

Programming Guide

Omnidirectional Laser Scanner

Revision History

Changes to the original manual are listed below:

Version	Date	Description of Version
1.0	2012/11/01	Initial release
1.1	2015/9/1	Added new data editing functions

Important Notice

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Specification or version may be subject to change without notice. The actual specification and version are based on the product delivered.

General Handling Precautions

- Do not dispose of the scanner in fire.
- Do not put the scanner directly in the sun or by any heat source.
- Do not use or store the scanner in a very humid place.
- Do not drop the scanner or allow it to collide violently with other objects.
- Do not take the scanner apart without authorization.

Printing Guidance

- This programming guide is in A5 size. Please double check your printer setting before printing it out.
- When printing barcodes for programming, the use of a high-resolution laser printer is strongly suggested for the best scan result.

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Radio Notice

Some equipment generates uses and can radiate radio frequency energy. If not installed and used in accordance with the instructions in this manual, it may cause interference to radio communications. The equipment has been tested and found to comply with the limits for a Class A computing device pursuant to EN55022 and 47 CFR, Part 2 and Part 15 of the FCC rules. These specifications are designed to provide reasonable protection against interference when operated in a commercial environment.

Radio and Television Interference

Operation of this equipment in a residential area can cause interference to radio or television reception. This can be determined by turning the equipment off and on.

The user is encouraged to try to correct the interference by one or more of the following measures:

Reorient the receiving antenna.

Relocate the device with respect to the receiver.

Move the device away from the receiver.

Plug the device into a different outlet so that the device and the receiver are on different branch circuits.

If necessary, the user may consult the manufacturer, authorized dealer, or experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful: "How to Identify and Resolve Radio-TV Interference Problems." This booklet is available from the U.S. Government Printing Office, Washington, DC 20402 U.S.A., Stock No. 004000003454.

For CE-countries

This scanner is in conformity with CE standards. Please note that an approved, CE-marked power supply unit should be used in order to maintain CE conformance.

Laser Safety

The laser scanner complies with safety standard IEC 60825-1 for a Class I laser produce. It also complies with CDRH as applicable to a Class IIa laser product. Avoid long term staring into direct laser light.

Radiant Energy

The laser scanner uses one low-power visible laser diodes operating at 650nm in an opto-mechanical scanner resulting in less than 3.9 μ W radiated power as observed through a 7mm aperture and averaged over 10 seconds.

Do not attempt to remove the protective housing of the scanner, as un-scanned laser light with a peak output up to 0.8mW would be accessible inside.

Laser Light Viewing

The scan window is the only aperture through which laser light may be observed from this product. A failure of the scanner motor, while the laser diode continues to emit a laser beam, may cause emission levels to exceed those for safe operation. The scanner has safeguards to prevent this occurrence. If, however, a stationary laser beam is emitted, the failing scanner should be disconnected from its power source immediately.

Adjustments

Do not attempt any adjustments or alteration of this product. Do not remove the protective housing of the scanner. There are no user-serviceable parts inside.

Caution

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous laser light exposure.

Optical

The use of optical instruments with this product will increase the eye hazard. Optical instruments include binoculars, magnifying glasses, and microscopes but do not include normal eye glasses worn by the user.

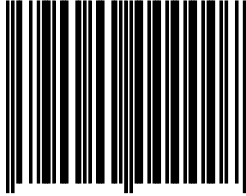
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Enter/Exit Programming Mode



(This barcode can also be found at back cover page.)

Framed values are default values.

INTRODUCTION

This is an advanced programming guide for various omnidirectional laser scanners. This guide contains a series of programming barcode labels, and by scanning these codes, it can make configurations to the scanners. This allows decoding options and interface protocols to be tailored to a specific application. The configuration is stored in non-volatile memory and will not be lost by removing power from the scanner. Other than specified in this guide, for any special functions or specifications, please contact your dealer for details.

The scanner must be properly powered before programming. For RS-232C type scanners, an external power adapter must be used to supply DC power to the scanner. If a keyboard emulation type scanner is used with an IBM PC/XT/AT, PS/2 or any fully compatible computers, power will be drawn from the keyboard port; therefore no external power adapter is required. If keyboard emulation type scanner is used with any other non IBM PC compatible computers, an external power adapter may be required.

Under the programming mode, the laser scanner will acknowledge a good and valid reading with a short beep. It will give long beeps for either an invalid or bad reading.

CHANGE THE SCANNER SETTING

In order to change the scanner setting, please follow the steps below:

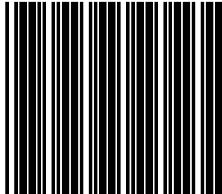
1. Scan the **Enter/Exit Programming Mode** barcode. There will be 2 beeps (low-high) indicating ready to make settings.
2. Scan barcodes for the desired feature (1 beep)
3. Scan the **Enter/Exit Programming Mode** barcode again to save the configuration. There will be 2 beeps (long-short) indicating a successful setting.

After reading a valid barcode in programming mode, the scanner will give a high beep.

DEFAULT PARAMETERS

This table gives the default settings of all the programmable parameters. The default settings will be restored whenever the **Reset** programming label is scanned. (This label can also be found on p.8.)

Reset (Return to factory default)



Default Values of Operating Parameters

<i>Function</i>	<i>Default</i>
<i>Sleep mode</i>	
Motor sleep mode	After 30 minutes
Laser sleep mode	After 10 minutes
Scanner timing	
Same code delay	200msec
Beeper Tone	
Frequency	medium
Duration	50msec
Code Identifiers	
Code ID	off
Code 39	M
ITF 2 of 5	I
Chinese post code	H
UPC-A	A
UPC-E	E
EAN-13	F
EAN-8	FF
Codabar	N
Code 128	K
Code 93	L
MSI/Plessey	P
GS1 DataBar Omnidirectional (Formally RSS-14 Standard)	RS
GS1 DataBar Limited (Formally RSS Limited)	RL
GS1 DataBar Expanded (Formally RSS Expanded)	RX

Default Values of Keyboard Emulation Parameters

Function	Default Values
Keyboard type selection	IBM PC/AT USA
Message terminator	Enter/ carriage return

Default Values of Serial Communication Parameters

Function	Default Values
Handshaking protocol	None
ACK/NAK response time setting	300 msec
Baud rate	9600
Data bit	8
Stop bit	1
Parity	None
Message terminator selection	CR/LF

Default Values of USB Emulation Parameters

Function	Default Values
Keyboard Type	US Keyboard
Message Terminator	Enter

Default Values of Wand Emulation Parameters

Function	Default Values
Wand emulation speed	Normal
Wand emulation output	Black = High
Data output format	Transmit as scan

Default Values of Decoding Parameters

Function	Code	Default Value
Reading codes selection	Code 39	Enable
	ITF 2 of 5	Disable
	Chinese Post Code	Disable
	UPC/EAN/JAN	Enable
	Codabar	Disable
	MSI/PLESSY	Disable
	Code 128	Disable
	Code 93	Disable
	EAN-128	Disable
	Italian Pharmacy	Disable
	ISSN/ ISBN	Disable
	GS1 DataBar (RSS)	Disable
Code 39	Codes	Standard
	Start/stop characters	Not transmitting
	Check digit	Disabled
	Concatenation	Off
	Length	3~32
Interleaved 2 of 5	Length	6-32
	Check digit	Disable
Chinese Post Code	Length	10~32
	Check digit	Disable
UPC/EAN/JAN	Format	All
	Addendum	Disable
	UPC-E=UPC-A	Disabled
	UPC-A leading digit	Transmit
	UPC-A check digit	Transmit
	UPC-E leading digit	Transmit
	UPC-E check digit	Transmit
Codabar	Type	Standard
	Start/stop characters	A, B, C, D
	Length	6~32 digits
Code 128	FNC 2 append	Disable
	Check digit	Disable
Code 93	Length	3~32
	Check digit	Not transmit
MSI	Length	6~32
	Check digit	Transmit
Italian Pharmacy	Transmit "A" Character	Not transmitting

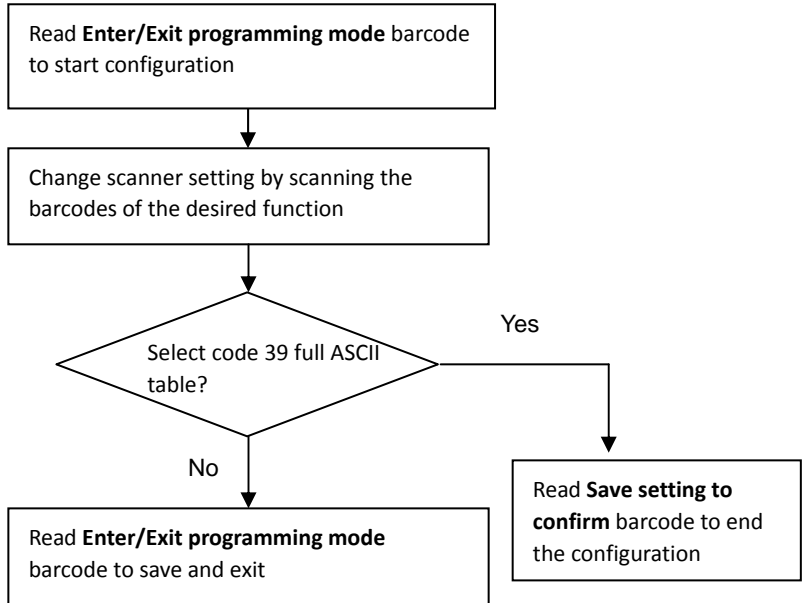
Default Values of Decoding Parameters (continued)

Function	Code	Default Value
GS1 DataBar (formally RSS)	GS1 DataBar Omnidirectional	Disable
	GS1 DataBar Limited	Disable
	GS1 DataBar Expanded	Disable
	Transmit GS1 DataBar Omnidirectional check digit	Enable
	Transmit GS1 DataBar Omnidirectional application ID (01)	Enable
	Transmit GS1 DataBar Limited check digit	Enable
	GS1 DataBar Omnidirectional/EAN-128 emulation	Disable
	Transmit GS1 DataBar Limited application ID (01)	Enable
	Transmit GS1 DataBar Expanded check digit	Enable
	Transmit AI(01) of Expanded	Enable
GS1 DataBar Expanded /EAN-128 emulation	Disable	

NOTE:

Contact your distributor to make sure if your model and firmware version support GS1 DataBar.

PROGRAM PROCEDURE



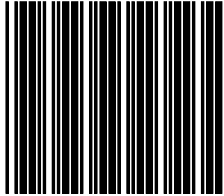
System Setting

The series scanner is a multi-interface communication scanner. If you had ordered only one type of interface, the device is configured in the interface requested, i.e. RS-232C, keyboard wedge, wand emulation or USB. If not requested, the default interface is set in keyboard wedge interface (PC/AT). Use this section to change interfaces.

Reset (Return to Factory Default)

Reading of “Reset” barcode label turns all parameters back to default values, and the scanner remains in the last interface set when it is reset.

Reset (Return to Factory Default)

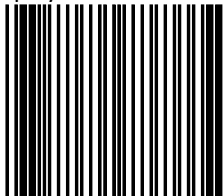


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Display Firmware Version

Reading of the “Display Firmware Version” will show the current firmware version on host.

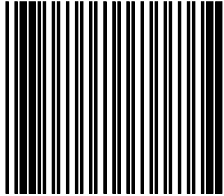
Display Firmware Version



Abort (Exit Programming Mode)

Reading of the “Abort” barcode label discards all the parameters read prior to scan the “Enter/Exit of Programming Mode”.

Abort (Exit Programming Mode)

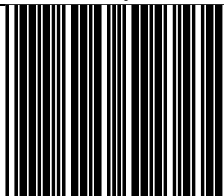


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Return to PC/AT Default

This barcode allows setting in keyboard wedge interface for IBM PC AT/PS/2 and compatibles.

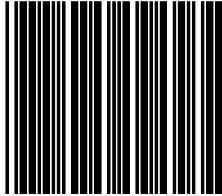
Return to PC/AT Default



Return to RS-232 Default

The RS-232C interface scanner is often used when connecting to the serial port of a PC or terminal. Read the barcode to set the scanner into RS-232 interface.

Return to RS-232 Default

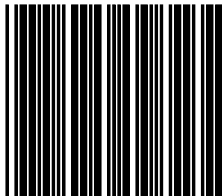


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Return to USB Default

Reading of “Return to USB default” sets the device into USB interface support.

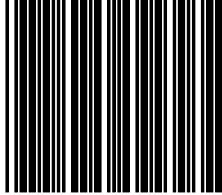
Return to USB Default



Return to Wand Emulation Default

The Wand emulation is achieved by decoding a scanned barcode and then encoding it again, so that the output is readily decoded by an external decoder designed for processing of wand data.

Return to Wand Emulation Default

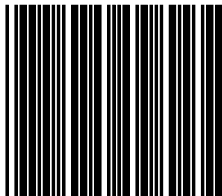


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Return as Customer Default

Reading of the label sets the device back to customer saved parameter settings.

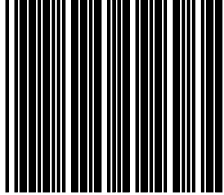
Return as Customer Default



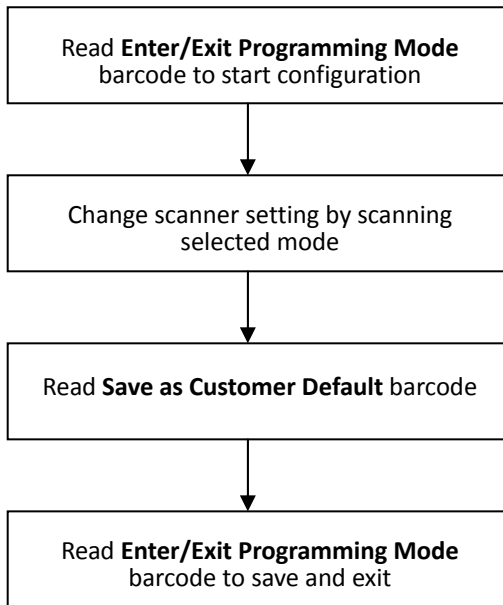
Save as Customer Default

Reading of this label to save the desired parameters set into customer's own default setting.

Save as Customer Default



How to Save as Customer Default



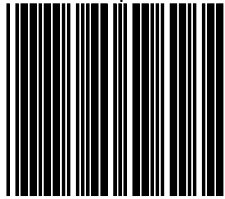
Sleep Timeouts Selection

In this section, user can set both laser and/or motor to enter into sleep mode. The timeout programming labels will allow users to set the different time frame before entering into laser and/or motor sleep mode. The feature reduces power consumption and prolongs scanner life time.

NOTE:

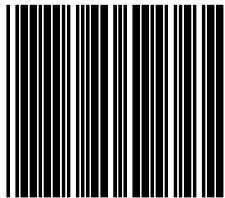
- 1. Laser always enters sleep mode before motor.**
- 2. If the motor timeout is set shorter than the motor timeout, then laser would enter sleep mode as motor enters sleep mode.**

Motor sleep mode off

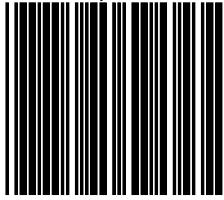


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Motor sleep time 5 min.

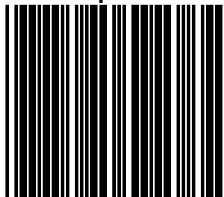


Motor sleep time 10 min.

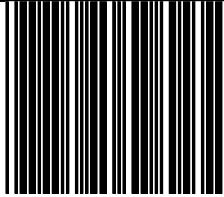


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Motor sleep time 20 min.

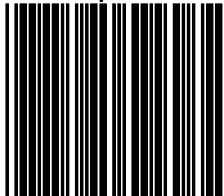


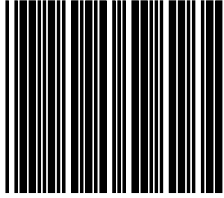
Motor sleep time 30 min.



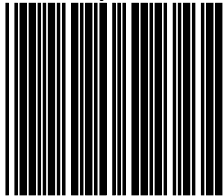
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Motor sleep time 60 min.

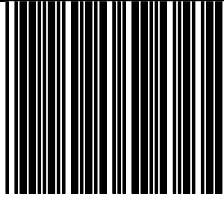


Laser sleep mode off

To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

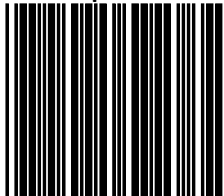
Laser sleep time 5 min.

Laser sleep time 10 min.

