Programming
USER MANUEL

SC410 &
SC610

3nStar
ONE BRAND, ONE SOLUTION

Contents

Factory Default

SET

Factory default Settings

(Restoring to factory default Setting will not change the output mode)

END

Customer's Default

SET

Save customer’s default Setting

Set customer’s default Setting

END

Scan Mode

Level Trigger (Hand Trigger)

Scan while pressing the scan button. Finish scanning once the decode is complete or exceeded the reading time.

Automatic Scan

Scanning starts once the image is changed and ends once the reading time exceeds.

Continuous Scan

Continuously read single or multiple barcodes (by the same code read interval Setting, define the decoding sequence). Press and release the scan button to start or end the scanning.

Level Trigger (Hand Trigger)

SET

Level trigger (hand trigger) (default)

END

Automatic Scan

SET

AUTO SCAN

END

Continuous Scan

SET

Continuous Scan

END

Same bar code reading
Same bar code reading mode under auto scan. Continuous scan default does not repeat reading the same bar code within 500ms and, it can Set 0-5000ms. 0ms means no reading delay.

No repeat reading
If the same bar code is read continuously within the Set time, the bar code will be ignored and there will be no output to avoid reading the same code repeatedly.

No output for the same bar code which repeatedly reads within 100ms
Scan “SET.”
Scan “Restrict read.”
Scan “Reading time.”
Scan "1" from appendix decimal number.
Scan "0" from appendix decimal number.
Scan "0" from appendix decimal number.
Scan “END.”

Interval reading
Output the same barcode after Setting the time.

Read the same code after one second interval
Scan “SET.”
Scan "Interval reading" Setting code.
Scan "Reading time" Setting code.
Scan appendix decimal number, "1" Setting code
Scan appendix decimal number, "0" Setting code.
Scan appendix decimal number, "0" Setting code.
Scan appendix decimal number, "0" Setting code.
Scan “END.”

Not reading same barcode
Not reading the same barcode.

Reading Mode of Same Code

SET

Not repeated (default)

Interval reading

Not read barcode

END

Reading Time of Same Barcode

SET

Reading time (ms)

END

Decode Time

This is the decode time after trigger under level trigger and automatic trigger. If the barcode is not read after the time has elapsed, the scanner will turn off the decoding and enter the standby state . The default decode time is 5000ms, and it can be Set from 0~3600000ms, 0 means it will last to read the barcode successful

Set max decoding time to eights
Scan “START.”
Scan “Decode time” Setting code.
Scan appendix decimal number, "8" Setting code.
Scan appendix decimal number, "0" Setting code.
Scan appendix decimal number, "0" Setting code.
Scan appendix decimal number, "0" Setting code.
Scan “END.”

SET

(It is recommended to not have this under continuous scan mode)

Decode time (ms)

END

Sleep Time

SET

Turn off

1s

2s

3s

END

Sleep Time

SET

5s

7s

10s (default)

15s

END

Automatic Scan Sensitivity

SET

LOW

Medium (default)

High

END

Decode Data Verify (Redundancy)

Confirm if the barcode data is correct. The more it checks, scan speed will be slower.

SET

Turn off (default)

READ TWICE AND OUTPUT

READ THREE TIMES AND OUTPUT

END

Output Mode

USB Keyboard

SET

USB KEYBOARD (default)

END

USB VCP

SET

USB VCP

END

Serial Port (RS232)

SET

RS232

END

RS232 Baud Rate

SET

9600 (default)

19200

38400

57600

115200

230400

END

RS232 Data Bit Transmission

SET

Seven data bits

Eight data bits (default)

END

RS232 Parity Bit

SET

Not checked (default)

Odd parity

Even parity

END

RS232 Stop Bit

SET

One stop bit (default)

Two stop bits (default)

END

International Keyboard Language

SET

U.S.A. (default)

Belgian

U.K.

Danish

French

German

END

International Keyboard Language

SET

Italian

Norwegian

Portuguese

Spanish

Swedish

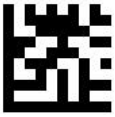
Swiss

END

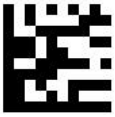
International Keyboard Language

SET

Japanese



Hungarian



Czech

Slovakia

Romania

Croatian

END

International Keyboard Language

SET

Polish

Turkish Q

Portuguese (Brazil)

Russian

Bulgarian

END

Code Page Character Encoding

SET

Simplified Chinese (GB2312) – Unicode / Excel; Notepad

Simplified Chinese (GB2312) – Code Page / Word

END

Character Encoding

SET

Korean – Unicode / Excel; Notepad

Korean – Code Page / Word

END

Character Encoding

SET

Thailand

Cyrillic

Turkish

Greek

END

Character Encoding

SET

West European Latin

Central and East European Latin

Hebrew

END

System Setting

Aiming Light

SET

Turn on when scanning

Always on (default)

Turn off

END

Illuminate Work Mode

SET

Turn on when scanning (default)

Always on

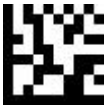
Fade up

Turn off

END

Lighting Intensity

SET



High (default)

Medium

Low

END

Buzzer

SET

Turn on (default)

Turn off

END

Barcode Setting

Support Barcode	
UPC A	Default turn on
UPC E	Default turn on
EAN 8	Default turn on
EAN 13	Default turn on
Code 128/GS1-128	Default turn on
Code 39	Default turn on
Code 93	Default turn on
Codabar	Default turn on
Code 32	Turn off
Code 11	Turn off
Plessey	Turn off
MSI Plessey	Default turn on
Interleaved 2 of 5	Default turn on
IATA 2 of 5	Turn off
Matrix 2 of 5	Turn off
Straight 2 of 5	Turn off
Pharmacode	Turn off
GS1 DataBar 14	Default turn on
GS1 DataBar 14 Stacked	Turn off
GS1 DataBar Expanded	Default turn on
GS1 DataBar Expanded Stacked	Turn off

GS1 DataBar Limited	Default turn on
Composite Code-A	Turn off
Composite Code-B	Turn off
Composite Code-C	Turn off
PDF417	Default turn on
Micro PDF417	Default turn on
Data Matrix	Default turn on
QR	Default turn on
Micro QR	Default turn on
Aztec	Turn off
MaxiCode	Turn off

