

# Ez One Shot<sup>®</sup>

## 1D SCAN ENGINE USER'S MANUAL



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# CLONING MODE

## WHAT IS CLONING MODE?

CLONING duplicates a scanner's settings in other scanners. It can save time when a number of scanners must be programmed to the same settings.

## HOW SHOULD CLONING WORK?

1. Using this guide, make all the necessary settings for one wand.
2. Scan the CLONING MODE bar code shown below.
3. When CLONING MODE is scanned, all setup parameters will be converted to alphanumeric characters and shown on the monitor.
4. Using a bar code printer, print out all the setup parameters as Code 39 bar code labels.
5. Scan the printed labels sequentially with each wand to be programmed.



## NOTES:

1. All cloning strings are upper case.
2. All cloning strings printed on labels should be the same as those on the monitor sequentially from first to last.
3. Cloning mode works in Word Note Pad only.
4. Never edit the data on the first row (.A017\$). It is an entry command for cloning.
5. The cloning string's length can be adjusted by combining multiple strings into one, or by breaking one string into multiple strings starting from the second row after "...". Length must be in sequences of four, such as 4, 8, 12, 16, 20 (MAX).
6. Be sure to print the dots exactly where they are shown on the monitor.

## FORMAT OF CLONING

\* Format of Cloning:

1st row >>> ".A017\$" ( never edit any data of the first row )

2nd row >>> "...XXXX" you can adjust the String's Length starting from the dots "..." forward. The length of the string should be in 4, 8, 12, 16 or 20 ( MAX ) digits.

3rd row ~ so on >>> XXXX

End row - A dot "." Is the ending of cloning.

XXXX Stands for any string

# CLONING MODE

## EXAMPLE :

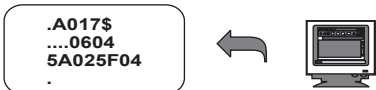
### 1. PROJECT ASSIGNMENTS:

- 1.1. Beep tone: **BEEP LOW**
- 1.2. Capslock Mode: **CAPSLOCK ON.**
- 1.3. Reading Mode: **CONTINUOUS AUTO OFF.**

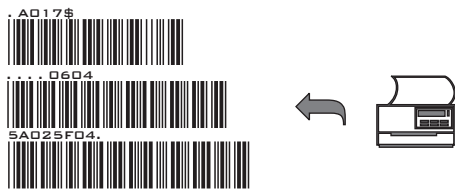
### 2. SETTING PROCEDURE:

- 2.1. Scan **BEEP LOW (GROUP 6).**
- 2.2. Scan **CAPSLOCK ON (GROUP 16).**
- 2.3. Scan **CONTINUOUS AUTO OFF (GROUP2).**

3. All parameters will be converted to alphanumeric characters and shown on the monitor.



4. Print the results shown on the monitor as bar codes with a bar code printer. The bar codes should be in the Code 39 symbology.



5. Scan these labels with any of the wands that must be programmed with the same settings as the first wand. Be sure to scan from the first row to the second and so on sequentially, top to bottom.

## CORRECT SETTING

.A017\$ .... 0604 5A02 5F04 .	4 4 4 4 . (Dot)	.A017\$ ....06045A02 5F04. 4+.(Dot)	12 4+.(Dot)
--	-----------------------------	--	----------------

## WRONG SETTING

.A017\$ ..0604 5A02 5F04 .	←	<b>Wrong Setting:</b> The string “...” consists of 4 Dots, located at the beginning of second row; do not break the “...” into multiple strings.
.A017\$ ....06045 A025F04 .	✓ 9 x } ← 7 x } ← . (Dot) ✓	<b>Wrong Setting:</b> The string lengths of the second and third row do not match the length requirements, because rows should be in length of four digits.
.A017\$.... 0604 5A02 5F04.	X ← 4 ✓ 4 ✓ 4+.(Dot) ✓	<b>Wrong Setting because you add “....” after .A017\$:</b> The .A017\$ is a FIXED parameter to enter setup procedure. It is an unchangeable parameter. <b>Never add, delete or rearrange data from the FIRST row.</b>

# HOW TO SET PARAMETERS

## How do you program a scanner with this user's guide?

1. Use the scanner to scan at the barcode representing the function/parameter you want to set.
2. When you hear two beeps, the new settings have been defined or updated into the memory processor.

Default parameters are indicated in bold type and underlined characters. The character font is ARIAL BLACK. CD = Check Digit. CDV = Check Digit Verification.

Most settings require only a single barcode, but a few need several different barcodes (multi-step configuration) to be scanned in order to completely define a setting. They are:

### **Preamble / Postamble (maximum 16 digits)**

Step 1: Scan CLR PRE/POSTAMBLE.

Step 2: Scan PREAMBLE or POSTAMBLE.

Step 3: Scan any alphanumeric from Full ASCII table in Group 38-49

Step 4: Scan PREAMBLE or POSTAMBLE.

### **Min Length / Max Length**

Step 1: Scan MIN LENGTH or MAX LENGTH.

Step 2: Scan two digits from Full ASCII numeric table in Group 46

Step 3: Scan MIN LENGTH or MAX LENGTH.

### **Accuracy Adjustment**

Step 1: Scan ACCURACY ADJUSTMENT.

Step 2: Scan one digit from GROUP 8

Step 3: Scan ACCURACY ADJUSTMENT.

### **Set Code ID (Example: Code 39)**

Step 1: Scan CODE 39 SET ID from Group 11

Step 2: Scan either one or two alphanumerics (maximum 2 digits) from Full ASCII table in Group 40-46

Step 3: Scan CODE 39 SET ID from Group 11

### **Set A Data - (CX-Codabar, ABC Codabar, Codabar Coupling).**

Step 1: Scan SET INSERT DATA.

Step 2: Scan one alphanumeric character from Full ASCII Table in Group 40-46

Step 3: Scan SET INSERT DATA.

## **NOTE:**

1. The scanner will beep three times as indication that a setting is not yet complete or unexpected barcode is scanned during multi-step configuration.
2. If you make a mistake, forget a step, etc., and want to abort the multi-step configuration, scan RESET/ABORT and start over again.

**RESET / ABORT**



# GROUP-1

## GENERAL SETTINGS

---

### DEFAULT

.A001\$



\*Reset to factory default

---

### CHECK VERSION

.A007\$



\*Check firmware version

---

### RESET/ ABORT

.P023\$



\*Abort multi-step configuration

---

### SETUP CODE READ

.B015\$



SETUP CODE ON

.B016\$



SETUP CODE OFF

\*Caution: Scanning SETUP CODE OFF will turn the scanner into unprogrammable state and the scanner will not react to any configuration barcode!

# GROUP-2

## READING MODE

---

. F005\$



CONTINUOUS MODE

- \* LED is always on.
- \* The trigger does not function in Continuous Mode.

. F001\$



FLASH MODE

- \* The LED is on steady if a barcode is close to the scanner, but starts flashing if no barcode is detected after 60 seconds.
- \* The trigger does not function in Flash Mode.

