l	+L
CR*	$M	-	- or /M	M	M	m	+M
SO	$N	.	. or /N	N	N	n	+N
SI	$O	/	/O	O	O	o	+O
DLE	$P	0	0 or /P	P	P	p	+P
DC1	$Q	1	1 or /Q	Q	Q	q	+Q
DC2	$R	2	2 or /R	R	R	r	+R
DC3	$S	3	3 or /S	S	S	s	+S
DC4	$T	4	4 or /T	T	T	t	+T
NAK	$U	5	5 or /U	U	U	u	+U
SYN	$V	6	6 or /V	V	V	v	+V
ETB	$W	7	7 or /W	W	W	w	+W
CAN	$X	8	8 or /X	X	X	x	+X
EM	$Y	9	9 or /Y	Y	Y	y	+Y
SUB	$Z	:	/Z	Z	Z	z	+Z
ESC	%A	;	%F	[	%K	{	%P
FS	%B	<	%G	\	%L	|	%Q
GS	%C	=	%H	]	%M	}	%R
RS	%D	>	%I	^	%N	~	%S
US	%E	?	%J	_	%O	DEL	%T, %X

Function/Control Key Support in HID Keyboard Mode

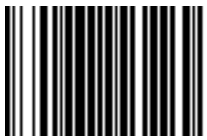
The SLx-USB can transmit **Function, Control**, **Alt** and **Shift Keys** for use with software programs that use these keys for menus or commands. For example, when the Slx-USB reads a bar code containing the Code 39 characters for SOH (Control-A), it will transmit the corresponding function key, F1 to your computer. These "keys" are created by combining two Code 39 characters. In order to read them and have them interpreted as the correct keystroke, the bar code reader must have "**Full ASCII Code 39**" reading enabled. The following chart shows the encoding scheme for both Windows and Macintosh computers.

Full ASCII Code	Code 39	IBM PC key transmitted	Mac key transmitted
SOH	$A	F1	F1
STX	$B	F2	F2
ETX	$C	F3	F3
EOT	$D	F4	F4
ENQ	$E	F5	F5
ACK	$F	F6	F6
BEL	$G	F7	F7
SO	$N	F8	F8
LF	$J	Num Pad 5*	Enter
CR	$M	Enter	Return
SI	$O	F9	F9
DLE	$P	F10	Command On
DC1	$Q	Del	Del
DC2	$R	Insert	Command Off
DC3	$S	Left Arrow*	Left Arrow
DC4	$T	Right Arrow*	Right Arrow
NAK	$U	Down Arrow*	Down Arrow
SYN	$V	Up Arrow*	Up Arrow
VT	$K	Page Up*	Page Up
FF	$L	Page Down*	Page Down
ETB	$W	Home*	Home
CAN	$X	End*	End
EM	$Y	Shift On	Shift On
SUB	$Z	Shift Off	Shift Off
FS	%B	Control On	Control On
GS	%C	Control Off	Control Off
RS	%D	Alt On	Option On
US	%E	Alt Off	Option Off
*Refers to the keys on the Number Pad on the far right side of a PC keyboard			

Instructions on encoding **Function**, **Control**, **Alt** and **Shift** keys with Full-ASCII Code 39 bar code characters.

Appendix B: *Code 128 Specifications*

Code 128 is a very powerful bar code, combining an extensive character set and variable length with compactness and error checking.



The character set contains all 128 ASCII characters with each character made up of three bars and three spaces. (No double characters are required to make up lower case ad special characters). Each element (bar or space) varies from one to four units in width, totaling 11 units of width per character. Code 128 contains two levels of error checking:

- Each character is checked for internal parity, **and**
- The last character is a checksum.

Code 128 has three subsets, A, B and C. Subset A contains alphanumeric characters and unprintable control characters, subset B contains alphanumeric characters plus printable control characters and subset C contains only numeric characters and uses a 2-character encoding scheme to create a more compact bar code. Code 128 uses an internal Mod 103 check character that is not displayed by the bar code reader. Code 128 bar codes can be made up of only one subset or may be a combination of several.

The Code 39 features of **Accumulate Mode**, **Caps Lock ON** and **Caps lock OFF** also apply to Code 128.

