

Ez One Shot[®]

2D HANDHELD
SCANNER
USER'S
MANUAL



CONTENTS

PREFACE

Table of Contents.....	2
LED & Beeper Indication.....	3
Cloning Mode.....	4-5
How to set up the parameter.....	6

GENERAL SETTINGS (GROUP 1 - 12)

1 Default, Abort, Check Version, Setup Code Read.....	7
2 Reading Mode, Magnetic Switch.....	8
3 Beep tone, Vibrator, Terminator.....	9
4 Send Data Length, Preamble, Postamble.....	10
5 Code ID, Inverse Barcode.....	11
6 Symbologies Code Identifier.....	12
7~9 Set Code ID.....	13-15
10 Inter-block and Inter-character Delay.....	16
11 Keyboard Layout.....	17
12 Caplock Mode, Numeric Key, HT/CR/ESC Conversion..	18

SYMBOLOGIES (GROUP 13 - 30)

13~15 Enable/Disable Barcode Symbology.....	19-21
16 Interleaved 2 of 5, IATA, Matrix 2 of 5.....	22
17 Industrial 2 of 5, NEC 2 of 5, Code 11.....	23
18 Code 93, MSI.....	24
19 Standard/Full ASCII Code 39, Code 32.....	25
20 Codabar.....	26
21 Code128, GS1-128, GS1 Databar.....	27
22 UPC-A, UPC-A Expand to EAN-13.....	28
23 UPC-E, UPC-E Expand to UPC-A, UPC-E1.....	29
24 EAN-8.....	30
25 EAN-13, ISBN.....	31
26 China Post, Korea Post, Planet, Postnet.....	32
27 Australian Post, Other Postal Codes.....	33
28 PDF417, MicroPDF417, (Micro)QR Code, DataMatrix..	34
29 MaxiCode, Aztec, Chinese Sensible Code (Han Xin)..	35
30 Codablock A, Codablock F, GS1 Composite.....	36

FULL ASCII(CODE39)TABLE, FUNCTION KEY TABLE(GROUP 31 - 42)

31~39 Full ASCII table(Code 39).....	37-45
40~42 Function Key table(Code 39).....	46-48

APPENDIX

Appendix 1 Default table.....	49-52
Appendix 2 Barcode test chart.....	53-54

LED & BEEPER INDICATION

	Status	Blue LED	Beeper
Scanner	Initializing/ Power-up	1 Flash	1 long beep
	Successful Barcode Scan	1 Flash	1 beep
	Reads Configuration Barcode	1 Flash	2 beeps
	Unexpected Barcode Scan during Configuration	1 Flash	3 short beeps

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 "...". 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:

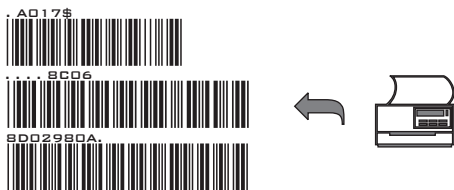
- 1.1. Beep tone: **BEEP LOW.**
- 1.2. Capslock Mode: **CAPSLOCK ON.**
- 1.3. Reading Mode: **CONTINUOUS AUTO OFF.**

2. SETTING PROCEDURE:

- 2.1. Scan **BEEP LOW (GROUP 3).**
 - 2.2. Scan **CAPSLOCK ON (GROUP 12).**
 - 2.3. Scan **CONTINUOUS MODE (GROUP2).**
3. Scan [A016\$] Cloning Mode. All parameters will be output in 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 from the first row to the second and so on sequentially, top to bottom, with the scanner you wish to "clone" these settings to.

CORRECT SETTING

.A017\$	4
....	4
0604	4
5A02	4
5F04	4
.	4 (Dot)

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

WRONG SETTING

.A017\$	
..	←
..0604	
5A02	
5F04	
.	

Wrong Setting: The string "...." consists of 4 Dots, located at the beginning of second row; do not break the "...." into multiple strings.

.A017\$	✓
....06045	9 x } ←
A025F04	7 x } ←
.	4 (Dot) ✓

Wrong Setting: 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\$....	X ←
0604	4 ✓
5A02	4 ✓
5F04.	4+.(Dot) ✓

Wrong Setting because you add "...." after .A017\$:
The .A017\$ is a FIXED parameter to enter setup procedure. It is an unchangeable parameter. **Never add, delete or rearrange data from the FIRST row.**

HOW TO SET PARAMETERS

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

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

Default parameters are indicated in bold type and underlined characters. The character font is ARIAL BLACK.

