unitech

# Handheld Scanner

**- MS839L -**


# User's Manual

**Version 1.1**

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# Table of Contents

# Chapter 1

# Overview

## Introducing the MS839

As a keyboard scanner supports most of the popular PCs and IBM terminals.

As a RS232 serial scanner sends data by using RS232 communication protocol. The communication speed (baud rate) ranges from 300 bps to 38400bps.

As a RS232 terminal interface, systems with ANSI ASCII communication environment such as UNIX, XENIX are installed between a host computer and a terminal and supports full duplex and block communication modes.

As a wand emulation scanner, the output of the scanner emulates a wand scanner output. Two output formats are supported. Code 39 format and Native Code 39 format, the scanner always outputs the same data contents but with Code 39 what symbology. Native scanner the same contents and symbology as the scanned label.

The scanner supports the following bar code symbologies:

- Code 39 Standard and Full ASCII
- UPC/EA.N with supplement codes
- Interleaved 2 of 5
- Standard 2 of 5
- MSI code
- Plessey code
- Codahar
- UCC/EAN128
- Code 32 (Italian pharmacy)
- Code 93
- Code 128
- China Postal Code (Toshiba Code)

# Chapter 2

# Keyboard Interface

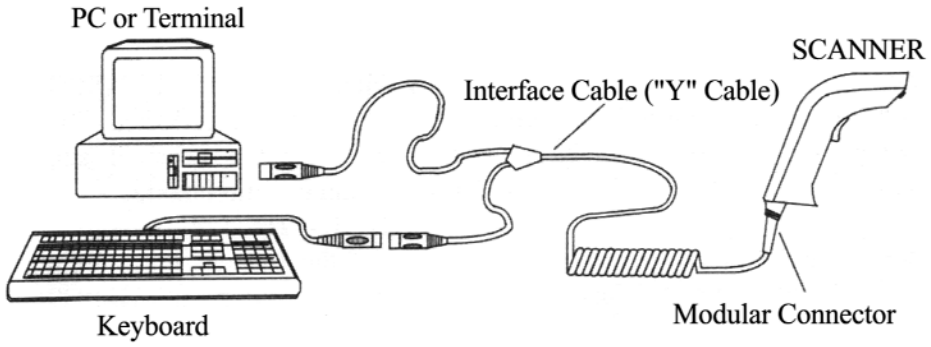
As a keyboard Interface, the scanner is actually installed between a PC (or terminal) and a keyboard. See Figure for reference. The scanner sends data to the host device by emulating the keyboard input and acts like an extension of the keyboard.

## Installation

This scanner can be installed easily by following the installation guide illustrated below. Before you start the installation, locate a "Y" type cable **in** the package.

**Installation procedures:**

1) Plug the modular (RJ45) connector of the "Y" cable into the bottom of the scanner until you hear a click sound.




Installed as a Keyboard Interface

2) Turn off your PC or terminal.
3) Unplug the keyboard from the PC or terminal.
4) Plug the keyboard into a connector of the Y cable that mates with it.
5) Plug the remaining connector of the "Y" cable into the keyboard port of your PC or terminal.
6) Power up your PC or terminal you press the switch the beam should be out from the scanner.

7) If nothing happens at step 6, check all cable connections first and make sure your PC or terminal has been powered. Contact technical support if.
8) Unless the scanner has been prior installed for the PC/terminal, user may have to select a proper device number from Group 1 of Appendix D.
9) The Default setting of this scanner is IBM PC/AT and PS/2. If you like to make sure that you have the right selection, you may scan the following label.


F3 AT[PS/2]

## Installation without keyboard or laptop computer

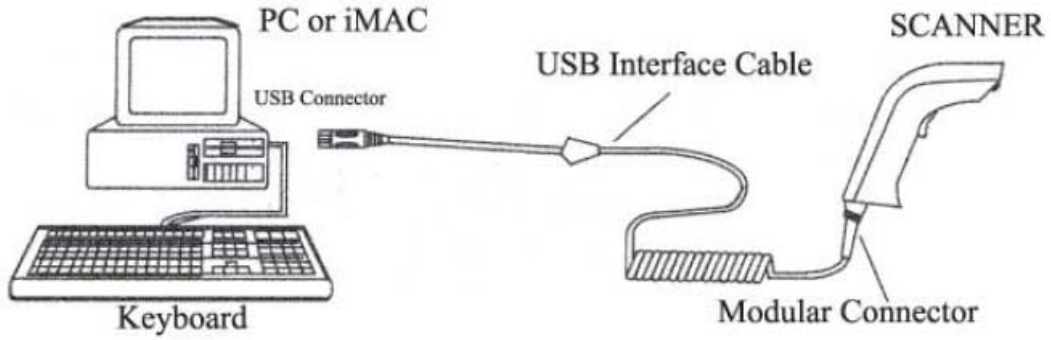
The scanner has the capability to answer the keyboard inquiry made by PC to avoid " Keyboard Error " message when keyboard is not present.

This implementation is useful to the applications where keyboard entry is not necessary. You may scan the following label to enable this feature. (Some of the laptop computers may not work properly with this feature. Please contact your local vendor for further support.)


