

DFS131 Serial Commands Manual v1.0

Table of Content

Chapter 1: Product Profile

1.1 Product Requirements	1-1
1.2 Default Communication Protocols.....	1-1
1.3 Packet Format	1-2

Chapter 2: General Commands

Read All Parameters.....	2-1
Reset Scanner to Default.....	2-1
Check Firmware Version.....	2-1
Store Parameter	2-1
Reading Mode	2-2
LED Auto-Off Control, Trigger Control.....	2-2
No Read Message Control	2-2
Scan Interval, Identical Read Interval	2-2
Auto-Sensing Range, Infrared Sensor Status	2-2
Mobile Phone Mode, Custom Trigger Mode.....	2-2
Code ID, Send Data Length.....	2-5
Interblock Delay, Intercharacter Delay	2-5
Accuracy Adjustment	2-5
Preamble, Postamble, Terminator	2-5
Interface, Baud Rate, Data Bits, Parity, Stop Bits	2-7
Handshaking, ACK/ NAK, BCC character	2-7
Keyboard Layout, Caps Lock, Numeric Key, Function Key	2-7
Command Response	2-11
Sleep Mode	2-11
Good Read Indicator, Beep Mode.....	2-11
Inverse Barcode, Mirrored 2D Barcode.....	2-11
Setup Code	2-11

Chapter 3: Symbologies Commands

Code 39.....	3-1
Full ASCII Code 39.....	3-1
Code 32.....	3-1
Codabar	3-2

Codabar ABC / CX / Coupling	3-2
Interleaved 2/5	3-3
Standard 2/5 (IATA).....	3-3
Matrix 2/5.....	3-4
Industrial 2/5	3-4
Code 11	3-5
NEC 2/5.....	3-5
MSI	3-6
UK Plessey	3-6
Telepen	3-6
EAN-13	3-6
UPC-A	3-7
EAN-8.....	3-8
UPC-E	3-8
Code 93.....	3-9
Code 128, ISBT 128	3-9
EAN/UCC/GS1 128.....	3-9
GS1 Databar.....	3-10
GS1 Databar - Limited	3-10
GS1 Databar - Expanded.....	3-10
GS1 Composite, GS1 Emulation.....	3-11
UPC-A/EAN-13 with Extended Coupon Code	3-11
Coupon GS1 Databar Output.....	3-11
China Post, Korea Post.....	3-12
Other Postal Codes.....	3-12
Codablock A, Codablock F.....	3-14
QR Code, Micro QR Code	3-15
PDF417, MicroPDF417	3-16
Data Matrix	3-16
MaxiCode	3-17
Aztec	3-17
Han Xin (Chinese Sensible) Code.....	3-18

Chapter 4: Appendix

4.1 ASCII Table	4-1
4.2 Symbologies Code ID Identifier.....	4-2

Chapter 1

Product Profile

This document describes the serial commands in ASCII equivalents for host parameter programming through UART/RS232/VCP interface. All commands can be sent via COM port using serial communication software.

1.1 Product Requirements

The following products, when programmed with the specified firmware, support serial commands operation via given interface:

Model	Firmware Version	Interface
DFS131	SM3-h-x.xx.F1	RS232, USB VCP

1.2 Default Communication Protocols

Baud rate = 9600

Data Bits = 8

Parity = None

Stop Bit = 1

Handshaking = None

Flow Control Timeout = None

ACK/NAK = OFF

BCC = OFF

1.3 Packet Format

► From Host to Scan Engine

The following table shows the general packet format of serial commands from host to scanner.

Initial Code	Order Code	State Code	Parameter	End Code
1 byte	5 bytes	1 byte	(variable)	1 byte

Initial Code: 1 byte, one fixed data: { (DEC 123, or HEX 0x7B)

Order Code: 5 bytes, operation code to specify the property of command

State Code: 1 byte, **R**(Read Current Value), **W**(Write Value),

*****(Inquire Default Value) or **?**(Inquire Configurable Value)

When State Code is **R**, ***** or **?** parameter is not needed.

When State Code is **W**, parameter should be specified.

Parameter: Variable, specifies the detailed values of each command.

End Code: 1 byte, one fixed data: } (DEC 125, or HEX 0x7D)

► From Scan Engine to Host

The following table shows the general packet format of response from scanner to host.

Initial Code	Order Code	State Code	Parameter	End Code
1 byte	5 bytes	1 byte	(variable)	1 byte

Initial Code: 1 byte, one fixed data: { (DEC 123, or HEX 0x7B)

Order Code: 5 bytes, operation code to identify the property of each response

State Code: 1 byte, **R**(Read Current Value), **W**(Write Value).

*****(Inquire Default Value) or **?**(Inquire Configurable Value)

Parameter: Variable, specifies the detailed values of each command.

End Code: 1 byte, one fixed data: } (DEC 125, or hex 0x7D)

Example 1:

Host >> Scanner {MG002R}
Scanner >> Host {MG002R6,5,2,1}

Example 2:

Host >> Scanner {MG002W6,5,2,1}
Scanner >> Host {MG002WOK}

Example 3:

Host >> Scanner {MG002*}
Scanner >> Host {MG002*6,5,2,1}

Example 4:

Host >> Scanner {MG002?6,5,2,1}
Scanner >> Host {MG002?3~11,1~5,1~2,1~2}

Chapter 2

General Commands

➤ Read All Parameters

When below command is sent, the scan engine will return "{M ALLR###}", followed by all of the current settings of the scan engine:

{M ALLR}

➤ Reset Scanner to Default

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

{M DEFW}

➤ Check Firmware Version

When below command is sent to the scan engine, the scan engine will return a string of data that represents current firmware version.

{M VERR}

➤ Store Parameter

When below command is sent to the scan engine, all current settings will be permanently stored on the scan engine; power-off the scan engine will not erase the stored parameters.

{M CMDW}

Chapter 2: General Commands

- Reading Mode
- LED Auto-Off Control, Trigger Control
- No Read Message Control
- Scan Interval, Identical Read Interval
- Auto-Sensing Range, Infrared Sensor Status
- Mobile Phone Mode, Custom Trigger Mode

Property	Command	Option	Remark
Reading Mode	Write Value: {MR001W 2 }	2 Trigger Mode 5 Continuous Mode 7 Imager Auto-Sensing Mode 9 Serial Trigger Mode 10 Infrared Auto-Sensing Mode	Default: Infrared Auto-Sensing Mode
	Read Current Value: {MR001 R } Inquire Default Value: {MR001*} Inquire Configurable Value: {MR001 ? }		
Start Scanning Character	Write Value: {MR013W 1,G }	Can be 1~10 digits of alphanumeric characters (#00~#FF).	Default: G (1 character) When in Serial Trigger Mode (cf. Reading Mode), by default the scanner starts scanning after receiving {G}. Please note that curly brackets are needed when sending Start Scanning Character. To set Start Scanning Character, please enter Character length before the comma, and Character data (in Hex or ASCII) after the comma. For example: {MR013W 4,#47#47#57#50 } {MR013W 4,GGWP }
	Read Current Value: {MR013 R } Inquire Default Value: {MR013*} Inquire Configurable Value: {MR013 ? }		
Stop Scanning Character	Write Value: {MR014W 1,S }	Can be 1~10 digits of alphanumeric characters (#00~#FF).	Default: S (1 character) When in Serial Trigger Mode (cf. Reading Mode), by default the scanner stops scanning after receiving {S}. Please note that curly brackets are needed when sending Stop Scanning Character. To set Stop Scanning Character, please enter Character length before the comma, and Character data (in Hex or ASCII) after the comma. For example: {MR014W 3,#53#4F#53 } {MR014W 3,SOS }
	Read Current Value: {MR014 R } Inquire Default Value: {MR014*}		

Chapter 2: General Commands

	Inquire Configurable Value: {MR014?}		
LED Auto-Off Timeout	Write Value: {MR002W 60 }	A number from 0~255.	Default: 0 sec The period of inactivity before LED automatically turns off when scanner is in following reading mode: 1. Flash Mode/ Continuous Auto Off Mode 2. Trigger Mode/ Toggle Mode, with LED Auto-Off Control On
	Read Current Value: {MR002R} Inquire Default Value: {MR002*} Inquire Configurable Value: {MR002?}		
LED Auto-Off Control	Write Value: {MR003W 0 }	0 Disable 1 Enable	Default: Disable When enabled, LED illumination will automatically turn off after LED Auto-Off Timeout elapses. Applicable for Trigger/ Toggle mode.
	Read Current Value: {MR003R} Inquire Default Value: {MR003*} Inquire Configurable Value: {MR003?}		
No Read Status	Write Value: {MR004W 0,7 ,No Read}	0 Not send 1 Send	Default: Not send When enabled, a 'No Read' message will be sent after LED Auto-Off Timeout elapses. Applicable for Trigger/ Toggle/ Flash/ Continuous Auto Off Mode.
	Read Current Value: {MR004R} Inquire Default Value: {MR004*} Inquire Configurable Value: {MR004?}		
No Read Message	Write Value: {MR004W 0,7 ,No Read}	Can be 1~10 digits of alphanumeric characters (#00~#FF).	Default: No Read (7 characters) The message being sent after LED Auto-Off Timeout elapse. Applicable for Trigger/ Toggle/ Flash/ Continuous Auto Off Mode.
	Read Current Value: {MR004R} Inquire Default Value: {MR004*} Inquire Configurable Value: {MR004?}		
Scan Interval	Write Value: {MR005W 6 }	0 0 sec 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	Default: 1 sec The interval between two consecutive scans. Applicable for Continuous Mode.