GS1-128/UCC-128/ EAN-128

GS1-128 UCC-128/EAN-128 Code is a subset of Code 128 adopted by the GS1 (UCC and EAN) council's product, container, and shipping label symbology. GS1-128 UCC/EAN-128 bar codes always start with a Function Code 1 character. In addition, a Function Code 1 character terminates all variable length fields unless they are the last field in the bar code. The TriCoder outputs the following for the special function codes and start sequences:

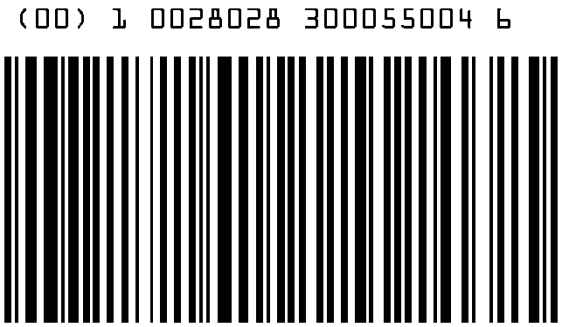
]C1 Start C/Function Code 1

^] (GS) Function Code 1 as a variable string terminator

If **UCC/EAN 128** is ***enabled***, the reader looks for the Function Code 1 as the leading character, and treats all such codes as UCC/EAN 128 bar codes.

A subset of GS1/UCC/EAN-128 is the **UCC or EAN Serial Shipping Container Code**; it's specification calls for a 19 digit UCC/EAN 128 code with an additional Mod 10 Check digit (20 digits in all). The Mod 10 Check digit is calculated the same as the *Interleaved 2 of 5* example in ***Appendix H***. It is the 20 digit data length (including the MOD 10 check digit) and the MOD 10 check calculation that distinguishes the *UCC* ***Serial Shipping Container Code*** from other UCC /EAN 128 bar codes.

GS1/UCC/EAN 128 is enabled in the SLx-USB *Setup: Bar Codes Section: Code 128*. If UCC/EAN 128 is ***enabled***, you will be able to read standard Code 128 bar codes, any UCC/EAN 128 bar code, as well as the 19 digit UCC/EAN 128 bar codes with the *Function 1* character and the Mod 10 check character. (Any 19 digit UCC/EAN 128 code will not be read unless the 20th digit computes as a valid Mod 10 check digit.



The **GS1-128** (UCC 128) specification is used extensively by the retail industry. If you have a requirement for a **UCC 128 Serial Shipping Container** bar code, be sure to follow the specification as closely as possible as many vendors will impose fines for non-conformance. For more information on UCC 128, GS1-US at:

GS1-US (Formerly Uniform Code Council, Inc.)
7887 Washington Village Drive, Suite 300
Dayton, OH 45459
937-435-3870
937-435-7317
info@gs1us.org
8:00 a.m. to 6 p.m. EST

Many of the specifications are available online at:

https://www.gs1us.org

Appendix C: *Interleaved 2 of 5 Code*

Interleaved 2 of 5 Code is a numeric-only, even-number-of-digits bar code. It is sometimes used in warehouse and industrial applications. A combination of five elements, two wide and three narrow represent each character. Odd-number position digits are encoded in the bars, even-number positions in the spaces.

123456

Interleaved 2 of 5 Code is so susceptible to partial scans being interpreted as valid reads that we recommend at least one of the following safeguards:

• Use one length of I 2 of 5 code. Using one length of data allows you to tell the SLx-USB to look for one length of I 2 of 5 code only. By default, the SLx-USB is set to look for a 6 digit I 2 of 5 code but you can set the length to something different using the Setup Menu Deck. Setting the length to 00 digits allows variable length bar codes scanning.

• Use a check digit. Worth Data' LabelRIGHT printing program automatically calculates and prints a check digit upon request using the method below:

A Mod 10 Check Digit is optionally available for use with I 2 of 5. The exact check digit calculation is illustrated below.

Interleaved 2 of 5 Mod 10 check digit calculation

Assume that the bar code data is **1987**.

Starting with the least significant digit (in this case, a 7), label the digits alternatively even and odd.

