NOTICE

This device complies with part 15 of the FCC Rules. Operation is subject to the following two condition: (1) This device may not cause harmful interface, and (2) This device must accept any interface received, including Interface that may cause undesired operation.

This equipment has been tested and found comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interface when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interface to radio communications. Operation of this equipment in a residential area is likely to cause harmful interface in which case the user will be required to correct the interface at his own expense.

☛ All brand and trademark are belonged to their respective owner.
☛ Specifications are subject changed without notice.

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Installation

1) First of all, you must make sure that the power is disconnected from your equipment before connecting the scanner. Beside, you also have to check the cable connector of the scanner match your equipment interface correctly.

2) Boot up your computer after connecting the scanner with your equipment, the scanner will make a long music and light the LED, above scanner to indicate a successful power on. Trigger the button, the scan line in front of scanner will active. Now you can start to set programming optimal usage.

☛ If any of the above operation is not right, turn off the power immediately and check any improper connections. Go through all above steps again.
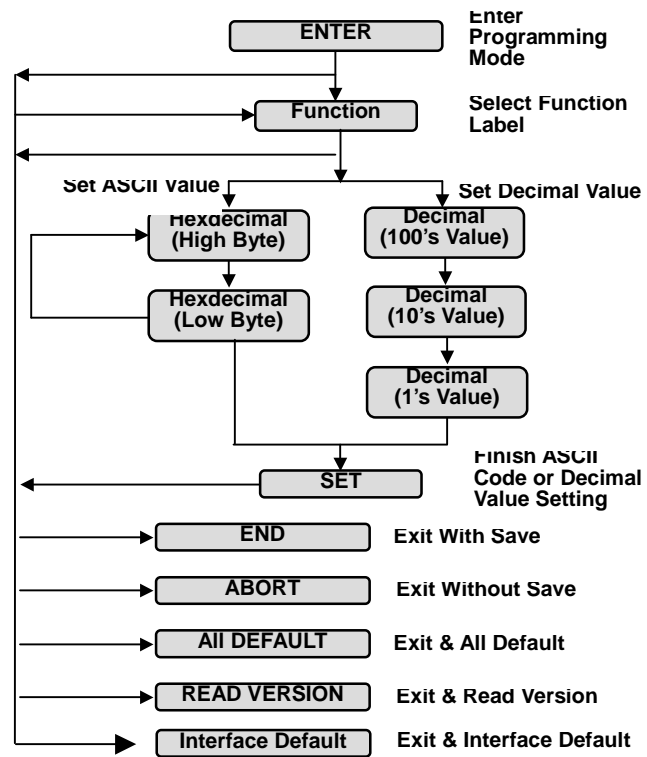

Recommened Steps

When the required settings have been configured, all settings are stored in non volatile memory of scanner after reading End label. There are recommended steps as follows.

1) Set right host interface for your scanner at ▢ 10.
   (The scanner is in factory default as bold label)

2) Set interface to optimize protocol of scanner with your host in Charter 2.

3) Set system control of scanner, such as specific adjustments double confirm, power saving, indicator and scanning mode which you prefer usage in Chapter 3.

4) Set code option of scanner for your usage in Chapter 4. You must make sure to enable the symbology first, then Min./Max. code length, code ID checksum and truncate digits are also convered.

5) Set string format of the scanner, such as preamble, postamble, prefix, suffix, code ID and code name transmission for your application in Chapter 5.

☛ If any error step were processing, scanner will generate a 5 beeps as warnning. You have to take care this matter and set correctly again.

☛ If it is still not work properly,please contact with dealer.

Configuration Flowchart

ENTER	Enter Programming Mode
Function	Select Function Label

Set ASCII Value / Set Decimal Value

Hexdecimal (High Byte)	Decimal (100's Value)
Hexdecimal (Low Byte)	Decimal (10's Value)
	Decimal (1's Value)

SET	Finish ASCII Code or Decimal Value Setting
END	Exit With Save
ABORT	Exit Without Save
All DEFAULT	Exit & All Default
READ VERSION	Exit & Read Version
Interface Default	Exit & Interface Default

1

Introduction

String Output Flowchart

Preamble
Prefix
Code Name
Code ID
Code Data
Suffix
Postamble

5
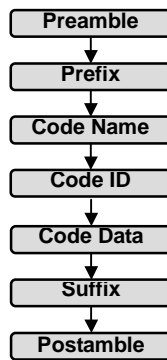
Default Setting

Code Type	Read Enable	Length		Truncate		Code ID
		Min.	Max.	Leading	Ending	
UPC-A	✓	-	-	0	0	A
UPC-E	✓	-	-	0	0	E
EAN-13	✓	-	-	0	0	F
EAN-8	✓	-	-	0	0	FF
Code-39	✓	0	0	0	0	M
Interleaved 2 of 5		4	0	0	0	I
Industrial 2 of 5		4	0	0	0	H
Matrix 2 of 5		4	0	0	0	G
Codabar/NW7	✓	0	0	0	0	N
Code-128	✓	0	0	0	0	K
Code-93		0	0	0	0	L
Code-11		0	0	0	0	O
MSI/Plessey		0	0	0	0	P
UK/Plessey		0	0	0	0	R
Telepen		0	0	0	0	S
RSS		0	0	0	0	T
RSS Limit		0	0	0	0	U
RSS Stack		0	0	0	0	V
RSS Expansion Limit		0	0	0	0	W
RSS Expansion Stack		0	0	0	0	X

Adjustment	Value	Result
Beep Loudness	05	Level 5
Beep Tone	27	2.4 Hz
Beep Duration	10	10 mSec
Stand-by Time	05	1 Sec
Led Off Delay	20	100 mSec
Lamp Off Delay	05	1000 mSec
Good read Time	05	100 mSec
Double Confirm Times	02	Once
Tx Gap	00	1 mSec
Tx Delay	00	10 mSec
Timeout	03	1 Sec
Wait Addon Count	10	Once
Preamble Data	00_{16}	<NULL>
Postamble Data	00_{16}	<NULL>
Prefix Data (All Datas)	00_{16}	<NULL>
Suffix Data (All Datas)	$0D_{16}0A_{16}$	<CR><LF>

Manual Label Layout

The scanner must be set by reading the barcode labels in manual. The discription of label is as follows.

Callout	
Section Title	Exit Program
	Function Title
UPC-A	END
	Truncate Zero
Group Line	Disable
	Selection Label
	Enable
	Default Setting
Function Description	Specific Adjustments
	Selection Description
Truncate Leading / Ending: The leading or ending digits of barcode data characters can be truncated when these values are set to non zero. It will be read nothing else only beeps when the truncate value is more than barcode data digits or the value of Truncate Leading is overlap with the Ending. The maximum value of Truncate digits is 15.	Truncate Leading (Range:00_{10}-FF_{10})
	Adjustment (ASCII Code or Decimal Value)
	Truncate Ending (Range:00_{10}-FF_{10})
Code ID: A Code ID is a character	Insert0 Position (Range:00_{10}-FF_{10})
	Chapter Number
	Insert1 Position (Range:00_{10}-FF_{10})
Selection Label	Insert0 data (Range:00_{16}-FF_{16} ASCII Code)
	Chapter Title
	Insert1 data (Range:00_{16}-FF_{16} ASCII Code)
	Range Description
	ID (Range:00_{16}-FF_{16} ASCII Code)
	Sub ID (Range:00_{16}-FF_{16} ASCII Code)
	Page Number
	25

1 Introduction

4 Code Option

☞ The factory default settings are indicated by bold symbols.

Frequent Question

Q: Why scanner block the keyboard operation?
A: Check the cable connection with your equipment, then turn power on again.

Q: If the scanner dosen't need an Enter character addition after each barcode label transmission.
A: Refer to postamble transmission at ▭66, then set ⏍Disable⏍.

Q: If the scanner needs to read single digit code.
A: Refer to Min. code length of code option use "01" in Chapter 4 for single code readable.

Q: If the scanner can't discriminate an unknown label, but read manual very well.
A: Refer to code name at ▭20 to set ⏍Enable⏍, read a barcode label, then you will know what symbology is read. Beside, it maybe need to verify checksum. Refer to verify checksum of code option in Chapter 4, and set ⏍Enable⏍.

Q: If the scanner transferred characters very slow or lost some characters when data be output to screen by keyboard interface
A: You may set caps lock to be ⏍Alt+Keypad⏍ at ▭11. Otherwise, it maybe mis-match of transmission rate, therefore, you can adjust an appropriate ⏍Tx Gap⏍ to match your equipment. See ▭12.

Q: If the scanner only sounds beep when read barcode but didn't send data to PC.
A: It is the communication problem between scanner interface and PC. It may be cuased by cable damaged or wrong interface setting. Check your cable connection and set the interface setting again.

Q: What does Tx , Tx Gap mean ?
A: Tx means transmittion. Tx Gap means transmittion of Inter-character delay. See ▭12.

☛ Call to the dealer if scanner dose not work properly.

1

Introduction

ENTER

Host Interface

Type

| 0DC1 | **Keyboard** |
| 0DC2 | **RS232** |

If the interface cable you have is PS2 or USB HID, please set as Keyboard. If it is USB COM or RS232 type, please set as RS232. .

Type

ZADE	**ALL DEFAULT**
ZDEF	**BARCODE DEFAULT**
ZKBD	**KEYBOARD DEFAULT**
Z232	**RS232 DEFAULT**
ZVER	**VERSION**
ZEXT	**ABORT**
ZISP	**ISP**
ZCLK	**Set date & Time**

All Default::All settings will be reset as bold label,but exclude interface setting.

Barcode Default: Restore to default barcode setting

Keyboard Default: Restore to keyboard interface default setting

RS232 Default: Restore to RS232 interface default setting

Version: You can get the firmware version & date of decoder.

ABORT: To skip or give up current configuration, so all previous setting will be aborted before you set END to finish programming.

ISP: After enable ISP, the scanner will become COM interface and can be update firmware or configuration to scanner.