Turn on all Barcodes

SET

Turn on all barcodes

END

Only Turn on 1D Codes

SET

Only turn on 1D codes

END

Only Turn on 2D Codes

SET

Only turn on 2D codes

END

Turn off all Barcodes

SET

Turn off all barcodes

END

Turn off 1D Codes

SET

Turn off 1D codes

END

Turn off 2D codes

SET

Turn off 2d codes

END

UPC A

SET

Turn on UPC A
(Default)

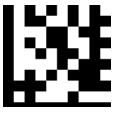
Turn off UPC A

END

UPC A

SET

Output first digit
(Default)



No output first digit
(Default)

END

UPC A

SET

Output check digit
(Default)

No output
check digit

END

UPC A

SET

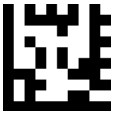
Turn on check digit
(Default)

Turn off check digit

END

UPC A

SET



Turn on EAN 13
switch

Turn off EAN 13 switch

END

UPC A

SET

Turn on UPC A 2/5-digit
additional code

Turn off UPC A 2/5-digit additional code
(Default)

END

UPC A

SET

Only reads UPC A 2/5-digit additional codes

Reads UPC A 2/5-digit additional codes (Default)

END

UPC E

SET

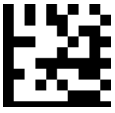
Turn on UPC E
(Default)

Turn off UPC E

END

UPC E

SET



Output check digit
(Default)

Not output check
digit

END

UPC E

SET

Turn on check digit
(Default)

Turn off check digit

END

UPC E

SET

Turn on UPC A switch

Turn off UPC A switch
(Default)

END

UPC E

SET

Turn on UPC E 2/5-digit additional code

Turn off UPC E 2/5-digit additional code (Default)

END

UPC E

SET

Only reads UPC E 2/5-digit additional codes

Only reads UPC E and UPC E 2/5-digit additional code (default)

END

EAN 8

SET

Turn on EAN 8
(Default)

Turn off EAN 8

END

EAN 8

SET

Output check digit
(Default)

No output check digit

END

EAN 8

SET

Turn on EAN 8 switch

Turn off EAN 8 switch
(Default)

END

EAN 8

SET

Turn on EAN 8 2/5-digit additional code

Turn off EAN 2/5-digit additional code (Default)

END

EAN 8

SET

Only reads EAN 8 2/5-digit
additional code

Reads EAN 8 and EAN 8 2/5-digit additional code
(Default)

END

EAN 13

SET

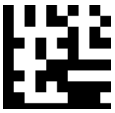
Turn on EAN 13
(Default)

Turn off EAN 13

END

EAN 13

SET



Output check digit
(Default)

No output check digit

END

EAN 13

SET

Turn on ISBN switch

Turn off ISBN switch
(Default)

END

EAN 13

SET

Turn on ISSN switch

Turn off ISSN switch
(Default)

END

EAN 13

SET

Turn on EAN 13 2/5-digit additional code

Turn off EAN 13 2/5-digit additional code (Default)

END

EAN 13

SET

Only reads EAN 13 2/5-digit additional code

Reads EAN 13 and EAN 13 2/5-digit additional code

END

Code 128 / GS1 -128

SET

Turn on Code 128 / GS1-128
(Default)

Turn off Code 128 / GS1-128

END

Code 39

SET

Turn on Code 39
(Default)

Turn off Code 39

END

Code 39

SET

Turn on Code 39 full ASCII function

Turn off Code 39 full ASCII function
(Default)

END

Code 39

SET

Output start / end digit

No output start / end digit

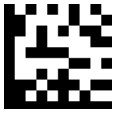
END

Code 39

SET

Not verified
(Default)

Verify and
output



Verify but no output

END

Code 93

SET

Turn on Code 93

Turn off Code 93
(Default)

END

Code 32

SET

Turn on Code 32

Turn off Code 32
(Default)

END

Code 32

SET

Output start / end digit

No output start / end digit (default)

END

Code 11

SET

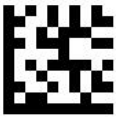
Turn on Code 11

Turn off Code 11
(Default)

END

Code 11

SET



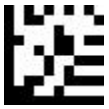
Output check digit
(Default)

No output check digit

END

Codabar

SET



Turn on Codabar
(Default)

Turn off Codabar

END

Codabar

SET

Not verified
(Default)

Verify and
output

Verify but no
output

END

Codabar

SET

Output start / end digit

No output start / end digit

END

Plessey

SET

Turn on Plessey

Turn off Plessey (Default)

END

MSI Plessey

SET

Turn On MSI Plessey (Default)

Turn off MSI Plessey

END

MSI Plessey

SET

Not Verified

Mod 10 verify (Default)

END

MSI Plessey

SET

Mod 10/10 verify

Mod 11/10 verify

END

MSI Plessey

SET

Output check digit
(Default)

No output check digit

END

Interleaved 2 of 5

SET

Turn on Interleaved 2 of 5 (Default)

Turn off Interleaved 2 of 5

END

Interleaved 2 of 5

SET

Not verified
(Default)

Verify and output

END

IATA 2 of 5

SET

Turn on IATA 2 of 5

Turn off IATA 2 of 5 (Default)

END

Matrix 2 of 5

SET

Turn on Matrix 2 of 5

Turn off Matrix 2 of 5
(Default)

END

Straight 2 of 5

SET

Turn on Straight 2 of 5

Turn off Straight 2 of 5 (Default)

END

SET

Turn on
Pharmacode

Turn off
Pharmacode
(Default)

END

SET

Turn on GS1 DataBar 14
(Default)

Turn off GS1 DataBar 14

END

GS1 DataBar 14

SET

Turn on GS1 DataBar 14 Stacked

Turn off GS1 DataBar 14 Stacked
(Default)

END

GS1 DataBar 14

SET

Output AI (01) character
(Default)

No output AI (01) character

END

GS1 DataBar Expanded

SET

Turn on GS1 DataBar Expanded
(Default)

Turn off GS1 DataBar Expanded

END

GS1 DataBar Expanded

SET

Turn on GS1 DataBar Expanded Stacked

Turn off GS1 DataBar Expanded Stacked
(Default)