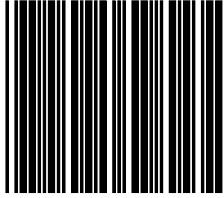


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Laser sleep time 15 min.

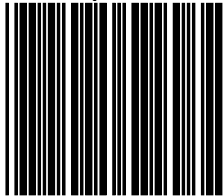


Laser sleep time 20 min.

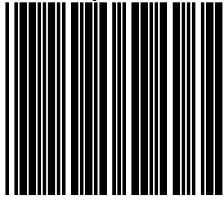


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Laser sleep time 25 min.



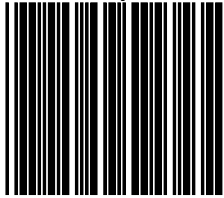
Laser sleep time 30 min.



Same Code Delay Time

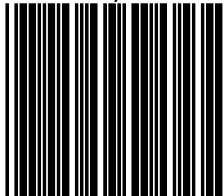
This parameter sets the minimum time allowed between decodes of the same label.

Same code delay time 50 msec.

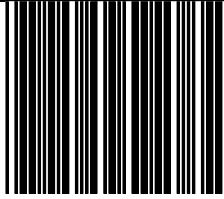


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Same code delay time 100 msec.

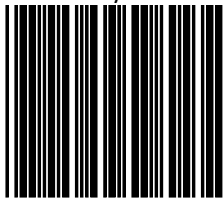


Same code delay time 200 msec.

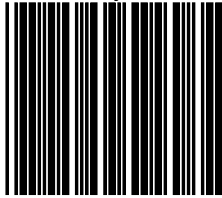


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Same code delay time 300 msec.

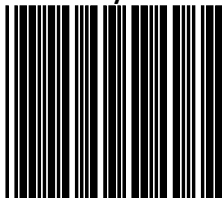


Same code delay time 400 msec.

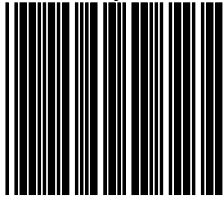


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Same code delay time 500 msec.

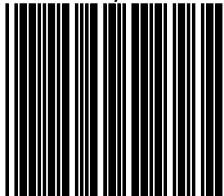


Same code delay time 600 msec.

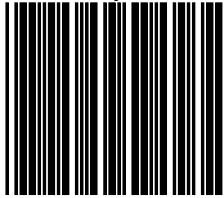


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Same code delay time 700 msec.

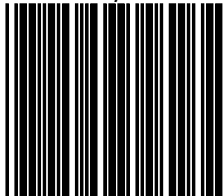


Same code delay time 800 msec.

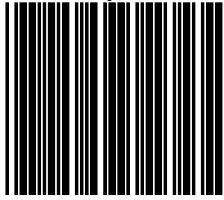


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Same code delay time 900 msec.

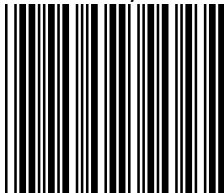


Same code delay time 1000 msec.



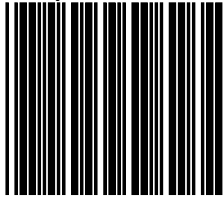
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Same code delay time infinite

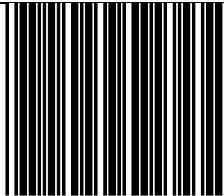


Beeper Sound Selection

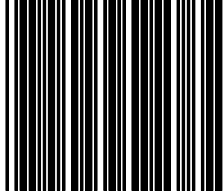
This section includes all setting labels for beeper sound settings, including tone frequency, volume, duration time, power on beep enable/disable, and enable/disable sound when the scanner enters sleep mode.

LED/Beep after transmission

To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

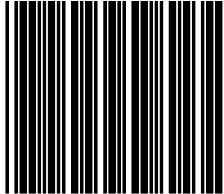
LED/Beep before transmission

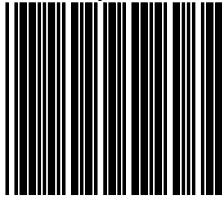
Power-up tone enable



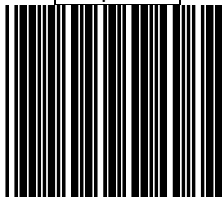
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Power-up tone disable

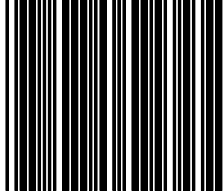


Sleep sound

To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

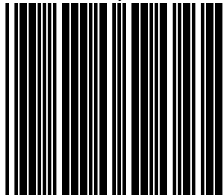
Sleep silent

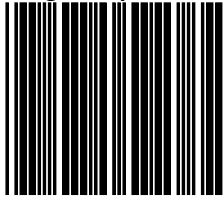
Medium beeper tone



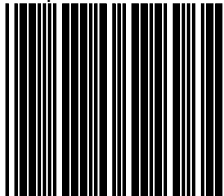
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Low beeper tone

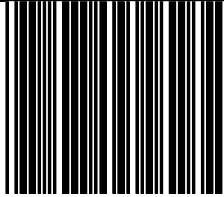


High beeper tone

To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

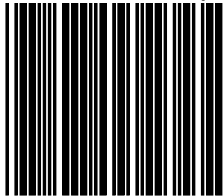
Speaker disable

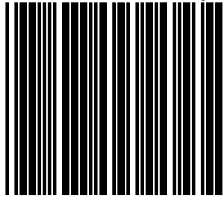
Beeper sound duration (100msec)



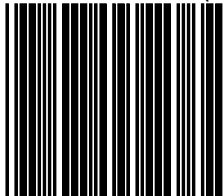
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Beeper sound duration (50msec)

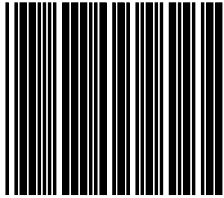


Beeper sound duration (20msec)

To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

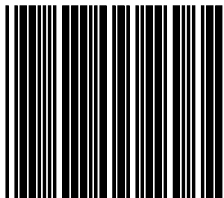
Beeper sound duration (5msec)

Beeper sound duration 200msec

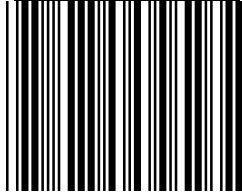


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Beeper sound duration 500msec

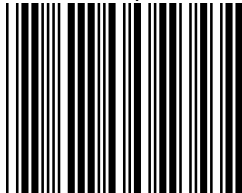


Loud beeper volume

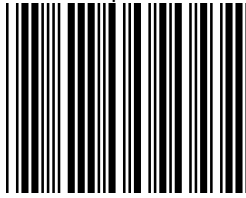


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Medium beeper volume



Low beeper volume



Barcode Identifier Code Setting

The scanner can transmit maximum 2 digits barcode identifier code for different types of barcodes. Use Enable or Disable identifier setting barcode to determine the transmission of barcode ID.

The procedure is as follows:

- 1.) Scan **Enter/Exit Programming Mode** label
- 2.) Scan **Barcode Identifier Setting Code** label
- 3.) Scan the new code mark from ASCII table (maximum 2 digits). For example, if **AB** is the code mark, then scan **A** and **B**.
- 4.) Scan **Save Setting to Confirm** label
- 5.) Scan **Enter/Exit Programming Mode** label

Barcode Identifier Code Selection

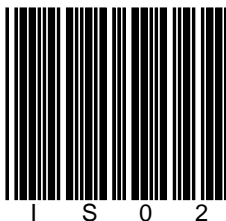


Scan "Enable identifier code" label to transmit the label ID as shown in the table below.

Code 39	M
ITF 2 of 5	I
Chinese post code	H
UPC-A	A
UPC-E	E
EAN-13	F
EAN-8	FF
Codabar	N
Code 128	K
Code 93	L
MSI/Plessey	P
GS1 DataBar Omnidirectional (RSS-14 Standard)	RS
GS1 DataBar Limited (RSS Limited)	RL
GS1 DataBar Expanded (RSS Expanded)	RX

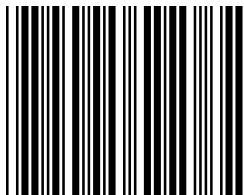


Set Message Format with Code Identifier



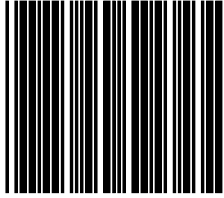
Code	Code identifier
UPC-A	A
UPC-E	E
EAN-8	FF
EAN-13	F
CODE 39	*
CODBAR	%
ITF 2 OF 5	i
CODE 93	&
CODE 128	#
MSI/PLESSY	@
EAN-128	P

Enable Identifier Code Table as AIM Standard



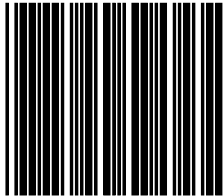
Barcode Identifier Code Setting

Code 39 identifier code setting

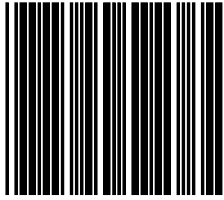


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

ITF 2 of 5 identifier code setting

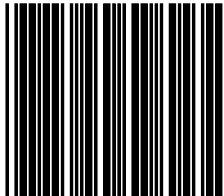


Chinese Post code identifier code setting

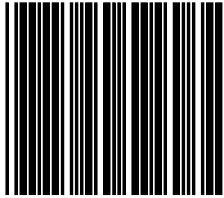


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

UPC-E identifier code setting

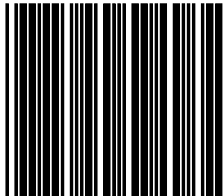


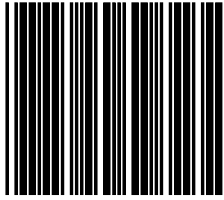
UPC-A identifier code setting



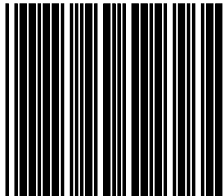
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

EAN-13 identifier code setting

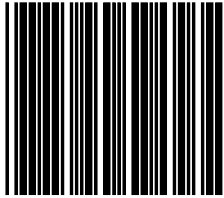


EAN-8 identifier code setting

To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

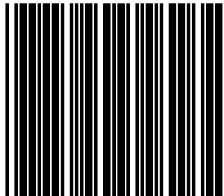
Codabar identifier code setting

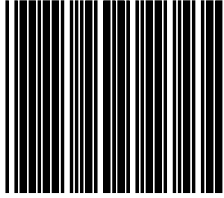
Code 128 identifier code setting



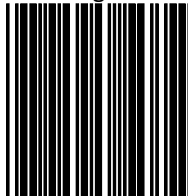
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Code 93 identifier code setting

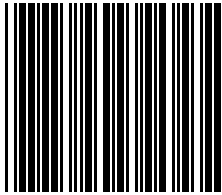


MSI identifier code setting

To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

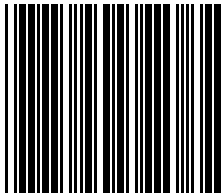
Save setting to confirm

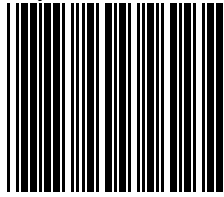
GS1 DataBar Omnidirectional identifier code setting



To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

GS1 DataBar Limited identifier code setting

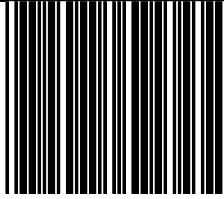


GS1 DataBar Expanded identifier code setting

Message delay

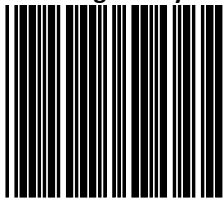
This section contains different delay time frames between two consecutive messages. This delay will be added before each data transmission.

Inter message delay 0 ms

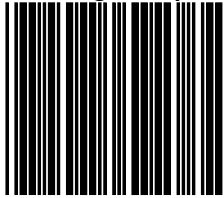


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Inter message delay 100 ms

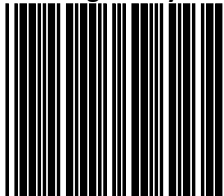


Inter message delay 500 ms



To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

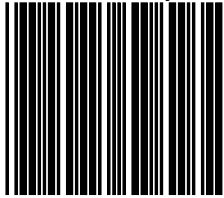
Inter message delay 1000 ms



Character Delay

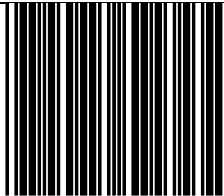
This option governs delay time between two consecutive characters; the delay time can be altered by scanning the following labels.

Character delay 5 ms

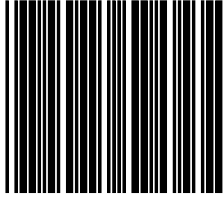


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Inter character delay 0 ms

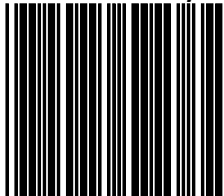


Inter character delay 10 ms

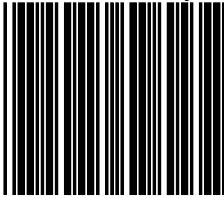


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Inter character delay 20 ms



Inter character delay 50 ms



Interface Communication Setting

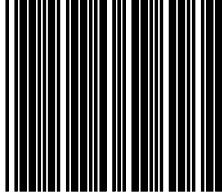
This section contains labels to configure the scanner to user's host terminal. The following interfaces are supported:

- *RS-232C interface
- *Keyboard wedge
- *USB interface
- *Wand emulation

RS-232C Interface Configuration

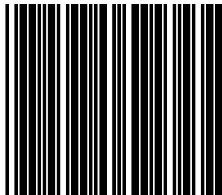
Baud Rate Setting

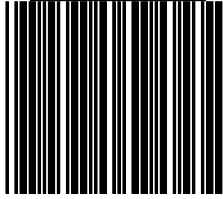
Baud Rate 38400



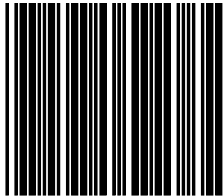
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Baud Rate 19200

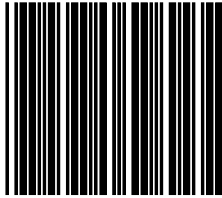


Baud Rate 9600

To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

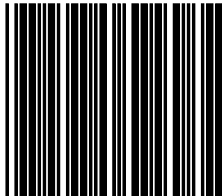
Baud Rate 4800

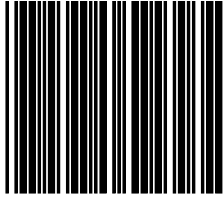
Baud Rate 2400



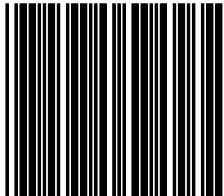
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Baud Rate 1200



Baud Rate 57600

To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Baud Rate 115200

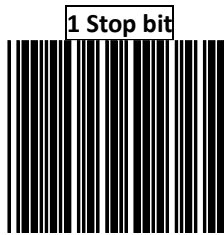
Date Bit Setting



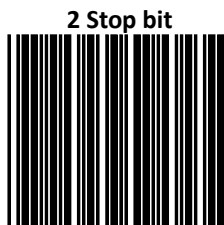
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.



Stop Bit Setting

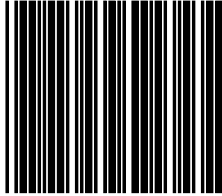


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.



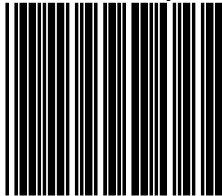
Parity Bit Setting

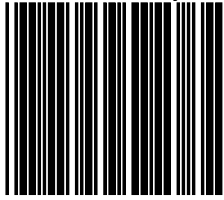
Even Parity



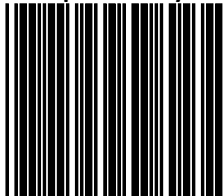
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Odd Parity

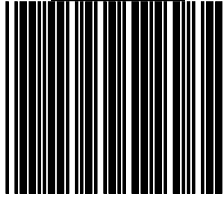


Mark Parity

To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Space Parity

None Parity



Handshaking Protocol

The RS-232C type scanner supports four handshaking protocols. With these options of communication protocol, users can tailor the scanner to meet the requirement of most systems. These handshaking protocols are:

***None**

The scanner will transmit any read data unconditionally. The scanner will not check the receiving device or the transmitted message.

***RTS/CTS**

Under this handshaking protocol, the scanner use the RTS pin to instruct the connected device to transmit data and test the CTS pin for readiness of the connected device to receive data.