7 - even
8 - odd
9 - even
1 – odd

Take the sum of the odd digits:	**8 + 1 = 9**
Multiply the sum of the even digits by 3:	**(7 + 9) x 3 = 48**
Add the results of steps 3 and 4:	**9 + 48 = 57**
Subtract the result of step 5 from the next highest multiple of 10:	**60 - 57 = 3**
The checksum becomes the low-order digit:	1987**3**
Because the data now has an odd length, a leading zero is added, for the final result of :	**019873**

Appendix D: *UPC/EAN GS1 Specifications*

UPC symbols are found on almost all grocery products and many other retail items. The UPC code most people are familiar with (UPC-A) is a fixed-length (12 digits) numeric only code, with the first digit controlled by UPC coding assignments and the last digit a checksum. UPC-E and UPC-E1 are variations of the standard UPC-A code. Each digit is constructed of two bars and two spaces. UPC has very precise standards of code size, structure, and numbers to be used. This is also know as GS1-12

EAN is an international superset of UPC. EAN-13 has 13 digits, with the first two digits representing a country code. The final digit is, as with UPC, a check digit. EAN-8 is a shorter version on the EAN-13 code containing seven data digits and ending again with a checksum. This is also know as GS1-13

The exact UPC/EAN symbol specifications are available from:

GS1-US (Formerly Uniform Code Council, Inc.)
7887 Washington Village Drive, Suite 300
Dayton, OH 45459
937-435-3870
937-435-7317
info@GS1us.org
8:00 a.m. to 6 p.m. EST

Specifications are also available via the internet at:

https://www.gs1us.org

Keep the following guidelines in mind when printing UPC bar codes:
If you plan to use a "supermarket-type" in-counter scanner to read the codes, specify a bar code height of at least .9" for an optimal first read rate.
Make it an early practice to observe the numbering conventions of the GS1 Council. Do not label unmarked merchandise with a bar code whose numbers may conflict with those already assigned. If products with these numbers are not in your store now, they are likely to be in the future, causing conflicts in your inventory system.
The leading **N**umber **S**ystem **C**haracter, (the first number of the 11 digits to be entered) should conform to these UPC assignments:

0,6,7,8: Regular UPC 12 digit codes with numbers assigned by the GS1 UPC Council. (Do not use **0** as the leading number for in-store marking).

2 Store-marked random weight items of meat and produce.
3 Reserved for National Drug Code and Health Related Items.
4 Use this leading digit for in-store marking of non-food items.
5 Reserved for coupons. Do not use this today, or you will not be able to process coupons through your system tomorrow.

UPC 2 and 5-character supplemental codes

The UPC standards include the addition of a 2 or 5-character supplemental code used with magazines and paperback books. To read the supplements, you must first enable them using the SLx-USB Setup Deck.
NOTE: *Enabling the supplements disallows the reading of UPC codes from right to left to assure that the supplement does not get missed.*

UCC/EAN Extended Coupon Code

Enabling supplements also allows reading of the Extended Coupon Codes, providing that the UPC's NSC is a 5 or the EAN's country code is 99. The supplement is a Code 128 bar code in an Extended Coupon Code.

ISBN Specifications

ISBN (International Standard Book Numbering) bar codes are essentially EAN-13 with a 5 digit supplement, where the first 3 digits are the Bookland country codes of **978** for books and **977** for periodicals. Although the bar code contains 18 characters, the ISBN format uses only 9 of them, along with a newly calculated Mod-11 check digit. For example, a bar code containing the numbers 978055337062153495 would transmit as 0553370626 in the ISBN format. The SLx-USB has the option of transmitting in the ISBN format.

ISBN 0-553-37062

ISBN specifications are available from:

American National Standards Institute
Customer Service
11 West 42nd St.
New York, NY 10036
https://web.ansi.org

document ***ISO 2108:1992***

The UPC/EAN checksum character

The last character in a UPC-A, UPC-E, UPC-E1, EAN-13 or EAN-8 bar code is the checksum. For reference, these are the methods of calculation:

Checksum calculation for UPC-A, EAN-13 and EAN-8

Use Worth Data's phone number (it's not a real UPC-A code) as sample data:
18314589938

Assign even and odd positions, starting at the right and moving left:

8	**3**	**9**	**9**	**8**	**5**	**4**	**1**	**3**	**8**	**1**
odd	**even**	**odd**	**even**	**odd**	**even**	**odd**	**even**	**odd**	**even**	**odd**

Starting with the leading digit, 8, take the sum of all the characters in the odd positions.