END

GS1 DataBar Expanded

SET

Output AI (01) character
(Default)

No output AI (01) character

END

GS1 DataBar Limited

SET

Turn on GS1 DataBar Limited
(Default)

Turn off GS1 DataBar Limited

END

GS1 DataBar Limited

SET

Output AI (01) character
(Default)

No output AI (01) character

END

Composite Code-A

SET

Turn on Composite Code-A

Turn off Composite Code-A (default)

END

Composite Code-B

SET

Turn on Composite Code-B

Turn off Composite Code-B
(Default)

END

Composite Code-C

SET

Turn on Composite Code-C

Turn off Composite Code-C
(Default)

END

PDF417

SET

Turn on PDF417
(Default)

Turn off PDF417

END

Micro PDF417

SET

Turn on Micro PDF417
(Default)

Turn off Micro PDF417

END

Data Matrix

SET

Turn on Data Matrix
(default)

Turn off Data Matrix

END

Data Matrix

SET

Turn on Mirror Decoding
(Default)

Turn off Mirror decoding

END

Data Matrix

SET

Turn on Rectangular Data Matrix
(Default)

Turn off Rectangular Data Matrix

END

QR

SET

Turn on QR
(Default)

Turn off QR

END

QR

SET

Turn on Mirror Decoding
(Default)

Turn off Mirror decoding

END

QR

SET

Simplified Chinese general output / TXT, Excel
(Default)

UTF8 - Multiply language general output
TXT, Excel

Code-page output Word , QQ ,Wechat

END

Micro QR

SET

Turn On Micro QR
(Default)

Turn off Micro QR

END

Aztec

SET

Turn on Aztec

Turn off Aztec
(Default)

END

Aztec

SET

Turn on mirror decoding
(Default)

Turn off mirror decoding

END

MaxiCode

SET

Turn on MaxiCode

Turn off MaxiCode
(Default)

END

Decode Length Setting

Single length limit

EXAMPLE:

Limits the single barcode length reading. Set the reading length of 14 digits to Code 128.

1. Scan “SET”
2. Scan code 128 , limit single barcode length setting code
3. Scan ASCII Code table, digit of barcode “ 1”
4. Scan ASCII Code table, digit of barcode “4”
5. Scan “END”

Limited to Two Different Lengths

EXAMPLE:

Limited reading to two different length barcodes. Set the reading length to 2 digits and 14 digits of Code 128.

1. Scan “SET”
2. Scan the Setting of code 128 to limit two different barcode length
3. Scan ASCII Code table, Barcode of “ 0”
4. Scan ASCII Code table, Barcode of “2”
5. Scan ASCII Code table, Barcode of “1”
6. Scan ASCII Code table, Barcode of “4”
7. Scan “END”

Code 128 Decode Length Setting

The Range of Length Limit

EXAMPLE:

To limit reading the barcode in the length range, for example, to read a limit length as 8-14 digits of code 128.

1. Scan “SET”
2. Scan the limit length range Setting code of code 128
3. Scan ASCII Code table , barcode of “ 0”
4. Scan ASCII Code table , barcode of “ 8 ”
5. Scan ASCII Code table , barcode of “1”
6. Scan ASCII Code table , barcode of “ 4”
7. Scan “END”

Any Length

Example:

1. Scan “SET”
2. Scan the Setting code for any length of code 128
3. Scan “END”

Code 128 Decode Length Setting

SET

Limit single length

Limit two
different length

Limit length range

Any length
(Default)

END

Code 39 Decode length Setting

SET

Limit single length

Limit two different length

Limit length range

Any length (Default)

END

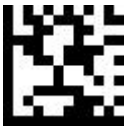
Code 93 Decode length Setting

SET

Limit single length

Limit two different length

Limit length range



Any length (Default)

END

Codabar Decode Length Setting

SET

Limit single length

Limit two different length

Limit length range

Any length (Default)

END

Interleaved 2 of 5 Decode Length Setting

SET

Limit single length

Limit two different length

Limit length range

Any length
(Default)

END

Code 11 Decode Length Setting

SET

Limit single length

Limit two different length

Limit length range

Any length
(Default)

END

MSI Plessey Decode Length Setting

SET

Limit single length

Limit two different length

Limit length range

Any length (Default)

END

Matrix 2 of 5 Decode length Setting

SET

Limit single length

Limit two
different length

Limit length range

Any length
(Default)

END

Data editing

Output format

DATA OUTPUT FORMAT AS BELOW

Barcode information (4 bytes)	Prefix (4 bytes)	AIM ID	Barcode contain	Suffix (4 bytes)	End symbol (1 byte)

Barcode information

1. Default output is not output barcode information
2. Turn on and turn off barcode information through serial command or scan barcode these two ways
3. Only support serial port mode, USB keyboard does not support the definition as follows

Start sign 0x03 (1 byte)	Bar code type code (1 byte) Hexadecimal	Barcode length (2 bytes) 0x0001 ~0xFFFF

Bar code type code as below：

Code	2D codes	Code	1D codes	Code	1D codes
0x 41	PDF417	0x61	UPC A	0x71	Pharmacode
0x 42	Micro PDF417	0x 62	UPC E	0x72	GS1 DataBar 14
0x 43	Data Matrix	0x 63	EAN 8	0x73	GS1 DataBar Expanded
0x 44	QR	0x 64	EAN 13	0x74	GS1 DataBar Limited
0x 45	Micro QR	0x 65	Code 128	0x75	Composite Code-A
0x 46	Aztec	0x66	Code 39	0x76	Composite Code-B
0x 47	MaxiCode	0x67	Code 93	0x77	Composite Code-C
		0x68	Code 32		
		0x69	Code 11		
		0x6A	Codabar		
		0x6B	Plessey		
		0x6C	MSI Plessey		
		0x6D	Interleaved 2 of 5		
		0x6E	IATA 2 of 5		
		0x6F	Matrix 2 of 5		
		0x70	Straight 2 of 5		

Barcode Information

SET

Turn off
(Default)

Turn on

END

Prefix

Add output digits before the barcode data, maximum Set 4 bytes Add “a” after all barcode data:

1. Scan "SET"
2. Scan "Set all barcode Suffix"
3. Scan ASCII Code table · “a” Setting code
4. Scan "END"

Remove Suffix:

