GENERALSCAN

Generalscan R1521
Scan Engine User Guide

Generalscan Inc.

Disclaimer

Table of Content

1 Introduction

1.1 Enter/Exit Setup

Scanning the Enter Setup barcode can enable the engine to enter the setup mode. Then you can scan programming barcodes to configure your engine.
Scanning the Exit Setup barcode will disable most of the programming barcode and you can only scan the Enter Setup barcode.

*Enter Setup   Exit Setup

Programming barcode data can be transmitted to the host device. Scan the appropriate barcode below to enable or disable the transmission of programming barcode data to the host device. If the engine is reboot, it will be reset to Do not Transmit Programming Barcode Data.

Transmit Programming Barcode Data   *Do Not Transmit Programming Barcode Data

1.2 Restore Factory Defaults

Attention: Please use the "Restore Factory Defaults" carefully. After scanning below programming barcode, the current setting will be lost and replaced by the factory defaults. Please refer to the appendix to get the factory defaults and function.

Restore Factory Default

2 Scan Mode

2.1 Batch Mode

In batch mode, when the trigger control interface of the scan engine changes to trigger level, the scan engine starts to shoot and read. If the control interface keeps trigger level, the scan engine will keep scanning barcode. The same barcode can only be scanned one time. After scanning successfully, barcode will be output through interface. To start a new batch scanning, cancel the trigger level and restart it again.

Batch Mode

2.2 Trigger Mode

In trigger mode, when the trigger control interface of the scan engine changes to trigger level, the scan engine starts to shoot and read. Within the time of "single reading duration", if the control interface keeps trigger level, the scan engine will keep scanning barcode until scanning successfully. If the trigger level is cancelled or the single reading is timeout, the scan engine will stop shooting and reading. After scanning successfully, barcode will be output through interface. To start a new batch scanning, cancel the trigger level and restart it again.

＊Trigger Mode

2.2.1 Level Mode or Pulse Mode

You can select level mode or pulse mode in the trigger mode. Level mode means the control interface need keep to be trigger level from the beginning to the ending of the reading. Pulse Mode means the scan engine starts reading when detecting the trigger level and ends reading when scanning is successful or the single reading is timeout.

＊Level Mode   Pulse Mode

2.2.2 Single Reading Duration

Single reading duration means the maximum time for shooting and reading when the control interface keeps trigger level in trigger mode. If it is timeout, the shooting and reading will stop no matter whether the reading is successfully or not. The duration of single reading is 1000~3600000ms and the default duration is 3000ms. About the custom duration, please refer to appendix D.

*3000ms   5000ms

Custom Modify Single Reading Duration

2.2.3 Idle Auto Sleep

In trigger mode, you can select auto sleep in idle time. "Idle" means no operation or communication is performed for a time period. The auto sleep can keep the scan engine stay in the low power consumption state. Sending trigger signal or communication can awake the scan engine.
Attention: This function only works in serial port interface.

*Disable Auto Sleep   Allow Auto Sleep

2.2.4 Idle Duration

The idle duration is 0~65535ms, the default duration is 500ms. Please refer to appendix D to learn how to set up.

*500ms   1000ms

Custom

2.2.5 Delay of Scanning the Same Barcode

In order to avoid the same barcode being read for several times in a short time in the triggering mode, you can set a delay time in this mode so that the scan engine will read the same barcode after the delay time.

Delay of scanning the same barcode means the scan engine refuse to read the same barcode within the set time after reading a barcode. The scan engine can read and output data only after the set time.

Scan the "No Delay", set to output the same barcode that scan engine has scanned.

If it is set to "Require delay for the same code reading" and "Disable re reading and reset after timeout ", the same barcode can only be read and output after exceeding the delay time of the same code reading.

If it is set to "Require delay for the same code reading" and "Enable re reading and reset after timeout", the same barcode can only be read and output after exceeding the delay time of the same code reading and after no same barcode is read.

*No Delay

Delay

* Disable Re Reading and Reset After Timeout

Enable Re Reading and Reset After Timeout

Scanning below programming barcode, you can modify the delay time of scanning the same barcode. The delay time range is 0~65535ms, and the default delay time is 1500ms. If you select "No time limited", the same barcode will not be output. Please refer to Appendix D to see how to make custom setting.

No Time Limited

1000ms

*1500ms

3000ms

5000ms

Custom

2.3 Sense Mode

In the automatic sense mode, the scan engine will monitor the captured image. When the scene changes, it will read barcode within the limited time of "single reading duration". After the information is output successfully or timeout, it will get back to the status of monitoring scene changes again.