Most settings require only a single bar code, but a few need several different bar codes to be scanned in order to completely define a setting (i.e Multi-step Configurations). They are:

Preamble / Postamble (maximum 16 digits)

Step 1: Scan CLR PRE/POSTAMBLE.

Step 2: Scan PREAMBLE or POSTAMBLE.

Step 3: Scan 1 ~ 16 alphanumeric from Full ASCII table (Group 31-42).

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 table - Numbers (Group 39).

Step 3: Scan MIN LENGTH or MAX LENGTH.

Set Code ID (Example: Code 39)

Step 1: Scan CODE 39 SET ID from Group 7

Step 2: Scan either one or two alphanumerics (maximum 2 digits) from Full ASCII table (Group 31-39)

Step 3: Scan CODE 39 SET ID from Group 7

NOTES:

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

INTERFACES SELECTION

.C008\$



USB HID

.C006\$



USB VCP

* Caution: Before switching to USB VCP, please make sure you have installed proper driver on PC. The driver is available for download on website or from your local distributor.

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!

FUNCTION CODE CONVERSION

.C019\$



ENABLE

.C020\$



DISABLE

* Caution: Once disabled, the scanner will output the original encoded data of the barcodes in Full ASCII Table - Function/Navigation/Modifier Keys (Group 53-55).

GROUP-2

GENERAL SETTINGS - READING MODE

. F002\$



TRIGGER MODE

- * The LED will light when the trigger is pressed.
- * The LED will go off when the trigger is released.

. F060\$



MOBILE PHONE MODE

- * The LED will turn on when the trigger is pressed. The LED will turn off when the trigger is released.
- * Optimized to read bar codes from mobile phone or other LED displays

. F007\$



AUTO SENSING MODE (CCD)

- * Auto-Sensing Mode (CCD) uses ambient light to detect barcodes. The LED dims until a barcode is presented to the scanner, then the LED brightens to read the code.
- * If the ambient light condition is poor, the scanner might not be working properly.
- * By default, the scanner will simply operate like Trigger Mode which requires manual trigger. To enable auto-sensing, place the scanner on an Auto Hands-free Stand or disable Magnetic Switch by scanning below configuration barcode.

. F034\$



MAGNETIC SWITCH ON

MAGNETIC SWITCH

. F035\$



MAGNETIC SWITCH OFF

NOTES:

1. The Magnetic Switch is automatically activated when the scanner is in Auto-Sensing Mode.
2. If Magnetic Switch is on, auto-sensing will be activated only when the scanner is placed on an Auto Hands-free Stand.
3. If Magnetic Switch is off, the scanner will always be auto-sensing.

GROUP-3

GENERAL SETTINGS - BEEP TONE, VIBRATOR, TERMINATOR

BEEP TONE

.F019\$



BEEP HIGH

.F018\$



BEEP MEDIUM

.F022\$



BEEP LOW

.F012\$



BEEP OFF

VIBRATOR

.D034\$



VIBRATOR ON

.D035\$



VIBRATOR OFF

TERMINATOR

.D010\$



NONE

.D013\$



CR+LF

.D011\$



LF

.D014\$



TAB

.D012\$



CR

.D015\$



SPACE

.D016\$



ESC

NOTES:

1. For the USB HID interface the default terminator is CR.
2. For the USB VCP interface the default terminator is CR+LF.
3. Below is the position of Terminator among output data string:
[Preamble] [Symbology ID] [Barcode Length] [Barcode Data] [Postamble] [Terminator]
4. By default, with Preamble, Postamble, Barcode Length and Symbology ID disabled, the scanner data output will be:
[Barcode Data] [Terminator]

GROUP-4

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.

STEP 4 : Scan : PREAMBLE.

STEP 5 : Scan : POSTAMBLE.

STEP 6 : Scan : “\$” twice from Full ASCII Table.

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-5

GENERAL SETTINGS - CODE ID, INVERSE BARCODE

ENABLE INVERSE BARCODE

.D021\$



DISABLE INVERSE BARCODE
(READS POSITIVE BARCODE ONLY)

.D022\$



ENABLE INVERSE BARCODE
(READS POSITIVE & NEGATIVE BARCODES)

CODE ID / SYBBOLOGY ID

.A008\$



FACTORY ID ON

.A014\$



AIM ID ON

.A015\$



SET ID ON

.A009\$



DISABLE CODE ID

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.