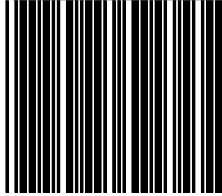
***ACK/NAK**

The scanner waits for an ACK or NAK signal from the host computer after each data transmission. Normally, the scanner will temporarily stored the scanned data in the memory buffer before receiving the ACK or NAK signal. If the ACK signal is received, it will clear the transmitted data and continue to send the next data. In case the NAK signal is received, it will repeat to transmit the same data until receiving the ACK signal.

***Xon/Xoff**

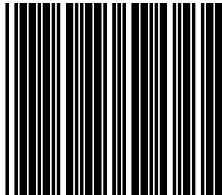
During the data communication, if a scanner receives an Xoff (ASCII 013H), it will stop the transmission at once. The scanner waits for a Xon (ASCII 01H) to start the transmission again.

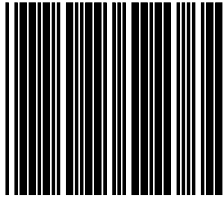
None handshaking



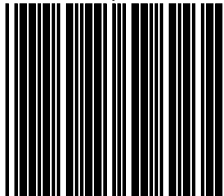
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

ACK/NAK



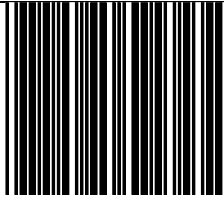
Xon/Xoff

To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

RTS/CTS

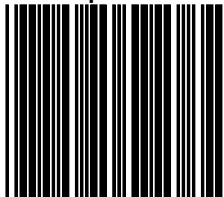
ACK/NAK Response Time Setting

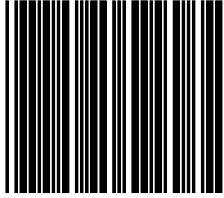
ACK/NAK response time 300ms



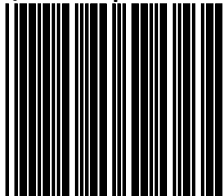
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

ACK/NAK response time 500ms

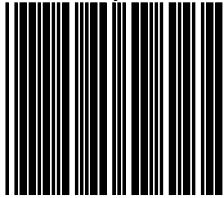


ACK/NAK response time 1s

To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

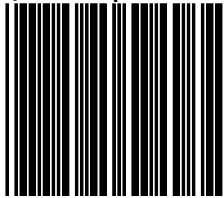
ACK/NAK response time 2s

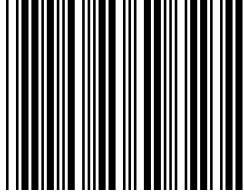
ACK/NAK response time 3s



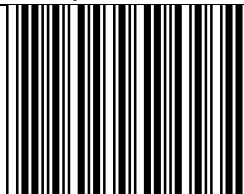
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

ACK/NAK response time 5s

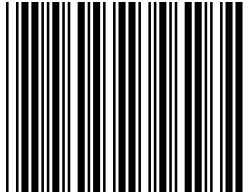


ACK/NAK response time Infinity

To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

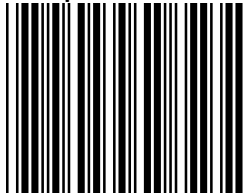
Disable ACK/NAK timeout beeper

Enable ACK/NAK timeout beeper

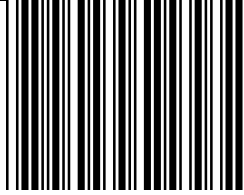


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Enable beeper on<BEL> character



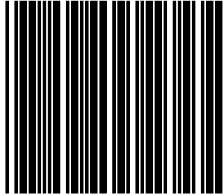
Ignore beep on <BEL>character



Message terminator for RS-232C

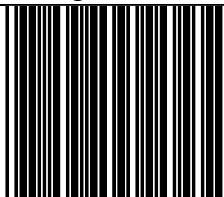
The series RS-232C type scanner can be programmed to append a terminator to every message sent via the serial port. Different terminator will be appended at the end of message sent from the serial port.

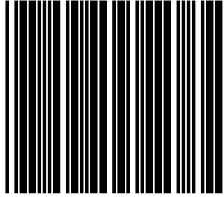
RS-232 message terminator—none



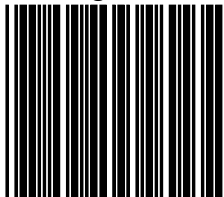
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

RS-232 message terminator—CR/LF

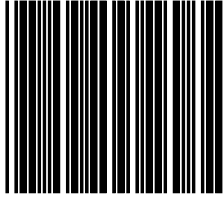


RS-232 message terminator—CR

To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

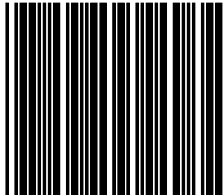
RS-232 message terminator—LF

RS-232 message terminator—H tab

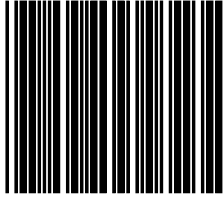


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

RS-232 message terminator—STX/ETX



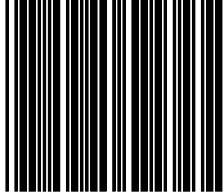
RS-232 message terminator—EOT



Keyboard Wedge Interface Configuration

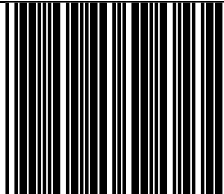
Message Terminator for Keyboard Wedge

Keyboard terminator---none

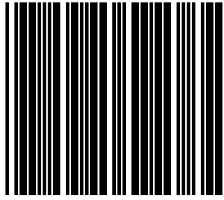


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Keyboard terminator---Enter

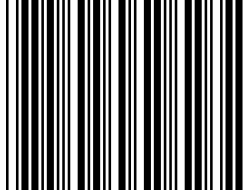


Keyboard terminator---H-TAB



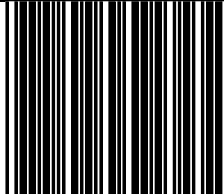
Keyboard Language Selection

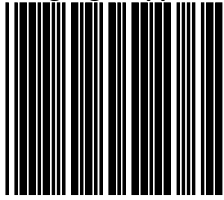
Enable International keyboard type
(Alt method)



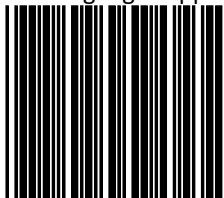
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Keyboard language support---USA

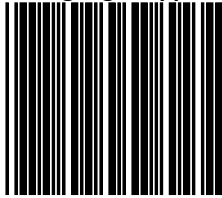


Keyboard language support---Germany

To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

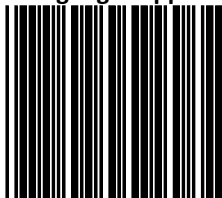
Keyboard language support---UK

Keyboard language support---French

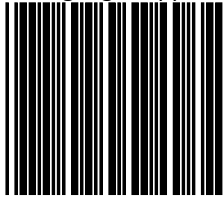


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Keyboard language support---Spanish

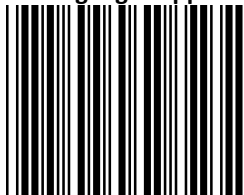


Keyboard language support--- Italian

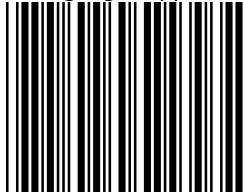


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Keyboard language support--- Swiss

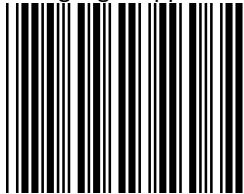


Keyboard language support---Swedish

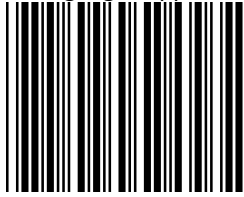


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

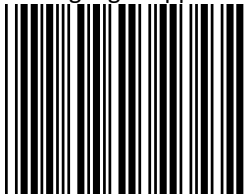
Keyboard language support---Japanese



Keyboard language support---Belgium



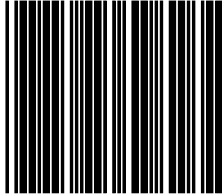
Keyboard language support---Turkish



Capital Lock

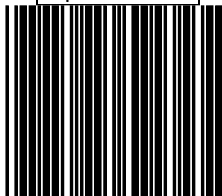
Select the suitable code to match your keyboard caps lock status.

Capital lock on



To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

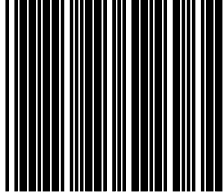
Capital lock off



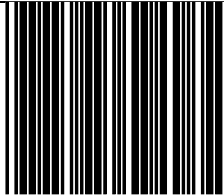
Function Key Emulation

In this section, users can emulate Function keys, Arrow keys, and many other extended keys. An IBM compatible keyboard does not translate to ASCII characters; it can be concatenated with input data as header and/or trailer. (See Appendix B)

Function key emulation enable



Function key emulation disable



USB Interface Configuration

The USB mode is effectively a keyboard emulator that works with hosts, such as USB-compatible operating system and USB ports. USB compatible operating systems are Windows 98, Windows NT 5.0 and later. No additional software is needed since the USB driver supports its built-in operating system

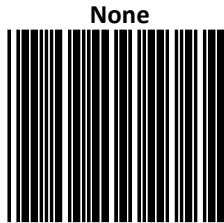
Keyboard Type



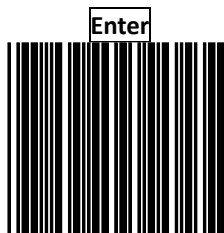
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.



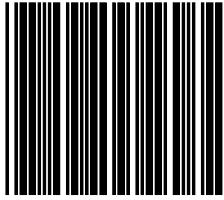
Message terminator for USB



To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.



H tab

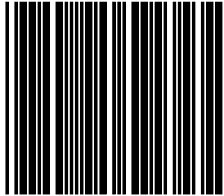


Wand Emulation Configuration

Emulation Speed Selection

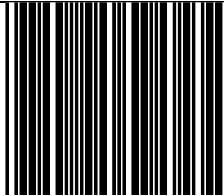
The data output speed can be set to befit the external decoder.

Wand emulation speed=Low
(1ms narrow element width)

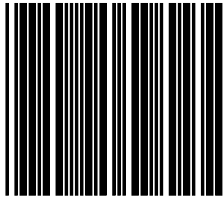


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Wand emulation speed =medium
(600 us narrow element width)

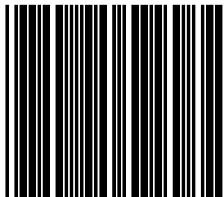


Wand emulation speed= high
(300 us narrow element width)



To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

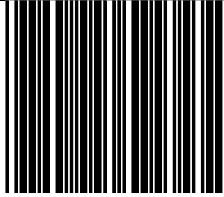
Wand emulation speed ---- higher
(100us narrow element width)



Emulation Data Output Selection

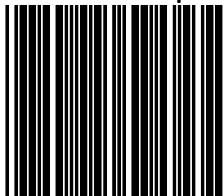
The decoded data output logic level can be set to benefit the external decoder.

Wand emulation data output black = high

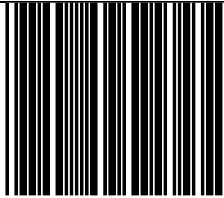


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Wand emulation data output black = low

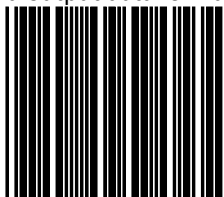


Wand Data Transmitted as Scanning



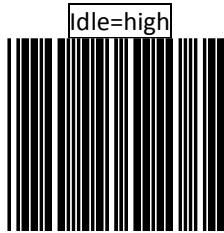
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Enable Wand output data format as Code 39

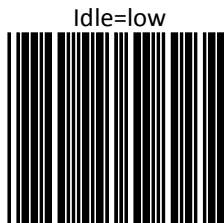


Emulation data idle state selection

The level refers to wand emulation data signal when not in use.



To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.



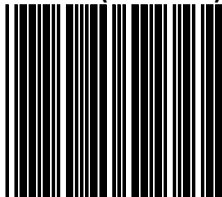
Data Editing

HEADER AND TRAILER

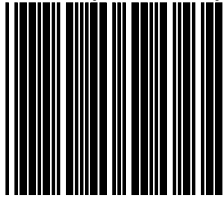
The **Header and Trailer** section allows you to append a header and/or a trailer to every message transmitted via the serial ports, USB or the keyboard port. There is no restriction in selecting header or trailer characters as far as the sum of the lengths of header and trailer is not greater than 10 digits.

1. Select either header or trailer you are going to program by scanning the corresponding label
2. Scan the character(s) you want from the ASCII table to set as header or trailer. (Be sure to enable full ASCII code 39 option before you start.)
3. Read the **save setting to confirm** label to confirm your choice into memory.

Header (Preamble)

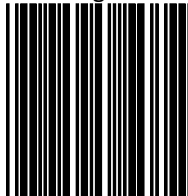


Trailer (Postamble)



To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Save setting to confirm

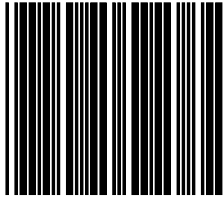


Truncate Header/Trailer Character

This setting allows you to truncate a number of header or trailer for symbology. As a result, the specific characters you select are deleted (or keep if the reverse setting is set) from the symbology you want.

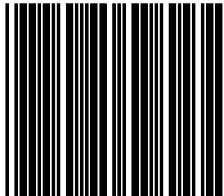
- 1.) Scan the **Enter/Exit programming mode** label.
- 2.) Select the **Truncate header or truncate trailer** label.
- 3.) Scan two barcode value from the full ASCII code table(0~9). For example, scan **0** and **2** if you want to clear the number **2** from header.
- 4,) Scan **save setting to confirm** label
- 5,) Scan **Enter/Exit programming mode** label to end of configuration.

Truncate header character



To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

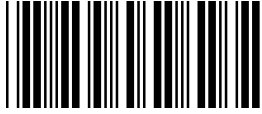
Truncate trailer character



Truncate Settings

- Truncate character default setting allows you enable the truncate function. EX: setting of truncate 4 header characters in EAN-13 001234567895 will appear as 34,567,895.
- Truncate character reverse setting allows you to enable the truncate reverse function. Reverse truncate allows you to save the specific character you select. EX: Reverse truncate 4 header characters EAN-13 001234567895, the first 4 characters 0012 are saved.
- Disable all barcode for truncate setting allows you to disable all truncates settings; once disabled, you can choose to enable all by scanning “Enable all barcode for truncate setting” or enable a single barcode truncate setting such as EAN13 or Code 39.

Truncate character default



To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Truncate character reverse



Enable all barcode for truncate setting



To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Disable all barcode for truncate setting



Enable EAN13 for truncate setting



To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Enable EAN8 for truncate setting



Enable UPC-A for truncate setting

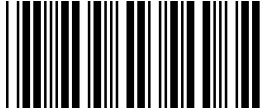


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Enable UPC-E for truncate setting



Enable Code39 for truncate setting



To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Enable I25 for truncate setting



Enable Code128 for truncate setting



To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

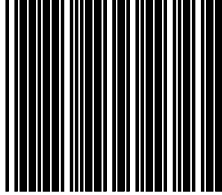
Enable Codabar for truncate setting



Add Code Length

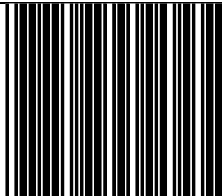
This option allows you to add the reading barcode numeric characters as header

Add code length as header enable (all barcode)



To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Add code length as header disable (all barcode)



Auxiliary Handheld Scanner Setting

If the scanner is designed for in-counter application, it provides an auxiliary RS-232 port for the use of an additional peripheral device to be connected to the host system via the scanner itself. It is usually used to connect a handheld scanner for items too large or too heavy to be placed on the checkstand.

This section instructs how to enable the AUX port as a handheld scanner input port.

NOTE:

Contact your distributor to make sure if your omnidirectional scanner and firmware version support such a function.

Handheld Data Format Requirements

Before installation, the connected handheld scanner must be configured to transmit data format as below. Refer to the manual of the handheld scanner for more details or contact the distributor.

