KOAMTAC

KDC300 User Manual

(Rev 2.85.O/2.86.O/3.02B)

December, 2011

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May be covered under one or more pending and/or US Patents, including US Pat. No. 7,769,917; 7,954,710.
KDC® is a registered trademark and property of KoamTac, Inc.
KoamTac® is a registered trademark and property of KoamTac, Inc.
KTSync® is a registered trademark and property of KoamTac, Inc.

TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO ANY TYPE OF MOISTURE. DO NOT LOOK DIRECTLY INTO LASER OR POINT THE LASER INTO ANOTHER PERSON'S EYES. EXPOSURE TO THE BEAM MAY CAUSE EYE DAMAGE.

CAUTION:

Changes or modifications not expressly approved by the manufacturer responsible for compliance could void the user's authority to operate the equipment.

WARNING:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

INFORMATION TO USER:

This equipment has been tested and found to comply with the limit of a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation; if this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user, is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient / Relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit difference from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help.

WARNING: RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

1. INTRODUCTION

Congratulations on purchasing KoamTac's revolutionary barcode scanner and data collector. Lightweight and compact, with a user-friendly design and superior functionality, KoamTac's KDC works in a variety of portable applications. Use it independently or as an accessory to your PC, PDA, or smartphone. To find out more about KoamTac, Inc. and our family of products, visit us at www.koamtac.com.

FEATURES	KDC100	KDC200	KDC250	KDC300	KDC400
USB CONNECTIONS	2	1	1	**1**	1
RECHARGEABLE BATTERY	YES	YES	YES	**YES**	YES
SCAN ENGINE	Laser	Laser	Laser	**Imager**	Laser/ Imager
AUTOMATIC DATA UPLOAD	YES	YES	YES	**YES**	YES
STORES10,000+ BARCODES	YES	YES	YES	**YES**	No
KTSYNC® SOFTWARE	YES	YES	YES	**YES**	YES
SDK FOR DEVELOPERS	YES	YES	YES	**YES**	YES
SUPPORTS MICROSOFT© WINDOWS XP, VISTA, 7 & MOBILE 5.0+	YES	YES	YES	**YES**	YES
ANDROID, BLACKBERRY, IOS	NO	YES	YES	**YES**	YES
BLUETOOTH	NO	YES	YES	**YES**	YES
GPS	NO	NO	YES	**NO**	NO

Table 1 - Features of KDC

1.1 KDC Package

The standard KDC package contains:

1. One KDC Barcode Data Collector
2. One USB Cable
3. One Lanyard (KDC100/200/250/300) or One Hand Strap (KDC400)
4. KoamTac Installation CD with
   - KTSync$^©$ for Microsoft Windows XP, Vista, 7 and Mobile 5.0+
   - KDC Device Driver
   - User Manual
5. One Protective KDC Rubber Case (KDC100/200/250/300) or One Smartphone Protective Rubber Case (KDC400)

NOTE: Depending on your region or distributor, package contents may vary.

KDC100/200/250/300   KDC400

Figure 1 – KDC Package

1.2 KDC Characteristics

Before you use your KDC, please become familiar with its physical characteristics. Refer to Figure 2 and Figure 3 below which indicate placement of scan and scroll buttons, OLED display, LEDs, and ports on your KDC. KDC100/200/250/300 models are similar except for the KDC100 which includes an additional USB connector. KDC400 has power switch and two scan buttons but doesn't have OLED display.

KDC100 Barcode Reader and Data Collector
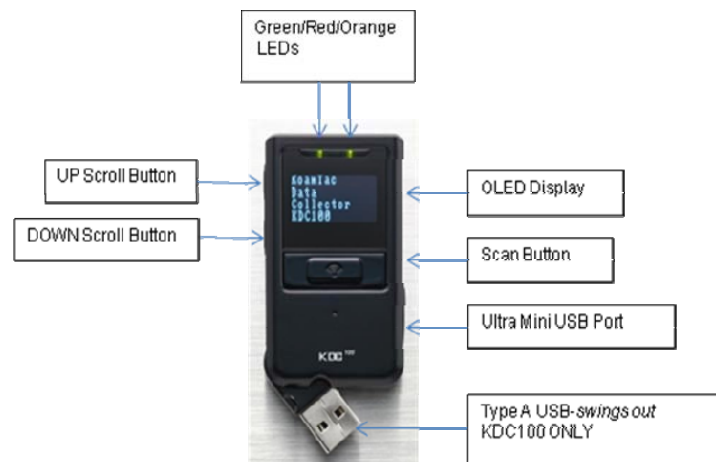
Figure 2 - Characteristics of KDC100

KDC200 / KDC250 / KDC300
Barcode Reader and Data Collector

KDC200
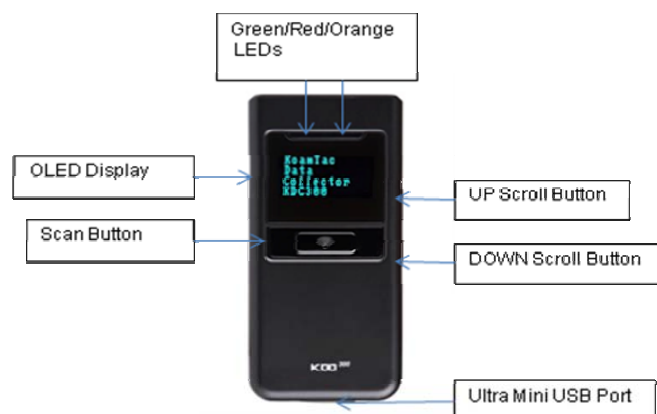
KDC250/300

Figure 3 - Characteristics of KDC200 / KDC250 / KDC300

KDC400

Figure 4 - Characteristics of KDC400

2. INSTALLATION

2.1 KoamTac Installation Wizard

Windows XP

WARNING: *DO NOT CONNECT KDC TO USB PORT PRIOR TO INSTALLATION*

1. Insert KoamTac Installation CD into your computer's CD drive.
2. Click **Start** icon then **My Computer** icon. A listing of devices on your computer will be displayed including the disk drive containing the KoamTac Installation CD.
3. Click on the KoamTac Installation CD icon then click on the Setup directory. Click on the PC_Setup.exe file which executes the KTSync Setup Wizard.

NOTES

- If KTSync Setup Wizard locates an older version of KTSync on your computer, you will be prompted to remove the older program before installing the new version. Select Remove KTSync then click Finish. When removal is complete, click Close. Go to Step 2 to run KTSync Setup Wizard.

- If you have any problems, please refer to the Manual Installation section.

KTSync Setup Wizard

Below are the screen images you will see during the installation of KTSync.

- Click **Next** icon in KTSync Setup Wizard window

● Click **Next** icon in KTSync Confirm Installation window

• Within a few minutes, installation of KTSync will be complete. Click **Close** icon and wait for the Device Driver Installation Wizard to load.
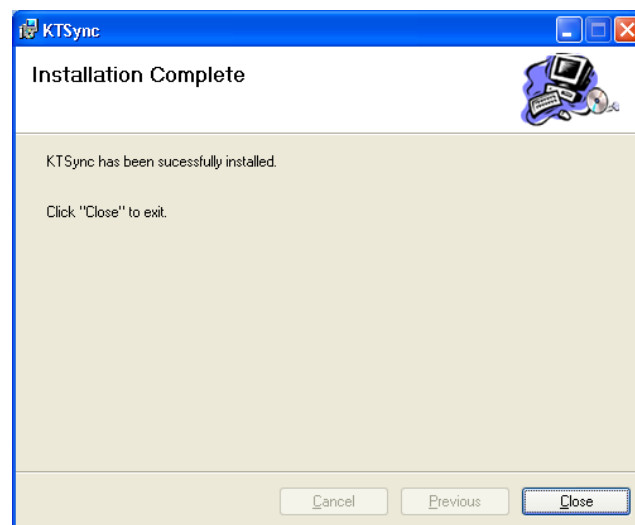
Device Driver Installation Wizard

Below are the screen images you will see during the installation of the KDC Device Driver.

- Click **Next** icon in Device Driver Installation Wizard window
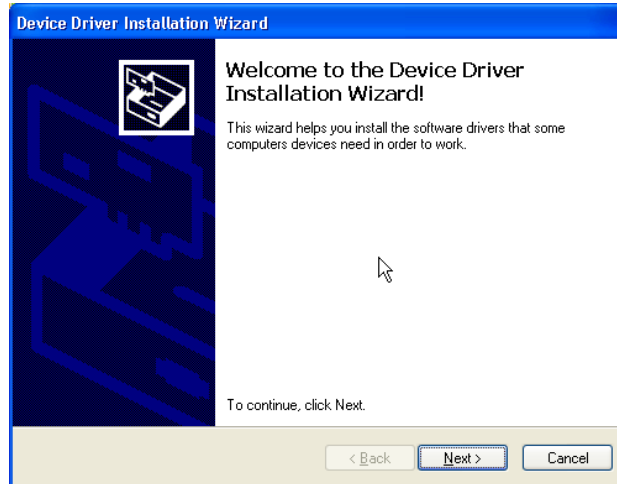
- Click **Continue Anyway** icon in Software Installation Logo testing window
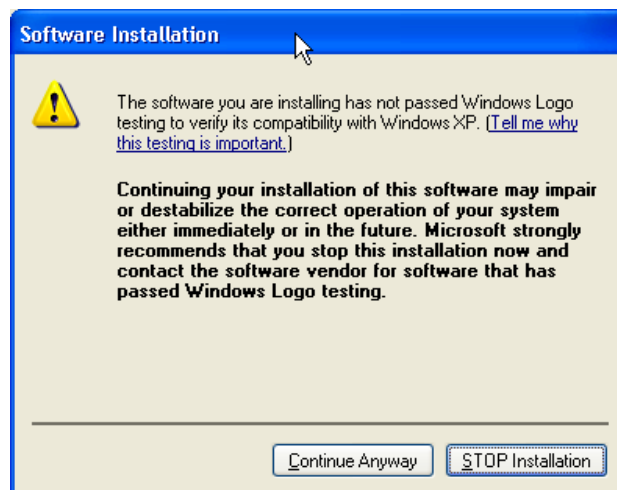
- Click **Finish** icon in Device Driver Installation Wizard window
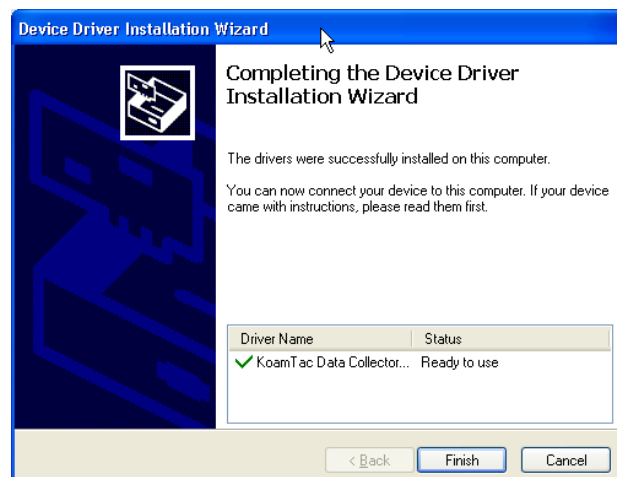
Connect KDC to Computer

Using the USB cable included with the KDC, follow the directions below.

- Connect the cable's ultra mini USB connector to the KDC.
- Connect the cable's Type A USB connector to your PC.
- Wait until your computer beeps and/or displays the message Found *New Hardware.*

Found New Hardware Wizard

- Select "No, not this time" option in Found New Hardware Wizard and click Next if your PC pops up the following Found New Hardware Wizard.

- Select "Install the software automatically (Recommended)" option in Found New Hardware Wizard and click Next if your PC pops up the following Found New Hardware Wizard.
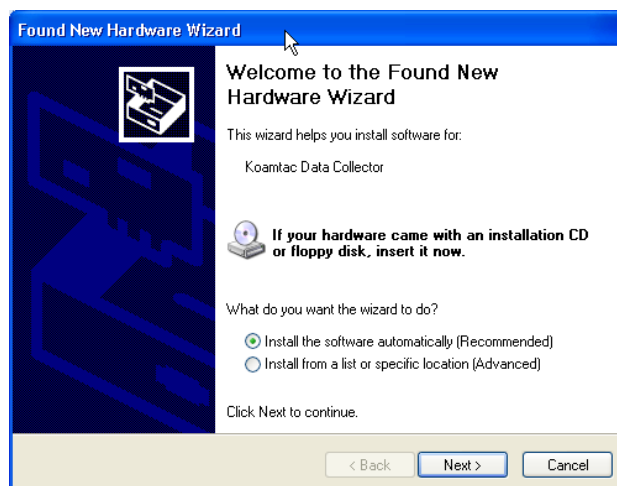
- Click **Continue Anyway** icon in Software Installation Logo testing window

- Click **Finish** icon in Found New Hardware Wizard window

Verify COM Port Address

- User can verify installed COM Port in Device Manager

17
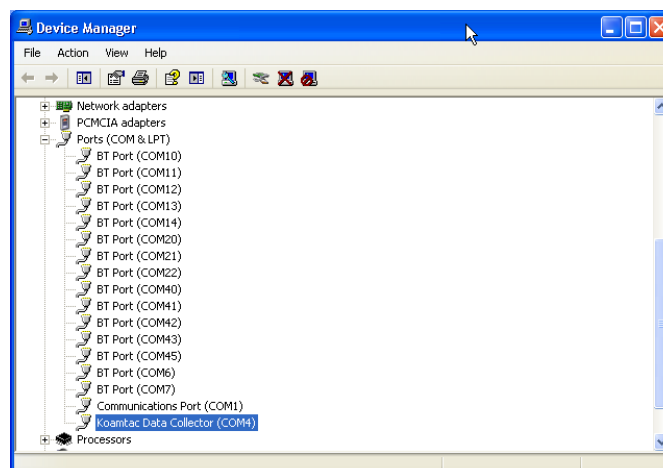
Vista and Windows 7

WARNING: *DO NOT CONNECT KDC TO USB PORT PRIOR TO INSTALLATION*

1. Insert KoamTac Installation CD into your computer's CD drive.
2. Click **Start** icon then **My Computer** icon. A listing of devices on your computer will be displayed including the disk drive containing the KoamTac Installation CD.
3. Click on the KoamTac Installation CD icon then click on the Setup directory. Click on the PC_Setup.exe file which executes the KTSync Setup Wizard.

NOTES

- If KTSync Setup Wizard locates an older version of KTSync on your computer, you will be prompted to remove the older program before installing the new version. Select Remove KTSync then click Finish. When removal is complete, click Close. Go to Step 2 to run KTSync Setup Wizard.

- If you have any problems, please refer to the Manual Installation section.

KTSync Setup Wizard

Below are the screen images you will see during the installation of KTSync.

- Click **Next** icon in KTSync Setup Wizard window

● Click **Next** icon in KTSync Confirm Installation window

● Click **Close** icon in KTSync Installation Complete window and wait for Device Driver Installation Wizard
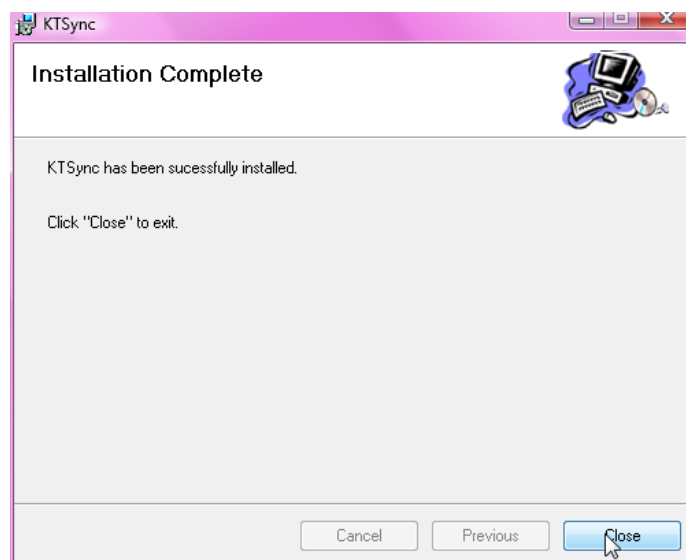
● **Click Install this driver software anyway** in Windows Security window
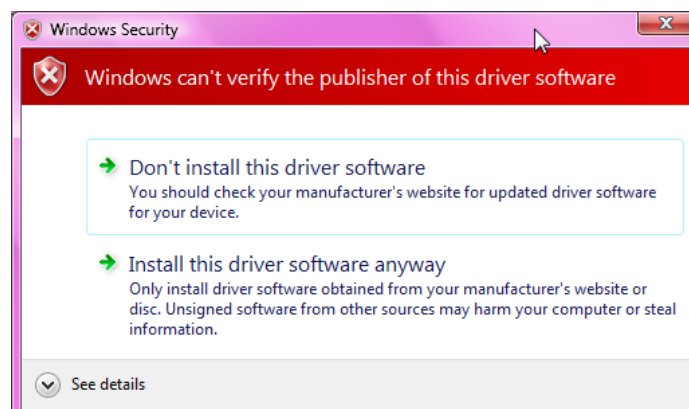
● Click **Finish** icon in Device Driver Installation Wizard window
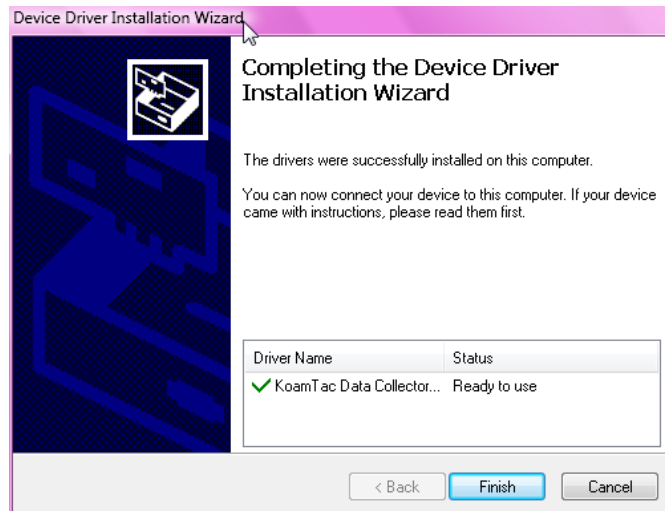
Connect KDC to Computer

Using the USB cable included with the KDC, follow the directions below.

- Connect ultra mini USB connector to the KDC.
- Connect Type A USB connector to your PC.
- Wait until your computer beeps and/or displays the message Found *New Hardware.*

Verify COM Port Address

● User can verify installed COM Port in Device Manager

20
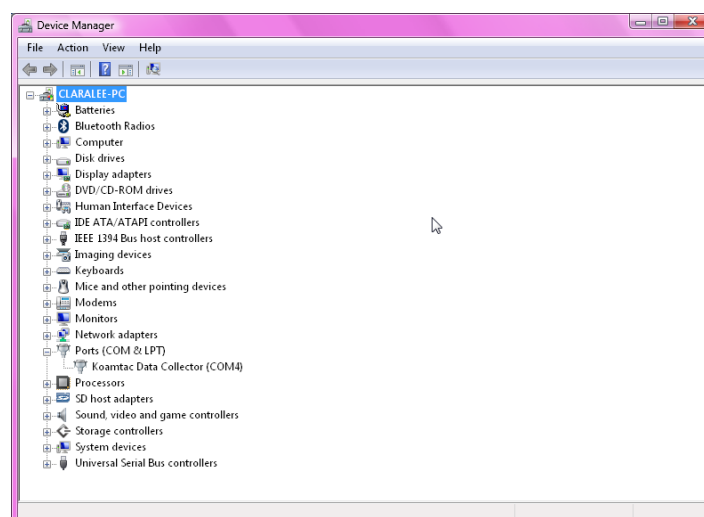
Windows Mobile 5.0+

WARNING: *PLEASE CONNECT PDA TO PC PRIOR TO INSTALLATION*

1. PC_Setup.exe creates Mobile_Setup.exe file under C:\Program Files\KoamTac\KTSync\Windows.Mobile
   directory
2. Execute Mobile_Setup.exe

● Select Windows Mobile version to install.
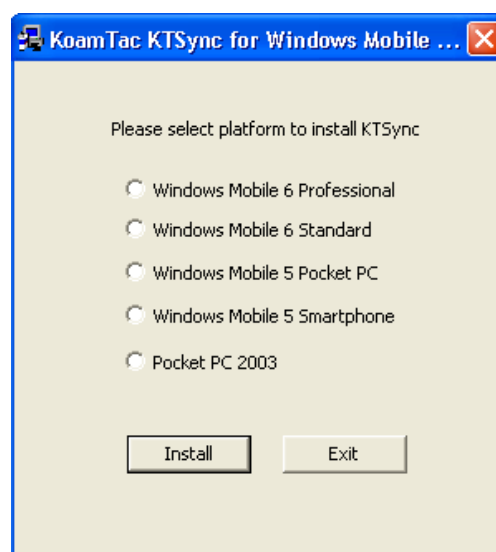
● Click Next icon.
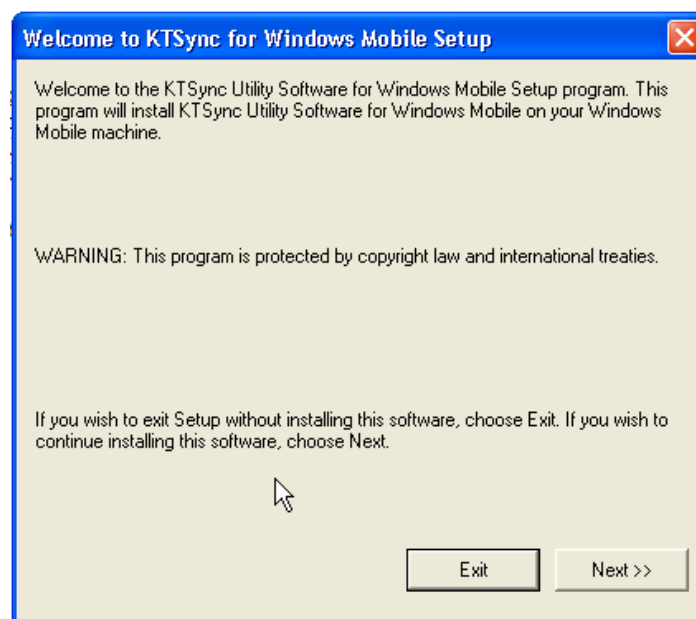
● Click **OK** icon in Pending Application Install window
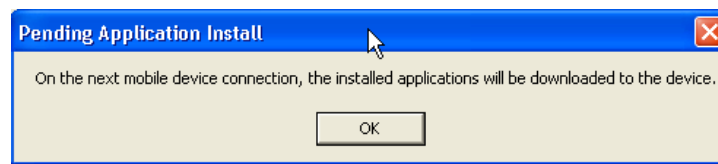
● Follow the instructions on PDA screen

COM port Assignment

● User should assign a COM port for KDC before using pKTSync.
● User should pair KDC with PDA using PDA *Bluetooth* manager and assign a COM port for *Bluetooth* communication
● Please refer to the PDA manual for the details of COM port assignment method

Android

● Download and install aKTSync from the Android Market.
http://www.androidzoom.com/android_applications/productivity/ktsync_luxv.html

Blackberry

● Download and install bKTSync from the Blackberry App World.
http://appworld.blackberry.com/webstore/content/16861?lang=en

iPad/iPhone/iPod touch

● Download and install iKTSync from the Apple App Store.
http://itunes.apple.com/us/app/ktsync/id372916602?mt=8

2.2 Manual Installation

The KDC is equipped with one ultra mini USB port which is used to upload barcode data and to charge the KDC battery. Prior to using the KDC, KTSync software and KDC device driver must be installed on your computer. Using the USB cable included with the KDC, follow the directions below.

