

1D Laser Barcode Scanner

User Manual

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Quick-start

Restore defaults

Scan the "Restore Custom defaults".



Restore Custom defaults



Write to Custom Defaults

Quick-start : 2.4G/433M

The factory has been matched and you can use it directly.

Matching Operation:

1, Press the button, the buzzer rang "Di-di-di" , the blue light is on, the scanner starts.

Note: In the 2.4g mode of the Bluetooth scanner , the light is green.

2, Plug the dongle, the blue light is on, the Dongle starts to work.

3, Please match the dongle and the scanner within 30 seconds!

4, Open a text, put the cursor in, Scan your barcode.



Match(match the scanner and the dongle)

Quick-start : Bluetooth

For Android、IOS

1, Press the button, the scanner starts, The red light flashing and the blue light is on which means in matching mode.

2, The Scanner name: "Scanner xxx", xxx is 3 random Numbers.

3, Choose the scanner is going to pair with the host, When the connection is successful, the red light goes out and the blue light is on , the buzzer rang "DI-di".

Recommending use 2.4G mode or wire-USB at the windows !

1, Switch the Bluetooth scanner to 2.4G mode, plug in the 2.4G-dongle, and scan the "Match" Barcode.

2, Use the USB-cable to connect the computer.

General Settings

Match and Network (2.4G, 433M)

Match:

Plug the dongle to your computer, the system will automatically install the driver, when it start to work , the blue light is always on, Match the scanner and the dongle by scan the “Match” Barcode.

(1) Matching successfully: the buzzer rang “ Di-da-di”, “DI-di-di”.

(2) Matching failed: the buzzer rang “ Di---en”.

If pairing fails, please unplug the dongle and try the matching operation again.

Network: One to one , More to one

One to one —one scanner to one dongle

1, Plug the dongle to your computer.

2, Scan the “Match” bar code to Match the dongle.

More to one —several scanners to one receiver.

If you have 3 scanners: scanner A, scanner B, scanner C.

1, Plug the dongle to your computer.

2, Match for the scanner A: A scan the “Match” Barcode.

3, Unplug the dongle and Plug the dongle again.

4, Match for the scanner B: B scan the “Match” Barcode.

5, Unplug the dongle and Plug the dongle again.

6, Match for the scanner C: C scan the “Match” Barcode.

7, After that ,3 scanners can transmit the data to the dongle.

At “More to one”, Which scanner is the data received?

You can set different prefix characters to distinguish which scanner uploads the data.

For example:

A scanner sets the prefix character “A”.

B scanner sets the prefix character “B”.

C scanner sets the prefix character “C”.

Working Mode

Two upload mode: Instant upload mode、 storage mode.

Instant upload Mode

Instant upload data to your computer.



Instant upload Mode

(1) Upload successful: The status light flashed and the buzzer rang “ Di ”.

(2) Upload failed: The red light flashed and the buzzer rang “ Di---en”.

If you receive upload-failed, Please confirm the match is successful.

If you receive upload-successful but no data, Please confirm the dongle in USB-HID mode.




Storage Mode

Scan and store barcode inside the scanner, and uploaded the data to your computer when you need it.



Storage Mode

Note: Instant upload mode and storage mode, the sound of reading barcode is different.

 Show total storage (Show total number of memory)	 Upload Data (Upload Data to your computer)
 Zero clearing (Clear all data in memory, Please use it with caution)	

1, Save successful: The status light flashed and the buzzer rang “ Di-en ”.










2, Save failed: The red light flashed and the buzzer range “ Di---en”, This indicates that there was not enough memory to save the bar code. Please upload the saved bar code by scanning “Upload Date” and then clear the Memory by scanning “Zero cleaning”.

3, Upload completed: the buzzer rang “ Di-do-en ”.

Transmission speed










HID-speed

Set the delay between each character, the range of 00-99 can be set. the larger the value, the slower.

