AS622

Serial Commands Manual

Version 1.5

DATE: 2022/12/05

Table of Content

1. Introduction

1.1 Manual Description

This user's manual describes serial command format and full list of commands that can be configured over serial communication.

1.2 Product Requirements

Model	Firmware Version	Interface
AS622	HM3-r-x.xx.F1	UART
		USB VCP

2. Command Format

User can configure AS622 by sending serial commands from the host. Please make sure the communication protocols of AS622 match those of the host.

AS622's communication protocols are:

Parameter	Default
Baud Rate	9600
Parity	None
Data Bits	8
Stop Bits	1
Hardware Flow Control	None

2.1 Read/Write/Inquire for General Settings

Below is the command format for host to perform read/write/inquire for general settings:

Head	Function	Type	Data	Tail
(1 Byte)	(5 Bytes)	(1 Byte)	(variable)	(1 Byte)

Head = 1 byte of data, **{** (0x7B)

Function = 5 bytes of data, indicating the specific function

Type = 1 byte of data, which can be either of the 4 options below

R (0x52) means Read Current Value

W (0x57) means Write Value

***** (0x2A) means Inquire Default Value

? (0x3F) means Inquire Configurable Value

Data = Variable, specifying the detailed values/settings of each function. **Data** should only be entered when **Type** is Write. **Data** is omitted when **Type** is **Read**/**Inquire**.

Tail = 1 byte of data, **}** (0x7D)

2.2 Response for General Settings

Below is the response format of general settings after the scanner receives command from the host:

Head	Function	Type	Data	Tail
(1 Byte)	(5 Bytes)	(1 Byte)	(variable)	(1 Byte)

Head = 1 byte of data, **{** (0x7B)

Function = 5 bytes of data, indicating the specific function

Type = 1 byte of data, which can be either of the 4 options below

R (0x52) means Read Current Value

W (0x57) means Write Value

***** (0x2A) means Inquire Default Value

? (0x3F) means Inquire Configurable Value

Data = Variable, specifying the detailed values/settings of each function

Tail = 1 byte of data, **}** (0x7D)

2.3 Example of Read/Write/Inquire/Response for General Settings

(1) Read current value of function MR001

Host > Scanner: {MR001R}

Scanner > Host: {MR001R7}

(2) Write 7 to function MR001 (Success)

Host > Scanner: {MR001W7}

Scanner > Host: {MR001WOK}

(3) Write 8 to function MR001 (Failure/Not supported)

Host > Scanner: {MR001W8}

Scanner > Host: {MR001WNG}

(4) Inquire default value of function MR001

Host > Scanner: {MR001*}

Scanner > Host: {MR001*7}

(5) Inquire configurable value of function MR001

Host > Scanner: {MR001?}

Scanner > Host: {MR001?7:9~10}

2.4 Read/Write/Inquire for Symbologies

Below is the command format for host to perform read/write/inquire for symbologies:

Head (1 Byte)	Function (5 Bytes)	Type (1 Byte)	Symbol (2 bytes)	Separator (1 Byte)	Data (variable)	Tail (1 Byte)

Head = 1 byte of data, **{** (0x7B)

Function = 5 bytes of data, indicating the specific function

Type = 1 byte of data, which can be either of the 4 options below

R (0x52) means Read Current Value

W (0x57) means Write Value

***** (0x2A) means Inquire Default Value

? (0x3F) means Inquire Configurable Value

Symbol = 2 bytes of data, indicating the specific symbology

Separator = 1 byte of data, **,** (0x2C)

Data = Variable, specifying the detailed values/settings of each function. **Data** should only be entered when **Type** is Write. **Data** is omitted when **Type** is **Read**/**Inquire**.

Tail = 1 byte of data, **}** (0x7D)

2.5 Response for Symbologies

Below is the response format of symbologies after the scanner receives command from the host:

Head (1 Byte)	Function (5 Bytes)	Type (1 Byte)	Symbol (2 bytes)	Separator (1 Byte)	Data (variable)	Tail (1 Byte)

Head = 1 byte of data, **{** (0x7B)

Function = 5 bytes of data, indicating the specific function

Type = 1 byte of data, which can be either of the 4 options below

R (0x52) means Read Current Value

W (0x57) means Write Value

***** (0x2A) means Inquire Default Value

? (0x3F) means Inquire Configurable Value

Symbol = 2 bytes of data, indicating the specific symbology

Separator = 1 byte of data, **,** (0x2C)

Data = Variable, specifying the detailed values/settings of each function

Tail = 1 byte of data, **}** (0x7D)

2.6 Example of Read/Write/Inquire/Response for Symbologies

(1) Read current value of function MS001, symbol 01

Host > Scanner: {MS001R01}

Scanner > Host: {MR001R01,0}

(2) Write 1 to function MS001, symbol 01 (Success)

Host > Scanner: {MS001W01,1}

Scanner > Host: {MS001W01,OK}

(3) Write 3 to function MS001, symbol 01 (Failure/Not supported)

Host > Scanner: {MS001W01,3}

Scanner > Host: {MS001W01,NG}

(4) Inquire default value of MS001, symbol 01

Host > Scanner: {MS001*01}

Scanner > Host: {MS001*01,1}

(5) Inquire configurable value of MS001, symbol 01

Host > Scanner: {MS001?01}

Scanner > Host: {MS001?01,0~1}

2.7 General Commands

(1) Read All Values

When below command is sent, the scanner will return current values of all available functions:

{M ALLR}

(2) Reset to Default

When below command is sent, the scanner will be reset to default, including communication protocols (9600, 8, N, 1)

{M DEFW}

(3) Check Firmware Version

When below command is sent, the scanner will return firmware version:

{M VERR}

(4) Write Flash (Store Parameter)

When below command is sent, all current values/settings will be permanently saved to the flash memory of the scanner.

