

TR-UMD5100



Model: D5100

Wireless 2D 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.

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User manuals are available in Spanish, French, Italian and German, and can be downloaded from our website. You may visit our official website via the link below or by scanning the given QR code:
<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

Software Version

Scan the bar code below to output the current software version for the scanner.



Show Software Version

Beeper Volume



High*



Medium



Low



Mute

Battery Level

To check the remaining battery level, please scan the following barcode. Make sure that your cursor is in a text box when scanning the barcode.



Show Battery Level

Power Timeout Timer (Sleep Timer)

When there is no activity within a specified time period, the scanner turns off. Scan the appropriate scanner power time-out barcode to change the timeout duration (in seconds).

Note: If there are no trigger pulls during the timer interval, the scanner turns off. Whenever the trigger is enabled, the timer is reset.



30s



60s



120s



300s*



600s



1800s



Never



Immediately

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 International configuration.



United States*



Germany



France



Spain



Italy



United Kingdom



Italy 142



International

Operation Modes

Real Time Mode

By default, the barcode scanner is in real time mode and it transmits scanned data into the host device immediately.



Real Time Mode*

Storage Mode

Storage mode is used to store barcode data when a scanner is out of range of its receiver or when performing inventory. The data is stored in the memory so it won't get lost when the barcode scanner is turned off. When the scanner's buffer space is full, any barcodes scanned generate an error tone. In order to clear the scanner's buffer, you must scan Clear All Codes.



Storage Mode

Upload All Stored Codes

In storage mode, the scanner won't transmit the data into the host device when the scanner is back in range. Users need to scan the following code to control the barcode scanner to transmit the stored data.



Upload All Stored Codes

Total Records

If you wish to output the total number of barcodes scanned when in storage mode, scan Total Records.



Total Records

Clear All Stored Codes

If you want to clear the scanner's buffer of all data accumulated in storage mode, scan Clear All Stored Codes.



Clear All Stored Codes

Chapter 2

Communications and Pairing

2.4GHz Wireless Pairing

If the scanner doesn't connect to the USB dongle automatically, please scan the following codes to pair the scanner to the dongle. First scan 2.4GHz Mode symbol and then scan Pairing symbol. Be sure to unplug the dongle before scanning the codes. (If the barcode scanner is not connected to the USB dongle when used wireless after scanning a test barcode, it will emit a good read beep followed by three quick beeps)



2.4GHz Mode



Pairing

USB HID-keyboard

No driver from the manufacturer is required for USB Keyboard connection.



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 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

Keyboard Conversion

Alphabetic keyboard characters can be forced to be all upper case or all lowercase. So if you have the following barcode: "AZErty", you can make the output "AZERTY" by scanning Convert All Characters to Upper Case, or to "azerty" by Convert All Characters to Lower Case.



Convert All Characters to Lower Case



Convert All Characters to Upper Case



Conversion Off*

Terminators (Termination Suffixes) - Enter, Tab

Termination suffixes are added to all symbologies at the end of scanned data.



Carriage Return



Line Feed



Carriage Return & Line Feed



Horizontal Tab



None (Clear Termination Suffixes)

Timestamp

If you want to record the time and date for every scan, scan either Time & Date Prefix or Time & Date Suffix. If the time and date stamp doesn't match your computer's, contact Tera customer service for Time Sync Tool.



Show Current Time & Date



Time & Date Prefix



Time & Date Suffix



Clear Timestamp

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 or the GS character, following the steps below.

Step 1: Scan GS Replacement On



GS Replacement On



GS Replacement Off

Step 2: Check the Appendix - ASCII Character Chart and scan the barcode on the rightmost column that represents the character you need.

(To remove the GS character, just scan GS Replacement Off)

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. You can add any prefix or suffix from the Appendix ASCII Character Chart.

3. Enter prefixes and suffixes in the order in which you want them to appear on the output.
4. The maximum size of a prefix or suffix configuration is 16 characters.

Add a Prefix or Suffix

Step 1: Scan the Add Prefix or Add Suffix symbol



Add Prefix



Add Suffix

Step 2: Scan the barcode in the rightmost column which represents the character you need.

For example, add an @ as a prefix, you should scan Add Prefix, then the 64th symbol from the Appendix ASCII Character Chart.

(To clear all prefixes or suffixes, scan the Add Prefix or Add Suffix symbol again.)