. F002\$



TRIGGER MODE

- \* The LED will turn on when the trigger is pressed.
- \* The LED will turn off when the trigger is released.

. F006\$



CONTINUOUS AUTO OFF

- \* The LED is always on when the trigger is pressed.
- \* The LED will go off if no barcode has been detected after 60 seconds.

. F003\$



TOGGLE MODE

- \* The LED is always on when the trigger is pressed.
- \* The LED will go off if one barcode is read.

. F004\$



TEST MODE

- \* Factory Scanability Test Use Only

. F061\$



SERIAL TRIGGER MODE

- \* CAUTION !! Do NOT scan this configuration barcode while in USB HID interface !!
- \* The hardware trigger does not function in Serial Trigger Mode. Only serial command can be used as trigger.
- \* This configuration barcode is currently supported by MT15 and latest version of MT780(FW: HM3-e-x.xx) only.
- \* Before switching to Serial Trigger Mode, please first set Start Scanning Character and Stop Scanning Character (see Group 5)

# GROUP-3

## ADVANCED READING MODE SETTINGS

---

### LED AUTO-OFF CONTROL (TRIGGER & TOGGLE MODE)

. F038\$



LED AUTO OFF DISABLE

. F039\$



LED AUTO OFF ENABLE

#### NOTE:

1. When enabled, LED will automatically go off after LED Auto-Off Timeout elapses.
- 

### LED AUTO-OFF TIMEOUT (TRIGGER, TOGGLE, FLASH, CONTINUOUS AUTO OFF MODE)

. F043\$



LED AUTO OFF TIMEOUT  
(DEFAULT = 60 SEC)

#### NOTE:

1. Supported by MT15 and latest MT780(FW: HM3-e-x.xx) only.

#### STEPS:

1. Scan LED AUTO-OFF TIMEOUT
  2. Scan two digits (01~60) from Full ASCII Code39 numeric table  
(unit = 1 sec, range = 1 sec ~ 60 sec, Default = 60 sec)
  3. Scan LED AUTO-OFF TIMEOUT
- 

### FLASH TIMEOUT (FLASH MODE)

. F041\$



FLASH TIMEOUT  
(DEFAULT = 60 SEC)

#### NOTE:

1. Supported by MT10, MT30, MT40/MT40W only.

#### STEPS:

1. Scan FLASH TIMEOUT
  2. Scan two digits (03~60) from Full ASCII Code39 numeric table  
(unit = 1 sec, range = 3 sec ~ 60 sec, Default = 60 sec)
  3. Scan FLASH TIMEOUT
- 

### LED AUTO-OFF TIMEOUT (CONTINUOUS AUTO OFF MODE)

. F042\$



LED AUTO OFF TIMEOUT  
(DEFAULT = 60 SEC)

#### NOTE:

1. Supported by MT10, MT30, MT40/MT40W only.

#### STEPS:

1. Scan LED AUTO OFF TIMEOUT
2. Scan two digits (03~60) from Full ASCII Code39 numeric table  
(unit = 1 sec, range = 3 sec ~ 60 sec, Default = 60 sec)
3. Scan LED AUTO OFF TIMEOUT



# GROUP-4

## ADVANCED READING MODE SETTINGS

---

### TRIGGER CONTROL (FLASH, CONTINUOUS & TEST MODE)

. F036\$



TRIGGER CONTROL DISABLE

. F037\$



TRIGGER CONTROL ENABLE

#### NOTE:

1. When enabled, LED can be switched on/off by pressing trigger.
- 

### IDENTICAL READ INTERVAL (FLASH, CONTINUOUS & CONTINUOUS AUTO OFF MODE)

. F040\$



IDENTICAL READ INTERVAL  
(DEFAULT = 1.0 SEC)

#### NOTE:

1. The interval will start counting only after the scanned barcode is removed from the aimer of scanner. If you want to read the same barcode continuously without any timeout, please use Test Mode.

#### STEPS (for MT15, MT780(FW: HM3-e-x.xx)):

1. Scan IDENTICAL READ INTERVAL
2. Scan two digits (01~14) from Full ASCII Code39 numeric table (Group 46)  
(01=0.1 Sec, 02=0.2 Sec, 03=0.3 Sec, 04=0.4 Sec, 05=0.5 Sec  
06=1.0 Sec, 07=1.5 Sec, 08=2.0 Sec, 09=2.5 Sec, 10=3.0 Sec  
11=3.5 Sec, 12=4.0 Sec, 13=4.5 Sec, 14=5.0 Sec, Default = 06 (1.0 Sec))
3. Scan IDENTICAL READ INTERVAL

#### STEPS (for MT30, MT40/MT40W, MT780(FW: SM3-e-x.xx)):

1. Scan IDENTICAL READ TIMEOUT
2. Scan two digits (01~50) from Full ASCII Code39 numeric table (Group 46)  
(unit = 100mS, range = 100mS ~ 5000mS, Default = 1000mS)
3. Scan IDENTICAL READ TIMEOUT

#### STEPS (for MT10 and older models):

1. Scan IDENTICAL READ TIMEOUT
  2. Scan two digits (1~5) from Full ASCII Code39 numeric table (Group 46)  
(unit = 1 sec, range = 1 sec ~ 5 sec, Default = 1 sec)
  3. Scan IDENTICAL READ TIMEOUT
- 

### FIXED SCAN RATE

. B036\$



DISABLE  
(AUTO-ADAPTIVE)

. B035\$



ENABLE  
(FIXED SCAN RATE)

#### NOTE:

1. Once enabled, scan rate will be fixed at top speed, optimized for moving barcode reading, at the cost of reduced reading range.
2. Supported by MT30, MT40/MT40W only.

# GROUP-5

## ADVANCED READING MODE SETTINGS

---

### START SCANNING CHARACTER & STOP SCANNING CHARACTER (SERIAL TRIGGER MODE)

. 8033\$



START SCANNING CHARACTER  
(DEFAULT = N/A)

. 8034\$



STOP SCANNING CHARACTER  
(DEFAULT = N/A)

#### NOTE:

1. Please properly set Start/Stop Scanning Character before entering Serial Trigger Mode.
2. Supported by MT15 and latest MT780(FW: HM3-e-x.xx) only.

#### STEPS:

1. Scan START/STOP SCANNING CHARACTER
  2. Scan 1~10 digits of alphanumerics or control codes from the Full ASCII table (Group 38-46).
  3. Scan START/STOP SCANNING CHARACTER
- 

### NO READ STATUS (TRIGGER, TOGGLE, FLASH, CONTINUOUS AUTO OFF, SERIAL TRIGGER MODE)

. D040\$



NO READ STATUS DISABLE

. D041\$



NO READ STATUS ENABLE

#### NOTE:

1. When enabled, a "No Read" message will be sent after LED Auto-Off Timeout elapses.
  2. For Trigger Mode and Toggle Mode, LED Auto-Off Control must also be enabled for No Read Status to be functional.
  3. Supported by MT15 and latest MT780(FW: HM3-e-x.xx) only.
- 

### NO READ MESSAGE (TRIGGER, TOGGLE, FLASH, CONTINUOUS AUTO OFF, SERIAL TRIGGER MODE)

. D042\$



NO READ MESSAGE  
(DEFAULT = "No Read")

#### NOTE:

1. No Read Status must also be enabled for No Read Message to be functional.
2. Supported by MT15 and latest MT780(FW: HM3-e-x.xx) only.