Keyboardless

# Installed as an USB Interface

You can install the scanner with the USB interface cable to work with either PC or iMac USB port. See Figure 1.1 for reference. Your operating system may require the original setup CD to install the driver with initial setup.




Installed as an USB Interface

The factory default setting should work with either PC or iMac USB interface; you may also scan the following label to make sure you get the right device setting.

.C001$

USB

# Operating Parameters

There are some operating parameters that can be configured to work for different applications.

**Intercharacter Delay**

Intercharacter delay is the time period that the scanner will wait before transmitting the next character after the first character was sent. If data sent by the scanner was incorrect or missing characters, a longer intercharacter delay may solve the problem.

**Interblock Delay**

Interblock delay is the minimum time interval between two adjacent scanning. If the processing speed of your host device is slower than your scanning speed, a longer interblock delay may ensure the data integrity.

**Function Code**

The scanner can emulate function and other special keys on the keyboard by scanning some pre-defined labels. Appendix B includes those labels for special keys on PC, Macintosh, and IBM terminals. As an option, you may also print these labels by printing their corresponding Code 39 characters (in brackets) to work with scanner.

**Caps-Lock**

This parameter tells the scanner the current Caps-Lock status of the keyboard so that the character transmitted by the scanner is in correct case.

Auto Trace (For PC AT/XT only):
In Auto Trace mode, the scanner will keep track of the Caps-Lock status automatically. For some PCs, the scanning performance may he compromised because of the auto tracing. If the scanning performance is poor (or can not scan), or the scanner cannot output the upper/lower case characters correctly, try to select one of the next two choices instead of auto tracing.

Lower Case:
When the keyboard is in the unshifted state (Cap Lock is not pressed), select "Lower Case".

Upper Case:
When keyboard has the CapLock key on, select "Upper Case".

**Alt Key Mode**

"ALT Key Mode" is a choice in the language selection. Sending characters by ALT key plus keys on the numeric keypad is a feature in MS-DOS. When selecting "ALT Key Mode", the scanner sends out the native ASCII combination codes to represent each character of the bar code scanned. If your system accepts ALT key sending, you can enable this mode and ignore selections of the "Upper/Lower Case" and "Language".

You may find these settings on the Appendix D page D2 and D3.

# Chapter 3

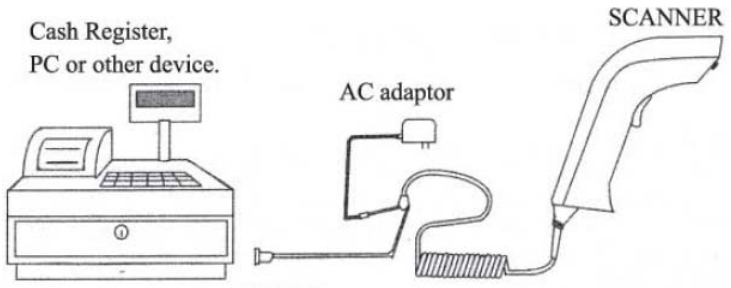
# RS232 Serial Interface

## Installation

To use the scanner as a RS232 serial interface, a RS232 interface cable and a power adapter are required. See chapter 1 for cable pinout and adapter specification. Figure 2 shows an installation diagram for your reference.

**Installation procedures:**

1) Make sure the scanner's cable has the right connector and pinout for the RS232 port of the host device. If the pinout is different from device, swapping pins is necessary to achieve proper communication.
2) If the host device has power output at RS232 interface port, the scanner can be powered by connecting that power line to pin 9 of the scanner connector. If there is no power at RS232 port, adapter is needed Plug the adapter into the DB type connector at the end of the interface cable.




Installed as a Serial Interface

3) Plug the DB type connector the interface cable into host's RS232 port and power up the device.
4) When the scanner is powered, a long beep sound indicates the scanner is ready to use.

# Operating Parameters

**Device Type**


**Baud Rate, Parity and Data Bit:**

These parameters set the scanner's communication protocol that must be matched by the host. The default setting for the serial interface is 9600 baud rate, none parity, and 8 data bit.

Baud Rate can be 300, 600, 1200, 2400, 4800, 9600, 19200, or 38400 bps.

Parity can be even, odd, space, mark, or none.

Data Bit can be 7 or 8 long.

The scanner may not support settings with Data Bit as 7 and Parity as none combination. Such combination is treated as 7 data bits with MARK parity.

**Handshaking:**

The scanner supports CTS/RTS handshaking as an option. The hardware handshaking is supported on character-by-character basis.

During the communication, the scanner will stop sending data until the CTS is valid within time specified by the Time Out parameter. During this time-out waiting period:

If CTS is valid.

If CTS is not valid, the scanner sounds an error beep and discards the current buffered data.

**BCC Character:**

BCC check character is calculated for entire data stream by using "Exclusive OR" method. it is sent after data stream for data verification.

**Time Out:**

You can adjust the Time Out duration for handshaking and ACK/NAK protocol to fit applications.