☛ **End user please don't update firmware by yourself, unless you get correct instruction from your dealer. Because improper procedure may cuase damage on the scanner.**

Keyboard

‖‖‖‖‖‖‖‖‖ **End**

USB

If select Enable means you use the usb hid,if select Disable means you use the ps2 cable.

Disable	1A00
‖‖‖‖‖‖‖‖	
Enable	1A01
‖‖‖‖‖‖‖‖	

Simulation

It is recommended to Enable the function if your PC without keyboard installation. It simulates keyboard timing and pass keyboard present status to the PC during power-on.

Disable	1A50
‖‖‖‖‖‖‖‖	
Enable	1A51
‖‖‖‖‖‖‖‖	

Key Pad

The Keypad must be enable if your application program can accept numeric code from keypad only. The scanner will output code as numeric key-pad did when it read numeric digit.

Disable	1A70
‖‖‖‖‖‖‖‖	
Enable	1A71
‖‖‖‖‖‖‖‖	

Caps Lock

By selecting Caps Lock On or Caps Lock Off, scanner can get Caps Lock status. If Alt+Keypad were selected, Caps Lock and output will be independent.The Auto function can be effect when USB HID or KB Simulation is enable.When you set Auto, the scanner will detect the status of Keyboard Caps Lock.So the batcode data outputwill follow the status of Keyboard Caps Lock.

Auto	1B80
‖‖‖‖‖‖‖‖	
Alt+Keypad	1B81
‖‖‖‖‖‖‖‖	
Caps Lock Off	1B82
‖‖‖‖‖‖‖‖	
Caps Lock On	1B83
‖‖‖‖‖‖‖‖	

Example Barcode "ABCdef"

Status Selection	Caps Lock **On**	Caps Lock **Off**
Caps Lock On	ABCdef	abcDEF
Caps Lock Off	abcDEF	ABCdef
Alt+Keypad	ABCdef	ABCdef

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Specific Adjustments

1052 Tx Gap
(Range:00_{10}-FF_{10} Unit:1ms)

1062 Tx Delay
(Range:00_{10}-FF_{10} Unit:10ms)

1072 Timeout
(Range:01_{10}-FF_{10} Unit:1000ms)

Tx Gap: It will delay the output timing of per digit. If the output speed is too high, the system may not receive all digits. If so, try out suitable delay time to make system work properly.

Tx Delay: It can be used while you will scan several continued short barcode or multi-filed barcode. This function will delay the timing after barcode.

It can delay the waiting time of serial scanner for the handshaking acknowledgment from the host PC. If scanner didn't get acknowledgment from host PC after timeout occur, the scanner will sound 5 beeps as warning. You may need to check the handhsanking mode or adjust to longer delay timer. The function is particular useful for some applications which the host PC will take longer respond time

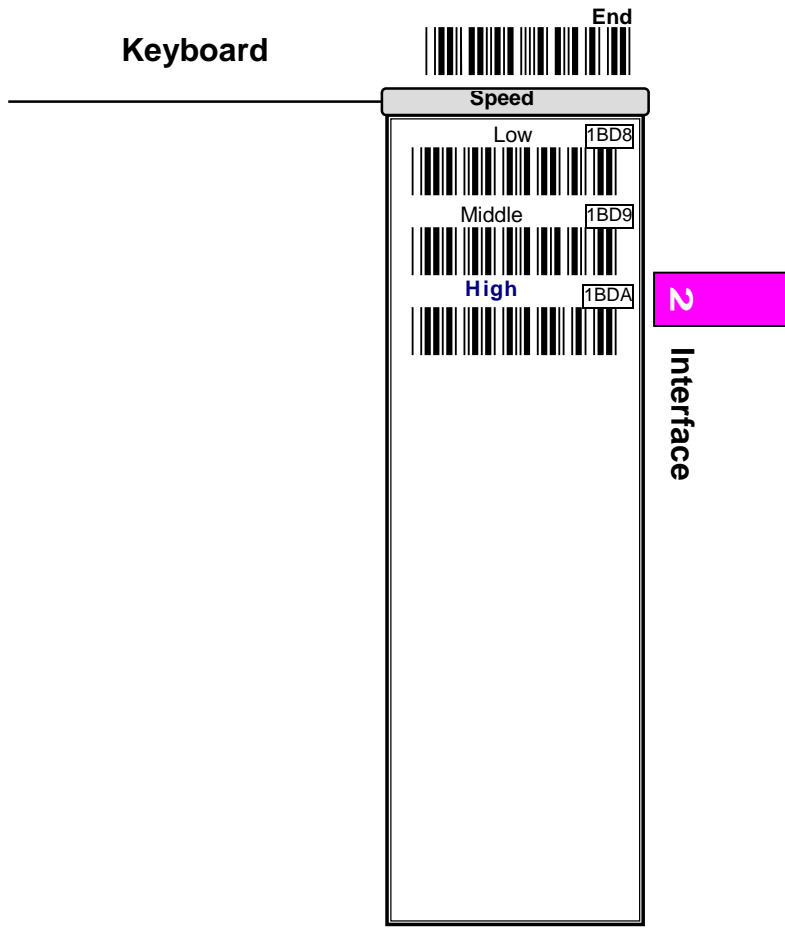*** TX means : transmission**

Example Barcode Data: "**ABCD**"   Tx Gap: **2ms**
                                                    Tx Delay: **10ms**

1) **ENTER** ⇨   Entry Programming

2) **Tx Gap** ⇨ **0** ⇨ **2** ⇨ **SET** ⇨   2ms Inter-char. Delay
          02*1ms(Unit)=2ms

3) **Tx Delay** ⇨ **0** ⇨ **1** ⇨ **SET** ⇨   10ms Transmit Delay
          01*10ms(Unit)=10ms

4) **END**   Exit Programming

Output

A	2ms	B	2ms	C	2ms	D	2ms	10ms

Keyboard

Speed

Low 1BD8

Middle 1BD9

High 1BDA

2

Interface

13

ENTER

||||| ||| ||| ||||| ||| |||

Keyboard

1DC0   **USA (US)**

||||| ||| ||| ||||| ||| |||

1DC1   UK (UK)

||||| ||| ||| ||||| ||| |||

1DC2   Japan

||||| ||| ||| ||||| ||| |||

1DC3   France(FR)

||||| ||| ||| ||||| ||| |||

1DC4   Germany (GR)

||||| ||| ||| ||||| ||| |||

1DC5   Italian (IT)

||||| ||| ||| ||||| ||| |||

1DC6   Spanish (SP)

||||| ||| ||| ||||| ||| |||

1DC7   Portuguese (PO)

||||| ||| ||| ||||| ||| |||

Here you can set up the scanner's language to match your computer keyboard layout.

RS232

‖‖‖‖‖‖‖‖‖‖‖ **END**

If the scanner is with USB cable but virtual COM interface, it should be programmed as **USB COM enable,** otherwise, the data will not be output to the PC.

USB COM

Disable 2A00
‖‖‖‖‖‖‖‖‖‖‖

Enable 2A01
‖‖‖‖‖‖‖‖‖‖‖

CTS: Clear To Send (Hardware Signal)
RTS: Request To Send (Hardware Signal)
Xon: Transmit On (ASCII Code 13_{16})
Xoff: Transmit Off (ASCII Code 11_{16})

None: It only uses TxD and RxD signal without relation for any hardware or software handshaking protocol.

RTS/CTS (CTS/RTS): If the scanner sent barcode data to host computer, it will issue the singal of RTS (CTS) first, and wait for the signal returned from the host computer. Then it will perform the normal data communication. If there is no CTS (RTS) signal returned from the host computer after timeout (Response Delay), the scanner will sound 5 beeps as warning.

Protocol

None 2CC0
‖‖‖‖‖‖‖‖‖‖‖

RTS/CTS 2CC1
‖‖‖‖‖‖‖‖‖‖‖

CTS/RTS 2CC2
‖‖‖‖‖‖‖‖‖‖‖

Scanner Ready 2CC3
‖‖‖‖‖‖‖‖‖‖‖

Data Ready 2CC4
‖‖‖‖‖‖‖‖‖‖‖

Xon/Xoff 2CC5
‖‖‖‖‖‖‖‖‖‖‖

2

Interface

Scanner Ready: The scanner will issue signal of RTS after power-on, then transmit data upon receiving active CTS signal.

Data Ready: The scanner will issue signal of RTS to indicate a successful decoding and will transmit data upon receiving CTS signals.

Xon/Xoff: When the host PC can't accept data, it will notice the scanner to suspend data transmission by sending an Xoff code, and Xon as to be continued.

☛**Remark :** If the interface is USB COM, it does not support **Protocol** setting.

15

ENTER

||||| |||| ||| || |||| |||| |||

RS232

Baud Rate

2BDC **115200 Bps**

||| ||| ||| ||| |||

2BDB 57600 Bps

||| ||| ||| ||| |||

2BDA 38400 Bps

||| ||| ||| ||| |||

2BD9 19200 Bps

||| ||| ||| ||| |||

2BD8 9600 Bps

||| ||| ||| ||| |||

2BD7 4800 Bps

||| ||| ||| ||| |||

2BD6 2400 Bps

||| ||| ||| ||| |||

2BD5 1200 Bps

||| ||| ||| ||| |||

2BD4 600 Bps

||| ||| ||| ||| |||

2BD3 300 Bps

||| ||| ||| ||| |||

Data Bits

2A60 7 Bits

||| ||| ||| ||| |||

2A61 **8 Bits**

||| ||| ||| ||| |||

Stop Bits

2A70 **1 Bits**

||| ||| ||| ||| |||

2A71 2 Bits

||| ||| ||| ||| |||

RS232

|||||||||||||||||||||||||| **END**

Parity

None   `2CD0`

||||||||||||||||||||||||||

Odd   `2CD1`

||||||||||||||||||||||||||

Even   `2CD2`

||||||||||||||||||||||||||

Mark   `2CD3`

||||||||||||||||||||||||||

Space   `2CD4`

||||||||||||||||||||||||||

CTS Trigger

Disable   `2A50`

||||||||||||||||||||||||||

Enable   `2A51`

||||||||||||||||||||||||||

2 Interface

17

||||||||||||||||||||||

RS232

Specific Adjustments

2052   Tx Gap

||||||||||||||||

(Range:00_{10}-FF_{10} Unit:1ms)

2062   Tx Delay

||||||||||||||||

(Range:00_{10}-FF_{10} Unit:10ms)

2072   Timeout

||||||||||||||||

(Range:01_{10}-FF_{10} Unit:1000ms)

Tx Gap: It will delay the outout timing of per digit . It is same as Tx Gap of keyboard wedge on 12.