Chapter 2: General Commands

		.... 254 124.5 sec 255 125.0 sec	
		Read Current Value: {MR005R} Inquire Default Value: {MR005*} Inquire Configurable Value: {MR005?}	
Trigger Control	Write Value: {MR006W0}	0 Off 1 On	Default : Off When enabled, the scanner can be controlled by hardware trigger signal. For Flash/Continuous/Test Mode.
		Read Current Value: {MR006R} Inquire Default Value: {MR006*} Inquire Configurable Value: {MR006?}	
Identical Read Interval	Write Value: {MR007W6}	All models: 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 3.0 sec 11 3.5 sec 12 4.0 sec 13 4.5 sec 14 5.0 sec DFS131: 15 5.5 sec 16 6.0 sec 17 6.5 sec 254 124.5 sec 255 125.0 sec	Default: 1.0 sec Timeout between identical consecutive decoding. For Flash/Continuous/Continuous Auto Off mode.
		Read Current Value: {MR007R} Inquire Default Value: {MR007*} Inquire Configurable Value: {MR007?}	
Imager Sensitivity	Write Value: {MR009W5}	A number from 1~20. 1~20 The smaller the value, the more sensitive.	Default: 5 A numeric range that increases or decreases the scanner's reaction time to the barcode presentation. 1 is the most sensitive settings, and 20 is the least sensitive. Applicable for Imager Auto-Sensing Mode.
		Read Current Value: {MR009R} Inquire Default Value: {MR009*} Inquire Configurable Value: {MR009?}	
Infrared Sensor	Write Value: {MR011W0}	0 Off 1 On	Default: Off

Chapter 2: General Commands

Status			When enabled, this function can help scanner detect barcode/object in low ambient light condition when in Imager Auto-Sensing Mode. Applicable for Imager Auto-Sensing Mode.
	Read Current Value: {MR011R} Inquire Default Value: {MR011*} Inquire Configurable Value: {MR011?}		
Auto Sensing Range	Write Value: {MR012W2}	1 Near 2 Middle 3 Far	Default : Middle Infrared auto-sensing range adjustment. Applicable for Imager Auto-Sensing Mode/ Infrared Auto-Sensing Mode
	Read Current Value: {MR012R} Inquire Default Value: {MR012*} Inquire Configurable Value: {MR012?}		
Mobile Phone Mode	Write Value: {MR016W0}	0 Off 1 On	Default : Off When enabled, the LEDs will be blinking to improve readability of on-screen barcodes.
	Read Current Value: {MR016R} Inquire Default Value: {MR016*} Inquire Configurable Value: {MR016?}		
Custom Trigger Mode	Write Value: {MR017W0}	0 Off 1 On	Default : Off 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 with LED Auto-Off Timeout recounted. Applicable for Serial Trigger Mode.
	Read Current Value: {MR017R} Inquire Default Value: {MR017*} Inquire Configurable Value: {MR017?}		

- Code ID, Send Data Length
- Interblock Delay, Intercharacter Delay
- Accuracy Adjustment
- Preamble, Postamble, Terminator

Property	Command	Option	Remark
Code ID	Write Value: {MG012W0}	0 Disable Code ID 1 Factory ID On 2 AIM ID On 3 Set ID On	Default : Disable Code ID Send Code ID before every output data.

Chapter 2: General Commands

	Read Current Value: {MG012R} Inquire Default Value: {MG012*} Inquire Configurable Value: {MG012?}		
Send Data Length	Write Value: {MG013W0}	0 Off 1 On	Default: Off Send data length before every output data.
	Read Current Value: {MG013R} Inquire Default Value: {MG013*} Inquire Configurable Value: {MG013?}		
Data Length Mode	Write Value: {MG014W0}	0 4 digits 1 2 digits or 4 digits	Default: 2 digits or 4 digits Number of digits in data length before every output data. Not applicable for 1D scanners, whose data length is always 2 digits.
	Read Current Value: {MG014R} Inquire Default Value: {MG014*} Inquire Configurable Value: {MG014?}		
Interblock Delay	Write Value: {MG018W0,0}	0 0ms 1 10ms 2 20ms 253 2530ms 254 2540ms 255 2550ms	Default: 0 ms Time interval between two consecutive barcode reads.
	Read Current Value: {MG018R} Inquire Default Value: {MG018*} Inquire Configurable Value: {MG018?}		
Intercharacter Delay	Write Value: {MG018W0,0}	0 0ms 1 1ms 2 2ms 253 253ms 254 254ms 255 255ms	Default: 0 ms When enabled, LED Time interval between characters in an output data.
	Read Current Value: {MG018R} Inquire Default Value: {MG018*} Inquire Configurable Value: {MG018?}		
Preamble	Write Value: {MG015W0,}	Can be a string up to 16 digits composed of alphanumeric characters or control codes (#00~#FF).	Default: Null (0 character) Preamble is a prefix of up to 16 alphanumeric characters/control codes added to the beginning of an output data. To set Preamble, please enter Preamble length before the comma, and Preamble data (in Hex or ASCII) after the comma. For example: {MG015W3,#41#42#43} {MG015W3,ABC}

Chapter 2: General Commands

	Read Current Value: {MG015R} Inquire Default Value: {MG015*} Inquire Configurable Value: {MG015?}		
Postamble	Write Value: {MG016W0,}	Can be a string up to 16 digits composed of alphanumeric characters or control codes (#00~#FF).	Default: Null (0 character) Postamble is a suffix of up to 16 alphanumeric characters/function keys added to the end of an output data. To set Postamble, please enter Postamble length before the comma, and Postamble data (in Hex or ASCII) after the comma. For example: {MG016W3,#58#59#5A} {MG016W3,XYZ}
	Read Current Value: {MG016R} Inquire Default Value: {MG016*} Inquire Configurable Value: {MG016?}		
Terminator	Write Value: {MG017W2,#0D#0A}	Can be a string up to 2 digits composed of alphanumeric characters or control codes (#00~#FF).	Default: CR+LF Ending character(s) of an output data (before Postamble) To set Terminator, please enter Terminator length before the comma, and Terminator data (in Hex or ASCII) after the comma.
	Read Current Value: {MG017R} Inquire Default Value: {MG017*} Inquire Configurable Value: {MG017?}		

- **Interface, Baud Rate, Data Bits, Parity, Stop Bits**
- **Handshaking, ACK/ NAK, BCC character**
- **Keyboard Layout, Caps Lock, Numeric Key, Function Key Conversion**

Property	Command	Option	Remark
Interface	Write Value: {MG001W1}	1 UART / RS232 4 USB VCP 5 USB HID	Default: Varies by product Send Code ID before every output data.
	Read Current Value: {MG001R} Inquire Default Value: {MG001*} Inquire Configurable Value: {MG001?}		
Baud Rate	Write Value: {MG002W6,5,2,1}	1 300 bps 2 600 bps 3 1200 bps 4 2400 bps 5 4800 bps 6 9600 bps 7 19200 bps 8 38400 bps 9 57600 bps	Default: 9600 bps The number of times a signal in transmission changes state or varies.

Chapter 2: General Commands

		10 76800 bps 11 115200 bps	
	Read Current Value: {MG002R} Inquire Default Value: {MG002*} Inquire Configurable Value: {MG002?}		
Parity	Write Value: {MG002W6,5,2,1}	1 Even 2 Odd 3 Space 4 Mark 5 None	Default: None Data Parity is a bit that is added at the end of the data bits to ensure the total number of “1” in a set of bits is even or odd.
	Read Current Value: {MG002R} Inquire Default Value: {MG002*} Inquire Configurable Value: {MG002?}		
Data Bits	Write Value: {MG002W6,5,2,1}	1 7 bits 2 8 bits	Default: 8 bits The number of data bits of a frame in transmission.
	Read Current Value: {MG002R} Inquire Default Value: {MG002*} Inquire Configurable Value: {MG002?}		
Stop Bits	Write Value: {MG002W6,5,2,1}	1 1 bit 2 2 bits	Default: 1 bit The number of stop bit added to the end of data bits in transmission.
	Read Current Value: {MG002R} Inquire Default Value: {MG002*} Inquire Configurable Value: {MG002?}		
Handshaking	Write Value: {MG003W0}	0 None 1 RTS enabled at Power-Up 2 RTS enabled in Communication	Default: None Handshaking (RTS) status.
	Read Current Value: {MG003R} Inquire Default Value: {MG003*} Inquire Configurable Value: {MG003?}		
BCC Character	Write Value: {MG019W0}	0 Disable 1 Enable	Default: Disable Block check character (BCC) is a character added to a transmission block to facilitate error detection.
	Read Current Value: {MG019R} Inquire Default Value: {MG019*} Inquire Configurable Value: {MG019?}		
ACK / NAK	Write Value: {MG020W0}	0 Off 1 On	Default: Off Once enabled, the scanner will emit 3 warning beeps (via external buzzer) if the host, after receiving engine’s barcode data, does not reply “ACK (0x06)” or “NAK (0x15)” after a configurable timeout (1 sec/3 sec/10 sec or unlimited). Scan engine will re-send barcode data if host replies “NAK (0x15)”.
	Read Current Value: {MG020R} Inquire Default Value: {MG020*} Inquire Configurable Value: {MG020?}		