# Serial TTL

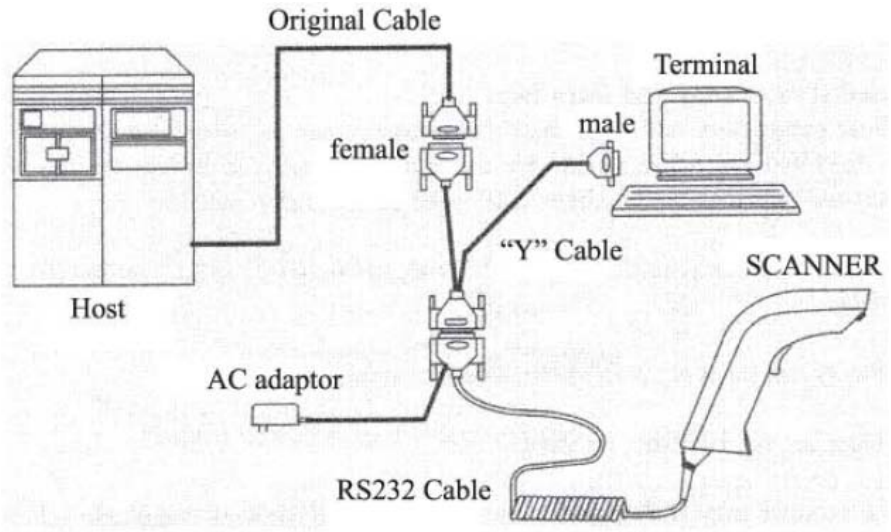
This scanner supports serial TTL interface, which follows the RS232 communication data format but with TTL voltage output ranged from OV to 5V.

# Chapter 4

# Terminal Interface

## Installation

To install the scanner as a terminal interface, you need a DB25 RS232 cable, a terminal wedge "Y" cable and an AC adapter. See Figure 3 for reference.




Installed as a Terminal Wedge

**Installation procedures:**

1) Power off the terminal and unplug the communication cable at terminal side.
2) Install the interface cable as shown in Figure 3. The "Y" cable provided **in** Figure 3 is for terminals with female connector on communication port. If there is a male connector on your terminal, you need a converter to change that male to female and another converter to change the female to male on host connector.
3) When the scanner is powered, a long beep sound indicates that the scanner is ready to use.

# Operating Parameters

**Parameters Baud Rate, Parity and Data Bit:**

These parameters set the scanner's communication protocol which the same setting by the host. The default setting for the terminal interface is 9600 baud rate, none parity, and 8 data bit.

Baud Rate can be 300, 600, 1200, 2400, 4800, 9600, 19200, or 38400 bps.

Parity can be even, odd, space, mark, or none.

Data Bit can be 7 or 8 long.

The scanner may not support settings with Data Bit as 7 and Parity as none combination. Such combination is treated as 7 data bits with MARK parity.

**Data Direction:**

This setting is only for the terminal wedge and corresponds to the terminal communication mode. If the terminal has:

"Full Duplex" mode, set the data direction to "Send to Host".

"Half Duplex" mode, set to "Send to Host and Terminal".

"Block" mode, set to "send to Terminal".

# Chapter 5

# Setup

The scanner interface can be configured to fit the user's specific application. Configuration parameters are stored in a non-volatile memory, which is retained even if power is lost.

## Barcode Menu Setup

The setup menu in Appendix C contains eight groups:
Group 1: Device selection.
Group 2: Beep and delay.
Group 3: Keyboard and Wand Emulation.
Group 4: RS-232 Settings.
Group 5: Scanner port.
Group 6: Code 39,1 2 of 5, S 2 of 5 and Code 32.
Group 7: Code 128, Code 93, Code 11, Codabar, and MS.
Group 8: UPC/EAN
Group 9: Dump setup

### Setup Procedures

For most parameters, proceed the following steps for the setting:

1) Locate a group that contains the parameter to be changed.
2) When you hear beep, the new setting will have been defined or updated into the memory processor.

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

**Double Verification:**

Step 1: Scan Double Verification from Group 5

Step 2: Scan one digit

Step 3: Scan Double Verification

**Min Length / Max Length**

Step 1: Scan MIN LENGTH or MAX LENGTH.

Step 2: Scan two digits from Appendix E.

Step 3: Scan MIN LENGTH or MAX LENGTH.

**NOTES:**

1. If you hear three times of beeps, please re-operate.
2. If you operate improperly, reset the scanner and re-scan.


## Barcode Length Setting

The following example illustrates how to set Code 39 with a minimum length of 5 and a maximum length of 20:

- ✧ Scan "Enter Group 7"
- ✧ Scan "Fl" to select Code 39
- ✧ Scan "MIN LENGTH" to enter minimum length setting
- ✧ Scan "0 " and "5" to select length 5. (Appendix E)
- ✧ Scan -MIN LENGTH" to end minimum length setting
- ✧ Scan "MAX LENGTH" to enter maximum length setting
- ✧ Scan "2" and "0" to select length 20. (Appendix E)
- ✧ Scan "MAX LENGTH" to end maximum Length Setting
- ✧ Scan "Exit" to end setup

# Code ID Setting

Each bar code symbology supported by the scanner has a default ID character defined as below.

