

Ez One Shot[®]

PEN SCANNER USER'S MANUAL



Version: 2018.1

CONTENTS

PREFACE

Table of Contents.....	2
Beeper Indication.....	3
Cloning Mode.....	4-5
How to connect the scanner to the host.....	6
How to set up the parameter.....	7

GENERAL SETTINGS (GROUP 1 - 13)

1 Default, Check Version, Interface.....	8
2 Beep tone, Terminator.....	9
3 Send Data Length, Preamble, Postamble.....	10
4 Accuracy Adjustment.....	11
5 Code ID, Inverse Barcode.....	12
6 Symbolgies Code Identifier.....	13
7~8 Set Code ID.....	14-15
9 Inter-block and Inter-character Delay.....	16
10 Keyboard Layout.....	17
11 Caplock Mode, Numeric Key.....	18
12 RS232 - Baud rate, Data bits, Parity.....	19
13 RS232 - Stop bit, Handshaking, ACK/NAK, Flow Control, BCC.....	20

SYMBOLGIES (GROUP 14 - 31)

14~16 Enable/Disable Barcode Symbology.....	21-23
16 China postcode(Toshiba code).....	23
17 MSI code, UK Plessey code.....	24
18 Code 93, Telepen, IATA.....	25
19 Interleaved 2 of 5, Code 11.....	26
20 Industrial 2 of 5, Matrix 2 of 5.....	27
21 Codabar.....	28
22 ABC Codabar, CX Codabar.....	29
23 Codabar Coupling.....	30
24 Code 39 (Full ASCII/Standard), Code 32.....	31
25 UPC-E.....	32
26 UPC-E(0)&(1), UPC-E EXPAND.....	33
27 UPC-A.....	34
28 EAN-8.....	35
29 EAN-13, ISSN, ISBN, ISMN.....	36
30 EAN/UCC 128, Code 128.....	37
31 DataBar(RSS) Stacked, Limited, Expanded.....	38

FULL ASCII(CODE39)TABLE, FUNCTION

KEY TABLE(GROUP 32 - 43)

32~40 Full ASCII table(Code 39).....	39-47
41~43 Function Key table(Code 39).....	48-50

APPENDIX

Appendix 1 Default table.....	51-54
Appendix 2 Cable Pin Assignment.....	55-56
Appendix 3 Barcode test chart.....	57-58

BEEPER INDICATION

Status	Beeper	Remark
Initializing/ Power-up	1 long beep	
Successful Barcode Scan	1 beep	
Reads Configuration Barcode	2 beeps	
Unexpected Barcode Scan during Configuration	3 short beeps	Scan RESET/ ABORT and retry
Power Off or Standby		

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 "...". Length must be in sequences of four, such as 4, 8, 12, 16, 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 :

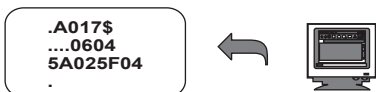
1. PROJECT ASSIGNMENTS:

- 1.1. Beep tone: **BEEP LOW**
- 1.2. Capslock Mode: **CAPSLOCK ON.**

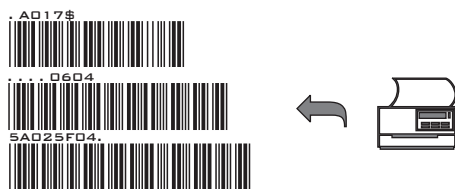
2. SETTING PROCEDURE:

- 2.1. Scan **BEEP LOW (GROUP 2).**
- 2.2. Scan **CAPSLOCK ON (GROUP 11).**

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.	12 4+.(Dot)
--	----------------------------	----------------------------------	----------------

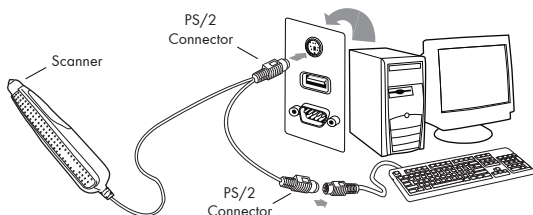
WRONG SETTING

.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 A025F04 .	✓ 9 x } 7 x } .(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\$.... 0604 5A02 5F04.	X ← 4 ✓ 4 ✓ 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 CONNECT THE SCANNER TO THE HOST TERMINAL

KEYBOARD WEDGE INTERFACE

1. Power down the host computer.
2. Disconnect the keyboard cable from the computer.
3. Connect the "Y" cable between the keyboard and the scanner and computer.
4. Restart the computer.
5. The scanner will beep.
6. Set the scanner to KEYBOARD interface by scanning PS2 KB barcode (Group1)
7. Scanner will beep to confirm the setting.
8. Scan a bar code to confirm that data shows on the monitor.