Note: In keyboard applications, ASCII Control characters can be represented in 3 different ways, as shown in the Appendix A Control Characters. The CTRL + X function is OS and application dependent. If you need to add a control characters as a prefix or suffix, you should first select an escape character set, and then follow the steps mentioned above. For example, add a STX prefix and an ETX suffix, you should first scan Escape Character Set 3, then scan Add Prefix, then the 1st symbol from the Appendix A Control Characters; then scan Add Suffix, then the 4th symbol from the Appendix A Control Characters.



Escape Character Set 0



Escape Character Set 1



Escape Character Set 2



Escape Character Set 3

Removal of Characters

If you need to remove leading and/or trailing characters from scanned bar codes, please scan the Remove characters from the start symbol or the Remove characters from the end symbol, then scan the appropriate code among the first 16 codes from the Appendix ASCII Character Chart.

(Note: The maximum size of this configuration is 16 characters.)



Remove characters from the start



Remove characters from the end

For example, if you have the following barcode:
"QWERT123456789ASDFG", you can make the output
"12345678" by scanning Remove characters from the
start, then the 5th barcode from the ASCII Character
Chart; then scanning Remove characters from the end,
lastly the 6th barcode from the ASCII Character Chart.
That is, the first 16 barcodes in the ASCII Character
Chart are digits codes that tell the barcode scanner
how many digits should be removed.

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 Symbolologies

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*



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

Appendix ASCII Character Chart

Appendix A - Control Characters

Dec	ASCII	Escape Set 0	Escape Set1
1	SOH	NULL	Home
Escape Set2		Escape Set3	Symbol
Ctrl+A		Alt+001	

Dec	ASCII	Escape Set 0	Escape Set1
2	STX	Ctrl+B	End
Escape Set2		Escape Set3	Symbol
Ctrl+B		Alt+002	

Dec	ASCII	Escape Set 0	Escape Set1
3	ETX	Ctrl+C	Up Arrow
Escape Set2	Escape Set3	Symbol	
Ctrl+C	Alt+003		

Dec	ASCII	Escape Set 0	Escape Set1
4	EOT	NULL	Down Arrow
Escape Set2	Escape Set3	Symbol	
Ctrl+D	Alt+004		

Dec	ASCII	Escape Set 0	Escape Set1
5	ENQ	NULL	Left Arrow
Escape Set2	Escape Set3	Symbol	
Ctrl+E	Alt+005		

Dec	ASCII	Escape Set 0	Escape Set1
6	ACK	NULL	Right Arrow
Escape Set2	Escape Set3	Symbol	
Ctrl+F	Alt+006		

Dec	ASCII	Escape Set 0	Escape Set1
7	BEL	NULL	Shift+Tab
Escape Set2	Escape Set3	Symbol	
Ctrl+G	Alt+007		

Dec	ASCII	Escape Set 0	Escape Set1
8	BS	Back Space	Back Space
Escape Set2	Escape Set3	Symbol	
Back Space	Alt+008		

Dec	ASCII	Escape Set 0	Escape Set1
9	HT	Tab	Tab
Escape Set2	Escape Set3	Symbol	
Tab	Alt+009		

Dec	ASCII	Escape Set 0	Escape Set1
10	LF	Enter	Enter
Escape Set2	Escape Set3	Symbol	
Ctrl+P	Alt+010		

Dec	ASCII	Escape Set 0	Escape Set1
11	VT	NULL	NULL
Escape Set2	Escape Set3	Symbol	
Ctrl+Q	Alt+011		

Dec	ASCII	Escape Set 0	Escape Set1
12	FF	NULL	NULL
Escape Set2	Escape Set3	Symbol	
Ctrl+R	Alt+012		

Dec	ASCII	Escape Set 0	Escape Set1
13	CR	Enter	Enter
Escape Set2	Escape Set3	Symbol	
Enter	Alt+013		

Dec	ASCII	Escape Set 0	Escape Set1
14	S0	F1	Page Up
Escape Set2	Escape Set3	Symbol	
Ctrl+N	Alt+014		

Dec	ASCII	Escape Set 0	Escape Set1
15	S1	F2	Page Down
Escape Set2	Escape Set3	Symbol	
Ctrl+O	Alt+015		

Dec	ASCII	Escape Set 0	Escape Set1
16	DLE	F3	F11
Escape Set2	Escape Set3	Symbol	
Ctrl+P	Alt+016		

Dec	ASCII	Escape Set 0	Escape Set1
17	DC1	F4	NULL
Escape Set2	Escape Set3	Symbol	
Ctrl+Q	Alt+017		