1. Scan "SET"
2. Scan "Turn off all barcode Prefix"
3. Scan "END"

Add “&13”digit after EAN 13:

1. Scan "SET"
2. Scan "Set EAN 13 Prefix"
3. Scan ASCII Code table “&” Setting
3. Scan ASCII Code table, “1” Setting code
3. Scan ASCII Code table, “3” Setting code
4. Scan "END"

Remove EAN 13 Prefix:

1. Scan "SET"
2. Scan "Turn off EAN 13 Prefix"
3. Scan "END”

Prefix

SET

Turn off all barcode Prefix
(Default)

Set all barcode Prefix

END

Prefix

SET

Set UPC A
Prefix

Turn off UPC
A Prefix

END

SET

Set UPC E Prefix

Turn off UPC E Prefix

END

SET

Set EAN 8 Prefix

Turn off EAN 8 Prefix

END

SET

Set EAN 13 Prefix

Turn off EAN 13 Prefix

END

SET

Set Code 128 Prefix

Turn off Code 128 Prefix

END

SET

Set Code 39 Prefix

Turn off Code 39 Prefix

END

SET

Set Code 93 Prefix

Turn off Code 93 Prefix

END

SET

Set Code 32 Prefix

Turn off Code 32 Prefix

END

SET

Set Code 11 Prefix

Turn off Code 11 Prefix

END

SET

Set Codabar Prefix

Turn off Codabar Prefix

END

SET

Set Plessey Prefix

Turn off Plessey Prefix

END

SET

Set MSI Plessey Prefix

Turn off MSI Plessey Prefix

END

SET

Set Interleaved 2 of 5 Prefix

Turn off Interleaved 2 of 5 Prefix

END

SET

Set IATA 2 of 5 Prefix

Turn off IATA 2 of 5 Prefix

END

SET

Set Matrix 2 of 5 Prefix

Turn off Matrix 2 of 5 Prefix

END

SET

Set Straight 2 of 5 Prefix

Turn off Straight 2 of 5 Prefix

END

SET

Set Pharmacode Prefix

Turn off Pharmacode Prefix

END

SET

Set GS1 DataBar 14 Prefix

Turn off GS1 DataBar 14 Prefix

END

SET

Set GS1 DataBar Expanded Prefix

Turn off GS1 DataBar Expanded Prefix

END

SET

Set GS1 DataBar Limited Prefix

Turn off GS1 DataBar Limited Prefix

END

SET

Set Composite Code A Prefix

Turn off Composite Code A Prefix

END

SET

Set Composite Code B Prefix

Turn off Composite Code B Prefix

END

SET

Set Composite Code C Prefix

Turn off Composite Code C Prefix

END

SET

Set PDF417 Prefix

Turn off PDF417 Prefix

END

SET

Set Micro PDF417 Prefix

Turn off Micro PDF417 Prefix

END

SET

Set Data Matrix Prefix

Turn off Data Matrix Prefix

END

SET

Set QR Prefix

Turn off QR Prefix

END

SET

Set Micro QR Prefix

Turn off Micro QR Prefix

END

SET

Set Aztec Prefix

Turn off Aztec Prefix

END

SET

Set MaxiCode Prefix

Turn off MaxiCode Prefix

END

Suffix

Add output digits after the barcode data, maximum Set 4 bytes Add “a”after all barcode data:

1. Scan "SET"
2. Scan "Set all barcode Suffix"
3. Scan ASCII Code table, “a” Setting code
4. Scan "END"

Remove Suffix:

1. Scan "SET"
2. Scan "Turn off all barcode Suffix"
3. Scan "END"

Add “&13” digit after EAN 13:

1. Scan "SET"
2. Scan "Set EAN 13 Suffix"
3. Scan ASCII Code table “&” Setting
4. Scan ASCII Code table, “1” Setting code
5. Scan ASCII Code table, “3” Setting code
6. Scan "END"

Remove EAN 13 Suffix:

1. Scan "SET"
2. Scan "Turn off EAN 13 Suffix"
3. Scan "END"

Suffix

SET

Turn off all barcode suffixes
(Default)