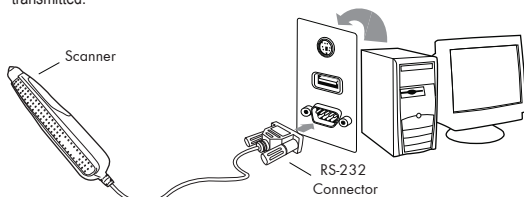


RS-232 INTERFACE

1. Make sure your host computer supplies enough power (>75mA) at PIN9 of RS232 port.
2. Plug the cable to the RS232 port.
3. The scanner will beep.
4. Set the scanner to RS-232 interface by scanning RS232 barcode (Group1).
5. Set RS-232 protocol: Baud Rate, Stop Bits, Handshaking, Data Bits and Parity (Group14)
6. Scan a bar code to confirm that data shows on the monitor.

NOTES:

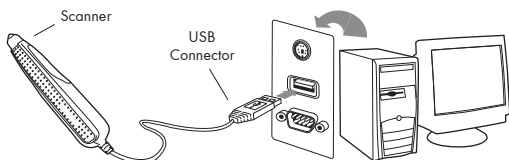
1. Make sure the protocol communication settings of the scanner (such as baud rate, data bits, etc.) match those of the host computer. Otherwise, no data will be transmitted.



USB INTERFACE

The USB Interface supported is compatible with Apple MAC series, Windows 98, 2000, XP, Vista, 7, 8 and so on.

1. Connect the USB cable between the scanner and the computer.
2. The scanner will beep.
3. The scanner will detect the USB driver automatically. (The first time the scanner is connected via the USB port, follow the appropriate instructions for the host computer.)
4. Set the scanner to USB HID interface by scanning USB HID barcode (GROUP)
5. Scanner will beep to confirm the setting.
6. Scan a bar code to confirm that data shows on the monitor.



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 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 bar code, but a few need several different bar codes 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 32-43

Step 4: Scan PREAMBLE or POSTAMBLE.

Min Length / Max Length

Step 1: Scan MIN LENGTH or MAX LENGTH.

Step 2: Scan two digits from Group 40 or Full ASCII numeric table in Appendix

Step 3: Scan MIN LENGTH or MAX LENGTH.

Accuracy Adjustment

Step 1: Scan ACCURACY ADJUSTMENT.

Step 2: Scan one digit from GROUP 4

Step 3: Scan ACCURACY ADJUSTMENT.

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 in Group 32-40

Step 3: Scan CODE 39 SET ID from Group 7

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 32-40

Step 3: Scan SET INSERT DATA.

NOTES:

1. The scanner will beep three times as a reminder that a setting is not yet complete.
2. If you make a mistake, forget a step, etc., scan RESET to start again.



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!

.C005\$



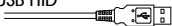
USB HID



.C008\$



USB HID



.C006\$



USB VCP

INTERFACES SELECTION

.C001\$



PS2 KB

.C002\$



RS232

Caution:

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. VCP driver is available from your local distributor.

GROUP-2

GENERAL SETTINGS

BEEP TONE

. F012\$



BEEP OFF

. F014\$



BEEP HIGH

. F013\$



BEEP MEDIUM

. F017\$



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 Keyboard Wedge interface the default terminator is CR.
2. For the USB interface the default terminator is CR.
3. For the RS232 interface the default terminator is CR+LF.

GROUP-3

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-4

GENERAL SETTINGS - 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.

SETTING PROCEDURE:

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

RESET



NOTES:

1. The scanner will beep three times as reminder that a setting is not yet complete.
2. If you make a mistake, forget a step, etc., scan **RESET** to start again.

GROUP-5

GENERAL SETTINGS

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 bar code data and after the preamble.

