Ez One Shot®

PEN SCANNER USER'S MANUAL

Version: 2018.1

CONTENTS

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 scanners 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.

CLONING MODE

Figure 1

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

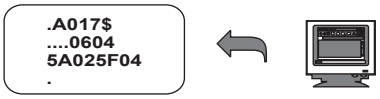
CLONING MODE

EXAMPLE :

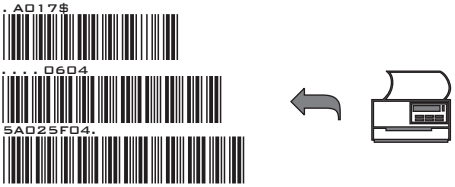
1. PROJECT ASSIGNMENTS:
1.1. Beep tone: **BEEP LOW**
1.2. Capslock Mode: **CAPSLOCK ON.**

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.

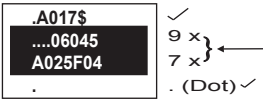
CORRECT SETTING

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

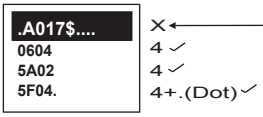
.A017$	
....06045A02	12
5F04.	4+.(Dot)

WRONG SETTING

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



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.

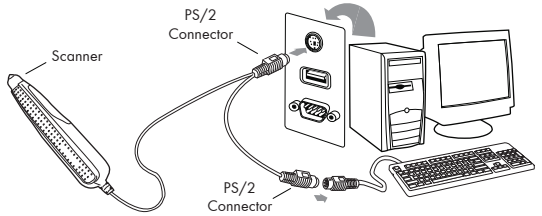


Wrong Setting because you add "...." after .A017$:
The .A017$ is a FIXED parameter to enter setup procedure. It is an unchangeable parameter. **Never add, delete or rearrange data from the FIRST row.**

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.

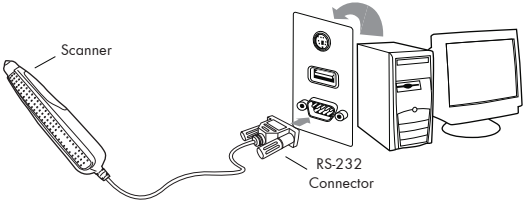


RS-232 INTERFACE

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:

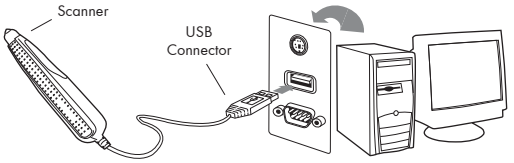
1. Make sure the protocol communication settings of the scanner (such as baud rate, data bits, etc.) match those of the host computer. Otherwise, no data will be transmitted.



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.

RESET

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$

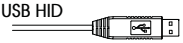
SETUP CODE OFF

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

INTERFACES SELECTION

. C005$

USB HID



. C008$

USB HID

. C006$

USB VCP

. 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 avaliable 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

0

1

2

3

4

5

6

7

8

9

ACCURACY ADJUSTMENT

.A010$

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

.P023$

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	]E0	4 563987 123453 12411
Preamble 145287	CODE ID AIM ID :]E0	BARCODE / DATA EAN 13 +5