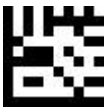
Set all barcode suffixes

END

Suffix

SET

Set UPC A Suffix



Turn off UPC A Suffix

END

Suffix

SET

Set UPC E Suffix

Turn off UPC E Suffix

END

Suffix

SET

Set EAN 8 Suffix

Turn off EAN 8 Suffix

SET

Suffix

SET

Set EAN 13 Suffix

Turn off EAN 13 Suffix

END

Suffix

SET

Set Code 128 Suffix

Turn off Code 128 Suffix

END

Suffix

SET

Set Code 39 Suffix

Turn off Code 39 Suffix

END

Suffix

SET

Set Code 93 Suffix

Turn off Code 93 Suffix

END

Suffix

SET

Set Code 32 Suffix

Turn off Code 32 Suffix

END

Suffix

SET

Set Code 11 Suffix

Turn off Code 11 Suffix

END

Suffix

SET

Set Codabar Suffix

Turn off Codabar Suffix

END

Suffix

SET

Set Plessey Suffix

Turn off Plessey Suffix

END

Suffix

SET

Set MSI Plessey Suffix

Turn off MSI Plessey Suffix

END

Suffix

SET

Set Interleaved 2 of 5 Suffix

Turn off Interleaved 2 of 5 Suffix

END

Suffix

SET

Set IATA 2 of 5 Suffix

Turn off IATA 2 of 5 Suffix

END

Suffix

SET

Set Matrix 2 of 5 Suffix

Turn off Matrix 2 of 5 Suffix

END

Suffix

SET

Set Straight 2 of 5 Suffix

Turn off Straight 2 of 5 Suffix

END

Suffix

SET

Set Pharmacode Suffix

Turn off Pharmacode Suffix

END

Suffix

SET

Set GS1 DataBar 14 Suffix

Turn off GS1 DataBar 14 Suffix

END

Suffix

SET

Set GS1 DataBar Expanded Suffix

Turn off GS1 DataBar Expanded Suffix

END

Suffix

SET

Set GS1 DataBar Limited Suffix

Turn off GS1 DataBar Limited Suffix

END

Suffix

SET

Set Composite Code A Suffix

Turn off Composite Code A Suffix

END

Suffix

SET

Set Composite Code B Suffix

Turn off Composite Code B Suffix

END

Suffix

SET

Set Composite Code C Suffix

Turn off Composite Code C Suffix

END

Suffix

SET

Set PDF417 Suffix

Turn off PDF417 Suffix

END

Suffix

SET

Set Micro PDF417 Suffix

Turn off Micro PDF417 Suffix

END

Suffix

SET

Set Data Matrix Suffix

Turn off Data Matrix Suffix

END

Suffix

SET

Set QR Suffix

Turn off QR Suffix

END

Suffix

SET

Set Micro QR Suffix

Turn off Micro QR Suffix

END

Suffix

SET

Set Aztec Suffix

Turn off Aztec Suffix

END

Suffix

SET

Set MaxiCode Suffix

Turn off MaxiCode Suffix

END

Bar Code Identify

SET

Turn off bar code identify code
(Default)

Turn On AIM bar code identify code

END

Bar Code Identify Code Table

Symbology	3nStar	AIM
UPC-A	A	E
UPC-E	E	E
EAN-8	FF	E
EAN-13	F	E
Code 128	K	C
Code 39	M	A
Code 93	L	G
Code 32	M	A
Code 11	O	H
Codabar	N	F
Plessey	P	P
MSI / Plessey	a	M
Interleaved 2 of 5	I	I
IATA 2 of 5	Z	R
Matrix 2 of 5	G	X
Straight 2 of 5	S	S
Pharmacode	H	X
GS1 DataBar 14	RS	e
GS1 DataBar Expanded	RX	e
GS1 DataBar Limited	RL	e
Composite CC-A	m	e
Composite CC-B	n	e
Composite CC-C	i	e
PDF417	r	L
Micro PDF417	s	L
Data Matrix	t	d
QR	u	Q
Micro QR	j	Q
Aztec	e	Z
MaxiCode	v	U

Terminal character

SET

NONE

Enter / CR
(Default)

END

Terminal character

SET

CR / LF

TAB

END

Letter case conversion

SET

Turn off
(Default)

Change to uppercase

Change to lowercase

END

Caps Lock

SET

Turn off Caps Lock
(Default)

Turn on Caps Lock

END

GS character conversion

Convert GS characters in keyboard mode to other ASCII Code

Set the GS character to be converted to # output:

1. Scan “SET”
2. Scan “GS character conversion”
3. Scan “#”Setting code in ASCII Code table
4. Scan “END”

Set GS characters to be converted to carriage return output:

1. Scan “SET”
2. Scan “GS character conversion”
3. Scan “carriage return” setting code in ASCII Code table
4. Scan “END”

Restore the default value of GS character

1. Scan “SET”
2. Scan “Turn off GS characters conversion”
3. Scan “END”

GS character conversion

SET

Turn off GS character conversion
(Default)

GS character conversion

END

Function Key Mapping

SET

Turn off

Turn on
(Default)

END

Control Characters Mapping

SET

Ctrl Char mode
(Default)

Alt + Unicode mode

END

ASCII Code Table

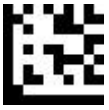
Hexadecimal	Decimal	ASCII	Function Key Mapping		
			Turn off	Ctrl Char mode	Alt+Unicode mode
00	0	NUL	Null	Ctrl+@	Alt + 000
01	1	SOH	Home	Ctrl+A	Alt + 001
02	2	STX	End	Ctrl+B	Alt + 002
03	3	ETX	Up Arrow	Ctrl+C	Alt + 003
04	4	EOT	Down Arrow	Ctrl+D	Alt + 004
05	5	ENQ	Left Arrow	Ctrl+E	Alt + 005
06	6	ACK	Right Arrow	Ctrl+F	Alt + 006
07	7	BEL	Null	Ctrl+G	Alt + 007
08	8		Backspace	Backspace	Alt + 008
09	9		TAB	TAB	Alt + 009
0A	10	LF	Null	Ctrl+J	Alt + 010
0B	11	VT	Null	Ctrl+K	Alt + 011
0C	12	FF	Null	Ctrl+L	Alt + 012
0D	13		Enter	Enter	Enter
0E	14	SO	Page Up	Ctrl+N	Alt + 014
0F	15	SI	Page Down	Ctrl+O	Alt + 015

Hexadecimal	Decimal	ASCII	Function Key Mapping		
			Turn off	Ctrl Char mode	Alt+Unicode mode
10	16	DLE	F11	Ctrl+P	Alt + 016
11	17	DC1	Null	Ctrl+Q	Alt + 017
12	18	DC2	Null	Ctrl+R	Alt + 018
13	19	DC3	Null	Ctrl+S	Alt + 019
14	20	DC4	Null	Ctrl+T	Alt + 020
15	21	NAK	F12	Ctrl+U	Alt + 021
16	22	SYN	F1	Ctrl+V	Alt + 022
17	23	ETB	F2	Ctrl+W	Alt + 023
18	24	CAN	F3	Ctrl+X	Alt + 024
19	25	EM	F4	Ctrl+Y	Alt + 025
1A	26	SUB	F5	Ctrl+Z	Alt + 026
1B	27	ESC	F6	Ctrl+[	Alt + 027
1C	28	FS	F7	Ctrl+\	Alt + 028
1D	29	GS	F8	Ctrl+]	Alt + 029
1E	30	RS	F9	Ctrl+^	Alt + 030
1F	31	US	F10	Ctrl+_	Alt + 031

Hexadecimal	Decimal	ASCII	
20	32	SPACE	
21	33	!	
22	34	"	
23	35	#	

Hexadecimal	Decimal	ASCII	
24	36	$	
25	37	%	
26	38	&	
27	39	'	

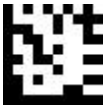
Hexadecimal	Decimal	ASCII	
28	40	(	
29	41	)	
2A	42	*	
2B	43	+	

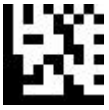
Hexadecimal	Decimal	ASCII	
2C	44	,	
2D	45	-	
2E	46	.	
2F	47	/	

Hexadecimal	Decimal	ASCII	
30	48	0	
31	49	1	
32	50	2	
33	51	3	

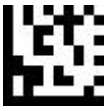
Hexadecimal	Decimal	ASCII	
34	52	4	
35	53	5	
36	54	6	
37	55	7	

Hexadecimal	Decimal	ASCII	
38	56	**8**	
39	57	**9**	
3A	58	**:**	
3B	59	**;**	

Hexadecimal	Decimal	ASCII	
3C	60	<	
3D	61	=	
3E	62	>	
3F	63	?	