Chapter 2: General Commands

ACK / NAK Timeout	Write Value: {MG020W 0 }	A number from 1~255 (sec)	Default: 1 sec The configurable timeout during which the scanner should wait before emitting 3 warning beeps when ACK / NAK is enabled.
	Read Current Value: {MG021 R } Inquire Default Value: {MG021*} Inquire Configurable Value: {MG021 ? }		
Comparing String	Write Value: {MR018W 0 ,	Can be 1~10 digits of alphanumeric characters (#00~#FF).	Default: Null (0 character) The scanner will return Response String to host whenever an incoming string matches Comparing String. Applicable when Response String is also defined. To set Comparing String, please enter String length before the comma, and String data (in Hex or ASCII) after the comma. For example: {MR018W 5 ,#48#45#4C#4C#4F} {MR018W 5 ,HELLO}
	Read Current Value: {MR018 R } Inquire Default Value: {MR018*} Inquire Configurable Value: {MR018 ? }		
Response String	Write Value: {MR019W 0 ,	Can be 1~10 digits of alphanumeric characters(#00~#FF).	Default: Null (0 character) The scanner will return Response String to host whenever an incoming string matches Comparing String. Applicable when Comparing String is also defined. To set Response String, please enter String length before the comma, and String data (in Hex or ASCII) after the comma. For example: {MR019W 4 ,#48#4F#4C#41} {MR019W 4 ,HOLA}
	Read Current Value: {MR019 R } Inquire Default Value: {MR019*} Inquire Configurable Value: {MR019 ? }		
Keyboard Layout	Write Value: {MG005W 1 ,0,1,1,0}	<ul style="list-style-type: none"> 1 US 2 Alt Code 3 German (QWERTZ) 4 French (AZERTY) 5 Spanish 6 Italian 7 Swiss German (QWERTZ) 8 Czech (QWERTY) 9 UK 10 Japanese (106 Keys) 11 Hungarian (QWERTZ) 12 Czech (QWERTZ) 13 Swiss French (QWERTZ) 	Default: US Keyboard layout setting must match that of host; otherwise the data output will be incorrect. Only applicable for USB HID interface.

Chapter 2: General Commands

		<p>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)</p>	
		<p>Read Current Value: {MG005R} Inquire Default Value: {MG005*} Inquire Configurable Value: {MG005?}</p>	
Caps Lock	<p>Write Value: {MG005W1,0,1,1,0}</p>	<p>0 Caps Lock Off 1 Caps Lock On 2 Caps Lock Free</p>	<p>Default: Caps Lock Off When barcode scanner is set to Caplock Free mode, no matter keyboard Capslock LED indicator on PC/Laptop is ON or OFF, output will always be the same as what is encoded in the barcode. Only applicable for USB HID interface.</p>
		<p>Read Current Value: {MG005R} Inquire Default Value: {MG005*} Inquire Configurable Value: {MG005?}</p>	
Numeric Key	<p>Write Value: {MG005W1,0,1,1,0}</p>	<p>0 Numeric Key 1 Alphanumeric Key</p>	<p>Default: Alphanumeric Key When set to Numeric Key, scanner will utilize numeric keypad for any numeric data output (Num Lock on your PC/Laptop must be active at this moment) Only applicable for USB HID interface.</p>
		<p>Read Current Value: {MG005R} Inquire Default Value: {MG005*} Inquire Configurable Value: {MG005?}</p>	
Function Key Conversion	<p>Write Value: {MG005W1,0,1,1,0}</p>	<p>0 Disable 1 Enable</p>	<p>Default: Enable When enabled, the following conversion of Code39 barcode to its corresponding function key will occur: \$TA = F1 \$TB = F2 \$TC = F3 \$TD = F4 \$TE = F5 \$TF = F6 \$TG = F7 \$TH = F8 \$TI = F9 \$TJ = F10</p>

Chapter 2: General Commands

			\$TK = F11 \$TL = F12 Only applicable for USB HID interface
	Read Current Value: {MG005R} Inquire Default Value: {MG005*} Inquire Configurable Value: {MG005?}		
HT/CR/ESC converts to TAB/Enter/Escape	Write Value: {MG005W1,0,1,1,0}	0 Disable 1 Enable	Default: Disable When enabled, the following conversion of Code39 barcode to its corresponding key will occur: \$I = TAB \$M = Enter %A = Escape Only applicable for USB HID interface.
	Read Current Value: {MG005R} Inquire Default Value: {MG005*} Inquire Configurable Value: {MG005?}		

- **Command Response**
- **Sleep Mode**
- **Good Read Indicator, Beep Mode**
- **Inverse Barcode, Mirrored 2D Barcode**
- **Setup Code**

Property	Command	Option	Remark
Command Response	Write Value: {M ASKW1}	0 Not send 1 Send	Default: Send Status of acknowledgment (receipt of response) as part of the communication protocol.
	Read Current Value: {M ASKR} Inquire Default Value: {M ASK*} Inquire Configurable Value: {M ASK?}		
Good Read LED	Write Value: {MT004W1}	0 Disable 1 Enable	Default: Enable Once enabled, the scanner's external indicator LED will turn on for every successful decode.
	Read Current Value: {MT004R} Inquire Default Value: {MT004*} Inquire Configurable Value: {MT004?}		
Good Read Beep	Write Value: {MT001W1}	0 Beep Off 1 Beep Medium - 2.7 KHz 2 Beep High - 4.0 KHz 3 Beep Low - 2.0 KHz	Default: Beep Medium - 2.7 KHz Scanner's external buzzer frequency.
	Read Current Value: {MT001R} Inquire Default Value: {MT001*} Inquire Configurable Value: {MT001?}		
Beep Mode	Write Value: {MT002W0}	0 Standard 1 Warning Beep Only 2 Mute	Default: Standard 1. Standard = Enables good read beep/warning

Chapter 2: General Commands

			beep/power-up beep/setup beep 2. Warning Beep Only = Enables warning beep only Mute = Completely silent in any condition
	Read Current Value: {MT002R} Inquire Default Value: {MT002*} Inquire Configurable Value: {MT002?}		
Good Read Beep Duration	Write Value: {MT003W15}	A number from 4 to 20 with an increment of 10ms.	Default: 150mS The duration of good read beep.
	Read Current Value: {MT003R} Inquire Default Value: {MT003*} Inquire Configurable Value: {MT003?}		
Inverse Barcode	Write Value: {MT010W0}	0 Normal (Positive) 1 Normal & Inverse (Positive & Negative)	Default: None Handshaking (RTS) status.
	Read Current Value: {MT010R} Inquire Default Value: {MT010*} Inquire Configurable Value: {MT010?}		
Mirrored 2D Barcode	Write Value: {MT011W0}	0 Disable 1 Enable	Default: Disable Enable mirrored 2D barcode decodability.
	Read Current Value: {MT011R} Inquire Default Value: {MT011*} Inquire Configurable Value: {MT011?}		
Setup Code	Write Value: {MT015W1}	0 Off 1 On	Default: On Once disabled, scanner will not be configurable by programming barcodes.
	Read Current Value: {MT015R} Inquire Default Value: {MT015*} Inquire Configurable Value: {MT015?}		

Chapter 3

Symbologies Commands

- Code 39
- Full ASCII Code 39
- Code 32

Property	Command	Option	Remark
Code 39 Status	Write Value: {MS001W01,1}	0 Disable 1 Enable	Default: Enable Code 39 barcode symbology status.
Min Length (Code 39)	Write Value: {MS002W01,1,48}	A number from 1~99	Default: 1 The minimum length of barcode to be decoded.
Max Length (Code 39)	Write Value: {MS002W01,1,48}	A number from 1~99	Default: 48 The maximum length of barcode to be decoded.
Set Code ID (Code 39)	Write Value: {MS003W01,#00#00}	Can be 0~2 digits of alphanumeric characters (#00~#FF).	Default: bm The Code ID shown at the beginning of an output data when Set ID (cf. Code ID) is enabled.
Check Digit Verification (Code 39)	Write Value: {MS004W01,0}	0 Disable CDV 1 CDV & Not Send CD 2 CDV & Send CD	Default: Disable CDV Code 39 Check Digit Verification status.
Start & Stop (Code 39)	Write Value: {MS006W01,0}	0 Start/Stop Not Send 1 Start/Stop Send	Default: Start/Stop Not Send Status of Start and Stop characters in a decoded Code 39 output data.
Code 39	Read Current Value: {MSA01R} Inquire Default Value: {MSA01*} Inquire Configurable Value: {MSA01?}		
Full ASCII Code 39 Status	Write Value: {MS001W02,1}	0 Disable 1 Enable	Default: Enable Full ASCII Code 39 barcode symbology status.
Set Code ID (Full ASCII Code 39)	Write Value: {MS003W02,#00#00}	Can be 0~2 digits of alphanumeric characters (#00~#FF).	Default : bD The ID shown at the beginning of an output data when Set ID (cf. Code ID) is enabled.
Full ASCII Code 39	Read Current Value: {MSA02R} Inquire Default Value: {MSA02*} Inquire Configurable Value: {MSA02?}		
Code32 Status	Write Value: {MS001W03,0}	0 Disable 1 Enable	Default: Disable Code 32 barcode symbology status.
Set Code ID (Code 32)	Write Value: {MS003W03,#00#00}	Can be 0~2 digits of alphanumeric characters (#00~#FF).	Default: <B The ID shown at the beginning of an output data when Set ID (cf. Code ID) is enabled.
Code32 Leading &	Write Value:	0 Not Send All	Default: Send All

