Tera

Model: D5100Y

Wired Handheld 2D/1D Barcode Scanner

User Manual

Ver.04.1.01

About This Manual

An asterisk (*) next to an option indicates the default setting.

Scanners are factory programmed for the most common terminal and communication settings.

If settings need to be changed, you can reprogram by scanning the barcodes in this manual.

Note:
For the correct use of the product, please read this manual carefully and do not scan configuration barcodes at random. Otherwise, some settings will be temporarily unavailable.

The scanner's keyboard layout default is a US keyboard.

Please do not hesitate to contact us if you have any questions.

Important Notice:

Please include your Order Number and Product Model Number in the email.

Official Customer Service

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https://www.tera-digital.com

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Chapter 1 General Settings

Factory Default Settings

If you aren't sure what programming options are in your scanner, or you have changed some options and want to restore the scanner to factory default settings, scan the barcode below.

Restore Defaults

Firmware Reversion

Scan the bar code below to output the current firmware reversion for the scanner.

Show Firmware Reversion

Power up Beeper

The scanner can be programmed to beep when it's powered up. Scan the Off barcode if you don't want a power up beep. Default = Power Up Beeper On.

On*

01

Off

Keyboard Country Layout
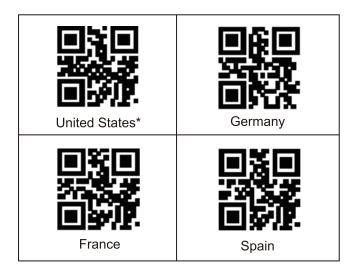
Your keyboard layout default is a US keyboard.
To change this layout, scan the appropriate Keyboard
Country barcode below. Note that if your keyboard
layout doesn't match your computer's, the outputs may
be incorrect. If the keyboard layout you need is not
listed below, please try the Virtual Kyeboard On
configuration.

United States*	Germany
France	Spain

Italy	Virtual Keyboard Off*
Virtual Keyboard On	Note: Be sure to enable Numberpad when virtual keyboard is activated. Otherwise, the output may not be as expected.

Chapter 2 Communications

USB HID-keyboard

No driver from the manufacturer is required for USB Keyboard connection. By default, the scanner is normally identified as a HID keyboard device and can scan barcodes into any text editors.

USB HID-keyboard*

USB-COM/Virtual Serial Port

Scan the following code to program the scanner to emulate a regular RS232-based COM Port.
No extra configuration and driver is necessary.
To exit USB-COM mode, please scan the USB HID Keyboard barcode.

USB-COM Mode

Chapter 3 Data Editing

Character Encoding

Working in keyboard mode, the scanner by default selects GBK code page.

GBK*

UTF-8

Raw Data

Unicode

Terminators (Termination Suffixes) - Enter, Tab

Termination suffixes are added to all symbologies at the end of scanned data. By default, the scanner comes with an Enter suffix. If you don't need it, please scan the None symbol; if you want to replace it with a Tab key, please scan the Horizontal Tab symbol.

Carriage Return*

Carriage Return & Line Feed

None (Clear Termination Suffixes)

Horizontal Tab

Replacement of Group Separators

A <GS> is a non-printable character to separate parts of a barcode which do not have a fixed length.
In some cases, you may need to replace or remove the Group Separator <GS> embedded in your barcodes.
To replace the GS character, following the steps below.

Step 1: Scan GS Replacement On

GS Replacement On

GS Replacement Off

Target Character

Step 2: Scan Target Character symbol.

Step 3: Check the Appendix - ASCII Character Chart for the hex value of the desired character. And scan the numeric codes from the programming chart respectively. (To remove the GS character, just scan GS Replacement Off)

For example, replace GS characters with a vertical bar character. First, scan GS Replacement On, then Target Character symbol, thrid, the digit code 7 and letter code C from the Programming Chart, lastly scan Save symbol from the Programming Chart.