 No delay	 HID-speed 5	 HID-speed 10
 HID-speed 15	 HID-speed 20	 HID-speed 30
 HID-speed 40	 HID-speed 50	 HID-speed 60
<p>1, In 2.4G or 433M mode, this parameter is stored in the dongle and defaults is "No delay". When there is no matching dongle, scanning this setting code is invalid.</p> <p>2, In Bluetooth mode, this parameter is stored in the scanner, the default is "HID-speed 30".</p> <p>3, In Bluetooth mode, If the data is lost, please set a slower HID speed.</p>		




Upload speed

For storage mode, set the time delay between each barcode, the range of 001-255 can be set. the larger the value, the slower, the defaults is "010".

 Upload-speed 000	 Upload-speed 001	 Upload-speed 002
 Upload-speed 005	 Upload-speed 010*	 Upload-speed 015
 Upload-speed 040	 Upload-speed 050	 Upload-speed 060

Interface setup

Suitable for wired scanner, Dongle, Base.

 USB-HID*	 USB-COM	 TTL/RS232
Note1: It supports 25 languages in USB-HID mode, Please refer to appendix 3.		
Note2: Dongle and wired-USB mode support USB-HID, USB -COM.		
Note3: In use, no data is uploaded . It may be set to USB-COM or TTL/RS232.		

Dongle indicator light



- (1) Blue LED always on means the dongle is normal.
- (2) Blue LED flashing means the dongle is broken or the USB port is bad.

Base indicator light





- (1) Blue LED always on indicates that the dongle is normal.
- (2) Blue LED flashing means the dongle is broken or the USB port is bad.
- (3) Green LED always on means the base and scanner are in good contact.

Wired USB function switch - wireless series

Plug in the USB cable, and the scanner will automatically switch to the wired mode. Unplug the USB cable and automatically switch to the wireless mode. You can disable the wired function by setting code.

 Wire-ON *	 Wire-OFF
---	--










Trigger Mode

 Keys Trigger *	 Continuous Mode
Continuous Mode can be used for a long shutdown time or never shut down.	
 Auto-sense-OFF	 Auto-sense-ON
Note: The sensor function can be turned on or off by pressing the button for 6 seconds .	

Power and Standby



Battery Reserve (show battery level)

Shutdown time setting		
 90s	 2min*	
 5min	 30min	
 60min	 166min40s	
There are 2 setting codes set for Not shutdown.		
 Not shutdown	 Not shutdown-Enabled once	 Shutdown

Battery level indication

- 1, The scanner starts, when the buzzer rang “Di-di-di” and the blue light is on with no red light flashing, it indicates that the battery is sufficient.
- 2, The scanner starts, when the buzzer rang “Di-di-di” and the blue light is on with the red light flashes three times, it indicates that the battery less than 20%, please charge the scanner as soon as possible.
- 3, The scanner starts, when the buzzer rang “Di-di-di” and the blue light is on with the red light flashes three times, it indicates that the battery less than 5%, The scanner enters the low battery protection mode. Please charge the scanner at least for 30 minutes.
- 4, Press the button, the scanner does not respond. Please charge the scanner at least for 30 minutes. If the scanner still cannot start, this indicates that the battery is broken and needs to be replaced.

LED tips during charging

Plugged the USB cable into the USB port of computer.

- 1, Charging mode: the status light is on with the red light flashing.
- 2, Charging completed: the status light is on and the red light goes out.
- 3, Micro-current charging: the status light off and the red light flashing, this is battery protection phase, please do not use it in this condition.

Bluetooth- Setup



1, Bluetooth scanner has three modes: Bluetooth, 2.4G, Wire.

2, The default mode of the scanner is Bluetooth mode.

Press the button, the buzzer rang “Di-di-di”, The red light flashing and the blue light is on which means in matching mode, the green light is on which means in 2.4G mode,

Bluetooth/2.4G Switch operation









1: Press the button for 10seconds, 2: Scan the settings barcode.

 Bluetooth-mode*	 2.4G-mode
--	--

Switch process description

In Bluetooth mode, Press and hold the button for 10seconds, the buzzer rang “ Di-da-di”, “DI-di-di”. Means that the switching operation is complete, Release the button, The green light is on which means the scanner successfully switches to 2.4G-mode.

In 2.4G mode, Press and hold the button for 10seconds, the buzzer rang “ Di-da-di”, “DI-di-di”. Means that the switching operation is complete, Release the button, The blue light is on which means the scanner successfully switches to Bluetooth-mode.