EXAMPLE :

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

145287	JE0	4 ⁵ 563987 ¹ 123453 ¹	12411
Preamble 145287	CODE ID AIM ID : JE0	BARCODE / DATA EAN 13 +5	
OUTPUT : 145287JE0456398712345312411			

GROUP-6

GENERAL SETTINGS

SYBBOLOGIES CODE ID IDENTIFIER						
Symbologies	Factory ID	AIM ID (new)	Symbologies	Factory ID	AIM ID (new)	
EAN 128	T	JC1	MSI	O	JM0	
Code 128	K	JC0	MSI(MOD 10 / CDV & not send CD)		JM1	
EAN8(+2/+5 OFF)	S	JE4	Code 32	B	JX0	
EAN8(+2 ON)		JE4	Codabar	N	JF0	
EAN8(+5 ON)		JE4	Codabar(ABC Codabar)		JF1	
UPC-E(+2/+5 OFF)	E	JE0	Codabar(CDV & Send CD)		JF2	
UPC-E(+2 ON)		JE3	Codabar(CDV & not send CD)	JF4		
UPC-E(+5 ON)		JE3	UK Plessey	P	JP0	
UPC-A(+2/+5 OFF)	A	JE0	Matrix 2 of 5	Y	JX0	
UPC-A(+2 ON)		JE3	Full ASCII Code 39(disable CDV)	D	JA4	
UPC-A(+5 ON)		JE3	Full ASCII Code 39(CDV & send CD)		JA5	
EAN-13(+2/+5 OFF)	F	JE0	Full ASCII Code 39(CDV & not send CD)		JA7	
EAN-13(+2 ON)		JE3	Standard Code 39(disable CDV)	M	JA0	
EAN-13(+5 ON)		JE3	Standard Code 39(CDV & send CD)	JA1		
Code 93	L	JG0	Standard Code 39(CDV & not send CD)		JA3	
Code 11(disable CDV)	J	JH0	Interleaved 2 of 5(CDV & send CD)	I	J11	
Code 11(send one CD)		JH0	Interleaved 2 of 5(CDV & not send CD)		J13	
Code 11(send two CD)		JH1	Interleaved 2 of 5(disable CDV)		J10	
Code 11(not send CD)		JH3	Databar		je0	
Telepen(ASCII)	U	JB0	Databar Stacked	G		
Telepen(Numeric)		JB1	Databar Stacked Omnidirectional			
IATA 2 of 5	R	JR0	Databar Truncated			
Industrial 2 of 5	V	JS0	Databar Limited			C
China Post Code	H	JX0	Databar Expanded			Q
PDF417	Z	JE0	Databar Expanded Stacked			

SET ID - SETTING PROCEDURES

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.

Example: Define the MSI Code ID = A, Code 93 = G9

MSI :

Step1: Scan MSI Set ID (Group 8).

Step2: "A" from Group 36.

Step3: Scan MSI Set ID (Group 8).

Code 93:

Step1: Scan Code 93 Set ID (Group 7).

Step2: "G" from Group 36, Scan "9" from Group 40.

Step3: Scan Code 93 Set ID (Group 7).

NOTES:

1. The length of a Code ID is either one or two characters. If one character is set, the Code ID output will be one character. If two characters are set, the Code ID output will be two characters.
2. Only one type of Code ID will be sent.

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\$



EAN 128 Set ID

. P022\$



Telepen Set ID

. P009\$



Code 11 Set ID

. P011\$



Code 32 Set ID

. P012\$



China Post Code
(TOSHIBA Code) Set ID

GROUP-8

GENERAL SETTINGS - SET CODE ID


MSI Code Set ID 

UK Plessey Set ID 

Matrix 2 of 5 Set ID 

Interleaved 2 of 5 Set ID 

Industrial 2 of 5 Set ID 

Full ASCII Code39 Set ID 

GS1 Databar (RSS) Limited Set ID 

GS1 Databar (RSS) Expanded Set ID 

GS1 Databar (RSS) Set ID 

LABEL Code Set ID (Reserved) 

RESET



1. The scanner will beep three times as a reminder that a setting is not yet complete.
2. If you make a mistake, forget a step, etc., scan RESET to start again.