Baud rate	9600
Data bit	8
Parity	None
Stop bit	1
Handshaking	RTS/CTS
Message terminator	STX/ETX
Code 39 identifier code	M
ITF 2 of 5 identifier code	I
Chinese post code identifier code	H
UPC-A identifier code	A
UPC-E identifier code	E
EAN-13 identifier code	F
EAN-8 identifier code	FF
Codabar identifier code	N
Code 128 identifier code	K
Code 93 identifier code	L
MSI identifier code	P
GS1 CodeBar Omnidirectional identifier code	RS
GS1 CodeBar Limited identifier code	RL
GS1 CodeBar Expanded	RX
Industrial 2 of 5 identifier code	D
Code 11 identifier code	O
Standard 2 of 5 identifier code	S
Matrix 2 of 5 identifier code	G

Installation of An Auxiliary Handheld Scanner

Follow the steps below to use the auxiliary RS-232C port as a handheld scanner input port:

1. Configure the handheld scanner data format as above table requirements.
2. Turn off the host system.
3. Connect the handheld scanner to the auxiliary port.
4. Connect the external power supply for the auxiliary scanner (if required).
5. Activate the RS-232C auxiliary port of the in-counter scanner.

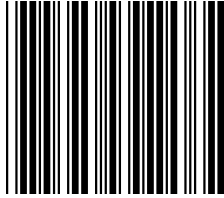
NOTE:

1. You may need to enable the AUX function of the handheld scanner after installation. Refer to the manual of the handheld scanner for more information or contact the distributor.
2. The auxiliary input port's data transmission format follows the main output format of the omnidirectional scanner, including barcode symbologies and related parameters. For example, if the handheld scanner can read Codabar while the omnidirectional scanner can not, the handheld scanner would decode a Codabar barcode without transmitting the data. To complete the data transmission, you have to re-program the omnidirectional scanner and enable this function.

Enable the AUX Port on the In-Counter Scanner

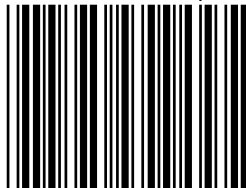
Read the barcode below to activate the RS-232 auxiliary port of the omnidirectional scanner. Before start, make sure your scanner model and firmware version supports such a function.

Enable the AUX port



To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Disable the AUX port



EAS Setting

If the scanner supports the use of an EAS antenna, it can work simultaneously with an EAS system using the interlock feature. When enabled, users may scan and deactivate an item at the same time.

This section instructs how to enable and configure the interlock feature.

NOTE:

Contact your distributor to make sure if your omnidirectional scanner and firmware version support such a function.

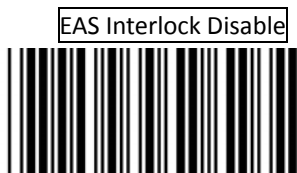
Setting EAS Interlock

When enabled, the EAS tag is not de-activated until the associated barcode is decoded.



To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

When disabled (default), the EAS tag is de-activated independently of any barcode scanning.



Setting EAS Active

Use this setting to set the polarity of the EAS allowing the scanner to send an EAS output after a good barcode read to deactivate a tag on the product.

EAS Active state = Active high



To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

EAS Active state = Active low



Setting EAS Timeout

Use this setting to set EAS Timeout. EAS output signal is held in its active state for a good read indication. To set the timeout:

1. Scan the Enter/Exit Programming barcode to begin the setup.
2. Scan 3 ASCII number barcodes (Please see the Full ASCII Code Table to set the time in millisecond. For example:
 - 000:disable the feature
 - 001:10 msec
 - 002:20 msec
 - 250:2500 msec (2.5second)
3. Scan the Enter/Exit Programming barcode to save the settings.

Set EAS Timeout



EAS Pinout

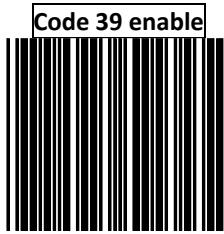
The following is a table for the EAS port pin out.

	Function	Color	Note
1	Ground	Red	
2	Antenna+	Orange	
3	Antenna-	Black	
4	EAS In	Green	
5	EAS Out	White	Open collector output
6	Shield	Purple	

Symbology Configuration

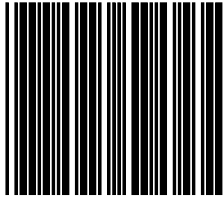
In this section, device can be programmed to recognize one or more barcode symbologies automatically. If the scanner is configured to support multiple barcode symbologies, the scanner will discriminate different symbologies automatically. However, to improve scanning performance, you should enable only the symbologies that will be in active use.

Reading Code Selection

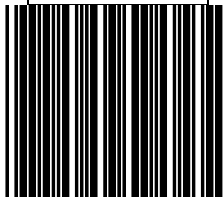


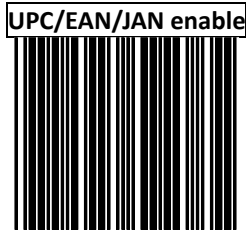
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.



Codabar enable

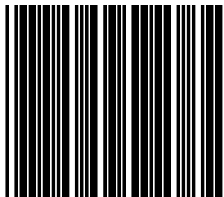
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

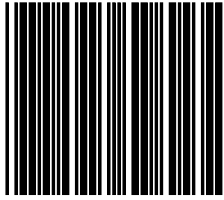
Codabar disable



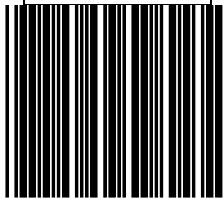
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

UPC/EAN/JAN disable
(only can't transmitted but can decode)

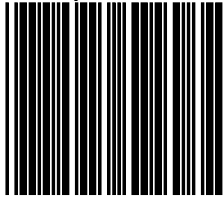


ITF 2 of 5 enable

To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

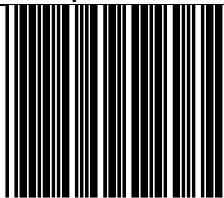
ITF 2 of 5 disable

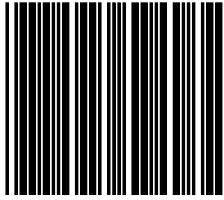
Chinese postcode enable



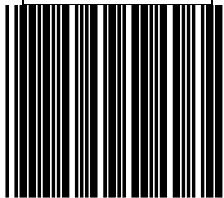
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Chinese postcode disable

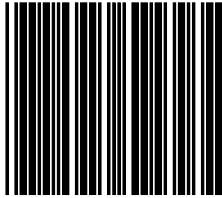


Code 128 enable

To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

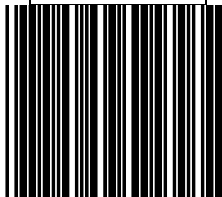
Code 128 disable

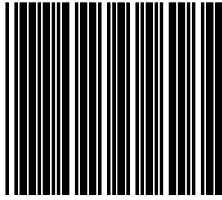
Code 93 enable



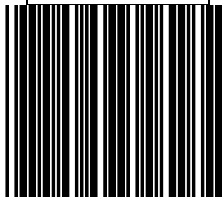
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Code 93 disable

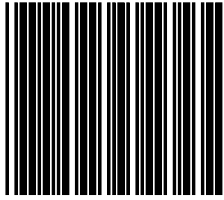


EAN-128 enable

To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

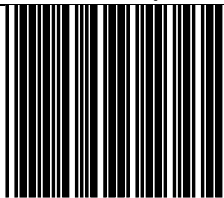
EAN-128 disable

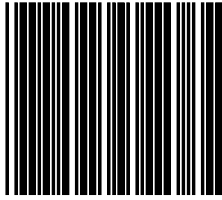
EAN convert to ISSN/ISBN



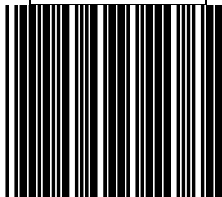
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

EAN convert to ISSN/ISBN disable

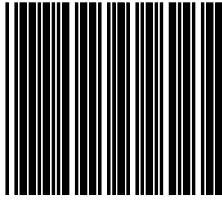


Code 32 enable

To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

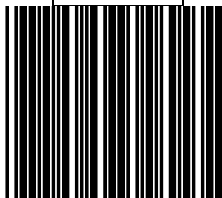
Code 32 disable

MSI enable



To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

MSI disable



UPC/EAN Parameters Setting

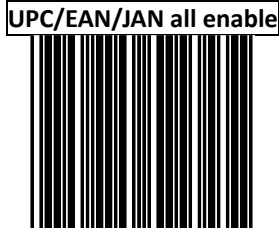
In this section, device can be programmed to recognize some or all derivatives of UPC/EAN.

These derivatives are UPC-A, UPC-E, EAN-8, and EAN-13. Either 2 or 5 addendum digits is supported, addendum digits are those additional digits after normal stop character.

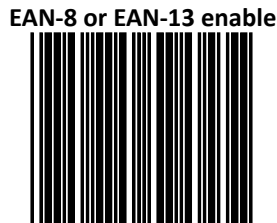
The programming menu for UPC/EAN/JAN also provides several options to govern the transmission of scanned data.

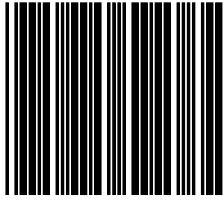
- *UPC/EAN expansion
- *Check digit transmission
- *Data redundant check
- *Addendum seek timeout
- *Addendum left/right margin adjust

Format

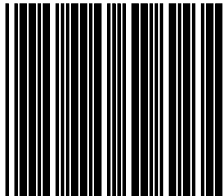


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

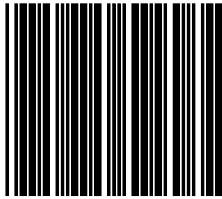


UPC-A and EAN-13 Enable

To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

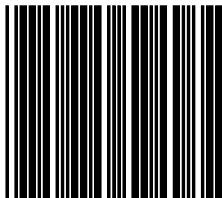
UPC-A and UPC-E Enable

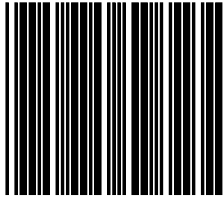
UPC-A enable



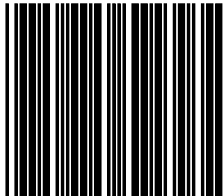
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

UPC-E enable



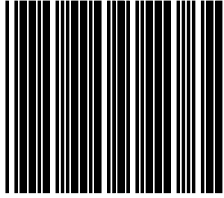
EAN-13 enable

To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

EAN-8 enable

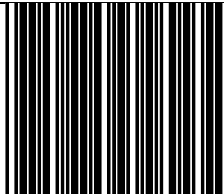
Force UPC-E to UPC-A format

Force UPC-E to UPC-A format enable



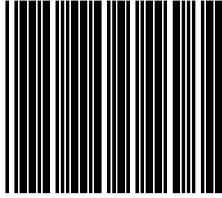
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Force UPC-E to UPC-A format disable



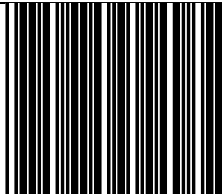
Force UPC-A to EAN-13 format

Force UPC-A to EAN-13 format enable



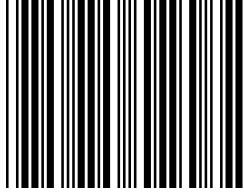
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Force UPC-A to EAN-13 format disable



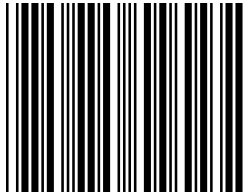
Force EAN-8 to EAN-13 format

Force EAN-8 to EAN-13 format disable

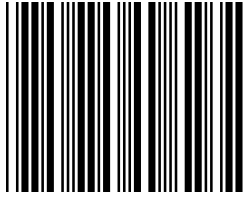


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Force EAN-8 to EAN-13 format enable

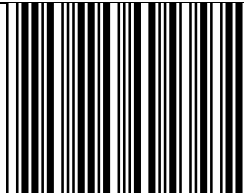


EAN-13 first "0" can transmitted



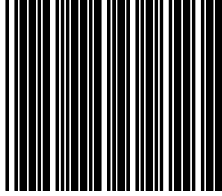
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

EAN-13 first "0" can't transmitted



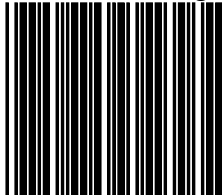
Transmit UPC-A check digit

Transmit UPC-A check digit enable



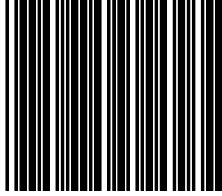
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Transmit UPC-A check digit disable



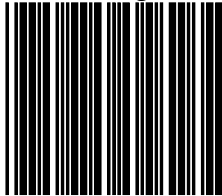
Transmit UPC-E leading character

Transmit UPC-E leading character enable



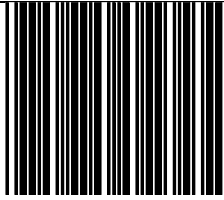
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Transmit UPC-E leading character disable



Transmit UPC-E check digit

Transmit UPC-E check digit enable



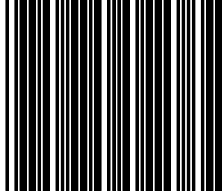
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Transmit UPC-E check digit disable



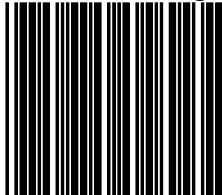
Transmit EAN-8 check digit

Transmit EAN-8 check digit enable



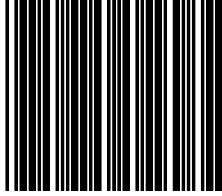
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Transmit EAN-8 check digit disable



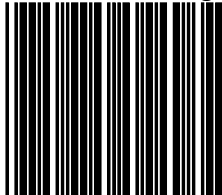
Transmit EAN-13 check digit

Transmit EAN-13 check digit enable



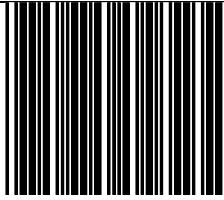
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Transmit EAN-13 check digit disable



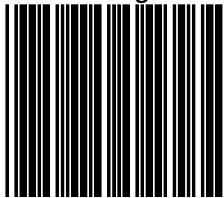
Transmit UPC-A leading character

Transmit UPC-A leading character enable

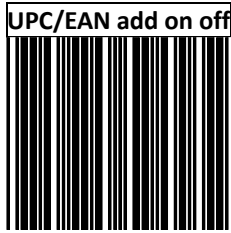


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Transmit UPC-a leading character disable

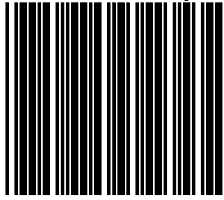


Addendum

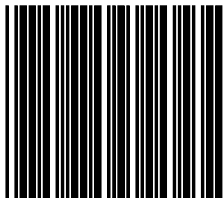


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.