NOTE: *If you have the KDC100, it has two ports, Ultra Mini and standard Type A which swings out. See Figure 2 for more details.*

Windows XP, Vista, and 7

1. Insert the KoamTac Installation CD into your computer's disk drive.
2. Create a directory called KoamTac on your computer.
3. Copy XP.Vista.7 directory from KoamTac CD to KoamTac directory. The XP.Vista.7 directory contains KTSync® programs for Microsoft® Windows XP, Vista, Windows 7 and user manuals.
4. Connect KDC cable to ultra mini USB connector on the KDC.
5. Connect KDC cable to Type A USB connector on your computer. Wait until your computer beeps and/or displays the message *New Hardware Found*. You will be prompted to search for a device driver for KDC.
6. Browse then select *KTReader.inf* file from the KoamTac directory created in Step 2. Follow screen prompts to continue with the device driver installation.

   NOTE*: KTReader.inf is the device driver for 32bit Microsoft® Windows XP, Vista, and Windows 7. If you have a 64bit computer, use KTReader.inf file from XP.Vista.64bit folder in the KoamTac directory.*

Windows Mobile 5.0+

Please connect your Windows Mobile PDA to your computer before software installation.

● Create a directory and name it KoamTac on the PDA.
● Copy Mobile5.0_6.0 directory from KoamTac CD to PDA KoamTac directory.
● Mobile5.0_6.0 contains KTSync® programs for Microsoft® Windows Pocket PC 2003, Mobile 5.0, Mobile 6.0 Standard, and Mobile6.0 Professional. It also includes KDC User Manual.

3. OPERATING THE KDC

3.1 Getting Started

Attach Lanyard/Hand Strap to KDC

To prevent possible damage to the KDC, we **strongly** recommend wearing it around your neck/hand by the included lanyard/hand strap. Also, please don't swing KDC by the lanyard/hand strap because contact with another object may cause it to malfunction or become damaged.

To attach the hand strap:

1. Fit the thin end of hand strap through the pillar of the KDC.

2. Loop the thick end of strap through the thin loop

3. Pull the strap tight to secure

Charge KDC Battery

Prior to using the KDC, you must charge its battery. To charge the battery, follow these directions.

1. Connect the KDC cable to the ultra mini USB connector on the KDC.
2. Connect the KDC cable to Type A USB connector on your computer.
3. Your KDC battery will begin charging. Within a few minutes, two small LEDs on the front panel will illuminate orange. When the battery is fully charged, the LEDs will illuminate green.

KDC100	KDC200	KDC250/300	KDC400
2 Hours	2 Hours	4 Hours	5 Hours

Table 2 – Approximate Time to Charge KDC Battery

Configure KDC

The KDC is designed to meet the data collection requirements of many different industries in a variety of dynamic situations. To perform well in these diverse environments, the KDC is designed to be configured easily and quickly. But, to perform at its maximum level, the KDC must be configured properly. Until you are familiar with configuring the KDC, it is recommended that you DO NOT modify the KDC settings. The KDC can be configured in three different methods which are explained in Section 3.3 – KDC Menus(KDC100/200/250/300 only), Chapter 5 –Synchronization, and Appendix C – Special Barcodes.

[Note] Please refer Honeywell 5x80 manual for the detailed explanation on 2D barcode setting related special barcode.

CONFIGURATION METHODS FOR THE KDC100/200/250/300

- KDC Menu
- KTSync® Software
- Special Barcodes

Press UP and DOWN Scroll Buttons simultaneously to access the KDC menu.

Figure 5 - Location of Scroll Buttons

CONFIGURATION METHODS FOR THE KDC400

- KTSync® Software
- Special Barcodes

3.2 Basics

Reading Barcodes

Reading a barcode is simple. Point the KDC at a barcode and press the scan button. Be sure to point the scan engine at the barcode, not at your face, and make sure to position the light beam on the barcode. If the barcode is scanned successfully, you will hear one beep and the LEDs will illuminate in green. The scanned barcode data will be displayed along with the scan time and battery level. *Depending on the configuration of your KDC, other information may also be displayed.*
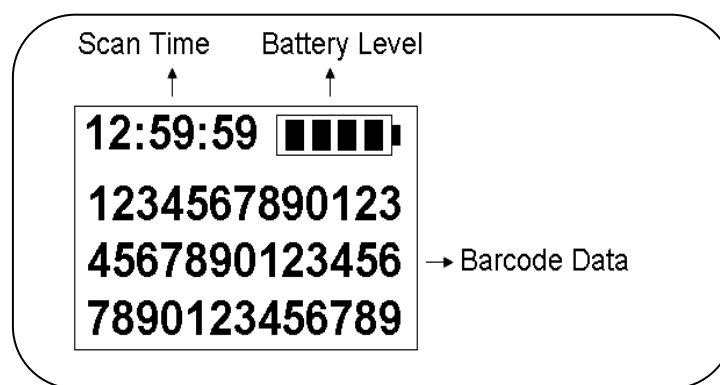
Figure 6 - KDC Display

If the scan was unsuccessful, you will hear two beeps, the LEDs will illuminate in red, and the message **Failed reading…** will display. If you have problems scanning a barcode, try the following suggestions while pointing the KDC at the barcode and depressing the scan button.

- Modify the angle of the KDC in relation to the barcode, making the angle bigger or smaller as needed.
- Modify the distance between the barcode and the KDC, moving closer or further away as needed.
- Check option settings defined in the KDC menu section and change options as needed.
- Check that the barcode's width does not exceed the light beam's width and vice versa.

Synchronizing Barcode Data to PC

Use the KTSync® program to synchronize barcode data from the KDC to your PC. Please refer to Chapter 5 for details.

3.3 KDC Menus

Top Menu	Sub Menu	Options	KDC100	KDC200	KDC250	KDC300
KDC Mode	Normal		Default	Default	Default	Default
	Application		Custom Application	Custom Application	Custom Application	Custom Application
View Data	View/Delete		View/Delete Data	View/Delete Data	View/Delete Data	View/Delete Data
Set Barcodes (100/200/250)	EAN13	Enabled/Disabled	Enable	Enable	Enable	N/A
	EAN8	Enabled/Disabled	Enable	Enable	Enable	N/A
	UPCA	Enabled/Disabled	Enable	Enable	Enable	N/A
	UPCE	Enabled/Disabled	Enable	Enable	Enable	N/A
	CODE39	Enabled/Disabled	Enable	Enable	Enable	N/A
	ITF14	Enabled/Disabled	Enable	Enable	Enable	N/A
	CODE128	Enabled/Disabled	Enable	Enable	Enable	N/A
	I2of5	Enabled/Disabled	Enable	Enable	Enable	N/A
	CODABAR	Enabled/Disabled	Enable	Enable	Enable	N/A
	GS1-128	Enabled/Disabled	Enable	Enable	Enable	N/A
	CODE93	Enabled/Disabled	Enable	Enable	Enable	N/A
	CODE35	Enabled/Disabled	Enable	Enable	Enable	N/A
	BooklandEAN	Enabled/Disabled	Disable	Disable	Disable	N/A
	EAN13withAddon	Enabled/Disabled	Disable	Disable	Disable	N/A
	EAN8withAddon	Enabled/Disabled	Disable	Disable	Disable	N/A
	UPCAwithAddon	Enabled/Disabled	Disable	Disable	Disable	N/A
	UPCEwithAddon	Enabled/Disabled	Disable	Disable	Disable	N/A
Set Barcodes (300)	1D Symbology	Codabar	N/A	N/A	N/A	Enable
		Code 11	N/A	N/A	N/A	Enable
		Code 32	N/A	N/A	N/A	Enable
		Code 39	N/A	N/A	N/A	Enable
		Code 93	N/A	N/A	N/A	Enable
		Code 128	N/A	N/A	N/A	Enable
		EAN-8	N/A	N/A	N/A	Enable
		EAN-13	N/A	N/A	N/A	Enable
		GS1 Composite	N/A	N/A	N/A	Enable
		I2of5	N/A	N/A	N/A	Enable
		Matrix 2of5	N/A	N/A	N/A	Enable
		MSI	N/A	N/A	N/A	Enable
		Plessey	N/A	N/A	N/A	Enable
		PosiCode	N/A	N/A	N/A	Enable
		GS1 Omni	N/A	N/A	N/A	Enable
		GS1 Limited	N/A	N/A	N/A	Enable
		GS1 Expanded	N/A	N/A	N/A	Enable
		S2of5 Ind	N/A	N/A	N/A	Enable
		S2of5 IATA	N/A	N/A	N/A	Enable
		TCL39	N/A	N/A	N/A	Enable
		Telepen	N/A	N/A	N/A	Enable
		Trioptic	N/A	N/A	N/A	Enable
		UPCA	N/A	N/A	N/A	Enable
		UPCE0	N/A	N/A	N/A	Enable
		UPCE1	N/A	N/A	N/A	Enable
	2D Symbology	AztecCode	N/A	N/A	N/A	Enable
		AztecRunes	N/A	N/A	N/A	Enable
		CodablockF	N/A	N/A	N/A	Enable
		Code16K	N/A	N/A	N/A	Enable
		Code49	N/A	N/A	N/A	Enable

		DataMatrix	N/A	N/A	N/A	Enable
		MaxiCode	N/A	N/A	N/A	Enable
		MicroPDF	N/A	N/A	N/A	Enable
		PDF417	N/A	N/A	N/A	Enable
		QRCode	N/A	N/A	N/A	Enable
		HanXin Code	N/A	N/A	N/A	Enable
	Postal Codes	Postnet	N/A	N/A	N/A	Enable
		PlanetCode	N/A	N/A	N/A	Enable
		UK Post	N/A	N/A	N/A	Enable
		Canada Post	N/A	N/A	N/A	Enable
		Kix Post	N/A	N/A	N/A	Enable
		Australia Post	N/A	N/A	N/A	Enable
		Japan Post	N/A	N/A	N/A	Enable
		China Post	N/A	N/A	N/A	Enable
		Korea Post	N/A	N/A	N/A	Enable
	OCR	OCR Off	N/A	N/A	N/A	Enable
		OCR A	N/A	N/A	N/A	Disable
		OCR B	N/A	N/A	N/A	Disable
		OCR USC	N/A	N/A	N/A	Disable
		OCR MICR	N/A	N/A	N/A	Disable
		OCR SEMI	N/A	N/A	N/A	Disable
Barcode Options (100/200/250)	CodaBar_NoStartStop Chars	Enabled/Disabled	Disable	Disable	Disable	N/A
	UPCE_as_UPCA	Enabled/Disabled	Disable	Disable	Disable	N/A
	EAN8_as_EAN13	Enabled/Disabled	Disable	Disable	Disable	N/A
	UPCE_as_EAN13	Enabled/Disabled	Disable	Disable	Disable	N/A
	ReturnCheckDigit	Enabled/Disabled	Disable	Disable	Disable	N/A
	VerifyCheckDigit	Enabled/Disabled	Disable	Disable	Disable	N/A
	UPCA_as_EAN13	Enabled/Disabled	Disable	Disable	Disable	N/A
	I2of5_VerifyCheckDigit	Enabled/Disabled	Disable	Disable	Disable	N/A
	Code39_VerifyCheckDigit	Enabled/Disabled	Disable	Disable	Disable	N/A
	I2of5_ReturnCheckDigit	Enabled/Disabled	Disable	Disable	Disable	N/A
	Code39_ReturnCheckDigit	Enabled/Disabled	Disable	Disable	Disable	N/A
	UPCE_ReturnCheckDigit	Enabled/Disabled	Enabled	Enabled	Enabled	N/A
	UPCA_ReturnCheckDigit	Enabled/Disabled	Enabled	Enabled	Enabled	N/A
	EAN8_ReturnCheckDigit	Enabled/Disabled	Enabled	Enabled	Enabled	N/A
	EAN13_ReturnCheckDigit	Enabled/Disabled	Enabled	Enabled	Enabled	N/A
Barcode Options (300)	Codabar	Tx StartStop(Enable/disable)	N/A	N/A	N/A	Disable
		Check Digit(DoNotVerify/VerfyDONotTX/VerifyDoTx)	N/A	N/A	N/A	DoNotVerify
		Concatenate(Disable/Enable/Required)	N/A	N/A	N/A	Enable
	Code39	Tx StartStop(Enable/disable)	N/A	N/A	N/A	Disable

			N/A	N/A	N/A	
		Check Digit(DoNotVerify/VerfyDONotTX/VerifyDoTx)	N/A	N/A	N/A	DoNotVerify
		Append(Enable/Disable)	N/A	N/A	N/A	Disable
		Full ASCII(Enable/Disable)	N/A	N/A	N/A	Disable
	I2of5	Check Digit(DoNotVerify/VerfyDONotTX/VerifyDoTx)	N/A	N/A	N/A	DoNotVerify
	Code11	Check Digit(2 digits/1 digit)	N/A	N/A	N/A	2 digits
	Code128	Concatenate(Disable/Enable)	N/A	N/A	N/A	Disable
	Telepen	Output(Original/AIM)	N/A	N/A	N/A	AIM
	UPCA	VerifyChkDgt(Enabled/Disabled)	N/A	N/A	N/A	Enable
		NumberSys(Enabled/Disabled)	N/A	N/A	N/A	Enable
		2DgtAddenda(Enabled/Disabled)	N/A	N/A	N/A	Disable
		5DgtAddenda(Enabled/Disabled)	N/A	N/A	N/A	Disable
		Req. Addenda(Enabled/Disabled)	N/A	N/A	N/A	Disable
		Sep. Addenda(Enabled/Disabled)	N/A	N/A	N/A	Enable
		Coupon Code(Enabled/Disabled)	N/A	N/A	N/A	Enable
	UPCE	Expand(Enabled/Disabled)	N/A	N/A	N/A	Disable
		Req. Addenda(Enabled/Disabled)	N/A	N/A	N/A	Disable
		Sep. Addenda(Enabled/Disabled)	N/A	N/A	N/A	Enable
		Check Digit(Enabled/Disabled)	N/A	N/A	N/A	Enable
		NumberSys(Enabled/Disabled)	N/A	N/A	N/A	Enable
		2DgtAddenda(Enabled/Disabled)	N/A	N/A	N/A	Disable
		5DgtAddenda(Enabled/Disabled)	N/A	N/A	N/A	Disable
	EAN-13	VerifyChkDgt(Enabled/Disabled)	N/A	N/A	N/A	Enable
		2DgtAddenda(Enabled/Disabled)	N/A	N/A	N/A	Disable
		5DgtAddenda(Enabled/Disabled)	N/A	N/A	N/A	Disable
		Req. Addenda(Enabled/Disabled)	N/A	N/A	N/A	Disable
		Sep. Addenda(Enabled/Disabled)	N/A	N/A	N/A	Enable

		ISBN Trans.(Enabled/Disabled)	N/A	N/A	N/A	Disable
	EAN-8	VerifyChkDgt(Enabled/Disabled)	N/A	N/A	N/A	Enable
		2DgtAddenda(Enabled/Disabled)	N/A	N/A	N/A	Disable
		5DgtAddenda(Enabled/Disabled)	N/A	N/A	N/A	Disable
		Req. Addenda(Enabled/Disabled)	N/A	N/A	N/A	Disable
		Sep. Addenda(Enabled/Disabled)	N/A	N/A	N/A	Enable
	MSI	Tx CheckChar(Enabled/Disabled)	N/A	N/A	N/A	Disable
	PosiCode	A and B/A&B LimitedA/A&B LimitedB	N/A	N/A	N/A	A&B LimitedB
	GS1	UPCEAN Ver.(Enabled/Disabled)	N/A	N/A	N/A	Disable
		GS1 Emulation(No Emulate/GS1 128 Emul/GS1 Emulate)	N/A	N/A	N/A	No Emulate
	PostNet	Tx CheckChar(Enabled/Disabled)	N/A	N/A	N/A	Disable
	PlanetCode	Tx CheckChar(Enabled/Disabled)	N/A	N/A	N/A	Disable
Scan Options	Scan Angle	Narrow/Wide	Wide	Wide	Wide	N/A
	Filter	Normal/High	Normal	Normal	Normal	N/A
	Time Out	.5 seconds to 10 seconds	2 second(s)	2 second(s)	2 second(s)	2 second(s)
	Min. Barcode Length	2 to 36 characters	4 chars	4 chars	4 chars	N/A
	Min. Barcode Length	2 to 48 characters	N/A	N/A	N/A	4 chars
	Security Level	1 to 4 level	2 level	2 level	2 level	N/A
	Image Capture	Enabled/Disabled	N/A	N/A	N/A	Disable
	Auto Trigger	Enabled/Disabled	Disable	Disable	Disable	Disable
	Reread Delay	Continuous, Short, Medium, Long, Extra Long	Medium	Medium	Medium	Medium
	Finger Trigger	Enabled/Disabled	N/A	Enabled	Enabled	Enabled
	Partial Display	Start Position	1	1	1	1
		No. of Char(s)	0 chars	0 chars	0 chars	0 chars
		Action	Select	Select	Select	Select
Data Process	Wedge / Store	Wedge Only				
		Wedge & Store Always	Default	Default	Default	Default
		Store Only				
		Save if Sent				
		Save if Not Sent				
	Data Format	Barcode only	Default	Default	Default	Default
		Packet Data				
	Data Editor/Prefix	Delete	Delete	Delete	Delete	Delete
	Data Editor/Suffix	Delete	Delete	Delete	Delete	Delete

	Data Editor/AIM ID	None/In Prefix/In Suffix	None	None	None	None
	Data Editor/Partial Data	Start Position	1	1	1	1
		No. of Char(s)	0 chars	0 chars	0 chars	0 chars
		Action	Select	Select	Select	Select
	Handshake	Enable/Disable	Disable	Disable	Disable	Disable
	Terminator	None, CR, LF, CR+LF, Tab	CR+LF	CR+LF	CR+LF	CR+LF
	Chk Duplicate	Enabled/Disabled	Disable	Disable	Disable	Disable
BT Config	ConnectDevice	SPP	N/A			
		HID iOS	N/A			
		iPhone	N/A	Default	Default	Default
		SPP2.0	N/A			
		HID normal	N/A			
	Auto Connect	Enabled/Disabled	N/A	Disabled	Disabled	Disabled
	Auto Power On	Enabled/Disabled	N/A	Disabled	Disabled	Disabled
	Auto Power On/Power Off Time	Disable, 1sec to 10second(s)	N/A	Disabled	Disabled	Disabled
	Auto Power Off	Enabled/Disabled	N/A	Enabled	N/A	Enabled
	Auto Power Off/Beep Warning	Enabled/Disabled	N/A	Enabled	Enabled	Enabled
	Auto Power Off/Power Off Time	1 to 30 minutes	N/A	5 minutes	5 minutes	5 minutes
	PowerOff Msg	Enabled/Disabled	N/A	Disabled	Disabled	Disabled
	MAC Address	12 Characters *Bluetooth* MAC Address	N/A			
	BT FW Version	Bluetooth Firmware Version	N/A			
	Wakeup Nulls	Enabled/Disabled	N/A	Disabled	Disabled	Disabled
	BT Toggle		N/A	Enabled	Enabled	Enabled
	HID AutoLock	Disabled,1,2,3,4,5,10,15 minutes	N/A	1 minutes	1 minutes	1 minutes
	HID Keyboard	English,German,French,Italian, Spanish	N/A	US	US	US
	HID Delay/Initial	Disabled, 1,2,3,5,10 secs	N/A	Disabled	Disabled	Disabled
	HID Delay/Inter char	Disabled,10, 20, 30, 50, 100msec	N/A	Disabled	Disabled	Disabled
	HID Ctrl Char	Disabled, Alt+Numpad, ^+Character	N/A	Disabled	Disabled	Disabled
BT Service	Power	Enabled/Disabled	N/A	Enabled	Enabled	Enabled
	Pairing	Pairing neighboring Bluetooth devices	N/A			
	Discovering	Discovering neighboring *Bluetooth* devices	N/A			
	Connecting to	View Connect to *Bluetooth* device	N/A			
	HID Sync		N/A			
GPS Config (250G)	GPS Power	Enabled/Disabled	N/A	N/A	Disabled	N/A
	Power Mode	Normal/Power Save	N/A	N/A	Normal	N/A
	Bypass Data	Enabled/Disabled	N/A	N/A	Disabled	N/A
	Acquire Test		N/A	N/A		N/A
	Reset GPS		N/A	N/A		N/A

	Memory Size(3.0 only)	0.5/3.5, 1/3, 2/2, 3/1, 4/0	1M/3M	1M/3M	1M/3M	1M/3M
System Config	Memory Status	No. of Stored Barcodes				
		Free Memory Available				
	Reset Memory	Memory(Empties Data)				
		Application Memory				
		BT Registry(KDC100 Not use)				
	Auto Erase	Enabled/Disabled	Disable	Disable	Disable	Disable
	Sleep Timeout	Disable, 1sec to 10minute(s)	5 second(s)	5 second(s)	5 second(s)	5 second(s)
	Auto PowerOff	Bluetooth, GPS, Pwr Off Time	N/A	N/A	Disabled/ Disabled/ 1 hour	N/A
	Date / Time	YYYY:MM:DD &				
		HH:MM:SS				
	Battery	% of Battery Charge Available				
	Version	Firmware Version & Serial No.				
	Button Lock	Enabled/Disabled	Disable	Disable	Disable	Disable
	Beep Sound	Enabled/Disabled	Enable	Enable	Enable	Enable
	Beep Volume	Low/High	High	High	High	High
	Auto Exit	Enabled/Disabled	Enable	Enable	Enable	Enable
	Port Status	Enabled/Disabled	Enable	Enable	Enable	Enable
	Display Format	Time & Battery / Type & Time / Type & Battery / Memory Status / GPS Data(KDC250 only)/Barcode Only	Time & Battery	Time & Battery	Time & Battery	Time & Battery
	Menu Barcode	Enable/Disable	N/A	N/A	N/A	Disable
	Scrolling	Enabled/Disabled	Enable	Enable	Enable	Enable
	Brightness	1 to 15 level(8 level)	8 level	8 level	8 level	8 level
	Factory Default	Restores Default Settings				

Table 3 - KDC Menu Options

KDC Mode Menu

The KDC Mode Menu has two options – Normal and Application modes.