GROUP-9

GENERAL SETTINGS

INTERBLOCK DELAY

. B001\$ 	<u>0mS</u>
. B002\$ 	10mS
. B003\$ 	50mS
. B004\$ 	100mS
. B005\$ 	200mS
. B006\$ 	500mS

INTERCHARACTER DELAY

. B010\$ 	<u>140uS</u>
. B011\$ 	500uS
. B012\$ 	1mS
. B013\$ 	4mS
. B014\$ 	16mS

GROUP-10

GENERAL SETTINGS

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-11

GENERAL SETTINGS

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



GROUP-12

TETHERED SCANNER - RS232 SETTINGS

BAUD RATE



DATA BITS & PARITY



GROUP-13

TETHERED SCANNER - RS232 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-14

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-15

ENABLE/ DISABLE SYMBOLOGIES

ENABLE



DISABLE



GROUP-16

ENABLE/DISABLE SYMBOLOGIES, CHINA POSTAL CODE

ENABLE

. N032\$



GS1 Databar ENABLE

. N038\$



GS1 Databar STACKED ENABLE

. N010\$



GS1 Databar LIMITED ENABLE

. N026\$



GS1 Databar EXPANDED ENABLE

. N028\$



GS1 Databar EXPANDED STACKED ENABLE

DISABLE

. N033\$



GS1 Databar DISABLE

. N039\$



GS1 Databar STACKED DISABLE

. N011\$



GS1 Databar LIMITED DISABLE

. N027\$



GS1 Databar EXPANDED DISABLE

. N029\$



GS1 Databar EXPANDED STACKED DISABLE

CHINA POSTAL CODE [TOSHIBA CODE]

. K001\$



ENABLE

. K002\$



DISABLE

. K003\$



DISABLE CDV

. K004\$



CDV & SEND CD

. K005\$



CDV & NOT SEND CD

. K006\$



MIN LENGTH (11)

. K007\$



MAX LENGTH (48)

GROUP-17

SYMBOLOGIES: 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 (6)

. L006\$



MAX LENGTH (48)

. L010\$



ENABLE

. L011\$



DISABLE

UK PLESSEY CODE

. L012\$



CDV & SEND CD

. L013\$



CDV & NOT SEND CD

GROUP-18

SYMBOLOLOGIES: CODE 93, TELEPEN, IATA



CODE 93



TELEPEN



IATA



GROUP-19

SYBBOLOGIES: INTERLEAVED 2 OF 5, CODE 11



ENABLE



DISABLE



DISABLE CDV



CDV & SEND CD



CDV & NOT SEND CD

INTERLEAVED 2 OF 5



First digit suppressed



Last digit suppressed



NO suppressed



MIN LENGTH (6)



MAX LENGTH (48)



ENABLE



DISABLE



DISABLE CDV



CDV & SEND CD



CDV & SEND CD
(1 DIGIT)

CODE 11



CDV & SEND CD
(2 DIGITS)



CDV & NOT SEND CD



MIN LENGTH (6)



MAX LENGTH (32)

GROUP-20

SYMBOLOLOGIES: 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 (6)

. 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 (6)

. M016\$



MAX LENGTH (48)

GROUP-21

SYMBOLOLOGIES: 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-22

SYMBOLOLOGIES: ABC- CODABAR, CX- CODABAR



ON



OFF



SET INSERT DATA*

ABC- CODABAR



INSERT DATA- ON



INSERT DATA- OFF

* The data can be any alphanumerics of FULL ASCII Table (GROUP 32-40)

REMARK:

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.



ON



OFF



SET INSERT DATA*

CX CODE- CODABAR



INSERT DATA- ON



INSERT DATA- OFF

* The data can be any alphanumerics of FULL ASCII Table (GROUP 32-40)

REMARK:

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-23

SYBBOLOGIES: CODABAR COUPLING, ADJACENT REQUIRED



ON



OFF



SET INSERT DATA*

CODABAR COUPLING



INSERT DATA - ON



INSERT DATA - OFF

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 32-40)*

ADJACENT REQUIRED

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

NOTES:

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.



ON



OFF

SETTING PROCEDURE - SET INSERT DATA

Step 1- Scan SET INSERT DATA.

Step 2- Scan any combination of alphanumeric characters from FULL ASCII Table.

Step 3- Scan SET INSERT DATA.