Prefix and Suffix Overview

When a barcode is scanned, additional information is sent to the host computer along with the barcode data. This group of barcode data and additional, user-defined data is called a "message string". The selections in this section are used to build the user-defined data into the message string. Prefix and Suffix characters are data characters that can be sent before and after scanned data. By default, they are sent with all symbologies. Below is draw of the breakdown of a message string.
<Prefix><Barcode Data><Suffix><Termination Suffix>

Points to keep in mind

1. It is not necessary to build a message string. The selections in this section are only used if you wish to alter the default settings.
2. The maximum size of a prefix or suffix configuration is 15 characters.

Add a Prefix or Suffix

Step 1: Scan the Customize Prefix or Customize Suffix barcode.

Customize Prefix

Customize Suffix

Transmit Prefix

Do not Transmit Prefix

Transmit Suffix

Do not Transmit Suffix

Step 2: Determine the 2 digit hex value from the ASCII Character Chart for the desired characters.

Step 3: Scan the digits or letters respectively from the Programming Chart and scan Save barcode to save the changes.

Step 4: Scan Transmit Prefix or Transmit Suffix barcode to show the prefix or suffix.

Chapter 4 Scan Modes

Manual Trigger Mode

A scan mode for reading barcodes by pulling the trigger.

Manual Trigger Mode*

Continuous Scan Mode

A scan mode that continuously keeps scanning barcodes.

Continuous Scan Mode

Sensor-activated Mode

For sensor-activated mode, when the scanner is idle it has no illumination, and uses predominantly ambient light to detect if an object is moving in front of the scanner. The scanner is expected to reside in a fixed position. Whenever it detects activity in the field of view it will turn on the illumination and attempt to read a barcode. After reading the barcode the illumination will be default remain on for defined period, before it returns to idle state again.

Sensor-activated Mode

Chapter 5 Symbologies

Inverse Barcodes Reading

This selection is used to allow the scanner to read barcodes that are inverted. Inverse barcodes refer to barcodes with white elements on a black background.

Regular Only*

Both Regular and Inverse

EAN 13
EAN-13 On/Off

On*

Off

EAN-13 Addenda

This selection adds 2 or 5 digits to the end of all scanned EAN-13 data. Default = Off for both 2 digit and 5 digit Addenda.

2 digit Addenda On

2 digit Addenda Off*

5 digit Addenda On

5 digit Addenda Off*

EAN-13 Addenda Required

When required is scanned, the scanner will only read EAN-13 barcodes that have addenda. Default=Not Required.

Required

Not Required*

EAN 13 Check Digit

This selection allows you to specify whether the check digit should be transmitted at the end of the scanned data or not. Default=On.

Transmit Check Digit*   Don't Transmit Check Digit

EAN 8
EAN-8 On/Off

On*   Off

EAN-8 Addenda

This selection adds 2 or 5 digits to the end of all scanned EAN-8 data. Default = Off for both 2 digit and 5 digit Addenda.

2 digit Addenda On   2 digit Addenda Off*

12

5 digit Addenda On   5 digit Addenda Off*

EAN-8 Addenda Required

When required is scanned, the scanner will only read EAN-8 barcodes that have addenda.
Default=Not Required.

Required   Not Required*

EAN-8 Check Digit

This selection allows you to specify whether the check digit should be transmitted at the end of the scanned data or not. Default=On.

Transmit Check Digit*   Don't Transmit Check Digit

UPC-A
UPC-A On/Off

On*   Off

UPC-A Addenda

This selection adds 2 or 5 digits to the end of all
scanned UPC-A data. Default = Off for both 2 digit
and 5 digit Addenda.

2 digit Addenda On 2 digit Addenda Off*

5 digit Addenda On 5 digit Addenda Off*

UPC-A Addenda Required

When required is scanned, the scanner will only read UPC-A barcodes that have addenda.
Default=Not Required.

Required

Not Required*

UPC-A Check Digit

This selection allows you to specify whether the check digit should be transmitted at the end of the scanned data or not. Default=On.

Transmit Check Digit*

Don't Transmit Check Digit

Convert UPC-A to EAN-13

When UPC-A Converted to EAN-13 is selected, UPC-A barcodes are converted to 13 digit EAN-13 codes by adding a zero to the front. When Do not Convert UPC-A is selected, UPC-A codes are read as UPC-A.