Hexadecimal	Decimal	ASCII	
40	64	@	
41	65	A	
42	66	B	
43	67	C	

Hexadecimal	Decimal	ASCII	
44	68	D	
45	69	**E**	
46	70	**F**	
47	71	**G**	

Hexadecimal	Decimal	ASCII	
48	72	H	
49	73	I	
4A	74	J	
4B	75	K	

Hexadecimal	Decimal	ASCII	
4C	76	L	
4D	77	M	
4E	78	N	
4F	79	O	

Hexadecimal	Decimal	ASCII	
50	80	P	
51	81	Q	
52	82	R	
53	83	S	

Hexadecimal	Decimal	ASCII	
54	84	**T**	
55	85	**U**	
56	86	**V**	
57	87	**W**	

Hexadecimal	Decimal	ASCII	
58	88	X	
59	89	Y	
5A	90	Z	
5B	91	[	

Hexadecimal	Decimal	ASCII	
5C	92	\	
5D	93	]	
5E	94	^	
5F	95	_	

Hexadecimal	Decimal	ASCII	
60	96	`	
62	97	a	
62	98	b	
63	99	c	

Hexadecimal	Decimal	ASCII	
64	100	d	
65	101	e	
66	102	f	
67	103	g	

Hexadecimal	Decimal	ASCII	
68	104	h	
69	105	i	
6A	106	j	
6B	107	k	

Hexadecimal	Decimal	ASCII	
6C	108	l	
6D	109	m	
6E	110	n	
6F	111	o	

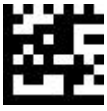
Hexadecimal	Decimal	ASCII	
70	112	p	
71	113	q	
72	114	r	
73	115	s	

Hexadecimal	Decimal	ASCII	
74	116	t	
75	117	u	
76	118	v	
77	119	w	

Hexadecimal	Decimal	ASCII	
78	120	**x**	
79	121	**y**	
7A	122	**z**	
7B	123	{	

Hexadecimal	Decimal	**ASCII**	
7C	124	|	
7D	125	}	
7E	126	~	
7F	127	Delete	

Function key	
	
Insert	Delete
	
Home	End
	
Up Arrow	Down Arrow
	
Left Arrow	Right Arrow

Function key	
	
Shift	ESC
	
Page Up	Page Down
	
Ctrl	Alt
	
F1	F2

	
F3	F4
	
F5	F6
	
F7	F8
	
F9	F10

	
F11	F12

Serial command

Transmission and reception format, feedback message

Command format: The following is the instruction transmission and the serial receiving format.

Length (1 Byte)	Source (1 Byte)	ExID (1 Byte)	ExCMD (1 Byte)	Data (MAX 32 Bytes)	High Byte of Checksum (1 Byte)	Low Byte of Checksum (1 Byte)

Length : Not include the information length of Checksum (min 5 bytes ; max 36 bytes)

Source : 0x57 means terminal sEnd to decoder or 0x52 means decoder sEnd to terminal

ExID : Command identifier code

ExCMD : Command

Data (MAX 32 Bytes) : Setting code transmit max 32 bytes in one time

High Byte of Checksum: Checksum High bit

Low Byte of Checksum: Checksum Low bit

Checksum Calculation

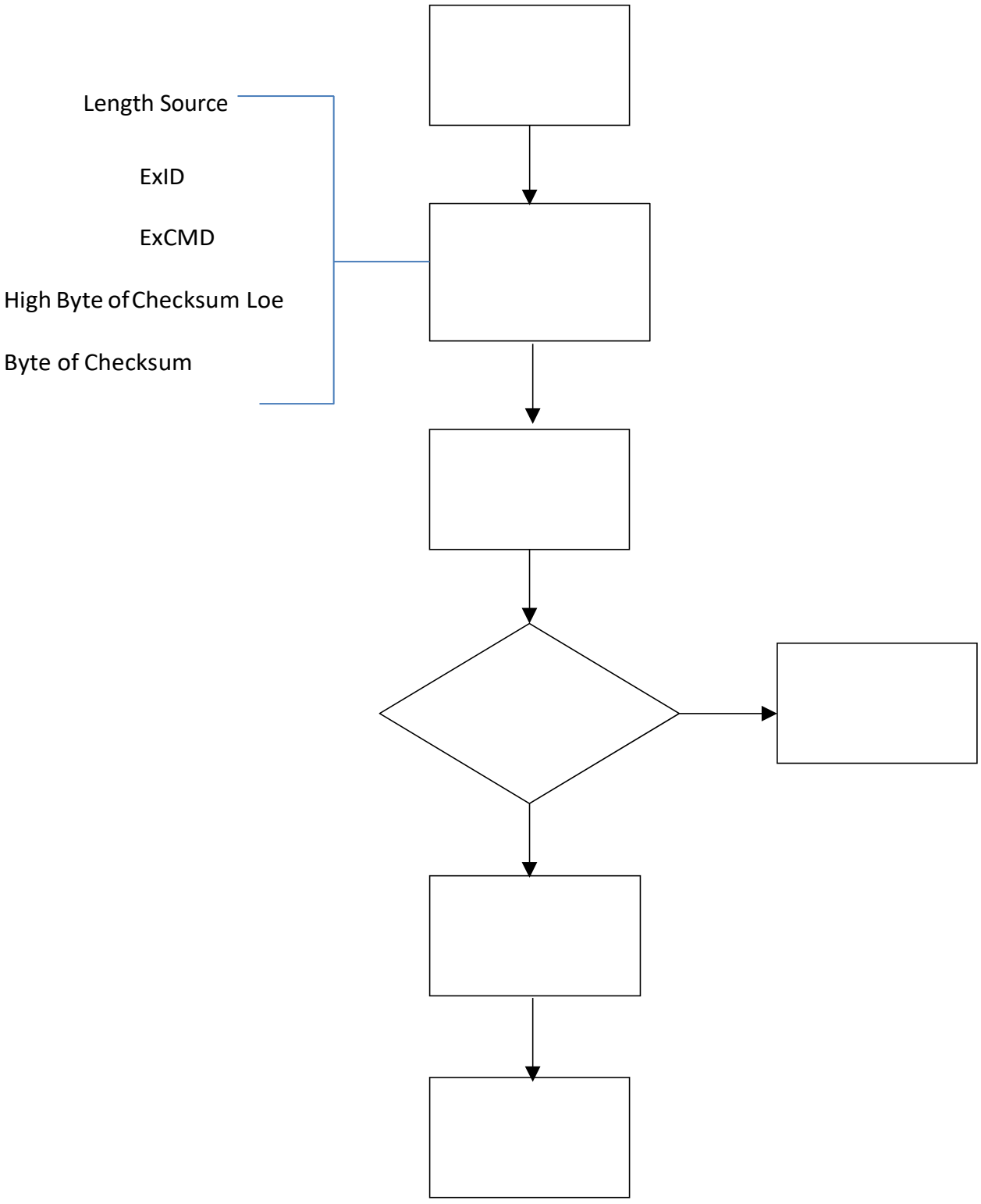
Checksum = 0x10000 – [Length] – [Source] – [ExID] – [ExCMD] – [D1 + D2 +D3 +.....]