OUTPUT : 145287]E0456398712345312411

GROUP-6

GENERAL SETTINGS

SYMBOLOGIES CODE ID IDENTIFIER					
Symbologies	Factory ID	AIM ID (new)	Symbologies	Factory ID	AIM ID (new)
EAN 128	T	]C1	MSI	O	]M0
Code 128	K	]C0	MSI(MOD 10 / CDV & not send CD)		]M1
EAN8(+2/+5 OFF)	S	]E4	Code 32	B	]X0
EAN8(+2 ON)		]E4	Codabar	N	]F0
EAN8(+5 ON)		]E4	Codabar(ABC Codabar)		]F1
UPC-E(+2/+5 OFF)	E	]E0	Codabar(CDV & Send CD)		]F2
UPC-E(+2 ON)		]E3	Codabar(CDV & not send CD)		]F4
UPC-E(+5 ON)		]E3	UK Plessey	P	]P0
UPC-A(+2/+5 OFF)	A	]E0	Matrix 2 of 5	Y	]X0
UPC-A(+2 ON)		]E3	Full ASCII Code 39(disable CDV)	D	]A4
UPC-A(+5 ON)		]E3	Full ASCII Code 39(CDV & send CD)		]A5
EAN-13(+2/+5 OFF)	F	]E0	Full ASCII Code 39(CDV & not send CD)		]A7
EAN-13(+2 ON)		]E3	Standard Code 39(disable CDV)	M	]A0
EAN-13(+5 ON)		]E3	Standard Code 39(CDV & send CD)		]A1
Code 93	L	]G0	Standard Code 39(CDV & not send CD)		]A3
Code 11(disable CDV)	J	]H0	Interleaved 2 of 5(CDV & send CD)	I	]I1
Code 11(send one CD)		]H0	Interleaved 2 of 5(CDV & not send CD)		]I3
Code 11(send two CD)		]H1	Interleaved 2 of 5(disable CDV)		]I0
Code 11(not send CD)		]H3	Databar	G	]e0
Telepen(ASCII)	U	]B0	Databar Stacked		
Telepen(Numeric)		]B1	Databar Stacked Omnidirectional		
IATA 2 of 5	R	]R0	Databar Truncated		
Industrial 2 of 5	V	]S0	Databar Limited	C	
China Post Code	H	]X0	Databar Expanded	Q	
PDF417	Z	]E0	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

EAN 13 Set ID

EAN 8 Set ID

UPC E Set ID

UPC A Set ID

Code 39 Set ID

Code 93 Set ID

Codabar Set ID

IATA Set ID

Code 128 Set ID

EAN 128 Set ID

Telepen Set ID

Code 11 Set ID

Code 32 Set ID

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$  0mS

.B002$  10mS

.B003$  50mS

.B004$  100mS

.B005$  200mS

.B006$  500mS

INTERCHARACTER DELAY

.B010$  140uS

.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

. A0005$

CAPLOCK OFF

. A0004$

CAPLOCK ON

. A0006$

CAPLOCK FREE

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

. D017$

NUMERIC KEY

. D018$

ALPHANUMERIC KEY

GROUP-12

TETHERED SCANNER - RS232 SETTINGS

BAUD RATE

. E001$

300

. E002$

600

. E003$

1200

. E004$

2400

. E005$

4800

. E006$

9600

. E007$

19200

. E022$

38400

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-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