Tx Delay: It is a delay time after barcode. It is same as Tx Delay of Keyboard wedge on 12.

Timeout: It is same as Timeout of Keyboard wedge on 12.

System Control

END

Power on Music

The power-on music will indicate the scanner as successful power on. It can be inhibitted by setting Disable.

Disable 0A40

Enable 0A41

Power on Trigger

The scanner can be activated LED light source without trigger pushed by setting Enable,

Disable 0A50

Enable 0A51

3

Good read Beep

The scanner will sound a beep for per successful barcode reading when it is set Enable . And the beep Volume, Tone and Time can be adjusted by setting on 23.

Disable 8B00

Enable 8B01

Good read Vibrator

If set Enable ,the Scanner Vibrates when successfully read a barcode.
This function is only applicable in CM 200 series. For CM 500 series, good read vibration is an extra purchase option.

Disable 8B20

Enable 8B21

Reject Same

If set Enable,the same barcode will not be scanned. But this function only work under Continue Mode.

Disable 8B60

Enable 8B61

Object Detect

This is auto sensor function. So even the LED is off, but when object or barcode under the scan range, it will be auto LED on and scan barcode by set Enable.
This function is only applicable in CM 003, CM300 and CM 1002 series.

Disable 0A60

Enable 0A61

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Tx Length	
8C50	**Disable**
8C51	Enable

If your application need Barcode Length, you must set this function to be Enable .

Force Case	
8E80	**None**
8E81	Inverse
8E82	Lowercase
8E83	Uppercase

It will converse all output digits to be same printing-case, even one barcode may have two kinds of case.

Example Barcode "BarCode",

Uppercase	BARCODE
Lowercase	barcode

Double Confirm	
8B70	**Disable**
8B71	Enable

When barcode is easy misreading, try this function. Then scanner will output the data after same decoding by double times. For more times confirm, please refer Doubble Confirm Count on ⌐24. But double confirm will delay the scan speed.

Tx Code ID	
8C30	**Disable**
8C31	Enable

If your application need Code ID, you must set this function to be Enable .

Code ID Position	
8C20	**Before Code Data**
8C21	After Code Data

Upon your usage, the output position of Code ID can be Before or After Code Data by setting.

System Control

END

Tx Control Code

Disable 8C40

Enable 8C41

If you want the control code to be output, then set it as Enable.

Tx Code Name

Disable 8C00

Enable 8C01

This function can show unknown barcode type which is readable by this scanner. When Enable is set, Code Name will be showed on front of per barcode, then you will know what kind of barcode symbology it is.

Return Detect

Disable 0B80

Enable 0B81

With Auto Trigger 0B82

This Function is only applicable in CM301, CM-302 and CM901 with **Canmax special designed Barcode Scanner Holder**.

Enable: When placing the barcode scanner on the holder, enable this function will turn off the LED beam light in any scanning mode, if the scanner has been preset the scanning mode as"auto detect". Auto detect function stays the same.

With auto Trigger: When "With Auto trigger" is activated, the scanner LED beam light will automatically turn on when taking off the scanner from the holder. The scanning mode can be implement with this function except "**Momentary**" mode.

Note: This function is only applicable in CM301, CM 302 and CM901 model with Canmax special designed barcode scanner holder. and these are optional extra purchase function and items.

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System Control

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ENTER

System Control

Scanning Mode

8AC2 **Good read Off**

8AC4 Momentary

8AC5 Alternate

8AC3 Timeout Off

8AC6 Timeout Flash

8AC1 Continue

8AC0 Test

Good read Off: The LED light source will be on when the tirgger is pushed and then be off when a barcode is read successfully. And you can refer Stand-by Time on 23.

Momentary: The trigger will act as a switch. When the trigger is pressed, it will scan barcode, when it is released it will stop to scan.

Alternate: The trigger will be act as a toggle switch. Press button to active or stop scanning.

Timeout Off: The scanner will scan barcode when trigger is pressed, and it will stop scanning when barcode is not decoded after stand-by time elapsed. Stand-by Time setting is on 23.

TimeOut Flash: The scanner will scan barcode when trigger is pressed, Light source turns flashing when barcode is not decoded after stand-by time elapsed. Stand-by Time setting is on 23. This function is only applicable in CM-003 series.

Continue: No need to press the trigger then the scanner can read barcode when the LED light source is on.

Test: The scanner will always keep reading continuously and same barcode reading is allowed without double confirm. The feature can test the performance of scan speed and sensitive.

☛ For saving power and keeping longer life of laser component, the laser beam and motor will be stopped when no code is decoded for all above scanning mode .

System Control

Specific Adjustments

Beep Adjustments: You can adjust Beep Volume , Beep Tone and Beep Time of good reading upon your pavorite usage.

Stand-by Time: The timeout duration can be adjusted from 1 to 99 seconds. The Stand-by Time is only effective during Good-read Off & Timeout Off mode for CCD scanner. If no code to be read after Stand-by Time , on laser scanner,the laser beam and motor will be shutdown to keep the life time of laser diode.

LED/Lamp Off Delay: There are two kinds LED light source durations for all scanning mode. The scanner light source will be flash when no code is read until Standby Time is timeout. The Led Off Delay is lighting duration and the Lamp Off Delay is blanking duration. The scanner can still read barcode during the light source is flashing and then be waked up automatically when read a barcode.

Object Detec Level : It is the function of auto detection. You can set up the level of detection sensitivity you want.

Object Detect Time : It can adjust the time for auto detection duration.

Setup Timeout : It is the timer between scanner go into " Enter" and quit " End". So that means you need to finish whole setting before the setup timeout timing. Otherwise, the scanner will quit the setting mode as soon as the time is up.

Beep Volume   8142
(Range:00_{10}-FF_{10} Unit:Level)

Beep Tone   8162
(Range:00_{10}-FF_{10} Unit:100Hz)

Beep Time   8152
(Range:00_{10}-FF_{10} Unit:10ms)

Standby Time   8122
(Range:00_{10}-FF_{10} Unit:1s)

LED Off Delay   8192
(Range:00_{10}-FF_{10} Unit:10ms)

Lamp off Delay   8172
(Range:00_{10}-FF_{10} Unit:1s)

Good read Time   8112
(Range:00_{10}-FF_{10} Unit:100ms)

Object Detect level 0052
(Range:00_{10}-FF_{10} Unit:1ms)

Object Detect Time 0062
(Range:00_{10}-FF_{10} Unit:100ms)

Setup Timeout   0072
(Range:00_{10}-FF_{10} Unit:1000ms)

3

System Control

23

ENTER

‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖

System Control

Specific Adjustments

| 81A2 | Vibrator Off Delay |

‖‖‖‖‖‖‖‖‖‖‖‖‖

(Range:00_{10}-FF_{10} Unit:10ms)

| 8132 | Wait Addon Count |

‖‖‖‖‖‖‖‖‖‖‖‖‖

(Range:00_{10}-FF_{10})

| 8102 | Double Confirm count |

‖‖‖‖‖‖‖‖‖‖‖‖‖

(Range:00_{10}-FF_{10})

| 81E2 | Global Min. Length |

‖‖‖‖‖‖‖‖‖‖‖‖‖

(Range:00_{10}-FF_{10})

| 81F2 | Global Max. Length |

‖‖‖‖‖‖‖‖‖‖‖‖‖

(Range:00_{10}-FF_{10})

| ZCLK | Set Date & Time |

‖‖‖‖‖‖‖‖‖‖‖‖‖

Vibrator Off Delay: Sets the duration of vibration of scanner, Unit: 10 ms.

Wait Addon Count: This setting is used for WPC add-on code, such as EAN and UPC. The WPC code must be decoded first, then Add-on. Add-on may not be decoded with WPC at the same time. Therefore, you can set **wait addon count** to force the add-on code must be output with WPC code together.

If the Wait addon count is set as "0",the barcode data will only be output with add-on code.

Doubble Confirm Count: The more confirm times the less miss-reading will be happened. This feature should depend on the symbology and printing quality of barcodes. Selecting a higher value will reduce read-out speed.

Global Min. / Max. Length: When you set min. length, barcode digits number which is under the min. length, it will not be decoded. If you set Max. length, the barcode digits which is over the value will not be decoded,neither.   But the values setting will not effect in some fixed length symbobolgies (i.e. UPC and EAN is called WPC).

Set Date & Time: Date and Time setting. The setting format will be (yy/mm/dd/hh/mm/). For the example, setting the scanner date and time as 2012,Aug,30.13:30. (**Note: this function is only applicable in CM200 and CM500 series**).

Procedure:
1) Scan "Enter" barcode
2) Scan "Set Date & time" barcode
3) Refer to ASCII table in page 82, and scan 1208301330.as (2012,Aug,30,13:30)
4) Scan "End" barcode

3

System Control

ENTER

UPC-A

Read

| AA70 | Disable |
| AA71 | **Enable** |

Leading Zero	Data Digts (11 Digits)	Check Digit

Addon Type

AB90	**None**
AB91	Addon 2
AB92	Addon 5
AB93	Addon 2+5

The Add-on barcode is the supplemental 2 or 5 digits for WPC code.

Format

Leading Zero	Data Digits (11 Digits)	Check Digit	Add-on 2 or 5

Wait Addon

| AA00 | **Disable** |
| AA01 | Enable |

It is recommended to set Enable if you want the UPC can be output with add-on code together. Please enable this function first and refer Wait Addon Count at 📖24 for good reading of Add-on code.