Bluetooth Mode		
 Bluetooth-HID	 Bluetooth-SPP	 Bluetooth-BLE
IOS keyboard		
 Show/hide IOS keyboard		
Note: Scan this barcode to show/hide the keyboard in IOS		
 Show/hide IOS keyboard double-click -ON*	 Show/hide IOS keyboard double-click -OFF	
Bluetooth connection settings		
 Off connection	 Connection initialization	

Buzzer setup

Turn on all sounds*		Turn off all sounds	
Sound frequency 2048HZ		Sound frequency 2731HZ	
Low volume	Medium volume	High volume *	
Sound settings			
Beep after good decode-ON*		Beep after good decode-OFF	
Boot sound-ON*		Boot sound-OFF	
Setup code sound-ON*		Setup code sound-OFF*	

End character

End character is used to mark the end of a barcode data.	
CR *	LF
Tab	CR+LF
None	

Capital & Lowercase

Swap capital/lowercase	All lowercase
All capital	Don't convert *

Barcode Reading function

Decoder global control



 All types -ON	 Default type *
--	---

ID, ON/OFF, Min-digits

Barcode type	Barcode-ID	ON/OFF default	Minimum digits
UPCA	b	ON	No
UPCE	c	ON	No
EAN13	e	ON	No
EAN8	d	ON	No
ISBN,ISSN	f	OFF	No
Code39	a	ON	1
Code32	C	OFF	No
Code128	g	ON	2
Code11	M	OFF	4
Code93	h	ON	1
Codabar	k	ON	4
交叉25码	i	ON	4
工业25码	j	ON	4
Pharmacode	P	OFF	2
MSI	l	OFF	4
GS1D	D	OFF	No
GS1L	L	OFF	No
GS1E	E	OFF	No

Barcode-ID:

The scanner defines ID characters for each type of barcode, we can use the Code ID prefix to identify the barcode type.







 Send ID-OFF *	 Send ID-ON
--	---

Minimum digits:

In order to prevent error codes, the scanner sets the minimum number of digits for barcode reading, Bar codes less than the default minimum digit are not readable.









Duplicate barcode upload Setup

For a period of time, the same barcode is not allowed to be read continuously to avoid repeated upload.









 Duplicate detection-OFF* (upload duplicate barcode)	 Duplicate detection-ON (Unable to upload duplicate barcode)
 Duplicate detection 1 S	 Duplicate detection 5 S
 Duplicate detection 10 S	 Duplicate detection 25 S
For example: Set the "Duplicate detection 5 S". After scanning A bar code, the scanning A bar code will not be uploaded within 5 seconds, and it will be handled as upload failure, Scan other barcodes and then scan A barcode to upload.	

Barcode Parameter Settings











UPCA

 UPCA-ON*	 UPCA-OFF
Check Digit: UPCA data is 12 bits, the 12th bit is the check digit, Default output.	
 Output UPCA check digit-ON*	 Output UPCA check digit-OFF
System character: The first digit of UPCA, Default output.	
 Output UPCA system character-ON*	 Output UPCA system character-OFF
UPCA to EAN13 UPCA to EAN13 by adding a "0" in front of it, and the type is converted to EAN13.	
 UPCA to EAN13-ON	 UPCA to EAN13-OFF*







UPCE

 UPCE-ON*	 UPCE-OFF
Check Digit: UPCE data is 8 bits, the eighth bit is the check digit, Default output.	
 Output UPCE check digit-ON*	 Output UPCE check digit-OFF
System character: The first digit of UPCE, Default output.	
 Output UPCE system character-ON*	 Output UPCE system character-OFF
UPCE to UPCA UPCE can be extended to UPCA, and the type is converted to EAN13.	
 UPCE to UPCA-ON	 UPCE to UPCA-OFF*






EAN13

 EAN13-ON*	 EAN13-OFF
Check Digit: EAN13 data is 13 bits, the 13th bit is the check digit, Default output.	
 Output EAN13 check digit-ON*	 Output EAN13 check digit-OFF
 Output EAN13 country code-ON*	 Output EAN13 country code-OFF*
EAN13 to ISSN/ISBN	
The 977 header is used for ISSN and 978 for ISBN.	
 EAN13 to ISSN-ON	 EAN13 to ISSN-OFF*
Set ON, the " 977" before the barcode is deleted, and the type is converted to ISSN.	
 EAN13 to ISBN-ON	 EAN13 to ISBN-OFF*
Set ON, the " 978" before the barcode is deleted, and the type is converted to ISBN.	