#### STEPS:

1. Scan NO READ MESSAGE
2. Scan 1~7 alphanumerics from Full ASCII Code39 table (Group 40-46)
3. Scan NO READ MESSAGE

# GROUP-6

## BEEP TONE, TERMINATOR

---

### BEEP TONE

.F019\$



BEEP HIGH

.F018\$



BEEP MEDIUM

.F012\$



BEEP OFF

.F022\$



BEEP LOW

---

### TERMINATOR

.D010\$



NONE

.D011\$



LF

.D012\$



CR

.D013\$



CR+LF

.D014\$



TAB

.D015\$



SPACE

.D016\$



ESC

### NOTES:

Below is the position of Terminator among output data string:

[Preamble] [Symbology ID] [Barcode Length] [Barcode Data] [Postamble] **[Terminator]**

By default, with Preamble, Postamble, Barcode Length and Symbology ID disabled, the scanner data output will be:

[Barcode Data] **[Terminator]**

1. For the USB HID interface the default terminator is CR.
2. For the USB VCP/UART interface the default terminator is CR+LF.

# GROUP-7

## SEND DATA LENGTH, PREAMBLE & POSTAMBLE

### SEND DATA LENGTH

.D019\$



SEND DATA LENGTH ON

.D020\$



SEND DATA LENGTH OFF

---

### PREAMBLE & POSTAMBLE ( PREFIX AND SUFFIX )

.A011\$



CLEAR PRE/ POSTAMBLE

.A012\$



PREAMBLE (16)

.A013\$



POSTAMBLE (16)

### EXAMPLE:

Set PREAMBLE String as “##”

POSTAMBLE String as “\$\$”

### SETTING PROCEDURE:

STEP 1 : Scan : CLEAR PRE/ POSTAMBLE.

STEP 2 : Scan : PREAMBLE.

STEP 3 : Scan : “#” twice from FULL ASCII Table (Group 40)

STEP 4 : Scan : PREAMBLE.

STEP 5 : Scan : POSTAMBLE.

STEP 6 : Scan : “\$” twice from FULL ASCII Table (Group 40)

STEP 7 : Scan : POSTAMBLE.

### DATA FORMAT:

[Preamble] [Symbology ID] [Barcode Length] [Barcode Data] [Postamble] [Terminator]

### NOTES:

1. A PREAMBLE is a string of up to 16 characters added to the beginning of a scanned barcode.
2. A POSTAMBLE is a string of up to 16 characters added to the end of a scanned barcode.
3. Default value for both: None.

# GROUP-8

## ACCURACY ADJUSTMENT

---



---

**ACCURACY  
ADJUSTMENT**



Accuracy Adjustment assures a more reliable decoded output. Enabling the feature and setting a number from 1 to 9 subjects the decoded output a higher standard of accuracy. The higher the number, the greater the accuracy.

---

### STEPS:

1. Scan ACCURACY ADJUSTMENT.
2. Scan one digit (0~9) from barcode menu above.  
(Default = 1)
3. Scan ACCURACY ADJUSTMENT.

### NOTE:

1. The scanner will beep three times as indication that a setting is not yet complete or unexpected barcode is scanned during multi-step configuration.
2. If you make a mistake, forget a step, etc., and want to abort the multi-step configuration, scan RESET/ABORT and start over again.

**RESET / ABORT**



# GROUP-9

## INVERSE BARCODE, CODE ID

---

### ENABLE INVERSE BARCODE

.D021\$



DISABLE INVERSE BARCODE  
(READS POSITIVE BARCODE ONLY)

.D022\$



ENABLE INVERSE BARCODE  
(READS POSITIVE & NEGATIVE BARCODES)

---

### ENABLE CODE ID

.A008\$



FACTORY ID ON

.A014\$



AIM ID ON

.A015\$



SET ID ON

---

### DISABLE CODE ID

.A009\$



### NOTES:

1. Only ONE code ID will be sent.
2. The code ID is located at the position before the barcode data and after the preamble.

### EXAMPLE :

- 1.Preamble 145287,
- 2.Code ID: enable AIM ID,
- 3.Bar code symbologies : EAN 13+5

145287	JE0	4563987123453	12411
Preamble 145287	CODE ID AIM ID : JE0	BARCODE / DATA EAN 13 +5	
OUTPUT : 145287JE0456398712345312411			

# GROUP-10

## SYBBOLOGIES CODE IDENTIFIER

Symbologies		Factory ID	AIM ID	
ID	Code 39	M	A0	
			A1	
			A3	
	Full ASCII Code 39	D	A4	
			A5	
			A7	
	Code 32		B	X0
	Codabar	N	F0	
			F1	
			F2	
			F4	
	Interleaved 2 of 5	I	I0	
			I1	
			I3	
	UK Plessey		P	P0
	IATA 2 of 5		R	R0
	Matrix 2 of 5		Y	X0
	Industrial 2 of 5		V	S0
	Code 11	J	H0	
			H0	
			H1	
			H3	
	MSI	O	M0	
			M1	
	Telepen	U	B0	
			B1	
	China Postal Code		H	X0
	EAN-13	F	E0	
			E3	
	UPC-A	A	E0	
E3				
EAN-8	S	E4		
		E4		
UPC-E	E	E0		
		E3		
Code 93		L	G0	
Code 128		K	C0	
GS1 128		T	C1	
GS1 Databar		G	e0	

# GROUP-11

## SET CODE ID

---

. P001\$



EAN 13 Set ID

. P002\$



EAN 8 Set ID

. P003\$



UPC E Set ID

. P004\$



UPC A Set ID

. P005\$



Code 39 Set ID

. P013\$



Code 93 Set ID

. P007\$



Codabar Set ID

. P021\$



IATA Set ID

. P010\$



Code 128 Set ID

. P016\$



EAN 128 Set ID

. P022\$



Telepen Set ID

. P009\$



Code 11 Set ID

---

### STEPS:

1. Scan the SET ID barcode for a particular symbology.
2. Scan one or two alphanumeric characters from the Full ASCII Table.
3. Scan the SET ID barcode again.

### NOTE:

1. The scanner will beep three times as indication that a setting is not yet complete or unexpected barcode is scanned during multi-step configuration.
2. If you make a mistake, forget a step, etc., and want to abort the multi-step configuration, scan RESET/ABORT and start over again.