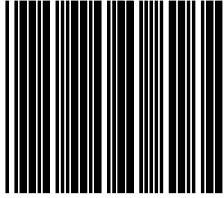
Add on 2 only

To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Add on 2 or 5

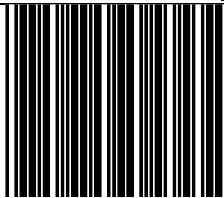
Add on format

Add on format with separator

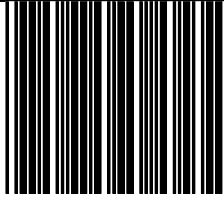


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Add on format without separator

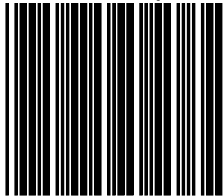


EAN/UPC +Add on (none mandatory)

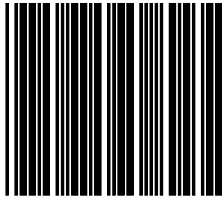


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

EAN/UPC + Add on(mandatory)

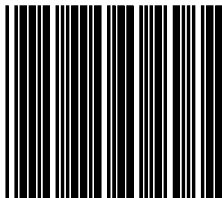


**EAN/UPC + add on mandatory for 378/379 French Supplement
requirement not sent for other**

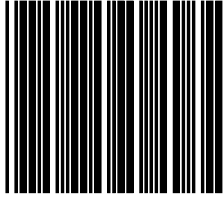


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

**EAN/UPC +add on mandatory for 978/977
book land Supplement requirements
Not sent for other**

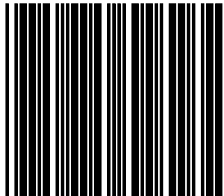


EAN/UPC + addon mandatory for 434/439
German Supplement requirement
Not sent for other

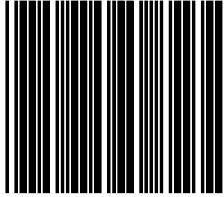


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

EAN/UPC + add on mandatory for 419/414
Euro amounts Supplement requirement
not sent for other

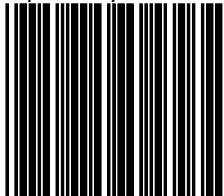


EAN/UPC + add on mandatory for 378/379
French Supplement requirement
optionally for other

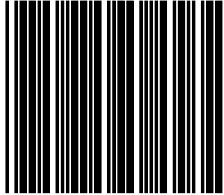


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

EAN/UPC + add on mandatory for 978/977
Book land Supplement requirement
optionally for other

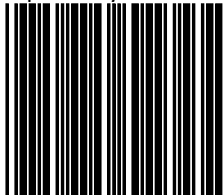


EAN/UPC + add on mandatory for 434/439
German Supplement requirement
optionally for other

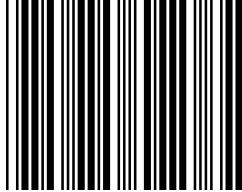


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

EAN/UPC + add on mandatory for 419/414
Euro amounts Supplement requirement
optionally for other

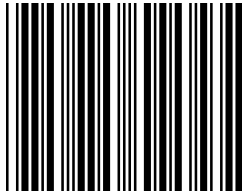


EAN/UPC + add on mandatory for 491
Japanese (bookland) Supplement
requirement optionally for other

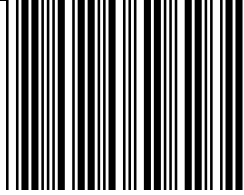


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

EAN/UPC + add on mandatory for 491
Japanese (bookland) Supplement
requirement Not sent for other

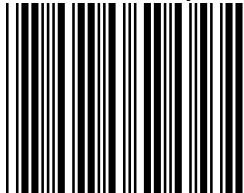


Double code not allowed

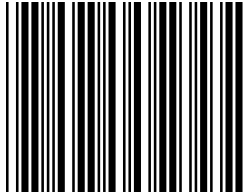


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Double code mandatory for 978/192

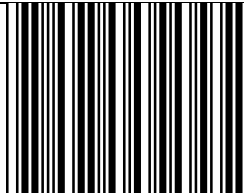


Double code format without separator

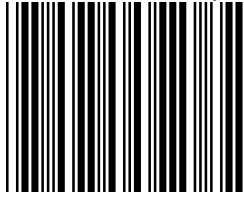


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Double code format with separator



Double code format with free (one character)

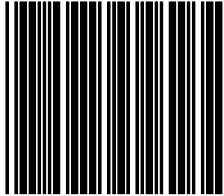


Data Redundant Check

In this section, user can set decoder data redundant check, before it is accepted as a good read. A higher data redundant check read setting offers more assurance that a barcode has been read correctly, while a lower setting allows faster scanning performance.

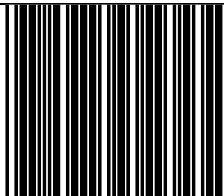
UPC-A Data Redundant Check

UPC-A data redundant check = 0

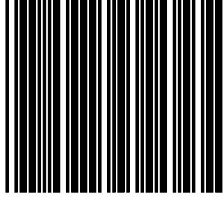


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

UPC-A data redundant check = 1

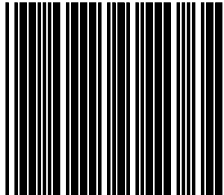


UPC-A data redundant check = 2



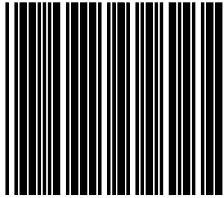
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

UPC-A data redundant check = 3



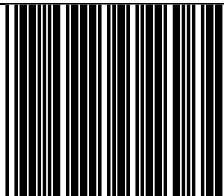
UPC-E Data Redundant Check

UPC-E data redundant check = 0

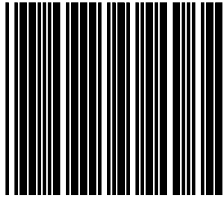


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

UPC-E data redundant check = 1

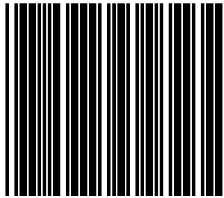


UPC-E data redundant check = 2



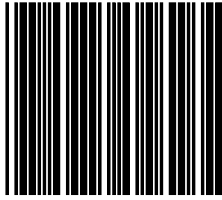
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

UPC-E data redundant check = 3



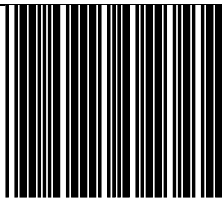
EAN-13 Data Redundant Check

EAN-13 data redundant check = 0

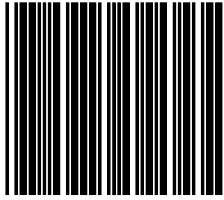


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

EAN- 13 data redundant check = 1

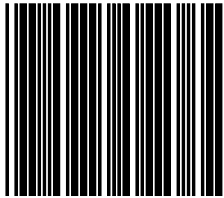


EAN-13 data redundant check = 2



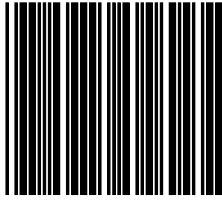
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

EAN-13 data redundant check = 3



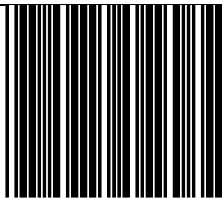
EAN-8 Data Redundant Check

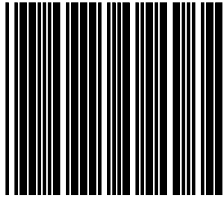
EAN-8 data redundant check = 0



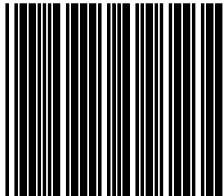
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

EAN-8 data redundant check = 1



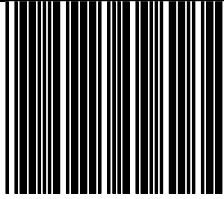
EAN-8 data redundant check =2

To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

EAN-8 data redundant check = 3

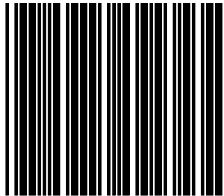
2 digit addendum data redundant check

2 digit addendum data redundant check = 0

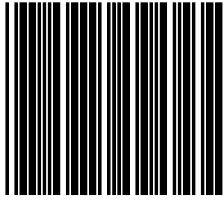


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

2 digit addendum data redundant check = 1

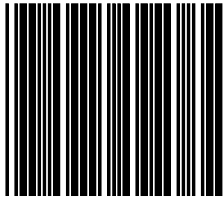


2 digit addendum data redundant check = 2



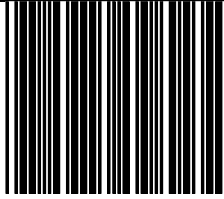
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

2 digit addendum data redundant check = 3



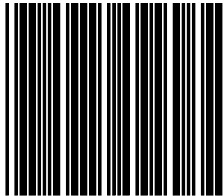
5 digit addendum data redundant check

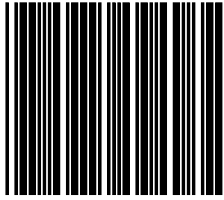
5 digit addendum data redundant check = 0



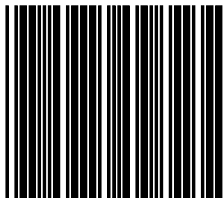
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

5 digit addendum data redundant check = 1



5 digit addendum data redundant check =2

To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

5 digit addendum data redundant check = 3

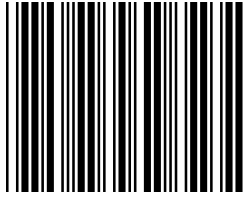
Addendum seek timeout



To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

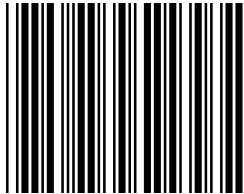


Addendum seek timeout=8

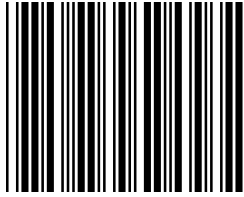


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Addendum seek timeout=9



Addendum seek timeout=10

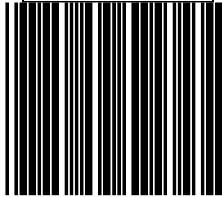


Code 39 Parameters Setting

The scanner can be programmed to support the standard code 39 or Full ASCII code 39. In addition, it is user's option to transmit or not to transmit the start and stop characters. You can also enable or disable the check digit feature. If the check digit feature is enabled, you have the further option to decide whether the check digit is transmitted or not.

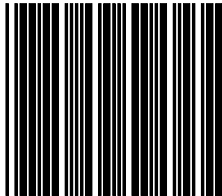
Character Set

Standard code 39



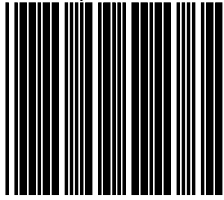
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

FULL ASCII code 39



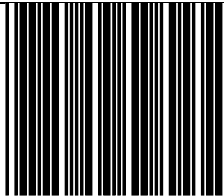
Start/Stop Character Transmission

Code 39 start/stop character transmission



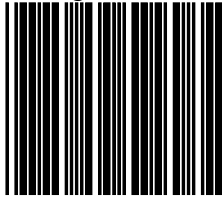
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Code 39 start/stop character without transmission



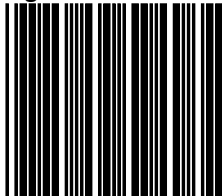
Check Digit

Code 39 check digit calculate and transmit



To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Code 39 check digit calculate but without transmit

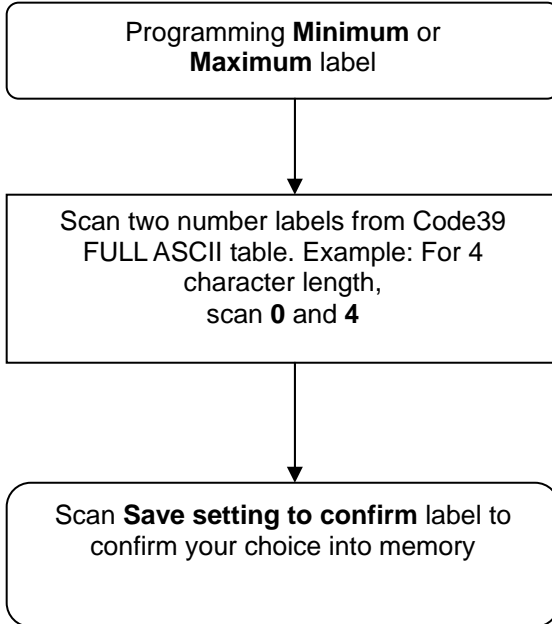




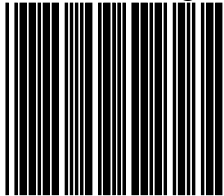
Code 39 reading length setting

The default code 39 length is 3 ~32 character. It can be set at minimum 1 digit and maximum 62 digits.

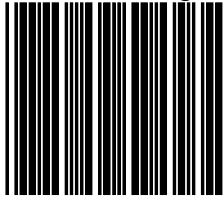
CODE LENGTH SETTING PROCESS



Code 39 maximum length setting

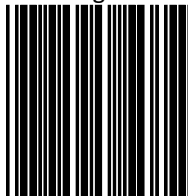


Code 39 minimum length setting



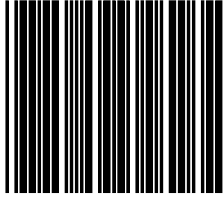
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Save setting to confirm



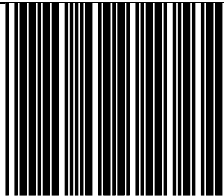
Concatenation

Code 39 concatenation enable



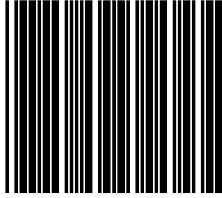
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Code 39 concatenation disable



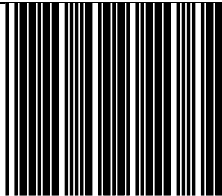
Code 32 "A" Character Transmit

Code 32 (Italian pharmacy) transmit "A" character



To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

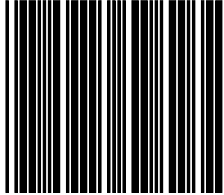
Code 32(Italian pharmacy) without transmitting "A" character



Data Redundant Check

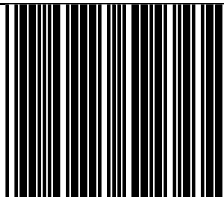
In this section, users can use labels to set decoder data redundant check before it is accepted as a good read. A higher data redundant check read setting offers more assurance that a barcode has been read correctly while a lower setting allows faster scanning performance.

Code 39 data redundant check = 0

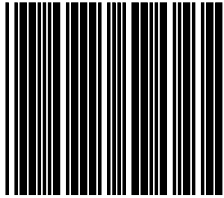


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Code 39 data redundant check = 1

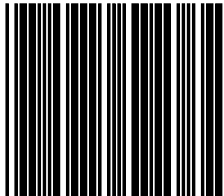


Code 39 data redundant check = 2



To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Code 39 data redundant check = 3



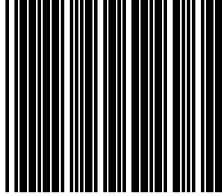
CODABAR Parameters Setting

In this section, there are varies settings for Codabar symbology, including:

- Check character verification or transmission
- CODABAR concatenation
- Data redundant check
- Start/Stop Characters
- Min./Max. length setting

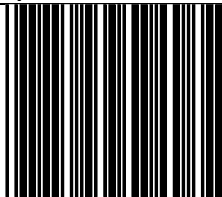
Format

Codabar start/stop character transmission ----none

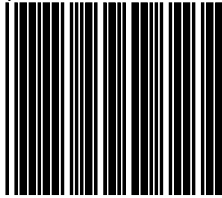


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Codabar start/stop character transmission ---- A,B,C,D

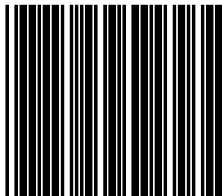


Codabar start/stop character transmission ---- DC1~DC4



To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

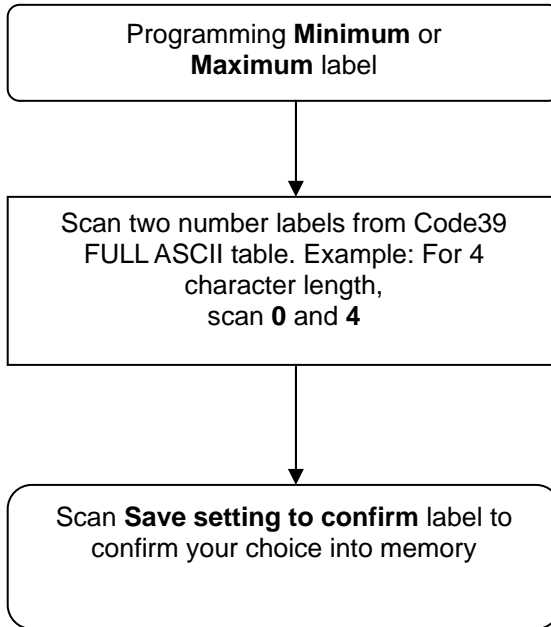
Codabar start/stop character transmission ---- a/t,b/n,c/* ,d/e



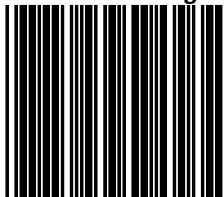
CODABAR Reading Length Setting

The default CODABAR length is 6 ~32 character. It can be set at minimum 1 digit and maximum 62 digits

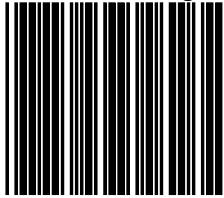
CODE LENGTH SETTING PROCESS



Codabar maximum length setting

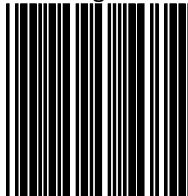


Codabar minimum length setting



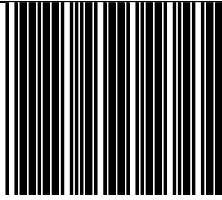
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Save setting to confirm



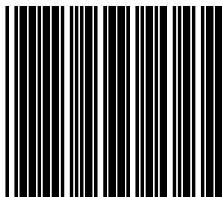
CODABAR Concatenation

Codabar concatenation disable



To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Codabar concatenation enable

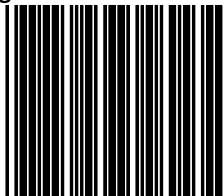


Check digit

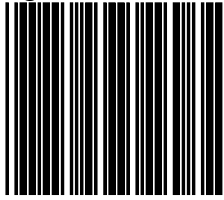


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Check digits calculate but not transmit



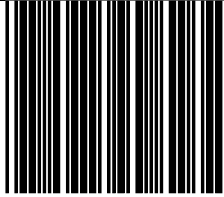
Check digit calculate and transmit



Data Redundant Check

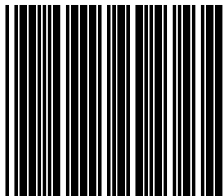
In this section, users can set decoder data redundant check before it is accepted as a good read. A higher data redundant check read setting offers more assurance that a bar code has been read correctly while a lower setting allows faster scanning performance.