- Normal: This is the default mode which provides basic barcode scanning. In Normal mode barcode data can be manipulated directly through the KDC or using KTSync® during the synchronization process.

- Application: This mode allows you to run the user application created by Application Generation Tool described in Chapter 6.

View Data Menu

This menu option allows you to view and/or delete barcodes stored in the KDC.

Set Barcodes Menu

This menu lists all the barcode symbologies supported by your KDC and allows you to select the barcode symbologies you will be scanning. For maximum scan performance, you should select only the symbologies you are scanning. Please refer to Appendix A.1 – Symbologies for a detailed listing of symbologies supported by your KDC.

Code Options Menu

Your KDC supports various Code Options including Transmission of Start and Stop Characters, Symbology Conversion, Verification of Optional Check Character, Transmission of Check Digit, and Concatenate. Please refer to Section 4.3 and Honeywell IT5x80 reference manual for a detailed listing of Code Options for the symbologies supported by the KDC.

Scan Options Menu

- Timeout: Allows you to set the length of time before the KDC will stop scanning a barcode from .5 second up to 10 seconds. The default is 2 seconds.

- Minimum Barcode Length: Allows you to set a barcode length from 2 characters to 48 characters. It is strongly recommended that you maximize the minimum barcode length setting to prevent possible errors. The default is 4 characters.

		Minimum (Default)	Maximum (Default)
1D Symbology	Codabar	2(4)	60(60)
	Code 11	1(4)	80(80)
	Code 32		
	Code 39	0(0)	48(48)
	Code 93	0(0)	80(80)
	Code 128	0(0)	80(80)
	EAN-8		
	EAN-13		
	GS1 Composite		
	I2of5	2(4)	80(80)
	Matrix 2of5	1(4)	80(80)
	MSI	4(4)	48(48)
	Plessey	4(4)	48(48)
	PosiCode	2(4)	80(48)
	GS1 Omni		
	GS1 Limited		
	GS1 Expanded	4(4)	74(74)
	S2of5 Ind	1(4)	48(48)
	S2of5 IATA	1(4)	48(48)
	TCL39		
	Telepen	1(1)	60(60)
	Trioptic		
	UPCA		
	UPCE0		
	UPCE1		
2D Symbology	AztecCode	1(1)	3750(3750)
	AztecRunes		
	CodablockF	1(1)	2048(2048)
	Code16K	0(1)	160(160)
	Code49	1(1)	81(81)
	DataMatrix	1(1)	1500(1500)
	MaxiCode	1(1)	150(150)
	MicroPDF	1(1)	366(366)
	PDF417	1(1)	2750(2750)
	QRCode	1(1)	3500(3500)

	HanXin Code		
Postal Codes	Postnet		
	PlanetCode		
	UK Post		
	Canada Post		
	Kix Post		
	Australia Post		
	Japan Post		
	China Post	2(4)	80(80)
	Korea Post	2(4)	80(48)
OCR	OCR Off		
	OCR A		
	OCR B		
	OCR USC		
	OCR MICR		
	OCR SEMI		

Table 4 – KDC300 Minimum Barcode Length

● Image Capture: Allows you to capture an image in JPEG format in C:\myData folder. User should enable the image capture option first then press the scan button to start the aiming. Green aiming light will illuminate and take an image upon release of the scan button. KDC300 will disable the image capture option if user presses the scan button for 10 seconds.

● Auto Trigger: Allows users to scan a barcode automatically once Auto Trigger is enabled. User can adjust Reread delay from Continuous to Extra Long. Auto Trigger mode always enables duplicate check option.

[Note1] USB cable insertion requirement is removed from FW2.85/86.O and FW 3.02.
[Note2] Users can exit the auto trigger mode by pressing the scan button for 3 seconds.

● Reread Delay: Users can adjust Reread delay from Continuous to Extra Long. Auto Trigger mode always enables duplicate check option.

Partial Display: Allows you to display partial data. User defines the start position and number of characters to be displayed.

Data Process Menu

Wedge/Store - The KDC provides five modes of data transmission in keyboard wedging mode.

● Wedge Only: Barcode data is NOT stored in memory but transmitted to the host.

● Wedge & Store Only: Barcode data is stored in memory and transmitted to the host.

● Store Only: Barcode data is stored in memory but NOT transmitted to the host.

● Save if Sent: If data transmission is successful, barcode data is stored in memory.

● Save if Not Sent: If data transmission is NOT successful, barcode data is stored in memory.

Data Format - The KDC provides two data formats, Barcode Only and Packet Data.

- Barcode Only: KDC transmits scanned barcodes only. User may incorporate proper data transmission error detection and correction mechanism in this mode.

  - KDC supports various termination characters for barcode only format.

  - User can select <NONE>, <CR>, <LF>, <CR+LF> or <TAB> as the termination character.

- Packet Data: KDC transmits packet data with checksum to minimize transmission errors.

  - KTSync® sets Data Format to Packet Data format upon execution.

  - User may change Data Format to Barcode only if user prefers to use Barcode only mode but either KTSync program terminates abnormally or user disconnects KDC without exiting KTSync program normally.

[Note] Barcode Index: KDC200i/250i/300i/400i add 4 bytes barcode index to maintain last synchronized barcode information. This optional index would be added if data format is "Packet Data" and

(1) 4 bytes index would be added before "@" when responding to "p" command

(2) 4 bytes index plus "@" character would be added after checksum byte if user scan a barcode and wedging to the host

Data Editor - KDC provides various data editing options.

- **Prefix** - Allows you to add a prefix to scanned data which can then be stored in KDC or wedged to the host. The Prefix format must be defined in the data format menu of KTSync. The maximum length for a Prefix is 11 characters.

  ✓ **NOTE:** This Prefix option is different from the Prefix option in KTSync which appends the prefix to data during synchronization.

  ✓ **NOTE:** User can also define prefix by scanning characters defined in Appendix C.17 ~ C.21 between following special barcodes

Prefix Enter Start

||||||||||||||||||||||||||||||||||||||||||
⊤MKDC83000.

Prefix/Suffix Enter Finish

||||||||||||||||||||||||||||||||||||||||||
⊤MKDC83002.

✓ **NOTE:** User can also delete or display current prefix by scanning following special barcodes

Delete Prefix

||||||||||||||||||||||||||||||||||||||||||
⊤MKDC83004.

Display Prefix

||||||||||||||||||||||||||||||||||||||||||
⊤MKDC83006.

- **Suffix** - Allows you to add a suffix to scanned data which can then be stored in KDC or wedged to the host. The Suffix must be defined in the data format menu of KTSync. The maximum length for a Suffix is 11 characters.

  ✓ **NOTE:** This Suffix option is different from the Suffix option in KTSync which appends the suffix to data during synchronization.

  ✓ **NOTE:** User can also define suffix by scanning characters defined in Appendix C.18 ~ C.22 between following special barcodes

Suffix Enter Start

||||||||||||||||||||||||||||||||||||||||||
⊤MKDC83001.

Prefix/Suffix Enter Finish

||||||||||||||||||||||||||||||||||||||||||
⊤MKDC83002.

✓ **NOTE:** User can also delete or display current suffix by scanning following special barcodes

Delete Suffix

┬MKDC83005.

Display Suffix

┬MKDC83007.

● **AIM ID** - Allows you to add AIM ID to scanned data which can then be stored in KDC or wedged to the host. AIM ID must be defined in data format menu of KTSync. AIM ID is either added to the end of Prefix or Suffix.

● **Partial Data**: Allows you to store and/or transfer partial data. User defines the start position and number of characters to be stored and/or transferred.

   ■ Select the *x* characters from *y* position
      ◆ Set Partial Data Start Position to *y*, Partial Data Length to *x,* Partial Data Action to Select
      ◆ Partial Data Length *0* means Select all characters from *y* position.
   ■ Erase the *x* characters from *y* position
      ◆ Set Partial Data Start Position to *y*, Partial Data Length to *x,* Partial Data Action to Erase
      ◆ Partial Data Length *0* means Erase all characters from *y* position.

Handshake - KDC provides Handshake mode when Data Format is set to Packet Data.

   ● Handshake Mode will increase the reliability of barcode data transmission.

   ● The default mode for Handshake is Disabled.

   ● Data transmission speed is slower when Handshake Mode is Enabled.

Terminator – KDC supports various termination characters when the Data Format mode is set to Barcode Only. This option allows you to select <NONE>, <CR>, <LF>, <CR+LF>, or <TAB> as the termination character. The default terminator is <CR+LF>. Up/Down/Left/Right arrow terminator is also available for HID mode.

Chk Duplicate – This option allows you to prevent collecting duplicated data.

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BT Config Menu - KDC200/250/300/400

The KDC supports *Bluetooth* Ver2.1+EDR. Before utilizing the advantages of Bluetooth functionality with the KDC, you should become familiar with Bluetooth connectivity and its impact on your host environment.

To configure your KDC for Bluetooth functionality, you must use the KDC Menus.   To access the menus, simultaneously press the UP and DOWN scroll buttons on the side of the KDC. Use the DOWN button to scroll to Bluetooth then press the Scan button.

Below is a listing of the Bluetooth options and their settings. The default settings for these options have been set to increase the usability of Bluetooth technology without compromising the KDC battery usage.

[NOTE] We strongly recommend NOT changing these settings until you have fully tested the Bluetooth connection between the KDC and the host device.

For more detailed information regarding Bluetooth functionality with the KDC, please refer to Chapter 4.

- ConnectDevice
    - SPP, SPP2.0
    - HID normal
    - HID iOS (KDC200i/250i/300i/400i)
    - iPhone (KDC200i/250i/300i/400i)
- Auto Connect - Enabled or Disabled
- Auto Power On - Enabled or Disabled
    - PWR On Time – Disabled, 1 to 10 seconds
- Auto Power Off - Enabled or Disabled (KDC250 should use option in system menu)
    - Beep Warning - Enabled or Disabled
    - PWR Off Time - 1 to 30 Minutes
- PowerOff Msg – Enabled or Disabled
- MAC Address – 12 characters *Bluetooth* MAC Address
- FW Version – Display *Bluetooth* Firmware Version
- Wakeup Nulls – Enabled or Disabled
- Autolock Time – 0, 1, 2, 3, 4, 5, 10, 15 minutes
- BT Toggle – Enable or Disable HID soft keyboard or iPhone mode connection On/Off toggle.
- HID AutoLock - Disabled, 1, 2, 3, 4, 5, 10, 15 minutes
- HID Keyboard – English, German, French, Spanish, Italian
- HID Initial Delay
    - Define the initial delay between 1sec to 10sec before data transmission in HID mode
- HID Inter-character Delay
    - Define the inter-character delay between 10msec to 100msec in HID mode
- HID Control Character
    - Map control characters to either **ALT+Numlock** or **^+Character**
    `

BT Service - KDC200/250/300/400

- Power
    - o Enable or Disable Bluetooth Power
- Pairing Mode
    - o KDC enters pairing mode so that host *Bluetooth* device can search KDC.
    - o KDC exits pairing mode either by pressing the scan button or it fails to pair with *Bluetooth* host device in 90sec.
- Discovering
    - o Search neighborhood *Bluetooth* devices
- Connecting To
    - o Inquiry to registered *Bluetooth* devices
- HID Sync
    - o KDC transmits all stored data to the host over HID profile if HID Sync option is enabled

GPS Config - KDC250

- GPS Power
    - o Enable or Disable GPS Power
- Power Mode
    - o Normal or Power Save
- Bypass Data
    - o Enabled or Disabled
- Acquire Test
    - o Acquiring time test of GPS signal
- Reset GPS
    - o Reset GPS parameters

System Menu

- Memory Size (3.0+ version only)

    - User can select normal data and application database memory partition size.

    - KDC will erase all stored data upon changing the partition size.

    - User should enter the following key sequence to change the partition.

    - <Up key> + <Up key> + <Down key> + <Down key> + <Scan button>

- Memory Status: Checks the number of stored barcodes and memory usage.

- Reset Memory: Resets KDC memory by erasing all stored barcodes, application and BT registry.

- Auto Erase: Erases all stored barcodes upon reaching buffer full condition if Enabled is selected

- Sleep Timeout: Sets amount of time KDC waits, when not being used, before going to *sleep.*

- Auto Power Off (KDC250 only)

    - Bluetooth: Enabled/Disabled
    - GPS: Enabled/Disabled
    - Power Off Time:0(Never), 5, 10, 20, 30, 60, 120 seconds

- Date/Time: Sets the date and time of KDC which can also be set using KTSync$^{®}$

- Battery: Shows current status of battery power level.

- Version: Shows KDC firmware version and serial number.

- Button Lock: Locks or unlocks KDC scan and scroll buttons.

- Beep Sound: Enables or disables KDC beep sound.

- Beep Volume: High or low.

- Auto Exit: Enables KDC to automatically exit KDC Menus.

- Port Status: Enables or disables KDC port messages.

- Display Format: Selection of display format - Time & Battery, Type & Time, Type & Battery, Memory Status and Barcode only

- Menu Barcode: Enables or disables Honeywell special barcodes

- Scrolling : Enables or disables display scrolling for a barcode with more than 40 characters

- Brightness: Adjusts display brightness

- Factory Default: Resets KDC options to factory default settings.

3.4 LED Status

KDC100/200/250/300

LED Color	Status
Green	● Successful Reading ● USB is connected and battery is fully charged
Orange	● Low battery ● USB is connected and battery is charging
Red	● No reading ● Empty battery

KDC400

LED Color	Status
Green	● Successful Reading ● USB is connected and battery is fully charged ● iPhone mode
Orange	● Low battery ● USB is connected and battery is charging ● HID mode
Red	● No reading ● SPP mode

Table 5 - Explanation of LEDs

3.5 Empty Battery

KDC100/200/250/300

The KDC will display the message ***Empty Battery Connect USB*** when the battery is empty. Please charge the KDC IMMEDIATELY to prevent data collecting interruption.

KDC400

- Under 30% - Orange LED blinks 1 second interval during 5 seconds in every minute
- Under 20% - Red LED blinks 1 second interval during 10 seconds in every minute
- Under 10% - Red LED blinks 1 second interval during 10 seconds in every minute and beeper sounds simultaneously

3.6 Buffer Full (KDC100/200/250/300)

The KDC will display the message *Buffer Full* when the size of collected data reaches 80KB (85 version)/180KB(86 version) or the number of collected barcodes is 10,240. To prevent the loss of data, you should synchronize the data then reset the memory when this message displays.

4MB version KDC reaches Buffer Full condition as follows:

- 0.5MB Partition - Collected data size reaches 0.5MB or collected number is 25,600
- 1MB Partition - Collected data size reaches 1MB or collected number is 51,200
- 2MB Partition - Collected data size reaches 2MB or collected number is 102,400
- 3MB Partition - Collected data size reaches 3MB or collected number is 153,600
- 4MB Partition - Collected data size reaches 4MB or collected number is 204,800

3.7 Reset Feature (KDC100/200/250/300)

The Reset feature lets you restart the KDC if necessary without losing any stored barcode data or option settings. To reset the KDC, follow these steps.

1. Press DOWN scroll button and SCAN button simultaneously for 5 seconds.

2. When the LEDs illuminate yellow, release the buttons.

3. The KDC initial screen, **KoamTac Data Collector KDC** displays when reset is complete.

Note:

The KDC stores collected data into flash memory and will not lose data or the KDC settings during the reset process.

3.8 Replace Battery

KDC300 comes with a rechargeable, Lithium-Ion battery. The battery is recharged from any USB port and can be recharged about 300 times before it needs to be replaced.

KoamTac recommends replacing the battery every six months as a declining battery will cause noticeable performance degradation in KDC300. Replacement batteries can be purchased from a KoamTac distributor. Batteries should be disposed of properly.

The steps for replacing the battery are as follows.

1. Disassemble the KDC back cover by unscrewing the middle screw.

2. Remove old battery and replace with new battery.

3. Reassemble the back cover.

1		Unscrew the screw which is pointed by the arrow.
2		Remove the battery cover by pulling it down.
3		Remove the battery. Pull out the 2 pin connecter gently.

Figure 7 - Replacing KDC Battery

4. BLUETOOTH - KDC200/250/300/400

The KDC200/250/300/400 support HID (Human Interface Device) and SPP (Serial Port Profile). KDC200i/250i/300i support HID, SPP and MFI (Made for iPhone). They are compatible with the following Bluetooth stacks.

- BlueSoleil
- Broadcom (Widcomm)
- Microsoft Windows XP, Vista, 7, and Mobile5.0+
- Toshiba

KDC200/250/300 can configure *Bluetooth* options using KDC menu and special barcodes. KDC400 can configure Bluetooth options using PC KTSync and special barcodes.

Bluetooth Config

4.1 ConnectDevice

KDC supports both Serial Port Profile (SPP) and Human Interface Device Profile (HID). User can choose SPP2.0, SPP2.1, HID normal, HID iOS profiles to communicate with the host device. Additional iPhone option is available for KDC200i/250i/300i/400i models.

User can connect and disconnect Bluetooth connection with the host device by pressing Up and Down key if BT Toggle option in BT Config menu is enabled. It normally takes 3 seconds to connect and 1 second to disconnect.

This is a very useful feature for iPhone and iPad application. User can enable and disable iPhone and iPad soft key instantly using this BT Toggle option.

Up key shows Bluetooth connection status and Down key shows time if KDC is connected using SPP profile.

4.2 Auto Connect

This feature allows the KDC to connect automatically to the host device when the KDC is powered on.

IMPORTANT: Until the host device and KDC have been fully tested, it is strongly recommended that this feature be set to Disable because a host device that does not support this feature can cause problems such as power loss or upload delays.

[Note] KDC tries to connect automatically to the host 10 times during two minutes if *Bluetooth* power is ON, *Bluetooth* is disconnected, Auto Connect is enabled and system Sleep Timeout is set to 5 seconds

4.3 Auto Power On

The Auto Power On option allows the KDC to automatically power on Bluetooth when the SCAN button is depressed. The default setting is Disabled. NOTE: The host may have to open the COM port before reconnecting with the KDC. Power on time determines the scan button pressing time to activate auto power on feature.

4.4 Auto Power Off

The Auto Power Off option works in conjunction with the PWR Off Time option.   This option allows the KDC to power off Bluetooth automatically when the KDC is NOT CONNECTED to the host for the time duration specified in the PWR Off Time option.

 The default for this option is Enabled. It is strongly recommended to keep it enabled to maximize the operation time of the KDC. If Auto Power Off is enabled, Bluetooth can be manually powered off before specified time in PWR Off Time option.

4.5 Beep Warning

The KDC beeps to acknowledge the status of the Bluetooth connection as follows:

1. One high short beep when Bluetooth is connected.
2. One low short when Bluetooth is disconnected.
3. Five short beeps if:

    - "Beep Warning is ENABLED"
    - "Auto Power Off is DISABLED"
    - "KDC200/200P/300 is DISCONNECTED from HOST"
    - "Bluetooth power is ON"

4.6 PWR OFF Time

The PWR Off Time option works in conjunction with the Auto Power Off option. If Auto Power Off is Enabled, the KDC powers off Bluetooth when the time duration specified in the PWR Off Time option is met and the KDC is NOT CONNECTED to the host. The time settings for this option are from one (1) minute to 30 minutes. The default is five (5) minutes.

4.7 PowerOFF Msg

KDC can display "Bluetooth Disconnected" message if Power Off Message option is Enabled. "Bluetooth Disconnected" message would be displayed if PowerOff Msg option is Enabled and KDC is disconnected with other *Bluetooth* device.

4.8 MAC Address

User can verify KDC Bluetooth MAC Address.

4.9 FW Version

User can verify KDC Bluetooth firmware version in BT FW menu.

4.10 Wakeup Nulls

The KDC sends three leading Null bytes to wake up connected *Bluetooth* device. This feature can be disabled if connected *Bluetooth* device doesn't require additional bytes to wake up.

4.11 Autolock Time

iPhone/iPad/iPod touch loses incoming Bluetooth data in sleep mode. Users can set KDC Autolock time to the same Autolock time of your iPhone/iPad/iPod touch to use automatic wakeup feature in HID mode to prevent data loss. There would be a one second delay of barcode transmission if Autolock time is set to more than one minute and the barcode scan interval is larger than auto lock time. The autolock time would be set as 0, 1, 2, 3, 4, 5, 10, 15 minutes. 0 means iPhone/iPad/iPod touch never enters sleep mode.