.A002$

ENABLE ALL CODE

.K010$

CODE 32

.K001$

CHINA POSTAL CODE

.L010$

UK PLESSEY CODE

.N001$

INDUSTRIAL 2 OF 5

.M010$

MATRIX 2 OF 5

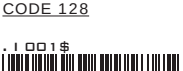
.J001$

INTERLEAVED 2 OF 5

.J010$

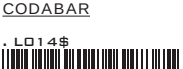
CODE 128

.I001$



CODABAR

.L014$



TELEPEN

DISABLE

.A003$

DISABLE ALL CODE

.K011$

CODE 32

.K002$

CHINA POSTAL CODE

.L011$

UK PLESSEY CODE

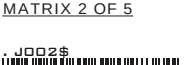
.N002$

INDUSTRIAL 2 OF 5

.M011$

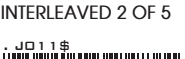
MATRIX 2 OF 5

.J002$



INTERLEAVED 2 OF 5

.J011$



CODE 128

.I002$

CODABAR

.L015$

TELEPEN

GROUP-15

ENABLE/ DISABLE SYMBOLOGIES

ENABLE

. H001$

UPC-A

. H007$

UPC-E

. H019$

EAN-8

. H013$

EAN-13

. L001$

MSI

. G008$

CODE 39

. I010$

CODE 11

. G010$

CODE 93

. M001$

EAN-128

. N017$

IATA

DISABLE

. H002$

UPC-A

. H008$

UPC-E

. H020$

EAN-8

. H014$

EAN-13

. L002$

MSI

. G009$

CODE 39

. I011$

CODE 11

. G011$

CODE 93

. M002$

EAN-128

. N018$

IATA

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

SYMBOLOGIES: CODE 93, TELEPEN, IATA

CODE 93

. G010$

ENABLE

. G011$

DISABLE

. G012$

MIN LENGTH (6)

. G013$

MAX LENGTH (48)

TELEPEN

. L014$

ENABLE TELEPEN

. L015$

DISABLE TELEPEN

. L020$

TELEPEN ASCII

. L021$

TELEPEN NUMBER

IATA

. N017$

ENABLE

. N018$

DISABLE

. N019$

DISABLE CDV

. N020$

CDV & SEND CD

. N021$

CDV & NOT SEND CDV

. N022$

MIN LENGTH (6)

. N023$

MAX LENGTH (48)

GROUP-19

SYMBOLOGIES: INTERLEAVED 2 OF 5, CODE 11

INTERLEAVED 2 OF 5

. J001$

ENABLE

. J002$

DISABLE

. J003$

DISABLE CDV

. J004$

CDV & SEND CD

. J005$

CDV & NOT SEND CD

. J008$

First digit suppressed

. J009$

Last digit suppressed

. J014$

NO suppressed

. J006$

MIN LENGTH (6)

. J007$

MAX LENGTH (48)

CODE 11

. I010$

ENABLE

. I011$

DISABLE

. I012$

DISABLE CDV

. I013$

CDV & SEND CD

. I042$

CDV & SEND CD
(1 DIGIT)

. I043$

CDV & SEND CD
(2 DIGITS)

. I014$

CDV & NOT SEND CD

. I015$

MIN LENGTH (6)

. I016$

MAX LENGTH (32)

GROUP-20

SYMBOLOGIES: INDUSTRIAL 2 OF 5, MATRIX 2 OF 5

INDUSTRIAL 2 OF 5

. N001$

ENABLE

. N002$

DISABLE

. N003$

DISABLE CDV

. N004$

CDV & SEND CD

. N005$

CDV & NOT SEND CD

. N006$

MIN LENGTH (6)

. N007$

MAX LENGTH (48)

MATRIX 2 OF 5

. M010$

ENABLE

. M011$

DISABLE

. M012$

DISABLE CDV

. M013$

CDV & SEND CD

. M014$

CDV & NOT SEND CD

. M015$

MIN LENGTH (6)

. M016$

MAX LENGTH (48)

GROUP-21

SYMBOLOGIES: CODABAR

CODABAR

.I001$

ENABLE

.I002$

DISABLE

.I005$

DISABLE CDV

.I006$

CDV & SEND CD

.I007$

CDV & NOT SEND CD

.I008$

MIN LENGTH (6)

.I009$

MAX LENGTH (48)

START / STOP

.I030$

ST/SP: abcd/abcd

.I029$

ST/SP: ABCD/ABCD

.I031$

ST/SP: ABCD/TN*E

.I032$

ST/SP: abcd/tn*e

.I003$

SEND START / STOP

.I004$

Not Send 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

.I027$

CLSI FORMAT ON

.I028$

CLSI FORMAT OFF

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

SYMBOLOGIES: ABC- CODABAR, CX- CODABAR

ABC- CODABAR

.I017$

ON

.I018$

OFF

.I035$

SET INSERT DATA*

.I039$

INSERT DATA- ON

.I036$

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.

CX CODE- CODABAR

.I022$

ON

.I023$

OFF

.I037$

SET INSERT DATA*

.I040$

INSERT DATA- ON

.I038$

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

SYMBOLOGIES: 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.


