

Configuration Guide

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Programming with barcodes

The BARCODE PROGRAMMING feature gives the possibility to change the Scantech scanner settings without any tools or dismounting the scanner from the checkstand.

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Change scanner settings

In order to change the scanner settings please follow the sequence below:

1. **OPEN** the scanner Programming Mode by scanning code 1.1.
2. **CHANGE SCANNER SETTINGS** by scanning any of the codes 1.3 to 7.x.x.
3. **CLOSE** the scanner Programming Mode by scanning code 1.1.

Reading the **OPEN/CLOSE** code 1.1 gives a double tone beep (Low High).

An example:

For changing the baudrate to 4800 the following codes must be scanned successively:

1.1 -> 3.1.4 -> 1.1

After reading a valid barcode in Programming Mode the scanner will give a High beep.

The scanner will generate a Low beep after receiving an unexpected code. Reading a code, for example a predefined ASCII character, directly after entering the Programming Mode, is not allowed and the scanner will not accept this data.

At any moment (in Programming Mode) you can scan code 1.2 to close the programming mode without update, or code 1.3 to return to default settings.

Factory default settings

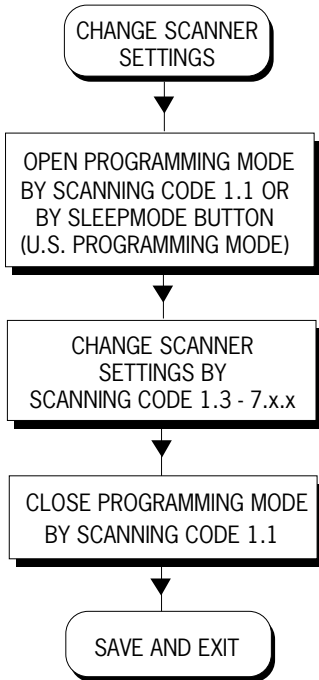
SLEEP MODE	DEFAULT
Sleep mode	After 30 minutes
SCANNER TIMING	DEFAULT
Same code delay	600msec
RS232 COMMUNICATION	DEFAULT
Baudrate	9600
Parity	None
Data bits	8
Stop bits	2
RTS/CTS	Off
Postamble	<CR>
OCIA COMMUNICATION	DEFAULT
OCIA byte format	DTS
IBM RS485 COMMUNICATION	DEFAULT
Mode	IBM fixed POS scanner
KEYBOARD WEDGE COMMUNICATION	DEFAULT
Terminal type	PC/AT
Keyboard	International (Alt method)
Inter character delay	2msec
Postamble	Enter (Alpha numeric)
USB COMMUNICATION	
Mode	USB Keyboard Emulation
DECODER SELECTION	DEFAULT
EAN/UPC	On (AddOn Off)
Code 128/EAN 128	Off
Code 39	Off
Code 32	Off
Codabar	Off
Interleaved 2/5	Off
DECODER CONFIGURATION	DEFAULT
Min. length Interleaved 2/5	8
CODE IDENTIFIERS	DEFAULT
Code identifiers	Off

Default message format

CODE	MESSAGE FORMAT
EAN13	D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 D11 D12 D13
EAN8	D1 D2 D3 D4 D5 D6 D7 D8
UPCA	D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 D11 D12
UPCE	D1 D2 D3 D4 D5 D6 D7
Code 128	D1 - Dx
EAN 128	JC1 D1 - Dx
Code 39	D1 - Dx
Code 32	D1 - Dx
Codabar	D1 - Dx
Interleaved 2/5	D1 - Dx

Important: Please note that EAN/UPC codes with AddOn are transmitted without a separator.

Programming flow chart



1. General

**OPEN PROGRAMMING MODE/
CLOSE PROGRAMMING MODE
WITH UPDATE**



1.1

Important: This code does not apply for scanners used in the USA concerning the “Open Programming Mode”. To “Open Programming Mode” press the sleep mode switch for 3 - 8 seconds. To “Close Programming Mode with Update” scan code 1.1.

CLOSE PROGRAMMING MODE WITHOUT UPDATE



1.2

RETURN TO FACTORY DEFAULT SETTINGS

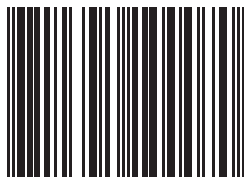


1.3

Use this code to return to the original factory default settings.

Important: Programming Mode is closed after scanning this code.