RESET



NOTES:

1. The scanner will beep three times as a reminder that a setting is not yet complete.
2. If you make a mistake, forget a step, etc., Scan RESET to start again.

GROUP-24

SYMBOLOLOGIES: 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-25

SYMBOLOGIES FORMATTING: UPC-E



UPC-E



ADD ON SUPPLEMENT



NOTE:

If ADDENDA REQUIRED is set to ON, the scanner will only read an UPC-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-26

SYMBOLOLOGIES: UPC-E SYSTEM NUMBER

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 in front of the bar code.

GROUP-27

SYMBOLOGIES FORMATTING: UPC- A



ENABLE



DISABLE



LEAD DIGIT SEND



LEAD DIGIT NO SEND



CHECK DIGIT SEND



CHECK DIGIT NO SEND

UPC-A EXPAND TO EAN-13



ENABLE



DISABLE



+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 UPC-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-28

SYMBOLOGIES FORMATTING: EAN 8

. H019\$



ENABLE

. H020\$



DISABLE

. H021\$



LEAD DIGIT SEND

. H022\$



LEAD DIGIT NO SEND

. H023\$



CHECK DIGIT SEND

. H024\$



CHECK DIGIT NO SEND

. H029\$



+ 5 ON

. H030\$



+ 5 OFF

. H031\$



+ 2 ON

. H032\$



+ 2 OFF

ADD ON SUPPLEMENT

. H043\$



ADD A SPACE ON

. H044\$



ADD A SPACE OFF

. H062\$



ADDENDA REQUIRED ON

. H061\$



ADDENDA REQUIRED OFF

NOTE:

If ADDENDA REQUIRED is set to ON, the scanner will only read an UPC-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-29

SYMBOLOGIES FORMATTING: EAN13, ISBN, ISSN, ISMN



ENABLE



DISABLE



LEAD DIGIT SEND



LEAD DIGIT NO SEND



CHECK DIGIT SEND



CHECK DIGIT NO SEND

EAN-13



+ 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



ISBN ON

ISBN

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.



ISSN OFF



ISSN ON

ISSN

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.



ISMN OFF



ISMN ON

ISMN

GROUP-30

SYMBOLOGIES: EAN/UCC-128, CODE 128

. M001\$



ENABLE

. M002\$



DISABLE

. M003\$



CODE ID ENABLE

. M004\$



CODE ID DISABLE

EAN/ UCC-128

. M005\$



FUNC 1 CHAR SEND

. M006\$



FUNC 1 CHAR NOT SEND

. M007\$



DEFINE FNC1

NOTES: DEFINE EAN 128

The first FNC1 character is translated to Jc1, and the second FNC1 character is translated to an ASCII <GS> character (scan from Group 34-40)

String format:

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

Setting Procedure:

- 1: Scan DEFINE FNC1.
- 2: Scan ASCII Code (Group 34-60)
- 3: Scan DEFINE FNC1.

CODE 128

. J010\$



ENABLE

. J011\$



DISABLE

. J012\$



MIN LENGTH (5)

. J013\$



MAX LENGTH (48)