When the scan engine is working in this mode, it can also respond to the trigger level and get ready to read. After the trigger level is canceled, or the reading is successful, or the reading is timeout, it will get back to the state of monitoring scene changes again. Before getting back to the monitoring state again, trigger level needs to be cancelled.

Sense Mode

2.3.1 Single Reading Duration

Single reading duration means the maximum time allowed to keep shooting and reading attempts before reading successfully after detecting the scene changes and the scan engine is ready to read. It will return to the monitoring state from the reading state after timeout. The setting range of single code reading duration is 1000~3600000ms, and the default duration is 3000ms. Please refer to Appendix D for the custom setting.

*3000ms

5000ms

Custom

2.3.2 Delay of Scanning the Same Barcode

In order to avoid the same barcode being read for several times in a short time in the triggering mode, you can set a delay time in this mode so that the scan engine will read the same barcode after the delay time.

Delay of scanning the same barcode means the scan engine refuse to read the same barcode within the set time after reading a barcode. The scan engine can read and output data only after the set time.

Scan the "No Delay", set to output the same barcode that scan engine has scanned.

If it is set to "Require delay for the same code reading" and "Disable re reading and reset after timeout ", the same barcode can only be read and output after exceeding the delay time of the same code reading.

If it is set to "Require delay for the same code reading" and "Enable re reading and reset after timeout", the same barcode can only be read and output after exceeding the delay time of the same code reading and after no same barcode is read.

*No Delay

Delay

* Disable Re Reading and Reset After Timeout

Enable Re Reading and Reset After Timeout

Scanning below programming barcode, you can modify the delay time of scanning the same barcode. The delay time range is 0~65535ms, and the default delay time is 1500ms. If you select "No time limited", the same barcode will not be output. Please refer to Appendix D to see how to make custom setting.

No Time Limited

1000ms

*1500ms

3000ms

5000ms

Custom

2.3.3 Image Stabilization Duration

The range of image stabilization duration is 0~1600ms and the default duration is 60ms. Please refer to Appendix D to see how to set up the image stabilization duration.

*60ms

500ms

1000ms

Custom

2.3.4 Sensitivity

Sensitivity specifies the degree of acuteness of the engine's response to changes in images captured. The higher the sensitivity, the lower requirement in image change is needed to trigger the engine. On the contrary, the lower the sensitivity, the higher requirement.

Medium Sensitivity

Low Sensitivity

*High Sensitivity

Enhanced Sensitivity

It is recommended not to use the following free setting methods when the above

sensitivity has been set to adapt to the application.

Set the scene change threshold value freely means when the scene change reaches or exceeds the threshold value, it will be detected and recognized that the scene has enough changes, and then it will be turned into ready to read. The higher the sensitivity, the lower the scene change threshold value is required.

When the scene changes threshold value is set very high, the sensitivity of the scan engine will be very low. For specific applications, please test first to determine the best threshold value.

The setting range of scene change threshold value is 1~50. When setting the scene change threshold value, data codes also need to be used. The default threshold value is 10. Please refer to Appendix D for setting method.

Modify the Scene Change Threshold Value

2.3.5 Stop Mode

Mode 1: In sense mode, after scanning the barcode successfully, the scan engine will turn off the light and re monitor the environment.

Mode 2: In sense mode, after scanning the barcode successfully, the scan engine will continue to scan and will not re monitor the environment until the scanning is not successful within the range of single scanning duration.

*Mode 1   Mode 2

2.4 Continuous Mode

The continuous mode is a working mode in which the scan engine continuously and circularly shoots, reads and outputs information. In this mode, whether it is the same barcode or not, the reading module will identify and output it.

In continuous mode, trigger level can be used to control the continuous reading to suspend or continue. During continuous reading, if the trigger level is cancelled, reading will be suspended, and if the trigger level is cancelled again, the reading will continue. This configuration may not take effect in the continuous read state.

2.4.1 Single Reading Duration

In continuous mode, single reading duration means the maximum duration of acquisition recognition before successful reading. After timeout, it will enter the interval of non-acquisition recognition according to the setting. The setting range of single reading duration is 1000~3600000ms, and the default duration is 3000ms. Please refer to Appendix D to get setting up.

*3000ms   5000ms

Custom

2.4.2 Interval Duration of Reading

Interval Duration of reading means the interval duration between two readings. No matter whether the reading is successful or failed, there will be an interval duration between the two readings, in which no acquisition reading is performed. The range of interval duration of reading is 0~65535ms, and the default duration is 1000ms. Please refer to Appendix D for custom setting method.

*500ms   1000ms

2000ms   5000ms

0ms   Custom

2.4.3 Delay of Scanning the Same Barcode

In order to avoid the same barcode being read for several times in a short time in the triggering mode, you can set a delay time in this mode so that the scan engine will read the same barcode after the delay time.