RETURN TO CUSTOM DEFAULT SETTINGS



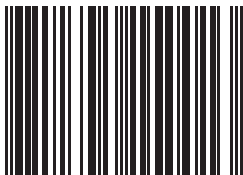
1.4

Important: Programming Mode is closed after scanning this code.

2. Scanner functionality

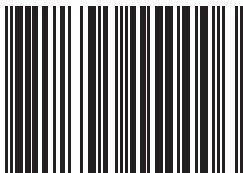
2.1 Speaker settings

SPEAKER FREQUENCY



2.1.1

SPEAKER VOLUME



2.1.2

2.2 Sleep mode

SLEEP MODE OFF



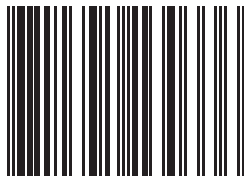
2.2.1

SLEEP MODE AFTER 30 MINUTES (DEFAULT)



2.2.3

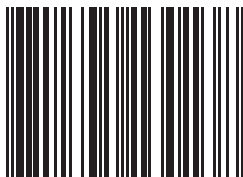
SLEEP MODE AFTER 60 MINUTES



2.2.4

2.3 Scanner timing

SAME CODE DELAY 300MSEC



2.3.4

SAME CODE DELAY 600MSEC (DEFAULT)



2.3.7

3. Communication parameters

3.1 RS232 communication

BAUDRATE 4800



3.1.4

BAUDRATE 9600 (DEFAULT)



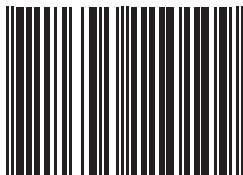
3.1.5

BAUDRATE 19200



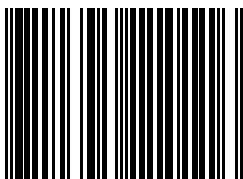
3.1.6

PARITY NONE (DEFAULT)



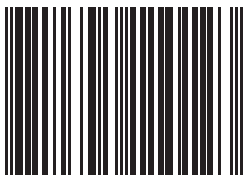
3.1.10

PARITY EVEN



3.1.11

PARITY ODD



3.1.12

7 DATABITS



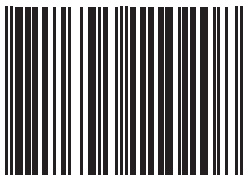
3.1.15

8 DATABITS (DEFAULT)



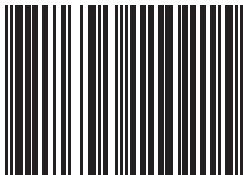
3.1.16

1 STOP BIT



3.1.20

2 STOP BITS (DEFAULT)



3.1.21

RTS/CTS ON



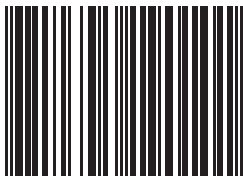
3.1.25

RTS/CTS OFF (DEFAULT)



3.1.26

RS232 PRESET 1



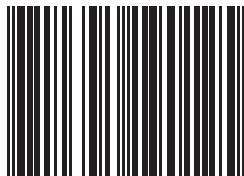
3.1.30

RS232 PRESET 2



3.1.31

RS232 PRESET 3



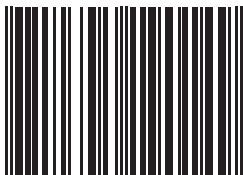
3.1.32

RS232 PRESET 4



3.1.33

RS232 PRESET 5



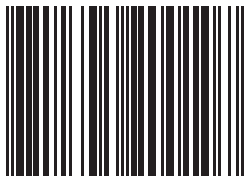
3.1.34

RS232 PRESET 6



3.1.35

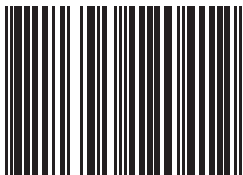
RS232 PRESET 7



3.1.36

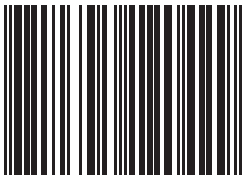
3.2 OCIA communication

OCIA BYTE FORMAT DTS (DEFAULT)



3.2.1

OCIA BYTE FORMAT NCR SHORT



3.2.2

OCIA BYTE FORMAT NCR LONG



3.2.3

OCIA PRESET 1



3.2.4

OCIA PRESET 2



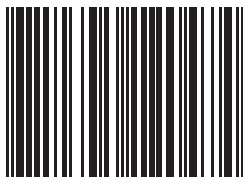
3.2.5

OCIA PRESET 3



3.2.6

OCIA PRESET 4



3.2.7

3.3 IBM RS485 communication

IBM FIXED POS SCANNER (DEFAULT)