4.12 HID Keyboard

User can select international keyboard – English, German, French, Spanish and Italian.

4.13 HID Initial and Inter-Character Delay

Certain application can't process HID input fast enough and lose some characters during transmission. Users would increase initial and inter-character delay to prevent data lose during HID transmission

- HID Initial Delay
    - o   Define the initial delay between 1sec to 10sec before data transmission in HID mode
- HID Inter-character Delay
    - o   Define the inter-character delay between 10msec to 100msec in HID mode

4.14 Control character transmission in HID mode

Control characters between ASCII value 0x00 and 0x1F can be replaced by ALT+Numpad or ^+Character.

- Disabled ➔ Transmit the original control character

- Alt+Numpad ➔ Transmit Alt+ ASCII value from Numpad.

- ^+Character ➔ Control characters would be substituted as following table.

Control Char	Transmit Chars	Control Char	Transmit Chars	Control Char	Transmit Chars	Control Char	Transmit Chars
0x01	^A	0x0B	^K	0x14	^T	0x1D	^]
0x02	^B	0x0C	^L	0x15	^U	0x1E	^^

0x03	^C	0x0E	^N	0x16	^V	0x1F	^_
0x04	^D	0x0F	^O	0x17	^W		
0x05	^E	0x10	^P	0x18	^X		
0x06	^F	0x11	^Q	0x19	^Y		
0x07	^G	0x12	^R	0x1A	^Z		
0x09	^I	0x13	^S	0x1C	^\		

4.15 Function key transmission in HID mode

Users can send F1 to F12 function keys by scanning special barcodes in HID mode.

4.16 Disconnect/Reconnect/HID Toggle

Users can disconnect or reconnect the Bluetooth connection or toggle soft keyboard using side buttons.

Bluetooth Profile	UP Key	DOWN Key
SPP	Reconnect	Disconnect if pressing more than 3sec
HIS iOS	Reconnect	Soft Keyboard Toggle if pressing less than 3sec, Disconnect if pressing more than 3sec
iPhone	Reconnect	Disconnect if pressing more than 3sec
SPP 2.0	Reconnect	Disconnect if pressing more than 3sec
HID normal	Reconnect	Disconnect if pressing more than 3sec

Bluetooth Service

4.17 Power

The POWER option allows you to Enable or Disable the Bluetooth functionality of the KDC.   To use Bluetooth, this option must be set to Enable. However, like all devices enabled for Bluetooth, the KDC will search constantly to connect with a Bluetooth host when set to enable. Constant searching uses battery power. Unless you are using Bluetooth with your KDC, this option should be set to Disable.

IMPORTANT: To prevent unnecessary power problems, it is strongly recommended that the POWER option be set to Disable if the KDC is idle for an extended period of time.

4.18 Pairing

Before you are able to use Bluetooth, the KDC must be paired with the host device. This paring process only needs to be completed once with each host device. After pairing, the host device will always recognize the KDC as a Bluetooth device unless the Bluetooth configuration is modified. If it is modified, you may need to pair the devices again.

IMPORTANT: The host device must be configured for Bluetooth before it can be paired to the KDC.

[NOTE] KDC with Bluetooth Spec2.1+EDR doesn't prompt Pin code entry menu

To pair the KDC with the host, follow these instructions.

1. Select Pairing from the Bluetooth menu. The message "**Pairing started…**" will displayed.
2. When prompted by the host device, enter the Security PIN "0000".
3. The **"Pairing success"** message will display when the Bluetooth connection is successfully established.   The connection must be established before the pairing timeout which is 60 seconds.

● If **"Pairing failed..."** message displays, the Bluetooth connection with the host device failed. If the message "**Connected**" displays, a Bluetooth connection was established.

● It is possible for the message "**Pairing failed...**" to display on the KDC while the host device displays **"Connected"** message.   If this occurs, a Bluetooth connection is established.

4.19 Discovering

KDC200/250/300/400 startsto search neighboring *Bluetooth* device if this Discovering menu is executed. It would take about 30 seconds to finish search and lists available neighboring *Bluetooth* devices. Use may enter corresponding Bluetooth MAC address in KTSync Bluetooth menu instead of searching neighborhood *Bluetooth* devices.

4.20 Connect To

This option lets you easily connect KDC to *Bluetooth* devices either previously registered in KTSync under the File Menu or discovered/connected from KDC *Bluetooth* Service menu

[Note] There could be an interoperability issue depending on corresponding device *Bluetooth* stack. Master *Bluetooth* device may request to follow master *Bluetooth* device security procedure if KDC tries to connect to the master *Bluetooth* device.

4.21 HID Sync

User can synchronize stored barcode data over HID using HID Sync option. KDC starts to transmit all stored barcode data upon executing HID Sync option.

5. SYNCHRONIZATION

When barcode data is collected, it must be uploaded to your application. KTSync®, which is bundled with the KDC, is software that allows barcode data to be uploaded to any PC, PDA, or smartphone running Android 2.1+, Apple iOS3.1.3+, Blackberry, Mac and Windows XP/Vista/7/Mobile 5.0+. It has three major functions. Windows XP/Vista/7 version supports all of the following features. Tablet, PDA and Smartphone versions support only limited features of PC KTSync.

- Synchronization - Provides data upload functionality to your applications.

- Keyboard Emulator - Allows scanned data to upload directly into your application as if the data were being entered manually on a keyboard.

- Application Generation - Allows user to create custom applications or download predefined applications such as Master-Slave, Pick/Bin, DB Lookup and Inventory.

Additional functions include:

- Prefix and Suffix add-ons to eliminate manual data entry.
- Symbology and Scan Option selections.
- Barcode Wedging options.

5.1 KTSync Menu

KTSync® was installed on your PC during the initial installation process. Before data can be uploaded to any host device, KTSync® must be launched on the host and configured to recognize the KDC. The following screen displays when KTSync® is launched.
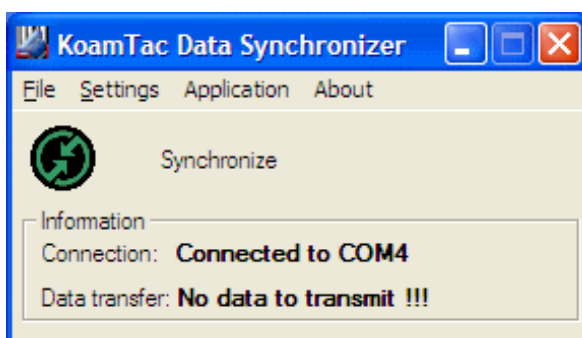
KDC100/200/250/300   **KDC400**

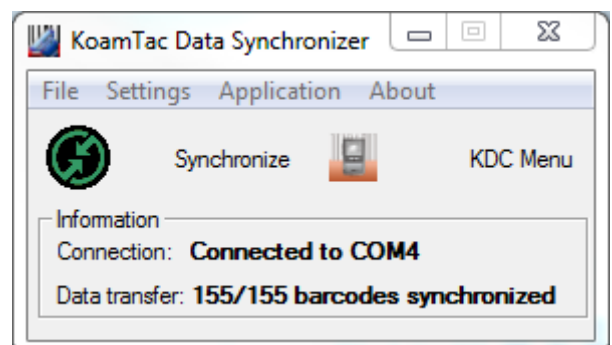*Figure 8 - KTSync® Synchronizer Menu*

File Menu

- Connect: This option displays the Serial port (COM#) assigned to KDC. You can also use this option to manually assign the Serial port. The Serial port assigned to KDC can be found under Windows Device Manager. The port assignment is used by KTSync® for synchronizing data from the KDC to the host.

- Synchronize: This option manually tells the KDC to synchronize data with the host. While data is being synchronized, KTSync menu options are unavailable. **NOTE: Please do not use your computer during data synchronization.**

- Bluetooth: This option is not available on KDC100. User can register MAC address to be directly connected by KDC200/250/300/400.

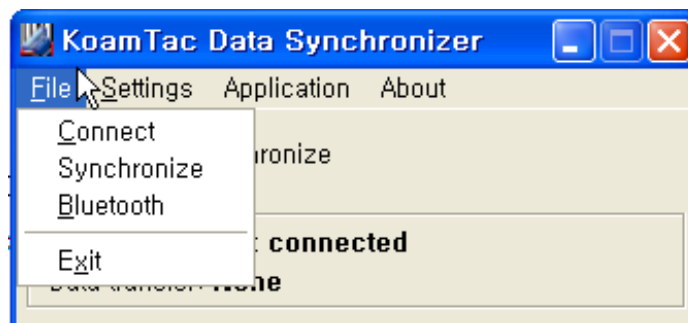- Exit: This option ends the KTSync program. You must re-run KTSync before you can synchronize data on the KDC.

Figure 9 – File Menu

Settings Menu

- Synchronization: Select Synchronize options.

- Barcode & KDC: Select Barcode and KDC options.

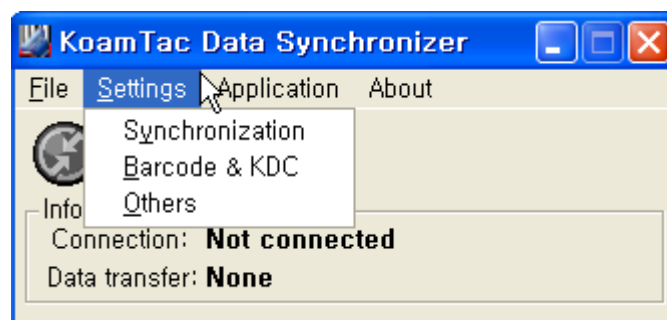- Others: Select Auto Connection and/or Synchronization Confirmation options.

Figure 10 – Setting Menu

Application Menu

- Generation: Create user application or download predefined application.

- DB Lookup: Allows users to download DB into KDC and display barcode description field

- Master/Slave: User defines a master barcode for comparison with one or more slave barcodes

- Pick/BIN: User defines Pick ID and the barcode symbology for comparison with a defined Bin

- Inventory: Users can count inventories. Inventory description would be displayed if inventory DB is downloaded into KDC.
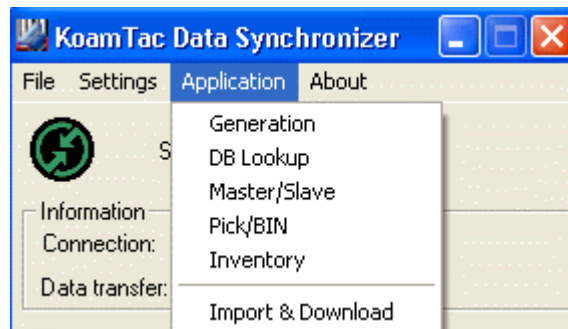

Figure 11 – Application Menu
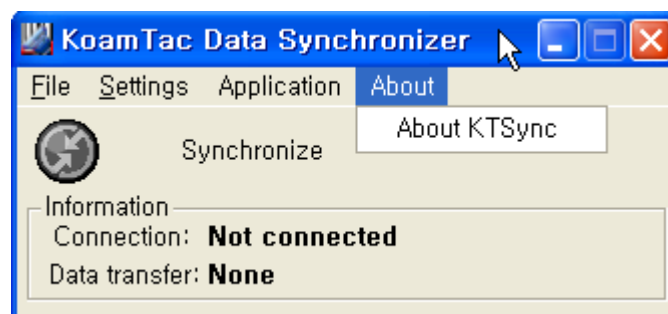
About Menu - KTSync® - Version Information

Figure 12 – About Menu

5.2 File Menu

Connect to KDC

The KDC connects to a COM port automatically when connected to your PC's USB port. **You can manually assign the KDC COM port using KTSync® Connection submenu under File menu if needed.**
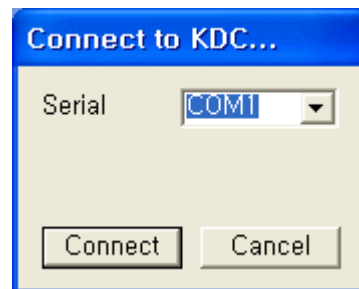

Figure 13 - COM Port Selection for KDC

- The COM port assignment is found in the Windows Device Manager.
- KTSync® will not connect to the KDC if it is in KDC Menus. You must EXIT from the KDC Menus.
- If KTSync® fails to connect automatically to the KDC, please follow these directions.

    1. Exit KTSync®.
    2. Check that you have connected the KDC to a USB port on your PC.
    3. Make sure to use the cable provided with the KDC.
    4. Check that the KDC is not in KDC Mode Menu.
    5. Restart KTSync®.

NOTE: You can manually assign the COM port using KTSync® Connect option under the File menu.

Synchronize

Under the File Menu, this option allows you to manually synchronize data on KDC with host. This option is similar to clicking on the Synchronize button in the KoamTac Data Synchronizer box.

Bluetooth

This menu option allows you to register up to ten Bluetooth devices including their MAC address, PIN #, and optional prefixes or suffixes. This option enables direct Bluetooth connection between KDC and other Bluetooth devices such as *Bluetooth* printer. User should choose *Bluetooth* device to be connected in "Connect to" menu in KDC *Bluetooth* Service menu.
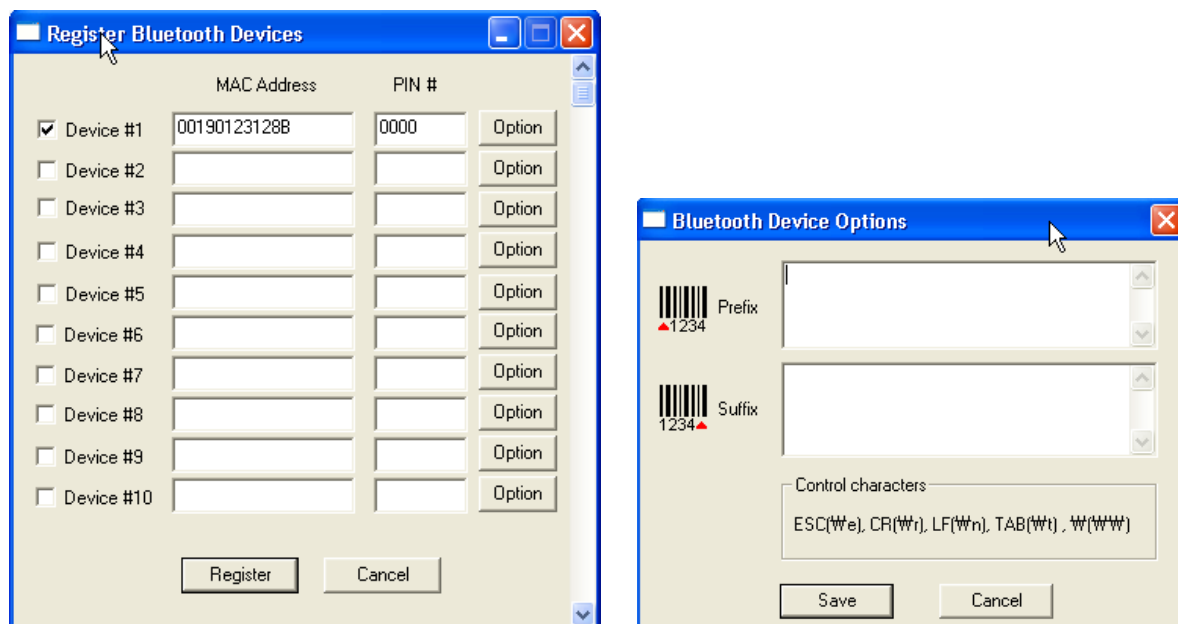

Figure 14 - Bluetooth Device Registry

5.3 Synchronization Settings

KTSync® provides several synchronization options for synchronizing data from your KDC to host devices such as your PC, PDA, or smartphone running Windows XP, Vista, Windows 7, or Mobile 5.0+.
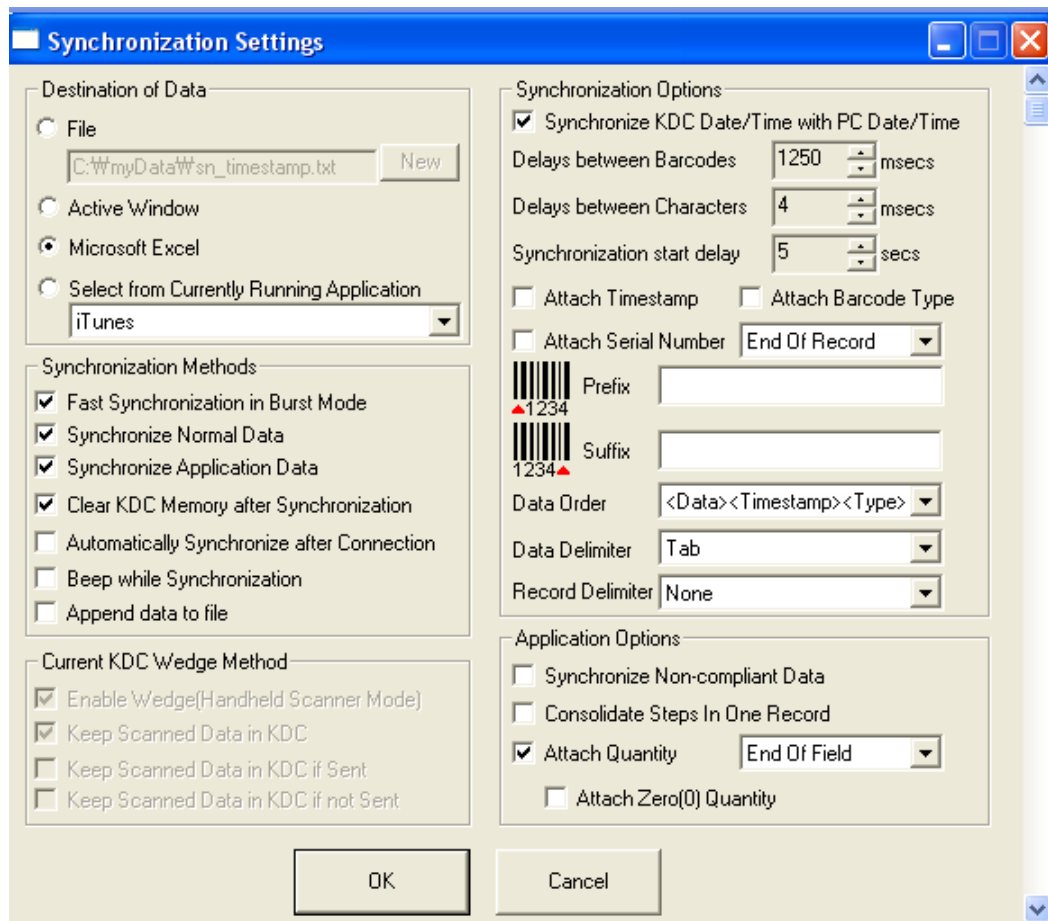

Figure 15 - KTSync® Synchronization Settings

Destination of Data

When barcode data is uploaded to the host device, you must assign a destination for the data. Destination of Data options include:

● File - This option means data will be saved in the assigned filename. You can select a different target directory by clicking the New icon. C:\MyData\sn_timestamp.txt is the default directory. If this directory is not created, you will be prompted to create it before data can be uploaded to a file.

● Active Window - This option means scanned barcode data is sent directly to the active program running on your device as if the data was being entered directly from a keyboard.

● Microsoft Excel - This option means barcode data is being imported directly into Microsoft's Excel. Various parameters can be set when uploading data to Excel.

● Select from Current Running Application – This option allows you to select a currently running application for data synchronization.

Note:

- Data synchronization begins immediately if *Automatically After Connection* is selected. If not selected, data synchronization is started manually by the user.
- Users **SHOULD NOT** operate the PC during the synchronization process. It can interrupt the process causing unreliable results*.*

Synchronization Methods

Fast Synchronization in Burst Mode

The KDC can synchronize data to a host device in Burst mode or Sequential mode. Burst mode provides the fastest synchronization process but could result in error in a poor *Bluetooth* environment. Fast synchronization in burst mode is only recommended with USB connection.

Synchronize Normal Data

The KDC will synchronize Normal Data only in KDC memory if Synchronize Normal Data option is selected. If you want all data in KDC memory synchronized, you should select Synchronize Normal Data **and** Synchronize Application Data.

Synchronize Application Data

The KDC will synchronize Application Data only in KDC memory if Synchronize Application Data option is selected. If you want all data in KDC memory synchronized, you should select Synchronize Normal Data **and** Synchronize Application Data.

Clear KDC Memory after Synchronization

The stored barcode data is cleared from the KDC memory after synchronization if this option is selected. The KDC can store a total of 10,240 barcodes or 80KB(86 version)/180KB(85 version) of barcode data.

● It is important to clear the KDC memory periodically to prevent Buffer Full message which will prevent the KDC from storing additional data.

● Stored barcode data can also be deleted using the Reset Memory feature on the KDC.

Automatically Synchronize after Connection

This option lets you automatically synchronize collected data to your computer immediately when the

KDC is connected to the host.

- IMPORTANT: Remember to configure all options properly before selecting this option.
- Data synchronization can be done manually by clicking the synchronize icon if this option is not selected.

Beep while Synchronization

You can enable or disable the beep tone during the synchronization process. A beep is sounded each and every time barcode data is synchronized if this option is selected. The KDC beeps 5 times when the synchronization process is complete.

Append data to File

KTSync would append data to the exiting file instead of creating a new file if user has specified file name and Append data to File option is enabled.

Current KDC Wedge Method

The KDC can be configured in one of five Wedge/Store modes -

- Wedge Only - Scanned data is transmitted to the host. The KDC does not store scanned data.
- Wedge & Store - Scanned data is stored in the KDC and transmitted to the host.
- Store Only - Scanned data is stored in the KDC but NOT transmitted to the host.
- Save if Sent - Scanned data is stored in the KDC ONLY if transmission to the host is successful.
- Save if Not Sent - Scanned data is stored in the KDC ONLY if transmission to the host is unsuccessful.

Enable Wedge (Handheld Scanner Mode) - This option will be checked if Wedge Only or Wedge & Store option is selected.

Keep Scan Data in KDC - This option will be checked if Store Only or Wedge & Store option is selected.

Synchronization Options

Synchronize KDC Time with PC Time when Connected

This option enables you to synchronize the KDC date and time with the host date and time. Synchronization of date and time occurs after the data is uploaded to the host device.