{M CMDW}

3. Function List - General Settings

This chapter describes all the available functions and data for general settings.

Head (1 Byte)	**Function (5 Bytes)**	Type (1 Byte)	**Data (variable)**	Tail (1 Byte)

Reading Mode

Function	Data (variable)
MR001	5: Continuous Mode 7: Imager Auto-sensing Mode* 9: Serial Trigger Mode 10: Infrared Auto-sensing Mode

Note:

When in Serial Trigger Mode, the scanner can only be triggered by sending "G" or [0x47] by default.

Example

To configure reading mode to serial trigger mode, send:

{MR001W9}

LED Auto-Off Timeout

Function	Data (variable)
MR002	A number 0~255. (0 = Continuous, 1 = 0.1 sec, 2 = 0.2 sec, 3 = 0.3 sec, 4 = 0.4 sec, 5 = 0.5 sec, 6 = 1 sec, 7 = 1.5 sec, 8 = 2.0 sec, 9 = 2.5 sec, 10 = 3 sec, ... 254 = 125 sec, 255 = unlimited) Default is 0 (Continuous)

Note:

LED Auto-Off Timeout is applicable for Continuous Mode/Serial Trigger Mode

Example:

To set LED Auto-Off Timeout as 1.5 sec, send:

{MR002W7}

No Read Status & No Read Message

Function	Data 1 (1 byte)
MR004	0: Disable* 1: Enable
	Data 2 (1 byte)
	, (0x2C) as Separator
	Data 3 (variable)
	A number 0~10, indicating the length of No Read Message. Default is 7.
	Data 4 (1 byte)
	, (0x2C) as Separator
	Data 5 (variable)
	No Read Message. Default is No Read. Please enter ASCII or Hex value (format: #00~#FF)

Note:

No Read Status & No Read Message is applicable for Serial Trigger Mode. (LED Auto-Off Timeout must be > 1 to take effect)

Example:

To enable No Read Status and set NG as No Read Message, send:

{MR004W1,2,NG}

or

{MR004W1,2,#4E#47}

Scan Interval

Function	Data (variable)
MR005	A number 0~255.

	(0 = Continuous, 1 = 0.1 sec, 2 = 0.2 sec, 3 = 0.3 sec, 4 = 0.4 sec, 5 = 0.5 sec, 6 = 1 sec, 7 = 1.5 sec, 8 = 2.0 sec, 9 = 2.5 sec, 10 = 3 sec, ... 254 = 125 sec, 255 = unlimited) Default is 6 (1 sec)

Note:

Scan Interval is applicable for Continuous Mode.

Example:

To set Scan Interval as 1.5 sec, send:

{MR005W7}

Trigger Control

Function	Data (1 byte)
MR006	0: Disable 1: Enable*

Note:

Trigger Control is applicable for Continuous Mode/Serial Trigger Mode/Infrared Auto-sensing Mode.

Example:

To disable Trigger Control, send:

{MR006W0}

Identical Read Interval

Function	Data (variable)
MR007	A number 0~255. (0 = Disable, 1 = 0.1 sec, 2 = 0.2 sec, 3 = 0.3 sec, 4 = 0.4 sec, 5 = 0.5 sec, 6 = 1.0 sec, 7 = 1.5 sec, 8 = 2.0 sec, 9 = 2.5 sec, 10 = 3 sec,.....254 = 124.5 sec, 255 = 125 sec) Default is 6 (1 sec)

Note:

Identical Read Interval is applicable for Continuous Mode.

Example:

To set Identical Read Interval as 3 sec, send:

{MR007W10}

Infrared Sensor Status

Function	Data (1 byte)
MR011	0: Disable* 1: Enable

Note:

Infrared Sensor Status is applicable for Serial Trigger Mode.

Example:

To enable Infrared Sensor Status, send:

{MR011W1}

Infrared Auto-sensing Range

Function	Data (1 byte)
MR012	1: Near 2: Middle* 3: Far

Example:

To configure Infrared Auto-sensing Range to Far, send:

{MR012W3}

Start Scanning Character

Function	Data 1 (variable)

MR013	A number 1~10, indicating the length of Start Scanning Character. Default is 1.
	Data 2 (1 byte)
	, (0x2C) as Separator
	Data 3 (variable)
	Start Scanning Character. Default is G (0x47) Please enter ASCII or Hex value (format: #00~#FF)

Note:

Start Scanning Character is applicable for Serial Trigger Mode.