Delay of scanning the same barcode means the scan engine refuse to read the same barcode within the set time after reading a barcode. The scan engine can read and output data only after the set time.

Scan the "No Delay", set to output the same barcode that scan engine has scanned.

If it is set to "Require delay for the same code reading" and "Disable re reading and reset after timeout ", the same barcode can only be read and output after exceeding the delay time of the same code reading.

If it is set to "Require delay for the same code reading" and "Enable re reading and reset after timeout", the same barcode can only be read and output after exceeding the delay time of the same code reading and after no same barcode is read.

*No Delay

Delay

* Disable Re Reading and Reset After Timeout

Enable Re Reading and Reset After Timeout

Scanning below programming barcode, you can modify the delay time of scanning the same barcode. The delay time range is 0~65535ms, and the default delay time is 1500ms. If you select "No time limited", the same barcode will not be output. Please refer to Appendix D to see how to make custom setting.

No Time Limited

1000ms

*1500ms

3000ms

5000ms	Custom

3 Illumination and Aiming

3.1 Illumination

A group of LEDs are equipped in the engine to provide auxiliary lighting conditions. The light beam will focus on the target barcode to improve the scan performance, especially in the dark. Users can configure the illumination to make it adapt to different lighting conditions.

Normal：Illumination LEDs on the engine are turned on during image capture.

Always on：Illumination LEDs on the engine keep on after the engine is powered on.

Off：Illumination LEDs on the engine are off all the time.

*Normal

Off	Always On

3.2 Aiming

There is a projection device in the engine. It is used for projecting a special pattern, which means the center of the image. When capturing the image, project the pattern on the target barcode means the engine has aimed the target barcode, so that the scanning become easier.

Normal：The engine projects an aiming pattern only during barcode scanning/capture.

Always on：Aiming pattern is constantly on after the engine is powered on.

Off：Aiming pattern is off all the time.

*Normal

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Off   Always On

3.3 Decoding Mode

3.3.1 Full Map Decoding Mode

Full Map Decoding Mode

3.3.2 Center Decoding Mode

Center Decoding Mode

3.3.3 Customized Decoding Mode

The code can be output successfully only when the decode center is within the customized area.

Customized Decoding Mode

3.3.4 Decoding Range Setting

This setting is available ONLY after enabling customized decoding mode. Please reference the following example to modify the range.

Decoding Range Upper Boundary

The upper boundary of the specify range, the percentage of the image height, value range 1~100 (%), the upper boundary range cannot be higher than the lower boundary.

Upper Boundary Range 00

Upper Boundary Range 10

Upper Boundary Range 20

Upper Boundary Range 30

* Upper Boundary Range 40

Modify Upper Boundary Range

Decoding Range Lower Boundary

The lower boundary of the specify range, the percentage of the image height, value range 1~100 (%), the lower boundary range cannot be lower than the upper boundary.

* Lower Boundary Range 60

Lower Boundary Range 70

Lower Boundary Range 80

Lower Boundary Range 90

Lower Boundary Range 100

Modify Lower Boundary Range

Decoding Range Left Boundary

The left boundary of the specify range, the percentage of the image height, value range 1~100 (%), the left boundary range cannot be higher than the right boundary.

Left Boundary Range 00

Left Boundary Range 10

Left Boundary Range 20

Left Boundary Range 30

* Left Boundary Range 40

Modify Left Boundary Range

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Decoding Range Right Boundary

The right boundary of the specify range, the percentage of the image height, value range 1~100 (%), the right boundary range cannot be lower than the left boundary.

* Right Boundary Range 60

Right Boundary Range 70

Right Boundary Range 80

Right Boundary Range 90

Right Boundary Range 100

Modify Right Boundary Range

How to Set Boundary Range

Example: Set the upper boundary range 50
A. Scan the code "Enter Setup" at 1.1(Page 1) (Factory default is on, if it has been disabled, please scan again.).
B. Scan the code "customized decoding mode" at 3.2.3.1(Page 13).
C. Scan the data code "5", "0" at 6.1(Page 43).
D. Scan the data code "Save" at 6.2(Page 44).
E. Scan the code "Exit Setup" at 1.1(Page 1)(If you want to continue to use, you can skip this step.).