3.3.1

IBM HANDHELD SCANNER EMULATION



3.3.2

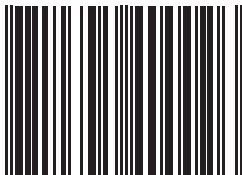
3.4 Keyboard Wedge communication

TERMINAL TYPE PC/AT (DEFAULT)



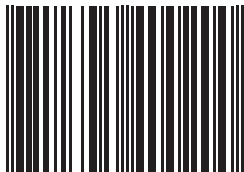
3.4.2

TERMINAL TYPE PS2



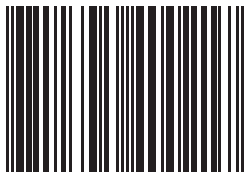
3.4.3

**INTERNATIONAL KEYBOARD
(ALT METHOD) (DEFAULT)**



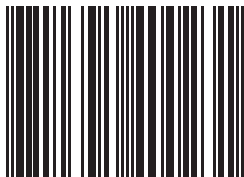
3.4.10

US KEYBOARD



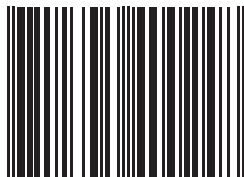
3.4.11

FRENCH KEYBOARD



3.4.13

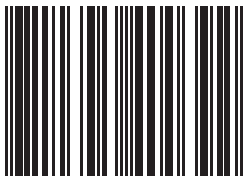
GERMAN KEYBOARD



3.4.14

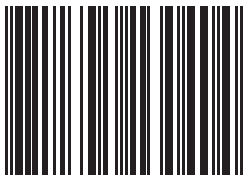
Other keyboards available through download utility.

USER DEFINED KEYBOARD



3.4.23

INTER CHARACTER DELAY 0MSEC



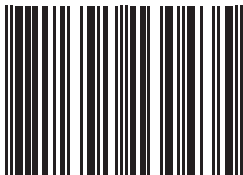
3.4.35

INTER CHARACTER DELAY 2MSEC (DEFAULT)



3.4.37

INTER CHARACTER DELAY 5MSEC



3.4.38

INTER CHARACTER DELAY 10MSEC



3.4.39

INTER CHARACTER DELAY 20MSEC



3.4.40

3.5 USB Communication

3.5 USB Settings

For scanners with integrated USB-interface, you may activate this interface by connecting the appropriate communication cable.

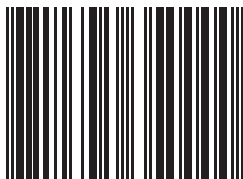
Depending on the software version of the scanner, various protocol versions may be possible:

1. USB Keyboard Emulation (default)
2. USB IBM fixed POS scanner
3. USB IBM handheld scanner emulation
4. USB RS-232 emulation

Important: Reset (re-power) the scanner after changing one of the options listed above.

When using USB Keyboard Emulation, you can optionally select different keyboard languages using codes 3.4.10, 3.4.11, 3.4.13 or 3.4.14.

USB KEYBOARD EMULATION (DEFAULT)



3.5.1

USB IBM FIXED POS SCANNER



3.5.2

USB IBM HANDHELD SCANNER EMULATION



3.5.3

USB RS-232 EMULATION



3.5.4

4. Decoding parameters

4.1 Decoder selection

EAN/UPC ON + ADDON OFF (DEFAULT)



4.1.1

EAN/UPC ON + ADDON ON



4.1.3

**EAN/UPC ON + ADDON MANDATORY ON
(FOR 378/379/414/419/434/439/529/977)**

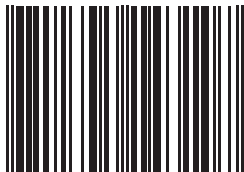


4.1.5

Important: After scanning this code, bar codes starting with 378, 379, 414, 419, 434, 439, 529 or 977 will only be accepted including AddOn. If no AddOn has been found, the bar code will not be accepted.

Bar codes starting with different characters are accepted with or without AddOn.