**CODE ID IDENTIFIER**

| SYMBOLOGIES | Factory ID | SYMBOLOGIES ID | Factory ID |
|---|---|---|---|
| MSI | O | CODABAR | N |
| EAN 8 | E0 | | |
| UPC-E | E | | |
| UPC-A | A | UK PLESSY | P |
| EAN 13 | F | | |
| Code 93 | L | FULL ASCII Code 39 | M |
| Code 11 | J | STANDARD Code 39 | M |
| TELEPEN | J | S25 Code | TT |
| EAN 128 | FF | INDUSTRIAL 2 OF 5 (Code 2 of 5) | H |
| Code 128 | K | China Post Code (Toshiba Code) | C |
| Code 32 (Code 39 PARAF) | T | INTERLEAVED 2OF 5 | T |

**SET ID - SETTING PROCEDURES**

Setting steps:

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

Scan the SET ID bar code again.

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

MSI:

Step 1: Scan MSI Set ID (Group 5).

**Step2: "A"**

Step3: Scan **MSI** Set ID (Group 5).

Code 93:

Step 1: Scan Code 93 Set ID (Group 5).

Step2: "G" from "A" Appendix E. Full ASCII Chart, Scan "9" from "A" Appendix E. Full ASCII Chart.

Step3: Scan Code 93 Set ID (Group 5).

**NOTES:**

1. The length of a Code ID is one character. 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.

## Preamble (Prefix) and Postamble (Suffix)

PREAMBLE & POSTAMBLE (PREFIX AND SUFFIX)

.A012$

PREAMBLE (16)

.A013$

POSTAMBLE (16)

**EXAMPLE:**

Set PREAMBLE String as " ## "

POSTAMBLE String as "$$"

**SETTING PROCEDURE**

STEP 1: Scan: PREAMBLE.

STEP 2: Scan: "4" twice from FULL ASCII Table.

STEP 3: Scan: PREAMBLE.

STEP 4: Scan: POSTAMBLE.

STEP 5: Scan: " $ " twice From FULL ASCII Table.

STEP 6: Scan: POSTAMBLE.

**FORMAT**

{Preamble} {Code ID} {Bar Code} {Postamble}

**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 bar code.
3. Default value for either: None.

# Quick Setup

Appendix A has a quick setup chart, which gives you one label or one function convenience to the scanner. To setup the scanner, locate the label with the function you want and scan that label.

# Batch Setup

If you need to configure more than one scanner, you may duplicate the settings of the scanner (master) to the others. You can do this by producing a set of custom setup labels derived from the master scanner and scanning these labels configuring the other scanners.

The following label is called "Dump Settings" label. Before you scan the label, please open a text editor application (such like, Notepad, Word, etc.) Scan the following label, the settings of the scanner will dump to the screen as one or several ASCII string(s). Use any barcode printing software, select 39 symbology, and use the string(s) to generate bar code labels. You use this batch setup labels to duplicate setting to the other scanners.

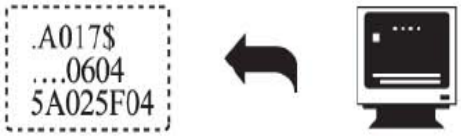
Dump Settings


**EXAMPLE:**

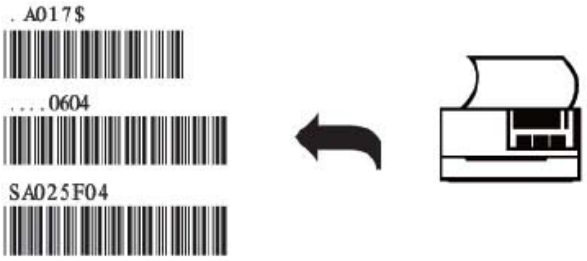
1. PR OJECT ASSIGNMENTS:
   - 1.1 Beep tone: BEEP LOW – HIGH
   - 1.2 Capslock Mode: CAPSLOCK ON (FIXED)
   - 1.3 Reading Mode: CONTINUOUS AUTO OFF

2. SETTING PROCEDURE:
   - 2.1 Scan BEEP LOW. - -HIGH (GROUP 3)
   - 2.2 Scan CAPSLOCK ON (FIXED) (GROUP 3)
   - 2.3 Scan CONTINUOUS AUTO OFF (GROUP 2)

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



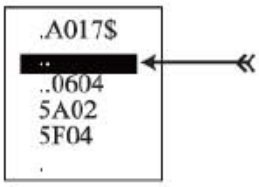

4. Print the results shown on the monitor as bar codes with a bar code printer. The bar codes should be in the Code 39 symbology.



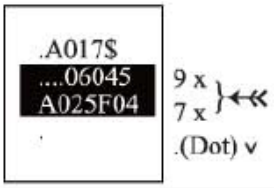

5. Scan these labels with any of the wands that must be programmed with the same settings as the first wand. Be sure to scan from the first row to the second and so on sequentially, top to bottom.