8 + 9 +8 + 4 + 3 + 1 = 33

Multiply the result of step 1 by 3.

33 x 3 = 99

Now take the sum of all the even-position characters.

3 + 9 + 5 + 1 + 8 = 26

Add the result in Step 2 to the result in Step 3.

99 + 26 = 125

Subtract the result from the next higher multiple of 10.

Next higher multiple of 10 over 125 = 130

130 - 125 = 5

5 is the ***Modulo-10*** check character. The data to be printed becomes:

183145899385

This same formula is used for EAN-13 (using the 1-12 digits) and EAN-8 (using the 1-7 digits).

UPC-E Checksum Calculation

Use the sample data of 123456 to demonstrate the UPC-E checksum calculation:
The 6 digit UPC-E code is converted to a 10-digit code, using an expansion scheme based on the sixth digit:

Because the sample UPC-E code ends in a **6**, the insertion digits **0000** are inserted at the **sixth digit** (insertion position 6):

1234500006

Add the **N**umber **S**ystem **C**haracter of 0 to the sample data:

01234500006

Use the UPC-A check digit calculation described in the previous section to produce a check digit as if it were a UPC-A code. The check digit for the sample data is:
5

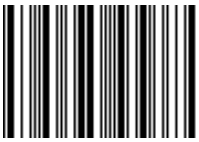
The complete 8 digit code consists of the *Number System Character*, the *original 6 digit code* and the *check digit*:

01234565

If the code ends in:	UPC-E Data	Insertion Digits	Insertion Position	10 digit code
0	abcde**0**	**00000**	3	ab**00000**cde
1	abcde**1**	**10000**	3	ab**10000**cde
2	abcde**2**	**20000**	3	ab**20000**cde
3	abcde**3**	**00000**	4	abc**00000**de
4	abcde**4**	**00000**	5	abcd**00000**e
5	abcde**5**	**0000**	6	abcde**0000**5
6	abcde**6**	**0000**	6	abcde**0000**6
7	abcde**7**	**0000**	6	abcde**0000**7
8	abcde**8**	**0000**	6	abcde**0000**8
9	abcde**9**	**0000**	6	abcde**0000**9

Appendix E: *Codabar Specifications*

Codabar is widely used in libraries, blood banks, the cotton industry and transportation industries. Its' character set consists of numbers **0** through **9**, and punctuation characters **+ . - / :** and **$**. Symbols **a, b, c, d, t, n, *** and **e** are used as start and stop characters. Characters are constructed of four bars and three spaces.



a12345b

Codabar is a numeric-only code, but different combinations of start and stop characters can be used to identify different types of labels. Codabar's variable data length and extremely low error rate make for a versatile bar code.

Codabar start/stop transmission

The Codabar Setup section lets you determine whether Codabar start/stop characters are transmitted or not. If you are varying start/ stop characters with different types of labels, you'll want to "Enable Stop/Start character Transmission". Start/stop character transmission can also be helpful if you want your program to differentiate between data coming from the Slot Badge reader and data coming from the keyboard. If neither of these situations apply, you'll probably want to disable it.

Appendix F: *MSI/Plessey Specifications*

Plessey is a variable length numeric only bar code. **MSI** Bar Code is a variable length, numeric-only code with an automatically appended Modulus 10 check digit. MSI is sometimes called ***Modified Plessey Code***. If the user specifies an additional check digit, the MSI code can be 14 digits long, otherwise it has a maximum length of 13 characters. This is how the MSI check digit(s) are calculated:

The MSI Mod 10 check digit is calculated as follows:

The example bar code data is:

82345

Form a number from the odd positions, starting in the units position.