Decoding Range Diagram
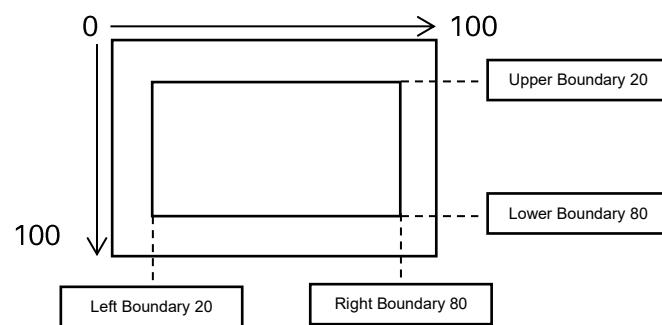
4   Edit Data

4.1 Add Code ID

Users can use Code ID to identify different barcode types, and the code ID corresponding to each barcode type can be modified freely. The Code ID of all barcodes is one character and must be a letter, cannot be a number, invisible character, or punctuation mark.

Allow to Add Code ID   *Do Not Add Code ID

Scanning below programming barcode can restore the Code IDs of all barcode types to the default values. Please think carefully before setting.

Restore Code IDs of All Barcode Types

5   Symbology Parameters

5.1 GS1 AI Setting

In order to output the code value according to GS1 AI rules, it is also necessary to enable the GS1 AI rule function.

Enable GS1 AI Output Rule   * Disable GS1 AI Output Rule

5.2 Reverse Color Code Setting

If this configuration is enabled, the recognition speed will be affected. Please open it in the required scenario.

5.2.1 Operation for All Reverse Color Code

Allow to Read Reverse Color Code   *Disable to Read Reverse Color Code

5.2.2 1D Reverse Color Code Setting

Allow to Read 1D Reverse Color Code   *Disable to Read 1D Reverse Color Code

5.2.3 2D Reverse Color Code Setting

Allow to Read PDF417 Reverse Color Code   *Disable to Read PDF417 Reverse Color Code

Allow to Read DM Reverse Color Code   *Disable to Read DM Reverse Color Code

Allow to Read QR Reverse Color Code   *Disable to Read QR Reverse Color Code

Allow to Read Micro PDF417 Reverse Color Code   *Disable to Read Micro PDF417 Reverse Color Code

Allow to Read Aztec Reverse Color Code

*Disable to Read Aztec Reverse Color Code

Allow to Read Maxi code Reverse Color Code

*Disable to Read Maxi code Reverse Color Code

Allow to Read Chinese-sensible Code Reverse Color Code

*Disable to Read Chinese-sensible Code Reverse Color Code

Allow to Read Dot Code Reverse Color Code

*Disable to Read Dot Code Reverse Color Code

5.3 Code 128

5.3.1 Restore Defaulting Settings

Restore Default Settings of Code 128

5.3.2 Allow/Disable to Read Code 128

* Allow to Read Code 128

Disable to Read Code 128

5.3.3 Set Up Length Limit

*Set Up Minimum Length Limit 00

Set Up Minimum Length Limit 04

Set Up Maximum Length Limit 32

* Set Up Maximum Length Limit 255

Custom Set Up Minimum Length

Custom Set Up Maximum Length

5.4 EAN-8

5.4.1 Restore Default Settings

Restore Default Setting of EAN8

5.4.2 Allow/Disable to Read EAN-8

* Allow to Read EAN-8

Disable to Read EAN-8

5.4.3 Output Verification

The data of EAN-8 must be 8 bytes, and the last one is verification.

*Output Verification

Do Not Output Verification

5.4.4 Extended Code

When setted to be "Read 2-digit extended code" or "Read 5-digit extended code", the scan engine can read the symbology with/without extended code. When the scan engine is set to be "Do not read 2-digit extended code" or "Do not read 5-digit extended code", the extended code of the symbology will not be read and output.

* Do Not Read 2-digit Extended Code

Read 2-digit Extended Code

* Do Not Read 5-digit Extended Code

Read 5-digit Extended Code

5.4.5 Extended Code Must Be Included

When the scan engine is set to be "extended code must be included", it can only scan the symbology with extended code.

*Not required

Extended Code Must Be Included

5.4.6 Allow/Disable to Transmit to EAN13

* Disable to Transmit EAN8 To EAN13

Allow to Transmit EAN8 To EAN13

5.5 EAN-13

5.5.1 Restore Default Settings

Restore Default Settings of EAN-13

5.5.2 Allow/Disable to Read EAN-13

* Allow to Read EAN-13   Disable to Read EAN-13

5.5.3 Output Verification

*Output Verification   Do Not Output Verification

5.5.4 Extended Code

When setted to be "Read 2-digit extended code" or "Read 5-digit extended code", the scan engine can read the symbology with/without extended code. When the scan engine is set to be "Do not read 2-digit extended code" or "Do not read 5-digit extended code", the extended code of the symbology will not be read and output.