Tx Chksum

| AA60 | Disable |
| AA61 | **Enable** |

By setting Enable, check characters will be transmitted.

UPC-A

The all leading "0" of barcode data will be truncated when this function is enabled.
Example Barcode "00054321"

Output "54321"

Truncate Zero

Disable | AA50

Enable | AA51

Specific Adjustments

Truncate Lead | A082
(Range:00_{10}-FF_{10})

Truncate End | A092
(Range:00_{10}-FF_{0})

Insert0 Position | A0C2
(Range:00_{10}-FF_{10})

Insert1 Position | A0D2
(Range:00_{10}-FF_{10})

Insert0 Data | A0EB
(Range:00_{16}-FF_{16} ASCII Code)

Insert1 Data | A10B
(Range:00_{16}-FF_{16} ASCII Code)

ID | A12B
(Range:00_{16}-FF_{16} ASCII Code)

Sub ID | A14B
(Range:00_{16}-FF_{16} ASCII Code)

4

Code Option

Truncate Lead / End: The leading or ending character of barcode data will be truncated when these values are set to non zero. It will be output nothing except beeps if the truncate value is more than barcode data digits or overlap with the Ending. The maximum value of Truncate digits is 15.

ID: The ID is a character which is used to represent the symbobly while successful reading. It will be prefixed on the front or back barcode. There are some symbobolgies (i.e. UPC-E and EAN-8) include 2 Code ID. If your application need Code ID, please enable Code ID Transmission first. You can refer the setting at ☐20.

Insert Position & Data : This function can append one or two characters into the barcode data. But you need to make sure the value of insert position can not be greater than the length of barcode. Otherwise, your setting will be no effect. You can add an Insert Data 0 at Insert Position 0

☛If the insert position you set is 0, the character will be inserted in the front of the barcode. If the value is FF, the inserted position will be behind the barcode. If the value is 1, the character will be inserted behind the first barcode digit. If the value is 2, the character will be inserted behind the second digit……and so forth.

27

UPC-E

Read

| BA70 | Disable |
| BA70 | **Enable** |

Format

Leading Zero	Data Digits (6 Digits)	Check Digit

Add-on

BB90	**None**
BB91	Addon 2
BB92	Addon 5
BB93	Addon 2+5

Format

Leading Zero	Data Digits (6 Digits)	Check Digit	Add-on 2 or 5

Wait Addon

| BA00 | **Disable** |
| BA01 | Enable |

Refer 26.

Expansion

| BA10 | **Disable** |
| BA11 | Enable |

This expansion function is for UPC-E and EAN-8 only. It will extend the barcode to be 13-digits by " 0 " zero. .
Example Barcode "01236547"
Output "0012360000057"

Tx CheckSum

| BA60 | Disable |
| BA61 | **Enable** |

Refer 26.

UPC-E

Refer 📄27.

Truncate Zero

Disable | BA50

Enable | BA51

Truncate Zero

Refer 📄27.

Truncate Lead | B082
(Range:00_{10}-FF_{10})

Truncate End | B092
(Range:00_{10}-FF_{10})

Insert0 Position | B0C2
(Range:00_{10}-FF_{10})

Insert1 Position | B0D2
(Range:00_{10}-FF_{10})

Insert0 Data | B0EB
(Range:00_{16}-FF_{16} ASCII Code)

Insert1 Data | B10B
(Range:00_{16}-FF_{16} ASCII Code)

ID | B12B
(Range:00_{16}-FF_{16} ASCII Code)

Sub ID | B14B
(Range:00_{16}-FF_{16} ASCII Code)

4

Code Option

29

ENTER

||||||||||||||||||||||||

EAN-13

Read

CA70	Disable

||||||||||||||||||||||||

CA71	**Enable**

||||||||||||||||||||||||

Format

Data Digts (12 Digits)	Check Digit

Addon type

CB90	**None**

||||||||||||||||||||||||

CB91	Addon 2

||||||||||||||||||||||||

CB92	Addon 5

||||||||||||||||||||||||

CB93	Addon 2+5

||||||||||||||||||||||||

Format

Data Digits (12 Digits)	Check Digit	Add-on 2 or 5

Wait Addon

CA00	**Disable**

||||||||||||||||||||||||

CA01	Enable

||||||||||||||||||||||||

Refer 📂26.

ISBN/ISSN Conversion

CA10	**Disable**

||||||||||||||||||||||||

CA11	Enable

||||||||||||||||||||||||

The ISBN (International Standard Book Number) and ISSN (International Standard Serial Number) are especial barcode for book and magazine. The ISBN is 10 digits with leading "978" and the ISSN is 8 digits with leading "977" of "EAN-13" .

Example Barcode "9789572222720"   **Output** "9572222724"

Example Barcode "9771019248004"   **Output** "10192484"

EAN-13

Tx Chksum	
Disable	CA60
‖‖‖‖‖‖‖‖‖‖‖	
Enable	CA610
‖‖‖‖‖‖‖‖‖‖‖	

Refer ☐26.

Truncate Zero	
Disable	CA50
‖‖‖‖‖‖‖‖‖‖‖	
Enable	CA51
‖‖‖‖‖‖‖‖‖‖‖	

Refer ☐27.

Specific Adjustments

Refer ☐27.

Truncate Lead   C082

‖‖‖‖‖‖‖‖‖‖‖

(Range:00_{10}-FF_{10})

Truncate End   C092

‖‖‖‖‖‖‖‖‖‖‖

(Range:00_{10}- FF)

Insert0 Position   C0C2

‖‖‖‖‖‖‖‖‖‖‖

(Range:00_{10}- FF)

Insert1 Position   C0D2

‖‖‖‖‖‖‖‖‖‖‖

(Range:00_{10}- FF)

Insert0 Data   C0EB

‖‖‖‖‖‖‖‖‖‖‖

(Range:00_{16}-FF_{16} ASCII Code)

Insert1 Data   C10B

‖‖‖‖‖‖‖‖‖‖‖

(Range:00_{16}-FF_{16} ASCII Code)

ID   C12B

‖‖‖‖‖‖‖‖‖‖‖

(Range:00_{16}-FF_{16} ASCII Code)

Sub ID   C14B

‖‖‖‖‖‖‖‖‖‖‖

(Range:00_{16}-FF_{16} ASCII Code)

4

Code Option

31

EAN-8

Read

| DA70 | Disable |
| DA71 | **Enable** |

Format

Data Digits (7 Digits)	Check Digit

Addon Type

DB90	**None**
DB91	Addon 2
DB92	Addon 5
DB93	Addon 2+ 5

Format

Data Digits (7 Digits)	Check Digit	Add-on 2 or 5

Wait Addon

| DA00 | **Disable** |
| DA01 | Enable |

Refer 26.

Expansion

| DA10 | **Disable** |
| DA11 | Enable |

Refer 26.

Truncate Zero

| DA50 | **Disable** |
| DA51 | Enable |

Refer 27.

EAN-8

END

Tx Chksum	
Disable	DA60
Enable	DA61

Specific Adjustments

Truncate Lead	D082
(Range:00_{10}-FF)	
Truncate End	D092
(Range:00_{10}- FF)	
Insert0 Position	D0C2
(Range:00_{10}- FF)	
Insert1 Position	D0D2
(Range:00_{10}- FF)	
Insert0 Data	D0EB
(Range:00_{16}-FF_{16} ASCII Code)	
Insert1 Data	D10B
(Range:00_{16}-FF_{16} ASCII Code)	
ID	D12B
(Range:00_{16}-FF_{16} ASCII Code)	
Sub ID	D14B
(Range:00_{16}-FF_{16} ASCII Code)	

4

Code Option

CODE-39

Read

EA70	Disable
EA71	**Enable**

Format

Start "*"	Data Digits (Variable)	Checksum (Optional)	End "*"

Type

EB90	**Standard**
EB91	Full ASCII

The Full ASCII function is an enhanced setting for Code-39 which is with toatal 128 digits to represent Full ASCII code. It must be combined by either one of **+ , % , $** or **/** and one of alpha character (A to Z).

Format

EBA0	**None**
EBA1	Code-32
EBA2	Code-32 with 'A'

The Code-32 symbology (Italian Pharmaceutical) is another version of Code-39 which max. can be 10 digits and can be 0 – 9 digits. The leading A is an optional character and can be set to be transmitted or not.

Tx Start/End

EA20	**Disable**
EA21	Enable

The Start and End character of Code-39 must be "✳". You can transmit all data digits including two "✳" by set Enable.

Truncate Zero

EA50	**Disable**
EA51	Enable

Refer 🗋27.

CODE-39

The checksum of Code-39 is optional and it is made the sum module 43 as the numerical value of the data digits.

Verify Checksum

Disable EBB0

Enable EBB1

By setting Enable, checksum will be transmitted.

Tx Checksum

Disable EA60

Enable EA61

Min. / Max. Code Length: Each symbology has its own Min./Max. Code Length. They can be set to qualify data entry. If the Min./Max. Code Length is zero, the Public Min./Max. Code Length will be changed. The length is defined by the actual barcode length transmitted. If the barcode length is over the value of min/max. length, it will not be output. Make sure the Minimum length value is not bigger than the Maximum length, otherwise, this barcode will not be output. In particular, you can set the same value for Minimum and Maximum length to have the fixed length barcode must be decoded.

Refer 27.

Specific Adjustments

Truncate Lead E082

(Range:00_{10}-FF)

Truncate End E092

(Range:00_{10}- FF)

Min. Length E0A

(Range:01_{10}- FF)

Max. Length E0B2

(Range:01_{10}- FF)

Insert0 Position E0C2

(Range:01_{10}- FF)

Insert1 Position E0D2

(Range:01_{10}- FF)

4

Code Option

35

ENTER

‖‖‖‖‖‖‖‖‖‖‖‖‖

CODE-39

Refer ▭27.