UPC-A Converted
to EAN-13

Do not Convert UPC-A*

UPC-E

UPC-E On/Off

On*

Off

2 digit Addenda On

2 digit Addenda Off*

5 digit Addenda On

5 digit Addenda Off*

UPC-E Addenda Required

When required is scanned, the scanner will only read
UPC-E barcodes that have addenda.
Default=Not Required.

Required

Not Required*

UPC-E Check Digit

Transmit Check Digit*

Don't Transmit Check Digit

Code128

On*

Off

Code 39

Code 39 On/Off

On*   Off

If you are reading Code 39 barcodes, Code 32 Pharmaceutical should remain disabled; otherwise, the output might not be as expected.

Full ASCII Code 39

If Full ASCII Code 39 decoding is enabled, certain character pairs within the barcode symbol will be interpreted as a single character. Default= Off.

On   Off*

Code 39 Check Character

No Check Character indicates that the scanner reads and transmits barcode data with or without a check character. When Check Character is set to Validate Mod 43 Check, but Don't Transmit, the unit only reads Code 39 barcodes printed with a check character,

but will not transmit the check character with the scanned data. When Check Character is set to Validate Mod 43 Check and Transmit, the scanner only reads Code 39 barcodes printed with a check character, and will transmit this character at the end of the scanned data. Default = No Check Character.

Validate Mod 43 Check   No Check Character*

Transmit Check Digit   Don't Transmit Check Digit*

Code 32 Pharmaceutical

Code 32 Pharmaceutical is a form of the Code 39 symbology used by Italian pharmacies. This symbology is also known as PARAF.

On   Off*

Code 93

On*

Off

Codabar
Codabar On/Off

On*

Off

Codabar Start/Stop Characters

Transmit

*Don't Transmit

Interleaved 2 of 5
Interleaved 2 of 5 On/Off

On

Off*

Interleaved 2 of 5 Check Digit

No Check Digit indicates that the scanner reads and transmits barcode data with or without a check digit. When Check Digit is set to Validate Mod 10 Check, but Don't Transmit, the unit only reads Interleaved 2 of 5 barcodes printed with a check digit, but will not transmit the check digit with the scanned data. When Check Digit is set to Validate Mod 10 Check and Transmit, the scanner only reads
Interleaved 2 of 5 barcodes printed with a check digit, and will transmit this digit at the end of the scanned data. Default = No Check Digit.

Validate Mod 10 Check

No Check Digit*

Transmit Check Digit   Don't Transmit Check Digit*

Industrial 2 of 5

On   Off*

Matrix 2 of 5

On   Off*

Code 11

On   Off*

GS1 Databar
GS1 Databar On/Off

On

Off*

GS1 Databar Application Identifier Parentheses

Transmit Parentheses*

Don't Transmit Parentheses

GS1 Databar Limited
GS1 Databar Limited On/Off

On

Off*

GS1 Databar Limited Application Identifier Parentheses

Transmit Parentheses*   Don't Transmit Parentheses

QR Code

On*   Off

Data Matrix

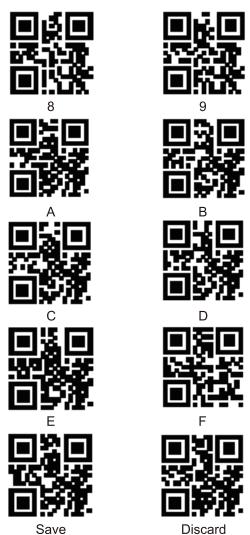On*   Off

PDF417

On*   Off

Chapter 6 Appendix
Appendix A: Programming Chart

This selection is only involved when you need to set up for variable parameters. For example, adding prefixes or suffixes, removing characters and replacing GS characters.

0

1

2

3

4

5

6

7

8

9

A

B

C

D

E

F

Save

Discard

Note: If you make an error while scanning the letters and digits (before scanning Save), scan Discard, scan the correct letters or digits, and Save again.