Codabar data redundant check = 0

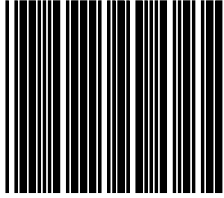


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Codabar data redundant check = 1

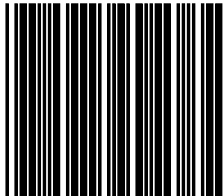


Codabar data redundant check = 2



To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Codabar data redundant check = 3



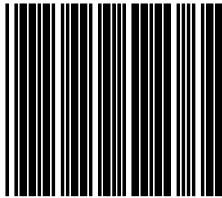
Code 128 Parameters Setting

In this section, there are varies setting for Code 128 symbology, including:

- Check character verification or transmission
- FNC2 concatenation
- Data redundant check
- FNC1 transmission for EAN-128
- **Min./Max. length setting**

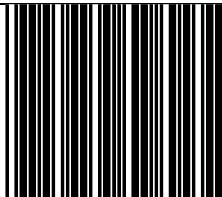
Check Digit

No check character

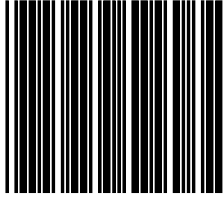


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Calculate but not transmit



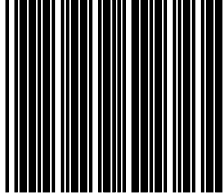
Calculate and transmit



Code 128 FNC2 concatenation

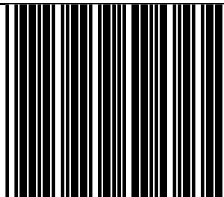
This function permits the temporary storage of a code in the decoder if this code starts with FNC 2 character. The message buffered will be concatenated and transmitted with the next code having no FNC 2 character

Code 128 FNC2 concatenation enable



To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

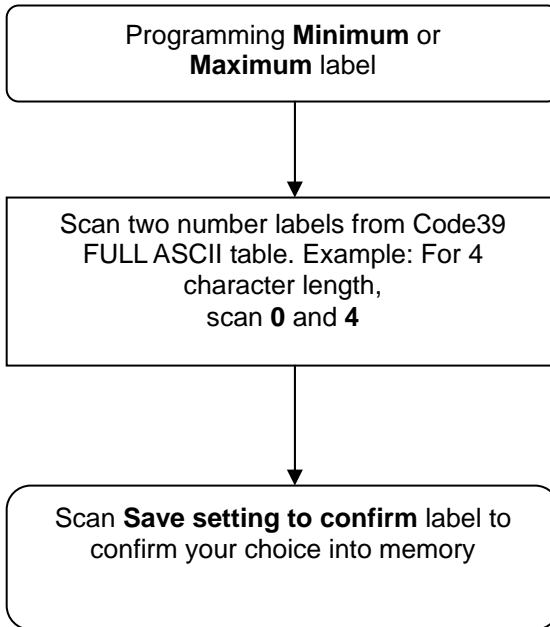
Code 128 FNC2 concatenation disable



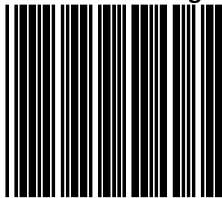
Code 128 reading length setting

The default code 128 length is 3 ~62 character. It can be set at minimum 1 digit and maximum 62 digits

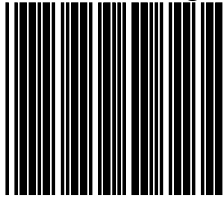
CODE LENGTH SETTING PROCESS



Code 128 maximum length setting

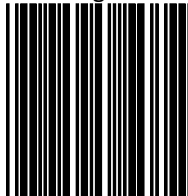


Code 128 minimum length setting



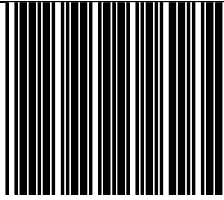
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Save setting to confirm



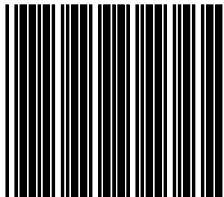
EAN-128 FNC1 Character

EAN-128 FNC1 Character transmitted



To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

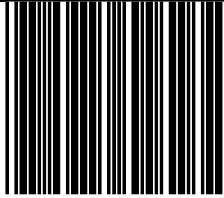
EAN-128 FNC1 not character transmitted



Data Redundant Check

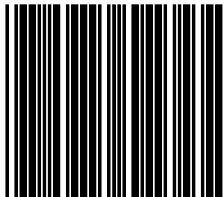
In this section, users can set decoder data redundant check before it is accepted as a good read. A higher data redundant check read setting offers more assurance that a bar code has been read correctly while a lower setting allows faster scanning performance

Code 128 data redundant check = 0

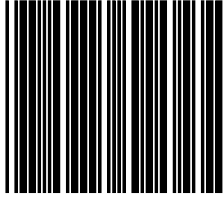


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Code 128 data redundant check = 1

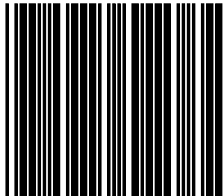


Code 128 data redundant check = 2



To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Code 128 data redundant check = 3



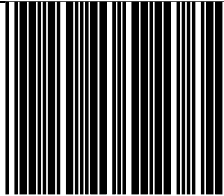
ITF 2 of 5 Parameters Setting

In this section, there are varies ITF 2 of 5 symbology including:

- Check character verification or transmission
- Data redundant check
- Two fixed length setting
- **Min./Max. length setting**

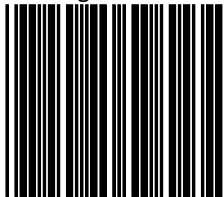
Check Digit

ITF 2 of 5 no check character

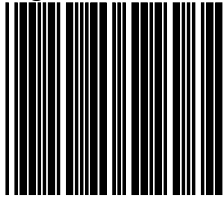


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

ITF 2 of 5 check digit calculate and transmit



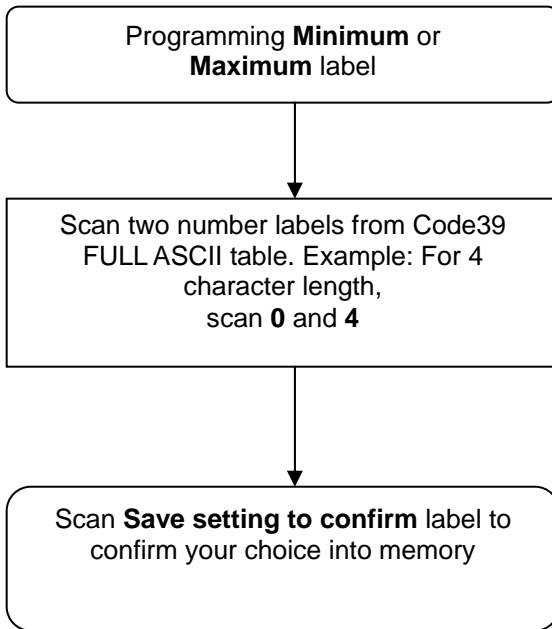
ITF 2 of 5 check digit calculate but without transmit



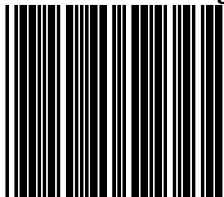
ITF 2 of 5 reading length setting

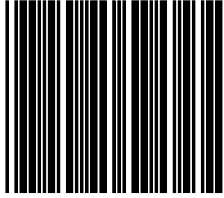
The default ITF 2 of 5 length is 6 ~32 character. It can be set at minimum 2 digit and maximum 62 digits

CODE LENGTH SETTING PROCESS

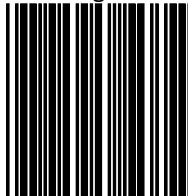


ITF 2 of 5 code maximum length setting

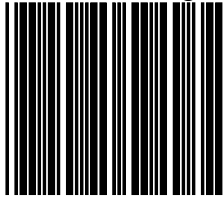


ITF 2 of 5 code minimum length setting

To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

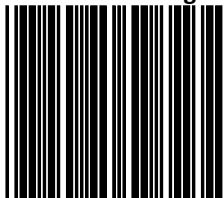
Save setting to confirm

ITF 2 of 5 one fixed length setting



To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

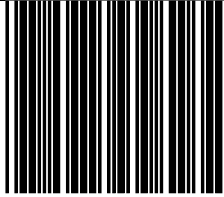
ITF 2 of 5 two fixed length setting



Data Redundant Check

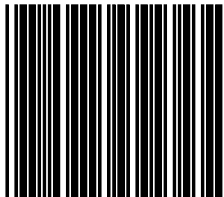
In this section, users can set decoder data redundant check, before it is accepted as a good read. A higher data redundant check read setting offers more assurance that a bar code has been read correctly, while a lower setting allows faster scanning performance

ITF 25 data redundant check =0

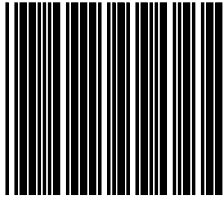


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

ITF 25 data redundant check = 1

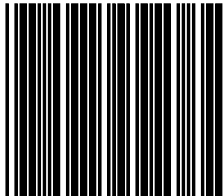


ITF 25 data redundant check = 2



To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

ITF 25 data redundant check = 3



Chinese Post Code Parameters Setting

In this section, there are varies Chinese post code symbologies including:

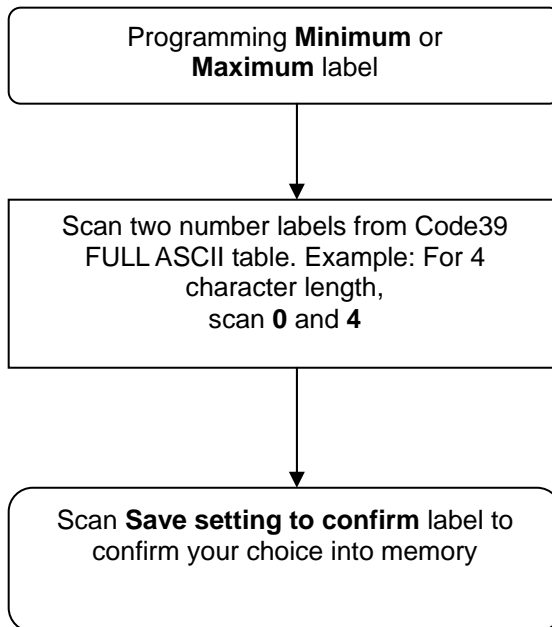
- Data redundant check
- **Min./Max. length setting**

Chinese Post Code Reading Length Setting

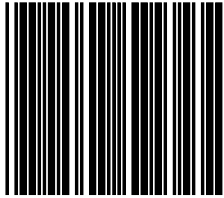
The default Chinese post code length is 10 ~32 character. It can be set at minimum 1 digit and maximum 62 digits.

In order to avoid missing characters when scanning is incomplete, we recommend using a short-range length or fixed length.

CODE LENGTH SETTING PROCESS

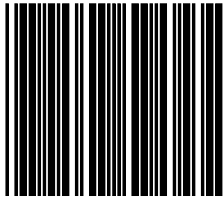


Chinese post code maximum length setting

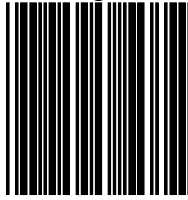


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Chinese post code minimum length setting



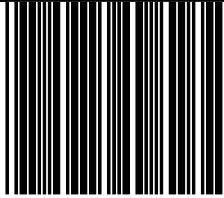
Save setting to confirm



Data Redundant Check

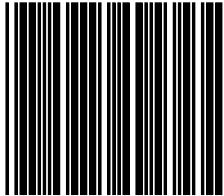
The option allows you to set decoder data redundant check before it is accepted as a good read. A higher data redundant check read setting offers more assurance that a bar code has been read correctly while a lower setting allows faster scanning performance

Chinese post code data redundant check = 0

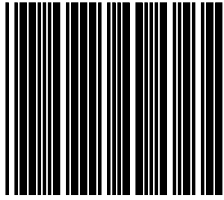


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Chinese post code data redundant check = 1

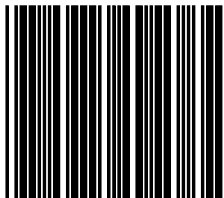


Chinese post code data redundant check = 2



To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Chinese post code data redundant check = 3



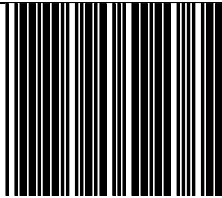
MSI/PLESSY Code Parameters Setting

In this section, there are varies set up for Chinese post code symbology, including:

- Check character verification or transmission
- Data redundant check
- **Min./Max. length setting**

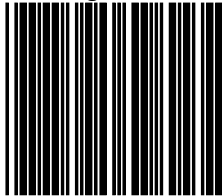
Double Check Digit

MSI/PLESSY double check digit calculate but not transmit

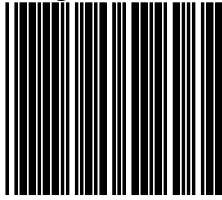


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

MSI/PLESSY double check digit without calculate and transmit

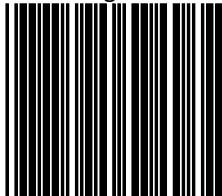


MSI/PLESSY double check digit calculate but only first digit transmit



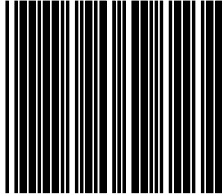
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

MSI/PLESSY double check digit calculate and both transmit



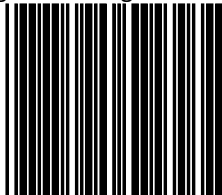
Single Check Digit

MSI/PLESSY single check digit calculate but without transmission



To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

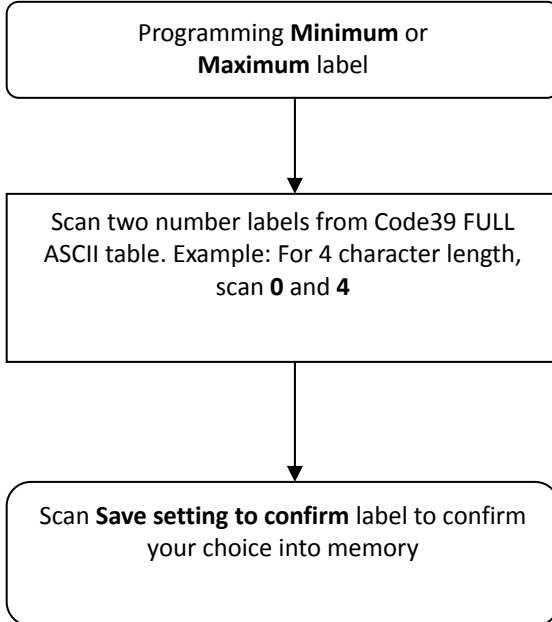
MSI/Plessy single check digit calculate and transmit



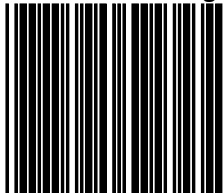
MSI/PLESSY code reading length setting

The default MSI/PLESSY code length is 6~32 character. It can be set at minimum 1 digit and maximum 62 digits