Chapter 3: Symbologies Commands

Tailing	{MS006W03, 3 }	1 Send Leading Only 2 Send Tailing Only 3 Send All	Status of Lead/Last Digit of an output data.
Code 32	Read Current Value: {MSA03 R } Inquire Default Value: {MSA03*} Inquire Configurable Value: {MSA03?}		

- **Codabar**
- **Codabar ABC / CX / Coupling**

Property	Command	Option	Remark
Codabar Status	Write Value: {MS001W05, 1 }	0 Disable 1 Enable	Default: Enable Codabar barcode symbology status.
Min Length (Codabar)	Write Value: {MS002W05, 6,48 }	A number from 1~99.	Default: 4 The minimum length of barcode to be decoded.
Max Length (Codabar)	Write Value: {MS002W05, 6,48 }	A number from 1~99	Default: 60 The maximum length of barcode to be decoded.
Set Code ID (Codabar)	Write Value: {MS003W05, #00#00 }	Can be 0~2 digits of alphanumeric characters (#00~#FF).	Default: aN The Code ID shown at the beginning of an output data when Set ID (cf. Code ID) is enabled.
Check Digit (Codabar)	Write Value: {MS004W05, 0 }	0 Disable CDV 1 CDV & Not Send CD 2 CDV & Send CD	Default : Disable CDV Codabar Check Digit Verification status.
Symbol Concatenation	Write Value: {MS005W05, 1 }	0 Off 1 On 2 Require	Default: Off When enabled, the scanner looks for a Codabar having a “D” start character, adjacent to a Codabar having a “D” stop character. In this case, the two barcodes are concatenated into one with the “D” characters omitted.
Start & Stop (Codabar)	Write Value: {MS006W05, 1 }	0 Not send 1 Send	Default: Not Send Status of Start and Stop characters in a decoded Codabar output data.
Codabar	Read Current Value: {MSA05 R } Inquire Default Value: {MSA05*} Inquire Configurable Value: {MSA05?}		

➤ Interleaved 2/5

Property	Command	Option	Remark
Interleaved 2/5 Status	Write Value: {MS001W09, 1 }	0 Disable 1 Enable	Default: Enable Interleaved 2/5 barcode symbology status.
Min Length (Interleaved 2/5)	Write Value: {MS002W09, 6,48 }	A number from 1~99.	Default: 4 The minimum length of barcode to be decoded.
Max Length (Interleaved 2/5)	Write Value: {MS002W09, 6,48 }	A number from 1~99	Default: 80 The maximum length of barcode to be decoded.
Set Code ID (Interleaved 2/5)	Write Value: {MS003W09, #00#00 }	Can be 0~2 digits of alphanumeric characters (#00~#FF).	Default: e1 The ID shown at the beginning of an output data when Set ID (cf. Code ID) is enabled.
Check Digit (Interleaved 2/5)	Write Value: {MS004W09, 0 }	0 Disable CDV 1 CDV & Not Send CD 2 CDV & Send CD	Default: Disable CDV Interleaved 2/5 Check Digit Verification status
First / Last digit suppressed	Write Value: {MS006W09, 0 }	0 No digit suppressed 1 Last digit suppressed 2 First digit suppressed	Default: No digit suppressed Status of First and Last digit of an output data.
Interleaved 2/5	Read Current Value: {MSA09 R } Inquire Default Value: {MSA09*} Inquire Configurable Value: {MSA09 ? }		

➤ Standard 2/5 (IATA)

Property	Command	Option	Remark
Standard 2/5 Status	Write Value: {MS001W12, 0 }	0 Disable 1 Enable	Default: Disable Standard 2/5 barcode symbology status.
Min Length (Standard 2/5)	Write Value: {MS002W12, 6,48 }	A number from 1~99.	Default: 4 The minimum length of barcode to be decoded.
Max Length (Standard 2/5)	Write Value: {MS002W12, 6,48 }	A number from 1~99	Default: 48 The maximum length of barcode to be decoded.
Set Code ID (Standard 2/5)	Write Value: {MS003W12, #00#00 }	Can be 0~2 digits of alphanumeric characters (#00~#FF).	Default: fR The ID shown at the beginning of an output data when Set ID (cf. Code ID) is enabled.
Standard 2/5	Read Current Value: {MSA12 R } Inquire Default Value: {MSA12*} Inquire Configurable Value: {MSA12 ? }		

Chapter 3: Symbologies Commands

➤ Matrix 2/5

Property	Command	Option	Remark
Matrix 2/5 Status	Write Value: {MS001W13, 0 }	0 Disable 1 Enable	Default: Disable Matrix 2/5 barcode symbology status.
Min Length (Matrix 2/5)	Write Value: {MS002W13, 6,48 }	A number from 1~99.	Default: 4 The minimum length of barcode to be decoded.
Max Length (Matrix 2/5)	Write Value: {MS002W13, 6,48 }	A number from 1~99	Default: 80 The maximum length of barcode to be decoded.
Set Code ID (Matrix 2/5)	Write Value: {MS003W13, #00#00 }	Can be 0~2 digits of alphanumeric characters (#00~#FF).	Default: mY The ID shown at the beginning of an output data when Set ID (cf. Code ID) is enabled.
Matrix 2/5	Read Current Value: {MSA13 R } Inquire Default Value: {MSA13*} Inquire Configurable Value: {MSA13 ? }		

➤ Industrial 2/5

Property	Command	Option	Remark
Industrial 2/5 Status	Write Value: {MS001W14, 0 }	0 Disable 1 Enable	Default: Disable Industrial 2/5 barcode symbology status.
Min Length (Industrial 2/5)	Write Value: {MS002W14, 6,48 }	A number from 1~99.	Default: 4 The minimum length of barcode to be decoded.
Max Length (Industrial 2/5)	Write Value: {MS002W14, 6,48 }	A number from 1~99	Default: 48 The maximum length of barcode to be decoded.
Set Code ID (Industrial 2/5)	Write Value: {MS003W14, #00#00 }	Can be 0~2 digits of alphanumeric characters (#00~#FF).	Default: fV The ID shown at the beginning of an output data when Set ID (cf. Code ID) is enabled.
Industrial 2/5	Read Current Value: {MSA14 R } Inquire Default Value: {MSA14*} Inquire Configurable Value: {MSA14 ? }		

Chapter 3: Symbologies Commands

➤ Code 11

Property	Command	Option	Remark
Code 11 2/5 Status	Write Value: {MS001W15, 0 }	0 Disable 1 Enable	Default: Disable Code 11 2/5 barcode symbology status.
Min Length (Code 11 2/5)	Write Value: {MS002W15, 6,48 }	A number from 1~99.	Default: 4 The minimum length of barcode to be decoded.
Max Length (Code 11 2/5)	Write Value: {MS002W15, 6,48 }	A number from 1~99	Default: 80 The maximum length of barcode to be decoded.
Set Code ID (Code 11 2/5)	Write Value: {MS003W15, #00#00 }	Can be 0~2 digits of alphanumeric characters (#00~#FF).	Default : hJ The ID shown at the beginning of an output data when Set ID (cf. Code ID) is enabled.
Code 11 2/5 CDV digits	Write Value: {MS005W15, 1 }	1 1 digit 2 2 digits	Default: 2 digits Check Digit status in a decoded Codabar output data.
Code 11 2/5	Read Current Value: {MSA15 R } Inquire Default Value: {MSA15*} Inquire Configurable Value: {MSA15 ? }		

➤ NEC 2/5

Property	Command	Option	Remark
NEC 2/5 Status	Write Value: {MS001W16, 1 }	0 Disable 1 Enable	Default: Enable NEC 2/5 barcode symbology status.
Min Length (NEC 2/5)	Write Value: {MS003W16, 4,80 }	A number from 1~99.	Default: 4 The minimum length of barcode to be decoded
Max Length (NEC 2/5)	Write Value: {MS003W16, 4,80 }	A number from 1~99	Default: 80 The maximum length of barcode to be decoded.
Set Code ID (NEC 2/5)	Write Value: {MS003W16, #00#00 }	Can be 0~2 digits of alphanumeric characters (#00~#FF).	Default: Yn The ID shown at the beginning of an output data when Set ID (cf. Code ID) is enabled.
Check Digit (NEC 2/5)	Write Value: {MS004W16, 0 }	0 Disable CDV 1 CDV & Not Send CD 2 CDV & Send CD	Default: Disable CDV NEC 2/5 Check Digit Verification status.
NEC 2/5	Read Current Value: {MSA16 R } Inquire Default Value: {MSA16*} Inquire Configurable Value: {MSA16 ? }		