DATA FORMAT:

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

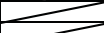

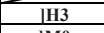
EXAMPLE :

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

145287]E0	4563987123453	12411
Preamble 145287	CODE ID AIM ID :]E0	BARCODE / DATA EAN 13 +5	
OUTPUT : 145287]E0456398712345312411			

GROUP-6

GENERAL SETTINGS - SYMBOLOGIES CODE IDENTIFIER

Symologies		Factory ID	AIM ID	
1D	Code 39	Disable CDV	A0	
		CDV & Send CD	A1	
		CDV	A3	
	Full ASCII Code 39	Disable CDV	D	A4
		CDV & Send CD		A5
		CDV		A7
	Code 32		B	X0
	Codabar		N	F0
		CDV & Send CD		F2
		CDV		F6
		Symbol Concatenation		F1
	Interleaved 2 of 5	Disable CDV	I	I0
		CDV & Send CD		I1
		CDV		I3
	NEC 2 of 5		n	X0
	IATA 2 of 5		R	R0
	Matrix 2 of 5		Y	X0
	Industrial 2 of 5		V	S0
	Code 11	Disable CDV	J	
		CDV & Send CD-1		
		CDV & Send CD-2		
		CDV		H3
	MSI	Disable CDV	O	M0
		Single Mod 10		M5
		Single Mod 10 & CD		M1
		Double Mod 10		M7
		Double Mod 10 & CD		M3
		MOD - 11		M6
		MOD - 11 & Send CD		M2
	EAN-13		F	E0
with Add-On		E3		
UPC-A		A	E0	
	with Add-On		E3	
EAN-8		S	E4	
	with Add-On		E4	
UPC-E		E	E0	
	with Add-On		E3	
Code 93		L	G0	
Code 128		K	C0	
GS1 128		T	C1	
GS1 Databar		G	e0	
Databar Limited		l	e0	
Databar Expanded		e	e0	
Postal	China Post	H	X0	
	Korea Post	k	X0	
	Australian	a	X0	
	British	b	X0	
	Canadian	c	X0	
	Japanese	j	X0	
	KIX (Netherlands)	x	X0	
	InfoMail Code	m	X0	
	Intelligent Code	i	X0	
	Planet Code	f	X0	
	Postal-4i Code	4	X0	
	Postnet Code	p	X0	
2D	PDF417	Z	L0	
	Micro-PDF	r	L0	
	QR Code	W	Q0	
	Data Matrix	X	d0	
	MaxiCode	u	U0	
	Codablock-A	g	O6	
	Codablock-F	C	O0	
	Aztec	z	z0	
Chinese Sensible Code (Han Xin)	O	X0		

GROUP-7

GENERAL SETTINGS - 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\$



GS1 128 Set ID

. P009\$



Code 11 Set ID

. P011\$



Code 32 Set ID

. P014\$



MSI Set ID

. P017\$



Matrix 2 of 5 Set ID

. P006\$



Interleaved 2 of 5
Set ID

GROUP-8

GENERAL SETTINGS - SET CODE ID

. P018\$



Industrial 2 of 5 Set ID

. P028\$



NEC 2 of 5 Set ID

. P008\$



Full ASCII Code39
Set ID

. P024\$



GS1 Databar
Set ID

. P019\$



GS1 Databar Limited
Set ID

. P020\$



GS1 Databar Expanded
Set ID

. P012\$



China Post (TOSHIBA Code)
Set ID

. P035\$



Korea Post Set ID

. P036\$



Australian Post Set ID

. P037\$



British Post Set ID

. P038\$



Canadian Post Set ID

. P039\$



Japanese Post Set ID

. P040\$



KIX (Netherlands) Post
Set ID

. P041\$



InfoMail Set ID

GROUP-9

GENERAL SETTINGS - SET CODE ID

. P042\$



Intelligent Mail Set ID

. P043\$



Planet Code Set ID

. P044\$



Postal-4i Set ID

. P045\$



Postnet Set ID

. P025\$



PDF417 Set ID

. P029\$



MicroPDF417 Set ID

. P026\$



QR Code Set ID

. P027\$



Data Matrix Set ID

. P030\$



MaxiCode Set ID

. P033\$



Aztec Set ID

. P034\$



Chinese Sensible Code (Han Xin)
Set ID

. P031\$



Codablock A
Set ID

. P032\$



Codablock F
Set ID

Steps:

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

GROUP-10

GENERAL SETTINGS

INTERBLOCK DELAY

. B001\$



0mS

. B002\$



10mS

. B003\$



50mS

. B004\$



100mS

. B005\$



200mS

. B006\$



500mS

. B007\$



Set Interblock Delay

NOTES:

You may either scan [0mS], [10mS], [50mS], [100mS], [200mS], [500mS] or follow below steps to fine-tune Interblock Delay (0~2550mS)

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

INTERCHARACTER DELAY

. B010\$



0mS

. B012\$



1mS

. B013\$



4mS

. B014\$



16mS

. B009\$



Set Intercharacter Delay

NOTES:

You may either scan [0mS], [1mS], [4mS], [16mS] or follow below steps to fine-tune Intercharacter Delay (0~255mS)

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

GROUP-11

GENERAL SETTINGS - 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-12

GENERAL SETTINGS - CAPLOCK MODE, NUMERIC KEY, HT/CR/ESC CONVERSION

CAPITAL LOCK MODE



NOTE:

1. When barcode scanner is set to Caplock 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.
-

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



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-13

ENABLE/ DISABLE SYMBOLOGIES

ENABLE



ENABLE ALL CODE



CODE 32



INDUSTRIAL 2 OF 5



MATRIX 2 OF 5



INTERLEAVED 2 OF 5



CODE 128



CODABAR



CODE 93



GS1-128



IATA



CODE 11



MSI

DISABLE



DISABLE ALL CODE



CODE 32



INDUSTRIAL 2 OF 5



MATRIX 2 OF 5



INTERLEAVED 2 OF 5



CODE 128



CODABAR



CODE 93



GS1-128



IATA



CODE 11



MSI

GROUP-14

ENABLE/ DISABLE SYMBOLOGIES

ENABLE



UPC-A



UPC-E



EAN-8



EAN-13



CODE 39



FULL ASCII CODE39



NEC 2 OF 5



GS1-128



GS1 Databar
Omnidirectional



GS1 Databar Limited



GS1 Databar Expanded



CHINA POST

DISABLE



UPC-A



UPC-E



EAN-8



EAN-13



CODE 39



FULL ASCII CODE39



NEC 2 OF 5



GS1-128



GS1 Databar
Omnidirectional



GS1 Databar Limited



GS1 Databar Expanded



CHINA POST

GROUP-15

ENABLE/ DISABLE SYMBOLOGIES

ENABLE



KOREA POST



PDF417



MICROPDF417



(MICRO) QR CODE



DATA MATRIX



MAXICODE



AZTEC



CODABLOCK A



CODABLOCK F



CHINESE SENSIBLE CODE
(HAN XIN)

DISABLE



KOREA POST



PDF417



MICROPDF417



(MICRO) QR CODE



DATA MATRIX



MAXICODE



AZTEC



CODABLOCK A



CODABLOCK F



CHINESE SENSIBLE CODE
(HAN XIN)

GROUP-16

SYMBOLOLOGIES: INTERLEAVED 2 OF 5, IATA, MATRIX 2 OF 5

. J001\$



ENABLE

. J002\$



DISABLE

. J003\$



DISABLE CDV

. J004\$



CDV & SEND CD

INTERLEAVED 2 OF 5

. J006\$



MIN LENGTH (4)

. J007\$



MAX LENGTH (80)

. J005\$



CDV & NOT SEND CD

. N017\$



ENABLE

. N018\$



DISABLE

IATA

. N022\$



MIN LENGTH (4)

. N023\$



MAX LENGTH (80)

. M010\$



ENABLE

. M011\$



DISABLE

MATRIX 2 OF 5

. M015\$



MIN LENGTH (4)

. M016\$



MAX LENGTH (80)

GROUP-17

SYBBOLOGIES: INDUSTRIAL 2 OF 5, NEC 2 OF 5, CODE 11

. N001\$



ENABLE

. N002\$



DISABLE

INDUSTRIAL 2 OF 5

. N006\$



MIN LENGTH (4)

. N007\$



MAX LENGTH (48)

