



NT-1988 User Manual

Release v1.0.0

2026-06-27

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1 System Settings

1.1 Read firmware version



Read firmware version

1.2 Restore Factory Defaults

Note

If Write Custom Defaults has been performed, Restore Defaults restores those custom defaults; otherwise it restores factory defaults.

Important

Set Factory Defaults clears all custom defaults and restores factory defaults.



Restore custom defaults



Write custom default values



Set factory defaults

1.3 working mode

Note

During the data upload process, if you scan the “data upload” command again, the current upload will be canceled or stopped.

Note

In wireless transmission mode, if automatic storage is turned on, barcodes that fail to be transmitted will be automatically saved, and the stored data can be read through “data upload” .



* Normal mode



storage mode



Upload storage data



Read the total number of stored barcodes



Clear storage data after uploading



Read storage space usage



Clear stored barcode



* Autosave mode off



Automatic storage mode is on

2 Power management

2.1 Read sleep time



Read sleep time

2.2 Set sleep time



Hibernate now



Sleep after 1 minute



Sleep after 3 minutes (default)



Sleep after 5 minutes



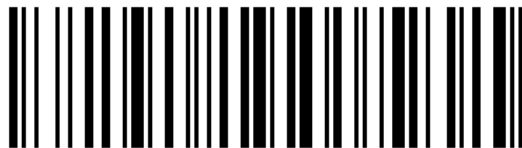
Sleep after 10 minutes



Sleep after 30 minutes



Sleep after 1 hour



Sleep after 2 hours



never sleep

2.3 Get scanner battery level



Get battery level

3 Feedback Indicators

3.1 Buzzer control



mute



* high volume



medium volume



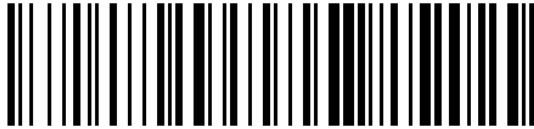
low volume



* high pitch



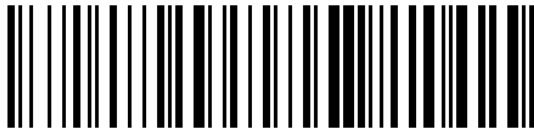
low pitch



* SDK voice response off



SDK voice response enabled



Base connection buzzer prompt switch

3.2 Vibration motor control

Note

The vibration motor works with a beep prompt, not all models support this feature.



Disable



Enable

3.3 Buzzer sound definition

Type	Sound	Description	Audio file
Beep	Single tone (2 pitches)	Storage mode decode; power-off prompt.	storage-mode.m4a, shutdown.m4a
Beep	Single tone (3 pitches)	Power-on prompt; setting saved; upload complete.	startup.m4a, wireless-setting.m4a
Beep	Short single tone	Successful decode.	one-beeps.m4a
Beep	30-second continuous short tone	2.4G pairing waits for the receiver; stops after pairing.	pair2.4G.m4a
Alarm sound	Two tones (same pitch)	Low-battery alarm during decoding.	two-beeps.m4a
Alarm sound	Three tones (same pitch)	Inventory storage error or capacity exceeded.	three-beeps.m4a
Alarm sound	Transmission failure	Alarm when barcode transmission fails.	No audio available
Alarm sound	Five tones (same pitch)	Boot failure caused by low battery.	five-beeps.m4a

3.4 Indicator definition

Indicator	Status
red light / green light	When charging, the red light is on and the green light is off; when fully charged, the red light is off and the green light is on.
blue light	Following the buzzer action, the buzzer lights up when it sounds and goes out when it does not sound; models that support Bluetooth mode are also used to indicate the Bluetooth connection status.

4 wired mode

Note

Only applicable to scanners that support wired transmission.

4.1 USB transfer method



* USB keyboard mode



USB virtual serial port mode

Note

After the automatic interface selection is turned on, the device will automatically switch between wired and wireless; when plugging in the USB cable, the wired mode will be used first. When the USB cable is not plugged in or USB is unavailable, the scanner works in 2.4G mode. Some models may not support this feature.



* Wired/wireless automatic selection turns on



Wired/wireless automatic selection off

4.2 USB keyboard transfer speed

Note

This setting also affects the speed of RF and Bluetooth transmission of very long barcodes and stored data uploads.



* top speed



top speed



medium speed



medium speed



Read keyboard speed



Read keyboard speed

4.3 USB HID multi-key send settings

Note

The settings in this section are only applicable to Windows systems.



USB HID multi-key sending enabled



* USB HID multi-key sending off

5 wireless mode

Note

Only suitable for scanners that support 2.4G transmission.

5.1 Read Interface Settings



Current Interface Settings

5.2 Wireless transmission method

Note

The blue light is always on or flashing to indicate that it is currently in Bluetooth mode; the blue light is off to indicate that it is currently in 2.4G mode or USB wired mode.



2.4G transmission mode

5.3 2.4G pairing

Important

Only valid in wireless 2.4G mode.



Start 2.4G pairing



one-to-one pairing



One-to-one pairing

5.4 Receiver working mode

Note

Composite device mode is only available on receivers running FWVerL or later. You can also use `ReceiverAddress.exe` to generate a pairing barcode and complete pairing by scanning it.



Receiver as composite device



Receiver as virtual serial port

Note

This mode requires the virtual serial port driver to be installed.



receiver as keyboard

Receiver keyboard transmission speed

Note

The instructions in this section are only applicable to receivers of FWVerL and above. The transmission speeds of the scanner and receiver must match, otherwise errors may occur when transmitting long barcodes.

Important

This command is only valid in wireless 2.4G mode and the receiver is connected normally.



Read keyboard speed

Example

KB SP=2, 4 represents a USB keyboard speed of 2ms and a receiver keyboard speed of 4ms.



receiver keyboard high speed



Receiver Keyboard Medium Speed



Receiver Keyboard Low Speed

Note

It is only valid in wireless 2.4G mode and the receiving end receives normally.

5.5 2.4G transmission cache

Note

This command is only available on some scanners that support this feature. After scanning the setup code, two short beeps indicate disabled, and one three-tone beep indicates enabled.

When scanning ordinary barcodes, if the amount of barcode data is large and the scanning interval is short, and the data is not uploaded in time, you can use this setting barcode to turn on or off data caching.



SRAM cache switch

In normal mode, after data caching is turned on, if the device briefly leaves the communication distance and enters offline state, you can use this setting to choose to wait for connection before uploading the cached data, or to clear the cached data.



Offline caching switch

6 Bluetooth Mode

Note

Only suitable for RF+BT scanners with Bluetooth function.

6.1 Read Interface Settings



Current Interface Settings

6.2 Bluetooth Transmission Mode

Note

The blue light is always on or flashing to indicate that it is currently in Bluetooth mode; the blue light is off to indicate that it is currently in 2.4G mode or USB wired mode.



Bluetooth Transmission

6.3 Bluetooth Operating Mode

Note

Valid only in Bluetooth mode.

Note

Before switching the Bluetooth working mode, you need to clear the pairing information between the host device and the scanner.



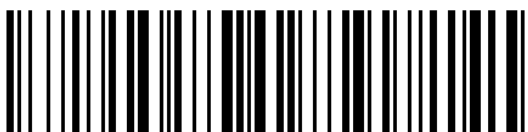
Bluetooth HID Keyboard (Default)



Bluetooth SPP Serial Port



Bluetooth BLE Serial Port



Bluetooth cradle transmission mode

Note

It is suitable for pairing with a Bluetooth cradle that has already been paired. When the barcode on the base is damaged, you can also use the gadget BluetoothAddress.exe to generate a pairing barcode.

6.4 Change Bluetooth Name

After entering the new Bluetooth name, scan the generated QR code to complete the setup. If the host has saved old pairing records after modification, please delete the old pairing first and search for connection again.

6.5 Clear Bluetooth HID Pairing

After scanning “Clear Pairing” in Bluetooth transmission mode, the scanner will disconnect the currently paired device and clear the pairing list, then wait for new devices to be paired. Historically paired devices need to be deleted and paired again.



Clear Bluetooth Pairing

6.6 System Keyboard Functions

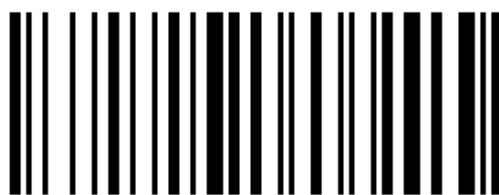
iOS system pop-up keyboard function



iOS pop up/hide keyboard



Press and hold the trigger for 4 seconds to toggle the iOS on-screen keyboard



Double-press the trigger to toggle the iOS on-screen keyboard



Pop up iOS keyboard switch after sending

Windows Caps Lock detection

Note

This command is only available on some Bluetooth scanners. After scanning the setup code, two short beeps indicate disabled, and one three-tone beep indicates enabled.



Windows Caps Lock detection switch

6.7 Switch between Bluetooth and 2.4G by pressing and holding for 8 seconds

Note

This command is only available on some RF+BT scanners (DS, C, RT). When enabled, press and hold the trigger for more than 8 seconds and release it to switch between RF and BT. If you hold it for more than 16 seconds, the scanner powers off and the mode does not switch. After scanning the setup code, two short beeps indicate disabled, and one three-tone beep indicates enabled.



Press and hold the trigger for 8 seconds to toggle RF/BT switching

6.8 Bluetooth keyboard transmission speed

Note

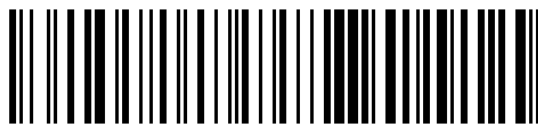
Valid only in Bluetooth mode.



Read Bluetooth HID delay



High speed (2 ms)



High speed (6 ms)



* Medium speed (10 ms)



Medium speed (18 ms)



Low speed (25 ms)



Low speed (30 ms)

6.9 Bluetooth connection status non-sleep setting

Note

After scanning the setup code, two short beeps indicate disabled, and one three-tone beep indicates enabled.



Bluetooth connection status non-sleep switch

7 Keyboard Settings

7.1 HID Keyboard General Setting

HID common settings

Note

The general HID mode settings in this section are applicable to USB keyboard, RF2.4G keyboard, and BT HID keyboard.

Ctrl key combination settings



* Combine-Key Off



Ctrl+ Key Config1



Alt+ Key Config2



Normal-Key Config3



Ctrl+ Key Config4



Alt+ Key Config5

Note

only for ASCII <0x20 chars, Alt+ key only for Windows system.

Case settings



normal



Swap case



all caps



all lowercase

*When set to ALT, TH keyboard language, the case setting does not apply.