Chapter 3: Symbologies Commands

- MSI
- UK Plessey
- Telepen

Property	Command	Option	Remark
MSI Status	Write Value: {MS001W18, 0 }	0 Disable 1 Enable	Default: Enable MSI Plessey barcode symbology status.
Min Length (MSI)	Write Value: {MS002W18, 6,48 }	A number from 1~99.	Default: 4 The minimum length of barcode to be decoded.
Max Length (MSI)	Write Value: {MS002W18, 6,48 }	A number from 1~99	Default: 48 The maximum length of barcode to be decoded.
Set Code ID (MSI)	Write Value: {MS003W18, #00#00 }	Can be 0~2 digits of alphanumeric characters (#00~#FF).	Default: gO The ID shown at the beginning of an output data when Set ID (cf. Code ID) is enabled.
MSI CDV Mode	Write Value: {MS005W18, 1 }	0 Disable CDV & Send CD 1 Single Mod 10 & Not Send CD 2 Single Mod 10 & Send CD 3 Double Mod 10 & Not Send CD 4 Double Mod 10 & Send CD 5 Check Digits Mod 11 & Not Send CD 6 Check Digits Mod 11 & Send CD	Default: Single Mod 10 & Not Send CD Check Digit format.
MSI	Read Current Value: {MSA18 R } Inquire Default Value: {MSA18*} Inquire Configurable Value: {MSA18 ? }		

- EAN-13

Property	Command	Option	Remark
EAN-13 Status	Write Value: {MS001W21, 1 }	0 Disable 1 Enable	Default: Enable EAN-13 barcode symbology status.
Set Code ID (EAN-13)	Write Value: {MS003W21, #00#00 }	Can be 0~2 digits of alphanumeric characters (#00~#FF).	Default: dF The ID shown at the beginning of an output data when Set ID (cf. Code ID) is enabled.
Check Digit (EAN-13)	Write Value: {MS004W21, 2 }	1 Not send CD 2 Send CD	Default: Send CD Status of Check Digit in an output data.
Addenda Required (EAN-13)	Write Value: {MS008W21, 1 }	0 Off 1 On	Default: Off Only decodes the EAN-13 barcode with an add-on

Chapter 3: Symbologies Commands

			supplement.
Add a Space (EAN-13)	Write Value: {MS010W21,0}	0 Off 1 On	Default: On Space status between EAN-13 and supplement.
Supplement 5 (EAN-13)	Write Value: {MS011W21,0}	0 Off 1 On	Default: Off Status of 5-digit supplement in an output data.
Supplement 2 (EAN-13)	Write Value: {MS012W21,0}	0 Off 1 On	Default: Off Status of 2-digit supplement in an output data.
ISBN (EAN-13)	Write Value: {MS001W25,0}	0 Off 1 On	Default: Off Convert EAN-13 to ISBN format.
EAN-13	Read Current Value: {MSA21R} Inquire Default Value: {MSA21*} Inquire Configurable Value: {MSA21?}		

➤ UPC-A

Property	Command	Option	Remark
UPC-A Status	Write Value: {MS001W22,1}	0 Disable 1 Enable	Default: Enable UPC-A barcode symbology status.
Set Code ID (UPC-A)	Write Value: {MS003W22,#00#00}	Can be 0~2 digits of alphanumeric characters (#00~#FF).	Default: cA The ID shown at the beginning of an output data when Set ID (cf. Code ID) is enabled.
Check Digit (UPC-A)	Write Value: {MS004W22,2}	1 Not send CD 2 Send CD	Default: Send CD Status of Check Digit in an output data.
Lead Digit (UPC-A)	Write Value: {MS006W22,1}	0 Not send 1 Send	Default: Send Status of Lead Digit in an output data.
UPC-A expand to EAN-13	Write Value: {MS007W22,0}	0 Off 1 On	Default: Off Convert UPC-A to EAN-13.
Addenda Required (UPC-A)	Write Value: {MS008W22,1}	0 Off 1 On	Default: Off Only decodes the UPC-A barcode with an add-on supplement.
Add a Space (UPC-A)	Write Value: {MS010W22,0}	0 Off 1 On	Default: On Space status between UPC-A and supplement.
Supplement 5 (UPC-A)	Write Value: {MS011W22,0}	0 Off 1 On	Default: Off Status of 5-digit supplement in an output data.
Supplement 2 (UPC-A)	Write Value: {MS012W22,0}	0 Off 1 On	Default: Off Status of 2-digit supplement in an output data.
UPC-A	Read Current Value: {MSA22R} Inquire Default Value: {MSA22*} Inquire Configurable Value: {MSA22?}		

Chapter 3: Symbologies Commands

➤ EAN-8

Property	Command	Option	Remark
EAN-8 Status	Write Value: {MS001W23,1}	0 Disable 1 Enable	Default: Enable EAN-8 barcode symbology status.
Set Code ID (EAN-8)	Write Value: {MS003W23,#00#00}	Can be 0~2 digits of alphanumeric characters (#00~#FF).	Default: DS The ID shown at the beginning of an output data when Set ID (cf. Code ID) is enabled.
Check Digit (EAN-8)	Write Value: {MS004W23,2}	1 Not send CD 2 Send CD	Default: Send CD Status of Check Digit in an output data.
Addenda Required (EAN-8)	Write Value: {MS008W23,1}	0 Off 1 On	Default: Off Only decodes the EAN-8 barcode with an add-on supplement.
Add a Space (EAN-8)	Write Value: {MS010W23,0}	0 Off 1 On	Default: On Space status between EAN-8 and supplement.
Supplement 5 (EAN-8)	Write Value: {MS011W23,0}	0 Off 1 On	Default: Off Status of 5-digit supplement in an output data.
Supplement 2 (EAN-8)	Write Value: {MS012W23,0}	0 Off 1 On	Default : Off Status of 2-digit supplement in an output data.
EAN-8	Read Current Value: {MSA23R} Inquire Default Value: {MSA23*} Inquire Configurable Value: {MSA23?}		

➤ UPC-E

Property	Command	Option	Remark
UPC-E Status	Write Value: {MS001W24,1}	0 Disable 1 Enable	Default: Enable UPC-E barcode symbology status.
Set Code ID (UPC-E)	Write Value: {MS003W24,#00#00}	Can be 0~2 digits of alphanumeric characters (#00~#FF).	Default: EE The ID shown at the beginning of an output data when Set ID (cf. Code ID) is enabled.
Check Digit (UPC-E)	Write Value: {MS004W24,2}	1 Not send CD 2 Send CD	Default: Send CD Status of Check Digit in an output data.
UPC-E0 / UPC-E1	Write Value: {MS005W24,1}	1 UPC-E1 Off 2 UPC-E1 On	Default: UPC-E1 Off Decoding status of UPC-E barcode that begins with 0 or 1.
Lead Digit (UPC-E)	Write Value: {MS006W24,1}	0 Not send 1 Send	Default: Send Status of Lead Digit in an output data.
UPC-E expand to	Write Value:	0 Off	Default: Off

Chapter 3: Symbologies Commands

UPC-A	{MS007W24,0}	1 On	Convert UPC-E to UPC-A.
Addenda Required (UPC-E)	Write Value: {MS008W24,1}	0 Off 1 On	Default: Off Only decodes the UPC-E barcode with an add-on supplement.
Add a Space (UPC-E)	Write Value: {MS010W24,0}	0 Off 1 On	Default: On Space status between UPC-E and supplement.
Supplement 5 (UPC-E)	Write Value: {MS011W24,0}	0 Off 1 On	Default: Off Status of 5-digit supplement in an output data.
Supplement 2 (UPC-E)	Write Value: {MS012W24,0}	0 Off 1 On	Default: Off Status of 2-digit supplement in an output data.
UPC-E	Read Current Value: {MSA24R} Inquire Default Value: {MSA24*} Inquire Configurable Value: {MSA24?}		

- **Code 93**
- **Code 128, ISBT 128**
- **EAN/UCC/GS1 128**

Property	Command	Option	Remark
Code 93 Status	Write Value: {MS001W28,0}	0 Disable 1 Enable	Default: Enable Code 93 barcode symbology status.
Min Length (Code 93)	Write Value: {MS002W28,6,48}	A number from 1~99.	Default: 1 The minimum length of barcode to be decoded.
Max Length (Code 93)	Write Value: {MS002W28,6,48}	A number from 1~99.	Default: 80 The maximum length of barcode to be decoded.
Set Code ID (Code 93)	Write Value: {MS003W28,#00#00}	Can be 0~2 digits of alphanumeric characters (#00~#FF).	Default: iL The ID shown at the beginning of an output data when Set ID (cf. Code ID) is enabled.
Code 93	Read Current Value: {MSA28R} Inquire Default Value: {MSA28*} Inquire Configurable Value: {MSA28?}		
Code 128 Status	Write Value: {MS001W29,1}	0 Disable 1 Enable	Default: Enable Code 128 barcode symbology status.
Min Length (Code 128)	Write Value: {MS002W29,5,48}	A number from 1~99.	Default: 1 The minimum length of barcode to be decoded.
Max Length (Code 128)	Write Value: {MS002W29,5,48}	A number from 1~99.	Default: 80 The maximum length of barcode to be decoded.
Set Code ID (EAN-128)	Write Value: {MS003W29,#00#00}	Can be 0~2 digits of alphanumeric characters (#00~#FF).	Default: jK The ID shown at the beginning of an output data when Set ID (cf. Code ID) is enabled.