Appendix B: ASCII Character Chart

Hex Value	Dec Value	Character
00	0	NUL (Null char.)
01	1	SOH (Start of Header)
02	2	STX (Start of Text)
03	3	ETX (End of Text)
04	4	EOT (End of Transmission)
05	5	ENQ (Enquiry)
06	6	ACK (Acknowledgment)
07	7	BEL (Bell)
08	8	BS (Backspace)
09	9	HT (Horizontal Tab)
0a	10	LF (Line Feed)
0b	11	VT (Vertical Tab)
0c	12	FF (Form Feed)
0d	13	CR (Carriage Return)

0e	14	SO (Shift Out)
0f	15	SI (Shift In)
10	16	DLE (Data Link Escape)
11	17	DC1 (XON) (Device Control 1)
12	18	DC2 (Device Control 2)
13	19	DC3 (XOFF) (Device Control 3)
14	20	DC4 (Device Control 4)
15	21	NAK (Negative Acknowledgment)
16	22	SYN (Synchronous Idle)
17	23	ETB (End of Trans. Block)
18	24	CAN (Cancel)
19	25	EM (End of Medium)
1a	26	SUB (Substitute)
1b	27	ESC (Escape)
1c	28	FS (File Separator)
1d	29	GS (Group Separator)

0e	14	SO (Shift Out)
0f	15	SI (Shift In)
10	16	DLE (Data Link Escape)
11	17	DC1 (XON) (Device Control 1)
12	18	DC2 (Device Control 2)
13	19	DC3 (XOFF) (Device Control 3)
14	20	DC4 (Device Control 4)
15	21	NAK (Negative Acknowledgment)
16	22	SYN (Synchronous Idle)
17	23	ETB (End of Trans. Block)
18	24	CAN (Cancel)
19	25	EM (End of Medium)
1a	26	SUB (Substitute)
1b	27	ESC (Escape)
1c	28	FS (File Separator)
1d	29	GS (Group Separator)

1e	30	RS (Request to Send)
1f	31	US (Unit Separator)
20	32	SP (Space)
21	33	! (Exclamation Mark)
22	34	" (Double Quote)
23	35	# (Number Sign)
24	36	$ (Dollar Sign)
25	37	% (Percent)
26	38	& (Ampersand)
27	39	` (Single Quote)
28	40	((Right / Closing Parenthesis)
29	41	) (Right / Closing Parenthesis)
2a	42	* (Asterisk)
2b	43	+ (Plus)
2c	44	, (Comma)
2d	45	- (Minus / Dash)

2e	46	. (Dot)
2f	47	/ (Forward Slash)
30	48	0
31	49	1
32	50	2
33	51	3
34	52	4
35	53	5
36	54	6
37	55	7
38	56	8
39	57	9
3a	58	: (Colon)
3b	59	; (Semi-colon)
3c	60	< (Less Than)
3d	61	= (Equal Sign)
3e	62	> (Greater Than)

3f	63	? (Question Mark)
40	64	@ (AT Symbol)
41	65	A
42	66	B
43	67	C
44	68	D
45	69	E
46	70	F
47	71	G
48	72	H
49	73	I
4a	74	J
4b	75	K
4c	76	L
4d	77	M
4e	78	N
4f	79	O

50	80	P
51	81	Q
52	82	R
53	83	S
54	84	T
55	85	U
56	86	V
57	87	W
58	88	X
59	89	Y
5a	90	Z
5b	91	[(Left / Opening Bracket)
5c	92	\ (Back Slash)
5d	93	] (Right / Closing Bracket)
5e	94	^ (Caret / Circumflex)
5f	95	_ (Underscore)
60	96	' (Grave Accent)

61	97	a
62	98	b
63	99	c
64	100	d
65	101	e
66	102	f
67	103	g
68	104	h
69	105	i
6a	106	j
6b	107	k
6c	108	l
6d	109	m
6e	110	n
6f	111	o
70	112	p
71	113	q

72	114	r
73	115	s
74	116	t
75	117	u
76	118	v
77	119	w
78	120	x
79	121	y
7a	122	z
7b	123	{ (Left/ Opening Brace)
7c	124	| (Vertical Bar)
7d	125	} (Right/Closing Brace)
7e	126	~ (Tilde)
7f	127	DEL (Delete)