Num Lock Settings



Num Lock Settings



Num Lock on

*When the receiving device is a mobile phone, you need to keep the Num Lock off setting, otherwise the numbers will not be displayed.

Enter character set settings

Note

Applicable only to certain mod's of 2D scanners, this setting matches the 2D module's output character set.



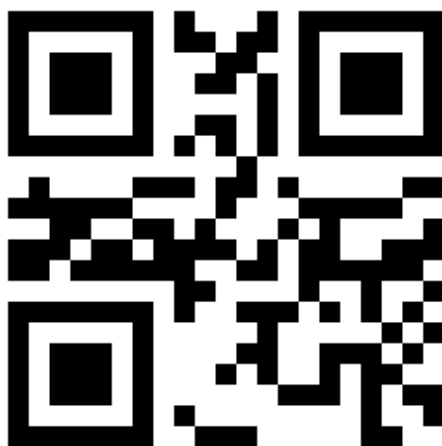
Read the current character set settings



automatic



GBK / BIG5 / HANGUL / SJIS



ISO/IEC 8859



UTF8 (Word)



UTF8 (Txt)



Normal mode

illustrate:

model	Applicable scenarios	Code scan engine output character set	limit
Auto	Automatically select the input character set as UTF8 or ISO/IEC 8859; Word or Txt output is based on the last UTF8 setting.	primitive type	none
GBK	Windows Notepad, Excel Chinese input.	GBK (GB2312) or original type	Applies to Windows systems only.
UTF8 (Word)	Word, QQ Chinese input.	UTF8 or primitive type	Applies to Windows systems only.
ISO/IEC 8859	European single-byte special characters ($\geq C0H$), applicable to FR, GE, TR, PT, ES, CS, IT, UK, HU, SK.	primitive type	Languages not listed need to be added by customization.
UTF8 (Txt)	To input special characters in Windows Notepad, you need to install the Unicode plug-in.	UTF8 or primitive type	Applies to Windows systems only.
Normal	Multi-language special characters, suitable for characters on FR, GE, TR, PT, ES, CS, IT, UK, HU, SK keyboards.	UTF8 or primitive type	Languages not listed need to be added by customization.

Receiving device selection

Note

This section is used to set the way different receiving devices input ASCII characters (0x20 to 0x7F) and needs to be used in conjunction with [Keyboard Language Settings](#).



Read the current receiving device settings



Windows device



iPhone/iPad/Mac devices



Android device

*IOS/MAC devices are currently valid: FR, DE, TR, PT, ES, CS, IT, UK, HU, SK. Please refer to the document “MAC iphone ipad keyboard layout for barcode scanner.docx”

*It is recommended to install Google Gboard input method uniformly on Android devices. Please refer to the document “Android device keyboard layout for barcode scanner.docx”

7.2 Keyboard language settings

See also

Keyboard language settings have been split into a separate page: [Keyboard Language Settings](#).

8 Keyboard Language

8.1 Read the current keyboard layout



Read the current keyboard layout

L1 *ENUSA EN key



* US English keyboard

L2 FR France French key



French French keyboard

L3 DE Germany key



german german keyboard

L4 IT Italy Italy key



Italian keyboard

L5 PT Portugal Portugal key



Portuguese keyboard

L6 ES Spain Spain key



spanish keyboard

L7 TR Turkey Turkey key



Turkish Q keyboard



Turkish F keyboard

L8 ENUK UK key



British English keyboard

L9 CS Czech Czech key



Czech keyboard



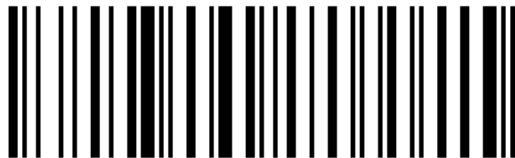
Czech standard keyboard

L10 HU Hungary Hungary key



Hungarian keyboard

L11 FR Belgium (French) Belgium FR Key



Belgian French keyboard

L12 PT Brazil (Portuguese) Brazil PT Key



Brazilian Portuguese keyboard

L13 FR Canadian French (Traditional) Canadian FR Key



Canadian French (traditional) keyboard

L14 HRCroatia Key



Croatian keyboard

L15 SK Slovak Key



Slovak QWERTY keyboard



Slovak keyboard

L16 DA Denmark Denmark Key



Danish keyboard

L17 FI Finland Key



Finnish keyboard

L18 ES Latin America (Spanish) Latin-America ES Key



Latin American Spanish keyboard

L19 NL Netherlands Netherlands Key



Dutch keyboard

L20 NO Norway Norway Key



Norwegian keyboard

L21 PL Poland Poland Key



Polish keyboard

L22 SR Serbia (Latin) Serbia Key



Serbian Latin keyboard

L23 SL Slovenia Key



Slovenian keyboard

L24 SV Sweden Sweden Key



Swedish keyboard

L25 DE Switzerland (German) Swiss DE Key



Swiss German keyboard

L26 JP Japanese Japanese Key



Japanese keyboard

L27 TH Thai Thailand Key

Note

When using a Thai keyboard, the code scan engine also needs to be set to TH output.



Thai keyboard

See also

Reference file: RF2.4G, Bluetooth Settings_Chinese, Thai, Korean.docx.

L28 ALT International Keyboard ALT Global Key

Note

The ALT international keyboard layout is only available on Windows systems. It is not affected by the host keyboard layout, but it reduces transmission speed.



ALT international keyboard

L29 ALT Single Byte Special Keyboard ALT Single Byte Special Key



ALT single-byte special character keyboard

Note

Languages not listed in this section need to be customized to be supported.

9 Data Editing

9.1 Standard Data Editing Settings

This section describes how to configure common output rules such as prefixes, suffixes, and hidden characters by scanning setup codes.

Prefix/Suffix and Hidden Character Settings

You can add up to 10 prefixes and/or 10 suffixes to the output data. To configure them, scan the two-digit hexadecimal numeric setup codes that correspond to the required ASCII value (that is, two barcodes per character).

See also

For character values, please refer to *ASCII Function Key Character Reference Table* and *ASCII Character Reference Table*; for parameters that require input of numerical values, please scan *Numeric Setup Codes*; for specific procedures, see *Add a Prefix or Suffix*.

Can be set to hide the first, middle or last characters of the barcode. After scanning the corresponding hidden setting barcode, scan the two-digit hexadecimal setting barcode corresponding to the length of the characters to be hidden (00~FF, for example, scan 0 and 4 in sequence when hiding 4 characters).

See also

See *Steps to Hide the First/Middle/Tail Characters of a Barcode* for the hidden character process.

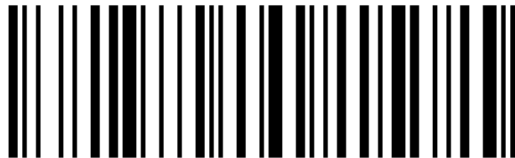
Operation Code



Add Prefix



Add Suffix



Clear all prefixes



Clear all suffixes



Hide Leading Characters



Hide Middle Section Start Position



Hide Middle Section Length



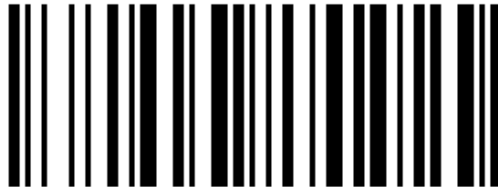
Hide Trailing Characters

Numeric Setup Codes

For parameters that require a numeric value, scan the corresponding numeric setup codes.



Numeric Setup Code 0



Numeric Setup Code 1



Numeric Setup Code 2



Numeric Setup Code 3



Numeric Setup Code 4



Numeric Setup Code 5



Numeric Setup Code 6



Numeric Setup Code 7



Numeric Setup Code 8



Numeric Setup Code 9



Numeric Setup Code A



Numeric Setup Code B



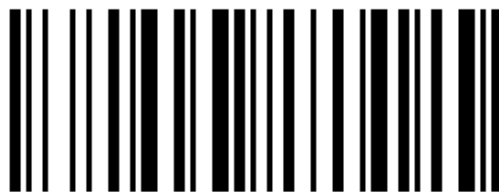
Numeric Setup Code C



Numeric Setup Code D



Numeric Setup Code E



Numeric Setup Code F

Output Format Settings

To change the output data format, scan the corresponding setup barcode below.



Default Output Format



Allow Suffix Output



Allow Prefix Output



Allow Hiding Leading Data



Allow Hiding Middle Data



Allow Hiding Trailing Data

Procedure Examples

Add a Prefix or Suffix

1. If prefix and suffix output has not been enabled, please scan the corresponding output formatting code first.
2. The new characters will be appended to the existing suffixes; if you want to abandon the original suffixes, please scan “Clear all prefixes/suffixes” and then reset them.
3. Scan the “Add Prefix” or “Add Suffix” setting barcode.
4. Determines the hexadecimal value of the prefix or suffix to be entered based on *ASCII Function Key Character Reference Table* or *ASCII Character Reference Table*.
5. Scan the corresponding two-digit hexadecimal setting barcode.
6. To continue adding characters, repeat steps 4 and 5.

Example

If you need to add `Ctrl+A` as a prefix, scan “Add Prefix” “9” “7” “4” “1” in sequence.

Example

If you need to add `Ctrl+Alt+A` as a suffix, scan “Add suffix” “9” “7” “9” “9” “4” “1” in sequence.

Steps to Hide the First/Middle/Tail Characters of a Barcode

1. Scan the setting barcode that hides the header, middle starting bit, middle length or trailing characters of the barcode.
2. Determine the hexadecimal value corresponding to the character length to be hidden (for example, hide 4 characters scan 0, 4; hide 12 characters scan 0, C).
3. Scan the corresponding two-digit hexadecimal setting barcode.
4. Enable or disable the hidden character function through the output formatting code.

9.2 Extended Data Editing Settings

This section lets you generate data editing setup codes from complete commands in one step. It is intended for batch configuration, remote serial-command delivery, or character replacement.

Online One-Code Setup Generator

Note

The online generator is shown only in the HTML manual. After generating a setup code, scan the generated barcode to complete the setting, or send the command by serial command using the format below.

Add Prefix

Add Suffix

Hide Leading Barcode Characters

Hide Middle Barcode Characters

Hide Trailing Barcode Characters

Character Replacement

One-Code Setup Command Format

Edit format:

\$DATA#ncllxx#

- n** 1 suffix; 2 prefix; 3 hides the tail content of the barcode; 4 hides the middle content of the barcode; 5 hides the first content of the barcode; 7 replaces characters.
- c** Code ID currently supports only 0, which indicates all symbologies.
- ll** Length, hexadecimal value: 01~0A, hide 01~FF, replace 01~05.
- xx** ASCII value. Hexadecimal can be represented by \x plus two characters, and the character range is 0~9, A~F.