Chapter 3: Symbologies Commands

Code 128	Read Current Value: {MSA29R} Inquire Default Value: {MSA29*} Inquire Configurable Value: {MSA29?}		
EAN-128 Status	Write Value: {MS001W30,1}	0 Disable 1 Enable	Default: Enable EAN 128 barcode symbology status.
Min Length (EAN-128)	Write Value: {MS002W30,5,48}	A number from 1~99.	Default: 1 The minimum length of barcode to be decoded.
Max Length (EAN-128)	Write Value: {MS002W30,5,48}	A number from 1~99.	Default: 80 The maximum length of barcode to be decoded.
Set Code ID (EAN-128)	Write Value: {MS003W30,#00#00}	Can be 0~2 digits of alphanumeric characters (#00~#FF).	Default: IT The ID shown at the beginning of an output data when Set ID (cf. Code ID) is enabled.
EAN-128	Read Current Value: {MSA30R} Inquire Default Value: {MSA30*} Inquire Configurable Value: {MSA30?}		

- **GS1 Databar**
- **GS1 Databar - Limited**
- **GS1 Databar - Expanded**

Property	Command	Option	Remark
GS1 Databar Status	Write Value: {MS001W32,0}	0 Disable 1 Enable	Default: Enable GS1 Databar / Truncated barcode symbology status.
Set Code ID (GS1 Databar)	Write Value: {MS003W32,#00#00}	Can be 0~2 digits of alphanumeric characters (#00~#FF).	Default: yG The ID shown at the beginning of an output data when Set ID (cf. Code ID) is enabled.
GS1 Databar	Read Current Value: {MSA32R} Inquire Default Value: {MSA32*} Inquire Configurable Value: {MSA32?}		
Limited Status	Write Value: {MS001W33,0}	0 Disable 1 Enable	Default: Enable GS1 DataBar-Limited barcode symbology status.
Set Code ID (GS1 Databar Limited)	Write Value: {MS003W33,#00#00}	Can be 0~2 digits of alphanumeric characters (#00~#FF).	Default: I The ID shown at the beginning of an output data when Set ID (cf. Code ID) is enabled.
GS1 Databar Limited	Read Current Value: {MSA33R} Inquire Default Value: {MSA33*} Inquire Configurable Value: {MSA33?}		
Expanded Status	Write Value: {MS001W34,0}	0 Disable 1 Enable	Default: Enable GS1 DataBar-Expanded barcode symbology status.
Min Length (GS1 Databar Expanded)	Write Value: {MS002W34,1,74}	A number from 1~99	Default: 4 The minimum length of barcode to be decoded.
Max Length	Write Value:	A number from 1~99.	Default: 74

Chapter 3: Symbologies Commands

(GS1 Databar Expanded)	{MS002W34,1,74}		The maximum length of barcode to be decoded.
Set Code ID (GS1 Databar Expanded)	Write Value: {MS003W34,#00#00}	Can be 0~2 digits of alphanumeric characters (ASCII code).	Default: }e The ID shown at the beginning of an output data when Set ID (cf. Code ID) is enabled.
GS1 Databar Expanded	Read Current Value: {MSA34R} Inquire Default Value: {MSA34*} Inquire Configurable Value: {MSA34?}		

- **GS1 Composite, GS1 Emulation**
- **UPC-A/EAN-13 with Extended Coupon Code**
- **Coupon GS1 Databar Output**

Property	Command	Option	Remark
GS1 Composite Status	Write Value: {MS001W49,0}	0 Disable 1 Enable	Default: Disable GS1 Composite barcode symbology status.
UPC/EAN Version Composite Status	Write Value: {MS004W49,0}	0 Disable 1 Enable	Default: Disable GS1 Composite with UPC/EAN linear component.
UPC/EAN Version Composite Required	Write Value: {MS008W49,0}	0 Disable 1 Enable	Default: Disable When enabled, the scanner will only decode UPC/EAN with GS1 Composite format.
Min Length (GS1 Composite)	Write Value: {MS002W49,1,2435}	A number from 1~2435.	Default: 1 The minimum length of barcode to be decoded.
Max Length (GS1 Composite)	Write Value: {MS002W49,1,2435}	A number from 1~2435.	Default: 2435 The maximum length of barcode to be decoded.
Set Code ID (GS1 Composite)	Write Value: {MS003W49,#79#20}	Can be 0~2 digits of alphanumeric characters (ASCII code).	Default: y (#79#20) The ID shown at the beginning of an output data when Set ID (cf. Code ID) is enabled.
UPC-A/EAN-13 with Extended Coupon Code Status	Write Value: {MS005W49,0}	0 Disable 1 Enable 2 Necessary	Default: Disable When enabled, the scanner sees the coupon code and extended coupon code in a single scan. When set as necessary, no data is output unless both coupon code and extended coupon codes are read.
Coupon GS1 Databar Output	Write Value: {MS006W49,0}	0 Disable 1 Enable	Default: Disable When enabled, the scanner only outputs GS1 Databar in coupons that have both UPC and GS1 Databar.
GS1 Emulation	Write Value: {MS007W49,0}	0 Disable 1 GS1 128	Default: Disable When GS1 128 emulation is

Chapter 3: Symbologies Commands

		2 GS1 Databar 3 Disable GS1 expansion 4 EAN-8 expand to EAN-13	enabled, all retail barcodes (UPC/EAN) are expanded out to 16 digits, with AIM ID of J̄C1. When GS1 Databar emulation is enabled, all retail barcodes are expanded out to 16 digits, with AIM iD of J̄em. When GS1 expansion is disabled, all retail barcodes expansion is disabled.
GS1 Composite	Read Current Value: {MSA49 R } Inquire Default Value: {MSA49*} Inquire Configurable Value: {MSA49 ? }		

- **China Post, Korea Post**
- **Other Postal Codes**

Property	Command	Option	Remark
China Post Status	Write Value: {MS001W51, 0 }	0 Disable 1 Enable	Default: Disable China Post barcode symbology status.
Min Length (China Post)	Write Value: {MS002W51, 4 ,80}	A number from 2~80.	Default: 4 The minimum length of barcode to be decoded.
Max Length (China Post)	Write Value: {MS002W51,4, 80 }	A number from 2~80.	Default: 80 The maximum length of barcode to be decoded.
Set Code ID (China Post)	Write Value: {MS003W51, #51#48 }	Can be 0~2 digits of alphanumeric characters (ASCII code).	Default: QH The ID shown at the beginning of an output data when Set ID (cf. Code ID) is enabled.
China Post	Read Current Value: {MSA51 R } Inquire Default Value: {MSA51*} Inquire Configurable Value: {MSA51 ? }		
Korea Post Status	Write Value: {MS001W52, 0 }	0 Disable 1 Enable	Default: Disable Korea Post barcode symbology status.
Check Digit (Korea Post)	Write Value: {MS004W52, 1 }	1 CDV & Not send CD 2 CDV & Send CD	Default: CDV & Not send CD Status of Check Digit in an output data.
Min Length (Korea Post)	Write Value: {MS002W52, 4 ,48}	A number from 2~80.	Default: 4 The minimum length of barcode to be decoded.
Max Length (Korea Post)	Write Value: {MS002W52,4, 48 }	A number from 2~80.	Default: 48 The maximum length of barcode to be decoded.
Set Code ID (Korea Post)	Write Value: {MS003W52, #3F#6B }	Can be 0~2 digits of alphanumeric characters (ASCII code).	Default: ?k The ID shown at the beginning of an output data when Set ID (cf. Code ID) is enabled.