EAN8

 EAN8-ON*	 EAN8-OFF
Check Digit: EAN8 data is 8 bits, the eighth bit is the check digit, Default output.	
 Output EAN8 check digit-ON*	 Output EAN8 check digit-OFF
 Output EAN8 country code-ON*	 Output EAN8 country code-OFF







UPC&EAN Extra code

 UPC/EAN extra-code-OFF*	 UPC/EAN 2 Extra-code	 UPC/EAN 5 Extra-code
 UPC/EAN 2/5 Extra-code	 UPC/EAN Must have 2/5 Extra-code	

Code39

 Code39-ON*	 Code39-OFF
 Full-ASCII-OFF*	 Full-ASCII-ON
Code39 data can include all ASCII characters, Set ON to read full ASCII characters.	
 Output Code39 Start/Stop character-OFF*	 Output Code39 Start/Stop character-ON
Character * as the Start/Stop character of code 39.	

Code32

Code32 is extended by Code39, When Code32 is enabled, Code39 that complies with Code32 rules will also be output as Code32 first.	
 Code32-OFF*	 Code32-ON
 Output Code32 check digit-OFF	 Output Code32 check digit-ON*
 Output Code32 Prefix A -OFF	 Output Code32 Prefix A -Oon*







Code128

 Code128-ON*	 Code128-OFF
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Code93

 Code93-ON*	 Code93-OFF
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Code11

 Code11-ON	 Code11-OFF*
Code11 check digit Code11 barcode data contains check digit, which can be the last 1 (C check) or 2 (CK check) characters of the data.	
 Code11 No check*	 Code11 C/CK check
 Code11 C check	 Code11 CK check
<p>C check: One character check, CK check: Two characters check. No check: Code11 Without check, all check digit will be output. C/CK check: Code11 Automatic C / CK check, all check digits are not output. C check: Code11 perform C check, Do not output 1 check digit, At the same time, the scanner reads only the Code11 by C check. CK check: Code11 perform CK check, Do not output 2 check digits, At the same time, the scanner reads only the Code11 by CK check.</p>	



Codabar

 Codabar-ON*	 Codabar-OFF
CODABAR Start/Stop character Codabar Start/Stop characters are not output by default, When editing the Codabar, you can select the A,B,C,D characters as the Start/Stop characters.	
 Output Codabar Start/Stop character -OFF*	 Output Codabar Start/Stop character -ON
 Output Start/Stop character - allow 1	 Output Start/Stop character - allow 2
<p>allow 1: Start/stop characters are converted from uppercase to lowercase. allow 2: Start characters are converted from uppercase to lowercase, Stop characters changes as follows: A to t, B to n, C to *, D to e.</p>	


Industrial 2 of 5

 Industrial 2 of 5 -ON*	 Industrial 2 of 5 -OFF
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Interleaved 2 of 5

 Interleaved 2 of 5-ON*	 Interleaved 2 of 5-OFF
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MSI

 MSI -ON	 MSI -OFF*
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Pharmacode

 Pharmacode -ON	 Pharmacode -OFF*
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GS1

Contains:GS1 Data Bar, GS1 Data Bar Limited, GS1 Data Bar Expanded.	
 GS1-ON	 GS1-OFF*
GS1 Data Bar check digit GS1 Data Bar : The last bit is check digit.	
 Output GS1 Data Bar check digit -OFF*	 Output GS1 Data Bar check digit -ON
GS1 Data Bar Limited check digit GS1 Data Bar Limited : The last bit is check digit.	
 Output GS1 Limited check digit -OFF*	 Output GS1 Limited check digit -ON