**RESET / ABORT**

. P023\$

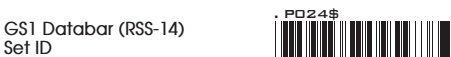
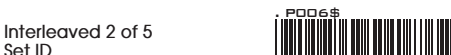
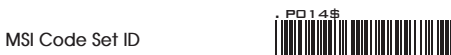




# GROUP-12

## SET CODE ID

---



---

### STEPS:

1. Scan the SET ID barcode for a particular symbology.
2. Scan one or two alphanumeric characters from the Full ASCII Table.
3. Scan the SET ID barcode again.

### NOTE:

1. The scanner will beep three times as indication that a setting is not yet complete or unexpected barcode is scanned during multi-step configuration.
2. If you make a mistake, forget a step, etc., and want to abort the multi-step configuration, scan RESET/ABORT and start over again.

**RESET / ABORT**



# GROUP-13

## INTERBLOCK DELAY, INTERCHARACTER DELAY

---

### INTERBLOCK DELAY

.B001\$



0mS

.B002\$



10mS

.B003\$



50mS

.B004\$



100mS

.B005\$



200mS

.B006\$



500mS

#### NOTE:

1. Supported by MT10, MT30, MT40/MT40W and MT780(FW: SM3-e-x.xx)
- 

### INTERCHARACTER DELAY

.B010\$



140uS

.B011\$



500uS

.B012\$



1mS

.B013\$



4mS

.B014\$



16mS

#### NOTE:

1. Supported by MT10, MT30, MT40/MT40W and MT780(FW: SM3-e-x.xx)

# GROUP-14

## INTERBLOCK/INTERCHARACTER DELAY, FUNCTION CODE, HT/CR/ESC CONVERSION

---

### INTERBLOCK DELAY

. B007\$



Set Interblock Delay  
(Default = 0mS)

#### NOTE:

1. Supported by MT15 and latest MT780(FW: HM3-e-x.xx) only.

#### STEPS:

1. Scan [Set Interblock Delay].
  2. Scan three digits (Range: 000~255, unit: 10mS) from the Full ASCII numeric table (Group 46).
  3. Scan [Set Interblock Delay].
- 

### INTERCHARACTER DELAY

. B009\$



Set Intercharacter Delay  
(Default = 0mS)

#### NOTE:

1. Supported by MT15 and latest MT780(FW: HM3-e-x.xx) only.

#### STEPS:

1. Scan [Set Intercharacter Delay].
  2. Scan three digits (Range: 000~255, unit: 1mS) from the Full ASCII numeric table (Group 46).
  3. Scan [Set Intercharacter Delay].
- 

### FUNCTION CODE CONVERSION

. C019\$



ENABLE

. C020\$



DISABLE

\*Once disabled, the scanner will output the original encoded data of the barcodes in Full ASCII Table  
- Function/Navigation/Modifier Keys (Group 48-50).

---

### HT/CR/ESC CONVERTS TO TAB/ENTER/ESCAPE

. D025\$



HT/CR/ESC CONVERTS TO  
TAB/ENTER/ESCAPE ENABLE

. D026\$



HT/CR/ESC CONVERTS TO  
TAB/ENTER/ESCAPE DISABLE

#### NOTE:

1. By default, HT [\$I], CR [\$M] and ESC [%A] is transmitted as <0x09>, <0x0D> and <0x1B> respectively.
2. When enabled, HT [\$I], CR [\$M] and ESC [%A] is transmitted as <TAB>, <ENTER> and <ESCAPE> on keyboard respectively.

# GROUP-15

## KEYBOARD LAYOUT

---

### KEYBOARD LAYOUT

. C010\$



ENGLISH (USA)

. C018\$



ENGLISH (UK)

. C012\$



FRENCH

. C011\$



GERMAN

. C014\$



ITALIAN

. C013\$



SPANISH

. C017\$



CZECH (QWERTY)

. C022\$



CZECH (QWERTZ)

. C021\$



HUNGARIAN (QWERTZ)

. C024\$



HUNGARIAN (101 KEY)

. C016\$



SWISS (GERMAN)

. C023\$



SWISS (FRENCH)

. C009\$



JAPAN (106 key)

. C025\$



CANADIAN (FRENCH)

. C034\$



CANADIAN (TRADITIONAL)

. C029\$



NORWEGIAN

. C026\$



SWEDISH

. C031\$



PORTUGUESE

. C030\$



BELGIAN (AZERTY)

. C028\$



DUTCH

. C027\$



DANISH

. C032\$



SLOVAK

. C033\$



BRAZILIAN (PORTUGUESE)

. C015\$



ALT CODE

# GROUP-16

## CAPITAL LOCK MODE, NUMERIC KEY

### **CAPITAL LOCK MODE**



### **NOTE:**

1. When barcode scanner is set to Capslock Free mode, no matter keyboard Capslock LED indicator is ON or OFF, output will be always the same as the Original barcode. In other words, what you see is what output is.(CODABAR is the exception)
2. If ABCD/ ABCD, abcd/ abcd, ABCD/T\*E, abcd/tn\*e are on, they work independently according to their rules.

### **NUMERIC KEY**



### **NOTE:**

1. By default, the alphanumeric key is used for transmitting digits. Scan NUMERIC KEY if you want to use the keys on the numeric keypad.
2. If you select NUMERIC KEY, the Num Lock status of the physical keyboard should be ON.

# GROUP-17

## INTERFACE, SLEEP MODE TIMEOUT

---

### INTERFACE

. C008\$



USB HID

. C006\$



USB VCP

. C002\$



UART

### NOTE:

1. This scanner is designed to switch easily between interface options. To switch from one interface to another, the appropriate cable must be installed. After changing to a new cable, be sure to reset the interface setting as appropriate.
  2. Before switching to USB VCP, please make sure you have installed proper driver on PC. The driver is available either on our website or from your local distributor.
  3. MT15 supports UART interface only.
- 

### SLEEP MODE TIMEOUT

. B030\$



SET MINUTE

(Default = Varies by product)

. B029\$



SET SECOND

(Default = Varies by product)

### STEPS:

For example, to set Sleep Mode Timeout to XXmin and YYsec:

1. Scan [Set Minute].
2. Scan two digits (00~60) from Full ASCII numeric table (Group 46).
3. Scan [Set Minute].
1. Scan [Set Second].
2. Scan two digits (00~59) from Full ASCII numeric table (Group 46).
3. Scan [Set Second].

### NOTE:

1. To enable Sleep Mode, set Sleep Mode Timeout > 0min & 0sec.
2. To disable Sleep Mode (scanner always on), set Sleep Mode Timeout = 0min & 0sec.
3. To wake scanner up from Sleep Mode, simply press the trigger button, or pull low at trigger pin.