* Do Not Read 2-digit Extended Code   Read 2-digit Extended Code

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∗ Do Not Read 5-digit Extended Code   Read 5-digit Extended Code

5.5.5 Extended Code Must Be Included

When the scan engine is set to be "extended code must be included", it can only scan the symbology with extended code.

∗Not required   Extended Code Must Be Included

5.5.6 Transmit EAN13 to ISBN

Other Configurations are the same as EAN13.

∗ Disable to Transmit EAN13 To ISBN   Allow to Transmit EAN13 to ISBN

5.5.7 Transmit EAN13 to ISSN

Other Configurations are the same as EAN13.

∗ Disable to Transmit EAN13 To ISSN   Allow to Transmit EAN13 to ISSN

5.6 UPCE0

5.6.1 Restore Default Settings

Restore Default Settings of UPCE0

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5.6.2 Allow/Disable to Read UPCE0

*Allow to Read UPCE0   Disable to Read UPCE0

5.6.3 Output Verification

*Output Verification   Do Not Output Verification

5.6.4 Output System Characters

*Output System Characters   Do Not Output System Characters

5.6.5 Extended Code

When setted to be "Read 2-digit extended code" or "Read 5-digit extended code", the scan engine can read the symbology with/without extended code. When the scan engine is set to be "Do not read 2-digit extended code" or "Do not read 5-digit extended code", the extended code of the symbology will not be read and output.

* Do Not Read 2-digit Extended Code   Read 2-digit Extended Code

* Do Not Read 5-digit Extended Code   Read 5-digit Extended Code

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5.6.6 Extended Code Must Be Included

When the scan engine is set to be "extended code must be included", it can only scan the symbology with extended code.

*Not Required   Extended Code Must Be Included

5.6.7 Allow/Disable to Transmit To UPCA

* Disable to Transmit UPCE0 to UPCA   Allow to Transmit UPCE0 to UPCA

5.7 UPCE1

5.7.1 Restore Default Settings

Restore Default Setting of UPCE1

5.7.2 Allow/Disable to Read UPCE1

* Allow to Read UPCE1   Disable to Read UPCE1

5.7.3 Output Verification

*Output Verification

Do Not Output Verification

5.7.4 Output System Characters

*Output System Characters

Do Not Output System Characters

5.7.5 Extended Code

When setted to be "Read 2-digit extended code" or "Read 5-digit extended code", the scan engine can read the symbology with/without extended code. When the scan engine is set to be "Do not read 2-digit extended code" or "Do not read 5-digit extended code", the extended code of the symbology will not be read and output.

* Do Not Read 2-digit Extended Code

Read 2-digit Extended Code

* Do Not Read 5-digit Extended Code

Read 5-digit Extended Code

5.7.6 Extended Code Must Be Included

When the scan engine is set to be "extended code must be included", it can only scan the symbology with extended code.

*Not required   Extended Code Must Be Included

5.7.7 Allow/Disable to Transmit To UPCA

*Disable to Transmit UPCE1 to UPCA   Allow to Transmit UPCE1 to UPCA

5.8 UPCA

5.8.1 Restore Default Settings

Restore Default Settings of UPCA

5.8.2 Allow/Disable to Read UPCA

*Allow to Read UPCA   Disable to Read UPCA

5.8.3 Transmit UPCA To EAN13

*Disable to Transmit UPCA To EAN13   Allow to Transmit UPCA To EAN13

5.8.4 Output Verification

*Output Verification   Do Not Output Verification

5.8.5 Output System Characters

*Output System Characters   Do Not Output System Characters

5.8.6 Extended Code

When setted to be "Read 2-digit extended code" or "Read 5-digit extended code", the scan engine can read the symbology with/without extended code. When the scan engine is set to be "Do not read 2-digit extended code" or "Do not read 5-digit extended code", the extended code of the symbology will not be read and output.

* Do Not Read 2-digit Extended Code   Read 2-digit Extended Code

* Do Not Read 5-digit Extended Code   Read 5-digit Extended Code

5.8.7 Extended Code Must Be Included

When the scan engine is set to be "extended code must be included", it can only scan the symbology with extended code.

*Not required   Extended Code Must Be Included

5.9 Interleaved 2 of 5

5.9.1 Restore Default Settings

Restore Default Settings of InterLeaved25

5.9.2 Allow/Disable to Read InterLeaved25

* Allow to Read InterLeaved25

Disable to Read InterLeaved25

5.9.3 Set Length Limit

* Set Minimum Length Limit 00

Set Minimum Length Limit 04

Set Maximum Length Limit 32

* Set Maximum Length Limit 255

Custom Set Minimum Length

Custom Set Maximum Length

5.9.4 Verification and Output Verification

The Interleaved 2 of 5 barcode does not require mandatory verification, and users can

choose to use verification according to different applications. If it is set to "No Verification", the scan engine will not verify the barcode data.