CODE 128/EAN 128 ON



4.1.20

CODE 128/EAN 128 OFF



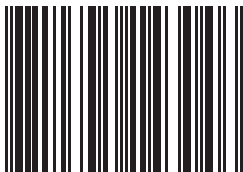
4.1.21

CODE 39 ON



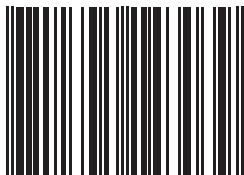
4.1.25

CODE 39 FULL ASCII ON



4.1.26

CODE 32 ON



4.1.27

CODE 39/CODE 32 OFF



4.1.28

CODABAR ON



4.1.30

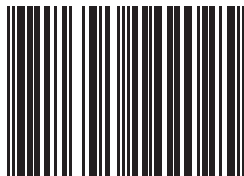
CODABAR OFF



4.1.31

INTERLEAVED 2/5 ON

(Select a minimum code length using the appropriate barcodes in paragraph 4.2)



4.1.35

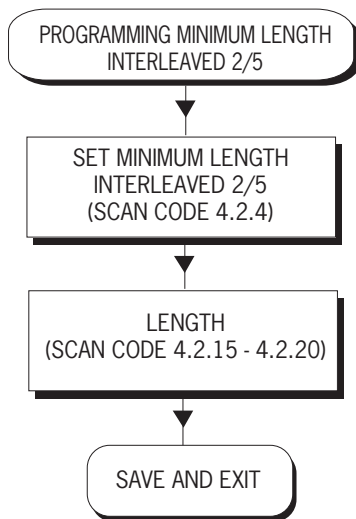
INTERLEAVED 2/5 OFF



4.1.36

4.2 Decoder configuration

Programming flow chart minimum length Interleaved 2/5



SET MIN. LENGTH INTERLEAVED 2/5



4.2.4

LENGTH = 4



4.2.15

LENGTH = 6



4.2.16

LENGTH = 8 (DEFAULT)



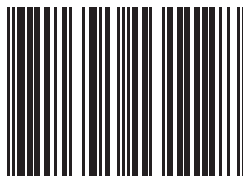
4.2.17

LENGTH = 10



4.2.18

LENGTH = 12



4.2.19

LENGTH = 14



4.2.20

5. Data formatting

5.1 Preambles

Programming sequence preambles

The scanner can be programmed to output bar code data according to the following format:

[PREAMBLE STRING] [BAR CODE DATA]

The preamble string is limited to a maximum length of 3 characters. Use the chart on the next page to program the preamble string.

Example:

to send a <STX> in front of the bar code data, scan successively (while in Programming Mode)

5.1.1 Free programmable preambles: Open programming mode

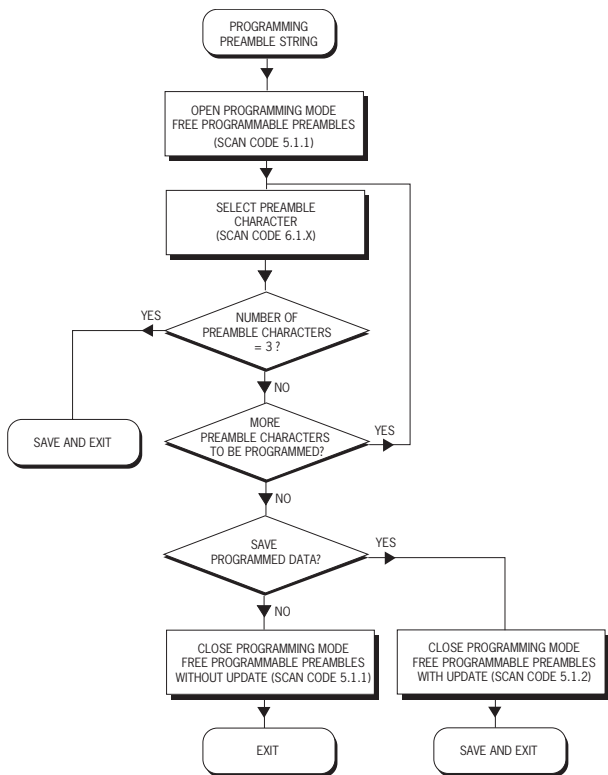
6.1.2 <STX>

5.1.2 Free programmable preambles: Close programming mode with update

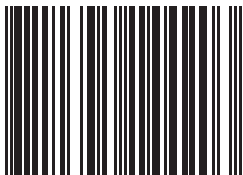
As a result, the scanner will give the following bar code data output:

[<STX>] [BAR CODE DATA]

Programming flow chart preambles



**FREE PROGRAMMABLE PREAMBLES:
OPEN PROGRAMMING MODE /CLOSE
PROGRAMMING MODE WITHOUT UPDATE**



5.1.1

**FREE PROGRAMMABLE PREAMBLES:
CLOSE PROGRAMMING MODE WITH UPDATE**



5.1.2

5.2 Postambles

Programming sequence postambles

The scanner can be programmed to output bar code data according to the following format:

[BAR CODE DATA] [POSTAMBLE STRING]

The postamble string is limited to a maximum length of 3 characters. Use the chart on the next page to program the postamble string.