. J033\$



ENABLE

. J034\$



DISABLE

. J035\$



DISABLE CDV

. J036\$



CDV & SEND CD

NEC 2 OF 5

. J038\$



MIN LENGTH (4)

. J039\$



MAX LENGTH (80)

. J037\$



CDV & NOT SEND CD

. I 010\$



ENABLE

. I 011\$



DISABLE

. I 042\$



CDV & SEND CD
(1 DIGIT)

CODE 11

. I 043\$



CDV & SEND CD
(2 DIGITS)

. I 015\$



MIN LENGTH (4)

. I 016\$



MAX LENGTH (80)

GROUP-18

SYMBOLOLOGIES: CODE 93, MSI

CODE 93



MSI



GROUP-19

SYMBOLOGIES: 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-20

SYBBOLOGIES: CODABAR



ENABLE



DISABLE



DISABLE CDV



CDV & SEND CD

CODABAR



CDV & NOT SEND CD



MIN LENGTH (4)



MAX LENGTH (60)



NOT SEND START / STOP

START / STOP



Send START / STOP



CONCATENATION OFF

CONCATENATION



CONCATENATION ON



CONCATENATION
REQUIRE

NOTE:

1. When you enable concatenation, the scanner looks for a Codabar symbol having a "D" start character, adjacent to a symbol having a "D" stop character. In this case the two messages are concatenated into one with the "D" characters omitted.



2. Select Require to prevent the scanner from decoding a single "D" Codabar symbol without its companion. This selection has no effect on Codabar symbols without Stop/Start D characters.

GROUP-21

SYMBOLOLOGIES: CODE 128, GS1-128, GS1 DATABAR

CODE 128



GS1-128



GS1 DATABAR



GROUP-22

SYMBOLOGIES FORMATTING: UPC- A

. H001\$



ENABLE

UPC- A

. H005\$



CHECK DIGIT SEND

. H002\$



DISABLE

. H006\$



CHECK DIGIT NOT SEND

. H077\$



NUMBER SYSTEM
DIGIT SEND

. H078\$



NUMBER SYSTEM
DIGIT NOT SEND

UPC-A EXPAND TO EAN-13

. H068\$



ENABLE

. H067\$



DISABLE

. H033\$



+5 ON

ADD ON SUPPLEMENT

. H060\$



ADDENDA REQUIRED ON

. H034\$



+ 5 OFF

. H059\$



ADDENDA REQUIRED OFF

. H035\$



+2 ON

. H036\$



+ 2 OFF

. H045\$



ADD A SPACE ON

. H046\$



ADD A SPACE OFF

NOTE:

If ADDENDA REQUIRED is set to ON, the scanner will only read an UPC-A/E bar code 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-23

SYMBOLOLOGIES: UPC-E

. H007\$



ENABLE

. H008\$



DISABLE

. H079\$



NUMBER SYSTEM
DIGIT SEND

. H011\$



CHECK DIGIT SEND

. H012\$



CHECK DIGIT NOT SEND

. H080\$



NUMBER SYSTEM
DIGIT NOT SEND

UPC-E

**UPC-E EXPAND
TO UPC-A**

. H053\$



ENABLE

. H054\$



DISABLE

. H037\$



+5 ON

. H038\$



+ 5 OFF

. H039\$



+2 ON

. H047\$



ADD A SPACE ON

ADD ON SUPPLEMENT

. H056\$



ADDENDA REQUIRED ON

. H055\$



ADDENDA REQUIRED OFF

. H040\$



+ 2 OFF

. H048\$



ADD A SPACE OFF

UPC-E1

. H065\$



UPC-E1 ON

. H066\$



UPC-E1 OFF

GROUP-24

SYMBOLOLOGIES: EAN-8



EAN-8



ADD ON SUPPLEMENT



NOTE:

If ADDENDA REQUIRED is set to ON, the scanner will only read an EAN-8 bar code 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-25

SYMBOLOGIES: EAN-13, ISBN



EAN-13



ADD ON SUPPLEMENT



ISBN



NOTES:

1. If ADDENDA REQUIRED is set to ON, the scanner will only read an EAN-13 bar code 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.
2. ISBN is considered as an extension of EAN-13. EAN-13 must be enabled before reading an ISBN.