If it is set to "USS Verification but Not Output Verification", the scan engine will process USS verification, and the output data will not contain verification characters after passing the verification.

If it is set to "USS Verification and Output Verification", the scan engine will process USS verification, and the output data will contain verification characters after passing the verification.

If it is set to "OPCC Verification but Not Output Verification", the scan engine will process OPCC verification, and the output data will not contain verification characters after passing the verification.

If it is set to "OPCC Verification and Output Verification", the scan engine will process OPCC verification, and the output data will contain verification characters after passing the verification.

* No Verification

USS Verification but Not Output Verification

USS Verification and Output Verification

OPCC Verification but Not Output Verification

OPCC Verification and Output Verification

5.10 Matrix 2 of 5

5.10.1 Restore Default Settings

Restore Default Settings of Matrix 25

5.10.2 Allow/Disable to Read Matrix 25

Allow to Read Matrix 25

* Disable to Read Matrix 25

5.10.3 Set Length Limit

* Set Minimum Length Limit 00

Set Minimum Length Limit 04

Set Maximum Length Limit 32

* Set Maximum Length Limit 255

Custom Set Minimum Length

Custom Set Maximum Length

5.10.4 Verification and Output Verification

* No Verification

Verification but Not Output Verification

Verification and Output Verification

5.11 Industrial 2 of 5

5.11.1 Restore Default Settings

Restore Default Settings of Industrial 25

5.11.2 Allow/Disable to Read Industrial 25

Allow to Read Industrial 25

* Disable to Read Industrial 25

5.11.3 Set Length Limit

* Set Minimum Length Limit 00

Set Minimum Length Limit 04

Set Maximum Length Limit 32

* Set Maximum Length Limit 255

Custom Set Minimum Length

Custom Set Maximum Length

5.11.4 Verification and Output Verification

* No Verification

Verification but Not Output Verification

Verification and Output Verification

5.12 IATA 2 of 5

5.12.1 Restore Default Settings

Restore Default Settings of IATA 25

5.12.2 Allow/Disable to Read IATA 25

Allow to Read IATA 25

* Disable to Read IATA 25

5.12.3 Set Length Limit

* Set Minimum Length Limit 00

Set Minimum Length Limit 04

Set Maximum Length Limit 32

* Set Maximum Length Limit 255

Custom Set Minimum Length

Custom Set Maximum Length

5.12.4 Verification and Output Verification

* No Verification

Verification but Not Output Verification

Verification and Output Verification

5.13 Code 39

5.13.1 Restore Default Settings

Restore Default Settings of Code 39

5.13.2 Allow/Disable to Read Code 39

33

*Allow to Read Code 39   Disable to Read Code 39

5.13.3 Output Start and Terminator

Output Start and Terminator   *Do Not Output Start and Terminator

5.13.4 Set Length Limit

*Set Minimum Length Limit 00   Set Minimum Length Limit 04

Set Maximum Length Limit 32   *Set Maximum Length Limit 255

Custom Set Minimum Length   Custom Set Maximum Length

5.13.5 Verification and Output Verification

*No Verification

Verification but Not Output Verification   Verification and Output Verification

5.13.6 Disable/Enable Code32

*Disable Code32

Enable Code32

5.13.7 Code32 Prefix

This configuration only take effect when Code32 is enabled.

Enable to Output Code32 Prefix

* Disable to Output Code32 Prefix

5.13.8 Code32 Output Verification

This configuration only take effect when Code32 is enabled.

Enable Code32 To Output Verification

* Disable Code32 To Output Verification

5.13.9 Full ASCII Support

The encoding method of Code 39 can include the representation of all ASCII characters. Through setting, the scan engine can support the barcode with full ASCII character.

*Disable Full ASCII

Enable Full ASCII

5.14 Codabar

5.14.1 Restore Default Settings

Restore Default Settings of Coda bar

5.14.2 Allow/Disable to Read Coda bar

* Allow to Read Coda bar

Disable to Read Coda bar

5.14.3 Set Length Limit

* Set Minimum Length Limit 00

Set Minimum Length Limit 04

Set Maximum Length Limit 32

* Set Maximum Length Limit 255

Custom Set Minimum Length

Custom Set Maximum Length

5.14.4 Verification Mode and Output Verification

* No Verification

Mode 10 Verification and Output Verification

Mode 10 Verification but Not Output Verification

Mode 16 Verification and Output Verification

Mode 16 Verification but Not Output Verification

5.14.5 Output Start and Terminator

There is a character before and after the Coda bar barcode data as the Start and the Terminator. The Start and the Terminator are one of the four characters "A", "B", "C", and "D". In addition, it is allowed to use the "T", "N", "*", and "E" to represent the Terminator. You can set not to output Start and Terminator or one of the four formats.