Delays

You can set transmission delays between barcodes and characters during the synchronization process. It is important to set proper delays to prevent errors during the transmission of collected barcodes. Some Windows applications such as Excel require longer delay times.

Attachments

Timestamp, Barcode Type, and Serial Number can be attached to the scanned barcode by selecting these options. The Serial Number of the KDC can be attached to the Start or End of Record.

Prefix and Suffix

● Enter the characters you want appended to the front (Prefix) or back (Suffix) of the barcode in the Prefix and Suffix fields.

● The character set is any combination of ASCII characters including alphanumeric, line feed ("\n"), and carriage return ("\r").

Order and Delimiter

● Select Order of Data – Type, Data, and Timestamp
● Select the Delimiter between Data – Tab, Space, Comma, and Semicolon
● Select the Delimiter between Records – None, LF, CR, Tab, and <LF & CR>

Application Options

Synchronize Non-Compliant Data

The KDC will synchronize both compliant and non-compliant data (filtered data) if Synchronize Non-Compliant Data option is Enabled.

Consolidate Steps in One Record

KTSync will consolidate the data collected in Step 1 with the data collected in Step 2 and/or Step 3. Data will be consolidated into one record instead of individual data records for each step when Consolidate Steps in One Record is Enabled. Non-complete records, i.e. three steps were defined but data was only collected for two steps; would be discarded if this option is Enabled.

Attach Quantity

Quantity would be attached to the left or right of the data if this option is Enabled.

5.4 Barcode & KDC Settings

KTSync® allows you to configure the KDC Scan Options and Barcode Settings. The configuration options for the KDC using KTSync® are similar to the Set Barcodes, Code Options, Data Editing and Scan Options on the KDC Menu. Please refer to Appendix A for proper barcode settings for your application.

NOTE: You must configure barcode and scan options properly for optimal KDC performance.
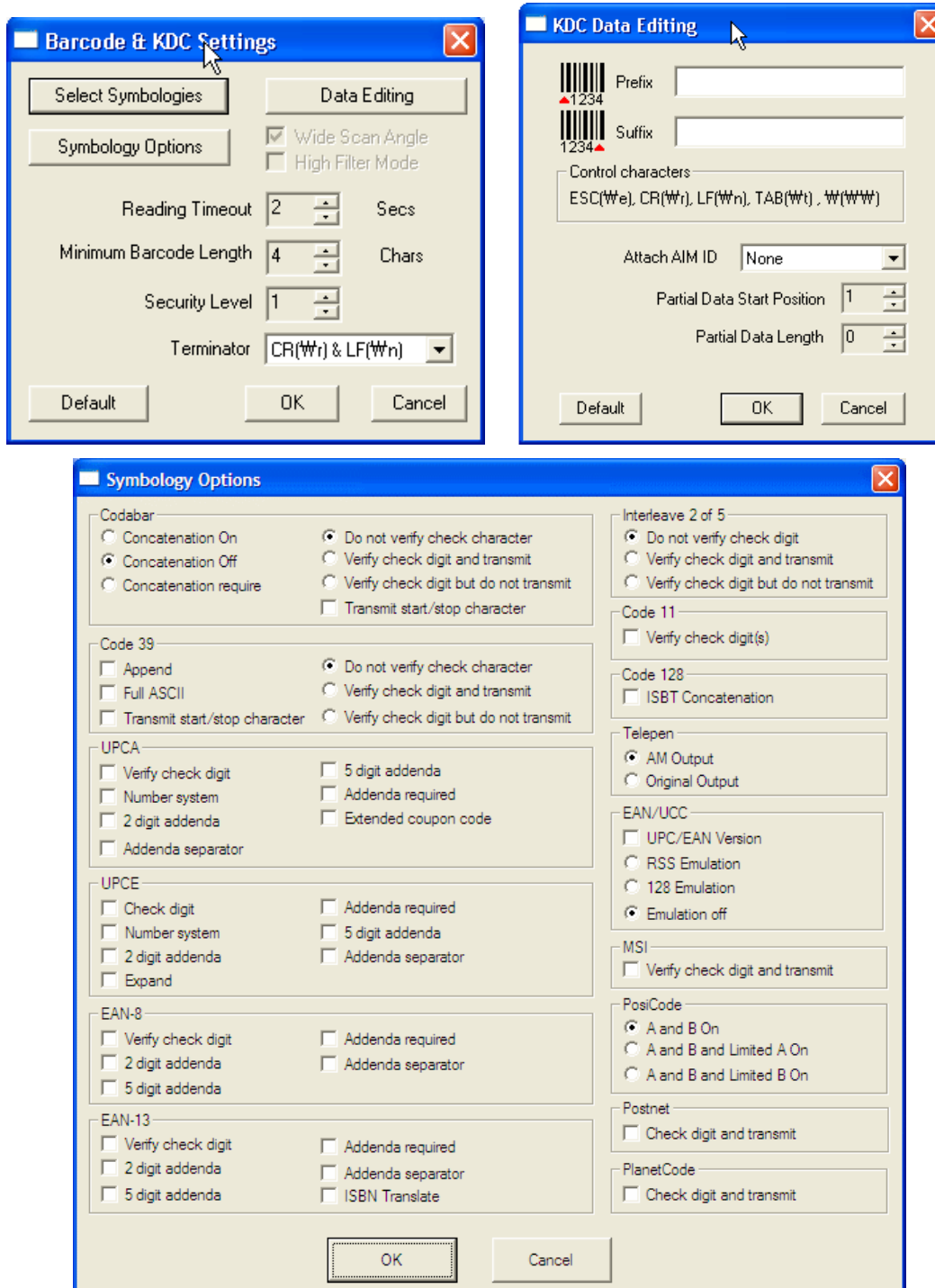
Figure 16 - Barcode & KDC Settings, Symbologies, Data Editing and Scan Options

Select Symbologies and Symbology Options

The process for scanning and reading barcodes is delicate and complicated. Although your KDC is equipped with a high performance scan engine, if configured incorrectly it may not perform at its peak performance level. To ensure its high performance, the KDC comes configured to optimize its scan engine technology. Unless you clearly understand the impact of your changes to the KDC settings, please do not change factory default settings. Please refer to Appendix A for details. Pressing the Default icon will reset all symbology related options to factory default settings.

Data Editing Option

Prefix - Allows you to add a prefix to scanned data which can then be stored in KDC or wedged to the host. The Prefix format must be defined in the data format menu of KTSync. The maximum length for a Prefix is 11 characters. **NOTE:** This Prefix option is different from the Prefix option in KTSync which appends the prefix to data during synchronization.

Suffix - Allows you to add a suffix to scanned data which can then be stored in KDC or wedged to the host. The Suffix must be defined in the data format menu of KTSync. The maximum length for a Suffix is 11 characters. **NOTE:** This Suffix option is different from the Suffix option in KTSync which appends the suffix to data during synchronization.

AIM ID - Allows you to add AIM ID to scanned data which can then be stored in KDC or wedged to the host. AIM ID must be defined in data format menu of KTSync. AIM ID is either added to the end of Prefix or Suffix.

Partial Data: Allows you to display and store partial data. User defines the start position and number of characters to be displayed and stored.

- Select the *x* characters from *y* position
    - ✓ Set Partial Data Start Position to *y*, Partial Data Length to *x,* Partial Data Action to Select
    - ✓ Partial Data Length *0* means Select all characters from *y* position.
- Erase the *x* characters from *y* position
    - ✓ Set Partial Data Start Position to *y*, Partial Data Length to *x,* Partial Data Action to Erase
    - ✓ Partial Data Length *0* means Erase all characters from *y* position.

5.5 Others Settings

Other options under the Settings menu allows you to select four additional settings.

- **Ask Confirmation before Trying Auto Connection** prevents unintentional launch of KTSync.

- **Ask Confirmation before Starting Auto Synchronization** prevents unintentional synchronization of data.

- **Minimize KTSync on Start** will minimize KTSync and send to the tray upon execution.

- **Keep Checking *Bluetooth* Connection** allows reconnection of KDC once *Bluetooth* signal is detected. This feature is useful when moving from *Bluetooth* host device frequently. KTSync will automatically reconnect *Bluetooth* connection when you enter an effective *Bluetooth* network range. *(Not Available on KDC100)*

To select any of these settings, click on the box to the left of the setting. A check mark (√) will display next to the setting to indicate that it is selected.
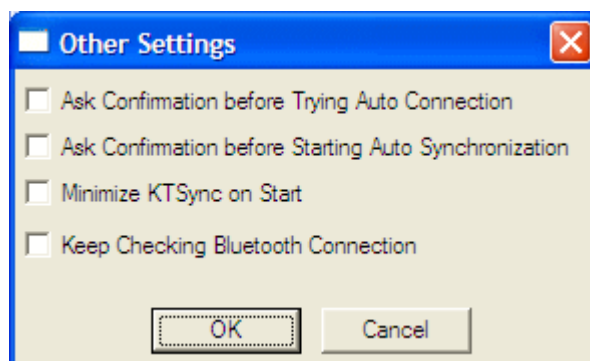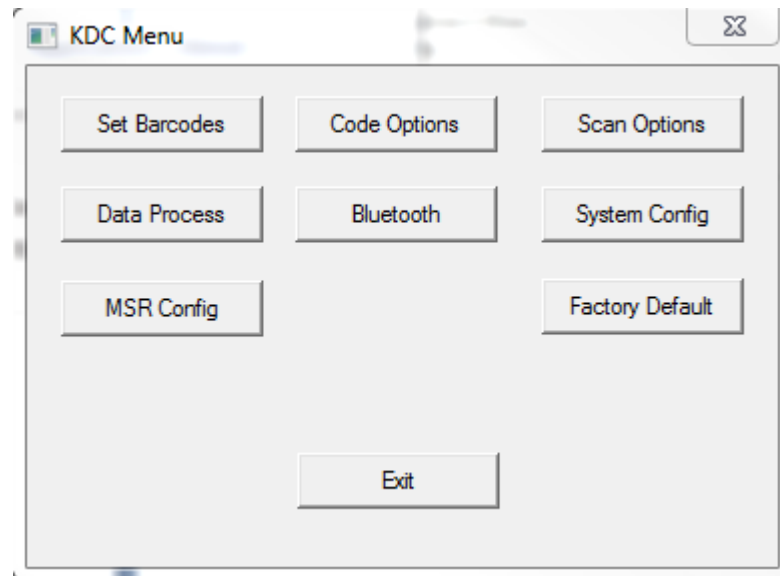

Figure 17 - KTSync® Confirmation Settings

5.6 KDC Menu (KDC400)

KDC Menu allows users to configure KDC400 settings.

5.7 Mobile pKTSync

pKTSync provides limited functionality for Pocket PC 2003 and Mobile 5.0+ users.

1. Synchronization - Provides data upload functionality to your applications.

2. Keyboard Emulator - Allows scanned data to be uploaded directly into your application as if the data were being entered manually on a keyboard.

For detailed explanations of these functions, please refer to earlier sections of this chapter.

WARNING: The user must assign the correct COM port to KDC prior to use pKTSync. Please refer to your mobile device manual for details on *Bluetooth* pairing and COM port assignment methods.
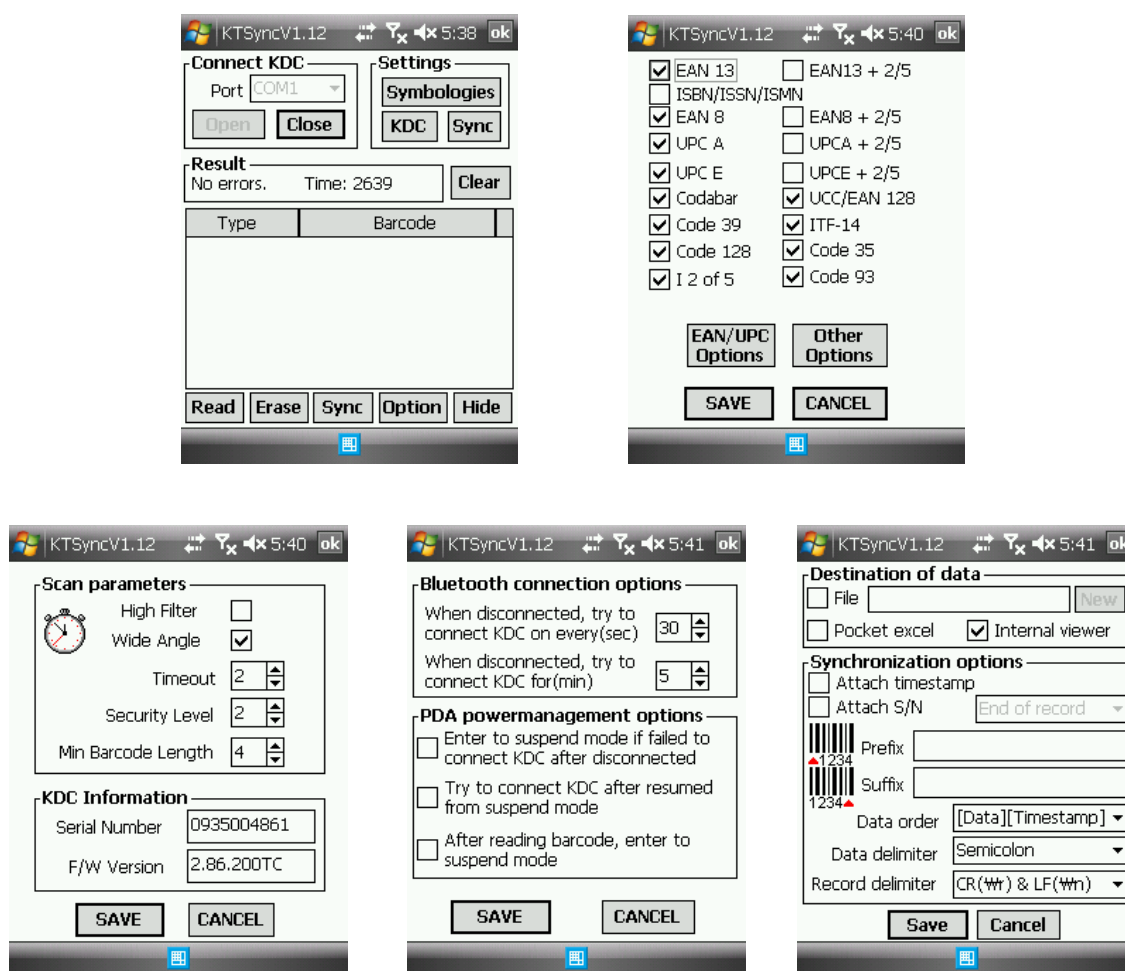
Figure 18 – Mobile pKTSync

5.8 Android aKTSync

The aKTSync provides limited functionality of PC KTSync to Android users.

[NOTE 1] aKTSync only supports Android devices with 2.1+ OS version and that are compatible with BluetoothChat application.

[NOTE 2] KDC with *Bluetooth* Spec2.1+EDR doesn't prompt Pin code entry menu

KDC and Android Pairing

1. Pairing

   ● Select "SPP" Bluetooth profile from KDC ConnectDevice submenu in BT Config menu.

   ● Search KDC200/200i/300/300i from Android and pairing two devices.

   ● KDC200/200i/300/300i PIN code is "0000"

2. Connection

   ● Click "Connect" icon in aKTSync

   ● Android would list up paired *Bluetooth* devices and user should select the target KDC.

3. Synchronization - Provides data upload functionality to your applications.

4. Settings – User can change various Synchronization options in settings menu.

5. Wedging – User can wedge barcode data to any Android application. Press home key and launch the target application.

Launch KTSync

1. Download and install aKTSync from the Android Market.

   http://www.androidzoom.com/android_applications/productivity/ktsync_luxv.html

2. Change KDC Bluetooth "ConnectDevice" option to "SPP"

3. Execute Android *Bluetooth* device scan option and KDC *Bluetooth* pairing option

   A. Execute KDC *Bluetooth* "Pairing" option

   B. Launch "Settings" on the Android device

   C. Select "Wireless and Networks"

   D. Click on "Bluetooth Settings"

   E. Click on "Scan devices"

   F. The Android device will display the KDC model and 6 digits of the serial number.

4. Press the KDC list entry, enter "0000" PIN code and press "OK"

5. When paired, the Android device will display "Paired but not connected".

6. Launch aKTSync program

   A. Press menu key and select the "Connect" option on the top left

   B. From the list of paired devices, choose the KDC to use

C. On the top menu bar of aKTSync, you will see "connecting" then "connected".

D. On the KDC display, you will see "Pairing Succeeded!!!" then "Bluetooth Connected"

E. Select "Settings" option on the bottom left to change aKTSync setting

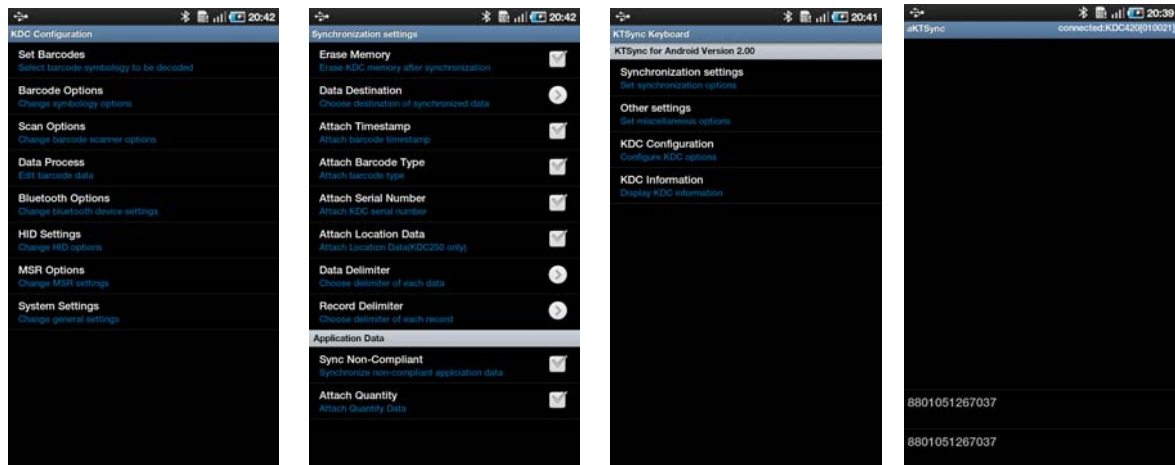
Figure 19 – Android aKTSync

Keyboard Wedge

1. Launch "Settings" on the Android device
2. Select "Language and Keyboard (or Input method)"
3. Select "KTSync Keyboard"
4. Launch the application and touch the input box to give focus to it
5. Barcode would be wedged to the input box upon scanning a barcode

Settings

Users can set Synchronization and auto connect settings in Settings menu.

5.9 iPad/iPhone/iPod touch KTSync

The iKTSync for iPad/iPhone/iPod touch provides limited functionality of PC KTSync for iPad, iPhone and iPod touch users.

KDC200i/250i/300i/400i and iPhone/iPad/iPod touch connection instructions

1. The KDC200i/250i/300i/400i support "SPP", "HID" and "iPhone" Bluetooth profiles.
2. The iPhone/iPad/iPod touch should use either "HID" or "iPhone" Bluetooth profiles.
3. KDC Bluetooth profile should be set to '"iPhone" to use iKTSync.
4. Download the KTSync program from the App Store.
   A. http://itunes.apple.com/us/app/ktsync/id372916602?mt=8
5. Enable the iPhone/iPad/iPod touch Bluetooth power from the iOS Setting > General > Bluetooth menu
6. Pair and connect KDC.

iPhone/iPad/iPod touch Pairing and Connection using KDC200i/250i/300i/400i Discovering option

1. Download and install iKTSync from the Apple App Store.
   A. http://itunes.apple.com/us/app/ktsync/id372916602?mt=8
2. Press the two KDC side buttons together to enter menu mode
3. Scroll down to "BT Service - Discovering" menu
4. Press the front middle scan button
   A. "Discovering Started …" message will be displayed on KDC screen
   B. Discovering will take about 30 seconds.
5. Select discovered iPhone/iPod touch device name and press the front middle scan button
   A. [Pin Code] User Default/Enter PinCode will be displayed
   B. Press the front middle scan button to select the "Use Default" option
   C. "Connecting to iPhone/iPod touch device name" will be displayed
   D. iPhone/iPad/iPod touch will ask for the PIN number.
   E. Please enter "0000" and hit "connect" icon
   F. "iPhone Connected" message will be displayed
6. Launch KTSync and configure Settings

iKTSync Settings

iKTSync provides following Settings menu.

- Synchronization - User can configure Synchronization options such as destination of data, data formation and delimiters.
- Other settings - Users can configure KDC250 GPS module, disconnection options and soft trigger button.
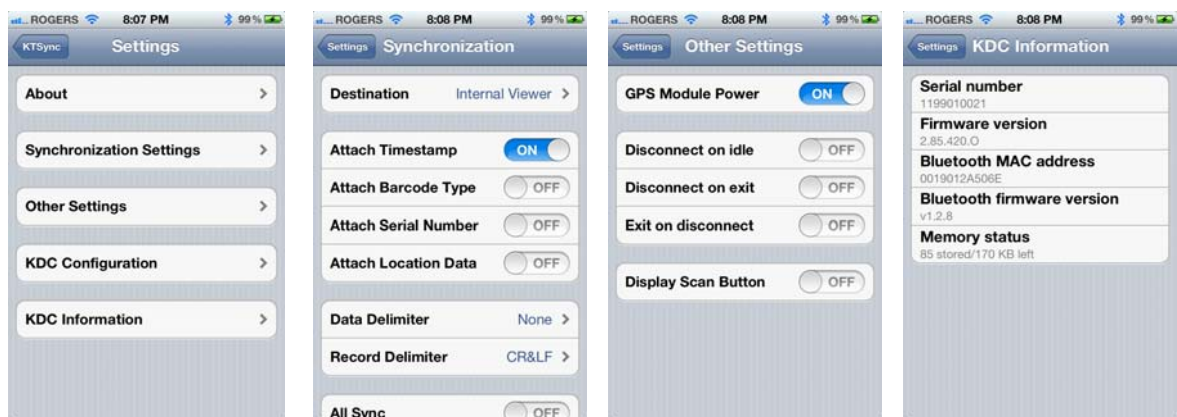

Figure 20 – iPad/iPhone/iPod touch KTSync

iKTSync Settings

5.10 Blackberry bKTSync

The bKTSync provides limited functionality of PC KTSync for Blackberry users.