# GROUP-18

## UART SETTINGS

---

### BAUD RATE

.E003\$



1200

.E004\$



2400

.E005\$



4800

.E006\$



9600

.E007\$



19200

.E022\$



38400

.E061\$



57600

.E065\$



76800

.E063\$



115200

### NOTE:

1. 57600, 76800 and 115200 are only supported by MT15 and latest MT780(FW: HM3-e-x.xx)
- 

### DATA BITS & PARITY

.E008\$



8 Bits None

.E009\$



8 Bits EVEN

.E010\$



8 Bits ODD

.E011\$



8 Bits MARK

.E012\$



8 Bits SPACE

.E013\$



7 Bits EVEN

.E014\$



7 Bits ODD

.E015\$



7 Bits MARK

.E021\$



7 Bits SPACE

# GROUP-19

## UART SETTINGS

---

### STOP BITS

.E016\$



1 STOP BIT

.E017\$



2 STOP BITS

---

### HANDSHAKING

.E018\$



NONE

.E019\$



RTS enable at Power on

.E020\$



RTS enable with Communication

---

### ACK / NAK

.E023\$



ON

.E024\$



OFF

---

### FLOW CONTROL: TIME OUT

.E025\$



1 Sec

.E026\$



3 Sec

.E027\$



10 Sec

.E028\$



Unlimited

---

### BCC

.E029\$



RS232 BCC Char On

.E030\$



RS232 BCC Char Off



# GROUP-20

## ENABLE/ DISABLE SYMBOLOGIES

---

### ENABLE



ENABLE ALL CODE



CODE 32



CHINA POSTAL CODE



UK PLESSEY CODE



INDUSTRIAL 2 OF 5



MATRIX 2 OF 5



INTERLEAVED 2 OF 5



CODE 128



CODABAR



TELEPEN

### DISABLE



DISABLE ALL CODE



CODE 32



CHINA POSTAL CODE



UK PLESSEY CODE



INDUSTRIAL 2 OF 5



MATRIX 2 OF 5



INTERLEAVED 2 OF 5



CODE 128



CODABAR



TELEPEN

# GROUP-21

## ENABLE/ DISABLE SYMBOLOGIES

---

### ENABLE



UPC-A



UPC-E



EAN-8



EAN-13



MSI



CODE 39



CODE 11



CODE 93



EAN/UCC/GS1-128



IATA

### DISABLE



UPC-A



UPC-E



EAN-8



EAN-13



MSI



CODE 39



CODE 11



CODE 93



EAN/UCC/GS1-128



IATA

# GROUP-22

## ENABLE/DISABLE SYMBOLOGIES, CHINA POSTAL CODE

---

### ENABLE

. N032\$



GS1 DATABAR

. N038\$



GS1 DATABAR STACKED

. N010\$



GS1 DATABAR LIMITED

. N026\$



GS1 DATABAR EXPANDED

. N028\$



GS1 DATABAR EXPANDED STACKED

### DISABLE

. N033\$



GS1 DATABAR

. N039\$



GS1 DATABAR STACKED

. N011\$



GS1 DATABAR LIMITED

. N027\$



GS1 DATABAR EXPANDED

. N029\$



GS1 DATABAR EXPANDED STACKED

---

. K004\$



CDV & SEND CD

. K005\$



CDV & NOT SEND CD

. K006\$



MIN LENGTH ( 11 )

. K007\$



MAX LENGTH ( 48 )

### CHINA POSTAL CODE

[ TOSHIBA CODE ]

. K001\$



ENABLE

. K002\$



DISABLE

. K003\$



DISABLE CDV

# GROUP-23

## MSI CODE, UK PLESSEY CODE

---

. L001\$



ENABLE

. L002\$



DISABLE

. L004\$



CDV & SEND CD

. L003\$



CDV & NOT SEND CD

. L007\$



CHECK DIGIT DOUBLE  
MOD 10

**MSI**

. L008\$



CHECK DIGIT DOUBLE 11  
PLUS MOD 10

. L009\$



CHECK DIGIT SINGLE  
MOD 10

. L005\$



MIN LENGTH ( 06 )

. L006\$



MAX LENGTH ( 48 )

. L010\$



ENABLE

. L011\$



DISABLE

**UK PLESSEY CODE**

. L012\$



CDV & SEND CD

. L013\$



CDV & NOT SEND CD

# GROUP-24

## CODE 93, IATA, TELEPEN

---



### CODE 93



### IATA



### TELEPEN



# GROUP-25

INTERLEAVED 2 OF 5, CODE 11

---



## INTERLEAVED 2 OF 5



## CODE 11



# GROUP-26

## INDUSTRIAL 2 OF 5, MATRIX 2 OF 5

---

. N001\$



ENABLE

. N002\$



DISABLE

. N003\$



DISABLE CDV

. N004\$



CDV & SEND CD

### INDUSTRIAL 2 OF 5

. N005\$



CDV & NOT SEND CD

. N006\$



MIN LENGTH ( 06 )

. N007\$



MAX LENGTH ( 48 )

---

. M010\$



ENABLE

. M011\$



DISABLE

. M012\$



DISABLE CDV

. M013\$



CDV & SEND CD

### MATRIX 2 OF 5

. M014\$



CDV & NOT SEND CD

. M015\$



MIN LENGTH ( 06 )

. M016\$



MAX LENGTH ( 48 )

# GROUP-27

## CODABAR

---



### CODABAR



### START / STOP



#### Example of ST ( Start ) / SP ( Stop )

123456	Not Transmit ST/SP
A123456B	ST/SP: ABCD/ABCD
a123456b	ST/SP: abcd/abcd
A123456N	ST/SP: ABCD/TN*E
a123456n	ST/SP: abcd/tn*e



### CLSI FORMAT

CLSI - Enable library space insertion. If you enable the CLSI format, this option inserts spaces in position 2, 7, 13 of the data string for use in library systems.



# GROUP-28

## ABC- CODABAR, CX- CODABAR

---

. I 017\$



ON

. I 018\$



OFF

. I 035\$



SET INSERT DATA\*

### ABC- CODABAR

. I 039\$



INSERT DATA- ON

. I 036\$



INSERT DATA- OFF

\* The data can be any alphanumerics of FULL ASCII Table (GROUP 40-46)

### NOTE:

ABC-CODABAR (American Blood Commission). The ABC Code is an acronym for American Blood Commission. This bar code is a variant of the CODABAR Code developed for the use in the blood bank. This Code consists of two bar codes which are decoded in one read cycle. The code is concatenated when the stop character of the first bar code and the start character of the second bar code is a "D", these two "D" are not transmitted.

---

. I 022\$



ON

. I 023\$



OFF

. I 037\$



SET INSERT DATA\*

### CX CODE- CODABAR

. I 040\$



INSERT DATA- ON

. I 038\$



INSERT DATA- OFF

\* The data can be any alphanumerics of FULL ASCII Table (GROUP 40-46)

### NOTE:

The CX-Code consists of two bar codes which are decoded in one read cycle, the code is concatenated when the stop character of the first bar code is a C, and the start character of the second bar code is a B. The B and C characters are not transmitted.