Do Not Output Start and Terminator

*Output the Start ABCD/Terminator ABCD

Output the Start ABCD/Terminator TN*E

Output the Start abcd/Terminator abcd

Output the Start abcd/Terminator tn *e

5.15 Code 93

5.15.1 Restore Default Settings

Restore Default Settings of Code 93

5.15.2 Allow/Disable to Read Code 93

* Allow to Read Code 93

Disable to Read Code 93

5.15.3 Set Length Limit

* Set Minimum Length Limit 00

Set Minimum Length Limit 04

Set Maximum Length Limit 32

* Set Maximum Length Limit 255

Custom Set Minimum Length

Custom Set Maximum Length

5.16 Code 11

5.16.1 Restore Default Settings

Restore Default Settings of Code 11

5.16.2 Allow/Disable to Read Code 11

Allow to Read Code 11

* Disable to Read Code11

5.16.3 Set Length Limit

* Set Minimum Length Limit 00

Set Minimum Length Limit 04

Set Maximum Length Limit 32

* Set Maximum Length Limit 255

Custom Set Minimum Length

Custom Set Maximum Length

5.16.4 Verification Mode and Output Verification

No Verification

1-bit check if the data does not exceed 10 bits, 2 bits check if the data exceeds 10 bits, and transmit check bits

*1-bit check if the data does not exceed 10 bits, 2 bits check if the data exceeds 10 bits, and do not transmit check bits