Example:

to send a <ETX> after the bar code data, scan successively (while in Programming Mode)

5.2.5 Free programmable postambles: Open programming mode

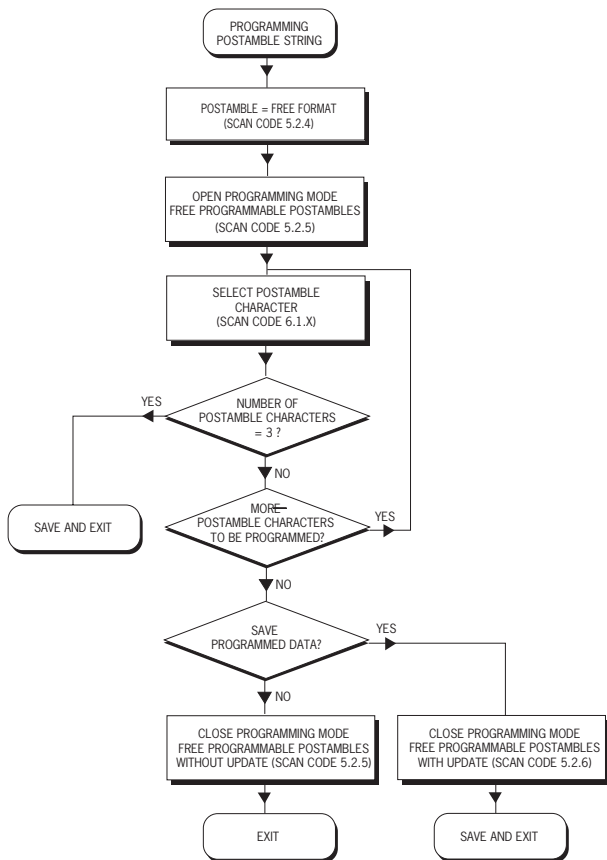
6.1.3 <ETX>

5.2.6 Free programmable postambles: Close programming mode with update

As a result, the scanner will give the following bar code data output:

[BAR CODE DATA] [<ETX>]

Programming flow chart postambles



PREDEFINED POSTAMBLE = CR



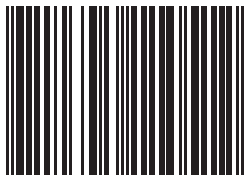
5.2.1

PREDEFINED POSTAMBLE = LF



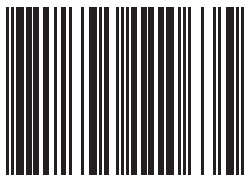
5.2.2

PREDEFINED POSTAMBLE = CR + LF



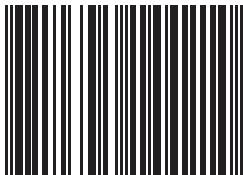
5.2.3

POSTAMBLE = FREE FORMAT



5.2.4

**FREE PROGRAMMABLE POSTAMBLES:
OPEN PROGRAMMING MODE /CLOSE
PROGRAMMING MODE WITHOUT UPDATE**



5.2.5

**FREE PROGRAMMABLE POSTAMBLES :
CLOSE PROGRAMMING MODE WITH UPDATE**



5.2.6

5.3 Code identifiers

Set message format with code identifiers

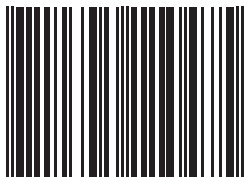
A code identifier is a data string, giving information to the host system concerning the bar code type that has been read. After scanning code 5.3.1 the scanner is programmed to transmit data according to the following format:

CODE	CODE IDENTIFIER	MESSAGE FORMAT
EAN13	F	D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 D11 D12 D13
EAN8	FF	D1 D2 D3 D4 D5 D6 D7 D8
UPCA	A	D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 D11 D12
UPCE	E	0 D1 D2 D3 D4 D5 D6
Code 128	#	D1 - Dx
EAN 128	P	JC1 D1 - Dx
Code 39	*	D1 - Dx
Code 32	*	D1 - Dx
Codabar	%	D1 - Dx
Interleaved 2/5	i	D1 - Dx

Important: Please note that the UPCE format will be changed. The scanner will transmit UPCE codes with leading zero and without check digit.