# GROUP-29

## CODABAR COUPLING, ADJACENT REQUIRED



### **CODABAR COUPLING**



ABC-Codabar and CX-Codabar have certain rules regarding the Stop Character of first bar code and the stop character of second bar code while in conjunction, while Codabar-Coupling is enabled, the data from any two Codabar bar codes can be coupled into one set of data without any limitations between the Stop character of first bar code and the Start character of second bar code. The Start and Stop characters associated with each bar code will be sent.

\* *The data can be any alphanumerics of FULL ASCII Table (GROUP 40-46)*

### **ADJACENT REQUIRED**

If CODABAR ADJACENT is enabled, the scanner will only read two adjacent Codabar bar codes; a single barcode will not be read.

#### **NOTE:**

1. Both ABC-Codabar and CX-Codabar can be enabled together, except when Codabar-Coupling is also enabled.
2. If ABC-Codabar, CX-Codabar, and Codabar-Coupling are all enabled at the same time, the scanner will read only Codabar-Coupling, that is, ABC-Codabar, CX-Codabar will be considered coupling formats.



### **STEPS:**

1. Scan SET INSERT DATA.
2. Scan any combination of alphanumeric characters from FULL ASCII Table.
3. Scan SET INSERT DATA.

### **NOTE:**

1. The scanner will beep three times as indication that a setting is not yet complete or unexpected barcode is scanned during multi-step configuration.
2. If you make a mistake, forget a step, etc., and want to abort the multi-step configuration, scan RESET/ABORT and start over again.

**RESET / ABORT**



# GROUP-30

## STANDARD & FULL ASCII CODE 39, CODE 32

---

### STANDARD CODE 39 & FULL ASCII 39



### NOTE:

The default for Code 39 is Standard Code 39. If Full ASCII Code 39 is enabled, Standard Code 39 will be automatically disabled.

---



### CODE 32



# GROUP-31

## UPC-E

---

. H007\$



ENABLE

. H008\$



DISABLE

. H009\$



LEAD DIGIT SEND

. H010\$



LEAD DIGIT NO SEND

. H011\$



CHECK DIGIT SEND

. H012\$



CHECK DIGIT NO SEND

---

. H037\$



+5 ON

. H038\$



+ 5 OFF

. H039\$



+2 ON

. H040\$



+ 2 OFF

## ADD ON SUPPLEMENT

. H047\$



ADD A SPACE ON

. H048\$



ADD A SPACE OFF

. H056\$



ADDENDA REQUIRED ON

. H055\$



ADDENDA REQUIRED OFF

---

### NOTE:

If ADDENDA REQUIRED is set to ON, the scanner will only read an UPC-E barcode that has an addenda. At the same time please also scan +5 ON or +2 ON so the scanner will output a 5-digit or 2-digit addendum.

# GROUP-32

## UPC-E SYSTEM NUMBER, UPC-E EXPAND TO UPC-A

### UPC-E0

. H064\$



E ( 0 ) OFF

. H063\$



E ( 0 ) ON

---

### UPC-E1

. H065\$



E ( 1 ) ON

. H066\$



E ( 1 ) OFF

### NOTE:

Most UPC bar codes lead with 0 number systems, for these bar codes use UPC E(0) selection. For the bar codes that lead with the 1 number, use UPC E(1) selection.

---

### UPC-E EXPAND TO UPC-A

. H053\$



ENABLE

. H054\$



DISABLE

---

### NOTE:

1. If UPC-E EXPAND TO UPC-A FORMAT is enabled, the output of UPC-A will be 12 digits.
2. The default output of UPC-A is 12 digits, if UPC-A EXPAND TO EAN13 is enabled, a zero will be added to the front of the barcode.

# GROUP-33

## UPC- A

---



### UPC-A EXPAND TO EAN-13



### ADD ON SUPPLEMENT



### NOTE:

If ADDENDA REQUIRED is set to ON, the scanner will only read an UPC-A barcode that has an addenda. At the same time please also scan +5 ON or +2 ON so the scanner will output a 5-digit or 2-digit addendum.

# GROUP-34

## EAN 8

---



ENABLE



DISABLE



LEAD DIGIT SEND



LEAD DIGIT NO SEND



CHECK DIGIT SEND



CHECK DIGIT NO SEND

---



+ 5 ON



+ 5 OFF



+ 2 ON



+ 2 OFF

### ADD ON SUPPLEMENT



ADD A SPACE ON



ADD A SPACE OFF



ADDENDA REQUIRED ON



ADDENDA REQUIRED OFF

---

### NOTE:

If ADDENDA REQUIRED is set to ON, the scanner will only read an EAN-8 barcode that has an addenda. At the same time please also scan +5 ON or +2 ON so the scanner will output a 5-digit or 2-digit addendum.

# GROUP-35

## EAN13, ISBN, ISSN, ISMN

---



ENABLE



DISABLE



LEAD DIGIT SEND

### EAN-13



LEAD DIGIT NO SEND



CHECK DIGIT SEND



CHECK DIGIT NO SEND

---



+ 5 ON



+ 5 OFF



+ 2 ON



+ 2 OFF

### ADD ON SUPPLEMENT



ADD A SPACE ON



ADD A SPACE OFF



ADDENDA REQUIRED ON



ADDENDA REQUIRED OFF

---



ISBN OFF

### NOTES:

1. If ADDENDA REQUIRED is set to ON, the scanner will only read an EAN-13 bar code that has an addenda.
2. Either ISSN or ISBN will be considered as an extension of EAN-13. If ISSN or ISBN needs to be read, EAN-13 must be enabled. If ISSN and ISBN need to be read with addenda, EAN-13 must be enabled with ADDENDA REQUIRED set to ON, and +2 ON or +5 ON must be enabled as well.

### ISBN



ISBN ON



ISSN OFF

### NOTE:

Both ISSN and ISBN are the extension codes of EAN-13. If scanner is required to read either ISSN or ISBN, EAN-13 must be enabled. Otherwise the scanner will not be able to read ISSN or ISBN.

### ISSN



ISSN ON

---



ISMN OFF

### ISMN



ISMN ON



# GROUP-36

## EAN/UCC/GS1-128, CODE 128

---

. M001\$



ENABLE

. M002\$



DISABLE

. M003\$



CODE ID ENABLE

. M004\$



CODE ID DISABLE

### EAN/UCC/GS1-128

. M005\$



FUNC 1 CHAR SEND

. M006\$



FUNC 1 CHAR NOT SEND

. M007\$



DEFINE FNC1

The first FNC1 character is translated to Jc1, and the second FNC1 character is translated to an ASCII <GS> character (scan from Group 40-46)

String format:

Jc1	DATA CHARACTERS	<GS>	DATA CHARACTERS
-----	-----------------	------	-----------------

### STEPS:

1. Scan DEFINE FNC1.
2. Scan one ASCII Code (Group 40-46)
3. Scan DEFINE FNC1.

---

### CODE 128

. J010\$



ENABLE

. J011\$



DISABLE

. J012\$



MIN LENGTH ( 05 )

. J013\$



MAX LENGTH ( 48 )