Table 1: One-Code Setup Examples

Command	Description
\$DATA#1005abcd\x03#	Add 0x05 suffixes: abcd + 0x03.
\$DATA#200ANETUM12345#	Add 0x0A prefix NETUM12345.
\$DATA#3008#	Hide the last 0x08 characters of the barcode.
\$DATA#40050A#	Hides the 0x0A characters after the 0x05 character in the barcode.
\$DATA#5011#	Hide barcode header 0x11 bytes.
\$DATA#7001\x1D02GS#	Replace GS (0x1D) characters with GS.
\$DATA#7002NT01Z#	Replace NT with Z.

Character replacement operation

Format: \$DATA#70 + replaced character length + replaced characters + replacement data length + replacement data #

The sum of the lengths of the replaced characters and the replacement characters is ≤ 6 , supporting 1~6 characters being replaced by 5~0 characters.



Read replacement settings



Clear replacement settings

Example

\$DATA#7001\x1D02GS# means replacing the non-displayable character GS (0x1D) with GS for display.



Character replacement operation: GS to text GS

Example

\$DATA#7001\x0A01\x0D# means replacing LF (0x0A) with CR (0x0D).



Character replacement operation: LF to CR

Example

\$DATA#7006ABCDEF00# means replacing the string ABCDEF with an empty string, that is, not displaying it.

9.3 Terminal character settings

Note

This terminal character is independent of the scan engine suffix and wireless suffix, which facilitates quick setting when the scan engine has no suffix.



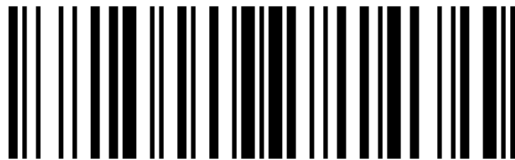
None (Default)



Carriage Return CR



Tab TAB



Carriage Return + Line Feed CRLF



Line Feed LF

9.4 GS1 AI field bracket settings

Note

Only some AI fields are applicable and require special version support.



Raw Format (Default)



Add Parentheses



Add brackets and separate with CR



Add brackets and separate them with TAB

10 Scan Mode

10.1 Barcode Decode Mode



Key scan mode (default)



Continuous scan mode

Note

Continuous Scan Mode is suitable for high-volume scanning workflows. Press the Trigger button once to start or stop scanning.



Key pulse scan mode

Note

Scanning starts when a key-level change is detected and maintained for about 30 ms. Scanning stops when another key-level change is detected, or when a decode succeeds or times out.



Host trigger mode (only applicable to some customized models)

Note

Host trigger mode is only applicable to some customized models.



Batch scanning mode (only applicable to some customized models)

Decoding timeout

This parameter sets the maximum time that decoding processing lasts during a scan attempt. Default: 3000ms, range: 0500-9999ms.



3 seconds (default)



6 seconds

Scan Interval

The interval between two readings in continuous mode. Default: 500ms, range: 0100-9999ms.



0.5 seconds (default)



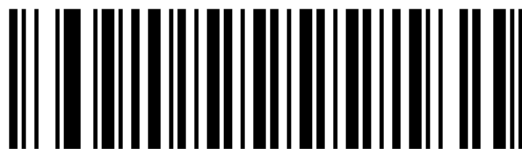
1 second

11 Module Settings

11.1 Engine Output Format

Add carriage return suffix to All Symbolologies

To add a carriage return suffix to all symbolologies, please scan the following barcode. This operation first clears all current suffixes, and then adds carriage return suffixes to All Symbolologies.



Add carriage return suffix to All Symbolologies

Add newline suffix to all encoding systems

To add a carriage return and line feed suffix to All Symbolologies, please scan the following barcode. This operation first clears all current suffixes, and then adds carriage return and line feed suffixes to All Symbolologies.



Add newline suffix to all encodings

Add carriage return and line feed suffix to All Symbolologies

To add a carriage return and line feed suffix to All Symbolologies, please scan the following barcode. This operation first clears all current suffixes, and then adds carriage return and line feed suffixes to All Symbolologies.



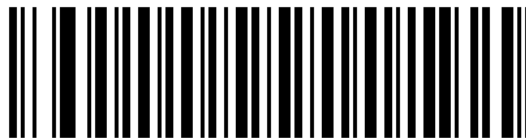
Add carriage return and line feed suffix to All Symbolologies

11.2 Barcode Settings

Symbology

All Symbolologies

If the code reading device needs to read all symbologies, please scan the “All symbologies enabled” barcode. To only read a specific symbology, please scan the “All symbologies disabled” barcode, and then scan the enable barcode for that specific symbology.



All encodings enabled



All encodings disabled

Note

After scanning the “All symbologies enabled” barcode, 2D postal codes are not enabled by default. 2D postal codes must be enabled separately.

Reading length description

The effective reading length of certain code systems can be set. If the length of the barcode data read does not match the effective reading length, the code reading device will issue an error tone. Setting the minimum and maximum length to the same value will force the barcode reading device to read fixed-length barcodes. This helps reduce misreadings.

Example

Only barcodes with a length of 6-10 characters are read.

Minimum length=06. Maximum length=10

1. Select the code system for which you want to set the maximum and minimum reading length, scan the “Minimum Reading Length” barcode under its directory, scan the number “6” barcode and the “Save” barcode from [Appendix Charts](#).
2. Scan the “Maximum Read Length” barcode, scan the digits “1” , “0” and “Save” barcodes from [Appendix Charts](#).

The above steps will set the maximum reading length of the selected code system to 10 and the minimum reading length to 6.

One-dimensional coding system

If the code reading device needs to read all 1D barcodes, please scan the “All 1D barcodes enabled” barcode. Only certain code systems can be read, please scan the “All 1D code systems disabled” barcode.



* All 1D symbologies enabled



All one-dimensional code systems disabled

QR code system

If the code reading device needs to read all barcode systems, please scan the “All QR code systems enabled” barcode. Only certain code systems can be read, please scan the “All QR Code Systems Disabled” barcode.



* All QR code systems enabled



All QR codes are disabled

Codabar

Note

Default all Codabar settings



Restore Codabar default settings

Enable/disable



* Enable



Disable

start/stop characters

“Start/Stop” character output is located at the leading and trailing ends of the barcode. Configurable to transmit or not transmit Start/Stop characters. Default = no transmission.



transmission



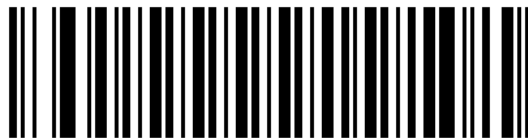
* Do not transmit

Check character

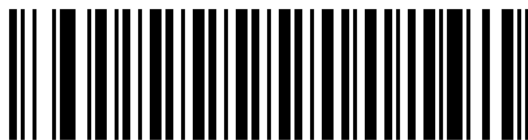
No check characters means that the barcode reading device will read and transmit all barcodes with or without check characters. (When scanning a barcode with check characters at this time, the check characters are transmitted together)

When “Check Character” is set to “Enable, do not transmit check characters”, the code reading device will verify based on the last digit of the barcode. If the verification passes, normal data except the last check character will be transmitted. If the verification fails, the barcode content will not be sent.

When “Check Character” is set to “Enable, transmit check character”, the code reading device will verify based on the last digit of the barcode. If the verification passes, the check character will be transmitted together with the last digit of normal data. If the verification fails, the barcode content will not be sent.



* No check character



Enable, do not transmit check characters



Enable, transmit check characters

cascade

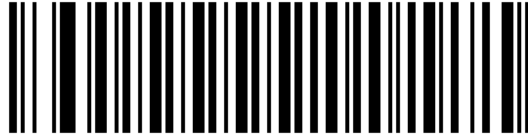
Codabar supports barcode concatenation. When cascading is enabled, the barcode reading device looks for a Codabar barcode with a “D” start character that is adjacent to a barcode with a “D” stop character. In this case, the two barcodes are concatenated into one, omitting all “D” characters.

A 1 2 3 4 D D 5 6 7 8 A

Scan the “Require” barcode to prevent barcode reading devices from decoding a single “D” Codabar barcode without an adjacent “D” starting character for the Codabar barcode. This selection has no effect on Codabar without stop/start D characters.



Enable



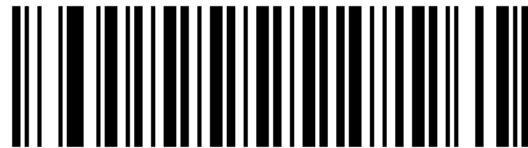
need



* Disable

Reading length

Scan the barcode below to change the reading length. For additional information, see [Reading length description](#). Minimum and maximum lengths are 2-60. Minimum default value=4, maximum default value=60. (Note: After scanning the “minimum reading length” and “maximum reading length”, you need to scan the specified reading length and save the barcode, please refer to [Reading length description](#))



Minimum reading length



Maximum reading length

Code 39

Enable/disable



* Enable

Note

Default Code 39 configuration



Restore Code 39 default settings



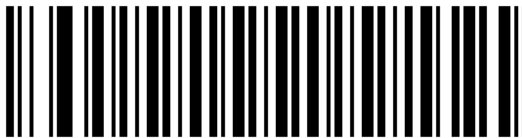
Disable

start/stop characters

“Start/stop characters” are located at the beginning and end of the barcode. Configurable to transmit or not transmit “start/stop characters” . Default = no transmission.



transmission



* Do not transmit

Check character

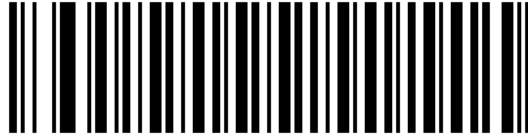
No check characters means that the barcode reading device will read and transmit all barcodes with or without check characters. (When scanning a barcode with check characters at this time, the check characters are transmitted together)

When “Check Character” is set to “Enable, do not transmit check characters” , the code reading device will verify based on the last digit of the barcode. If the verification passes, normal data except the last check character will be transmitted. If the verification fails, the barcode content will not be sent.

When “Check Character” is set to “Enable, transmit check character” , the code reading device will verify based on the last digit of the barcode. If the verification passes, the check character will be transmitted together with the last digit of normal data. If the verification fails, the barcode content will not be sent.