Chapter 3: Symbologies Commands

Korea Post	Read Current Value: {MSA52R} Inquire Default Value: {MSA52*} Inquire Configurable Value: {MSA52?}		
Other Postal Codes Status	Write Value: {MS001W50,0}	<ul style="list-style-type: none"> 0 Disable (Default) 1 Australian 2 InfoMail 3 Japanese 4 KIX (Netherlands) 5 Planet 6 Postnet 7 British 9 Postal-4i 10 Intelligent Mail 11 Postnet with B Fields 30 Canadian 8 InfoMail + British 12 Planet + Postnet 13 Planet + Postal-4i 14 Postnet + Postal-4i 15 Planet + Intelligent Mail 16 Postnet + Intelligent Mail 17 Postal-4i + Intelligent Mail 18 Planet + Postnet with B Fields 19 Postal-4i + Postnet with B Fields 20 Intelligent Mail + Postnet with B Fields 21 Planet + Postnet + Postal-4i 22 Planet + Postnet + Intelligent Mail 23 Planet + Postal-4i + Intelligent Mail 24 Postnet + Postal-4i + Intelligent Mail 25 Planet + Postal-4i + Postnet with B Fields 26 Planet + Intelligent Mail + Postnet with B Fields 27 Postal-4i + Intelligent Mail + Postnet with B Fields 28 Planet + Postnet + Postal-4i + Intelligent Mail 29 Planet + Postal-4i + Intelligent Mail + Postnet with B Fields 	
Australian Post Interpretation	Write Value: {MS001W53,0}	<ul style="list-style-type: none"> 0 Bar Output 1 Numeric N Table 2 Alphanumeric C Table 3 Combination C and N Tables 	Default: Bar Output This option controls what interpretation is applied to customer fields in Australian 4-State symbols.
Check Digit (Planet)	Write Value: {MS004W60,1}	<ul style="list-style-type: none"> 1 CDV & Not send CD 2 CDV & Send CD 	Default: CDV & Not send CD Status of Check Digit in an output data.
Check Digit (Postnet)	Write Value: {MS004W62,1}	<ul style="list-style-type: none"> 1 CDV & Not send CD 2 CDV & Send CD 	Default: CDV & Not send CD Status of Check Digit in an output data.
Set Code ID (Australian Post)	Write Value: {MS003W53,#41#61}	Can be 0~2 digits of alphanumeric characters (ASCII code).	Default: Aa The ID shown at the beginning of an output data when Set ID (cf. Code ID) is enabled.
Set Code ID (British Post)	Write Value: {MS003W54,#42#62}	Can be 0~2 digits of alphanumeric characters (ASCII code).	Default: Bb The ID shown at the beginning of an output data when Set ID (cf. Code ID) is enabled.

Chapter 3: Symbologies Commands

Set Code ID (Canadian Post)	Write Value: {MS003W55, #43#63 }	Can be 0~2 digits of alphanumeric characters (ASCII code).	Default: Cc The ID shown at the beginning of an output data when Set ID (cf. Code ID) is enabled.
Set Code ID (Japanese Post)	Write Value: {MS003W56, #4A#6A }	Can be 0~2 digits of alphanumeric characters (ASCII code).	Default: Jj The ID shown at the beginning of an output data when Set ID (cf. Code ID) is enabled.
Set Code ID (KIX (Netherlands) Post)	Write Value: {MS003W57, #4B#78 }	Can be 0~2 digits of alphanumeric characters (ASCII code).	Default: Kx The ID shown at the beginning of an output data when Set ID (cf. Code ID) is enabled.
Set Code ID (InfoMail)	Write Value: {MS003W58, #2C#6D }	Can be 0~2 digits of alphanumeric characters (ASCII code).	Default: ,m The ID shown at the beginning of an output data when Set ID (cf. Code ID) is enabled.
Set Code ID (Intelligent Mail)	Write Value: {MS003W59, #4D#69 }	Can be 0~2 digits of alphanumeric characters (ASCII code).	Default: Mi The ID shown at the beginning of an output data when Set ID (cf. Code ID) is enabled.
Set Code ID (Planet)	Write Value: {MS003W60, #4C#66 }	Can be 0~2 digits of alphanumeric characters (ASCII code).	Default: Lf The ID shown at the beginning of an output data when Set ID (cf. Code ID) is enabled.
Set Code ID (Postal-4i)	Write Value: {MS003W61, #4E#34 }	Can be 0~2 digits of alphanumeric characters (ASCII code).	Default: N4 The ID shown at the beginning of an output data when Set ID (cf. Code ID) is enabled.
Set Code ID (Postnet)	Write Value: {MS003W62, #50#70 }	Can be 0~2 digits of alphanumeric characters (ASCII code).	Default: Pp The ID shown at the beginning of an output data when Set ID (cf. Code ID) is enabled.

➤ Codablock A, Codablock F

Property	Command	Option	Remark
Codablock A Status	Write Value: {MS001W77, 1 }	0 Disable 1 Enable	Default: Disable Codablock A barcode symbology status.
Min Length (Codablock A)	Write Value: {MS002W77, 1 ,600}	A number from 1~600.	Default: 1 The minimum length of barcode to be decoded.
Max Length (Codablock A)	Write Value: {MS002W77,1, 600 }	A number from 1~600.	Default: 600 The maximum length of

Chapter 3: Symbologies Commands

			barcode to be decoded.
Set Code ID (Codablock A)	Write Value: {MS003W77, #56#67}	Can be 0~2 digits of alphanumeric characters (#00~#FF).	Default: Vg The ID shown at the beginning of an output data when Set ID (cf. Code ID) is enabled.
Codablock A	Read Current Value: {MSA77R} Inquire Default Value: {MSA77*} Inquire Configurable Value: {MSA77?}		
Codablock F Status	Write Value: {MS001W78, 1}	0 Disable 1 Enable	Default: Disable Codablock F barcode symbology status
Min Length (Codablock F)	Write Value: {MS002W78, 1, 2045}	A number from 1~4000.	Default: 1 The minimum length of barcode to be decoded.
Max Length (Codablock F)	Write Value: {MS002W78, 1, 2048}	A number from 1~4000.	Default: 2048 The maximum length of barcode to be decoded.
Set Code ID (Codablock F)	Write Value: {MS003W78, #71#43}	Can be 0~2 digits of alphanumeric characters (#00~#FF).	Default: qC The ID shown at the beginning of an output data when Set ID (cf. Code ID) is enabled.
Codablock F	Read Current Value: {MSA78R} Inquire Default Value: {MSA78*} Inquire Configurable Value: {MSA78?}		

➤ QR Code, Micro QR Code

Property	Command	Option	Remark
QR Code Status	Write Value: {MS001W70, 1}	0 Disable 1 Enable	Default: Enable QR & Micro QR Code QR Code barcode symbology status.
Min Length (QR Code)	Write Value: {MS002W70, 1, 4000}	A number from 1~4000.	Default: 1 The minimum length of barcode to be decoded.
Max Length (QR Code)	Write Value: {MS002W70, 1, 4000}	A number from 1~4000.	Default: 4000 The maximum length of barcode to be decoded.
Set Code ID (QR Code)	Write Value: {MS003W70, #00#00}	Can be 0~2 digits of alphanumeric characters (#00~#FF).	Default: sW The ID shown at the beginning of an output data when Set ID (cf. Code ID) is enabled.
QR Code	Read Current Value: {MSA70R} Inquire Default Value: {MSA70*} Inquire Configurable Value: {MSA70?}		

Chapter 3: Symbolologies Commands

➤ PDF417, MicroPDF417

Property	Command	Option	Remark
PDF417 Status	Write Value: {MS001W72,1}	0 Disable 1 Enable	Default: Enable PDF417 barcode symbology status.
Min Length (PDF417)	Write Value: {MS002W72,1,2750}	A number from 1~2750.	Default: 1 The minimum length of barcode to be decoded.
Max Length (PDF417)	Write Value: {MS002W72,1,2750}	A number from 1~2750.	Default: 2750 The maximum length of barcode to be decoded.
Set Code ID (PDF417)	Write Value: {MS003W72,#72#5A}	Can be 0~2 digits of alphanumeric characters (#00~#FF).	Default: rZ The ID shown at the beginning of an output data when Set ID (cf. Code ID) is enabled.
PDF417	Read Current Value: {MSA72R} Inquire Default Value: {MSA72*} Inquire Configurable Value: {MSA72?}		
MicroPDF417 Status	Write Value: {MS001W73,0}	0 Disable 1 Enable	Default: Disable MicroPDF417 barcode symbology status.
Min Length (MicroPDF417)	Write Value: {MS002W73,1,366}	A number from 1~366.	Default: 1 The minimum length of barcode to be decoded.
Max Length (MicroPDF417)	Write Value: {MS002W73,1,366}	A number from 1~366.	Default: 366 The maximum length of barcode to be decoded.
Set Code ID (MicroPDF417)	Write Value: {MS003W73,#52#72}	Can be 0~2 digits of alphanumeric characters (#00~#FF).	Default: Rr The ID shown at the beginning of an output data when Set ID (cf. Code ID) is enabled.
MicroPDF417	Read Current Value: {MSA73R} Inquire Default Value: {MSA73*} Inquire Configurable Value: {MSA73?}		

➤ Data Matrix

Property	Command	Option	Remark
Data Matrix Status	Write Value: {MS001W74,1}	0 Disable 1 Enable	Default: Enable Data Matrix barcode symbology status.
Min Length (Data Matrix)	Write Value: {MS002W74,1,3116}	A number from 1~3116.	Default: 1 The minimum length of barcode to be decoded.
Max Length (Data Matrix)	Write Value: {MS002W74,1,3116}	A number from 1~3116.	Default: 3116 The maximum length of barcode to be decoded.
Set Code ID	Write Value:	Can be 0~2 digits of	Default: wX

Chapter 3: Symbologies Commands

(Data Matrix)	{MS003W74, #77#58}	alphanumeric characters (#00~#FF).	The ID shown at the beginning of an output data when Set ID (cf. Code ID) is enabled.
Data Matrix	Read Current Value: {MSA74R} Inquire Default Value: {MSA74*} Inquire Configurable Value: {MSA74?}		