**CORRECT SETTING**

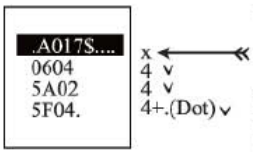

**WRONG SETTING**




Wrong Setting: The string "...." Consists of 4 Dots, located at the beginning of second rows. Do not break the "...." Into multiple string.




Wrong Setting: The string lengths in the second and third rows do not match the length requirements, because rows should be in lengths of four digits.




**Wrong Setting Because you add "..." After .A0 17 $**
The 0.A17 $ is a FIXED parameter for setup entering. It is an unchangeable parameter. Never add, delete or rearrange data from the FIRST row.

- ✧ Only the settings that are different from the default values will be dumped.
- ✧ The settings can be dumped to a PC or terminal only if that PC or terminal matches the type defined by Device Type of the scanner. The previous example of "Keyboardless Wedge" as Device Type is equivalent-to a PC/AT interface, so you cannot dump that settings to a system which dose not support a PC/AT keyboard interface.

The following label dumps the settings to a PC/AT regardless what kind of device has been chosen on the scanner.

Dump Settings On PC/AT


- ✧ You can adjust the length of the dumped strings by combining multiple strings into one or breaking one string into multiple strings. The following strings have the same effect as the dumped string listed above:

...1800C06D51DJ8080
80A007C005354415254.

You cannot delete any character from or add any character into the strings and the first three characters ("...") must be present in the first string.

- ✧ All characters in dumped strings are in upper case. If you see lowercase characters in dumped strings, change them to upper case.

# Scanner Configuration Manager Software

**Scanner Configuration Manager** is a utility program to users to configure scanner settings on a computer using the Microsoft Windows based operating system. Use this program to define the settings and then download the parameters to the scanner.

# Factory Default Setting

To clear all the setting data, please scan the factory default barcode.

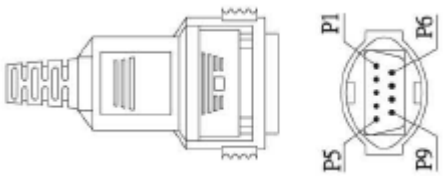
# Chapter 6

# Pin Assignment

## TTL, Wand Emulation

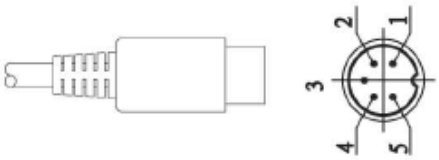
### 1.1) AMP (D-Sub 9Pin):

| 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 |

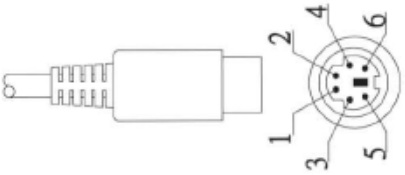



## Keyboard Interface

### Type of Connector

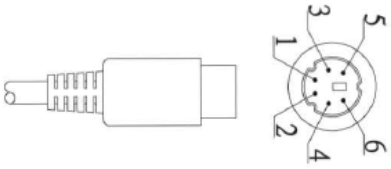
### 2.1) PS/2 Mini Din6 Female

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



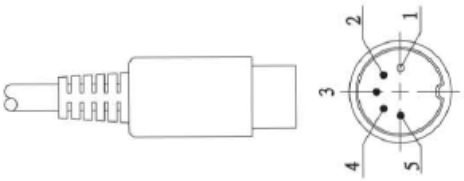

### 2.2) PS/2 Mini Din6 Male

| Pin | Signal |
|---|---|
| 1 | KB- Data |
| 2 | NC |
| 3 | GND |
| 4 | +5Vcc |
| 5 | KB-CLK |
| 6 | NC |



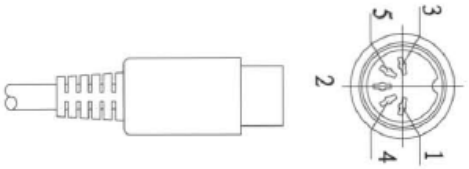
### 2.3) PC-AT: Din5 Male

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




### 2.4) PC-AT: Din5 Female

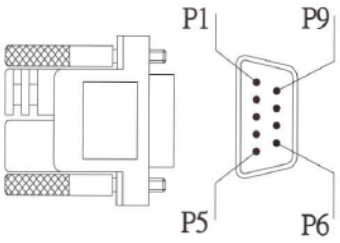
| Pin | Signal |
|---|---|
| 1 | PC-Clk |
| 2 | PC-Data |
| 3 | NC |
| 4 | GND |
| 5 | +5VCC |




## RS232 Interface

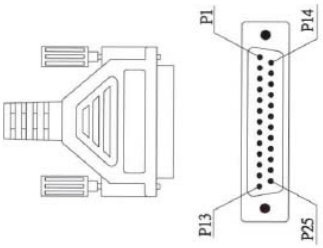
### 3.1) DB9F

| 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 A

## Examples

## Quick Setup Sheet

**Device Type**

PCAT[PS/2]/USB

Keyboardless

Code39 Wand Emulation

Serial Interface

**UPC-E**

Cut Leading Digit

Send Check Digit

UPC-A Conversion

**Scanner Mode**

Trigger

Flash

CONTINUOUS MODE

CONTINUOUS AUTO OFF

**Beep**

None

**Terminator**

Enter

**Scan Code**

U.S.