Fixed 1-bit check, transmit check bit

Fixed 1-bit check, do not transmit check bit

Fixed 2-bit check, transmit check bit

Fixed 2-bit check, do not transmit check bit

5.17 MSI Plessey

5.17.1 Restore Default Settings

Restore Default Settings of MSI Plessey

5.17.2 Allow/Disable to Read MSI Plessey

Allow to Read MSI Plessey

* Disable to Read MSI Plessey

5.17.3 Set Length Limit

* Set Minimum Length Limit 00

Set Minimum Length Limit 04

Set Maximum Length Limit 32

* Set Maximum Length Limit 255

Custom Set Minimum Length

Custom Set Maximum Length

5.17.4 Verification Mode and Output Verification

No Verification

Mode 10 check, transmit check bit

* Mode 10 check, do not transmit check bit

Mode 11 check, transmit check bit

Mode 11 check, do not transmit check bit

Mode 10、10 check, transmit check bit

Mode 10、10 check, do not transmit check bit

Mode 11、10 check, transmit check bit

Mode 11、10 check, do not transmit check bit

5.18 GS1 Data Bar

* Allow to Read GS1 Data Bar

Disable to Read GS1 Data Bar

5.19 GS1 Data Bar Limited

* Allow to Read GS1 Data Bar Limited

Disable to Read GS1 Data Bar Limited

5.20 GS1 Data Bar Expanded

* Allow to Read GS1 Data Bar Expanded

Disable to Read GS1 Data Bar Expanded

5.21 Plessey

5.21.1 Restore Default Settings

Restore Default Settings of Plessey

5.21.2 Allow/Disable to Read Plessey

* Disable to Read Plessey

Allow to Read Plessey

5.21.3 Set Length Limit

* Set Minimum Length Limit 00

Set Minimum Length Limit 04

Set Maximum Length Limit 32

* Set Maximum Length Limit 255

Custom Set Minimum Length

Custom Set Maximum Length

5.21.4 Output Verification

Output Verification

＊ Do Not Output Verification

5.22 Febraban

5.22.1 Type ITF25

Allow to Read Type ITF25 Febraban

＊ Disable to Read Type ITF25 Febraban

5.22.2 Type Code128

Allow to Read Type Code128 Febraban

＊ Disable to Read Type Code128 Febraban

5.22.3 Verification Character Setting

Turn on Febraban Verification

＊ Turn Off Febraban Verification

5.23 Composite

Allow to Read **Composite** * Disable to Read **Composite**

5.24 PDF 417

* Allow to Read PDF 417 Disable to Read PDF 417

5.25 QR Code

* Allow to Read QR Disable to Read QR

5.26 Micro QR

Allow to Read Micro QR * Disable to Read Micro QR

5.27 Data Matrix

* Allow to Read Data Matrix Disable to Read Data Matrix

5.28 Micro PDF417

Allow to Read Micro PDF417 * Disable to Read Micro PDF417

5.29 Aztec

* Allow to Read Aztec   Disable to Read Aztec

5.30 Maxicode

Allow to Read Maxicode   * Disable to Read Maxicode

5.31 Chinese-sensible Code

Allow to Read Chinese-sensible Code   * Disable to Read Chinese-sensible Code

5.32 Dot Code

Allow to Read DotCode   *Disable to Read DotCode

6   Data Code

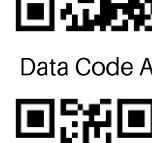## 6.1 Data Code 0~F

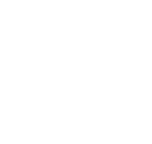|	
Data Code 0	Data Code 1
Data Code 2	Data Code 3
Data Code 4	Data Code 5
Data Code 6	Data Code 7
Data Code 8	Data Code 9
Data Code A	Data Code B
Data Code C	Data Code D

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Data Code E

Data Code F

6.2 Save Or Cancel

After scanning the data code, scan the "Save" to save the read data. If there is an error when scanning the data code, besides resetting, you can also cancel the wrong data.
For example, you scan a programming code and then scan data code "1", "2" and "3". If you scan "Cancel One Bit Data of Previous Reading", the last read data code "3" will be cancelled. If you scan "Cancel the Data String of Previous Reading", the read data code "1", "2" and "3" will be cancelled. If you scan "Cancel the Current Setting", the read data code will be cancelled together with the programming code.

Save

Cancel One Bit Data of Previous Reading

Cancel the Data String of Previous Reading

Cancel the Current Setting

7 Get Device Information

Get Product Version Number

Appendix A: Code ID Table

Symbology	Code ID
Code128	j
EAN-8	d
EAN-13	d
UPC-E0	c
UPC-E1	c
UPCA	c
Interleaved 2 of 5	e
Matrix 2 of 5	v
Industrial 2 of 5	D
IATA25	s
Code 39	b
Coda bar	a
Code 93	i
PDF417	r
QR	Q
Data Matrix	u
Code 11	H
MSI Plessey	J
Micro QR	Q
Code32	b
ISBN	d
ISSN	d
MicroPDF417	s
Aztec	z
GS1 128	j
AIM 128	f
ISBT 128	F
GS1 Data Bar	R
GS1 Data Bar Limited	R
GS1 Data Bar Expanded	R
Plessey	p
Maxicode	x
Chinese-sensible Code	h
Dot Code	d
Combined Code	m

Appendix D：Parameters Configuration Example

The methods in the following examples use programming barcodes to set parameters. "Scanning 'xxxxx'" in the text refers to scanning the programming barcodes of this function.

How to Modify the Single Reading Duration

Example: Set up the single reading duration to be 1500ms.
1. Scanning "Enter Setup" (Please ignore this step if the "Enter Setup" is ready);
2. Scanning "Custom Modify the Single Reading Duration";
3. Scanning Data Code "1", "5", "0", "0";
4. Scanning "Save";
5. Scanning "Exit Setup". (Please ignore this step if you need to set up more parameters.)

How to Set Up Idle Duration

Example: Set up the idle duration to be 500ms.
1. Scanning "Enter Setup" (Please ignore this step if the "Enter Setup" is ready);
2. Scanning "Custom Set Up the Idle Duration";
3. Scanning Data Code "5", "0", "0";
4. Scanning "Save";
5. Scanning "Exit Setup". (Please ignore this step if you need to set up more parameters.)

How to Set Up Image Stabilization Duration

Example: Set up the image stabilization duration to be 500ms.
1. Scanning "Enter Setup" (Please ignore this step if the "Enter Setup" is ready);
2. Scanning "Modify the Image Stabilization Duration";
3. Scanning Data Code "5", "0", "0";
4. Scanning "Save";
5. Scanning "Exit Setup". (Please ignore this step if you need to set up more parameters.)

How to Modify the Delay Time of Scanning the Same Barcode

Example: Set up the delay time of scanning the same barcode to be 1000ms.
1.   Scanning "Enter Setup" (Please ignore this step if the "Enter Setup" is ready);
2.   Scanning "Custom Modify the Delay Time of Scanning the Same Barcode";
3.   Scanning Data Code "1", "0", "0", "0";
4.   Scanning "Save";
5.   Scanning "Exit Setup". (Please ignore this step if you need to set up more parameters.)

How to Set Up the Interval Duration of Reading

Example: Set up the interval duration of reading to be 500ms.
1.   Scanning "Enter Setup" (Please ignore this step if the "Enter Setup" is ready);
2.   Scanning "Custom Modify the Interval Duration of Reading";
3.   Scanning Data Code "5", "0", "0";
4.   Scanning "Save";
5.   Scanning "Exit Setup". (Please ignore this step if you need to set up more parameters.)