GROUP-26

SYMBOLOLOGIES: CHINA POST, KOREA POST, PLANET, POSTNET



CHINA POST



KOREA POST



PLANET CODE



POSTNET



GROUP-27

SYMBOLOLOGIES: AUSTRALIAN POST, OTHER POSTAL CODES

. A002\$



ENABLE

AUSTRALIAN POST

. K024\$



DISABLE

. K026\$



AUSTRALIAN POST
INTERPRETATION

AUSTRALIAN POST INTERPRETATION

This option controls what interpretation is applied to customer fields in Australian 4-State symbols. By default, interpretation is Bar Output (Code = 0).

Code	Interpretation
0	Bar Output
1	Numeric N Table
2	Alphanumeric C Table
3	Combination C and N Tables

Example:

To set interpretation to Numeric N Table.

1. Scan [Australian Post Interpretation]
2. Scan [1] from Full ASCII Table - Numbers (Group 39)
3. Scan [Australian Post Interpretation]

. A002\$



ENABLE

OTHER POSTAL CODES:

BRITISH POST

CANADIAN POST

JAPANESE POST

INFOMAIL

INTELLIGENT MAIL

POSTAL-4i

KIX (NETHERLANDS) POST

. K024\$



DISABLE

GROUP-28

SYMBOLOLOGIES: PDF417, MICROPDF417, QR CODE, DATAMATRIX

PDF417

.G021\$



ENABLE

.G022\$



DISABLE

.G023\$



MIN LENGTH (1)

.G024\$



MAX LENGTH (2750)

MICROPDF417

.G039\$



ENABLE

.G040\$



DISABLE

.G041\$



MIN LENGTH (1)

.G042\$



MAX LENGTH (366)

(MICRO) OR CODE

.G025\$



ENABLE

.G026\$



DISABLE

.G029\$



MIN LENGTH (1)

.G030\$



MAX LENGTH (4000)

DATAMATRIX

.G031\$



ENABLE

.G032\$



DISABLE

.G033\$



MIN LENGTH (1)

.G034\$



MAX LENGTH (3116)

GROUP-29

SYMBOLOLOGIES: MAXICODE, AZTEC, CHINESE SENSIBLE CODE (HAN XIN)

MAXICODE

.G043\$



ENABLE

.G044\$



DISABLE

.G045\$



MIN LENGTH (1)

.G046\$



MAX LENGTH (150)

AZTEC

.G055\$



ENABLE

.G056\$



DISABLE

.G057\$



MIN LENGTH (1)

.G058\$



MAX LENGTH (3832)

CHINESE SENSIBLE CODE (HAN XIN)

.G059\$



ENABLE

.G060\$



DISABLE

.G061\$



MIN LENGTH (1)

.G062\$



MAX LENGTH (4000)

GROUP-30

SYBBOLOGIES: CODABLOCK A, CODABLOCK F, GS1 COMPOSITE

CODABLOCK A

.G047\$



ENABLE

.G048\$



DISABLE

.G049\$



MIN LENGTH (1)

.G050\$



MAX LENGTH (600)

WARNING:

1. Once enabled, Code 39 will be automatically disabled to reduce the risks of mistakenly decoding a damaged Codablock A as a Code 39 symbol.
-

CODABLOCK F

.G051\$



ENABLE

.G052\$



DISABLE

.G053\$



MIN LENGTH (1)

.G054\$



MAX LENGTH (2048)

NOTES:

1. When Codablock F and Code 128 are both enabled, there is some risks of mistakenly decoding a damaged Codablock F symbol as a Code 128 symbol. Therefore, whenever possible, Code 128 should be disabled when Codablock F is enabled.
-