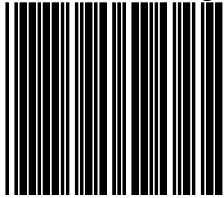
CODE LENGTH SETTING PROCESS



MSI/PLESSY maximum length setting

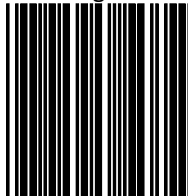


MSI/PLESSY minimum length setting



To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

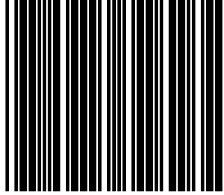
Save setting to confirm



Data Redundant Check

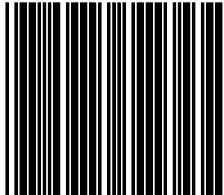
The option allows you to set decoder data redundant check before it is accepted as a good read. A higher data redundant check read setting offers more assurance that a barcode has been read correctly while a lower setting allows faster scanning performance

MSI data redundant check = 0

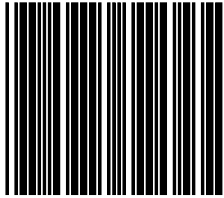


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

MSI data redundant check = 1

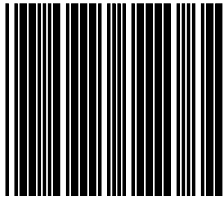


MSI data redundant check = 2



To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

MSI data redundant check = 3



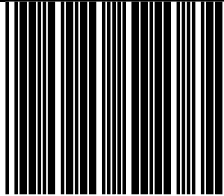
Code 93 Parameters Setting

In this section, there are varies set up for Code 93 symbology, including:

- Check character verification or transmission
- Data redundant check
- **Min./Max. length setting**

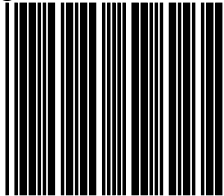
Check Digit

Code 93 check digit calculate but without transmit

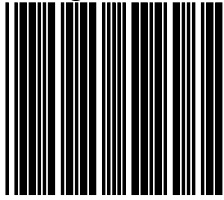


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Code 93 check digit not calculate and without transmit



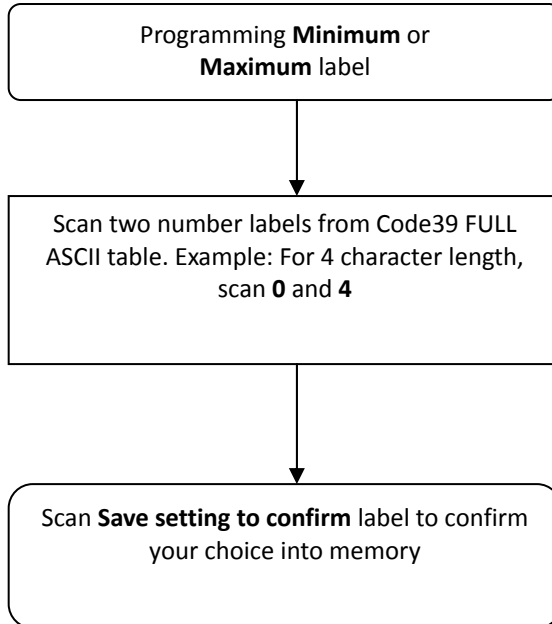
Code 93 check digit calculate and transmit



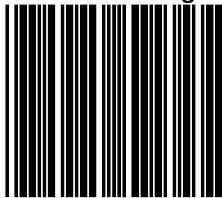
Code 93 code reading length setting

The default Code 93 code length is 3 ~32 character. It can be set at minimum 1 digit and maximum 62 digits.

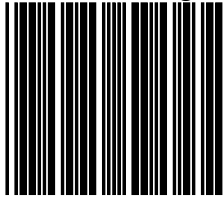
CODE LENGTH SETTING PROCESS



Code 93 maximum length setting

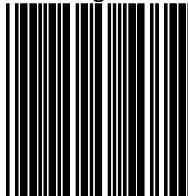


Code 93 minimum length setting



To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

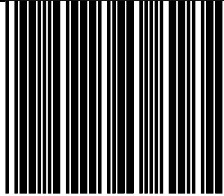
Save setting to confirm



Data Redundant Check

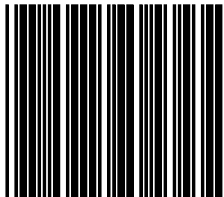
The option allows you to set decoder data redundant check before it is accepted as a good read. A higher data redundant check read setting offers more assurance that a barcode has been read correctly while a lower setting allows faster scanning performance.

Code 39 data redundant check = 0

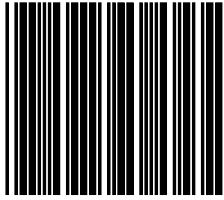


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Code 39 data redundant check = 1

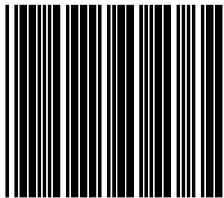


Code 93 data redundant check = 2



To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Code 93 data redundant check = 3



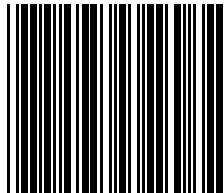
GS1 Databar Parameters Setting

NOTE:

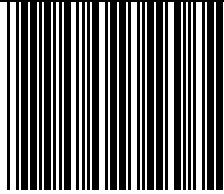
1. There are 7 types of barcodes in the GS1 DataBar family and they are categorized into three groups in this programming guide. Barcode types in the same group use the same barcodes for setting
2. Before start, contact your distributor to make sure if your model and firmware version support GS1 DataBar.

Group	Representative	Contents
Group 1	GS1 DataBar Omnidirectional (Formally RSS-14)	GS1 DataBar Omnidirectional GS1 DataBar Truncated GS1 DataBar Stacked GS1 DataBar Stacked Omnidirectional
Group 2	GS1 DataBar Limited (Formally RSS Limited)	GS1 DataBar Limited
Group 3	GS1 DataBar Expanded (Formally RSS Expanded)	GS1 DataBar Expanded GS1 DataBar Expanded Stacked

GS1 DataBar Omnidirectional enable

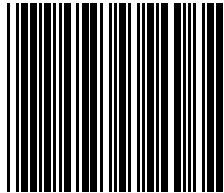


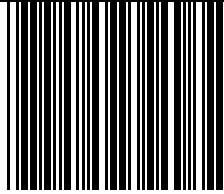
GS1 DataBar Omnidirectional disable



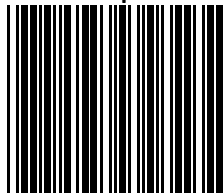
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

GS1 DataBar Limited enable

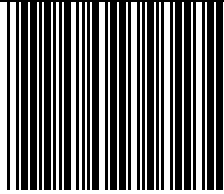


GS1 DataBar Limited disable

To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

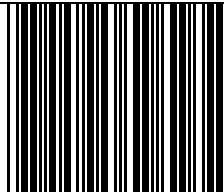
GS1 DataBar Expanded enable

GS1 DataBar Expanded disable

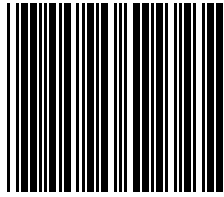


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Transmit GS1 DataBar Omnidirectional check digit

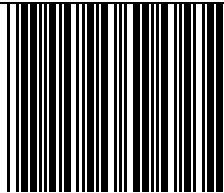


Do not transmit GS1 DataBar Omnidirectional check digit

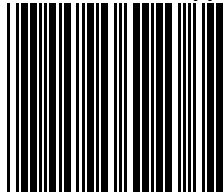


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Transmit GS1 DataBar application ID (01)

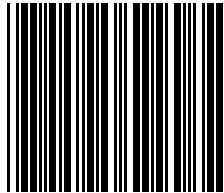


Do not transmit GS1 DataBar application ID (01)

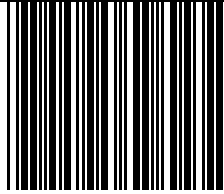


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

GS1 DataBar Omnidirectional/EAN-128 emulation enable (]C1)

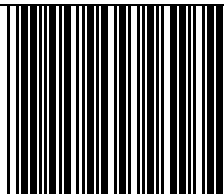


GS1 DataBar Omnidirectional/EAN-128 emulation disable (]C1)

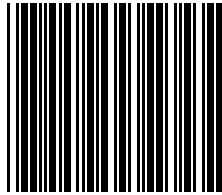


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Transmit GS1 DataBar Limited check digit

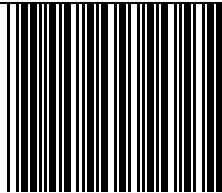


Do not transmit GS1 DataBar Limited check digit

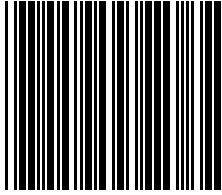


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Transmit GS1 DataBar Limited application ID (01)

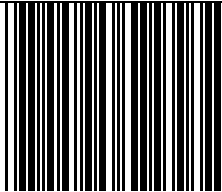


Do not transmit GS1 DataBar Limited application ID (01)

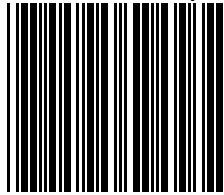


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Transit GS1 DataBar Expanded check digit

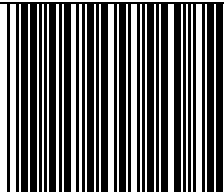


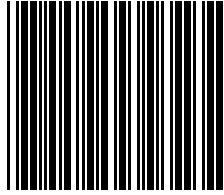
Do not transmit GS1 DataBar Expanded check digit



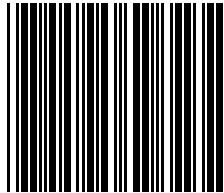
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Enable transmit AI(01) of expanded

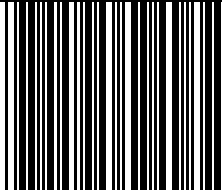


Disable transmit AI(01) of expanded

To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

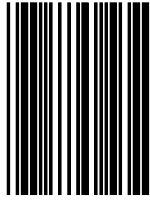
GS1 DataBar Expanded/EAN-128 emulation enable (JC1)

GS1 DataBar Expanded/EAN-128 emulation disable (J C1)



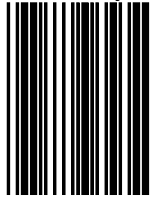
Full ASCII Code Table

Full ASCII --- NUL

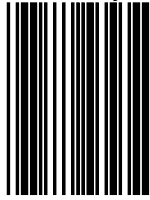


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Full ASCII ---- SOH
(Function Key---Ins)

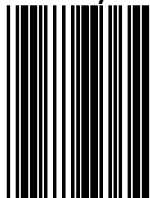


**Full ASCII ----STX
(Function Key---Del)**

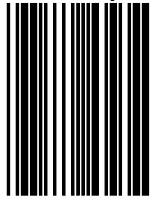


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

**Full ASCII ---- ETX
(Function Key---Home)**

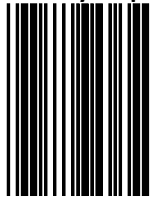


**Full ASCII ---- EOT
(Function Key---End)**

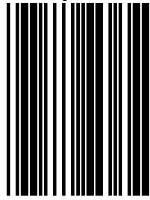


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

**Full ASCII ---- ENQ
(Function Key---Up arrow)**

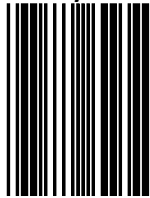


**Full ASCII ---- ACK
(Function Key---Down arrow)**

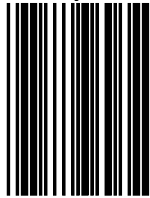


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

**Full ASCII ---- BEL
(Function Key---Left arrow)**

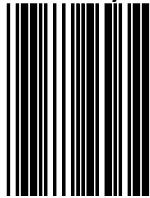


**Full ASCII ---- BS
(Function Key---Backspace)**

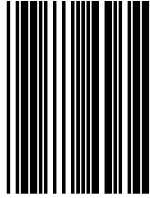


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

**Full ASCII ---- HT
(Function Key---Tab)**

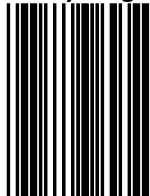


Full ASCII ---- LF
(Function Key---Enter(num))

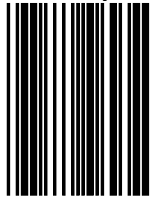


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Full ASCII ---- VT
(Function Key---Right arrow)

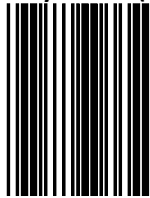


**Full ASCII ---- FF
(Function Key---PgUp)**

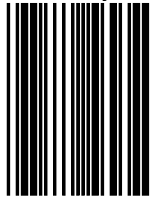


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

**Full ASCII ---- CR
(Function Key---Enter(alphabet))**

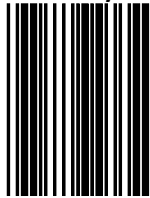


**Full ASCII ---- SO
(Function Key---PgDn)**

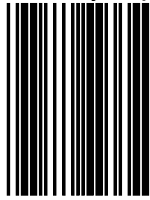


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

**Full ASCII ---- SI
(Function Key---Shift)**

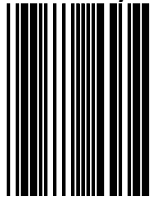


**Full ASCII ---- DLE
(Function Key---5(num))**

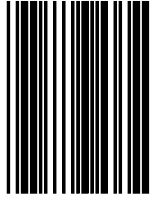


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

**Full ASCII ---- DC1
(Function Key---F1)**

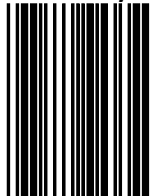


**Full ASCII ---- DC2
(Function Key---F2)**

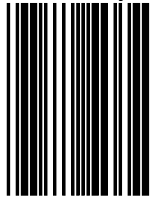


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

**Full ASCII ---- DC3
(Function Key---F3)**

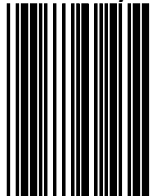


**Full ASCII ---- DC4
(Function Key---F4)**

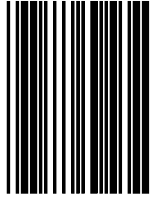


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

**Full ASCII ---- NAK
(Function Key---F5)**

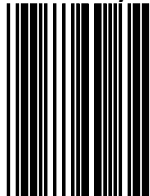


**Full ASCII ---- SYN
(Function Key---F6)**

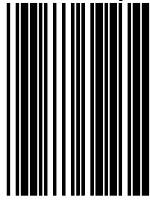


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

**Full ASCII ---- ETB
(Function Key---F7)**

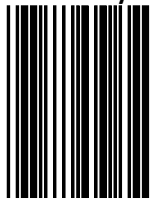


**Full ASCII ---- CAN
(Function Key---F8)**

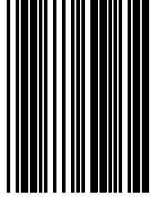


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

**Full ASCII ---- EN
(Function Key---F9)**

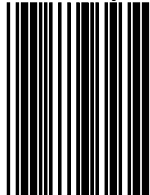


**Full ASCII ---- SUB
(Function Key---F10)**

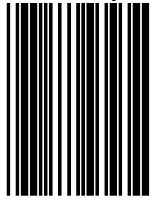


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

**Full ASCII ---- ESC
(Function Key---F11)**

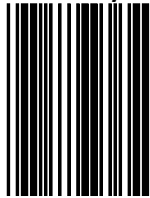


**Full ASCII ---- FS
(Function Key---F12)**

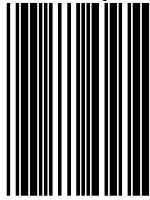


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

**Full ASCII ---- GS
(Function Key---ESC)**

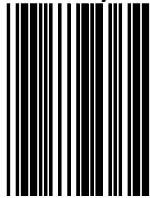


**Full ASCII ---- RS
(Function Key---Ctl(L))**

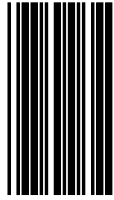


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

**Full ASCII ---- US
(Function Key---Alt(L))**

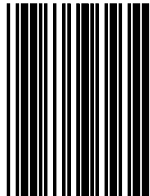


Full ASCII ---- SP

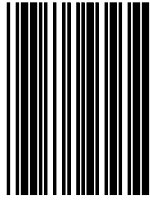


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Full ASCII ---- !