E0DB	Insert0 Data

‖‖‖‖‖‖‖‖‖‖‖

(Range:00_{16}-FF_{16} ASCII Code)

E10B	Insert1 Data

‖‖‖‖‖‖‖‖‖‖‖

(Range:00_{16}-FF_{16} ASCII Code)

E12B	Code ID

‖‖‖‖‖‖‖‖‖‖‖

(Range:00_{16}-FF_{16} ASCII Code)

E14B	Code-32 ID

‖‖‖‖‖‖‖‖‖‖‖

(Range:00_{16}-FF_{16} ASCII Code)

Interleaved 2 of 5

Read

Format

Data Digits	Checksum
(Variable)	(Optional)

Disable　HA70

Enable　HA71

Verify Checksum

The checksum is made the sum module 10 as the numberical values of all data digits.

Disable　HBB0

Enable　HBB1

Tx Checksum

Refer 26.

Disable　HA60

Enable　HA61

Truncate Zero

Refer 27.

Disable　HA50

Enable　HA51

4

Code Option

37
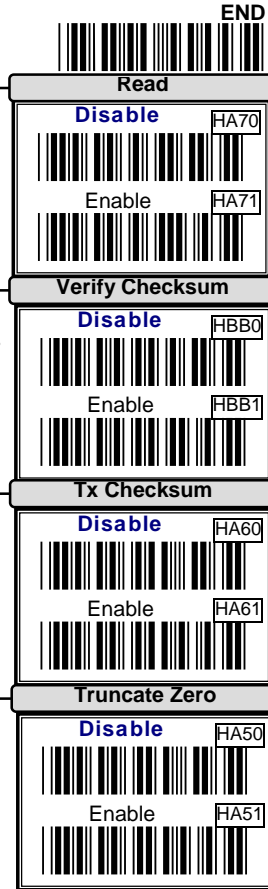
Interleaved 2 of 5

Specific Adjustments

| H082 | Truncate Lead |
(Range:00_{10}-FF)

| H092 | Truncate End |
(Range:00_{10}- FF)

| H0A2 | Min. Length |
(Range:00_{10}- FF)

| H0B2 | Max. Length |
(Range:00_{10}- FF)

| H0C2 | Insert0 Position |
(Range:00_{10}- FF)

| H0D2 | Insert1 Positionh |
(Range:00_{10}- FF)

| H0EB | Insert0 Data |
(Range:00_{16}-FF_{16} ASCII Code)

| H10B | Insert1 Data |
(Range:00_{16}-FF_{16} ASCII Code)

| H12B | ID |
(Range:00_{16}-FF_{16} ASCII Code)

| H14B | Sub ID |
(Range:00_{16}-FF_{16} ASCII Code)

Because, the start and end of interleaved 2 of 5 code is not olny one patten in symbol. In order to prevent partial reading, it is recommand to use the fixed code length for each 2 of 5 code barcode label. Setting the same **Min./Max. Code Length**, it is like a length filter, and only one length is accepted.

Refer 27 & 35.

Industrial 2 of 5

Read

Format

Data Digits	Checksum
(Variable)	(Optional)

Disable IA70

Enable IA71

Truncate Zero

Refer 27.

Disable IA50

Enable IA51

Tx Checksum

Refer 26.

Disable IA60

Enable IA61

4

Code Option

Verify Checksum

The checksum is made the sum module 10 as the numberical values of all data digits.

Disable IBB0

Enable IBB1

39

ENTER

||||||||||||||||||||||||

Industrial 2 of 5

Refer ☐27, ☐35.

I082   Truncate Lead

||||||||||||||||||||||||

(Range:00_{10}-FF)

I092   Truncate End

||||||||||||||||||||||||

(Range:00_{10}- FF)

I0A   Min. Length

||||||||||||||||||||||||

(Range:00_{10}- FF)

I0B2   Max. Length

||||||||||||||||||||||||

(Range:00_{10}- FF)

I0C2   Insert0 Position

||||||||||||||||||||||||

(Range:00_{10}- FF)

I0D2   Insert1 Positionh

||||||||||||||||||||||||

(Range:00_{10}- FF)

I0EB   Insert0 Data

||||||||||||||||||||||||

(Range:00_{16}-FF_{16} ASCII Code)

I10B   Insert1 Data

||||||||||||||||||||||||

(Range:00_{16}-FF_{16} ASCII Code)

I12B   ID

||||||||||||||||||||||||

(Range:00_{16}-FF_{16} ASCII Code)

I14B   Sub ID

||||||||||||||||||||||||

(Range:00_{16}-FF_{16} ASCII Code)

Matrix 2 of 5

END

Format

Data Digits	Checksum
(Variable)	(Optional)
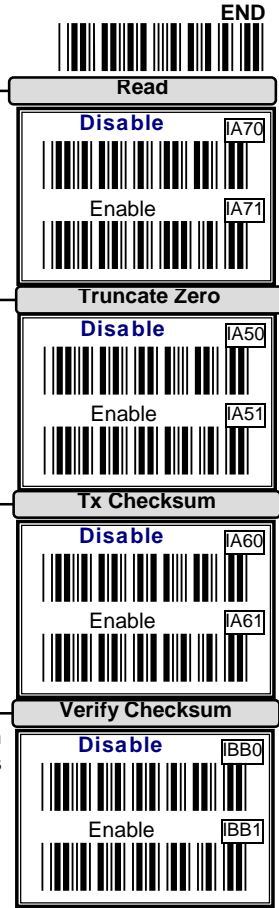
Refer ☐27.

Refer ☐26.

The checksum is made the sum module 10 as the numberical values of all data digits.

Read

Disable　JA70

Enable　JA71

Truncate Zero

Disable　JA50

Enable　JA51

Tx Checksum

Disable　JA60

Enable　JA61

Verify Checksum

Disable　JBB0

Enable　JBB1

4

Code Option

41
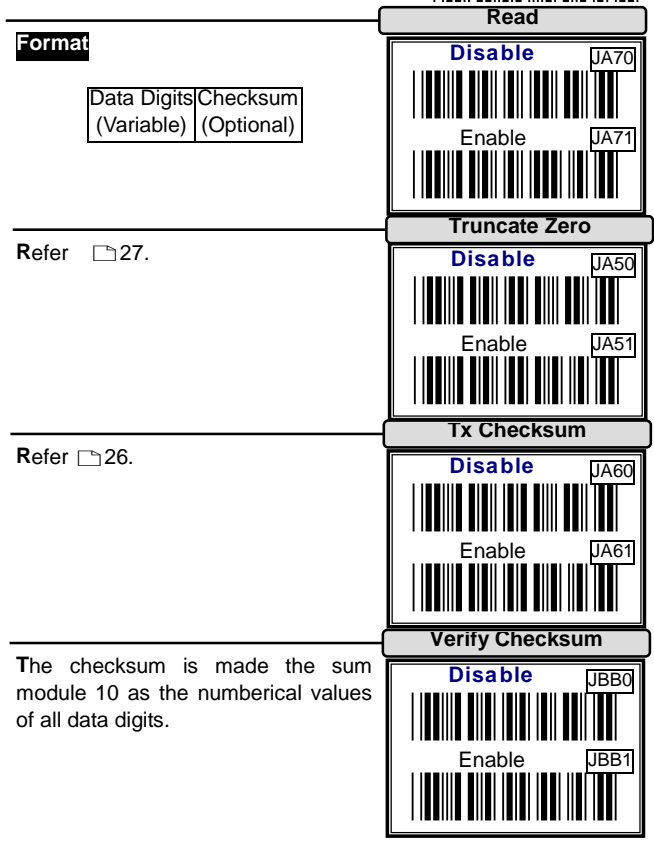
Specific Adjustments

J082 Truncate Lead

(Range:00_{10}-FF_{10})

J092 Truncate End

(Range:00_{10}-FF_{10})

J0A2 Min. Length

(Range:00_{10}-FF_{10})

J0B2 Max. Length

(Range:00_{10}-FF_{10})

J0C2 Insert0 Position

(Range:00_{10}-FF_{10})

J0D2 Insert1 Positionh

(Range:00_{10}-FF_{10})

J0EB Insert0 Data

(Range:00_{16}-FF_{16} ASCII Code)

J10B Insert1 Data

(Range:00_{16}-FF_{16} ASCII Code)

J12B ID

(Range:00_{16}-FF_{16} ASCII Code)

J14B Sub ID

(Range:00_{16}-FF_{16} ASCII Code)

Refer ☐27 ☐35.

Codabar/NW7

END

Format

Start	Data Digits (Variable)	Cheksum (Optional)	End

Read

Disable — GA70

Enable — GA71

Type

The Codabar has four kinds of Start/End patten, you may choice one to match your application.

ABCD/ABCD — GB90

abcd/abcd — GB91

ABCD/TN*E — GB92

abcd/tn*e — GB93

4

Code Option

Same Start/End Pair

Sometimes, the Codabar requires only same Start/End patten can be decoded.

Disable — GA00

Enable — GA01

Tx Start/End

You can transmit all data digits including Start/End by set Enable.

Disable — GA20

Enable — GA21

Verify Checksum

The checksum is made as the sum module 16 of the numberical values of all data digits.

Disable — GBB0

Enable — GBB1

43

Codabar/NW7

Tx Checksum

GA60 **Disable**

GA61 Enable

Refer ☐26.

Truncate Zero

GA50 **Disable**

GA51 Enable

Refer ☐27.