Data editing

Relevant setting barcode

 Insert Characters	 Delete characters	
Barcode types(Barcode data: 068000-068018)		
 All barcode types	 UPCE	 UPCA
 EAN8	 EAN13	 ISBN/ISSN
 Code39	 Code128	 Code93
 Codabar	 Interleaved 2 of 5	 industrial 2 of 5
 MSI	 Code11	 China post
 GS1D	 GS1L	 GS1E
 Code32	Do not scan = All barcode types.	
Set save location (Barcode data: 068100-068107) (Different group Settings can take effect at the same time)		
 Group 1	 Group 2	 Group 3
 Group 4	 Group 5	 Group 6
 Group 7	 Group 8	Do not scan = Group 1
Edit location		
 Before barcode	From which place to start? Setup by barcode in "ASCII Barcode Table".	 After barcode
Save to take effect		
 Save Settings	 Clear settings	
















Example: Insert character

In the process of setting, scan the irrelevant barcode, the scanner will exit setting status.

Please scan in order 1,2,3, ...

Example: Code128=123456789



	Insert Ab before	Insert Cd from the third	Insert Ef after
1	 Insert Characters		
2	 All barcode types (Omit this step, default all barcode types)		
3	 Group 1 (Omit this step, default Group 1)		
4	 Before barcode	 003 ETX	 After barcode
5	 065 A	 067 C	 069 E
6	 098 b	 100 d	 102 f
	Each group can insert within 10 characters		
7	 Save Settings		
Setup result			
	Ab123456789	123Cd456789	123456789Ef
Clear insert character setting, Please scan in order 1,2.	 1, Insert Characters	 2, Clear settings	

1, set different bar code type, make this setting to this kind of barcode is effective.

2, set different group, make different Settings take effect at the same time












Example: Delete character

In the process of setting, scan the irrelevant barcode, the scanner will exit setting status.

Please scan in order 1,2,3, ...

Example: Code128=123456789



	Delete 1 bit before	Delete 3 bit from the third	Delete 3 bit after
1	 Delete characters		
2	 All barcode types (Omit this step, default all barcode types)		
3	 Group 1 (Omit this step, default Group 1)		
4	 Before barcode	 003 ETX	 After barcode
5	 001 SOH	 002 STX	 003 ETX
6	 Save Settings		
Setup result			
	23456789	1236789	123456
Clear delete character setting, Please scan in order 1,2.	 1, Delete characters	 2, Clear settings	






1, set different bar code type, make this setting to this kind of bar code is effective.

2, set different group, make different Settings take effect at the same time.






Quick delete character

 Delete 1 bit before	 Delete 1 bit after
 Delete 2 bit before	 Delete 2 bit after
 Delete 3 bit before	 Delete 3 bit after
 Delete 4 bit before	 Delete 4 bit after
 Code128- Delete 1 bit before	 Code39- Delete 1 bit after
 Delete 2 bit from the fourth	 Code128- Delete 2 bit from the third
 Clear Quick delete character Settings	

Quick insert character

 Insert A before	 Insert A after
 Insert A from the second	 Code128- Insert AB from the third
 Clear Quick insert character Settings	





Quick replaces character

 'A' replaces '1'	 "AB replaces '1'
 Code39- 'B' replaces '1'	 Code128- 'AB' replaces '1'
 Clear Quick replaces character Settings	









Time system









Only for the wireless series

Time setting and examples






 Output time	 Set Year Month Day
 Set Hour Minute Second	 Save settings

Examples

step	Set Y.M.D-20.06.10
1	 Set Year Month Day
2	 002 STX
3	 000 NUL/SP
4	 000 NUL/SP
5	 006 ACK
6	 001 SOH
7	 000 NUL/SP
8	 Save settings

step	Set H:M:S-16:34:30
1	 Set Hour Minute Second
2	 001 SOH
3	 006 ACK
4	 003 ETX
5	 004 EOT
6	 003 ETX
7	 000 NUL/SP
8	 Save settings

Date format

 default:2020.06.10	 American:06.10.2020	 British:10.06.2020
 Date delimiter character "."-default		 Date delimiter character "/"


Time output and examples

Time-prefix/suffix

 Time-prefix/suffix -OFF*	 Time-prefix	 Time-suffix
---	--	--


Insert time by data editing










Replace time with a key combination (NUL+SOH)

 NUL+SOH=Time-OFF	 NUL+SOH=Time-ON*
---	---



Example-Insert Time

In the process of setting, scan the irrelevant barcode, the scanner will exit setting status.