Example:

To set “ABCD” as Start Scanning Character, send:

{MR013W4,ABCD}

or

{MR013W4,#41#42#43#44}

Stop Scanning Character

Function	Data 1 (variable)
MR014	A number 1~10, indicating the length of Stop Scanning Character. Default is 1.
	Data 2 (1 byte)
	, (0x2C) as Separator
	Data 3 (variable)
	Stop Scanning Character. Default is S (0x53) Please enter ASCII or Hex value (format: #00~#FF)

Note:

Stop Scanning Character is applicable for Serial Trigger Mode.

Example:

To set “ABCD” as Stop Scanning Character, send:

{MR014W4,ABCD}

or

{MR014W4,#41#42#43#44}

Custom Trigger Mode

Function	Data (1 byte)
MR017	0: Disable* 1: Enable

Note:

Custom Trigger Mode is applicable for Serial Trigger Mode.

When enabled, the scanner will be able to receive additional Start Scanning Character before LED Auto-Off Timeout expires. In such case, the scanner will return No Read Message immediately and reset LED Auto-Off Timeout.

Example:

To enable Centering Mode, send:

{MR017W1}

Comparing String

Function	Data 1 (variable)
MR018	A number 0~10, indicating the length of Comparing String. Default is 0.
	Data 2 (1 byte)
	, (0x2C) as Separator
	Data 3 (variable)
	Comparing String. Default is N/A Please enter ASCII or Hex value (format: #00~#FF)

Note:

Comparing String is applicable for Serial Trigger Mode.

The scanner will return Response String to the host whenever an incoming string matches Comparing String. Response String must also be defined for Comparing String to take effect.

Example:

To set “HELLO” as Comparing String, send:

{MR018W5,HELLO}

or

{MR018W5,#48#45#4C#4C#4F}

Response String

Function	Data 1 (variable)
MR019	A number 0~10, indicating the length of Response String. Default is 0.
	Data 2 (1 byte)
	, (0x2C) as Separator
	Data 3 (variable)
	Response String. Default is N/A Please enter ASCII or Hex value (format: #00~#FF)

Note:

Response String is applicable for Serial Trigger Mode.

The scanner will return Response String to the host whenever an incoming string matches Comparing String. Comparing String must also be defined for Response String to take effect.

Example:

To set “HOLA” as Response String, send:

{MR019W4,HOLA}

or

{MR019W4,#48#4F#4C#41}

Centering Mode

Function	Data (1 byte)
MR020	0: Disable* 1: Enable

Note:

When enabled, the scanner only reads barcode that is within the aimer dot area.

Example:

To enable Centering Mode, send:

{MR020W1}

Interface

Function	Data (1 byte)
MG001	4: USB VCP 5: USB HID*

Example:

To configure Interface to USB HID, send:

{MG001W5}

Baud Rate, Parity, Data Bits, Stop Bits

Function	Data 1 (variable)
MG002	3: 1200 bps 4: 2400 bps 5: 4800 bps 6: 9600 bps* 7: 19200 bps 8: 38400 bps 9: 57600 bps 10: 76800 bps 11: 115200 bps
	Data 2 (1 byte)
	, (0x2C) as Separator
	Data 3 (1 byte)
	1: Even

	2: Odd 3: Space 4: Mark 5: None*
	Data 4 (1 byte)
	, (0x2C) as Separator
	Data 5 (1 byte)
	1: 7 Data Bits 2: 8 Data Bits*
	Data 6 (1 byte)
	, (0x2C) as Separator
	Data 7 (1 byte)
	1: 1 Stop Bit* 2: 2 Stop Bits

Example:

To set Baud Rate, Parity, Data Bits, Stop Bits as 115200,N,8,1 , send:

{MG002W11,5,2,1}

Handshaking

Function	Data (1 byte)
MG003	0: None* 1: RTS enabled at Power-Up 2: RTS enabled in Communication

Example:

To enable RTS at Power-Up, send:

{MG003W1}

Keyboard Layout, Caps Lock, Numeric Key, Function Key Conversion, HT/CR/ESC to TAB/Enter/Escape Conversion

Function	Data 1 (variable)
MG005	1: English (US)* 2: Alt Code 3: German (QWERTZ) 4: French (AZERTY) 5: Spanish 6: Italian 7: Swiss German (QWERTZ) 8: Czech (QWERTY) 9: English (UK) 10: Japanese (106 Keys) 11: Hungarian (QWERTZ) 12: Czech (QWERTZ) 13: Swiss French (QWERTZ) 14: Hungarian (QWERTY) 15: Canadian French (QWERTY) 16: Swedish 17: Danish 18: Dutch 19: Norwegian 20: Belgian French (AZERTY) 21: Portuguese 22: Slovak 23: Brazilian Portuguese 24: Canadian French (Traditional)
	Data 2 (1 byte)
	, (0x2C) as Separator
	Data 3 (1 byte)
	0: Caps Lock Off* 1: Caps Lock On 2: Caps Lock Free