Codabar/NW7

END

Specific Adjustments

Truncate Lead G082

(Range:00_{10}-FF_{10})

Truncate End G092

(Range:00_{10}-FF_{10})

Min. Length G0A2

(Range:00_{10}-FF_{10})

Max. Length G0B2

(Range:00_{10}-FF_{10})

Insert0 Position G0C2

(Range:00_{10}-FF_{10})

Insert1 Positionh G0D2

(Range:00_{10}-FF_{10})

Insert0 Data G0EB

(Range:00_{16}-FF_{16} ASCII Code

Insert1 Data G10B

(Range:00_{16}-FF_{16} ASCII Code

ID G12B

(Range:00_{16}-FF_{16} ASCII Code)

Sub ID G14B

(Range:00_{16}-FF_{16} ASCII Code)

4

Code Option

45

ENTER

||||||||||||||||||||||||

Code-128

Read

FA70   Disable

||||||||||||||||||||||||

FA71   **Enable**

||||||||||||||||||||||||

Data Digits	Checksum
(Variable)	(Optional)

Type

FB90   **Standard**

||||||||||||||||||||||||

FB91   UCC-128

||||||||||||||||||||||||

The Code-128 can be translated to UCC-128 format if it starts with FNC1 character. The first FNC1 will be translated to "]C1", and next to be a concatenation code as <GS>($7F_{16}$).

]C1	Datas	<GS>	Datas	Checksum

Verify Checksum

FBB0   Disable

||||||||||||||||||||||||

FBB1   **Enable**

||||||||||||||||||||||||

The checksum is presented as the sum module 103 of all data digits.

Tx Checksum

FA60   Disable

||||||||||||||||||||||||

FA61   **Enable**

||||||||||||||||||||||||

Refer 📄26.

Truncate Zero

FA50   **Disable**

||||||||||||||||||||||||

FA51   Enable

||||||||||||||||||||||||

Refer 📄27.

Code-128

Refer ☐27, ☐35.

Specific Adjustments

Truncate Lead | F082
(Range:00_{10}-FF_{10})

Truncate End | F092
(Range:00_{10}-FF_{10})

Min. Length | F0A2
(Range:00_{10}-FF_{10})

Max. Length | F0B2
(Range:00_{10}-FF_{10})

Insert0 Position | F0C2
(Range:00_{10}-FF_{10})

Insert1 Positionh | F0D2
(Range:00_{10}-FF_{10})

Insert0 Data | F0EB
(Range:00_{16}-FF_{16} ASCII Code)

Insert1 Data | F10B
(Range:00_{16}-FF_{16} ASCII Code)

ID | F12B
(Range:00_{16}-FF_{16} ASCII Code)

Sub ID | F14B
(Range:00_{16}-FF_{16} ASCII Code)

4

Code Option

47

ENTER

Code-93

Read	
KA70	**Disable**
KA71	Enable

Format

Data Digits (Variable)	Checksum1 (Optional)	Checksum2 (Optional)

Verify Checksum	
KBB0	Disable
KBB1	One
KBB2	**Two**

The checksum is presented as the sum module 47 of all data digits.

Tx Checksum	
KA60	**Disable**
KA61	Enable

Refer 📂26.

Truncate Zero	
KA50	**Disable**
KA51	Enable

Refer 📂27.

Operation Manual 48

Code-93

Refer 27, 35.

Specific Adjustments

Truncate Lead — K082

(Range:00_{10}-FF_{10})

Truncate End — K920

(Range:00_{10}-FF_{10})

Min. Length — K0A2

(Range:00_{10}-FF_{10})

Max. Length — K0B2

(Range:00_{10}-FF_{10})

Insert0 Position — K0C2

(Range:00_{10}-FF_{10})

Insert1 Positionh — K0D2

(Range:00_{10}-FF_{10})

Insert0 Data — K0EB

(Range:00_{16}-FF_{16} ASCII Code

Insert1 Data — K10B

(Range:00_{16}-FF_{16} ASCII Code

ID — K12B

(Range:00_{16}-FF_{16} ASCII Code)

Sub ID — K14B

(Range:00_{16}-FF_{16} ASCII Code)

4

Code Option

49

Code-11

Read

LA70 **Disable**

LA71 Enable

Format

Data Digits (Variable)	Checksum1 (Optional)	Checksum2 (Optional)

Verify Checksum

LBB0 Disable

LBB1 One

LBB2 **Two**

The checksum is presented as the sum module 11 of all data digits.

Tx Checksum

LA60 **Disable**

LA61 Enable

By setting Enable, checksum1 and checksum2 will be transmitted by the way you set on the checksum verificvation.

Truncate Zero

LA50 **Disable**

LA51 Enable

Refer ⌐27.

Code-11

Refer 🗋27, 🗋35.

Specific Adjustments

Truncate Lead   L082

(Range:00₁₀-FF₁₀)

Truncate End   L920

(Range:00₁₀-FF₁₀)

Min. Length   L0A2

(Range:00₁₀-FF₁₀)

Max. Length   L0B2

(Range:00₁₀-FF₁₀)

Insert0 Position   L0C2

(Range:00₁₀-FF₁₀)

Insert1 Positionh   L0D2

(Range:00₁₀-FF₁₀)

Insert0 Data   L0EB

(Range:00₁₆-FF₁₆ ASCII Code)

Insert1 Data   L10B

(Range:00₁₆-FF₁₆ ASCII Code)

ID   L12B

(Range:00₁₆-FF₁₆ ASCII Code)

Sub ID   L14B

(Range:00₁₆-FF₁₆ ASCII Code)

4

Code Option

51

MSI/Plessey

Read

| MA70 | **Disable** |
| MA71 | Enable |

Format

Data Digits (Variable)	Checksum1 (Optional)	Checksum2 (Optional)

Verify Checksum

MBB0	Disable
MBB1	**Mod 10**
MBB2	Mod 10/10
MBB3	Mod 11/10

The MSI/Plessey has one or two optional checksum characters. The checksum is presented by 3 kinds of method as Mod 10, Mod 10/10 and Mod 11/10. The checksum1 and checksum2 will be calculated as the sum module 10 or 11 of the data digits.

Tx Checksum

| MA60 | **Disable** |
| MA61 | Enable |

Refer 26.

Truncate Zero

| MA50 | **Disable** |
| MA51 | Enable |

Refer 27.

MSI/Plessey

Refer ☐27, ☐35.

Specific Adjustments

Truncate Lead M082

(Range:00_{10}-FF_{10})

Truncate End M092

(Range:00_{10}-FF_{10})

Min. Length M0A2

(Range:00_{10}-FF_{10})

Max. Length M0B2

(Range:00_{10}-FF_{10})

Insert0 Position M0C2

(Range:00_{10}-FF_{10})

Insert1 Positionh M0D2

(Range:00_{10}-FF_{10})

Insert0 Data M0EB

(Range:00_{16}-FF_{16} ASCII Code)

Insert1 Data M10B

(Range:00_{16}-FF_{16} ASCII Code)

ID M12B

(Range:00_{16}-FF_{16} ASCII Code)

Sub ID M14B

(Range:00_{16}-FF_{16} ASCII Code)

4

Code Option

53

ENTER

||||||||||||||||||||||||

UK/Plessey

Read	
NA70	**Disable**
NA71	Enable

Format

Data Digits (Variable)	Checksum1+2 (Optional)

Verify Checksum	
NBB0	Disable
NBB1	**Enable**

Refer 📁26.

Tx Checksum	
NA60	**Disable**
NA61	Enable

Refer 📁26.

Truncate Zero	
NA50	**Disable**
NA51	Enable

Refer 📁27.

UK/Plessey

Refer ⊡27, ⊡35.

Specific Adjustments

Truncate Lead   N082

|||| ||| ||||| |||||
(Range:00_{10}-FF_{10})

Truncate End   N092

|||| ||| ||||| |||||
(Range:00_{10}-FF_{10})

Min. Length   N0A2

|||| ||| ||||| |||||
(Range:00_{10}-FF_{10})

Max. Length   N0B2

|||| ||| ||||| |||||
(Range:00_{10}-FF_{10})

Insert0 Position   N0C2

|||| ||| ||||| |||||
(Range:00_{10}-FF_{10})

Insert1 Position   N0D2

|||| ||| ||||| |||||
(Range:00_{10}-FF_{10})

Insert0 Data   N0EB

|||| ||| ||||| |||||
(Range:00_{16}-FF_{16} ASCII Code)

Insert1 Data   N10B

|||| ||| ||||| |||||
(Range:00_{16}-FF_{16} ASCII Code)

ID   N12B

|||| ||| ||||| |||||
(Range:00_{16}-FF_{16} ASCII Code)

Sub ID   N14B

|||| ||| ||||| |||||
(Range:00_{16}-FF_{16} ASCII Code)

4

Code Option

55

Telepen

Read

| OA70 | **Disable** |
| OA71 | Enable |

Format

| Data Digits
(Variable) | Checksum
(Optional) |

Type

OB90	**Numeric**
OB91	ASCII
OB92	Auto Switching

A Telepen can be transimtted by Numeric and ASCII format. Characters can be mixed the both format into the Telepen barcode. By setting Auto Switching, datas can be conversed between Numeric and Full ASCII by character <DLE>($7F_{16}$) automatically.

Verify Checksum

| OBB0 | **Disable** |
| OBB1 | Enable |

Refer ☐26.

Tx Checksum

| OA60 | **Disable** |
| OA61 | Enable |

Refer ☐26.

Truncate Zero

| OA50 | **Disable** |
| OA51 | Enable |

Refer ☐27.

Telepen

Refer ☐27, ☐35.

Specific Adjustments

Truncate Lead | O082

(Range:00_{10}-FF_{10})

Truncate End | O920

(Range:00_{10}-FF_{10})

Min. Length | O0A2

(Range:00_{10}-FF_{10})

Max. Length | O0B2

(Range:00_{10}-FF_{10})

Insert0 Position | O0C2

(Range:00_{10}-FF_{10})

Insert1 Positionh | O0D2

(Range:00_{10}-FF_{10})

Insert0 Data | O0EB

(Range:00_{16}-FF_{16} ASCII Code)

Insert1 Data | O10B

(Range:00_{16}-FF_{16} ASCII Code)

ID | O12B

(Range:00_{16}-FF_{16} ASCII Code)

Sub ID | O14B

(Range:00_{16}-FF_{16} ASCII Code)

4

Code Option

57

ENTER

|||||||||||||||||||||||||||||||

RSS14

PA70 **Disable**

|||||||||||||||||||||||||||||||

PA71 Enable

|||||||||||||||||||||||||||||||

RSS code has a new name as : **GS1 databar**

Code Mark

PA20 **Disable**

|||||||||||||||||||||||||||||||

PA21 Enable

|||||||||||||||||||||||||||||||

If you want **]e0** to be output, then please set up the Code Mark as Enable.