835

Multiply the new number by 2

(835) x 2 = 1670

Add the digits of product

1 + 6 + 7 + 0 = 14

Add the even digits of the original number to the result in 3

2 + 4 + 14 = 20

Subtract the result from the next highest multiple of 10

20 - 20 = 0

New Check Digit

0

Data with check digit is:

823450

The MSI Mod 11 check digit is calculated as follows:

The example bar code data is:

943457842

Assign a checking factor to each number, starting with the units position of the number (in this example, the **2**) up to the highest order position (the **9**). Use checking factors of:

2,3,4,5,6,7,2,3,4,5,6,7...

Multiply the checking factor with its assigned number and add the products:

4 + 12 + 32 + 35 + 30 + 28 + 6 + 12 + 36 = 195

Divide the sum by 11

195/11 = 17 remainder 8

Subtract remainder from 11

11 - 8 = 3

New Check Digit

3

(If the remainder is 10, no check digit is added.)

Data with check digit is:

943457823

Appendix G: *Code 93 Specifications*

Code 93 is variable length, continuous, bi-directional, compact code. Code 93 is an alphanumeric bar code which consists of *43 data characters* (**0-9**,**A-Z**,**$/+%.-** and **Space**), *4 control characters*, and a *unique start/stop character*. The entire set of 128 ASCII characters is represented in Code 93 using combinations of *control characters* and *data characters*.

The control characters are ($), (%), (/), and (+). Full ASCII 93 is created by pairing these control characters with normal data characters. It is almost identical to the pairings for Code 39; Code 39 uses $M to produce a Carriage Return (ASCII 13) character -- Code 93 uses ($)M to produce the Carriage Return.

Code 93's two built-in check digits greatly minimize the possibility of reader substitution errors. These check digits are never transmitted by the bar code reader. Code 93's Start and Stop characters are also never transmitted.

The Code 39 features of **Accumulate Mode**, **Caps Lock ON** and **Caps lock OFF** also apply to Code 128.

If you have not decided which bar code type to use for your application and are considering using Code 93, while we agree that Code 93 is an excellent code, we believe that Code 128 is generally preferable because less space is required. Two space disadvantages of Code 93 are:

Code 93 **does not** have the numeric compression capability that 128 does, (compression results in 128's significantly less space for equivalent codes), and

Code 93 requires pairings to make all Full ASCII characters while 128 does not, (more space is required for lower case and upper case than Code 128).

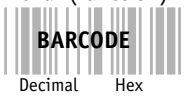
Appendix H: *ASCII Code Equivalent Table*

The 128 ASCII codes and their 3 digit decimal equivalents are detailed in the below table.

char	hex	3 digit ASCII	char	hex	3 digit ASCII	char	hex	3 digit ASCII	char	hex	3 digit ASCII
NUL	00	000	SP	20	032	@	40	064	‘	60	096
SOH	01	001	!	21	033	A	41	065	a	61	097
STX	02	002	"	22	034	B	42	066	b	62	098
ETX	03	003	#	23	035	C	43	067	c	63	099
EOT	04	004	$	24	036	D	44	068	d	64	100
ENQ	05	005	%	25	037	E	45	069	e	65	101
ACK	06	006	&	26	038	F	46	070	f	66	102
BEL	07	007	'	27	039	G	47	071	g	67	103
BS	08	008	(	28	040	H	48	072	h	68	104
HT	09	009	)	29	041	I	49	073	i	69	105
LF	0A	010	*	2A	042	J	4A	074	j	6A	106
VT	0B	011	+	2B	043	K	4B	075	k	6B	107
FF	0C	012	,	2C	044	L	4C	076	l	6C	108
CR	0D	013	-	2D	045	M	4D	077	m	6D	109
SO	0E	014	.	2E	046	N	4E	078	n	6E	110
SI	0F	015	/	2F	047	O	4F	079	o	6F	111
DLE	10	016	0	30	048	P	50	080	p	70	112
DC1	11	017	1	31	049	Q	51	081	q	71	113
DC2	12	018	2	32	050	R	52	082	r	72	114
DC3	13	019	3	33	051	S	53	083	s	73	115
DC4	14	020	4	34	052	T	54	084	t	74	116
NAK	15	021	5	35	053	U	55	085	u	75	117
SYN	16	022	6	36	054	V	56	086	v	76	118
ETB	17	023	7	37	055	W	57	087	w	77	119
CAN	18	024	8	38	056	X	58	088	x	78	120
EM	19	025	9	39	057	Y	59	089	y	79	121
SUB	1A	026	:	3A	058	Z	5A	090	z	7A	122
ESC	1B	027	;	3B	059	[	5B	091	}	7B	123
FS	1C	028	<	3C	060	\	5C	092	|	7C	124
GS	1D	029	=	3D	061	]	5D	093	{	7D	125
RS	1E	030	>	3E	062	^	5E	094	~	7E	126
US	1F	031	?	3F	063	_	5F	095	DEL	7F	127