	Data 4 (1 byte)
	, (0x2C) as Separator
	Data 5 (1 byte)
	0: Disable Numeric Keypad Output* 1: Enable Numeric Keypad Output
	Data 6 (1 byte)
	, (0x2C) as Separator
	Data 7 (1 byte)
	0: Disable Function Key Conversion 1: Enable Function Key Conversion*
	Data 8 (1 byte)
	, (0x2C) as Separator
	Data 9 (1 byte)
	0: Disable HT/CR/ESC to TAB/Enter/Escape conversion* 1: Enable HT/CR/ESC to TAB/Enter/Escape conversion

Example:

To set Keyboard Layout as German, Caps Lock Free, enable Numeric Keypad output, enable Function Key Conversion and enable HT/CR/ESC to TAB/Enter/Escape Conversion, send:

{MG005W3,2,1,1,1}

Code ID

Function	Data (1 byte)
MG012	0: Disable Code ID* 1: Factory ID On 3: Set ID On

Example:

To configure Code ID to Factory ID, send:

{MG012W1}

Send Data Length

Function	Data (1 byte)
MG013	0: Off* 1: On

Note:

When Send Data Length is enabled, a suffix will be added to indicate the length of barcode data.

Example:

To enable Send Data Length, send:

{MG013W1}

Data Length Digits

Function	Data (1 byte)
MG014	0: 4 digits 1: 2 digits or 4 digits*

Example:

To set Data Length Digits as 4, send:

{MG014W0}

Preamble

Function	Data 1 (variable)
MG015	A number 0~16, indicating the length of Preamble. Default is 0.
	Data 2 (1 byte)
	, (0x2C) as Separator
	Data 3 (variable)

	Preamble. Default is N/A. Please enter ASCII or Hex value (format: #00~#FF)

Example:

To set “ABCD” as Preamble, send:

{MG015W4,ABCD}

or

{MG015W4,#41#42#43#44}

Postamble

Function	Data 1 (variable)
MG016	A number 0~16, indicating the length of Postamble. Default is 0.
	Data 2 (1 byte)
	, (0x2C) as Separator
	Data 3 (variable)
	Postamble. Default is N/A. Please enter ASCII or Hex value (format: #00~#FF)

Example:

To set “ABCD” as Postamble, send:

{MG016W4,ABCD}

or

{MG016W4,#41#42#43#44}

Terminator

Function	Data 1 (variable)
MG017	A number 0~2, indicating the length of Terminator. Default is 2.
	Data 2 (1 byte)
	, (0x2C) as Separator
	Data 3 (variable)

	Terminator. Default is CR+LF for RS232/USB VCP, CR for USB HID.. Please enter ASCII or Hex value (format: #00~#FF)

Example:

To set [HT] as Terminator, send:

{MG017W1,#09}

Interblock Delay, Intercharacter Delay

Function	Data 1 (variable)
MG018	0 ~ 255: Interblock Delay (unit = 10ms)
	Data 2 (1 byte)
	, (0x2C) as Separator
	Data 3 (variable)
	0 ~ 255: Intercharacter Delay (unit = 1ms)

Note:

Interblock Delay and Intercharacter Delay are only applicable when Interface is USB HID.

Example:

To set Interblock Delay as 10ms and Intercharacter Delay as 5ms, send:

{MG018W1,5}

BCC (Binary Check Character)

Function	Data (1 byte)
MG019	0: Disable* 1: Enable

Example:

To enable BCC, send:

{MG019W1}

ACK / NAK

Function	Data (1 byte)
MG020	0: Off* 1: On

Example:

To enable ACK/NAK, send:

{MG020W1}

ACK / NAK Timeout

Function	Data (variable)
MG021	A number 1~255 (unit = ms). Default is 1.

Example:

To set ACK/NAK Timeout as 10ms, send:

{MG021W10}

UTF-8 to Unicode

Function	Data (1 byte)
MG022	0: Disable* 1: Enable

Example:

To enable UTF-8 to Unicode, send:

{MG022W1}

Command Response

Function	Data (1 byte)
ASK	0: Not send

	1: Send*

Note:
When enabled, the scanner will return message after receiving Write command from the host.

Example:
To disable Command Response, send:
{M ASKW0}

Good Read Beep

Function	Data (1 byte)
MT001	0: Beep Off 1: Beep Medium* 2: Beep High 3: Beep Low

Example:
To configure Good Read Beep to Beep High, send:
{MT001W0}

Good Read LED

Function	Data (1 byte)
MT004	0: Disable 1: Enable*

Example:
To disable Good Read LED, send:
{MT004W0}

Inverse Barcode

Function	Data (1 byte)

MT010	0: Disable* 1: Enable

Example:

To enable Inverse Barcode, send:

{MT010W1}

Setup Code (Barcode Configurability)

Function	Data (1 byte)
MT015	0: Off 1: On*

Example:

To disable Setup Code, send:

{MT015W0}

4. Function List - Symbologies

This chapter describes all the available functions, symbols, and data for Symbologies.