ON


OFF

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.

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

SYMBOLOGIES: STANDARD & FULL ASCII CODE 39, CODE 32

STANDARD CODE 39 & FULL ASCII 39

. G008$

ENABLE

. G009$

DISABLE

. G001$

FULL ASCII CODE 39 ENABLE

. G002$

FULL ASCII CODE 39 DISABLE

. G014$

START / STOP - SEND

. G003$

DISABLE CDV

. G004$

CDV & SEND CD

. G005$

CDV & NOT SEND CD

. G006$

MIN LENGTH (1)

. G007$

MAX LENGTH (48)

. G015$

START / STOP Not SEND

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

. K010$

ENABLE

. K011$

DISABLE

. K012$

LEADING SEND

. K013$

LEADING NOT SEND

. K014$

TAILING SEND

. K015$

TAILING NOT SEND

GROUP-25

SYMBOLOGIES FORMATTING: UPC-E

UPC-E

. H007$

ENABLE

. H008$

DISABLE

. H009$

LEAD DIGIT SEND

. H010$

LEAD DIGIT NO SEND

. H011$

CHECK DIGIT SEND

. H012$

CHECK DIGIT NO SEND

ADD ON SUPPLEMENT

. H037$

+5 ON

. H038$

+ 5 OFF

. H039$

+2 ON

. H040$

+ 2 OFF

. 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 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

SYMBOLOGIES: 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

. H001$

ENABLE

. H002$

DISABLE

. H003$

LEAD DIGIT SEND

UPC- A

. H004$

LEAD DIGIT NO SEND

. H005$

CHECK DIGIT SEND

. H006$

CHECK DIGIT NO SEND

UPC-A EXPAND TO EAN-13

. H068$

ENABLE

. H067$

DISABLE

. H033$

+5 ON

. H034$

+ 5 OFF

. H035$

+2 ON

. H036$

+ 2 OFF

ADD ON SUPPLEMENT

. H045$

ADD A SPACE ON

. H046$

ADD A SPACE OFF

. H060$

ADDENDA REQUIRED ON

. H059$

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

EAN-8

.H019$

ENABLE

.H020$

DISABLE

.H021$

LEAD DIGIT SEND

.H022$

LEAD DIGIT NO SEND

.H023$

CHECK DIGIT SEND

.H024$

CHECK DIGIT NO SEND

ADD ON SUPPLEMENT

.H029$

+ 5 ON

.H030$

+ 5 OFF

.H031$

+ 2 ON

.H032$

+ 2 OFF

.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

EAN-13

. H013$

ENABLE

. H014$

DISABLE

. H015$

LEAD DIGIT SEND

. H016$

LEAD DIGIT NO SEND

. H017$

CHECK DIGIT SEND

. H018$

CHECK DIGIT NO SEND

ADD ON SUPPLEMENT

. H025$

+ 5 ON

. H026$

+ 5 OFF

. H027$

+ 2 ON

. H028$

+ 2 OFF

. H041$

ADD A SPACE ON

. H042$

ADD A SPACE OFF

. H058$

ADDENDA REQUIRED ON

. H057$

ADDENDA REQUIRED OFF

ISBN

. H050$

ISBN OFF

. H049$

ISBN ON

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

. H052$

ISSN OFF

. H051$

ISSN ON

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

. H070$

ISMN OFF

. H069$

ISMN ON

GROUP-30

SYMBOLOGIES: EAN/UCC-128, CODE 128

EAN/ UCC-128

. M001$

ENABLE

. M002$

DISABLE

. M003$

CODE ID ENABLE

. M004$

CODE ID DISABLE

. 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]c1, and the second FNC1 character is translated to an ASCII <GS> character (scan from Group 34-40)

String format:

]C1	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

. N032$
GS1 DataBar ENABLE

. N033$
GS1 DataBar DISABLE

. N034$
GS1 DataBar CHECK DIGIT SEND

. N035$
GS1 DataBar CHECK DIGIT NOT SEND

. N036$
GS1 DataBar PREFIX SEND

. N037$
GS1 DataBar PREFIX NOT SEND

. N038$
GS1 DataBar STACKED ENABLE

. N039$
GS1 DataBar STACKED DISABLE

. P024$
GS1 DataBar SET ID

GS1 DataBar (RSS) - LIMITED

. N010$
GS1 DataBar LIMITED ENABLE

. N011$
GS1 DataBar LIMITED DISABLE

. N012$
GS1 DataBar LIMITED CHECK DIGIT SEND

. N013$
GS1 DataBar LIMITED CHECK DIGIT NOT SEND

. N024$
GS1 DataBar LIMITED PREFIX SEND

. N025$
GS1 DataBar LIMITED PREFIX NOT SEND

. P019$
GS1 DataBar LIMITED SET ID

GS1 DataBar (RSS) - EXPANDED

. N026$
GS1 DataBar EXPANDED ENABLE

. N027$
GS1 DataBar EXPANDED DISABLE

. N028$
GS1 DataBar EXPANDED STACKED ENABLE

. N029$
GS1 DataBar EXPANDED STACKED DISABLE

. N030$
GS1 DataBar EXPANDED MIN LENGTH

. N031$
GS1 DataBar EXPANDED MAX LENGTH

. P020$
GS1 DataBar EXPANDED SET ID

GROUP-32

FULL ASCII TABLE (CODE 39)
CONTROL CODES

%U  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  *

%O  -

%H  =

%Q  |

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

b

c

d

e

f

g

h

i

j

k

l

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+O

GROUP-42

FULL ASCII TABLE (CODE 39)
NAVIGATION KEYS

$TO

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 Plesssy**	
		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

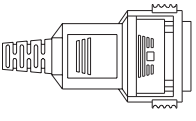
Cable Pin Assignment

INTERFACES:

1. TTL, Wand Emulation

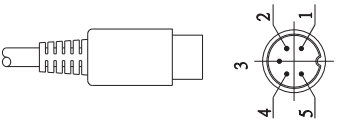
1.1) AMP (D-Sub 9Pin):

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



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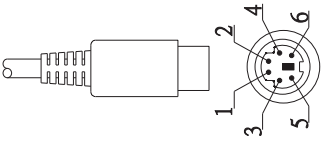
2. Keyboard Interface:

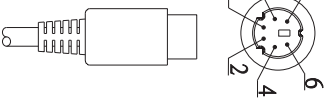
Type of connector:
2.1) PS/2 Mini Din6 Female:

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

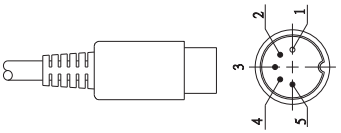
Cable Pin Assignment

2. Keyboard Interface:

Type of connector:

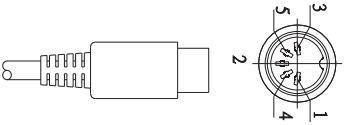
2.3) PC-AT: Din 5 Male:

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



2.4) PC-AT: Din 5 Female:

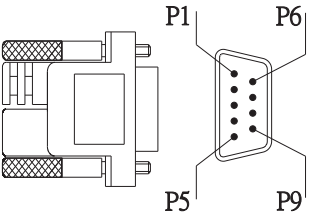
Pin	Signal
1	PC-Clk
2	PC-Data
3	NC
4	GND
5	+5VCC



3.RS232 Interfaces:

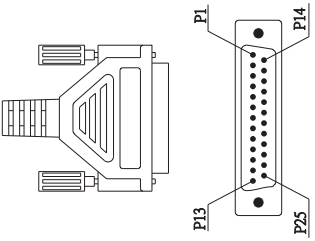
3.1) DB9F

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)

CODE-39

Interleaved 2of5

UPC

EAN

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