LEGEND:

Char (function)



Full ASCII Menu

(Items in parentheses are transmitted in keyboard wedge mode.)

NUL 000 00	DLE(f10) 016 10	SP 032 20	0 048 30	@ 064 40	P 080 50	` 096 60	p 112 70
SOH(f1) 001 01	DC1(Del) 017 11	! 033 21	1 049 31	A 065 41	Q 081 51	a 097 61	q 113 71
STX(f2) 002 02	DC2(Ins) 018 12	“ 034 22	2 050 32	B 066 42	R 082 52	b 098 62	r 114 72
ETX(f3) 003 03	DC3(←) 019 13	# 035 23	3 051 33	C 067 43	S 083 53	c 99 63	s 115 73
EOT(f4) 004 04	DC4(→) 020 14	$ 036 24	4 052 34	D 068 44	T 084 54	d 100 64	t 116 74
ENQ(f5) 005 05	NAK(↓) 021 15	% 037 25	5 053 35	E 069 45	U 085 55	e 101 65	u 117 75
ACK(f6) 006 06	SYN(↑) 022 16	& 038 26	6 054 36	F 070 46	V 086 56	f 102 66	v 118 76
BEL(f7) 007 07	ETB(Home) 023 17	‘ 039 27	7 055 37	G 071 47	W 087 57	g 103 67	w 119 77
BS 008 08	CAN(End) 024 18	(040 28	8 056 38	H 072 48	X 088 58	h 104 68	x 120 78
HT 009 09	EM(Shift ON) 025 19	) 041 29	9 057 39	I 073 49	Y 089 59	i 105 69	y 121 79
LF 010 0A	SUB(Shift OFF) 026 1A	* 042 2A	: 058 3A	J 074 4A	Z 090 5A	j 106 6A	z 122 7A
VT(Pg Up) 011 0B	Esc 027 1B	+ 043 2B	; 059 3B	K 075 4B	[091 5B	k 107 6B	{ 123 7B
FF(Pg Dn) 012 0C	FS(Ctrl ON) 028 1C	, 044 2C	< 060 3C	L 076 4C	\ 092 5C	l 108 6C	| 124 7C
CR 013 0D	GS(Ctrl OFF) 029 1D	- 045 2D	= 061 3D	M 077 4D	] 093 5D	m 109 6D	} 125 7D
SO(f8) 014 0E	RS(Alt ON) 030 1E	. 046 2E	> 062 3E	N 078 4E	^ 094 5E	n 110 6E	~ 126 7E
SI(f9) 015 0F	US(Alt OFF) 031 1F	/ 047 2F	? 063 3F	O 079 4F	_ 095 5F	o 111 6F	DEL 127 7F

START SETUP

Scan **START SETUP** to enter setup mode

CLEAR

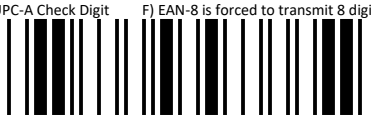
Clears Preamble & Postamble and resets current individual parameter back to default settings.