Alt Key

**EAN-8**

Cut Leading Digit

Cut Check Digit

**EAN-13**

Cut Leading Digit

Cut Check Digit

ISBN Conversion

**Character Delay**

140 $\mu$s

4ms

**UPC-E Expand to UPC-A**

Enable

Disable

**UPC-E Expand to E EAN 13**

Enable

Disable

Note:

1. If UPC E Expand To UPC Format is enabled, the output of UPC-A is 12 digits.
2. The default output of UPC-A is 12 digits, and if UPC E Expand To EAN13 is enabled, a zero will be added in front of the barcode.

**Code ID**

No

Yes

**UPC-A**

Cut Leading Digit


Cut Check Digit


Supplement Code

No


Yes


**Setup**

Enable


Disable


Display Version


Factory Default

# Function Codes

## Function Codes for PC

F1


F2


F3


F4


F5


F6


F7


F8


F9


Win Make


F10


F11


F12


Cursor Right


Cursor Left


Cursor Up


Cursor Down


Win Break

Home


End


Pg Up


Pg Dn


Tab


Back Tab


ESC


Enter


Del


Ins


Alt Make


Alt Break


Left Shift Make


Left Shift Break


Left Ctrl Make


Left Ctrl Break


Return

# Setup Menu

## Device Selection and Default: Group 1

Device ID  Device Type

.C001$

01-IBM PC/AT, PS/2 MOD 40, 60, 80, USB etc.

.C007$

06-Keyboardless Wedge(PC/AT, Notebook)

.C002$

04-Serial Wedge

.C0004

26-Wand emulation(Native Output)

.C003$

07-Wand emulation(with Code 39 output)

.A001$

Factory Default

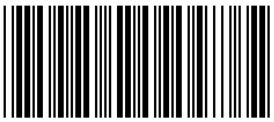
# Beeps and Delays Group 2

## Beep Tone

.F012$

None

.F022$



Low

.F018$

Mediu

.F019$

High

## Interblock Delay

.B001$

1 ms

.B002$

10 ms

.B003$

50 ms

.B004$

100 ms

.B005$

200 ms

.B006$

500 ms

## Intercharacter Delay

.B010$

140 μs

.B011$

500 μs

.B012$

1 ms

.B013$

4 ms

.B014$

16 ms

# Keyboard Wedge Settings Group 3

### Function Code

.B016$

Off

.B015$

ON

### Caps-Lock

.A006$

Auto Trace(PC/XT, AT)

.A005$

Lower Case

.A004$

Upper Case

### Level Duration of Mini Width

.D001$

200us

.D002$

600us

### Polarity of Idle Condition

.D003$

Low

.D004$

High

### Output of Wand Emulation

.D005$

Bar with High/Space with Low

.D006$

Bar with Low/Space with High

## Language (For PC/XT, AT)

.C010$

U.S

.C018$

U.K.

.C016$

Swiss

.C013$

Spanish

.C014$

Italian

.C011$

German

.C012$

French

.C015$

Alt Key Mode

.C009$

Japanese(106 key)

.C017$

CZECH (QWERTY)

## Use number Keypad digits

.D018$

Disable

.D017$

Enable

# RS232 Settings Group 3

## Baud Rate

.E001$
300

.E002$
600

.E003$
1200

.E004$
2400

.E005$
4800

.E006$
9600

.E007$
19200

.E022$
38400

## Parity

.E009$
Even

.E010$
Odd

.E011$
Mark

.E012$
Space

.E008$
None

## Data Bit

.E013$
7 bit

.E014$
8 bit

# RS232 Settings Group 4

### Handshaking (for serial wedge)

.E018$

Ignore

.E019$

RTS Enable at Power up

.E020$

RTS Enable in Communication

### ACK/NAK (for serial wedge)

.E024$

Off

.E023$

On

### BCC Character (for serial wedge)

.E029$

On

.E030$

Off

### Time Out (for serial wedge)

.E025$

1 sec

.E026$

3 sec

.E027$

10 sec

.E028$

Unlimited

# Scanner Port: Group 5

## Terminator




## Code ID



Note:

This setting doesn't affect EAN128 code ID. EAN128 has its own Code ID setting on page 33.

## Label Type



## Scanning Mode



Flashing wait 60 sec.




## Double Verification

.A002$

Enable All Code

.A001$

Factory Default

.A004$

Caplock On

.A003$

Disable All Code

.A006$

Caplock Auto

.A005$

Caplock Off

.A008$

Factory ID On

.A007$

Check Version

.A010$

Double Verification

.A009$

Disable Code ID

## Data length (Two Digits) Send

.D020$

Disable

.D019$

Enable

## Preamble/Postamble

.A012$

Preamble

.A013$

Postamble

Scan “PP/OO” for Pre/Postamble. Scan characters from Full ASCII char or Function.