GS1 COMPOSITE

.K051\$



ENABLE

.K050\$



DISABLE

UPC/EAN Version GS1 COMPOSITE

.K055\$



ENABLE

.K057\$



UPC/EAN COMPOSITE REQUIRED ON

.K054\$



DISABLE

.K056\$



UPC/EAN COMPOSITE REQUIRED OFF

GROUP-31

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-32

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-33

FULL ASCII TABLE (CODE 39) SYMBOLS

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

GROUP-34

FULL ASCII TABLE (CODE 39) SYMBOLS

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

GROUP-35

FULL ASCII TABLE (CODE 39)
UPPER CASE ALPHABETS



A



B



C



D



E



F



G



H



I



J



K



L



M


GROUP-36

FULL ASCII TABLE (CODE 39)
UPPER CASE ALPHABETS

N 

O 

P 

Q 

R 

S 

T 

U 

V 

W 

X 

Y 

Z 

GROUP-37

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-38

FULL ASCII TABLE (CODE 39)
LOWER CASE ALPHABETS

n  +N

o  +O

p  +P

q  +Q

r  +R

s  +S

t  +T

u  +U

v  +V

w  +W

x  +X

y  +Y

z  +Z

GROUP-39

FULL ASCII TABLE (CODE 39) NUMBERS



0



1



2



3



4



5



6



7



















8



9

GROUP-40

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-41

FULL ASCII TABLE (CODE 39)
NAVIGATION KEYS

\$TQ



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-42

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	Interface Selection	N/A (normally USB HID out of box)
	Setup Code	ON
	Function Code Conversion	ON
2	Reading Mode	Trigger Mode
3	Beep Tone	Medium
	Vibrator	OFF
	Terminator	CR (USB HID) CR+LF (USB VCP)
4	Send Data Length	OFF
	Preamble	None
	Postamble	None
5	Inverse Barcode	Disable
	Code ID (Symbology ID)	Disable
7~9	Set ID	None
10	Interblock Delay	0mS
	Intercharacter Delay	0mS
11	Keyboard Layout	English (USA)
12	Capital Lock Mode	OFF
	Numeric Key	Alphanumeric Key
	HT/CR/ESC Conversion	Disable
13~15	Enable/Disable Symbologies	
	Code 32	Disable
	Industrial 2 of 5	Disable
	Matrix 2 of 5	Disable
	Interleaved 2 of 5	Enable
	Code 128	Enable
	Codabar	Enable
	Code 93	Enable
	GS1-128	Enable
	IATA	Disable
	Code 11	Disable
	MSI	Enable
	UPC-A	Enable
	UPC-E	Enable
	EAN-8	Enable
	EAN-13	Enable
	Code 39	Enable
	Full ASCII Code 39	Enable
	NEC 2 of 5	Enable
	GS1 Databar Omnidirectional	Enable
	GS1 Databar Limited	Enable
	GS1 Databar Expanded	Enable
	China Post	Disable
	Korea Post	Disable
	PDF417	Enable
	MicroPDF417	Disable
	(Micro) QR Code	Enable
	DataMatrix	Enable
	MaxiCode	Enable
	Aztec	Enable
Codablock A	Disable	
Codablock F	Disable	
Chinese Sensible Code (Han Xin)	Disable	

APPENDIX 1

DEFAULT TABLE 2

GROUP	PARAMETER	DEFAULT
16	Interleaved 2 of 5	
	Enable/Disable	Enable
	Check Digit Verification	Disable CDV
	Min Length	4
	Max Length	80
	IATA	
	Enable/Disable	Disable
	Min Length	4
	Max Length	80
	Matrix 2 of 5	
Enable/Disable	Disable	
Min Length	4	
Max Length	80	
17	Industrial 2 of 5	
	Enable/Disable	Enable
	Min Length	4
	Max Length	48
	NEC 2 of 5	
	Enable/Disable	Enable
	Check Digit Verification	Disable CDV
	Min Length	4
	Max Length	80
	Code 11	
Enable/Disable	Enable	
Check Digit Verification	CDV & Send CD (2 digits)	
Min Length	4	
Max Length	80	
18	Code 93	
	Enable/Disable	Enable
	Min Length	1
	Max Length	80
	MSI	
	Enable/Disable	Enable
	Check Digit Verification	Single Mod 10 & Not Send CD
Min Length	4	
Max Length	48	
19	Code 39	
	Enable/Disable	Enable
	Check Digit Verification	Disable CDV
	Min Length	1
	Max Length	48
	Full ASCII Code 39	Enable
	Start/Stop	Send
Code 32		
Enable/Disable	Disable	
20	Codabar	
	Enable/Disable	Enable
	Check Digit Verification	Disable CDV
	Min Length	4
	Max Length	60
	Start/Stop	Not Send
Concatenation	OFF	
21	Code 128	
	Enable/Disable	Enable
	Min Length	1
	Max Length	80
	ISBT Concatenation	OFF
	GS1-128	
	Enable/Disable	Enable
	Min Length	1
	Max Length	80
	GS1 Databar	
	GS1 Databar Omnidirectional	Enable
	GS1 Databar Limited	Enable
GS1 Databar Expanded	Enable	
Min Length	4	
Max Length	74	