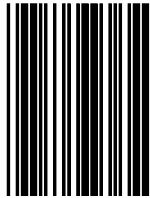


Full ASCII ----“

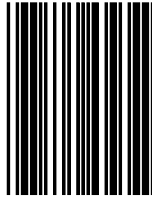


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Full ASCII ----#

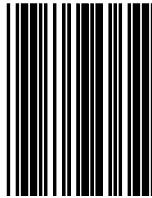


Full ASCII ---- \$

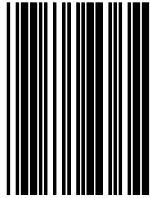


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Full ASCII ---- %

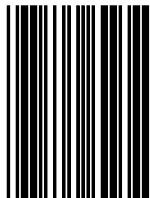


Full ASCII ---- &

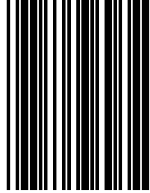


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Full ASCII ---- ‘

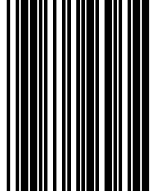


Full ASCII ---- (

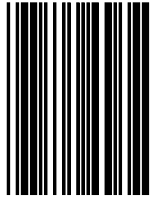


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Full ASCII ----)

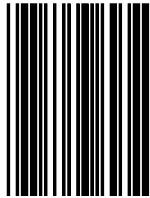


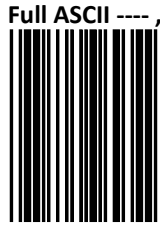
Full ASCII ---- *



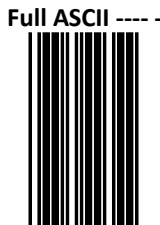
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Full ASCII ---- +

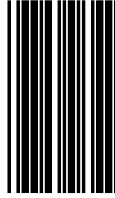




To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

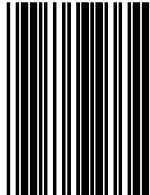


Full ASCII ---- .

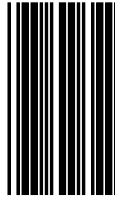


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Full ASCII ---- /

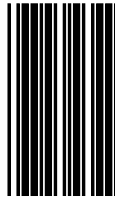


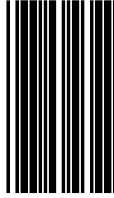
Full ASCII ---- 0



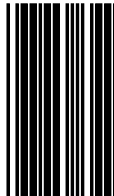
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Full ASCII ---- 1

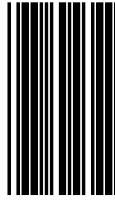


Full ASCII ---- 2

To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

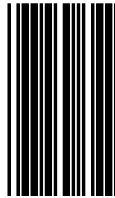
Full ASCII ---- 3

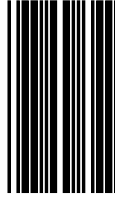
Full ASCII ---- 4



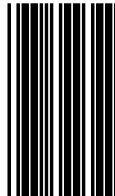
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Full ASCII ---- 5

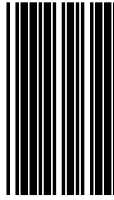


Full ASCII ---- 6

To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

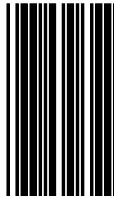
Full ASCII ---- 7

Full ASCII ---- 8

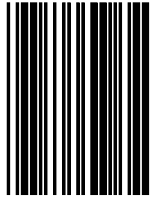


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Full ASCII ----9

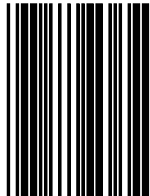


Full ASCII ---- :

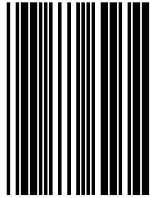


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Full ASCII ---- ;

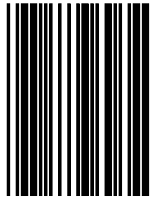


Full ASCII ---- <

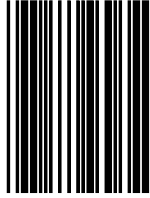


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Full ASCII ---- =

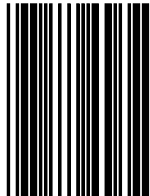


Full ASCII ---- >

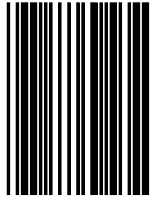


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Full ASCII ---- ?

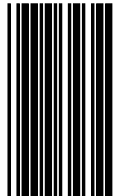


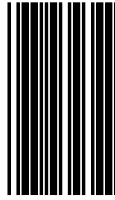
Full ASCII ---- @



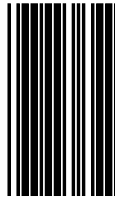
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Full ASCII ---- A

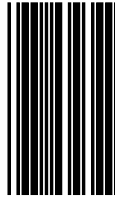


Full ASCII ---- B

To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

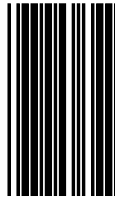
Full ASCII ---- C

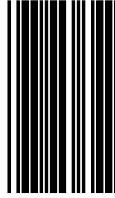
Full ASCII ---- D



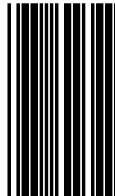
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Full ASCII ---- E

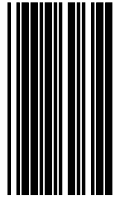


Full ASCII ---- F

To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

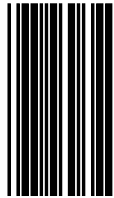
Full ASCII ---- G

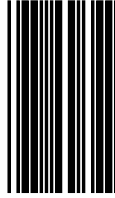
Full ASCII ---- H



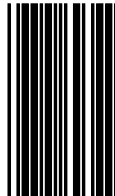
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Full ASCII ---- I

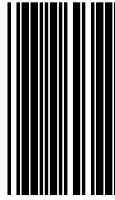


Full ASCII ---- J

To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

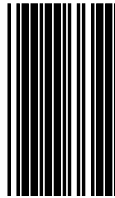
Full ASCII ---- K

Full ASCII ---- L

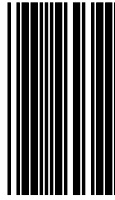


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Full ASCII ---- M

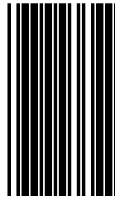


Full ASCII ---- N

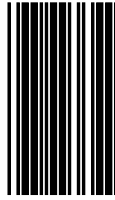


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Full ASCII ---- O

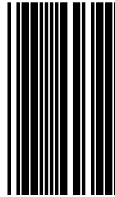


Full ASCII ---- P

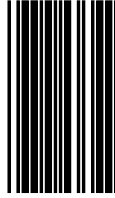


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Full ASCII ---- Q

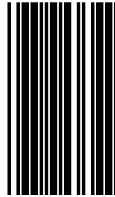


Full ASCII ---- R

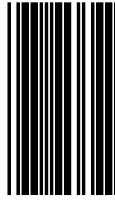


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Full ASCII ---- S

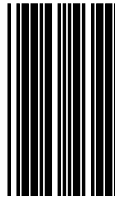


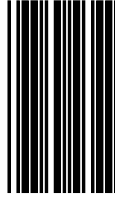
Full ASCII ---- T



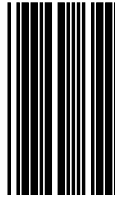
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Full ASCII ---- U

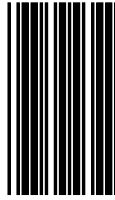


Full ASCII ---- V

To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

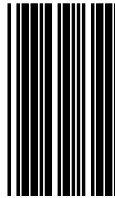
Full ASCII ---- W

Full ASCII ---- X

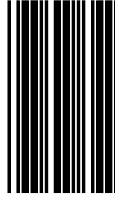


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Full ASCII ---- Y

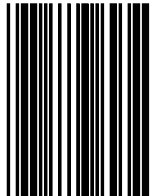


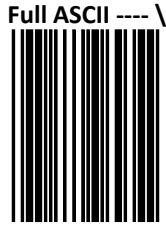
Full ASCII ---- Z



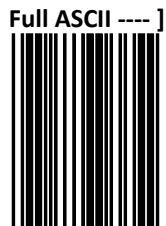
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Full ASCII ---- [

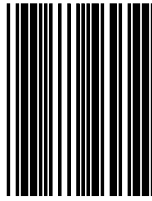




To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

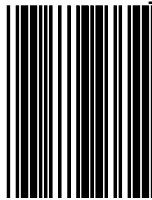


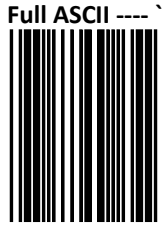
Full ASCII ---- ^



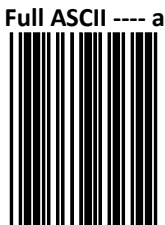
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Full ASCII ----

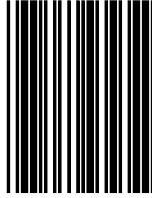




To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

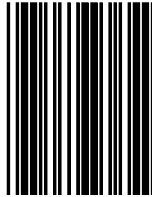


Full ASCII ---- b

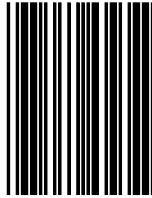


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Full ASCII ---- c

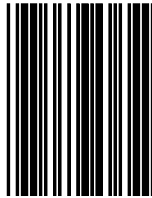


Full ASCII ---- d

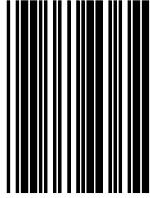


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Full ASCII ---- e

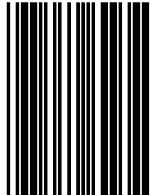


Full ASCII ---- f

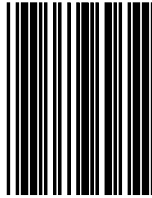


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Full ASCII ---- g

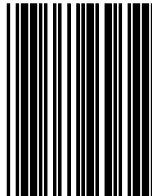


Full ASCII ---- h

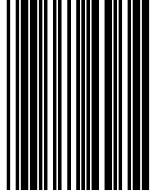


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Full ASCII ---- i

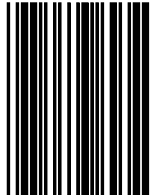


Full ASCII ---- j

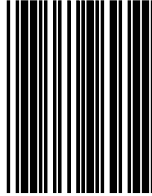


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Full ASCII ---- k

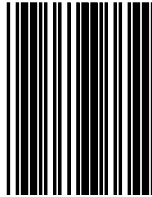


Full ASCII ---- l

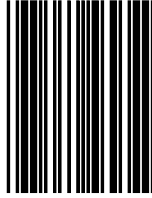


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Full ASCII ---- m

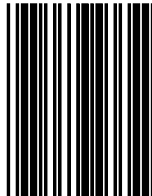


Full ASCII ---- n

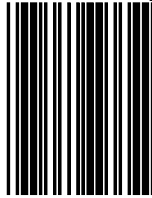


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Full ASCII ---- o

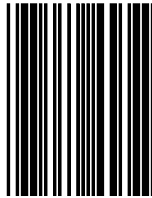


Full ASCII ---- p

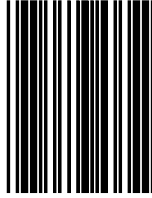


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Full ASCII ---- q

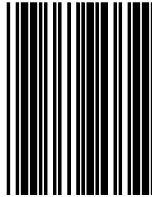


Full ASCII ---- r

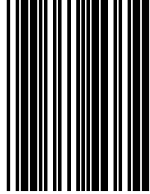


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Full ASCII ---- s

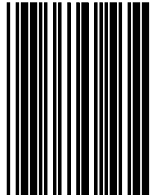


Full ASCII ---- t

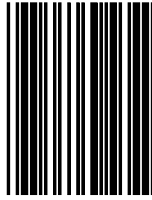


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Full ASCII ---- u

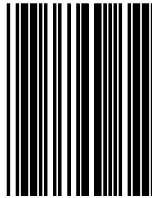


Full ASCII ---- v

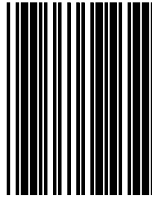


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Full ASCII ---- w

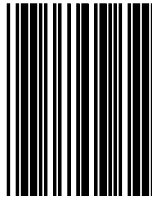


Full ASCII ---- x

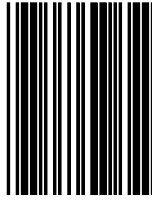


To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Full ASCII ---- y

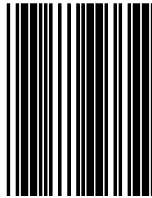


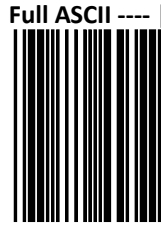
Full ASCII ---- z



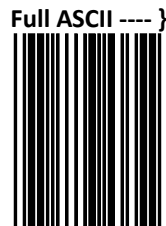
To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Full ASCII ---- {

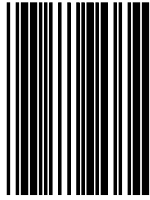




To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

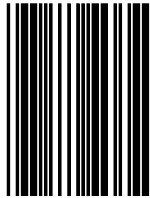


Full ASCII ---- ~



To prevent confusion in code scanning, cover the unwanted label and present the desired barcodes one by one to the scanner.

Full ASCII ---- DEL



APPENDIX A

CODE 39 FULL ASCII CODE TABLE

ASCII	CODE 39	VALEUR HEXA.	ASCII	CODE 39	VALEUR HEXA.
NUL	%U	00	%	/E	25
SOH	\$A	01	&	/F	26
STX	\$B	02	'	/G	27
ETX	\$C	03	(/H	28
EOT	\$D	04)	/I	29
ENQ	\$E	05	*	/J	2A
ACK	\$F	06	+	/K	2B
BEL	\$G	07	,	/L	2C
BS	\$H	08	-	-	2D
HT	\$I	09	.	.	2E
LF	\$J	0A	/	/	2F
VT	\$K	0B	0	0	30
FF	\$L	0C	1	1	31
CR	\$M	0D	2	2	32
SO	\$N	0E	3	3	33
SI	\$O	0F	4	4	34
DLE	\$P	10	5	5	35
DC1	\$Q	11	6	6	36
DC2	\$R	12	7	7	37
DC3	\$S	13	8	8	38
DC4	\$T	14	9	9	39
NAK	\$U	15	:	/Z	3A
SYN	\$V	16	;	%F	3B
ETB	\$W	17	<	%G	3C
CAN	\$X	18	=	%H	3D
EM	\$Y	19	>	%I	3E
SUB	\$Z	1A	?	%J	3F
ESC	%A	1B	@	%V	40
FS	%B	1C	A	A	41
GS	%C	1D	B	B	42
RS	%D	1E	C	C	43
US	%E	1F	D	D	44
SP	SP	20	E	E	45
!	/A	21	F	F	46
"	/B	22	G	G	47

#	/C	23	H	H	48
\$	/D	24	I	I	49

ASCII	CODE 39	VALEUR HEXA.	ASCII	CODE 39	VALEUR HEXA.
J	J	4A	e	+E	65
K	K	4B	f	+F	66
L	L	4C	g	+G	67
M	M	4D	h	+H	68
N	N	4E	i	+I	69
O	O	4F	j	+J	6A
P	P	50	k	+K	6B
Q	Q	51	l	+L	6C
R	R	52	m	+M	6D
S	S	53	n	+N	6E
T	T	54	o	+O	6F
U	U	55	p	+P	70
V	V	56	q	+Q	71
W	W	57	r	+R	72
X	X	58	s	+S	73
Y	Y	59	t	+T	74
Z	Z	5A	u	+U	75
[%K	5B	v	+V	76
\	%L	5C	w	+W	77
]	%M	5D	x	+X	78
^	%N	5E	y	+Y	79
_	%O	5F	z	+Z	7A
`	%W	60	{	%P	7B
a	+A	61		%Q	7C
b	+B	62	}	%R	7D
c	+C	63	~	%S	7E
d	+D	64	DEL	%T	7F

APPENDIX B

FUNCTION KEY EMULATION

FUNCTION KEY	ASCII	CODE 39	FUNCTION KEY	ASCII	CODE 39
Ins	\$A	01	F1	\$Q	11
Del	\$B	02	F2	\$R	12
Home	\$C	03	F3	\$S	13
End	\$D	04	F4	\$T	14
Up	\$E	05	F5	\$U	15
Down	\$F	06	F6	\$V	16
Left	\$G	07	F7	\$W	17
Backspace	\$H	08	F8	\$X	18
TAB	\$I	09	F9	\$Y	19
Enter(num)	\$J	0A	F10	\$Z	1A
Right	\$K	0B	F11	%A	1B
PgUp	\$L	0C	F12	%B	1C
Enter	\$M	0D	ESC	%C	1D
PgDn	\$N	0E	Ctl(L)	%D	1E
shift	\$O	0F	Alt(L)	%E	1F
5 (num)	\$P	10			

Enter/Exit programming