Dec	ASCII	Escape Set 0	Escape Set1
18	DC2	F5	NULL
Escape Set2	Escape Set3	Symbol	
Ctrl+R	Alt+018		

Dec	ASCII	Escape Set 0	Escape Set1
19	DC3	F6	NULL
Escape Set2	Escape Set3	Symbol	
Ctrl+S	Alt+019		

Dec	ASCII	Escape Set 0	Escape Set1
20	DC4	F7	NULL
Escape Set2	Escape Set3	Symbol	
Ctrl+T	Alt+020		

Dec	ASCII	Escape Set 0	Escape Set1
21	NAK	F8	F12
Escape Set2	Escape Set3	Symbol	
Ctrl+U	Alt+021		

Dec	ASCII	Escape Set 0	Escape Set1
22	SYN	F9	F1
Escape Set2	Escape Set3	Symbol	
Ctrl+V	Alt+022		

Dec	ASCII	Escape Set 0	Escape Set1
23	TB	F10	F2
Escape Set2	Escape Set3	Symbol	
Ctrl+W	Alt+023		

Dec	ASCII	Escape Set 0	Escape Set1
24	CAN	F11	F3
Escape Set2	Escape Set3	Symbol	
Ctrl+X	Alt+024		

Dec	ASCII	Escape Set 0	Escape Set1
25	EM	F12	F4
Escape Set2	Escape Set3	Symbol	
Ctrl+Y	Alt+025		

Dec	ASCII	Escape Set 0	Escape Set1
26	SUB	NULL	F5
Escape Set2	Escape Set3	Symbol	
Ctrl+Z	Alt+026		

Dec	ASCII	Escape Set 0	Escape Set1
27	Esc	Esc	F6
Escape Set2	Escape Set3	Symbol	
Ctrl+[	Alt+027		

Dec	ASCII	Escape Set 0	Escape Set1
28	FS	ALT+028	F7
Escape Set2	Escape Set3	Symbol	
Ctrl+\	Alt+028		

Dec	ASCII	Escape Set 0	Escape Set1
29	GS	ALT+029	F8
Escape Set2	Escape Set3	Symbol	
Ctrl+]	Alt+029		

Dec	ASCII	Escape Set 0	Escape Set1
30	RS	NULL	F9
Escape Set2	Escape Set3	Symbol	
Ctrl+^	Alt+030		

Dec	ASCII	Escape Set 0	Escape Set1
31	US	NULL	F10
Escape Set2	Escape Set3	Symbol	
Ctrl+_	Alt+031		

Appendix - B Printable Characters

Dec	ASCII	Symbol
32	Space	
33	!	
34	"	

Dec	ASCII	Symbol
35	#	
36	\$	
37	%	
38	&	
39	'	
40	(	
41	)	

Dec	ASCII	Symbol
42	*	
43	+	
44	,	
45	-	
46	.	
47	/	
48	0	

Dec	ASCII	Symbol
49	1	
50	2	
51	3	
52	4	
53	5	
54	6	
55	7	

Dec	ASCII	Symbol
56	8	
57	9	
58	:	
59	;	
60	<	
61	=	
62	>	

Dec	ASCII	Symbol
63	?	
64	@	
65	A	
66	B	
67	C	
68	D	
69	E	

Dec	ASCII	Symbol
70	F	
71	G	
72	H	
73	I	
74	J	
75	K	
76	L	

Dec	ASCII	Symbol
77	M	
78	N	
79	O	
80	P	
81	Q	
82	R	
83	S	

Dec	ASCII	Symbol
84	T	
85	U	
86	V	
87	W	
88	X	
89	Y	
90	Z	

Dec	ASCII	Symbol
91	[	
92	\	
93	]	
94	^	
95	_	
96	`	
97	a	

Dec	ASCII	Symbol
98	b	
99	c	
100	d	
101	e	
102	f	
103	g	
104	h	

Dec	ASCII	Symbol
105	i	
106	j	
107	k	
108	l	
109	m	
110	n	
111	o	

Dec	ASCII	Symbol
112	p	
113	q	
114	r	
115	s	
116	t	
117	u	
118	v	

Dec	ASCII	Symbol
119	w	
120	x	
121	y	
122	z	
123	{	
124		
125	}	

Dec	ASCII	Symbol
126	~	
127	DEL	
199	Ç	
231	ç	