To return to the Scantech default format without code identifiers scan code 5.3.2.

**SET MESSAGE FORMAT WITH
CODE IDENTIFIERS**



5.3.1

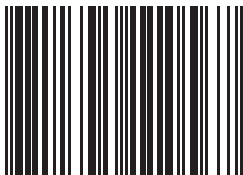
**SET MESSAGE FORMAT WITHOUT
CODE IDENTIFIERS**



5.3.2

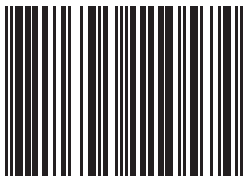
5.4 Code representation

**UPCA FORMAT
TRANSMITTED AS UPCA
(12 DIGITS)**



5.4.3

**UPCA FORMAT
TRANSMITTED AS EAN13
(WITH LEADING ZERO)**



5.4.4

**UPCE FORMAT
UPCE TO UPCA
EXPANSION: ON**



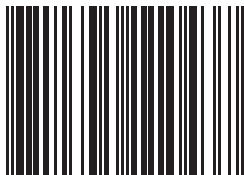
5.4.5

**UPCE FORMAT
UPCE TO UPCA
EXPANSION: OFF**



5.4.6

**UPCE FORMAT
WITH LEADING ZERO**



5.4.7

**UPCE FORMAT
WITHOUT LEADING ZERO**



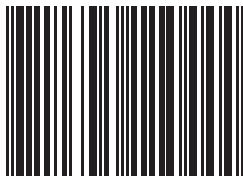
5.4.8

**UPCE FORMAT
WITH CHECK DIGIT**



5.4.9

**UPCE FORMAT
WITHOUT CHECK DIGIT**

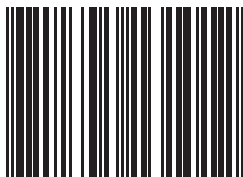


5.4.10

6. Appendix

6.1 Predefined ASCII characters

SOH



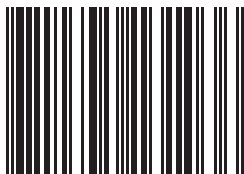
6.1.1

STX



6.1.2

ETX



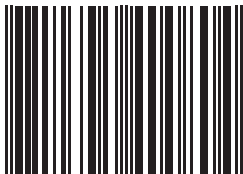
6.1.3

EOT



6.1.4

TAB (KBW ONLY)



6.1.30

ENTER (NUMERIC) (KBW ONLY)



6.1.32

7. Polaris interface selection

**RETURN TO KEYBOARD
WEDGE DEFAULT**



7.1

**RETURN TO RS232
DEFAULT**



7.2

Important: Programming Mode is closed after scanning these codes.

7.1 Polaris features

User instructions: Freeze Frame / Single Line

The Polaris featuring the Freeze Frame and the Single Line option, enables the user to temporarily switch from the full scan pattern (the Omni directional mode) to a blinking, multiple scan pattern called Freeze Frame, or to a Single Line preventing the wrong bar code being read. These features are especially helpful on sheets or products where multiple bar codes are printed.

1. Press the button on top of the scanner. Dependent on which feature is chosen, the scanner's scan pattern will change from the multiple scan lines, to either a **blinking multiple scan pattern** or to just one **single Line**.
2. Direct the blinking multiple scan pattern/single line onto the required bar code, whilst holding the button.

3. Once the scan pattern/line is completely crossing the bar code, release the button. The scanner generates a beep indicating the scanner has read the bar code.
4. After a successful read, the blinking multiple scan pattern/single line will disappear, and the scanner will return to the normal Omni directional mode.

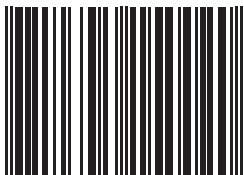
To use the Freeze Frame/Single Line option again, follow steps one to four.

To activate the Freeze Frame/Single Line:

1. Scan code 7.1.3 Enable Search Mode.
2. Scan code 7.1.5 for Single Line or code 7.1.6 for Freeze Frame.

Turn off Freeze Frame/ Single Line by scanning code 7.1.4.

ENABLE SEARCH MODE



7.1.3

DISABLE SEARCH MODE



7.1.4

SELECT SINGLE LINE



7.1.5

SELECT FREEZE FRAME



7.1.6