Example: Code128=123456789 

	Before barcode	From the third	After barcode
1		 Insert Characters	
2		 All barcode types (Omit this step, default all barcode types)	
3		 Group 1 (Omit this step, default Group 1)	
4	 Before barcode	 003 ETX	 After barcode
5		 000 NUL/SP	
6		 001 SOH	
7		 Save Settings	

Setup result

Time123456789	123Time456789	123456789Time
Clear insert character setting, Please scan in order 1,2.	 1, Insert Characters	 2, Clear settings

LED description

1, Wired scanner: Green light.

Green: Always on when working, Turn off when reading.

2, 2.4G wireless scanner: Blue + Red light.

Blue: Always on when working, Turn off when reading.

Red: Low power indicator, charging breathing light.

3, 433M wireless scanner: Blue + Red light.

Blue: Always on when working, Turn off when reading.

Red: Low power indicator, charging breathing light.

4, Bluetooth scanner: Blue + Green + Red light

Blue: Bluetooth status light.

Always on when working, turn off when reading.

Green: 2.4G status-light.

Always on when working, turn off when reading.

Red: Low power indicator, charging breathing light.

5, 2.4G-dongle/ 433M-dongle: Blue light.

Blue: Always on when working.

Flashing means the dongle is broken or the USB port is bad.

6, Base: Blue + Green light.

Blue: Always on when working.

Flashing means the dongle is broken or the USB port is bad.

Green: Always on means the base and scanner are in good contact.

FAQ

1, In wired mode, there is no data upload?

- ① Scanner is set to storage mode? Please set to instant upload mode.
- ② Scanner is set to USB-COM? Please set to USB-HID.

2, 2.4G/433M connected but no data upload?

- ① Scanner is set to storage mode?

Unplug and plug the dongle, Scan setting code: "Match" in 30 seconds, then scan "instant upload mode".

- ② Scanner is set to USB-COM?

Unplug and plug the dongle, Scan setting code: "Match" in 30 seconds, then scan "USB-HID".

3, Can't search the scanner?

- ① Make sure the scanner is in HID-mode.
- ② Whether the scanner in matching state?
- ③ Scan " Connection initialization ", delete the matched scanner, and re-pair operation.

4, Bluetooth connected but not upload?

- ① Scanner set to storage mode? Please set to Instant upload mode.
- ② Scanner set to 2.4G mode (check status light).
- ③ Please check the Bluetooth mode (HID,SPP,BLE).

5, Barcode characters is wrong?

- ① Set the scanner keyboard nations with using the keyboard.
- ② Set more slow HID speed.

6, Turn on, Scanner red light flashing three times and then shut down?

- ① Low battery, please charge.

Factory Defaults-Caution



Factory Defaults (caution)

More support, please contact the manufacturer.

Appendix 1: ASCII characters

















































Hex	Dec	Description	Hex	Dec	Description
#00	0	NUL(CTRL @)	#22	34	"
#01	1	SOH(CTRL A)	#23	35	#
#02	2	STX(CTRL B)	#24	36	\$
#03	3	ETX(CTRL C)	#25	37	%
#04	4	EOT(CTRL D)	#26	38	&
#05	5	ENQ(CTRL E)	#27	39	'
#06	6	ACK(CTRL F)	#28	40	(
#07	7	BEL(CTRL G)	#29	41)
#08	8	BS(Backspace)	#2A	42	*
#09	9	HT(Tab)	#2B	43	+
#0A	10	LF(CTRL J)	#2C	44	,
#0B	11	VT(CTRLK)	#2D	45	—
#0C	12	FF(CTRL L)	#2E	46	.
#0D	13	CR(Enter)	#2F	47	/
#0E	14	SO(CTRL N)	#30	48	0
#0F	15	SI(CTRL O)	#31	49	1
#10	16	DLE(CTRL P)	#32	50	2
#11	17	DC1(CTRL Q)	#33	51	3
#12	18	DC2(CTRL R)	#34	52	4
#13	19	DC3(CTRL S)	#35	53	5
#14	20	DC4(CTRL T)	#36	54	6
#15	21	NAK(CTRL U)	#37	55	7
#16	22	SYN(CTRL V)	#38	56	8
#17	23	ETB(CTRL W)	#39	57	9
#18	24	CAN(CTRL X)	#3A	58	:
#19	25	EM(CTRL Y)	#3B	59	;
#1A	26	SUB(CTRL Z)	#3C	60	<
#1B	27	ESC(ESC)	#3D	61	=
#1C	28	FS(CTRL \)	#3E	62	>
#1D	29	GS(CTRL])	#3F	63	?
#1E	30	RS(CTRL ^)	#40	64	@
#1F	31	US(CTRL _)	#41	65	A
#20	32	(space)	#42	66	B
#21	33	!	#43	67	C

















