[NOTE] KDC with Bluetooth Spec2.1+EDR doesn't prompt Pin code entry menu

1. Download and install bKTSync from the Blackberry App World.
   http://appworld.blackberry.com/webstore/search/ktsync?lang=en
2. Go to Blackberry Options > Applications menu and Enable ˝Input Simulation˝ option
3. Change KDC Bluetooth profile in "ConnectDevice" option to "SPP"
4. Execute Blackberry *Bluetooth* manager and KDC *Bluetooth* pairing option
   A. Execute KDC *Bluetooth* "Pairing" option
   B. Launch the Blackberry *Bluetooth* manager and select "Search". The KDC model and 6 digits of the serial number would be displayed.
   C. Highlight the KDC and press the Enter or Select Key
   D. Enter "0000" PIN code and press the Enter or Select Key if BT ConnectDevice is selected as SPP2.0. Blackberry wouldn't prompt to enter PIN code if BT ConnectDevice is selected as SPP.
   E. The Blackberry will display "Pairing with KDC"…"complete."
   F. Close the Blackberry Bluetooth manager
5. Go to Downloads folder and execute KTSync
6. Select KDC to connect, press menu button and execute connect option.
7. User can configure KDC options in KDC settings and Symbologies Settings menu
8. Go to KTSync Synchronization Settings and select Destination. To send collected barcode as an email attachment, choose ˝Email Attachment˝ as destination, enter email address, subject and body message. You can enter multiple email addresses using the semicolon(;) separator.
9. To scan barcodes into any application (like email, notes, worksheet or web browser), press the menu key and select "Running in the background" option. bKTSync will maintain the connection and place the scanned barcode data where ever the cursor is flashing.

KDC Settings

Select Laser Angle — Wide ▾

Set Scan Timeout — 2 seconds ▾

Set Security Level — 2 ▾

Set Minimum Barcode Length — 2 ▾

Symbologies Settings
Enable/Disable Symbols
☑ EAN13
☑ EAN8
☑ UPCA
☑ UPCE
☑ Code39
☑ ITF14
☑ Code128
☑ Interleave 2 of 5
☑ Codabar
☑ GS1-128
☑ Code93

Synchronization Settings
Select Destination — Email Attachment ▾
Attach Barcode Type — No ▾
Attach Timestamp — No ▾
Attach Serial Number — Do not attach ▾
Select Data Delimiter — Tab ▾
Select Record Delimiter — CR&LF ▾
Email Address: info@koamtac.com
Email Subject: KDC BB Ktsync test email

Synchronization Settings
Attach Barcode Type — No ▾
Attach Timestamp — No ▾
Attach Serial Number — Do not attach ▾
Select Data Delimiter — Tab ▾
Select Record Delimiter — CR&LF ▾
Email Address: info@koamtac.com
Email Subject: KDC BB Ktsync test email
Email Body Message: Hi...

Figure 21 – Blackberry bKTSync

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5.11 KTSync for Mac OS X

The KTSync Mac OS X version provides limited functionality of PC Windows KTSync for Mac OS X users.

[NOTE 1] KTSync for Mac OS X version only supports Bluetooth SPP profile. User should pair KDC with Mac before launching KTSync program.

[NOTE 2] Mac OS X version KTSync is built as a X86 binary application and works with the Intel based Mac. It is verified on Mac PC running Mac OS X 10.6.5 only.

KTSync Mac OS X version supports following features.

- Keyboard wedge function to the active window or any registered user application
- Synchronize to a file, active window and user defined application.
- It allows adding serial number, timestamp and various data and record delimiters.

User will see the following initial KTSync screen once launching the program.
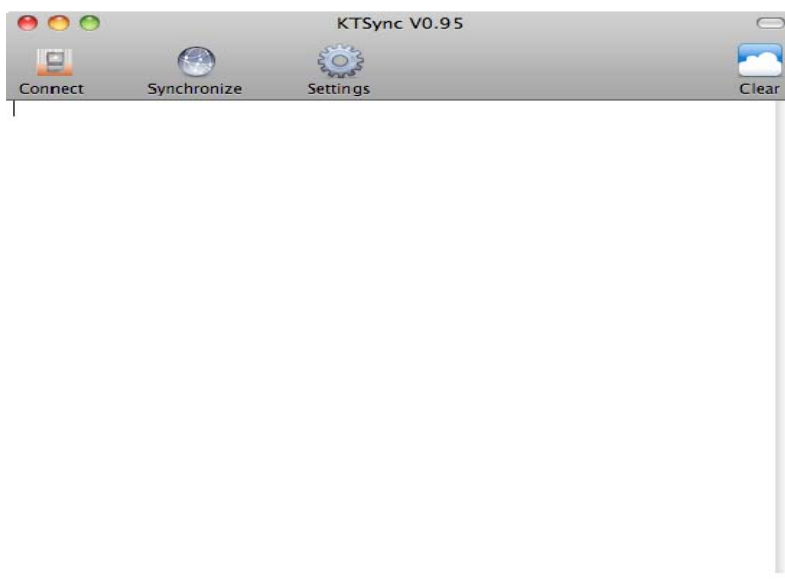
 Connect Button

User can connect the Mac with paired KDC by clicking the Connect button. The following screen will be displayed when this button is pressed and KTSync will start to connect to the selected KDC.

KDC300002001
KDC200020478
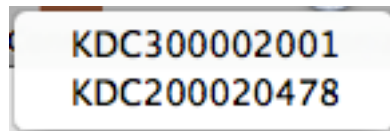
 Synchronize Button

User can start the synchronization process by pressing the Synchronize button. User can select the destination of barcode data in the settings menu. There are 3 selectable destinations.

✓ File
Active window
User application
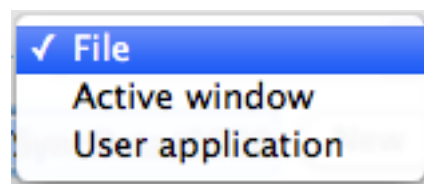
 Settings Button

User can configure synchronization options by pressing the Settings button.
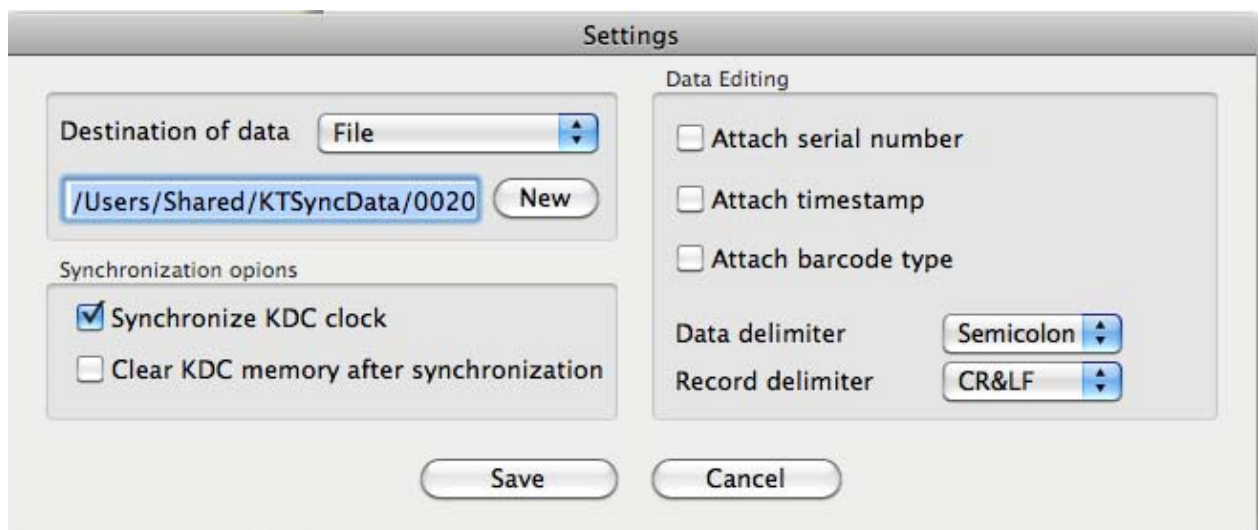
- Destination of data
  - The KTSync program wedges or downloads barcode data to the one of following three destinations.

    - ✓ File: The KTSync makes file name based on current date and time and stores into a default directory /Users/Shared/KTSyncData directory. User can define other

directory by clicking "New" button. The maximum file path length is 128 characters.

- ✓ Active window

    The KTSync sends barcode data to current active window if Active window option is selected.

- ✓ User application: User can define the target application by pressing "New" button. The maximum application name path length is 128 characters.

● Synchronize KDC clock

KTSync will set KDC's date and time with Mac PC date and time when KDC is connected to Mac if this option is enabled.

● Clear KDC memory after synchronization

KTSync clears barcode date stored in KDC memory once synchronization has finished if this option is enabled

● Attach serial number

The KTSync would add a KDC serial number to barcode data if this option is enabled.

● Attach time stamp

The KTSync would add timestamp to barcode data if this option is enabled.

● Attached barcode type

The KTSync would add barcode type to barcode data if this option is enabled.

● Data delimiter

This option is used to select a character to be added between barcode data, serial number, timestamp and/or barcode type. User can select one of "None", "Tab", "Space", 'Comma" and "Semicolon" as data delimiter.

● Record delimiter

This option is used to select a character to be added at the end of barcode record. User can select one of "None", "CR", "LF", TAB", and "CR&LF" as record delimiter.
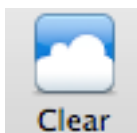
 Clear Button

User may press this button to clear KTSync internal viewer.

6. APPLICATION GENERATION

[NOTE] KDC FW2.85 doesn't support the Application Generation feature. Users should upgrade FW2.85 to FW2.86 or use FW3.0+ enabled KDC to use Application Generation feature.

When you select Application menu from the KTSync, you can choose from the following five Applications – Generation, DB Lookup, Master/Slave, Pick/BIN, and Inventory. Users can also download saved programs using Import & Download option.
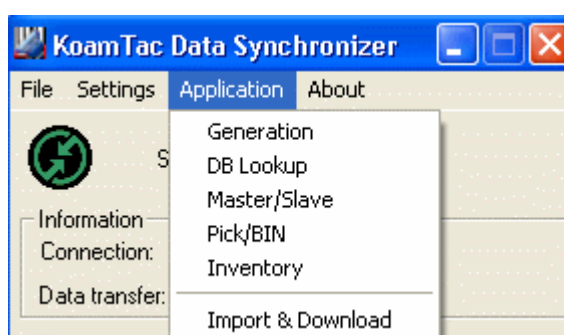
Figure 22 – Application Menu

When the Application tool is selected, the KDC will beep once to acknowledge a connection between the KDC and the Application tool. KTSync would popup the following warning window if downloaded application in KDC doesn't match with KTSync application tool.
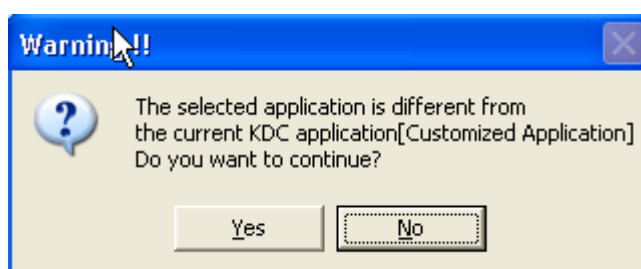
Figure 23 – Application Warning Window

[Note] KDC would wedge barcode data to the host in application mode if "wedge and store always" option in data process menu is selected and KDC firmware version is higher than 2.86. G or 3.0.

6.1 Application Generation

KDC Application Generation tool is a robust feature that allows you to create custom applications for collecting and managing barcode data. To create a custom application, select the Generation submenu from the Application menu in KTSync®.

Figure 24 – Application Generation Menu

Generate Application

Generate step 1 - To generate a custom application, click on the Generate Step 1 box which enables you to define the user prompts and data collection settings for Step 1 of your custom application. Below is a description of each field. These prompts are the same when selecting Generate step 2 and Generate step 3. **NOTE: Your custom application can include only Step 1**.

● **First line**

   Enter up to 13 characters which will display on the first line of the KDC

● **Second line**

   Enter up to 13 characters which will display on the second line of the KDC

● **Starting quantity**

Enter a predefined start quantity for each scanned barcode. The start quantity can be defined from 1 to 128 and is modifiable using up or down side key.

● **Waiting to scan**

Enter the number of seconds the KDC pauses before the user prompts display. During this timeout period, the user can modify the quantity. If this field is set to zero, the quantity field cannot be adjusted. This field can be defined from "-1" to "30" seconds. "-1" second enables infinite waiting of user quantity input.

● **Enable data filter**

Click on this box to enable the data filtering option. Data filtering allows you to predefine different aspects of the barcode data you are collecting.

Data Filter Settings

When you select Enable data filtering, you must click on the Settings box to select the Data filter setting. The option for the data filter settings are the same for Step1, Step 2, and Step 3.

Figure 25 – Data Filter Settings

- **Barcode Type**

   This field allows you to select the type of barcodes the KDC will collect. When you click on the box, Select Symbols is enabled. A listing of the symbologies supported by the KDC displays. To select a barcode symbology, click on the box associated with the symbology.

- **Minimum Data Length**

   This field allows you to define the minimum length of the scanned barcode. The length can be between 2 and 36 characters. If a user scans a barcode whose length is less than the defined length, the barcode data is not collected.

   [Note] The default KDC minimum barcode length defined in scan option is 4. Therefore, users should change KDC minimum barcode length to 2 or 3 to define minimum data length to 2 or 3.

- **Maximum Data Length**

   This field allows you to define the maximum length of a scanned barcode. The defined length can be between 2 and 256 characters. If a user scans a barcode whose length is greater than the defined length, the barcode data is not collected.

   [Note] The default KDC minimum barcode length defined in scan option is 4. Therefore, users should change KDC minimum barcode length to 2 or 3 to define maximum data length to 2 or 3.

- **Barcode Collation**

   This option enables you to define a data string that the KDC will use to compare scanned barcodes.
   - o   Starting Position – This is the start position of the scanned barcode data to be compared with the defined data string.
   - o   Data String – This is the defined value to be compared with scanned barcode data. This value can be up to 32 characters

- **Collect Partial Data**

   This option allows you to define partial barcode data to be collected when a barcode is scanned. Only the partial data will be stored in the KDC.
   - o   Start position – This is the starting position that the KDC will use when collecting scanned barcode data.
   - o   Data Length – This is the length of partial data to be stored by the KDC

- **Check for Duplicated Data**

   This option allows you to prevent collecting duplicated data.
   - o   Previous Scanned Data – This option allows you to compare the scanned barcode with the previously scanned barcode and treat it as non-compliant data if you scanned the same barcode twice.

o   All Stored Data – This option allows you to compare the scanned barcode with stored barcode data and treat it as non-compliant data if the same barcode was already scanned and stored.

- **Don't Save Non-Compliant Data**

  This field tells the KDC how to manage non-compliant data based on the defined data filtering fields. If this field is enabled, non-compliant data is NOT stored in the KDC. If this option is not enabled, non-compliant data is stored.

Generate step 2

To include another step in your data collection process, click the box, Generate step 2. This step has the same options as Step 1. In this step, you have the option of repeating step 2 by clicking the box, Repeat Step.

[NOTE] This field is disabled when your application has three steps.

Generate step 3

To include a third step, click the box, Generate step 3. This step has the same options as step 1 and 2. However, in this step you have the option to repeat steps 2 or 3.

Application Download and Execution

Prior to running your application, it must be downloaded to KDC.

- Click "Download" icon from Application Generation Window.
- Change KDC from Normal mode to Application mode.
  - Press two side buttons simultaneously to enter menu mode
  - Select KDC mode and enter scan button
  - Change to Application mode
  - Save and exit from menu mode
- KDC will run in normal mode if you don't change to Application mode after downloading the application.

6.2 Predefined Applications

KTSync provides four Predefined Applications – Master/Slave, Pick/Bin, DB Lookup and Inventory.

Master/Slave

Master/Slave predefined application allows you to define a **master** barcode for comparison with one or more **slave** barcodes. The predefined application can be run once or continuously and within either setting, you can define a substring for comparison of master and slave barcodes.

- **Master/Slave Onetime**
  Define one **master** barcode and compare it with one **slave** barcode.

- **Master/Slave Continuous**
  Define one **master** barcode and compare it with multiple **slave** barcodes.

- **Collation Options**
  Works in either Onetime or Continuous Mode to compare a substring within the master and slave barcodes.

  - ✓ Master start position - Select the numeric position of start substring character in Pick barcode, 1 to 255
  - ✓ Slave start position - Select the numeric position of start substring character in Pick barcode, 1 to 255
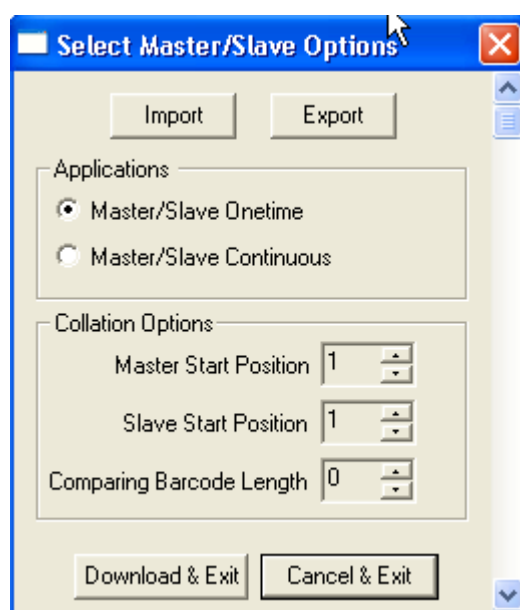 - ✓ Comparing Barcode Length - Number of characters to be compared, 0 to 255. 0 means all characters.

Figure 26 – Master/Slave Application Settings
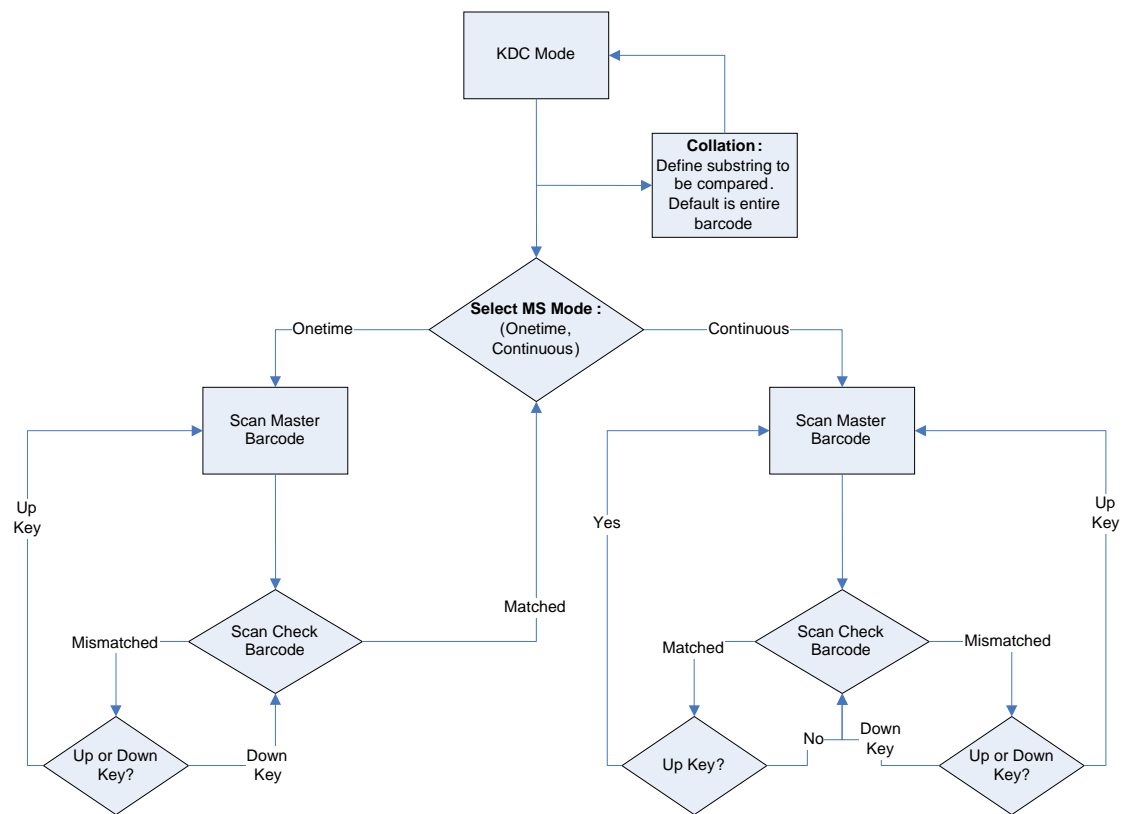
Figure 27 – Master/Slave Application Flow Chart

Pick/Bin

The Pick/Bin predefined application is a special version of the Master/Slave predefined application. The Pick/Bin application allows you to define Pick ID and the barcode symbology for comparison with a defined Bin.

- **Number of ID and Symbology**

    Define Pick ID characters from 2 to 32 and the barcode symbology.

- **Pick Start Position and Symbology**

    Select numeric position of start substring character in Pick barcode from 1 to 255 and the barcode symbology.

- **Bin Start Position and Symbology**

    Select the numeric position of start substring character in Bin barcode from 1 to 255 and the barcode symbology.