APPENDIX 1

DEFAULT TABLE 3

GROUP	PARAMETER	DEFAULT
22	UPC-A	
	Enable/Disable	Enable
	Check Digit Verification	Send CD
	Number System Digit	Send
	UPC-A Expand to EAN-13	Disable
	+ 5	OFF
	+ 2	OFF
	Add a Space	ON
Addenda Required	OFF	
23	UPC-E	
	Enable/Disable	Enable
	Check Digit Verification	Send CD
	Number System Digit	Send
	UPC-E Expand to UPC-A	Disable
	+ 5	OFF
	+ 2	OFF
	Add a Space	ON
	Addenda Required	OFF
UPC-E1	OFF	
24	EAN-8	
	Enable/Disable	Enable
	Check Digit Verification	Send CD
	+ 5	OFF
	+ 2	OFF
	Add a Space	ON
Addenda Required	OFF	
25	EAN-8	
	Enable/Disable	Enable
	Check Digit Verification	Send CD
	+ 5	OFF
	+ 2	OFF
	Add a Space	ON
	Addenda Required	OFF
ISBN	OFF	
26	China Post	
	Enable/Disable	Disable
	Min Length	4
	Max Length	80
	Korea Post	
	Enable/Disable	Disable
	Check Digit Verification	CDV & Not Send CD
	Min Length	4
	Max Length	80
	Planet Code	
	Enable/Disable	Disable
	Check Digit Verification	CDV & Not Send CD
	Postnet	
	Enable/Disable	Disable
Check Digit Verification	CDV & Not Send CD	
27	Australian Post	
	Enable/Disable	Disable
	Interpretation	Bar Output
	British Post	
	Enable/Disable	Disable
	Canadian Post	
	Enable/Disable	Disable
	Japanese Post	
	Enable/Disable	Disable
	Infomail	
	Enable/Disable	Disable
	Intelligent Mail	
	Enable/Disable	Disable
	Postal-4i	
	Enable/Disable	Disable
	KIX (Netherlands) Post	
	Enable/Disable	Disable

APPENDIX 1

DEFAULT TABLE 4

GROUP	PARAMETER	DEFAULT
28	PDF417	
	Enable/Disable	Enable
	Min Length	1
	Max Length	2750
	MicroPDF417	
	Enable/Disable	Disable
	Min Length	1
	Max Length	366
	(Micro) QR Code	
	Enable/Disable	Enable
	Min Length	1
	Max Length	4000
	DataMatrix	
Enable/Disable	Enable	
Min Length	1	
Max Length	3116	
29	MaxiCode	
	Enable/Disable	Enable
	Min Length	1
	Max Length	150
	Aztec	
	Enable/Disable	Enable
	Min Length	1
	Max Length	3832
	Chinese Sensible Code (Han Xin)	
	Enable/Disable	Disable
Min Length	1	
Max Length	4000	
30	Codablock A	
	Enable/Disable	Disable
	Min Length	1
	Max Length	600
	Codablock F	
	Enable/Disable	Disable
	Min Length	1
	Max Length	2048
	GS1 Composite	
	Enable/Disable	Disable
	EAN/UPC Version GS1 Composite	
	Enable/Disable	Disable
EAN/UPC Composite Required	Off	

APPENDIX 2

BAR CODE TEST CHART

DENSITY	NARROW mm(mil)	WIDE mm(mil)	CHAR.GAP mm(mil)	N/W RATIO
MEDIUM DENSITY	0.25(10)	0.625(25)	0.25(10)	1/2.5

MEDIUM DENSITY

NW-7
(CODABAR)



b\$:/+.00123B

CODE-39



CODE-39 TEST

Interleaved
2of5



9876543210

UPC



0 6
31323 12078

EAN



4 712567 014012

APPENDIX 2

BAR CODE TEST CHART

DENSITY	NARROW mm(mil)	WIDE mm(mil)	CHAR.GAP mm(mil)	N/W RATIO
LOW DENSITY	0.33(13)	0.825(32.5)	0.33(13)	1/2.5

LOW DENSITY



C9876543210D



CODE-39 TEST



0012345690



4 7 1 6 4 1 5 9 4 2 0 5 2



0 7 1 5 8 9 8 1 2 3 0 8