# Define Code ID Group 5

## Define Code ID

.P008$

Full ASCII Code 39 Set ID

.P005$

CODE 39 Set ID

.P001$

EAN 13 Set ID

.P004$

UPC A Set ID

.P002$

EAN 8 Set ID

.P003$

UPC E Set ID

.P006$

Interleaved 2 of 5 Set ID

.P007$

Codabar Set ID

.P010$

Code 128 Set ID

.P013$

Code 93 Set ID

.P021$

Standard 2 of 5 Set ID

.P014$

MSI Code Set ID

.P016$

EAN 128 Set ID

.P011$

Code 32 Set ID (Italian hamacy)

.P015$

UK Plessey Set ID

.P009$

Code 11 Set ID(Special)

.P012$

China Post code
(Toshiba Code)
Set ID

# Code 39 Group 6

## Code 39

### Define Code ID

.G009$

Disable

.G008$

Enable

.G001$

Full ASCII Code 39 Enable

.G002$

Full ASCII Code 39 Disable

.G004$

Check Digit(CD)
Calculate & Send

.G005$

CD Calculate,
Not Send.

.G003$

CD not Calculate

.G014$

Send

.G015$

No Send

.G007$

Max Length 48

.G006$

Min Length 0

# I 2 of 5 Group 6

### I 2 of 5 (ITF)

.J002$

Disable

.J001$

Enable

.J004$

Check Digit (CD) Calculae & Send

.J005$

CD Calculate, not send

.J003$

CD not Calculate

.J008$

First Digit Suppressed

.J009$

Last Digit Suppressed

.J014$

Not Suppressed

.J006$

Min Length 10

.J007$

Max Length 64

# S 2 of 5/China Postal

## Code (Toshiba Code)

.K002$

Disable

.K001$

Enable

.K004$

Check Digit(CD)
Calculate & Send

.K005$

CD Calculate,
not send

.K003$

CD not Calculate

.K006$

Min Length 10

.K007$

Max Length 64

## Code 32 (Italian Pharmacy)

.K011$

Disable

.K010$

Enable

.K012$

Leading Character Send

.K013$

Leading Character
No Send

.K014$

Tailing Character Send

.K015$

Tailing Character
No Send

# EAN 128 Group 6

### Telepen

.L015$

Disable

.L014$

Enable

.L020$

Standard

.L021$

Numeric set

### Define the EAN 128Fields separator

.M007$

Define the EAN 128 Fields separator

Scan an ASCII code in full ASCII code chart to select a new fields separator.

### UCC/EAN 128

.M002$

Disable

.M001$

Enable

.M004$

Code ID Disable

.M003$

Code ID Enable

Note: If EAN 128 is disabled, the EAN 128 labels will be decoded as Code128.

# Code 128/Code 93/MSI Code Group 7

## Code 128

.J011$

Disable

.J010$

Enable

.J012$

Min Length 1

.J013$

Max Length 64

## Code 93

.G011$

Disable

.G010$

Enable

.G012$

Min Length 1

.G013$

Max Length 48

## MSI/Plessey Code

.L002$

Disable

.L001$

Enable

.L004$

Check Digit Send

.L003$

Check Digit No Send

.L007$

Check Digit Double Module 10

.L008$

Check Digit Module 11 plus 10

.L009$

Check Digit Single Module 10

.L005$

Min Length 1

.L006$

Max Length 16

# Code 11/Codaber Group 7

## Code 11

.I011$

Disable

.I010$

Enable

.I042$

One Check Digit

.I043$

Two Check Digit

.I013$

Check Send

.I014$

No Send

.I015$

Min Length 1

.I016$

Max Length 48

.I003$

Start & Stop Send

.I004$

Start & Stop No Send

.I006$

Check Digit
Calculate & Send

.I007$

Check Digit Calculate
but not Send

.I005$

Check Digit
Not Calculate

.I027$

CLSI Format On

.I028$

CLSI Format Off

.I008$

Min Length 3

.I009$

Max Length 48

## Codabar

.I002$

Disable

.I001$

Enable

# UPC/EAN Code Group 8

## UPC-A

.H002$

Disable

.H001$

Enable

.H003$

Leading Digit Send

.H004$

Leading Digit No Send

.H005$

Check Digit Send

.H006$

Check Digit No Send

.H009$

Leading Digit Send

.H010$

Leading Digit No Send

.H011$

Check Digit Send

.H012$

Check Digit No Send

.H053$

Zero Expansion On

.H054$

Zero Expansion Off

## UPC-E

.H008$

Disable

.H007$

Enable

.H066$

Disable NSC=1

.H065$

Enable NSC=1

# UPC/EAN Code Group 8

## EAN-13

.H014$

Disable

.H013$

Enable

.H015$

Leading Digit Send

.H016$

Leading Digit No Send

.H017$

Check Digit Send

.H018$

Check Digit No Send

.H049$

ISBN Enable

.H050$

ISBN Disable

## EAN-8

.H020$

Disable

.H019$

Enable

.H021$

Leading Digit Send

.H022$

Leading Digit No Send

.H023$

Check Digit Send

.H024$

Check Digit No Send

# Supplement Code Group 8

### Supplement Code

.H028$
Two Supplement Code Off

.H027$
Two Supplement Code On

.H026$
Five Supplement Code Off

.H025$
Five Supplement Code On

.H057$
Transmitted if Present

.H058$
Must Present

.H041$
Space Separator Inserted

.H042$
Space Separator Not Inserted

See the **Batch Setup** section for using the labels below.