Hex	Dec	Description	Hex	Dec	Description
#44	68	D	#66	102	f
#45	69	E	#67	103	g
#46	70	F	#68	104	h
#47	71	G	#69	105	i
#48	72	H	#6A	106	j
#49	73	I	#6B	107	k
#4A	74	J	#6C	108	l
#4B	75	K	#6D	109	m
#4C	76	L	#6E	110	n
#4D	77	M	#6F	111	o
#4E	78	N	#70	112	p
#4F	79	O	#71	113	q
#50	80	P	#72	114	r
#51	81	Q	#73	115	s
#52	82	R	#74	116	t
#53	83	S	#75	117	u
#54	84	T	#76	118	v
#55	85	U	#77	119	w
#56	86	V	#78	120	x
#57	87	W	#79	121	y
#58	88	X	#7A	122	z
#59	89	Y	#7B	123	{
#5A	90	Z	#7C	124	
#5B	91	[#7D	125	}
#5C	92	\	#7E	126	~
#5D	93]	#7F	127	DEL
#5E	94	^	#80	128	F1
#5F	95	_	#81	129	F2
#60	96	`	#82	130	F3
#61	97	a	#83	131	F4
#62	98	b	#84	132	F5
#63	99	c	#85	133	F6
#64	100	d	#86	134	F7
#65	101	e	#87	135	F8

















































Hex	Dec	Description	Hex	Dec	Description
#88	136	F9	#AA	170	Home Keypad
#89	137	F10	#AB	171	end Keypad
#8A	138	F11	#AC	172	Page Up Keypad
#8B	139	F12	#AD	173	Page Down Keypad
#8C	140	Left shift make	#AE	174	Up Arrow Keypad
#8D	141	Left shift break	#AF	175	Down Arrow Keypad
#8E	142	Right shift mark	#B0	176	Left Arrow Keypad
#8F	143	Right shift break	#B1	177	Right Arrow Keypad
#90	144	Left ALT mark	#B2	178	Center Keypad
#91	145	Left ALT break	#B3	179	Insert
#92	146	Right ALT mark	#B4	180	Delete
#93	147	Right ALT break	#B5	181	Home
#94	148	Left control mark	#B6	182	End
#95	149	Left control break	#B7	183	Page Up
#96	150	Right control mark	#B8	184	Page Down
#97	151	Right control break	#B9	185	Up Arrow
#98	152	/Keypad	#BA	186	Down Arrow
#99	153	*Keypad	#BB	187	Left Arrow
#9A	154	-Keypad	#BC	188	Right Arrow
#9B	155	+Keypad	#BD	189	
#9C	156	-Keypad	#BE	190	Num Lock
#9D	157	enter Keypad	#BF	191	Caps Lock
#9E	158	0Keypad	#C0	192	Scroll Lock
#9F	159	1Keypad	#C1	193	Print Screen
#A0	160	2Keypad	#C2	194	Pause
#A1	161	3Keypad			
#A2	162	4Keypad			
#A3	163	5 Keypad			
#A4	164	6 Keypad			
#A5	165	7 Keypad			
#A6	166	8 Keypad			
#A7	167	9 Keypad			
#A8	168	Insert Keypad			
#A9	169	Delete Keypad			


















