- **Comparing Barcode Length**

    Select the number of characters to be compared from 0 to 255. 0 means all characters.
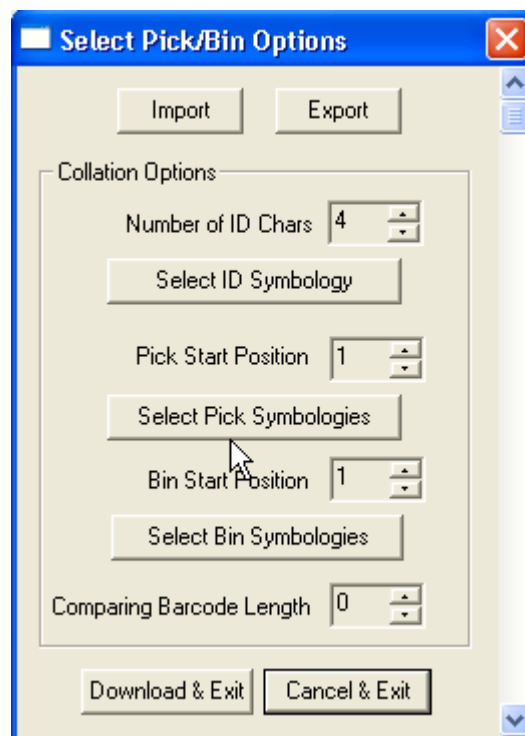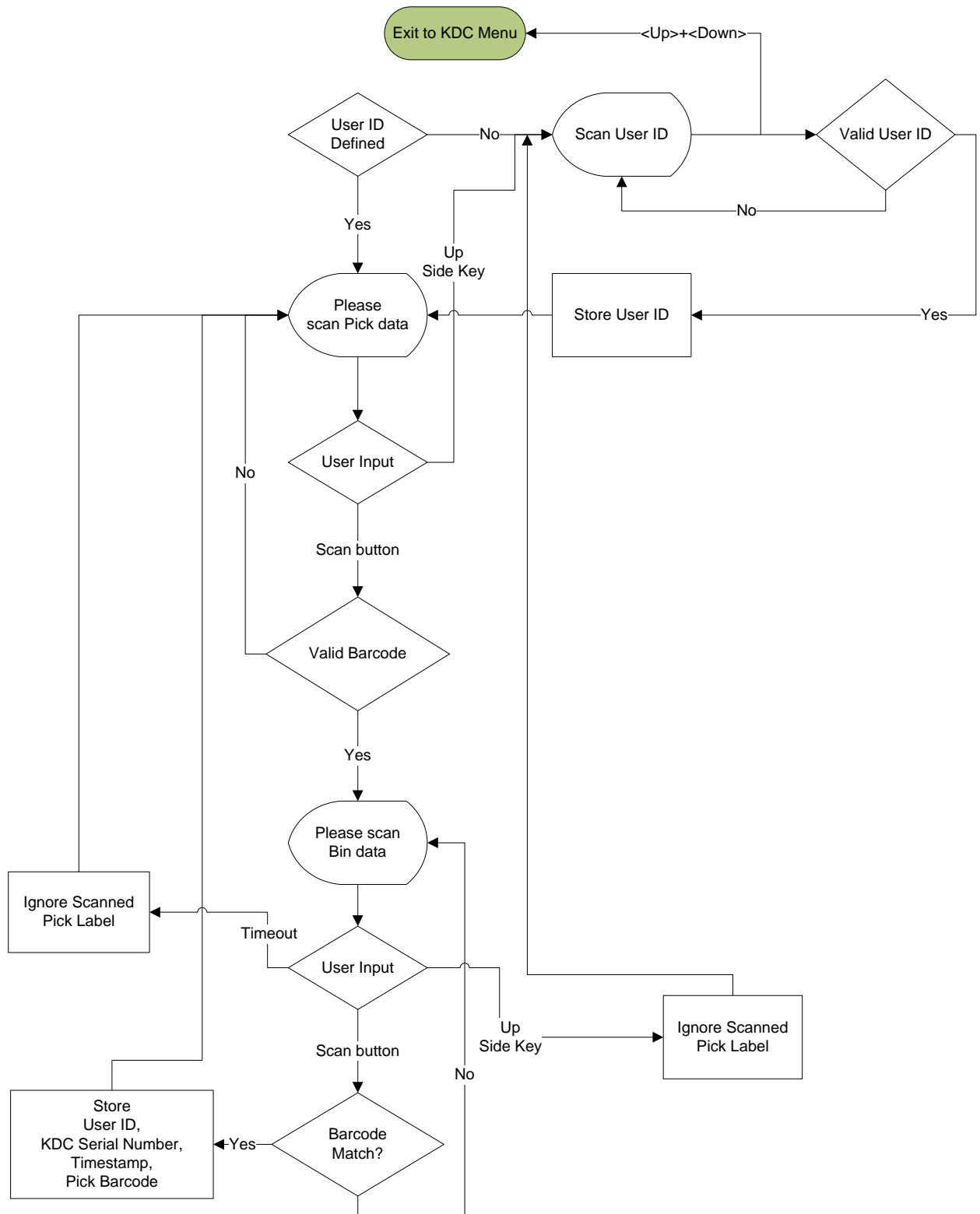

Figure 28 – Pick/BIN Application Menu

Figure 29 – Pick/BIN Application Flow Chart

DB Lookup Application

The DB Lookup application allows you to download a database to the KDC which can then be utilized for advanced AUTO-ID applications like displaying additional data after scanning a barcode. For example, using our DB Lookup application, you could download a product database including information such as description, price, and stock quantity. With the advanced data functionality built-in to the KDC, you could easily display product price, description, and stock level after the product's barcode is scanned.

Functionality of DB Lookup Application

- The database size cannot exceed 800 records.
- The maximum record size is 128 bytes.
- Each record can have up to 4 fields including the barcode which is the primary key.
- The maximum field size is 39 characters.
- Quantities can be entered by pressing the UP or DOWN scroll buttons after DB fields displayed.
- Quantity can be 1 to 128.
- User can create a database using Microsoft Excel.
  - Excel file must be saved as .txt.
  - Records should be separated by CR/LF
  - Fields should be separated by TAB.
  - Database should end with CR/LF.
  - Last 4 bytes of database should be CR/LF/CR/LF.

DB Lookup Fields and Settings

- **Download DB to KDC -** Downloads user created database to KDC.

- **Starting Quantity -** Enter predefined start quantity for each scanned barcode. The start quantity can be defined from 1 to 128 and is modifiable using up or down scroll buttons.

- **Barcode Field -** Select the position of barcode field in database from 1 to 4.

- **Stored Barcode Start Position -** Select the numeric position of start substring character of barcode in database from 1 to 39.

- **Scanned Barcode Start Position -** Select the numeric position of start substring character of scanned barcode from 1 to 39.

- **Comparing Barcode Length -** Number of characters to be compared from 0 to 255 where 0 is all characters.

- **Display on KDC -** Define database fields to be displayed on KDC. KDC can display one to three fields. KDC will display one field in two or three lines if same field is specified in line entering option.
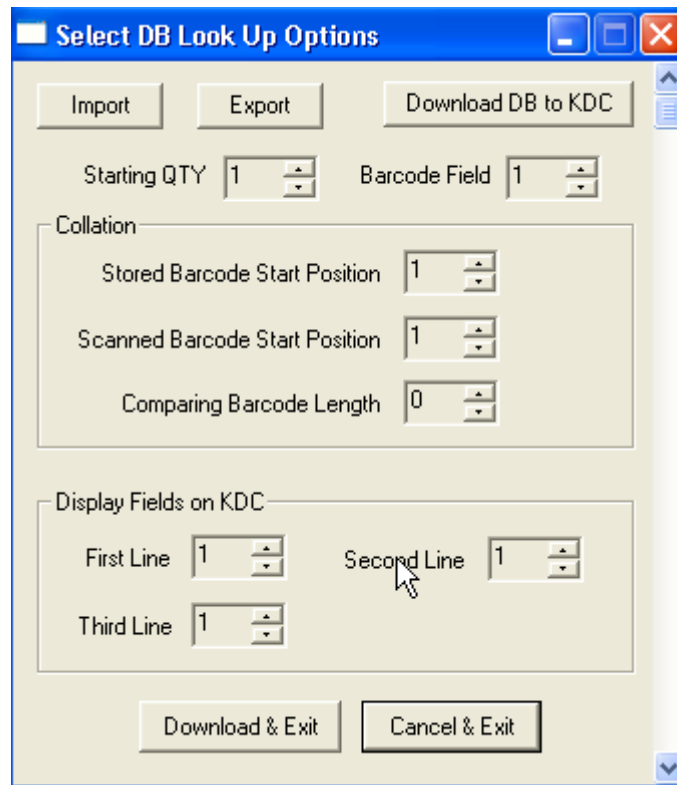
Figure 30 – DB Lookup Application Menu

Inventory Application

The Inventory application allows you to count inventories by scanning inventory barcodes. This application will increase inventory item count if the same item is scanned. Users can also download an inventory database to the KDC. KDC will display inventory description after scanning a barcode if inventory DB is downloaded.

Functionality of Inventory Application

- The inventory cannot exceed 800 items.
- The maximum record size is 128 bytes.
- Each record can have up to 4 fields including the barcode which is the primary key.
- The maximum field size is 39 characters.
- Quantities 1 to 32786 can be entered by pressing the UP or DOWN scroll buttons after inventory is scanned.
- Starting Quantity can be 1 to 128.
- Min/Max. Data Length is between 2 to 256 (KDC100/200) or 4 to 256 (KDC300)
- Barcode Collation Start Position is between 1 to 256
- The length of Collation Data String is between 1 to 30
- Collect Partial Data Start Position is between 1 to 256
- Collect Partial Data Length is between 1 to 256
- Users can create an inventory database using Microsoft Excel.
  - Excel file must be saved as .txt.
  - Click User Inventory DB option to display inventory description
  - Click Do not add non-existing item into DB if one do not wish to add new items into inventory DB
  - The number of Barcode Data Field is between 1 to 4
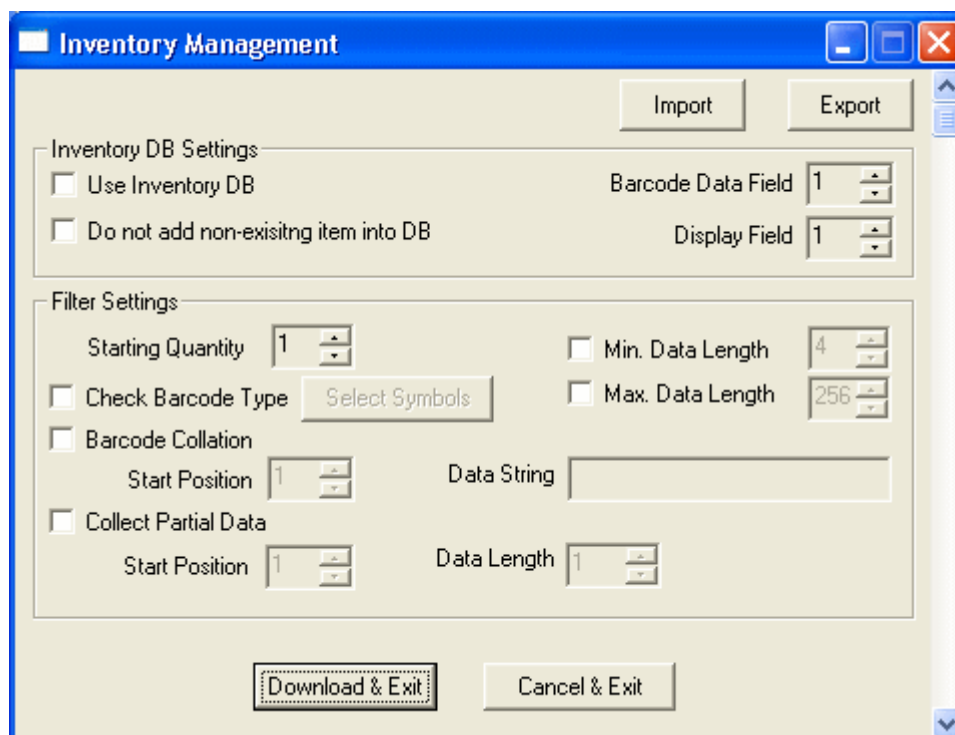 - The position of Display Filed is between 1 to 4

Figure 31 – Inventory Application Menu

7. TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
KDC not working	Dead battery	● Charge battery by connecting KDC to your PC using the included cable
	Hardware failure	● Contact distributor for technical support
KDC not charging	Bad battery	● Replace battery – Contact Local Distributor
	Poor USB port	● USB port doesn't supply proper current to KDC - Charge KDC using a different USB port on your PC
Failed reading	Damaged barcode	● Scan a different barcode
	Out of scan range	● Move the scanner closer to barcode ● Move scanner farther from the barcode
	Incorrect angle	● Change the angle of scanner to barcode
	Symbology not supported	● Contact KoamTac - www.koamtac.com for possibility of custom symbology support
	Scan options	● Check scan option settings
	Dirty scan window	● Clean scan window
	Damaged scan window	● Replace scan window
KDC reads wrong barcode	Dirty scan window	● Clean scan window
	Damaged scan window	● Replace scan window
	Poor quality barcode	● Select only necessary barcodes ● Increase minimum barcode length ● Increase security level
Can't communicate with PC, PDA, or smartphone	USB cable is not connected properly	● Check cable connection between KDC and host device
	Software is not working properly	● Reload the software
	COM configuration	● Check COM port configurations
LED blinks yellow	Low battery power	● Charge the battery by connecting KDC to PC. ● KDC will lose collected data if the battery is empty.
Buffer Full Message	Full Memory	● Clear the Memory using Synchronization program
Empty Battery Message	Empty battery	● Connect USB immediately. ● Synchronize the collected data and charge KDC
Abnormal KTSync Operation on DELL PC	Quickset Utility	● Disable Quickset Utility before using KTSync. ● Dell Quickset utility interrupts normal KTSync operation
	WSED Utility	● Disable WSED Wireless enable/disable utility ● delete the folder C:\Program Files\WSED, which contains a file WSED.exe, with the same icon as in the taskbar ● Delete the registry entry KEY_LOCAL_MACHINE \SOFTWARE\Microsoft\Windows\CurrentVersion\Run\WSED

Table 6 - Troubleshooting Techniques

8. WARRANTY

LIMITED WARRANTY AND DISCLAIMERS

BY OPENING THE PACKAGE OF THIS PRODUCT YOU AGREE TO BECOME BOUND BY THE LIABILITY AND WARRANTY CONDITIONS AS DESCRIBED BELOW.

UNDER ALL CIRCUMSTANCES THIS MANUAL SHOULD BE READ ATTENTIVELY, BEFORE INSTALLING AND OR USING THE PRODUCT.

Serial Number

A serial number appears on the KDC label. This official registration number is strictly related to the device purchased. Make sure that the serial number appearing on your KDC is not removed. Removing the serial number will affect the warranty conditions and liability disadvantageously, so please maintain the label with serial number on the KDC. Units with the serial number label removed should not be operated.

Warranty/Warranty Period/Liability

KoamTac, Inc. ("KoamTac") manufactures its hardware products in accordance with industry-standard practices. Unless otherwise agreed in a contract, KDC is warranted for a period of one year after purchase, covering defects in material and workmanship except rechargeable battery. KoamTac will repair or, at its opinion, replace products that prove to be defective in material or workmanship under proper use during the warranty period. KoamTac will not be liable in cases (i) in which the unit has been repaired or altered unless done or approved by KoamTac, (ii) in which the unit has not been maintained in accordance with any operating or handling instructions supplied by KoamTac, (iii) in which the unit has been subjected to unusual physical or electrical stress, misuse, abuse, power shortage, negligence or accident or (iv) in which the unit has been used other than in accordance with the product operating and handling instructions. Preventive maintenance is the responsibility of the customer and is not covered under this warranty. Under no circumstance will KoamTac be liable for any direct, indirect, consequential or incidental damages arising out of use or inability to use either the hardware or software, even if KoamTac has been informed about the possibility of such damages.

Warranty Coverage and Procedure

During the warranty period, KoamTac will repair or replace defective products returned to KoamTac warehouse. International customers should contact the local KoamTac office or support center. If warranty service is required, KoamTac will issue a Return Material Authorization Number. Products must be shipped in the original or comparable package, shipping and insurance charges prepaid. KoamTac will ship the repaired or replacement product freight and insurance prepaid. Customer accepts full responsibility for its software and data including the appropriate backup thereof. Repair or replacement of a product during warranty will not extend the original warranty term.

CAUTION: Changes or modifications not expressly approved by the manufacturer responsible for compliance could void the user's authority to operate the equipment.

9. CONTACT INFORMATION

KOAMTAC

CORPORATE HEADQUARTERS

116 Village Boulevard, Suite 200

Princeton, NJ 08540, USA

PH: 609-734-4335 FAX: 609-228-4373

email: support@koamtac.com

For more information, visit our website - www.koamtac.com

APPENDIX A - BARCODE & SCAN OPTIONS

The process for scanning and reading barcodes is delicate and complicated. Although your KDC is equipped with a high performance scan engine, if configured incorrectly it may not perform at its peak performance level. To ensure its high performance, the KDC comes configured to optimize its scan engine technology. Unless you clearly understand the impact of your changes to the KDC settings, please do not change factory default settings.

A.1 Symbologies

KoamTac's KDC products support most major barcode symbologies including 1D, 2D, Postal, and OCR-Fonts. Below is a list of the barcode symbologies supported by the KDC with respect to each models particular area of support. To ensure superior scan performance, remember to select only the required symbologies.

	KDC100/200/250/410/415	*KDC300/420/425*
1D Barcodes	EAN13, EAN8, UPCA, UPCE, Bookland EAN, EAN13 with Addon, EAN8 with Add-on, UPCA with Add-on, UPCE with Add-on, Interleave 2 of 5, ITF14, Code128, Codabar, GS1-128, Code39, Code93, & Code35	Codabar, Code11, Code32, Code39, Code128, EAN8, EAN13, GS1-128, I2of5, MSI, Plessey, PosiCode, GS1 DATABAR OMNI, GS1 Limited, GS1 Expanded, S2of5IA, S2of5ID, TLC39, Telepen, Trioptic, UPCA, & UPCE
2D Barcodes	*N/A*	AztecCode, AztecRunes, CodablockF,Code 16K, Code49, DataMatrix, MaxiCode, MicroPDF, PDF417, & QRCode and HanXin Code
Postal Barcodes	*N/A*	AusPost, CanadaPost, ChinaPost, JapanPost, KoreaPost, KixPost, Planet Code, Postnet (US), & UKPost
OCR Fonts	*N/A*	OCR-A, OCR-B, OCRUSCurrency, OCRMICRE13B, & OCRSEMIFONT

Table 7 - Symbologies Supported by KDC

Equation to Determining Potential Number of Stored Barcodes

The number of barcodes that can be stored in the KDC memory depends on the size of the barcodes.

__Example__: If only UPCA barcodes are scanned and the check digit is not transmitted, then each barcode takes up 11 (barcode data) + 2 (added bytes) + 2 (length and type) + 4 (time stamp) = 19 bytes. The maximum number of UPCA barcodes that can be saved is 81,920/19 =4,311.

If different length barcodes are mixed, then you cannot compute the maximum number of barcodes that can be stored.

Data Buffer Full

When the data buffer is full, the KDC displays a message, **Buffer Full**, ignoring any command to scan barcodes. You must reset the data buffer to continue data collection.

APPENDIX B – FAQ

B.1 Symbology

Q: What barcode symbologies are supported by the KDC?

A: The KDC100/200/250/410/415 support 1D barcode only. KDC300/520/425 support most major 1D, 2D barcode symbologies and OCR.

KDC300/420/425	*KDC100/200/250/410/415*
2D Barcodes	***1D Barcodes***
AztecCode, AztecRunes, CodablockF, Code16K, Code49, DataMatrix, MaxiCode, MicroPDF, PDF417, QRCode, and HanXin Code	EAN13 EAN8 UPCA UPCE Bookland EAN EAN13 with Add-on EAN8 with Add-on UPCA with Add-on UPCE with Add-on Interleave 2 of 5 ITF14 Code128 Codabar GS1-128 Code39 Code93 Code35
1D Barcodes	
Codabar, Code11, Code32, Code39, Code128, EAN8, EAN13, GS1-128, I2of5, MSI, Plessey, PosiCode, GS1 DATABAR OMNI, GS1 Limited, GS1 Expanded, S2of5IA, S2of5ID, TLC39, Telepen, Trioptic, UPCA, and UPCE	
Postal Barcodes	
AusPost, CanadaPost, ChinaPost, JapanPost, KoreaPost, KixPost, Planet Code, Postnet (US), and UKPost	
OCR Fonts	
OCR-A, OCR-B, OCRUSCurrency, OCRMICRE13B, and OCRSEMIFONT	

Table 8 – Listing of Symbologies Supported by KDC

B.2 Host Interface

Q: What interface ports are supported by the KDC?
A: The KDC100 has two USB ports - Swing out Type A and ultra mini USB ports which support USB to Serial protocol. KDC200/250/300/400 have one ultra mini USB port which supports USB to Serial protocol and Bluetooth which supports HID/SPP/MFi *Bluetooth* profiles

B.3 Battery

Q: How long will the KDC battery last before it needs to be replaced?
A: The battery on the KDC can be charged at least 300 times before it needs to be replaced.

Q: How long does it take to charge the KDC?
A: It takes about 2 hours to charge the KDC100/200, 4 hours to charge the KDC250/300 and 5 hours to charge the KDC400.

Q: How many barcodes can a fully charged KDC scan?
A: If user scans a barcode every 5 seconds, KDC100 scans more than 5,000 barcodes, KDC200 scans more than 3,500 barcodes, KDC250 scans more than 10,000 scans, KDC300 scans more than 8,000 scans and KDC410/415 scans more than 20,000 scans and KDC420/425 scans more than 15,000 scans.

Q: How long will the KDC battery lasts in the sleep mode?
A: KDC100 lasts more than 1,200 hours, KDC200 lasts more than 48 hours while connected in Bluetooth, KDC250 lasts more than 12 hours while GPS is power on and Bluetooth is connected, KDC300 lasts more than 100 hours while connected in Bluetooth and KDC400 lasts more than 200 hours while connected in Bluetooth.

Q: Can I replace the KDC200 battery?
A: Yes. The KDC has a separate compartment for the battery which can be opened easily with a screw driver. Contact your distributor for a replacement battery.