Head (1 Byte)	**Function (5 Bytes)**	Type (1 Byte)	**Symbol (2 Bytes)**	Separator (1 Byte)	**Data (variable)**	Tail (1 Byte)

Code 39

Status

Function	Symbol	Data (1 byte)
MS001	01	0: Disable 1: Enable*

Example:

To disable Code 39, send:

{MS001W01,0}

Min Length, Max Length

Function	Symbol	Data 1 (variable)
MS002	01	A number 1~50 for Min Length. Default is 1.
		Data 2 (1 byte)
		, (0x2C) as Separator
		Data 3 (variable)
		A number 1~50 for Max Length. Default is 50.

Example:

To set Code 39 Min Length as 1 and Max Length as 10, send:

{MS002W01,1,10}

Set Code ID

Function	Symbol	Data (variable)
MS003	01	0~2 alphanumeric characters as Set ID. Please enter ASCII or Hex value (format:

		#00~#FF)

Example:

To set Code 39 Set ID as “AB”, send:

{MS003W01,AB}

or

{MS003W01,#41#42}

Check Digit Verification

Function	Symbol	Data (1 byte)
MS004	01	0: Disable CDV* 1: CDV & Not Send CD 2: CDV & Send CD

Example:

To set Code 39 CDV & Send CD, send:

{MS004W01,2}

Start & Stop

Function	Symbol	Data (1 byte)
MS006	01	0: Start/Stop Not Send* 1: Start/Stop Send

Example:

To set Code 39 Start/Stop Send, send:

{MS006W01,1}

Full ASCII Code 39

Status

Function	Symbol	Data (1 byte)
MS001	02	0: Disable 1: Enable*

Example:

To disable Full ASCII Code 39, send:

{MS001W02,0}

Set Code ID

Function	Symbol	Data (variable)
MS003	02	0~2 alphanumeric characters as Set ID. Please enter ASCII or Hex value (format: #00~#FF)

Example:

To set Full ASCII Code 39 Set ID as “AB”, send:

{MS003W02,AB}

or

{MS003W02,#41#42}

Code 32

Status

Function	Symbol	Data (1 byte)
MS001	03	0: Disable 1: Enable*

Example:

To disable Code 32, send:

{MS001W03,0}

Set Code ID

Function	Symbol	Data (variable)
MS003	03	0~2 alphanumeric characters as Set ID. Please enter ASCII or Hex value (format: #00~#FF)

Example:

To set Code 32 Set ID as “AB”, send:

{MS003W03,AB}

or

{MS003W03,#41#42}

Leading & Tailing

Function	Symbol	Data (1 byte)
MS006	03	0: Not Send All 1: Send Leading Only 2: Send Tailing Only 3: Send All*

Example:

To set Code 32 Send Leading Only, send:

{MS006W03,1}

Codabar

Status

Function	Symbol	Data (1 byte)
MS001	05	0: Disable 1: Enable*

Example:

To disable Codabar, send:

{MS001W05,0}

Min Length, Max Length

Function	Symbol	Data 1 (variable)
MS002	05	A number 1~50 for Min Length. Default is 4.
		Data 2 (1 byte)
		, (0x2C) as Separator
		Data 3 (variable)
		A number 1~50 for Max Length. Default is 50.

Example:

To set Codabar Min Length as 1 and Max Length as 10, send:

{MS002W05,1,10}

Set Code ID

Function	Symbol	Data (variable)
MS003	05	0~2 alphanumeric characters as Set ID. Please enter ASCII or Hex value (format: #00~#FF)

Example:

To set Codabar Set ID as “AB”, send:

{MS003W05,AB}

or

{MS003W05,#41#42}

Start & Stop

Function	Symbol	Data (1 byte)
MS006	05	0: Start/Stop Not Send* 1: Start/Stop Send

Example:

To set Codabar Start/Stop Send, send:

{MS006W05,1}

Interleaved 2 of 5

Status

Function	Symbol	Data (1 byte)
MS001	09	0: Disable 1: Enable*

Example:

To disable Interleaved 2 of 5, send:

{MS001W09,0}

Min Length, Max Length

Function	Symbol	Data 1 (variable)
MS002	09	A number 1~50 for Min Length. Default is 5.

		Data 2 (1 byte)
		, (0x2C) as Separator
		Data 3 (variable)
		A number 1~50 for Max Length. Default is 50.

Example:

To set Interleaved 2 of 5 Min Length as 1 and Max Length as 10, send:

{MS002W09,1,10}

Set Code ID

Function	Symbol	Data (variable)
MS003	09	0~2 alphanumeric characters as Set ID. Please enter ASCII or Hex value (format: #00~#FF)

Example:

To set Interleaved 2 of 5 Set ID as “AB”, send:

{MS003W09,AB}

or

{MS003W09,#41#42}

Check Digit Verification

Function	Symbol	Data (1 byte)
MS004	09	0: Disable CDV* 1: CDV & Not Send CD 2: CDV & Send CD

Example:

To set Interleaved 2 of 5 CDV & Send CD, send:

{MS004W09,2}

Matrix 2 of 5

Status

Function	Symbol	Data (1 byte)
MS001	13	0: Disable 1: Enable*

Example:

To disable Matrix 2 of 5, send:

{MS001W13,0}

Min Length, Max Length

Function	Symbol	Data 1 (variable)
MS002	13	A number 1~50 for Min Length. Default is 4.
		Data 2 (1 byte)
		, (0x2C) as Separator
		Data 3 (variable)
		A number 1~50 for Max Length. Default is 24.