GROUP-31

GS1 DataBar, LIMITED, EXPANDED

GS1 DataBar (RSS) - OMNI & STACKED



GS1 DataBar (RSS) - LIMITED



GS1 DataBar (RSS) - EXPANDED



GROUP-32

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-33

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-34

FULL ASCII TABLE (CODE 39) SYMBOLS

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

GROUP-35

FULL ASCII TABLE (CODE 39) SYMBOLS

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

GROUP-36

FULL ASCII TABLE (CODE 39)
UPPER CASE ALPHABETS



A



B



C



D



E



F



G



H



I



J



K



L



M


GROUP-37

FULL ASCII TABLE (CODE 39)
UPPER CASE ALPHABETS


N 

O 

P 

Q 

R 

S 

T 

U 

V 

W 

X 

Y 

Z 

GROUP-38

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-39

FULL ASCII TABLE (CODE 39) LOWER CASE ALPHABETS

n 

o 

p 

q 

r 

s 

t 

u 

v 

w 

x 

y 

z 

GROUP-40

FULL ASCII TABLE (CODE 39) NUMBERS



0



1



2



3



4



5



6



7



















8



9














GROUP-41

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-42

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-43

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	Computer Type	PC-AT
	Interface	(depends on model no.)
	Setup Code	On
2	Beep Tone	Beep Medium
	Terminator	CR(KB, USB); CR+LF(RS232)
3	Send Data Length	Off
	Preamble & Postamble	None
4	Accuracy Adjustment	0
5	Label Type Positive/ Negative	Disable
5~8	Enable & Disable Code ID	Off
9	Interblock Delay	0ms
	Intercharacter Delay	140us
10	Keyboard Layout	English(USA)
11	Caplock	Off
	Numeric Key	Alphanumeric Key
12	Baud Rate	9600
	Data Bits & Parity	8 Bits None
13	Stop Bits	1 stop bit
	Handshaking	None
	ACK/NAK	Off
	Flow Control Timeout	1 Sec
	BCC	Off
14	Enable and Disable Symbologies	
	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	

APPENDIX 1

DEFAULT TABLE 2

GROUP	PARAMETER	DEFAULT	
15	UPC-A	Enable	
	UPC-E	Enable	
	EAN-8	Enable	
	EAN-13	Enable	
	MSI	Disable	
	Code 39	Enable	
	Code 11	Disable	
	Code 93	Disable	
	EAN-128	Enable	
IATA	Disable		
16	1	GS1 Databar	Disable
		GS1 Databar Stacked	Enable
		GS1 Databar Limited	Disable
		GS1 Databar Expanded	Disable
		GS1 Databar Expanded Stacked	Enable
	2	China Post Code	
		Enable/Disable	Enable
		Check Digits	Disable CDV
		Min Length	11 digits
		Max Length	48 digits
17	1	MSI	
		Enable/Disable	Disable
		Check Digits	CDV & send CD
		Check Digits Mode	Single MOD 10
	2	UK Plessy	
		Enable/Disable	Disable
		Check Digits	CDV & not send CD
18	1	Code 93	
		Enable/Disable	Disable
		Min Length	6 digits
		Max Length	48 digits
	2	Telepen	
		Enable/Disable	Disable
		Telepen ASCII/ Number	Number
	3	IATA	
		Enable/Disable	Disable
		Check Digits	Disable CDV
		Min Length	6 digits
		Max Length	48 digits
19	1	Interleaved 2 of 5	
		Enable/Disable	Enable
		Check Digits	Disable CDV
		First/ last digit suppressed	No suppressed
		Min Length	6 digits
		Max Length	48 digits
	2	Code II	
		Enable/Disable	Disable
		Check Digits	Disable CDV
		Min Length	6 digits
		Max Length	32 digits
20	1	Industrial 2 of 5	
		Enable/Disable	Disable
		Check Digits	Disable CDV
		Min Length	6 digits
		Max Length	48 digits
	2	Matrix 2 of 5	
		Enable/Disable	Disable
		Check Digits	Disable CDV
		Min Length	6 digits
		Max Length	48 digits

APPENDIX 1

DEFAULT TABLE 3

GROUP	PARAMETER	DEFAULT	
21	Codabar		
	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	
	Start(ST)/Stop(SP)	Send	
	CLSI Format	On	
22	1	ABC-Codabar	
		ON/OFF	Off
		Insert Data	Off
	2	CX-Codabar	
		ON/OFF	Off
	Insert Data	Off	
23	Codabar-Coupling		
	ON/OFF	Off	
	Insert Data	Off	
	Adjacent Required	Off	
24	1	Code 39	
		Full ASCII 39 Enable/Disable	Enable
		Check Digits	Disable CDV
		Start/Stop	Not Send
		Min Length	1 digit
	Max Length	48 digits	
	2	Code 32	
		Enable/Disable	Disable
		Leading	send
		Tailing	send
25	UPC-E		
	Enable/Disable	Enable	
	Check Digits	Send	
	Lead Digits	Send	
	Add a space	Off	
	Addenda required	Off	
	+5 On/Off	Off	
	+2 On/Off	Off	
26	UPC-E systems number		
	UPC E(0) On/Off	On	
	UPC E(1) On/Off	Off	
	UPC-E expand to UPC-A	Disable	
	UPC-A expand to EAN-13	Disable	
27	UPC-A		
	Enable/Disable	Enable	
	Check Digits	Send	
	Lead Digits	Send	
	Add a space	Off	
	Addenda required	Off	
	+5 On/Off	Off	
	+2 On/Off	Off	
28	EAN-8		
	Enable/Disable	Enable	
	Check Digits	Send	
	Lead Digits	Send	
	Add a space	Off	
	Addenda required	Off	
	+5 On/Off	Off	
	+2 On/Off	Off	