B.4 Memory

Q: How many barcodes can be stored in the KDC?

A: KDC has basic 180KB data memory and optional 4MB extended memory. 180KB can store more than 10,000 UPC barcodes and 4MB can store maximum 204,800 barcodes. FW86 version uses 100KB for database area and user data memory is 80KB.

Q: Can I download stored barcodes or wedge barcodes to my application?

A: Yes. KTSync® is keyboard wedging, application generation, DB look up and inventory program bundled with the KDC200/250/300/400 which supports host devices running on Android®, iPhone/iPad/iPod touch, Blackberry®, Windows® XP/Vista/7/Mobile5.0+. KDC100 only supports Windows XP/Vista/7 version.

Q: Does the KDC support *Android*®, *iPhone/iPad/iPod touch*®, *Blackberry*®, **Mac*® and *Windows*® devices?

A: KTSync® supports Android®, iPhone/iPad/iPod touch, Blackberry®, Mac® and Windows® devices currently.

B.5 Programming

Q: Can the KDC be programmed by a KoamTac partner?

A: Yes. KoamTac's Application Generation tool provides an enhanced programming environment for developing custom applications for the KDC.

1. KDC supports, at most, three step data collection processes including the ability to perform various data functionality features.

2. KDC's database lookup function provides enhanced data processes enabling the KDC to display database results with or without scanned barcode data.

3. KDC can display a message from Host enabling two way communications and a messaging application.

Q: Does KoamTac provide customization services for the KDC?

A: Yes. Custom applications or projects can be developed by KoamTac engineers. This service is provided for an additional fee to KoamTac. For more information regarding this service, please contact KoamTac.

Q: Can a partner develop a PC or Smartphone application for the KDC?

A: A software development kit for Windows® XP/Vista/7/Mobile5.0+, Android is available on KoamTac support page. Android®, iPhone/iPad/iPod touch, Blackberry®, Mac® SDK are available through KoamTac authorized distributors.

APPENDIX C - SPECIAL BARCODES

C.1 Set Symbologies

Please refer to Honeywell Adaptus® Technology enabled scanner user manual such as 4600 or 4820.

C.2 Barcode Options

Please refer to Honeywell Adaptus® Technology enabled scanner user manual such as 4600 or 4820.

C.3 Delete Last Scanned Barcode

TMKDC80001.

C.4 Scan Options

Auto trigger Enable

ᴛMKDC5A001.

Auto trigger Disable

ᴛMKDC5A010.

Reread Delay Continuous

ᴛMKDC5B000.

Reread Delay Short

ᴛMKDC5B001.

Reread Delay Medium

ᴛMKDC5B002.

Reread Delay Long

ᴛMKDC5B003.

Extra Long

ᴛMKDC5B004.

C.5 Scan Timeout

Timeout = 500msec

_TMKDC101F4.

Timeout = 1sec

_TMKDC103E8.

Timeout = 2sec

_TMKDC107D0.

Timeout = 3sec

_TMKDC10BB8.

Timeout = 4sec

_TMKDC10FA0.

Timeout = 5sec

_TMKDC11388.

Timeout = 6sec

_TMKDC11770.

Timeout = 7sec

_TMKDC11B58.

Timeout = 8sec

_TMKDC11F40.

Timeout = 9sec

_TMKDC12328.

Timeout = 10sec

_TMKDC12710.

C.6 Minimum Barcode Length

Minimum Length = 2

ᴛMKDC002.

Minimum Length = 3

ᴛMKDC003.

Minimum Length = 4

ᴛMKDC004.

Minimum Length = 5

ᴛMKDC005.

Minimum Length = 6

ᴛMKDC006.

Minimum Length = 7

ᴛMKDC007.

Minimum Length = 8

ᴛMKDC008.

Minimum Length = 9

ᴛMKDC009.

Minimum Length = 10

ᴛMKDC00A.

Minimum Length = 11

ᴛMKDC00B.

Minimum Length = 12

ᴛMKDC00C.

Minimum Length = 13

ᴛMKDC00D.

Minimum Length = 14

ᴛMKDC00E.

Minimum Length = 15

ᴛMKDC00F.

Minimum Length = 16

ᴛMKDC010.

Minimum Length = 17

ᴛMKDC011.

Minimum Length = 18

ᴛMKDC012.

Minimum Length = 19

ᴛMKDC013.

Minimum Length = 20

ᴛMKDC014.

Minimum Length = 21

ᴛMKDC015.

Minimum Length = 22

ᴛMKDC016.

Minimum Length = 23

ᴛMKDC017.

Minimum Length = 24

ᴛMKDC018.

Minimum Length = 25

ᴛMKDC019.

Minimum Length = 26

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MKDC01A.

Minimum Length = 27

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MKDC01B.

Minimum Length = 28

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MKDC01C.

Minimum Length = 29

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MKDC01D.

Minimum Length = 30

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MKDC01E.

Minimum Length = 31

‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖
MKDC01F.

Minimum Length = 32

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MKDC020.

Minimum Length = 33

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MKDC021.

Minimum Length = 34

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MKDC022.

Minimum Length = 35

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MKDC023.

Minimum Length = 36

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MKDC024.

C.7 Image Capture

Capture Now

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TMKDC90000.

Image Capture Enabled

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TMKDC91001.

Image Format JPEG

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TMKDC92006.

Image Format BMP

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TMKDC92008.

Pixel Depth (1 bit per pixel)

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TMKDC93001.

Pixel Depth (8 bit per pixel)

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TMKDC93008.

C.8 Data Process - Wedge/Store

Wedge Only

ₜMKDC82000.

Wedge & Store

ₜMKDC82001.

Store Only

ₜMKDC82002.

Wedge & Store if Sent

ₜMKDC82003.

Wedge & Store if Not Sent

ₜMKDC82004.

C.9 Data Process - Data Edit

Prefix Enter Start

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TMKDC83000.

Suffix Enter Start

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TMKDC83001.

Prefix / Suffix Enter Finish

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TMKDC83002.

Prefix / Suffix Enter Cancel

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TMKDC83003.

Delete Prefix

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TMKDC83004.

Delete Suffix

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TMKDC83005.

Display Prefix

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TMKDC83006.

Display Suffix

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TMKDC83007.

C.10 Data Process – Data Format, Handshake and Duplicate Check

Data format - Barcode only

₸MKDC84001.

Data format - Packet data

₸MKDC84010.

Enable Handshake

₸MKDC86001.

Disable Handshake

₸MKDC86010.

C.11 Data Process - Termination Character

None

₸MKDC88000.

CR

₸MKDC88001.

LF

₸MKDC88002.

CR+LF

₸MKDC88003.

Tab

₸MKDC88004.

C.12 Data Process – Check Duplicate

Enable Check Duplicate

TMKDC89001.

Disable Check Duplicate

TMKDC89010.

C.13 Bluetooth

Enable Bluetooth Power

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TMKDC60001.

Disable Bluetooth Power

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TMKDC60010.

Enter Pairing Mode

‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖
TMKDC61001.

Enable Discovering

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TMKDC61101.

Discovering Disable

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TMKDC61110.

Connect To Last

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TMKDC61201.

Enable Auto Connect

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TMKDC62001.

Disable Auto Connect

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TMKDC62010.

Enable Auto Power Off

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TMKDC64001.

Disable Auto Power Off

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TMKDC64010.

Enable Auto Power On

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TMKDC66001.

Disable Auto Power On

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TMKDC66010.

C.14 Bluetooth Auto Power On Time

Disable

‚MKDC67000.

1 sec.

‚MKDC67001.

2 sec.

‚MKDC67002.

3 sec.

‚MKDC67003.

4 sec.

‚MKDC67004.

5 sec.

‚MKDC67005.

6 sec.

‚MKDC67006.

7 sec.

‚MKDC67007.

8 sec.

‚MKDC67008.

9 sec.

‚MKDC67009.

10 sec.

‚MKDC6700A.

Enable Beep Warning

Disable Beep Warning

$_T$MKDC68001.

$_T$MKDC68010.

C.15 Bluetooth Power Off Time

1min

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TMKDC69001.

2min

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TMKDC69002.

3min

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TMKDC69003.

4min

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TMKDC69004.

5min

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TMKDC69005.

6min

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TMKDC69006.

7min

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TMKDC69007.

8min

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TMKDC69008.

9min

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TMKDC69009.

10min

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TMKDC6900A.

11min

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TMKDC6900B.

12min

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TMKDC6900C.

13min

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T MKDC6900D.

14min

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T MKDC6900E.

15min

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T MKDC6900F.

16min

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T MKDC69010.

17min

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T MKDC69011.

18min

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T MKDC69012.

19min

‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖

T MKDC69013.

20min

‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖

T MKDC69014.

21min

‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖

T MKDC69015.

22min

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T MKDC69016.

23min

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T MKDC69017.

24min

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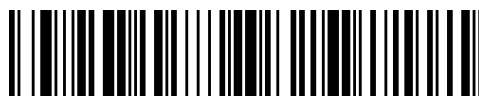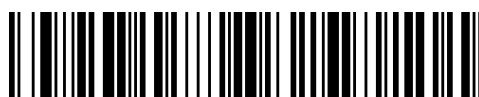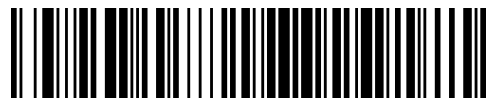
T MKDC69018.

25min

‌MKDC69019.

26min

‌MKDC6901A.

27min

‌MKDC6901B.

28min

‌MKDC6901C.

29min

‌MKDC6901D.

30min

‌MKDC6901E.

Enable Power Off Msg

‌MKDC63001.

Disable Power Off Msg

‌MKDC63010.

Mac Address

‌MKDC63100.

BT FW Version

‌MKDC63200.

Enable Wakeup Null

‌MKDC63401.

Disable Wakeup Null

‌MKDC63410.

Confirm To Send Enabled

‚ÇúMKDC63501.

Confirm To Send Disabled

‚ÇúMKDC63510.

Bluetooth Device Type SPP

‚ÇúMKDC6A000.

Bluetooth Device Type HID iOS

‚ÇúMKDC6A001.

Bluetooth Device Type IPHONE

‚ÇúMKDC6A002.

Bluetooth Device Type SPP2.0

‚ÇúMKDC6A003.

Bluetooth Device Type HID Normal
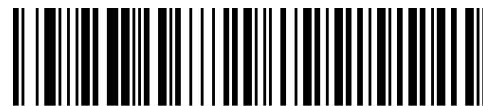
‚ÇúMKDC6A004.

BT Toggle Enabled

‚ÇúMKDC6B001.

BT Toggle Disabled

‚ÇúMKDC6B010.

HID Sync

‚ÇúMKDC6E000.

C.16 HID Autolock Time

0 min (Never)

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MKDC6C000.

1 min

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MKDC6C001.

2 min

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MKDC6C002.

3 min

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MKDC6C003.

4 min

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MKDC6C004.

5 min

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MKDC6C005.

10 min

‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖
MKDC6C00A.

15 min

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MKDC6C00F.

Disconnect

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MKDC6D000.

C.17 HID Keyboard layout

US

German

ᴛMKDC6F000.

ᴛMKDC6F001.

French

Italian

ᴛMKDC6F002.

ᴛMKDC6F003.

Spanish

ᴛMKDC6F004.

C.17 HID Initial Delay

Disabled

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⊤MKDCH0000.

1 second

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⊤MKDCH0001.

2 seconds

‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖

⊤MKDCH0002.

3 seconds

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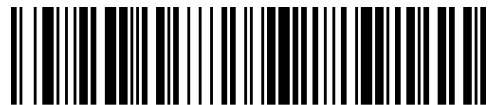
⊤MKDCH0003.

5 seconds

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⊤MKDCH0005.

10 seconds

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⊤MKDCH000A.

C.18 HID Character Delay

Disabled

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⊤MKDCH1000.

10 msec

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⊤MKDCH100A.

20 msec

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⊤MKDCH1014.

30 msec

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⊤MKDCH101E.

50 msec

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⊤MKDCH1032.

100 msec

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⊤MKDCH1064.

C.19 HID Control Character (KDC200/250)

Disabled

┬MKDCH2000.

Alt+Numpad

┬MKDCH2001.

^+Character

┬MKDCH2002.

C.20 System

Memory Status

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ᴛMKDC50001.

Reset Memory

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ᴛMKDC50002.

Date/Time

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ᴛMKDC52001.

Battery

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ᴛMKDC53001.

Version

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ᴛMKDC54001.

Button Lock

‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖
ᴛMKDC55001.

Button Unlock

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ᴛMKDC55010.

Beep Sound Enable

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ᴛMKDC56001.

Beep Sound Disable

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ᴛMKDC56010.

Beep Volume High

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ᴛMKDC5D001.

Beep Volume Low

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ᴛMKDC5D010.

Enable Auto Menu Exit

▮▮▮ TMKDC58001.

Disable Auto Menu Exit

▮▮▮ TMKDC58010.

Enable Port Status

▮▮▮ TMKDC58100.

Disable Port Status

▮▮▮ TMKDC58101.

Time & Battery

▮▮▮ TMKDC58200.

Type & Time

▮▮▮ TMKDC58201.

Type & Battery

▮▮▮ TMKDC58202.

Barcode Only

▮▮▮ TMKDC58205.

Memory Status

▮▮▮ TMKDC58203.

Auto Erase Enable

▮▮▮ TMKDC5F001.

Auto Erase Disable

▮▮▮ TMKDC5F010.

Menu Barcode Enable

ᴛMKDC52401.

Menu Barcode Disable

ᴛMKDC52410.

Enable Scrolling

ᴛMKDC59001.

Disable Scrolling

ᴛMKDC59010.

Factory Default

ᴛMKDC57001.

KDC Reset

ᴛMKDCA0000.

Confirm memory size

ᴛMKDC5E100.

0.5M / 3.5M

ᴛMKDC5E000.

1M / 3M

ᴛMKDC5E001.

2M / 2M

ᴛMKDC5E002.

3M / 1M

ᴛMKDC5E003.

4M / 0M

ㅜMKDC5E004.

C.21 Sleep Timeout

Disable

‌MKDC51000.

1sec

‌MKDC51001.

2sec

‌MKDC51002.

3sec

‌MKDC51003.

4sec

‌MKDC51004.

5sec

‌MKDC51005.

10sec

‌MKDC5100A.

20sec

‌MKDC51014.

30sec

‌MKDC5101E.

1min

‌MKDC5103C.

2min

‌MKDC51078.

5min

‌MKDC5112C.

10min

||||||||||||||||||||||||||||||||||
ᴛMKDC51258.

Date/Time

||||||||||||||||||||||||||||||||||
ᴛMKDC52001.

Battery

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ᴛMKDC53001.

Version

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ᴛMKDC54001.

Button Lock

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ᴛMKDC55001.

Button Unlock

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ᴛMKDC55010.

Beep Sound Enable

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ᴛMKDC56001.

Beep Sound Disable

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ᴛMKDC56010.

Beep Volume High

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ᴛMKDC5D001.

Beep Volume Low

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ᴛMKDC5D010.
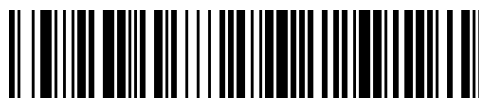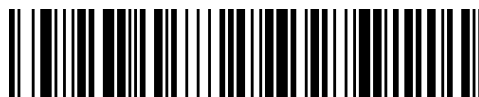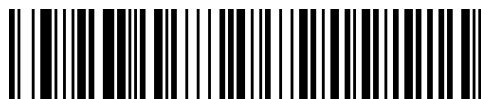
Enable Auto Menu Exit

‚MKDC58001.

Disable Auto Menu Exit

‚MKDC58010.

Enable Port Status

‚MKDC58101.

Disable Port Status

‚MKDC58100.

Time & Battery

‚MKDC58200.

Type & Time

‚MKDC58201.

Type & Battery

‚MKDC58202.

Memory Status

‚MKDC50001.

Auto Erase Enable

‚MKDC5F001.

Auto Erase Disable

‚MKDC5F010.

Menu Barcode Enable

‚MKDC52401.

Menu Barcode Disable

‚MKDC52410.

Enable Scrolling

⊤MKDC59001.

Disable Scrolling

⊤MKDC59010.

Factory Default

⊤MKDC57001.

KDC Reset

⊤MKDCA0000.

C.22 Function

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ᴛMKDC7001.

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ᴛMKDC7002.

F3

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ᴛMKDC7003.

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ᴛMKDC7004.

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ᴛMKDC7005.

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ᴛMKDC7006.

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ᴛMKDC7007.

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ᴛMKDC7008.

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ᴛMKDC7009.

F10

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ᴛMKDC700A.

F11

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ᴛMKDC700B.

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ᴛMKDC700C.

C.23 Number

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TMKDC7131.

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TMKDC7132.

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TMKDC7133.

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TMKDC7134.

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TMKDC7135.

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TMKDC7136.

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TMKDC7137.

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TMKDC7138.

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TMKDC7139.

C.24 Lower Case Alphabet

a
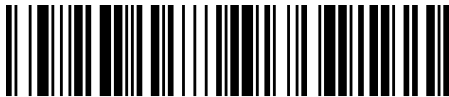
ᴛMKDC7161.

b

ᴛMKDC7162.

c

ᴛMKDC7163.

d

ᴛMKDC7164.

e

ᴛMKDC7165.

f

ᴛMKDC7166.

g

ᴛMKDC7167.

h

ᴛMKDC7168.

i

ᴛMKDC7169.

j

ᴛMKDC716A.

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ᴛMKDC716B.

l

ᴛMKDC716C.

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ᴛMKDC716D.

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ᴛMKDC716E.

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ᴛMKDC716F.

p

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ᴛMKDC7170.

q

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ᴛMKDC7171.

r

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ᴛMKDC7172.

s

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ᴛMKDC7173.

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ᴛMKDC7174.

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ᴛMKDC7175.

v

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ᴛMKDC7176.

w

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ᴛMKDC7177.

x
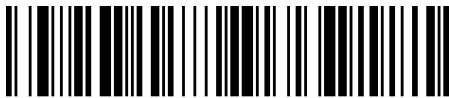
|||||||||||||||||||||||||||||
ᴛMKDC7178.

y

‍MKDC7179.

z

‍MKDC717A.

C.25 Upper Case Alphabet

A
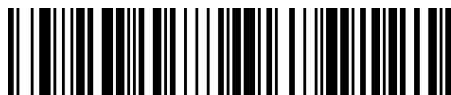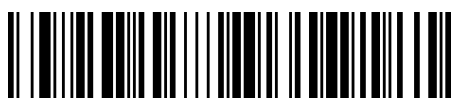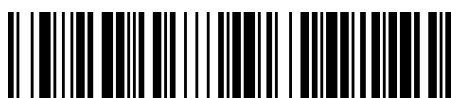
‖‖‖ barcode ‖‖‖
_TMKDC7141.

B

‖‖‖ barcode ‖‖‖
_TMKDC7142.

C

‖‖‖ barcode ‖‖‖
_TMKDC7143.

D

‖‖‖ barcode ‖‖‖
_TMKDC7144.

E

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_TMKDC7145.

F

‖‖‖ barcode ‖‖‖
_TMKDC7146.

G

‖‖‖ barcode ‖‖‖
_TMKDC7147.

H

‖‖‖ barcode ‖‖‖
_TMKDC7148.

I

‖‖‖ barcode ‖‖‖
_TMKDC7149.

J

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_TMKDC714A.

K

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_TMKDC714B.

L

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_TMKDC714C.

M

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ᴛMKDC714D.

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ᴛMKDC714E.

O

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ᴛMKDC714F.

P

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ᴛMKDC7150.

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ᴛMKDC7151.

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ᴛMKDC7152.

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ᴛMKDC7153.

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ᴛMKDC7154.

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ᴛMKDC7155.

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ᴛMKDC7156.

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ᴛMKDC7157.

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ᴛMKDC7158.

Y

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ₜMKDC7159.

Z
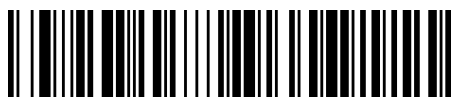
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ₜMKDC715A.

C.26 Control Character

BS

ᴛMKDC7108.

TAB

ᴛMKDC7109.

LF

ᴛMKDC710A.

VT

ᴛMKDC710B.

CR

ᴛMKDC710D.

ESC

ᴛMKDC711B.

Space

ᴛMKDC7120.

DEL

ᴛMKDC717F.

C.27 Symbol Character
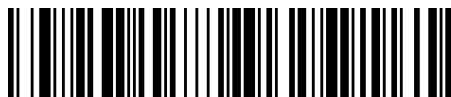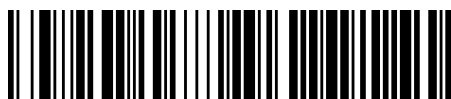
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ꜰMKDC7121.

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ꜰMKDC7122.

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ꜰMKDC7129.

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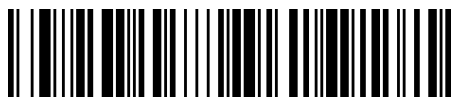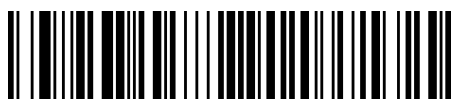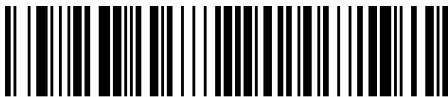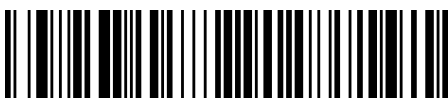
ᴛMKDC717E.
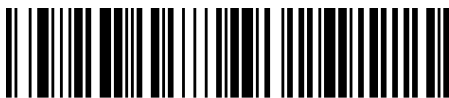
Start-String

ᴛMKDC7201.

Stop-String

ᴛMKDC7210.

Note:

- *You can compose a string up to 16 characters.*

- *A string would be composed by scanning the "Start-String", number/alphabet/special characters, and "Stop-String" special barcodes.*

- *The KDC will abort string composition if you do not scan "Stop-String" in one minute after scanning "Start-String" and number/alphabet/special characters.*

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