Application ID

PA30 **Disable**

|||||||||||||||||||||||||||||||

PA31 Enable

|||||||||||||||||||||||||||||||

If you want **01** to be output, then pleaswe set up the Application ID as **Enable**.

Tx Checksum

PA60 **Disable**

|||||||||||||||||||||||||||||||

PA61 Enable

|||||||||||||||||||||||||||||||

Refer 📄26.

Truncate Zero

PA50 **Disable**

|||||||||||||||||||||||||||||||

PA51 Enable

|||||||||||||||||||||||||||||||

Refer 📄27.

RSS14

END

‖‖‖‖‖‖‖‖‖‖‖

Specific Adjustments

Truncate Lead	P082

‖‖‖‖‖‖‖‖‖‖‖

$(Range:00_{10}\text{-}FF_{10})$

Truncate End	P092

‖‖‖‖‖‖‖‖‖‖‖

$(Range:00_{10}\text{-}FF_{10})$

Insert0 Position	P0C2

‖‖‖‖‖‖‖‖‖‖‖

$(Range:00_{10}\text{-}FF_{10})$

Insert1 Positionh	P0D2

‖‖‖‖‖‖‖‖‖‖‖

$(Range:00_{10}\text{-}FF_{10})$

Insert0 Data	P0EB

‖‖‖‖‖‖‖‖‖‖‖

$(Range:00_{16}\text{-}FF_{16}\text{ ASCII Code})$

Insert1 Data	P10B

‖‖‖‖‖‖‖‖‖‖‖

$(Range:00_{16}\text{-}FF_{16}\text{ ASCII Code})$

ID	P12B

‖‖‖‖‖‖‖‖‖‖‖

$(Range:00_{16}\text{-}FF_{16}\text{ ASCII Code})$

Sub ID	P14B

‖‖‖‖‖‖‖‖‖‖‖

$(Range:00_{16}\text{-}FF_{16}\text{ ASCII Code})$

4

Code Option

59

ENTER

||||||||||||||||||||||||||||||

RSS14 Limited

READ	
QA70	**Disable**
QA71	Enable

Code Mark	
QA20	**Disable**
QA21	Enable

If you want the **]e0** to be output, then please set the Code Mark as **Enable**.

Application ID	
QA30	**Disable**
QA31	Enable

If you want the **01** to be output, then please set the Application ID as **Enable**.

Tx Checksum	
QA60	**Disable**
QA61	Enable

Refer 📂26.

Truncate Zero	
QA50	**Disable**
QA51	Enable

Refer 📂27.

RSS14 Limited

Specific Adjustments

Refer ☐27, ☐35.

Truncate Lead Q082

(Range:00_{10}-FF_{10})

Truncate End Q092

(Range:00_{10}-FF_{10})

Insert0 Position Q0C2

(Range:00_{10}-FF_{10})

Insert1 Positionh Q0D2

(Range:00_{10}-FF_{10})

Insert0 Data Q0EB

(Range:00_{16}-FF_{16} ASCII Code)

Insert1 Data Q10B

(Range:00_{16}-FF_{16} ASCII Code)

ID Q12B

(Range:00_{16}-FF_{16} ASCII Code)

Sub ID Q14B

(Range:00_{16}-FF_{16} ASCII Code)

4

Code Option

61

ENTER

|||||||||||||||||||||||||||||||||

RSS14 Stacked

READ

RA70 **Disable**

||||||||||||||||||||||||||||||

RA71 Enable

||||||||||||||||||||||||||||||

Code Mark

RA20 **Disable**

||||||||||||||||||||||||||||||

RA21 Enable

||||||||||||||||||||||||||||||

If you want **]e0** to be output, then please set up the Code Mark as **Enable**.

Application ID

RA30 **Disable**

||||||||||||||||||||||||||||||

RA31 Enable

||||||||||||||||||||||||||||||

If you want **01** to be output, then please set up the Application ID as **Enable**.

Tx Checksum

RA60 **Disable**

||||||||||||||||||||||||||||||

RA61 Enable

||||||||||||||||||||||||||||||

Refer 📑26.

Truncate Zero

RA50 **Disable**

||||||||||||||||||||||||||||||

RA51 Enable

||||||||||||||||||||||||||||||

Refer 📑27.

RSS14 Stacked

END

Refer ☐27, ☐35..

Specific Adjustments

Truncate Lead   R082

(Range:00_{10}-FF_{10})

Truncate End   R092

(Range:00_{10}-FF_{10})

Insert0 Position   R0C2

(Range:00_{10}-FF_{10})

Insert1 Positionh   R0D2

(Range:00_{10}-FF_{10})

Insert0 Data   R0EB

(Range:00_{16}-FF_{16} ASCII Code)

Insert1 Data   R10B

(Range:00_{16}-FF_{16} ASCII Code)

ID   R12B

(Range:00_{16}-FF_{16} ASCII Code)

Sub ID   R14B

(Range:00_{16}-FF_{16} ASCII Code)

4

Code Option

RSS Expansion

READ

SA70 **Disable**

SA71 Enable

Code Mark

SA20 **Disable**

SA21 Enable

If you want the **]e0** to be output, then please set up the Code Mark as **Enable**.

Application ID

SA30 **Disable**

SA31 Enable

If you want the **01** to be output, then please set up the Application ID as **Enable**.

Truncate Zero

SA50 **Disable**

SA51 Enable

Refer 27.

RSS Expansion

Refer 27, 35..

Truncate Lead | S082

(Range:00_{10}-FF_{10})

Truncate End | S092

(Range:00_{10}-FF_{10})

Insert0 Position | S0C2

(Range:00_{10}-FF_{10})

Insert1 Positionh | S0D2

(Range:00_{10}-FF_{10})

Insert0 Data | S0EB

(Range:00_{16}-FF_{16} ASCII Code)

Insert1 Data | S10B

(Range:00_{16}-FF_{16} ASCII Code)

ID | S12B

(Range:00_{16}-FF_{16} ASCII Code)

Sub ID | S14B

(Range:00_{16}-FF_{16} ASCII Code)

4

Code Option

65

RSS Expansion stacked

READ	
TA70	**Disable**
TA71	Enable

Code Mark	
TA20	**Disable**
TA21	Enable

If you want to output the **]e0**, then please set up the Code Mark as **Enable**.

Application ID	
TA30	**Disable**
TA31	Enable

If you want to output the **01**, then please set up the Appliation ID as **Enable**.

Truncate Zero	
TA50	**Disable**
TA51	Enable

Refer 27.

RSS Expansion Stacked

Refer ⃞27, ⃞35..

Truncate Lead   T082

(Range:00_{10}-FF_{10})

Truncate End   T092

(Range:00_{10}-FF_{10})

Insert0 Position   T0C2

(Range:00_{10}-FF_{10})

Insert1 Positionh   T0D2

(Range:00_{10}-FF_{10})

Insert0 Data   T0EB

(Range:00_{16}-FF_{16} ASCII Code)

Insert1 Data   T10B

(Range:00_{16}-FF_{16} ASCII Code)

ID   T12B

(Range:00_{16}-FF_{16} ASCII Code)

Sub ID   T14B

(Range:00_{16}-FF_{16} ASCII Code)

4

Code Option

67

Preamble/Postamble

Tx Preamble

8C60   Disable

8C61   **Enable**

By setting Enable, Preamble will be appended in front of the barcode. Refer to String Output Flowchart on 5.

Preamble Data

830D   Data

(Range:00_{16}-FF_{16} ASCII Code)

There is One control digit can be programmed as Preamble. It will be appended automatically when each barcode is decoded.

Tx Postamble

8C70   Disable

8C71   **Enable**

By setting Enable, Postamble will be appended after the barcode. Refer to String Output Flowchart on 5.

Postamble Data

838D   Data

(Range:00_{16}-FF_{16} ASCII Code)

Generally, your application need to append a carriage return character to finish data transmission. Or you may set the Postamble to be Disable to have your application without any control characters apppended after data transmission. The factory default of Postamble Data is <CR>($0D_{16}$) and <LF>($0A_{16}$).

Example Append the code "**@+**" after each barcode transimitted.

1) ENTER ⇨   Entry Programming

2) Enable ⇨   Enable Postamble Transmission

3) Data ⇨ 4 ⇨ 0 ⇨ SET ⇨ Postamble Data "@"
        "@"

4) END   Exit Programming

Prefix/Suffix

The Prefix data can be set up to 8 characters. The string of Prefix data will be behind the Preamble data and before the barcode data.

Prefix Data

Data | 820D

(Range:00_{16}-FF_{16} ASCII Code)
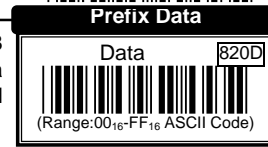
The Suffix data can be set up to 8 characters. The string of Suffix data will be behind the Postamble data and the barcode data. Refer String output Flowchart on page 5.

Suffix Data

Data | 828D

(Range:00_{16}-FF_{16} ASCII Code)
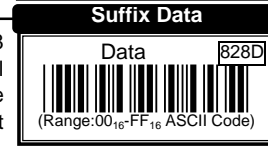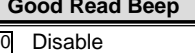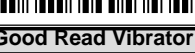
Example Append a string "**ABCD**" after each barcode transmission

1) **ENTER**⇨Programming entry

2) **Data**⇨4⇨1⇨4⇨2⇨4⇨3⇨4⇨4⇨**SET**⇨Suffix Data "ABCD"
       "A"   "B"   "C"   "D"

3) **End**   Exit Programming

5

String Format

69

ENTER

Memory

Tx. Header

7A00 Disable

7A01 **Enable**

The option enables to display the header information while uploading the barcode data from the flash memory.