APPENDIX 1

DEFAULT TABLE 4

GROUP	PARAMETER	DEFAULT	
29	EAN-13		
	Enable/Disable	Enable	
	Check Digits	Send	
	Lead Digits	Send	
	Add a space	Off	
	Addenda required	Off	
	+5 On/Off	Off	
	+2 On/Off	Off	
	ISSN On/Off	Off	
	ISBN	Off	
30	1	EAN/UCC128	
		Enable/Disable	Enable
		Code ID	Disable
		Func 1 Char Send	Not Send
	2	Code 128	
		Enable/Disable	Enable
		Check Digits	Disable CDV
		Min Length	5 digits
		Max Length	48 digits
31		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

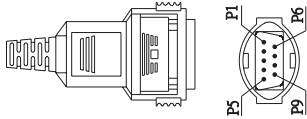
APPENDIX 2

Cable Pin Assignment INTERFACES:

1. TTL, Wand Emulation

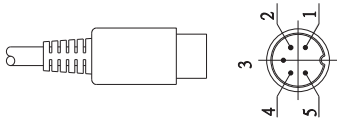
1.1) AMP (D-Sub 9Pin):

Pin	Signal
2	Data
7	GND
9	+5VCC



1.2) Din 5 male (240 degree):

Pin	Signal
1	+ 5VCC
2	Data
3	GND
4	N/A
5	N/A

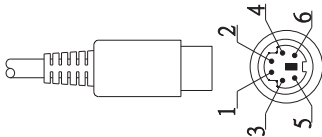


2. Keyboard Interface:

Type of connector:

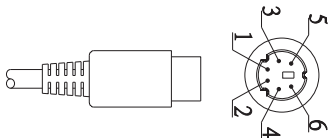
2.1) PS/2 Mini Din6 Female:

Pin	Signal
1	PC Data
2	NC
3	GND
4	+5VCC
5	PC-Clk
6	NC



2.2) PS/2 Mini Din6 Male:

Pin	Signal
1	KB- Data
2	NC
3	GND
4	+5VCC
5	KB-Clk
6	NC



APPENDIX 2

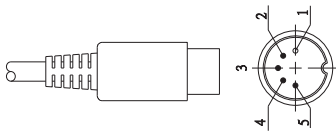
Cable Pin Assignment

2. Keyboard Interface:

Type of connector:

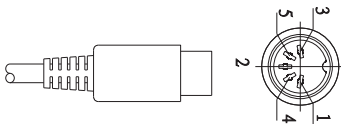
2.3) PC-AT: Din 5 Male:

Pin	Signal
1	KB-Clk
2	KB-Data
3	NC
4	GND
5	+5VCC



2.4) PC-AT: Din 5 Female:

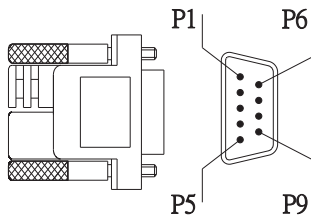
Pin	Signal
1	PC-Clk
2	PC-Data
3	NC
4	GND
5	+5VCC



3. RS232 Interfaces:

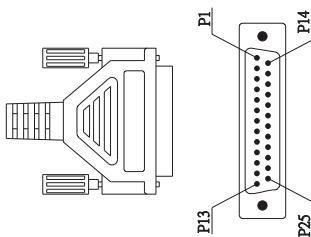
3.1) DB9F

Pin	Signal
2	TXD(Out)
3	RXD(In)
5	GND
7	CTS(In)
8	RTS(Out)
9	+5VCC



3.2) DB25F

Pin	Signal
2	RXD(In)
3	TXD(Out)
4	CTS(In)
5	RTS(Out)
7	GND
16	+5VCC
25	+5VCC



APPENDIX 3

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 3 1 3 2 3 1 2 0 7 8 6

EAN



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

APPENDIX 3

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