Feedback information: After the terminal transmits the command to the device, the device will return the following message to enable the terminal to judge whether the command succeeds or fails. If the Setting is successful, the following 5 bytes hexadecimal data (ACK) are sequentially transmitted to the terminal.

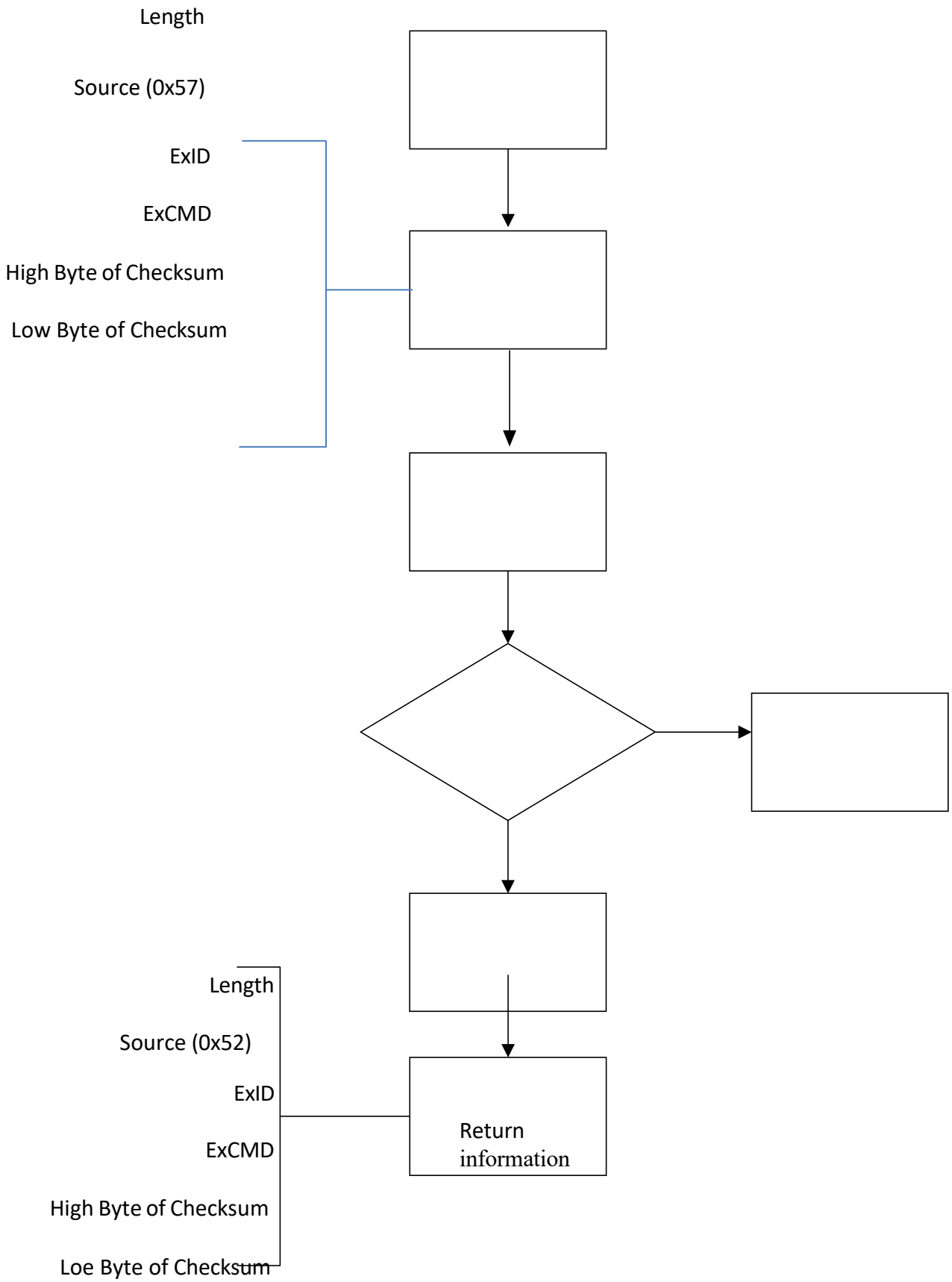
If the Setting fails, the following 5 bytes hexadecimal data (NAK) are sequentially transmitted to the terminal.