* No check character



Enable, do not transmit check characters



Enable, transmit check characters

Reading length

Scan the barcode below to change the reading length. For additional information, see [Reading length description](#). Minimum and maximum lengths are 0-48. Minimum default value=0, maximum default value=48. (Note: After scanning the “minimum reading length” and “maximum reading length”, you need to scan the specified reading length and save the barcode, please refer to [Reading length description](#))



Minimum reading length



Maximum reading length

Code 32 Pharmaceutical (PARAF)

Code 32 Pharmaceutical is a form of the Code 39 barcode used in Italian pharmacies. When configuring Code 32, you need to enable Code 39 before configuring it.

This encoding is also called PARAF.



Enable



* Disable

FULL ASCII

If Code 39 Full ASCII decoding is enabled, some characters in the barcode will be decoded into single characters.

Example

\$V will be decoded to the ASCII character SYN and /C will be decoded to the ASCII character #. Default = disabled.

NUL%U	DLE \$P	SP SPACE	0/P	@%V	P P	'%W	p+P
SOH\$A	DC1 \$Q	!/A	1/Q	A A	Q Q	a+A	q+Q
STX\$B	DC2 \$R	"/B	2/R	B B	R R	b+B	r+R
ETX\$C	DC3\$S	# /C	3/S	C C	S S	c+C	s+S
EOT \$D	DC4 \$T	\$ /D	4/T	D D	T T	d+D	t+T
ENQ \$E	NAK \$U	% /E	5/U	E E	U U	e+E	u+U
ACK \$F	SYN\$V	& /F	6/V	F F	V V	f+F	v+V
BEL\$G	ETB \$W	'/G	7/W	G G	W W	g+G	w+W
BS\$H	CAN\$X	(/H	8/X	H H	X	h+H	x+X
HT \$I	EM\$Y	) /I	9/Y	I I	Y Y	i+I	y+Y
LF\$J	SUB\$Z	* /J	:/Z	J J	Z Z	j+J	z+Z
VT\$K	ESC %A	+ /K	; %F	K K	[%K	k+K	{ %P
FF\$L	FS%B	, /L	< %G	L L	\ %L	l+L	%Q
CR\$M	GS%C	-/M	=%H	M M	] %M	m+M	} %R
SO\$N	RS %D	./N	> %I	N N	^%N	n+N	~%S
SI\$O	US%E	/ /O	?%J	O O	_ %O	o +O	DEL%T

The character pairs /M and /N are decoded as a minus sign and a period respectively. Character pairs /P to /Y are decoded as 0 to 9.



FULL ASCII enabled

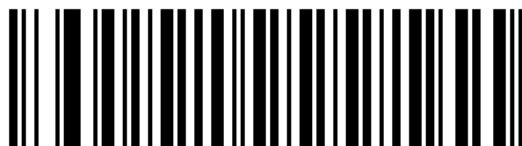


* FULL ASCII disabled

Interleaved 2 of 5

Note

Default all Interleaved 2 of 5 settings



Restore Interleaved 2 of 5 default settings

Enable/disable



* Enable



Disable

Check character

No check characters means that the barcode reading device will read and transmit all barcodes with or without check characters. (When scanning a barcode with check characters at this time, the check characters are transmitted together)

When “Check Character” is set to “Enable, do not transmit check characters”, the code reading device will verify based on the last digit of the barcode. If the verification passes, normal data except the last check character will be transmitted. If the verification fails, the barcode content will not be sent.

When “Check Character” is set to “Enable, transmit check character”, the code reading device will verify based on the last digit of the barcode. If the verification passes, the check character will be transmitted together with the last digit of normal data. If the verification fails, the barcode content will not be sent.



* No check character



Enable, do not transmit check characters



Enable, transmit check characters

Reading length

Scan the barcode below to change the read length. For additional information, see [Reading length description](#). Minimum and maximum lengths are 2-80. Minimum default value=4, maximum default value=80. (Note: After scanning the “minimum reading length” and “maximum reading length”, you need to scan the specified reading length and save the barcode, please refer to [Reading length description](#))



Minimum reading length



Maximum reading length

NEC 2of5

Enable/disable

Note

Default all NEC 2 of 5 settings



Restore NEC 2 of 5 default settings



* Enable



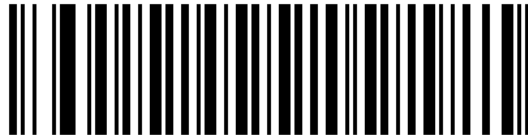
Disable

Check character

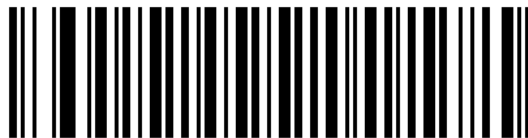
No check characters means that the barcode reading device will read and transmit all barcodes with or without check characters. (When scanning a barcode with check characters at this time, the check characters are transmitted together)

When “Check Character” is set to “Enable, do not transmit check characters”, the code reading device will verify based on the last digit of the barcode. If the verification passes, normal data except the last check character will be transmitted. If the verification fails, the barcode content will not be sent.

When “Check Character” is set to “Enable, transmit check character”, the code reading device will verify based on the last digit of the barcode. If the verification passes, the check character will be transmitted together with the last digit of normal data. If the verification fails, the barcode content will not be sent.



* No check character



Enable, do not transmit check characters



Enable, transmit check characters

Reading length

Scan the barcode below to change the read length. For additional information, see [Reading length description](#). Minimum and maximum lengths are 2-80. Minimum default value=4, maximum default value=80.

(Note: After scanning the “minimum reading length” and “maximum reading length”, you need to scan the specified reading length and save the barcode, please refer to [Reading length description](#))



Minimum reading length



Maximum reading length

Code 93

Note

Default all Code 93 settings



Restore Code 93 default settings

Enable/disable



* Enable



Disable

Reading length

Scan the barcode to change the read length. For additional information, see [Reading length description](#). Minimum and maximum lengths are 0-80. Minimum default value=0, maximum default value=80. (Note: After scanning the “minimum reading length” and “maximum reading length”, you need to scan the specified reading length and save the barcode, please refer to [Reading length description](#))



Minimum reading length

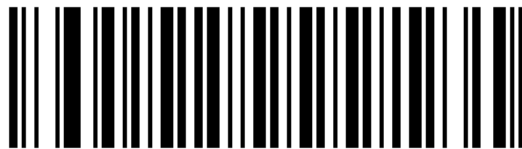


Maximum reading length

Straight 2 of 5 Industrial (three-bar start/stop)

Note

Restore Straight 2 of 5 Industrial default settings



Restore Straight 2 of 5 Industrial default settings

Enable/disable



Enable



* Disable

Reading length

Scan the barcode below to change the read length. For additional information, see [Reading length description](#). Minimum and maximum lengths are 1-48. Minimum default value=4, maximum default value=48. (Note: After scanning the “minimum reading length” and “maximum reading length”, you need to scan the specified reading length and save the barcode, please refer to [Reading length description](#))



Minimum reading length



Maximum reading length

Straight 2 of 5 IATA (two-bar start/stop)

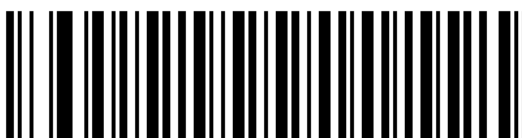
Note

Restore Straight 2 of 5 IATA default settings



Restore Straight 2 of 5 IATA default settings

Enable/disable



Enable



* Disable

Reading length

Scan the barcode below to change the read length. For additional information, see [Reading length description](#). Minimum and maximum lengths are 1-48. Minimum default value=4, maximum default value=48. (Note: After scanning the “minimum reading length” and “maximum reading length”, you need to scan the specified reading length and save the barcode, please refer to [Reading length description](#))



Minimum reading length



Maximum reading length

Matrix 2 of 5

Note

Defaults to all Matrix 2 of 5 settings



Restore Matrix 2 of 5 default settings

Enable/disable



Enable



* Disable

Reading length

Scan the barcode below to change the read length. For additional information, see [Reading length description](#). Minimum and maximum lengths are 1-80. Minimum default value=4, maximum default value=80. (Note: After scanning the “minimum reading length” and “maximum reading length”, you need to scan the specified reading length and save the barcode, please refer to [Reading length description](#))



Minimum reading length



Maximum reading length

Check

This option sets the enabling and disabling of the Matrix 2 of 5 code verification function.



Enable verification



* Disable validation

Code 11

Note

Default all settings

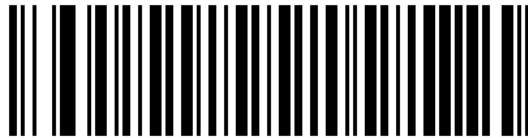


Restore Code 11 default settings

Enable/disable



Enable



* Disable

Check Digit

This option sets 1 or 2 check digits for Code 11 barcodes. Default = two check digits.



a check digit



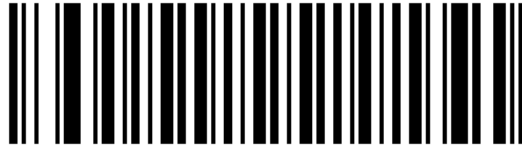
* Two check digits

Reading length

Scan the barcode below to change the read length. For additional information, see [Reading length description](#). Minimum and maximum lengths are 1-80. Minimum default value=4, maximum default value=80. (Note: After scanning the “minimum reading length” and “maximum reading length”, you need to scan the specified reading length and save the barcode, please refer to [Reading length description](#))



Minimum reading length



Maximum reading length

Code 128

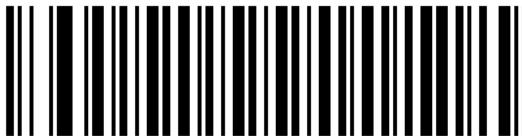
Note

Default all Code 128 settings



Restore Code 128 default settings

Enable/disable



* Enable



Disable

ISBT 128 cascade



ISBT 128 Enable



* ISBT 128 disabled

Reading length

Scan the barcode below to change the read length. For additional information, see [Reading length description](#). Minimum and maximum lengths are 0-80. Minimum default value=0, maximum default value=80. (Note: After scanning the “minimum reading length” and “maximum reading length”, you need to scan the specified reading length and save the barcode, please refer to [Reading length description](#))



Minimum reading length



* Maximum reading length

GS1-128

Note

Default all GS1-128 settings



Restore GS1-128 default settings

Enable/disable



* Enable



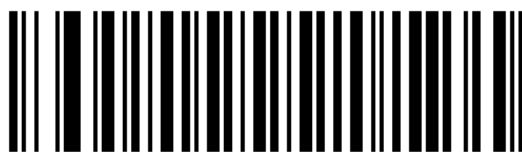
Disable

Reading length

Scan the barcode below to change the read length. For additional information, see [Reading length description](#). Minimum and maximum lengths are 1-80. Minimum default value=1, maximum default value=80. (Note: After scanning the “minimum reading length” and “maximum reading length”, you need to scan the specified reading length and save the barcode, please refer to [Reading length description](#))



Minimum reading length

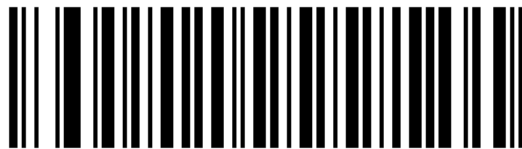


Maximum reading length

UPC-A

Note

Default all UPC-A settings



Restore UPC-A default settings

Enable/disable



* Enable



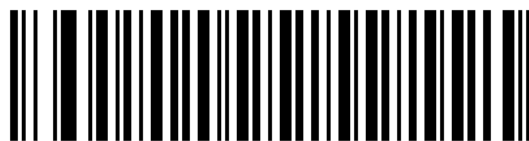
Disable

Check Digit

The following configures whether a check digit should be transmitted at the end of the output data. Default = enabled.