# GROUP-37

## GS1 DATABAR, LIMITED, EXPANDED

---

### . N032\$ GS1 DataBar (RSS-14) - OMNI & STACKED



GS1 DataBar ENABLE



GS1 DataBar CHECK DIGIT SEND



GS1 DataBar PREFIX SEND



GS1 DataBar STACKED ENABLE



GS1 DataBar DISABLE



GS1 DataBar CHECK DIGIT NOT SEND



GS1 DataBar PREFIX NOT SEND



GS1 DataBar STACKED DISABLE



GS1 DataBar LIMITED ENABLE



GS1 DataBar LIMITED CHECK DIGIT SEND



GS1 DataBar LIMITED PREFIX SEND

### GS1 DataBar (RSS-14) - LIMITED



GS1 DataBar LIMITED DISABLE



GS1 DataBar LIMITED CHECK DIGIT NOT SEND



GS1 DataBar LIMITED PREFIX NOT SEND



GS1 DataBar EXPANDED ENABLE



GS1 DataBar EXPANDED STACKED ENABLE



GS1 DataBar EXPANDED  
MIN LENGTH (01)

### GS1 DataBar (RSS-14) - EXPANDED



GS1 DataBar EXPANDED DISABLE



GS1 DataBar EXPANDED STACKED DISABLE



GS1 DataBar EXPANDED  
MAX LENGTH (74)

# GROUP-38

FULL ASCII TABLE ( CODE 39 )  
CONTROL CODES

---

%L		NUL
\$A		SOH
\$B		STX
\$C		ETX
\$D		EOT
\$E		ENQ
\$F		ACK
\$G		BEL
\$H		BS
\$I		HT
\$J		LF
\$K		VT
\$L		FF
\$M		CR
\$N		SO
\$O		SI

# GROUP-39

## FULL ASCII TABLE ( CODE 39 ) CONTROL CODES

---

DLE	\$P 
DC1	\$Q 
DC2	\$R 
DC3	\$S 
DC4	\$T 
NAK	\$U 
SYN	\$V 
ETB	\$W 
CAN	\$X 
EM	\$Y 
SUB	\$Z 
ESC	%A 
FS	%B 
GS	%C 
RS	%D 
US	%E 
SP	

# GROUP-40

## FULL ASCII TABLE ( CODE 39 ) SYMBOLS

---

+		+
-		-
.		.
\$		\$
%		%
/		/
%L		\
/ A		!
%V		@
/ C		#
%N		^
%S		~
/ F		&
/ J		*
%□		-
%H		=
%□		

# GROUP-41

## FULL ASCII TABLE ( CODE 39 ) SYMBOLS

---

{	%P 
}	%R 
[	%K 
]	%M 
(	/ H 
)	/ I 
<	%G 
>	%I 
,	%W 
"	/ B 
'	/ G 
,	/ L 
;	%F 
:	/ Z 
?	%J 
DEL	%T 

# GROUP-42

FULL ASCII TABLE ( CODE 39 )  
UPPER CASE ALPHABETS

---



A



B



C



D



E



F



G



H



I



J



K



L



M

# GROUP-43


FULL ASCII TABLE ( CODE 39 )  
UPPER CASE ALPHABETS

---

N 

O 

P 

Q 

R 

S 

T 

U 

V 

W 

X 

Y 

Z 



# GROUP-44

## FULL ASCII TABLE ( CODE 39 ) LOWER CASE ALPHABETS

---

+A  a

+B  b

+C  c

+D  d

+E  e

+F  f

+G  g

+H  h

+I  i

+J  j

+K  k

+L  l

+M  m

# GROUP-45

## FULL ASCII TABLE ( CODE 39 ) LOWER CASE ALPHABETS

---

n 

o 

p 

q 

r 

s 

t 

u 

v 

w 

x 

y 

z 

# GROUP-46

FULL ASCII TABLE ( CODE 39 )  
NUMBERS

---



0



1



2



3



4



5



6



7



8



















9

# GROUP-47

## FULL ASCII TABLE ( CODE 39 ) FUNCTION KEYS














---

F1	\$TA	
F2	\$TB	
F3	\$TC	
F4	\$TD	
F5	\$TE	
F6	\$TF	
F7	\$TG	
F8	\$TH	
F9	\$TI	
F10	\$TJ	
F11	\$TK	
F12	\$TL	
Home	\$TM	
End	\$TN	
Enter (Numeric Key)	\$T+D	
App	\$T+□	

# GROUP-48

FULL ASCII TABLE ( CODE 39 )  
NAVIGATION KEYS

---

\$T0		Cursor Right
\$TP		Cursor Left
\$TQ		Cursor Up
\$TR		Cursor Down
\$TS		Page Up
\$TT		Page Down
\$TU		Tab
\$TV		Back Tab
\$TW		Esc
\$TX		Enter
\$TY		BS
\$TZ		Ins
\$T%K		Del

# GROUP-49

## FULL ASCII TABLE ( CODE 39 ) MODIFIER KEYS

---

**\$T%L**



Alt (Left) make \*1

**\$T+E**



Alt (Right) make

**\$T%N**



Shift (Left) make \*2

**\$T+I**



Shift (Right) make

**\$T+K**



Win (Left) make

**\$T+M**



Win (Right) make

**\$T%W**



Ctrl (Left) make \*3

**\$T+G**



Ctrl (Right) make

**\$T%M**



Alt (Left) break

**\$T+F**



Alt (Right) break

**\$T%O**



Shift (Left) break

**\$T+J**



Shift (Right) break

**\$T+L**



Win (Left) break

**\$T+N**



Win (Right) break

**\$T+A**



Ctrl (Left) break

**\$T+H**



Ctrl (Right) break

---

For UK Keyboard Special Character

**\$T+B**



**\$T+C**



£

### Note:

- \*1: When "Alt(Left)Make" is programmed, please scan "Alt(Left)Break" to resume barcode setting.
- \*2: When "Shift(Left)Make" is programmed, please scan "Shift(Left)Break" to resume barcode setting.
- \*3: When "Ctrl(Left)Make" is programmed, please scan "Ctrl(Left)Break" to resume barcode setting.