# Dump Setup Strings Group 9

.A016$
Dump Settings

.C001$
PC/AT Interface Keyboard setting

.A018$
Dump Settings on PC/AT

.C002$
RS232 Interface Keyboard setting

Speed=9600, Databit=8, Parity=None,

Stop=1FlowControl=None

# DataBar (RSS), Limited, Expanded Group 10

### Databar (RSS-14)

Databar – 14 Enable


Databar – 14 Disable


Databar – 14 Check Digit Send


Databar – 14 Check Digit Not Send


Databar – 14 Prefix Send


Databar – 14 Prefix Not Send


Databar – 14 Stacked Enable


Databar – 14 Stacked Disable


Databar – 14 Set ID

## Databar (RSS LIMITED)

Databar – Limited Enable


Databar – Limited Disable


Databar – Limited Check Digit Send


Databar – Limited Check Digit Not Send


Databar – Limited Prefix Send


Databar – Limited Prefix Not Send


Databar – Limited Set ID


## Databar (RSS-EXPANDED)

Databar – Expanded Enable


Databar – Expanded Disable


Databar – Expanded Stacked Enable


Databar – Expanded Stacked Disable

Databar – Expanded Min Length


Databar – Expanded Max Length


Databar – Expanded Set ID


# Full ASCII Chart

(Characters in parentheses represent Code 39 barcode printing)


NUL(%U)


BS($H)


SOH($A)


HT($I)


STX($B)


LF($J)


ETX($C)


VT($K)


EOT($D)


FF($L)


ENQ($E)


CR($M)


ACK($F)


SO($N)


BEL($G)


SI($O)


DLE($P)


ETB($W)


DC1($Q)


CAN($X)


DC2($R)


EM($Y)


DC3(%S)


SUB(%Z)


DC4($T)


ESC(%A)


NAK($U)


FS(%B)


SYN($V)


GS(%C)


RS(%D)


US(%E)


SP


!(/A)


”(/B)


#(/C)


$


%


&(/F)


’(/G)


( (/H)


) (/I)


*(/J)


+


,(/L)


-


.


/


0


1


2


3


4


5


6


7


8


9


: (/Z)


; (%F)


< (%G)


= (%H)


> (%I)


? (%J)


@ (%V)


A


B


C


D


E


F


G


H


I


J


K


L


M


N


O


P


Q


R


S


T


U


V


W


X


Y


Z


[(%K)


\(%L)


](%M)


^(%N)


_(%O)


`(%W)


k(+K)


a(+A)


l(+L)


b(+B)


m(+M)


c(+C)


n(+N)


d(+D)


o(+O)


e(+E)


p(+P)


f(+F)


q(+Q)


g(+G)


r(+R)


h(+H)


s(+S)


i(+I)


t(+T)


j(+J)


u(+U)


v(+V)


w(+W)


x(+X)


y(+Y)


z(+Z)


{ (%P)


| (%Q)


} (%R)


~ (%S)


DEL(%T)

# Barcode Chart

EAN-13


Code 39


EAN-8


Code 39 with C / D


UPC-A


EAN 128


UPC-E


Code 128


ISBN 957-630-239-0


Codabar


Inter leaved 2 of 5

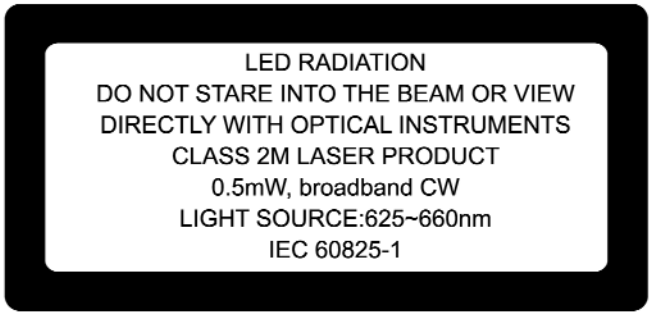

MSI Code

# Appendix B

## Worldwide Support

Unitech's professional support team is available to quickly answer questions or technical-related issues. Should an equipment problem occur, please contact the nearest Unitech regional service representative. For complete contact information please visit the Web sites listed below:

| Region | Web Site |
|---|---|
| Global Operation Center | www.unitech-adc.com |
| Unitech Asia Pacific & Middle East | www.unitech-utp.com.tw |
| Greater China Division | www.unitech-sbd.com |
| Unitech Japan | www.unitech-japan.co.jp |
| Unitech America | www.ute.com |
| Unitech Latin America | www.latin.ute.com |
| Unitech Europe | www.unitech-europe.nl |


LED RADIATION
DO NOT STARE INTO THE BEAM OR VIEW
DIRECTLY WITH OPTICAL INSTRUMENTS
CLASS 2M LASER PRODUCT
0.5mW, broadband CW
LIGHT SOURCE:625~660nm
IEC 60825-1