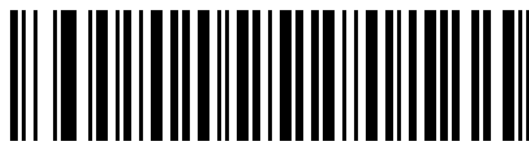
* Enable



Disable

digital system

UPC numeric system characters are usually transmitted at the beginning of the output data, default = enabled.



* Enable



Disable

Additional code

This setting adds a two-digit or five-digit additional code to the end of all read UPC-A data.

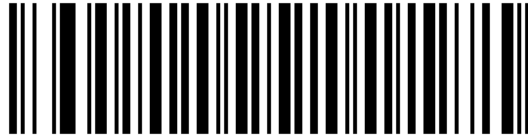
Default=2/5 digit add-on code disabled.



2-digit add-on code enabled



* 2-digit appendix disabled



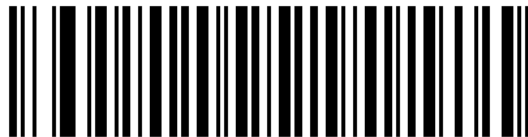
5-digit add-on code enabled



* 5-digit appendix disabled

Required add-on code

When “Required” is scanned, the barcode reading device will only read UPC-A barcodes with the add-on code. Then, you must enable the 2 or 5 digit add-on code. Default=not required.



need



* unnecessary

Additional code separator

When this function is enabled, there will be a space separating the barcode and the additional code. When disabled, no space separation occurs. Default = enabled.



* Enable



Disable

Note

UPC-A can be converted to EAN-13 with the following setup code



Not turning

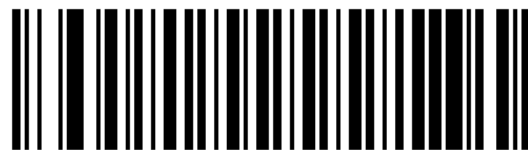


change

UPC-E0

Note

Default all UPC-E settings



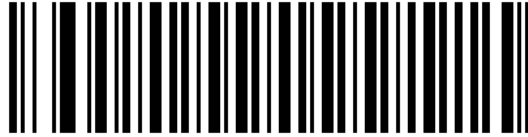
Restore UPC-E default settings

Enable/disable

Most UPC barcodes start with the 0 digit system. To read these barcodes, scan the “*UPC-E0 Enabled” barcode. If you need to read barcodes using the 1 digit system, please scan “UPC-E1 Enable” . Default=UPC-E0 enabled.



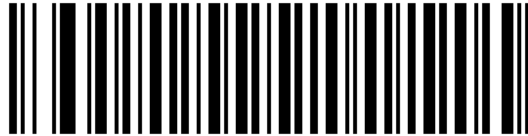
* UPC-E0 enabled



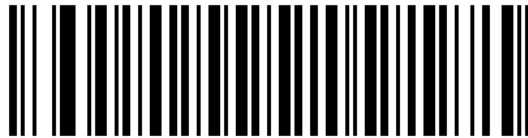
UPC-E0 disabled

barcode extension

UPC-E Expand expands UPC-E barcodes into 12-digit UPC-A format. Default = disabled.



Enable



* Disable

Required add-on code

When “Required” is scanned, the barcode reading device will only read UPC-E barcodes with additional codes. Default = Not required.



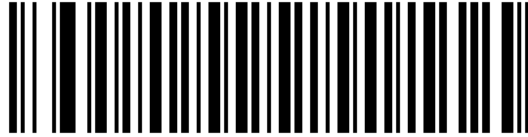
need



* unnecessary

Additional code separator

When this function is enabled, there will be a space separating the barcode and the additional code. When disabled, no space separation occurs. Default = enabled.



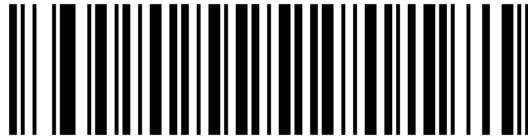
* Enable



Disable

Check Digit

The following configures whether a check digit should be transmitted at the end of the output data. Default = enabled.



* Enable



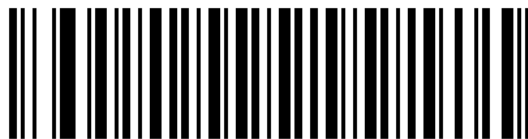
Disable

digital system

The numeric system characters of UPC are usually transmitted at the beginning of the output data. Default = enabled.



* Enable



Disable

Additional code

This setting adds a 2/5-digit additional code to the end of all read UPC-E data. Default=2/5 digit add-on code disabled.



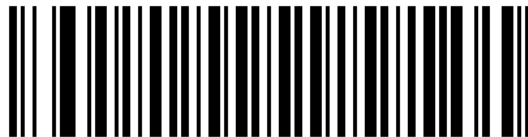
2-digit add-on code enabled



* 2-digit appendix disabled



5-digit add-on code enabled



* 5-digit appendix disabled

UPC-E1

Most UPC barcodes start with the 0 digit system. To read these barcodes, scan the “*UPC-E0 Enabled” barcode. If you need to read barcodes using the 1 digit system, please scan “UPC-E1 Enable”. Default=UPC-E1 disabled.



UPC-E1 enabled

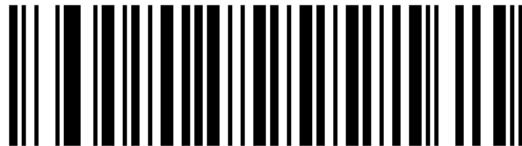


*UPC-E1 disabled

EAN/JAN-13

Note

Default all EAN/JAN settings

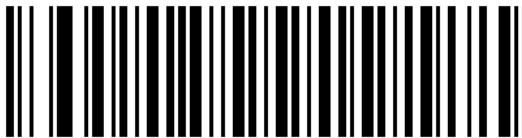


Restore EAN/JAN-13 default settings

Enable/disable



* Enable



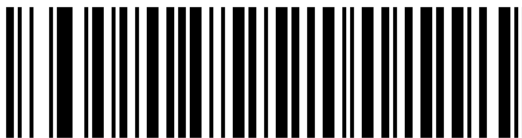
Disable

Note

If you want to convert a UPC-A barcode to EAN-13 format, scan the UPC-A disabled barcode.

Check Digit

The following configures whether a check digit should be transmitted at the end of the output data. Default = enabled.



* Enable



Disable

Additional code

This setting adds a 2/5-digit additional code to the end of all read EAN/JAN-13 data.

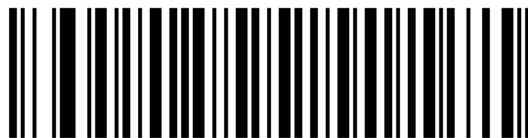
Default=2/5 digit add-on code disabled.



2-digit add-on code enabled



* 2-digit appendix disabled



5-digit add-on code enabled



* 5-digit appendix disabled

Required add-on code

When scanning “Required”, the code reading device will only read EAN/JAN-13 barcodes with additional codes. Default=not required.



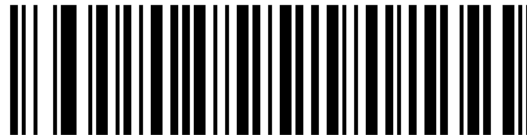
need



* unnecessary

Additional code separator

When this function is enabled, there will be a space separating the barcode and the additional code. When disabled, no space separation occurs. Default = enabled.



* Enable



Disable

ISBN Translate

When set to be transmitted in ISBN symbols, EAN-13 Bookland symbols will be converted to the equivalent ISBN symbol format. Default = disabled.



Enable



* Disable

EAN/JAN-8

Note

Default all EAN/JAN-8 settings



Restore EAN/JAN-8 default settings

Enable/disable



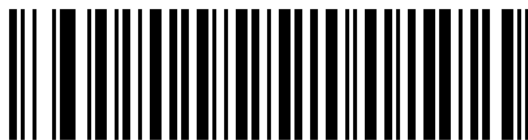
* Enable



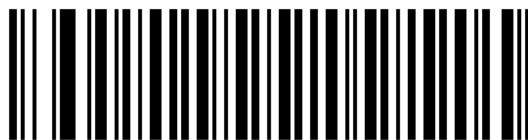
Disable

Check character

The following configures whether a check character should be transmitted at the end of the output data.
Default = enabled.



* Enable



Disable

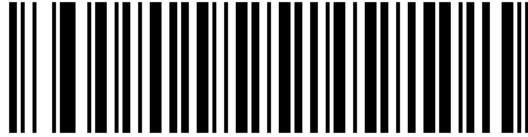
Additional code

This setting adds a 2/5-digit additional code to the end of all read EAN/JAN-13 data.

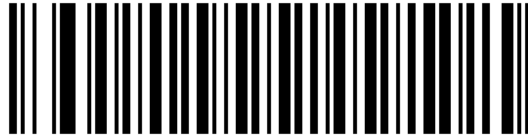
Default=2/5 digit add-on code disabled



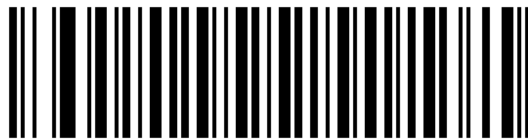
2-digit add-on code enabled



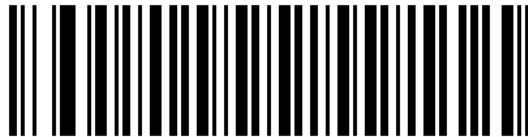
* 2-digit appendix disabled



5-digit add-on code enabled



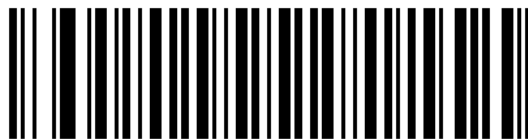
5-digit add-on code enabled



* 5-digit appendix disabled

Required add-on code

When scanning “Required”, the code reading device will only read EAN/JAN-8 barcodes with additional codes. Default=not required.