# APPENDIX 1

## DEFAULT TABLE 1

GROUP	PARAMETER	DEFAULT
1	Setup Code Read	On
2	Reading Mode	Trigger Mode
3	LED Auto-Off Control	Disable
	LED Auto-Off Timeout (Trigger, Toggle, Flash...)	60 sec
	Flash Timeout	60 sec
	LED Auto-Off Timeout (Continuous Auto Off)	60 sec
4	Trigger Control	Disable
	Identical Read Interval	1.0 sec
	Fixed Scan Rate	Disable (Auto-adaptive)
5	Start Scanning Character	N/A
	Stop Scanning Character	N/A
	No Read Status	Disable
	No Read Message	No Read
6	Beep Tone	Beep Medium
	Terminator	CR(USB HID); CR+LF(USB VCP/UART)
7	Send Data Length	Off
	Preamble & Postamble	None
8	Accuracy Adjustment	1
9	Inverse Barcode	Disable
	Code ID	Disable
11~12	Set Code ID	None
13	Interblock Delay	0 ms
	Intercharacter Delay	140 us
14	Interblock Delay	0 ms
	Intercharacter Delay	0 ms
	Function Code Conversion	Enable
	HT/CR/ESC Conversion	Disable
15	Keyboard Layout	English (USA)
16	Capital Lock Mode	Off
	Numeric Key	Alphanumeric Key
17	Interface	N/A (not affected by Default)
	Sleep Mode Timeout	MT10, MT30, MT40, MT40W, MT780(FW: SM3-e-x.xx): 1 min 0 sec MT15, MT780(FW: HM3-e-x.xx): 3 min 0 sec
18	Baud Rate	9600
	Data Bits & Parity	8 Bits, None
19	Stop Bits	1 Stop Bit
	Handshaking	None
	ACK/NAK	Off
	Flow Control Timeout	1 Sec
	BCC	Off
20~22	<b>Enable and Disable Symbologies</b>	
	Code 32	Disable
	China Postal Code	Disable
	UK Plessey Code	Disable
	Industrial 2 of 5	Disable
	Matrix 2 of 5	Disable
	Interleaved 2 of 5	Enable
	Code 128	Enable
	Codabar	Enable
	Telepen	Disable
	UPC-A	Enable
	UPC-E	Enable
	EAN-8	Enable
	EAN-13	Enable
	MSI	Disable
	Code 39	Enable
	Code 11	Disable
	Code 93	Disable
	EAN/UCC/GS1-128	Enable
	IATA	Disable
GS1 Databar	Disable	
GS1 Databar Stacked	Enable	
GS1 Databar Limited	Disable	
GS1 Databar Expanded	Disable	
GS1 Databar Expanded Stacked	Enable	

# APPENDIX 1

## DEFAULT TABLE 2

GROUP	PARAMETER	DEFAULT
22	<b>China Post Code (Toshiba Code)</b>	
	Enable/Disable	Disable
	Check Digits	Disable CDV
	Min Length	11 digits
	Max Length	48 digits
23	<b>MSI</b>	
	Enable/Disable	Disable
	Check Digits	CDV & send CD
	Check Digits Mode	Single Mod 10
	<b>UK Plessey Code</b>	
	Enable/Disable	Disable
	Check Digits	CDV & not send CD
24	<b>Code 93</b>	
	Enable/Disable	Disable
	Min Length	6 digits
	Max Length	48 digits
	<b>IATA</b>	
	Enable/Disable	Disable
	Check Digits	Disable CDV
	Min Length	6 digits
	Max Length	48 digits
	<b>Telepen</b>	
	Enable/Disable	Disable
	Telepen ASCII/Number	ASCII
25	<b>Interleaved 2 of 5</b>	
	Enable/Disable	Enable
	Check Digits	Disable CDV
	First/ last digit suppressed	No suppressed
	Min Length	6 digits
	Max Length	48 digits
	<b>Code 11</b>	
	Enable/Disable	Disable
	Check Digits	Disable CDV
	CDV & Send CD (1 Digit/2 Digits)	1 digit
Min Length	6 digits	
Max Length	32 digits	
26	<b>Industrial 2 of 5</b>	
	Enable/Disable	Disable
	Check Digits	Disable CDV
	Min Length	6 digits
	Max Length	48 digits
	<b>Matrix 2 of 5</b>	
	Enable/Disable	Disable
	Check Digits	Disable CDV
	Min Length	6 digits
	Max Length	48 digits
27	<b>Codabar</b>	
	Enable/Disable	Enable
	Check Digits	Disable CDV
	Min Length	6 digits
	Max Length	48 digits
	ST/SP; Abcd/abcd, abcd/tn*c, ABCD/ABCD,ABCD/TN*C	ABCD/ABCD
	Send Start/Stop	Send
CLSI Format	Off	
28	<b>ABC-Codabar</b>	
	ON/OFF	Off
	Insert Data	Off
	<b>CX-Codabar</b>	
	ON/OFF	Off
	Insert Data	Off
29	<b>Codabar-Coupling</b>	
	ON/OFF	Off
	Insert Data	Off
	Adjacent Required	Off



# APPENDIX 1

## DEFAULT TABLE 3

GROUP	PARAMETER	DEFAULT
30	<b>Code 39</b>	
	Full ASCII 39 Enable/Disable	Enable
	Check Digits	Disable CDV
	Start/Stop	Not Send
	Min Length	1 digit
	Max Length	48 digits
	<b>Code 32</b>	
	Enable/Disable	Disable
	Leading	Send
Tailing	Send	
31	<b>UPC-E</b>	
	Enable/Disable	Enable
	Check Digits	Send
	Lead Digits	Send
	Add a space	Off
	Addenda required	Off
	+5 On/Off	Off
	+2 On/Off	Off
32	<b>UPC-E System Number, UPC-E Expand to UPC-A</b>	
	UPC E(0) On/Off	On
	UPC E(1) On/Off	Off
	UPC-E expand to UPC-A	Disable
33	<b>UPC-A, UPC-A Expand to EAN-13</b>	
	Enable/Disable	Enable
	Check Digits	Send
	Lead Digits	Send
	UPC-A expand to EAN-13	Disable
	Add a space	Off
	Addenda required	On
	+5 On/Off	Off
+2 On/Off	Off	
34	<b>EAN-8</b>	
	Enable/Disable	Enable
	Check Digits	Send
	Lead Digits	Send
	Add a space	Off
	Addenda required	On
	+5 On/Off	Off
	+2 On/Off	Off
35	<b>EAN-13</b>	
	Enable/Disable	Enable
	Check Digits	Send
	Lead Digits	Send
	Add a space	Off
	Addenda required	On
	+5 On/Off	Off
	+2 On/Off	Off
	ISBN	Off
	ISSN	Off
	ISMN	Off
36	<b>EAN/UCC/GS1-128</b>	
	Enable/Disable	Enable
	Code ID	Disable
	Func 1 Char Send	Not Send
	<b>Code 128</b>	
	Enable/Disable	Enable
	Check Digits	Disable CDV
	Min Length	5 digits
	Max Length	48 digits

# APPENDIX 1

**DEFAULT TABLE 4**

GROUP	PARAMETER	DEFAULT
37	<b>GS1 Databar</b>	
	GS1 Databar	Disable
	GS1 Databar Check Digit	Not Send
	GS1 Databar Prefix	Not Send
	GS1 Databar Stacked	Enable
	GS1 Databar Limited	Disable
	GS1 Databar Limited Check Digit	Not Send
	GS1 Databar Limited Prefix	Not Send
	GS1 Databar Expanded	Disable
	GS1 Databar Expanded Stacked	Enable
	GS1 Databar Expanded Min Length	1 digit
	GS1 Databar Expanded Max Length	74 digits