52	A0	E0	FE	80

Setup process



Reading Process



Command Table

Function		ID	CMD	Data
Illuminate work mode	Turn off	A1	04	00
	Turn On when scan	A1	04	01
	Always Turn On	A1	04	02
Buzzer	Turn On	A1	05	0E
	Turn off	A1	05	0D
Decode time	No limit	A1	06	01
	5 s	A1	06	02
	10 s	A1	06	03
Sleep time	None sleep	A1	07	01
	1 s later	A1	07	02
	2 s later	A1	07	03
	3 s later	A1	07	04
	5 s later	A1	07	05
	7 s later	A1	07	06
	10 s later	A1	07	07
	15 s later	A1	07	08

Function		ID	CMD	Data
Same code reading interval	Turn off	A1	08	00
	Not read same code	A1	08	01
	100 ms	A1	08	02
	200 ms	A1	08	03
	300 ms	A1	08	04
	500 ms	A1	08	05
	1 s	A1	08	06
	2 s	A1	08	07
	3s	A1	08	08
	4s	A1	08	09
	5s	A1	08	0A
Fill light intensity	Low	A1	09	01
	medium	A1	09	02
	High	A1	09	03
Automatic sensing sensitivity	Low	A1	0A	01
	medium	A1	0A	02

	High	A1	0A	03
Error check	Turn off	A1	0B	01
	Read twice	A1	0B	02
	Read three times	A1	0B	03
Decode information	Turn On	A2	01	0E
	Turn off	A2	01	0D
bar code identify code	Turn off	A2	02	00
	AIM ID	A2	02	01
Terminal character	None	A2	03	01
	CR/LF	A2	03	02
	CR	A2	03	03
	TAB	A2	03	04

Function		ID	CMD	Data
Turn On All barcode		B0	01	0E
Turn On 1D code		B0	01	01
Turn On 2D code		B0	01	02
UPC / EAN 2/5 bits additional code	Turn On	B0	02	0E
	Turn off	B0	02	0D
UPC A	Turn On	B1	01	0E
	Turn off	B1	01	0D
	Output check digit	B1	02	0E
	Not output check digit	B1	02	0D
	Turn On check digit	B1	03	0E
	Turn off check digit	B1	03	0D
	Turn On EAN-13 switch	B1	04	0E
	Turn off EAN-13 switch	B1	04	0D

Function		ID	CMD	Data
UPC E	Turn On	B2	01	0E
	Turn off	B2	01	0D
	Output check digit	B2	02	0E
	Not output check digit	B2	02	0D
	Turn On check digit	B2	03	0E
	Turn off check digit	B2	03	0D
	Turn On UPC A switch	B2	04	0E
	Turn off UPC A switch	B2	04	0D
EAN 8	Turn On	B3	01	0E
	Turn off	B3	01	0D
	Output check digit	B3	02	0E
	Not output check digit	B3	02	0D
	Turn On EAN-13 switch	B3	03	0E
	Turn off EAN-13 switch	B3	03	0D

Function		ID	CMD	Data
EAN 13	Turn On	B4	01	0E
	Turn off	B4	01	0D
	Output check digit	B4	02	0E
	Not output check digit	B4	02	0D
	Turn On ISBN switch	B4	03	0E
	Turn off ISBN switch	B4	03	0D
	Turn On ISSN switch	B4	04	0E
	Turn off ISSN switch	B4	04	0D
Code 128	Turn On	B5	01	0E
	Turn off	B5	01	0D
Code 39	Turn On	B6	01	0E
	Turn off	B6	01	0D
	Turn On ASCII	B6	02	0E
	Turn off ASCII	B6	02	0D
	Transmit Start/End symbol	B6	03	0E
	Not transmit Start/End symbol	B6	03	0D

Function		ID	CMD	Data
Code 39	Not Verified	B6	04	01
	Verify and transmit	B6	04	02
	Verify and not transmit	B6	04	03
Code 93	Turn On	B7	01	0E
	Turn off	B7	01	0D
Code 11	Turn On	B9	01	0E
	Turn off	B9	01	0D
Codabar	Turn On	BA	01	0E
	Turn off	BA	01	0D
	Not Verified	BA	02	01
	Verify and transmit	BA	02	02
	Verify and not transmit	BA	02	03
	Transmit Start/End symbol	BA	03	0E
	Not transmit Start/End symbol	BA	03	0D
	Turn On	BB	01	0E

Plessey	Turn off	BB	01	0D
MSI Plessey	Turn On	BC	01	0E
	Turn off	BC	01	0D
	Not Verified	BC	02	01
	Mod 10 Verified	BC	02	02
	Mod 10/10 Verified	BC	02	03
	Mod 11/10 Verified	BC	02	04
	Output check digit	BC	03	0E
	Not output check digit	BC	03	0D
Interleave d 2 of 5	Turn On	BD	01	0E
	Turn off	BD	01	0D
	Not Verified	BD	02	01
	Verify and transmit	BD	02	02
	Verify and not transmit	BD	02	03

Function		ID	CMD	Data
IATA 2 of 5	Turn on	BE	01	0E
	Turn off	BE	01	0D
Matrix 2 of 5	Turn on	BF	01	0E
	Turn off	BF	01	0D
Straight 2 of 5	Turn on	D0	01	0E
	Turn off	D0	01	0D
Pharmacode	Turn On	D1	01	0E
	Turn off	D1	01	0D
GS1 DataBar 14	Turn On	D2	01	0E
	Turn off	D2	01	0D
GS1 DataBar 14 Stacked	Turn On	D2	02	0E
	Turn off	D2	02	0D
GS1 DataBar Expanded	Turn On	D3	01	0E
	Turn off	D3	01	0D
GS1 DataBar Expanded Stacked	Turn On	D3	02	0E
	Turn off	D3	02	0D
	Turn On	D4	01	0E

GS1 DataBar Limited	Turn off	D4	01	0D
CC-A	Turn On	D5	01	0E
	Turn off	D5	01	0D
CC-B	Turn On	D6	01	0E
	Turn off	D6	01	0D
CC-C	Turn On	D7	01	0E
	Turn off	D7	01	0D
PDF 417	Turn On	D8	01	0E
	Turn off	D8	01	0D
Micro PDF 417	Turn On	D9	01	0E
	Turn off	D9	01	0D
Data Matrix	Turn On	DA	01	0E
	Turn off	DA	01	0D
Rectangular Data Matrix	Turn On	DA	03	0E
	Turn off	DA	03	0D
QR	Turn On	DB	01	0E
	Turn off	DB	01	0D
Micro QR	Turn On	DC	01	0E
	Turn off	DC	01	0D
Aztec	Turn On	DD	01	0E
	Turn off	DD	01	0D

Function		ID	CMD	Data
MaxiCode	Turn On	DE	01	0E
	Turn off	DE	01	0D

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