Example:

To set Matrix 2 of 5 Min Length as 1 and Max Length as 10, send:

{MS002W13,1,10}

Set Code ID

Function	Symbol	Data (variable)
MS003	13	0~2 alphanumeric characters as Set ID. Please enter ASCII or Hex value (format: #00~#FF)

Example:

To set Matrix 2 of 5 Set ID as “AB”, send:

{MS003W13,AB}

or

{MS003W13,#41#42}

Industrial 2 of 5

Status

Function	Symbol	Data (1 byte)
MS001	14	0: Disable 1: Enable*

Example:

To disable Industrial 2 of 5, send:

{MS001W14,0}

Min Length, Max Length

Function	Symbol	Data 1 (variable)
MS002	14	A number 1~50 for Min Length. Default is 4.
		Data 2 (1 byte)
		, (0x2C) as Separator
		Data 3 (variable)
		A number 1~50 for Max Length. Default is 24.

Example:

To set Industrial 2 of 5 Min Length as 1 and Max Length as 10, send:

{MS002W14,1,10}

Set Code ID

Function	Symbol	Data (variable)
MS003	14	0~2 alphanumeric characters as Set ID. Please enter ASCII or Hex value (format: #00~#FF)

Example:

To set Industrial 2 of 5 Set ID as “AB”, send:

{MS003W14,AB}

or

{MS003W14,#41#42}

Code 11

Status

Function	Symbol	Data (1 byte)
MS001	15	0: Disable 1: Enable*

Example:

To disable Code 11, send:

{MS001W15,0}

Min Length, Max Length

Function	Symbol	Data 1 (variable)
MS002	15	A number 1~50 for Min Length. Default is 4.
		Data 2 (1 byte)
		, (0x2C) as Separator
		Data 3 (variable)
		A number 1~50 for Max Length. Default is 50.

Example:

To set Code 11 Min Length as 1 and Max Length as 10, send:

{MS002W15,1,10}

Set Code ID

Function	Symbol	Data (variable)
MS003	15	0~2 alphanumeric characters as Set ID. Please enter ASCII or Hex value (format: #00~#FF)

Example:

To set Code 11 Set ID as “AB”, send:

{MS003W15,AB}

or

{MS003W15,#41#42}

Check Digit Verification

Function	Symbol	Data (1 byte)
MS004	15	0: Disable CDV* 1: CDV & Not Send CD 2: CDV & Send CD

Example:

To set Code 11 CDV & Send CD, send:

{MS004W15,2}

Check Digit

Function	Symbol	Data (1 byte)
MS005	15	0: 1 Digit* 1: 2 Digits

Example:

To set Code 11 Check Digit as 2 Digits, send:

{MS005W15,1}

MSI Plessey

Status

Function	Symbol	Data (1 byte)
MS001	18	0: Disable* 1: Enable

Example:

To enable MSI Plessey, send:

{MS001W18,1}

Min Length, Max Length

Function	Symbol	Data 1 (variable)
MS002	18	A number 1~50 for Min Length. Default is 4.
		Data 2 (1 byte)

		, (0x2C) as Separator
		Data 3 (variable)
		A number 1~50 for Max Length. Default is 50.

Example:

To set MSI Plessey Min Length as 1 and Max Length as 10, send:

{MS002W18,1,10}

Set Code ID

Function	Symbol	Data (variable)
MS003	18	0~2 alphanumeric characters as Set ID. Please enter ASCII or Hex value (format: #00~#FF)

Example:

To set MSI Plessey Set ID as “AB”, send:

{MS003W18,AB}

or

{MS003W18,#41#42}

Check Digit Verification

Function	Symbol	Data (1 byte)
MS004	18	1: CDV & Not Send CD 2: CDV & Send CD*

Example:

To set MSI Plessey CDV & Not Send CD, send:

{MS004W18,1}

Check Digit

Function	Symbol	Data (1 byte)
MS005	18	1: Single Mod 10* 2: Double Mod 10 3: Mod 11 Plus Mod 10

Example:

To set MSI Plessey Check Digit as Double Mod 10, send:

{MS005W18,2}

EAN-13

Status

Function	Symbol	Data (1 byte)
MS001	21	0: Disable 1: Enable*

Example:

To disable EAN-13, send:

{MS001W21,0}

Set Code ID

Function	Symbol	Data (variable)
MS003	21	0~2 alphanumeric characters as Set ID. Please enter ASCII or Hex value (format: #00~#FF)

Example:

To set EAN-13 Set ID as “AB”, send:

{MS003W21,AB}

or

{MS003W21,#41#42}

Check Digit Verification

Function	Symbol	Data (1 byte)
MS004	21	1: CDV & Not Send CD 2: CDV & Send CD*

Example:

To set EAN-13 CDV & Not Send CD, send:

{MS004W21,1}

ISBN

Function	Symbol	Data (1 byte)
MS001	25	0: Disable* 1: Enable

Example:

To enable ISBN, send:

{MS001W25,1}

ISSN

Function	Symbol	Data (1 byte)
MS001	26	0: Disable* 1: Enable

Example:

To enable ISSN, send:

{MS001W26,1}

UPC-A

Status

Function	Symbol	Data (1 byte)
MS001	22	0: Disable 1: Enable*

Example:

To disable UPC-A, send:

{MS001W22,0}

Set Code ID

Function	Symbol	Data (variable)
MS003	22	0~2 alphanumeric characters as Set ID. Please enter ASCII or Hex value (format: #00~#FF)

Example:

To set UPC-A Set ID as “AB”, send:

{MS003W22,AB}

or

{MS003W22,#41#42}

Check Digit Verification

Function	Symbol	Data (1 byte)
MS004	22	1: CDV & Not Send CD 2: CDV & Send CD*

Example:

To set UPC-A CDV & Not Send CD, send:

{MS004W22,1}

UPC-A Expand to EAN-13

Function	Symbol	Data (1 byte)
MS007	22	0: Disable* 1: Enable

Example:

To enable UPC-A Expand to EAN-13, send:

{MS007W22,1}

EAN-8

Status

Function	Symbol	Data (1 byte)
MS001	23	0: Disable 1: Enable*

Example:

To disable EAN-8, send:

{MS001W23,0}

Set Code ID

Function	Symbol	Data (variable)
MS003	23	0~2 alphanumeric characters as Set ID. Please enter ASCII or Hex value (format: #00~#FF)

Example:

To set EAN-8 Set ID as “AB”, send:

{MS003W23,AB}

or

{MS003W23,#41#42}

Check Digit Verification

Function	Symbol	Data (1 byte)
MS004	23	1: CDV & Not Send CD 2: CDV & Send CD*

Example:

To set EAN-8 CDV & Not Send CD, send:

{MS004W23,1}

UPC-E0

Status

Function	Symbol	Data (1 byte)
MS001	24	0: Disable 1: Enable*

Example:

To disable UPC-E0, send:

{MS001W24,0}

Set Code ID

Function	Symbol	Data (variable)
MS003	24	0~2 alphanumeric characters as Set ID. Please enter ASCII or Hex value (format: #00~#FF)

Example:

To set UPC-E0 Set ID as “AB”, send:

{MS003W24,AB}

or

{MS003W24,#41#42}

Check Digit Verification

Function	Symbol	Data (1 byte)
MS004	24	1: CDV & Not Send CD 2: CDV & Send CD*

Example:

To set UPC-E0 CDV & Not Send CD, send:

{MS004W24,1}

UPC-E Expand to UPC-A

Function	Symbol	Data (1 byte)
MS007	24	0: Disable* 1: Enable

Example:

To enable UPC-E0 Expand to UPC-A, send:

{MS007W24,1}

Code 93

Status

Function	Symbol	Data (1 byte)
MS001	28	0: Disable 1: Enable*

Example:

To disable Code 93, send:

{MS001W28,0}

Min Length, Max Length

Function	Symbol	Data 1 (variable)
MS002	28	A number 1~50 for Min Length. Default is 4.
		Data 2 (1 byte)
		, (0x2C) as Separator

		Data 3 (variable)
		A number 1~50 for Max Length. Default is 50.

Example:

To set Code 93 Min Length as 1 and Max Length as 10, send:

{MS002W28,1,10}

Set Code ID

Function	Symbol	Data (variable)
MS003	28	0~2 alphanumeric characters as Set ID. Please enter ASCII or Hex value (format: #00~#FF)

Example:

To set Code 93 Set ID as “AB”, send:

{MS003W28,AB}

or

{MS003W28,#41#42}

Code 128

Status

Function	Symbol	Data (1 byte)
MS001	29	0: Disable 1: Enable*

Example:

To disable Code 128, send:

{MS001W29,0}

Min Length, Max Length

Function	Symbol	Data 1 (variable)
MS002	29	A number 1~50 for Min Length. Default is 4.
		Data 2 (1 byte)
		, (0x2C) as Separator

		Data 3 (variable)
		A number 1~50 for Max Length. Default is 50.

Example:

To set Code 128 Min Length as 1 and Max Length as 10, send:

{MS002W29,1,10}

Set Code ID

Function	Symbol	Data (variable)
MS003	29	0~2 alphanumeric characters as Set ID. Please enter ASCII or Hex value (format: #00~#FF)

Example:

To set Code 128 Set ID as “AB”, send:

{MS003W29,AB}

or

{MS003W29,#41#42}

GS1-128 (UCC/EAN 128)

Function	Symbol	Data (1 byte)
MS001	30	0: Disable 1: Enable*

Example:

To disable GS1-128, send:

{MS001W30,0}

GS1 DataBar

Status

Function	Symbol	Data (1 byte)
MS001	32	0: Disable 1: Enable*

Example:

To disable GS1 DataBar, send:

{MS001W32,0}

Set Code ID

Function	Symbol	Data (variable)
MS003	32	0~2 alphanumeric characters as Set ID. Please enter ASCII or Hex value (format: #00~#FF)