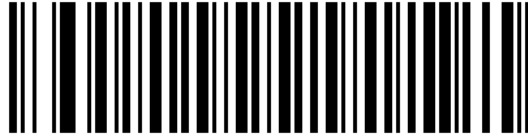
need



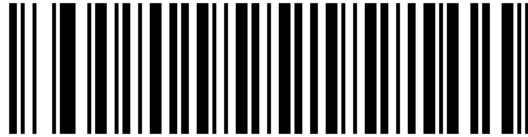
* unnecessary

Additional code separator

When this function is enabled, there will be a space separating the barcode and the additional code. When disabled, no space separation occurs. Default = enabled.



* Enable



Disable

MSI

Note

Default all MSI settings



Restore MSI default settings

Enable/disable



Enable



* Disable

Check character

MSI barcodes use different types of check characters. You can configure your barcode reading device to read MSI barcodes using check characters. Default = MOD10 enabled, but no transmission.

When “Check Character” is set to “Enable MOD10 and Transmit” , the barcode reading device will only read and use MSI barcodes printed with the specified type of check characters, and will transmit the characters at the end of the output data.

When “Check Character” is set to “Enable MOD10, but do not transmit”, the device will only read and use MSI barcodes printed with the specified type of check characters, but will not transmit scanned check characters.



* Enable MOD10, but do not transmit



Enable MOD10 and transmit



Disable MSI check characters

Reading length

Scan the barcode below to change the read length. For additional information, see [Reading length description](#). Minimum and maximum lengths are 4-48. Minimum default value=4, maximum default value=48. (Note: After scanning the “minimum reading length” and “maximum reading length”, you need to scan the specified reading length and save the barcode, please refer to [Reading length description](#))



Minimum reading length

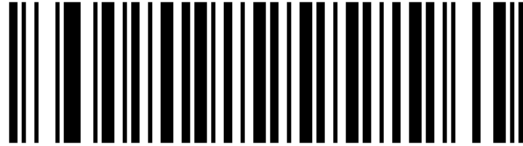


Maximum reading length

GS1 DataBar Omnidirectional

Note

Defaults to all GS1 DataBar Omnidirectional settings

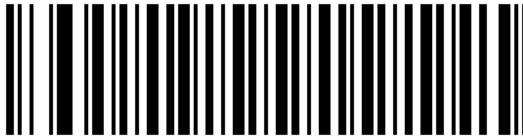


Restore GS1 DataBar Omnidirectional default settings

Enable/disable



* Enable



Disable

GS1 DataBar Limited

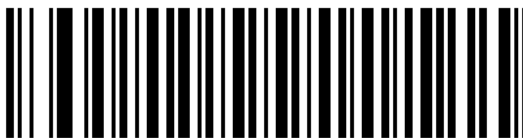
Note

Defaults to all GS1 DataBar Limited settings



Restore GS1 DataBar Limited default settings

Enable/disable



* Enable



Disable

GS1 DataBar Expanded

Note

Default all settings



Restore GS1 DataBar Expanded default settings

Enable/disable



* Enable



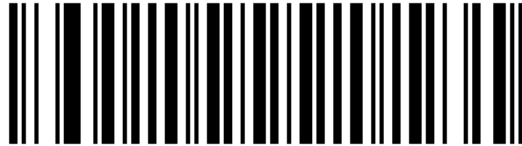
Disable

Reading length

Scan the barcode below to change the read length. For additional information, see [Reading length description](#). Minimum and maximum lengths are 4-74. Minimum default value=4, maximum default value=74. (Note: After scanning the “minimum reading length” and “maximum reading length”, you need to scan the specified reading length and save the barcode, please refer to [Reading length description](#))



Minimum reading length



Maximum reading length

PDF417

Note

Default all PDF417 settings



Restore PDF417 default settings

Enable/disable



* Enable



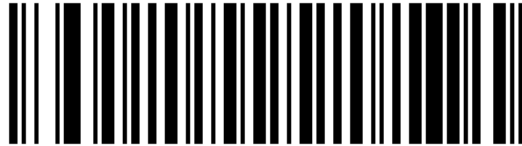
Disable

Reading length

Scan the barcode below to change the read length. For additional information, see [Reading length description](#). Minimum and maximum lengths are 1-2750. Minimum default value=1, maximum default value=2750. (Note: After scanning the “minimum reading length” and “maximum reading length”, you need to scan the specified reading length and save the barcode, please refer to [Reading length description](#))



Minimum reading length



Maximum reading length

QR Code

Note

Default all QR Code settings



Restore QR Code and Micro QR Code default settings

Enable/disable



* Enable



Disable

Reading length

Scan the barcode below to change the read length. For additional information, see [Reading length description](#). The minimum and maximum lengths are 1-7089. Minimum default value=1, maximum default value=7089. (Note: After scanning the “minimum reading length” and “maximum reading length”, you need to scan the specified reading length and save the barcode, please refer to [Reading length description](#))



Minimum reading length



Maximum reading length

Data Matrix

Note

Default all Data Matrix settings



Restore Data Matrix default settings

Enable/disable



* Enable



Disable

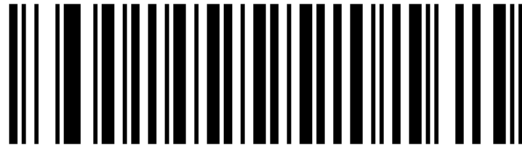
Reading length

Scan the barcode below to change the read length. For additional information, see [Reading length description](#). The minimum and maximum length are 1-3116. Minimum default value=1, maximum default value=3116. (Note: After scanning the “minimum reading length” and “maximum reading length”, you need to scan the specified reading length and save the barcode, please refer to [Reading length description](#))



Maximum reading length

Minimum reading length

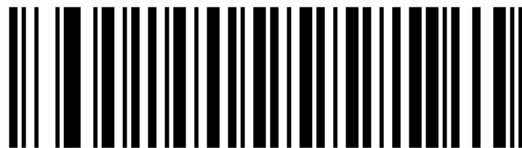


Maximum reading length

Aztec Code

Note

Default all Aztec Code settings



Restore Aztec Code default settings

Enable/disable



* Enable



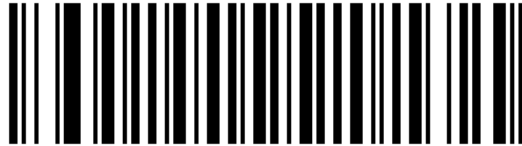
Disable

Reading length

Scan the barcode below to change the read length. For additional information, see [Reading length description](#). The minimum and maximum lengths are 1-3832. Minimum default value=1, maximum default value=3832. (Note: After scanning the “minimum reading length” and “maximum reading length”, you need to scan the specified reading length and save the barcode, please refer to [Reading length description](#))



Minimum reading length



Maximum reading length

China Post (Hong Kong 2 of 5)

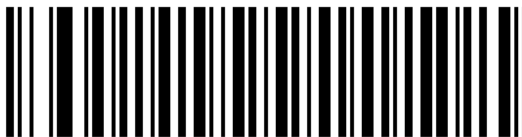
Note

Defaults to all China Post (Hong Kong 2 of 5) settings



Restore China Post default settings

Enable/disable



Enable



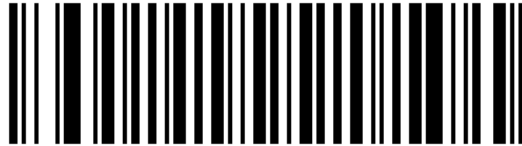
* Disable

Reading length

Scan the barcode below to change the read length. For additional information, see [Reading length description](#). Minimum and maximum lengths are 2-80. Minimum default value=4, maximum default value=80. (Note: After scanning the “minimum reading length” and “maximum reading length”, you need to scan the specified reading length and save the barcode, please refer to [Reading length description](#))



Minimum reading length



Maximum reading length

Korea Post

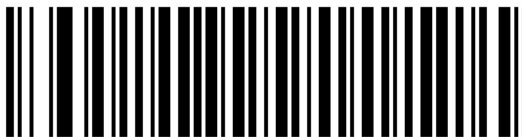
Note

Default all settings



Restore Korea Post default settings

Enable/disable



Enable



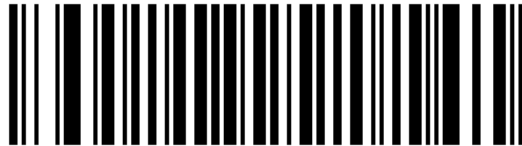
* Disable

Reading length

Scan the barcode below to change the read length. For additional information, see [Reading length description](#). Minimum and maximum lengths are 2-80. Minimum default value=4, maximum default value=48. (Note: After scanning the “minimum reading length” and “maximum reading length”, you need to scan the specified reading length and save the barcode, please refer to [Reading length description](#))



Minimum reading length



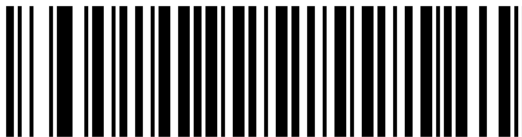
Maximum reading length

Check Digit

Scan the following barcode to determine whether a check digit should be transmitted at the end of the output data. Default = disabled.