RESET

Warning: *Scanning this bar code after scanning START SETUP will reset the reader back to all of the default parameter settings.*

UPC / EAN – GS1

***0) Enable UPC/EAN**
1) Disable UPC/EAN
2) Enable Supplements
***3) Disable Supplements**
***4) Transmit UPC-A NSC**
5) Don't transmit UPC-A NSC
***6) Transmit UPC-A Check Digit**
7) Don't transmit UPC-A Check Digit
8) Transmit UPC-E NSC & EAN-8 Flag Ch
9) Don't transmit UPC-E NSC & EAN-8 Flag Ch
A) Transmit UPC-E & EAN-8 Check digit
*** B) Don't transmit UPC-E & EAN-8 Check digit**
*** C) UPC-E Compressed transmission**
D) UPC-E Expanded transmission
*** E) EAN-8 observes 9 & A above**
F) EAN-8 is forced to transmit 8 digits always



2 of 5 Length

Scan 2 digit length **(default is 06)**

Codabar

0) Enable Codabar
***1) Disable Codabar**
2) Enable CLSI Codabar
*** 3) Disable CLSI Codabar**
***4) Suppress start/stop characters**
5) Enable start/stop characters

MSI / Plessey

***0) Disable MSI**
1) Enable MSI 1 Mod 10 check digit
2) Enable MSI 2 Mod 10 check digits
3) Enable MSI Mod 11/10 check digits
***4) Transmit no check digit**
5) Transmit 1 check digit
6) Transmit 2 check digits
7) Enable Plessey
8) Enable Labelcode 5
9) Enable Labelcode 4

Keyboard Country

***00) USA**
01) French
02)German
03) Belgian
04) Fr. Canadian
05) Danish
06) Dutch
07) Italian
08) Latin Amer.
09) Norwegian
10) Portuguese
11) Spanish
12) Swedish
13) Swiss
14) U.K.

Postamble

Scan up to 15 characters from the **Full ASCII Menu.**
Scan **SET** when completed.

Beep Tone

0) Lowest
1) Low
*** 2) Medium**
3) High
4) Highest
5) No Beep Tone

SET

END SETUP

When all changes have been made, scan **END SETUP**

2 of 5 Code

0) Enable I 2 of 5
*** 1) Disable I 2 of 5**
2) Enable check digit
*** 3) Disable check digit**
4) Transmit check digit
*** 5) Don't transmit check digit**
6) Enable 2 of 5
*** 7) Disable 2 of 5**

Code 3 of 9

*** 0) Enable Code 39**
1) Disable Code 39
*** 2) Enable Full ASCII Code 39**
3) Disable Full ASCII Code 39
*** 4) Enable Accumulate Mode**
5) Disable Accumulate Mode
6) Transmit Start/Stop characters
*** 7) Don't transmit Start/Stop characters**
8) Enable Mod 43 Check Character
*** 9) Disable Mod 43 Check Character**
A) Transmit Mod 43 Check Character
*** B) Don't transmit Mod 43 Check Character**
C) Caps Lock ON
*** D) Caps Lock OFF**

RSS-14 (GS1-14)

*** 0) Disable RSS-14**
1) Standard 14 digits
***3) 14 + identifiers**
***4) 14 + UCC-128 emulation**

Code 128

0) Disable 128
***1) Enable 128**
2) Disable UCC/EAN-128
***4) Enable UCC/EAN-128**

Terminator Character

***0) None**
1) None
2) Tab
3) Output Preamble & Postamble normally
4) Preamble=Preamble+Postamble
5)Postamble=Preamble+Postbamble

Code 93

0) Enable Code 93
***1) Disable Code 93**
2) Enable Full ASCII Code 93
*** 3) Disable Full ASCII Code 93**

Characters

Scan up to 8 sets of hex characters to reassign and delete characters in the bar code output. Scan **SET** when completed.

Postamble

Scan up to 15 characters from the **Full ASCII Menu.**
Scan **SET** when completed.

1

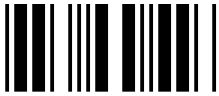
5

9

C

SLx-USB Setup Deck

2



SLx-USB Setup Deck

6

SLx-USB Setup Deck

0

SLx-USB Setup Deck

d

3

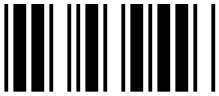
7

A

E

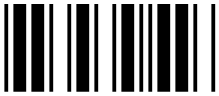
SLx-USB Setup Deck

4



SLx-USB Setup Deck

8



SLx-USB Setup Deck

B

SLx-USB Setup Deck

F