Tx. Date & Time

7A10 Disable

7A11 **Enable**

The option enables to display the date and time while uploading the barcode data from the flash memory

Reject Same

7A20 **Disable**

7A21 Enable

The option enables to reject the same barcode data scanned.
This option I sonly available when the trigger mode is set to "**Continue**"

Good Read Beep

7A60 Disable

7A61 **Enable**

This option enables the Beep sound when the barcode data is successfully read

Good Read Vibrator

7A70 Disable

7A71 **Enable**

If set Enable ,the Scanner Vibrates when successfully read a barcode.
This function is only applicable in CM 200 series. For CM 500 series, good read vibration is an extra purchase option.

Time Format

7B90 hh:mm:ss

7B91 hh:mm

The options of time display

Operation Manual

70

Memory

The options of date display.

Date Format

yyyy/mm/dd   7BD0

mm/dd/yyyy   7BD1

yy/mm/dd   7BD2

mm/dd/yy   7BD3

yyyy-mm-dd   7BD4

mm-dd-yyyy   7BD5

yy-mm-dd   7BD6

mm-dd-yy   7BD7

dd/mm/yyyy   7BD8

dd/mm/yy   7BD9

dd-mm-yyyy   7BDA

dd-mm-yy   7BDB

6

Memory

71

ENTER

||||||||||||||||||||||||||

Memory

7052	Lamp Off delay

||||||||||||||||||||||||||

(Range:00_{10}-FF_{10} Unit:1s)

7062	Standby Time

||||||||||||||||||||||||||

(Range:00_{10}-FF_{10} Unit:1s)

707A	Separator

||||||||||||||||||||||||||

(Range:00_{16}-FF_{16} ASCII Code)

Lamp Off Delay: This enables to set the duration time of laser beam power on, the laser beam will automatically turn off if barcode label not scanned. This setting is only available when the trigger mode is set as" **good read off**" or **"Timeout Off"**. **Default: 5 Sec.**

Standby Time: When the light source turns off, this function enables to set the time to turn off the main power of the scanner. **Default: 0 sec**.

Separator: The separator setting of date, time, and the barcode data when uploading the barcode data from flash memory.

Memory

6

Memory

Bluetooth

BT Module Enter

/$%BTM

In order to set up the Bluetooth option," BT module Enter" must be scan first.

Local Name

ZBT1

This option enables the user to assigned the scanner name. Please refer to the HEX ASCII table (Form 0~9, A~F). The first digit and last digit cannot be space or "-". If scanner name setting is incorrect, connection failure will occur.

Remote Mac address

ZBT2

Options of Mac address setting, total of 12 digits, Please refer to the HEX ASCII table (From 0~9, A~F).
(1) If scanner connection mode is set as"**Slave**", Scanner address can be set as 12 digits of "0" to connect with any types of Bluetooth devices. OR scanner address can be assigned with appointed Bluetooth device MAC address to connect with that particular Bluetooth device.]
(2)If scanner connection mode is set as" **Master**" scanner address must assign as appointed Bluetooth device MAC address. And it cannot be set As 12 digits of "0".

Pin Code

ZBT3

Pin code password setting for scanner connection. **Default is "1234"**

Bluetooth

Bluetooth connection Mode

Please refer to page 76 to scan the numbers to switch different mode.

Mode

ZBT4

0:Slave
1:Master
2:HID

Procedure:
1) scan "**BT module Enter"**
2) scan " **Mode"**
3) scan **0** or **1** or **2** to switch mode (page 76).
4) scan **Set**
5) scan **END**

7
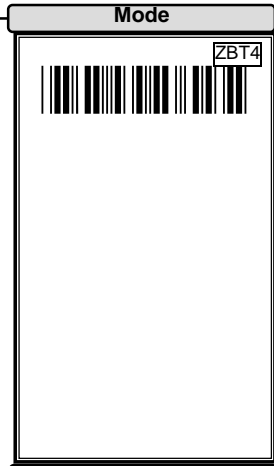
Bluetooth

Default

Bluetooth setting reset to **Default**.

ZDEF

LIST

List function will display the parameters of the Bluetooth setting. For example, the values of Local Name,Remote Mac address,Pin Code,Mode.

ZLST

Display values as following:
Serial Adaptor (Local Name)
00126F006E9B (Mac Address)
1234 (Pin Code)
0 (Mode)

Note:
1. When paring in progress, pressing the paring button again will cancel the current pairing progress.
2. When resetting the connection of Slave/ Master mode, user must re-pairing with the bluetooth device for rest changes.
3. When Blue LED flashing quickly, it means resetting the changes to the scanner.
4. When Blue LED flashing slowly, it means pairing progress waiting.
5. When Connection mode is set as "Slave", pairing process must be accomplish in 60 seconds. Otherwise, connection failure will occur.

ENTER

Wireless

Good Read Beep

6A60 Disable

6A61 **Enable**

This option enables the Beep sound when the barcode data is successfully read

Good Read Vibrator

6A70 **Disable**

6A71 **Enable**

If set Enable ,the Scanner Vibrates when successfully read a barcode.
This function is only applicable in CM 200 series. For CM 500 series, good read vibration is an extra purchase option.

Specific Adjustments

6042 Connect Off Time

(Range:00_{10}-FF_{10} Unit:1s)

6052 Lamp Off delay

(Range:00_{10}-FF_{10} Unit:1s)

6062 Standby Time

(Range:00_{10}-FF_{10} Unit:1s)

6072 Timeout

(Range:00_{10}-FF_{10} Unit:1s)

Connect Off Time: This enables to set the duration timing into sleep mode, while wireless connection status is successfully connected. **Default 60 Sec**

Lamp Off Delay: This enables to set the duration time of laser beam power on, the laser beam will automatically turn off if barcode label not scanned. This setting is only available when the trigger mode is set as" **good read off**" or **"Timeout Off"**. Default: 5 Sec.

Standby Time: When the light source turns off, this function enables to set the time to turn off the main power of the scanner. Default: 0 sec.

Timeout: the timeout setting for the handshaking acknowledgment from the host PC. If scanner did not receive acknowledgement from the host PC, the warning sound will be active. The function is particular useful for some application which the host PC will take longer response time. **Default: 10 Sec.**

8

Wireless

Special Setting For CM500 series

Send Barcode data

/$%MTX

In Bluetooth mode or connecting with USB cable, scan this barcode will transmit the saved barcode data in the memory to PC .

Clear barcode data

/$%MCR

Under any operation mode, scan this barcode will erase all the barcode data saved in the memory.

Bluetooth to Memory

/$%TOM

For CM500 Three in one function model, you can scan this barcode to switch from Bluetooth mode to Memory mode without pressing the Scan key for mode switching.

Memory to Bluetooth

/$%TOB

For CM500 Three in one function model, you can scan this barcode to switch from Memory mode to Bluetooth mode without pressing the Scan key for mode switching.

Cable Type

IBM PC, XT, AT & PS/2		
Function	6p Mini Din(M)	6p Mini Din(F)
Clock (Host)	5	---
Data (Host)	1	---
Clock (KBD.)	---	5
Data (KBD.)	---	1
Ground	3	3
GND Shield	3	3
VCC (+5V)	4	4
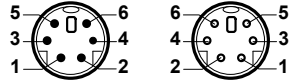
5p Mini Din(M)   6p Mini Din(F)

RS-232		
Function	9p D-Sub(F)	DC Jack(M)
TxD	2	. . .
RxD	3	. . .
RTS	8	. . .
CTS	7	. . .
Shorted	4,6	. . .
Ground	5	2
GND Shield	5	2
VCC (+5V)	9	1
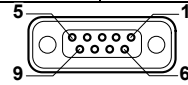
9p D-Sub(F)

DC Jack(M)

Test Chart

UPC-A

000012345670

EAN-13 (ISBN) with Add-on 5

9789572216675   00420
(ISBN: 9572216678)

Code-39 (Full ASCII Code)

* C O D E 3 9 T + E + S + T *
(Full ASCII Code: *CODE39 Test*)

Interleaved 2 of 5

1 2 3 4 5 6 7 8 9 0 5

Code-93

C O D E 9 3 T E S T Y d

Code-128 (C Type)

0123456789e
(UCC/EAN-128:)C10123456789e)

Test Chart

MSI/Plessey

1 0 5 5 8 3 0 2 5

Telepen

T E L E P E N   T e s t +
(Numeric: 57424942534251055774888916)

RSS14

(01)20012345678909

RSS Expansion Stacked

(01) 0 0614141 000012

PDF417

PDF417Test

ASCII Code Table

L \ H	0 (*)	1 (*)	0	1
0	Null		NUL	DLE
1	Up	F1	SOH	DC1
2	Down	F2	STX	DC2
3	Left	F3	ETX	DC3
4	Right	F4	EOT	DC4
5	PgUp	F5	ENQ	NAK
6	PgDn	F6	ACK	SYN
7		F7	BEL	ETB
8	Bs	F8	BS	CAN
9	Tab	F9	HT	EM
A		F10	LF	SUM
B	Home	Esc	VT	ESC
C	End	F11	FF	FS
D	Enter	F12	CR	GS
E	Insert	Ctrl+	SO	RS
F	Delete	Alt+	SI	US

(*) For keyboard wedge only.

L \ H	2	3	4	5	6	7
0	SP	0	@	P	`	p
1	!	1	A	Q	a	q
2	"	2	B	R	b	r
3	#	3	C	S	c	s
4	$	4	D	T	d	t
5	%	5	E	U	e	u
6	&	6	F	V	f	v
7	'	7	G	W	g	w
8	(	8	H	X	h	x
9	)	9	I	Y	i	y
A	*	:	J	Z	j	z
B	+	;	K	[	k	{
C	,	<	L	\	l	|
D	-	=	M	]	m	}
E	.	>	N	^	n	~
F	/	?	O	_	o	DEL

0 — %00
1 — %01
2 — %02
3 — %03
4 — %04
5 — %05
6 — %06
7 — %07
8 — %08
9 — %09
A — %0A
B — %0B
C — %0C
D — %0D
E — %0E
F — %0F
SET — %OK