Enable



* Disable

Han Xin Code

Enable/disable



Enable

Note

Default all Han Xin settings



Restore Han Xin Code default settings



* Disable

Reading length

Scan the barcode below to change the read length. For additional information, see [Reading length description](#). Minimum and maximum lengths are 1-1000. Minimum default value=1, maximum default value=1000. (Note: After scanning the “minimum reading length” and “maximum reading length”, you need to scan the specified reading length and save the barcode, please refer to [Reading length description](#))



Minimum reading length



Maximum reading length

MaxiCode

Note

Default all MaxiCode settings

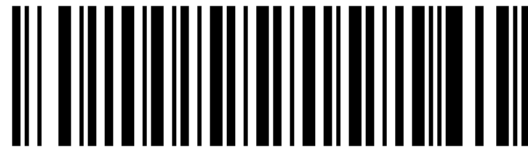


Restore MaxiCode default settings

Enable/disable



Enable



Disable

Reading length

Scan the barcode below to change the read length. For additional information, see [Reading length description](#). Minimum and maximum lengths are 1-150. Minimum default value=1, maximum default value=150. (Note: After scanning the “minimum reading length” and “maximum reading length”, you need to scan the specified reading length and save the barcode, please refer to [Reading length description](#))



Minimum reading length



Maximum reading length

Micropdf

Note

Default all micropdf settings



Restore MicroPDF417 default settings

Enable/disable



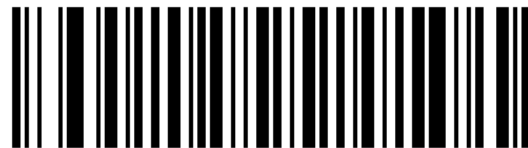
Enable



Disable

Reading length

Scan the barcode below to change the read length. For additional information, see [Reading length description](#). The minimum and maximum length are 1-366. Minimum default value=1, maximum default value=366. (Note: After scanning the “minimum reading length” and “maximum reading length”, you need to scan the specified reading length and save the barcode, please refer to [Reading length description](#))



Minimum reading length



Maximum reading length

GS1 Composite Code

Note

Default settings for all composites

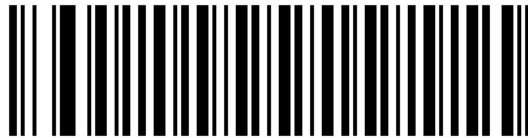


Restore GS1 Composite Code default settings

Enable/disable



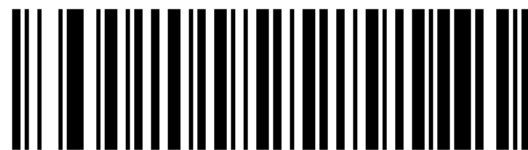
Enable



Disable

Reading length

Scan the barcode below to change the read length. For additional information, see [Reading length description](#). The minimum and maximum lengths are 1-2435. Minimum default value=1, maximum default value=2435. (Note: After scanning the “minimum reading length” and “maximum reading length”, you need to scan the specified reading length and save the barcode, please refer to [Reading length description](#))



Minimum reading length



Maximum reading length

Codablock A

Note

Default settings for all composites



Restore Codablock A default settings

Enable/disable



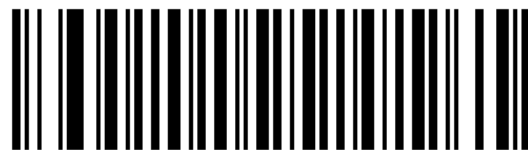
Enable



Disable

Reading length

Scan the barcode below to change the read length. For additional information, see [Reading length description](#). Minimum and maximum lengths are 1-600. Minimum default value=1, maximum default value=600. (Note: After scanning the “minimum reading length” and “maximum reading length”, you need to scan the specified reading length and save the barcode, please refer to [Reading length description](#))



Minimum reading length



Maximum reading length

Codablock F

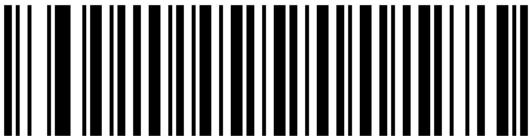
Note

Default settings for all composites

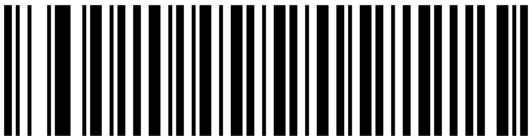


Restore Codablock F default settings

Enable/disable



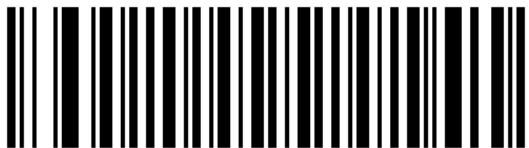
Enable



Disable

Reading length

Scan the barcode below to change the read length. For additional information, see [Reading length description](#). The minimum and maximum lengths are 1-2048. Minimum default value=1, maximum default value=2048. (Note: After scanning the “minimum reading length” and “maximum reading length”, you need to scan the specified reading length and save the barcode, please refer to [Reading length description](#))



Minimum reading length



Maximum reading length

11.3 Engine code tabulation

1D Symbologies

Symbology	AIM	HS7		
	ID	Possible Modifiers(m)	ID	Hex
All Symbologies				99
Codabar	]Fm	0-1	a	61
Code 11	]H3		h	68
Code 128	]Cm	0, 1, 2, 4	j	6A

continues on next page

Table 2 – continued from previous page

Symbology	AIM	HS7		
Code 32 Pharmaceutical (PARAF)	JX0		<	3C
Code 39 (supports Full ASCII mode)	JAm	0, 1, 3, 4,5,7	b	62
TCIF Linked Code 39 (TLC39)	JL2		T	54
Code 93 and 93i	JGm	0-9, A-Z, a-m	i	69
EAN	JEm	0, 1, 3, 4	d	64
EAN-13 (including Bookland EAN)	JE0		d	64
EAN-13 with Add-On	JE3		d	64
EAN-13 with Extended Coupon Code	JE3		d	64
EAN-8	JE4		D	44
EAN-8 with Add-On	JE3		D	44
GS1				
GS1 DataBar	Jem	0	y	79
GS1 DataBar Limited	Jem		{	7B
GS1 DataBar Expanded	Jem		}	7D
GS1-128	JC1		I	49
2 of 5				
China Post (Hong Kong 2 of 5)	JX0		Q	51
Interleaved 2 of 5	JIm	0, 1, 3	e	65
Matrix 2 of 5	JX0		m	6D
NEC 2 of 5	JX0		Y	59
Straight 2 of 5	JRm	0, 1, 3	f	66
IATA				
Straight 2 of 5 Industrial	JS0		f	66
MSI	JMm	0, 1	g	67
Telepen	JBm		t	74
UPC		0, 1, 2, 3, 8,9, A, B, C		
UPC-A	JE0		c	63
UPC-A with Add-On	JE3		c	63
UPC-A with Extended Coupon Code	JE3		c	63
UPC-E	JE0		E	45

continues on next page

Table 2 – continued from previous page

Symbology	AIM	HS7
UPC-E with Add-On	]E3	E 45
UPC-E1	]X0	E 45
Add HS7 Code ID		5C80
Add AIM Code ID		5C81
Add Backslash		5C5C
Batch Mode Quantity		5 35

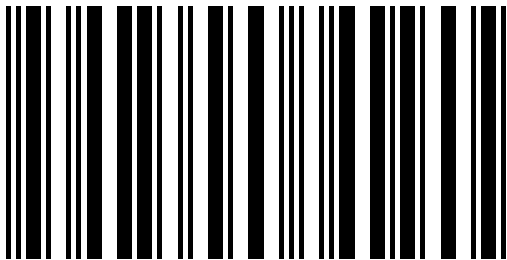
2D Symbologies

Symbology	AIM	HS7	ID	Hex
	ID	Possible Modifiers(m)	ID	Hex
All Symbologies				99
Aztec Code	]zm	0-9, A-C	z	7A
Chinese Sensible Code (Han Xin Code)	]X0		H	48
Codablock A	]O6	0, 1, 4, 5, 6	V	56
Codablock F	]Om	0, 1, 4, 5, 6	q	71
Code 49	]Tm	0, 1, 2, 4	l	6C
Data Matrix	]dm	0-6	w	77
GS1	]em	0-3	y	79
GS1 Composite	]em	0-3	y	79
GS1DataBar Omnidirectional	]em	0-3	y	79
MaxiCode	]Um	0-3	x	78
PDF417	]Lm	0-2	r	72
MicroPDF417	]Lm	0-5	R	52
QR Code	]Qm	0-6	s	73
Micro QR	]Qm		s	73

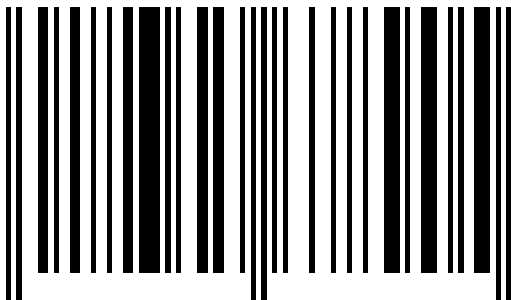
Postal Code

Symbology	AIM	HS7		
	ID	Possible Modifiers(m)	ID	Hex
All Symbologies				99
Australian Post	]X0		A	41
British Post	]X0		B	42
Canadian Post	]X0		C	43
China Post	]X0		Q	51
InfoMail	]X0		,	2c
Intelligent Mail Bar Code	]X0		M	4D
Japanese Post	]X0		J	4A
KIX (Netherlands) Post	]X0		K	4B
Korea Post	]X0		?	3F
Planet Code	]X0		L	4C
Postal-4i	]X0		N	4E
Postnet	]X0		P	50

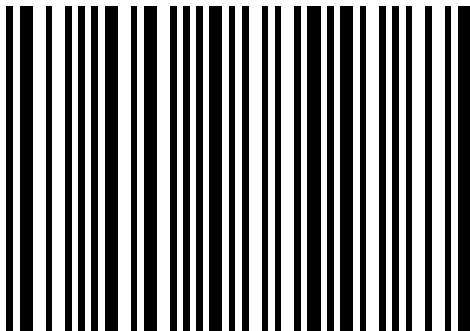
Barcode example



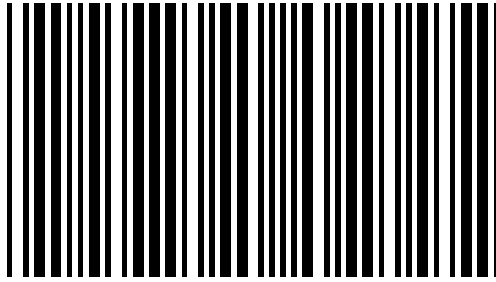
Example content: 1234567890



Example content: 0012345678905



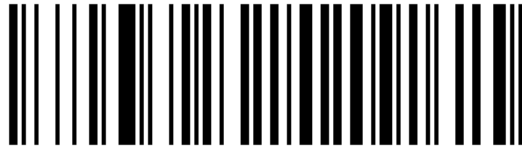
Example content: A13579B



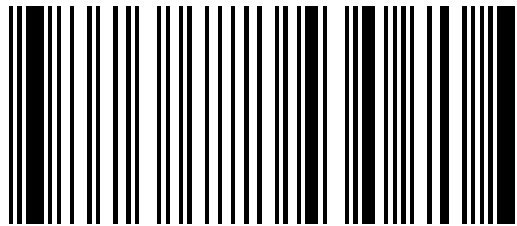
Example content: BC321



Example content: 9780330290951



Example content: Code 128



Example content: 123456-9\$



Example content: Package #98765-43210<CR><LF>Ship To:<CR><LF>Jane Doe<CR><LF>123 Main
Street<CR><LF>Anywhere, NY 12345<SUB>