Appendix 2: ASCII Barcode Table

Barcode data: 069000-069194



























 000 NUL/SP	 001 SOH	 002 STX
 003 ETX	 004 EOT	 005 ENQ
 006 ACK	 007 BEL	 008 Back Space
 009 HT/TAB	 010 LF	 011 VT
 012 FF	 013 CR/ENTER	 014 SO
 015 SI	 016 DLE	 017 DC1
 018 DC2	 019 DC3	 020 DC4
 021 NAK	 022 SYN	 023 ETB
 024 CAN	 025 EM	 026 SUB
 027 ESC	 028 FS	 029 GS
 030 RS	 031 US	 032 SP
 033 !	 034 "	 035 #
 036 \$	 037 %	 038 &
 039 '	 040 ( 041)
 042 *	 043 +	 044 ,
 045 -	 046 .	 047 /

 048 0	 049 1	 050 2
 051 3	 052 4	 053 5
 054 6	 055 7	 056 8
 057 9	 058 :	 059 ;
 060 <	 061 =	 062 >
 063 ?	 064 @	 065 A
 066 B	 067 C	 068 D
 069 E	 070 F	 071 G
 072 H	 073 I	 074 J
 075 K	 076 L	 077 M
 078 N	 079 O	 080 P
 081 Q	 082 R	 083 S
 084 T	 085 U	 086 V
 087 W	 088 X	 089 Y
 090 Z	 091 [ 092 \"
 093]	 094 ^	 095 _

 096	 097 a	 098 b
 099 c	 100 d	 101 e
 102 f	 103 g	 104 h
 105 i	 106 j	 107 k
 108 l	 109 m	 110 n
 111 o	 112 p	 113 q
 114 r	 115 s	 116 t
 117 u	 118 v	 119 w
 120 x	 121 y	 122 z
 123 {	 124	 125 }
 126 ~	 127 DEL	 128 F1
 129 F2	 130 F3	 131 F4
 132 F5	 133 F6	 134 F7
 135 F8	 136 F9	 137 F10
 138 F11	 139 F12	 140 l_Shift on
 141 l_Shift off	 142 r_Shift on	 143 r_Shift off

 144 l_Alt on	 145 l_Alt off	 146 r_Alt on
 147 r_Alt off	 148 l_Ctrl on	 149 l_Ctrl off
 150 r_Ctrl on	 151 r_Ctrl off	 152 /(KP)
 153 *(KP)	 154 -(KP)	 155 +(KP)
 156 _(KP)	 157 Enter(KP)	 158 0(KP)
 159 1(KP)	 160 2(KP)	 161 3(KP)
 162 4(KP)	 163 5(KP)	 164 6(KP)
 165 7(KP)	 166 8(KP)	 167 9(KP)
 168 Inert	 169 Delete	 170 Home
 171 End	 172 Page Up	 173 Page Down
 174 Up	 175 Down	 176 Left
 177 Right	 178 Center	 179 Insert
 180 Delete	 181 Home	 182 End
 183 Page Up	 184 Page Down	 185 Up
 186 Down	 187 Left	 188 Right
 189	 190 Num Lock	 191 caps lock
 192 scroll lock		

Appendix 3: Language

 06005000 UNITED STATES	 06005009 FRANCE	 06005018 SERBIA/YUGOSLAVIA
 06005001 BELGIUM	 06005010 GERMANY	 06005019 SLOVENIA
 06005002 BRAZIL	 06005011 HUNGARY	 06005020 SPAIN
 06005003 CANADIAN-FRENCH	 06005012 ITALY	 06005021 SWEDEN
 06005004 CROATIA	 06005013 LATIN AMERICA	 06005022 SWITZERLAND (FRENCH)
 06005005 CZECHOSLOVAKIA (CZECH)	 06005014 NETHERLANDS	 06005023 SWITZERLAND (GERMAN)
 06005006 CZECHOSLOVAKIA (SLOVAK)	 06005015 NORWAY	 06005024 UNITED KINGDOM
 06005007 DENMARK	 06005016 POLAND	 06005025 UNIVERSAL
 06005008 FINLAND	 06005017 PORTUGAL	