Example:

To set GS1 DataBar Set ID as “AB”, send:

{MS003W32,AB}

or

{MS003W32,#41#42}

GS1 DataBar Limited

Status

Function	Symbol	Data (1 byte)
MS001	33	0: Disable 1: Enable*

Example:

To disable GS1 DataBar Limited, send:

{MS001W33,0}

GS1 DataBar Expanded

Status

Function	Symbol	Data (1 byte)
MS001	34	0: Disable 1: Enable*

Example:

To disable GS1 DataBar Expanded, send:

{MS001W34,0}

QR Code

Status

Function	Symbol	Data (1 byte)
MS001	70	0: Disable 1: Enable*

Example:

To disable QR Code, send:

{MS001W70,0}

Set Code ID

Function	Symbol	Data (variable)
MS003	70	0~2 alphanumeric characters as Set ID. Please enter ASCII or Hex value (format: #00~#FF)

Example:

To set QR Code Set ID as “AB”, send:

{MS003W70,AB}

or

{MS003W70,#41#42}

Micro QR Code

Status

Function	Symbol	Data (1 byte)
MS001	71	0: Disable 1: Enable*

Example:

To disable Micro QR Code, send:

{MS001W71,0}

PDF417

Status

Function	Symbol	Data (1 byte)
MS001	72	0: Disable 1: Enable*

Example:

To disable PDF417, send:

{MS001W72,0}

Set Code ID

Function	Symbol	Data (variable)
MS003	72	0~2 alphanumeric characters as Set ID. Please enter ASCII or Hex value (format: #00~#FF)

Example:

To set PDF417 Set ID as “AB”, send:

{MS003W72,AB}

or

{MS003W72,#41#42}

MicroPDF417

Status

Function	Symbol	Data (1 byte)
MS001	73	0: Disable 1: Enable*

Example:

To disable MicroPDF417, send:

{MS001W73,0}

Set Code ID

Function	Symbol	Data (variable)
MS003	73	0~2 alphanumeric characters as Set ID. Please enter ASCII or Hex value (format: #00~#FF)

Example:

To set MicroPDF417 Set ID as “AB”, send:

{MS003W73,AB}

or

{MS003W73,#41#42}

Data Matrix

Status

Function	Symbol	Data (1 byte)
MS001	74	0: Disable 1: Enable*

Example:

To disable Data Matrix, send:

{MS001W74,0}

Set Code ID

Function	Symbol	Data (variable)
MS003	74	0~2 alphanumeric characters as Set ID. Please enter ASCII or Hex value (format: #00~#FF)

Example:

To set Data Matrix Set ID as “AB”, send:

{MS003W74,AB}

or

{MS003W74,#41#42}

MaxiCode

Status

Function	Symbol	Data (1 byte)
MS001	75	0: Disable 1: Enable*

Example:

To enable MaxiCode, send:

{MS001W75,1}

Set Code ID

Function	Symbol	Data (variable)
MS003	75	0~2 alphanumeric characters as Set ID. Please enter ASCII or Hex value (format: #00~#FF)

Example:

To set MaxiCode Set ID as “AB”, send:

{MS003W75,AB}

or

{MS003W75,#41#42}

Aztec

Status

Function	Symbol	Data (1 byte)
MS001	79	0: Disable 1: Enable*

Example:

To disable Aztec, send:

{MS001W79,0}

Set Code ID

Function	Symbol	Data (variable)
MS003	79	0~2 alphanumeric characters as Set ID. Please enter ASCII or Hex value (format: #00~#FF)

Example:

To set Aztec Set ID as “AB”, send:

{MS003W79,AB}

or

{MS003W79,#41#42}

Appendix

Appendix A - Factory ID

Symbology	Factory ID
Code 128 / EAN 128 / GS1-128	K
EAN-8	S
EAN-13	F
UPC-E0	E
UPC-A	A
Interleaved 2 of 5	I
Matrix 2 of 5	Y
Industrial 2 of 5	V
Code 39	M
Codabar	N
Code 93	L
Code 11	J
MSI Plessey	O
GS1 DataBar	G
PDF417	Z
MicroPDF417	R
QR Code / Micro QR Code	W
Data Matrix	X
Aztec	z
MaxiCode	u

Version History

Rev	Date	Description	Issued
1.0	2022.06.15	Initial Release	Shaw
1.1	2022.07.05	Added MaxiCode	Shaw
1.2	2022.09.07	Revised Terminator & MSI Plessey	Shaw
1.3	2022.09.12	Added LED Auto-Off Timeout, No Read Message, Scan Interval, Trigger Control, Identical Read Interval, Infrared Sensor Status, Custom Trigger Mode, Comparing String, Response String FW: HM3-r-2.00.F1	Shaw
1.4	2022.11.25	Updated Interblock Delay, Intercharacter Delay	Shaw
1.5	2022.12.05	Updated Max Length	Shaw

Arkscan, LLC
420 W.42nd Street, Suite 11C
New York, NY 10036, USA
E-mail: info@arkscan.com
Web: www.arkscan.com