Example content: 01234567

Matrix 2 of 5



6543210

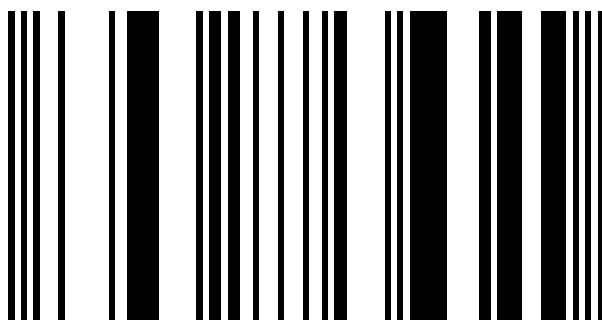
Barcode example picture

Straight 2 of 5 Industrial

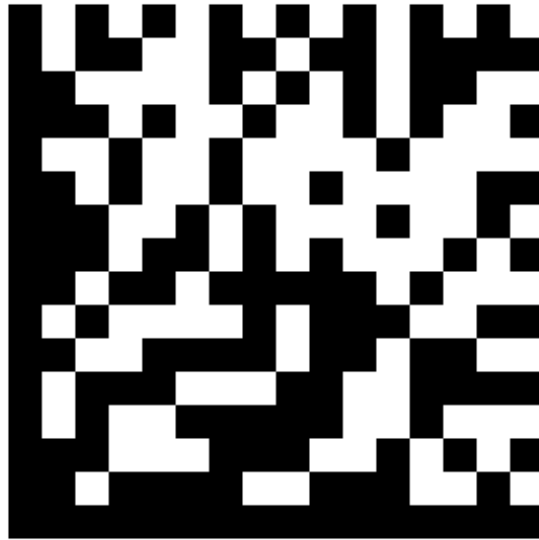


123456

Barcode example picture



Example content: (01)00123456789012



Example content: Test Symbol

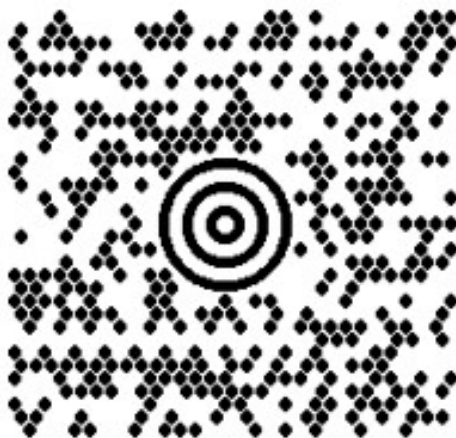
Micro PDF417



Test Message

Barcode example picture

MaxiCode



Test Message

Barcode example picture



Example content: 1998 Chev Blazer<CR>123437486089J672<CR>Reg PAN 123 ABC Dec 1999

11.4 engine character table

ASCII Conversion Table

Hexadecimal	decimal	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 (Inquiry)
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)

continues on next page

Table 3 – continued from previous page

Hexadecimal	decimal	character
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

continues on next page

Table 3 – continued from previous page

Hexadecimal	decimal	character
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

continues on next page

Table 3 – continued from previous page

Hexadecimal	decimal	character
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)

Keyboard operation ASCII conversion

Hexadecimal	decimal	CTRL+X	Description
00	0	CTRL+@	
01	1	CTRL+A	Select all
02	2	CTRL+B	Bold
03	3	CTRL+C	copy
04	4	CTRL+D	Font format
05	5	CTRL+E	center alignment
06	6	CTRL+F	Find
07	7	CTRL+G	position
08	8	CTRL+H	replace
09	9	CTRL+I	italics
0a	10	CTRL+J	Justify
0b	11	CTRL+K	hyperlink
0c	12	CTRL+L	left aligned
0d	13	CTRL+M	left indent
0e	14	CTRL+N	New
0f	15	CTRL+O	Enable
10	16	CTRL+P	Print
11	17	CTRL+Q	
12	18	CTRL+R	Align right
13	19	CTRL+S	Save
14	20	CTRL+T	First line indent
15	21	CTRL+U	Underline F12
16	22	CTRL+V	Paste F1
17	23	CTRL+W	Write disk closed F2
18	24	CTRL+X	cut F3
19	25	CTRL+Y	repeat F4
1a	26	CTRL+Z	Cancel F5
1b	27	CTRL+[	F6
1c	28	CTRL+\	F7
1d	29	CTRL+]	F8
1e	30	CTRL+^	F9
1f	31	CTRL+-	F10
7f	32	CTRL+	

11.5 Engine setting barcode

Appendix Charts



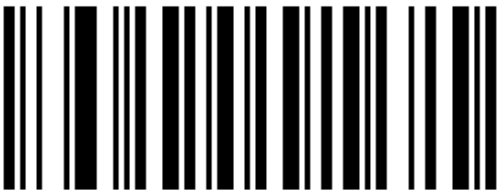
0



1



2



3



4



5



6



7



8



9



A



B



C



D



E



F



Save



give up

Note

If an error occurs while scanning letters or numbers (before scanning the Save barcode), scan the Abandon barcode, rescan the correct letters or numbers, and then scan the Save barcode.

12 Appendix

12.1 Character Reference Table

ASCII Function Key Character Reference Table

0FH

HEX	CODE	*Config0	Config3	Con- fig1	Con- fig4	Config2 Win- dows	Config5 Win- dows
00H	NUL	NUL	NUL	Ctrl+@	Ctrl+@	ALT+000	ALT+000
01H	SOH	NUL	NUL	Ctrl+A	Ctrl+A	ALT+001	ALT+001
02H	STX	NUL	NUL	Ctrl+B	Ctrl+B	ALT+002	ALT+002
03H	ETX	NUL	NUL	Ctrl+C	Ctrl+C	ALT+003	ALT+003
04H	EOT	NUL	NUL	Ctrl+D	Ctrl+D	ALT+004	ALT+004
05H	ENQ	NUL	NUL	Ctrl+E	Ctrl+E	ALT+005	ALT+005
06H	ACK	NUL	NUL	Ctrl+F	Ctrl+F	ALT+006	ALT+006
07H	BEL	NUL	NUL	Ctrl+G	Ctrl+G	ALT+007	ALT+007
08H	BS	Backspace	Backspace	Ctrl+H	Ctrl+H	ALT+008	ALT+008
09H	HT	TAB	TAB	TAB	Ctrl+I	ALT+009	ALT+009
0AH	LF	NUL	Enter	Ctrl+J	Ctrl+J	ALT+010	ALT+010
0BH	VT	TAB	TAB	Ctrl+K	Ctrl+K	ALT+011	ALT+011
0CH	FF	NUL	NUL	Ctrl+L	Ctrl+L	ALT+012	ALT+012
0DH	CR	Enter	Enter	Enter	Ctrl+M	Enter	ALT+013
0EH	SO	NUL	NUL	Ctrl+N	Ctrl+N	ALT+014	ALT+014
0FH	SI	NUL	NUL	Ctrl+O	Ctrl+O	ALT+015	ALT+015

1FH

HEX	CODE	*Config0/3	Config1/4	Config2/5 Windows
10H	DLE	NUL	Ctrl+P	ALT+016
11H	DC1	NUL	Ctrl+Q	ALT+017
12H	DC2	NUL	Ctrl+R	ALT+018
13H	DC3	NUL	Ctrl+S	ALT+019
14H	DC4	NUL	Ctrl+T	ALT+020
15H	NAK	NUL	Ctrl+U	ALT+021
16H	SYN	NUL	Ctrl+V	ALT+022
17H	ETB	NUL	Ctrl+W	ALT+023
18H	CAN	NUL	Ctrl+X	ALT+024
19H	EM	NUL	Ctrl+Y	ALT+025
1AH	SUB	NUL	Ctrl+Z	ALT+026
1BH	ESC	ESC	Ctrl+[	ALT+027
1CH	FS	NUL	Ctrl+\	ALT+028
1DH	GS	NUL	Ctrl+]	ALT+029
1EH	RS	NUL	Ctrl+^	ALT+030
1FH	US	NUL	Ctrl+-	ALT+031

Note

On Mac systems, the Ctrl key corresponds to the Command key.

ASCII Character Reference Table**5FH**

HEX	ASCII	HEX	ASCII	HEX	ASCII	HEX	ASCII
20H	Space	30H	0	40H	@	50H	P
21H	!	31H	1	41H	A	51H	Q
22H	"	32H	2	42H	B	52H	R
23H	#	33H	3	43H	C	53H	S
24H	\$	34H	4	44H	D	54H	T
25H	%	35H	5	45H	E	55H	U
26H	&	36H	6	46H	F	56H	V
27H	'	37H	7	47H	G	57H	W
28H	(	38H	8	48H	H	58H	X
29H	)	39H	9	49H	I	59H	Y
2AH	*	3AH	:	4AH	J	5AH	Z
2BH	+	3BH	;	4BH	K	5BH	[
2CH	,	3CH	<	4CH	L	5CH	\
2DH	-	3DH	=	4DH	M	5DH	]
2EH	.	3EH	>	4EH	N	5EH	^
2FH	/	3FH	?	4FH	O	5FH	_

9DH

HEX	ASCII	HEX	ASCII	HEX	Fun Key	HEX	Fun Key
60H	`	70H	p	80H	F1	90H	End
61H	a	71H	q	81H	F2	91H	Page Down
62H	b	72H	r	82H	F3	92H	Right Arrow
63H	c	73H	s	83H	F4	93H	Left Arrow
64H	d	74H	t	84H	F5	94H	Down Arrow
65H	e	75H	u	85H	F6	95H	Up Arrow
66H	f	76H	v	86H	F7	96H	Print Screen
67H	g	77H	w	87H	F8	97H	*Ctrl
68H	h	78H	x	88H	F9	98H	*Shift
69H	i	79H	y	89H	F10	99H	*Left Alt
6AH	j	7AH	z	8AH	F11	9AH	*Right Alt
6BH	k	7BH	{	8BH	F12	9BH	1s Delay
6CH	l	7CH		8CH	Insert	9CH	*Win-GUI
6DH	m	7DH	}	8DH	Home	9DH	*Keystroke
6EH	n	7EH	~	8EH	Page Up		
6FH	o	7FH	DEL	8FH	Delete		

 Note

When Ctrl, Shift, Alt, GUI are set as prefix or suffix, they will be output in combination with the next character (not supported when set to ALT, TH keyboard). The character after Keystroke is directly output as the key value.