➤ MaxiCode

Property	Command	Option	Remark
MaxiCode Status	Write Value: {MS001W75, 1}	0 Disable 1 Enable	Default: Enable MaxiCode barcode symbology status.
Min Length (MaxiCode)	Write Value: {MS002W75, 1, 150}	A number from 1~150.	Default: 1 The minimum length of barcode to be decoded.
Max Length (MaxiCode)	Write Value: {MS002W75, 1, 150}	A number from 1~150.	Default: 150 The maximum length of barcode to be decoded.
Set Code ID (MaxiCode)	Write Value: {MS003W75, #78#75}	Can be 0~2 digits of alphanumeric characters (#00~#FF).	Default: xu The ID shown at the beginning of an output data when Set ID (cf. Code ID) is enabled.
MaxiCode	Read Current Value: {MSA75R} Inquire Default Value: {MSA75*} Inquire Configurable Value: {MSA75?}		

➤ Aztec

Property	Command	Option	Remark
Aztec Status	Write Value: {MS001W79, 1}	0 Disable 1 Enable	Default: Enable Aztec barcode symbology status.
Min Length (Aztec)	Write Value: {MS002W79, 1, 3832}	A number from 1~3832.	Default: 1 The minimum length of barcode to be decoded.
Max Length (Aztec)	Write Value: {MS002W79, 1, 3832}	A number from 1~3832.	Default: 3832 The maximum length of barcode to be decoded.
Set Code ID (Aztec)	Write Value: {MS003W79, #7A#7A}	Can be 0~2 digits of alphanumeric characters (#00~#FF).	Default: zz The ID shown at the beginning of an output data when Set ID (cf. Code ID) is enabled.
Aztec	Read Current Value: {MSA79R} Inquire Default Value: {MSA79*}		

Chapter 3: Symbologies Commands

Inquire Configurable Value: {MSA79?}

► Han Xin (Chinese Sensible) Code

Property	Command	Option	Remark
Han Xin Code Status	Write Value: {MS001W76,0}	0 Disable 1 Enable	Default: Disable Han Xin Code barcode symbology status.
Min Length (Han Xin Code)	Write Value: {MS002W76,1,4000}	A number from 1~4000.	Default: 1 The minimum length of barcode to be decoded.
Max Length (Han Xin Code)	Write Value: {MS002W76,1,4000}	A number from 1~4000.	Default: 4000 The maximum length of barcode to be decoded.
Set Code ID (Han Xin Code)	Write Value: {MS003W76,#48#51}	Can be 0~2 digits of alphanumeric characters (#00~#FF).	Default: HQ The ID shown at the beginning of an output data when Set ID (cf. Code ID) is enabled.
Han Xin Code	Read Current Value: {MSA76R} Inquire Default Value: {MSA76*} Inquire Configurable Value: {MSA76?}		

Chapter 4

Appendix

4.1 ASCII Table

is displayed in hexadecimal format

Dec	Hex	ASCII	Dec	Hex	ASCII	Dec	Hex	ASCII	Dec	Hex	ASCII
00	00	NUL	32	20	SP	64	40	@	96	60	`
01	01	SOH	33	21	!	65	41	A	97	61	a
02	02	STX	34	22	"	66	42	B	98	62	b
03	03	ETX	35	23	#	67	43	C	99	63	c
04	04	EOT	36	24	\$	68	44	D	100	64	d
05	05	ENQ	37	25	%	69	45	E	101	65	e
06	06	ACK	38	26	&	70	46	F	102	66	f
07	07	BEL	39	27	'	71	47	G	103	67	g
08	08	BS	40	28	(	72	48	H	104	68	h
09	09	HT	41	29	)	73	49	I	105	69	i
10	0A	LF	42	2A	*	74	4A	J	106	6A	j
11	0B	VT	43	2B	+	75	4B	K	107	6B	k
12	0C	FF	44	2C	,	76	4C	L	108	6C	l
13	0D	CR	45	2D	-	77	4D	M	109	6D	m
14	0E	SO	46	2E	.	78	4E	N	110	6E	n
15	0F	SI	47	2F	/	79	4F	O	111	6F	o
16	10	DLE	48	30	0	80	50	P	112	70	p
17	11	DC1	49	31	1	81	51	Q	113	71	q
18	12	DC2	50	32	2	82	52	R	114	72	r
19	13	DC3	51	33	3	83	53	S	115	73	s
20	14	DC4	52	34	4	84	54	T	116	74	t
21	15	NAK	53	35	5	85	55	U	117	75	u
22	16	SYN	54	36	6	86	56	V	118	76	v
23	17	ETB	55	37	7	87	57	W	119	77	w
24	18	CAN	56	38	8	88	58	X	120	78	x
25	19	EM	57	39	9	89	59	Y	121	79	y
26	1A	SUB	58	3A	:	90	5A	Z	122	7A	z
27	1B	ESC	59	3B	;	91	5B	[	123	7B	{
28	1C	FS	60	3C	<	92	5C	\	124	7C	|

Chapter 4: Appendix

29	1D	GS	61	3D	=	93	5D	]	125	7D	}
30	1E	RS	62	3E	>	94	5E	^	126	7E	~
31	1F	US	63	3F	?	95	5F	_	127	7F	DEL

4.2 Symbologies Code ID Identifier

Symbologies Code ID Identifier

SYMBOLOGIES CODE IF IDENTIFIER					
Symbologies	Factory ID	AIM ID	Symbologies	Factory ID	AIM ID
EAN 128	T	]C1	MSI (MOD 10/CDV & send one CD)	O	]M0
Code 128	K	]C0	MSI (MOD 10/CDV & not send CD)		]M1
AIM-128		]C2	MSI (send two CD)		]M8
ISBT-128		]C4	MSI (disable CDV)		]M9
EAN-8 (+2/+5 OFF, +2 ON, +5 ON)	S	]E4	Code 32	B	]X0
UPC-E (+2/+5 OFF)		]E0	Codabar	N	]F0
UPC-E (+2 ON)	E	]E3	Codabar (ABC Codabar)		]F1
UPC-E (+5 ON)		]E3	Codabar (CDV & send CD)		]F2
UPC-A (+2/+5 OFF)	A	]E0	Codabar (CDV & not send CD)	P	]F6
UPC-A (+2 ON)		]E3	UK Plessey		]P0
UPC-A (+5 ON)]E3	Matrix 2 of 5		Y	]X0
EAN-13 (+2/+5 OFF)	F	]E0	Matrix 2 of 5 (disable CDV)	]X1	
EAN-13 (+2 ON)		]E3	Matrix 2 of 5 (MOD 10/CDV & send one CD)	]X2	
EAN-13 (+5 ON)		]E3	Matrix 2 of 5 (MOD 10/CDV & not send CD)	]X3	
Code 93	L	]G0	ISBN	D	]X4
Code 11 (send one CD)	J	]H0	ISSN		]X5
Code 11 (send two CD)		]H1	Full ASCII Code 39(disable CDV)		]A4
Code 11 (not send CD)		]H3	Full ASCII Code 39(CDV &	]A5	

			send CD)		
Code 11 (disable CDV)		]H9	Full ASCII Code 39(CDV & not send CD)		]A7
IATA 2 of 5 (disable CDV)	R	]R0	Standard Code 39 (disable CDV)	M	]A0
IATA 2 of 5 (MOD 10/send one CD)		]R1	Standard Code 39 (CDV and send CD)		]A1
IATA 2 of 5 (MOD 10/send one CD)		]R3	Standard Code 39 (CDV and not send CD)		]A3
Industrial 2 of 5	V	]S0	Databar (Stacked/Omnidirectional/Truncated)	G	]e0
PDF 417	Z	]L0	Databar Limited	C	
Data Matrix (ECC000-140)	X	]d0	Databar Expanded	Q	]e0
Data Matrix (ECC200)		]d1	Databar Expanded stacked		
Data Matrix (ECC200, FNC1 is the 1st/5th digit)		]d2	QR Code	W	]Q0
Data Matrix (ECC200, FNC1 is the 2nd/6th digit)		]d3	2005 ver., w/o ECL		]Q1
Data Matrix (ECC200, w/ ECL)		]d4	2005 ver., w/ ECL		]Q2
Data Matrix (ECC200, FNCL is the 1st/5th digit, w/ ECL)		]d5	2005 ver., FNC1 is the 1st digit, w/o ECL		]Q3
Data Matrix (ECC200, FNCL is the 2nd/6th digit, w/ ECL)		]d6	2005 ver., FNC1 is the 1st digit, w/ ECL		]Q4
Interleaved 2 of 5, incl: ITF-6, ITF-14 (CDV & send CD)	I	]I1	2005 ver., FNC1 is the 2nd digit, w/o ECL	]Q5	
Interleaved 2 of 5, incl: ITF-6, ITF-14 (CDV & not send CD)		]I3	2005 ver., FNC1 is the 2nd digit, w/ ECL	]Q6	
Interleaved 2 of 5 (disable CDV)		]I0			